

**KTC**<sup>®</sup>  
KYOTO TOOL CO., LTD.

128, Sayama-Shinkaichi, Kumiyama-cho,  
Kuse-gun, Kyoto, 613-0034 Japan  
Phone. +81-774-46-3717 Fax. +81-774-46-3768  
Email : support@kyototool.co.jp  
URL <http://en.ktc.co.jp/>

ISO 9001



ISO 14001



**KTC**

SELECT THE NO.1 TOOLS OF THE WORLD

No. **38**

**KTC**<sup>®</sup>  
KYOTO TOOL

# SELECT THE NO.1 TOOLS OF THE WORLD



# 38

## For Safe Use of Your Tools

In order to satisfy our customers, **KTC** is striving to improve safety and product quality. So you may use our products in the safest possible manner we have prepared a list of safety notices. Please read these carefully before use.



### Caution

Products shown in this catalog  
Safety notices apply to all products.

- Do not use the tools for any purpose other than the intended purpose. (Fig. 1)
- If breaks, cracks, abrasions or deformities become apparent, stop using the tool. (Fig. 2)
- Do not use the tool in an unsafe manner. Make sure you have a good footing and maintain your balance. (Fig. 3)
- Do not attempt to modify the tool. The application of heat or any modification process may greatly reduce the quality of the product. (Fig. 4)
- Where an instruction manual is included, be sure to read it before using the tool.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Any other safety warnings are displayed at the beginning of each manual, or alongside the item in this catalog. There are also warnings in the hand tool guide. These should be read in conjunction with other warnings.

## Meaning of Symbols



### Warning

Improper use may result in death or serious injury to the user.



### Caution

Improper use may result in injury to the user or damage to the tool.

## Meaning of Symbols

- ..... Unit as shipped from the factory
- ..... When ordering, please check availability of stock
- ..... Product weight by unit.
- ..... Powerfit symbol
- ..... Width x Depth x Height
- ..... This model has been changed
- ..... Successive model is displayed

## Caution & Request

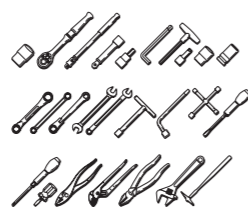
- Products displayed in this catalog are current as at November 2014.
- To allow for product improvements, the shape, size and color of products may change without notice.
- As the pictures in the catalog are printed, actual shades of color may differ.
- Unless otherwise specified, measurements are in millimeters.

Reproduction of this catalog in part or in full is prohibited.

## TOOL SETS



## CONVENTIONAL TOOLS



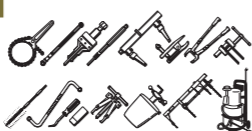
## MEASURING and INSULATED TOOLS



## POWER TOOLS



## AUTOMOTIVE SPECIAL TOOLS



## OTHER TOOLS and EQUIPMENT



## MOTORCYCLE TOOLS



## PLUMBING TOOLS



## TOOL STORAGE



## 11 1. TOOL SETS

## 45 2. CONVENTIONAL TOOLS

- 50 SOCKETS and DRIVE TOOLS
- 78 IMPACT SOCKETS and ACCESSORIES
- 93 HEXAGONAL WRENCHES
- 106 TORX® WRENCHES
- 118 BOX END WRENCHES
- 125 OPEN END WRENCHES  
and COMBINATION WRENCHES
- 131 PROFIT® TOOLS
- 133 HANDLE WRENCHES
- 135 SCREWDRIVERS
- 146 PLIERS, CUTTING PLIERS, SHEARS
- 154 LOCKING PLIERS
- 157 PROSNIP®
- 158 HAMMERS, CHISELS, and PUNCHES
- 162 SCRAPERS, FILES and BRUSES
- 167 ADJUSTABLE WRENCHES, PIPE WRENCHES  
and GEAR PULLERS

## 173 3. MEASURING and INSULATED TOOLS

- 174 DIGITAL TORQUE WRENCHES
- 188 TORQUE WRENCHES
- 191 GAUGES
- 194 INSULATED TOOLS

## 199 4. POWER TOOLS

- 200 AIR IMPACT WRENCHES
- 204 ELECTRIC IMPACT WRENCHES

## 207 5. AUTOMOTIVE SPECIAL TOOLS

- 209 ENGINE
- 234 DRIVELINE SYSTEM
- 237 STEERING SYSTEM
- 250 SUSPENSION SYSTEM
- 254 TIRE & WHEEL
- 262 BRAKE SYSTEM
- 277 ELECTRIC SYSTEM
- 284 BODY

## 299 6. OTHER TOOLS and EQUIPMENT

- 300 AUTOMOTIVE MAINTENANCE ACCESSORIES
- 305 LIGHTS

## 309 7. MOTORCYCLE TOOLS

- 310 MOTORCYCLE TOOLS
- 315 CYCLE TOOLS

## 321 8. PLUMBING TOOLS

- 322 PLUMBING TOOLS

## 329 9. TOOL STORAGE

- 331 TOP CHEST
- 335 ROLLER CABINET
- 337 TOOL STATION, WAGON,  
and WALL HUNGING CASE
- 343 SPLIT-OPEN and TOP OPENING TOOL CASE
- 345 ACCESSORIES

## 1. TOOL SETS

11

## 2. CONVENTIONAL TOOLS

45

## 3. MEASURING and INSULATED TOOLS

173

## 4. POWER TOOLS

199

## 5. AUTOMOTIVE SPECIAL TOOLS

207

## 6. OTHER TOOLS and EQUIPMENT

299

## 7. MOTORCYCLE TOOLS

309

## 8. PLUMBING TOOLS

321

## 9. TOOL STORAGE

329

### All about KTC

- 3 KTC Brand story
- 4 About KTC's after sales service system

- 193 Basic Knowledge of tools<sup>③</sup> Torque
- 222 Basic Knowledge of tools<sup>④</sup> About the LLC

- 39 Basic course in hand tools part1.
- 168 Basic course in hand tools part2.
- 250 Cautionary points on handling the spring compressor

- 208 Mechanism of Engine
- 233 Driveline System Mechanism
- 236 Steering System Mechanism
- 249 Suspension System Mechanism
- 253 Tire & Wheel Mechanism
- 260 Brake System Mechanism
- 276 Electric System Mechanism
- 283 Body Mechanism

- 348 Index



21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS

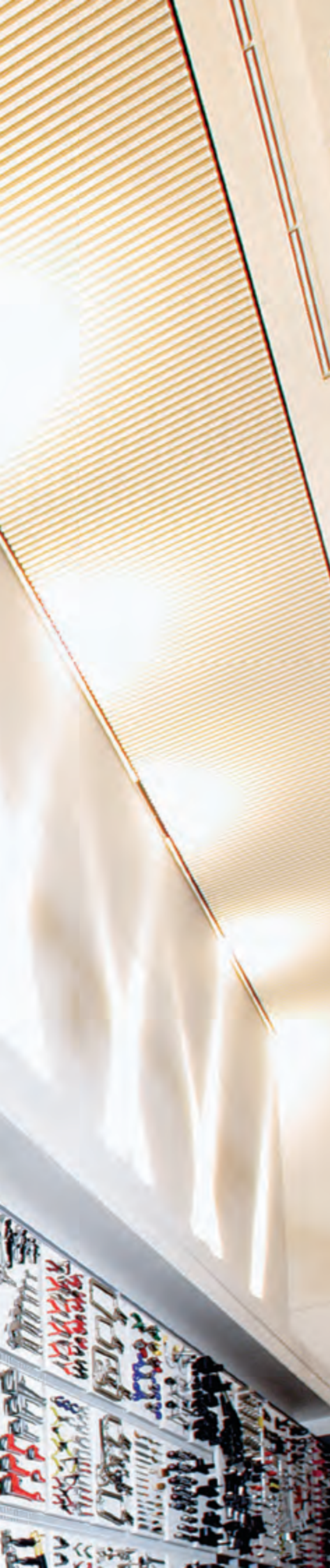
21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS

21C VERSION TOOLS



## KTC Brand story

A legacy of pursuing high quality handed down from the men who drew their passion from making tools to service Zero fighter planes

To trace the source of the passion that is inside KTC tools, one must return to 1939, before KTC was founded.

At that time, "Kyoto Machinery", a textile machinery maker that could be considered the forerunner of KTC, was taking the initiative in making high performance, highquality tools for servicing Zero fighter planes which had clearly surpassed world standards. A passion for tool making in response to the mission to "produce high quality tools" - this could be called the true source of KTC manufacturing.

However, it was not only the Zero fighter planes that drove their passion for the tools.

They were amazed by the superior functionality of the American made socket wrench that they had been shown as a war trophy from the battle of Midway, making them firmly determined to catch up and surpass its quality of it.

This lead to their stubborn insistence on pursuing only high quality steel materials, even in the times of scarcity that followed immediately after the war.

Then in 1950, the "KYOTO TOOL CO., LTD." was established by the three men who acquired a heart for uncompromising research for technological innovation and a spirit of craftsmanship that pursued the highest levels of quality, while they were forming their passionate ideas about tool making.

The turning point came in the month following the company's establishment, before they had even had time to organize their production system.

There was an enquiry regarding a delivery of tools to be included with vehicles from Toyota Automotive Sales, which had just become independent from Toyota Motor Co. Ltd. As the delivery of onboard vehicle tools to Toyota started, the production volume of automobiles, mainly trucks, grew rapidly and so did the production volume of tools.

After that KTC rode a wave of motorization and won the rank of No.1 in Japan for number of items and volume of production.



# About KTC's after sales service system

## After sales service

KTC provides the following after sales service and information service, allowing customers to purchase and use our products with confidence.

### 1 For inquiries regarding our products Contact details for product inquiries

#### Customer center

**TEL+81-774-46-3717**  
**FAX+81-774-46-3768**  
**e-mail:support@kyototool.co.jp**

\* Telephone inquiries: 9:00 am to 12:00 pm, 1:00 pm to 5:00 pm  
 (excluding Saturdays, Sundays, public holidays and company holidays)

#### KTC home page

**<http://en.ktc.co.jp/>**

Introducing new product information, product catalogs, instruction manuals, sales information and product dealers. For more information, please visit our website.

### 2 After sales service

**Parts supply service** ..... Sales of maintenance parts that can be replaced and repaired by customers.

**Repair service** ..... Charged repair service for goods to be repaired in accordance with our company regulations. (Parts cost, repair cost, freight cost will be charged.)

**Calibration service** ..... We calibrate measurement instruments such as a torque wrench and issue certificates of calibration for a fee. For more information, please refer to P.159.

\*1 Requests to be made at the product dealer's store.

\*2 Supply of some parts may be restricted due to safety / quality control reasons.

### 3 Quality assurance

**In case if our product with the KTC or NEPROS mark has lost functionality due to material or manufacturing problems, or where the plating has come off other than by wear, we will repair or replace the product with an equivalent product.**

\* The following items are not eligible for our quality assurance

- Consumables - Products that use wearable parts, such as the inward turning tools (screw driver, hexagon head screw driver and TORX® driver), pliers (nippers, pliers and pinchers), and gears. Also other products that constantly wear as they age.
- Damage that is caused by any other factors than problems in the product material and manufacturing process. Damage that is caused by inappropriate use or negligence.
- Wear, breakage or deformation of the product caused by hard hitting with a hammer or the like.
- Damage that is caused by repairs or modifications made by the user or a third party.
- Damage that is caused by application of an excessive load beyond the one that the product is designed for.
- Damage that is caused by fire or natural disaster.
- Damage that is caused by wear as a result of use in a production line.
- Differences due to product model change or design change

#### <Examples of inappropriate use>

- Wear, breakage or deformation caused by use of hand tools with power tools such as an impact wrench.
- Breakage or deformation caused by the use of couplings or pipes.

#### <Contact desk for quality assurance>

Please lodge your inquiry through the dealer you purchased the product from.

Fruits of technologies which create safety

# DIGITAL RATCHET

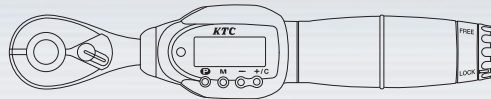
Realizes High Accuracy Torque Control with easy operation and high workability.  
Breaks ground for the future of Torque Control Tools by pursuing the highest quality for functionality, operability, visibility and design.

KTC has aimed for an environment in which "everybody can conduct torque control freely" in any maintenance context or manufacturing site. Eliminates individual difference of fastening bolts · nuts, and makes torque control more familiar to realize stable quality and improvement of safety. Also pursues high quality and cost performance at the same time to bring to everyone who needs it. Apply torque control to every manufacturing site for a promise of Safety · Security · Quality.



## Bring Safety called Torque Control to All People

Advanced Digital Torque Tool "Digital Ratchet" (GWE3-060 ~ GWE4-200)



### STANDARD TYPE

#### Advanced Digital Torque Tool "Digital Ratchet" fixed grip type

Power sensor built-in fixed grip is adopted.  
Higher accuracy torque measurement becomes possible regardless of work-posture and proficiency level.

## MEMORQ

### Advanced Digital Torque Tool Digital Ratchet [MemorQ]

New Torque Measurement History Automatic "Record · Control" tool is added to Digital Ratchet. Evolved from torque control tool to torque management system.



## SCREWDRIVER TYPE

### Advanced Digital Torque Tool "Digital Ratchet screwdriver type"

Measurement of minimal torque is possible with the screwdriver type torque measuring tool which is the first one in the Digital Ratchet series. Various bits as well as Cross bits can be used.



## INTERCHANGEABLE HEAD TYPE

### Advanced Digital Torque Tool "Head Replaceable Type Digital Ratchet"

Head Replaceable Type with wide selection of Ratchet Head, Ratchet Offset Wrench, Hex-Key Wrench and Brake Tool. Usable range is expanded greatly.



## ADJUSTABLE HEAD TYPE

### Advanced Digital Torque Tool "Digital Ratchet Adjustable Wrench Type"

Adjustable wrench head is mounted instead of ratchet head. Torque measurement at part where ratchet head could not be used.





# Continuous evolution toward new dimensions.

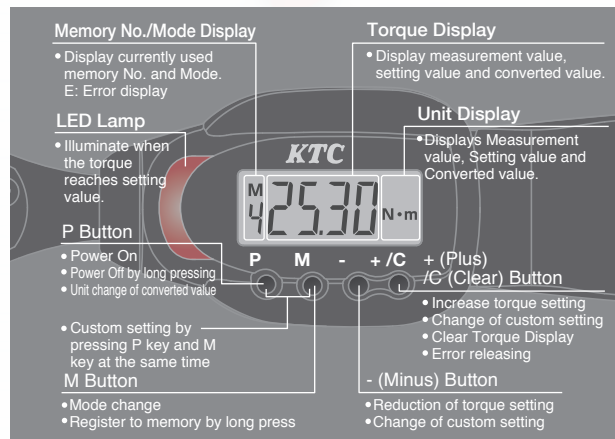
Evolution of Digital Ratchet never stops providing Safety · Security · Quality named torque control to all working scenes.



## PRODUCT DESCRIPTIONS

### Satisfy International Standards (ISO) with Professional Torque Measurement Function

Measurement accuracy satisfies ISO requirement ( $\pm 4\%$ ). Large size LED Lamp is adopted to make lighting easily confirmed from positions difficult to see the display. As well, new functions are added to support diverse contexts like customizing measurement mode and display mode. Apply torque control to every manufacturing site for a promise of Safety · Security · Quality.

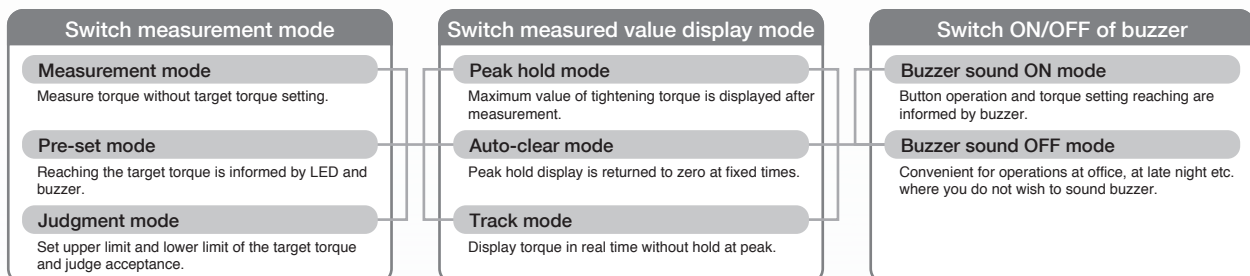


### Power sensor built-in fixed grip

Mounted sensor detects operation load applied to the grip correctly and analyzes. Higher accuracy torque measurement became possible regardless of work-posture and proficiency level.



By choosing function and operation conditions, customize Digital Ratchet for yourself. By changing setting according to operation content, usability is increased.



Applicable in diverse contexts through wide head variations.

## STANDARD TYPE

### Digital Ratchet

Ratchet Handle Head is used.  
With unprecedented easiness and high workability  
High accuracy Torque Control is realized.

Advanced Torque Control Tool which is developed with a new idea combined with ratchet handle which is used by many for wide usages at maintenance sites, digital display with which torque check is easily conducted, and power sensor built-in fixed grip using cutting-edge sensor technology. High accuracy torque measurement is made possible regardless of work posture and proficiency level.



Ratchet Head with comfortable operability adopted with "Union mechanism", "integrated claw" and "36 teeth gear."

\*Socket is required at use.

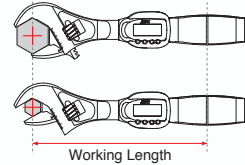
## ADJUSTABLE HEAD TYPE

### Digital Ratchet Adjustable Wrench Type

By adopting a newly developed adjustable head, support operation scenes in which socket wrenches cannot be used.

Adjustable Wrench Type where the Adjustable Wrench Head is mounted on a handle with Power Sensor. Exerts power in various scenes where operation with Ratchet type was difficult. Adjustable wrench head has a dedicated shape in which center position of bolt · nut is not changed even if the mouth opening dimensions changes. Since the distance between force point and rotation axis is not changed even if the size is, more accurate torque measurement is possible\*.

\*Torque is expressed by [distance from rotating axis to force point] x [applied force at force point]. Depending on size of bolt · nut distance from rotating axis to force point varies and correct torque measurement cannot be made.



Working length(from rotational axis of the bolt to the force applied point) hardly changes even if the opening width changes, which enables high accuracy measurement.

## INTERCHANGEABLE HEAD TYPE

### Interchangeable Head Type Digital Ratchet

With various replacement heads supporting diverse operation scenes.

Head replaceable type Digital Ratchet which can be used practically in diverse contexts by combining with various replacement heads. Various replacement heads are prepared, like ratchet head, ratchet offset wrench, Hex-Key wrench, break tool etc. Applicable range of torque control is expanded greatly.



By using replacement heads, it can support various operation scenes. Also, by adopting KTC's original Union mechanism\*, replacement parts are held surely, and unexpected fall-off of parts is prevented.

\*Union mechanism requires button operation at assembling and disassembling.

## SCREWDRIVER TYPE

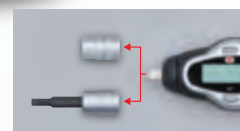
### Digital Ratchet Screwdriver Type

Screwdriver type supporting minimal torque.  
3 types are lined up to meet operation scenes.

Measurement of minimal torque is possible with the screwdriver type torque measuring tool which is the first one in the Digital Ratchet series. Supports diverse operation contexts which require minimal torque measurement · control like electrical facilities, electric circuit board operation, replacing cutter chips, mounting resin · aluminum parts etc. Since tip bits are magnetic attraction type, various bits can be used. After removing adapter socket, 1/4"sq. sockets and bit sockets can be used.



1/4"sq. bits can be adapted.



Adaptor can also serves 1/4"sq. Socket wrenches & Bit Sockets.

# From Torque Control to Operation Management Solutions

Digital Ratchet, developed under the concept of "Bring the Safety called Torque Control to All People" has evolved further. From "Control Torque" to "Quality Assurance" and "Safety Management" by Integrated Work Managing System.

## DIGITAL RATCHET [MEMORQ]



"Record · Control" measurement results

### Main functions

#### High accuracy torque measurement

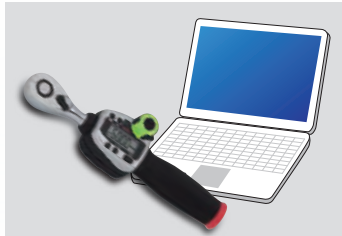
Quick and sure high accuracy torque measurement is realized.



More accurate torque measurement is realized regardless of work posture and working skill of operators by adopting power sensor built-in fixed grip.

#### Measurement result record · Output

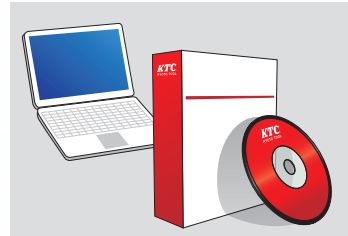
Record and data output of measurement result data is possible.



Measurement data can be recorded automatically and the data can be sent to related software. It is possible to utilize for a wide range of management.

#### Software · Customize

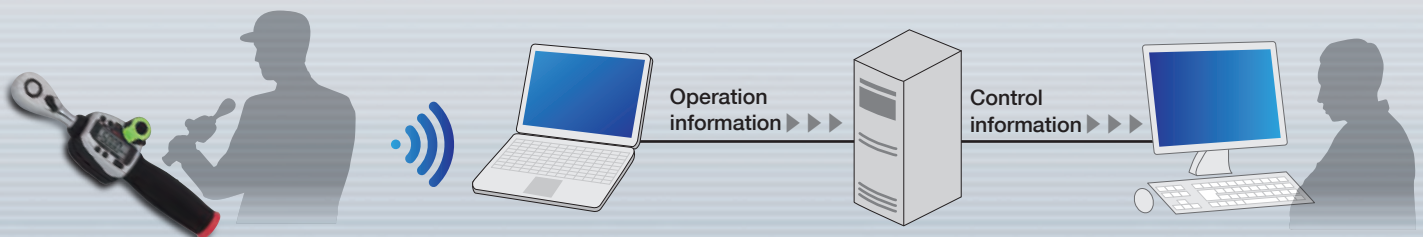
Control system can be customized according to needs.



As well as torque setting for each operation target, it also realizes blunder avoidance, tact time control etc. by operation date and time, operation start · completion setting.

"Innovation" at operation process is realized by introducing Digital Ratchet [MemorQ] as an operation record terminal.

### Introduction image



#### Operator

- Operation Start Date and Time
- Operation Torque Value
- Operation Completion Date and Time
- ⇒ Outputs Information in Real-time

#### Monitor for operator

- Operation Manual
- Operation Procedure
- Torque Value etc.

#### Internal Business Management System

- Operation Record
- Quality Record
- Information Analysis etc.

#### Manager

- Operation Status Monitor
- Tact Time Control
- Progress Control
- Preparation Control

**DIGITAL RATCHET [MEMORQ], which keeps operation records surely, changes working conditions at manufacturing sites.**



**Digital Ratchet [MemorQ] creates sure operation control and reliance by clients.**

**Safety can be ensured**

- Screw tightening torque value is **recorded electronically**.
- Operation records like amount of production · operation hours etc. can be controlled.

**Quality Assurance Level is increased.**

- Utilize as **Agreed Guaranty Record** provided to customers.

**Can aim for cost reduction**

- 3-person operations of Fastening · Record · QA can be conducted by **1 operator**
- Function which does not allow proceeding to **the next process until the value becomes acceptance value**



**Operation management solution by Digital Ratchet [MemorQ] at various sites.**

Software customizing of Digital Ratchet [MemorQ] makes it possible to support various operation contexts flexibly. Bringing "innovation" to many production and maintenance sites.



**Manufacturing line of products**

Supports various production lines with various head variations of ratchet head, adjustable head and head replaceable type. Effective especially at cell production lines and etc.



**Operation at assembling site**

Needs to record operation history at assembling and construction are increasing, especially at important fastening parts (layered structure parts) and hidden parts.



**Maintenance · Check**

Not only checking marks, but recording data prevents skipping of checking and correctness of operation is increased. And more, implementation of operation is guaranteed.



**Wheel nuts for tires**

There are many accidents caused by breaking of wheel bolts of large vehicles. Most of the causes are overtightening of nuts. Safety can be provided by tightening with appropriate torque.

# TOOL SETS

## 1. TOOL SETS

TOOL SETS



**CAUTION TOOL SETS**

- READ THE INSTRUCTION MANUAL REGARDING THE TOOLS CONTAINED AND THE CASE. BEFORE USING
- LOCK THE COVER AND DRAWERS WHEN MOVING.

**● HIGH MECHANIC TOOL SET**

HIGH MECHANIC TOOL SET

The SK8600A High Mechanic Tool Set is the most comprehensive in the KTC TOOL SET series and contains a wide assortment of tools to suit the most discerning tradesman.

**■ Main Contents**

- 1/4"~1/2"sq. tool
- TORX® Wrench (T-Type, E-Type)
- Hex. Wrench
- Box End Wrench
- Open End Wrench
- Combination Wrench
- Adjustable Wrench
- Pipe Wrench
- Hammer
- T-Shaped Wrench
- Snap Ring Pliers
- Pliers and Bolt Clippers
- Screwdriver
- Scraper
- Vernier Caliper
- Other Tools, Conventional
- Tools and Automotive Special Tools



\* Photograph is an image. There are tools that are not reflected in the photograph.



<b>No. SK8600AR</b>	
Total 431 pcs.	▼kg 179 ☞ 1 (6 Cartons)
• SK8600A-T1	Tools × 1
• SK8600A-T2	Tools × 1
• SK8600A-T3	Tools × 1
• SK8600A-T4	Tools × 1
• EKR-1004R	Chest × 1
• EKW-1007R	Roller Cabinet × 1



<b>No. SK8600ABK</b>	
Total 431 pcs.	▼kg 179 ☞ 1 (6 Cartons)
• SK8600A-T1	Tools × 1
• SK8600A-T2	Tools × 1
• SK8600A-T3	Tools × 1
• SK8600A-T4	Tools × 1
• EKR-1004BK	Chest × 1
• EKW-1007BK	Roller Cabinet × 1

\*Please check the merchandise inventory for a product that is marked by before placing an order.

●HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET

No. SK8600A	
Total 431 pcs.	▼kg 179 ☒ 1 (6 Cartons)
• SK8600A - T1 Tools	x1
• SK8600A - T2 Tools	x1
• SK8600A - T3 Tools	x1
• SK8600A - T4 Tools	x1
• EKR-1004 Chest	x1
• EKW-1007 Roller Cabinet	x1
Contents	
1/4"sq.Socket Wrench Set	TB2X20B
1/4"sq.Deep Socket (6pt.)	B2L-06, 07, 08, 09, 10, 11, 12, 13, 14
1/4"sq.T-Type TORX® Wrench	BT2-T10, T15, T20, T25, T27
1/4"sq.Wobble Extension Bar	BE2-050JW, 075JW
1/4"sq.Universal Joint	BJ2
3/8"sq.Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
3/8"sq.Socket (12pt.)	B3-08W, 10W, 12W, 13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W
3/8"sq.Socket (6pt.)	B3-1/4, 9/32, 5/16, 3/8, 7/16
3/8"sq.Socket (12pt.)	B3-1/2W, 17/32W, 9/16W, 19/32W, 5/8W, 21/32W, 3/4W, 13/16W, 7/8W
3/8"sq.Deep Socket (6pt.)	B3L-055, 07, 08, 09, 10, 12, 13, 14, 17, 19
3/8"sq.Spark Plug Wrench	B3A-13P, 14SP, 16SP, 18P, 20.8P
3/8"sq.Long Hex. Wrench	BT3-05, 06, 08, 10
3/8"sq.Hex. Wrench	BT3-6M, 2P
3/8"sq.E-Type TORX® Wrench	B3-E10, E12
3/8"sq.T-Type TORX® Wrench	BT3-T30S, T40S, T45S, T50S
3/8"sq.T-Type Long TORX® Wrench	BT3-T25L, T30L, T40L, T45L, T50L
3/8"sq.Socket Holder	EHB305 (1 piece), EHB310 (8 pieces)
3/8"sq.Ratchet Handle	BR3E, BRG3, BR3F
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-030, 050, 075, 150, 200, 270
3/8"sq.Flexible Extension Bar	BES21-200
3/8"sq.Wobble Extension Bar	BE3-030JW, 050JW, 075JW, 150JW, 270JW
3/8"sq.Universal Joint	BJ3
1/2"sq.Socket (6pt.)	B4-08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 32
1/2"sq.Socket (12pt.)	B4-08W, 10W, 12W, 13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W, 25W, 26W, 27W, 28W, 29W, 30W, 31W, 32W
1/2"sq.Deep Socket (6pt.)	B4L-08, 10, 12, 13, 14, 17, 19, 21, 22, 24
1/2"sq.Hex Wrench	BT4-05, 06, 08, 10, 12, 14
1/2"sq.Socket Holder	EHB405 (1 piece), EHB410 (6 pieces)
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Spinner Handle	BS4E
1/2"sq.Extension Bar	BE4-075, 150, 270
1/2"sq.Stud Bolt Remover Set	BSR354
1/2"sq.Universal Joint	BJ4
Adaptor	BA23, BA32, BA34, BA43
45° x 6° Long Box End Wrench	M5-0607, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427
45° Short Box End Wrench	M5S-0708, 0810, 1012, 1113, 1214, 1417
15° Long Box End Wrench Set	M1513 (M151-10x12, 12x14, 14x17)
Flat Type Long Box End Wrench Set	M1505 (M150-8x10, 10x12, 11x13, 12x14, 14x17)
Flat Type Short Box End Wrench Set	M1004 (M100-7x8, 10x12, 12x14, 14x17)
Hex. Box End Wrench Set (6pt.)	M274 (M27-8H, 10H, 12H, 14H)
Double-Flex Ratchet Box End Wrench	MR1A-0810F, 1012F, 1214F, 1315F, 1417F
Short Ratchet Box End Wrench Set	MR1S-0810F, 1012F, 1113F, 1214F, 1315F, 1417F
Insert Changeable Flat Ratchet Screwdriver	RM22
Standard Combination Wrench	MS2-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27
Standard Combination Wrench	MS2-1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16

Open End Wrench	S2-0607, 0708, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2123, 2224, 2326, 2427
Profit Tool Open End Wrench	S30-10, 12, 13, 14, 17, 19
Profit Tool Box End Wrench	M30-10, 12, 13, 14, 17, 19
Slim Type Open End Wrench Set	S206 (S20-10x12, 12x10, 12x14, 14x12, 17x19, 19x17)
Adjustable Wrench	WM-150, 200, 250, 300
Pipe Wrench	PWA-150, 250, 350
Hammer	PH45-323
Plastic Hammer	K9-6
T-Shaped Wrench With Short Handle	TH-8N, 10N, 12N
Pliers	PJ-150, 200, 250
Heavy Duty Waterpump Pliers	WPD1-250
Internal Snap Ring Pliers	SCP-171
Bent Internal Snap Ring Pliers	SCP-172L
External Snap Ring Pliers	SOP-171
Flat Type External Snap Ring Pliers	SOP-173
Side Cutting Pliers (Coated Handle)	SPD-175C, 200C
Needle Nose Pliers	PSL-150
Needle Nose Pliers (Bent Nose Type)	PSL-200BN, 200BN1
Diagonal Cutting Pliers	PN1-150, 175
All Purpose Shears	AP-175
Impact Screwdriver Set	SD6
Palm Screwdriver Set (Flat · Cross)	MDEA-75, 100, 150, PDEA-1, 2, 3
Palm Screwdriver (Flat · Cross)	MDEA-M, PDEA-P
Plastic Grip Screwdriver Set (Flat · Cross)	D1M2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2
Stubby Screwdriver (Flat · Cross)	SD3-M, P
Short Stubby Screwdriver (Cross)	SD4-P
Heavy Duty Screwdriver (Flat · Cross)	FD-250, FPD-250
Magnetic Pick-Up Tool	VL2-HD
Rolling Wedge Bar	LZ1-450
Flex T-Shaped Spark Plug Wrench	PHF-16H
High Grade L-Shaped Long Ball Point Hex.-Key Wrench Set	HLD2509 (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Locking Pliers	250CR, 150LN
Carburetor Screwdriver Set	CDZ-165
Plastic Grip Long Screwdriver	MDDZ-400, PDDZ-2
Thickness Gauge	TGZ-1818
Vernier Caliper	GMN-20
Knock Pin Punch	PK8 (2, 3, 4, 4.5, 5, 6, 7, 8)
Hub Cap Pliers	HP-350S
1/2"sq.Aluminum Socket Set For Polished Nut	B35A-17H, 19H, 21H
Brake Shoe Adj. Tool	ABX301, 304
Screwdriver For Brake Drum Screw	AB-5
Flare Nut Wrench	MZ10-10x12
Disc-brake Spreader	AB-10
Clip Clamp Tool	AP203-6A, 10A
Stainless Scraper	KZ1-22, 30
Sticker Scraper DX	KZSS-25

\*The numbers of contents are not including holders.

- Chest EKR-1004 (W725xD390xH410)
- Roller Cabinet EKW-1007 (W740xD470xH910)

➔ The cases are listed on P.331 & P.335.



● HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET



EKW-1007R



EKW-1007BK

**No. SK8300A**

Total 212 pcs.	▼kg 109	☞ 1 (3 Cartons)
• SK8600A - T1 Tools	x1	
• SK8600A - T2 Tools	x1	
• EKW-1007 Roller Cabinet	x1	

**No. SK8300AR**

Total 212 pcs.	▼kg 109	☞ 1 (3 Cartons)
• SK8600A - T1 Tools	x1	
• SK8600A - T2 Tools	x1	
• EKW-1007R Roller Cabinet	x1	

**No. SK8300ABK**

Total 212 pcs.	▼kg 109	☞ 1 (3 Cartons)
• SK8600A - T1 Tools	x1	
• SK8600A - T2 Tools	x1	
• EKW-1007BK Roller Cabinet	x1	

**Contents**

1/4"sq.Socket Wrench Set	TB2X20B
3/8"sq.Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
3/8"sq.Socket (6pt.)	B3-1/4, 9/32, 5/16, 3/8, 7/16
3/8"sq.Socket (12pt.)	B3-1/2w, 17/32w, 19/32w, 5/8w, 21/32w, 3/4w, 13/16w, 7/8w
3/8"sq.Deep Socket (6pt.)	B3L-08, 10, 12, 13, 14, 17, 19
3/8"sq.Spark Plug Wrench	B3A-13P, 14SP, 16SP, 18P, 20.8P
3/8"sq.Hex. Bit Socket	BT3-05, 06, 08, 10
3/8"sq.Cross. Flat Bit Socket	BT3-6M, 2P
3/8"sq.E-Type TORX® Wrench	B3-E10, E12
3/8"sq.T-Type Short TORX® Bit Socket	BT3-T30S, T40S, T45S, T50S
3/8"sq.Socket Holder	EHB305 (1 piece), EHB310 (5 pieces)
3/8"sq.Ratchet Handle	BR3E, BR3F
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-050, 075, 150, 270
3/8"sq.Wobble Extension Bar	BE3-075JW, 150JW
3/8"sq.Universal Joint	BJ3
1/2"sq.Socket (6pt.)	B4-08, 09, 10, 11, 12, 13, 14, 17, 19, 21, 22, 23, 24, 26, 27, 29, 30, 32
1/2"sq.Socket Holder	EHB405 (1 piece), EHB410 (2 pieces)
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Spinner Handle	BS4E
1/2"sq.Extension Bar	BE4-075, 150, 270

Adaptor	POWERFIT	BA32, BA43
45° x 10° Long Box End Wrench	POWERFIT	M5-0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427
45° x 6° Short Offset Wrench	POWERFIT	M5S-0708, 1012, 1417
Standard Combination Wrench	POWERFIT	MS2-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22, 24
Open End Wrench	POWERFIT	S2-0607, 0708, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427
Adjustable Wrench		WM-250, 300
Pipe Wrench		PWA-350
Hammer		PH45-323
Plastic Hammer		K9-6
T-Shaped Wrench with Short Handle		TH-8N, 10N, 12N
Combination Pliers (Soft Grip)		PJ1-50, 200
Heavy Duty Waterpump Pliers		WPD1-250
Internal Snap Ring Pliers		SCP-171
External Snap Ring Pliers		SOP-171
Side Cutting Pliers (Coated Handle)		SPD-200C
Needle Nose Pliers		PSL-150
Needle Bent Nose Pliers		PSL-200BN
Diagonal Cutting Pliers		PN1-150
Plastic Grip Screwdriver (Flat · Cross)		D1M2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat · Cross)		D1MS-6, D1PS-2
Plastic Grip Long Screwdriver (Flat · Cross)		MDDZ-400, PDDZ-2
Insert Changeable Flat Ratchet Screwdriver		RM22
Sticker Scraper DX		KZSS-25
Heavy Duty Screwdriver		FD-250, FPD-250
High Grade L-Shaped Long Ball Point Hex.-Key Wrench		HLD2509 (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Locking Pliers		250CR, 150LN
Flare Nut Wrench		MZ10-10x12

• Set of various tools in wide range with Roller Cabinet (W740xD470xH910) for efficient operation.

\*The numbers of contents are not including holders.

☞ The case is listed on P.335.



●HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET



EKR-1004R



EKR-1004BK

\* Photograph is an image. There are tools that are not reflected in the photograph.

**No. SK8100A**

Total 140 pcs.	▼kg 57	☞ 1 (2 Cartons)
• SK8600A-T1	Tools	x1
• EKR-1004	Chest	x1

**No. SK8100AR**

Total 140 pcs.	▼kg 57	☞ 1 (2 Cartons)
• SK8600A-T1	Tools	x1
• EKR-1004R	Chest	x1

**No. SK8100ABK**

Total 140 pcs.	▼kg 57	☞ 1 (2 Cartons)
• SK8600A-T1	Tools	x1
• EKR-1004BK	Chest	x1

**Contents**

1/4"sq.Socket Wrench Set	TB2X20B
3/8"sq.Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
3/8"sq.Deep Socket (6pt.)	B3L-08, 10, 12, 13, 14, 17, 19
3/8"sq.Spark Plug Wrench	B3A-13P, 14SP, 16SP, 18P, 20.8P
3/8"sq.Hex. Bit Socket	BT3-05, 06, 08, 10
3/8"sq.Cross. Flat Bit Socket	BT3-6M, 2P
3/8"sq.E-Type TORX® Wrench	B3-E10, E12
3/8"sq.T-Type Short TORX® Bit Socket	BT3-T30S, T40S, T45S, T50S
3/8"sq.Socket Holder	EHB305 (1 piece), EHB310 (3 pieces)
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-050, 075, 150
3/8"sq.Wobble Extension Bar	BE3-075JW, 150JW
3/8"sq.Universal Joint	BJ3
Adaptor	BA32
45° × 10° Long Box End Wrench	M5-0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Standard Combination Wrench	MS2-08, 10, 12, 13, 14, 17, 19, 21, 22, 24,
Open End Wrench	S2-0607, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Adjustable Wrench	WM-250, 300
Pipe Wrench	PWA-350
Ball-Peen Hammer	PH45-323
Combination Pliers (Soft Grip)	PJ-200
Heavy Duty Waterpump Pliers	WPD1-250

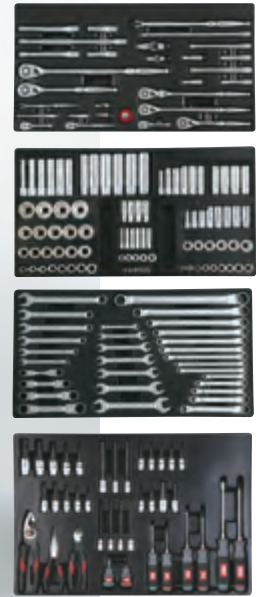
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Side Cutting Pliers (Coated Handle)	SPD-200C
Needle Nose Pliers	PSL-150
Needle Bent Nose Pliers	PSL-200BN
Diagonal Cutting Pliers	PN1-150
Plastic Grip Screwdriver (Flat · Cross)	DM2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat · Cross)	D1MS-6, D1PS-2
Plastic Grip Screwdriver (Flat · Cross)	MDDZ-400, PDDZ-2
Heavy Duty Screwdriver (Flat · Cross)	FD-250, FPD-250
T-Shaped Wrench with Short Handle	TH-8N, 10N, 12N
Locking Pliers	250CR, 150LN
Flare Nut Wrench	MZ10-10x12
Sticker Scraper DX.	KZSS-25

- This set comes with an EKR-1004 series chest (W725xD390xH410).
  - This durable case is a 4-drawer type with plenty of storage capacity, and it is easy to use.
  - A number of practical types and sizes are included in the set.
  - It is good for a wide range of vehicle servicing from car inspection to heavy machinery servicing.
- \*The numbers of contents are not including holders.
- ☛ The case is listed on P.331.

ROLLER CABINET SET

ROLLER CABINET SET

SK8038EX is a tool set with extensive items in the next-generation roller cabinet "EKX-118" that's developed based on the study of mechanical movement and in pursuit of work efficiency and safety.



Tray Stored State



Paper is not included in the set.

\* Photograph is an image. There are tools that are not reflected in the photograph.  
 \* There are products that cannot be stored in the tray.  
 \* EKX-118 (W740xD540xH1230)

<b>No. SK8038EX</b>		
Total 220 pcs.	▼kg 145	☑ 1 (4 Cartons)
• SK8038EX-T1	Tools × 1	
• SK8038EX-T2	Tools × 1	
• SK8038EX-T3	Tray (set of 4) × 1	
• EKX-118	Roller Cabinet × 1	

Contents		
1/4"sq. Socket (6pt.)	POWERFIT	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14
1/4"sq. Deep Socket (6pt.)	POWERFIT	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14
1/4"sq. Extension Bar	POWERFIT	BE2-050, 100
1/4"sq. Wobble Extension Bar	POWERFIT	BE2-030JW
1/4"sq. Universal Joint	POWERFIT	BJ2
1/4"sq. Ratchet Handle	POWERFIT	BR2E
1/4"sq. Short Ratchet Handle	POWERFIT	BR2S
1/4"sq. Spinner Handle	POWERFIT	BS2E
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 13, 14, 15, 16, 17, 18, 19
3/8"sq. Semi-Deep Socket (6pt.)	POWERFIT	B3M-08, 10, 12, 13, 14, 15, 16, 17
3/8"sq. Hex. Bit Socket	POWERFIT	BT3-04, 05, 06, 07, 08, 10, 12
3/8"sq. Long Hex. Bit Socket	POWERFIT	BT3-04L, 05L, 06L, 07L, 08L, 10L, 12L
3/8"sq. Cross-Flat Bit Socket	POWERFIT	BT3-6M, 2P
3/8"sq. T-Type Torx Bit Socket	POWERFIT	BT3-T20, T25, T27, T30, T40
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150, 270
3/8"sq. Wobble Extension Bar	POWERFIT	BE3-050JW, 075JW, 150JW
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Universal Joint	POWERFIT	BJ3
3/8"sq. Ratchet Handle	POWERFIT	BR3E
3/8"sq. Flex Long Ratchet Handle	POWERFIT	BR3FL
3/8"sq. Long Ratchet Handle	POWERFIT	BR3L
3/8"sq. Compact Short Ratchet Handle	POWERFIT	BRC3S
3/8"sq. Spinner Handle	POWERFIT	BS3E
3/8"sq. T-Shaped Handle	POWERFIT	TH20
3/8"sq. Digital Ratchet	POWERFIT	GEK060-R3, GEK085-R3
1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
1/2"sq. Socket (12pt.)	POWERFIT	B4-22W, 23W, 24W, 25W, 26W, 27W, 28W, 29W, 30W, 31W, 32W

1/2"sq. Deep Socket (6pt.)	POWERFIT	B4L-10, 12, 13, 14, 15, 16, 17, 19, 21
1/2"sq. Deep Socket (12pt.)	POWERFIT	B4L-22W, 23W, 24W
1/2"sq. T-Type Torx Bit Socket	POWERFIT	BT4-T45, T50, T55, T60, T70
1/2"sq. Extension Bar	POWERFIT	BE4-075, 150, 270
1/2"sq. Wobble Extension Bar	POWERFIT	BE4-075JW, 150JW
1/2"sq. Universal Joint	POWERFIT	BJ4
1/2"sq. Ratchet Handle	POWERFIT	BR4E
1/2"sq. Long Ratchet Handle	POWERFIT	BR4L
1/2"sq. Spinner Handle	POWERFIT	BS4E
1/2"sq. Digital Ratchet	POWERFIT	GEK135-R4
Offset Wrench (45° × 6° Long)	POWERFIT	M5-0809, 0810, 1012, 1113, 1214, 1315, 1417, 1719, 2224
Offset Wrench (45° × 6° Short)	POWERFIT	M5S-0810, 1012, 1113, 1214, 1417
Flat Type Extra-Long Box End Wrench	POWERFIT	M160-10X12, 14X17, 22X24
Short Double-Flex Ratchet Box End Wrench	POWERFIT	MR1S-0810F, 1012F, 1214F, 1417F
Extra-long Ratchet Box End Wrench (Flex type)	POWERFIT	MR15L-12F, 14F, 17F, 19F
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Open End Wrench	POWERFIT	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719
Adjustable Wrench	POWERFIT	WM-250, 300
T-Shaped Wrench	POWERFIT	TH-8, 10, 12, 14
High-Grade Ball Point	POWERFIT	HLD2509
L-Shaped Long Hex-Key Wrench Set (9 pcs.)	POWERFIT	(1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Pliers (with Soft Grip)	POWERFIT	PJ-200
Diagonal Cutting Pliers	POWERFIT	PN1-150
Needle Nose Pliers	POWERFIT	PSL-150
Plastic Grip Screwdriver Set (Flat•Cross)	POWERFIT	D1M2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat•Cross)	POWERFIT	D1MS-6, D1PS-2
Plastic Grip Long Screw Driver Set (Flat•Cross)	POWERFIT	D1M2-630, D1P2-230
Ball-Peen Hammer	POWERFIT	PH45-323
Plastic Hammer	POWERFIT	UD8-10
Magnetic Parts Tray	POWERFIT	YKPT-RM, SM
Magnetic Paper Holder	POWERFIT	YKHD-RPM
Wrench Holder for T-Shaped Wrench	POWERFIT	YKHD-5TM

☑ The case is listed on P.336.

\* Digital Ratchet is a registered trademark of KYOTO TOOL.

TOOL SET

TOOL SET



<b>No. SK3650EZ</b>		
<b>Total</b> 66 pcs.	▼kg 21	☞ 1 (2 Cartons)
• SK3650ET	Tools x 1	
• EKR-113	Chest x 1	

Contents		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq. Short Hex. Bit Socket	POWERFIT	BT3-05S, 06S, 08S, 10S,
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq. Universal Joint		BJ3
Box End Wrench (45° x 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM
Tray (set of 3)		SK36810ET2

- ☑ The case is listed on P.332.
- It is a set with extensive tools in the chest EKR-113 (W540xD280xH335). New layout that's born in the pursuit of work efficiency is adopted for the included tray.
- Useful accessories can be installed on EKR-113. ☑ P.333
- \* Top cover of the chest cannot be closed while the parts tray is attached.

<b>No. SK4580EZ</b>		
<b>Total</b> 59 pcs.	▼kg 21	☞ 1 (2 Cartons)
• SK4580ET	Tools x 1	
• EKR-113	Chest x 1	

Set Contents		
1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24, 27
1/2"sq. Ratchet Handle		BR4E
1/2"sq. Spinner Handle		BS4E
1/2"sq. Quick Spinner	POWERFIT	BE4-Q
1/2"sq. Extension Bar	POWERFIT	BE4-075, 150
1/2"sq. Universal Joint		BJ4
Box End Wrench (45° x 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM
Nail and Hand Brush		YTHB-100
Tray (set of 3)		SK46110ET2

- ☑ The case is listed on P.332.
- It is a set with extensive tools in the chest EKR-113 (W540xD280xH335). New layout that's born in the pursuit of work efficiency is adopted for the included tray.
- Useful accessories can be installed on EKR-113. ☑ P.333
- \* Top cover of the chest cannot be closed while the parts tray is attached.

TOOL SET

TOOL SET



<b>No. SK3650E</b>		
<b>Total 66 pcs.</b>	▼kg 21	☞ 1 (2 Cartons)
• SK3650ET	Tools x 1	
• EKR-103	Chest x 1	

Contents		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq. Short Hex. Bit Socket	POWERFIT	BT3-05S, 06S, 08S, 10S,
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq. Universal Joint		BJ3
Box End Wrench (45° x 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM
Tray (set of 3)		SK36810ET2

- ☑ The case is listed on P.332.
- It is a set with extensive tools in the chest EKR-103 (W510xD275xH325). New layout that's born in the pursuit of work efficiency is adopted for the included tray.
- Useful accessories can be installed on EKR-103. ☑ P.333
- \* Top cover of the chest cannot be closed while the parts tray is attached.

<b>No. SK4580E</b>		
<b>Total 59 pcs.</b>	▼kg 21	☞ 1 (2 Cartons)
• SK4580ET	Tools x 1	
• EKR-103	Chest x 1	

Contents		
1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24, 27
1/2"sq. Ratchet Handle		BR4E
1/2"sq. Spinner Handle		BS4E
1/2"sq. Quick Spinner	POWERFIT	BE4-Q
1/2"sq. Extension Bar	POWERFIT	BE4-075, 150
1/2"sq. Universal Joint		BJ4
Box End Wrench (45° x 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM
Nail and Hand Brush		YTHB-100
Tray (set of 3)		SK46110ET2

- ☑ The case is listed on P.332.
- It is a set with extensive tools in the chest EKR-103 (W510xD275xH325). New layout that's born in the pursuit of work efficiency is adopted for the included tray.
- Useful accessories can be installed on EKR-103. ☑ P.333
- \* Top cover of the chest cannot be closed while the parts tray is attached.

TOOL STATION® SET

TOOL STATION® SET



SK3486T



SKR703A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions · with key



SKR602A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions



SKR502A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions



\* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

3/8" sq.

No. SK7006

Total 48 pcs. ▼kg 45.5 ☒ 1 (2 Cartons)  
• SK3486T Tools x1  
• SKR703A Tool Station x1<with key>

- Tool Station is designed for a new servicing environment. (Movable 3 drawer type with shutters)
- 3/8"sq. Socket wrenches and Drive tools.

3/8" sq.

No. SK6006

Total 48 pcs. ▼kg 36.5 ☒ 1 (2 Cartons)  
• SK3486T Tools x1  
• SKR602A Tool Station x1

- Tool station for ease of use and better workability (Movable 2 drawer type)
- 3/8"sq. Socket wrenches and Drive tools.

3/8" sq.

No. SK5006

Total 48 pcs. ▼kg 32.5 ☒ 1 (2 Cartons)  
• SK3486T Tools x1  
• SKR502A Tool Station x1

- Basic type Tool Station with improved mobile efficiency. (Fixed 2 drawer type)
- 3/8"sq. Socket wrenches and Drive tools.

Common Items

3/8"sq.Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket (6pt.)	POWERFIT	B3L-10, 12, 14
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
45° x 10° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

1/2" sq.

TOOL STATION® SET

TOOL STATION® SET



SK4476T



SKR703A  
(Tool Station)  
W670×D420×H900  
1 Top Liner · 8 Partitions · with key



SKR602A  
(Tool Station)  
W670×D420×H900  
1 Top Liner · 8 Partitions



SKR502A  
(Tool Station)  
W670×D420×H900  
1 Top Liner · 8 Partitions



\* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

No. SK7016

Total 47 pcs. ▼kg 46 ☞ 1 (2 Cartons)

- SK4476T Tools ×1
- SKR703A Tool Station ×1<with key>
- Tool station is designed for a new servicing environment. (Movable 3 drawer type with shutters)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.

No. SK6016

Total 47 pcs. ▼kg 37 ☞ 1 (2 Cartons)

- SK4476T Tools ×1
- SKR602A Tool Station ×1
- Tool station for ease of use and better workability (Movable 2 drawer type)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.

No. SK5016

Total 47 pcs. ▼kg 33 ☞ 1 (2 Cartons)

- SK4476T Tools ×1
- SKR502A Tool Station ×1
- Basic type Tool Station with improved mobile efficiency. (Fixed 2 drawer type)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.

Common Items

1/2"sq.Socket (6pt.)	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24
1/2"sq.Spark Plug Wrench	POWERFIT	B4A-16P
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Quick Spinner	POWERFIT	BE4-Q
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150
45° × 10° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

● **TOOL STATION® SET (FOR GENERAL MACHINERY MAINTENANCE)**

TOOL STATION® SET



SKR703A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions · with key

<b>No. SK7026M</b>	
Total 52 pcs.	▼kg 46.5    ☞ 1 (2 Cartons)
• SK4510MT	Tools × 1
• SKR703A	Tool Station × 1 <with key>

- The case is listed on P.337.
- Tool station that was born from the new maintenance environment. (Movable 3-stage drawer type · with shutter)
- A set with 1/2"sq. sockets and driving tools.



SKR602A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions

<b>No. SK6026M</b>	
Total 52 pcs.	▼kg 37.5    ☞ 1 (2 Cartons)
• SK4510MT	Tools × 1
• SKR602A	Tool Station × 1

- The case is listed on P.337.
- Tool station with the emphasis on ease of use and workability. (Movable 2-stage drawer type)
- A set with 1/2"sq. sockets and driving tools.

<b>No. SK5026M</b>	
Total 52 pcs.	▼kg 33.5    ☞ 1 (2 Cartons)
• SK4510MT	Tools × 1
• SKR502A	Tool Station × 1

- The case is listed on P.337.
- Basic type tool station with the improved transfer efficiency. (Fixed 2-stage tray type)
- A set with 1/2"sq. sockets and driving tools.



SKR502A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions

Common Set Contents		
1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq. Ratchet Handle		BR4E
1/2"sq. Extension Bar	POWERFIT	BE4-075, 150
1/2"sq. Hex. Bit Socket	POWERFIT	BT4-05, 06, 08, 10, 12
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Box End Wrench (45° x 6° Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Combination Pliers (with Soft Grip)		PJ-200
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers		PSL-150
Pliers		SPD-175C
Combination Hammer		UD6-10
Adjustable Wrench		WM-250
Heavy Duty Waterpump Pliers		WPD1-250
1/2"sq. Socket Holder		EHB410 (2 pcs.)
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

\* Holders are not included in the total.

\* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

3/8" sq.

**● MOTORCYCLE TOOL STATION® SET**

MOTORCYCLE TOOL STATION® SET



**No. SK7006B**

**Total** 80 pcs. **▼kg** 50.5 **☞** 1 (2 Cartons)  
 • SK7006BT Tools x1  
 • SKR703A Tool Station x1<with key>

Contents	
3/8"sq.Socket (6pt.)	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket (6pt.)	B3L-08, 10, 12
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Extension Bar	BE3-150
3/8"sq.Wobble Extension Bar	BE3-075JW
3/8"sq.Hex.Bit Socket	BT3-04, 05, 06, 08, 10
3/8"sq.Cross Bit Wrench	BT3-2P
45° x 6° Long Box End Wrench	M5-0810, 1012, 1417, 1719, 2224
Flat Type Short Box End Wrench	M100-7x8, 10x12, 12x14
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Cross)	D1M2-6, 8
Plastic Grip Screwdriver (Flat)	D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)	FD-250
Soft Grip Screwdriver (Flat)	D7SM-420
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2
Baby Screwdriver (Flat · Cross)	BAD-75, 0
Adjustable Wrench	WM-250
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Ball-Peen Hammer	PH45-323
Plastic Hammer	K9-6
Spark Plug Wrench	B3A-16P, 18P, 20.8P
Nipple Wrench	MCS2-100
Bent Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips For Snap Ring Pliers	SPC5
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
T-Shaped Wrench	TH-8, 10, 12, 14
Set of Small File	TZKF105 (Half, Half Circle, Circle, Angle, Triangle)
Screwdriver For Brake Drum	AB-5
Tension Spring Tool	AB-7
High Class Scraper	KZ3-18A
3/8"sq.Handle	ABX101
Locking Plier-Curved Jaw	7CR
Magnetic Parts Tray	YKPT-RM

• Set of wide range of motorcycle tools with Tool Station.



SKR703A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions · With key

**No. SK6006B**

**Total** 69 pcs. **▼kg** 39.5 **☞** 1 (2 Cartons)  
 • SK6006BT Tools x1  
 • SKR602A Tool Station x1

Contents	
3/8"sq.Socket (6pt.)	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket (6pt.)	B3L-08, 10, 12
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Extension Bar	BE3-150
3/8"sq.Wobble Extension Bar	BE3-075JW
3/8"sq.Hex.Bit Socket	BT3-04, 05, 06, 08, 10
3/8"sq.Cross Bit Wrench	BT3-2P
45° x 6° Long Box End Wrench	M5-0810, 1012, 1417, 1719, 2224
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Flat)	D1M2-6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)	FD-250
Soft Grip Screwdriver (Flat)	D7SM-420
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2
Baby Screwdriver (Flat · Cross)	BAD-75, 0
Adjustable Wrench	WM-250
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Ball-Peen Hammer	PH45-323
Plastic Hammer	K9-6
Spark Plug Wrench	B3A-16P, 18P, 20.8P
Nipple Wrench	MCS2-100
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips for Snap Ring Pliers	SPC5
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
T-Shaped Wrench	TH-8, 10, 12, 14
File Half-Round	FIS-100HM
3/8"sq.Handle	ABX101
Locking Plier-Curved Jaw	7CR

• A motorcycle tool set included in Tool Station.



SKR602A  
(Tool Station)  
W670xD420xH900  
1 Top Liner · 8 Partitions

\*Please check the merchandise inventory for a product that is marked by before placing an order.



MECHANIC DESK SET

MECHANIC DESK SET

EASY BUGGY TOOL SET



3/8" sq. 1/2" sq.

No. SK200A

Total 77 pcs. ▼kg 65 ☒ 1 (2 Cartons)  
 • SK200AT Tools x1  
 • SK200-M Mechanic Desk Case x1

Contents

3/8"sq.Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14
3/8"sq.Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14, 17
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP, 20.8P
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Universal Joint		BJ3
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
1/2"sq.Socket (6pt.)	POWERFIT	B4-14, 17, 19, 21, 22, 24, 26, 27, 30, 32
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Spinner Handle		BS4E
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150
Adaptor	POWERFIT	BA43
45° x 6" Long Box End Wrench	POWERFIT	M5-1012, 1113, 1214, 1417, 1921, 2224
45° Short Box End Wrench	POWERFIT	M5S-0810, 1012, 1214
Open End Wrench		S2-05507, 0810, 1012, 1113 1214, 1417, 1719
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)		FD-250
Plastic Grip Stubby Screwdriver		D1MS-6, D1PS-2
Baby Screwdriver (Flat · Cross)		BAD-75, 0
Plastic Grip Long Screwdriver (Flat)		MDDZ-400
Plastic Grip Long Screwdriver (Cross)		PDDZ-2
Adjustable Wrench		WM-300
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Heavy Duty Waterpump Pliers		WPD1-250
Combination Hammer		UD7-10
Stainless Scraper		KZ1-22
Sticker Scraper DX		KZSS-25
Sticker Scraper DX Spare Blade		KZS-2510 (10 pcs.)
File Half-Round & Round		FIS-100HM, 100M
Rolling Wedge Bar		LZ1-450
Flare Nut Wrench		MZ1-10x12
Thickness Gauge Set (18 pcs.)		TGZ-1818
Screwdriver For Brake Drum Screw		AB-5
Magnetic Pick-Up Tool		VL2-HD

- The content includes everything needed for automobile servicing.
- A useful tray is housed inside. (only in the top drawer)



SK200-M  
(Mechanical Desk Case)  
W575xD485xH880

SK200A Tray Stored State



\* Mechadesk is a registered trademark of Kyoto Tool Co., Ltd.

\*Please check the merchandise inventory for a product that is marked with before placing an order.



# TRUCK MECHANIC TOOL SET

# TRUCK MECHANIC TOOL SET

TOOL SETS



## No. SK300A

Total 52 pcs. ▼kg 54 ☞ 1 (2 Cartons)

- SK300AT Tools x1
- SK300-M Work Truck Case x1

### Contents

1/2"sq.Socket (6pt.) (12pt.)	POWERFIT®	B4-08, 10, 12, 13, 14, 17, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq.Deep Socket (6pt.)	POWERFIT®	B4L-10, 12, 14, 17
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Extension Bar	POWERFIT®	BE4-075, 150
1/2"sq.Spinner Handle		BS4E
45° × 10° Long Box End Wrench	POWERFIT®	M5-0810, 1012, 1214, 1417, 1921, 2224, 2427
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417, 1719, 2224, 2427
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)		FD-250
Stubby Screwdriver (Flat · Cross)		D1MS-6, D1PS-2
Adjustable Wrench		WM-200, 300
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Side Cutting Pliers (Coated Handle)		SPD-200C
Ball-Peen Hammer		PH68-344
Stainless Scraper		KZ1-22

- This is a set with case suitable for servicing large vehicles.
- The case has been developed with an emphasis on storage and ease of use.



## No. SK302

Total 57 pcs. ▼kg 58 ☞ 1 (2 Cartons)

- SK302T Tools x1
- SK300-M Work Truck Case x1

### Contents

1/2"sq.Socket (6pt.) (12pt.)	POWERFIT®	B4-08, 10, 12, 13, 14, 17, 19W, 22W, 24W, 27W
1/2"sq.Deep Socket (6pt.)	POWERFIT®	B4L-10, 12, 14, 17
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Extension Bar	POWERFIT®	BE4-075, 150
1/2"sq.Spinner Handle		BS4E
3/4"sq.Socket		B40-30, 32, 36, 38, 41
3/4"sq.Ratchet Handle		BR6A
3/4"sq.Extension Bar		BE40-200
45° × 6° Long Box End Wrench	POWERFIT®	M5-0810, 1012, 1214, 1417, 1921, 2224, 2427
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417, 1719, 2224, 2427
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)		FD-250
Stubby Screwdriver (Flat · Cross)		D1MS-6, D1PS-2
Adjustable Wrench		WM-200, 300
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Side Cutting Pliers (Coated Handle)		SPD-200C
Ball-Peen Hammer		PH68-344
Stainless Scraper		KZ1-22

- This is a set that includes 3/4"sq sockets and driving tools in SK300.

TOOL SETS



SK300-M  
(Work Truck Case)  
W700xD450xH890

\*Please check the merchandise inventory for a product that is marked by before placing an order.

MECHANIC KIT

MECHANIC KIT



MECHANIC KIT (AUTOMOTIVE)

3/8" sq. 1/2" sq.

No. **MK91A**

Total 79 pcs. ▼kg 31.5 ☞ 1 (2 Cartons)

- MK91AT Tools x1
- MK91A-M Wall Hanging Tool Chest x1

Contents

3/8"sq.Socket (6pt.) (12pt.)	B3-055, 07, 08, 10, 12, 13W
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-075, 150, 270
3/8"sq.Universal Joint	BJ3
3/8"sq.Spark Plug Wrench	B3A-16P, 20.8P
1/2"sq.Socket (12pt.)	B4-14W, 17W, 19W, 21W, 22W, 24W, 27W
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Spinner Handle	BS4E
1/2"sq.Extension Bar	BE4-075, 150
Adaptor	BA43, 34
45° × 6" Long Box End Wrench	M5-1012, 1214, 1417, 1719, 1921, 2224
45° Short Box End Wrench	M5S-0708, 1012, 1417
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 17, 19
Plastic Grip Screwdriver (Flat)	D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)	FD-250
Plastic Grip Stubby Screwdriver (Flat · Cross)	D1MS-6, D1PS-2
Baby Screwdriver (Flat)	BAD-50
Adjustable Wrench	WM-200, 300
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers (Coated Handle)	WPD1-250
Side Cutting Pliers (Coated Handle)	SPD-200C
Combination Hammer	UD7-10
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips For Snap Ring Pliers	SPC5
T-Shaped Wrench	TH-10, 12
Oil Filter Cartridge Wrench	FF-8095
Cross Rim Wrench	XH-14-21

- Important tools are protected by a slide shutter (lockable).
- This efficient kit neatly hangs the tools needed in the workshop reducing time spent hunting around for them when they are needed.
- The shapes of the tools are printed on the case so they are easily returned to the correct position, and it can be used as a retail display kit that allows you to see at a glance what is missing after purchasing.
- MK91A-M (W1125×D145×H630)
- ☞ The case is listed on P.342.

MECHANIC KIT (INDUSTRIAL)

1/4" sq. 1/2" sq.

No. **MK81A**

Total 76 pcs. ▼kg 32 ☞ 1 (2 Cartons)

- MK81AT Tools x1
- MK81A-M Wall Hanging Tool Chest x1

Contents

1/4"sq.Socket (6pt.)	B2-05, 055, 07, 08, 10, 12
1/4"sq.Ratchet Handle	BR2E
1/2"sq.Socket (6pt.) (12pt.)	B4-10, 12, 13W, 14W, 17W, 19W, 21W, 22W, 24W, 27W, 30W, 32W
1/2"sq.Hex. Bit Socket	BT4-05, 06, 08, 10, 12
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-150
1/2"sq.Universal joint	BJ4
45° × 6" Long Box End Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1921, 2224
Combination Wrench	MS2-10, 12, 14, 17, 19, 21
Plastic Grip Screwdriver (Flat)	D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)	FD-250
Adjustable Wrench	WM-200, 250, 300
Pipe Wrench	PWA-250, 300, 350
Mini Clipper	BPZ2-215C
Combination Pliers (Soft Grip)	PJ-150, 200
Side Cutting Pliers (Coated Handle)	SPD-175C, 200C
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers (Coated Handle)	WPD1-250
Combination Hammer	UD7-10
Hex-Key Wrench	HL4 (2, 2.5, 3, 4)
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips For Snap Ring Pliers	SPC5

- Hang-on-wall type tool set for industrial use.
- It is perfect for use in maintenance and inspections.
- The shapes of the tools are printed on the case so they are easily returned to the correct position, and it can be used as a retail display kit that allows you to see at a glance what is missing after purchasing.
- MK81A-M (W1125×D145×H630)
- ☞ The case is listed on P.342.

3/8" sq.

## TOOL SET (THIN METAL STORAGE CASE TYPE)

MECHANIC TOOL SET

No. **SK3568SS**

Total 56 pcs. ▼kg 20 📦 1 (2 Cartons)  
 • SK3568SST Tools x 1  
 • EKS-103 Thin Metal Storage Case x 1

## Contents

3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-075, 150
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Universal Joint		BJ3
3/8"sq. Spinner Handle		BS3E
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417, 1719
Box End Wrench (45° × 6° Long)	POWERFIT	M5-1012, 1113, 1214, 1417, 1921, 2224
Plastic Grip Screwdriver Set (Flat+Cross)		D1M2-5, 6, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat+Cross)		D1MS-6, D1PS-2
L-Shaped Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers		PSL-150
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Hammer		UD7-10
Adjustable Wrench		WM-250

🔗 The case is listed on P.342.

- The unit is lockable to reduce risk of theft.
- Tool-Shaped shadow pictures for hanging Tool up.



Walls may need to be reinforced depending on the material and structure.

MECHANIC TOOL SET  
(CHEST + ROLLER CABINET TYPE, CHEST TYPE)

SKX3306

SKX3306 + SKX3805

No. **SK36813XX**

Total 68 pcs. ▼kg 75 📦 1 (3 Cartons)  
 • SK36813XT1 Tools x1  
 • SKX3306 Chest x1  
 • SKX3805 Roller Cabinet x1

No. **SK36813X**

Total 68 pcs. ▼kg 28 📦 1 (2 Cartons)  
 • SK36813XT1 Tools x1  
 • SKX3306 Chest x1

## Common Items

3/8"sq.Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq.Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq.Semi-Deep Socket (6pt.)	POWERFIT	B3M-08, 10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq.Universal Joint		BJ3
45° × 6° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
Adjustable Wrench		WM-250
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM



SK36813XX is the replacement model for SK3686XX.



SK36813X is the replacement model for SK3686X.

🔗 The cases are listed on P.334 & P.336.

●TOOL SET (CHEST + WAGON TYPE)

MECHANIC TOOL SET



SKX0213 + SKX2613

No. **SK59310XX**

Total 94 pcs. ▼kg 21.5 ☞ 1 (3 Cartons)  
 • SK59310XT Tools × 1  
 • SKX0213 Chest × 1  
 • SKX2613 Wagon × 1

Contents

1/4"sq. Socket (6pt.)	POWERFIT	B2-05, 055, 06, 07, 08, 10, 12
1/4"sq. Extension Bar	POWERFIT	BE2-050, 100
1/4"sq. Ratchet Handle		BR2E
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Universal Joint	POWERFIT	BJ3
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Short Hex. Bit Socket	POWERFIT	BT3-05S, 06S, 08S, 10S
3/8"sq. T-Type Torx Bit Socket	POWERFIT	BT3-T25, T27, T30, T40, T45
3/8"sq. Plug Wrench	POWERFIT	B3A-14SP, 16SP
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Box End Wrench (45° × 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1315, 1417, 1618, 1719, 2224
Ratchet Combination Wrench		MSR1A-08, 10, 12, 13, 14, 17
3/8"sq. Adapter for Ratchet Box End Wrench		BZ14-BA3
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers (Standard Type)		PSL-150
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit: No.2 (22·30mm), No.3 (25mm) Hex. Bit: 4·5·6mm)
Combination Hammer		UD7-10
Magnetic Parts Tray		YKPT-RM
Adjustable Wrench		WM-250
Handy Remover Medium Size		AP201-10A
Handy Remover Narrow Type		AP201-N
1/4"sq. Socket Holder		EHB210
3/8"sq. Socket Holder		EHB310
Tray (set of 3)		SK36613XT2

☞ The cases are listed on P.334 & P.339.

●MECHANIC TOOL SET (CHEST)



SKX0213

SKX0213BK

SK3666X

SKX0213S

No. **SK3650X**

Total 66 pcs. ▼kg 19 ☞ 1 (2 Cartons)  
 • SK3650XT Tools × 1  
 • SKX0213 Chest (Solid Red) × 1

No. **SK3650XS**

Total 66 pcs. ▼kg 19 ☞ 1 (2 Cartons)  
 • SK3650XT Tools × 1  
 • SKX0213S Chest (Metallic Silver) × 1

No. **SK3650XBK**

Total 66 pcs. ▼kg 19 ☞ 1 (2 Cartons)  
 • SK3650XT Tools × 1  
 • SKX0213BK Chest (Solid Black) × 1

Contents

3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq. Short Hex. Bit Socket	POWERFIT	BT3-05S, 06S, 08S, 10S,
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Universal Joint		BJ3
Box End Wrench (45° × 6° Long)	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit: No.2 (22,30mm), No.3 (25mm) Hex. Bit: 4,5,6mm)
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers (Standard Type)		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM
Tray (set of 3)		SK36810XT2

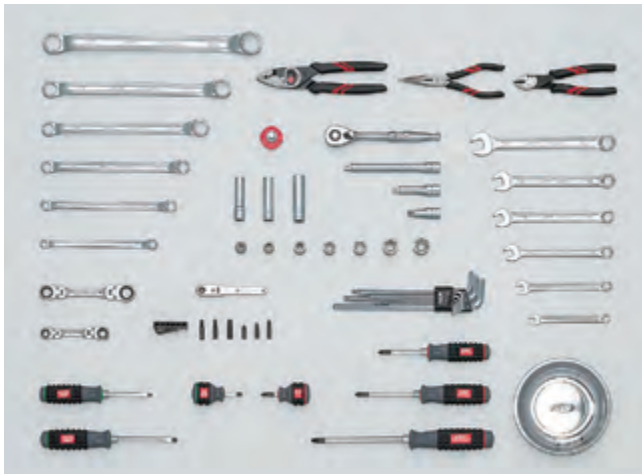
☞ The case is listed on P.334.

3/8" sq. 1/2" sq.

TOOL SETS

MECHANIC TOOL SET (CHEST)

MECHANIC TOOL SET



<b>No. SK3567X</b>		
<b>Total</b> 56 pcs.	▼kg 17.5	📦 1 (3 Cartons)
• SK3567XT1	Tools	× 1
• SK3567XT2	Tray (set of 2)	× 1
• SKX0213	Chest	× 1

Contents		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-10, 12, 14
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
Box End Wrench (45° x 6" Long)	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Short Double-Flex Ratchet Box End Wrench		MR1S-0810F, 1214F
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8 (Cross Bit No.2: 22, 30mm, No.3: 25mm, Hex. Bit 4, 5, 6mm)
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM

- The case is listed on P.334.
- Set contents are selected for there to be no insufficiency in daily maintenance.
- It is a set with 3/8"sq. sockets, driving tools and short ratchet offset wrenches.

TOOL SETS



<b>No. SK3546BX</b>		
<b>Total</b> 54 pcs.	▼kg 18.5	📦 1 (3 Cartons)
• SK3546BXT1	Tools	× 1
• SK3546BXT2	Tray	× 1
• SKX0213	Chest	× 1

Contents		
3/8"sq.Socket (12pt.)	POWERFIT	B3-1/4 W, 5/16 W, 3/8 W, 7/16 W, 1/2 W, 9/16 W, 19/32 W, 5/8 W, 11/16 W, 3/4 W, 13/16 W, 7/8 W
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq.Universal Joint		BJ3
45° x 6" Long Box End Wrench		M5-3/8 x 7/16, 1/2 x 9/16, 19/32 x 11/16, 5/8 x 3/4, 13/16 x 7/8, 15/16 x 1
Open End Wrench		S2-1/4 x 5/16, 3/8 x 7/16, 1/2 x 9/16, 19/32 x 11/16, C5/8 x 3/4, 13/16 x 7/8
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
Locking Plier-Curved Jaw		6LN
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259BSP (1/16, 5/64, 3/32, 1/8, 5/32, 3/16, 1/4, 5/16, 3/8)
Magnetic Parts Tray		YKPT-RM

- The case is listed on P.334.
- Set contents are selected for there to be no insufficiency in daily maintenance.
- It is a set with 3/8"sq. sockets, driving tools and short ratchet offset wrenches.

MECHANIC TOOL SET (CHEST)

MECHANIC TOOL SET

TOOL SETS



1/2" sq.

No. SK4586X

Total 58 pcs. ▼kg 19 1 (3 Cartons)

- SK4586T1 Tools x1
- SK4586XT2 Tray x1
- SKX0213 Chest x1

Contents

1/2"sq.Socket (6pt.)	POWERFIT®	B4-10, 12, 13, 14, 17, 19, 21, 22, 24, 27
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Spinner Handle		BS4E
1/2"sq.Extension Bar	POWERFIT®	BE4-075, 150
1/2"sq.Universal Joint		BJ4
45° × 6° Long Box End Wrench	POWERFIT®	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Combination Wrench	POWERFIT®	MS2-08, 10, 12, 13, 14, 17
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
1/2"sq.Quick Spinner	POWERFIT®	BE4-Q
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnetic Parts Tray		YKPT-RM

The case is listed on P.334.

MOTORCYCLE TOOL SET

MOTORCYCLE TOOL SET

TOOL SETS



3/8" sq.

No. SK35610XMC

Total 56 pcs. ▼kg 18 1 (2 Cartons)

- SK35610XMC Tools x 1
- SKX0213 Chest x 1

Contents

3/8"sq. Socket (6pt.)	POWERFIT®	B3-08, 10, 12, 13, 14
3/8"sq. Deep Socket (6pt.)	POWERFIT®	B3L-08, 10, 12, 14
3/8"sq. Hex. Bit Socket	POWERFIT®	BT3-03, 04, 05, 06
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Quick Spinner	POWERFIT®	BE3-Q
3/8"sq. Extension Bar	POWERFIT®	BE3-075, 150
Box End Wrench (45° × 6° Long)	POWERFIT®	M5-0810, 1113, 1214, 1719, 2224
Ratchet Box End Wrench		MSR1A-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Split Grip Screwdriver Through Type (Flat)		FD-250
Carbjet Screwdriver		CDZ-165
Combination Pliers (with Soft Grip)		PJ-200
Adjustable Wrench		WM-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
Locking Pliers		150LN, 175CR
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
3/8"sq. T-Shaped Handle		TH20
Magnetic Parts Tray		YKPT-RM
Tray		ETKT64-001A1 (Ratchets) ETKT64-001B1 (Box End Wrenches) ETKT64-001B2 (Pliers)

The case is listed on P.334.

OPTIONAL SET FOR MOTORCYCLES



3/8" sq.

No. SK3126MC

Total 12 pcs. ▼kg 3 1

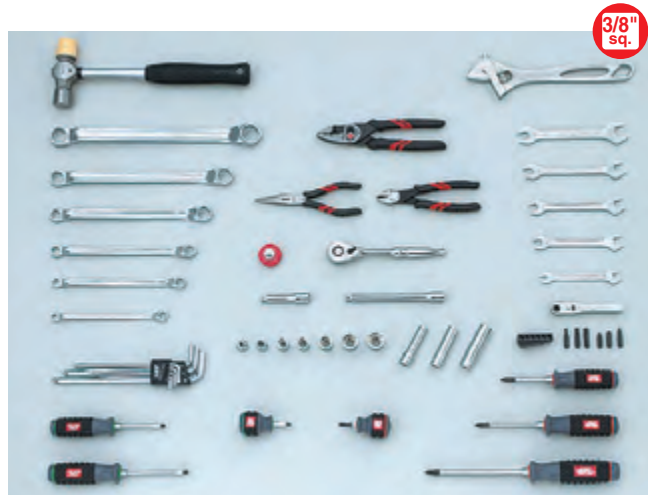
Contents

Plastic Hammer		K9-6
Flat Soft Grip Screwdriver (Carburetor)		D7SM-420
3/8"sq. Hex. Bit Socket	POWERFIT®	BT3-04, 05, 06, 08
3/8"sq. Cross Bit Socket	POWERFIT®	BT3-2P
Flat Set Files		ZKF1-2H
Half-Round Set Files		ZKF1-2HR
3/8"sq. T-Shaped Handle		TH20
3/8"sq. Socket Holder		EHB305
Adjustable Wrench		WM-250
3/8"sq. T-Shaped Handle		ABX101

It is a set with motorcycle tools to be added to the chest type set.  
\* Holders are not included in the total.

●MECHANIC TOOL SET (SPLIT OPEN METAL CASE)

MECHANIC TOOL SET (METAL CASE)



<b>No. SK3550W</b>		
<b>Total</b> 56 pcs.	▼kg 14.5	📦 1
• Split Open Metal Case EK-1		
<b>Contents</b>		
3/8"sq.Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket (6pt.)	POWERFIT	B3L-10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
3/8"sq.Extension Bar	POWERFIT	BE3-05S, 06S, 08S
45° × 6° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

- 3/8"sq. Socket wrenches and Drive tools.
- Plastic blister tray is included.
- The case is listed on P.343.

<b>No. SK4510W</b>		
<b>Total</b> 52 pcs.	▼kg 15	📦 1
• Split Open Metal Case EK-1		
<b>Contents</b>		
1/2"sq.Socket (6pt.)	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Spinner Handle	POWERFIT	BE4-Q
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150
45° × 6° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

- 1/2"sq. Socket wrenches and Drive tools.
- Plastic blister tray is included.
- The case is listed on P.343.

●OPTIONAL TOOL SET FOR THE SPLIT OPEN METAL CASE



<b>No. SK306M-S</b>		
<b>Total</b> 6 pcs.	▼kg 1	📦 1
• Metal Carrying Tray (W390xD100xH45) EK-1-10		
<b>Contents</b>		
Short Box End Wrench (45° × 6°)	POWERFIT	M5S-0810, 1012, 1214
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP
Plastic Grip Screwdriver (Flat)		D1M2-8
Locking Pliers		6LN

- Plastic blister tray is included.



<b>No. SK406M-S</b>		
<b>Total</b> 6 pcs.	▼kg 1	📦 1
• Metal Carrying Tray (W390xD100xH45) EK-1-10		
<b>Contents</b>		
Short Box End Wrench (45° × 6°)	POWERFIT	M5S-0810, 1012, 1214
1/2"sq. Plug Wrench	POWERFIT	B4A-16P
Plastic Grip Screwdriver (Flat)		D1M2-8
Locking Pliers		6LN

- Plastic blister tray is included.



MECHANIC TOOL SET (SPLIT OPEN HARD PLASTIC CASE)



3/8" sq.



1/2" sq.

No. **SK3536P**

<b>Total</b> 53 pcs.	▼kg 11	☞ 1
• Plastic Case	SK330P-M	
<b>Contents</b>		
3/8"sq.Socket (6pt.)	POWERFIT® B3-08, 10, 12, 13, 14, 17, 19	
3/8"sq.Deep Socket (6pt.)	POWERFIT® B3L-10, 12, 14	
3/8"sq.Ratchet Handle	BR3E	
3/8"sq.Extension Bar	POWERFIT® BE3-075, 150	
45° x 6° Long Box End Wrench	POWERFIT® M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver (Flat)	D1M2-5, 6	
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6	
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set	TMDB8	
Adjustable Wrench	WM-250	
Combination Pliers (Soft Grip)	PJ-200	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
3/8"sq.Quick Spinner	POWERFIT® BE3-Q	
Combination Hammer	UD7-10	
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	

- Plastic blister tray is included.
- ☞ The case is listed on P.343.

No. **SK4526P**

<b>Total</b> 52 pcs.	▼kg 11.5	☞ 1
• Plastic Case	SK330P-M	
<b>Contents</b>		
1/2"sq.Socket (6pt.)	POWERFIT® B4-10, 12, 13, 14, 17, 19, 21, 22, 24	
1/2"sq.Ratchet Handle	BR4E	
1/2"sq.Quick Spinner	POWERFIT® BE4-Q	
1/2"sq.Extension Bar	POWERFIT® BE4-075, 150	
45° x 6° Long Box End Wrench	POWERFIT® M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver (Flat)	D1M2-5, 6	
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6	
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set	TMDB8	
Adjustable Wrench	WM-250	
Combination Pliers (Soft Grip)	PJ-200	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
Combination Hammer	UD7-10	
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	

- Plastic blister tray is included.
- ☞ The case is listed on P.343.

OPTIONAL TOOL SET FOR THE SPLIT OPEN HARD PLASTIC CASE



Plastic Carrying Tray is not included.



Plastic Carrying Tray

Assembly Example



No. **SK306P-S**

<b>Total</b> 6 pcs.	▼kg 1	☞ 1
• Carrying Tray	SKP3-2-B	
(W385xD100xH40)		
<b>Contents</b>		
Short Box End Wrench (45° x 6°)	POWERFIT® M5S-0810, 1012, 1214	
3/8"sq.Spark Plug Wrench	POWERFIT® B3A-16SP	
Plastic Grip Screwdriver	D1M2-8	
Locking Pliers	6LN	

No. **SK406P-S**

<b>Total</b> 6 pcs.	▼kg 1	☞ 1
• Plastic Carrying Tray	SKP3-2-B	
(W385xD100xH40)		
<b>Contents</b>		
Short Box End Wrench (45° x 6°)	POWERFIT® M5S-0810, 1012, 1214	
1/2"sq. Plug Wrench	POWERFIT® B4A-16P	
Plastic Grip Screwdriver (Flat)	D1M2-8	
Locking Pliers	6LN	



MECHANIC TOOL SET



3/8" sq.

<b>No. SK348S</b>	
<b>Total</b> 48 pcs.	▼kg 11 ☐ 1
• Open Top Metal Case	EK-3
<b>Contents</b>	
3/8"sq.Socket (6pt.)	B3-055, 07, 08, 10, 11, 12, 13, 14, 17, 19, 21, 22
3/8"sq.Spark Plug Wrench	B3A-16SP
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Extension Bar	BE3-075, 150
3/8"sq.Spinner Handle	BS3E
45° x 6° Long Box End Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719
Plastic Grip Screwdriver (Flat)	D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2
Baby Screwdriver (Flat)	BAD-75
Baby Screwdriver (Cross)	BAD-0
Heavy Duty Screwdriver (Flat)	FD-250
Adjustable Wrench	WM-200, 300
Combination Pliers (Soft Grip)	PJ-200
Heavy Duty Waterpump Pliers	WPD1-250
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Combination Hammer	UD7-10
File Half-Round	FIS-100HM
Open End Wrench Holder	EHS-1

\*The numbers of contents are not including holders.

• Plastic blister tray is included.

☑ The case is listed on P.344.



<b>No. SK031S</b>	
<b>Total</b> 31 pcs.	▼kg 9.5 ☐ 1
• Open Top Metal Case	EK-3
<b>Contents</b>	
45° x 6° Long Box End Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719
Plastic Grip Screwdriver (Flat)	D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Heavy Duty Screwdriver (Flat)	FD-250
Plastic Grip Stubby Screwdriver (Flat · Cross)	D1MS-6, D1PS-2
Baby Screwdriver (Flat · Cross)	BAD-75, 0
Adjustable Wrench	WM-200, 300
Combination Pliers (Soft Grip)	PJ-200
Heavy Duty Waterpump Pliers	WPD1-250
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Combination Hammer	UD7-10
File Half-Round	FIS-100HM
Open End Wrench Holder	EHS-1

\*The numbers of contents are not including holders.

• The perfect set for those who already own driving tools or who wish to select their own driving tools.

• Plastic blister tray is included.

☑ The case is listed on P.344.

MECHANIC TOOL SET



1/2" sq.

<b>No. SK444S</b>	
<b>Total</b> 44 pcs.	▼kg 12 ☐ 1
• Open Top Metal Case	EK-3
<b>Contents</b>	
1/2"sq.Socket (6pt.)	B4-10, 12, 13, 14, 17, 19, 21, 22, 24
1/2"sq.Spark Plug Wrench	B4A-16P
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-150
1/2"sq.Spinner Handle	BS4E
45° x 6° Long Box End Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719
Plastic Grip Screwdriver (Flat)	D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)	D1MS-6
Plastic Grip Stubby Screwdriver (Cross)	D1PS-2
Baby Screwdriver (Flat)	BAD-75
Baby Screwdriver (Cross)	BAD-0
Heavy Duty Screwdriver (Flat)	FD-250
Adjustable Wrench	WM-200, 300
Combination Pliers (Soft Grip)	PJ-200
Heavy Duty Waterpump Pliers	WPD1-250
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Combination Hammer	UD7-10
File Half-Round	FIS-100HM
Open End Wrench Holder	EHS-1

\*The numbers of contents are not including holders.

• Plastic blister tray is included.

☑ The case is listed on P.344.

## ●MECHANIC TOOL SET (BASIC MODEL)

MECHANIC TOOL SET

No. **SK3434S**

Total 43 pcs. ▼kg 10 ☉ 1

• Open Top Metal Case SK120-M

**Contents**

3/8"sq.Socket (6pt.)	POWERFIT®	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket (6pt.)	POWERFIT®	B3L-08, 10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT®	BE3-075, 150
3/8"sq.Quick Spinner	POWERFIT®	BE3-Q
45° x 6° Long Box End Wrench	POWERFIT®	M5-0810, 1012, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT®	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver		D1M2-5, 6
Plastic Grip Screwdriver		D1P2-1, 2, 3
Short Stubby Screwdriver		SD4-P
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
L-Shaped Hex-Key Wrench Set (7 pcs.)		HL107 (2.5, 3, 4, 5, 6, 8, 10)

• Plastic blister tray is included.

➔ The case is listed on P.344.

No. **SK34010PS**

Total 40 pcs. ▼kg 4.5 ☉ 1

• Plastic Hard Case EKP-5

**Contents**

3/8"sq. Socket (6pt.)	POWERFIT®	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq. Deep Socket (6pt.)	POWERFIT®	B3L-08, 10, 12
3/8"sq. Extension Bar	POWERFIT®	BE3-075, 150
3/8"sq. Quick Spinner	POWERFIT®	BE3-Q
3/8"sq. Ratchet Handle		BR3E
Plastic Grip Screwdriver (Cross)		D7P2-1, 2, 3
Plastic Grip Screwdriver (Flat)		D7M2-5, 6
L-Shaped Hex-Key Wrench Set (7 pcs.)		HL107 (2.5, 3, 4, 5, 6, 8, 10)
Box End Wrench (45° x 6° Long)	POWERFIT®	M5-0810, 1012, 1214, 1417, 1719
Ratchet Combination Wrench		MSR1A-08, 10, 12, 13, 14
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers (Standard Type)		PSL-150
3/8" sq. Socket Holder		EHB310

➔ The case is listed on P.344.

No. **SK3249S**

Total 24 pcs. ▼kg 5.5 ☉ 1

• Single-Door Metal Case EK-5

**Contents**

3/8"sq. Socket (6pt.)	POWERFIT®	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Extension Bar	POWERFIT®	BE3-150
Box End Wrench (45° x 6° Long)	POWERFIT®	M5-1012, 1417, 1719
Open End Wrench		S2-0810, 1012, 1214, 1417
Plastic Grip Screwdriver (Flat)		D1M2-6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2
Baby Screwdriver (Cross)		BAD-0
Adjustable Wrench		WM-250
Combination Pliers (with Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Combination Hammer		UD7-10
3/8"sq. Socket Holder		EHB310

➔ The case is listed on P.344.

3/8" sq.

MECHANIC TOOL SET

MECHANIC TOOL SET



<b>No. SK322P</b>		
Total 22 pcs.	▼kg 3.2	📦 1
• Plastic Case	TCP1-1	
<b>Contents</b>		
3/8"sq.Socket (6pt.)	POWERFIT	B3-055, 07, 08, 10, 12, 13, 14, 17, 19, 22
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
3/8"sq.Spinner Handle		BS3E
3/8"sq.Universal Joint		BJ3
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Plastic Grip Screwdriver (Flat)		D1M2-6
Plastic Grip Screwdriver (Cross)		D1P2-2
Combination Pliers (Soft Grip)		PJ-200
<ul style="list-style-type: none"> <li>• Comes in a compact, light resin molded case.</li> <li>• With a selection of frequently used tools, the content is perfect for the weekend mechanic.</li> <li>• Plastic blister tray is included.</li> <li>• The case is listed on P.344.</li> </ul>		

RIDER'S MAINTENANCE TOOL SET

RIDER'S TOOL SET



<b>No. MCK317</b>		
Total 17 pcs.	▼kg 2	📦 1
• Tool Bag	MCKB-B	
<b>Contents</b>		
3/8"sq. Semi-Deep Socket (6pt.)	POWERFIT	B3M-08, 10, 12, 14
3/8"sq. Slide Head Handle		BHM3
3/8"sq. Extension Bar	POWERFIT	BE3-150
3/8"sq. Short Hex. Bit Socket	POWERFIT	BT3-04S, 05S, 06S
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14, 17
Replacement Driver Set		DB4 (Cross: No.2 x No.3, Flat: Tip Width 4 x 6, Handle)
Combination Pliers (Soft Grip)		PJ-150
Adjustable Wrench		WM-200
<ul style="list-style-type: none"> <li>• Tool bag is listed on P.311.</li> </ul>		

POTABLE TOOL BAG (MEDIUM) SET

POTABLE TOOL BAG SET



<b>No. SK3230</b>		
Total 23 pcs.	▼kg 2	📦 1
POTABLE TOOL BAG	BKB-M (W450 x D200 x H250)	
<b>Contents</b>		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-150
3/8"sq. Ratchet Handle		BR3E
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Combination Pliers (Soft Grip)		PJ-150
Needle Nose Pliers (Standard Type)		PSL-150
Adjustable Wrench		WM-200
Ratchet Screwdriver		DBR14
		Bit Size: Cross No.1, 2, 3, Flat 5.5, 6, 8
		Hex. 2.5, 3, 4, 5
Tool Bag (Black)		Torx T15, T20, T25, T30
<ul style="list-style-type: none"> <li>* Tool bag is not included in the total.</li> <li>• Potable Tool Bag (BKB-M) is listed on P.316.</li> <li>• Tool Bag (MCKB-B) is listed on P.311.</li> </ul>		

POTABLE TOOL BAG (LARGE) SET



<b>No. SK3231</b>		
Total 23 pcs.	▼kg 2	📦 1
POTABLE TOOL BAG	BKB-L (W520 x D200 x H260)	
<b>Contents</b>		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-150
3/8"sq. Ratchet Handle		BR3E
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Combination Pliers (Soft Grip)		PJ-150
Needle Nose Pliers (Standard Type)		PSL-150
Adjustable Wrench		WM-200
Ratchet Screwdriver		DBR14
		Bit Size: Cross No.1, 2, 3, Flat 5.5, 6, 8
		Hex. 2.5, 3, 4, 5
Tool Bag (Black)		Torx T15, T20, T25, T30
<ul style="list-style-type: none"> <li>* Tool bag is not included in the total.</li> <li>• Potable Tool Bag (BKB-L) is listed on P.316.</li> <li>• Tool Bag (MCKB-B) is listed on P.311.</li> </ul>		

● BICYCLE TOOL SET

BICYCLE TOOL SET



No. **SK34010CY**

Total 40 pcs. ▼kg 4.1 ☰ 1  
 • Plastic Hard Case EKP-5

Contents

3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 09, 10, 11, 12, 13, 14, 15
3/8"sq. Hex. Bit Socket		BT3-03, 04, 05, 06, 08
3/8"sq. T-Type Torx Bit Socket	POWERFIT	BT3-T25, T30
3/8"sq. Extension Bar	POWERFIT	BE3-075
3/8"sq. Ratchet Handle		BR3E
Plastic Grip Screwdriver (Cross)		D7P2-2
Plastic Grip Screwdriver (Flat)		D7M2-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers (Standard Type)		PSL-150
MiniHammer		TUD3S
Adjustable Wrench		WM-250
Pedal Wrench		CP2-15A
Tire Lever Set (2 pcs.)		CTR12
3/8" sq. Socket Holder		EHB315

- Basic model for bicycle maintenance that adopts a plastic single-door case.
- The case has an easy-to-carry compact size.

➡ The case is listed on P.344.



No. **SK34410XCY**

Total 44 pcs. ▼kg 15 ☰ 1 (2 Cartons)  
 • SK34410XCYT Tools x 1  
 • SKX0213 Chest x 1

Contents

3/8"sq. Digital Ratchet Small Torque Type		GEK030-C3A
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 09, 10, 11, 12, 13, 14, 15
3/8"sq. Hex. Bit Socket		BT3-03, 04, 05, 06, 08
3/8"sq. T-Type Torx Bit Socket	POWERFIT	BT3-T25, T30
3/8"sq. Extension Bar	POWERFIT	BE3-075
3/8"sq. Ratchet Handle		BR3E
Plastic Grip Screwdriver (Cross)		D7P2-2
Plastic Grip Screwdriver (Flat)		D7M2-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 15
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers (Standard Type)		PSL-150
Plastic Hammer		K9-6
Adjustable Wrench		WM-250
Pedal Wrench		CP2-15A
3/8"sq. Pedal Wrench (Crowfoot Wrench Type)		CP1-15
Tire Lever Set (2 pcs.)		CTR12
3/8"sq. Socket Holder		EHB315

- It is a Digital Ratchet adopted model for bicycle maintenance (torque measurement range: 2~30 N · m).
- Stationary type chest with plenty of storage is adopted for the case.

➡ The case is listed on P.334.

3/8"  
sq.

## ●DIGITAL RATCHET TOOL SET (TORQUE MEASUREMENT RANGE: 12~60 N·m)

DIGITAL RATCHET TOOL SET



SK35310XS1

SK35310XBK1  
(W520xD215xH300)

## No. SK35310XS1

Total 53 pcs. ▼kg 18 ☒ 1 (2 Cartons)

- SK35310X1T Tools × 1
- SKX0213S Chest (Metallic Silver) × 1

## No. SK35310XBK1

Total 53 pcs. ▼kg 18 ☒ 1 (2 Cartons)

- SK35310X1T Tools × 1
- SKX0213BK Chest (Solid Black) × 1

## Contents

3/8"sq. Digital Ratchet	GEK060-R3
3/8"sq. Socket (6pt.)	POWERFIT B3-08, 10, 12, 13, 14, 17, 19, 21
3/8"sq. Deep Socket (6pt.)	POWERFIT B3L-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT BE3-075, 150
3/8"sq. Quick Spinner	POWERFIT BE3-Q
3/8"sq. Universal Joint	POWERFIT BJ3
3/8"sq. Ratchet Handle	BR3E
3/8"sq. Spinner Handle	BS3E
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Plastic Grip Screwdriver (Flat)	D1M2-5, 6
Plastic Grip Stubby Screwdriver	Cross: D1PS-2, Flat: D1MS-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Box End Wrench (45° x 6° Long)	POWERFIT M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT MS2-08, 10, 12, 13, 14, 17
Combination Pliers (with Soft Grip)	PJ-200
Diagonal Cutting Pliers	PN1-150
Needle Nose Pliers (Standard Type)	PSL-150
Combination Hammer	UD7-10
Magnetic Parts Tray	YKPT-RM
Tray (set of 3)	SK35211XT2

☑ The case is listed on P.334.

## ●DIGITAL RATCHET TOOL SET (TORQUE MEASUREMENT RANGE: 17~85 N·m)



SK35310XS2

SK35310XBK2  
(W520xD215xH300)

## No. SK35310XS2

Total 53 pcs. ▼kg 18 ☒ 1 (2 Cartons)

- SK35310X2T Tools × 1
- SKX0213S Chest (Metallic Silver) × 1

## No. SK35310XBK2


Total 53 pcs. ▼kg 18 ☒ 1 (2 Cartons)

- SK35310X2T Tools × 1
- SKX0213BK Chest (Solid Black) × 1

## Contents

3/8"sq. Digital Ratchet	GEK085-R3
3/8"sq. Socket (6pt.)	POWERFIT B3-08, 10, 12, 13, 14, 17, 19, 21
3/8"sq. Deep Socket (6pt.)	POWERFIT B3L-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT BE3-075, 150
3/8"sq. Quick Spinner	POWERFIT BE3-Q
3/8"sq. Universal Joint	POWERFIT BJ3
3/8"sq. Ratchet Handle	BR3E
3/8"sq. Spinner Handle	BS3E
Plastic Grip Screwdriver (Cross)	D1P2-1, 2, 3
Plastic Grip Screwdriver (Flat)	D1M2-5, 6
Plastic Grip Stubby Screwdriver	Cross: D1PS-2, Flat: D1MS-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Box End Wrench (45° x 6° Long)	POWERFIT M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT MS2-08, 10, 12, 13, 14, 17
Combination Pliers (with Soft Grip)	PJ-200
Diagonal Cutting Pliers	PN1-150
Needle Nose Pliers (Standard Type)	PSL-150
Combination Hammer	UD7-10
Magnetic Parts Tray	YKPT-RM
Tray (set of 3)	SK35211XT2

☑ The case is listed on P.334.

\*Please check the merchandise inventory for a product that is marked by  before placing an order.

## TOOL SET (INDUSTRIAL MODEL)



### No. SK4518WM

Total 51 pcs. ▼kg 13.5 1  
• Split-Open Metal Case EK-1

#### Contents

1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq. Extension Bar	POWERFIT	BE4-150
1/2"sq. Hex. Bit Socket	POWERFIT	BT4-05, 06, 08, 10, 12
1/2"sq. Ratchet Handle		BR4E
Box End Wrench (45° x 6" Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver (Flat)		MDD1-75, 100, 150
Plastic Grip Screwdriver (Cross)		PDD1-1, 2, 3
Adjustable Wrench		WM-250
Side Cutting Pliers		SPD-175C
Heavy Duty Waterpump Pliers		WPD1-250
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers		PSL-150
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer		UD6-10

➔ The case is listed on P.343.



### No. SK45310M

Total 53 pcs. ▼kg 12.5 1  
• Split-Open Metal Case SKC-MA

#### Contents

1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq. Extension Bar	POWERFIT	BE4-150
1/2"sq. Hex. Bit Socket	POWERFIT	BT4-05, 06, 08, 10, 12
1/2"sq. Ratchet Handle		BR4E
Box End Wrench (45° x 6" Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver (Flat)		MDD1-75, 100, 150
Plastic Grip Screwdriver (Cross)		PDD1-1, 2, 3
Adjustable Wrench		WM-250
Side Cutting Pliers		SPD-175C
Heavy Duty Waterpump Pliers		WPD1-250
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers		PSL-150
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer		UD6-10
Open End Wrench Holder		EHS-1
Key		KAG-300

MODEL CHANGE It is the successor model of SK4518M.

➔ The case is listed on P.343.



### No. SK4418WM

Total 41 pcs. ▼kg 11.5 1  
• Split-Open Metal Case EK-1

#### Contents

1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W
1/2"sq. Extension Bar	POWERFIT	BE4-150
1/2"sq. Ratchet Handle		BR4E
Box End Wrench (45° x 6" Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver (Flat)		MDD1-100, 150
Plastic Grip Screwdriver (Cross)		PDD1-2, 3
Adjustable Wrench		WM-250
Side Cutting Pliers		SPD-175C
Heavy Duty Waterpump Pliers		WPD1-250
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer		UD6-10

➔ The case is listed on P.343.



### No. SK44310M

Total 43 pcs. ▼kg 10.5 1  
• Split-Open Metal Case SKC-MA

#### Contents

1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W
1/2"sq. Extension Bar	POWERFIT	BE4-150
1/2"sq. Ratchet Handle		BR4E
Box End Wrench (45° x 6" Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver (Flat)		MDD1-100, 150
Plastic Grip Screwdriver (Cross)		PDD1-2, 3
Adjustable Wrench		WM-250
Side Cutting Pliers		SPD-175C
Heavy Duty Waterpump Pliers		WPD1-250
Combination Pliers (with Soft Grip)		PJ-200
Diagonal Cutting Pliers		PN1-150
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer		UD6-10
Open End Wrench Holder		EHS-1
Key		KAG-300

MODEL CHANGE It is the successor model of SK4418M.

➔ The case is listed on P.343.

1/2"  
sq.

● TOOL SET (CHEST TYPE: FOR GENERAL MACHINERY MAINTENANCE)



No. **SK4510MXS**

Total 52 pcs.	▼kg 19	☞ 1 (2 Cartons)
• SK4510MT	Tools × 1	
• SKX0213S	Chest (Metallic Silver) × 1	

No. **SK4510MBK**

Total 52 pcs.	▼kg 19	☞ 1 (2 Cartons)
• SK4510MT	Tools × 1	
• SKX0213BK	Chest (Solid Black) × 1	

Contents

1/2"sq. Socket (6pt.)	POWERFIT	B4-10, 12
1/2"sq. Socket (12pt.)	POWERFIT	B4-13W, 14W, 17W, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq. Ratchet Handle		BR4E
1/2"sq. Extension Bar	POWERFIT	BE4-075, 150
1/2"sq. Hex. Bit Socket	POWERFIT	BT4-05, 06, 08, 10, 12
Plastic Grip Screwdriver (Flat)		D1M2-5, 6, 8
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Box End Wrench (45° × 6° Long)	POWERFIT	M5-1012, 1113, 1417, 1719, 2224
Combination Pliers (with Soft Grip)		PJ-200
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1719
Diagonal Cutting Pliers		PN1-150
Needle Nose Pliers		PSL-150
Side Cutting Pliers		SPD-175C
Combination Hammer		UD6-10
Adjustable Wrench		WM-250
Heavy Duty Waterpump Pliers		WPD1-250
1/2"sq. Socket Holder		EHB410 (2 pcs.)
L-Shaped Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

☉ The case is listed on P.334.

\* Tray is not included.



SKX0213S

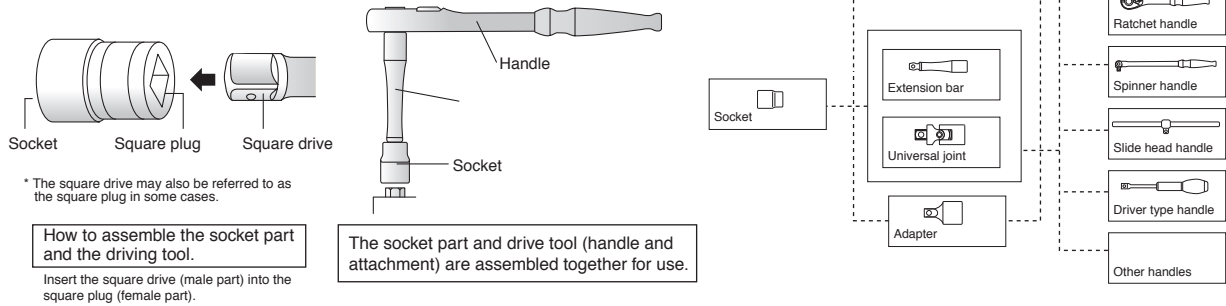


SKX0213BK



# Socket for socket wrench, Drive tool

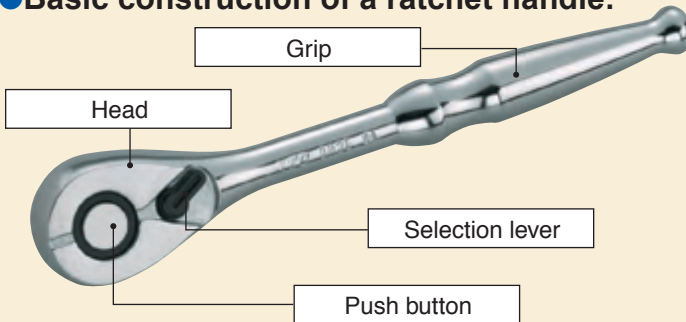
A socket wrench is a tool used when tightening or loosening a hexagonal bolt or nut, or a bolt with a hexagonal hole in it. It comprises a socket part (socket for a socket wrench) and a driving tool (handle and adapter), and these are used in combination. A socket used by a socket wrench has a box shape and, different from a spanner or monkey wrench, it completely encloses the bolt or nut in use, so that it is difficult for slippage to occur. It is therefore suited to the application of great torque. By using various adapters in conjunction with the sockets and driving tool, it becomes possible to work easily even in narrow spaces where the hand cannot easily enter or deep spaces.



## Drive tool

The drive tool has a handle that drives the socket and an attachment for connecting the socket and the handle. The most suitable combination of these is selected based on the operation and the work space. Handles and attachments include the following kinds.

### Basic construction of a ratchet handle.



The ratchet handle contains a gear wheel and claws, and repeated handle movement can rotate the socket. It is good for fast turning as the operation can be performed with the socket holding the bolt or nut. Also, a left or right toggle switch allows easy change of the direction of rotation. Ratchet handles come in "oval type", "round type", and "wobbling type". There is also a "socket holder type" (at KTC this is known as the Union Ratchet Handle), which can easily attach to and detach from the socket with the operation of a one-touch button.

#### Tool basics

The ratchet handle is a useful tool that can be used in various operations by combining it with sockets and attachments, and enables you to work efficiently.

### Types of ratchet handle

Ratchet handles are classified according into oval type and round type ratchet mechanisms, handle length, and whether or not they are of a flexible type.



#### Oval type

This is a general type of ratchet mechanism with about 20 gear teeth and a repeating angle of about 10 to 20°. The selection is operated easily.



#### Round type

The characteristic feature of the round type is the repeating angle of about 5° - smaller than that of the oval type.



#### Flexible type

As the head part can bend, it becomes possible to operate in confined spaces.

### Spinner handle



The square drive can bend left or right up to 90° about a pin in the center of the head part of the shank and stop at a given angle. When turning quickly to temporarily tighten and so on, the handle can be held straight and used like a screw driver (Fig. 1), and when tightening securely, a strong torque can be generated by holding the handle to the side (Fig. 2).



Fig. 1

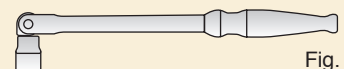
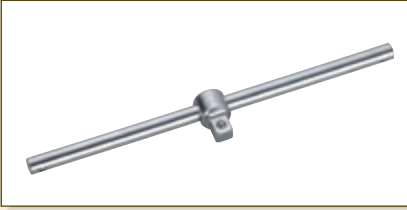


Fig. 2

#### Tool basics

The longer the handle, the larger the torque. However, care must be taken not to apply excessive torque.

## ● Slide head handle



The drive head can be stopped at any place on the handle, and it can be used either as an L shaped wrench or a T shaped wrench. When using as an L shaped wrench (Fig. 1), first pull towards you, and when you have turned 180°, slide the handle and pull the handle towards you again. When using as a T shaped wrench (Fig. 2), set the square drive in the center of the handle and turn with both hands. To make a T wrench with a longer axis, the extension bar is connected (Fig. 3).

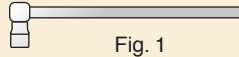


Fig. 1

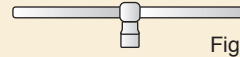


Fig. 2

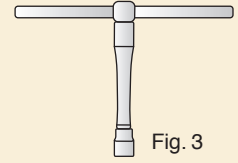


Fig. 3

### Tool basics

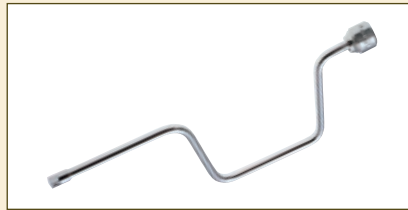
Spanners and offset wrenches require a great variety of wrenches to suit the target of the operation, however, a socket wrench requires only one handle, which allows you to purchase only the sockets to deal with different bolts and nuts. Also, by using an attachment, the range of use is widened. This full expandability makes it a recommended choice for novice workmen.

## ● Other drive tools



### L handle

This type has a square drive at the end of an L shaped handle.



### Speeder handle

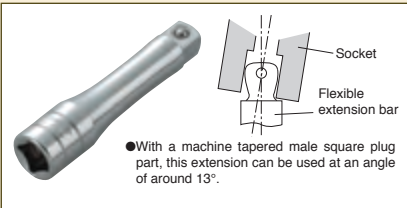
Pressing the gripping part lightly with one hand, the other hand turns the crank. This handle is good for fast turning.



### Screwdriver type handle

This handle has a square drive on the end of a screwdriver and is used as a box driver.

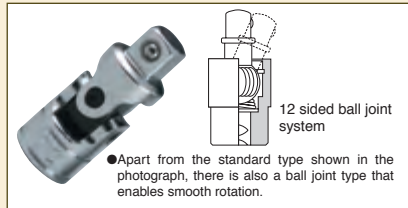
## Types of attachment



●With a machine tapered male square plug part, this extension can be used at an angle of around 13°.

### Extension bar

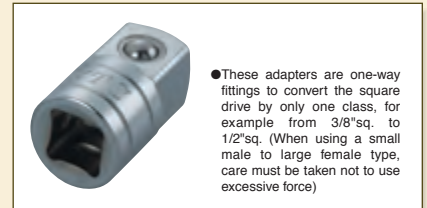
When working in a recessed, narrow place, this adapter is used to extend the socket to reach the site. There is the "standard type" and the "wobbling type".



●Apart from the standard type shown in the photograph, there is also a ball joint type that enables smooth rotation.

### Universal joint

Connecting between the socket and handle, this attachment facilitates operation on oblique angles. It allows operation at a maximum angle of 90°.



●These adapters are one-way fittings by only one class, for example from 3/8"sq. to 1/2"sq. (When using a small male to large female type, care must be taken not to use excessive force)

### Adapter

These adapters connect sockets and handles with square drives of different sizes. There are ones for enabling small handles to turn big sockets, and vice-versa.

### Tool basics

## Regarding ratchet handle union mechanism and push-cancel mechanisms.

With ratchet mechanisms, the push-cancel mechanism and KTC's union mechanism are often confused. However, their purposes are quite different. Their respective purposes are explained below...

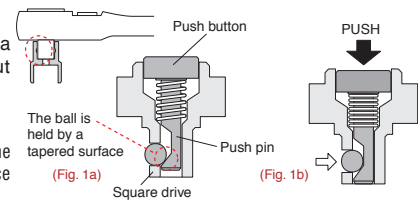
### 1 Push-cancel mechanism The purpose of this mechanism is to facilitate the disengaging of the socket.

#### Holding the socket (Fig. 1a)

The ball of the square drive is supported by the bias of a spring pushing against a pushpin. As the ball is held by a tapered surface, the ball can be pushed in without operating the pushpin for socket attachment and detachment.

#### Attaching and detaching the socket (Fig. 1b)

When the push button is pressed, the pushpin goes down, the ball drops into a groove and the socket can be attached and detached. With this structure, if the socket is forced so that a force greater than the spring force pressing the ball is applied, the socket may detach unexpectedly.



### 2 KTC's union mechanism This mechanism is designed to hold the socket securely to the ratchet.

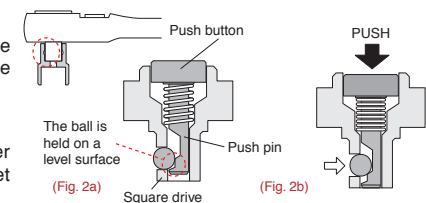
#### Holding the socket (Fig. 2a)

The ball of the square drive stops on the shallow platform of the pushpin and holds the socket. The ball is being held on a level surface, so that even if you try to detach the socket, the ball is not pulled in and the socket cannot be removed.

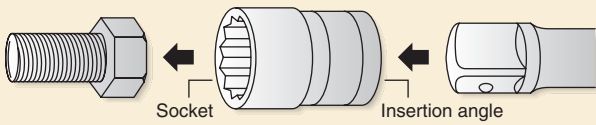
#### Socket attachment and detachment (Fig. 2b)

When the push button is pressed, the pushpin lowers, the ball drops down to the lower platform and the socket can be attached or detached. With this mechanism, the socket does not come off unexpectedly as long as the push button is not operated.

(Note) With the union mechanism, it is necessary to operate the button, while attaching the socket.

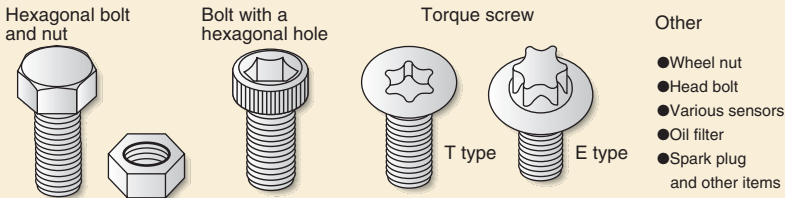


## Sockets for socket wrenches



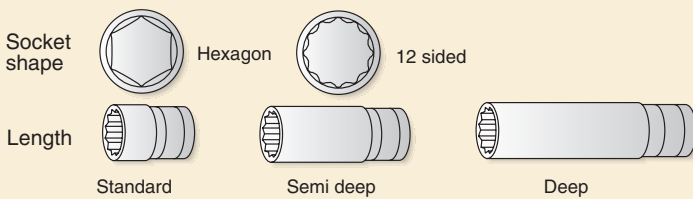
The socket of a socket wrench is used with the box shaped socket part completely enclosing the bolt or nut. The square plug insertion angle on the other side is for inserting various drive tools, such as a ratchet inserted during use. There are various types of sockets for different types of bolts and nuts with different square plugs and sizes.

### Socket classification by bolt type



Sockets for socket wrenches ("Socket" below) are selected according to the type of nut or bolt. Generally there are two types: hexagonal nuts and bolts, and bolts with a hexagonal hole. Hexagonal nuts and bolts take 6 or 12-sided sockets, and bolts with a hexagonal hole use hexagonal bit sockets. There are also special sockets for dealing with TORX® screws or turning oil filters and spark plugs.

### Socket classification by socket shape and length



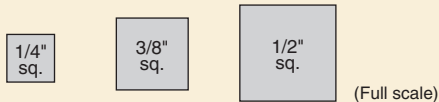
There are two types of the hexagonal bolt/nut sockets: the 12 sided socket allows the fitting of nuts and bolts at half the angle required for the hexagonal socket, making operation easy. Also three types of socket depths are available; standard, semi-deep and deep to suit different working environments. The KTC semi-deep is only set for 3/8"sq.)

### Classifying sockets according to insertion angle and size

Socket (hexagon / 12 sided type)	Insertion angle (square hole)
3.2~14.0mm	6.3sq. (1/4in)
5.5~24.0mm	9.5sq. (3/8in)
8.0~36.0mm	12.7sq. (1/2in)
19.0~60.0mm	19.0sq. (3/4in)
36.0~85.0mm	25.4sq. (1in)

The size is set for either hexagon or 12 sided for some sockets.

Insertion angle size comparison



The socket wrench insertion cavity is called the "insertion angle" and the sizes are set at 1/4"sq., 3/8"sq., 1/2"sq., 3/4"sq., and 1"sq. sq. stands for square, indicating the units used to measure the size of the socket wrench insertion angle. For example, a 3/8"sq. insertion angle means that the width across flat of the square face is 9.5mm (3/8 inches). The technical size standards of the socket wrench are set in inches as the tool is an American invention.

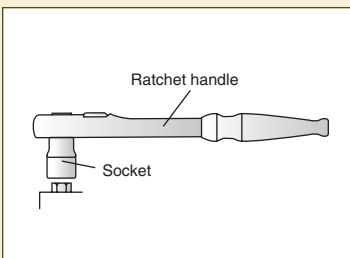
The set area for the caliber differs according to the insertion angle of the socket (please refer to the figure on the left). Selecting the insertion angle is a process that depends on the size of the bolt/nut being operated on. However, it is safe to select an insertion angle that is one level above the required level, if the size of the bolt/nut is close to the upper limit of the socket's set-range. Also in the case the size of the bolt/nut is close to the lower limit of the socket's set-range, it is safe to select an insertion angle that is one level below the required level (refer to "Tool basics" on page 83).

#### Tool basics

Most bolts used in automotive maintenance are within the 5.5 ~ 24mm size range. It is recommended that the tool with the 3/8"sq. insertion angle is obtained first. The 1/4"sq. is useful for working within the bonnet and other confined spaces. The 1/2"sq. is suitable for areas that require high torque, such as the suspension setting.

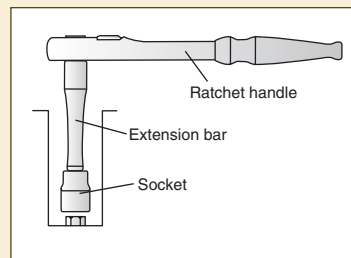
## How to use a socket wrench

The socket wrench allows the user to select the best way of use for different working environments, such as inner areas or where it is hard to insert the socket straight through from the handle, by combining the socket with the handle that drives it and the attachment that connects the socket to the handle.



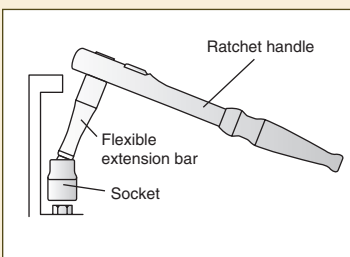
#### Ratchet handle + socket

The most standard method of use incorporating the socket and the ratchet handle. Turn the bolt/nut by inserting the socket into the drive angle and changing the rotation direction of the gears.



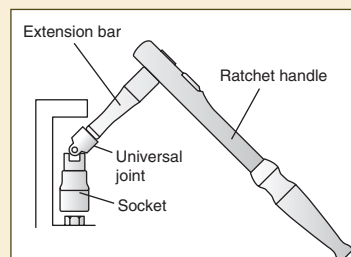
#### Ratchet handle + Extension bar + Socket

The extension bar allows easy tightening and loosening of bolts and nuts positioned in areas that are hard to reach.



#### Ratchet handle + Flexible extension bar + Socket

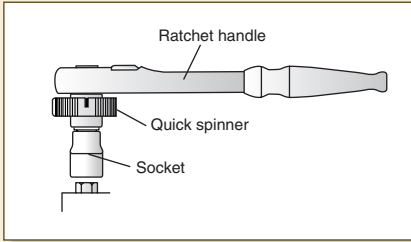
The flexible extension bar allows the mechanic to work from an angle of about 7 degrees in order to reach the bolts and nuts that are hard to reach using the ratchet handle directly.



#### Ratchet handle + Extension bar + Universal joint + Socket

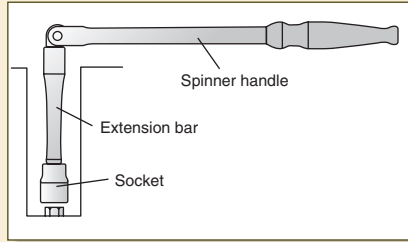
The universal joint allows the mechanic to work from the maximum angle of 45 degrees in order to reach the bolts and nuts that are hard to reach using the ratchet handle directly.

**Ratchet handle + Quick spinner + Socket**



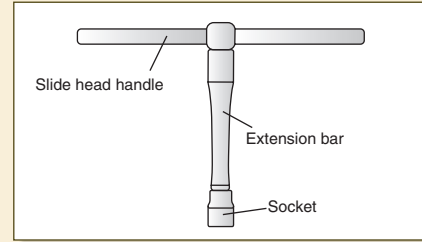
The quick spinner allows the fast turning of the socket through turning the disk-shaped grip without using the ratchet handle. This is useful where the handle fails to operate the ratchet mechanism to turn the bolt/nut (when under light loads).

**Spinner handle + Extension bar + Socket**



The spinner handle is used most commonly when a high level of torque is required. The spinner handle is usually combined with the socket, but can be combined with the extension bar, as can the ratchet.

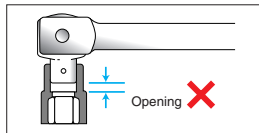
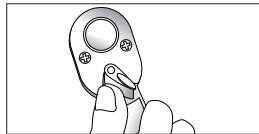
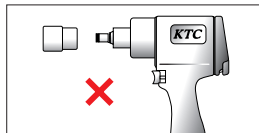
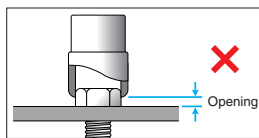
**Slide head handle + Extension bar + Socket**



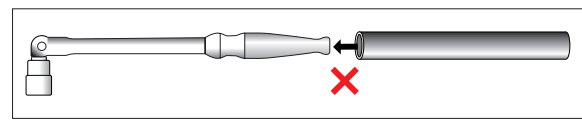
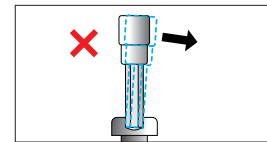
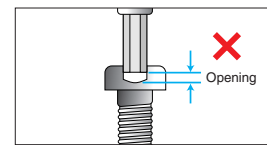
The slide head handle can be used as a "T shaped handle" in combination with an extension bar. By adding a ratchet adapter between the slide head handle and the extension bar, it can be used as a "T shaped ratchet".

**<Proper use of the tools>**

- Use sockets that correspond to the bolt/nut size being worked on.
- Completely cover the nut with the socket, when loosening/tightening.
- Do not use with power tools such as the impact wrench.
- Slowly and firmly operate the left/right switch levers of the ratchet handle.
- Fully insert the angle drive to the end.



- Fully insert the hexagon socket to the end of the hexagon cavity and tighten or loosen while applying pressure.
- Apply force toward the direction of the bolt turning. Applying pressure in a manner that bends the shaft downwards can damage the tip of the tool.
- The joints are delicate towards impact torque; do not handle in a rough manner.
- Use handle adapters that correspond to the socket-inserting-angle size being worked on.
- Do not use the handle by adding piping or by hitting with a hammer.



**Tool basics**

**Strength and limit**

**1 Soft impact wrench sockets?**

The impact wrench sockets are durable as they are usable for the impact wrench as well as a normal tool. This implies that the impact wrench sockets are harder than normal sockets. This is a common misunderstanding. The impact wrench sockets are actually lesser in hardness. This means that the impact wrench sockets are softer than normal sockets.

As the name suggests, the impact wrench is a tool that uses impact to turn, so the sockets will also be affected by impact.

Generally speaking, the hard materials are strong. In reality, it is strong only against a still load when the force is applied slowly. It lacks in elasticity and it can be brittle, therefore it is weak against strong impact and twists.

For this reason, the socket for the impact wrench is softer than usual to absorb the impact and twist. Also, the impact wrench sockets are not galvanized, as the hard coating is vulnerable to impacts and twists.

**2 Drive angle limit and hexagonal socket limit**

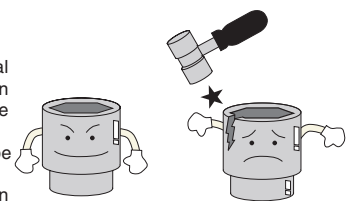
Steels that are used for tools (carbon steels or special steels) are hard and strong materials. However, it will break if you apply over a certain amount of load. Take drive tools, for example. The strength of a drive angle of a 3/8"sq. spinner handle is set around 260 N/m (\*1). On the other hand, the strength of a socket's hexagonal socket varies in size. As the caliber size increases, the strength will also increase, and when the size is over 17mm, the strength set will exceed the drive angle strength. (\*2)

Therefore, if a socket larger than 17mm is used, the drive angle of a 3/8"sq. spinner handle may not be sufficient. Although the 3/8"sq. sockets are set to 24mm, the hexagonal shape may be durable enough but the square may not hold under excessive force. If a socket larger than 17mm is going to be used, it is safer to use a spinner handle one size larger with an insertion angle socket of 1/2"sq.

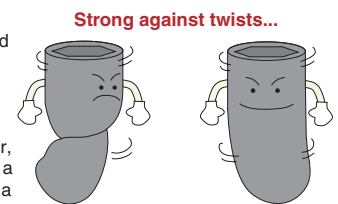
As the tightening torque of the 17mm bolt is 158.4N·m (\*3), tightening under normal torque will not damage the drive angle (caution: rust can cause the bolt to tighten excessively).

\*1 For KTCBX3E \*2 The strength will vary among different products.

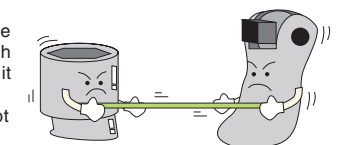
\*3 These are values for your reference. Refer to the tightening torque value data at the end of the volume for details.



**Strong, however brittle...**



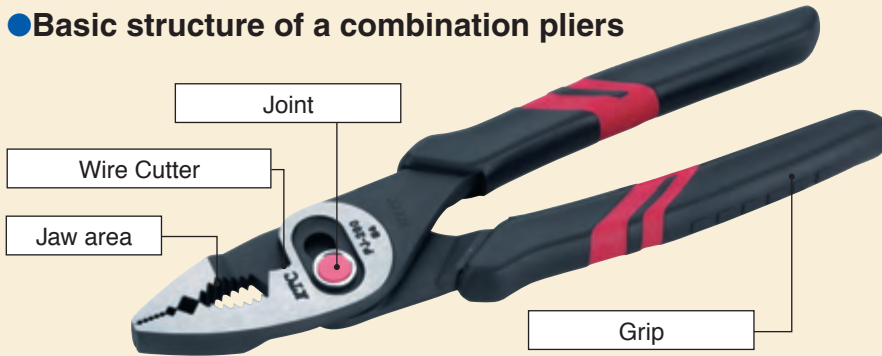
**Strong against twists...**



## Pliers

Pliers are used for holding, turning pipes, cutting wires, and a variety of other tasks. The term “plier” usually refers to the combination plier. However, there are other types of pliers, such as the long nose pliers, etc., which allow the user to select the tool according to purpose.

### ● Basic structure of a combination pliers



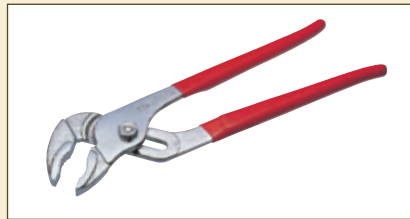
The head is of a curved shape, and a wave-shaped tooth inside to prevent materials from slipping. The tip of the jaw area is flat, and the center is curved to ease the gripping of poles and pipes. The mouth size can be adjusted by shifting the joint area (fulcrum).

### ● Types of pliers



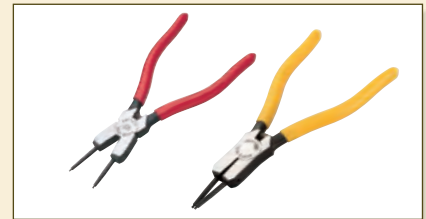
#### Long nosed pliers

Gripping area at the tip is thin and long which suits more detailed work.



#### Water pump pliers

The opening of the mouth can be adjusted to different levels, so pipes with large diameters can be gripped. These pliers are often used in pipe fitting work.

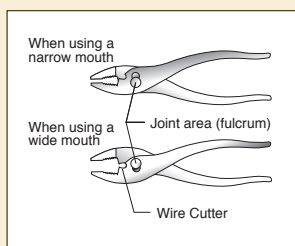


#### Snap ring pliers

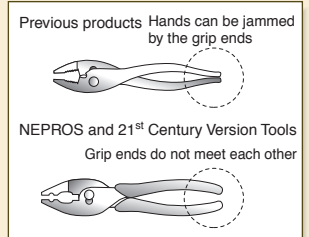
These pliers are often used for attaching and detaching a snap ring. There are two types of snap ring pliers: for cavity use, where the tip closes with the grip and for shaft use, where the tip opens when the grip is closed.

### ● How to use the pliers

For combination pliers, open the grip to approx. 90 degrees and shift the joint area to adjust the opening of the mouth to suit the material size. Use the tip of the jaw to grip flat materials and use the center of the jaw for shaped fitted materials. A wire cutter is equipped to the back of the jaw.



Large force can be applied by gripping the rear end of the handle. However, gripping small objects may cause your hand to become jammed between both ends of the handle. The NEPROS and 21<sup>st</sup> Century Version Tool pliers have a safety mechanism that prevents your hand from being jammed through disallowing full length closure.



The combination pliers is a convenient tool for various purposes. However, it is important to use the correct tools for specific operations. Using the combination pliers for the tightening/loosening of nuts and bolts and the cutting of large, hard wires may cause damage. Use the offset wrench or socket wrench for tightening/loosening nuts and bolts, and the nippers or wire cutters for cutting hard wires. It is important to use the correct tool to suit each of the operations detailed here.

#### <Correct use of tools>

- Do not use on items that may be electrically charged.
- Do not use this tool as a hammer.
- Do not apply impact through hitting with hammers, etc.
- Take care not to get hands or fingers caught between the grips.
- Carefully carry out opening adjustment.



# 2. CONVENTIONAL TOOLS

- SOCKETS and DRIVE TOOLS
- IMPACT SOCKETS and ACCESSORIES
- HEXAGONAL WRENCHES
- TORX® WRENCHES
- BOX END WRENCHES
- OPEN END WRENCHES and COMBINATION WRENCHES
- PROFIT® TOOLS
- HANDLE WRENCHES
- SCREWDRIVERS
- PLIERS, CUTTING PLIERS, SHEARS
- LOCKING PLIERS
- PROSNIP®
- HAMMERS, CHISELS, and PUNCHES
- SCRAPERS, FILES and BRUSES
- ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR PULLERS

# Relentless pursuit of the mechanic standard tool



The "standard model for the 21st Century" has inherited its DNA from the world's highest standard tools "Nepros", and is polished using the latest technology.

**That is the "21st Century Version Tool".**

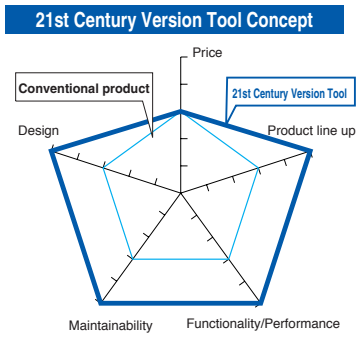
## 21<sup>ST</sup> CENTURY VERSION TOOLS

A new standard model, with over 50 years of history and technology, is designed with completely new concepts. Aiming for better service, better price, and better quality, we have completely revised our source materials, designs, construction and manufacturing process in order to achieve both high specs and reasonable prices.

### An all out challenge to the senses of the pro-mechanic

Tools are for use by mechanics at the site of maintenance. In order to get closer than ever to the senses of the pro-mechanic, we have repeatedly carried out uncompromising practical research and testing to achieve all of the requirements of the workplace at a higher level.

With DNA inherited from NEPROS, comes a beautiful design, improved maintainability, a richness of variation indispensable for a standard model that realize the world's highest class quality, functionality and evolution - and a reasonable price. The summation of KTC's technology, you'll understand why the "Tool that lasts 100 years" should rightly be called the mechanic standard when you use it.



### Newly designed silver case

We have painstakingly sought to perfect the trinity of functionality, endurance, and design. With beautiful lines and clean catches, every part of this beautiful all compact case has a futuristic feel. (Material: Steel)

■ **Metal case** D.PAT.

No.	Size	
EKB-1	L270×W145×H50mm	
EKB-2	L450×W185×H60mm	
EKB-3	L270×W145×H35mm	

\*Please check the merchandise inventory for a product that is marked by before placing an order.

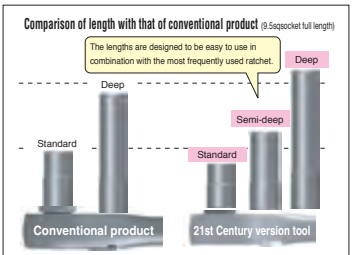




## SOCKET

### Wide variation of sizes

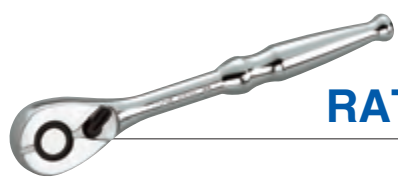
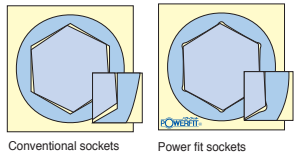
Sockets are designed in shapes and lengths taking into account small working spaces. The standard is shorter and more compact than conventional products. The total length of the deep socket is designed longer, to make work in recessed areas easier. Furthermore, with the addition of the semi-deep sockets, which perform the middle role, a total of 3 lengths have been designed. (The semi-deep design is only for 3/8"sp.)  
6 point and 12 point sockets for



each size from 1/4" to 1/2"sq. Furthermore the "N-Power fit shape" using NEPROS technology is used anew at both the square drive and socket ends, so that as to be more gentle on the bolt and nut, and to improve the strength of the wrench than conventional Power fit\*. The size variation is also rich, and milli size varies in millimeter increments. The inch sizes are also 5 times greater in variation than conventional products. We have achieved a truly full line up.

### \*What is POWERFIT?

When tightening and loosening bolts and nuts with a normal wrench the force is concentrated because the inside face of the wrench and the ridge of the bolt or nut contact in a line, giving rise to burring. With POWERFIT the wrench changes to surface contact and concentration of force is prevented.

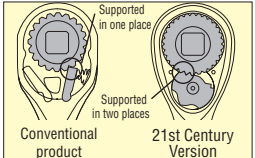


## RATCHET HANDLE

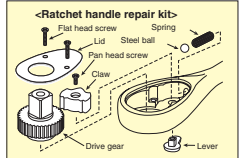
### High functionality, high performance ratchet handle

Based on a slim form for the overall shape, the head in particular uses the same "unified claw" as the NEPROS to achieve a 20% reduction in thickness compared with a conventional product, and greater compactness. A 36 tooth gear is used to realize a narrow feed angle, and the gear is supported by claws in 2 places to achieve a 30% increase in strength over conventional products.

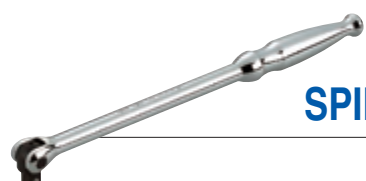
In addition, the area from the head to the grip is designed on the key concept of R, so that it is easy to apply force no matter which part of the handle is grasped. A union mechanism whereby the socket cannot accidentally separate from the ratchet unless a push button is pushed is used as standard (except for BR3A). This enables smooth release, and reduces roughness when attaching a socket.



Conventional products have an 18 tooth gear supported in one place with a claw. The 21st Century Version makes use of NEPROS technology and has a 36 tooth gear supported by claws in 2 places. In this way, even in the case of a very fine gear, there is a 30% increase in strength over a conventional product.



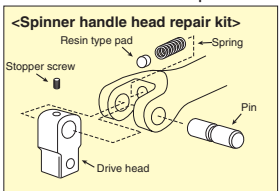
We have provided a repair kit to enable customers to care for and maintain their ratchet for a life time of use.



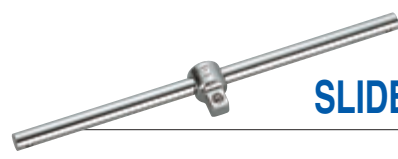
## SPINNER HANDLE

### Strong, long design

Uses a thick round grip that is easy to grasp and apply force to. In addition, we have achieved a 20% increase in strength over a conventional product by revising the materials and optimizing the design. By using a resin pad for the joint part, a smooth movement can be continued without the deep socket disengaging. Furthermore, we have been able to set the head height lower by using a new joint mechanism. This has resulted in improved workability in confined spaces.



Please use the repair kit on the head part. This will ensure life long use of the tool.



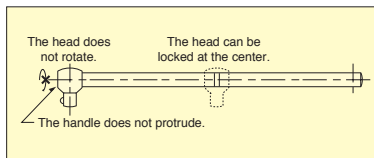
## SLIDE HEAD HANDLE

### Functions designed for easier use

As the groove provided in the bar prevents the head from rotating, operation is made easier when, for example, an extension bar is attached. The head can be locked in the center position. Furthermore, stoppers are provided at both ends of the bar, and when the head is at one end of the bar the head becomes almost flat with the bar so that the length of the bar, can be used effectively to apply force. Also, it is easier to work in confined spaces.



The head and bar become almost flat.



\*Please check the merchandise inventory for a product that is marked by before placing an order.



## EXTENSION BAR

### Wide variation of sizes

A newly designed form and revised materials make for maximum strength, 30 to 40% stronger than conventional products. (1/2"sq head turning type) Also, as with other accessories, the socket male side has had the form and ball position revised compared with conventional products. In addition, the socket female side also has a revised form and position for the ball groove, resulting in a design that reduces looseness.

Standard and head turning types are provided for all socket sizes, and the number of items is up 1.5 times compared with conventional product size variation.



## UNIVERSAL JOINT

### Smooth movement and compact design

The performance of the universal joints, at what angles it can swing and how smoothly it can move, is determined by the "pin gap" between the joints.

The new model of the universal joints has been shortened to the extreme.

The maximum swing angle to one side is set to 45°, which is very useful, and this enables smooth movement with 80 % conveyance efficiency (3/8"sq.).

The length is set to be 8 millimeters shorter than the previous models, which enables it to cope with work in tight spaces.

The "Pin Corking Method" is employed to prevent pins from falling off the joint, this improves strength and durability.



## SOCKET ADAPTOR

### The design that minimizes any loosening.

The socket adaptor connects the sockets, which have different drive sizes, to the driving tool. A new socket adaptor was produced after a thorough review of the form and material of the old mode.

As in other accessories, the socket is designed to stop looseness, i.e. by placing the ball that pulls the socket toward the adapter. This gives greater stability.



▶ P.78

## IMPACT SOCKET

### In pursuit of user-friendliness

The three different lengths (standard, semi-deep and deep) are available for different work places and purposes. It is made thinly so it can be used in narrow spaces (not available in standard models).

In addition to the usual engraved seal, the large, easy-to-read size indication is displayed.

Also, "AMBAC system"\*, a brand new system, is employed in order to prevent pins flying out when an impact wrench is used.



Easy-to-read size indication

\* "AMBAC system"...Refer to P78



▶ P.93

## HEX. BIT SOCKET & DRIVER

### Wide variation of sizes

The new bit socket is a screw-down type that is easy to replace when the bit is worn. 3 different lengths (3/8" sq. only) for different operations along with the long ballpoint type are available. Imperial sizes are also added making a greatly increased line-up. The square form is employed for the grip of the hexagon driver, as it can easily produce large torque and it is also effective for pushing. An emblem is fitted to each grip-end so that the type and the size can be easily recognized.

Left: Standard  
Right: Ball point



▶ P.106

## TORX® BIT SOCKET & DRIVER

### Functions designed for easier use

TORX® is the standard for screws and is developed by Camcar Co. in the United States. Cam Out (a tendency to escape to the outer side) that was happening in Phillips screws occurs less as the screws torque is conveyed more efficiently. This is now internationally widespread.

The new TORX® wrench, as in other tools, has achieved wider variation, improved strength, easier maintenance and improved performance.

The driver's grip-end is more recognizable.  
Left: Standard  
Right: Tamper Resistant





▶▶ P.118

## BOX END WRENCH

**Off-set angle 45°×6° that brings maximum power.**

A new type of Box End wrench that pursues operation performance in conveying torque into hard to reach areas. In order to convey force more efficiently to the bolts & nuts, the height and the length of the Off-set areas are kept to a minimum and the rising angle of the handle is of a low design.

The head is small but devised; it can easily reach onto bolts or nuts in hollow areas and can also be used in the opposite way around.



Former product 21st Century version tool



▶▶ P.125

## OPEN END WRENCH

**"New spear-shape" head has the width that is one of the smallest in the world**

The new spanner head has employed KTC original "new spear-shaped head" that has a much smaller head-width than the previous spear-shaped head but some parts are wider where force applies. The head width is Recognized as one of the smallest in the world. The corner of the caliber is R processed in order to prevent stress from accumulating. Satin and polished finishing brings out a beautiful form.



Former product 21st Century version tool



▶▶ P.127

## COMBINATION WRENCH

**Simple form with real ability**

New type combination wrench that exhibits real ability in extremely small spaces with simple form.

The spanner has the "new spear shaped head" which is one of the world's smallest. The handle is of a light and flexible I-shaped cross section design. In order to spread the load over the entire length, the setting has been extended further than in previous models.



I-shaped cross section design



▶▶ P.135

## SCREWDRIVER

**Wide variation of sizes**

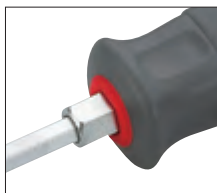
The end is shaped to fit exactly in relation to the screw, the gap between the screws is less and cam out (tendency to escape to the side) is reduced. Perfect catch with the screw through the use of magnets.

Fitted with square grips that are hard wearing with finger positions built into the design.

The outer surface is less slippery and easy to grip with bare hands, gloved hands or even oily hands with its curved design, this allows for a 30% preparation torque improvement on previous models.

The materials of the grip are a 3 layered compound of environmentally friendly propylene and easy fit elastomer resin. In order to easily identify the + and the -, the grip ends are colored as Red (+) and Green (-)

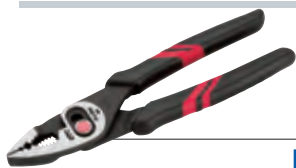
The axle is of a hexagon design. It is effective when high torque is required, as it has a bolster attached (except in stubby versions) and an off-set wrench or spanner can also be used.



Fitted with finger positioning indents, hexagon axis & a bolster.



The grip is made of elastomer resin and is soft in the hand. The convex surface prevents slippage and can be used even with oily hands.



▶▶ P.146

## PLIERS

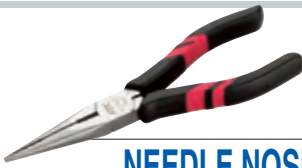
**The "three-step form" can handle from thin to thick operations.**

Combination pliers that have widely improved basic performance such as catching, gripping, rotating and cutting. The gripping area is made up of 3 separate toothed shaped areas that allow easy extraction of small to large items. The necessary cutting load required is 10% less than on previous models with a 20-30% improvement for gripping power.

The safety design to help prevent catching hands, etc. when selecting the wider mouthed option is a function that has been inherited from NEPROS.



3 toothed shaped areas of the pliers



▶▶ P.150

## NEEDLE NOSE PLIERS

**The blade shape has improved the fundamental performance greatly.**

On reviewing the previous blade shape, the cutting load has been reduced on the new model by 15%. 4 new variations of the previous model have been added: standard, long, slim, and bent nose. Choose the appropriate operation to suit oneself and one's working environment. The convex shape helps prevent slippage with a soft grip that fits the hand perfectly.

(Common points for scissor types)



Soft grip with a convex surface



▶▶ P.151

## CUTTING PLIERS

**The cutting function for both soft and hard wires has been achieved in the one pair of pliers.**

Generally speaking, when talking about nippers, 2 types of pliers were required for when cutting soft and hard wires. The new design has allowed for the 2 type of pliers to be combined into 1. The blade is designed to easily cut bronze and other soft wires at the tip end and harder wires such as piano wires and other much thicker wires at the base of the blade. This design has allowed for a reduction of around 15% in cutting load.



Standard shape has been fitted to the wide type. The blade angle on the end of the blade is 75° while at the base it is 90°.

# 2. CONVENTIONAL TOOLS

## SOCKETS and DRIVE TOOLS



### CAUTION

#### SOCKET WRENCH SETS

- READ THE CAUTION MESSAGE CAREFULLY FOR EACH TOOL.
- LOCK THE STOPPER SECURELY WHEN CARRYING.

#### DRIVE TOOLS

- DO NOT EXTEND THE HANDLE OR BAR BY USING A PIPE.
- INSERT THE SQUARE DRIVE TO THE END.
- DO NOT USE A DRIVE TOOL AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT TO A DRIVE TOOL BY HITTING WITH A HAMMER, ETC.
- DO NOT USE A DRIVE TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH.

#### SOCKETS

- USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.
- FIT THE BOLT HEAD OR NUT COMPLETELY INTO THE DEEP PART OF THE SOCKET.
- FIT THE DRIVE SECTION TO COVER COMPLETELY THE BOLT HEAD OR NUT.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.
- DO NOT USE A SOCKET WITH A POWER TOOL SUCH AS AN IMPACT WRENCH.




### ● 1/4"sq. SOCKET WRENCH SET DIGITAL RATCHET MODEL



#### SOCKET WRENCH SET

No. TB206WG1	▼ g 950	📦 1
Digital Ratchet	GEK030-R2-L	
Socket (12pt.)	B2-07W, 08W, 10W, 12W, 14W	
Socket Holder (5pcs.)	EHB205	

- It is a set of advanced digital torque tool "digital ratchet"  P.176 and 1/4"sq. socket (12pt.).

### ● 1/4"sq. SOCKET WRENCH SET (13pcs.)



#### SOCKET WRENCH SET (13pcs.)

mm · in

No. TB210	▼ g 400	📦 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
No. TB210B	▼ g 400	📦 1
Socket (6pt.) in	B2- $\frac{3}{16}$ , $\frac{7}{32}$ , $\frac{1}{4}$ , $\frac{9}{32}$ , $\frac{5}{16}$ , $\frac{11}{32}$ , $\frac{3}{8}$ , $\frac{7}{16}$ , $\frac{1}{2}$ , $\frac{9}{16}$	
<b>Common Items</b>		
Ratchet Handle	BR2E	
Extension Bar	50 BE2-050	
	100 BE2-100	

- with Plastic Tray (L264xW82xH30mm)  (Except 5mm and 3/16in)

### ● 1/4"sq. SOCKET WRENCH SET (17pcs.)



#### SOCKET WRENCH SET (17pcs.)

mm

No. TB214	▼ g 440	📦 1
Socket (6pt.)	B2-032, 04, 045, 05, 055, 06, 07, 08, 09, 10, 11, 12, 13, 14	
Ratchet Handle	BR2E	
Extension Bar	50 BE2-050	
	100 BE2-100	

- with Plastic Tray (L264xW82xH30mm)  (Except the following from 5mm)


### ● 1/4"sq. SOCKET WRENCH SET (25pcs.)



#### SOCKET WRENCH SET (25pcs.)

mm · in

No. TB2X20B	▼ kg 1.3	📦 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Socket (6pt.) in	B2- $\frac{3}{16}$ , $\frac{7}{32}$ , $\frac{1}{4}$ , $\frac{9}{32}$ , $\frac{5}{16}$ , $\frac{11}{32}$ , $\frac{3}{8}$ , $\frac{7}{16}$ , $\frac{1}{2}$ , $\frac{9}{16}$	
Ratchet Handle	BR2E	
Spinner Handle	BS2E	
Extension Bar	50 BE2-050	
	100 BE2-100	
Wobble Extension Bar 30	BE2-030JW	
Metal Case	EKB-3 L270xW150xH35mm	

- with Plastic Tray (L264xW144xH30mm)  (Except 5mm and 3/16in)

**SOCKET WRENCH SET (25pcs.)** mm

No. TB2X20	▼kg 1.3	📦 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Ratchet Handle	BR2E	
Spinner Handle	BS2E	
Extension Bar	50	BE2-050
	100	BE2-100
Wobble Extension Bar	30 BE2-030JW	
Metal Case	EKB-3 L270×W150×H35mm	

• with Plastic Tray (L264×W144×H30mm) (Except 5mm)

● 1/4"sq. SOCKET WRENCH SET (25pcs.)



**DEEP SOCKET WRENCH SET (15pcs.)** mm

No. TB2L10	▼kg 1.3	📦 1
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Ratchet Handle	BR2E	
Spinner Handle	BS2E	
Extension Bar	50	BE2-050
	100	BE2-100
Wobble Extension Bar	30 BE2-030JW	
Metal Case	EKB-3 L270×W150×H35mm	

• with Plastic Tray (L264×W144×H30mm) (Except 5mm)

● 1/4"sq. DEEP SOCKET WRENCH SET (15pcs.)



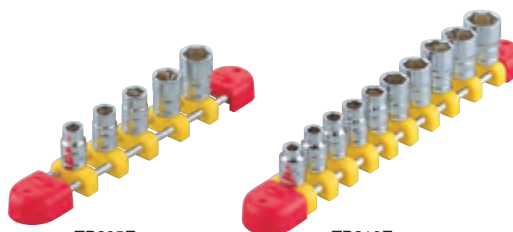
**SOCKET SET (5pcs.) • (10pcs.)** mm

No. TB205E	▼g 120	📦 1
Socket (6pt.)	B2-06, 07, 08, 10, 12	
Socket Holder (5pcs.)	EHB205	

No. TB210E	▼g 430	📦 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Socket Holder (10pcs.)	EHB210	

(Except 5mm)

● 1/4"sq. SOCKET WRENCH SET (5pcs.) • (10pcs.)



TB205E

TB210E

**SOCKET** mm

6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
B2 -032		3.2	6.5	12	2.5	16	8	9	10
-04		4	7	12	3	16	8	9	10
-045		4.5	7.5	12	3	16	8	9	10
-05		5	8.5	12	3	16	8	9	10
-055	B2 -055W	5.5	9	12	5	18	10	9	10
-06	-06 W	6	10	12	5	18	10	10	10
-07	-07 W	7	11	12	5	18	10	10	10
-08	-08 W	8	12	13	5.5	18.5	10.5	12	10
-09	-09 W	9	13.5	13	5.5	18.5	10.5	13	10
-10	-10 W	10	14.5	13.5	5.5	18.5	10.5	13	10
-11	-11 W	11	16	14.5	6	19	11	16	10
-12	-12 W	12	17	15	6.5	20.5	12.5	19	10
-13	-13 W	13	18.5	16.5	6.5	20.5	12.5	22	10
-14	-14 W	14	20	17.5	7	21.5	13.5	27	10

(Except the following from 5mm)

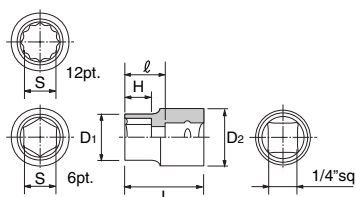
● 1/4"sq. SOCKET



**SOCKET** in

6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
B2 -1/8		3.1	6.5	12	2.5	16	8	9	10
-5/32		3.9	7	12	3	16	8	9	10
-3/16		4.7	8.5	12	3	16	8	9	10
-7/32	B2 -7/32 W	5.5	9	12	5	18	10	9	10
-1/4	-1/4 W	6.3	10	12	5	18	10	10	10
-9/32	-9/32 W	7.1	11	12	5	18	10	10	10
-5/16	-5/16 W	7.9	12	13	5.5	18.5	10.5	12	10
-11/32	-11/32 W	8.7	13.5	13	5.5	18.5	10.5	13	10
-3/8	-3/8 W	9.5	14.5	13.5	5.5	18.5	10.5	13	10
-7/16	-7/16 W	11.1	16	14.5	6	19	11	16	10
-1/2	-1/2 W	12.7	18.5	16.5	6.5	20.5	12.5	24	10
-17/32	-17/32 W	13.4	20	17.5	7	21.5	13.5	28	10
-9/16	-9/16 W	14.2	20	17.5	8	22.5	14.5	29	10

(Except the following from 3/16in)



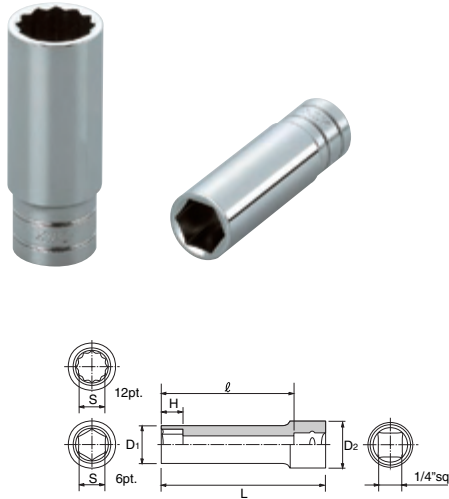
1/4"  
sq.

● 1/4" sq. DEEP SOCKET SET (5pcs.) • (10pcs.)



DEEP SOCKET SET (5pcs.) • (10pcs.)			mm
No. TB2L05	▼g 270	☞ 1	
Deep Socket (6pt.)	B2L-07, 08, 10, 12, 14		
Socket Holder (5pcs.)	EHB205		
<b>POWERFIT</b>			
No. TB2L10E	▼g 450	☞ 1	
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14		
Socket Holder (10pcs.)	EHB210		
<b>POWERFIT</b> (Except 5mm)			

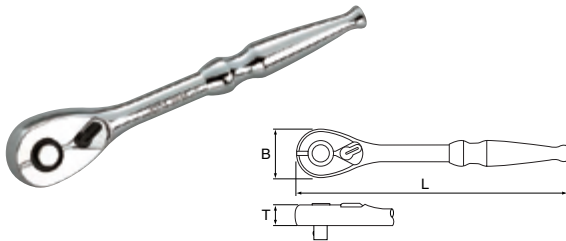
● 1/4" sq. DEEP SOCKET



DEEP SOCKET											mm
6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	l	▼g	☞		
B2L-032		3.2	6.5	12	5	50	42	17	5		
-04		4	7	12	5	50	42	19	5		
-045		4.5	7.5	12	5	50	42	18	5		
-05		5	8.5	12	5	50	42	20	5		
-055	B2L -055W	5.5	9	12	6	50	42	24	5		
-06	-06 W	6	10	12	6	50	42	28	5		
-07	-07 W	7	11	12	8	50	42	27	5		
-08	-08 W	8	12	13	9	50	42	33	5		
-09	-09 W	9	13.5	13	10	50	42	41	5		
-10	-10 W	10	14.5	13.5	11	50	42	36	5		
-11	-11 W	11	16	14.5	12	50	42	46	5		
-12	-12 W	12	17	15	14	50	42	52	5		
-13	-13 W	13	18.5	16.5	14	50	42	59	5		
-14	-14 W	14	20	17.5	17	50	42	67	5		
<b>POWERFIT</b> (Except the following from 5mm)											

DEEP SOCKET											in
6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	l	▼g	☞		
B2L -1/8		3.1	6.5	12	5	50	42	17	5		
-3/32		3.9	7	12	5	50	42	19	5		
-1/16		4.7	8.5	12	5	50	42	21	5		
-3/32	B2L -7/32 W	5.5	9	12	6	50	42	24	5		
-1/4	-1/4 W	6.3	10	12	6	50	42	28	5		
-9/32	-9/32 W	7.1	11	12	8	50	42	27	5		
-5/16	-5/16 W	7.9	12	13	9	50	42	33	5		
-11/32	-11/32 W	8.7	13.5	13	10	50	42	41	5		
-3/8	-3/8 W	9.5	14.5	13.5	11	50	42	39	5		
-7/16	-7/16 W	11.1	16	14.5	12	50	42	46	5		
-1/2	-1/2 W	12.7	18.5	16.5	14	50	42	66	5		
-11/32	-11/32 W	13.4	20	17.5	17	50	42	71	5		
-9/16	-9/16 W	14.2	20	17.5	17	50	42	66	5		
<b>POWERFIT</b> (Except the following from 3/16in)											

● 1/4" sq. RATCHET HANDLE D.PAT.

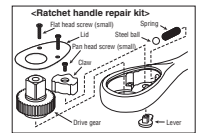


RATCHET HANDLE						
No.	Feed	B	T	L	▼g	☞
BR2E	10°	22	10	125	100	5

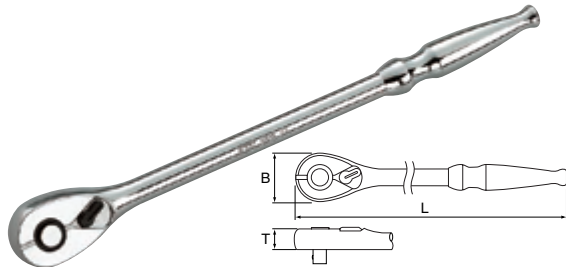
⚠ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ REPAIR KIT FOR 1/4" sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4" sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



● 1/4" sq. LONG RATCHET HANDLE D.PAT.

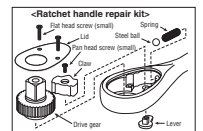


LONG RATCHET HANDLE						
No.	Feed	B	T	L	▼g	☞
BR2L	10°	22	10	190	125	5

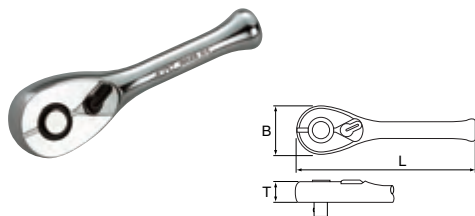
⚠ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
• BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■ REPAIR KIT FOR 1/4" sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4" sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



● 1/4" sq. SHORT RATCHET HANDLE D.PAT.

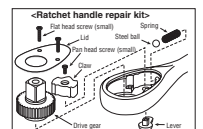


SHORT RATCHET HANDLE						
No.	Feed	B	T	L	▼g	☞
BR2S	10°	22	10	80	90	5

⚠ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ REPAIR KIT FOR 1/4" sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4" sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



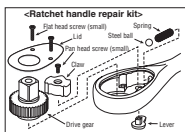
**FLEX RATCHET HANDLE**

No.	Feed	B	T	L	▽g	
BR2F	10°	22	10	125	140	5

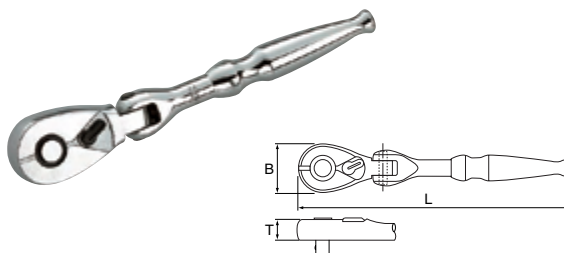
**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**REPAIR KIT FOR 1/4"sq. RATCHET HEAD**

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 1/4"sq. FLEX RATCHET HANDLE D.PAT.



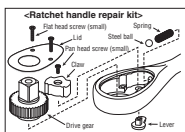
**FLEX LONG RATCHET HANDLE**

No.	Feed	B	T	L	▽g	
BR2FL	10°	22	10	190	170	5

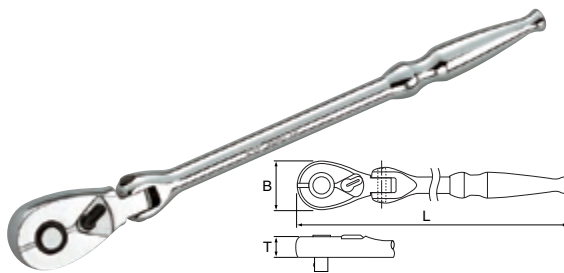
**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

**REPAIR KIT FOR 1/4"sq. RATCHET HEAD**

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 1/4"sq. FLEX LONG RATCHET HANDLE D.PAT.



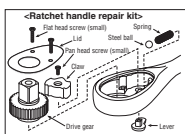
**FLEX SHORT RATCHET HANDLE**

No.	Feed	B	T	L	▽g	
BR2FS	10°	22	10	80	130	5

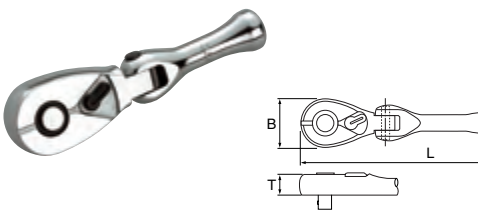
**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**REPAIR KIT FOR 1/4"sq. RATCHET HEAD**

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 1/4"sq. FLEX SHORT RATCHET HANDLE D.PAT.



**SPINNER HANDLE**

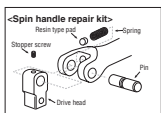
No.	D	Handle (ø)	L	▽g	
BS2E	12	12	150	90	5

**LONG SPINNER HANDLE**

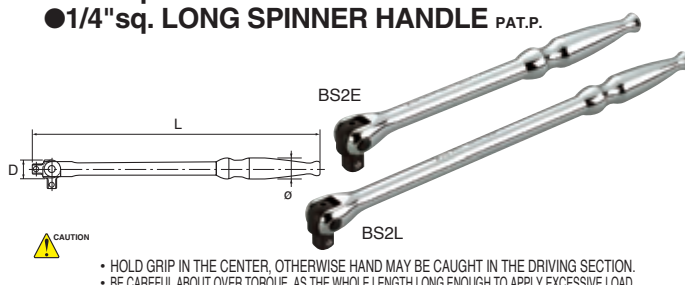
No.	D	Handle (ø)	L	▽g	
BS2L	12	12	200	110	5

**1/4"sq. Spinner handle head repair kit PAT.P.**

No.	Insertion angle	Contents
BS2E-K	1/4"sq.	Drive head · Pin · Pad · Spring · Stopper screw x1



● 1/4"sq. SPINNER HANDLE PAT.P.  
 ● 1/4"sq. LONG SPINNER HANDLE PAT.P.

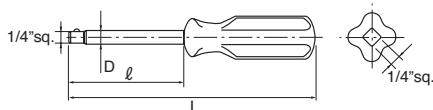


**DRIVER TYPE HANDLE**

No.	D	L	ℓ	▽g	
BD10	8.2	150	70	90	5

• Grip end has an opening. Usable as extension bar.

**CAUTION** • DO NOT USE MULTIPLE EXTENSION.



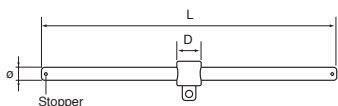
● 1/4"sq. SCREWDRIVER TYPE HANDLE



**SLIDE HEAD HANDLE**

No.	D	ø	L	▽g	
BHM2	13	7	120	70	5

• In the workplace (car maintenance, etc.), whether quick turning or strong tightening , this tool is faster than a ratchet handle.  
 • A track has been fitted to the handle to prevent the head from turning.

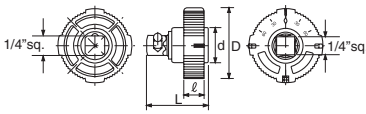


● 1/4"sq. SLIDE HEAD HANDLE



1/4" sq.

● 1/4" sq. QUICK SPINNER® D.PAT.



**QUICK SPINNER®**

No.	D	d	L	ℓ	▽g	☞
BE2-Q	28	12	19.5	8	25	10

- Specially for quick turning for effective use with Ratchet handle or Extension bar.
- Grip has angle (90°) indication by groove with 30° indication on surface.
- Grip is made of resin for light weight.

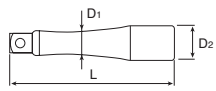
⚠ CAUTION • DO NOT USE MULTIPLE EXTENSION.

\*Quick Spinner is a registered trademark of the Kyoto Tool Co., Ltd.

● 1/4" sq. EXTENSION BAR



BE2-075



**EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	☞
BE2 -030	9	12	30	17	5
-050	9	12	50	27	5
-075	8	12	75	38	5
-100	8	12	100	48	5
-150	8	12	150	70	5
-200	8	12	200	90	5
-270	8	12	270	118	5
-600	9	12	600	300	5

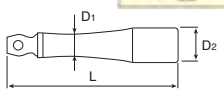
⚠ CAUTION • DO NOT USE MULTIPLE EXTENSION.



● 1/4" sq. WOBBLE EXTENSION BAR



BE2-075JW



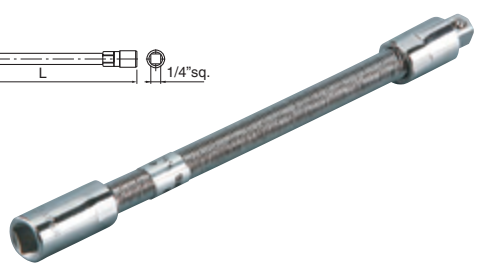
**WOBBLE EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	☞
BE2 -030JW	9	12	30	17	5
-050JW	9	12	50	27	5
-075JW	8	12	75	38	5
-100JW	8	12	100	48	5
-150JW	8	12	150	70	5
-200JW	8	12	200	90	5
-270JW	8	12	270	118	5

⚠ CAUTION • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT APPLY EXCESSIVE POWER OR IMPACT.  
• DO NOT USE MULTIPLE EXTENSION.



● 1/4" sq. FLEXIBLE EXTENSION BAR

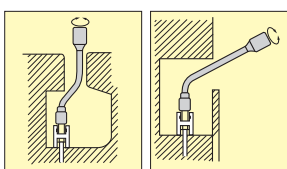


**FLEXIBLE EXTENSION BAR**

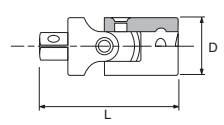
No.	L	N-m	▽g	☞
BES10 -150	150	9	50	10

• This is a handy tool when tightening or loosening nuts & bolts when the angle is difficult or the area is confined. (e.g. bolts inside the dash).

⚠ CAUTION • FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.  
• DO NOT USE MULTIPLE EXTENSIONS.



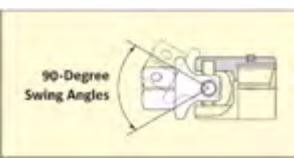
● 1/4" sq. UNIVERSAL JOINT



**UNIVERSAL JOINT**

No.	D	L	▽g	☞
BJ2	13	33	20	5

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE FLEX PART.



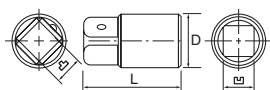
● 1/4" sq. INTERNAL × 3/8" sq. EXTERNAL DRIVE ADAPTOR



**1/4" sq. INTERNAL × 3/8" sq. EXTERNAL DRIVE ADAPTOR**

No.	sq.		D	L	▽g	☞
	Internal	External				
BA23	1/4"	3/8"	13	22	15	10

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

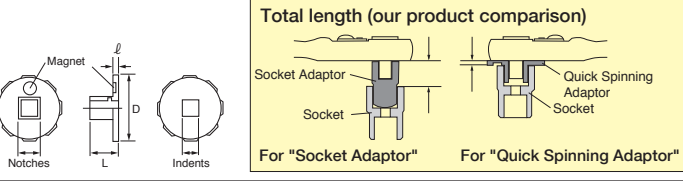




**QUICK SPINNING ADAPTOR**

No.	sq.		D	L	ℓ	▽g	📦
	Internal	External					
BAE23	1/4"	3/8"	28	13	2.5	20	10

- Quick Spinning is possible by the product itself unlike socket adaptor.
- It can be used with the total length shortened compared to socket adaptor since indents and notches are matched at the same position. (Below)
- Detachment and retention of socket is easy with the magnet.
- Grip has a shape that's hard to slip and easy to spin quickly.



**1/4"sq. QUICK SPINNING ADAPTOR D.PAT.**

Good Design Award Winning Product



**SOCKET HOLDER - CLIP SET (7pcs.)**

No.		H	A	L	▽g	📦
EHB205	5	19	25	165	55	10
EHB210	10	19	25	215	60	10
EHB215	15	19	25	315	80	10

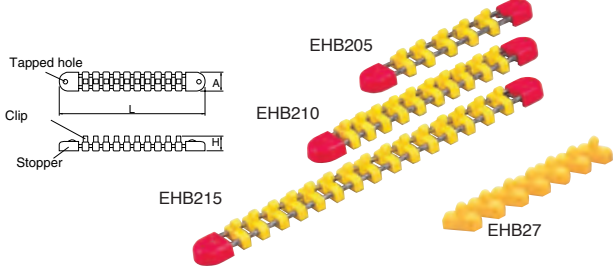
- Change of holder shape enables easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying).
- Different colors for different sizes

**CAUTION** • REVERSING HOLDER MAY MAKE SOCKETS FALLING.

No. EHB27	▽g 25	📦 10
CLIP	7pcs.	

- Spare clip for EHB205, 210 and 215.
- Can be used for EHB305 - 315 and 405 - 410.

**1/4"sq. SOCKET HOLDER • CLIP SET D.PAT.**



**ALUMINUM SOCKET HOLDER**

No.	sq.	Number of clips	H	A	L	▽g	📦
EHBA210	1/4"	10	17	28.5	305	175	1

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
- Rail color differs by the square, allowing the easy identification of socket.
- Since the rail size is uniform, sockets with various squares can be stored by interchanging the clip.

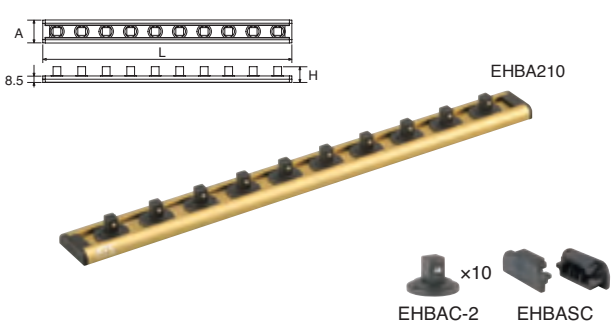
**CAUTION** • Socket may fall off if the socket holder is turned upside down. • It cannot be mounted on a surface that's perpendicular to the ground.

**Supply parts**

No.	Product Name
EHBAC-2	1/4"sq. Clip Set [10pcs.]
EBBASC	Side Cover [2pcs. Set]

\* Clip can be commonly used for EHBA210, EHBA310 and EHBA410.

**ALUMINUM SOCKET HOLDER**



**SOCKET WRENCH SET**

No. TB306WG1	▽kg 1.2	📦 1
Digital Ratchet	GEK060-R3-L	
Socket (12pt.)	B3-08W, 10W, 12W, 14W, 17W	
Socket Holder (5pcs.)	EHB305	

- It is a set of advanced digital torque tool "Digital Ratchet" P.176 and 3/8"sq. socket (12pt.).

**3/8"sq. SOCKET WRENCH SET**

**DIGITAL RATCHET MODEL**



**SOCKET WRENCH SET**

No. TB306WG2	▽kg 1.3	📦 1
Digital Ratchet	GEK085-R3-L	
Socket (12pt.)	B3-10W, 12W, 14W, 17W, 19W	
Socket Holder (5pcs.)	EHB305	

- It is a set of advanced digital torque tool "Digital Ratchet" P.176 and 3/8"sq. socket (12pt.).

**3/8"sq. SOCKET WRENCH SET**

**DIGITAL RATCHET MODEL**



**SOCKET WRENCH SET**

No. TB306WG3	▽kg 1.1	📦 1
Digital Ratchet	GEK030-C3-L	
Socket (12pt.)	B3-07W, 08W, 10W, 12W, 14W	
Socket Holder (5pcs.)	EHB305	

- It is a set of advanced digital torque tool "Digital Ratchet" P.176 and 3/8"sq. socket (12pt.).

**3/8"sq. SOCKET WRENCH SET**

**DIGITAL RATCHET MODEL**



3/8"  
sq.

● 3/8" sq. SOCKET WRENCH SET (12pcs.)



TB308

SOCKET WRENCH SET (12pcs.)		mm - in
No. TB308	▼kg 1.7	☞ 1
Socket (6pt.)	B3-07, 08, 10, 12, 13, 14, 17, 19	
No. TB308X	▼kg 1.7	☞ 1
Socket (6pt.)	B3-07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 17W, 19W	
No. TB308BX	▼kg 1.7	☞ 1
Socket (6pt.) in	B3- $\frac{3}{8}$ , $\frac{7}{16}$	
Socket (12pt.) in	B3- $\frac{1}{2}$ W, $\frac{9}{16}$ W, $\frac{19}{32}$ W, $\frac{5}{8}$ W, $\frac{11}{16}$ W, $\frac{3}{4}$ W	
<u>Common Items</u>		
Ratchet Handle	BR3E	
Extension Bar	50 BE3-050	
	100 BE3-100	
Universal Joint	BJ3	
Socket Holders (5pcs.)	EHB305	
Metal Case	EKB-1 L270xW145xH50mm	
• with Plastic Tray (L265xW145xH38mm)		



● 3/8" sq. SOCKET WRENCH SET (19pcs.)



SOCKET WRENCH SET (19pcs.)		mm
No. TB312X	▼kg 3.8	☞ 1
Socket (6pt.)	B3-055, 07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 15W, 17W, 19W, 21W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450xW185xH60mm	
• with Plastic Tray (L445xW185xH52mm)		



● 3/8" sq. SOCKET WRENCH SET (21pcs.)



SOCKET WRENCH SET (21 pcs.)		mm
No. TB314	▼kg 3.8	☞ 1
Socket (6pt.)	B3-055, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450xW185xH60mm	
• with Plastic Tray (L445xW185xH52mm)		



● 3/8" sq. SOCKET WRENCH SET (25pcs.)



SOCKET WRENCH SET (25pcs.)		mm
No. TB317X	▼kg 3.9	☞ 1
Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12	
Socket (12pt.)	B3-13W, 14W, 15W, 16W, 17W, 19W, 20W, 21W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450xW185xH60mm	
• with Plastic Tray (L445xW185xH52mm)		



● 3/8" sq. SOCKET WRENCH SET (26pcs.)



SOCKET WRENCH SET (26pcs.)		mm
No. TB318	▼kg 4	☞ 1
Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450xW185xH60mm	
• with Plastic Tray (L445xW185xH52mm)		



● 3/8" sq. DEEP SOCKET WRENCH SET (17pcs.)



DEEP SOCKET WRENCH SET (17pcs.)		mm
No. TB3L11X	▼kg 4	☞ 1
Deep Socket (6pt.)	B3L-06, 08, 10, 11, 12	
Deep Socket (12pt.)	B3L-13W, 14W, 15W, 17W, 19W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (5pcs.)	EHB305	
Metal Case	EKB-2 L450xW185xH60mm	
• with Plastic Tray (L445xW185xH52mm)		



\*Please check the merchandise inventory for a product that is marked by before placing an order.

**SOCKET WRENCH SET (26pcs.)** mm

No. TB3X20	▼kg 4.3	📦 1
Socket (6pt.)	B3-055, 07, 08, 10, 12	
Socket (12pt.)	B3- 13W, 14W, 15W, 17W, 19W	
Deep Socket (6pt.)	B3L-07, 08, 10, 12	
Deep Socket (12pt.)	B3L- 13W, 14W, 15W, 17W, 19W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
Wobble Extension Bar	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450xW185xH60mm	

• with Plastic Tray (L445xW185xH52mm)



●3/8"sq. SOCKET WRENCH SET (26pcs.)

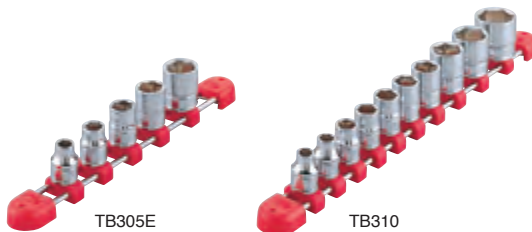


**SOCKET SET (5pcs.) • (10pcs.)** mm

No. TB305E	▼g 500	📦 1
Socket (6pt.)	B3-08, 10, 12, 14, 17	
Socket Holder (5pcs.)	EHB305	



●3/8"sq. SOCKET SET (5pcs.) • (10pcs.)



**No. TB310** ▼kg 1 📦 1

Socket (6pt.)	B3-07, 08, 10, 11, 12, 13, 14, 17, 19, 22
Socket Holder (10pcs.)	EHB310

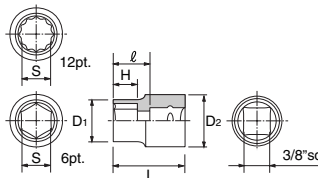


**SOCKET** mm

6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
B3 -055	B3 -055 W	5.5	9	17	5	22	10.5	19	5
-06	-06 W	6	10	17	5	22	10.5	20	5
-07	-07 W	7	11	17	5	22	10.5	20	5
-08	-08 W	8	12	17	5.5	22	10.5	20	5
-09	-09 W	9	13.5	17	5.5	22	10.5	21	5
-10	-10 W	10	14.5	17	5.5	22	10.5	20	5
-11	-11 W	11	16	17	6	23	11.5	23	5
-12	-12 W	12	17	18	7.5	24	12.5	26	5
-13	-13 W	13	18.5	18	7.5	24	12.5	28	5
-14	-14 W	14	20	19	8.5	25	13.5	34	5
-15	-15 W	15	21	20	8.5	26	14.5	35	5
-16	-16 W	16	22	21	9	26	14.5	41	5
-17	-17 W	17	24	22	10	27	15.5	51	5
-18	-18 W	18	25	23	10	27	15.5	58	5
-19	-19 W	19	26	24	10.5	27	15.5	62	5
-20	-20 W	20	27.5	25	11	28	16.5	71	5
-21	-21 W	21	28.5	26.5	11.5	28	16.5	81	5
-22	-22 W	22	30	27.5	11.5	28	16.5	86	5
-23	-23 W	23	31	28.5	12	29	17.5	94	5
-24	-24 W	24	32.5	30	12	29	17.5	115	5



●3/8"sq. SOCKET

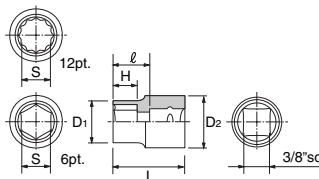


**SOCKET** in

6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
B3 -1/4	B3 -1/4 W	6.3	10	17	5	22	10.5	20	5
9/32	9/32 W	7.1	11	17	5	22	10.5	20	5
5/16	5/16 W	7.9	12	17	5.5	22	10.5	20	5
11/32	11/32 W	8.7	13.5	17	5.5	22	10.5	21	5
3/8	3/8 W	9.5	14	17	5.5	22	10.5	21	5
7/16	7/16 W	11.1	16	17	6	23	11.5	23	5
1/2	1/2 W	12.7	18.5	18	7.5	24	12.5	28	5
17/32	17/32 W	13.4	20	19	7.5	24	12.5	35	5
9/16	9/16 W	14.2	20	19	8.5	25	13.5	34	5
19/32	19/32 W	15	21	20	8.5	26	14.5	35	5
5/8	5/8 W	15.8	22	21	9	26	14.5	42	5
21/32	21/32 W	16.6	24	22	10	27	15.5	51	5
11/16	11/16 W	17.4	24	22	10	27	15.5	51	5
3/4	3/4 W	19	26	24	10.5	27	15.5	62	5
25/32	25/32 W	19.8	27.5	25	11	28	16.5	73	5
13/16	13/16 W	20.6	28.5	26.5	11.5	28	16.5	80	5
7/8	7/8 W	22.2	30	27.5	11.5	28	16.5	84	5



●3/8"sq. SOCKET





**DEEP SOCKET SET (5pcs.) • (10pcs.)** mm

<b>No. TB3L05</b>	▼kg 1	📦 1
Deep Socket (6pt.)	B3L-08, 10, 12, 14, 17	
Socket Holder (5pcs.)	EHB305	



<b>No. TB3L10</b>	▼kg 1.2	📦 1
Deep Socket (6pt.)	B3L-07, 08, 10, 12, 13, 14, 15, 17, 19, 22	
Socket Holder (10pcs.)	EHB310	



**●3/8"sq. DEEP SOCKET SET (5pcs.) • (10pcs.)**



**LONG DEEP SOCKET • SET** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	d	H	L	ℓ	▼g	📦
<b>B3LL -10</b>	10	14.5	18	8	11	130	113	115	5
<b>-12</b>	12	17.7	18	9	12	130	113	140	5



**●3/8"sq. LONG DEEP SOCKET • SET**



■Usage

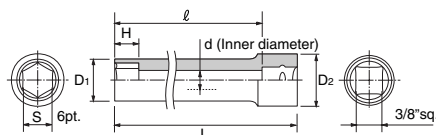
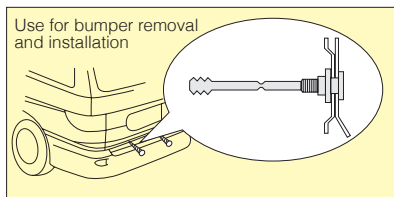
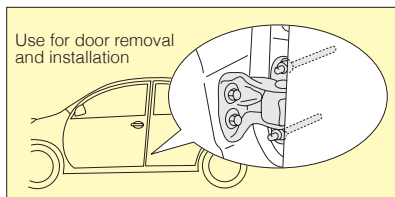
- Tightening & loosening of bolts and nuts that are either long and jut out or are in hard to reach areas.

<b>No. B3TLL2</b>	▼g 255	📦 1
-------------------	--------	-----

Long Deep Socket (6pt.) B3LL-10, 12

■Application

- Rear bumper cover installation bolt, Door knob inner installation bolt, Door hinge bolt, side louver installation bolt
- Bumper reinforcement installation bolt, Air bag adjusting bolt, Tension pulley adjustment bolt
- Installation bolts and nuts of the under carriage
- Use where Spanners, Off-set wrenches, Deep sockets, etc., are difficult to use in hard to reach areas



**MAGNETIC DEEP SOCKET SET(5pcs.)**

<b>No.TB3L05MGA</b>	▼g 480	📦 1
Magnetic Deep Socket	B3L-08MGA, 10MGA, 12MGA, 13MGA, 14MGA	
Socket Holder (5pcs.)	EHB305	

**●3/8"sq. MAGNETIC DEEP SOCKET SET (5pcs.)**



**MAGNETIC DEEP SOCKET**

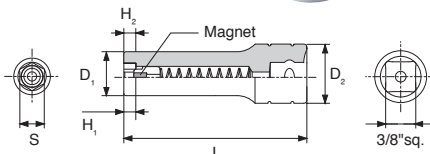
No.	S	D <sub>1</sub>	D <sub>2</sub>	L	H <sub>1</sub>	H <sub>2</sub>	▼g
<b>B3L-08MGA</b>	8	12.2	17	60	2.5	4	47
<b>B3L-10MGA</b>	10	14.7	17	65	3.1	4.5	60
<b>B3L-12MGA</b>	12	17.2	18	65	4.6	6	80
<b>B3L-13MGA</b>	13	18.7	18	70	5.2	6.5	99
<b>B3L-14MGA</b>	14	20.2	19	70	5.6	7	114

**●3/8"sq. MAGNETIC DEEP SOCKET**



- Prevents the falling of bolt · nut with the built-in magnet in the bore.
- Since the magnet part slides, it supports the bolt with washer, thin nut and stud bolts.
- Powerful neodymium magnet is used.

<p><b>Conventional product</b></p> <p>Gap is made</p>	<p><b>This product</b></p> <p>Spring</p>	<p>Securely holds a bolt with washer with sliding built-in magnet.</p>	<p>Can also be used for protruding bolts such as stud bolt.</p>
---	--	--	---



3/8" sq.

● 3/8"sq. CROWFOOT WRENCH SET (5pcs.)

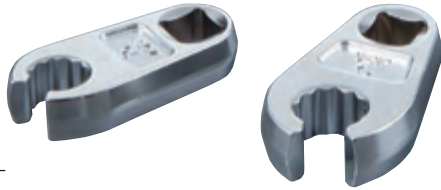


**CROWFOOT WRENCH SET(5pcs.)**

No. TBNS305W	▼ g 490	📦 1
Crowfoot Wrench	BNS3-10W, 12W, 14W, 17W, 19W	
Socket Holder (10pcs.)	EHB310	

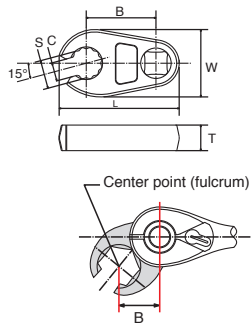
- For the loosening/tightening work of flare nut that's used in the hydraulic piping of automobiles and general industrial machinery.
- Approach to nuts is easy with the double hex. bore.
- Since the distance from the bore to drive center is unified at 30mm, conversion during the use of torque wrench does not change depending on the size.

● 3/8"sq. CROWFOOT WRENCH

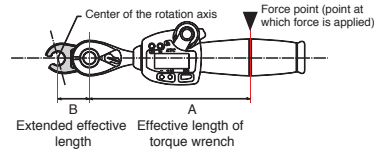


**CROWFOOT WRENCH**

No.	S	C	L	W	T	B	▼g
BNS3-08W	8	5	49	22	9.5	30	48
BNS3-10W	10	6	49	22	9.5	30	46
BNS3-11W	11	7	49	22	9.5	30	44
BNS3-12W	12	8	52	29	11	30	71
BNS3-13W	13	9	52	29	11	30	69
BNS3-14W	14	10	52	29	11	30	67
BNS3-17W	17	12	55.5	35	13	30	94
BNS3-19W	19	13	55.5	35	13	30	89



- For the loosening/tightening work of flare nut that's used in the hydraulic piping of automobiles and general industrial machinery.
- Approach to nuts is easy with the double hex. bore.
- Since the distance from the bore to drive center is unified at 30mm, conversion during the use of torque wrench does not change depending on the size.

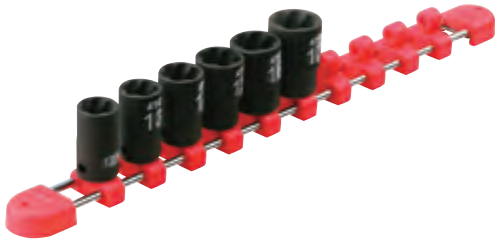


\* Numerical values of dimension B in the upper right dimension drawing (30mm) applies when there is a central axis of crowfoot wrench on the central axis extension of torque wrench (left). If there is no central axis of crowfoot wrench on the central axis extension of torque wrench as shown in the figure on the right, please measure the actual dimension B and apply to the conversion formula.

**Torque conversion formula:**  

$$\frac{A}{(A+B)} \times \text{Required torque value} = \text{Input torque value}$$

● 3/8"sq. TWIST SOCKET • SET (6pcs.)

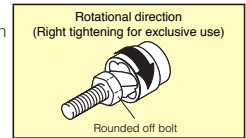


**TWIST SOCKET • SET** mm

No. TB3TW06	▼ g 430	📦 1
Twist Socket	B3TW-12, 13, 14, 15, 16, 17	
Socket Holder (10pcs.)	EHB310	

- For loosening bolts which are rounded off and stud bolts.
- Easy to remove because of twist configuration.
- \* Removed bolt and nut are nonrecyclable.
- \* Using sizes differ depending on the damaged condition on bolt and nut.
- Choose the size after seeing the actual stuff.

**CAUTION**  
 • Do not use a socket with a power tool such as an impact wrench.



● 3/8"sq. TWIST SOCKET • SET (10pcs.)

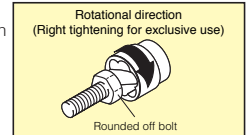


**TWIST SOCKET • SET** mm

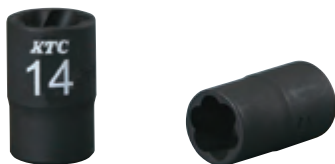
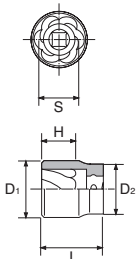
No. TB3TW10	▼ g 590	📦 1
Twist Socket	B3TW-08, 09, 10, 11, 12, 13, 14, 15, 16, 17	
Socket Holder (10pcs.)	EHB310	

- For loosening bolts which are rounded off and stud bolts.
- Easy to remove because of twist configuration.
- \* Removed bolt and nut are nonrecyclable.
- \* Using sizes differ depending on the damaged condition on bolt and nut.
- Choose the size after seeing the actual stuff.

**CAUTION**  
 • Do not use a socket with a power tool such as an impact wrench.



● 3/8"sq. TWIST SOCKET



**TWIST SOCKET** mm

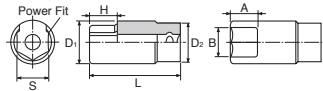
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	▼g	📦
B3TW-08	8	13	19	8	32	40	5
-09	9	14.5	19	8	32	45	5
-10	10	16	19	10	32	47	5
-11	11	17.5	19	10	32	49	5
-12	12	18.5	19	12	32	50	5
-13	13	20	19	12	32	51	5
-14	14	21	19	14	32	53	5
-15	15	22.5	19	14	32	55	5
-16	16	24	22	14	32	65	5
-17	17	26	22	16	35	70	5

**CAUTION**  
 • Do not use a socket with a power tool such as an impact wrench.

**SOCKET WRENCH FOR ELBOW CONNECTOR**

No.	sq.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	A	B	▽g	📦
ABX6-12	9.5	12	18.5	18	14	50	14	12	60	5
ABX6-14	9.5	14	22	20	17	50	17	14	80	5
ABX6-17	9.5	17	24	22	17	50	17	17	98	5
ABX6-19	9.5	19	26	24	21	50	21	19	110	5
ABX6-22	9.5	22	30	27.5	21	50	21	22	153	5
ABX6-34	12.7	34	45	41	20	44	19.5	27	300	5

- Usage
- Tightening tool for one-touch elbow connector that's used for trucks of 4t or more.
  - Width across flats 34mm is for the tightening and loosening of connector for check valve that's used for Isuzu trucks.
  - It can also be used to tighten and loosen elbow connectors (L-shape piping joint) used for general maintenance machinery.
  - ABX6-36 is 1/2"sq. model.



**SOCKET WRENCH FOR ELBOW CONNECTOR**



Elbow Connector

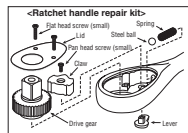
**RATCHET HANDLE**

No.	Feed	B	T	L	▽g	📦
BR3E	10°	33	13.5	180	260	5

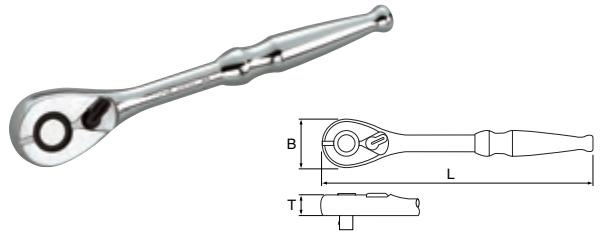
**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**3/8"sq. Ratchet head repair kit**

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



**3/8"sq. RATCHET HANDLE D.PAT.**



**RATCHET HANDLE (NO UNION MECHANISM TYPE)**

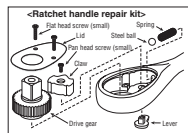
No.	Feed	B	T	L	▽g	📦
BR3A	10°	33	13.5	180	260	5

• Slippage is prevented by using the ratchet while pressing down on the anti-slip area of the central part of the head.

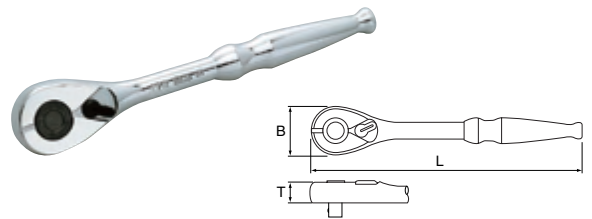
**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**3/8"sq. Ratchet head repair kit**

No.	Drive	Contents
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



**3/8"sq. RATCHET HANDLE D.PAT.**



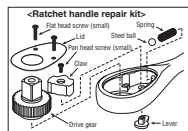
**LONG RATCHET HANDLE**

No.	Feed	B	T	L	▽g	📦
BR3L	10°	33	13.5	275	320	5

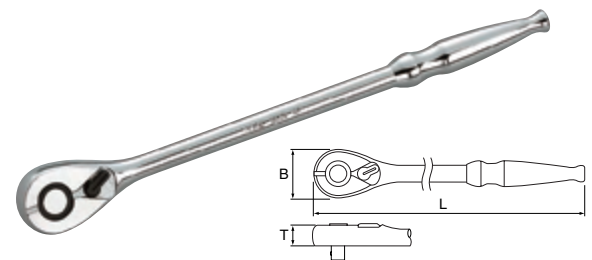
**CAUTION** • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.  
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

**3/8"sq. Ratchet head repair kit**

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



**3/8"sq. LONG RATCHET HANDLE D.PAT.**



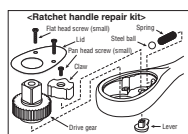
**FLEX RATCHET HANDLE**

No.	Feed	B	T	L	▽g	📦
BR3F	10°	33	13.5	180	280	5

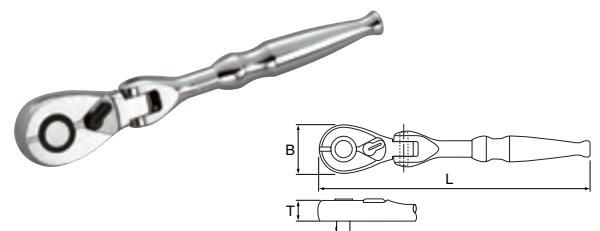
**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**3/8"sq. Ratchet head repair kit**

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2

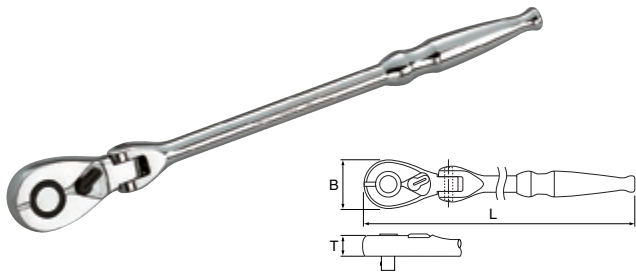


**3/8"sq. FLEX RATCHET HANDLE D.PAT.**



3/8" sq.

● 3/8"sq. FLEX LONG RATCHET HANDLE D.PAT.



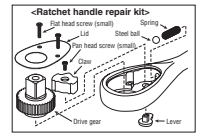
**FLEX LONG RATCHET HANDLE**

No.	Feed	B	T	L	▽g	☞
BR3FL	10°	33	13.5	275	360	5

**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

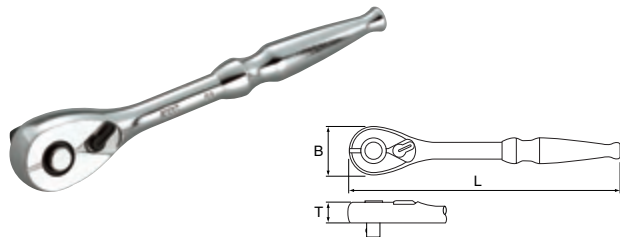
■ 3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.

Scheduled to be on sale from July 2005



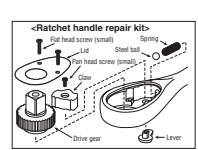
**COMPACT SHORT RATCHET HANDLE**

No.	Feed	B	T	L	▽g	☞
BRC3E	10°	22	10	125	100	5

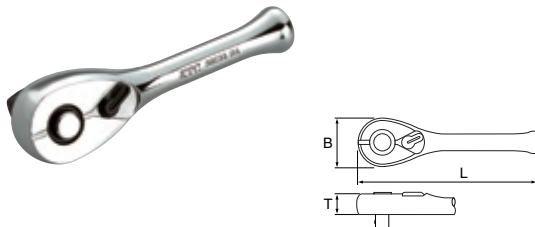
**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.



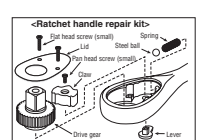
**COMPACT SHORT RATCHET HANDLE**

No.	Feed	B	T	L	▽g	☞
BRC3S	10°	22	10	80	90	5

**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

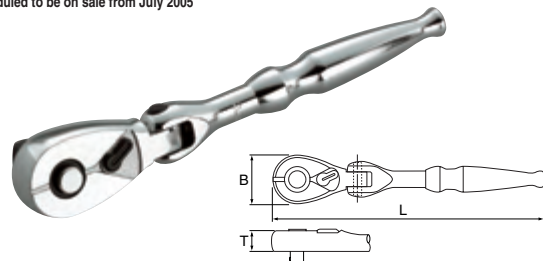
■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.

Scheduled to be on sale from July 2005



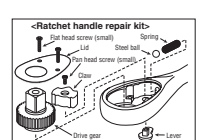
**COMPACT FLEX SHORT RATCHET HANDLE**

No.	Feed	B	T	L	▽g	☞
BRC3F	10°	22	10	125	140	5

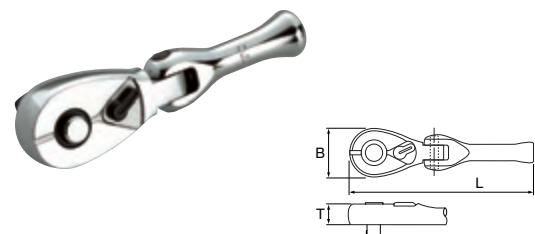
**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Leve · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.



**COMPACT FLEX SHORT RATCHET HANDLE**

No.	Feed	B	T	L	▽g	☞
BRC3FS	10°	22	10	80	90	5

**CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



● 3/8"sq. RATCHET HEAD REPAIR KIT



**RATCHET HEAD REPAIR KIT**

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2

• 3/8"sq. Ratchet head repair kid (for BR3E, BR3L, BR3F, BR3FL)  
 • See BR3A-K for no Union Mechanism type (BR3A)

• See BRC3-K for the compact type type (BRC3E, BRC3S, BRC3F, BRC3FS)

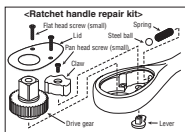




**RATCHET HEAD REPAIR KIT**

No.	Drive	Contents
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2

- 3/8"sq. Ratchet head repair kit (for no Union Mechanism type) (BR3A)
- \* See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- \* See BRC3-K for the compact type (BRC3E, BRC3S, BRC3F, BRC3FS)



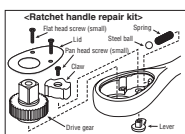
**●3/8"sq. RATCHET HEAD REPAIR KIT (NO UNION MECHANISM TYPE)**



**RATCHET HEAD REPAIR KIT**

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2

- 3/8"sq. Ratchet head repair kit for the compact type (BRC3E, BRC3S, BRC3F, BRC3FS)
- \* See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- \* See BR3A-K for no Union Mechanism type (BR3A)



**●3/8"sq. RATCHET HEAD REPAIR KIT (COMPACT TYPE)**



**RATCHET HANDLE**

No.	Type	Feed	B	L	▽g	Box
BRG3	Grip Type	5°	55	27.5	170	10

- 72teeth gear with small 5° increments.
- \* Replacement parts are available. Check with your dealer for details.

**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**●3/8"sq. RATCHET HANDLE (GRIP TYPE)**



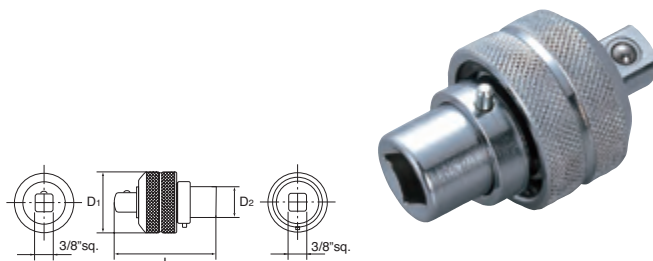
**RATCHET ADAPTOR**

No.	Feed	D <sub>1</sub>	D <sub>2</sub>	L	▽g	Box
BRA21	6°	31	17.7	51	140	10

- 60teeth gear with small 6° increments.
- \* Replacement parts are available. Check with your dealer for details.

**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

**●3/8"sq. RATCHET ADAPTOR**



**SPINNER HANDLE**

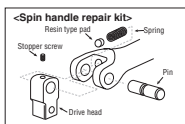
No.	D	ø	L	▽g	Box
BS3E	18	21	300	410	5

**LONG SPINNER HANDLE**

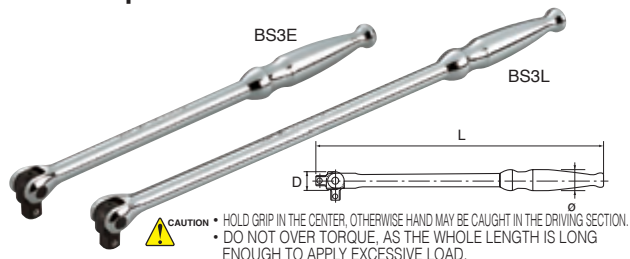
No.	D	ø	L	▽g	Box
BS3L	18	21	400	510	5

**■3/8"sq. Spinner handle head repair kit PAT.P.**

No.	Insertion angle	Contents
BS3E-K	3/8"sq.	Drive head · Pin · Pad Spring · Stopper screw x1



**●3/8"sq. SPINNER HANDLE PAT.P.**  
**●3/8"sq. LONG SPINNER HANDLE PAT.P.**



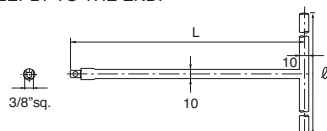
**CAUTION** • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.  
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

**T-SHAPED HANDLE**

No.	ℓ	L	▽g	Box
TH20	200	250	275	10

- \* With 3/8"sq. dr. for use on Sockets, Hexagon Wrenches, etc.

**CAUTION** • INSERT THE DRIVE SQUARE DEEPLY TO THE END.

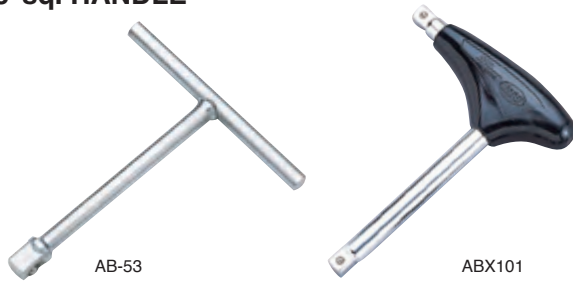


**●3/8"sq. T-SHAPED WRENCH**



3/8" sq.

● 3/8"sq. HANDLE

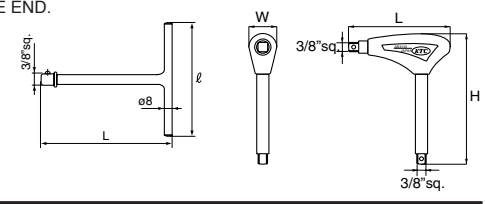


**HANDLE**

No.	H	W	ℓ	L	▽g	☒
ABX101	135	28	—	105	250	10
AB-53	—	—	100	115	90	1

• This can be used for sockets and hexagon wrenches due to the 3/8"sq drive.

⚠ CAUTION • INSERT THE DRIVE SQUARE DEEPLY TO THE END.



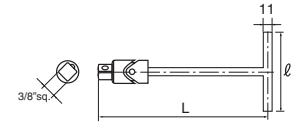
● FLEX T-SHAPED WRENCH (LONG)



**FLEX T SHAPE WRENCH (LONG)**

No.	EDGE	ℓ	L	▽g	☒
THF20-700	3/8"sq.	180	705	700	10

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.  
• INSERT THE DRIVE SQUARE DEEPLY TO THE END.



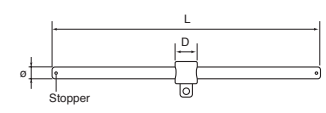
● 3/8"sq. SLIDE HEAD HANDLE



**SLIDE HEAD HANDLE**

No.	D	Handle (ø)	L	▽g	☒
BHM3	17	9	200	120	5

• For faster operation from quick turning to fastening.  
• A groove on the handle prevents head turning.

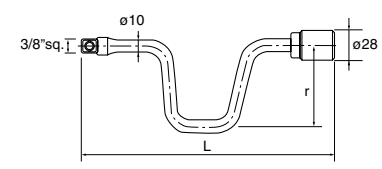


● 3/8"sq. SPEEDER HANDLE



**SPEEDER HANDLE**

No.	r (turning)	L	▽g	☒
BSD20	100	350	400	1

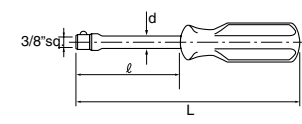


● 3/8"sq. SCREWDRIVER TYPE HANDLE

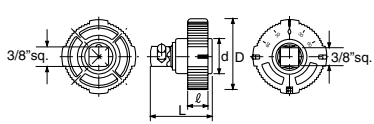


**DRIVER TYPE HANDLE**

No.	d	L	ℓ	▽g	☒
BD20	8	150	63	70	5



● 3/8"sq. QUICK SPINNER® D.PAT.



**QUICK SPINNER®**

No.	D	d	L	ℓ	▽g	☒
BE3-Q	36	17	31	10	40	10

• Specially for quick turning for effective use with Ratchet handle or Extension bar.  
• Grip has angle (90°) indication by groove with 30° indication in surface.  
• Grip is made of resin for light weight.

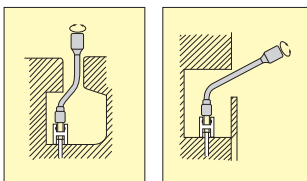
⚠ CAUTION • DO NOT USE MULTIPLE EXTENSIONS.

\*Quick Spinner is the registered trademark of the Kyoto Tool Co., LTD.

**FLEXIBLE EXTENSION BAR**

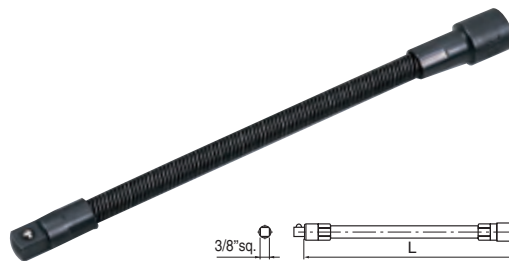
No.	L	N · m	▼g	☒
BES21-200	200	20	110	10

• Convenient for fastening & loosening bolts and nuts in narrow quarters.



**CAUTION** • FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.  
• DO NOT USE MULTIPLE EXTENSIONS.

● 3/8"sq. FLEXIBLE EXTENSION BAR



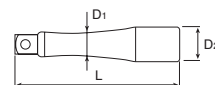
**EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☒
BE3-030	13	17	30	30	5
-050	13	17	50	50	5
-075	12	17	75	75	5
-100	12	17	100	95	5
-150	12	17	150	140	5
-200	12	17	200	190	5
-270	12	17	270	250	5
-600	13	17	600	530	1
-1000	13	17	990	700	1

**CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.



● 3/8"sq. EXTENSION BAR



BE3-075

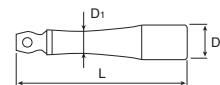
**WOBBLE EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☒
BE3-030JW	13	17	30	30	5
-050JW	13	17	50	50	5
-075JW	12	17	75	75	5
-100JW	12	17	100	95	5
-150JW	12	17	150	140	5
-200JW	12	17	200	190	5
-270JW	12	17	270	250	5
-600JW	13	17	600	530	1
-1000JW	13	17	990	700	1

**CAUTION** • DO NOT PUT PRESS TOO HARD, AS ITS STRUCTURE HAS LESS WEIGH RESISTANCE THAN THE NORMAL EXTENSION BAR.  
• DO NOT USE MULTIPLE EXTENSIONS.



● 3/8"sq. WOBBLE EXTENSION BAR

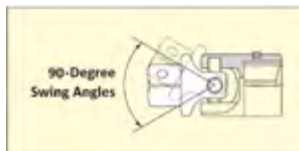
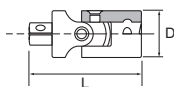


BE3-075JW

**UNIVERSAL JOINT**

No.	D	L	▼g	☒
BJ3	18	46	50	5

**CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



● 3/8"sq. UNIVERSAL JOINT

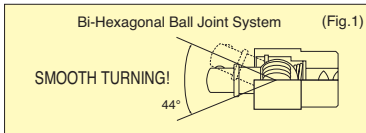
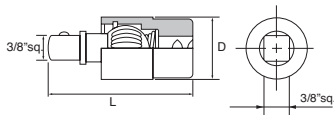


**FLEX BALL JOINT**

No.	D	L	▼g	☒
BJF20	22	50	86	5

• 12pt. ball joint system for smooth 44° turning (Fig.-1)

**CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



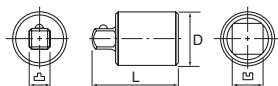
● 3/8"sq. FLEX BALL JOINT



**3/8"sq. INTERNAL DRIVE ADAPTOR**

No.	sq.		D	L	▼g	☒
	Internal	External				
BA32	3/8"	1/4"	17	25	20	5
BA34	3/8"	1/2"	17	29.5	38	5

**CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



● 3/8"sq. INTERNAL DRIVE ADAPTOR



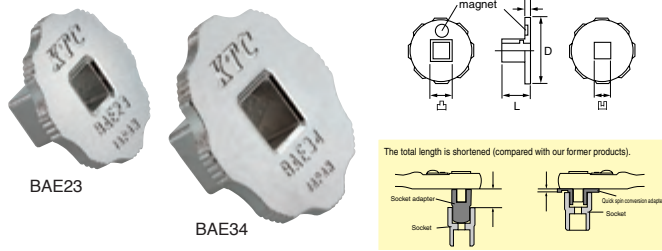
BA32



BA34

3/8" sq. 1/2" sq.

● QUICK SPINNING ADAPTOR • SET D.PAT.



QUICK SPINNING ADAPTOR

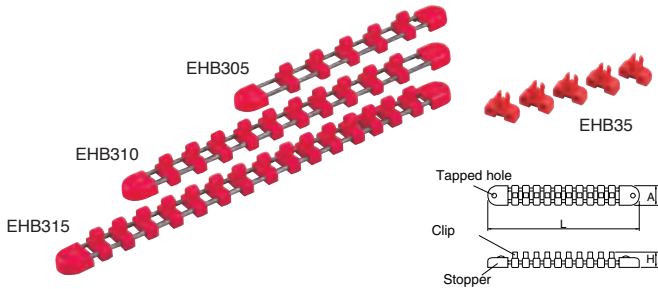
No.	sq.		D	L	ℓ	▽g	📦
	Internal	External					
BAE23	1/4"	3/8"	28	13	2.5	20	10
BAE34	3/8"	1/2"	37	17	3	30	10

- This product is different from the socket adapter as it can be rotated quickly as it is.
- The length can be shortened and used, as the concave and the convex are set at the same place, compared with the socket adapter. (See the left figure.)
- It is easy to hold and to remove the socket because of the magnet force.
- The grip shape prevents slipping and makes it easy to rotate.

QUICK SPINNING ADAPTOR • SET

No. BAE234	▽g 50	📦 1
Quick Spinning Adaptor		BAE23, 34

● 3/8"sq. SOCKET HOLDER • CLIP SET D.PAT.



SOCKET HOLDER • CLIP SET (5pcs.)

No.	No. of clips	H	A	L	▽g	📦
EHB305	5	23	25	215	80	10
EHB310	10	23	25	315	120	10
EHB315	15	23	25	365	140	10

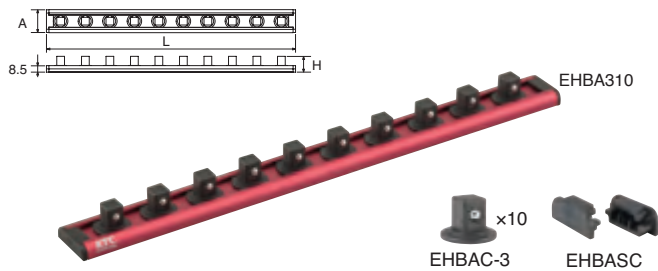
- Change of holder shape easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying)
- Different colors for different sizes.

⚠ CAUTION • REVERSING HOLDER MAY ALLOW SOCKETS TO GET DISLODGED.

No. EHB35	▽g 25	📦 10
Clip		5pcs.

- Spare clip for EHB305, 310 and EHB315.
- Can be used for EHB205-215 and 405-410.

● ALUMINUM SOCKET HOLDER



ALUMINUM SOCKET HOLDER

No.	sq.	No. of clips	H	A	L	▽g	📦
EHBA310	9.5	10	20	28.5	305	180	1

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
- Rail color differs by the square, allowing the easy identification of socket.
- Since the rail size is uniform, sockets with various squares can be stored by interchanging the clip.

⚠ CAUTION • Socket may fall off if the socket holder is turned upside down.  
• It cannot be mounted on a surface that's perpendicular to the ground.

■ Supply parts	
No.	Product Name
EHBAC-3	3/8"sq. Clip Set [10pcs.]
EHBASC	Side Cover [2pcs. Set]

\* Clip can be commonly used for EHBA310, EHBA210 and EHBA410.

● 1/2"sq. SOCKET WRENCH SET DIGITAL RATCHET MODEL



SOCKET WRENCH SET

No. TB406WG1	▽kg 1.4	📦 1
Digital Ratchet		
GEK085-R4-L		
Socket (12pt.)		B4-10W, 12W, 14W, 17W, 19W
Socket Holder (5pcs.)		EHB405

- It is a set of advanced digital torque tool "Digital Ratchet" P.177 and 1/2"sq. socket (12pt.).

● 1/2"sq. SOCKET WRENCH SET (14pcs.)



SOCKET WRENCH SET (14pcs.)

No. TB410	▽kg 3.4	📦 1
Socket (6pt.)		
B4-08, 10, 12, 13, 14, 17, 19, 21, 22, 24		
No. TB410X	▽kg 3.5	📦 1
Socket (6pt.)		
B4-08, 10, 12		
Socket (12pt.)		B4-13W, 14W, 17W, 19W, 21W, 22W, 24W

Common Items	
Ratchet Handle	BR4E
Extension Bar	75 BE4-075
	150 BE4-150
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450xW185xH60mm

• with Plastic Tray (L445xW185xH52mm) POWERFIT

● 1/2"sq. SOCKET WRENCH SET (13pcs.)



SOCKET WRENCH SET (13pcs.)

No. TB410W	▽kg 3.5	📦 1
Socket (12pt.)		
B4-08W, 10W, 11W, 12W, 13W, 14W, 17W, 19W, 22W, 24W		
Ratchet Handle		
BR4E		
Slide Head Handle		BHM4
Extension Bar		150 BE4-150
Metal Case		EKB-2 (W455xD190xH60)

- With tray (W447xD185xH30). Foam tray has the 2-layer structure of black and pink, making it easy to confirm the presence of tools.
- Size is marked on the socket storage and tool types on the storage part of other tools, making the storage location clear in a glance.
- It is a Japan Machine Tool Standard Type 415-ISO equivalent product (set contents may somewhat differ in consideration of the frequency of use, etc.).
- The case is listed on P.344.

**SOCKET WRENCH SET (19pcs.)** mm

<b>No. TB413</b>	▼kg 4.9	☞ 1
Socket (6pt.)	B4-08, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27	
<b>No. TB413X</b>	▼kg 4.9	☞ 1
Socket (6pt.)	B4-08, 10, 11, 12	
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W	
<b>Common Items</b>		
Ratchet Handle	BR4E	
Spinner Handle	BS4E	
Extension Bar	75 BE4-075	
	150 BE4-150	
Wobble Extension Bar	BE4-100JW	
Universal Joint	BJ4	
Socket Holder (5pcs.)	EHB405	
Metal Case	EKB-2 L450×W185×H60mm	

• with Plastic Tray (L445×W185×H52mm)



## ●1/2"sq. SOCKET WRENCH SET (19pcs.)



TB413

**SOCKET WRENCH SET (19pcs.)**

<b>No. TB415W</b>	▼kg 5.1	☞ 1
Socket (12pt.)	B4-08W, 10W, 11W, 12W, 13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W, 30W, 32W	
Ratchet Handle	BR4E	
Spinner Handle	BS4E	
Slide Head Handle	BHM4	
Extension Bar	150 BE4-150	
Metal Case	EKB-2 (W455×D190×H60)	

• With tray (W447×D185×H30). Foam tray has the 2-layer structure of black and pink, making it easy to confirm the presence of tools.

• Size is marked on the socket storage and tool types on the storage part of other tools, making the storage location clear in a glance.

• It is a Japan Machine Tool Standard Type 415-ISO equivalent product (set contents may somewhat differ in consideration of the frequency of use, etc.).

• The case is listed on P.344.

## ●1/2"sq. SOCKET WRENCH SET (19pcs.)

**SOCKET WRENCH SET (21pcs.)** mm · in

<b>No. TB415X</b>	▼kg 5.4	☞ 1
Socket (6pt.)	B4-08, 10, 11, 12	
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W, 30W, 32W	
<b>No. TB415BX</b>	▼kg 5.4	☞ 1
Socket (6pt.) in	B4-7/16	
Socket (12pt.) in	B4-1/2 W, 9/16 W, 19/32 W, 5/8 W, 11/16 W, 3/4 W, 29/32 W, 13/16 W, 7/8 W, 15/16 W, 1W, 1-1/16 W, 1-1/8 W, 1-1/4 W	

**Common Items**

Ratchet Handle	BR4E	
Spinner Handle	BS4E	
Extension Bar	75 BE4-075	
	150 BE4-150	
Wobble Extension Bar	BE4-100JW	
Universal Joint	BJ4	
Socket Holder (5pcs.)	EHB405	
Metal Case	EKB-2 L450×W185×H60mm	

• with Plastic Tray (L445×W185×H52mm)



## ●1/2"sq. SOCKET WRENCH SET (21pcs.)



TB415X

**SOCKET WRENCH SET (26pcs.)** mm

<b>No. TB420X</b>	▼kg 5.8	☞ 1
Socket (6pt.)	B4-08, 10, 11, 12	
Socket (12pt.)	B4-13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W, 26W, 27W, 29W, 30W, 32W	
Ratchet Handle	BR4E	
Spinner Handle	BS4E	
Extension Bar	75 BE4-075	
	150 BE4-150	
Wobble Extension Bar	BE4-100JW	
Universal Joint	BJ4	
Socket Holder (5pcs.)	EHB405	
Metal Case	EKB-2 L450×W185×H60mm	

• with Plastic Tray (L445×W185×H52mm)



## ●1/2"sq. SOCKET WRENCH SET (26pcs.)

**DEEP SOCKET WRENCH SET (15pcs.)** mm

<b>No. TB4L10X</b>	▼kg 5	☞ 1
Deep Socket (6pt.)	B4L-08, 10, 12	
Deep Socket (12pt.)	B4L-13W, 14W, 17W, 19W, 21W, 22W, 24W	
Ratchet Handle	BR4E	
Extension Bar	75 BE4-075	
	150 BE4-150	
Wobble Extension Bar	BE4-100JW	
Universal Joint	BJ4	
Socket Holder (5pcs.)	EHB405	
Metal Case	EKB-2 L450×W185×H60mm	

• with Plastic Tray (L445×W185×H52mm)



## ●1/2"sq. DEEP SOCKET WRENCH SET (15pcs.)



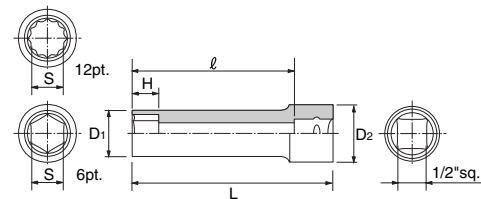


DEEP SOCKET										mm
6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦	
B4L-08	B4L -08W	8	12	22	9	90	74	81	5	
-09	-09W	9	13.5	22	10	90	74	97	5	
-10	-10W	10	14.5	22	11	90	74	90	5	
-11	-11W	11	16	22	12	90	74	107	5	
-12	-12W	12	17	22	13	90	74	120	5	
-13	-13W	13	18.5	22	14	90	74	126	5	
-14	-14W	14	20	22	17	90	74	138	5	
-15	-15W	15	21	22	17	90	74	144	5	
-16	-16W	16	22.5	22	17	90	74	160	5	
-17	-17W	17	24	22	17	100	84	195	5	
-18	-18W	18	25	23	21	100	84	216	5	
-19	-19W	19	26	24	21	100	84	218	5	
-20	-20W	20	27.5	25	22	100	84	230	5	
-21	-21W	21	28.5	26.5	23	100	84	259	5	
-22	-22W	22	30	27.5	23	100	84	302	5	
-23	-23W	23	31	28.5	24	100	84	301	5	
-24	-24W	24	32.5	30	27	100	84	316	5	
-25	-25W	25	34	30.5	27	100	84	360	5	
-26	-26W	26	35	31.5	30	100	84	356	5	
-27	-27W	27	36.5	33	30	100	84	409	5	
-28	-28W	28	38	34.5	30	100	84	431	5	
-29	-29W	29	39	35.5	30	100	84	466	5	
-30	-30W	30	40	36	30	100	84	460	5	
-31	-31W	31	42	37.5	30	100	84	541	5	
-32	-32W	32	43	38.5	32	100	84	538	5	
-33	-33W	33	44	40	32	100	84	595	5	
-34	-34W	34	45	41	32	100	84	634	5	
-35	-35W	35	46	41.5	32	100	84	669	5	
-36	-36W	36	47	42.5	32	100	84	710	5	

●1/2"sq. DEEP SOCKET



DEEP SOCKET										in
6pt.	12pt.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦	
B4L-3/8	B4L-3/8 W	9.5	14.5	22	11	90	74	93	5	
-7/16	-7/16 W	11.1	16	22	12	90	74	107	5	
-1/2	-1/2 W	12.7	18.5	22	14	90	74	136	5	
-17/32	-17/32 W	13.4	20	22	17	90	74	146	5	
-9/16	-9/16 W	14.2	20	22	17	90	74	138	5	
-19/32	-19/32 W	15.0	21	22	17	90	74	144	5	
-5/8	-5/8 W	15.8	22.5	22	17	90	74	170	5	
-21/32	-21/32 W	16.6	24	22	17	100	84	195	5	
-11/16	-11/16 W	17.4	24	22	17	100	84	195	5	
-3/4	-3/4 W	19.0	26	24	21	100	84	218	5	
-25/32	-25/32 W	19.8	27.5	25	22	100	84	243	5	
-13/16	-13/16 W	20.6	28.5	26.5	23	100	84	245	5	
-7/8	-7/8 W	22.2	30	27.5	23	100	84	273	5	
-19/16	-19/16 W	23.8	32.5	30	27	100	84	330	5	
-31/32	-31/32 W	24.6	34	30.5	27	100	84	344	5	
-1	-1 W	25.4	35	31.5	30	100	84	371	5	
-1-1/16	-1-1/16 W	26.9	36.5	33	30	100	84	409	5	
-1-1/8	-1-1/8 W	28.5	39	35.5	30	100	84	448	5	
-1-3/16	-1-3/16 W	30.1	40	36	30	100	84	460	5	
-1-1/4	-1-1/4 W	31.7	43	38.5	32	100	84	556	5	
-1-5/16	-1-5/16 W	33.3	44	40	32	100	84	593	5	
-1-3/8	-1-3/8 W	34.9	46	41.5	32	100	84	669	5	



**TWIST SOCKET SET (5pcs.)**

No. TB4TW05	▼g 930	📦 1
Twist Socket	B4TW-17, 19, 21, 22, 24	
Socket Holder (5pcs.)	EHB405	

- It is a tool for loosening bolts, stud bolts, etc. that are rounded from the edge loss.
- Twisted teeth bite into damaged bolt·nut, allowing the easy removal.
- \* Removed bolt·nut cannot be reused.
- \* Size to be used may differ depending on the damage condition of the bolt·nut. Please confirm the size selection with the actual article.

**CAUTION** Do not use power tools (pneumatic/ electric impact wrench, etc.).

Rotation direction (Dedicated for loosening right-hand thread)

Bolt with rounded edge

●1/2"sq. TWIST SOCKET SET (5pcs.)



**TWIST SOCKET**

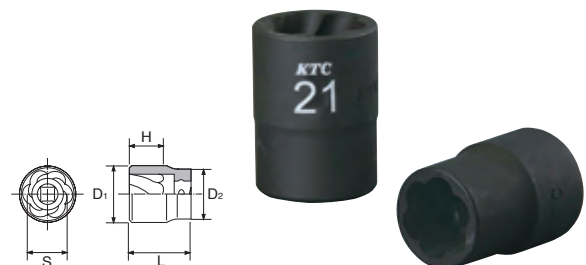
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	▼g	📦
B4TW-17	17	25.8	30	16	42	135	5
B4TW-19	19	28.4	30	16	42	140	5
B4TW-21	21	31	30	17	42	150	5
B4TW-22	22	32	30	17	42	155	5
B4TW-24	24	35	30	18	42	175	5

**CAUTION** Do not use power tools (pneumatic/ electric impact wrench, etc.).

Rotation direction (Dedicated for loosening right-hand thread)

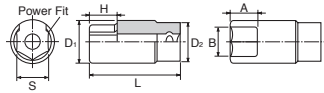
Bolt with rounded edge

●1/2"sq. TWIST SOCKET



\*Please check the merchandise inventory for a product that is marked by before placing an order.

SOCKET WRENCH FOR ELBOW CONNECTOR

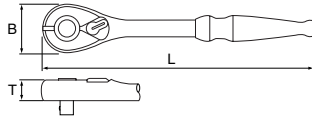


SOCKET WRENCH FOR ELBOW CONNECTOR

No.	sq.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	A	B	▽g	☒
ABX6-12	9.5	12	18.5	18	14	50	14	12	60	5
ABX6-14	9.5	14	22	20	17	50	17	14	80	5
ABX6-17	9.5	17	24	22	17	50	17	17	98	5
ABX6-19	9.5	19	26	24	21	50	21	19	110	5
ABX6-22	9.5	22	30	27.5	21	50	21	22	153	5
ABX6-34	12.7	34	45	41	20	44	19.5	27	300	5

Usage • Tightening tool for one-touch elbow connector that's used for trucks of 4t or more.  
 • Width across flats 34mm is for the tightening and loosening of connector for check valve that's used for Isuzu trucks.  
 • It can also be used to tighten and loosen elbow connectors (L-shape piping joint) used for general maintenance machinery.

1/2"sq. RATCHET HANDLE D.PAT.



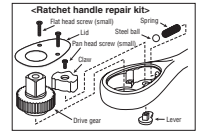
RATCHET HANDLE

No.	Feed	B	T	L	▽g	☒
BR4E	10°	39.5	18	250	580	5

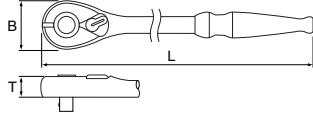
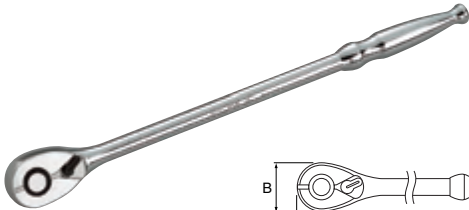
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



1/2"sq. LONG RATCHET HANDLE D.PAT.



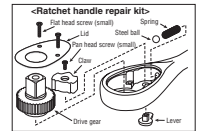
LONG RATCHET HANDLE

No.	Feed	B	T	L	▽g	☒
BR4L	10°	39.5	18	375	730	5

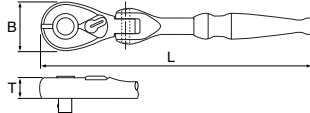
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



1/2"sq. FLEX RATCHET HANDLE D.PAT.



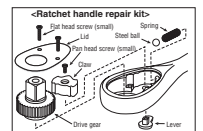
FLEX RATCHET HANDLE

No.	Feed	B	T	L	▽g	☒
BR4F	10°	39.5	18	250	700	5

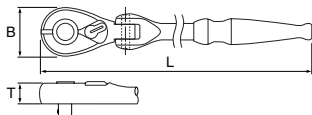
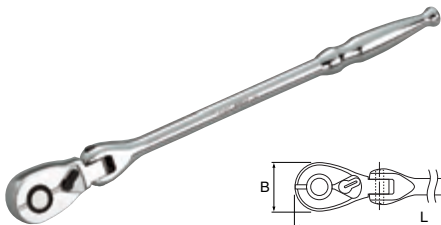
CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



1/2"sq. FLEX LONG RATCHET HANDLE D.PAT.



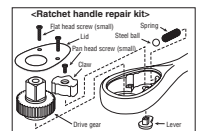
FLEX LONG RATCHET HANDLE

No.	Feed	B	T	L	▽g	☒
BR4FL	10°	39.5	18	375	870	5

CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.  
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

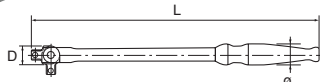
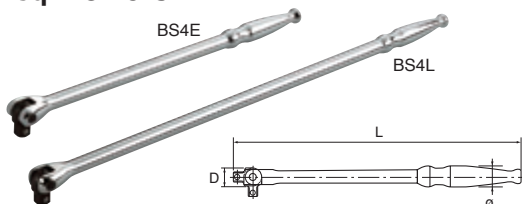
1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



1/2"sq. SPINNER HANDLE PAT.P.

1/2"sq. LONG SPINNER HANDLE PAT.P.



SPINNER HANDLE

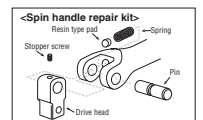
No.	D	Grip (ø)	L	▽g	☒
BS4E	22	21	400	700	5

LONG SPINNER HANDLE

No.	D	Grip (ø)	L	▽g	☒
BS4L	22	21	600	1,100	1

1/2"sq. Spinner handle head repair kit . PAT.P.

No.	Drive	Contents
BS4E-K	1/2"sq.	Drive · head · Pin · Pad · Spring · Stopper screw x1



CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.  
 • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.



## EXTRA-LONG SPINNER HANDLE

No.	D	L	A	▼kg	
BS4-780	20	787	10	1.5	10

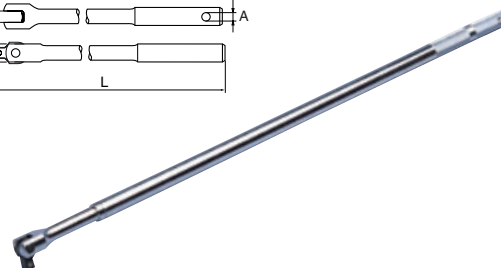
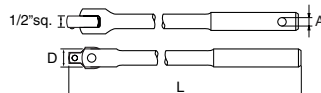
- Is optimal for crank pulley bolts, and hub centre bolt operations, etc., where heavy torque is necessary.
- The handle is hollow and light. • The unit has a knurl grip to help prevent slippage.

**CAUTION** • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.  
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

## Drive set PAT.P.

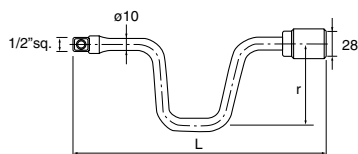
No.	Drive	Contents
BS4-780-1	1/2"sq.	Drive head ASSY · Pin · Steel ball · Spring · Hexagon shaped stopper screw x1

## ● 1/2"sq. EXTRA-LONG SPINNER HANDLE PAT.P.



## SPEEDER HANDLE

No.	r (turning)	L	▼g	
BSD30	110	350	590	1



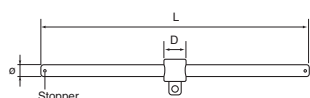
## ● 1/2"sq. SPEEDER HANDLE



## SLIDE HEAD HANDLE

No.	D	Handle (ø)	L	▼g	
BHM4	22	12	250	275	5

- From quick turning to fastening&loosening operation than using ratchet handle for some application.
- The head is unable to rotate as there is a groove placed into the handle.



## ● 1/2"sq. SLIDE HEAD HANDLE

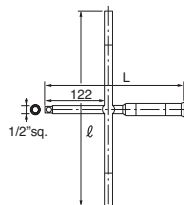


## SPEEDING CROSS WRENCH

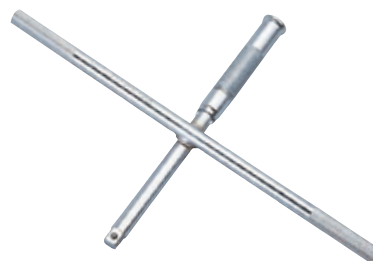
No.	ℓ	L	▼kg	
XH30	400	285	1.5	5

- For quick turning.

**CAUTION** • INSERT THE DRIVE SQUARE DEEPLY TO THE END.



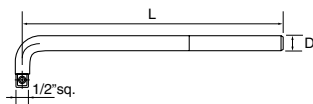
## ● 1/2"sq. SPEEDING CROSS WRENCH



## L SHAPE OFFSET HANDLE

No.	D	L	▼g	
BO30-280	16	280	500	2

**CAUTION** • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.



## ● 1/2"sq. L-SHAPED HANDLE

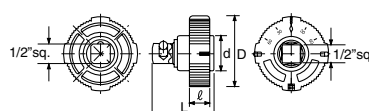


## QUICK SPINNER®

No.	D	d	L	ℓ	▼g	
BE4-Q	46	24	34.5	11	100	10

- Specially for quick turning for effective use with Ratchet handle or Extension bar. Grip has angle (90°) indication by groove with 30° indication in surface.
- Grip is made of resin for light weight.

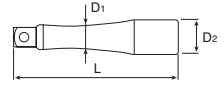
**CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.



\*Quick Spinner is the registered trademark of the Kyoto Tool Co., LTD.

1/2" sq.

● 1/2" sq. EXTENSION BAR



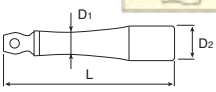
EXTENSION BAR

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	⊞
BE4- 050	17	22	50	90	5
- 075	17	22	75	140	5
- 100	17	22	100	170	5
- 150	17	22	150	250	5
- 200	17	22	200	330	5
- 270	17	22	270	440	5
- 600	17	22	600	1050	1
-1000	17	22	1000	1800	1

⚠ CAUTION • DO NOT USE MULTIPLE EXTENSIONS.



● 1/2" sq. WOBBLE EXTENSION BAR



BE4-075JW

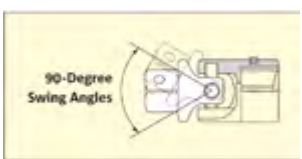
WOBBLE EXTENSION BAR

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	⊞
BE4-050JW	17	22	50	90	5
-075JW	17	22	75	140	5
-100JW	17	22	100	170	5
-150JW	17	22	150	250	5
-200JW	17	22	200	330	5
-270JW	17	22	270	440	5

⚠ CAUTION • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT TO APPLY EXCESSIVE POWER.  
• DO NOT EXTEND WITH ANOTHER



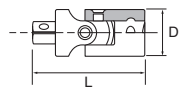
● 1/2" sq. UNIVERSAL JOINT



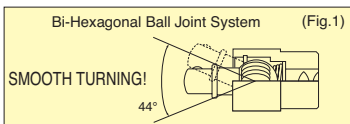
UNIVERSAL JOINT

No.	D	L	▽g	⊞
BJ4	25	67	140	5

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



● 1/2" sq. FLEX BALL JOINT

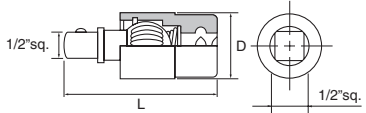


FLEX BALL JOINT

No.	D	L	▽g	⊞
BJF30	29	65	170	5

• 12pt. Ball Joint system works for 44° smooth turning.  
• Short length for effective use in narrow space. (Fig.1)

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



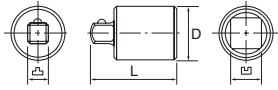
● 1/2" sq. INTERNAL × 3/4" sq. EXTERNAL DRIVE ADAPTOR



1/2" sq. INTERNAL × 3/4" sq. EXTERNAL DRIVE ADAPTOR

No.	sq.		D	L	▽g	⊞
	Internal	External				
BA43	1/2"	3/8"	22	35	45	5

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.



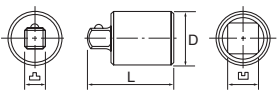
● 1/2" sq. INTERNAL × 3/4" sq. EXTERNAL DRIVE ADAPTOR



1/2" sq. INTERNAL × 3/4" sq. EXTERNAL DRIVE ADAPTOR

No.	sq.		D	L	▽g	⊞
	Internal	External				
BA3040	1/2"	3/4"	26	40	110	10

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.



\*Please check the merchandise inventory for a product that is marked by ⚠ before placing an order.

**SOCKET HOLDER-CLIP SET (5pcs.)**

No.	No. of clips	H	A	L	▼g	📦
EHB405	5	26.5	25	215	120	10
EHB410	10	26.5	25	365	150	10

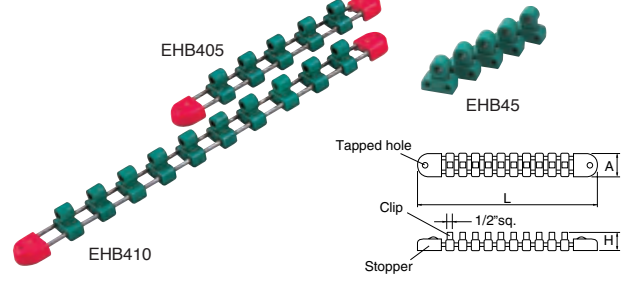
- Change of holder shape enables easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carving)
- The insertion angle has its own holder coloring setting.

**CAUTION** • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

No. EHB45	▼g 30	📦 10
Clip	5pcs.	

- Spare clip for EHB405, 410.
- Can be used for EHB205-215 and 305-315.

**1/2"sq. SOCKET HOLDER • CLIP SET (5pcs.)**  
D.PAT.



**ALUMINUM SOCKET HOLDER**

No.	sq.	No. of clips	H	A	L	▼g	📦
EHBA410	12.7	10	23	28.5	305	210	1

- Clip is a ball-lock type that prevents the socket from suddenly falling out.
- Rail color differs by the square, allowing the easy identification of socket.
- Since the rail size is uniform, sockets with various squares can be stored by interchanging the clip.

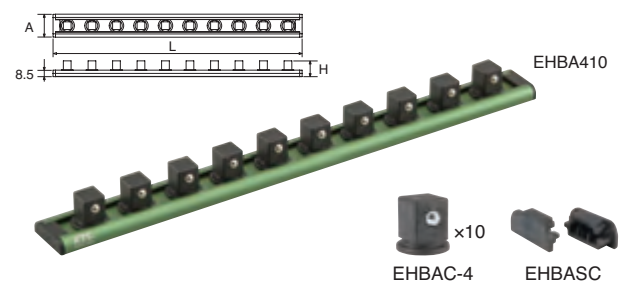
**CAUTION** • Socket may fall off if the socket holder is turned upside down.  
• It cannot be mounted on a surface that's perpendicular to the ground.

■ Supply parts

No.	Product Name
EHBAC-4	1/2"sq. Clip Set [10pcs.]
EHBASC	Side Cover [2pcs. Set]

\* Clip can be commonly used for EHBA410, EHBA210 and EHBA310.

**ALUMINUM SOCKET HOLDER**

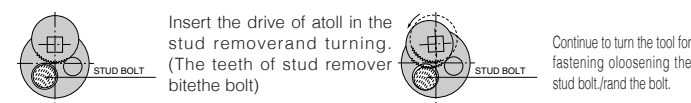


**STUD REMOVER**

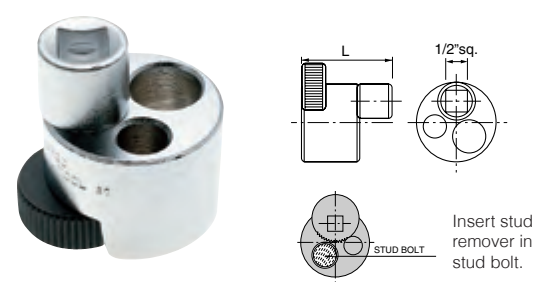
No.	Bolt Diameter		L	▼g	📦
	Max.	Min.			
BSR30	ø19	ø6	56	400	1

- For use on stud bolts.
- Replacement parts are available. Check with your dealer for details.

**CAUTION** • USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.



**1/2"sq. STUD REMOVER**



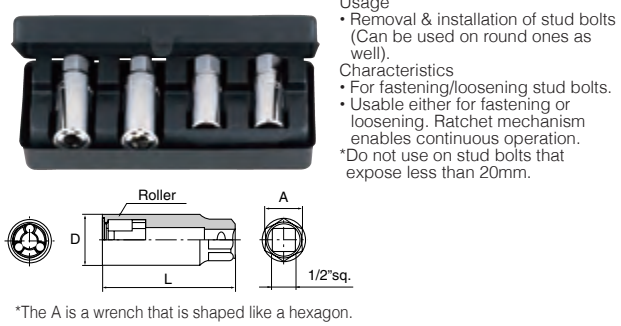
**STUD BOLT REMOVER • SET(4pcs.)**

No. BSR354	▼kg 1.1	📦 1
Stud Bolt Remover	BSR35-6, 8, 10, 12	
Metal Case	L215xW82xH50mm	

No.	D	L	S	Applicable Size	▼g	📦
BSR35 - 6	24	65	21	M 6	150	1
- 8	24	65	21	M 8	150	1
-10	28	75	21	M10	220	1
-12	28	75	21	M12	220	1

**CAUTION** • USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.  
• CHECK THE STUD BLOT FIRMLY CONNECTED WITH THE TOOL BEFORE APPLYING ANY POWER.

**1/2"sq. STUD BOLT REMOVER • SET (4pcs.)**



\*The A is a wrench that is shaped like a hexagon.

**SOCKET WRENCH SET(10pcs.)**

No. TB610A	▼kg 9	📦 1
Socket (12pt.)	B40-22, 24, 27, 30, 32, 36, 41, 46	
Ratchet Handle	BR6A	
Extension Bar 200	BE40-200	
Metal Case	B4110-MA (W545xD185xH85)	

• The case is listed on P.344.

**3/4"sq. SOCKET WRENCH SET (10pcs.)**



**SOCKET WRENCH SET(15pcs.)**

No. TB614A	▼kg 10.8	📦 1
Socket (12pt.)	B40-22, 24, 27, 30, 32, 35, 36, 38, 41, 46, 50	
Head	BH40	
Bar	BL40-500	
Extension Bar 130	BE40-130	
Extension Bar 200	BE40-200	
Metal Case	B4110-MA (W545xD185xH85)	

• The case is listed on P.344.

**3/4"sq. SOCKET WRENCH SET (15pcs.)**



3/4" sq.

● 3/4" sq. SOCKET WRENCH SET (14pcs.)



**SOCKET WRENCH SET(14pcs.)**

<b>No.TB615A</b>	▼kg 14.5	📦 1
Socket (12pt.)	B40-24, 27, 30, 32, 36, 41, 46, 50, 55	
Ratchet Handle	BR6A	
Head	BH40	
Bar	BL40-500	
Extension Bar 200	BE40-200	
Extension Bar 400	BE40-400	
Metal Case	B4110-MA (W545xD185xH85)	

➡ The case is listed on P.344.

● 3/4" sq. SOCKET WRENCH SET (19pcs.)



**SOCKET WRENCH SET(19pcs.)**

<b>No.TB619A</b>	▼kg 14.1	📦 1
Socket (12pt.)	B40-22, 23, 24, 26, 27, 29, 30, 32, 35, 36, 38, 41, 46, 50, 54, 55	
Ratchet Handle	BR6A	
Extension Bar 130	BE40-130	
Extension Bar 200	BE40-200	
Metal Case	B4110-MA (W545xD185xH85)	

➡ The case is listed on P.344.

● 3/4" sq. SOCKET WRENCH SET (18pcs.)

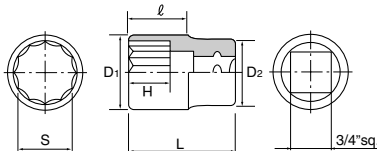


**SOCKET WRENCH SET(18pcs.)**

<b>No.TB618BA</b>	▼kg 16.7	📦 1
Socket (12pt.)	BB40-1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-5/8, 1-3/4, 1-13/16, 1-7/8, 2	
Ratchet Handle	BR6A	
Head	BH40	
Bar	BL40-500	
Extension Bar 200	BE40-200	
Extension Bar 400	BE40-400	
Metal Case	B4110-MA (W545xD185xH85)	

➡ The case is listed on P.344.

● 3/4" sq. SOCKET



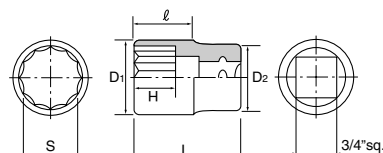
**SOCKET** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
B40 -17	17	26	33	12	46	25	160	5
-18	18	27	33	13	46	25	160	5
-19	19	27.5	33	14	46	25	160	5
-20	20	29.5	33	14	47	26	170	5
-21	21	30	33	15	47	26	170	5
-22	22	31	33	16	49	28	170	5
-23	23	32.5	33	16	49	28	170	5
-24	24	34	33	18	50	29	180	5
-25	25	35	34	19	51	30	200	5
-26	26	36.5	34	19	51	30	210	5
-27	27	38	34	19	51	30	220	5
-28	28	39	34	20	52	31	230	5
-29	29	40	34	21	53	32	240	5
-30	30	42	36	22	54	33	270	5
-31	31	43	38	23	55	34	300	5
-32	32	44	38	24	56	35	310	5
-33	33	46	38	24	57	36	340	5
-34	34	47	38	25	57	36	350	5
-35	35	48	38	26	59	38	370	5
-36	36	50	40	27	60	39	410	5
-37	37	51	40	28	61	40	430	5
-38	38	52	40	29	62	41	440	5
-39	39	54	40	30	63	42	470	5
-40	40	55	40	31	64	43	490	5
-41	41	56	40	32	65	44	500	5
-42	42	57.5	38	35	66	45	540	5
-43	43	59	40	36	67	46	590	5
-44	44	60	42	37	68	47	630	5
-45	45	62	44	37	69	48	710	5
-46	46	63	44	35	70	49	750	2
-47	47	64	44	39	71	50	780	2
-48	48	65.5	44.5	39	72	51	810	2
-50	50	68	46	42	74	53	880	2
-52	52	71	48	47	75	54	920	2
-54	54	73	48	48	76	55	950	2
-55	55	75	48	51	79	58	1,040	2
-56	56	76	48	52	80	59	1,060	2
-57	57	77	48	53	81	60	1,080	2
-58	58	79	48	53	82	61	1,180	2
-60	63	83.5	58	53	84	63	1,390	2
-63	56	76	48	52	80	59	1,060	2
-65	65	88	58	52	84	63	1,520	2
-70	70	92	58	52	84	63	1,580	2
-75	75	98.5	58	56	86	65	1,720	2
-80	80	104.5	63	59	90	69	2,040	2
-85	85	111	63	59	90	69	2,220	2

POWERFIT (Except below B40-46)

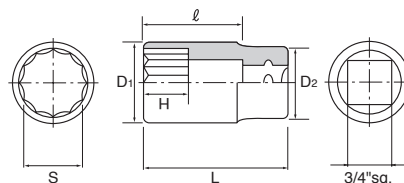
SOCKET									in
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞	
BB40 -1-1/16	26.9	38	34	20	51	28	230	5	
-1-1/8	28.5	40	34	21	53	30	250	5	
-1-3/16	30.1	42	36	22	54	31	280	5	
-1-1/4	31.7	44	38	24	56	33	300	5	
-1-5/16	33.3	47	38	25	58	34	338	5	
-1-3/8	34.9	48	38	26	59	36	340	5	
-1-7/16	36.5	50	40	27	60	37	360	5	
-1-1/2	38.1	52	40	29	62	39	480	5	
-1-5/8	41.2	56	37	32	65	44	500	5	
-1-3/4	44.4	61	43	34	68	47	660	5	
-1-13/16	46.0	63	44	35	70	49	740	5	
-1-7/8	47.6	65	44	36	71	50	780	5	
-2	50.8	69	47	38	75	54	960	5	

●3/4"sq. SOCKET



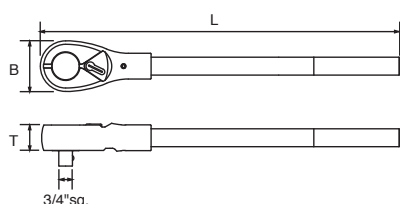
DEEP SOCKET									mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞	
B45-17	17	26	33	18	90	69	280	5	
B45-18	18	27	33	19	90	69	290	5	
B45-19	19	27.5	33	20	90	69	300	5	
B45-20	20	29.5	33	21	90	69	330	5	
B45-21	21	30	33	22	90	69	330	5	
B45-22	22	31	33	23	90	69	310	5	
B45-23	23	32.5	33	24	90	69	330	5	
B45-24	24	34	33	25	90	69	360	5	
B45-25	25	35	34	26	90	69	390	5	
B45-26	26	36.5	34	27	90	69	410	5	
B45-27	27	38	34	28	90	69	410	5	
B45-28	28	39	34	29	90	69	430	5	
B45-29	29	40	34	30	90	69	440	5	
B45-30	30	42	36	31	90	69	470	5	
B45-31	31	43	38	32	90	69	510	5	
B45-32	32	44	38	33	90	69	520	5	
B45-33	33	46	38	34	90	69	550	5	
B45-34	34	47	38	35	90	69	570	5	
B45-35	35	48	38	36	90	69	580	5	
B45-36	36	50	40	37	90	69	630	5	
B45-38	38	52	40	39	90	69	650	5	
B45-40	40	55	40	41	90	69	690	5	
B45-41	41	56	40	42	90	69	700	5	
B45-42	42	57	40	43	90	69	700	5	
B45-44	44	59.5	40	45	90	69	790	5	
B45-46	46	63	44	47	90	69	910	2	
B45-48	48	64.5	44	49	90	69	960	2	
B45-50	50	68	46	51	90	69	1,010	2	
B45-52	52	69.5	46	64	100	79	1,090	2	
B45-53	53	71	48	64	100	79	1,180	2	
B45-54	54	73	48	63	100	79	1,270	2	
B45-55	55	75	48	63	100	79	1,350	2	
B45-56	56	76	48	63	100	79	1,340	2	
B45-57	57	77	48	62	100	79	1,360	2	
B45-58	58	79	48	62	100	79	1,450	2	
B45-60	60	81	48	61	100	79	1,460	2	
B45-63	63	83.5	53	60	100	79	1,540	2	

●3/4"sq. DEEP SOCKET



RATCHET HANDLE							
No.	Type	Feed	B	T	L	▽kg	⊞
BR6A	Oval Head	9°	71	36	505	2.5	1

- It is a standard 3/4"sq. oval type ratchet handle.
- Gear with 40-tooth number is used. Feed angle is 9°.



●3/4"sq. RATCHET HANDLE

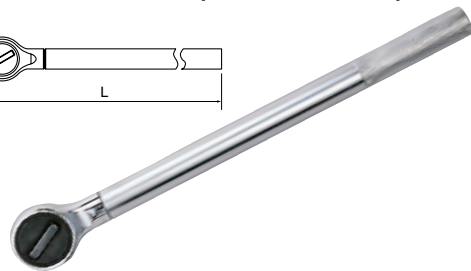
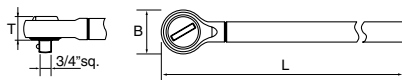


■ Supply Parts (3/4"sq. Ratchet Head Repair Kit)

No.	Square	Set Contents	▽g
BR6A-K	3/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x 1, Flat head screw (small) x2	680

3/4" sq.

● 3/4"sq. RATCHET HANDLE (ROUND HEAD)



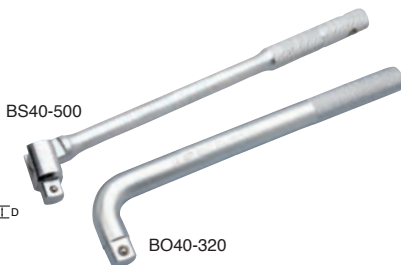
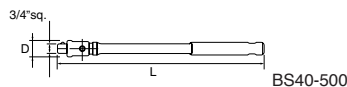
**RATCHET HANDLE (ROUND HEAD)**

No.	Type	Feed	B	T	L	▼kg	☞
BRM40	Round Head	6°	67	36	500	2.37	1

- Round head with compact design.
- 60 teeth gear with small 6° increments.
- \*Replacement parts are available. Check with your dealer for details.

**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/4"sq. SPINNER HANDLE • L-SHAPED HANDLE



**SPINNER HANDLE**

No.	D	L	▼kg	☞
BS40-500	40	500	2	1

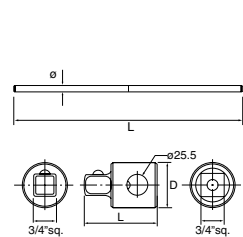
**CAUTION** • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION. DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

**L-SHAPED HANDLE**

No.	D	L	▼kg	☞
BO40-320	24	315	1.5	2

**CAUTION** • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 3/4"sq. HEAD • BAR



**HEAD**

No.	D	L	▼g	☞
BH40	40	71	300	1

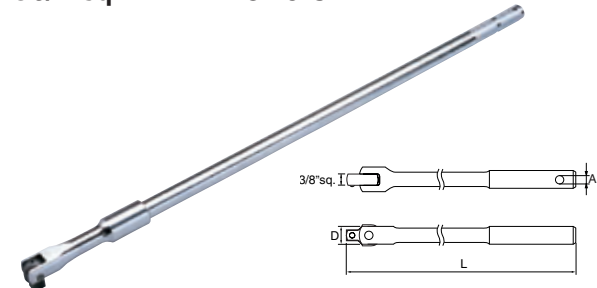
**CAUTION** • ALWAYS USE THE DESIGNATED BAR (No. BL40, BL40-500).

**BAR**

No.	L	σ	▼kg	☞
BL40-500	500	25	1.9	1

- For use with BH40.
- The BL40 employs a succession system which makes it compact after use.

● 3/4"sq. EXTRA-LONG SPINNER HANDLE PAT.P.



**EXTRA-LONG SPINNER HANDLE**

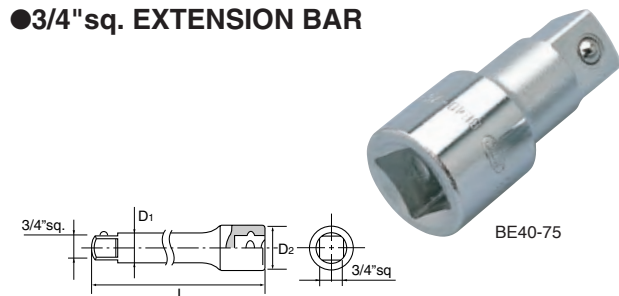
No.	D	L	A	▼kg	☞
BS6-1050	38	1000	10	3.7	1

- Is suitable for construction machinery and in large sized vehicles where high torque is necessary.
- CAUTION** • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION. DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

**Drive set PAT.P.**

No.	Drive	Contents
BS6-K	3/4"sq.	Drive head ASSY · Pin · Steel ball · Spring · Hexagon shaped hole fitted stop screw · Exchangeable jig · Exchangeable 6 hexagon shaped pole wrench x1

● 3/4"sq. EXTENSION BAR

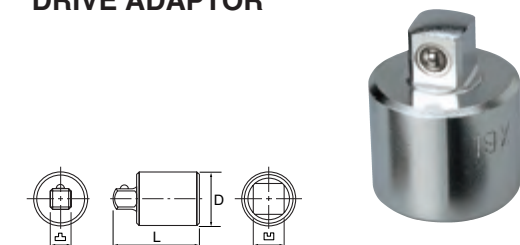


**EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☞
BE40 - 75	25	34	75	230	1
- 130	25	34	130	500	1
- 200	25	34	200	800	1
- 400	25	34	400	1,600	1

**CAUTION** • DO NOT EXTEND WITH 2 OR MORE BARS.

● 3/4"sq. INTERNAL × 1/2"sq. EXTERNAL DRIVE ADAPTOR



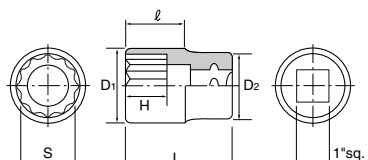
**3/4"sq. INTERNAL × 1/2"sq. EXTERNAL DRIVE ADAPTOR**

No.	sq.		D	L	▼g	☞
	Internal	External				
BA4030	3/4"	1/2"	34	43	154	10

**CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE, DO NOT APPLY EXCESSIVE POWER. DO NOT APPLY EXCESSIVE PRESSURE.

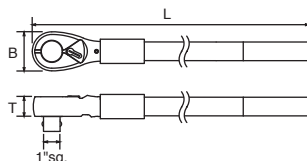
SOCKET										mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g			
B50 -27	27	40.5	44	19	60	31	370	1		
-30	30	44	44	21	65	36	410	1		
-32	32	46.5	44	23	65	36	430	1		
-33	33	48	48	23.5	65	36	510	1		
-35	35	50.5	48	24.5	65	36	530	1		
-36	36	54	52	30	72	43	720	1		
-38	38	54	52	32	74	45	710	1		
-40	40	56.5	52	33	76	47	750	1		
-41	41	60	52	34	77	48	850	1		
-42	42	59	56	35	79	50	810	1		
-46	46	66	52	40	82	53	980	1		
-50	50	71	56	43	86	57	1,200	1		
-54	54	74	56	46	90	61	1,270	1		
-55	55	78	56	48	92	63	1,430	1		
-58	58	79	56	50	94	65	1,370	1		
-60	60	84	56	52	98	69	1,660	1		
-63	63	88	60	56	103	74	1,980	1		
-65	65	91	60	58	103	74	2,170	1		
-67	67	94	60	59	108	79	2,360	1		
-68	68	94	60	59	109	80	2,410	1		
-70	70	97	60	60	111	82	2,480	1		
-71	71	97	65	63	113	84	2,500	1		
-75	75	104	65	66	118	89	3,050	1		
-77	77	107	65	67	120	91	3,260	1		
-80	80	110	65	70	124	95	3,450	1		
-83	83	110.5	65	72	127	98	3,610	1		
-85	85	117	70	75	130	101	4,170	1		
-90	90	119	75	78	130	101	4,370	1		
-95	95	125.5	85	76	130	101	4,800	1		
-100	100	131.5	85	75	130	101	5,200	1		

●1"sq. SOCKET



RATCHET HANDLE							
No.	Type	Feed	B	T	L	▼kg	
BR8A	Oval Head	9°	71	36	720	4.3	1

- It is a standard 1"sq. oval type ratchet handle.
- Gear with 40-tooth number is used. Feed angle is 9°.
- \*Spare parts are configured. P.472



■ Supply Parts (1"sq. Ratchet Head Repair Kit)

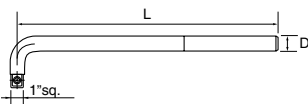
No.	Square	Set Contents	▼g
BR8A-K	1"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x 1, Flat head screw (small) x2	680

●1"sq. RATCHET HANDLE



L-SHAPED HANDLE				
No.	D	L	▼kg	
BO50-600	28.5	600	3.0	1

CAUTION • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.



●1"sq. L-SHAPED HANDLE



EXTENSION BAR					
No.	D <sub>1</sub>	D <sub>2</sub>	L	▼kg	
BE50 - 200	32	44	200	1.3	1
- 400	32	44	400	2.6	1

- You can choose from both 200mm length and 400mm in accordance with your working environment.
- Suitable for tightening for Hub nut of heavy trucks.

CAUTION • DO NOT EXTEND WITH 2 OR MORE BARS.

●1"sq. EXTENSION BAR



## 2. CONVENTIONAL TOOLS

# IMPACT SOCKETS and ACCESSORIES



### CAUTION

#### Socket for impact wrench and accessories

- Make sure that you read the User's manual carefully before use.
- Use the impact wrench socket and the impact wrench accessories.
- Make sure that all users are wearing safety glasses, ear plugs, hard hat, dust mask, and safety boots while working.
- Do not allow impact wrench to make contact with the nut.
- Do not connect more than one attachment.
- Do not freely turn while sockets or attachments are attached.

- Check the turning direction before use.
- Be sure to remove the air hose before replacing the socket.
- Check that the socket is correctly attached before commencing operation.
- It is dangerous to touch the socket during operation.
- Never use a non-conforming pin or ring. If the correct pin and ring is not used, there is a danger the pin may pop out when the tool is being turned freely.

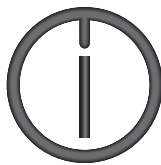


### The pursuit of a user friendly socket for the 21st Century Version Tool impact wrench

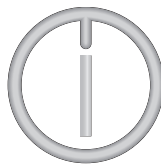
- 3 different lengths can be set according to use. (Standard, Semi-deep, Deep)
- The semi-deep and the deep type are of a thin wall design that can be used in confined spaces.
- In addition to the usual engraved stamp, the large easy-to-read size indication is displayed.



Easy-to-read size indication



Pins and rings are differentiated for use by color.



Standard Semi-deep (BP4)



Semi-deep (BP4M)

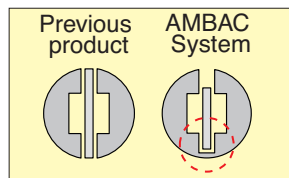


Deep (BP4L)

- Pins and rings are differentiated by color and easily matched.
- By employing a new type ring, pins and rings are easily attached. (Refer to P.137 for attachment procedure)

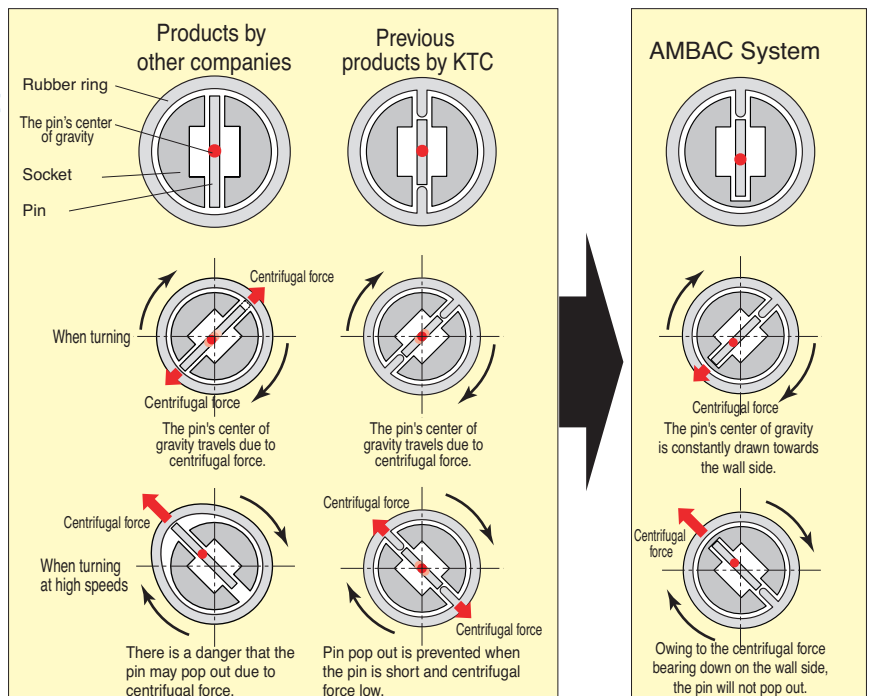
### A new pin pop-out prevention mechanism [AMBAC system] \*(PAT.P.) is employed by the 21st Century Version Tool.

\*AMBAC:Anti-disconnect Mechanism By Availing of Centrifugal force



Half of the pin hole has been used as a wall, and by shortening the length of the pin, the centrifugal force that occurs when the tool is being turned constantly bears down upon the wall side, preventing the pin from popping out. Refer to the diagram on the right.

By employing the AMBAC System, the pin is prevented from popping out when the impact wrench is being used.



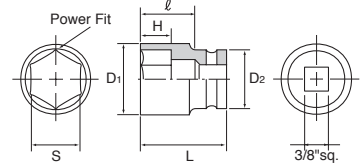
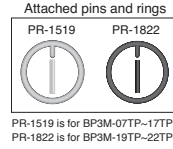


IMPACT SOCKET (SEMI-DEEP)									
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	☞	
BP3M-07TP	7	11.5	22	6	34	21	47	5	
BP3M-08TP	8	13	22	7	34	21	50	5	
BP3M-09TP	9	14	22	8	34	21	52	5	
BP3M-10TP	10	15.5	22	8	34	21	52	5	
BP3M-12TP	12	18	22	9	34	21	58	5	
BP3M-13TP	13	19	22	9	34	21	58	5	
BP3M-14TP	14	20.5	22	9	36	23	64	5	
BP3M-17TP	17	25	22.5	12	36	23	80	5	
BP3M-19TP	19	27.5	25	12	39	26	108	5	
BP3M-21TP	21	29	25	14	39	26	108	5	
BP3M-22TP	22	31	25	14	41	28	130	5	



• Combine the black pin with black ring and silver pin with gray ring.

●3/8"sq. IMPACT SOCKET (SEMI-DEEP THIN WALL) WITH PIN • RING PAT.

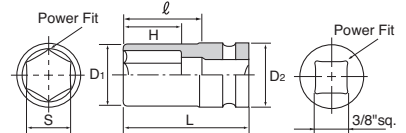


IMPACT SOCKET (SEMI-DEEP) mm									
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	☞	
BP3M-07T	7	11.5	22	6	34	21	47	5	
-08T	8	13	22	7	34	21	50	5	
-09T	9	14	22	8	34	21	52	5	
-10T	10	15.5	22	8	34	21	52	5	
-12T	12	18	22	9	34	21	58	5	
-13T	13	19	22	9	34	21	58	5	
-14T	14	20.5	22	9	36	23	64	5	
-17T	17	25	22.5	12	36	23	80	5	
-19T	19	27.5	25	12	39	26	108	5	
-21T	21	29	25	14	39	26	108	5	
-22T	22	31	25	14	41	28	130	5	

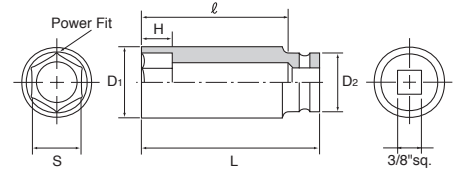
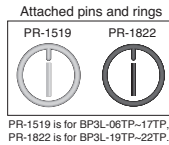
\* Pins and rings are sold separately.



●3/8"sq. IMPACT SOCKET (SEMI-DEEP)



●3/8"sq. IMPACT SOCKET (DEEP THIN WALL) WITH PIN • RING PAT.



IMPACT SOCKET (SEMI-DEEP)									
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	☞	
BP3L-06TP	6	10	22	5	55	42	57	5	
BP3L-07TP	7	11.5	22	6	55	42	60	5	
BP3L-08TP	8	13	22	7	55	42	68	5	
BP3L-09TP	9	14	22	8	55	42	73	5	
BP3L-10TP	10	15.5	22	10	55	42	73	5	
BP3L-11TP	11	17	22	12	55	42	82	5	
BP3L-12TP	12	18	22	12	55	42	88	5	
BP3L-13TP	13	19	22	12	55	42	88	5	
BP3L-14TP	14	20.5	22	12	80	67	137	5	
BP3L-17TP	17	25	22.5	14	80	67	195	5	
BP3L-19TP	19	27.5	25	14	80	67	233	5	
BP3L-21TP	21	29	25	15	80	67	237	5	
BP3L-22TP	22	31	25	16	80	67	281	5	



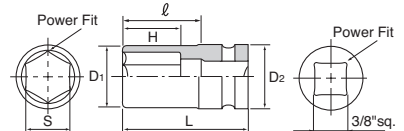
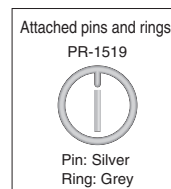
• Combine the black pin with black ring and silver pin with gray ring.

IMPACT SOCKET (LONG) mm									
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	☞	
BP3L-06T	6	10	22	5	55	42	57	5	
-07T	7	11.5	22	6	55	42	60	5	
-08T	8	13	22	7	55	42	68	5	
-09T	9	14	22	8	55	42	73	5	
-10T	10	15.5	22	10	55	42	73	5	
-11T	11	17	22	12	55	42	82	5	
-12T	12	18	22	12	55	42	88	5	
-13T	13	19	22	12	55	42	88	5	
-14T	14	20.5	22	12	80	67	137	5	
-17T	17	25	22.5	14	80	67	195	5	
-19T	19	27.5	25	14	80	67	223	5	
-21T	21	29	25	15	80	67	237	5	
-22T	22	31	25	16	80	67	281	5	

\* Pins and rings are sold separately.

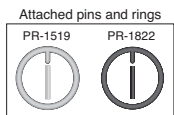


●3/8"sq. IMPACT SOCKET (LONG)

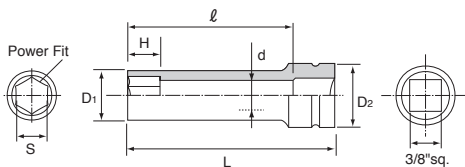


3/8" sq. 1/2" sq.

### ● 3/8"sq. IMPACT SOCKET LONG SOCKET (THIN WALL) WITH PIN • RING PAT.



PR-1519 is for BP3LL-10TP~17TP.  
PR-1822 is for BP3LL-19TP.

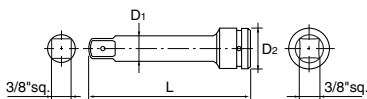
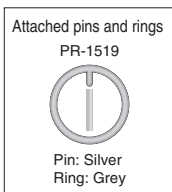


#### IMPACT SOCKET (LONG)

No.	S	D <sub>1</sub>	D <sub>2</sub>	d	H	L	ℓ	▼g	⊠
BP3LL-10TP	10	15.5	22	9	10	130	115	170	5
BP3LL-12TP	12	18	22	9	12	130	115	220	5
BP3LL-13TP	13	19	22	11	12	130	115	225	5
BP3LL-14TP	14	20.5	22	12	12	130	115	250	5
BP3LL-17TP	17	25	22.5	14	14	130	115	360	5
BP3LL-19TP	19	27.5	25	16	14	130	115	440	5

⚠ CAUTION • Combine the black pin with black ring and silver pin with gray ring.

### ● 3/8"sq. IMPACT EXTENSION BAR

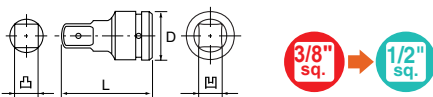


#### IMPACT EXTENSION BAR

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	⊠
BEP3-075	12.7	22	75	100	5
-100	12.7	22	100	120	5

⚠ CAUTION • DO NOT USE MULTIPLE EXTENSIONS.  
• Match the black pin with the black ring, and the silver pin with the grey ring.

### ● 3/8"sq. IMPACT ADAPTOR

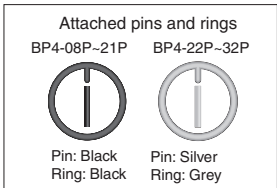
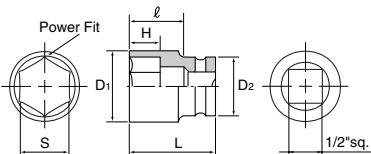


#### IMPACT ADAPTOR

No.	sq.		D	L	▼g	⊠
	Internal	External				
BAP34	3/8"	1/2"	22	42	70	5

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER. DO NOT APPLY EXCESSIVE POWER OR IMPACT.  
• Match the black pin with the black ring, and the silver pin with the grey ring.

### ● 1/2"sq. IMPACT SOCKET (STANDARD) PAT.P. WITH PINS & RINGS



#### IMPACT SOCKET mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	⊠
BP4-08P	8	15	25	6	33	15	65	5
-09P	9	16	25	6.5	33.5	15.5	68	5
-10P	10	17	25	7	34	16	68	5
-11P	11	18.5	25	7.5	34.5	16.5	72	5
-12P	12	20	25	8	35	17	77	5
-13P	13	21.5	25	9	36	18	81	5
-14P	14	22.5	25	9.5	36.5	18.5	83	5
-15P	15	24	25	10.5	37.5	19.5	89	5
-16P	16	26	25	11	39	21	103	5
-17P	17	27.5	25	12	39	21	110	5
-19P	19	30	25	13	40	22	123	5
-21P	21	32.5	25	14	41	23	135	5
-22P	22	34	29	15	42	24	173	5
-23P	23	35	29	16	43	25	178	5
-24P	24	36.5	29	16.5	43.5	25.5	186	5
-26P	26	38	29	18	45	27	193	5
-27P	27	40	29	18.5	45	27	212	5
-28P	28	42	29	19	46	28	233	5
-29P	29	43	29	19.5	46.5	28.5	243	5
-30P	30	44	29	20	47	29	246	5
-32P	32	46	29	21	48	30	261	5

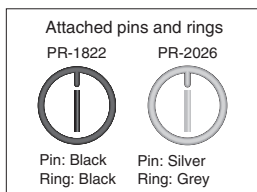
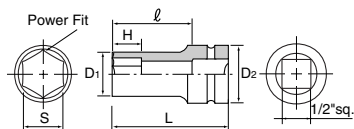
⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT



1/2" sq.

● 1/2"sq. IMPACT SOCKET (DEEP) PAT.P.  
WITH PINS & RINGS

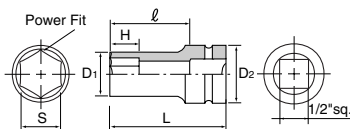


PR-1822 for BP4L-10TP~21TP  
PR-2026 for BP4L-22TP~32TP

IMPACT SOCKET (DEEP)								mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞
BP4L -10TP	10	15.5	25	20	75	57	101	5
-12TP	12	18	25	20	75	57	124	5
-13TP	13	19	25	20	75	57	124	5
-14TP	14	20.5	25	20	80	62	144	5
-17TP	17	25	24.5	24	80	62	187	5
-19TP	19	27.5	25	24	80	62	195	5
-21TP	21	29	25	24	80	62	193	5
-22TP	22	31	29	25	80	62	250	5
-23TP	23	32.5	29	25	80	62	264	5
-24TP	24	34	29	25	80	62	280	5
-26TP	26	36.5	29	25	100	82	391	5
-27TP	27	38	29	25	100	82	424	5
-30TP	30	42	29	25	100	82	487	5
-32TP	32	44	29	25	100	82	508	5

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

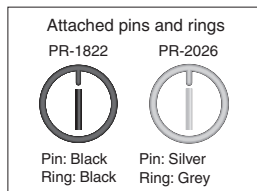
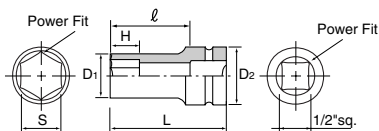
● 1/2"sq. IMPACT SOCKET (DEEP) PAT.P.



\* Pins and rings are sold separately.

IMPACT SOCKET (DEEP)								mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞
BP4L -10T	10	15.5	25	20	75	57	101	5
-12T	12	18	25	20	75	57	124	5
-13T	13	19	25	20	75	57	124	5
-14T	14	20.5	25	20	80	62	144	5
-17T	17	25	24.5	24	80	62	187	5
-19T	19	27.5	25	24	80	62	195	5
-21T	21	29	25	24	80	62	193	5
-22T	22	31	29	25	80	62	250	5
-23T	23	32.5	29	25	80	62	264	5
-24T	24	34	29	25	80	62	280	5
-26T	26	36.5	29	25	100	82	391	5
-27T	27	38	29	25	100	82	424	5
-30T	30	42	29	25	100	82	487	5
-32T	32	44	29	25	100	82	508	5

● 1/2"sq. IMPACT SOCKET (LONG)



PR-1822 for BP4LL-12TP~21TP  
PR-2026 for BP4LL-22TP

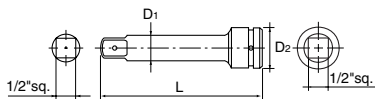
IMPACT SOCKET (LONG)								mm	
No.	S	D <sub>1</sub>	D <sub>2</sub>	d	H	L	ℓ	▽g	⊞
BP4LL-12TP	12	18	25	10	20	150	132	230	5
-13TP	13	19	25	11.5	20	150	132	240	5
-14TP	14	20.5	25	12	20	150	132	260	5
-17TP	17	25	25	14	24	150	132	380	5
-19TP	19	27.5	25	17	24	150	132	410	5
-21TP	21	29	25	19	24	150	132	420	5
-22TP	22	31	29	20	25	150	132	500	5

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

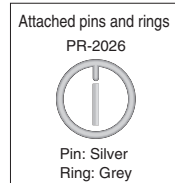
**IMPACT EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	☞
BEP4-075	18	29	75	180	1
-100	18	29	100	230	1
-150	18	29	150	300	1

⚠ CAUTION • DO NOT USE MULTIPLE EXTENSIONS.



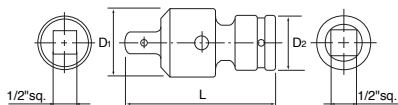
● 1/2"sq. IMPACT EXTENSION BAR. PAT.P.



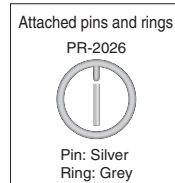
**IMPACT UNIVERSAL JOINT**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▽g	☞
BJP4	38	29	82.5	340	1

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



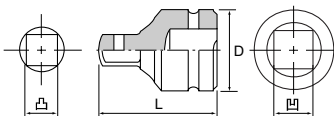
● 1/2"sq. IMPACT UNIVERSAL JOINT PAT.P.



**1/2"sq. INTERNAL DRIVE ADAPTOR**

No.	sq.		D	L	▽g	☞
	Internal	External				
BAP43	1/2"	3/8"	28.5	41.7	110	1
BAP46	1/2"	3/4"	28.5	50	160	1

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

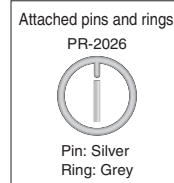


● 1/2"sq. INTERNAL DRIVE ADAPTOR PAT.P.

BAP43



BAP46

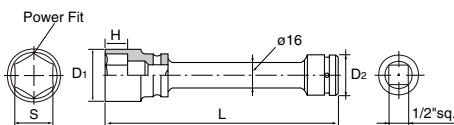


**UNIVERSAL JOINT SOCKET** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	▽g	☞
BP4L-17JUP	17	27	29	18	194	470	5
-19JUP	19	28.5	29	18	194	470	5
-24JUP	24	36.5	29	18	194	510	5

\*Comes with pin and ring. **POWERFIT**  
\*Replacement parts are specified. Check with your dealer for details.

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.  
• Match the black pin with the black ring, and the silver pin with the grey ring.



● 1/2"sq. IMPACT SOCKET FOR UNIVERSAL JOINT



**WHEEL NUT SOCKET SET FOR IMPACT WRENCH**

No.	S (Hexagonal)	D <sub>1</sub>	D <sub>2</sub>	H	ℓ	L	▽g	☞
BP49-17	17	24.0	25	22	18	100	180	5
BP49-19	19	26.0	25	24	18	100	190	5
BP49-21	21	27.5	25	26	18	100	190	5
BP49-22	22	29.5	25	27	18	100	210	5

Wheel nut socket for impact wrench

BP49-17, 19, 21

**Usage**

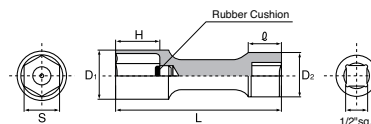
• Compatible with exclusive socket wrenches and impact wrenches used to tighten and loosen vehicle wheel nuts.

**Characteristics**

• Exclusive socket for the aluminum wheel  
• A protective rubber cushion has been fitted for chrome or painted nuts.

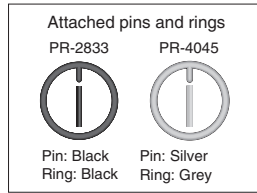
⚠ CAUTION • DO NOT USE EXCEPT FOR CAR WHEEL NUTS.  
• SPECIALLY DESIGNED TO BE THINNER THAN ORDINARY PRODUCTS. DUE TO THE THINNER CONSTRUCTION, THIS SOCKET SET MAY BREAK DEPENDING ON THE WAY OF USE.

● 1/2"sq. WHEEL NUT SOCKET SET FOR IMPACT WRENCH (LONG, THIN TYPE) PAT.P.

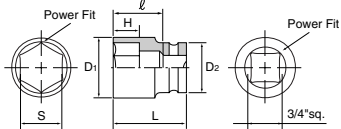


3/4" sq.

## ●3/4"sq. IMPACT SOCKET (STANDARD)



PR-2833 for BP6-17P~32P  
PR-4045 for BP6-35P~46P



## IMPACT SOCKET

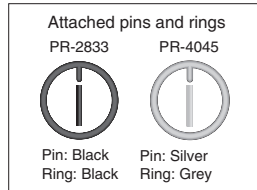
mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞	
BP6-17P	17	28.5	38	12	51	26	251	5	
-19P	19	31	38	13	51	26	259	5	
-21P	21	34	38	14	51	26	270	5	
-22P	22	35	38	15	51	26	274	5	
-23P	23	36.5	38	16	51	26	277	5	
-24P	24	38	38	16	51.5	26.5	284	5	
-26P	26	40	38	18	53	28	299	5	
-27P	27	42	38	18.5	53.5	28.5	322	5	
-28P	28	43	38	19	54	29	328	5	
-29P	29	44	38	19	54	29	336	5	
-30P	30	46	38	20	55	30	361	5	
-32P	32	48	38	21	56	31	369	5	
-35P	35	52	50	24	60.5	35.5	633	5	
-36P	36	54	50	24	61	36	672	5	
-38P	38	56	50	25	62	37	704	5	
-41P	41	60	50	26	63	38	764	2	
-46P	46	67	50	28	65	40	875	2	

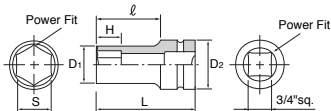
POWERFIT

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

## ●3/4"sq. IMPACT SOCKET (DEEP)



PR-2833 for BP6L-19TP~34TP  
PR-4045 for BP6L-35TP~46TP



## IMPACT SOCKET (DEEP)

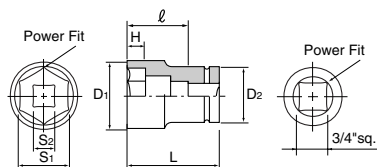
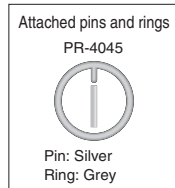
mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞	
BP6L-19TP	19	29	38	24	100	75	410	5	
-21TP	21	32	38	24	100	75	455	5	
-22TP	22	33	38	25	100	75	474	5	
-23TP	23	35	38	25	100	75	502	5	
-24TP	24	36	38	25	100	75	479	5	
-26TP	26	38	38	25	100	75	496	5	
-27TP	27	40	38	25	100	75	546	5	
-29TP	29	43	38	25	100	75	609	5	
-30TP	30	44	38	25	100	75	617	5	
-32TP	32	46	38	28	100	75	638	5	
-33TP	33	48	38	28	100	75	693	5	
-34TP	34	49	38	28	100	75	714	5	
-35TP	35	50	50	28	100	75	901	5	
-36TP	36	52	50	28	100	75	964	5	
-38TP	38	55	50	30	100	75	1,056	5	
-41TP	41	58	50	32	100	75	1,092	2	
-46TP	46	65	50	38	100	75	1,399	2	

POWERFIT

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

## ●3/4"sq. IMPACT COMBINATION SOCKET FOR WHEEL NUT



## IMPACT COMBINATION SOCKET FOR WHEEL NUT

mm

No.	S <sub>1</sub> Hexagonal	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g	⊞
ABP6-3217TP	32	17	46.5	50	12	76	51	780	2
-3517TP	35	17	50	50	13	78	53	840	2
-3820TP	38	20	55	50	14	75	50	850	2
-4119TP	41	19	58	50	14	80	55	900	2
-4120TP	41	20	58	50	14	80	55	900	2
-4121TP	41	21	58	50	14	80	55	900	2

POWERFIT



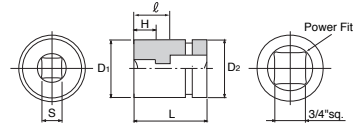
- A single, labor-saving wrench can be used to tighten or loosen both the outer and inner nuts.
- Is very effective for vehicles that have limited wheel and nut clearance due to the thin wall design.
- All the tools necessary for working on medium size (2t class) to large size (4t class) vehicles are provided.

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

**IMPACT INNER SOCKET** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	⊞
ABP6-17SQP	17	40	38	18.5	56.5	31.5	370	5
-19SQP	19	40	38	18.5	56.5	31.5	322	5
-20SQP	20	40	38	20.5	58.5	33.5	346	5
-21SQP	21	40	38	22.5	60.5	35.5	350	5

**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.



●3/4"sq. IMPACT INNER SOCKET



Attached pins and rings  
PR-2833

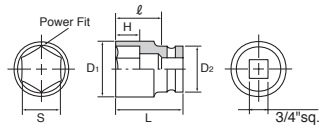
Pin: Black  
Ring: Black

**IMPACT SOCKET FOR WHEEL NUT (DEEP · THIN)**

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	⊞
BP6L-33TP	33	48	38	28	100	75	693	5

• Deep thin wall type that supports the new ISO wheel.

**CAUTION** • Combine the black pin with black ring and silver pin with gray ring.



●3/4"sq. IMPACT SOCKET FOR WHEEL NUT (DEEP · THIN) PAT.

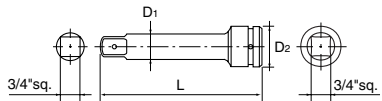


Attached pins and rings  
PR-2833

**IMPACT EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	⊞
BEP6-100	25	38	100	490	1
-150	25	38	150	680	1
-250	25	38	250	1,070	1

**CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.



●3/4"sq. IMPACT EXTENSION BAR



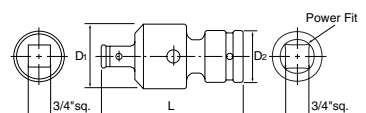
Attached pins and rings  
PR-2833

Pin: Black  
Ring: Black

**IMPACT UNIVERSAL JOINT**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	⊞
BJP6	48	38	111.5	775	1

**CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



●3/4"sq. IMPACT UNIVERSAL JOINT



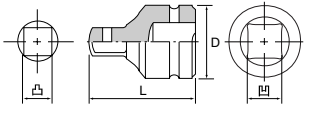
Attached pins and rings  
PR-2833

Pin: Black  
Ring: Black

**INTERNAL DRIVE IMPACT ADAPTOR**

No.	sq.		D	L	▼g	⊞
	Internal	External				
BAP64	3/4"	1/2"	38	60	270	1
BAP68	3/4"	1"	38	68	480	1

**CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/4"sq. INTERNAL DRIVE IMPACT ADAPTOR



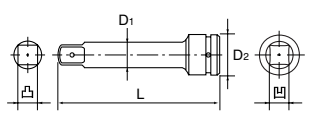
Attached pins and rings  
PR-2833

Pin: Black  
Ring: Black

**INTERNAL DRIVE IMPACT LONG ADAPTOR**

No.	sq.		D <sub>1</sub>	D <sub>2</sub>	L	▼g	⊞
	Internal	External					
BAP64-150	3/4"	1/2"	20	40	150	500	1

**CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/4"sq. INTERNAL DRIVE IMPACT LONG ADAPTOR



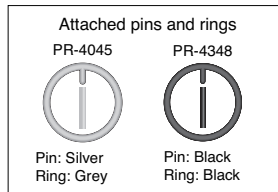
Attached pins and rings  
PR-2833

Pin: Black  
Ring: Black

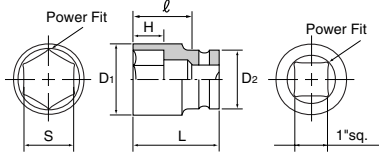
\*Please check the merchandise inventory for a product that is marked by before placing an order.



### ● 1"sq. IMPACT SOCKET (STANDARD)



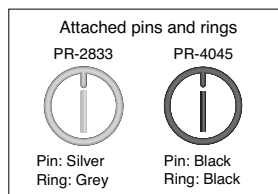
PR-4045 for BP8-21P~35P  
PR-4348 for BP8-36P~70P



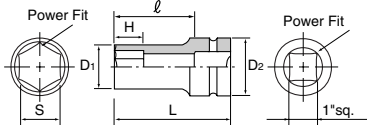
IMPACT SOCKET									mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g		
<b>BP8-21P</b>	21	36	50	16	58	28	483	2	
-22P	22	38	50	16	58	28	490	2	
-23P	23	38.5	50	16	58	28	496	2	
-24P	24	40	50	16.5	58	28	502	2	
-26P	26	42.5	50	18	60	30	525	2	
-27P	27	44	50	18.5	60	30	538	2	
-28P	28	45	50	19	60	30	535	2	
-29P	29	46.5	50	19	60	30	549	2	
-30P	30	48	49.5	22	70	40	633	2	
-32P	32	50	49.5	25	70	40	641	2	
-33P	33	52	50	25	70	40	686	2	
-35P	35	54	50	25	70	40	701	2	
-36P	36	56	53	25	70	40	790	2	
-38P	38	58	53	30	80	50	939	2	
-41P	41	63	53	35	80	50	1,045	2	
-46P	46	70	53	41.2	80	50	1,130	1	
-50P	50	76	53	37.4	80	50	1,273	1	
-54P	54	81	53	35.2	82	52	1,434	1	
-55P	55	82.5	53	35.2	82	52	1,481	1	
-58P	58	86	53	35.2	82	52	1,569	1	
-60P	60	88	53	35.2	82	52	1,604	1	
-65P	65	94	53	37.4	87	57	1,926	1	
-70P	70	101	53	35.4	87	57	2,235	1	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

### ● 1"sq. IMPACT SOCKET (DEEP)



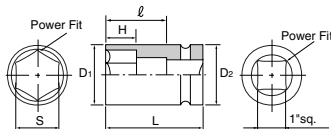
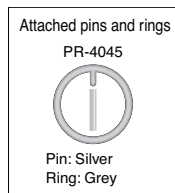
PR4050 for BP8L-22TP~35TP  
PR4348 for BP8L-36TP~70TP



IMPACT SOCKET (DEEP)									mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g		
<b>BP8L-22TP</b>	22	35	50	25	100	70	696	2	
-24TP	24	38	50	25	100	70	723	2	
-27TP	27	42	50	25	100	70	794	2	
-29TP	29	44.5	49.5	25	100	70	822	2	
-30TP	30	46	49.5	25	100	70	836	2	
-32TP	32	48	49.5	25	100	70	858	2	
-33TP	33	50	49.5	25	100	70	924	2	
-35TP	35	52	50	25	100	70	924	2	
-36TP	36	54	53	30	100	70	1,034	2	
-38TP	38	56	53.5	30	100	70	1,080	2	
-41TP	41	60	53	35	100	70	1,170	2	
-46TP	46	68	53	35	100	70	1,534	1	
-50TP	50	74	53	37.2	100	70	1,636	1	
-55TP	55	79	53	51.4	110	80	1,866	1	
-60TP	60	85.5	53	51.4	110	80	2,135	1	
-65TP	65	92	53	65.4	120	90	2,630	1	
-70TP	70	99	53	65.4	120	90	3,073	1	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

### ● 1"sq. IMPACT SOCKET FOR WHEEL NUT (THIN)



IMPACT SOCKET FOR WHEEL NUT									mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g		
<b>ABP8-32TP</b>	32	46.5	50	25	80	50	680	2	
-35TP	35	50	50	25	80	50	710	2	
-38TP	38	55	50	30	80	50	800	2	
-41TP	41	58	50	35	80	50	840	2	

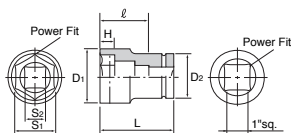
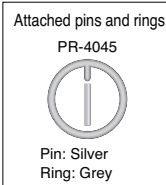
- A tool with the thin wall design that can be used for car types with lesser clearance between the wheel hub and wheel nut.
- The outer diameter has been reduced by 94% in comparison with the previous products.

#### Usage

- Tightening and loosening wheel nuts (outer nut) for middle size vehicles (2 t-4 t) and large vehicles (4 t and above, such as buses).

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

### ● 1"sq. WHEEL NUT COMBINATION SOCKET FOR IMPACT USE (THIN)



WHEEL NUT COMBINATION SOCKET FOR IMPACT USE										mm
No.	S <sub>1</sub> Hexagonal	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▽g		
<b>ABP8-3517TP</b>	35	17	50	50	13	83	53	830	2	
-3820TP	38	20	55	50	14	80	50	840	2	
-4119TP	41	19	58	50	14	85	55	890	2	
-4120TP	41	20	58	50	14	87	57	900	2	
-4121TP	41	21	58	50	14	87	57	900	2	

- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.



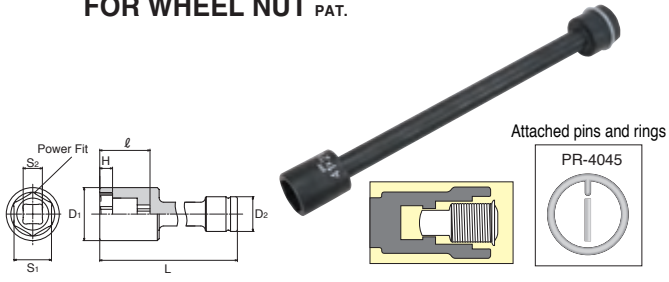
**IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT**

No.	S <sub>1</sub> Hex.	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	ℓ	L	▼kg	📦
ABP8ZL-4121TP	41	21	58	50	14	55	450	2.8	1

- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.
- Looseness is eliminated by integrating the combination socket and extension bar, allowing the torque management with higher accuracy even when torque wrench is used.
- With the long design of 450mm total length, it can be used without interference even with the wide body.

**CAUTION** • Combine the black pin with black ring and silver pin with gray ring.

**●1"sq. IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT PAT.**



**IMPACT INNER SOCKET** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
ABP8-17SQP	17	40	50	18.5	61.5	31.5	600	5
-19SQP	19	42	50	18.5	61.5	31.5	595	5
-20SQP	20	43	50	20.5	63.5	33.5	630	5
-21SQP	21	44	50	22.5	65.5	33.5	680	5

**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.

**●1"sq. IMPACT INNER SOCKET**



**IMPACT SOCKET (DEEP)**

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
BP8L-33TP	33	48	49.5	25	100	70	832	2

• Deep thin wall type that supports the new ISO wheel.

**CAUTION** • It may not be usable for some models.  
• Combine the black pin with black ring and silver pin with gray ring.

**●1"sq. IMPACT SOCKET (DEEP · THIN) PAT.**



**IMPACT EXTENSION BAR**

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
BEP8-150	33	50	150	1,065	1
-200	33	50	200	1,380	1
-250	33	50	250	1,750	1

**CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.  
• Match the black pin with the black ring, and the silver pin with the grey ring.

**●1"sq. IMPACT EXTENSION BAR**



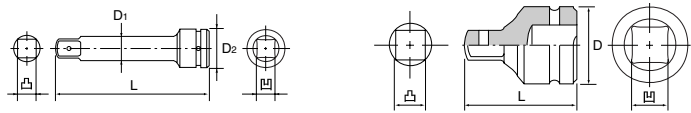
**INTERNAL x EXTERNAL DRIVE IMPACT ADAPTOR**

No.	sq.		D	L	▼g	📦
	Internal	External				
BAP86	1"	3/4"	50	75	510	1

No.	sq.		D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
	Internal	External					
BAP86-150	1"	3/4"	28	50	150	900	1

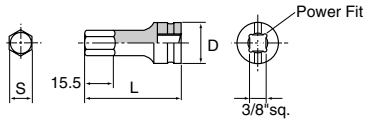
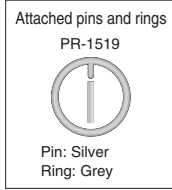
**CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.  
• Match the black pin with the black ring, and the silver pin with the grey ring.

**●1"sq. INTERNAL x 3/4"sq. EXTERNAL DRIVE IMPACT ADAPTOR**



3/8" sq. 1/2" sq.

● 3/8" sq. IMPACT HEX. WRENCH



**IMPACT HEX. WRENCH SET (6pcs.)**

No. TBTP306P	▼g 432	📦 1
Impact Hex. Wrench	BTP3-04P, 05P, 06P, 08P, 10P, 12P	
Socket Holder	EHB306	

\* Pins and rings are sold separately.

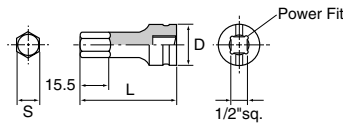
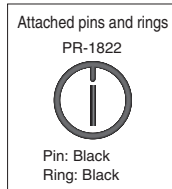
**IMPACT HEX. WRENCH**

No.	S	D	L	▼g	📦
<b>BTP3-04P</b>	4	22	45	51	10
<b>-05P</b>	5	22	45	53	10
<b>-06P</b>	6	22	45	55	10
<b>-08P</b>	8	22	45	60	10
<b>-10P</b>	10	22	52	74	10
<b>-12P</b>	12	22	52	84	10

• The tool can sufficiently withstand the use of the impact wrench due to **KTC** unique design.

⚠️ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 1/2" sq. IMPACT HEX. WRENCH



**IMPACT HEX. WRENCH SET (6pcs.)**

No. TBTP406P	▼g 768	📦 1
Impact Hex. Wrench	BTP4-06P, 08P, 10P, 12P, 14P, 17P	
Socket Holder	EHB4108	

\* Pins and rings are sold separately.

**IMPACT HEX. WRENCH**

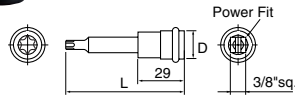
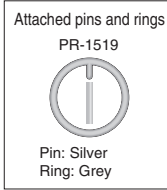
No.	S	D	L	▼g	📦
<b>BTP4-06P</b>	6	25	60	78	10
<b>-08P</b>	8	25	60	87	10
<b>-10P</b>	10	25	60	97	10
<b>-12P</b>	12	25	60	109	10
<b>-14P</b>	14	25	60	124	10
<b>-17P</b>	17	25	60	149	10

\* Pins and rings are sold separately.

• The tool can sufficiently withstand the use of the impact wrench due to **KTC** unique design.

⚠️ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 3/8" sq. T-TYPE IMPACT TORX<sup>®</sup> WRENCH & SET (5pcs.)



**IMPACT TORX<sup>®</sup> WRENCH • SET (5pcs.)**

No. TBTP305T	▼g 395	📦 1
T-Type Impact <b>TORX<sup>®</sup></b> Wrench (3/8"sq.)	BTP3-T20, T25, T30, T40, T45	

No.	Fastener	L	▼g	📦
<b>BTP3-T20P</b>	T20	75	77	1
<b>-T25P</b>	T25	75	78	1
<b>-T30P</b>	T30	75	79	1
<b>-T40P</b>	T40	75	80	1
<b>-T45P</b>	T45	75	81	1

⚠️ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

• **TORX<sup>®</sup>** is a registered trademark for the Textron Fastening Systems.

● PIN & RING SET FOR IMPACT WRENCH



**PIN & RING SET FOR IMPACT WRENCH**

No.	Size	Color	Total
PR-1519	Pin: φ2.5 × total length 15 Ring: OD 26	Pin: Silver Ring: Gray	Pin: 5 Ring: 5
PR-1822	Pin: φ2.5 × total length 18 Ring: OD 29	Pin: Black Ring: Black	Pin: 5 Ring: 5
PR-2026	Pin: φ2.5 × total length 20 Ring: OD 33	Pin: Silver Ring: Gray	Pin: 5 Ring: 5
PR-2833	Pin: φ4 × total length 28 Ring: OD 43	Pin: Black Ring: Black	Pin: 5 Ring: 5
PR-4045	Pin: φ4 × total length 40 Ring: OD 54	Pin: Silver Ring: Gray	Pin: 5 Ring: 5
PR-4348	Pin: φ4 × total length 43 Ring: OD 57	Pin: Black Ring: Black	Pin: 5 Ring: 5

\*Please check the merchandise inventory for a product that is marked by before placing an order.



## List of applied pin/ring sets for the 21st Century Version Tool impact socket (5 pins and rings included).

To be released in September 2005

Caution: there is no compatibility with tools other than the 21st Century Version Tools.

### ■ BP4-

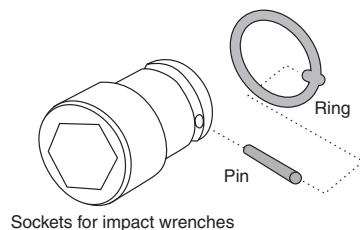
Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4-08	BP4-08P	PR-1822
-09	-09P	-1822
-10	-10P	-1822
-11	-11P	-1822
-12	-12P	-1822
-13	-13P	-1822
-14	-14P	-1822
-15	-15P	-1822
-16	-16P	-1822
-17	-17P	-1822
-19	-19P	-1822
-21	-21P	-1822
-22	-22P	PR-2026
-23	-23P	-2026
-24	-24P	-2026
-26	-26P	-2026
-27	-27P	-2026
-28	-28P	-2026
-29	-29P	-2026
-30	-30P	-2026
-32	-32P	-2026

### ■ BP4M-

Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4M-08T	BP4M-08TP	PR-1822
-09T	-09TP	-1822
-10T	-10TP	-1822
-11T	-11TP	-1822
-12T	-12TP	-1822
-13T	-13TP	-1822
-14T	-14TP	-1822
-15T	-15TP	-1822
-16T	-16TP	-1822
-17T	-17TP	-1822
-18T	-18TP	-1822
-19T	-19TP	-1822
-20T	-20TP	-1822
-21T	-21TP	-1822
-22T	-22TP	PR-2026
-23T	-23TP	-2026
-24T	-24TP	-2026
-25T	-25TP	-2026
-26T	-26TP	-2026
-27T	-27TP	-2026
-28T	-28TP	-2026
-29T	-29TP	-2026
-30T	-30TP	-2026
-31T	-31TP	-2026
-32T	-32TP	-2026
-33T	-33TP	-2026
-34T	-34TP	-2026
-35T	-35TP	-2026
-36T	-36TP	-2026

### Attaching the pin/ring

The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.



A protruding section is provided on the exterior of the ring in order to indicate the position of the hole while the ring is set.

### ■ BP4L-

Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4L-10T	BP4L-10TP	PR-1822
-12T	-12TP	-1822
-13T	-13TP	-1822
-14T	-14TP	-1822
-17T	-17TP	-1822
-19T	-19TP	-1822
-21T	-21TP	-1822
-22T	-22TP	PR-2026
-23T	-23TP	-2026
-24T	-24TP	-2026
-26T	-26TP	-2026
-27T	-27TP	-2026
-30T	-30TP	-2026
-32T	-32TP	-2026

### ■ BEP4-

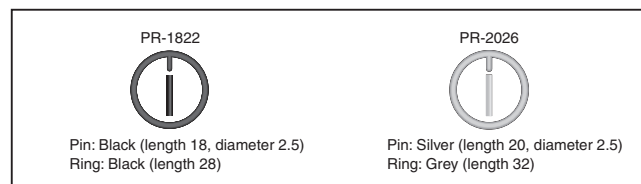
Applied product number	Pin/ring set product number
BEP4-075	PR-2026
-100	-2026
-150	-2026

### ■ BJP

Applied product number	Pin/ring set product number
BJP4	PR-2026

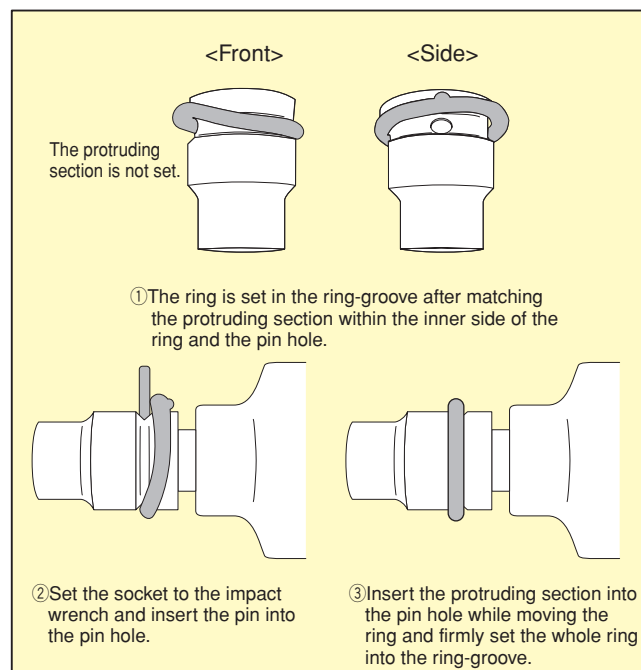
### ■ BAP

Applied product number	Pin/ring set product number
BAP43	PR-2026
43	-2026



### CAUTION

- Never use pieces inappropriately as this is dangerous.
- Match the black ring with the black pin, and the silver ring with the grey pin.





## List of applied pin/ring sets for the impact socket (5 pins and rings included).

\*Caution: there is no compatibility with the 21st Century Version Tools.

### ■ PB

Applied product number	Pin/ring set product number
PB22 - 7H	BPYPR-215
- 8H	-215
- 9H	-215
-10H	-215
-12H	-215
-13H	BPYPR-219
-14H	-219
-17H	-219
-19H	BPYPR-222
-21H	-222
-22H	-222
PB25 - 6H	BPYPR-215
- 7H	-215
- 8H	-215
- 9H	-215
-10H	-215
-11H	-215
-12H	-215
-13H	BPYPR-219
-14H	-219
-17H	-219
-19H	BPYPR-222
-21H	-222
-22H	-222
PB30 - 8H	BPYPR-321
- 9H	-321
-10H	-321
-11H	-321
-12H	-321
-13H	-321
-14H	-321
-15H	-321
-16H	BPYPR-322
-17H	-322
-19H	BPYPR-324B
-21H	-324B
-22H	-324B
-23H	-324B
-24H	-324B
-26H	-324B
-27H	-324B
-28H	-324B
-29H	-324B
-30H	-324B
-32H	-324B
PB31A-17H	BPYPR-324A
-19H	BPYPR-324C
-21H	-324C
PB32 -10H	BPYPR-321
-12H	-321
-13H	-321
-14H	-321
-17H	-321
-19H	BPYPR-322
-21H	-322
-22H	BPYPR-324B
-23H	-324B
-24H	-324B
-26H	-324B
-27H	-324B
-30H	-324B
-32H	-324B
PB35 -10H	BPYPR-321
-12H	-321
-13H	-321
-14H	-321
-17H	-321
-19H	BPYPR-322
-21H	-322
-22H	BPYPR-324B
-23H	-324B
-24H	-324B
-26H	-324B
-27H	-324B
-30H	-324B
-32H	-324B

Applied product number	Pin/ring set product number
PB40 -17H	BPYPR-433
-19H	-433
-21H	-433
-22H	-433
-23H	-433
-24H	-433
-26H	BPYPR-435
-27H	-435
-28H	-435
-29H	-435
-30H	-435
-32H	-435
-35H	BPYPR-442
-36H	-442
-38H	-442
-41H	BPYPR-444
-46H	-444
PB42Z-14	BPYPR-434
-17	-434
-19	-434
-22	-434
PB43 -3217	BPYPR-444
-3517	-444
-3820	-444
-4119	-444
-4120	-444
-4121	-444
PB45 -19H	BPYPR-433
-21H	-433
-22H	-433
-23H	-433
-24H	-433
-26H	-433
-27H	BPYPR-435
-29H	-435
-30H	-435
-32H	-435
-34H	-435
-35H	BPYPR-444
-36H	-444
-38H	-444
-41H	-444
-46H	-444
PB50 -21H	BPYPR-544
-22H	-544
-23H	-544
-24H	-544
-26H	-544
-27H	-544
-28H	-544
-29H	-544
-30H	-544
-32H	-544
-33H	-544
-35H	BPYPR-547
-36H	-547
-38H	-547
-41H	-547
-46H	-547
-50H	-547
-54H	BPYPR-554
-55H	-554
-58H	-554
-60H	-554
-65H	-554
-70H	-554
PB53 -3517	BPYPR-544
-3820	-544
-4119	-544
-4121	-544

\*Please check the merchandise inventory for a product that is marked by before placing an order.

# List of applied pin/ring sets for the impact socket (5 pins and rings included).

\*Caution: there is no compatibility with the 21st Century Version Tools.

Applied product number	Pin/ring set product number
PB54 -32H	BPYPR -544
-35H	-544
-38H	-544
-41H	-544
PB55 -22H	-544
-24H	-544
-27H	-544
-29H	-544
-30H	-544
-32H	-544
-35H	-544
-36H	BPYPR -547
-38H	-547
-41H	BPYPR -544
-46H	BPYPR -547
-50H	-547
-55H	BPYPR -554
-60H	-554
-65H	-554
-70H	-554

## ABP

Applied product number	Pin/ring set product number
ABP6 -17Y	BPYPR -435
-19Y	-435
-20Y	-435
-21Y	-435
ABP8 -17Y	BPYPR -544
-19Y	-544
-20Y	-544
-21Y	-544

## PBA

Applied product number	Pin/ring set product number
PBA2030	BPYPR-219
PBA3020	BPYPR-324A
PBA3040	-324A
PBA4030	BPYPR-434
PBA4030-150	BPYPR-435
PBA4050	BPYPR-434
PBA5040	BPYPR-544
PBA5040-150	-544

## PBE

Applied product number	Pin/ring set product number
PBE20 -75	BPYPR -219
-100	-219
PBE30 -75	BPYPR -324B
-100	-324B
-150	-324B
PBE40 -100	BPYPR -435
-150	-435
-250	-435
PBE50 -150	BPYPR -544
-200	-544
-250	-544

## PBJ

Applied product number	Pin/ring set product number
PBJ30	BPYPR-324B
PBJ40	BPYPR-435
PBJ31L-17H	BPYPR-324B
-19H	-324B
-24H	-324B

## PHB

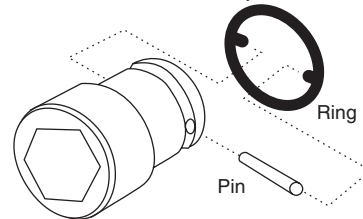
Applied product number	Pin/ring set product number
PHB20-4	BPYPR-214
-5	-214
-6	-214
-8	-214
-10	BPYPR-219
-12	-219
PHB30-6	BPYPR-322
-8	-322
-10	-322
-12	-322
-14	-322
-17	-322

## S6

Applied product number	Pin/ring set product number
S6T20	BPYPR-214
S6T25	-214
S6T30	-214
S6T40	-214
S6T45	-214

### Attaching the pin/ring

The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.



Sockets for impact wrenches



### CAUTION

• Never use pieces inappropriately as this is dangerous.

<Front>

Fit one side only

<Side>

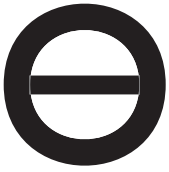
① Insert one side of the protruding section within the inner side of the ring into the pin hole of the socket.

② Set the socket to the impact wrench and insert the pin into the pin hole.

③ Insert the other side of the protruding section within the inner side of the ring and firmly set the whole ring into the ring-groove.

Impact socket pin/rubber ring size checker

**BPYPR-214**



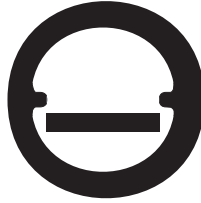
Pin :  $\varnothing 2.5 \times 14.6$   
Ring inner diameter :  $\varnothing 14.45$

**BPYPR-215**



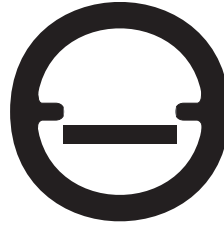
Pin :  $\varnothing 2.5 \times 15$   
Ring inner diameter :  $\varnothing 15.2$

**BPYPR-219**



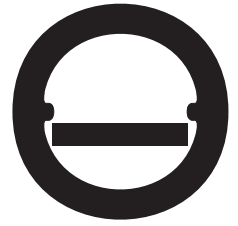
Pin :  $\varnothing 2.5 \times 15$   
Ring inner diameter :  $\varnothing 19.1$

**BPYPR-222**



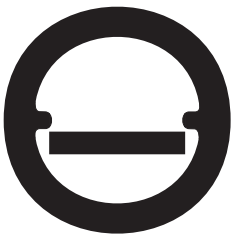
Pin :  $\varnothing 2.5 \times 15$   
Ring inner diameter :  $\varnothing 22.05$

**BPYPR-321**



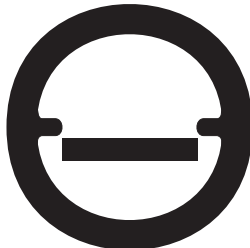
Pin :  $\varnothing 3 \times 18$   
Ring inner diameter :  $\varnothing 20.6$

**BPYPR-322**



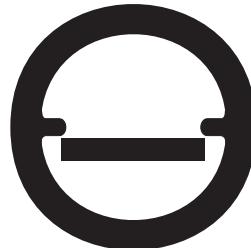
Pin :  $\varnothing 3 \times 18$   
Ring inner diameter :  $\varnothing 22.05$

**BPYPR-324A**



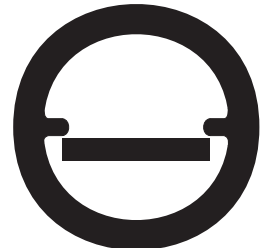
Pin :  $\varnothing 3 \times 18$   
Ring inner diameter :  $\varnothing 24.2$

**BPYPR-324B**



Pin :  $\varnothing 3 \times 19$   
Ring inner diameter :  $\varnothing 24.2$

**BPYPR-324C**



Pin :  $\varnothing 3 \times 19.5$   
Ring inner diameter :  $\varnothing 24.2$

**BPYPR-444**



Pin :  $\varnothing 4 \times 32.5$   
Ring inner diameter :  $\varnothing 43.9$

**BPYPR-435**



Pin :  $\varnothing 4 \times 25.5$   
Ring inner diameter :  $\varnothing 35.2$

**BPYPR-544**



Pin :  $\varnothing 5 \times 32$   
Ring inner diameter :  $\varnothing 43.9$

**BPYPR-433**



Pin :  $\varnothing 4 \times 25.5$   
Ring inner diameter :  $\varnothing 33.2$

**BPYPR-434**



Pin :  $\varnothing 4 \times 25.5$   
Ring inner diameter :  $\varnothing 34.2$

**BPYPR-547**



Pin :  $\varnothing 5 \times 32$   
Ring inner diameter :  $\varnothing 47.4$

**BPYPR-442**




Pin :  $\varnothing 4 \times 25.5$   
Ring inner diameter :  $\varnothing 41.5$

**BPYPR-554**



Pin :  $\varnothing 5 \times 38$   
Ring inner diameter :  $\varnothing 54.2$

\*There is no protruding section on the ring on the BPYPR-214 and 215.

\*Please check the merchandise inventory for a product that is marked by  before placing an order.

# HEXAGONAL WRENCHES

1/4" sq.



### CAUTION

#### HEXAGONAL WRENCH SETS

- READ THE CAUTION MESSAGE CAREFULLY FOR EACH TOOL.
- LOCK THE STOPPER SECURELY WHEN CARRYING.

#### HEXAGONAL WRENCHES

- USE A WRENCH APPROPRIATE TO THE SIZE OF A BOLT.
- INSERT A WRENCH DEEPLY INTO A BOLT.
- INSERT THE SQUARE DRIVE OF A DRIVE TOOL DEEPLY TO THE END.
- DO NOT GIVE ANY IMPACT BY HITTING WITH HAMMERS, ETC.
- DO NOT APPLY ANY POWER TOOL SUCH AS IMPACT WRENCH

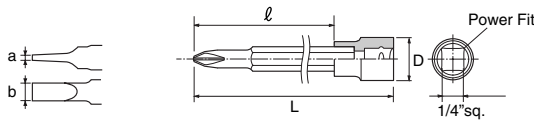
#### CROSS · FLAT BIT SOCKET

No.	Number	D	L	ℓ	▼g	⊞
BT2-1P	No.1	16	54.5	32	36	10
-2P	No.2	16	59.5	37	38	10

No.	a	b	D	L	ℓ	▼g	⊞
BT2-6M	1.0	6	16	59.5	37	38	10

• Bit replacement is possible. (Refer to P.105)

POWERFIT



#### ● 1/4"sq. CROSS · FLAT BIT SOCKET



#### HEX. BIT SOCKET

mm

No.	S	D	L	ℓ	▼g	⊞
BT2-03	3	16	54.5	32	36	10
-04	4	16	54.5	32	36	10
-05	5	16	59.5	37	39	10
-06	6	16	59.5	37	39	10

POWERFIT

#### HEX. BIT SOCKET

in

No.	S	D	L	ℓ	▼g	⊞
BT2-1/8	3.1	16	54.5	32	36	10
-9/64	3.5	16	54.5	32	36	10
-5/32	3.9	16	54.5	32	36	10
-3/16	4.7	16	54.5	32	36	10
-7/32	5.5	16	59.5	37	39	10
-1/4	6.3	16	59.5	37	39	10

• Bit replacement is possible. (Refer to P.105)

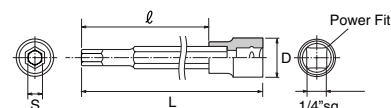
POWERFIT

#### HEX. BIT SOCKET SET (5pcs.) · (6pcs.)

mm · in

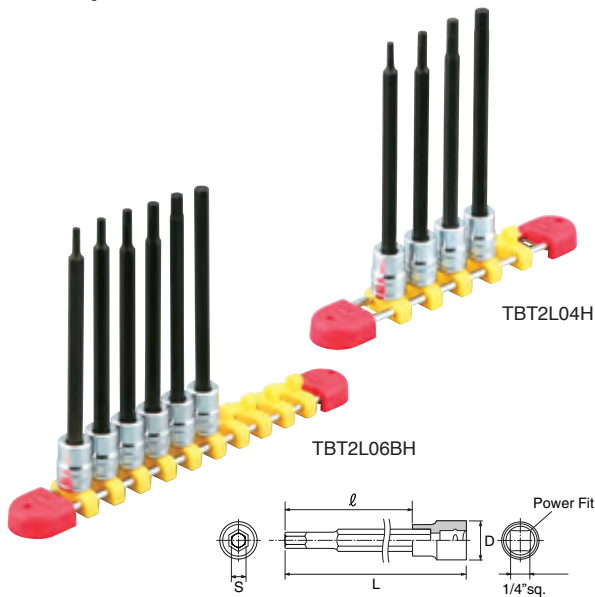
No. TBT205H	▼g 245	⊞ 1
Hexagon bit socket (1/4"sq.)	mm	BT2-03, 04, 05, 06
Cross bit socket (1/4"sq.)		BT2-2P
Socket holder		EHB205
No. TBT206BH	▼g 280	⊞ 1
Hexagon bit socket (1/4"sq.)	in	BT2-1/8, 9/64, 5/32, 3/16, 7/32, 1/4
Socket holder		EHB210

#### ● 1/4"sq. HEX. BIT SOCKET



\*Please check the merchandise inventory for a product that is marked by before placing an order.

● 1/4"sq. LONG HEX. BIT SOCKET



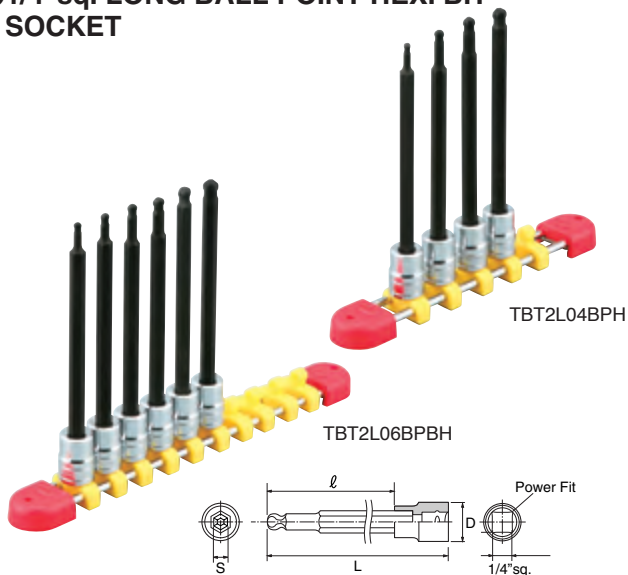
LONG HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▽g	☞	
BT2-03L	3	16	121.5	99	54	10	
-04L	4	16	121.5	99	54	10	
-05L	5	16	121.5	99	55	10	
-06L	6	16	121.5	99	56	10	

LONG HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▽g	☞	
BT2-1/8 L	3.1	16	121.5	99	54	10	
-9/64 L	3.5	16	121.5	99	54	10	
-5/32 L	3.9	16	121.5	99	54	10	
-3/16 L	4.7	16	121.5	99	55	10	
-7/32 L	5.5	16	121.5	99	56	10	
-1/4 L	6.3	16	121.5	99	56	10	

• Bit replacement is possible. (Refer to P.105)

LONG HEX. BIT SOCKET SET (4pcs.) - (6pcs.)			mm · in
<b>No. TBT2L04H</b>	▽g 275	☞ 1	
Long hexagon bit socket (1/4"sq.)	mm	BT2-03L,04L,05L,06L	
Socket holder		EHB205	
<b>No. TBT2L06BH</b>	▽g 390	☞ 1	
Long hexagon bit socket (1/4"sq.)	in	BT2-1/8L, 9/64L, 5/32L, 3/16L, 7/32L, 1/4L	
Socket holder		EHB210	

● 1/4"sq. LONG BALL POINT HEX. BIT SOCKET



LONG BALL POINT HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▽g	☞	
BT2-03BPL	3	16	121.5	99	54	10	
-04BPL	4	16	121.5	99	54	10	
-05BPL	5	16	121.5	99	55	10	
-06BPL	6	16	121.5	99	56	10	

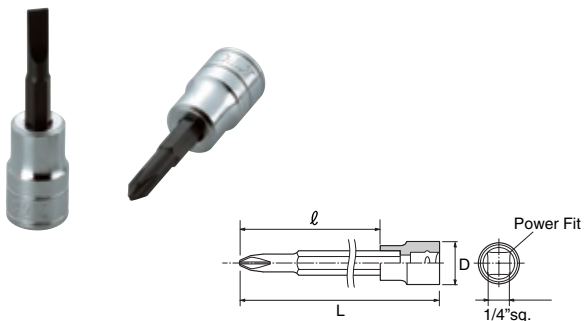
LONG BALL POINT HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▽g	☞	
BT2-1/8 BPL	3.1	16	121.5	99	54	10	
-9/64 BPL	3.5	16	121.5	99	54	10	
-5/32 BPL	3.9	16	121.5	99	54	10	
-3/16 BPL	4.7	16	121.5	99	55	10	
-7/32 BPL	5.5	16	121.5	99	56	10	
-1/4 BPL	6.3	16	121.5	99	56	10	

• Bit replacement is possible. (Refer to P.105)

LONG BALL POINT HEX. BIT SOCKET SET (4pcs.) - (6pcs.)			mm · in
<b>No. TBT2L04BPH</b>	▽g 275	☞ 1	
Long ball point hexagon bit socket (1/4"sq.)	mm	BT2-03BPL,04BPL,05BPL,06BPL	
Socket holder		EHB205	
<b>No. TBT2L06BPH</b>	▽g 390	☞ 1	
Long ball point hexagon bit socket (1/4"sq.)	in	BT2-1/8BPL, 9/64 BPL, 5/32 BPL, 3/16 BPL, 7/32 BPL, 1/4 BPL	
Socket holder		EHB210	

⚠ CAUTION\* Care should be taken not to force this piece as the torque limit of the ball point is low.

● 3/8"sq. CROSS · FLAT BIT SOCKET



CROSS · FLAT BIT SOCKET						
No.	Number	D	L	ℓ	▽g	☞
BT3 -1P	No.1	17	61	32	43	10
-2P	No.2	17	66	37	45	10
-3P	No.3	18.5	71	42	63	10

No.	a	b	D	L	ℓ	▽g	☞
BT3-6M	1.0	6	17	66	37	45	10

• Bit replacement is possible. (Refer to P.105)



**SHORT HEX. BIT SOCKET** mm

No.	S	D	L	ℓ	▼g	📦
BT3-03SS	3	17	34	5	36	1
-04SS	4	17	34	5	36	1
-05SS	5	17	34	5	37	1
-06SS	6	17	35.5	6.5	37	1
-07SS	7	18.5	36	7	49	1
-08SS	8	18.5	37	8	49	1
-09SS	9	18.5	39.5	9.5	55	1
-10SS	10	18.5	39.5	9.5	56	1
-12SS	12	22	42	10	87	1

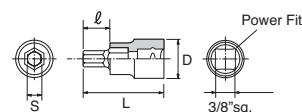
**SHORT HEX. BIT SOCKET SET (9pcs.)** mm

No. TBT3SS09H	▼g 562	📦 1
Stubby hexagon bitsocket (3/8"sq.) mm	BT3-03SS, 04SS, 05SS, 06SS, 07SS, 08SS, 09SS, 10SS, 12SS	
Socket holder	EHB310	

• Bit replacement is possible. (Refer to P.105)



●3/8"sq. SHORT HEX. BIT SOCKET SET (9pcs.)



**SHORT HEX. BIT SOCKET** mm

No.	S	D	L	ℓ	▼g	📦
BT3-03S	3	17	48	19	40	10
-04S	4	17	48	19	40	10
-05S	5	17	50	21	41	10
-06S	6	17	50	21	42	10
-07S	7	18.5	50	21	56	10
-08S	8	18.5	50	21	56	10
-09S	9	18.5	52	22	62	10
-10S	10	18.5	52	22	62	10
-12S	12	22	54	22	99	10



●3/8"sq. SHORT HEX. BIT SOCKET



**SHORT HEX. BIT SOCKET** in

No.	S	D	L	ℓ	▼g	📦
BT3-1/8 S	3.1	17	48	19	40	10
-9/64 S	3.5	17	48	19	40	10
-5/32 S	3.9	17	48	19	40	10
-3/16 S	4.7	17	48	19	40	10
-7/32 S	5.5	17	50	21	42	10
-1/4 S	6.3	17	50	21	42	10
-5/16 S	7.9	18.5	50	21	56	10
-3/8 S	9.5	18.5	52	22	62	10
-7/16 S	11.1	22	54	22	99	10

• Bit replacement is possible. (Refer to P.105)

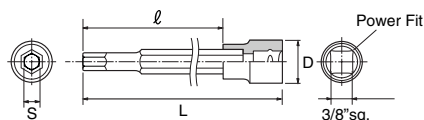


**SHORT HEX. BIT SOCKET SET (9pcs.)** mm . in

No. TBT3S09H	▼g 620	📦 1
Short hexagon bit socket (3/8"sq.) mm	BT3-03S,04S,05S,06S,07S,08S,09S,10S,12S	
Socket holder	EHB310	

**No. TBT3S09BH** ▼g 580 📦 1

Short hexagon bit socket (3/8"sq.) in	BT3-1/8S, 9/64S, 5/32S, 3/16S, 7/32S, 1/4S, 5/16S, 3/8S, 7/16S	
Socket holder	EHB310	



3/8" sq.

● 3/8"sq. HEX. BIT SOCKET SET (6pcs.) · (9pcs.) · (10pcs.)



HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▼g	☞	
BT3-03	3	17	61	32	43	10	
-04	4	17	61	32	43	10	
-05	5	17	66	37	46	10	
-06	6	17	66	37	46	10	
-07	7	18.5	71	42	65	10	
-08	8	18.5	71	42	65	10	
-09	9	18.5	73	43	76	10	
-10	10	18.5	73	43	76	10	
-12	12	22	76	44	121	10	

POWERFIT

HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▼g	☞	
BT3-1/8	3.1	17	61	32	43	10	
-9/64	3.5	17	61	32	43	10	
-5/32	3.9	17	61	32	43	10	
-3/16	4.7	17	61	32	43	10	
-7/32	5.5	17	66	37	46	10	
-1/4	6.3	17	66	37	46	10	
-5/16	7.9	18.5	71	42	65	10	
-3/8	9.5	18.5	73	43	76	10	
-7/16	11.1	22	76	44	121	10	

• Bit replacement is possible. (Refer to P.105)

POWERFIT

HEX. BIT SOCKET SET (6pcs.) · (9pcs.) · (10pcs.)			mm · in
<b>No. TBT306H</b>	▼g 405	☞ 1	
Hexagon bit socket (3/8"sq.)	mm	BT3-04,05,06,08,10	
Cross bit socket		BT3-2P	
Socket holder		EHB306	
<b>No. TBT310H</b>	▼g 745	☞ 1	
Hexagon bit socket (3/8"sq.)		BT3-03,04,05,06,07,08,09,10,12	
Cross bit socket		BT3-2P	
Socket holder		EHB310	
<b>No. TBT309BH</b>	▼g 645	☞ 1	
Hexagon bit socket (3/8"sq.)	in	BT3-1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16	
Socket holder		EHB310	

● 3/8"sq. LONG HEX. BIT SOCKET SET (9pcs.)



LONG HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▼g	☞	
BT3-03L	3	17	128	99	61	10	
-04L	4	17	128	99	61	10	
-05L	5	17	128	99	62	10	
-06L	6	17	128	99	63	10	
-07L	7	18.5	128	99	89	10	
-08L	8	18.5	128	99	89	10	
-09L	9	18.5	128	98	113	10	
-10L	10	18.5	128	98	113	10	
-12L	12	22	128	96	172	10	

POWERFIT

LONG HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▼g	☞	
BT3-1/8 L	3.1	17	128	99	61	10	
-9/64 L	3.5	17	128	99	61	10	
-5/32 L	3.9	17	128	99	61	10	
-3/16 L	4.7	17	128	99	62	10	
-7/32 L	5.5	17	128	99	63	10	
-1/4 L	6.3	17	128	99	63	10	
-5/16 L	7.9	18.5	128	99	89	10	
-3/8 L	9.5	18.5	128	98	113	10	
-7/16 L	11.1	22	128	96	172	10	

• Bit replacement is possible. (Refer to P.105)

POWERFIT

LONG HEX. BIT SOCKET SET (9pcs.)			mm · in
<b>No. TBT3L09H</b>	▼g 945	☞ 1	
Long hexagon bit socket (3/8"sq.)	mm	BT3-03L,04L,05L,06L,07L,08L,09L,10L,12L	
Socket holder		EHB310	
<b>No. TBT3L09BH</b>	▼g 865	☞ 1	
Long hexagon bit socket (3/8"sq.)	in	BT3-1/8L, 9/64L, 5/32L, 3/16L, 7/32L, 1/4L, 5/16L, 3/8L, 7/16L	
Socket holder		EHB310	

**LONG BALL POINT HEX. BIT SOCKET** mm

No.	S	D	L	ℓ	▼g	☞
BT3-03BPL	3	17	128	99	61	10
-04BPL	4	17	128	99	61	10
-05BPL	5	17	128	99	62	10
-06BPL	6	17	128	99	63	10
-07BPL	7	18.5	128	99	89	10
-08BPL	8	18.5	128	99	89	10



**LONG BALL POINT HEX. BIT SOCKET** in

No.	S	D	L	ℓ	▼g	☞
BT3-1/8 BPL	3.1	17	128	99	61	10
-9/64 BPL	3.5	17	128	99	61	10
-5/32 BPL	3.9	17	128	99	61	10
-3/16 BPL	4.7	17	128	99	62	10
-7/32 BPL	5.5	17	128	99	63	10
-1/4 BPL	6.3	17	128	99	63	10
-5/16 BPL	7.9	18.5	128	99	89	10

• Bit replacement is possible. (Refer to P.105)



**LONG BALL POINT HEX. BIT SOCKET SET (6pcs.) - (7pcs.)** mm · in

<b>No. TBT3L06BPH</b>	▼g 510	☞ 1
Long ball point hexagon bit socket (3/8"sq.) mm BT3-03BPL, 04BPL, 05BPL, 06BPL, 07BPL, 08BPL		
Socket holder EHB306		

<b>No. TBT3L07BPH</b>	▼g 580	☞ 1
Long ball point hexagon bit socket (3/8"sq.) in BT3-1/8BPL, 9/64BPL, 5/32BPL, 3/16BPL, 7/32BPL, 1/4BPL, 5/16BPL		
Socket holder EHB310		

**CAUTION** • Care should be taken not to force this piece as the torque limit of the ball point is low.

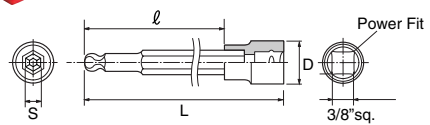
**3/8"sq. LONG BALL POINT HEX. BIT SOCKET SET (6pcs.) · (7pcs.)**



TBT3L06BPH



TBT3L07BPH



**IMPACT HEX. WRENCH SET (6pcs.)** mm

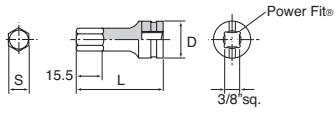
<b>No. TBTP306P</b>	▼g 340	☞ 1
Impact hex. Wrench Set (3/8"sq.) BTP3-04P, 05P, 06P, 08P, 10P, 12P		
Socket Holder EHB306		

• pins and rings are sold separately.

No.	S	D	L	▼g	☞
BTP3-04P	4	22	45	51	10
-05P	5	22	45	53	10
-06P	6	22	45	55	10
-08P	8	22	45	60	10
-10P	10	22	52	74	10
-12P	12	22	52	84	10

• Pins and rings are sold separately. Impact wrench can be used owing to the KTC's original design.

**3/8"sq. IMPACT HEX. WRENCH SET (6pcs.)**



**CROSS · FLAT BIT SOCKET**

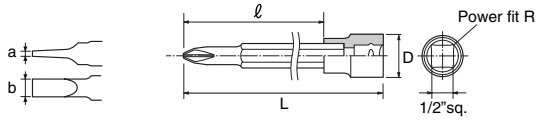
No.	Number	D	L	ℓ	▼g	☞
BT4-2P	No.2	22	70	37	73	10
-3P	No.3	22	75	42	82	10

No.	a	b	D	L	ℓ	▼g	☞
BT4-6M	1.0	6	22	70	37	73	10

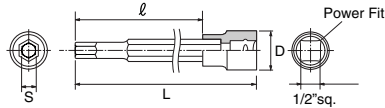
• Bit replacement is possible. (Refer to P.105)



**1/2"sq. CROSS · FLAT BIT SOCKET**



● 1/2"sq. HEX. BIT SOCKET



HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▼g	📦	
BT4-05	5	22	70	37	74	10	
-06	6	22	70	37	74	10	
-07	7	22	75	42	84	10	
-08	8	22	75	42	84	10	
-09	9	22	77	43	98	10	
-10	10	22	77	43	98	10	
-12	12	22	79	44	121	10	
-14	14	24	85	47	164	10	
-17	17	25	90	49	216	10	



HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▼g	📦	
BT4- <sup>3</sup> / <sub>16</sub>	4.7	22	65	32	71	10	
- <sup>7</sup> / <sub>32</sub>	5.5	22	70	37	74	10	
- <sup>1</sup> / <sub>4</sub>	6.3	22	70	37	74	10	
- <sup>5</sup> / <sub>16</sub>	7.9	22	75	42	84	10	
- <sup>3</sup> / <sub>8</sub>	9.5	22	76	43	98	10	
- <sup>7</sup> / <sub>16</sub>	11.1	22	80	44	121	10	
- <sup>1</sup> / <sub>2</sub>	12.7	24	85	47	164	10	
- <sup>9</sup> / <sub>16</sub>	14.2	25	90	49	216	10	
- <sup>5</sup> / <sub>8</sub>	15.8	25	90	49	216	10	

• Bit replacement is possible. (Refer to P.105)

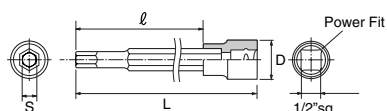


HEX. BIT SOCKET SET (7pcs.) - (9pcs.) - (10pcs.)			mm . in
No. TBT407H	▼g 765	📦 1	
Hexagon bit socket (1/2"sp.)	mm	BT4-05,06,08,10,12,14	
Cross bit socket (1/2"sp.)		BT4-2P	
Socket holder		EHB410	

No. TBT410H	▼kg 1.3	📦 1	
Hexagon bit socket (1/2"sp.)	mm	BT4-05,06,07,08,09,10,12,14,17	
Cross bit socket (1/2"sp.)		BT4-2P	
Socket holder		EHB410	

No. TBT409BH	▼kg 1.3	📦 1	
Hexagon bit socket (1/2"sp.)	in	BT4- <sup>3</sup> / <sub>16</sub> , <sup>7</sup> / <sub>32</sub> , <sup>1</sup> / <sub>4</sub> , <sup>5</sup> / <sub>16</sub> , <sup>3</sup> / <sub>8</sub> , <sup>7</sup> / <sub>16</sub> , <sup>1</sup> / <sub>2</sub> , <sup>9</sup> / <sub>16</sub> , <sup>5</sup> / <sub>8</sub>	
Socket holder		EHB410	

● 1/2"sq. LONG HEX. BIT SOCKET



LONG HEX. BIT SOCKET							mm
No.	S	D	L	ℓ	▼g	📦	
BT4-05L	5	22	132	99	90	10	
-06L	6	22	132	99	91	10	
-07L	7	22	132	99	108	10	
-08L	8	22	132	99	108	10	
-09L	9	22	132	98	135	10	
-10L	10	22	132	98	135	10	
-12L	12	22	132	96	172	10	
-14L	14	24	132	94	227	10	
-17L	17	25	132	91	298	10	



LONG HEX. BIT SOCKET							in
No.	S	D	L	ℓ	▼g	📦	
BT4- <sup>3</sup> / <sub>16</sub> L	4.7	22	132	99	90	10	
- <sup>7</sup> / <sub>32</sub> L	5.5	22	132	99	91	10	
- <sup>1</sup> / <sub>4</sub> L	6.3	22	132	99	91	10	
- <sup>5</sup> / <sub>16</sub> L	7.9	22	132	99	108	10	
- <sup>3</sup> / <sub>8</sub> L	9.5	22	132	98	135	10	
- <sup>7</sup> / <sub>16</sub> L	11.1	22	132	96	172	10	
- <sup>1</sup> / <sub>2</sub> L	12.7	24	132	94	227	10	
- <sup>9</sup> / <sub>16</sub> L	14.2	25	132	91	298	10	
- <sup>5</sup> / <sub>8</sub> L	15.8	25	132	91	298	10	

• Bit replacement is possible. (Refer to P.105)



LONG HEX. BIT SOCKET SET (9pcs.)			mm . in
No. TBT4L09H	▼kg 1.5	📦 1	
Long hexagon bit socket (1/2"sp.)		BT4-05L,06L,07L,08L,09L,10L,12L,14L,17L	
Socket holder		EHB410	

No. TBT4L09BH	▼kg 1.7	📦 1	
Long hexagon bit socket (1/2"sp.)	in	BT4- <sup>3</sup> / <sub>16</sub> L, <sup>7</sup> / <sub>32</sub> L, <sup>1</sup> / <sub>4</sub> L, <sup>5</sup> / <sub>16</sub> L, <sup>3</sup> / <sub>8</sub> L, <sup>7</sup> / <sub>16</sub> L, <sup>1</sup> / <sub>2</sub> L, <sup>9</sup> / <sub>16</sub> L, <sup>5</sup> / <sub>8</sub> L	
Socket holder		EHB410	

**LONG BALL POINT HEX. BIT SOCKET** mm

No.	S	D	L	ℓ	▼g	📦
BT4-05BPL	5	22	132	99	90	10
-06BPL	6	22	132	99	91	10
-07BPL	7	22	132	99	108	10
-08BPL	8	22	132	99	108	10



**LONG BALL POINT HEX. BIT SOCKET** in

No.	S	D	L	ℓ	▼g	📦
BT4- <sup>3</sup> / <sub>16</sub> BPL	4.7	22	132	99	90	10
- <sup>7</sup> / <sub>32</sub> BPL	5.5	22	132	99	91	10
- <sup>1</sup> / <sub>4</sub> BPL	6.3	22	132	99	91	10
- <sup>5</sup> / <sub>16</sub> BPL	7.9	22	132	99	108	10

\* Bit replacement is possible. (Refer to P.105)



**LONG BALL POINT HEX. BIT SOCKET SET** mm · in

No. TBT4L04BPH	▼g 520	📦 1
----------------	--------	-----

Long ball point hexagon bit socket (1/2"sp.) mm BT4-05BPL,06BPL,07BPL,08BPL

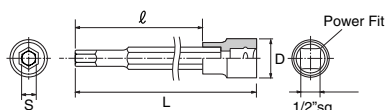
Socket holder EHB405

No. TBT4L04BPBH	▼g 500	📦 1
-----------------	--------	-----

Long ball point hexagon bit socket (1/2"sp.) in BT4-<sup>3</sup>/<sub>16</sub> BPL,<sup>7</sup>/<sub>32</sub> BPL,<sup>1</sup>/<sub>4</sub> BPL,<sup>5</sup>/<sub>16</sub> BPL

Socket holder EHB405

**CAUTION** • Care should be taken not to force this piece as the torque limit of the ball point is low.



● 1/2"sq. LONG BALL POINT HEX. BIT SOCKET



TBT4L04BPH



TBT4L04BPBH

**HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH SET (8pcs.) · (9pcs.)** mm

No. HLD1009	▼g 260	📦 5
-------------	--------	-----

High Grade L-Shaped Standard Hex-key Wrench HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10

No. HLD1008	▼g 150	📦 5
-------------	--------	-----

High Grade L-Shaped Standard Hex-key Wrench HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8

Common Items

Holder

- High grade hard chrome plating for better feeling, appearance and rust-resistance
- Made of special alloy steel for better wear-resistance & torque strength.
- Can apply high torque due to balanced hardness and flexibility processed by "state of the art" heat-treatment technique.
- With original holder for carrying and tool management.
- The holder is provided as a replaceable part. Check with your dealer for details.

● HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH SET (8 · 9pcs.)



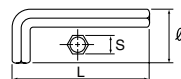
HLD1009

**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

**HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH** mm

No.	S	L	ℓ	▼g	📦
HLD100- 1.5	1.5	53	13	1	10
- 2	2	60	14	1	10
- 2.5	2.5	62	17	3	10
- 3	3	68	23	5	10
- 4	4	76	29	10	10
- 5	5	85	33	17	10
- 6	6	96	38	30	10
- 8	8	110	44	60	10
-10	10	120	50	105	10
-12	12	135	57	170	10
-14	14	155	69	270	10

● HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH



**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

**HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH SET (8pcs.) · (9pcs.)** mm

No. HLD1509	▼g 450	📦 5
-------------	--------	-----

High Grade L-Shaped Long Hex-key Wrench HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10

No. HLD1508	▼g 245	📦 5
-------------	--------	-----

High Grade L-Shaped Long Hex-key Wrench HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8

Common Items

Holder

- High grade hard chrome plating for better feeling, appearance and rust-resistance
- Made of special alloy steel for better wear-resistance & torque strength.
- Can apply high torque due to balanced hardness and flexibility processed by "state of the art" heat-treatment technique.
- With original holder for carrying and tool management.

\* The holder is provided as a replaceable part. Check with your dealer for details.

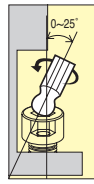
● HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH SET (8 · 9pcs.)



HLD1509

**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

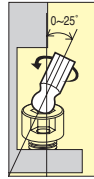
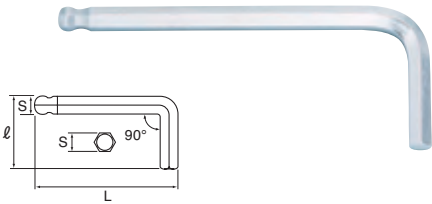
**● HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)**



HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)			mm
No. HLD2009	▼g 250	📦 5	
High Grade L-Shaped Standard Hex-key Wrench HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 Holder			

- Made of special alloy steel for better wear-resistance & torque strength.
  - With original holder for carrying and tool management.
  - The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
  - The holder is provided as a replaceable part. Check with your dealer for details.
- ⚠ CAUTION** - Care should be taken not to force this piece as the torque limit of the ball point is low.
- Oscillation angle of ball point depends on the size of bolts
  - Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

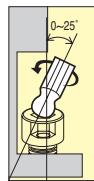
**● HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH**



HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH						mm
No.	S	L	ℓ	▼g	📦	
HLD200- 1.5	1.5	53.5	13.5	1	10	
- 2	2	60	14	1	10	
- 2.5	2.5	62.5	17.5	3	10	
- 3	3	68	23	5	10	
- 4	4	76	29	8	10	
- 5	5	85	33	18	10	
- 6	6	96	38	30	10	
- 8	8	108	44	60	10	
-10	10	122	50	100	10	

- ⚠ CAUTION** - Care should be taken not to force this piece as the torque limit of the ball point is low.
- Oscillation angle of ball point depends on the size of bolts
  - Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

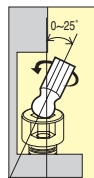
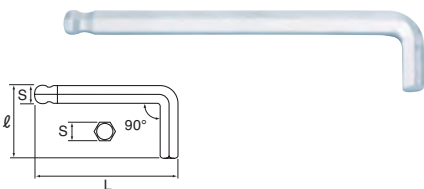
**● HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)**



HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)			mm
No. HLDS2009	▼g 220	📦 5	
High Grade L-Shaped Standard Hex-key Wrench HLDS200-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10 Holder			

- Made of special alloy steel for better wear-resistance & torque strength.
  - With original holder for carrying and tool management.
  - The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
  - The holder is provided as a replaceable part. Check with your dealer for details.
- ⚠ CAUTION** - Care should be taken not to force this piece as the torque limit of the ball point is low.
- Oscillation angle of ball point depends on the size of bolts
  - Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

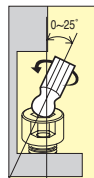
**● HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH**



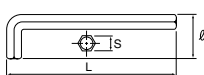
HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH						mm
No.	S	L	ℓ	▼g	📦	
HLDS200- 1.5	1.5	53.5	7.5	1	10	
- 2	2	60	9	1	10	
- 2.5	2.5	62.5	10.5	2.5	10	
- 3	3	68	12	4	10	
- 4	4	76	15	7	10	
- 5	5	85	17	16	10	
- 6	6	96	20	25	10	
- 8	8	108	24	55	10	
-10	10	122	29	95	10	

- ⚠ CAUTION** - Care should be taken not to force this piece as the torque limit of the ball point is low.
- Oscillation angle of ball point depends on the size of bolts
  - Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

**● HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH**

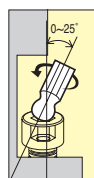


- ⚠ CAUTION**
- APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH						mm
No.	S	L	ℓ	▼g	📦	
HLD150- 1.5	1.5	81	17	1	10	
- 2	2	97	19	3	10	
- 2.5	2.5	115	20	5	10	
- 3	3	130	23	8	10	
- 4	4	145	29	18	10	
- 5	5	165	33	30	10	
- 6	6	185	38	50	10	
- 8	8	210	44	105	10	
-10	10	235	50	185	10	
-12	12	260	57	290	10	
-14	14	295	69	460	10	

**● HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (8 · 9pcs.)**



HLD2509

HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (8pcs.) · (9pcs.)		
No. HLD2509	▼g 445	📦 5
Hexagon Wrench HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10		
No. HLD2508	▼g 245	📦 5
Hexagon Wrench HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8		
[Common Items]		
Holder		

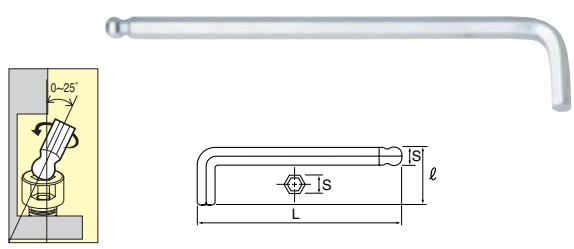
- Made of special alloy steel for better wear-resistance & torque strength.
  - With original holder for carrying and tool management.
- ⚠ CAUTION** - DO NOT EXTEND WITH PIPES, ETC.
- DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

**HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH** mm

No.	S	L	ℓ	▽g	📦
HLD250-1.5	1.5	81	18	1	10
- 2	2	97	19	3	10
- 2.5	2.5	113	21	5	10
- 3	3	130	23	8	10
- 4	4	145	29	17	10
- 5	5	165	33	30	10
- 6	6	185	38	50	10
- 8	8	210	44	105	10
-10	10	235	50	180	10

• The hexagon ends fit into hexagon bolts more tightly for less wear & tear.  
**CAUTION** • DO NOT EXTEND WITH PIPES, ETC.  
 • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

**●HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH**



**HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH . SET(9pcs.)** in

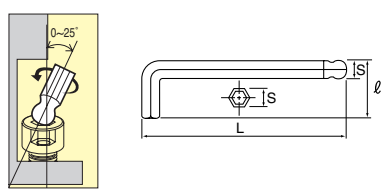
No.	▽g 400	📦 10
Hexagon Wrench in	HLD250- <sup>1</sup> / <sub>16</sub> , <sup>5</sup> / <sub>64</sub> , <sup>3</sup> / <sub>32</sub> , <sup>1</sup> / <sub>8</sub> , <sup>5</sup> / <sub>32</sub> , <sup>3</sup> / <sub>16</sub> , <sup>1</sup> / <sub>4</sub> , <sup>5</sup> / <sub>16</sub> , <sup>3</sup> / <sub>8</sub>	

Holder

No.	S	L	ℓ	▽g	📦
HLD250- <sup>1</sup> / <sub>16</sub>	1.5	81	17	1	10
- <sup>5</sup> / <sub>64</sub>	1.9	95	19	3	10
- <sup>3</sup> / <sub>32</sub>	2.3	110	20	5	10
- <sup>7</sup> / <sub>64</sub>	2.7	119	21	7	10
- <sup>1</sup> / <sub>8</sub>	3.1	129	23	8	10
- <sup>9</sup> / <sub>64</sub>	3.5	134	27	15	10
- <sup>5</sup> / <sub>32</sub>	3.9	144	29	17	10
- <sup>3</sup> / <sub>16</sub>	4.7	163	33	30	10
- <sup>7</sup> / <sub>32</sub>	5.5	174	36	40	10
- <sup>1</sup> / <sub>4</sub>	6.3	184	38	50	10
- <sup>5</sup> / <sub>16</sub>	7.9	206	44	105	10
- <sup>3</sup> / <sub>8</sub>	9.5	232	50	180	10

• The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined spaces.  
 • The tool with a new and unique design that can be employed for the tightening process.  
 • Anti-wear and warping characteristics have been improved through employing a special steel alloy.  
 • The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.  
**CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

**●HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH. SET (9pcs.)**



**HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)**

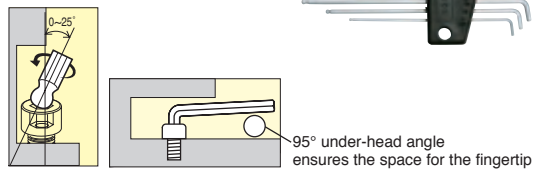
No.	▽g 400	📦 5
High Grade L-Shaped	HLDS250-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10	
Long Ball Point Hex-Key Wrench Set		

Holder

- New original design that can be used in final tightening. Wear resistance and twist strength have been improved with the adoption of special steel alloy.
- Original plastic holder that's convenient in carrying and tool management.
- Abrasion and deformation are reduced with the design that enlarged the contact surface for the hex. on the tip to fit on the hex. hole of the bolt perfectly.
- With about 1/2 the under-neck length of conventional products, it is effective for work in narrow spaces.
- Bending angle of the under-neck part is set at 95°, ensuring the space for the fingertip.
- \* Holder is configured as a spare part. Please contact your dealer for details.

**CAUTION** • Since the ball point has a low torque limit, please be careful not to apply too much force.  
 • Swing angle of the ball point will vary depending on the variation in the size and bolt.  
 • Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

**●HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)**

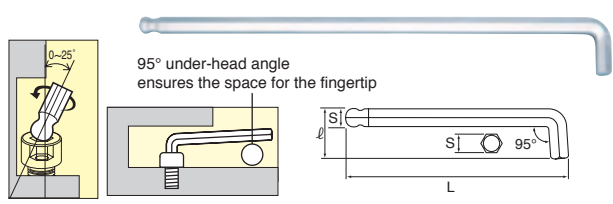


**HIGH GRADE L-SHAPED BALL POINT HEX-KEY WRENCH**

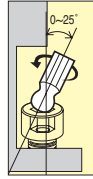
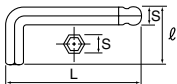
No.	S	L	ℓ	▽g	📦
HLDS250-1.5	1.5	80.5	5.5	1	10
HLDS250-2	2	97	7	2.5	10
HLDS250-2.5	2.5	112.5	8.5	4	10
HLDS250-3	3	129	11	7	10
HLDS250-4	4	146	13	15	10
HLDS250-5	5	165	16	28	10
HLDS250-6	6	186	19	45	10
HLDS250-8	8	208	24	100	10
HLDS250-10	10	230	28	165	10

**CAUTION** • Since the ball point has a low torque limit, please be careful not to apply too much force.  
 • Swing angle of the ball point will vary depending on the variation in the size and bolt.  
 • Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

**●HIGH GRADE L-SHAPED BALL POINT HEX-KEY WRENCH**



● HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH. SET (9pcs.)

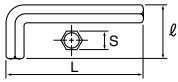


HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH . SET (9pcs.)						in
No. HLD2009B	▼g 235	📦 10				
L-Shaped Ball Point Hex-Key Wrench	in	HLD200-1/16, 5/64, 3/32, 1/8, 5/32, 3/16, 1/4, 5/16, 3/8				
Holder						
No.	S	L	ℓ	▼g	📦	
HLD200-1/16	1.5	48	15	1	10	
-5/64	1.9	52	16	1	10	
-3/32	2.3	58	19	1	10	
-7/64	2.7	61	21	3	10	
-1/8	3.1	63	23	3	10	
-9/64	3.5	69	26	5	10	
-5/32	3.9	72	28	10	10	
-3/16	4.7	80	30	15	10	
-7/32	5.5	87	33	20	10	
-1/4	6.3	94	36	30	10	
-5/16	7.9	106	42	60	10	
-3/8	9.5	120	47	105	10	

- The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined spaces.
- The tool with a new and unique design that can be employed for the tightening process.
- Anti-wear and warping characteristics have been improved through employing a special steel alloy.
- The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.

⚠️ CAUTION - DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

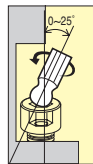
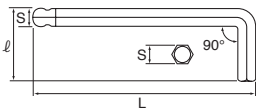
● L-SHAPED HEX-KEY WRENCH SET (7pcs.)



L-SHAPED HEX-KEY WRENCH SET (7pcs.)			mm
No. HL107	▼g 250	📦 10	
L-Shaped Hex-key Wrench	2.5, 3, 4, 5, 6, 8, 10		
Holder			
• These products are not sold individually.			
S	L	ℓ	
2.5	57	20	
3	65	23	
4	77	27	
5	83	32	
6	95	38	
8	100	42	
10	122	50	

⚠️ CAUTION - APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

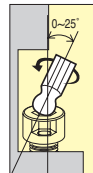
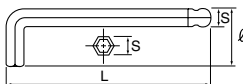
● L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)



L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)			
No. HL259BSP	▼g 420	📦 10	
L-Shaped Long Ball Point Hex-Key Wrench	1/16, 5/64, 3/32, 1/8, 5/32, 3/16, 1/4, 5/16, 3/8		
Holder			
• It is convenient in detaching bolts with hexagonal hole in deep places.			
• It can be turned diagonally.			
* This product is not sold in the single wrench unit.			
S (in)	L	ℓ	
1/16	92	16	
5/64	102	18	
3/32	115	21	
1/8	130	24	
5/32	144	29	
3/16	165	33	
1/4	187	39	
5/16	208	44	
3/8	234	50	

- Since the ball point has a low torque limit, please be careful not to apply too much force.
- Swing angle of the ball point will vary depending on the variation in the size and bolt.
- Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

● L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)



L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)				mm
No. HL259SP	▼g 420	📦 10		
L-Shaped Long ball point Hex-key Wrench Set (9pcs.)	1.5, 2, 2.5, 3, 4, 5, 6, 8, 10			
Holder				
S	L	ℓ		
1.5	92	16		
2	105	17		
2.5	115	20		
3	128	22		
4	142	26		
5	165	31		
6	188	37		
8	205	45		
10	230	50		

- Convenient for attaching and removing hexagon hole bolts in hard to reach areas.
  - Diagonal rotating-operation is possible.
  - These products are not sold individually.
- ⚠️ CAUTION - DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.
- APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

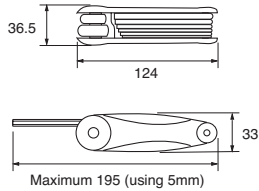


**FOLDING HEX-KEY WRENCH** mm

No. HLH8	▽g 220	5
Size	1.5, 2, 2.5, 3, 4, 5, 6, 8	

- For 1.5~8mm sizes.
- Plastic body which is light and helps your grasp.
- Replaceable parts are provided. Check with your dealer for details.

**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



● **FOLDING HEX-KEY WRENCH**

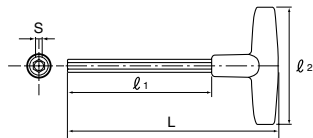


**T-SHAPED HEX. WRENCH** mm

No.	S	L	l <sub>1</sub>	l <sub>2</sub>	▽g	5
HT10- 2.5	2.5	150	105	86	22	10
- 3	3	150	105	86	25	10
- 4	4	190	135	105	40	10
- 5	5	190	135	105	50	10
- 6	6	230	165	130	80	10
- 8	8	230	165	130	115	10
-10	10	230	165	130	170	10

- For use on hexagon bolts in confined spaces.
- Suitable for quick turning.

**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



● **T-SHAPED HEX. WRENCH**

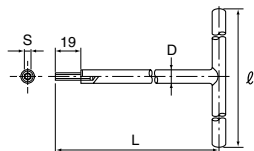


**T-SHAPED HEX. WRENCH** mm

No.	S	l	L	D	▽g	5
HTH-4	4	130	225	9	160	10
-5	5	160	230	11	265	10
-6	6	180	230	11	280	10
-8	8	180	235	13	395	10

- For use on hexagon bolts in confined spaces.
- Suitable for quick turning.

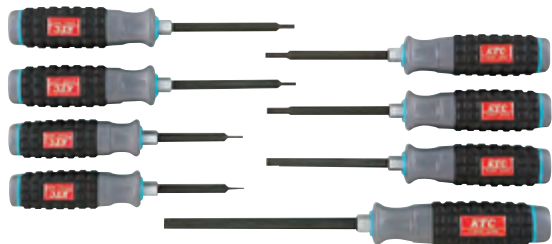
**CAUTION** • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



● **T-SHAPED HEX. WRENCH**



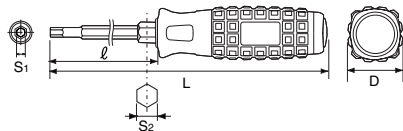
● PLASTIC GRIP HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D PAT.



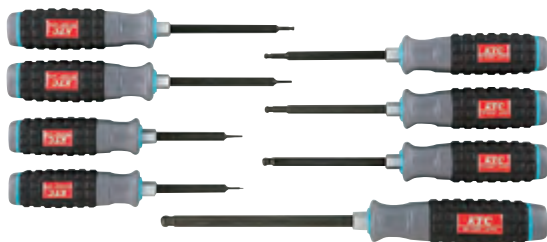
TD1H8



• The size is displayed on the grip end.



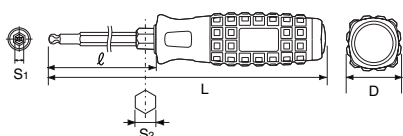
● PLASTIC GRIP BALL POINT HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D. PAT.



TD1HBP8



• The size is displayed on the grip end.



PLASTIC GRIP HEX. DRIVER SET			mm · in
<b>No. TD1H5</b>	▼g 650	1	
Plastic Grip Hex. Driver Set (5pcs.)		D1H-025, 03, 04, 05, 06	
<b>No. TD1H8</b>	▼kg 1.1	1	
Plastic Grip Hex. Driver Set (8pcs.)		D1H-015,02,025,03,04,05,06,08	
<b>No. TD1H10B</b>	▼kg 1.3	1	
Plastic Grip Hex. Driver Set (10pcs.) in		D1H- $\frac{1}{16}$ , $\frac{5}{64}$ , $\frac{3}{32}$ , $\frac{1}{8}$ , $\frac{9}{64}$ , $\frac{5}{32}$ , $\frac{3}{16}$ , $\frac{7}{32}$ , $\frac{1}{4}$ , $\frac{5}{16}$	

PLASTIC GRIP HEX. DRIVER								mm
No.	S <sub>1</sub>	S <sub>2</sub>	D	L	ℓ	▼g		
D1H-015	1.5	10	29.6	172	75	100	5	
-02	2	10	29.6	172	75	100	5	
-025	2.5	10	32	209	100	130	5	
-03	3	10	32	209	100	130	5	
-04	4	10	32	209	100	130	5	
-05	5	10	32	209	100	130	5	
-06	6	10	32	209	100	130	5	
-08	8	12	33.8	282	150	190	5	

PLASTIC GRIP HEX. DRIVER								in
No.	S <sub>1</sub>	S <sub>2</sub>	D	L	ℓ	▼g		
D1H- $\frac{1}{16}$	1.5	10	29.6	172	75	100	5	
- $\frac{5}{64}$	1.9	10	29.6	172	75	100	5	
- $\frac{3}{32}$	2.3	10	32	209	100	130	5	
- $\frac{1}{8}$	3.1	10	32	209	100	130	5	
- $\frac{9}{64}$	3.5	10	32	209	100	130	5	
- $\frac{5}{32}$	3.9	10	32	209	100	130	5	
- $\frac{3}{16}$	4.7	10	32	209	100	130	5	
- $\frac{7}{32}$	5.5	10	32	209	100	130	5	
- $\frac{1}{4}$	6.3	10	32	209	100	130	5	
- $\frac{5}{16}$	7.9	12	33.8	282	150	190	5	

PLASTIC GRIP BALL POINT HEX. DRIVER SET			mm · in
<b>No. TD1HBP5</b>	▼g 650	1	
Plastic Grip Ball Point Hex. Driver Set (5pcs.)		D1H-025BP,03BP,04BP,05BP,06BP	
<b>No. TD1HBP8</b>	▼kg 1.1	1	
Plastic Grip Ball Point Hex. Driver Set (8pcs.)		D1H-015BP, 02BP, 025BP, 03BP, 04BP, 05BP, 06BP, 08BP	
<b>No. TD1HBP10B</b>	▼kg 1.3	1	
Plastic Grip Ball Point Hex. Driver Set (10pcs.) in		D1H- $\frac{1}{16}$ BP, $\frac{5}{64}$ BP, $\frac{3}{32}$ BP, $\frac{1}{8}$ BP, $\frac{9}{64}$ BP, $\frac{5}{32}$ BP, $\frac{3}{16}$ BP, $\frac{7}{32}$ BP, $\frac{1}{4}$ BP, $\frac{5}{16}$ BP	

PLASTIC GRIP BALL POINT HEX. DRIVER								mm
No.	S <sub>1</sub>	S <sub>2</sub>	D	L	ℓ	▼g		
D1H-015BP	1.5	10	29.6	172	75	100	5	
-02BP	2	10	29.6	172	75	100	5	
-025BP	2.5	10	32	209	100	130	5	
-03BP	3	10	32	209	100	130	5	
-04BP	4	10	32	209	100	130	5	
-05BP	5	10	32	209	100	130	5	
-06BP	6	10	32	209	100	130	5	
-08BP	8	12	33.8	282	150	190	5	

PLASTIC GRIP BALL POINT HEX. DRIVER								in
No.	S <sub>1</sub>	S <sub>2</sub>	D	L	ℓ	▼g		
D1H- $\frac{1}{16}$ BP	1.5	10	29.6	172	75	100	5	
- $\frac{5}{64}$ BP	1.9	10	29.6	172	75	100	5	
- $\frac{3}{32}$ BP	2.3	10	32	209	100	130	5	
- $\frac{1}{8}$ BP	3.1	10	32	209	100	130	5	
- $\frac{9}{64}$ BP	3.5	10	32	209	100	130	5	
- $\frac{5}{32}$ BP	3.9	10	32	209	100	130	5	
- $\frac{3}{16}$ BP	4.7	10	32	209	100	130	5	
- $\frac{7}{32}$ BP	5.5	10	32	209	100	130	5	
- $\frac{1}{4}$ BP	6.3	10	32	209	100	130	5	
- $\frac{5}{16}$ BP	7.9	12	33.8	282	150	190	5	

\*Please check the merchandise inventory for a product that is marked by before placing an order.



# 2. CONVENTIONAL TOOLS

## TORX® WRENCHES



TORX® is a registered trademark for the Textron Fastening Systems.



### CAUTION

#### TORX® wrench sets

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.

#### TORX® wrenches

- Use wrenches that conform to the size of the tip standards.
- Do not use by adding on pipes, etc.
- Make sure that the bolt is fully inserted.
- Do not expose this tool to impact by hitting it with a hammer, etc.
- Fully insert the angle drive.

- Do not use with power tools, such as impact wrenches, etc.
- Do not twist using the tip.
- Take care to avoid over-applying force for the smaller sizes.
- Do not drop or expose to strong impact.

### The TORX® Standards

The TORX® standards were developed by the American firm Camcar. The curved bolt head and tool contact surface is the main characteristic, and is mainly divided into the T type and E type. standardized for their exceptional performance. They are employed globally for automobiles and industrial machines, and in Japan, the tools are widely distributed in each field as the necessary tool for the discerning professional.

As the name TORX® is a registered trademark of Textron Fastening Systems, the tools are generally called "hex-lobe" (meaning 6 ear lobes) wrenches.

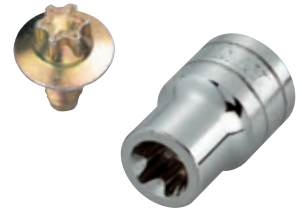
KTC receives licensing and technological training from Textron Fastening Systems, enabling the approved, formal usage of the product name TORX®.

T type TORX® screw



T type TORX® wrench

E type TORX® screw



E type TORX® wrench

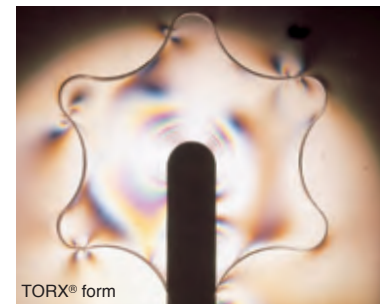
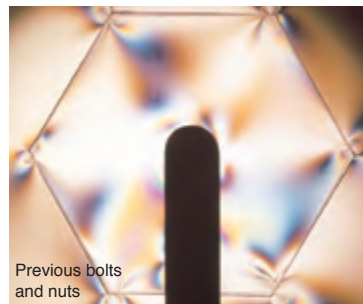
### Functions

#### High durability and torque transmission efficiency

Torque transmission is improved through greater facial contact of the tool with bolt heads compared to previous bolt head styles. Durability is increased through a lower concentration of stress, which reduces wear and breakage.

#### High operational performance

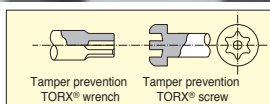
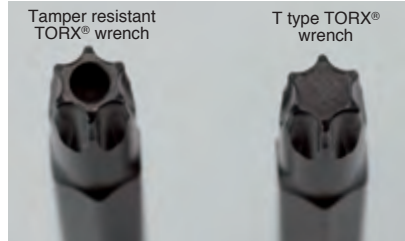
When tightening Phillips screws, the screw must not only be turned but also pushed in (a force that sustains the screw in the set position). However, the TORX® design allows for stabilizing of the bolt head and the contact surface of the tool, enabling the screw to be tightened through turning only and without applying force. This reduces the physical stress of the user, increases operational efficiency, and increases tool and screw durability.



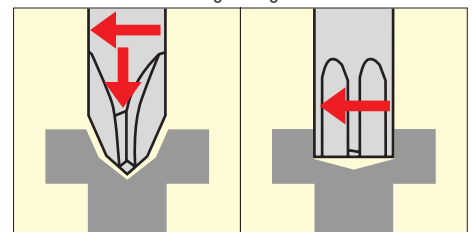
# TORX® Wrenches

### The tamper resistant TORX®

The screw with the round protrusion of the T type TORX® screw is called the "tamper resistant TORX® screw". The "tamper resistant TORX® screw" is used in places where disassembly should be avoided by non-professionals. This screw is widely employed for internal components of mobile phones and computers. Recently, this screw has been used in automobile applications, such as air bags and seat belts.



#### • Force distribution when tightening



Phillips screw

TORX® screw

\*Please check the merchandise inventory for a product that is marked by before placing an order.

## List of TORX® wrench sizes

\*The "A" dimensions and "bolt diameter" within the table below are guidelines that indicate the size of the TORX® screw and the corresponding TORX® tool. Select the most appropriate (tightly matching and without space for movement) TORX® tool for the TORX® screw before use.  
 \*The "A" dimensions are the tool standards indicated by Textron Fastening Systems which do not completely match the actual dimensions of the product. Also, the corresponding "bolt diameter" with the "designation" are examples illustrating general TORX® screws.

### T type TORX® wrench

		Designation	T6	T8	T9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
		"A" dimensions	1.65	2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
		Bolt diameter	M2	M2.5	—	M3	M3.5	M4	M5	M5	M6	M8	M8	M10	M12 · 14	M16	M18
Designation symbols	Drive																
T type TORX® bit socket	BT2-T★		●	●	●	●	●	●	●	●	●						
T type TORX® bit socket	BT3-T★							●	●	●	●	●	●	●	●		
T type TORX® bit socket	BT4-T★										●	●	●	●	●	●	●
T type TORX® impact wrench	S6T★							●	●		●	●	●				
T type TORX® L handle wrench	LT★		●	●		●	●	●	●	●	●	●	●	●	●		
T type TORX® driver	D1T-T★		●	●	●	●	●	●	●	●	●	●	●	●			

The ★ sign within the product number is allocated for the size (designation) number.

### E type TORX® wrench

		Designation	E4	E5	E6	E7	E8	E10	E11	E12	E14	E16	E18	E20	E24
		"A" dimensions	3.83	4.72	5.69	6.17	7.47	9.37	10.03	11.12	12.85	14.71	16.64	18.41	22.10
		Bolt diameter	—	—	M5	—	M6	M8	—	M10	M12	—	M14	M16	M18
Designation symbols	Drive														
E type TORX® wrench	B2-E★		●	●	●	●	●	●							
E type TORX® wrench	B3-E★			●	●	●	●	●	●	●	●	●			
E type TORX® wrench	B4-E★						●	●	●	●	●	●	●	●	●
E type TORX® long-straight offset wrench	WEE★X★L				●	●	●	●		●	●				

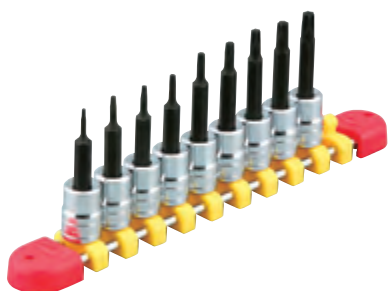
The ★ sign within the product number is allocated for the size (designation) number.

### T type tamper resistant TORX® wrench

		Designation	T8	T9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
		"A" dimensions	2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
		Bolt diameter	M2.5	—	M3	M3.5	M4	M5	M5	M6	M8	M8	M10	M12	M16	M18
Designation symbols	Drive															
T type tamper resistant TORX® bit socket	BT2-T★H		●	●	●	●	●	●	●	●						
T type tamper resistant TORX® bit socket	BT3-T★H						●	●	●	●	●	●	●	●		
T type tamper resistant TORX® bit socket	BT4-T★H										●	●	●	●	●	●
T type tamper resistant TORX® L handle wrench	LT★H		●		●	●	●	●	●	●	●	●	●	●		
T type tamper resistant TORX® driver	D1T-T★H		●	●	●	●	●	●	●	●	●	●	●			

The ★ sign within the product number is allocated for the size (designation) number.

● 1/4"sq. T-TYPE TORX® BIT SOCKET



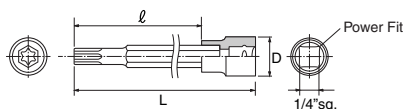
**T-TYPE TORX® BIT SOCKET**

No.	Fastener	D	L	ℓ	▽g	⊞
BT2-T 6	T 6	16	54.5	32	35	10
-T 8	T 8	16	54.5	32	35	10
-T 9	T 9	16	54.5	32	35	10
-T10	T10	16	54.5	32	36	10
-T15	T15	16	59.5	37	37	10
-T20	T20	16	59.5	37	37	10
-T25	T25	16	59.5	37	37	10
-T27	T27	16	59.5	37	38	10
-T30	T30	16	59.5	37	38	10

• Bit replacement is possible. (Refer to P.117)



No. TBT209T	▽g 390	⊞ 1
T-TYPE TORX® BIT SOCKET (1/4"sq.)		BT2-T6,T8,T9,T10,T15,T20,T25,T27,T30
Socket Holder	EHB210	



● 1/4"sq. T-TYPE LONG TORX® BIT SOCKET



**T-TYPE LONG TORX® BIT SOCKET**

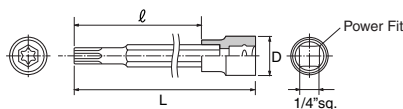
No.	Fastener	D	L	ℓ	▽g	⊞
BT2 -T 6L	T 6	16	121.5	99	53	10
-T 8L	T 8	16	121.5	99	53	10
-T 9L	T 9	16	121.5	99	53	10
-T10L	T10	16	121.5	99	54	10
-T15L	T15	16	121.5	99	54	10
-T20L	T20	16	121.5	99	54	10
-T25L	T25	16	121.5	99	54	10
-T27L	T27	16	121.5	99	55	10
-T30L	T30	16	121.5	99	55	10

• Bit replacement is possible. (Refer to P.117)

• The long type that is useful for replacing air bags.



No. TBT2L09T	▽g 550	⊞ 1
T-TYPE LONG TORX® BIT SOCKET (1/4"sq.)		BT2-T6L,T8L,T9L,T10L,T15L,T20L,T25L,T27L,T30L
Socket Holder	EHB210	



● 3/8"sq. T-TYPE SHORT TORX® BIT SOCKET



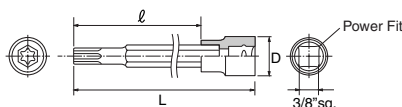
**T-TYPE SHORT TORX® BIT SOCKET**

No.	Fastener	D	L	ℓ	▽g	⊞
BT3-T20S	T20	17	50	21	44	10
-T25S	T25	17	50	21	44	10
-T27S	T27	17	50	21	45	10
-T30S	T30	17	50	21	45	10
-T40S	T40	18.5	52	23	63	10
-T45S	T45	18.5	52	23	65	10
-T50S	T50	18.5	52	23	65	10
-T55S	T55	22	58	26	119	10

• Bit replacement is possible. (Refer to P.117)



No. TBT3S08T	▽g 610	⊞ 1
T-TYPE SHORT TORX® BIT SOCKET · SET (3/8"sq.)		BT3-T20S,T25S,T27S,T30S,T40S,T45S,T50S,T55S
Socket Holder	EHB310	



**T-TYPE TORX® BIT SOCKET · SET (8pcs.)**

No.	Fastener	D	L	ℓ	▼g	☞
BT3-T20	T20	17	66	37	44	10
-T25	T25	17	66	37	44	10
-T27	T27	17	66	37	45	10
-T30	T30	17	66	37	45	10
-T40	T40	18.5	71	42	63	10
-T45	T45	18.5	71	42	65	10
-T50	T50	18.5	71	42	65	10
-T55	T55	22	76	44	119	10

• Bit replacement is possible. (Refer to P.117)

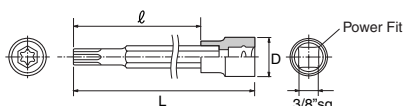


No. TBT308T ▼g 610 ☞ 1

T-TYPE TORX® BIT SOCKET · SET (3/8"sq.) BT3-T20,T25,T27,T30,T40,T45,T50,T55

Socket Holder EHB310

**●3/8"sq. T-TYPE TORX® BIT SOCKET · SET (8pcs.)**



**T-TYPE LONG TORX® BIT SOCKET · SET(8pcs.)**

No.	Fastener	D	L	ℓ	▼g	☞
BT3-T20L	T20	17	128	99	61	10
-T25L	T25	17	128	99	61	10
-T27L	T27	17	128	99	62	10
-T30L	T30	17	128	99	62	10
-T40L	T40	18.5	128	99	87	10
-T45L	T45	18.5	128	99	89	10
-T50L	T50	18.5	128	99	89	10
-T55L	T55	22	128	96	170	10

• Bit replacement is possible. (Refer to P.117)

• The long type that is useful for replacing air bags.

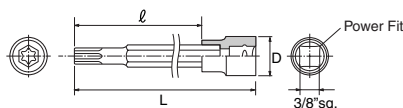


No. TBT3L08T ▼g 800 ☞ 1

T-TYPE LONG TORX® BIT SOCKET · SET (3/8"sq.) BT3-T20L,T25L,T27L,T30L,T40L,T45L,T50L,T55L

Socket Holder EHB310

**●3/8"sq. T-TYPE LONG TORX® BIT SOCKET · SET (8pcs.)**



**T-TYPE TORX® BIT SOCKET · SET (7pcs.)**

No.	Fastener	D	L	ℓ	▼g	☞
BT4-T30	T30	22	70	37	73	10
-T40	T40	22	75	42	82	10
-T45	T45	22	75	42	84	10
-T50	T50	22	75	42	84	10
-T55	T55	22	80	44	119	10
-T60	T60	24	85	47	161	10
-T70	T70	25	90	49	211	10

• Bit replacement is possible. (Refer to P.117)

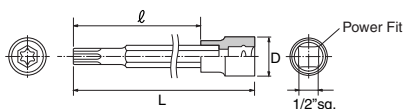


No. TBT407T ▼g 965 ☞ 1

T-TYPE TORX® BIT SOCKET (1/2"sq.) BT4-T30, T40, T45, T50, T55, T60, T70

Socket Holder EHB410

**●1/2"sq. T-TYPE TORX® BIT SOCKET · SET (7pcs.)**



1/2" sq.

● 1/2"sq. LONG T-TYPE TORX® BIT SOCKET SET (7pcs.)



LONG T-TYPE TORX® BIT SOCKET · SET (7pcs.)

No.	Fastener	D	L	ℓ	▽g	☞
BT4-T30L	T30	22	132	99	90	10
-T40L	T40	22	132	99	106	10
-T45L	T45	22	132	99	108	10
-T50L	T50	22	132	99	108	10
-T55L	T55	22	132	96	170	10
-T60L	T60	24	132	94	224	10
-T70L	T70	25	132	91	293	10

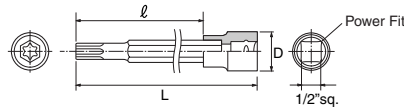
- Bit replacement is possible. (Refer to P.117)
- The long type that is useful for replacing air bags.



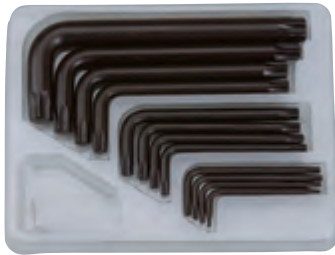
No. TBT4L07T      ▼kg 1.3      ☞ 1

Long T-Type TORX® Bit Socket (1/2" sq)	BT4-T30L, T40L, T45L, T50L, T55L, T60L, T70L
--	--

Socket Holder	EHB410
---------------	--------



● T-TYPE TORX® L-SHAPED WRENCH SET (12pcs.)



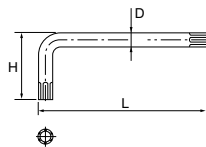
T-TYPE TORX® L-SHAPED WRENCH SET (12pcs.)

No. LTX12      ▼g 350      ☞ 1

T-Type TORX® L Handle Wrench	LT6, T8, T10, T15, T20, T25, T27, T30, T40, T45, T50, T55
------------------------------	---

- The pack can be used as a tray.

● T-TYPE TORX® L-SHAPED WRENCH

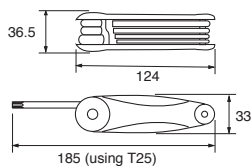
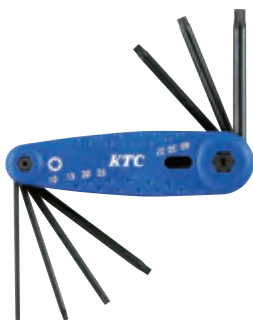


T-TYPE TORX® L-SHAPED WRENCH

No.	Fastener	D	L	H	▽g	☞
LT 6	T 6	3	50	17	3	10
LT 8	T 8	3	53	19	3.5	10
LT10	T10	3	56	20	4	10
LT15	T15	3.5	60	22	6	10
LT20	T20	4	64	24	8	10
LT25	T25	4.5	68	25	11	10
LT27	T27	5	72	27	14	10
LT30	T30	6	80	30	21	10
LT40	T40	7	87	33	30	10
LT45	T45	8	95	37	44	10
LT50	T50	9	109	41	65	10
LT55	T55	11.5	125	47	120	10

- ⚠ CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● FOLDING T-TYPE TORX® WRENCH



FOLDING T-TYPE TORX® WRENCH

No. HLT7      ▼g 210      ☞ 5

Size	T10, T15, T20, T25, T27, T30, T40
------	-----------------------------------

- It can be used for the 7 sizes of T10~T40.
- It has a light and easy-to-grip plastic body.
- \* Spare parts are configured. Please contact your dealer for details.

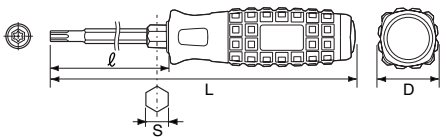
- ⚠ CAUTION • Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.



**T-TYPE TORX® DRIVER · SET (5pcs.) · (12pcs.)**

No.	Fastener	S	D	L	ℓ	▼g	📦
D1T-T 6	T 6	10	29.6	172	75	100	5
-T 8	T 8	10	29.6	172	75	100	5
-T 9	T 9	10	32	209	100	130	5
-T10	T10	10	32	209	100	130	5
-T15	T15	10	32	209	100	130	5
-T20	T20	10	32	209	100	130	5
-T25	T25	10	32	209	100	130	5
-T27	T27	10	32	209	100	130	5
-T30	T30	10	32	209	100	130	5
-T40	T40	12	33.8	282	150	190	5
-T45	T45	12	33.8	282	150	190	5
-T50	T50	12	33.8	282	150	190	5

<b>No. TD1T5</b>	▼g 650	📦 1
T-Type TORX® Driver		
D1T-T10, T15, T20, T25, T30		
<b>No. TD1T12</b>	▼kg 1.7	📦 1
T-Type TORX® Driver		
D1T-T6, T8, T9, T10, T15, T20, T25, T27, T30, T40, T45, T50		



**● T-TYPE TORX® DRIVER · SET (5pcs.) (12pcs.)**



TD1T5



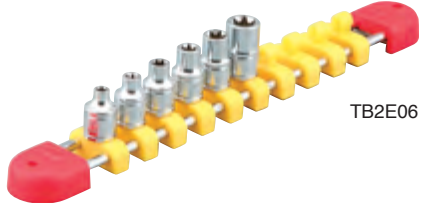
The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.

**E-TYPE TORX® WRENCH · SET (6pcs.)**

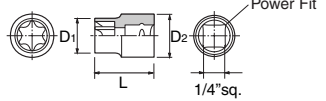
No.	Fastener	D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
B2-E 4	E 4	5.8	12	18	8	10
-E 5	E 5	7	12	18.5	9	10
-E 6	E 6	8	12	19	9	10
-E 7	E 7	9	12	20.5	10	10
-E 8	E 8	10	12	21	11	10
-E10	E10	13	13.5	22	17	10

<b>No. TB2E06</b>	▼g 125	📦 1
E-Type TORX® Wrench (1/4"sq.)		
B2-E4, E5, E6, E7, E8, E10		
Socket Holder		
EHB210		

**● 1/4"sq. E-TYPE TORX® WRENCH · SET (6pcs.)**



TB2E06

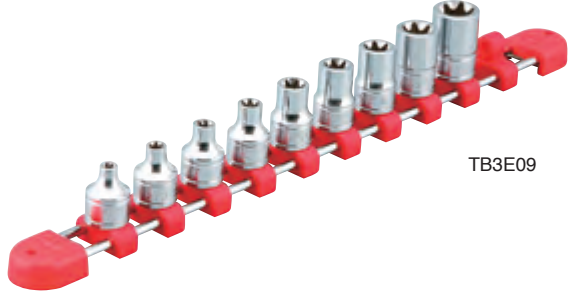


**E-TYPE TORX® WRENCH · SET (9pcs.)**

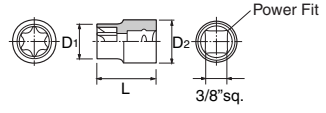
No.	Fastener	D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
B3-E 5	E 5	7	17	22.5	18	10
-E 6	E 6	8	17	23	18	10
-E 7	E 7	9	17	24	20	10
-E 8	E 8	10	17	25	20	10
-E10	E10	13	17	26	24	10
-E11	E11	14.5	17	26.5	27	10
-E12	E12	15.5	17	27	28	10
-E14	E14	18	17	28	34	10
-E16	E16	20	19	30	47	10

<b>No. TB3E09</b>	▼g 355	📦 1
E-Type TORX® Wrench (3/8"sq.)		
B3-E5, E6, E7, E8, E10, E11, E12, E14, E16		
Socket Holder		
EHB310		

**● 3/8"sq. E-TYPE TORX® WRENCH · SET (9pcs.)**



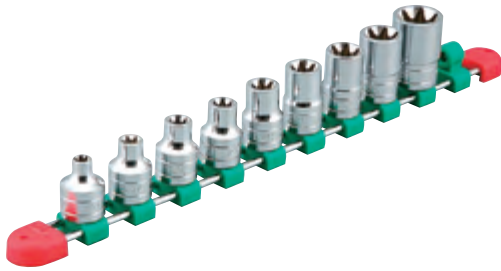
TB3E09



\*Please check the merchandise inventory for a product that is marked by before placing an order.

1/2"  
sq.

● 1/2"sq. E-TYPE TORX® WRENCH · SET (9pcs.)



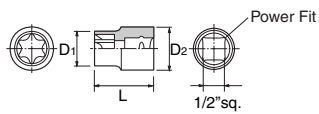
**E-TYPE TORX® WRENCH · SET (9pcs.)**

No.	Fastener	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☞	
<b>B4-E 8</b>	E 8	10	22	30	38	10	
<b>-E10</b>	E10	13	22	31	42	10	
<b>-E11</b>	E11	14.5	22	32	46	10	
<b>-E12</b>	E12	15.5	22	33	48	10	
<b>-E14</b>	E14	18	22	34.5	55	10	
<b>-E16</b>	E16	20	22	36	61	10	
<b>-E18</b>	E18	21	22	37	62	10	
<b>-E20</b>	E20	24	22	38.5	77	10	
<b>-E24</b>	E24	28.5	26.5	41	127	10	

POWERFIT

**No. TB4E09** ▼g 705 ☞ 1

E-Type TORX® Wrench (1/2"sq.)	B4-E8, E10, E11, E12, E14, E16, E18, E20, E24
Socket Holder	EHB410



● E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)



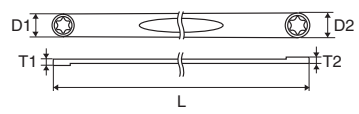
**E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)**

No.	Fastener	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	☞	
<b>WEE 6× 7L</b>	E 6×E 7	9.0	9.5	5.5	6.0	240	50	10	
<b>WEE 8×10L</b>	E 8×E10	10.5	12.0	6.5	7.0	300	100	10	
<b>WEE12×14L</b>	E12×E14	15.0	16.5	8.0	8.5	330	200	10	

**No. TWEE3L** ▼g 350 ☞ 1

E-Type TORX® Long Boxend Wrench	WEE6×7L, 8×10L, 12×14L
---------------------------------	------------------------

- The substantial length and single-sided hilt-offset enable the tightening and loosening of E type TORX® pieces in hard to reach areas.
- This can be used for the tensioner pulleys of imported vehicles (American/European cars) and the stud bolt E TORX® of domestic vehicles.



\*Please check the merchandise inventory for a product that is marked by before placing an order.

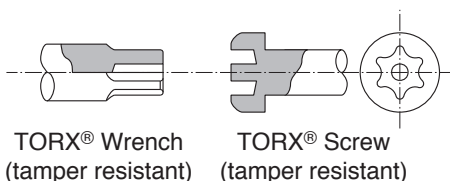
**TORX® WRENCHES FOR TAMPER RESISTANT FASTENERS**

These are restricted tools and the sale of these wrenches is limited to professional mechanics and other authorized users.



**Handling Instructions**

- It is prohibited to use these tools for unauthorized use and they may not be modified in any respect.
- "Tamper Resistant Fasteners" are used so the equipment may not be easily dissembled. These tools are designed to loosen or fasten tamper resistant fasteners and must be used in a responsible, professional manner.
- Please refer to the equipment manufacturers manual, or seek approval from the equipment manufacturers, prior to commencing work on any piece of equipment protected by tamper resistant fasteners.
- Please ensure the security of this tool and do not allow unauthorized access to it.



**T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

No.	Fastener	D	L	ℓ	▼g	☞
BT2 -T 8H	T 8	16	54.5	32	35	10
-T 9H	T 9	16	54.5	32	35	10
-T10H	T10	16	54.5	32	36	10
-T15H	T15	16	59.5	37	37	10
-T20H	T20	16	59.5	37	37	10
-T25H	T25	16	59.5	37	37	10
-T27H	T27	16	59.5	37	38	10
-T30H	T30	16	59.5	37	38	10

• Bit replacement is possible. (Refer to P.117)

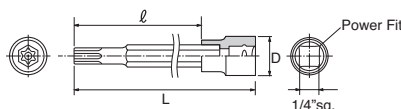


**● 1/4"sq. T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

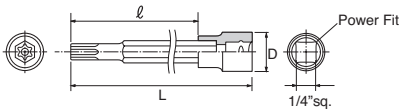


No.	TBT208TH	▼g 355	☞ 1
T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (1/4" sq.)		BT2-T8H, T9H, T10H, T15H, T20H, T25H, T27H, T30H	
Socket Holder		EHB210	

**CAUTION** • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



● 1/4"sq. LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (9pcs.)



LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (9pcs.)

No.	Fastener	D	L	ℓ	▼g	⊞
BT2-T 8HL	T 8	16	121.5	99	53	10
-T 9HL	T 9	16	121.5	99	53	10
-T10HL	T10	16	121.5	99	54	10
-T15HL	T15	16	121.5	99	54	10
-T20HL	T20	16	121.5	99	54	10
-T25HL	T25	16	121.5	99	54	10
-T27HL	T27	16	121.5	99	55	10
-T30HL	T30	16	121.5	99	55	10

- Bit replacement is possible. (Refer to P.117)
- The long type that is useful for replacing air bags.

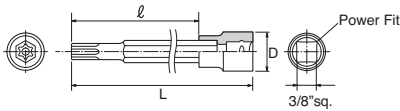


No. TBT2L08TH ▼g 975 ⊞ 1

Long T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (1/4" sq.)	BT2-T8HL, T9HL, T10HL, T15HL, T20HL, T25HL, T27HL, T30HL
Socket Holder	EHB210

⚠ CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● 3/8"sq. SHORT T-TYPE TORX® BIT SOCKET SET FOR TAMPER RESISTANT FASTENERS (8pcs.)



SHORT T-TYPE TORX® BIT SOCKET SET FOR TAMPER RESISTANT FASTENERS (8pcs.)

No.	Fastener	D	L	ℓ	▼g	⊞
BT3-T20HS	T20	17	50	21	44	10
-T25HS	T25	17	50	21	44	10
-T27HS	T27	17	50	21	45	10
-T30HS	T30	17	50	21	45	10
-T40HS	T40	18.5	52	23	63	10
-T45HS	T45	18.5	52	23	65	10
-T50HS	T50	18.5	52	23	65	10
-T55HS	T55	22	58	26	119	10

- Bit replacement is possible. (Refer to P.117)

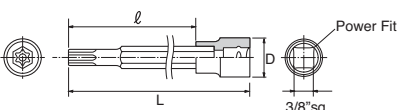


No. TBT3S08TH ▼g 610 ⊞ 1

Short T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (3/8" sq.)	BT3-T20HS, T25HS, T27HS, T30HS, T40HS, T45HS, T50HS, T55HS
Socket Holder	EHB310

⚠ CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● 3/8"sq. T-TYPE TORX® BIT SOCKET SET FOR TAMPER RESISTANT FASTENERS (8pcs.)



T-TYPE TORX® BIT SOCKET SET FOR TAMPER RESISTANT FASTENERS (8pcs.)

No.	Fastener	D	L	ℓ	▼g	⊞
BT3-T20H	T20	17	66	37	44	10
-T25H	T25	17	66	37	44	10
-T27H	T27	17	66	37	45	10
-T30H	T30	17	66	37	45	10
-T40H	T40	18.5	71	42	63	10
-T45H	T45	18.5	71	42	65	10
-T50H	T50	18.5	71	42	65	10
-T55H	T55	22	76	44	119	10

- Bit replacement is possible. (Refer to P.117)



No. TBT308TH ▼g 610 ⊞ 1

T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (3/8" sq.)	BT3-T20H, T25H, T27H, T30H, T40H, T45H, T50H, T55H
Socket Holder	EHB310

⚠ CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

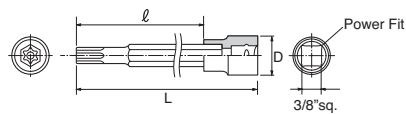
**LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

No.	Fastener	D	L	ℓ	▼g	⊞
BT3-T20HL	T20	17	128	99	61	10
-T25HL	T25	17	128	99	61	10
-T27HL	T27	17	128	99	62	10
-T30HL	T30	17	128	99	62	10
-T40HL	T40	18.5	128	99	87	10
-T45HL	T45	18.5	128	99	89	10
-T50HL	T50	18.5	128	99	89	10
-T55HL	T55	22	128	96	170	10

• Bit replacement is possible. (Refer to P.117)  
 • The long type that is useful for replacing air bags. **POWERFIT®**

<b>No. TBT3L08TH</b>	▼g 800	⊞ 1
Long T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (3/8" sq)	BT3-T20HL, T25HL, T27HL, T30HL, T40HL, T45HL, T50HL, T55HL	
Socket Holder	EHB310	

**CAUTION** \* COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



**3/8"sq. LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)**



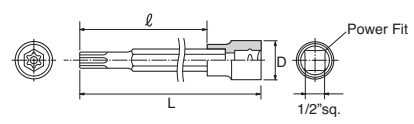
**T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)**

No.	Fastener	D	L	ℓ	▼g	⊞
BT4-T30H	T30	22	70	37	73	10
-T40H	T40	22	75	42	82	10
-T45H	T45	22	75	42	84	10
-T50H	T50	22	75	42	84	10
-T55H	T55	22	80	44	119	10
-T60H	T60	24	85	47	161	10
-T70H	T70	25	90	49	211	10

• Bit replacement is possible. (Refer to P.117) **POWERFIT®**

<b>No. TBT407TH</b>	▼g 965	⊞ 1
T-Type TORX® Bit Socket · Set for Tamper Resistant Fastener (1/2" sq.)	BT4-T30H, T40H, T45H, T50H, T55H, T60H, T70H	
Socket Holder	EHB410	

**CAUTION** \* COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



**1/2"sq. T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)**



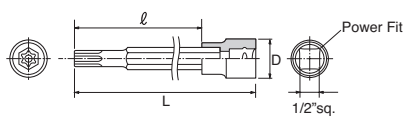
**LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)**

No.	Fastener	D	L	ℓ	▼g	⊞
BT4-T30HL	T30	22	132	99	90	10
-T40HL	T40	22	132	99	106	10
-T45HL	T45	22	132	99	108	10
-T50HL	T50	22	132	99	108	10
-T55HL	T55	22	132	96	170	10
-T60HL	T60	24	132	94	224	10
-T70HL	T70	25	132	91	293	10

• Bit replacement is possible. (Refer to P.117)  
 • The long type that is useful for replacing air bags. **POWERFIT®**

<b>No. TBT4L07TH</b>	▼kg 1.1	⊞ 1
Long T-Type TORX® Bit Socket · Set for Tamper Resistant Fastener (1/2" sq.)	BT4-T30HL, T40HL, T45HL, T50HL, T55HL, T60HL, T70HL	
Socket Holder	EHB410	

**CAUTION** \* COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



**1/2"sq. LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)**



\*Please check the merchandise inventory for a product that is marked by before placing an order.

● T-TYPE TORX® L-SHAPED WRENCH SET FOR TAMPER RESISTANT FASTENERS (11pcs.)

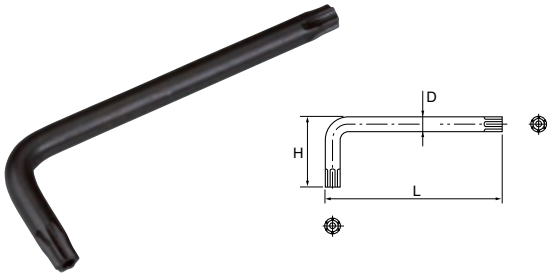


T-TYPE TORX® L-SHAPED WRENCH SET FOR TAMPER RESISTANT FASTENERS (11pcs.)			
No. LTXH11	▼g 330	📦 1	
T-Type TORX® L Handle Wrench	LT8H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, T45H, T50H, T55H		

• The pack can be used as a tray.

**CAUTION** • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● T-TYPE TORX® L-SHAPED WRENCH FOR TAMPER RESISTANT FASTENERS



T-TYPE TORX® L-SHAPED WRENCH FOR TAMPER RESISTANT FASTENERS

No.	Fastener	D	L	H	▼g	📦
LT 8H	T 8H	3	53	19	3.5	10
LT10H	T10H	3	56	20	4	10
LT15H	T15H	3.5	60	22	6	10
LT20H	T20H	4	64	24	8	10
LT25H	T25H	4.5	68	25	11	10
LT27H	T27H	5	72	27	14	10
LT30H	T30H	6	80	30	21	10
LT40H	T40H	7	87	33	30	10
LT45H	T45H	8	95	37	44	10
LT50H	T50H	9	109	41	65	10
LT55H	T55H	11.5	125	47	120	10

**CAUTION** • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.  
• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● T-TYPE TORX® DRIVER SET FOR TAMPER RESISTANT FASTENERS (11pcs.)



T-TYPE TORX® DRIVER - SET FOR TAMPER RESISTANT FASTENERS (11pcs.)

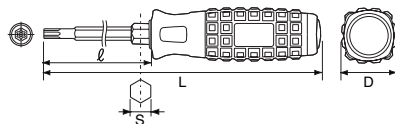
No.	Fastener	S	D	L	ℓ	▼g	📦
D1T-T 8H	T 8	10	29.6	172	75	100	10
T 9H	T 9	10	32	209	100	130	10
T10H	T10	10	32	209	100	130	10
T15H	T15	10	32	209	100	130	10
T20H	T20	10	32	209	100	130	10
T25H	T25	10	32	209	100	130	10
T27H	T27	10	32	209	100	130	10
T30H	T30	10	32	209	100	130	10
T40H	T40	12	33.8	282	150	190	10
T45H	T45	12	33.8	282	150	190	10
T50H	T50	12	33.8	282	150	190	10

No. TD1TH11	▼kg 1.6	📦 1
T-Type TORX® Driver Set for Tamper Resistant Fastener (11pcs.)	D1T-T8H, T9H, T10H, T15H, T20H, T25H, T27H, T30H, T40H, T45H, T50H	

**CAUTION** • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.





# 2. CONVENTIONAL TOOLS

## BOX END WRENCHES



**CAUTION**






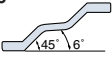
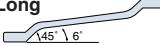

**Box end wrench sets**

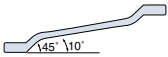

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.

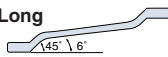

**Box end wrenches**


- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipe, etc.
- Insert the bolts and nuts fully.
- Do not use this tool as a hammer.
- Do not expose this tool to impact by hitting it with a hammer, etc.

**List of box end wrench sizes**

Diameter mm	Product number																																													
	5.5	6	6	7	8	8	10	10	10	10	11	12	13	13	14	16	17	17	19	19	20	21	21	22	23	26	27	27	29	30	32	35	36	41												
Type Tilt angle	7	7	8	8	9	10	11	12	13	14	13	14	15	17	17	18	19	21	21	22	22	23	26	24	26	27	28	32	30	32	32	36	38	38	46											
<b>M100</b> Straight-short 				●				●				●			●																															
<b>M150</b> Straight-long 						●		●			●	●			●												●																			
<b>M160</b> Super long-straight 						●		●			●	●			●												●																			
<b>M151</b> 15° Long 										●					●																															
<b>M15</b> 30° Short 																																					●	●	●	●	●		●	●	●	
<b>M5S</b> 45° × 6° Short 	●			●	●	●		●				●	●	●		●	●	●																												
<b>M5</b> 45° × 6° Long 	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>M25</b> 45° Long 	●	●		●	●		●	●	●	●	●	●	●		●	●		●	●	●	●		●		●	●	●																			

Diameter mm	8	10	12	14
<b>M27(hex diameter)</b> 45° × 10° Long 	●	●	●	●
				

Diameter in	1/4 × 5/16	5/16 × 3/8	3/8 × 7/16	13/32 × 1/2	7/16 × 1/2	1/2 × 9/16	9/16 × 5/8	19/32 × 11/16	5/8 × 11/16	5/8 × 3/4	11/16 × 3/4	3/4 × 25/32	3/4 × 13/16	25/32 × 7/8	13/16 × 7/8	15/16 × 1	1 × 1-1/16	1-1/8 × 1-1/4
<b>M5</b> 45° × 6° Long 	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>MB25</b> 45° Long 			●			●			●			●			●	●		

\*Please check the merchandise inventory for a product that is marked by  before placing an order.



**BOX END WRENCH SET (6pcs.) · (8pcs.) · (10pcs.)** mm

No. <b>TM506</b>	▼kg 1.3	📦 1
Box End Wrench	M5-0810, 1012, 1113, 1417, 1921, 2224	

• Resin form tray (L444xW184xH48mm) attached. 

No. <b>TM508</b>	▼kg 1.6	📦 1
Box End Wrench	M5-0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224	

• Resin form tray (L444xW184xH48mm) attached. 

No. <b>TM510</b>	▼kg 2.3	📦 1
Box End Wrench	M5-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427	

• Resin form tray (L444xW184xH48mm) attached. 

**BOX END WRENCH SET (6pcs.)** in

No. <b>TM506B</b>	▼kg 1.7	📦 1
Box End Wrench in	M5- $\frac{3}{8} \times \frac{7}{16}$ , $\frac{1}{2} \times \frac{9}{16}$ , $\frac{5}{8} \times \frac{11}{16}$ , $\frac{3}{4} \times \frac{25}{32}$ , $\frac{13}{16} \times \frac{7}{8}$ , $\frac{15}{16} \times 1$	

• Resin form tray (L444xW184xH48mm) attached.

**45°×6° LONG BOX END WRENCH** mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦
M5 -05507	5.5× 7	10	12	4.5	5	151	20	5
-0607	6× 7	10.5	12	4.5	5	151	20	5
-0608	6× 8	10.5	13	4.5	5.5	157	27	5
-0708	7× 8	12	13	5	5.5	167	30	5
-0809	8× 9	13	14.5	5.5	6	174	40	5
-0810	8×10	13	16	5.5	6.5	179	45	5
-1011	10×11	16	17.5	6.5	7	197	60	5
-1012	10×12	16	18.5	6.5	7.5	207	70	5
-1013	10×13	16	19.5	6.5	8.5	208	70	5
-1014	10×14	16	21	6.5	9.5	218	82	5
-1113	11×13	17.5	19.5	7	8.5	218	80	5
-1214	12×14	18.5	21	7.5	9.5	226	100	5
-1315	13×15	19.5	23	8.5	10	236	115	5
-1317	13×17	19.5	25.5	8.5	10.5	252	135	5
-1417	14×17	21	25.5	9.5	10.5	253	140	5
-1618	16×18	24	27	10.5	11.5	265	180	5
-1719	17×19	25.5	28	10.5	12	287	220	5
-1721	17×21	25.5	31	10.5	13	308	250	5
-1921	19×21	28	31	12	13	309	270	5
-1922	19×22	28	32.5	12	13.5	320	280	5
-2022	20×22	30	32.5	12	13.5	321	300	5
-2123	21×23	31	34	13	14.5	322	335	5
-2126	21×26	31	38	13	16	354	405	5
-2224	22×24	32.5	35.5	13.5	15	334	380	5
-2326	23×26	34	38	14.5	16	356	410	5
-2427	24×27	35.5	39	15	16.5	367	440	5
-2528	25×28	36.5	41	15.5	17	379	525	5
-2632	26×32	38	47	16	18	412	630	5
-2730	27×30	39.5	44	16.5	18	412	640	5
-2732	27×32	39.5	47	16.5	18	413	675	5
-2932	29×32	44	47	18	18	460	795	5
-3032	30×32	44	47	18	18	460	795	5
-3236	32×36	47	52.5	18	21	490	950	5
-3538	35×38	52.5	55	21	22	519	1150	5
-3638	36×38	52.5	55	21	22	519	1150	5
-4146	41×46	59.5	66.5	24.5	26	593	1760	2



**45°×6° LONG BOX END WRENCH** in

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦	
M5 -1/4	$\times \frac{5}{16}$	6.3× 7.9	10.5	13	4.5	5.5	157	27	5
-5/16	$\times \frac{3}{8}$	7.9× 9.5	13	16	5.5	6.5	179	45	5
-3/8	$\times \frac{7}{16}$	9.5×11.1	16	17.5	6.5	7	197	60	5
-13/32	$\times \frac{1}{2}$	10.3×12.7	16	19.5	6.5	8.5	208	70	5
-7/16	$\times \frac{1}{2}$	11.1×12.7	17.5	19.5	7	8.5	218	80	5
-1/2	$\times \frac{9}{16}$	12.7×14.2	19.5	21	8.5	9.5	235	111	5
-9/16	$\times \frac{5}{8}$	14.2×15.8	21	24	9.5	10.5	252	139	5
-19/32	$\times \frac{11}{16}$	15 ×17.4	23	25.5	10	10.5	254	146	5
-5/8	$\times \frac{11}{16}$	15.8×17.4	24	25.5	10.5	10.5	265	171	5
-5/8	$\times \frac{3}{4}$	15.8×19	24	28	10.5	12	286	207	5
-11/16	$\times \frac{3}{4}$	17.4×19	25.5	28	10.5	12	287	220	5
-3/4	$\times \frac{25}{32}$	19 ×19.8	28	30	12	12	309	263	5
-3/4	$\times \frac{13}{16}$	19 ×20.6	28	31	12	13	309	270	5
-25/32	$\times \frac{7}{8}$	19.8×22.2	30	32.5	12	13.5	321	300	5
-13/16	$\times \frac{7}{8}$	20.6×22.2	31	32.5	13	13.5	322	324	5
-15/16	×1	23.8×25.4	35.5	36.5	15	15.5	366	464	5
-1	$\times 1$	25.4×26.9	36.5	39	15.5	16.5	378	515	5
-1	$\times 1$	28.5×31.7	44	47	18	18	460	795	5

● **BOX END WRENCH SET (6pcs.) (8pcs.) (10pcs.)**



TM506

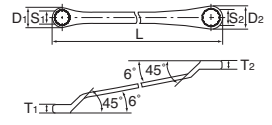



TM508



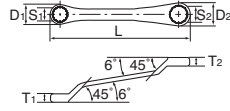
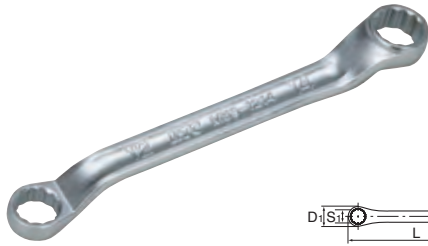
TM510

● **45°×6° LONG BOX END WRENCH**



\*Please check the merchandise inventory for a product that is marked by  before placing an order.

● 45°×6° SHORT BOX END WRENCH



45°×6° SHORT BOX END WRENCH										mm
No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	📦		
<b>M5S -05507</b>	5.5×7	9.8	11.8	4.3	4.8	96	15	10		
<b>-0708</b>	7×8	11.8	12.8	4.8	5.3	102	20	10		
<b>-0809</b>	8×9	12.8	14.3	5.3	5.8	104	25	10		
<b>-0810</b>	9×10	12.8	15.8	5.3	6.3	109	30	10		
<b>-1012</b>	10×12	15.8	18.3	6.3	7.3	127	50	10		
<b>-1113</b>	11×13	17.3	19.3	6.8	8.3	138	55	10		
<b>-1214</b>	12×14	18.3	20.8	7.3	9.3	145	70	10		
<b>-1315</b>	13×15	19.3	22.8	8.3	9.8	156	85	10		
<b>-1417</b>	14×17	20.8	25.3	9.3	10.3	168	105	10		
<b>-1618</b>	16×18	23.8	26.8	10.3	11.3	170	130	10		
<b>-1719</b>	17×19	25.3	27.8	10.3	11.8	177	160	10		
<b>-1921</b>	19×21	27.8	30.8	11.8	12.8	179	185	10		

45°×6° SHORT BOX END WRENCH SET (5pcs.)			
No. <b>TM5S05</b>	▽g 310	📦 1	
45°×6° Short Box End Wrench M5S-0810, 1012, 1113, 1214, 1417			

● 45° LONG BOX END WRENCH SET (6pcs.)



M256

45° LONG BOX END WRENCH SET (6pcs.)				mm
No. <b>M256</b>	▽kg 2.1	📦 1		JIS
45° Long Box End Wrench M25-10×12, 12×14, 14×17, 17×19, 19×21, 23×26				
No. <b>M2506</b>	▽kg 2.1	📦 1		JIS
45° Long Box End Wrench M25- 8×10, 11×13, 12×14, 17×19, 22×24, 24×27				
Common Items				
Metal Case		M256-M L385×W100×H45mm		

● 45° LONG BOX END WRENCH SET (8pcs.) (10pcs.)



M258

45° LONG BOX END WRENCH SET (8pcs.) · (10pcs.)				mm
No. <b>M258</b>	▽kg 2.5	📦 1		JIS
45° Long Box End Wrench M25- 8×10, 10×12, 11×13, 12×14, 14×17, 17×19, 19×21, 22×24				
No. <b>M2510</b>	▽kg 3	📦 1		JIS
45° Long Box End Wrench M25-5.5×7, 8×10, 10×12, 11×13, 12×14, 14×17, 17×19, 19×21, 22×24, 24×27				
Common Items				
Metal Case		M258-M L370×W180×H55mm		

● BOX END WRENCH SET (14pcs.)



BOX END WRENCH SET (14pcs.)				mm
No. <b>M215P</b>	▽kg 1.9	📦 1		
Flat Type Short Box End Wrench M100-7×8, 10×12, 12×14, 14×17				
Flat Type Long Box End Wrench M150-10×12, 12×14, 14×17				
15° Long Box End Wrench M151-10×12, 12×14, 14×17				
Box End Wrench (6pt.) M27-8H, 10H, 12H, 14H				
Hard Plastic Case		TCP1-1 L385×W190×H65mm		

- Mixed set of Flat Type Short Box End Wrench (M100), Flat Type Long Box End Wrench (M150), 15° Long Offset Wrench and Hex Box End Wrench.
- With Hard Plastic Case for light weight and durability.

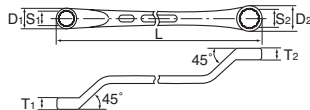
45° LONG BOX END WRENCH in

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
M25-5.5×7	5.5×7	9.5	12	4.5	5	150	26	10
- 6×7	6×7	11	12	4.5	5	150	26	10
- 8×9	8×9	14	15	5.5	6	175	50	10
- 8×10	8×10	14	17	5.5	6.5	175	50	10
- 10×12	10×12	17	19	6.5	7.5	200	70	10
- 10×13	10×13	17	21	6.5	8.5	200	72	10
- 10×14	10×14	17	22	6.5	9	220	100	10
- 11×13	11×13	18	21	7	8.5	200	74	10
- 12×14	12×14	19	22	7.5	9	220	110	10
- 13×17	13×17	21	26	8.5	10.5	245	145	10
- 14×17	14×17	22	26	9	10.5	245	155	10
- 17×19	17×19	26	29	10.5	12	270	210	10
- 17×21	17×21	26	31	10.5	13	310	270	10
- 19×21	19×21	29	31	12	13	310	275	10
- 19×22	19×22	29	33	12	13.5	310	280	10
- 21×23	21×23	31	34	13	14.5	310	340	5
- 22×24	22×24	33	35	13.5	15	315	350	5
- 23×26	23×26	34	38	14.5	16	355	410	5
- 24×27	24×27	35	39	15	16.5	360	460	5

● 45° LONG BOX END WRENCH



POWERFIT



JIS (M25-5.5×7, 6×7, 10×14, excludes inch size)

45° LONG BOX END WRENCH in

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
MB25- $\frac{3}{8}$ × $\frac{7}{16}$	9.5×11.1	16	18	6	7	195	80	10
- $\frac{1}{2}$ × $\frac{9}{16}$	12.7×14.2	20	22	8	8	220	115	10
- $\frac{5}{8}$ × $\frac{11}{16}$	15.8×17.4	24	26	10	10	245	105	10
- $\frac{3}{4}$ × $\frac{25}{32}$	19×19.8	29	30	11	11	275	210	10
- $\frac{13}{16}$ × $\frac{7}{8}$	20.6×22.2	31	33	12	13	310	280	5
- $\frac{15}{16}$ ×1	23.8×25.4	35	37	15	15.5	355	400	5

45° LONG BOX END WRENCH SET (3pcs.) mm

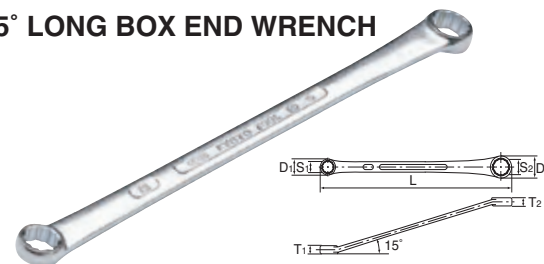
No. M253	▼g 345	⊞ 1
Long Box End Wrench	M25-10×12, 12×14, 14×17	

POWERFIT

15° LONG BOX END WRENCH mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
M151-10×12	10×12	17	19	6.5	7.5	200	50	10
-12×14	12×14	19	22	7.5	9	220	100	10
-14×17	14×17	22	26	9	10.5	245	140	10

● 15° LONG BOX END WRENCH



POWERFIT

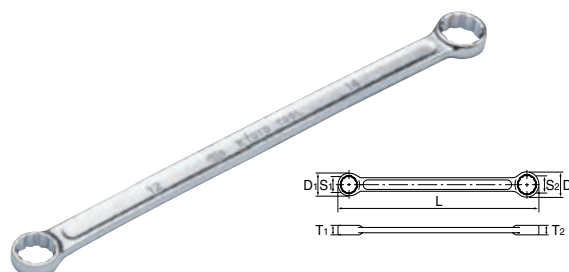
15° LONG BOX END WRENCH SET (3pcs.) mm

No. M1513	▼g 340	⊞ 10
15° Long Box End Wrench	M151-10×12, 12×14, 14×17	

FLAT TYPE LONG BOX END WRENCH mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
M150- 8×10	8×10	13	16	5.5	6.5	185	44	10
-10×12	10×12	16	18	6.5	7.5	200	56	10
-11×13	11×13	17	19	7	8	200	60	10
-12×14	12×14	18	21	7.5	8	220	80	10
-14×17	14×17	21	25	8	8.5	245	125	10
-17×19	17×19	25	28	8.5	9	285	148	10
-22×24	22×24	32	35	9.5	10	335	240	10

● FLAT TYPE LONG BOX END WRENCH



POWERFIT

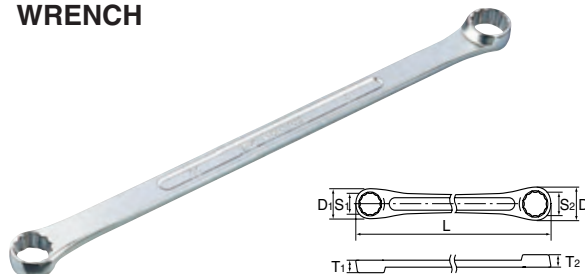
FLAT TYPE LONG BOX END WRENCH SET (5pcs.) mm

No. M1505	▼g 380	⊞ 10
Flat Type Long Box End Wrench	M150-8×10, 10×12, 11×13, 12×14, 14×17	

FLAT TYPE EXTRA-LONG BOX END WRENCH mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
M160- 8×10	8×10	14	17	7.3	7.6	235	60	10
-10×12	10×12	17	19	8.2	8.8	295	84	10
-12×14	12×14	19	22	9.4	10	330	120	10
-13×15	13×15	21	24	9.9	10.5	355	197	10
-14×17	14×17	22	26	10.6	11.5	370	240	10
-17×19	17×19	26	29	12.3	12.9	405	365	10
-22×24	22×24	33	35	15.2	15.8	435	540	10
-27×30	27×30	39	44	19.8	20.7	550	1118	10

● FLAT TYPE EXTRA-LONG BOX END WRENCH



POWERFIT

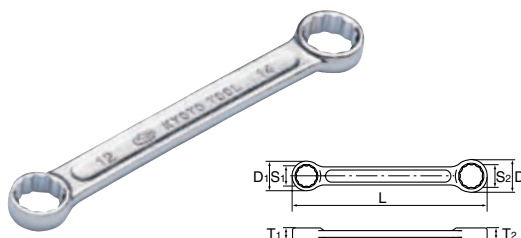
FLAT TYPE EXTRA-LONG BOX END WRENCH SET (3pcs.) mm

No. M1603	▼g 545	⊞ 1
Flat Type Extra-Long Box End Wrench - Set (3pcs.)	M160-8×10, 12×14, 17×19	

FLAT TYPE SHORT BOX END WRENCH mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	⊞
M100- 7× 8	7× 8	12	13	5	5.5	95	18	10
-10×12	10×12	16	18	6.5	7.5	115	34	10
-12×14	12×14	18	21	7.5	8	130	50	10
-14×17	14×17	21	25	8	8.5	145	72	10
-17×19	17×19	25	28	8.5	9	180	95	10
-22×24	22×24	32	35	9.5	10	230	120	10

● FLAT TYPE SHORT BOX END WRENCH



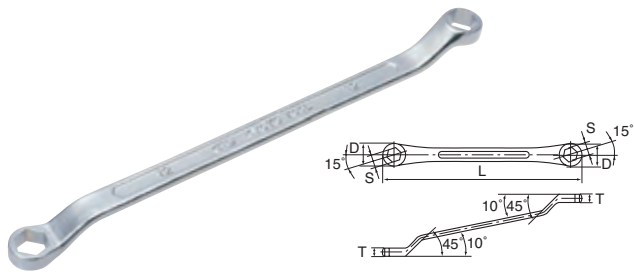
POWERFIT

FLAT TYPE SHORT BOX END WRENCH SET (4pcs.) mm

No. M1004	▼g 170	⊞ 1
Flat Type Short Box End Wrench - Set (4pcs.)	M100-7×8, 10×12, 12×14, 14×17	

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● HEX BOX END WRENCHES



**HEX BOX END WRENCH** mm

Hexagonal

No.	S	D	T	L	▼g	📦
M27- 8H	8	13	5	175	40	10
-10H	10	16	6	195	57	10
-12H	12	18	7	220	86	10
-14H	14	21	8	240	120	10

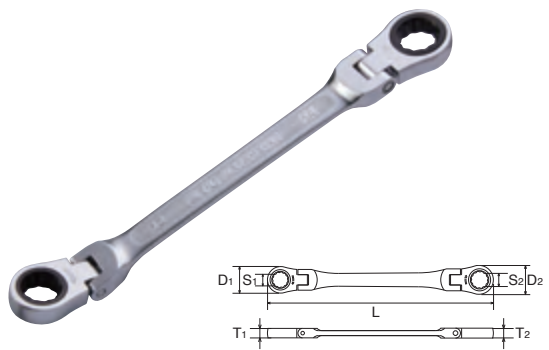
**HEX BOX END WRENCH SET (4pcs.)** mm

No. M274	▼g 330	📦 5
----------	--------	-----

Hex Box End Wrench Set (4pcs.) M27-8H, 10H, 12H, 14H

- 15° symmetric angle can enable this wrench used as Bi-hexagonal wrench.
- No chamfering on hexagonal end for bigger contact between bolts and the wrenches.
- Comfortable grip for applying torque easily.

● DOUBLE-FLEX RATCHET BOX END WRENCH



**DOUBLE-FLEX RATCHET BOX END WRENCH**

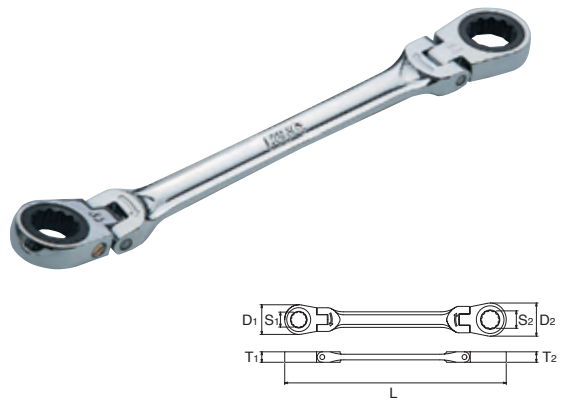
No.	S1xS2	D1	D2	T1	T2	Feed	L	▼g	📦
MR1A-0810F	8x10	16.4	20	6.5	7.3	5°	151	70	5
MR1A-1012F	10x12	20	23	7.3	8.2	5°	176	110	5
MR1A-1113F	11x13	21.8	25.2	7.8	8.6	5°	188	120	5
MR1A-1214F	12x14	23	27	8.2	9	5°	199	140	5
MR1A-1315F	13x15	25	28.2	8.6	9.4	5°	226	180	5
MR1A-1317F	13x17	25.2	31.8	8.6	10.3	5°	230	190	5
MR1A-1417F	14x17	27	31.6	9	10.3	5°	230	190	5
MR1A-1719F	17x19	31.6	33.7	10.3	11.2	5°	267	270	5

\* Feed of 8mm ratchet offset wrench section is 6°.

- Both heads are capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Head tilt angle is 180°.
- Nonslip grip design is adopted.

**CAUTION** • Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

● DOUBLE-FLEX RATCHET BOX END WRENCH



**DOUBLE-FLEX RATCHET BOX END WRENCH**

No.	S1xS2	D1	D2	T1	T2	L	▼g	📦
MR1-0607F	6x 7	18	18	7.4	7.4	120	65	5
MR1-0810F	8x10	18	21	7.4	8.4	150	75	5
MR1-1012F	10x12	21	23.5	8.4	8.4	175	105	5
MR1-1113F	11x13	22	25	8.4	8.4	185	120	5
MR1-1214F	12x14	23.5	26.5	8.4	8.4	195	135	5
MR1-1315F	13x15	25	28	8.4	8.4	205	155	5
MR1-1417F	14x17	26.5	30.5	8.4	10	225	190	5
MR1-1618F	16x18	29	32	10	11.4	250	270	5
MR1-1719F	17x19	30.5	34	10	11.4	260	285	5
MR1-2123F	21x23	38	45	12.5	13.5	312	555	5
MR1-2224F	22x24	41	45	13.5	13.5	325	590	5

**DOUBLE-FLEX RATCHET BOX END WRENCH SET (5pcs.)**

No. TMR105	▼g 660	📦 1
------------	--------	-----

Double-Flex Ratchet Box End Wrench MR1-0810F, 1012F, 1214F, 1315F, 1417F

- Both heads are capable of final tightening.
- Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- 5° ratchet feed allows the fine feeding.
- Size is displayed on the head where it is easily visible. Working direction can also be seen at a glance with the arrow display.

**CAUTION** • Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

**SHORT RATCHET BOX END WRENCH** mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦
MR1S-0810F	8×10	18	21	7.5	8.5	107	38	5
-1012F	10×12	21	23	8.5	8.5	129	91	5
-1113F	11×13	22	25	8.5	8.5	135	105	5
-1214F	12×14	23.5	26.5	8.5	8.5	149	117	5
-1315F	13×15	25	28	8.5	8.5	155	133	5
-1417F	14×17	26.5	30.5	8.5	10	168	162	5
-1618F	16×18	29	32	10	11.5	170	210	5
-1719F	17×19	30.5	34	10	11.5	180	233	5



**SHORT RATCHET BOX END WRENCH SET (5pcs.)** mm

No.	▼g	📦
TMR1S05	580	1

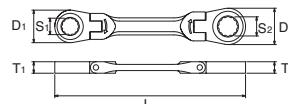
Flex Ratchet Box End Wrench MR1S-0810F, 1012F, 1214F, 1315F, 1417F



\* Ratchet head is available as replacement part.

- CAUTION**
- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
  - THE RATCHET END IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENING.

● SHORT RATCHET BOX END WRENCH



**EXTRA-LONG RATCHET BOX END WRENCH** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦
MR15L-10F	10	15.4	21	8.2	13.4	315	135	5
MR15L-12F	12	19	23.5	9.6	14.4	350	188	5
MR15L-13F	13	20.5	25	10.5	14.9	380	224	5
MR15L-14F	14	22	26.5	11	15.4	395	256	5
MR15L-15F	15	23.5	28	11.9	15.9	405	284	5
MR15L-17F	17	26	30.5	13.4	18.5	435	370	5
MR15L-19F	19	28.5	34	14.4	20.9	460	451	5

- Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- Tooth number of 72 and 5° ratchet feed allows the fine feeding.
- Size is displayed on the head where it is easily visible.
- Both the ratchet and offset wrench sides have single-side offset shape, allowing the use even with counterbore around the bolt · nut.
- Rotational direction can be switched with the lever on the head side, allowing the use in both tightening and loosening.

- CAUTION**
- Since the joint is sensitive to impact and twist, please be careful not to apply too much force.
  - Since excessive load can be placed on the long total length, please beware of over-torque.

● EXTRA-LONG RATCHET BOX END WRENCH (FLEX TYPE)



**RATCHET BOX END WRENCH** mm

No.	S <sub>1</sub> ×S <sub>2</sub> *	D <sub>1</sub>	D <sub>2</sub>	T	L	▼g	📦
RM- 8× 9	8× 9	17	19	10	120	70	10
- 8×10	8×10	17	22	10	120	70	10
-10×12	10×12	22	24	11	150	130	10
-12×14	12×14	24	29	14	165	230	10
-14×17	14×17	29	33	14	195	280	10

**RATCHET BOX END WRENCH SET (3pcs.)** mm

No.	▼g	📦
RM03	640	10

Ratchet Box End Wrench RM-10×12, 12×14, 14×17

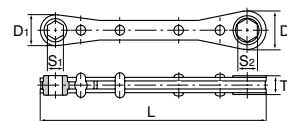
- \* When the diameter is 14mm or larger, the socket has 12 points.
- Smooth ratcheting operation.
  - Thin and round shaped head for use in confined spaces.
  - For light-load operation.
  - The feed angle is 20°.

- CAUTION**
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
  - THIS IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENINGS.

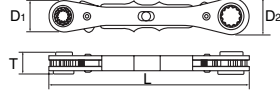
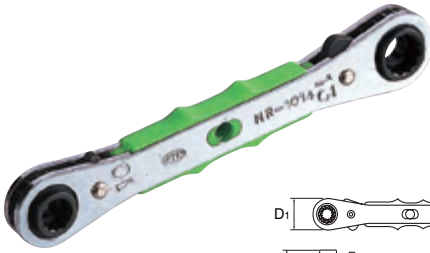
● RATCHET BOX END WRENCH



RM-8×9



● 4SIZE STANDARD RATCHET BOX END WRENCH

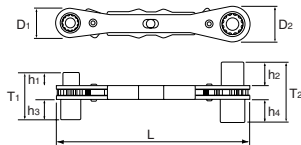
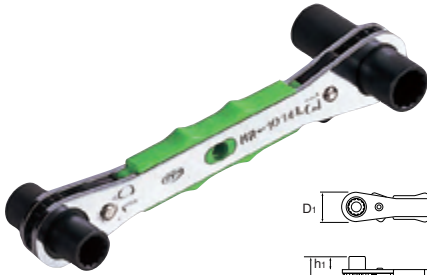


4SIZE STANDARD RATCHET BOX END WRENCH								mm
No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T	L	▽g	⊞	
MR-0813	8×12 · 10×13	21	25	15	143	130	10	
-1014	10×13 · 12×14	25	28	15	166	160	10	

- The socket is thin enough to operate in narrow quarters.
- The grip, with its wave form, is easy to hold and apply load.
- The green color is distinguishable in the workplace. It is also lightweight because it is made of plastic.

⚠ CAUTION \* ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • THIS IS ONLY FOR TEMPORARY FASTENINGS.  
 DO NOT USE IT FOR PERMANENT FASTENINGS.

● 4SIZE LONG RATCHET BOX END WRENCH



4SIZE LONG RATCHET BOX END WRENCH												mm
No.	Nominal Size	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	⊞
MR-0813L	8×12 · 10×13	10	17.5	15	17.5	21	25	34.5	44.5	143	180	10
-1014L	10×13 · 12×14	15	18	15	30	25	28	39.5	57.5	166	230	10

- The socket is long enough to operate in deep quarters.
- The grip, with its wave form, is easy to hold and apply load.
- The green color is distinguishable in the workplace. It is also lightweight because it is made of plastic.

⚠ CAUTION \* ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.  
 • THIS IS ONLY FOR TEMPORARY FASTENINGS.  
 DO NOT USE IT FOR PERMANENT FASTENINGS.



## 2. CONVENTIONAL TOOLS

# OPEN END WRENCHES and COMBINATION WRENCHES



### CAUTION

#### Open end wrench/combination wrench sets

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.
- If the set includes a holder, take care to avoid jamming your hands when taking tools from the holder.

#### Open end wrench/combination wrenches

- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
- Firmly hold the bolts and nuts using the end of the tool mouth.
- The open end wrench can come loose when too much force is applied.
- Take care not to allow the tool to slip off.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

### OPEN END WRENCH SET (8pcs.) · (10pcs.) mm

No. TS208	▼kg 1.1	📦 1
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1921, 2224	

- Resin forming tray (L444xW184xH48mm) attached.

### No. TS210 ▼kg 1.6 📦 1

Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427,	
-----------------	---	--

- Resin forming tray (L444xW184xH48mm) attached.

### OPEN END WRENCH SET (6pcs.) mm

No. TS206	▼g 550	📦 1
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719	
Holder	EHS-1	

### No. TS206A ▼g 450 📦 1

Open End Wrench	S2-05507, 0810, 1113, 1214, 1719, 2224	
Holder	EHS-1	

### OPEN END WRENCH SET (6pcs.) in

No. TS206B	▼g 700	📦 1
Open End Wrench in	S2- $\frac{5}{16} \times \frac{3}{8}$ , $\frac{13}{32} \times \frac{1}{2}$ , $\frac{1}{2} \times \frac{9}{16}$ , $\frac{19}{32} \times \frac{11}{16}$ , $\frac{5}{8} \times \frac{3}{4}$ , $\frac{29}{32} \times \frac{7}{8}$	
Holder	EHS-1	

### ● OPEN END WRENCH SET (8pcs.) · (10pcs.)



TS208



TS210

### ● OPEN END WRENCH SET (6pcs.)



TS206

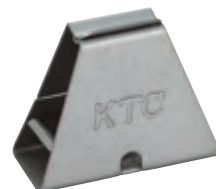
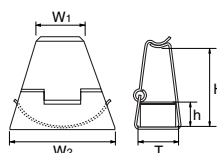


TS206A

### OPEN END WRENCH HOLDER

No.	H	h	W <sub>1</sub>	W <sub>2</sub>	T	▼g	📦
EHS-1	42	14	27	60	24	55	1

### ● OPEN END WRENCH HOLDER



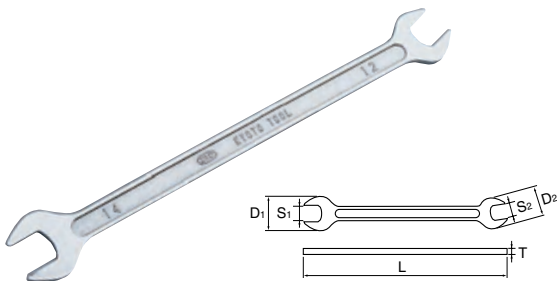
● OPEN END WRENCH



OPEN END WRENCH											mm
No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	⊞			
S2-05507	5.5×7	12.5	15.5	3.5	3.5	102	15	5			
-0607	6×7	13	15.5	3.5	3.5	102	15	5			
-0608	6×8	13	17.5	4	4	107	18	5			
-0708	7×8	15.5	17.5	4	4	112	20	5			
-0809	8×9	17.5	19.5	4.5	4.5	118	30	5			
-0810	8×10	17.5	21.5	4.5	4.5	122	40	5			
-1011	10×11	21.5	23.5	5	5	133	45	5			
-1012	10×12	21.5	25.5	5.5	5.5	138	60	5			
-1013	10×13	21.5	27.5	6	6	143	60	5			
-1014	10×14	21.5	29.5	6.5	6.5	148	65	5			
-1113	11×13	23.5	27.5	6	6	147	65	5			
-1214	12×14	25.5	29.5	6.5	6.5	157	75	5			
-1315	13×15	27.5	31.5	7	7	164	90	5			
-1317	13×17	27.5	36	7	7	168	100	5			
-1417	14×17	29.5	36	7	7	173	105	5			
-1618	16×18	33.5	38	8	8	188	135	5			
-1719	17×19	36	40	7.5	7.5	195	145	5			
-1721	17×21	36	44	8	8	203	170	5			
-1921	19×21	40	44	8	8	218	195	5			
-1922	19×22	40	46	8.5	8.5	223	205	5			
-2022	20×22	42	46	8.5	8.5	228	215	5			
-2123	21×23	44	48	8.5	8.5	233	240	5			
-2126	21×26	44	54	8.5	8.5	238	260	5			
-2224	22×24	46	50	9	9	244	260	5			
-2326	23×26	48	54	9	9	248	300	5			
-2427	24×27	50	55.5	9	9	253	320	5			
-2528	25×28	52	57.5	9.5	9.5	263	365	5			
-2632	26×32	54	65.5	10.5	10.5	273	460	5			
-2730	27×30	55.5	61.5	10	10	274	430	5			
-2732	27×32	55.5	65.5	10.5	10.5	284	480	5			
-2932	29×32	60	65.5	10.5	10.5	288	510	5			
-3032	30×32	61.5	65.5	10.5	10.5	294	525	5			
-3236	32×36	65.5	74	12	12	318	710	5			
-3538	35×38	72	78	13.5	13.5	334	905	5			
-3638	36×38	74	78	13.5	13.5	354	945	5			
-4146	41×46	84	94	14	14	399	1315	5			

OPEN END WRENCH											in
No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	⊞			
S2-1/4 x 5/16	6.3×7.9	13	17.5	4	4	107	18	5			
-5/16 x 3/8	7.9×9.5	17.5	21.5	4.5	4.5	122	40	5			
-3/8 x 7/16	9.5×11.1	21.5	23.5	5	5	133	45	5			
-1/2 x 9/16	10.3×12.7	21.5	27.5	6	6	143	60	5			
-7/16 x 1/2	11.1×12.7	23.5	27.5	6	6	147	65	5			
-1/2 x 9/16	12.7×14.2	27.5	29.5	6.5	6.5	160	74	5			
-9/16 x 5/8	14.2×15.8	29.5	33.5	7	7	169	97	5			
-19/32 x 11/16	15 x 17.4	31.5	36	7	7	175	106	5			
-5/8 x 11/16	15.8×17.4	33.5	36	7	7	177	110	5			
-5/8 x 3/4	15.8×19	33.5	40	7.5	7.5	192	133	5			
-11/16 x 3/4	17.4×19	36	40	7.5	7.5	195	145	5			
-3/4 x 25/32	19 x 19.8	40	42	8	8	216	177	5			
-3/4 x 13/16	19 x 20.6	40	44	8	8	218	195	5			
-25/32 x 7/8	19.8×22.2	42	46	8.5	8.5	228	215	5			
-13/16 x 7/8	20.6×22.2	44	46	8.5	8.5	231	224	5			
-15/16 x 1	23.8×25.4	50	52	9	9	249	300	5			
-1 x 1-1/16	25.4×26.9	52	55.5	9	9	256	327	5			
-1-1/8 x 1-1/4	28.5×31.7	60	65.5	10.5	10.5	288	510	5			

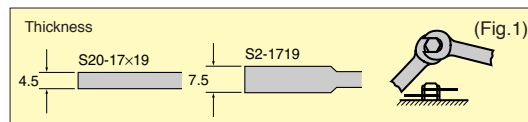
● SLIM TYPE OPEN END WRENCH



SLIM TYPE OPEN END WRENCH (S20)											mm
No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T	L	▽g	⊞				
S20-10×12	10×12	21	26	4	210	64	5				
-12×10	12×10	26	21	4	210	64	5				
-12×14	12×14	26	30	4	215	75	5				
-14×12	14×12	30	26	4	215	75	5				
-17×19	17×19	36	40	4.5	235	120	5				
-19×17	19×17	40	36	4.5	235	120	5				

SLIM TYPE OPEN END WRENCH SET (6pcs.)											mm
No. S206						▽g 544		⊞ 1			
Slim Type Open End Wrench (mm)											S20-10×12, 12×10, 12×14, 14×12, 17×19, 19×17

- Set of each 2 pcs. of same size combination with different angles.
- Fit to use in small spaces for tightening/loosening double nuts (Fig.1)





**FLEX-SOCKET SPANNER** mm

No.	S	D <sub>1</sub>	D <sub>2</sub>	T	L	▼g	📦
<b>FBS-10</b>	10	22	14	6	180	66	5
-12	12	26	17	6.5	205	100	5
-13	13	28	18	6.5	210	105	5
-14	14	29	19	6.5	230	140	5
-17	17	36	23	7	250	200	5
-19	19	40	26	7.5	265	230	5

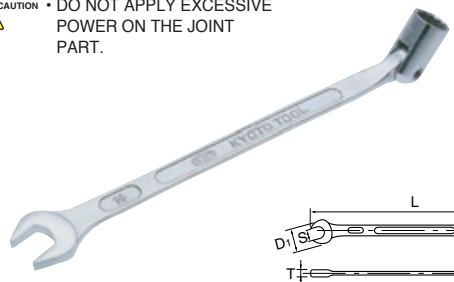
**FLEX-SOCKET SPANNER SET (6pcs.)** mm

No. FBS6	▼g 800	📦 1
Flex-Socket Spanner	FBS-10, 12, 13, 14, 17, 19	

- Quick turning at open end side and tight fastening at socket side.

● **FLEX-SOCKET SPANNER**

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



**FLEX-HEAD SOCKET** mm

No.	S <sub>1</sub> ×S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	A	L	▼g	📦
<b>FBH1 - 8×9</b>	8×9	12	13.5	5.5	200	80	10
- 8×10	8×10	12	14.5	5.5	200	90	10
-10×12	10×12	14.5	17	5.5	215	120	10
-12×14	12×14	17	20	6.5	230	160	10
-13×14	13×14	18.5	20	6.5	230	170	10
-14×17	14×17	20	23.5	7.5	245	220	10
-17×19	17×19	23.5	26	7.5	250	250	10

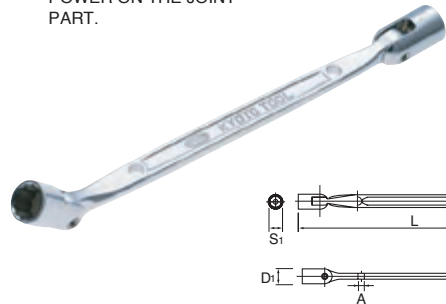
**FLEX-HEAD SOCKET SET (3pcs.)** mm

No. FBH103	▼g 370	📦 1
Flex-Head Socket	FBH1-8×9, 10×12, 13×14	

- Convenient for use in narrow space and for quick turning.

● **FLEX-HEAD SOCKET**

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



**COMBINATION WRENCH SET (8pcs.) · (10pcs.) · (12pcs.)** mm

No. TMS208	▼kg 1	📦 1
Combination Wrench	MS2-07, 08, 10, 12, 13, 14, 17, 19	

- Pla. tray (L444×W184×H48mm)

No. TMS210	▼kg 1.1	📦 1
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 15, 17, 19	

- Pla. tray (L444×W184×H48mm)

No. TMS212	▼kg 1.6	📦 1
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 15, 17, 19, 21, 22	

- Pla. tray (L444×W184×H48mm)

**COMBINATION WRENCH SET (8pcs.)** in

No. TMS208B	▼kg 1	📦 1
Combination Wrench	in MS2- 1/4, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4	

- Pla. tray (L444×W184×H48mm)

● **COMBINATION WRENCH SET (8pcs.) (10pcs.) (12pcs.)**



TMS208

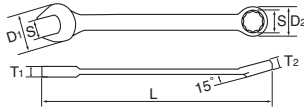


TMS210



TMS212

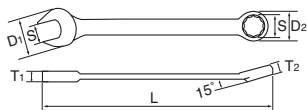
● COMBINATION WRENCH



COMBINATION WRENCH									mm
No.	S*	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g		
MS2-032	3.2	8	7.5	3	3	75	6	5	
-04	4	9	8.5	3	4	80	8	5	
-045	4.5	10	9	3	4	85	10	5	
-05	5	11	9.5	3	4.5	90	11	5	
-055	5.5	12.5	10	3	4.5	96	13	5	
-06	6	13	10.5	3	4.5	96	14	5	
-07	7	15.5	12	3.5	5	111	20	5	
-08	8	17.5	13	4	5.5	126	28	5	
-09	9	19.5	14.5	4.5	6	136	36	5	
-10	10	21.5	16	4.5	6.5	151	42	5	
-11	11	23.5	17	5	7	161	55	5	
-12	12	25.5	18	5.5	7.5	170	65	5	
-13	13	27.5	19	6	8.5	188	85	5	
-14	14	29.5	20.5	6	9.5	190	98	5	
-15	15	31.5	22.5	7	10	200	119	5	
-16	16	33.5	23.5	7	10.5	215	134	5	
-17	17	36	25	7	10.5	225	153	5	
-18	18	38	26.5	8	11.5	241	184	5	
-19	19	40	27.5	7.5	12	256	205	5	
-20	20	42	29.5	8	12	271	234	5	
-21	21	44	30.5	8	13	289	267	5	
-22	22	46	32	8.5	13.5	304	305	5	
-23	23	48	33.5	8.5	14.5	311	331	5	
-24	24	50	35	9	15	337	380	5	
-25	25	52	36	9	15.5	351	423	5	
-26	26	54	37.5	9	16	371	466	5	
-27	27	55.5	39	9	16.5	381	502	5	
-28	28	57.5	40.5	9.5	17	401	561	5	
-29	29	60	43.5	10	18	421	650	1	
-30	30	61.5	43.5	10	18	446	687	1	
-31	31	63.5	45.5	10.5	18	462	790	1	
-32	32	65.5	46.5	10.5	18	471	836	1	
-33	33	67.5	47.5	11	20	477	904	1	
-34	34	69.5	52	11	21	480	1030	1	
-35	35	72	52	12	21	481	1070	1	
-36	36	74	52	12	21	501	1155	1	
-38	38	78	54.5	13.5	22	521	1382	1	
-41	41	84	59	14	24.5	542	1680	1	
-46	46	94	66	14	26	562	2142	1	

\* 5mm and below the offset side is the hexagonal diameter. (Except the following from 5mm)

● COMBINATION WRENCH



COMBINATION WRENCH									in
No.	S*	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g		
MS2-1/8	3.1	8	7.5	3	3	75	6	5	
-3/32	3.9	9	8.5	3	4	80	8	5	
-3/16	4.7	10	9	3	4	85	10	5	
-13/64	5.1	11	9.5	3	4.5	90	11	5	
-7/32	5.5	12.5	10	3	4.5	96	13	5	
-15/64	5.9	13	10.5	3	4.5	96	14	5	
-1/4	6.3	13	10.5	3	4.5	96	14	5	
-9/32	7.1	15.5	12	3.5	5	111	20	5	
-5/16	7.9	17.5	13	4	5.5	126	28	5	
-11/32	8.7	19.5	14.5	4.5	6	136	36	5	
-3/8	9.5	21.5	16	4.5	6.5	151	42	5	
-7/16	11.1	23.5	17	5	7	161	55	5	
-1/2	12.7	27.5	19	6	8.5	188	85	5	
-9/16	14.2	29.5	20.5	6	9.5	190	98	5	
-19/32	15	31.5	22.5	7	10	200	119	5	
-5/8	15.8	33.5	23.5	7	10.5	215	134	5	
-11/16	17.4	36	25	7	10.5	225	153	5	
-3/4	19	40	27.5	7.5	12	256	205	5	
-25/32	19.8	42	29.5	8	12	271	234	5	
-13/16	20.6	44	30.5	8	13	289	267	5	
-7/8	22.2	46	32	8.5	13.5	304	305	5	
-15/16	23.8	50	35	9	15	337	380	5	
-1	25.4	52	36	9	15.5	351	423	5	
-1-1/16	26.9	55.5	39	9	16.5	381	502	5	
-1-1/8	28.5	60	43.5	10	18	421	650	5	
-1-3/16	30.1	61.5	43.5	10	18	446	687	5	
-1-1/4	31.7	65.5	46.5	10.5	18	471	836	5	
-1-5/16	33.3	67.5	47.5	11	20	477	904	5	
-1-3/8	34.9	72	52	12	21	481	1070	1	
-1-7/16	36.5	74	52	12	21	501	1155	1	
-1-1/2	38.1	78	54.5	13.5	22	521	1382	1	

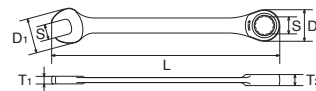
\* 13/64in and below the offset side is the hexagonal diameter.

**RATCHET COMBINATION WRENCH STRAIGHT TYPE**

No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	Feed	L	▼g	☒
MSR1A-08	8	16.2	16.4	4	6.5	6°	140	40	5
MSR1A-09	9	18.2	18.3	4.4	6.9	6°	150	50	5
MSR1A-10	10	20.5	20	4.8	7.3	5°	159	50	5
MSR1A-11	11	22.6	21.4	5.2	7.7	5°	165	70	5
MSR1A-12	12	24.6	22.6	5.5	8.2	5°	172	70	5
MSR1A-13	13	26.7	24.5	5.8	8.6	5°	178	80	5
MSR1A-14	14	28.8	27	6.2	9	5°	191	110	5
MSR1A-15	15	30.8	28.2	6.5	9.4	5°	200	120	5
MSR1A-16	16	33.2	30.3	6.8	9.9	5°	208	140	5
MSR1A-17	17	35.1	31.6	7.2	10.3	5°	225	170	5
MSR1A-18	18	37.2	32.3	7.7	10.7	5°	236	190	5
MSR1A-19	19	39.3	33.7	8.2	11.2	5°	248	230	5
MSR1A-21	21	46.2	40.1	9	13	4°	290	340	5
MSR1A-22	22	46.2	40.1	9	13	4°	290	340	5
MSR1A-24	24	51.5	46.5	10	14.5	4°	323	500	5

- Ratchet is capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding below 9 mm and above 21mm).
- Working direction can be seen at a glance with the arrow display.
- Nonslip grip design is adopted.

**● RATCHET COMBINATION WRENCH (STRAIGHT TYPE)**



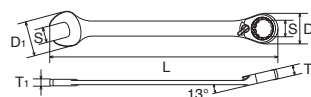
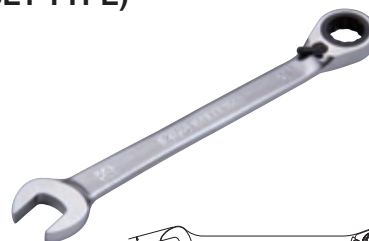
**RATCHET COMBINATION WRENCH OFFSET TYPE**

No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	Feed	L	▼g	☒
MSR2A-08	8	16.2	16.4	4.6	6.5	6°	140	40	5
MSR2A-10	10	20.5	20	5.3	7.3	5°	159	50	5
MSR2A-12	12	24.6	22.6	6	8.2	5°	172	80	5
MSR2A-13	13	26.7	24.5	6.4	8.6	5°	178	90	5
MSR2A-14	14	28.8	27	6.8	9	5°	191	110	5
MSR2A-17	17	35.1	31.6	7.7	10.3	5°	226	170	5
MSR2A-19	19	39.3	33.7	8.6	11.2	5°	248	220	5

- Ratchet is capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Rotation direction can be switched by lever.
- Nonslip grip design is adopted.

**CAUTION** • Please switch the lever securely from left to right since it may be the cause of damage or idling.

**● RATCHET COMBINATION WRENCH (OFFSET TYPE)**



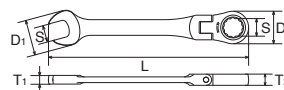
**SEMI-SHORT RATCHET COMBINATION WRENCH**

No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	Feed	L	▼g	☒
MSR1A-08F	8	16.2	16.4	4.3	6.5	6°	127	40	5
MSR1A-10F	10	20.5	20	5	7.3	5°	136	60	5
MSR1A-12F	12	24.6	23	5.8	8.2	5°	148	80	5
MSR1A-13F	13	26.7	25	6.1	8.6	5°	155	100	5
MSR1A-14F	14	28.8	27	6.4	9	5°	162	110	5
MSR1A-17F	17	35.1	31.6	7.6	10.3	5°	191	170	5
MSR1A-19F	19	39.3	33.7	8.6	11.2	5°	216	230	5

- Intermediate size of standard and short that considered the operability in tight spaces.
- Ratchet is capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Working direction can be seen at a glance with the arrow display.
- Head tilt angle is 180°.
- Nonslip grip design is adopted.

**CAUTION** • Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

**● SEMI-SHORT RATCHET COMBINATION WRENCH (FLEX TYPE)**



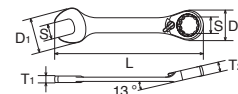
**SHORT RATCHET COMBINATION WRENCH OFFSET TYPE**

No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	Feed	L	▼g	☒
MSR2SA-08	8	16.2	16.4	3.8	6.4	6°	90	30	5
MSR2SA-10	10	20.5	20	4.8	7.3	5°	95	40	5
MSR2SA-12	12	24.6	22.6	5.5	8.2	5°	106	50	5
MSR2SA-13	13	26.7	24.5	5.8	8.6	5°	108	60	5
MSR2SA-14	14	28.8	27	6.2	9	5°	115	70	5
MSR2SA-17	17	35.1	31.6	7	10.3	5°	127	110	5

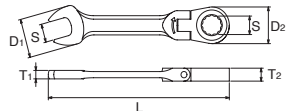
- Ratchet is capable of final tightening.
- 5° feed that's capable of smooth continuous work in tight spaces (excluding 8mm).
- Rotation direction can be switched by lever.
- Nonslip grip design is adopted.

**CAUTION** • Please operate the switching lever on left and right securely since it may be the cause of damage or idling.

**● SHORT RATCHET COMBINATION WRENCH (OFFSET TYPE)**



● SHORT RATCHET COMBINATION WRENCH (FLEX TYPE)



SHORT RATCHET COMBINATION WRENCH									
No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	📦	
MSR2S-08F	8	17.3	18	4	7.4	90	39	5	
MSR2S-10F	10	21.5	21	4.5	8.4	110	58	5	
MSR2S-11F	11	23.5	22	5	8.4	115	67	5	
MSR2S-12F	12	25.5	23.5	5.5	8.4	125	79	5	
MSR2S-13F	13	27.5	25	6	8.4	135	94	5	
MSR2S-14F	14	29.5	26.5	6	8.4	140	104	5	
MSR2S-15F	15	31.4	28	7	8.4	145	119	5	
MSR2S-16F	16	33.4	29	7	10	155	144	5	
MSR2S-17F	17	36	30.5	7	10	165	163	5	
MSR2S-18F	18	38	32	8	11.4	175	201	5	
MSR2S-19F	19	40	34	8	11.4	185	221	5	

SHORT RATCHET COMBINATION WRENCH SET (6pcs.)			
No.	TMSR2S06	▽g	📦
Short Ratchet Combination Wrench (Flex Type)		540	1
MSR2S-08F, 10F, 12F, 13F, 14F 17F			

- Ratchet is capable of final tightening.
- Since the span of the ratchet offset wrench and hinge sections is shortened and thickness is designed thin and flat, smooth continuous work in tight spaces is possible.
- Tooth number of 72 and 5° ratchet feed allows the fine feeding.
- Size is displayed on the head where it is easily visible. Working direction can also be seen at a glance with the arrow display.

⚠ CAUTION • Since the joint is sensitive to impact and twist, please be careful not to apply too much force.

● RATCHET COMBINATION WRENCH & SOCKET SET (WITH 3/8"sq. DRIVE ADAPTER)



Combination example (MSR2S-14F + BZ14-BA3)



Comparison with ratchet handle (BR3E)

RATCHET COMBINATION WRENCH & SOCKET SET			
No.	TBZ1407	▽g	📦
Drive adapter for Ratchet Combination Wrench		205	1 (1 Carton)
Socket for 14mm Ratchet (12pt.)		BZ14-BA3	
Ratchet Combination Wrench		MSR2S-14F	

- With a plastic case and storage tray that are convenient for storage.

● RATCHET COMBINATION WRENCH & SOCKET SET



RATCHET COMBINATION WRENCH & SOCKET SET			
No.	TBZ1406	▽g	📦
Socket for 14mm Ratchet (12pt.)		BZ14-08W, 10W, 12W, 13W, 14W	
Ratchet Combination Wrench		MSR2S-14F	

- With a plastic case and storage tray that are convenient for storage.



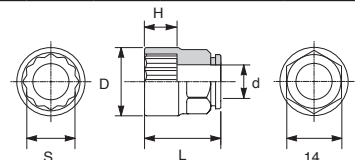
Combination example (MSR2S-14F + BZ14-12W)

● SOCKET FOR 14mm RATCHET



SOCKET FOR 14mm RATCHET								
No.	S	D	L	H	d	▽g	📦	
BZ14-08W	8	12.2	19	5.5	6	17	5	
BZ14-10W	10	14.7	19	5.5	9	17	5	
BZ14-12W	12	17	19	7.5	9	17	5	
BZ14-13W	13	18.5	20	7.5	9	20	5	
BZ14-14W	14	20	20.5	8	10.5	20	5	

- By combining with a 14mm ratchet combination wrench or ratchet offset wrench, both the outer diameter and height become compact, making it effective in small spaces.
- It can be used for long and protruded bolts since the socket has a through hole.

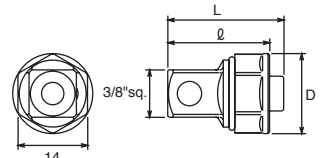


● RATCHET BOX END WRENCH 3/8"sq. DRIVE ADAPTER



3/8"sq. DRIVE ADAPTOR					
No.	D	L	ℓ	▽g	📦
BZ14-BA3	16.1	23.4	20.5	20	5

- By combining with a 14mm ratchet combination wrench or ratchet offset wrench, various 3/8"sq. sockets and bit sockets can be used.
- With the adoption of union mechanism, socket can be held securely.



# 2. CONVENTIONAL TOOLS

## PROFIT® TOOLS



**CAUTION**

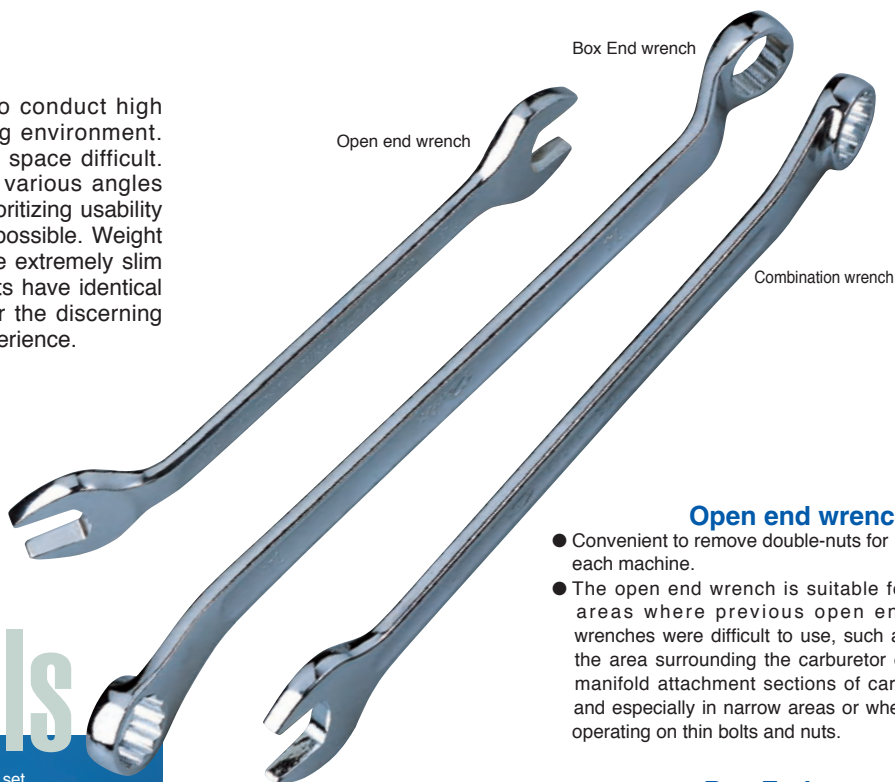
**PROFIT® tools**

- The durability is lower than that of the standard type due to the thin wall type design.
- Take care to not over-apply force.
- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
- Make sure that bolts and nuts are inserted correctly and fully into the tool. (Open end wrenches)

- Insert the bolts and nuts fully. (Box end wrenches)
- The open end wrench can come loose when too much force is applied.
- Take care not to allow the tool to slip off.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

### PROFIT® tool

The professional mechanic is expected to conduct high quality work in a confined space operating environment. Previous tools make working in a confined space difficult. Mechanics prefer to be able to work from various angles without changing the tool. Precision tools prioritizing usability have been developed in order to make this possible. Weight and excessive mass has been shed from the extremely slim tool body and open end wrenches and offsets have identical diameters with differing angles. The tool for the discerning professional who can feel the torque with experience.



**Open end wrench**

- Convenient to remove double-nuts for each machine.
- The open end wrench is suitable for areas where previous open end wrenches were difficult to use, such as the area surrounding the carburetor or manifold attachment sections of cars, and especially in narrow areas or when operating on thin bolts and nuts.

**Box End wrench**

- Removal and attachment of bolts and nuts in narrow areas, such as the flange joints or tight spaces in industrial machines.
- Suitable for the differential propeller shaft joint section of cars, drive shaft and clutch overhaul for front drive vehicles, carburetor and manifold related attachment and removal operations during engine overhaul.
- Operations that require deep reach in narrow areas, such as bumpers and inside panels during vehicle maintenance.



● PROFIT® TOOL BOX END WRENCH & OPEN END WRENCH SET (6pcs.)

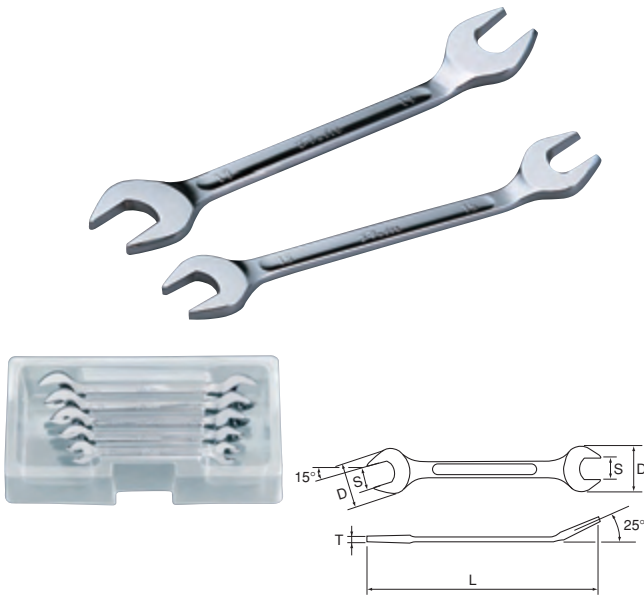


PROFIT® TOOL BOX END WRENCH & OPEN END WRENCH SET (6pcs.)		mm
No. SM306	▼ g 320	⊞ 5
Open End Wrenches	S 30-10, 12, 14	
Box-End Wrenches	M 30-10, 12, 14	

• Each set includes Box-End and Open-End wrenches.

\*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL OPEN END WRENCH

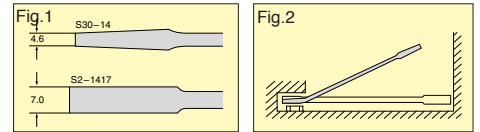


PROFIT® TOOL OPEN END WRENCH							mm
No.	S	D	T	L	▼g	📦	
<b>S30- 8</b>	8	19	3	120	30	10	
-10	10	22	3.5	130	35	10	
-12	12	27	4.3	140	53	10	
-13	13	29	4.5	150	60	10	
-14	14	30	4.6	160	68	10	
-15	15	33	4.7	170	80	10	
-17	17	36	4.8	185	105	10	
-19	19	40	5	200	125	10	

PROFIT® TOOL OPEN END WRENCH SET (5pcs.)				mm
<b>No. TS305</b>	▼g 380		📦 1	
Profit Tool™ Open End Wrench S30-8, 10, 12, 13, 14				
Plastic Case L215xW120xH45mm				

- Placed in the tray and housed in a transparent plastic case.
- Extra thin type open end wrench with one bent end and one tapered edge end. (Fig.1)
- The diameter is limited to one size and set with a 25 degree tilt angle on one end only.
- Convenient for use on double nuts on various machineries.
- Effective in places where it's difficult to use conventional wrenches, such as near surroundings of automobile carburetors and manifolds. Particularly effective in tight spaces or with thin bolts and nuts. (Fig.2)

COMPARISON OF TAPERED SHAPE ON THE TIP (to the KTC's conventional shape)



\*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

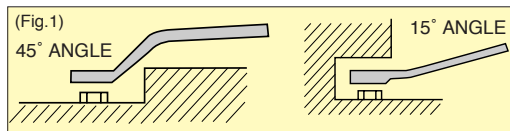
●PROFIT® TOOL BOX END WRENCH



PROFIT® TOOL BOX END WRENCH							mm
No.	S	D	T	L	▼g	📦	
<b>M30- 8</b>	8	12	4.5	155	30	10	
-10	10	15	5.5	175	40	10	
-12	12	18	6.5	200	60	10	
-13	13	19	7	210	70	10	
-14	14	21	7.5	225	80	10	
-15	15	22	8	231	90	10	
-17	17	25	9	244	100	10	
-19	19	27	10	270	120	10	

PROFIT® TOOL BOX END WRENCH SET (5pcs.)				mm
<b>No. TM305</b>	▼g 460		📦 1	
Profit Tool™ Box End Wrench M30-8, 10, 12, 13, 14				
Plastic Case L187xW190xH44mm				

- Placed in the tray and housed in a transparent plastic case.
- Smaller diameter of box-ends and thinner body angled 45° x 15°.
- Convenient for use on bolts and nuts used in flange joints of industrial machineries or between narrow gaps. (Fig.1)
- Effective for automobile parts including differentials, propeller shafts, joints and drive shafts of front-drive vehicles, as well as for clutch overhauling. Also convenient for attaching or removing carburetors and manifolds during engine overhauls.
- Suitable for automobile servicing operations in tight and deep spaces, such as behind bumpers or inside panels.



\*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

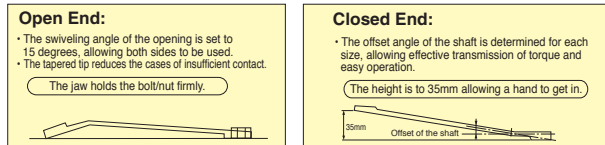
●PROFIT® TOOL COMBINATION WRENCH



PROFIT® TOOL COMBINATION WRENCH										mm
No.	S	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L		▼g	📦	
<b>MS30- 8</b>	8	18	11.5	2.5	4.5	125	18°	20	10	
-10	10	21.5	14.5	3	5.5	150	15°	30	10	
-12	12	26	17.5	3.8	6.5	170	13°	50	10	
-13	13	28.5	18.5	4	7	185	12°	60	10	
-14	14	29.5	20	4.1	7.5	200	11°	80	10	
-15	15	32	21	4.2	8	215	10°	90	10	
-17	17	36	24	4.3	9	240	9°	125	10	
-19	19	40	26.5	4.5	10	260	9°	155	10	

PROFIT® TOOL COMBINATION WRENCH SET (5pcs.)				mm
<b>No. TMS305</b>	▼g 440		📦 1	
Open-End Wrenches MS30-8, 10, 12, 13, 14				
Plastic Case L187xW190xH44mm				

- Placed in the tray and housed in a transparent plastic case.
- The closed end is designed to have Power Fit.
- Slim in form: designed in pursuit of thin lightweight wrenches.
- Shaft designed to be tapered for good torque transmission and ductility.
- Shaft length designed to be optimal for sufficient fastening torque.



\*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

# 2. CONVENTIONAL TOOLS

## HANDLE WRENCHES



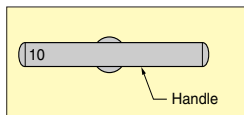
### CAUTION HANDLE WRENCHES

- DO NOT EXTEND A WRENCH BY CONNECTING A PIPE, ETC.
- FIT THE BOLT OR NUT COMPLETELY INTO THE DEEP PART OF THE SOCKET.
- DO NOT USE A WRENCH AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.

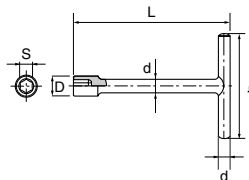
### T-SHAPED WRENCH

No.	S (Hexagonal)	D	d	ℓ	L	▽g	☒
TH- 8	8	12	8	200	255	300	10
-10	10	14	9	200	255	300	10
-12	12	17	10	250	255	430	10
-13	13	19	10	250	255	440	10
-14	14	20	11	250	255	440	10
-17	17	24	12	300	305	540	10
-19	19	29	14	300	305	680	10
-21	21	31	14	300	305	780	10

• Size marked on the top of the handle for easy recognition.



### ● T-SHAPED WRENCH

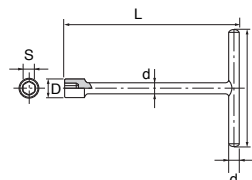


### T-SHAPED WRENCH WITH SHORT HANDLE

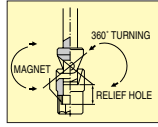
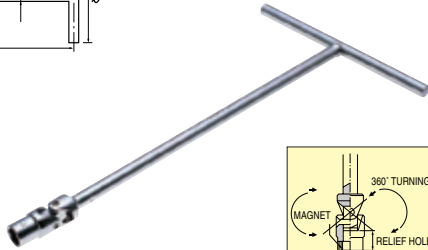
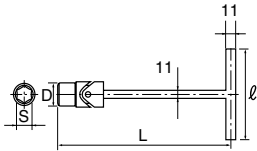
No.	S (Hexagonal)	D	d	ℓ	L	▽g	☒
TH- 8N	8	12	8	130	250	300	1
-10N	10	14	9	130	250	300	1
-12N	12	17	10	130	250	430	1

• Short handle for quick turning.

### ● T-SHAPED WRENCH WITH SHORT HANDLE



● FLEX T-SHAPED WRENCH  
(Socket is magnetised)

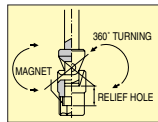
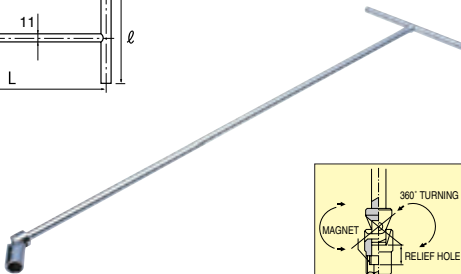
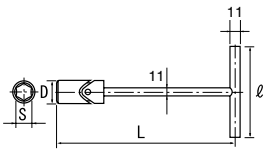


FLEX T-SHAPED WRENCH

No.	S (Hexagonal)	D	ℓ	L	▼g	📦
THF2-10	10	15	180	330	400	10
-12	12	17	180	330	405	10
-13	13	19	180	330	410	10
-14	14	20	180	335	410	10
-17	17	24	180	335	430	10

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● FLEX T-SHAPED WRENCH (LONG)  
(Socket is magnetised)

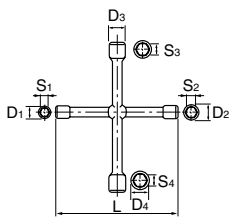


FLEX T-SHAPED WRENCH (LONG)

No.	S (Hexagonal)	D	ℓ	L	▼g	📦
THF2-10L	10	15	180	700	680	10
-12L	12	17	180	700	680	10
-13L	13	19	180	700	690	10
-14L	14	20	180	705	690	10
-17L	17	24	180	705	700	10

⚠ CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● CROSS RIM WRENCH



CROSS RIM WRENCH

No.	S <sub>1</sub> ×S <sub>2</sub> ×S <sub>3</sub> ×S <sub>4</sub> (Hexagonal)	D <sub>1</sub> ×D <sub>2</sub> ×D <sub>3</sub> ×D <sub>4</sub>	L	▼kg	📦
XH-14-21	14×17×19×21	20×25×29×31	400	1.3	10
-17-23	17×19×21×23	25×29×31×33	400	1.5	10
-19-26	19×21×23×26	29×31×33×37	400	1.5	10
-19-27	19×22×24×27	29×32×35×39	400	1.6	10

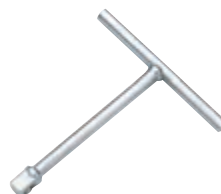
Note: Please refer below pages for Drive Tools.



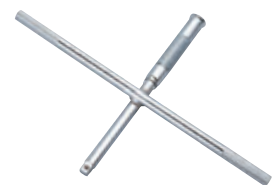
1/4" sq. ▶ P.53



3/8" sq. ▶ P.63



1/2" sq. ▶ P.71



3/4" sq. ▶ P.76



# 2. CONVENTIONAL TOOLS

# SCREWDRIVERS



**WARNING**

**Screwdrivers**

- Do not use if there is a live electric current. The plastic on the grip does not provide insulation against electrical current.



**CAUTION**

- Use screwdrivers that conform to the size of the screws.
- Do not use the screwdriver as a lever, scraper, punch, or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- The use of protective goggles is recommended.
- Do not use screwdrivers with chipped, worn, or cracked heads.
- Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.



Go Through type



Magnetic type

■ **Screwdriver line up**



■ **Standard screwdriver (21<sup>st</sup> Century Version Tools) ▶ P.137**

The square shaft allows for easy delivery of high torque while being effective in the direction it is being pushed in. A double format consisting of environmentally friendly polypropylene and elastomer, which provides a soft, comfortable grip. A hexagonal bolster is attached when extra power is needed. (Excluding stubby screwdrivers)



■ **Palm screwdriver ▶ P.138**

A soft grip that reduces fatigue. A hexagonal bolster is attached when high torque for larger sizes is needed.



■ **Plastic grip screwdriver ▶ P.138**

Acetyloid plastic grip with high durability. A powerful piercing type screwdriver with a black finish using special steel in the shaft.



■ **Soft grip screwdriver ▶ P.143**

The screwdriver employs a handle that is easy to grip and turn while applying force in pursuit of user-friendliness. Careful consideration has been provided in selecting grip material by using environmentally-friendly wood and plastic.



■ **Wooden grip screwdriver ▶ P.145**

Conventional screwdriver using natural timber for a soft, gentle grip. Wide grooves have been designed in 4 sections for the purpose of improved grip, concentrating the application of strength by the thumb and little finger, facilitating gripping and greater power for use.

■ **Other screwdrivers**

**Insulated screwdriver ▶ P.197**



**Heavy duty handled screwdriver ▶ P.139**



**Flat ratchet screwdriver ▶ P.142**



**Short stubby screwdriver ▶ P.140**



\*Please check the merchandise inventory for a product that is marked by before placing an order.

\*Except special screwdrivers **Chart of KTC screwdrivers** ● = with magnetic type

Grip		Shaft		Through type				Non-through type		
				Rounded shaft		Square shaft		Rounded shaft		Thin shaft (Rounded shaft)
		Material	Shape	Bolster		Bolster		Bolster		
		Yes	No	Yes	No	Yes	No	No		
Plastic	Square		●D10P2 / D10M2				PDDZ / MDDZ ●D10P / D10M	●D10SP / D10SM		
	Hexagon				●DPD / DMD					
	Rounded		●PDD1 / MDD1							
Soft	Round		●D8P2 / D8M2				●D8P / D8M			
	Square		●D7P2 / D7M2	●D1P2 / D1M2		●ND2P / ND2M	●D7P / D7M	●D7SP / D7SM		
	Hexagon									
	Rounded					●PDEA / MDEA*	●D6P / D6M	MDEA1		
Wooden	Hexagon	●ND3P / ND3M								
	Rounded		●D12P2 / D12M2 PD / MD							

\*Only PDEA-2, 3, MDEA-100, 150

Selecting screwdrivers

●As there is a great variety of screwdriver makes available, how do you select the appropriate type?  
Here, we will show you ways of selecting screwdrivers more suited to your purpose while showing you screwdriver types and functions.

**1 Select the grip**

Firstly, the grip is a very important factor when selecting a screwdriver. Select the material that it is best suited to your project. Every effort has been carried out to improve the grip but as users all have differently shaped hands, it is important that you try gripping the tool before purchase. Try this in the store in front of the sales staff.

**① Material**

**a. Plastic (hard)**  
Mainly made from hard durable materials that do not get dirty easily, such as Acetyloid.

**b. Plastic (Soft)**  
The elasticity of the surface provides a soft grip.

**c. Wooden**  
A conventional, familiar screwdriver that uses wooden materials. The screwdriver provides good grip even for greasy hands.

**② Shape**

**a. Round type**  
The round grip that allows for the hand to firmly grasp the tool is shaped for easier use when pushing and turning action is required. The ratio of pushing and turning for a basic screwdriver is said to be 7:3. This shape is often used for wooden screws that especially require the pushing and turning action. It is also suitable for women and when the application of strength by the user is difficult.

**b. Square - hexagonal - rounded type**  
A standard shape held using the basic side-grip method allows for easy use when turning rapidly or hitting the washer.

**2 Select the shaft**

The shaft is an important component as well as the grip. Select the correct shaft from the 5 points provided below.

**① Go Through and non-through**  
The through type shaft can also be used as a shock screwdriver for hitting washers. (However, the tool will quickly deteriorate.) The piercing type shaft is identified in the catalog by this symbol.

**② Shape**

**a. Rounded shaft** (○)  
A common shape that is easy to use when turning while supporting the shaft with the hand.

**b. Square shaft** (◇)  
Open end wrenches can be used for leverage when high turning torque is needed.

**③ Bolster**  
The wrench can be used for leverage by attaching a hex to the root of the shaft when high torque is needed.

**④ Material**

**a. Cr-V (Chrome vanadium copper)**  
A special steel that has anti-wear properties that are desired in screwdrivers. The steel is often used in high-grade models.

**b. SWRH62A (Hard drawn steel wired material)**  
A common steel material used for screwdrivers regulated by JIS standards.

**c. S55C, S45C (Carbon steel)**  
A common steel material used for screwdrivers regulated by JIS standards.

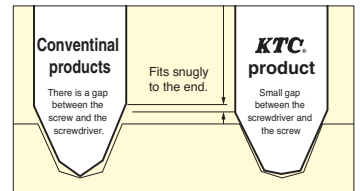
**⑤ Magnetic tip**  
These tools have magnetized tips. The magnetic type is identified in the catalog by this symbol.

**Magnetic type**

\*Please check the merchandise inventory for a product that is marked by ● before placing an order.

## New plastic grip screwdriver A new design that embodies a new concept.

- The design of the edges of the screwdriver has been modified in order to produce a new type of screwdriver.
- The square form (shape) allows for easy delivery of high torque while being effective in the direction it is being pushed in.
- A triple format consisting of environmentally friendly polypropylene and elastomer which provides a soft, comfortable grip.
- The grip end is color coded with red ⊕ (Cross head) and green ⊖ (Flat head) for easy distinction.
- Improved ease of use due to the tip shape that snugly fits the screw.
- The axle is of a hexagon design. The attached bolster is effective when high torque is needed.  
(Excluding stubby screwdrivers)
- The cross screwdriver reduces the gap with the screw and prevents cam out (the applied force from being forced outwards).



**\*Cam out**  
This refers to the force of the screwdriver that escapes when turning the screw.

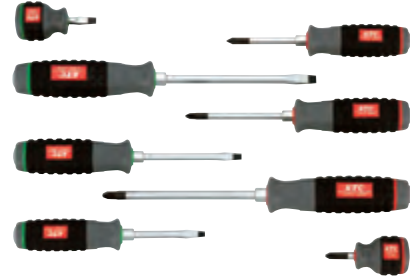
### STANDARD SCREWDRIVER SET (8pcs.)

<b>No. TPMD18</b>	▼kg 1.2	📦 1
Plastic grip screwdriver piercing type (cross)	D1P2-1, 2, 3	
Plastic grip screwdriver piercing type (flat)	D1M2-5, 6, 8	
Plastic grip stubby screwdriver (cross)	D1PS-2	
Plastic grip stubby screwdriver (flat)	D1MS-6	

- With hexagonal bolster. (Excluding stubby screwdrivers)
- The tip is magnetized.
- Cr-V is used for shaft material.



### ● STANDARD SCREWDRIVER SET (8pcs.) D.PAT.

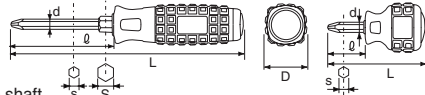


\*The stubby screwdriver is a non-through type shaft.

### STANDARD SCREWDRIVER · STUBBY SCREWDRIVER

No.	Type	d	D	S	s	L	ℓ	▼g	📦
<b>D1P2-1</b>	No.1	7.1	29.6	10	6.3	170	75	120	10
<b>-2</b>	No.2	7.1	32	10	6.3	210	100	150	10
<b>-3</b>	No.3	8.9	33.8	12	7.9	280	150	250	5
<b>D1PS-2</b>	No.2	7.1	35.5	—	6.3	75	25	70	10

- The tip is magnetized.
- Cr-V is used for shaft material.



\*The stubby screwdriver is a non-through type shaft.



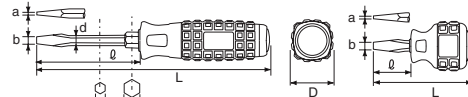
### ● STANDARD SCREWDRIVER · STUBBY SCREWDRIVER D.PAT.



### STANDARD SCREWDRIVER · STUBBY SCREWDRIVER

No.	a	b	d	D	S	s	L	ℓ	▼g	📦
<b>D1M2-5</b>	0.8	5.5	7.1	29.6	10	6.3	170	75	120	10
<b>-6</b>	1.0	6.3	7.1	32	10	6.3	210	100	150	10
<b>-8</b>	1.2	8	8.9	33.8	12	7.9	280	150	250	5
<b>D1MS-6</b>	1.0	6.3	7.1	35.5	—	—	75	25	70	10

- The tip is magnetized.
- Cr-V is used for shaft material.



\*The stubby screwdriver is a non-through type shaft.



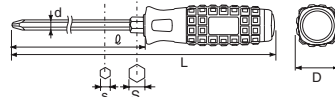
### ● STANDARD SCREWDRIVER · STUBBY SCREWDRIVER D.PAT.



### STANDARD LONG SCREWDRIVER

No.	Type	d	D	S	s	L	ℓ	▼g	📦
<b>D1P2-130</b>	No.1	7.1	29.6	10	6.3	400	300	180	5
<b>-230</b>	No.2	7.1	32	10	6.3	410	300	200	5
<b>-330</b>	No.3	8.9	33.8	12	7.9	430	300	310	5

- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines.
- With hexagonal bolster.
- Cr-V is used for shaft material.
- The tip is magnetized.



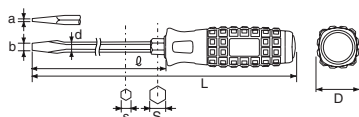
### ● STANDARD LONG SCREWDRIVER D.PAT.



### STANDARD LONG SCREWDRIVER

No.	a	b	d	D	S	s	L	ℓ	▼g	📦
<b>D1M2-530</b>	0.8	5.5	7.1	29.6	10	6.3	400	300	180	5
<b>-630</b>	1.0	6.3	7.1	32	10	6.3	410	300	200	5
<b>-830</b>	1.2	8.0	8.9	33.8	12	7.9	430	300	310	5

- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines.
- With hexagonal bolster.
- Cr-V is used for shaft material.
- The tip is magnetized.



### ● STANDARD LONG SCREWDRIVER D.PAT.



\*Please check the merchandise inventory for a product that is marked by before placing an order.

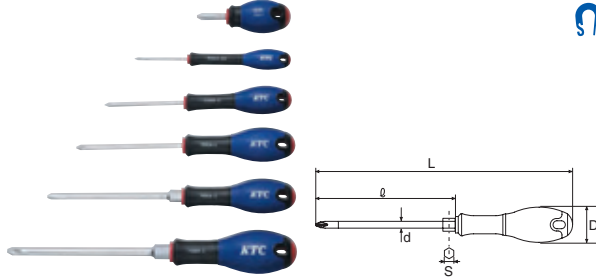
● PALM SCREWDRIVER SET (8pcs.)



PALM SCREWDRIVER SET (8pcs.)

No. PMDEA8	▼g	740	1
Palm screwdriver cross	No.1	PDEA-1	
	No.2	PDEA-2	
	No.3	PDEA-3	
Palm screwdriver flat	5.5×100	MDEA-75	
	6.5×125	MDEA-100	
	8 ×150	MDEA-150	
Stubby screwdriver cross	No.2	PDEA-P	
Stubby screwdriver flat	6 × 30	MDEA-M	

● PALM SCREWDRIVER

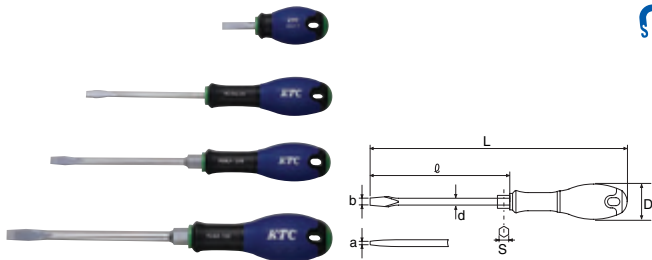


PALM SCREWDRIVER

No.	Type	d	D	S	L	ℓ	▼g	5
PDEA-00	No.00	3	20	—	148	50	20	5
-0	No. 0	4	27	—	177	75	40	5
-1	No. 1	5	32	—	205	100	70	5
-2	No. 2	6	32	10	230	125	95	5
-3	No. 3	8	40	12	266	150	165	5
-P	No. 2	6	32	—	89	30	40	5

- The large size comes attached with a hexagonal bolster. (Only PDEA-2, 3)
- The tip is magnetized.

● PALM SCREWDRIVER

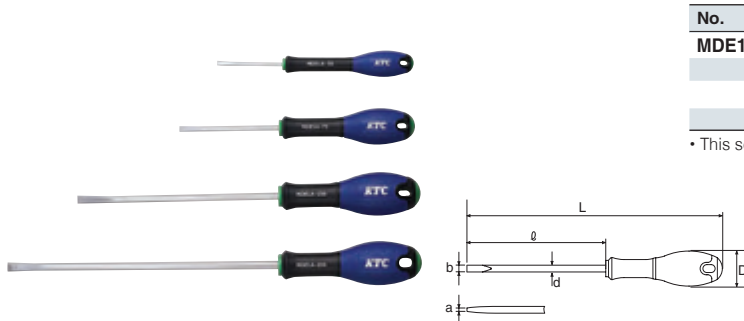


PALM SCREWDRIVER

No.	a	b	d	D	S	L	ℓ	▼g	5
MDEA-75	0.8	5.5	5	32	—	205	100	70	5
-100	0.9	6.5	6	32	10	230	125	95	5
-150	1.1	8	8	40	12	266	150	165	5
MDEA-M	0.9	6	6	32	—	89	30	40	5

- The large size comes attached with a hexagonal bolster. (Only MDEA-100, 150)
- The tip is magnetized.

● PALM THIN BLADE SCREWDRIVER

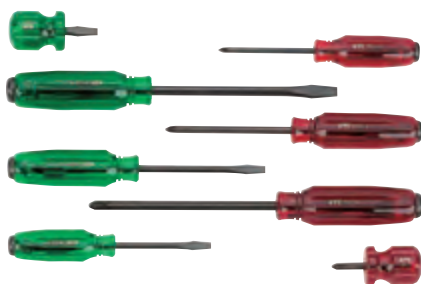


PALM THIN BLADE SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	5
MDE1A-50	0.4	3	3	20	148	50	20	5
-75	0.45	4	4	27	177	75	40	5
-150	0.9	5	5	32	255	150	75	5
-200	0.9	6	6	32	305	200	100	5

- This screwdriver is especially useful for operating on meters/gauges and electrical systems.

● PLASTIC GRIP SCREWDRIVER SET (8pcs.)



PLASTIC GRIP SCREWDRIVER SET (8pcs.)

No. PMD18	▼g	910	1
Flat Screwdriver	75	MDD1-75	
	100	MDD1-100	
	150	MDD1-150	
Cross Screwdriver	No.1	PDD1-1	
	No.2	PDD1-2	
	No.3	PDD1-3	
Stubby Screwdriver	Flat	SD1-M	
	Cross	SD1-P	

- The tip is magnetized. (Except SD1-M, P)
- Cr-V is used for shaft material.

\*The stubby screwdriver is a non-through type shaft.

● PLASTIC GRIP SCREWDRIVER




PLASTIC GRIP SCREWDRIVER

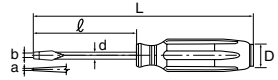
No.	Type	D	d	L	ℓ	▼g	5
PDD1 -1	No.1	27	5	160	75	75	10
-2	No.2	30	6.3	205	100	130	10
-3	No.3	33	8	265	150	210	5

- The tip is magnetized.
- Cr-V is used for shaft material.

**PLASTIC GRIP SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▽g	
MDD1- 75	0.7	5.5	5.5	27	160	75	75	10
-100	0.8	6	6	30	205	100	130	10
-150	1.0	8	8	33	265	150	210	5


- The tip is magnetized.
- Cr-V is used for shaft material.



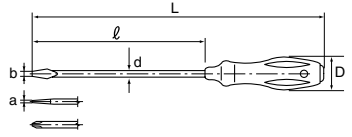
● PLASTIC GRIP SCREWDRIVER



**PLASTIC GRIP LONG SCREWDRIVER**

No	Type	a	b	d	D	L	ℓ	▽g	
PDDZ-2	Cross No.2	—	—	5.5	27	383	288	100	5
MDDZ-400	Flat	0.7	5.5	5.5	27	383	288	90	5


- Convenient for adjusting carburetors, etc.
- S55C is used for shaft material.



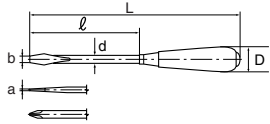
● PLASTIC GRIP LONG SCREWDRIVER



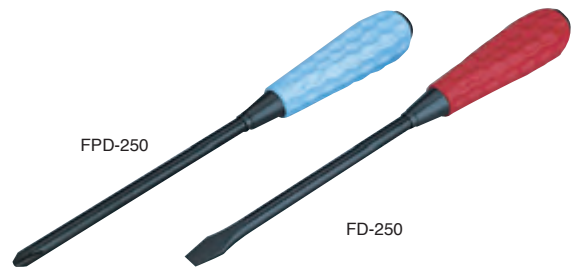
**HEAVY DUTY SCREWDRIVER**

No.	Type	a	b	d	D	L	ℓ	▽g	
FPD-250	Cross	—	—	9	32	275	150	210	5
FD -250	Flat	1.2	10	9	32	275	150	210	5


- The screwdriver has increased durability through widening and lengthening the shaft.
- The shaft and the handle are strongly fixed.
- SWRH62A is used for shaft material.



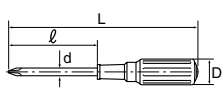
● HEAVY DUTY SCREWDRIVER



**WOODEN GRIP SCREWDRIVER**

No.	Type	D	L	ℓ	▽g	
PD-1	No.1	5	24	170	75	60
-2	No.2	6	28	220	100	110
-3	No.3	8	33	285	150	190
-4	No.4	9	34	350	200	260


- Traditional wooden grip.
- S55C (PD-1, 2, 3), S45C (PD-4) is used for shaft material.



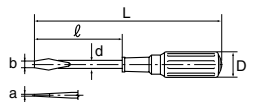
● WOODEN GRIP SCREWDRIVER



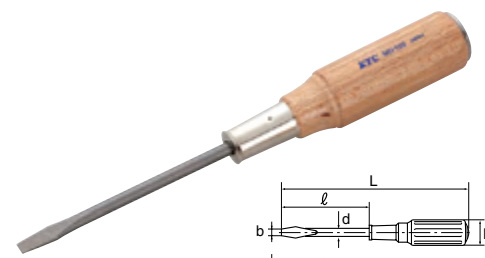
**WOODEN GRIP SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▽g	
MD- 50	0.6	4.5	5	24	145	50	55	10
- 75	0.7	5.5	5	24	170	75	55	10
-100	0.9	6	6	28	220	100	110	10
-125	0.9	7	7	33	260	125	160	10
-150	1.0	8	8	33	285	150	190	5
-200	1.1	9	9	34	350	200	250	5
-250	1.2	10	9	34	400	250	280	5
-300	1.2	10	9	34	450	300	310	5

- Traditional wooden grip.
- S55C (MD-50~150), S45C(MD-200~300) is used for shaft material.



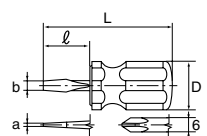
● WOODEN GRIP SCREWDRIVER



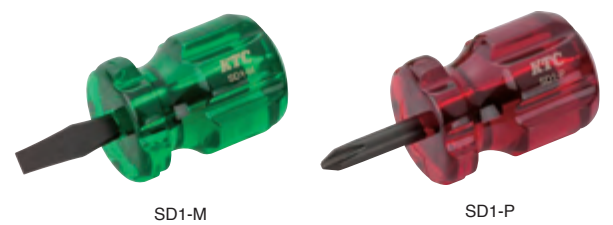
**STUBBY SCREWDRIVER**


No.	Type	a	b	D	L	ℓ	▽g	
SD1- P	Cross No.2	—	—	32	72	26	40	10
- M	Flat	0.8	6	32	72	26	40	10

- Convenient for attaching / detaching screws in narrow spaces.
- SWRH62A is used for shaft material.



● STUBBY SCREWDRIVER



\*Please check the merchandise inventory for a product that is marked by  before placing an order.

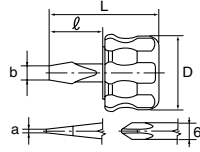
● MINI STUBBY SCREWDRIVER



SD3-M



SD3-P

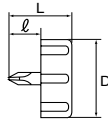


MINI STUBBY SCREWDRIVER

No	Type	a	b	D	L	ℓ	▽g	⊞
SD3-P	Cross No.2	—	—	29	40	20	25	10
-M	Flat	0.7	6	29	40	20	25	10

- With improved function of Stubby Screwdriver.
- SWRH62A is used for shaft material.

● SHORT STUBBY SCREWDRIVER

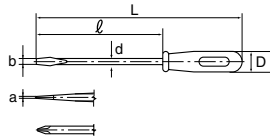
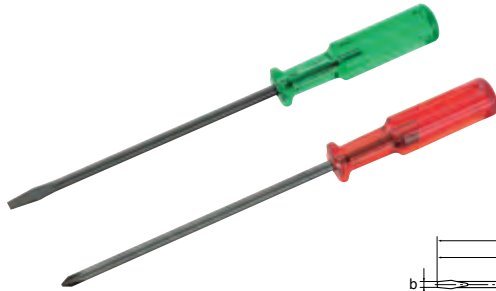


SHORT STUBBY SCREWDRIVER

No	Type	D	L	ℓ	▽g	⊞
SD4-P	Cross No.2	40	30	15	20	10

- Total length : 30mm for use in narrow space.  
(Ex. attaching/detaching mud guards, console boxes, installment panels)
- ø40 grip for applying higher torque.
- SWRH62A is used for shaft material.

● BABY SCREWDRIVER

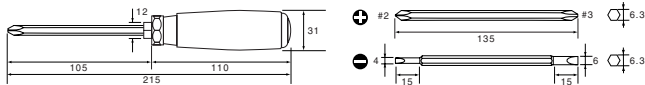


BABY SCREWDRIVER

No	Type	a	b	d	D	L	ℓ	▽g	⊞
BAD- 0	Cross	—	—	3	11	120	75	10	50
-50	Flat	0.4	3	3	11	95	50	10	50
-75	Flat	0.4	2.5	3	11	120	75	10	50

- For adjusting meters and other precision equipments.
- SWRH62A is used for shaft material.

● INTERCHANGEABLE SCREWDRIVER SET



INTERCHANGEABLE SCREWDRIVER SET

No. DB4	▽g 180
Cross-bit for the interchangeable screwdriver (No.2xNo.3)	DB4-P
Flat bit (tip width 4 × tip width 6)	-M
Handle	-H

- Cr-V is used for shaft material.

Characteristics

- 1 bit fits 2 sizes. One-touch operated through inserting and removing.
- A soft grip that prevents slipping.
- The shaft is hexagonal (each side of the hexagonal shaft is 6.3 mm). The attached bolster (hexagonal width-across flat 12 mm) allows the use of an open end wrench for tightening.
- Screwdriver bits that are readily available can also be used. (Where each side of the shaft is 6.3 mm and full length is 65 mm and over)

Replacement parts For the interchangeable screwdriver

No.	Product name
DB4-P	Cross bit (No.2xNo.3)
-M	Flat bit (tip width 4 × tip width 6)
-H	Handle

**RATCHET SCREWDRIVER**

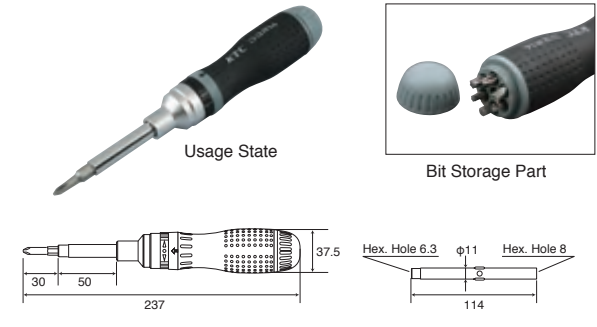
No. DBR14	▼g 340	6
Body	1pcs.	
Axis	Hex hole width across flats 6.3mm×8mm 1pcs.	
Bit	Cross No.1 × Flat 5.5mm, Cross No.3 × Flat 8mm, Torx T15 × T20, Torx T25 × T30, Hex. 2.5mm×3mm, Hex. 4mm×5mm 1pcs. each Cross No.2 × Flat 6mm 2pcs.	

- Ratchet mechanism that's capable of quick turning in both tightening and loosening directions.
- It can also be used as a regular screwdriver by fixing the ratchet.
- 2 on the axis, 6 on the grip end, the total of 8 bits can be stored.
- 14 types of cross, flat, T-type Torx and hex. bits are attached.  
Only the frequently used cross No.2 × flat 6mm are 2 pcs.

**Supply Parts**

No.	Product Name	
DBR14-01	End Cap (Gray)	
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm
DBR14-03	Bit	Cross No.1 × Flat 5.5mm
DBR14-04	Bit	Cross No.2 × Flat 6mm
DBR14-05	Bit	Hex. 2.5mm × Hex. 3mm
DBR14-06	Bit	Hex. 4mm × Hex. 5mm
DBR14-07	Bit	Torx T15 × Torx T20
DBR14-08	Bit	Torx T25 × Torx T30
DBR14-09	Bit	Cross No.3 × Flat 8mm
DBR14-10	Bit	Torx T27 × Torx T40

● RATCHET SCREWDRIVER



**RATCHET SCREWDRIVER**

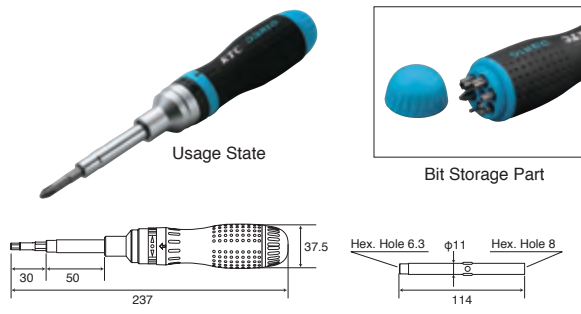
No. DBR16	▼g 340	6
Body	1pcs.	
Axis	Hex hole width across flats 6.3mm×8mm 1pcs.	
Bit	Cross No.2 × Flat 6mm Hex. 1.5mm×2mm, 2.5mm×3mm, 4mm×5mm, 6mm×8mm Anti-Tinker Torx T15H×T20H, T25H×T30H, T27H×T40H	

- Ratchet mechanism that's capable of quick turning in both tightening and loosening directions.
- It can also be used as a regular screwdriver by fixing the ratchet.
- 2 on the axis, 6 on the grip end, the total of 8 bits can be stored.

**Supply Parts**

No.	Product Name	
DBR16-01	End Cap (Blue)	
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm
DBR14-04	Bit	Cross No.2 × Flat 6mm
DBR14-14	Bit	Hex. 1.5mm×2mm
DBR14-05	Bit	Hex. 2.5mm × Hex. 3mm
DBR14-06	Bit	Hex. 4mm × Hex. 5mm
DBR14-15	Bit	Hex. 6mm×8mm
DBR14-11	Bit	Anti-Tinker Torx T15H×T20H
DBR14-12	Bit	Anti-Tinker Torx T25H×T30H
DBR14-13	Bit	Anti-Tinker Torx T27H×T40H

● RATCHET SCREWDRIVER



**RATCHET SCREWDRIVER**

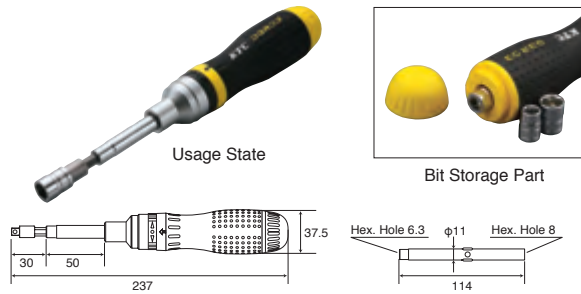
No. DBR03	▼g 280	6
Body	1pcs.	
Axis	Hex hole width across flats 6.3mm×8mm 1pcs.	
Bit	1/4"sq. Screwdriver	
Socket	1/4"sq. Socket 7mm, 8mm, 10mm	

- Ratchet mechanism that's capable of quick turning in both tightening and loosening directions.
- It can also be used as a regular screwdriver by fixing the ratchet.
- Socket can be stored in the grip.
- \* 1/4"sq. screwdriver cannot be stored in the grip.

**Supply Parts**

No.	Product Name	
DBR03-01	End Cap (Yellow)	
DBR14-02	Axis	Hex hole width across flats Width 6.3mm×8mm
DBR14-BD2	Bit	1/4"sq. Screwdriver
B2-07	Socket	1/4"sq. Socket 7mm
B2-08	Socket	1/4"sq. Socket 8mm
B2-10	Socket	1/4"sq. Socket 10mm

● RATCHET SCREWDRIVER



\*Please check the merchandise inventory for a product that is marked by before placing an order.

**● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER**

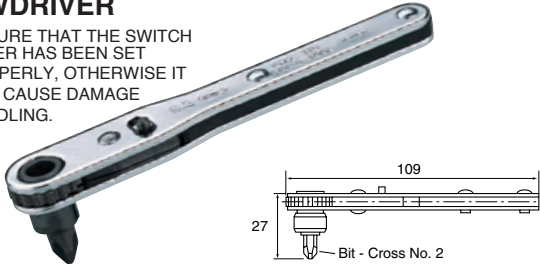
**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER SET			
No. TMD88	▼g 105	📦1	
Body			
Cross Bit	No.2 22mm, No.2 30mm, No.3 25mm		
Hexagon Bit	4 · 5 · 6mm		
Bit Holder for 6units	EHDB06		
• SWRH62A is used for shaft material. *The screwdriver is not sold individually.			

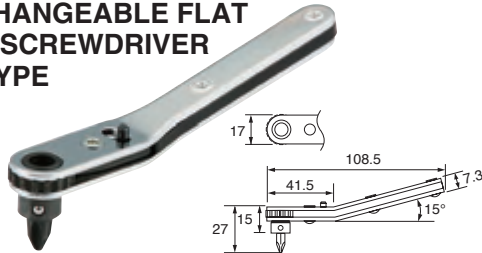
**● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER**

**CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER-BIT SET			
No. RM22	▼g 60	📦 10	
Body RM2-110 Bit (BT52P)			
Bit Set			
No. BT52P	Cross Bit (⊕ No.2 Length22)5pcs.	▼g 40	📦 10
No. TD52P	Cross Bit (⊕ No.2 Length30)5pcs.	▼g 40	📦 10
No. BT53P	Cross Bit (⊕ No.3 Length25)5pcs.	▼g 40	📦 10
No. TD5100M	Flat Bit (⊖ 100 Length30) 5pcs.	▼g 40	📦 10
No. TDH5	Hexagon Bit (3, 4, 5, 6 Length20) adapter (⊕ 1/4"sq. Length30)each 1 unit	▼g 50	📦 10
No. EHDB06	Bit Holder	1 unit ▼g 10	📦 10
• Cr-V is used for bit material.			

**● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER OFFSET TYPE**



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER OFFSET TYPE			
No. RM32	▼g 60	📦 10	
Body *			
Bit	Cross No.2 Total Length 22mm	1pcs.	
• 15° offset type that helps avoiding obstacles and secures the finger space. • Ratchet can be operated in both left and right directions with the switching lever. • Quick spinning is possible by turning the gear with a fingertip. • Bit of 6.3mm axis subtense can be used. * The body alone is not available. <b>CAUTION</b> • Please operate the switching lever on left and right securely since it may be the cause of damage or idling.			

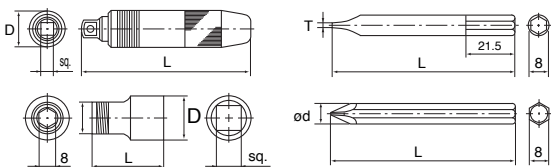
**● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER BIT SET**



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER BIT SET			
No.	Set Contents	📦	
TD4P	Cross Bit No.0, No.1, No.2, No.3	10	
BT52P	Cross Bit No.2 (Total Length 22mm) × 5pcs.	10	
TD52P	Cross Bit No.2 (Total Length 30mm) × 5pcs.	10	
BT53P	Cross Bit No.3 (Total Length 25mm) × 5pcs.	10	
TD3M	Flat Bit 4, 5.5, 7	10	
TD5100M	Flat Bit 5.5 (Total Length 30mm) × 5pcs.	10	
TDH6	Hex. Bit 2, 2.5, 3, 4, 5, 6 (Total Length 30mm)	10	
TDH5	Hex. Bit 3, 4, 5, 6 (Total Length 30mm) Adaptor (Notch 1/4"sq. Total Length 30mm)	10	
TDT5	T-Type Torx Bit T6, T8, T10, T15, T20 (Total Length 20mm)	10	
• It is a bit set of 6.3mm axis opposing side that can be used for the insert changeable flat ratchet screwdriver (TMD88, RM22, RM32). • It can also be used for Digital Ratchet screwdriver type (GLK060~500) P.180 and Torque screwdriver (GDP-080~GDP-450) P.190.			

**● IMPACT SCREWDRIVER SET**

**CAUTION** • GRIP THE CENTER SECURELY. • HIT THE CENTER SECURELY. • USE EXCLUSIVE BITS. • USE APPROVED EYE PROTECTION.



IMPACT SCREWDRIVER SET						
No. SD6	▼kg 1.1	📦 6				
Body						
Body	SD30-B					
Bit Holder (Opposite side8mm)	SD30-8H					
Cross Bit	No.1 SDP-1					
	No.2 SDP-2					
	No.3 SDP-3					
Flat Bit	(Tip Thickness1) SDM-1.0					
	(Tip Thickness1.6) SDM-1.6					
	(Tip Thickness1.8) SDM-1.8					
Metal Case L170×W50×H33	SD6-M					
• Light & easy to use and especially effective for loosening tightly fastened bolts or rusted bolts. • Cr-V is used for shaft material.						
Body						
No.	sq.	D	L	▼kg	📦	
SD30-B	12.7	30	142.5	1	1	
Bit Holder						
No.	sq.	D	L	▼g	📦	
SD30-8H	12.7	22	36	10	1	
Cross Bit						
No.	Type	d	L	▼g	📦	
SDP-1	No.1	8	80	10	10	
-2	No.2	8	80	10	10	
-3	No.3	8	80	10	10	
Flat Bit						
No.	T	L	▼g	📦		
SDM-1.0	1.0	80	10	10		
-1.6	1.6	80	10	10		
-1.8	1.8	80	10	10		

\*Please check the merchandise inventory for a product that is marked by before placing an order.



**SOFT GRIP SCREWDRIVER SET (8pcs.)**

No. TD798	▼kg 1	☉ 10
Cross Soft Grip Screwdriver	No.1	D7P-1
	No.2	D7P-2
	No.3	D7P-3
Flat Soft Grip Screwdriver	75	D7M-5
	100	D7M-6
	150	D7M-8
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The orange grip color indicates "cross".
- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- The package can be used as a tray.
- Cr-V is used for shaft material.

No. TD2798	▼kg 1	☉ 10
Cross Soft Grip Screwdriver Through type	No.1	D7P2-1
	No.2	D7P2-2
	No.3	D7P2-3
Flat Soft Grip Screwdriver Through type	75	D7M2-5
	100	D7M2-6
	150	D7M2-8
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The orange grip color indicates "cross".
- The green color of the grip indicates "flat".
- The shaft is through-type and the tip is magnetized.
- The package can be used as a tray.
- Cr-V is used for shaft material.

\*The stubby screwdriver is a non-through type shaft.

●SOFT GRIP SCREWDRIVER SET (8pcs.)



**SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)**

**SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)**

No. TD902	Soft Stubby Screwdriver Set	
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

No. TD702	Soft Grip Screwdriver Set	
Cross Soft Grip Screwdriver	No.2	D7P-2
Flat Soft Grip Screwdriver	100	D7M-6

- Cr-V is used for shaft material.
- **Best for gift-giving**
  - Pleasing as a gift, Convenient set of two pieces.
  - Operable in narrow spaces; good appearance.
  - Necessities, popular at home and office.

●SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)



**SOFT GRIP SCREWDRIVER**

No.	Type	d	D	L	ℓ	▼g	☉
D7P2-1	No.1	5.5	29	195	75	90	10
-110	No.1	5.5	29	220	100	95	10
-2	No.2	6.3	31	225	100	110	10
-215	No.2	6.3	31	275	150	120	10
-3	No.3	8	33	280	150	170	10

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The orange grip color indicates "cross".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

●SOFT GRIP SCREWDRIVER



● SOFT GRIP SCREWDRIVER

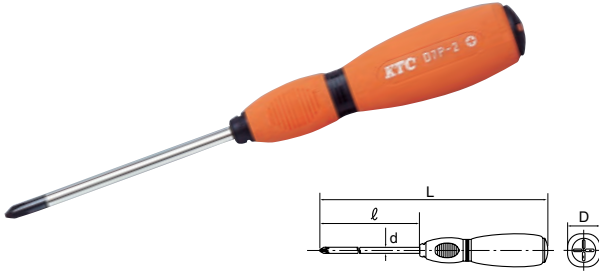


SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞
D7M2-5	0.75	5.5	5.5	29	195	75	90	10
-510	0.75	5.5	5.5	29	220	100	95	10
-6	0.95	6	6.3	31	225	100	110	10
-615	0.95	6	6.3	31	275	150	120	10
-8	1.1	8	8	33	280	150	170	10

- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	☞
D7P-1	No.1	5.5	29	200	75	80	10
-110	No.1	5.5	29	225	100	85	10
-115	No.1	5.5	29	275	150	95	10
-120	No.1	5.5	29	325	150	105	10
-2	No.2	6.3	31	230	100	105	10
-215	No.2	6.3	31	280	150	110	10
-220	No.2	6.3	31	330	200	130	10
-230	No.2	6.3	31	430	300	155	10
-3	No.3	8	33	285	150	160	10

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER

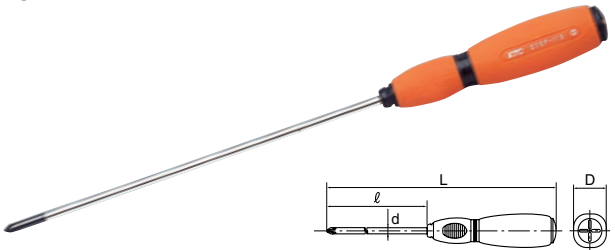


SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞
D7M-5	0.75	5.5	5.5	29	200	75	80	10
-510	0.75	5.5	5.5	29	225	100	85	10
-515	0.75	5.5	5.5	29	275	150	95	10
-520	0.75	5.5	5.5	29	325	200	105	10
-6	0.95	6	6.3	31	230	100	105	10
-615	0.95	6	6.3	31	280	150	115	10
-620	0.95	6	6.3	31	330	200	130	10
-630	0.95	6	6.3	31	430	300	155	10
-8	1.1	8	8	33	285	150	160	10

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER

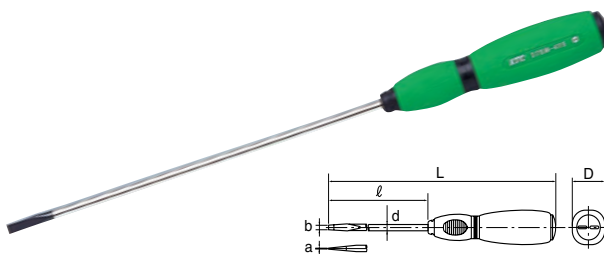


SOFT GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	☞
D7SP-0075	No.00	4	20	165	75	35	10
-0010	No.00	4	20	190	100	35	10
-075	No.0	4	20	165	75	35	10
-010	No.0	4	20	190	100	35	10
-175	No.1	4	20	165	75	35	10
-110	No.1	4	20	190	100	35	10
-115	No.1	4	20	240	150	40	10

- The shaft is thin and non-through type.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞
D7SM-450	0.5	4	4	20	140	50	30	10
-475	0.5	4	4	20	165	75	35	10
-410	0.5	4	4	20	190	100	35	10
-412	0.5	4	4	20	215	125	40	10
-415	0.5	4	4	20	240	150	40	10
-420	0.5	4	4	20	290	200	45	10

- The shaft is thin and non-through type.
- Cr-V is used for shaft material.

● SOFT STUBBY SCREWDRIVER



SOFT STUBBY SCREWDRIVER

Cross


No.	Type	d	D	L	ℓ	▼g	☞
D9P-125	No.1	6	35	75	25	40	10
-225	No.2	6	35	75	25	40	10

Flat

No.	a	b	d	D	L	ℓ	▼g	☞
D9M-625	0.8	6	6	35	75	25	40	10

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

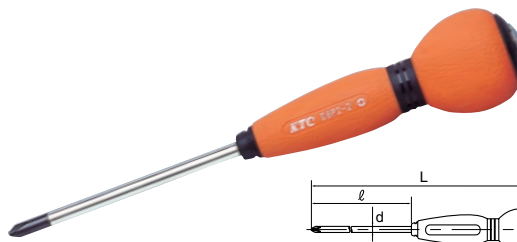
**SOFT ROUND SCREWDRIVER**

No.	Type	d	D	L	ℓ	▼g	
<b>D8P2-1</b>	No.1	5.5	32	170	75	65	10
<b>-2</b>	No.2	6.3	40	215	100	120	10
<b>-215</b>	No.2	6.3	40	265	150	130	10




- Round grip end, good for "push and turn" without palm pain.
- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **SOFT ROUND SCREWDRIVER**



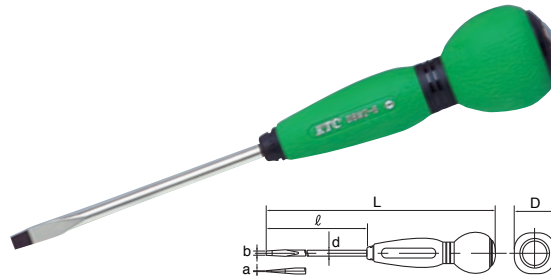
**SOFT ROUND SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▼g	
<b>D8M2-5</b>	0.75	5.5	5.5	32	170	75	65	10
<b>-6</b>	0.95	6	6.3	40	215	100	120	10
<b>-615</b>	0.95	6	6.3	40	265	150	130	10




- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **SOFT ROUND SCREWDRIVER**



**SOFT ROUND SCREWDRIVER**

No.	Type	d	D	L	ℓ	▼g	
<b>D8P-1</b>	No.1	5.5	32	170	75	55	10
<b>-110</b>	No.1	5.5	32	195	100	60	10
<b>-115</b>	No.1	5.5	32	245	150	70	10
<b>-2</b>	No.2	6.3	40	215	100	100	10
<b>-215</b>	No.2	6.3	40	265	150	110	10
<b>-220</b>	No.2	6.3	40	315	200	125	10




- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **SOFT ROUND SCREWDRIVER**



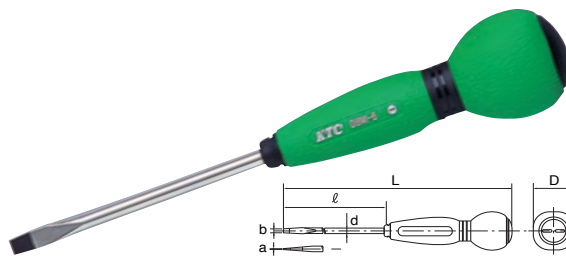
**SOFT ROUND SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▼g	
<b>D8M-5</b>	0.75	5.5	5.5	32	170	75	55	10
<b>-510</b>	0.75	5.5	5.5	32	195	100	60	10
<b>-515</b>	0.75	5.5	5.5	32	245	150	70	10
<b>-6</b>	0.95	6	6.3	40	215	100	100	10
<b>-615</b>	0.95	6	6.3	40	265	150	110	10
<b>-620</b>	0.95	6	6.3	40	315	200	125	10




- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **SOFT ROUND SCREWDRIVER**



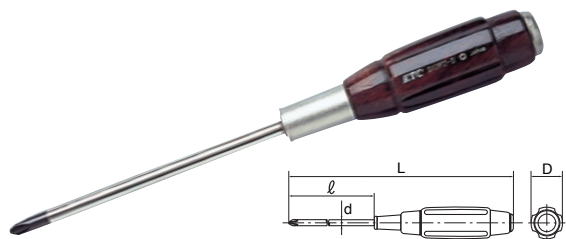
**WOODEN GRIP SCREWDRIVER**

No.	Type	d	D	L	ℓ	▼g	
<b>D12P2-1</b>	No.1	5.5	30	195	75	60	10
<b>-2</b>	No.2	6.3	32	230	100	120	10
<b>-215</b>	No.2	6.3	32	280	150	130	10
<b>-3</b>	No.3	8	35	290	150	200	10




- Palm-friendly native wood is used for grip.
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **WOODEN GRIP SCREWDRIVER**



**WOODEN GRIP SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▼g	
<b>D12M2-5</b>	0.75	5.5	5.5	30	195	75	60	10
<b>-6</b>	0.95	6	6.3	32	230	100	120	10
<b>-7</b>	0.95	7	7	35	265	125	180	10
<b>-8</b>	1.1	8	8	35	290	150	200	10



- Palm-friendly native wood is used for grip.
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

● **WOODEN GRIP SCREWDRIVER D.PAT**



# 2. CONVENTIONAL TOOLS

## PLIERS, CUTTING PLIERS, SHEARS



**WARNING Pliers, cutting pliers, shears**  
 • Do not use if there is a live electric current.  
 The plastic on the grip does not provide insulation against electrical current.



**CAUTION Pliers**  
 • Do not use this tool as a hammer.  
 • Do not apply strong impact on this tool by hitting it with a hammer, etc.  
 • Take care not to get hands or fingers caught between the grips.  
 • Take care when adjusting the width of the mouth.

**Water pump pliers**  
 • Do not use this tool as a hammer.  
 • Do not apply strong impact on this tool by hitting it with a hammer, etc.

• Firmly hold the pliers perpendicular to the pipe and hold firmly at the center.  
 • Do not twist or apply force sideways.  
 • Take care when adjusting the width of the mouth.

**Snap rings**  
 • Do not use except for snap rings.  
 • Use pliers that conform to the size of the snap rings.  
 • The pliers can loosen when too much force is applied.  
 • The snap ring may pop out if the tool loses its grasp.  
 • Wipe off any grease from the hole of the snap ring and tip of the pliers before use.

• Use protective goggles when working.

**Pliers and nippers**  
 • Check the direction the cut piece is likely to travel before cutting.  
 • Use protective goggles when working.  
 • Do not use this tool as a hammer.  
 • Do not apply strong impact on this tool by hitting it with a hammer, etc.  
 • Close the blade and store when the tool is not going to be used.

**Shears and bolt clippers**  
 • Check the direction the cut piece is likely to travel before cutting.  
 • Use protective goggles when working.  
 • Close the blade and store when the tool is not going to be used.  
 • Do not twist or hit using the blade tip.  
 • Take care not to cut the hand holding the tool.

### COMBINATION PLIERS (SOFT GRIP) PAT.P.



PJ-200

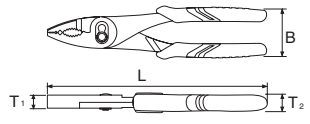
### COMBINATION PLIERS (SOFT GRIP)

No.	Is able to cut through large diameter wires (Steel wire)	L	B	T <sub>1</sub>	T <sub>2</sub>	▽g	☞
PJ-150	ø2	163	47	11	15	200	5
-200	ø2.6	200	52	11	16	300	5
-250	ø3.5	250	58	11	16	380	5

- A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
- Each blade of the "three stage form" allows the tool to grasp thin and thick objects.



The three stage form of the pliers



### COMBINATION PLIERS



PJ-200A

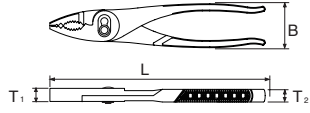
### COMBINATION PLIERS

No.	Is able to cut through large diameter wires (Steel wire)	L	B	T <sub>1</sub>	T <sub>2</sub>	▽g	☞
PJ-150A	ø2	158	40	11	10	190	5
-200A	ø2.6	195	45.5	11	11	270	5
-250A	ø3.5	245	50	11	11	350	5

- A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
- Each blade of the "three stage form" allows the tool to grasp thin and thick objects.



The three stage form of the pliers



### HEAVY DUTY WATERPUMP PLIERS

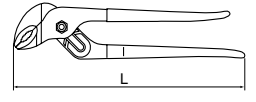
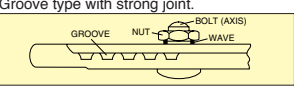


WPD1-250

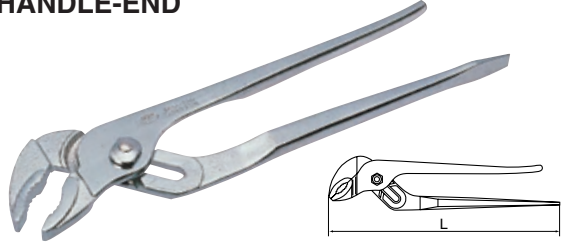
### HEAVY DUTY WATERPUMP PLIERS

No.	Nominal	Applicable Dia	L	▽g	☞
WPD1-250	250	ø6~32	265	360	10
-300	300	ø6~50	295	500	5

- The left and right teeth feature special design which become engaged in a unique way when the pliers turn in the direction of engagement.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- The joint replacement section is fixed firmly in order to prevent accidental changes in size.



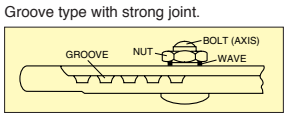
### WATERPUMP PLIERS WITH SLOTTED HANDLE-END



### WATERPUMP PLIERS WITH SLOTTED HANDLE-END

No.	Nominal	Applicable Dia.	L	▽g	☞
WPDA-250	250	ø6~32	260	380	10

- The shape of the teeth facilitates the grasp when the pliers are turned towards the lower jaw.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- Screwdriver-shaped grip end is handy for turning screws and prying.

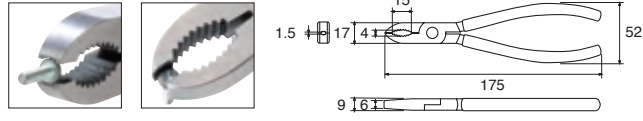


\*Please check the merchandise inventory for a product that is marked by before placing an order.

**SCREW PLIERS**

No.	Applicable screw size	▼g	
PSN-175	M2~M6	160	6

- Unlike conventional pliers, teeth for holding small screws are given on the tips.
- It is capable of vertical use that's been difficult with ordinary pliers. It is very convenient for loosening crushed, rusted or specially shaped small screws.
- Using the nonslip tips, small screws can be turned at 4 times or more torque compared to conventional pliers.



● **SCREW PLIERS**



**Types and applicable diameters of the snap ring pliers**

- KTC sets the claw diameter of the snap ring pliers according to the dimensions of the hole as shown in diagram "A" below. The "A" dimensions determine the nominal diameter of the snap ring according to the JIS standards. Therefore, the application of the snap ring pliers (nominal diameter) is dependent on the claw diameter.
- The grip color of KTC snap ring pliers is differentiated by using red for the "hole type" and yellow for the "shaft type", setting the tip shape according to use by dividing the types into the "straight type" where the tip is straight and the "curved type" where the tip is curved.

**Snap ring for holes**

Grip color **Red**

The mechanism of pliers

Closing the grip

↓

The tip closes

SCP-171

**Snap ring for shaft**

Grip color **Yellow**

The mechanism of pliers

Closing the grip

↓

Tip opens

SOP-171

**INTERNAL SNAP RING PLIERS**

INTERNAL SNAP RING PLIERS

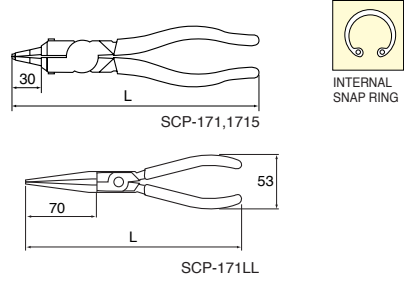
No.	Claw Dia.	Applicable Dia.	L	▼g	
SCP-171	ø2.0	19~30	185	200	10
-1715	ø1.5	12~13	185	200	10

- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)
- \* The number marked on the pliers is the product number (SCP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	
SCP-171LL	ø 1.2	10~11	220	160	10

- Long claws for use in narrow spaces.



● **INTERNAL SNAP RING PLIERS**



\*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

● BENT INTERNAL SNAP RING PLIERS



BENT INTERNAL SNAP RING PLIERS

BENT INTERNAL SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SCP-172L	ø1.2	10~11	165	200	10

- Claws are interchangeable. (7 kinds of spare claw tip sets are available.)
- Convenient for removing/installing snap rings on master cylinders of brakes.

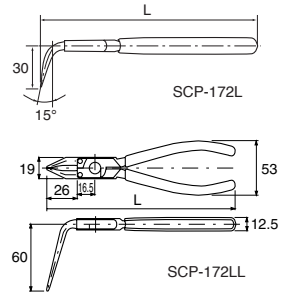
BENT INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SCP-172LL	ø1.2	10~11	175	200	10

- Long claws (60a) for use in narrow deep spaces.



INTERNAL SNAP RING



\*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

● EXTERNAL SNAP RING PLIERS



EXTERNAL SNAP RING PLIERS

EXTERNAL SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SOP-171	ø2.0	19~30	180	200	10
-1715	ø1.5	12	180	200	10

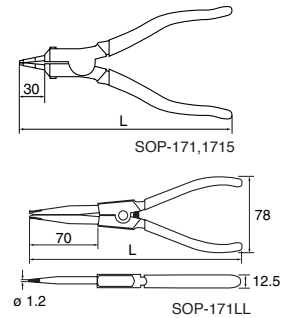
- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)

EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SOP-171LL	ø1.2	10~11	215	200	10

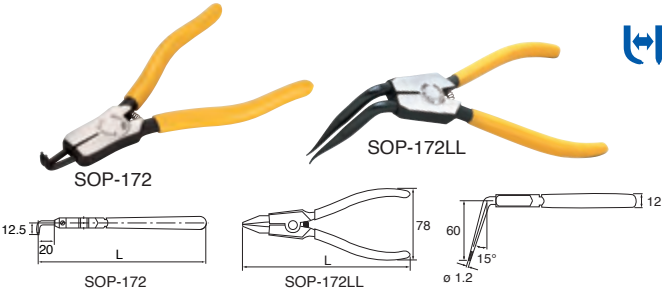


EXTERNAL SNAP RING



\* The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

● BENT EXTERNAL SNAP RING PLIERS



BENT EXTERNAL SNAP RING PLIERS

BENT EXTERNAL SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SOP-172	ø2.0	19~30	170	195	10

- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 149 can be used.)
- \* The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

BENT EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	☞
SOP-172LL	ø1.2	10~11	170	200	10

\*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

● FLAT TYPE EXTERNAL SNAP RING PLIERS

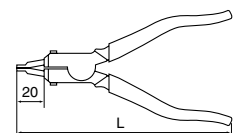


FLAT TYPE EXTERNAL SNAP RING PLIERS

No.	Claw Dia.	L	▼g	☞
SOP-173	Flat type	170	195	10



EXTERNAL SNAP RING



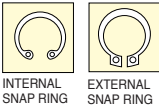
\*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

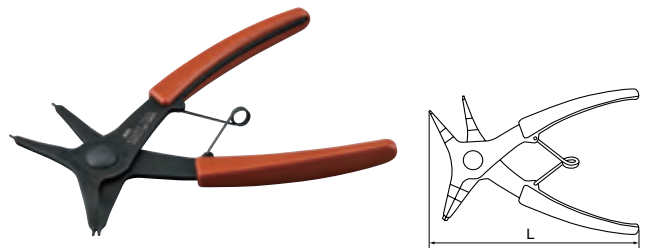
**INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS**

No.	Diameter of sharp end claw	Applicable Dia.	L	▼g	☞
SOCP-130	ø1.2	For Internal & External 10~40	145	120	6

• Good work efficiency for the hole provided on the shaft.



**INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS**



\*Replaceable parts are available for the opening/closing spring. Check with your dealer for details.

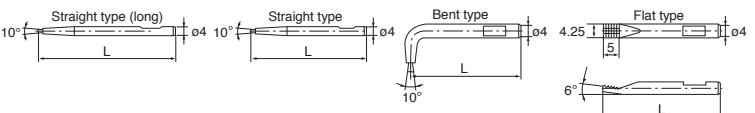
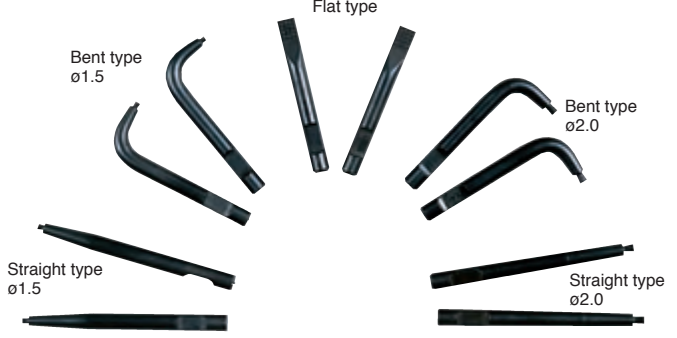
**SPARE TIPS FOR SNAP RING PLIERS (10pcs.)**

No.	Contents	L	▼g	☞
SPC 110	Straight type ø2.0	10pcs. 36	40	10
SPC 110L	Straight type ø2.0 (Long)	10pcs. 46	40	10
SPC0110	Straight type ø1.5	10pcs. 36	40	10
SPC0110L	Straight type ø1.5 (Long)	10pcs. 46	40	10
SPC 210	Bent type ø2.0	10pcs. 34	40	10
SPC0210	Bent type ø1.5	10pcs. 34	40	10
SPC 310	Flat type	10pcs. 36	40	10
SPC5	Straight ø1.5 (Long), ø2.0	1pa.ea. —	40	10
	Flat	1pa.		
	Bent ø1.5, ø2.0	1pa.ea.		

• 7 kinds of interchangeable claws are available for installation/removal of various kinds of snap rings. Economical as the claws are replaceable.  
 • Claws are made of special alloy steel and specially heat-treated for extra strength. Also upside-down tapered tip to prevent snap rings from clipping off the claws.  
 \* Suitable for work in narrow spaces.

\* Snap ring pliers with a mark as shown on P.147~148 are applicable to the pliers themselves. (Cannot be used for SCP-171LL, SCP-172L, SCP-172LL, SOP-171LL, SOP-172LL, and SOCP-130.)

**SPARE TIPS FOR SNAP RING PLIERS (10pcs.)**



**CONNECTOR HOUSING PLIERS**

No.	Attached Claw	L	ℓ	B	T	▼g	☞
AD101	Claw A	208	53	25	12	177	5
	Claw B	209	54	25	12	177	
	Claw C	194	39	34	12	176	

**Usage**  
 • Unlocking and extraction of connector housing.

**Features**  
 • Smoothly unlocks small, thin or recessed lock that's difficult to work with.  
 • Supports various shapes with 3 types of claw with different bending angles and tip shapes.  
 • Long claw that can avoid bundled wirings and reach deep places is adopted.  
 \* Spare parts are configured. Please contact your dealer for details.

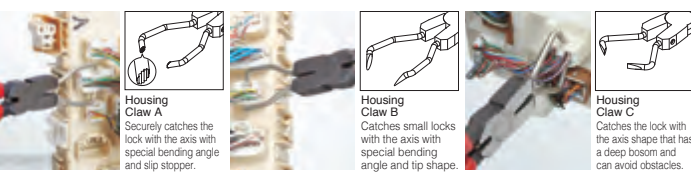
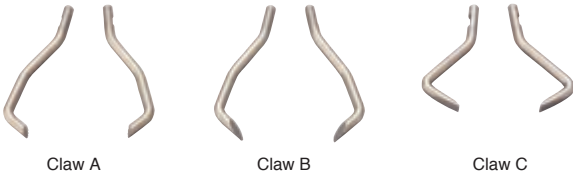
**CAUTION** • Please do not use it for usages other than the application.

**Supply Parts**

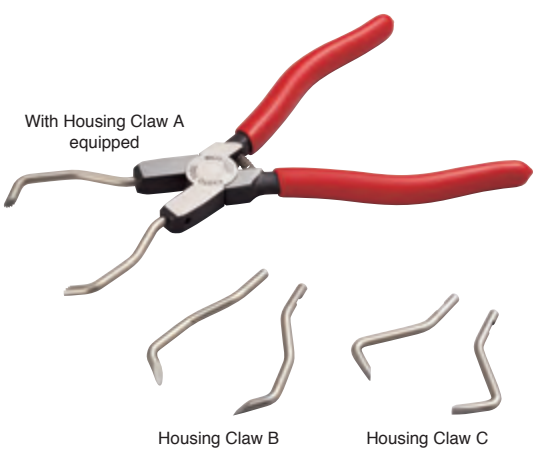
No.	Product Name	Set Contents	▼g	☞
AD101-123	Claw Set	Housing Claw A, B, C, 1 each	20	5

Hex. socket screws are not included.

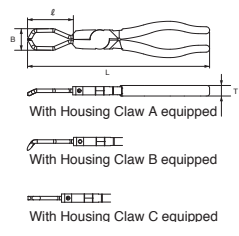
• If you already own the KTC straight snap ring pliers for hole (No.SCP-171, 1715), it can be used by replacing the claw. (Either screw can be used for the set screw.) P.147



**CONNECTOR HOUSING PLIERS D.PAT.P.**

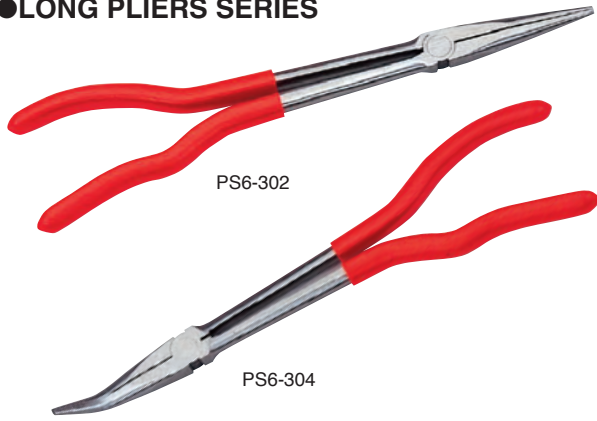


Housing Claw B      Housing Claw C



\* AD101 is a set of the body and 3 types of housing claw (A, B, C).

● LONG PLIERS SERIES



LONG PLIERS SERIES

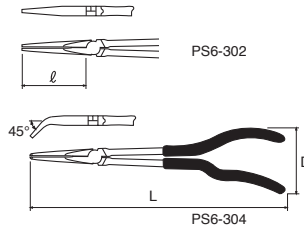
STRAIGHT LONG NOSE CUTTING PLIERS, LONG

No.	L	ℓ	D	▼g	☞
PS6-302	295	72	73	300	5

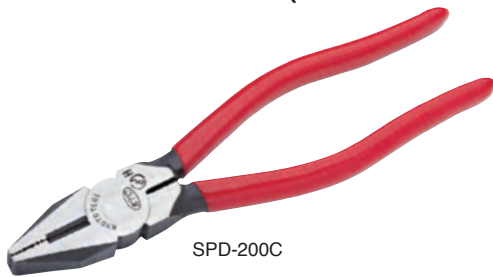
CONNECTOR HOUSING PLIERS

ANGLED LONG NOSE CUTTING PLIERS, LONG TYPE

No.	L	Angle	D	▼g	☞
PS6-304	290	45°	73	300	5



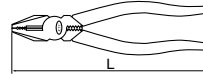
● SIDE CUTTING PLIERS (COATED HANDLE)



SIDE CUTTING PLIERS (COATED HANDLE) JIS

No.	Nominal	Max. Cutting Dia.	L	▼g	☞
SPD-150C	150	wireø2.15	165	215	10
-175C	175	wireø2.75	190	275	10
-200C	200	wireø3.4	215	375	10

- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.
- With vinyl coated handle. (No insulation)



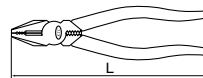
● SIDE CUTTING PLIERS



SIDE CUTTING PLIERS JIS

No.	Nominal	Max. Cutting Dia.	L	▼g	☞
SPD-175	175	wireø2.75	185	265	10

- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.

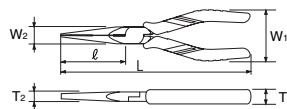


● NEEDLE NOSE PLIERS (STANDARD TYPE) PAT.P.



NEEDLE NOSE PLIERS (STANDARD TYPE)

No.	Max Cutting Dia.		L	ℓ	W <sub>1</sub>	W <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	▼g	☞
	soft	hard								
PSL-150	ø2.0	ø1.6	165	54	54	16	14	9	110	5
-200	ø2.3	ø1.8	205	70	55	18	15.5	10	190	5

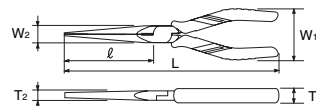


● NEEDLE NOSE PLIERS (LONG TYPE) PAT.P.



NEEDLE NOSE PLIERS (LONG TYPE)

No.	Max Cutting Dia.		L	ℓ	W <sub>1</sub>	W <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	▼g	☞
	soft	hard								
PSL-200L	ø2.0	ø1.6	200	89	54	16	14	10	130	5



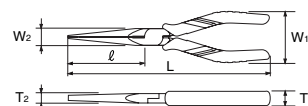
● NEEDLE NOSE PLIERS (SLIM TYPE) PAT.P.



NEEDLE NOSE PLIERS (SLIM TYPE)

No.	L	ℓ	W <sub>1</sub>	W <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	▼g	☞
PSL-175N	175	54	55	13.5	14.5	9	130	5

- No blade.

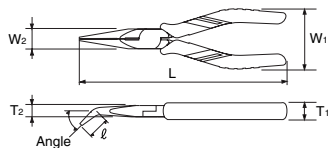


\*Please check the merchandise inventory for a product that is marked by ⚠ before placing an order.



**NEEDLE NOSE PLIERS (BENT NOSE TYPE)**

No.	Max Cutting Dia.		L	ℓ	Angle	W <sub>1</sub>	W <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	▽g	📦
	soft	hard									
PSL-150BN	ø2.0	ø1.6	161	15	45°	54	16	14	9	110	5
-200BN	ø2.3	ø1.8	199	25	45°	55	18	15.5	10	190	5
-200BN1	—	—	181	50	60°	55	18	15.5	10	190	5



• A cross groove has been designed on the tip section in order to prevent the grasped object from slipping.

\*The PSL-200BN1 is not supplied with a cutting edge.

**●NEEDLE NOSE PLIERS (BENT NOSE TYPE) PAT.P.**



PSL-200BN

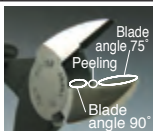
PSL-200BN1

**DIAGONAL CUTTING PLIERS**

No.	Max Cutting Dia.			L	ℓ	W <sub>1</sub>	W <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	▽g	📦
	soft	hard	piano wire								
PN1-125	ø2.3	ø1.6	ø1.2	135	16	49	17	14	10	95	5
-150	ø2.6	ø2.0	ø1.8	160	18	52	22	15	10.5	172	5
-175	ø2.6	ø2.0	ø1.8	180	20	51	25	16	11.5	220	5
-200	ø2.9	ø2.3	ø2.0	205	22	52	28	15	11.5	265	5

- A multi-functional type that can cut thin soft wires (such as copper) with its tip and hard wires (such as piano strings) with the base.
- Skin peeler attached.

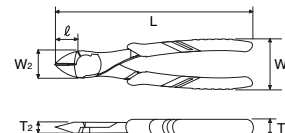
Standard shape has been fitted to the wide type. The angle of the blade is adjusted according to the object. (tip 75°, base 90°)



**●DIAGONAL CUTTING PLIERS PAT.P.**



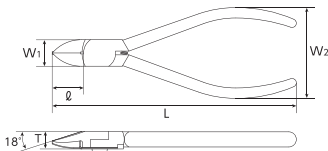
PN1-150



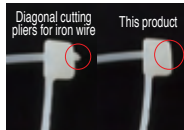
**BAND HOLD CUTTING PLIERS**

No.	L	ℓ	W <sub>1</sub>	W <sub>2</sub>	T	▽g	📦
PNC-125	130	16.5	14	48	8.5	90	6

- It is a cutting tool for plastic binding band (2.2~4.8mm width, 1.0~1.5mm thickness, 300mm or less length).
- Holding part prevents the cut-end of binding band from flying, allowing the safe work.
- Plastic dedicated blade that prevents protrusion on the cut surface of binding band compared to ordinary diagonal cutting pliers for iron wire, preventing work injury.



Holds the band cut-end



Flush cut surface

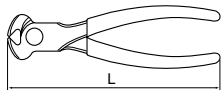
**●BAND HOLD CUTTING PLIERS**



**END CUTTING PLIERS**

No.	Nominal	Cutting Dia.	L	▽g	📦
EP-160	160	Hardø2 Softø2.6	160	220	10

- Special tool for cutting wires.
- Can be used for cutting nails.



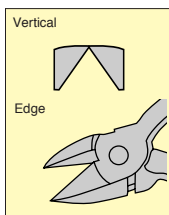
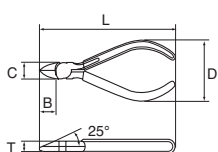
**●END CUTTING PLIERS**



**ANGLE CUTTER (TRUE FLUSH CUT)**

No.	Nominal	L	B	C	D	T	Capacity(ø)	▽g	📦
EN-21S	125	130	14	12.5	51	6.5	Copper2.0	75	5

- Special tool for cutting wires on printed circuits.
- Sharp edge of the blade for smooth cutting.



**●ANGLE CUTTER (TRUE FLUSH CUT)**



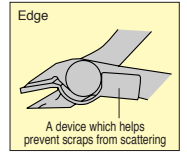
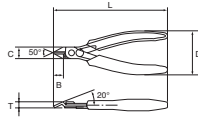
● PLATE TYPE CUTTER



PLATE TYPE CUTTER

No.	Nominal	L	B	C	D	T	Capacity(ø)	▼g	☞
EN-30S	130	130	11	13	48	7	Copper0.9	50	5

- For cutting leads in printed circuits.
- Flush cut blade for sharp cutting with stainless body for durability.
- Stopper for easy handling.
- Built-in device for preventing chips from scattering.



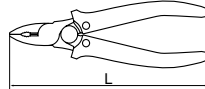
● MULTIPLICATIVE SIDE CUTTING PLIERS



MULTIPLICATIVE SIDE CUTTING PLIERS

No.	Nominal	Max. Cutting Dia.	L	▼g	☞
SPP-175	175	Hard ø1.8 Soft ø2.3	175	200	10

- Compound leverage action offers easy cutting.
- Soft comfortable grip.
- The grip end comes with a ball chain that prevents it from opening.



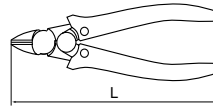
● MULTIPLICATIVE CUTTING PLIERS



MULTIPLICATIVE CUTTING PLIERS

No.	Nominal	Cutting Dia.	L	▼g	☞
DPP-165	165	Hard ø1.8 Soft ø2.3	165	180	10

- Compound leverage action offers easy cutting.
- Soft comfortable grip.
- Blade is induction heat-treated.
- The grip end comes with a ball chain that prevents it from opening.



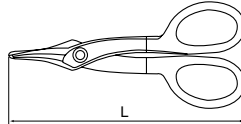
● ALL PURPOSE SHEARS



ALL PURPOSE SHEARS

No.	Nominal	L	▼g	☞
AP-175	175	180	200	10

- Induction heat-treated special alloy steel for sharpness and durability.
- Specially shaped back of the blade for avoiding deformation or bent.
- Built-in special nut in the axle bolt for tight and sharp cutting.



● BOOT BAND CUTTER



BOOT BAND CUTTER

No.	B <sub>1</sub>	B <sub>2</sub>	T	L	▼g	☞
AS402	24	41	11	193	260	10

Usage

- Cutting the boot or boot band of the drive shaft

Application

- The stainless steel band of the drive shaft on light weight vehicles to standard vehicles.



Standard, modified boot bands



Sealed type boot band (up to 0.6mm plate thickness)

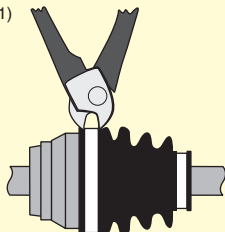
- Rubber drive shaft boot

Characteristics

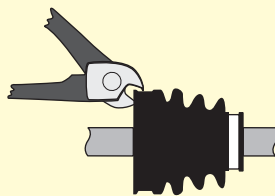
- Cutting can be conducted while the boot band is attached.
- The boot band can also be cut, increasing overall operation speed. (Fig. 1)
- The same tool can be used to cut the boot after cutting the band. (Fig. 2)
- The attached spring allows easy opening while the stopper allows storage in a compact form. Pushing the stopper while holding the handle will fix the tool in a position where the handle is closed, reducing the total storage space occupied by the tool. (Fig. 3)

\* Springs are available as replacement parts. Check with your dealer for details.

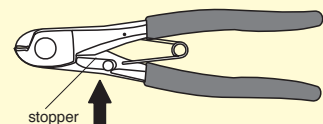
(Fig. 1)



(Fig. 2)



(Fig. 3)

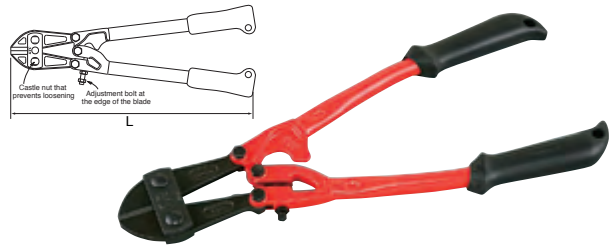


**BOLT CLIPPER**

No.	Nominal	Cutting Dia.	L	B	▼kg	
BP7-300	300(12")	ø5	320	54	0.8	1
-350	350(14")	ø6	370	60	1	1
-450	450(18")	ø7	465	69	1.5	1
-600	600(24")	ø9	620	84	2.6	1
-750	750(30")	ø12	770	96	3.9	1
-900	900(36")	ø15	920	108	5.9	1

- Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous replacement blades (BP2K-).

**●BOLT CLIPPER**



**SPARE BLADE FOR BOLT CLIPPER**

No.	Nominal	▼kg	
BP7-300-K	For 300(12")	0.3	1
-350-K	For 350(14")	0.4	1
-450-K	For 450(18")	0.6	1
-600-K	For 600(24")	1.0	1
-750-K	For 750(30")	1.4	1
-900-K	For 900(36")	2.1	1

- Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous tools (BP2-).

**●SPARE BLADE FOR BOLT CLIPPER**



**MINI CLIPPER**

No.	Nominal	Cutting Dia.	L	▼g	
BPZ2-215C	215	Hardø2.9	215	355	6

**●MINI CLIPPER**



**MULTI-PURPOSE CRIMPING PLIERS**

No.	L	B	T	▼g	
AD102A	187	56	22	160	10

**Usage**

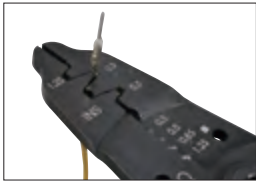
- For the wire harness repair of automobiles.

**Application**

- Applicable wires: JASO AVS AVSS 0.3, 0.5, 0.85, 1.25.

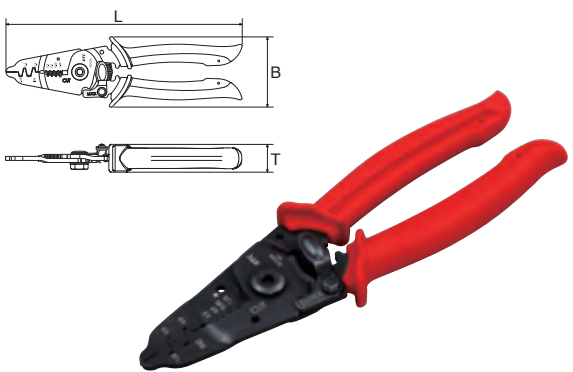
**Features**

- Supports automotive low-voltage wires 0.3 · 0.5 · 0.85 · 1.25.
- Supports 3 usages of wire cutting · wire stripping · terminal crimping.
- With the lock function that's convenient in storage.



- WARNING** • Do not use it where current is live.  
• It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

**●MULTI-PURPOSE CRIMPING PLIERS (FOR AUTOMOTIVE THREAD) D.PAT.P.**



**MULTI-PURPOSE CRIMPING PLIERS**

No.	L	B	T	▼g	
AD102B	220	62.5	22.5	200	10

**Usage**

- wire cutting · wire stripping · terminal crimping.

**Features**

- Supports 3 usages of wire cutting · wire stripping · terminal crimping.
- With the lock function that's convenient in storage.

**Application**

- Wire Stripping · Cutting

mm	0.25	0.3	0.4	0.5	0.65	0.8	1.0
AWG	30	28	26	24	22	20	18

**Crimping part (open barrel terminal)**

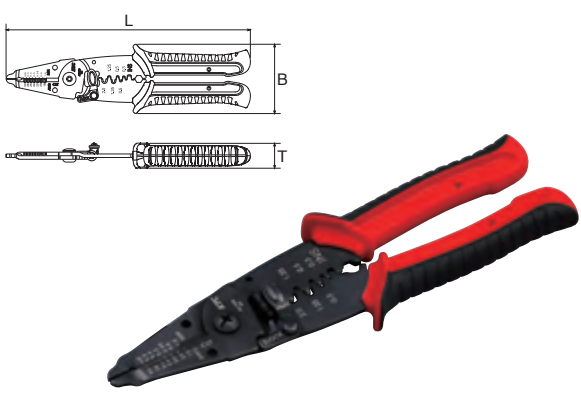
0.3sq.	0.5sq.	1.25sq.
--------	--------	---------

**Crimping part (sleeve terminal)**

0.5sq.	1.25sq.	2.0sq.
--------	---------	--------

- WARNING** • Do not use it where current is live.  
• It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

**●MULTI-PURPOSE CRIMPING PLIERS**



\*Please check the merchandise inventory for a product that is marked by before placing an order.

# 2. CONVENTIONAL TOOLS

## LOCKING PLIERS

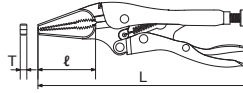


### ● LOCKING PLIERS LONG NOSE (WIRE CUTTER)



LOCKING PLIERS LONG NOSE (WIRE CUTTER)									
No.	Cutting capacity	Open width	L	ℓ	T (Tip width)	▽g	☞		Old model
	Soft wire								
100LN	φ1.2	0~45	135	38	5	108	5		4LN
150LN	φ1.2	0~51	165	46	5	192	5		6LN
225LN	φ2.3	0~71	220	56	5	375	5		9LN

- Long nose type that's useful in tight workspace.
- It can hold and turn small screws, bolt · nut.
- It can be used as a wire cutter.

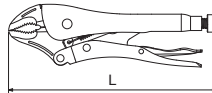


### ● LOCKING PLIERS-CURVED JAW (WIRE CUTTER)



LOCKING PLIERS-CURVED JAW (WIRE CUTTER)							
No.	Cutting capacity	Open width	L	▽g	☞		Old model
	Soft wire						
100WR	φ1.2	0~26	110	90	5		4WR
130WR	φ1.2	0~32	140	155	5		5WR
175WR	φ2.3	0~41	180	325	5		7WR
250WR	φ2.3	0~57	220	500	5		10WR

- It can fix pipes and the like with the curved jaw with teeth.
- It can be used as a wire cutter.

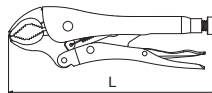


### ● LOCKING PLIERS-CURVED JAW



LOCKING PLIERS-CURVED JAW						
No.	Open width	L	▽g	☞		Old model
175CR	0~40	180	330	5		7CR
250CR	0~51	225	538	5		10CR

- It can fix pipes and the like with the curved jaw with teeth.
- It can securely hold even small objects when grinding.

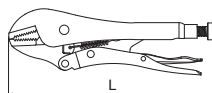


### ● LOCKING PLIERS-STRAIGHT JAW



LOCKING PLIERS-STRAIGHT JAW						
No.	Open width	L	▽g	☞		Old model
175R	0~37	180	383	5		7R
250R	0~45	215	553	5		10R

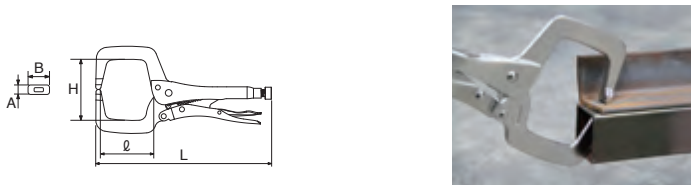
- It can fix square materials and the like with the straight jaw with teeth.
- It can securely hold even small objects when grinding.
- It can be used as a temporary handle for saw blades, files, etc.



**LOCKING PLIERS C-CLAMP**

No.	Open width	L	ℓ	H	A	B	▽g	📦		Old model
150R	0~ 47	165	38	47	10	10	235	5		6R
280R	0~ 97	270	76	95	10	14	775	5		11R
460R	0~188	450	250	100	10	14	1,216	5		18R
610R	0~330	610	400	90	10	14	1,586	5		24R

• It is convenient for fixing and welding of square iron materials and panels.



● LOCKING PLIERS C-CLAMP



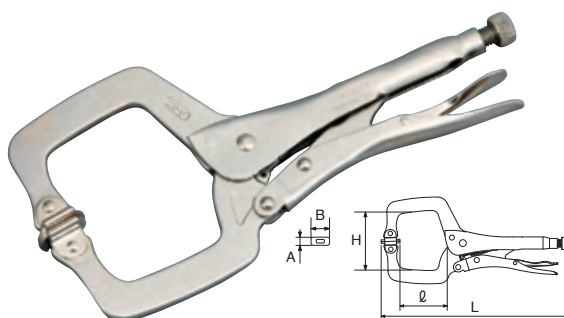
**LOCKING PLIERS SWIVEL PAD CLAMP**

No.	Open width	L	ℓ	H	A	B	▽g	📦		Old model
100SP	0~ 37	135	25	47	17	18	145	5		4SP
150SP	0~ 45	165	37	58	22	22	275	5		6SP
280SP	0~ 96	270	70	90	29	29	815	5		11SP
460SP	0~205	460	240	100	29	29	1,272	5		18SP
610SP	0~320	615	400	85	29	29	1,546	5		24SP

• It can fix tilted objects since the swivel pads at the tips move according to the objects.  
 • It is convenient for fixing and welding of panels.



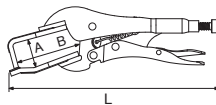
● LOCKING PLIERS SWIVEL PAD CLAMP



**LOCKING PLIERS PANEL CLAMP**

No.	Open width	L	A	B	▽g	📦		Old model
225R	0~41	230	25	76	666	5		9R

• It is convenient for fixing, welding and riveting of square iron materials and panels.



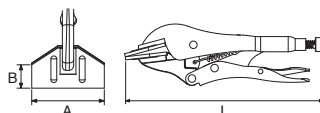
● LOCKING PLIERS PANEL CLAMP



**LOCKING PLIERS SHEET METAL TOOL**

No.	L	A	B	▽g	📦		Old model
200R	200	79	25	509	5		8R

• It is convenient for bending and temporary locking.



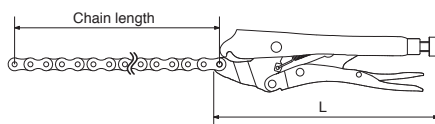
● LOCKING PLIERS SHEET METAL TOOL



**LOCKING PLIERS CHAIN CLAMP**

No.	L	Chain length	▽g	📦		Old model
510R	210	450	757	5		20R

• It is convenient for turning and gripping of circular and polygonal parts.



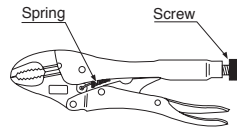
● LOCKING PLIERS CHAIN CLAMP



● LOCKING PLIERS SUPPLY PARTS

No.	Product name	Applicable part No.	Total
91A	Screw	100LN, 100SP, 100WR	1
51A	Screw	130WR, 150LN, 150R, 150SP	1
21A	Screw	175CR, 175R, 175WR, 200R, 225LN, 225R	1
07A	Screw	250WR, 250CR, 250R, 280R, 280SP, 460R, 460SP, 510R, 610R, 610SP	1

\* 1pcs. per pack.



No.	Product name	Applicable part No.	Total
92A	Spring	100LN, 100SP, 100WR	1
52A	Spring	130WR, 150LN, 150R, 150SP	1
22A	Spring	175CR, 175R, 175WR, 200R, 225LN, 225R	1
08A	Spring	250WR, 250CR, 250R, 280R, 280SP, 460R, 460SP, 510R, 610R, 610SP	1

\* 1pcs. per pack.



\*Please use the KTC genuine parts for spare parts.



Original locking pliers by **WISE-GRIP®**

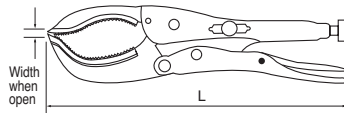
Blacksmith William Petersen from Denmark was the first to achieve a patent for the locking pliers. Mr. Petersen founded a small factory in De Witt, Nebraska in 1924. Today, the factory has grown, employing several hundred people. His invention is treasured and used around the world both domestically and professionally. To this day, all tools manufactured by **WISE-GRIP** adhere to Mr. Petersen's strict policies towards craftsmanship and quality.



**CAUTION**

- Vise grips**
- Do not use this tool as a hammer.
  - Do not apply strong impact on this tool by hitting it with a hammer, etc.
  - Take care to avoid jamming your hands with the grip.
  - Make sure that the held object is firmly locked in place before use.

● LOCKING PLIERS-LARGE JAW **WISE-GRIP®**



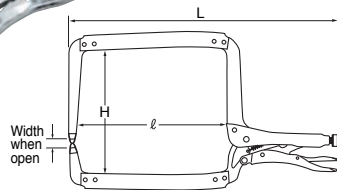
**LOCKING PLIERS-LARGE JAW**

No.	L	Open width	Screw	Spring	▼g	📦
12LC	265	0~79	No.07	No.08	650	5

• Can be used in exhaust pipe and radiator hose replacement, etc.

The name "**WISE-GRIP®**" is a registered trade mark of Irwin Industrial Tools Company.

● WIDE C-CLAMP **WISE-GRIP®**



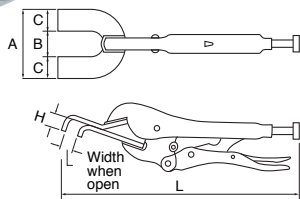
**WIDE C-CLAMP**

No.	L	Open width	ℓ	H	Screw	Spring	▼kg	📦
18DR	455	0~190	240	190	No.07	No.34	1.5	1

• Is effective when using fender clamps, lower panels, upper panel clamps, and back panel clamps.

The name "**WISE-GRIP®**" is a registered trade mark of Irwin Industrial Tools Company.

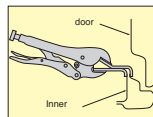
● PANEL CLAMP **WISE-GRIP®**



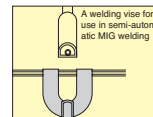
**PANEL CLAMP**

No.	L	Open width	A	B	C	H	Screw	Spring	▼g	📦
9AC	230	0~9.5	69	25	22	13	No.21	No.22	300	1

• The lower jaw of the tool can be adjusted by sliding forward and backward to suit, (a width of 0~9.5 mm) and can be clamped to a panel at 90°.



• Can be adjusted to suit the gap of closed doors.



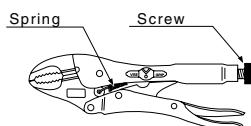
• Start the welding process after adjusting the tool to suit the gap of the closed door.

The name "**WISE-GRIP®**" is a registered trade mark of Irwin Industrial Tools Company.

REPLACEMENT FOR WISE GRIPS

No.	Product name	Applicable product number	Number
91	Screw	4BN, 4WR, 4LN, 4SP	5
51	Screw	5WR, 6BN, 6LN, 6R, 6SP	5
21	Screw	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 9AC	5
07	Screw	10WR, 10CR, 10R, 20R, 11P, 11R, 11SP, 18R, 18SP, 18DR, 24R, 24SP, 24DR, 12LC	5

\*5 units to one bag.



No.	Product name	Applicable product number	Number
92	Spring	4BN, 4WR, 4LN, 4SP	5
52	Spring	5WR, 6BN, 6LN, 6R, 6SP	5
22	Spring	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 11P, 11R, 11SP, 9AC	5
08	Spring	10WR, 10CR, 10R, 20R, 12LC	5
34	Spring	18R, 18SP, 18DR	5
137	Spring	24R, 24SP, 24DR	5

\*5 units to one bag.

## 2. CONVENTIONAL TOOLS

# PROSNIP®

The name "Prosnip" is a registered trade mark of Irwin Industrial Tools Company.



### CAUTION

#### PROSNIP® type

- Do not use if there is a live electric current.



### WARNING

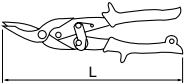
#### PROSNIP® type

- Check the direction the cut piece is likely to travel before cutting.
- Use protective goggles when working.
- Close the blade and store when the tool is not going to be used.
- Do not use the blade tip for gouging or hitting.
- Take care not to cut the hand holding the tool.

### SNIP (STRAIGHT LEFT CUTTING)

No.	L	Cutting power mm	▼g	☒
101	250	1.25	420	5

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from left to right.

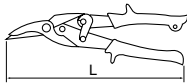
### ● SNIP (STRAIGHT LEFT CUTTING) Prosnip®



### SNIP (STRAIGHT RIGHT CUTTING)

No.	L	Cutting power mm	▼g	☒
102	250	1.25	410	5

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from left to right.

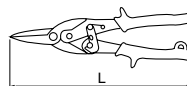
### ● SNIP (STRAIGHT RIGHT CUTTING) Prosnip®



### SNIP (STRAIGHT WIDE CURVES CUTTING)

No.	L	Cutting power mm	▼g	☒
103	250	1.25	420	5

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from left to right.

### ● SNIP (STRAIGHT WIDE CURVES CUTTING) Prosnip®



# 2. CONVENTIONAL TOOLS

## HAMMERS, CHISELS, and PUNCHES

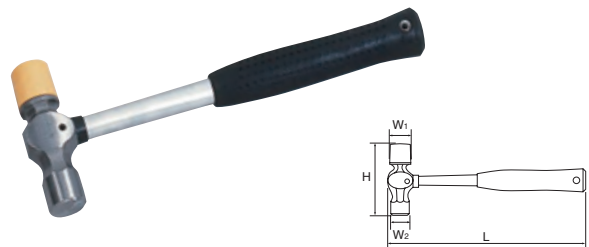


**CAUTION**

**Hammer types**

- Use the face of the hammer to tap in a perpendicular fashion.
- Do not use if the connection between the head and the grip is loose.
- Do not use if the blade becomes blunt as this will cause ripping and burring from long-term use.
- Do not use in the presence of fire hazards.
- Use protective goggles when working.

● **COMBINATION HAMMER**



**COMBINATION HAMMER**

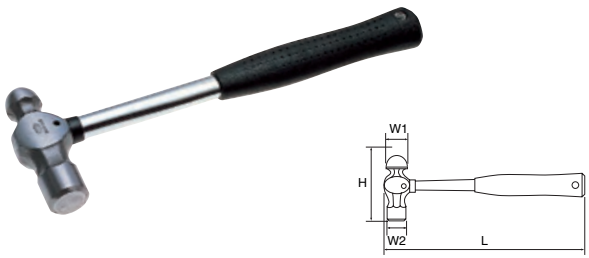
No.	Size	L	W <sub>1</sub>	W <sub>2</sub>	H	▼g	☐
UD7-10	1 LB	315	32	30	114	730	1

- This tool is a combined hammer made from steel and plastic that allows two different uses.
- Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.
- Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	☐
UD7-10-1	For UD7-10	Plastic	1

● **BALL-PEEN HAMMER**

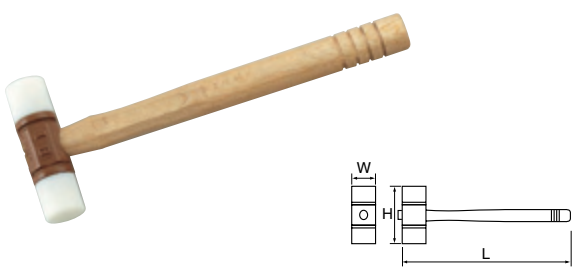


**BALL-PEEN HAMMER**

No.	Size	L	W <sub>1</sub>	W <sub>2</sub>	H	▼g	☐
PH45-323	1 LB	310	26	30	105	720	5
PH68-344	1.5 LB	335	28	35	117	950	5

- Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.
- Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.

● **PLASTIC HAMMER**



**PLASTIC HAMMER**

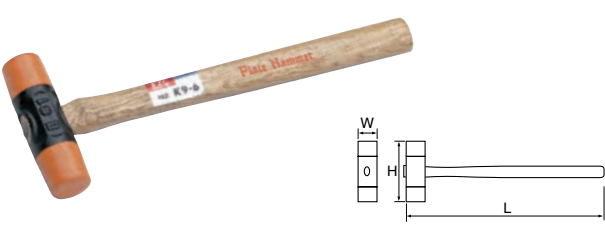
No.	Size	Material	L	W	H	▼g	☐
UD8-10	1 LB	Plastic (reinforced nylon)	310	32	112	450	1

- The head is constructed from reinforced nylon which prevents cracking and chipping, also reducing the possibility of chipped materials entering the machine.
- A slit is added to the wooden grip for prevention of slipping.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	☐
UD8-10-1	For UD8-10	Plastic (reinforced nylon)	1

● **PLASTIC HAMMER**



**PLASTIC HAMMER**

No.	Size	L	W	H	▼g	☐
K9-6	1 LB	310	32	110	450	5

- Head is made of plastic  
(Note) The head is not replaceable.

\*Please check the merchandise inventory for a product that is marked by before placing an order.



**PLASTIC HAMMER**

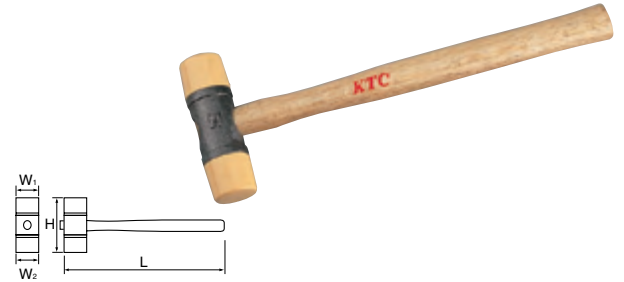
No.	Size	Material	L	W	H	▼g	☒
UD3-10	1 LB	Plastic	330	35	116	500	1

- A tapered grip form that raises efficiency and allows for easy familiarization.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	☒
UD3-10-1	For UD3-10, UD6-10	Plastic	1

● **PLASTIC HAMMER**



**SHOCK-LESS HAMMER**

No.	Size	Material	L	W	H	▼g	☒
UD1-10B	1 LB	Steel, Plastic	366	36	119	450	1

- The head can be replaced. Replacement can be carried out in one single motion without a roll pin. (UD1-10A)
- This tool is a combined hammer made from steel and plastic that allows two different uses. The head on the plastic side can be replaced (roll pin type). (UD1-10B)
- The flat hitting side allows for the nailing in of decorative pins or for hitting in center punches. (UD1-10B)

Replacement head (1 attached)

● **SHOCK-LESS HAMMER**



**COPPER HAMMER**

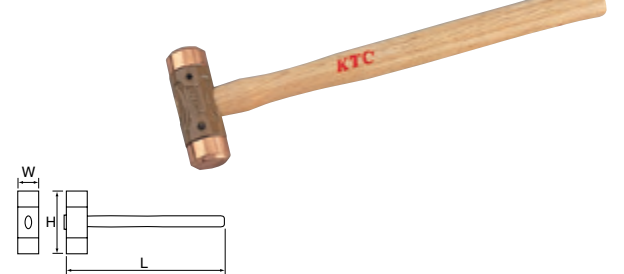
No.	Size	Material	L	W	H	▼g	☒
UD2-10	1 LB	Copper	330	30	88	450	1

- The head can be replaced (roll pin type).
- The main structure is made from cast iron.

Replacement head (1 attached)

No.	Application	Material	☒
UD2-10-1	For UD2-10	Copper	1

● **COPPER HAMMER**



**COMBINATION HAMMER**

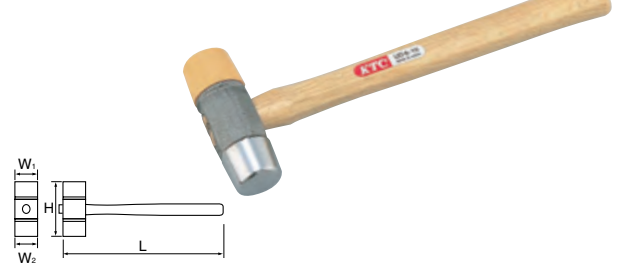
No.	Size	Material	L	W <sub>1</sub>	W <sub>2</sub>	H	▼g	☒
UD6-10	1 LB	Steel, Plastic	300	33	32	100	610	1

- A tapered grip form that raises efficiency and allows for easy familiarization.
- This tool is a combined hammer made from steel and plastic that allows two different operations.
- The head on the plastic side can be replaced.

Replacement head (1 attached)

No.	Application	Material	☒
UD3-10-1	For UD3-10, UD6-10	Plastic	1

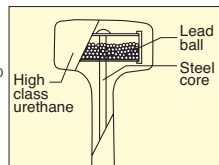
● **COMBINATION HAMMER**



**COMPONENT HAMMER**

No.	Size	Material	L	W	H	▼g	☒
UD1-10	1 LB	Plastic	310	46	98	610	1

- A singular structure with high standards of safety (urethane plastic). The tool is highly durable and produces no noise, allowing for quiet operation.
- The "shock-less" structure does not feed back the impact to your hands.
- The tool does not damage the item being worked on.



● **COMPONENT HAMMER**



**RUBBER HAMMER**

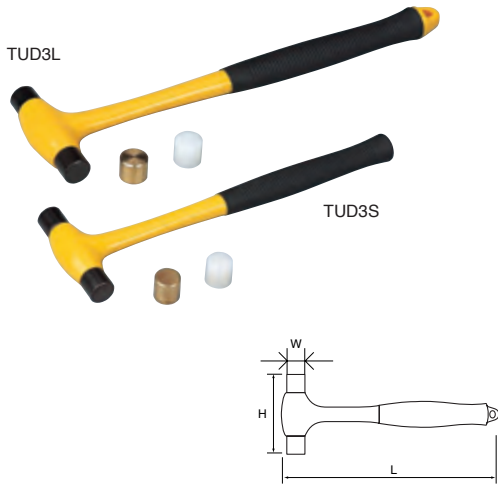
No.	Size	L	W	H	▼g	☒
UD4-10	1 LB	330	60	100	450	1

- Excellent quality rubber with high durability is used.

● **RUBBER HAMMER**



● MINI HAMMER-SET



MINI HAMMER-SET

No. TUD6	▼g 190	📦 1		
MINI HAMMER · SET		TUD3S, 3L		
No.	L	H	▼g	📦
TUD3S	180	56	70	1
3L	245	65	120	1

- Interchangeable head (iron, plastic, brass) enables use for different applications.
- The head is a twist-in type.
- Most suitable for press fitting of oil-seals and small bearings, and installation/removal of split pins.
- Complete with each 1 piece of plastic head and brass head.

Head set (2 each attached)

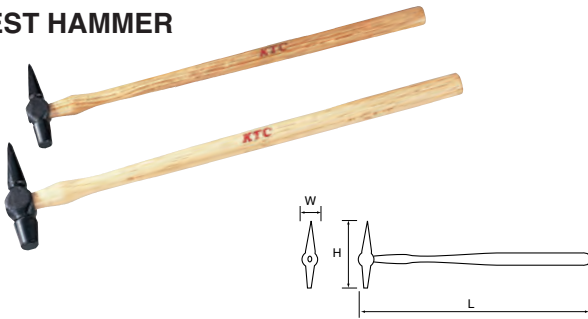
For TUD3S

No.	W	Material
UD1802C	12	Brass
F	12	Iron
P	12	Plastic

For TUD3L

No.	W	Material
UD2502C	4	Brass
F	4	Iron
P	4	Plastic

● TEST HAMMER

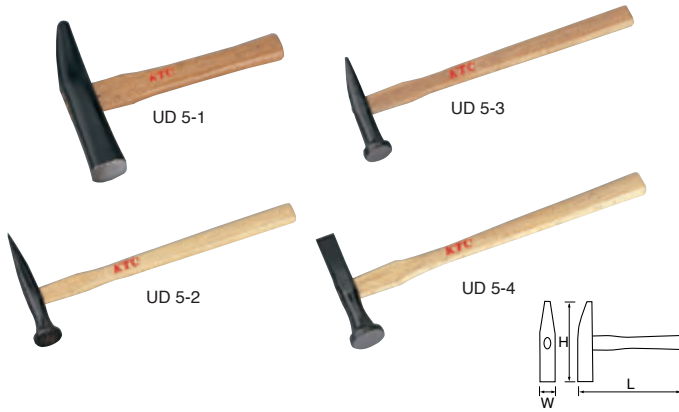


TEST HAMMER

No.	Size	L	W	H	▼g	📦
UDHT - 2	1/4 LB	380	16	95	160	1
-26	1/4 LB	600	16	95	250	1
- 4	1/2 LB	420	20	113	290	1
-46	1/2 LB	600	20	113	350	1
-49	1/2 LB	900	20	113	420	1

\*The grip is available as a replacement part. Check with your dealer for details.

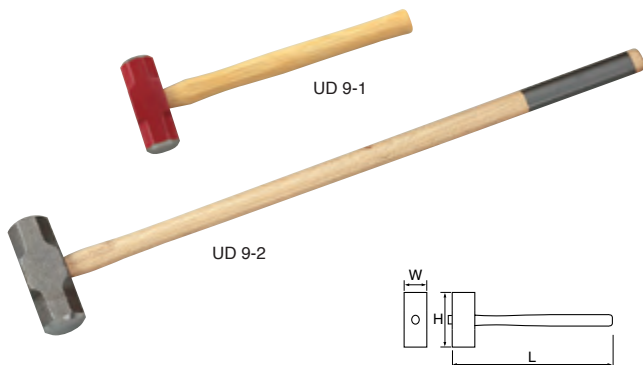
● SHEET METAL PROCESSING HAMMER



SHEET METAL PROCESSING HAMMER

No.	Usage	L	W	H	▼g	📦
UD5-1	Rough	250	38	190	1600	1
-2	Cone shaping	300	30	143	290	1
-3	Horizontal	300	30	100	300	1
-4	Vertical	300	50	100	390	1

● DOUBLE-HEAD HAMMER



DOUBLE-HEAD HAMMER

No.	Size	Head weight (kg)	Material	L	W	H	▼kg	📦
UD9-1	3 pounds	1.3	Iron	360	44	118	1.5	1
-2	8 pounds	3.6	Iron	900	58	163	4.0	1

\* The grip of the UD9-2 has a slip prevention structure.

\*The grip is available as a replacement part. Check with your dealer for detail.

**CHISEL**

No.	Size	▼g	☞
UDC-10	10×140	70	10
-13	13×160	150	10
-16	16×180	260	10
-19	19×190	290	10
-25	25×215	600	5

- Special alloy steel is friction-welded on the edge for more strength and durability.
- Chrome plated surface for rust resistance.

- DO NOT USE THE TOOL AS A SUBSTITUTE FOR A HAMMER.
- WEAR SAFETY GLASSES WHEN USING THE TOOL.
- DO NOT USE THE TOOL WITH CHIPPED OR ROUNDED EDGE.
- DO NOT TWIST THE TOOL.

● CHISEL



- OTHER TOOLS
- DO NOT USE THE TOOL IF ANYTHING WRONG SUCH AS CHIP, CRACK, WEAR OR DEFORMATION IS/ARE NOTICED.
  - DO NOT ALTER.

**CENTER PUNCH**

No.	Size	▼g	☞
UDP-10	10×125	65	10
-13	13×150	130	10

**Characteristics**

- Made with special steel alloy for durability and strength.
- Galvanized surface to prevent rust.
- The handle is knurled to prevent slippage.



- Use protective goggles when working.
- Do not use a punch with a chipped or rounded tip.
- Do not use with force as the blade may beak or shatter.

● CENTER PUNCH



UDP-13

UDP-10

**KNOCK PIN PUNCH-SET (3pcs.) · (8pcs.)**

No. PK3	▼g 300	☞ 10
Knock Pin Punch Set (3pcs.)	PK-4185, 45185, 5190	
No. PK8	▼g 960	☞ 5
Knock Pin Punch Set (8pcs.)	PK-2125, 3135, 4185, 45185, 5190, 6207, 212, 8217	

**KNOCK PIN PUNCH**

No.	No.	S	L	ℓ	A	▼g	☞
PK-2125	2	1.8	125	25	12	46	10
-3135	3	2.8	135	35	12	46	10
-4185	4	3.8	185	45	18	98	10
-45185	4.5	4.3	185	45	18	100	10
-5190	5	4.8	191	51	18	100	10
-6207	6	5.8	207	67	22	150	10
-7212	7	6.8	212	72	22	160	10
-8217	8	7.8	217	77	22	170	10

**Spare Parts**

No.	Product	Number
PK-2125-4	Chucking rubber	1
-3135-4	Chucking rubber	1
-4185-4	Chucking rubber	1
-45185-4	Chucking rubber	1
-5190-4	Chucking rubber	1
-6207-4	Chucking rubber	1
-7212-4	Chucking rubber	1
-8217-4	Chucking rubber	1

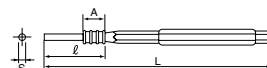
● KNOCK PIN PUNCH SET (3 or 8pcs.)



PK8



PK-8217-4



- Set of most frequently used sizes.
- Vinyl coated handle is hexagonal form, which prevents from rolling off.
- With chucking rubber at the point.



- WHEN USING THE TOOL, WEAR SAFETY EYE GLASSES.
- USE A TOOL APPROPRIATE TO THE SIZE OF AN OBJECT.
- SET THE CHUCKING RUBBER SECURELY.

**AUTO PUNCH**

No.	L	ℓ 1	ℓ 2	D1	D2	▼g
UDP-4	160	90	70	28	34	160

**Punches for Replacement**

No. UDP-4-1
-------------

**Application**

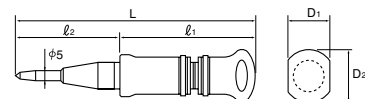
- For making when attaching optional parts. To eliminating distortion during sheet metal processing.
- For marking the fitting point to engage the parts.

**Features**

- Punch tip is made of highly durable hard steel.
- Continuous operations enhance operability.
- Quick marking with one hand without a hammer.
- Strength of punching adjustable by turning the handle.
  - \* Harder punch: turn clockwise. Softer punch: turn counter-clockwise.
  - \* The punch is made of abrasion-resistant SK steel.



● AUTO PUNCH



# CONVENTIONAL TOOLS

## SCRAPERS, FILES and BRUSES



Scraper

File

Wire Brush

Scraper is a tool with a spatula-shaped blade. It can be used in various usages such as scraping off of residue of sealant, gasket and packing of engines in automobile or industrial machinery, removing of rust and deburring of cutting trace.

File is a rod-shaped tool for the scraping and polishing of metal or wood. It is divided into different types such as woodworking and ironworking depending on the fineness and blade shape. Cloth-type is called emery paper or sandpaper.

Brush is used in various fields, but the representative industrial brush is the metal wire brush with hard bristles. It is used for removing of dirt and rust, polishing and the like.

### Scraper Chart

Blade material	Handle length					
	Short	Standard		Long		
Ceramic	KZ4S-18 	KZ4-12 	KZ4-18 	KZ4L-18 		
Carbide Blade	KZ2S-18 	KZ2-18A 		KZ2L-18 		
Hard Steel Edge	KZ3S-18 	KZ3-18A 		KZ3L-18 		
Stainless Steel	KZ1S-15 	KZ1-10 	KZ1-15 	KZ1-22 	KZ1-30 	KZ1L-15 
Hard Steel Edge (for Sticker)		KZSS-25 		KZS-40 		

### Proper Tool Use



#### CAUTION Scrapers

- Please do not use it as a chisel, lever or knife.
- Please do not use it as a hammer.
- Please do not apply an impact by tapping with a hammer, etc.
- Please do not use it if crack, chip, wear or deformation is detected.

#### Scrapers (Spare Blade)

- Please do not use the spare blade as a substitute for razor blade.
- Please beware of the cutting edge when replacing the blade.

**CERAMIC AND STAINLESS SCRAPER SET**

**CERAMIC AND STAINLESS SCRAPER SET A**

<b>No. KZ142A</b>	▼g 80	📦 10
Ceramic Scraper	Blade Width 12mm	KZ4-12
Stainless Scraper	Blade Width 10mm	KZ1-10

**CERAMIC AND STAINLESS SCRAPER SET B**

<b>No. KZ142B</b>	▼g 130	📦 10
Ceramic Scraper	Blade Width 18mm	KZ4-18
Stainless Scraper	Blade Width 15mm	KZ1-15

• Stainless Scraper for grinding and Ceramic Scraper for finishing.

**CAUTION** • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

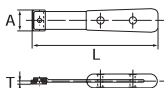
**● CERAMIC & STAINLESS SCRAPER SET A · B**



**CERAMIC SCRAPER SHORT**

No.	A	T	L	▼g	📦
<b>KZ4S-18</b>	18	3	115	50	20

- It is excellent in wear resistance. \* It uses a ceramic chip that causes less rust and deformation.
  - The blade does not bite in, allowing the smooth cutting.
  - Scrapes, glue and the like do not adhere to the blade.
  - Both sides of blade can be used.
- \* Impact (hitting, prying) and drop may damage the tip, so please be careful in handling.  
\* Ceramic chip is not sold by itself.



**● CERAMIC SCRAPER SHORT**



**CERAMIC SCRAPER**

No.	A	T	L	▼g	📦
<b>KZ4-12</b>	11	3	145	30	5
<b>-18</b>	18	3	175	52	5

**Purpose**

● Scraping and finishing the surface of automotive engines and gaskets of industrial machineries, etc.

**Special feature**

- Superb wear resistance. and smooth cutting.
- Ceramic tip for preventing rust and deformation.
- Tip does not adhere to sticky gasket, seal, gum, etc.
- Both sides of the blade can be used.

**● CERAMIC SCRAPER D. PAT.**



**CAUTION** • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

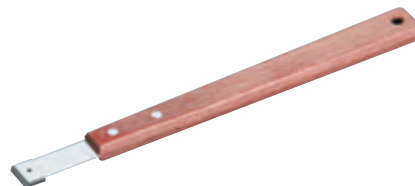
**CERAMIC SCRAPER LONG**

No.	A	T	L	▼g	📦
<b>KZ4L-18</b>	18	3	262	80	20

- It is excellent in wear resistance. \* It uses a ceramic chip that causes less rust and deformation.
  - The blade does not bite in, allowing the smooth cutting.
  - Scrapes, glue and the like do not adhere to the blade.
  - Both sides of blade can be used.
- \* Impact (hitting, prying) and drop may damage the tip, so please be careful in handling.  
\* Ceramic chip is not sold by itself.



**● CERAMIC SCRAPER LONG**



**STAINLESS SCRAPER SET**

<b>No. KZ12A</b>	▼g 130	📦 10
Stainless Scraper	Blade Width 10mm	KZ1-10
	Blade Width 22mm	-22

<b>No. KZ12B</b>	▼g 130	📦 10
Stainless Scraper	Blade Width 15mm	KZ1-15
	Blade Width 30mm	-30

<b>No. KZ12S</b>	▼g 160	📦 10
Stainless Scraper	KZ1-22 (Blade Width 22mm)	KZ1-30 (Blade Width 30mm)

**Caution**

● Blade width is small, to avoid scraping with blade at vertical position.

**● STAINLESS SCRAPER SET**



**CAUTION** • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

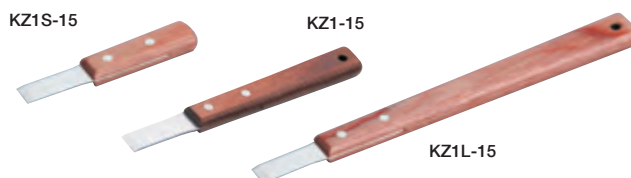
**STAINLESS SCRAPER SET**

<b>No. TKZ1153</b>	▼g 182	📦 10
Stainless Scraper Short	KZ1S-15	Blade width 15mm
Stainless Scraper	KZ1-15	Blade width 15mm
Stainless Scraper Long	KZ1L-15	Blade width 15mm

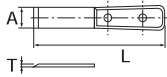
● It is a stainless scraper set with various handle lengths.

**CAUTION** • Please do not use it as a chisel, lever or knife.

**● STAINLESS SCRAPER SET**



● STAINLESS SCRAPER SHORT



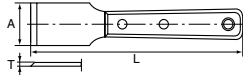
STAINLESS SCRAPER SHORT

No.	A	T	L	▽g	☞
KZ1S-15	15	1.4	110	50	20

- It can be used in tight spaces with the shorter handle than the conventional.
- \* Since the tip width is narrow, be careful not to stand the edge too much.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

● STAINLESS SCRAPER



STAINLESS SCRAPER

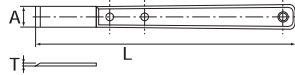
No.	A	T	L	▽g	☞
KZ1 -10	10	1.4	165	50	5
-15	15	1.4	170	52	5
-22	22	1.4	180	80	5
-30	30	1.4	180	80	5

Special feature

- Set of stainless scrapers of different blade width for multi purposes.

⚠ CAUTION • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

● STAINLESS SCRAPER LONG



STAINLESS SCRAPER LONG

No.	A	T	L	▽g	☞
KZ1L-15	15	1.4	260	80	20

- It can be used in deep spaces with the longer handle than the conventional.
- \* Since the tip width is narrow, be careful not to stand the edge too much.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

● HIGH CLASS SCRAPER SET (2pcs.)



HIGH CLASS SCRAPER SET (2pcs.)

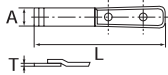
No. TKZ232A	▽g 110	☞ 10
H.S.S.	KZ2-18A	Blade Width 18mm
Hard Steel	KZ3-18A	Blade Width 18mm

Purpose

- Scraping gaskets on engines.
- Cleaning.
- For scraping heat-hardened gaskets easily and finishing for clean surface.
- Superb wear resistance.
- Specially heat-treated for superb durability so can be used for long time after grinding the edge at one time. (KZ3-18)

⚠ CAUTION • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC

● HARD METAL SCRAPER SHORT



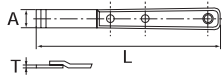
HARD METAL SCRAPER SHORT

No.	A	T	L	▽g	☞
KZ2S-18	18	1	118	50	5

- Carbide tip is used on the cutting edge.
- It can be used in tight spaces with the shorter handle than the conventional.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

● HARD METAL SCRAPER



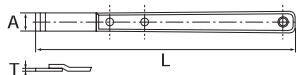
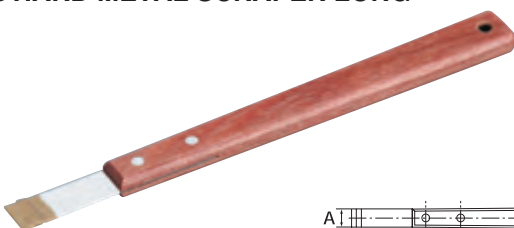
HARD METAL SCRAPER

No.	A	T	L	▽g	☞
KZ2-18A	18	1	180	55	5

- Hard steel tip is used on the cutting edge.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

● HARD METAL SCRAPER LONG



HARD METAL SCRAPER LONG

No.	A	T	L	▽g	☞
KZ2L-18	18	1	265	80	5

- Carbide tip is used on the cutting edge.
- It can be used in deep spaces with the longer handle than the conventional.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

**HARD STEEL SCRAPER SET**

No. TKZ3183	▼g 185	c 5
Hard Steel Scraper Short	KZ3S-18	Blade width 18mm
Hard Steel Scraper	KZ3-18A	Blade width 18mm
Hard Steel Scraper Long	KZ3L-18	Blade width 18mm

● It is a hard steel scraper set with various handle lengths.

**HARD STEEL SCRAPER SHORT**

No.	A	T	L	▼g	☒
KZ3S-18	18	1.4	118	50	5

- It uses a hard steel edge with less wear.
- It can be used in tight spaces with the shorter handle than the conventional.

**HARD STEEL SCRAPER**

No.	A	T	L	▼g	☒
KZ3-18A	18	1.4	180	55	5

● It uses a hard steel edge with less wear.

**HARD STEEL SCRAPER LONG**

No.	A	T	L	▼g	☒
KZ3L-18	18	1.4	265	80	5

- It uses a hard steel edge with less wear.
- It can be used in deep spaces with the longer handle than the conventional.

⚠ CAUTION • Please do not use it as a chisel, lever or knife.

**STICKER SCRAPER · SPARE BLADE**

No.	Blade Width	L	▼g	☒
KZS-40	40	155	110	10

**Special feature**

- For speedy, neatly, and safety sticker scraping.
- Sharp edge for clean finish.
- Fixed blade for preventing the position from changing.
- Comfortable grip for easy operation.

**SPARE BLADE**

No.	Contents	▼g	☒
KZS-4010	10pcs. set	15	10

⚠ CAUTION • DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE.  
• BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

**HIGH CLASS STICKER SCRAPER · SPARE BLADE**

No.	L	W	H	▼g	☒
KZSS-25	150	40	19	120	10

**Special feature**

- Easier job with unique 25mm blade width and round-shaped supporter for the blade.
- Built in space in the grip for storing optional spare blades set of 10pcs.
- 5pcs. spare blades as the standard accessory.

**SPARE BLADE**

No.	Contents	▼g	☒
KZS-2510	10pcs.set	20	10

⚠ CAUTION • DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE.  
• BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

**SET OF SMALL FILES**

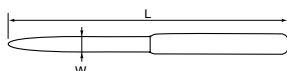
Set of small Files (5pcs.)

No. TZKF105	▼g 250	☒ 10
small File Flat	ZKF1-2H	
Half Round	-2HR	
Round	-2R	
Squire	-2S	
Triad	-2T	

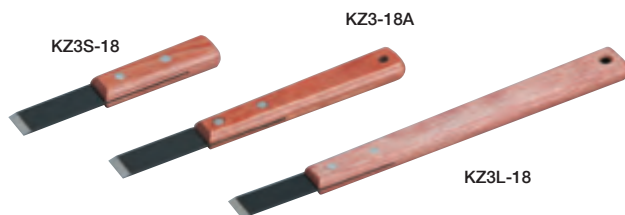
**SMALL FILE**

No.	Shape	L	W	Type	▼g	☒
ZKF1-2H	Flat	220	11	Mid	60	25
-2HR	Half Round	220	11	Mid	60	25
-2R	Round	220	5.5	Mid	40	25
-2S	Squire	220	5.5	Mid	50	25
-2T	Triad	220	9	Mid	40	25

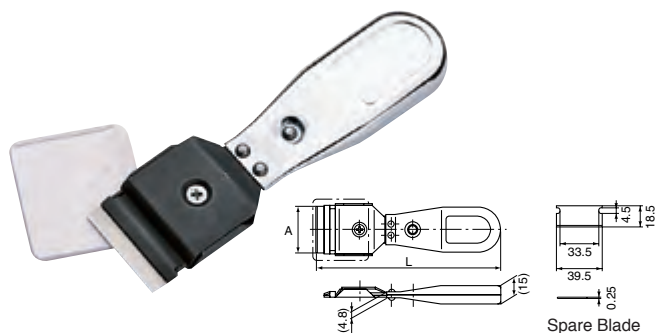
⚠ CAUTION • DO NOT TWIST THE TOOL.



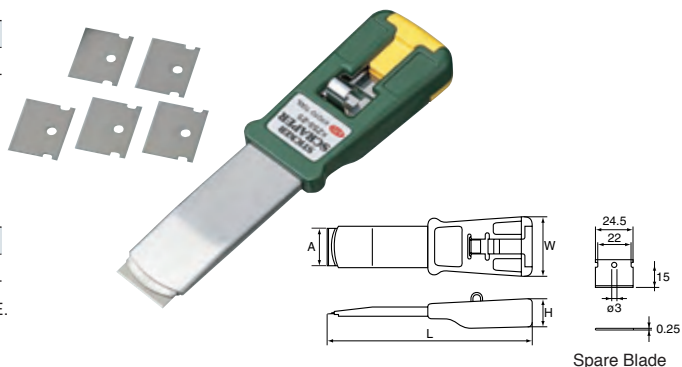
**● HARD STEEL SCRAPER SET**



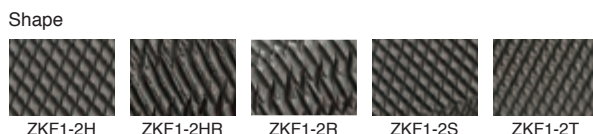
**● STICKER SCRAPER & SPARE BLADE**



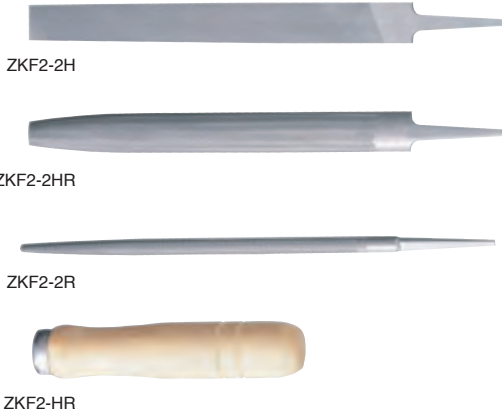
**● STICKER SCRAPER DX & SPARE BLADE D. PAT.**



**● SMALL FILE**

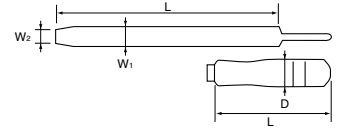


● ENGINEER'S FILE (WOODEN HANDLE)



ENGINEER'S FILE (WOODEN HANDLE)									JIS
No.	Shape	Type	L	W <sub>1</sub>	W <sub>2</sub>	D	▽g	☞	
ZKF2-2H	Flat	Mid	250	25	22	—	260	5	
-2HR	Half Round	Mid	250	25	15	—	240	5	
-2R	Round	Mid	250	∅10	—	—	150	5	
-HR	Wood Handle	Mid	115	—	—	∅23	30	10	

⚠ CAUTION • DO NOT TWIST THE TOOL.

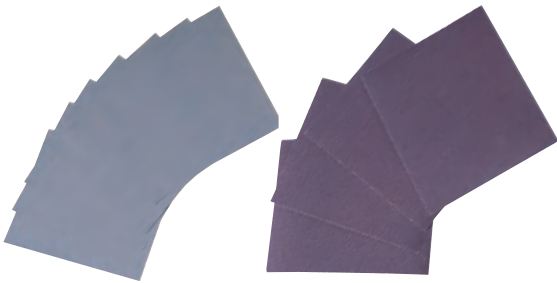


Shape



● ABRASIVE PAPER WATERPROOF ABRASIVE PAPER

Supply will be in packing unit shown in the table.



ABRASIVE PAPER · WATERPROOF ABRASIVE PAPER

ABRASIVE PAPER			WATERPROOF ABRASIVE PAPER		
No.	Size	☞	No.	Size	☞
YWP- 400	228×280	100	YGJ- 40	228×280	50
- 600	228×280	100	- 60	228×280	50
- 800	228×280	100	- 80	228×280	50
-1000	228×280	100	-120	228×280	50
-1200	228×280	100			

\*Part Nos indicate the sizes of the abrasive grains on the papers.

⚠ CAUTION • WEAR SAFETY GLASSES WHEN USING THE TOOL.

● NAIL AND HAND BRUSH



NAIL AND HAND BRUSH

No.	Size (material)			▽g	☞
	Base	Top (for nail)	Bottom (for palm)		
YTHB-100	100×20×38 (PP)	90×5×18 (white hog bristle)	88×15×23 Tampico (Mexican fiber)	65	1

- Brushes for nail, fingertip and palm are made into one.
  - Upper brush for nail/fingertip is made of white hog bristle placed in arch shape.
  - Lower brush for palm is made of Tampico.
  - Base is made of mold resistant PP (polypropylene) that allows cleanliness to be maintained.
- \* Please avoid the use of kerosene or detergent.

● BRUSH

BRUSH



No.	Name	Material (brush)	Length	Dia	Width (brush)	Shape (head)	Material (handle)	Shape (handle)	☞
YTBR-112	Three Line Wire Brush	Steel	270	0.3	85×15	Straight	Wood	Straight	10
-132	Sword Type Wire Brush	Steel	230	0.3	90×30	Straight	Wood	Straight	10
-142	Oval Type Wire Brush	Steel	130	0.3	110×50	—	Wood	—	10
-122	Metal Handle Wire Brush	Steel	260	0.25	67	Straight	Steel	Bent	10
-1221	A Type Channel Brush	Steel	215	0.25	65	Straight	Steel	Bent	10
-1222	J Type Channel Brush	Steel	235	0.25	85	Bent	Steel	Bent	10
-212	Brass Brush	Brass	240	0.14	75×17	Straight	Wood	Straight	10
-311	Engine Brush (Small)	Pig Hair	200	—	38× 9	Straight	Bamboo	Straight	10
-312	Engine Brush (Big)	Pig Hair	295	—	62×10	Straight	Bamboo	Straight	10
-323	Angled Brush	Pig Hair	315	—	62×15	Straight	Bamboo	Straight	10
-422	Palm Brush	Palm	260	—	65	Straight	Steel	Straight	10

Features

- Brass plated wire brush for more durability. (YTBR-112, 132, 142, 122, 1221 & 1222)
- The wood section of the shank is made of timber from thinning, that is used in consideration for preservation of natural environments.

⚠ CAUTION • WEAR SAFETY GLASSES WHEN USING THE TOOL.





## 2. CONVENTIONAL TOOLS

# ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR PULLERS



### CAUTION

#### Adjustable wrenches

- Firmly adjust the mouth to the width of the bolts and nuts.
- Turn towards the lower jaw.
- Do not use by adding on pipes, etc.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

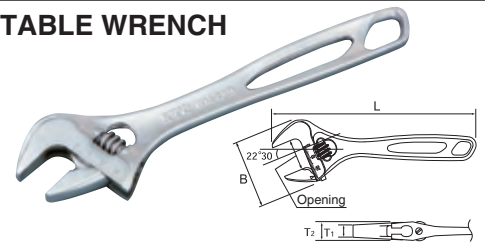
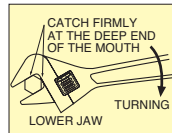
#### Pipe wrenches

- Use this tool within the range of the outer diameter of the pipe being held.
- Firmly hold the wrench perpendicular to the pipe and hold firmly at the center.
- Do not apply force sideways.
- Do not use by adding on pipes, etc.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Do not use when the teeth are chipped or worn, or when blocking has occurred.

#### ADJUSTABLE WRENCH

No.	Nominal	Opening	T <sub>1</sub>	T <sub>2</sub>	B	L	▽g	☞
WM-150	150	25	5.5	11	51.7	164.5	140	10
-200	200	30	6.5	13	63.5	213	240	10
-250	250	35	8.5	14.5	75	263	380	10
-300	300	43	10	18.5	91.5	316	670	5

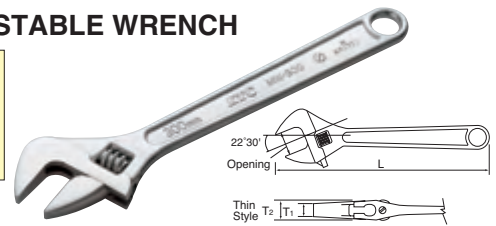
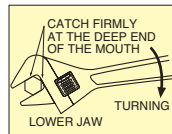
#### ADJUSTABLE WRENCH



#### ADJUSTABLE WRENCH

No.	Nominal	Opening	T <sub>1</sub>	T <sub>2</sub>	L	▽g	☞
MWA-150	150	20	6.7	11	158	120	6
-200	200	24	7.5	12.9	208	235	6
-250	250	29	8.7	15.32	258	380	6
-300	300	34	10.2	18.24	308	590	6
-375	375	44	13.4	23.5	375	1,300	1
-450	450	55	14	25.6	450	2,200	1

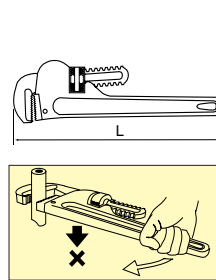
#### ADJUSTABLE WRENCH



#### PIPE WRENCH

No.	Nominal	Max. Dia. of Pipe	L	▽g	☞
PWA-150	150( 6")	3/4" (19)	150	185	6
-200	200( 8")	3/4" (20)	185	350	5
-250	250(10")	1" (26)	245	750	5
-300	300(12")	1 1/4" (32)	300	1,100	5
-350	350(14")	1 1/2" (38)	325	1,300	5
-450	450(18")	2" (52)	410	2,100	5
-600	600(24")	2 1/2" (65)	540	3,800	1
-900	900(36")	3 3/4" (95)	780	7,300	1

#### PIPE WRENCH



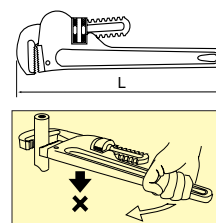
\* Upper jaw screws have trapezoidal shape and are processed using a non-oxidizing heat-treatment to enhance strength and endurance.  
 \* Upper and lower jaws have well-engaging teeth and are processed with induction heat-treatment for superior strength.

#### ALUMINUM PIPE WRENCH

JIS

No.	Nominal	Max. Dia. of Pipe	L	▽g	☞
APWA-350	350(14")	1 1/2" (38)	325	1,000	5
-450	430(18")	2" (52)	400	1,600	5
-600	600(24")	2 1/2" (65)	550	2,500	1

#### ALUMINUM PIPE WRENCH

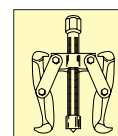
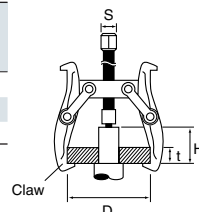


• Extra light body made of specially selected aluminum alloy.  
 • Highly accurate and rugged enough to pass U.S. Federal standards.

#### GEAR PULLER

No.	D · Diameter of Subject		t · Width of Subject (when D is max.)	H Claw Span	B Screw Hexagon	Breaking Load ton	▽g	☞
	Min	Max						
GU- 75	40	75	30	55	14	2	385	1
-100	50	100	45	70	17	4	800	1
-150	60	150	60	100	19	6	1,862	1

#### GEAR PULLER

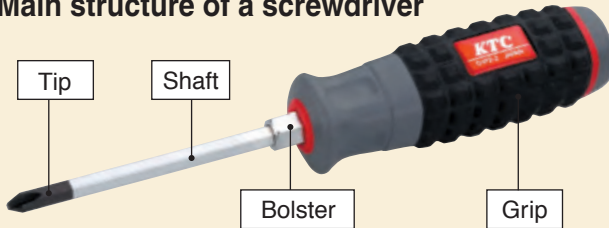


• Can be used both outer and inner diameter by reversing the claws  
 \*Replacement parts are available. Check with your dealer for details.

# SCREWDRIVER

A screwdriver is a common tool that can be found in family homes. The screwdriver is used for tightening and loosening screws. Along with the more common cross and flat screwdrivers, there are hex bolt/nut screwdrivers, hex hole bolt screwdrivers, TORX® screwdrivers, etc. according to the purpose.

## Main structure of a screwdriver



There are cross (+, and sometimes referred to as Philips) screwdrivers and flat (⊖) screwdrivers. In many cases KTC color codes the handles red or orange (+ or cross) and green (⊖ or flat).

The size of the cross screwdriver is determined by the size of the screw it turns.

The KTC lineup of cross screwdrivers covers the following screw sizes: No. 00, No. 0, No.1, No. 2, No. 3, No. 4 but No.1~No. 3 are most commonly used. The flat screwdriver size is determined by the length from the tip to the base of the shaft or by the width of the tip. Flat screwdrivers with a shaft length between 75 mm and 150 mm or a tip width between 5.5 mm and 8 mm are used most frequently.

## Types of screwdrivers



### Hexagon screwdrivers

This screwdriver is used to turn bolts with hex holes.



### Flat ratchet screwdriver

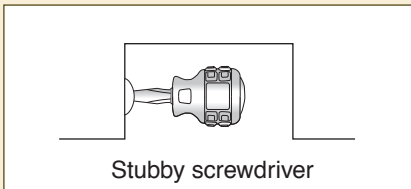
The ratchet structure allows for the forward and reverse movement alone to tighten and loosen screws.



### Impact screwdriver

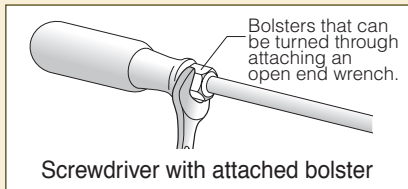
By holding the grip and hitting the base of the tool with a hammer, the strength of the impact turns the screw. This method is effective for turning tightly screwed screws or rusty screws.

## Selecting screwdrivers



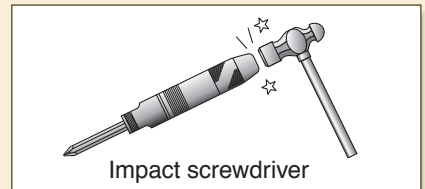
Stubby screwdriver

Removing screws in confined spaces.



Screwdriver with attached bolster

Removing and attaching screws that require large torque.



Impact screwdriver

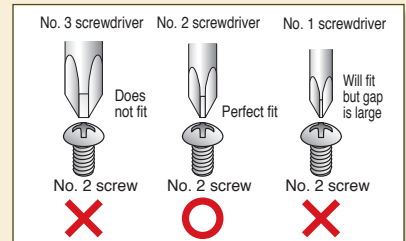
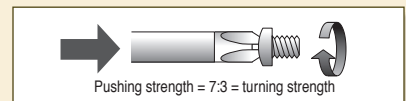
Apply impact to a hard tightened screw in order to loosen.

Refer to "Selecting screwdrivers" (P.189) listed in the section on conventional tools - screwdrivers for information on basic selection methods.

## How to use the screwdriver

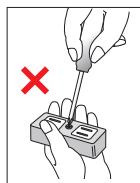
The basic movement in using a screwdriver is "push and turn" - pushing the screw and turning at the same time. Generally, the ratio between pushing and turning is 7:3, however, with hard-tightened screws, the pushing force must be increased in order to prevent the tip from slipping off the screw or damaging the screw. The center of the screwdriver shaft and the center of the screw must match for flat screwdrivers. Not only is turning difficult but the screw and/or screwdriver tip may become damaged if the center does not match.

It is also important to select the screwdriver size that matches the number allocated to the screw. The key to selecting the right size is to initially select a screwdriver that is slightly larger than the size of the screw. By selecting screwdrivers one size below the first screwdriver, the right match will be found. Once the perfect fitting screwdriver has been found, the operation can commence. If the size of the screwdriver is smaller than the size of the screw cross, the gap will increase, resulting in damaging the cross-hole of the screw.

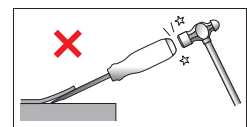


## Proper use of the tools

- Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.



- The plastic on the grip does not provide insulation against electrical current. Do not use if there is a live electric current.
- Do not use this tool as a lever or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Use screwdrivers that conform to the size of the screws.

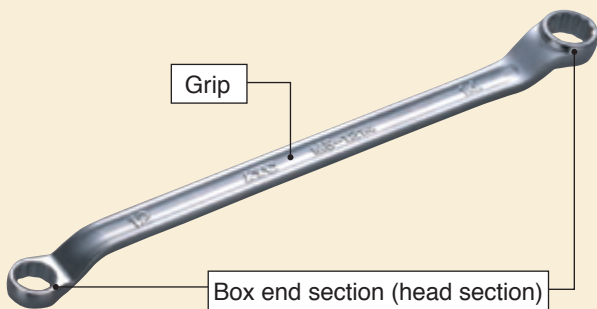


# BOX END WRENCH · OPEN END WRENCH

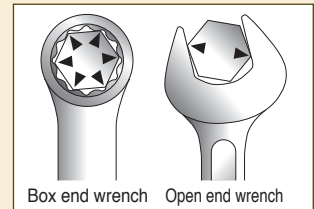
Bolts and nuts are used not only in engines, machines, and automobiles but also in building structures, furniture, and various places. The box end wrenches, open end wrenches, and combination wrenches are used for the attachment and removal of bolts and nuts.

## Box end wrench

### ● Basic structure of the box end wrench



Like the open end wrench, the box end wrench is a tool that is used to tighten and loosen bolts and nuts. Where the open end wrench holds the bolt/nut in two points, the box end wrench holds the bolt/nut in 6 points. The ring-form of the box end wrench prevents the head from slipping off the bolt/nut allowing even distribution of load, resulting in the application of more force than the open end wrench. The box end wrench is composed of the head used to grasp bolts/nuts and the grip. The nickname "eyeglass wrench" in Japan comes from the ring-form grip head on both sides of the grip. The head section is normally dodecagonal (12 sided/double hex) with a deflection angle of 30°, allowing the turning of bolts/nuts. The size of the box end wrench is expressed from the width-across-flat of the diameter as in open end wrenches. For example, the box end wrench that can turn bolts and nuts with a width-across-flat of 12 mm and 14 mm is called 12 × 14. KTC offers box end wrenches between 5.5 mm and 46 mm.



### ● Box end wrench types



#### Box end wrench for brake pipes

This box end wrench is mainly used for the flare nuts on the brake pipes of automobiles. The tip of the head is open, making this type suitable for working on nuts in piping connections.



#### Combination wrench

One side has a ring-form head and the other has an open end wrench head. The open end wrench is suitable for quick turning and the ring-form head is suitable for applying force as an offset wrench.



#### Ratchet box end wrench

This type has a ratchet function included in the head. The wrench can continuously turn the bolt/nut without taking the head off the bolt/nut.

### ● Classification of box end wrenches

Classification through total length — short type or long type

The long type is more commonly used. The longer wrench provides more force when turning, but is difficult to use in confined spaces. KTC also provides a super-long type straight offset wrench (M160) together with the previous long type.

Classification according to the angle of the handle — straight type · 15 degree type · 30 degree type · 45 degree type

A variety of types are available according to the working environment but the 45° type is the most common wrench. KTC offers the 45° × 6° and the 45° × 10° types (NEPROS®, M5, M27, M28) that allow for easy operation and increased application of force.

### ● Using the box end wrench

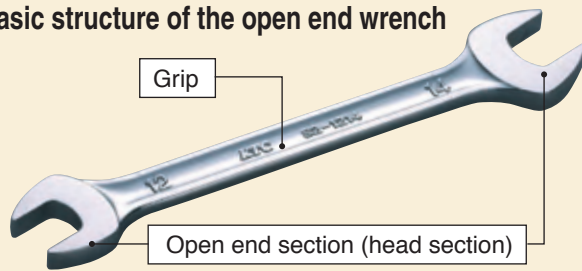
Select the correct diameter according to the width-across-flat of the bolt/nut and cover the bolt/nut with the ring-form head from above. The hex edge of the bolt/nut can slip or jar dangerously if the gap between the offset wrench diameter and the bolt/nut is too big. Select the right size offset wrench for the bolt/nut and firmly place the ring form to the end.

Long type	Short type
M150  Straight	M100  Straight
M160  Super long-straight	
M151  15°	
M15  30°	
M25  45°	M20  45°
M5  45° 6°	M5S  45° 6°
M28  45° 10°	
M27  45° 10°	

The symbols to the left of the illustration display the head section of the offset wrench with the product number inscribed. For example, the offset wrench product number for the 45 degree long type 10 × 12 mm is M25-10 × 12.

## Open end wrench

### Basic structure of the open end wrench

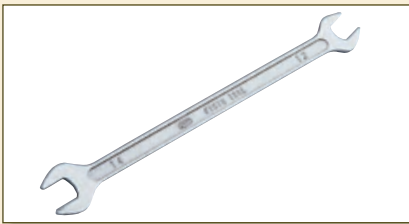


The open end wrench is a basic tool used to tighten or loosen nuts. The open end wrench holds the bolt/nut across the flat side in two places. Open end wrench size is determined through the width-across-flat of the diameter. For example, the open end wrench that can turn bolts and nuts with a width-across flat of 12 mm and 14 mm is called 12 × 14. KTC offers open end wrenches between 5.5 mm and 46 mm.

#### Tool basics

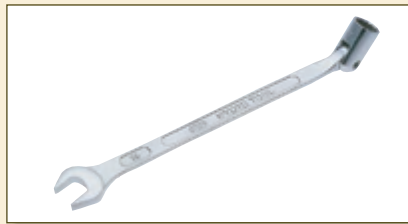
The open end wrench is included in vehicle maintenance tools and is commonly known. However, professional mechanics rely on offset wrenches that offer firmer control.

### Types of open end wrenches



#### Slim type open end wrench (Tappet open end wrench)

This open end wrench is thin with a long grip, making it suitable for adjusting the tappets.



#### Flex socket spanner

The other end is an offset socket wrench, allowing for quick turning using the spanner and final adjustments using the socket.



#### PROFIT® open end wrench

This open end wrench is an original thin slim design by KTC allowing work to be completed effectively in hard to reach areas, difficult with previous open end wrenches.

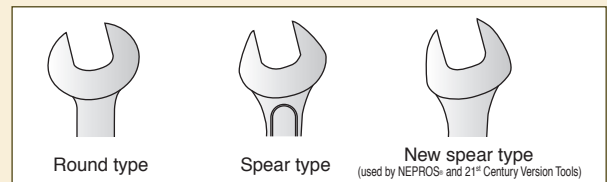
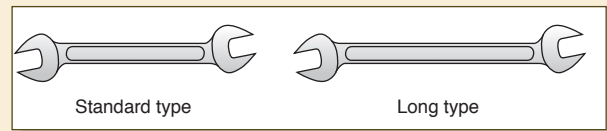
### Classification of open end wrenches

Classification through total length - - - standard type or long type

The longer open end wrench provides more force when turning, but is difficult to use in confined spaces.

Classification through head shape - - - round · spear · new spear types

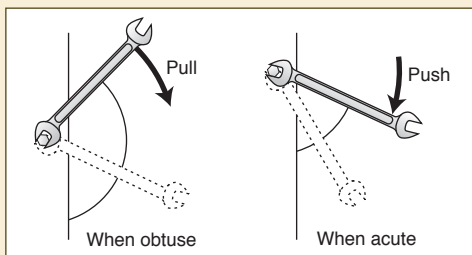
The spear type is small compared to the round type, making work in narrow areas easy. It is also often used in automobiles as the head weight is reduced. All KTC open end wrenches are spear types. NEPROS® and 21<sup>st</sup> Century Version Tools offers advanced, new original spear heads by KTC with minimal outer diameters and large volume in areas where strength is applied compared to previous spear types.



### How to use the open end wrench

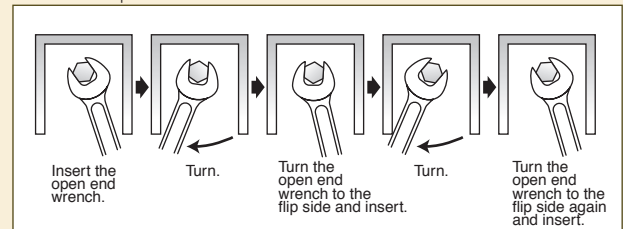
The open end wrench is effective on the return as well.

For safety, pull towards you if the turning angle against the bolt/nut is obtuse. Push away from you if the turning angle is acute.



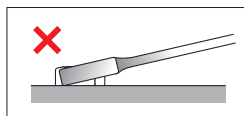
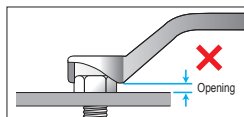
#### Using the open end wrench in confined spaces

Common open end wrenches have an angle of 15° against the grip. By using the front and flip sides of the open end wrench, a leverage of 30° and half the angle allows the bolt/nut to turn, making it convenient to use in confined spaces.

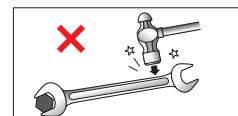
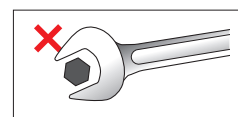


### Proper use of the tools

- The offset wrench must completely cover the bolt/nut before turning.
- Do not use this tool as a hammer.
- Do not attach the open end wrench diagonally towards the bolt/nut.
- Do not link two open end wrenches together.



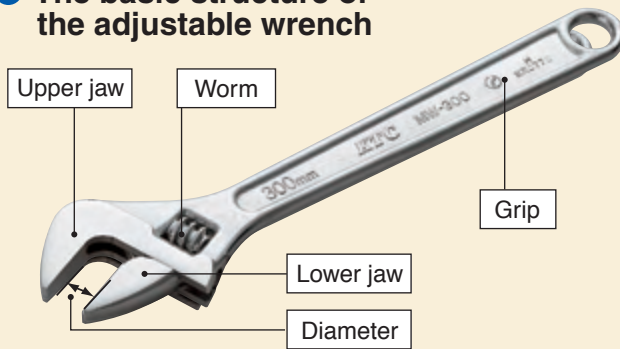
- Use tools that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Firmly hold the bolts and nuts using the end of the tool mouth.



# ADJUSTABLE WRENCH

The adjustable wrench is able to turn several kinds of bolts and nuts, by adjusting the worm on the head section. Monkey wrench is the slang term in English. The nick name "monkey wrench" is said to have come from the inventor Charles Moncky or from the theory that the head section is shaped like a monkey. The correct term is Adjustable Wrench.

## The basic structure of the adjustable wrench



Adjustable wrenches are divided into 15° and the 23° types according to the angle of the head.

KTC offers both 15° and 23° adjustable wrenches. SSize dimensions of the adjustable wrench all display the total length. SSize dimensions are displayed on the grip section. The maximum opening (maximum size of the bolt/nut that can be turned) as opposed to the size dimension is determined.

Size dimension (mm)	150	200	250	300	375	450
Maximum opening (mm)	20	24	29	34	44	53

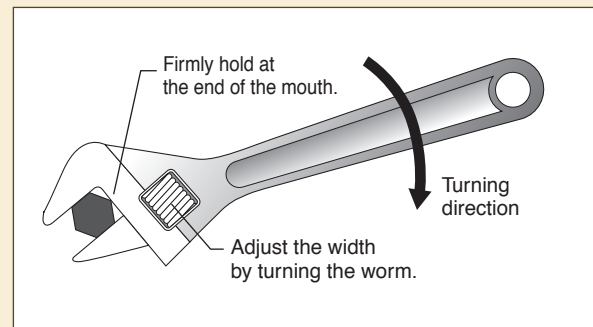
## How to use the adjustable wrench

The adjustable wrench is basically used like an open end wrench with an adjustable opening. Widen the opening by turning the worm with the thumb. Match the upper jaw to the bolt/nut and bring in the lower jaw by twisting the worm until the bolt/nut is firmly grasped. Move the adjustable wrench up and down in order to check for looseness. Turn the bolt and nut after re-gripping the grip.

The direction of the turn is important. Always turn adjustable wrenches towards the lower jaw side.

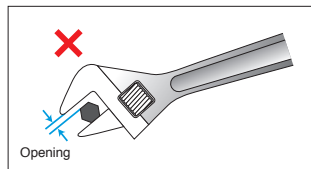
Turning towards the upper jaw will stress the lower jaw, causing the tool to break.

Any movementAny play in the lower jaw of the adjustable wrench causes loosening. Do not apply excessive torque. Take care when using an adjustable wrench for turning small bolts/nuts as the play can becomes larger. Like the open end wrench, the adjustable wrench only holds the bolt/nut in two places. When high torque is needed, use the socket wrench/offset wrench as these tools hold the nut in 6 points.

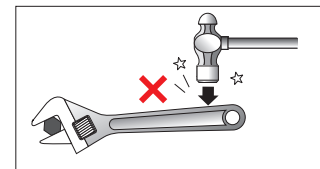


## Proper use of the tools

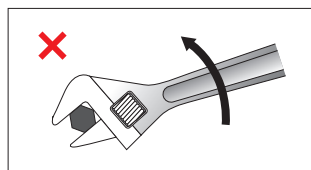
- Firmly adjust the mouth width to the bolts and nuts using the end of the mouth.



- Do not apply strong impact on this tool by hitting it with a hammer, etc.



- Always turn towards the lower jaw. The lower jaw can be exposed to excessive force, causing damage.



- Do not use this tool as a hammer.
- Do not use by adding on pipes, etc.



# 3. MEASURING and INSULATED TOOLS

- DIGITAL TORQUE WRENCHES
- TORQUE WRENCHES
- GAUGES
- INSULATED TOOLS



INSULATED TOOLS  
MEASURING and  
INSULATED TOOLS

# 3. MEASURING and INSULATED TOOLS

## DIGITAL TORQUE WRENCHES



### DIGITAL RATCHET ® PAT. D.PAT. Good Design Award Winning Product



### DIGITAL RATCHET

Advanced Digital Torque Tool  
**DIGITAL RATCHET**

**Quickly and reliably achieves a wide range of high-precision torque management**

Advanced Digital Torque Tool  
**DIGITAL RATCHET [MEMORQ]**

**Send the measurement data to a PC!!**

Digital torque wrench that's equipped with a strict torque control function that has light operability and digital display. It can be used in various torque management scenes of various manufacturing such as industrial machine, analytical instrument and automobile, construction, civil, engineering, various maintenance, etc.

New function to automatically "record and control" work history is added to Digital Ratchet. Transfers the work history (data) to a PC via wireless or USB. Measurement result can be used as the quality control or maintenance record. Definite "management" that leaves a record of work history leads to the improved trust, risk avoidance and cost reduction.

### FEATURES OF DIGITAL RATCHET

#### Checks the torque with sound and light

Confirms the tightening torque with number. Notifies the set torque with LED and buzzer.

#### Power sensor equipped fixed grip is adopted

High accuracy measurement is made possible regardless of the work-posture or proficiency level.

#### Authentic torque measurement function that passes the international standards (ISO)

Allows the measurement of both right and left-hand threads as well as the issuance of calibration and calibration certificate.

#### "Custom settings" that can comfortably manipulate various functions

Usability is further increased by customizing Digital Ratchet as preferred by customizing the measurement mode or display mode.

#### Application range is further extended by the adjustable wrench type & head replaceable type

In addition to general ratchet handle type, adjustable wrench type and head replaceable type are available. Application range is further extended.



Large and easy-to-view LED

When 90% of the set torque is reached, LED will flash and tone burst (beeps) will sound.

When the set torque is reached, LED lights up and buzzer will change to continuous tone (beep). Maximum torque is displayed at the end of tightening by the peak-hold function.

<p><b>Memory No./Mode Display</b></p> <ul style="list-style-type: none"> <li>Displays the memory No. and mode in use</li> <li>Error display</li> </ul> <p><b>LED Lamp</b></p> <ul style="list-style-type: none"> <li>Illuminates when power is turned on or setting torque is reached</li> </ul> <p><b>P Key</b></p> <ul style="list-style-type: none"> <li>Power on</li> <li>Power off by long press</li> <li>Unit change of converted value</li> <li>Custom setting by simultaneously pressing P and M button</li> </ul> <p><b>M Key</b></p> <ul style="list-style-type: none"> <li>Mode switch</li> <li>Memory registration by long press</li> </ul>	<p><b>Torque Display</b></p> <ul style="list-style-type: none"> <li>Displays the measurement, setting and converted value</li> </ul> <p><b>Unit Display</b></p> <ul style="list-style-type: none"> <li>Displays the measurement, setting and converted value.</li> </ul> <p><b>+ (Plus) /C (Clear) Key</b></p> <ul style="list-style-type: none"> <li>Increase of torque setting</li> <li>Change of custom setting</li> <li>Torque display clear</li> <li>Error release</li> </ul> <p><b>- (Minus) Key</b></p> <ul style="list-style-type: none"> <li>Reduction of set torque</li> <li>Change of custom setting</li> </ul>
---	--

**Switch measurement mode**

Torque measurement method can be selected from the following 3 modes according to the usage.

- Measurement mode**: Digitally displays the tightening torque. Torque control by visual inspection is possible. It is useful for confirming the measured value in general tightening.
- Pre-set mode**: Reaching the configured target torque is informed by the LED emission and buzzer. Capable of registering the maximum of 5 memories, making it ideal for the work in engine assembly or mold mounting.
- Judgment mode**: Upper and lower limits of the target torque are configured, allowing the acceptance decisions and passes to be counted. Acceptance range can be configured, allowing the over-torque or lack of torque to be easily grasped.

**Switch measured value display mode**

Display method of the measured values can be selected from the following 3 modes according to the usage.

- Peak hold mode**: Displays the maximum value of tightening torque. Whether the accurate tightening is made can be confirmed after the work, making it suitable for the tightening of oil filters and plugs.
- Auto-clear mode**: Peak hold display can be returned to zero at constant time. Suitable for the continuous work of identical torques such as tightening of piping junctions or wheel nuts.
- Track mode**: It displays the torque value in real-time without maintaining the maximum measured value. It supports the measurement of such as sliding torque of clutch and steering torque of power steering.

**Switch ON/OFF of buzzer**

It is equipped with ON/OFF function of the buzzer that notifies the button operation and reaching of set torque.

- Buzzer sound ON mode**: Button operation and reaching set torque is informed by buzzer.
- Buzzer sound OFF mode**: Turns off the buzzer that informs the button operation and reaching set torque. Convenient for work at office or late night where buzzer should not sound.

\* DIGITAL RATCHET and MEMORQ are registered trademarks of KYOTO TOOL.

See also the Digital Ratchet feature page. P.5~10

\*Please check the merchandise inventory for a product that is marked by before placing an order.



# Digital Ratchet Line Up

\* 3 variations of special resin case (small) included, special resin case (large) included and socket wrench set Digital Ratchet model are available, with common Digital Ratchet body for all.

## DIGITAL RATCHET P.176~177

	Digital Ratchet With special resin case (small)	Digital Ratchet With special resin case (large)	Socket Wrench Set Digital Ratchet Model With special resin case (large) + socket set
Torque measurement range: 6~30N·m 	No.GEK030-R2 Case size: W268xD107xH57 	No.GEK030-R2-L Case size: W324xD166xH58 	No.TB206WG1 Case size: W324xD166xH58  <b>Set Contents</b> No.GEK030-R2-L, EHB205 B2-07W, 08W, 10W, 12W, 14W
Torque measurement range: 2~30N·m 	No.GEK030-C3A Case size: W268xD107xH57 		
Torque measurement range: 6~30N·m 	No.GEK030-C3 Case size: W268xD107xH57 	No.GEK030-C3-L Case size: W324xD166xH58 	No.TB306WG3 Case size: W324xD166xH58  <b>Set Contents</b> No.GEK030-C3-L, EHB305 B3-07W, 08W, 10W, 12W, 14W
Torque measurement range: 12~60N·m 	No.GEK060-R3 Case size: W268xD107xH57 	No.GEK060-R3-L Case size: W324xD166xH58 	No.TB306WG1 Case size: W324xD166xH58  <b>Set Contents</b> No.GEK060-R3-L, EHB305 B3-08W, 10W, 12W, 14W, 17W
Torque measurement range: 17~85N·m 	No.GEK085-R3 Case size: W322xD107xH57 	No.GEK085-R3-L Case size: W324xD166xH58 	No.TB306WG2 Case size: W324xD166xH58  <b>Set Contents</b> No.GEK085-R3-L, EHB305 B3-10W, 12W, 14W, 17W, 19W
Torque measurement range: 17~85N·m 	No.GEK085-R4 Case size: W322xD107xH57 	No.GEK085-R4-L Case size: W324xD166xH58 	No.TB406WG1 Case size: W324xD166xH58  <b>Set Contents</b> No.GEK085-R4-L, EHB405 B4-10W, 12W, 14W, 17W, 19W
Torque measurement range: 27~135N·m 	No.GEK135-R4 Case size: W428xD107xH57 		
Torque measurement range: 40~200N·m 	No.GEK200-R4 Case size: W628xD107xH57 		

\* GEK030-C3 and GEK030-C3A are compact head type set with 1/4"sq. ratchet head and 3/8"sq. drive square.

\* Special resin case (large) can be used for storage with a socket attached to the socket holder (No.EHB205,305,405).

\* However, socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored.

Storage state of No.TB306WG1 ▶

## DIGITAL RATCHET ADJUSTABLE WRENCH TYPE P.177

Torque measurement range 17~85N·m	No.GEK085-W36 Case size: W322xD107xH57 
Torque measurement range 27~135N·m	No.GEK135-W36 Case size: W428xD107xH57 
Torque measurement range 40~200N·m	No.GEK200-W36 Case size: W628xD107xH57 

## DIGITAL RATCHET SCREWDRIVER TYPE P.180

Torque measurement range 12~60cN·m	No.GLK060 Case size: W322xD107xH57 
Torque measurement range 50~250cN·m	No.GLK250 Case size: W322xD107xH57 
Torque measurement range 100~500cN·m	No.GLK500 Case size: W322xD107xH57 

## DIGITAL RATCHET INTERCHANGEABLE HEAD TYPE P.178

Torque measurement range 8~40N·m	No.GEK040-X13 Case size: W324xD166xH58 
Torque measurement range 17~85N·m	No.GEK085-X13 Case size: W324xD166xH58 

Interchangeable head that supports a wide range of work scenes P.178~180

## DIGITAL RATCHET SPECIFICATIONS

Product Name Digital Ratchet	
Measurement accuracy	Right and left-hand threads ± 3% + 1 digit within the torque measurement range GEK030-R2 and GEK030-C3 Right and left-hand threads ± 4% + 1 digit within the torque measurement range GEK030-C3A 2~2.98N·m within the torque measurement range: right and left-hand threads ± 12% + 1 digit 3~5.98N·m: right and left-hand threads ± 8% + 1 digit 6~30N·m: right and left-hand threads ± 4% + 1 digit GEK040-X13 and GEK085-X13 Right and left-hand threads ± 4% + 1 digit (digit = minimum display unit) within the torque measurement range
Measurement direction	Left-hand thread, right-hand thread
Measurement unit	N·m (convertible by switching kgf·m, lbf-in, lbf-ft)
Power	Coin-type lithium battery CR2354×1
Number of set torque	Pre-set mode ×5, admission decision mode ×1
Auto-off	Power automatically shuts off in approx. 2 minutes of idling (modifiable)

\* Commercially available coin-type lithium battery CR2354 can be used for the battery. (Batteries other than Panasonic may not be usable.)  
\* Spare parts are established. Please contact your dealer for details.

Product Name Digital Ratchet Adjustable Wrench Type	
Measurement accuracy	± 3% + 1 digit (digit = minimum display unit) within the torque measurement range * Accuracy is guaranteed only for the lower jaw measurement direction and hex. tightening objects.
Measurement direction	Lower jaw direction only (turned around when measuring left-hand thread)
Measurement unit	N·m (convertible by switching kgf·m, lbf-in, lbf-ft)
Power	Coin-type lithium battery CR2354×1
Number of set torque	Pre-set mode ×5, admission decision mode ×1
Auto-off	Power automatically shuts off in approx. 2 minutes of idling (modifiable)

Product Name Digital Ratchet Screwdriver Type	
Measurement accuracy	Right and left-hand threads ± 3% + 1 digit (digit = minimum display unit) within the torque measurement range
Measurement direction	Left-hand thread, right-hand thread
Measurement unit	cN·m, N·m (convertible by switching kgf·m, ozf-in, lbf-in)
Power	Coin-type lithium battery CR2354×1
Number of set torque	Pre-set mode ×5, admission decision mode ×1
Auto-off	Power automatically shuts off in approx. 2 minutes of idling (modifiable)

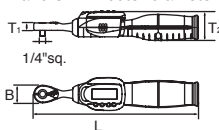
● 1/4" sq. DIGITAL RATCHET ® PAT. D.PAT.



DIGITAL RATCHET

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GEK030-R2	6~30	0.02	22	211	10	36	330	1
GEK030-R2-L	6~30	0.02	22	211	10	36	330	1

- GEK030-R2 comes with a special resin case (small). (Case size: W268xD107xH57)
- GEK030-R2-L comes with a special resin case (large). (Case size: W324xD166xH58)
- Special resin case (large) can be used for storage with a socket attached to the socket holder EHB205 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored)



- Repair kit (BR2E-K) is configured for the ratchet head.
- \* Recommend to calibrate and adjust when using a repair kit.

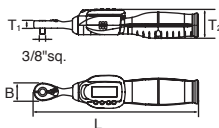
● 3/8" sq. DIGITAL RATCHET ® SMALL TORQUE TYPE PAT. D.PAT.



DIGITAL RATCHET

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GEK030-C3A	2~30	0.02	22	211	10	36	330	1

- Comes with a special resin case (small). (Case size: W268xD107xH57)
- Repair kit (BRC3-K) is configured for the ratchet head.
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Pre-set mode cannot be used in 2~2.98N·m range. (Measurement only)



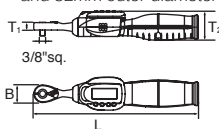
● 3/8" sq. DIGITAL RATCHET ® COMPACT HEAD TYPE PAT. D.PAT.



DIGITAL RATCHET

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GEK030-C3	6~30	0.02	22	211	10	36	330	1
GEK030-C3-L	6~30	0.02	22	211	10	36	330	1

- GEK030-C3 comes with a special resin case (small). (Case size: W268xD107xH57)
- GEK030-C3-L comes with a special resin case (large). (Case size: W324xD166xH58)
- Special resin case (large) can be used for storage with a socket attached to the socket holder EHB305 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored)



- Repair kit (BRC3-K) is configured for the ratchet head.
- \* Recommend to calibrate and adjust when using a repair kit.

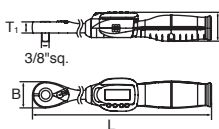
● 3/8" sq. DIGITAL RATCHET ® PAT. D.PAT.



DIGITAL RATCHET

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GEK060-R3	12~60	0.05	33	217	13.5	36	400	1
GEK060-R3-L	12~60	0.05	33	217	13.5	36	400	1

- GEK060-R3 comes with a special resin case (small). (Case size: W268xD107xH57)
- GEK060-R3-L comes with a special resin case (large). (Case size: W324xD166xH58)
- Special resin case (large) can be used for storage with a socket attached to the socket holder EHB305 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored)



- Repair kit (BR3E-K) is configured for the ratchet head.
- \* Recommend to calibrate and adjust when using a repair kit.

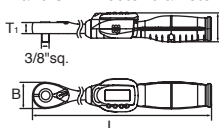
● 3/8" sq. DIGITAL RATCHET ® PAT. D.PAT.



DIGITAL RATCHET

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GEK085-R3	17~85	0.1	33	271	13.5	36	440	1
GEK085-R3-L	17~85	0.1	33	271	13.5	36	440	1

- GEK085-R3 comes with a special resin case (small). (Case size: W322xD107xH57)
- GEK085-R3-L comes with a special resin case (large). (Case size: W324xD166xH58)
- Special resin case (large) can be used for storage with a socket attached to the socket holder EHB305 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored)



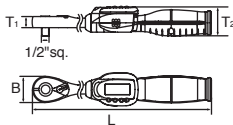
- Repair kit (BR3E-K) is configured for the ratchet head.
- \* Recommend to calibrate and adjust when using a repair kit.

**DIGITAL RATCHET**

No.	Torque measurement range (N-m)	Minimum display unit (N-m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☐
GEK085-R4	17~85	0.1	39.5	274	18	36	590	1
GEK085-R4-L	17~85	0.1	39.5	274	18	36	590	1

- GEK085-R4 comes with a special resin case (small). (Case size: W322xD107xH57)
- GEK085-R4-L comes with a special resin case (large). (Case size: W324xD166xH58)
- Special resin case (large) can be used for storage with a socket attached to the socket holder EHB405 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored)
- Repair kit (BR4E-K) is configured for the ratchet head.

\* Recommend to calibrate and adjust when using a repair kit.



● 1/2"sq. DIGITAL RATCHET ® PAT. D.PAT.



GEK085-R4

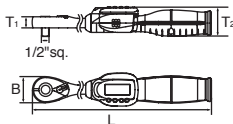
GEK085-R4-L

**DIGITAL RATCHET**

No.	Torque measurement range (N-m)	Minimum display unit (N-m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☐
GEK135-R4	27~135	0.1	39.5	380	18	36	700	1

- Comes with a special resin case. (Case size: W428xD107xH57)
- Repair kit (BR4E-K) is configured for the ratchet head.

\* Recommend to calibrate and adjust when using a repair kit.



● 1/2"sq. DIGITAL RATCHET ® PAT. D.PAT.



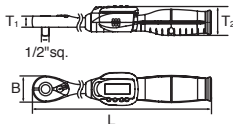
GEK135-R4

**DIGITAL RATCHET**

No.	Torque measurement range (N-m)	Minimum display unit (N-m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☐
GEK200-R4	40~200	0.2	39.5	580	18	36	990	1

- Comes with a special resin case. (Case size: W628xD107xH57)
- Repair kit (BR4E-K) is configured for the ratchet head.

\* Recommend to calibrate and adjust when using a repair kit.



● 1/2"sq. DIGITAL RATCHET ® PAT. D.PAT.



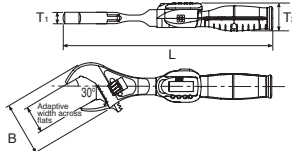
GEK200-R4

**DIGITAL RATCHET**

No.	Torque measurement range (N-m)	Minimum display unit (N-m)	Adaptive width across flats (mm)	B	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☐
GEK085-W36	17~ 85	0.1	10~36	69	275.2	14.5	36	560	1
GEK135-W36	27~135	0.1	10~36	69	381.2	14.5	36	680	1
GEK200-W36	40~200	0.2	10~36	69	581.2	14.5	36	990	1

\* Accuracy is guaranteed only for the lower jaw measurement direction and hex. tightening objects.

- Comes with a special resin case. (GEK085-W36 case size: W322xD107xH57) (GEK135-W36 case size: W428xD107xH57) (GEK200-W36 case size: W628xD107xH57)



● DIGITAL RATCHET ® ADJUSTABLE WRENCH TYPE PAT. D.PAT.



GEK085-W36



It is suitable for piping, etc. where socket wrench or the like cannot be used.

**Adjustable wrench head**  
High precision measurement is made possible by the adoption of dedicated head which effective length does not change when the aperture changes.

**Digital Ratchet Adjustable Wrench Type**

Effective length (distance from the bolt center to force point) mostly does not change even when the bolt size changes.

**Ordinary Adjustable Wrench**

Central axis of the bolt changes.

\* Change in the effective length causes error in the measured value.

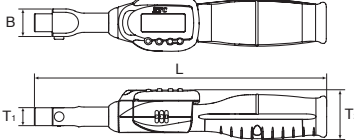
**DIGITAL RATCHET® INTERCHANGEABLE HEAD TYPE PAT. D.PAT.**



**DIGITAL RATCHET**

No.	Torque measurement range (N·m)	Minimum display unit (N·m)	B	L	T <sub>1</sub>	T <sub>2</sub>	▽g	📦
GEK040-X13	8~40	0.05	20	213	13	36	340	1
GEK085-X13	17~85	0.1	20	213	13	36	340	1

- Power sensor equipped fixed grip is adopted. It is a head replaceable type of advanced digital torque tool "Digital Ratchet" that's made the easy and high-level torque management possible regardless of proficiency or work attitude.
- Head replaceable type Digital Ratchet that further extends the use range. It is used in combination with various replacement heads.
- Comes with a special resin case. (Case size: W324xD166xH58)
- Special resin case can be used for storage with a socket attached to the socket holder EHB205, EHB305 or EHB405 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored.)



Combination example with ratchet head

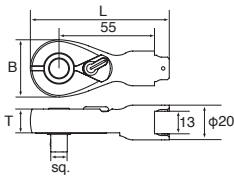
**RATCHET HEAD D.PAT.**



**DIGITAL RATCHET**

No.	sq.	Allowable torque (N·m)	B	L	T	▽g	📦
GX13-R2	1/4"	30	23	74.5	10	100	1
GX13-C3	3/8"	30	23	74.5	10	100	1
GX13-R3	3/8"	85	33	80	13.7	160	1
GX13-C4	1/2"	85	33	80	13.7	160	1

- It is a replacement head for Digital Ratchet head replaceable type.
- Repair kit (BR2E-K for GX13-R2, BRC3-K for GX13-C3, BR3E-K for GX13-R3, BRC4-K for GX13-C4) is configured.
- Standard oval ratchet head is adopted.
- It can be mounted to Digital Ratchet in both front and back directions. Comfortable operability with union mechanism, integrated claw and 36 teeth gear.



Combined state

**DIGITAL RATCHET® INTERCHANGEABLE HEAD TYPE 3/8"sq. RATCHET HEAD SET PAT. D.PAT.**



**DIGITAL RATCHET**

No. TGEK040X132	▽g 500	📦 1
Interchangeable Head Type Digital Ratchet	GEK040-X13	
Ratchet Head	GX13-R3	

- Power sensor equipped fixed grip is adopted. It is a head replaceable type of advanced digital torque tool "Digital Ratchet" that's made the easy and high-level torque management possible regardless of proficiency or work attitude.
- It is a set of head replaceable type Digital Ratchet and ratchet head.
- Comes with a special resin case. (Case size: W324xD166xH58)
- Special resin case can be used for storage with a socket attached to the socket holder EHB305 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored.)



It can be used with the head turned over

**DIGITAL RATCHET® INTERCHANGEABLE HEAD TYPE 3/8"sq. RATCHET HEAD SET PAT. D.PAT.**



**DIGITAL RATCHET**

No. TGEK085X132	▽g 500	📦 1
Interchangeable Head Type Digital Ratchet	GEK085-X13	
Ratchet Head	GX13-R3	

- Power sensor equipped fixed grip is adopted. It is a head replaceable type of advanced digital torque tool "Digital Ratchet" that's made the easy and high-level torque management possible regardless of proficiency or work attitude.
- It is a set of head replaceable type Digital Ratchet and ratchet head.
- Comes with a special resin case. (Case size: W324xD166xH58)
- Special resin case can be used for storage with a socket attached to the socket holder EHB305 (separately sold). (Socket, bit socket, etc. that exceed 70mm total length and 32mm outer diameter cannot be stored.)



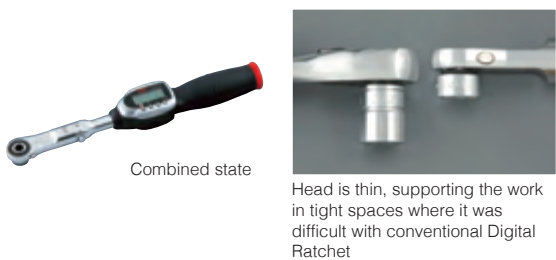
It can be used with the head turned over

\*Please check the merchandise inventory for a product that is marked by before placing an order.

**DIGITAL RATCHET**

No. TGX13MR147	▼g 201	📦 1
Ratchet Box End Wrench Head	GX13-MR14	
Socket for Ratchet Box End Wrench Head	BZ14-08W, 10W, 12W, 13W, 14W	
3/8"sq. Drive Adapter for Ratchet Box End Wrench	BZ14-BA3	

- It is a replacement head for Digital Ratchet head replaceable type.
- Rotational direction can be switched with the lever on the head side, allowing the use in both tightening and loosening.
- Tooth number of 72 and 5° ratchet feed allows the fine feeding.



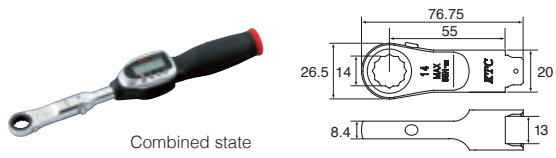
**●RATCHET BOX END WRENCH HEAD SET**



**DIGITAL RATCHET**

No.	Allowable torque (N-m)	Bore size (mm)	▼g	📦
GX13-MR14	55	14	90	1

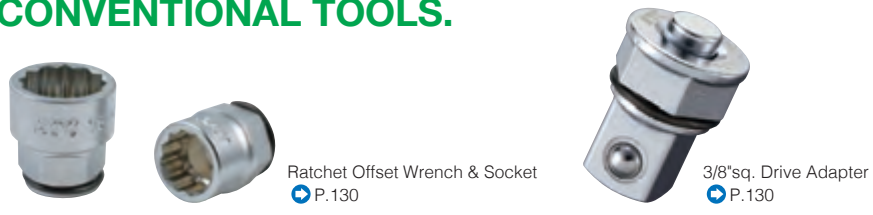
- It is a replacement head for Digital Ratchet head replaceable type.



**●RATCHET BOX END WRENCH HEAD**



**Ratchet offset wrench & socket (single) and 3/8"sq. drive adapter are published in CONVENTIONAL TOOLS.**



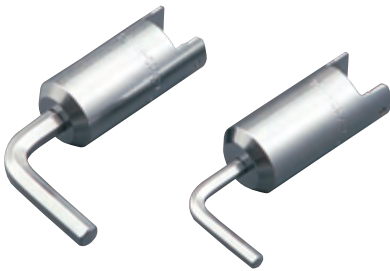
**DIGITAL RATCHET**

No.	Allowable torque (N-m)	S	L	H	h	▼g	📦
GX13-H04	11	4	65.5	37	27	78	1
GX13-H05	19	5	66	40.5	30.5	81	1
GX13-H06	46	6	66.5	45	35	85	1
GX13-H08	85	8	67.5	50	40	96	1
GX13-H10	85	10	68.5	55	45	110	1

- It is a replacement head for Digital Ratchet head replaceable type.



**●HEX. HEAD STANDARD TYPE**



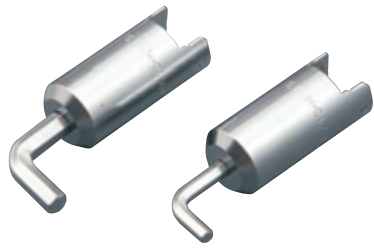
**DIGITAL RATCHET**

No.	Allowable torque (N-m)	S	L	H	h	▼g	📦
GX13-H04S	11	4	66.3	24.5	14.5	77	1
GX13-H05S	19	5	66.8	26.5	16.5	79	1
GX13-H06S	46	6	67.3	29	19	81	1
GX13-H08S	85	8	68.2	32	22	88	1
GX13-H10S	85	10	69.2	35	25	99	1

- It is a replacement head for Digital Ratchet head replaceable type.
- With the under-head bending angle set at 95 degrees, space for finger is secured.



**●HEX. HEAD SHORT TYPE**



\*Please check the merchandise inventory for a product that is marked by before placing an order.

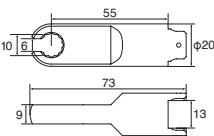
● BRAKE TOOL STRAIGHT TYPE



DIGITAL RATCHET

No.	Allowable torque (N·m)	Bore size (mm)	▼g	📦
GX13-MZ10	25	10	80	1

- It is a replacement head for Digital Ratchet head replaceable type.
- Ideal for the torque management in installation and removal of automobile brake pipe and ABS actuator.



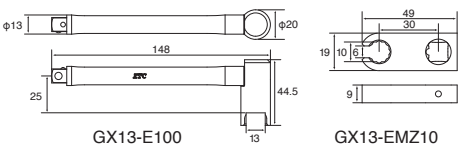
Combined state

● BRAKE TOOL OFFSET TYPE SET



GX13-E100

GX13-EMZ10



GX13-E100

GX13-EMZ10



Combined state

DIGITAL RATCHET

No.	Allowable torque (N·m)	▼g	📦
TGX13E1002	25	250	1

- It is a replacement head for Digital Ratchet head replaceable type.
- Ideal for the torque management in installation and removal of automobile brake pipe and ABS actuator.

\* Junction of the extension tool and wrench is specially designed. It cannot be used in combination with other socket wrenches or accessories.

Brake Tool Extension Tool

No.	Allowable torque (N·m)	▼g	📦
GX13-E100	25	180	1

Brake Tool 10mm Offset Type

No.	Allowable torque (N·m)	Bore size (mm)	▼g	📦
GX13-EMZ10	25	10	70	1

● DIGITAL RATCHET® SCREWDRIVER TYPE D.PAT.



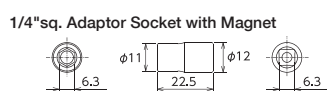
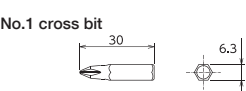
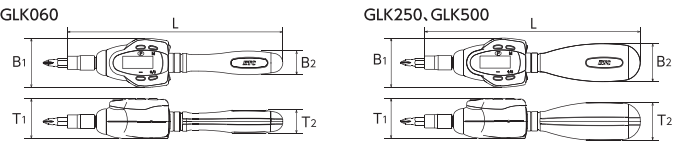
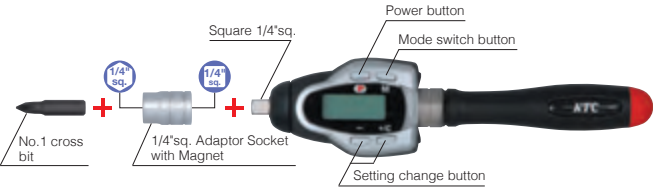
GLK250 · GLK500

GLK060

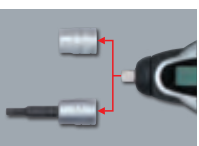
DIGITAL RATCHET

No.	Torque measurement range	Minimum display unit	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	📦
GLK060	12~60cN·m (0.12~0.6N·m)	0.05cN·m (0.01N·m)	41	20	179	33	19	170	1
GLK250	50~250cN·m (0.5~2.5N·m)	0.1cN·m (0.01N·m)	41	32	179	33	31	190	1
GLK500	100~500cN·m (1.0~5.0N·m)	0.1cN·m (0.01N·m)	41	32	179	33	31	190	1

- \* Measurement unit can be set in both cN·m and N·m. (100cN·m = 1N·m)
- Driver type of advanced digital torque tool "Digital Ratchet" that supports the minimal torque.
- It supports a wide range of scenes that requires minimal torque control such as electric facility, electric circuit board, replacing cutter chip and assembling of resin and aluminum parts.
- Bit is detachable by magnet, allowing the use of bit with 6.3mm axis opposing side such as insert changeable flat ratchet screwdriver (P.142) by removing the attached No.1 cross bit. (Double-headed bit cannot be used)
- After removing the adaptor socket, sockets and bit sockets of 1/4"sq. square can be used.
- It comes with a plastic case that's convenient for No.1 cross bit, 1/4"sq. adaptor socket with magnet and storage.



Tip bit is detachable by magnet



1/4"sq. socket can also be used



Easy-to-read LED position and shape

■ Supply parts

No.	Product Name
GLK-B2	1/4"sq. Adaptor Socket with Magnet
GLK-RA2	1/4"sq. Ratchet Adapter



**Leaves records**


**Easy one-button record**  
Easily record the measurement results with REC button.  
■ Automatic recording mode available  
■ 200 data can be recorded in the body

**Exports the recorded data in CSV**  
Measurement results that are sent to PC can be exported in CSV. Data can be used as the quality control or maintenance record.

**Check the torque with sound and light!**

Ring-shaped LED adopted  
Achieves the field of view of 360°. Informs the torque status by sound and light.

LED can easily be identified with 3 color changes



LOW OK OVER

**DIGITAL RATCHET [MEMORQ]**

Advanced Digital Torque Tool  
**DIGITAL RATCHET [MEMORQ]**  
PAT. D.PAT.




**Send the measurement data to a PC!!**  
Reliable torque management is achieved by managing the work history.


**2 output methods**

**Wireless connection type**  
It can wirelessly record to a PC.

**USB type**  
It can be connected to a PC with USB cable.



**3 heads**



Ratchet Head Adjustable Wrench Head Head Replaceable Type

**International Standards (ISO) are met**  
ISO standards are met with ±3% or less measurement accuracy of right-hand and left-hand threads. \* Allows the measurement of both right and left-hand threads as well as the issuance of calibration and calibration certificate (paid).  
\* Excludes some products.

**Power sensor equipped fixed grip is adopted**  
High accuracy torque measurement is made possible regardless of the work-posture or proficiency level. Soft resin that enhances the visibility and fit is used for the grip end.

Work in which "torque is managed but record is not left" or "handwritten data is input on a PC" is significantly improved by introducing the torque management system of Digital Ratchet [MemorQ] Series, achieving the "work efficiency" and "improved data reliability".

\* Digital Ratchet [MemorQ] is available in 3 variations of wireless connection host module set, for wireless communication and for USB.

**Digital Ratchet [MemorQ] Line Up**

	Torque setting range	Wireless connection host module set	For wireless communication	For USB
		It is a set of Digital Ratchet body for wireless communication and host module (GED-Z) that wirelessly transfers data to a PC. Wireless connection to a PC is possible only with this set.	Digital Ratchet for wireless communication [MemorQ] body only. To perform the wireless connection with a PC, separately sold host module (GED-Z) is required.	It is a type that records on the Digital Ratchet body and transfers to a PC via USB. It is convenient when a PC cannot be placed nearby or in on-site operation.
Digital Ratchet [MemorQ]	6~30N·m	No.TGED030R2Z	No.GED030-R2-Z	No.GED030-R2-U
Digital Ratchet [MemorQ] Small Torque Type	2~30N·m	No.TGED030C3AZ	No.GED030-C3A-Z	No.GED030-C3A-U
Digital Ratchet [MemorQ] Compact Head Type	6~30N·m	No.TGED030C3Z	No.GED030-C3-Z	No.GED030-C3-U
Digital Ratchet [MemorQ]	12~60N·m	No.TGED060R3Z	No.GED060-R3-Z	No.GED060-R3-U
Digital Ratchet [MemorQ]	17~85N·m	No.TGED085R3Z	No.GED085-R3-Z	No.GED085-R3-U
Digital Ratchet [MemorQ]	17~85N·m	No.TGED085R4Z	No.GED085-R4-Z	No.GED085-R4-U
Digital Ratchet [MemorQ]	27~135N·m	No.TGED135R4Z	No.GED135-R4-Z	No.GED135-R4-U
Digital Ratchet [MemorQ]	40~200N·m	No.TGED200R4Z	No.GED200-R4-Z	No.GED200-R4-U
Digital Ratchet [MemorQ] Adjustable Wrench Type	17~85N·m	No.TGED085W36Z	No.GED085-W36-Z	No.GED085-W36-U
Digital Ratchet [MemorQ] Adjustable Wrench Type	27~135N·m	No.TGED135W36Z	No.GED135-W36-Z	No.GED135-W36-U
Digital Ratchet [MemorQ] Adjustable Wrench Type	40~200N·m	No.TGED200W36Z	No.GED200-W36-Z	No.GED200-W36-U
Digital Ratchet [MemorQ] Interchangeable Head Type	8~40N·m	No.TGED040X13Z	No.GED040-X13-Z	No.GED040-X13-U
Digital Ratchet [MemorQ] Interchangeable Head Type	17~85N·m	No.TGED085X13Z	No.GED085-X13-Z	No.GED085-X13-U
		Digital Ratchet [MemorQ] Host Module for Wireless Communication	No.GED-Z	

**■ Digital Ratchet [MemorQ] Specifications**

**Head Type Ratchet Head Type**  
Measurement accuracy: Right-hand and left-hand threads ±3%+1digit (digit = minimum display unit) within torque measurement range GED030-R2-Z (-U) and GED030-C3-Z (-U), right-hand and left-hand threads ±4%+1digit within torque measurement range GED030-C3A-Z (-U), 2~2.98N·m within torque measurement range: right-hand and left-hand threads ±12%+1digit, 3~5.98N·m: right-hand and left-hand threads ±8%+1digit, 6~30N·m: right-hand and left-hand threads ±4%+1digit  
Measurement direction: Right-hand and left-hand threads

**Head Type Adjustable Wrench Type**  
Measurement accuracy: ±3% + 1 digit (digit = minimum display unit) within the torque measurement range  
\*Accuracy is guaranteed only for the lower jaw measurement direction and hex. tightening objects.  
Measurement direction: Lower jaw direction only (turned around when measuring left-hand thread)

**Head Type Head Replaceable Type**  
Measurement accuracy: Right and left-hand threads ±4% + 1 digit (digit = minimum display unit) within the torque measurement range  
Measurement direction: Right-hand and left-hand threads

**Common Specifications**  
Measurement unit: N·m (convertible by switch kgf·m, lbf·in, lbf·ft)  
Power: Lithium battery CR123A x1  
Number of set torques: Pre-set mode x5, admission decision mode x1  
Number of records: 200 in the body  
Auto-off: Power automatically shuts off in the fixed time of idling. Time until power off can be configured (1~10 minutes).

**Wireless Connection Host Module Specification**  
Maximum connectable number: 10 Max. (USB MemorQ cannot be connected)  
Radiowave frequency: 2.4GHz  
Communication range: 10~20m (may vary depending on the work environment)

\*Please check the merchandise inventory for a product that is marked by before placing an order.

Advanced Digital Torque Tool

# DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET



- Function that automatically "records and manages" the work history is added to the advanced digital torque tool "Digital Ratchet".
- It is a set of Digital Ratchet body [MemorQ] for wireless communication and host module for wireless communication (GED-Z P.184).
- Wireless connection to a PC is possible only with this set.
- With a special aluminum case.

**Wireless connection type**

Measurement results can be wirelessly recorded to a PC in real-time.



**Easy one-button record**

Records up to 200 measurement results on the body with REC button. Automatic recording is available by mode switching.



**Exporting CSV date**

Measurement results that have been transferred to a PC can be utilized as quality control or maintenance record by linking to applications.

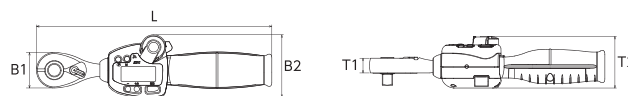


## 1/4"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET



With special aluminum case  
Size: W265xD190xH95

DIGITAL RATCHET [MEMORQ]									
No. TGED030R2Z	▼g 400 (case: 0.9kg)							1	
1/4"sq. Digital Ratchet [MemorQ] for Wireless Communication GED030-R2-Z									
Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z									
Digital Ratchet [MemorQ] Body Specifications									
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	1	
GED030-R2-Z	6~30N·m	22	58.4	211	10	48	350	1	



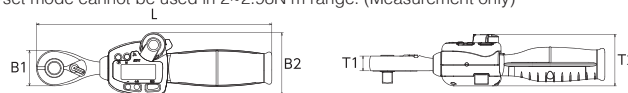
## 3/8"sq. DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE WIRELESS HOST MODULE SET



With special aluminum case  
Size: W265xD190xH95

DIGITAL RATCHET [MEMORQ]									
No. TGED030C3AZ	▼g 400 (case: 0.9kg)							1	
3/8"sq. Digital Ratchet [MemorQ] Small Torque Type for Wireless Communication GED030-C3A-Z									
Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z									
Digital Ratchet [MemorQ] Body Specifications									
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	1	
GED030-C3A-Z	2~30N·m	22	58.4	211	10	48	350	1	

\* Pre-set mode cannot be used in 2~2.98N·m range. (Measurement only)

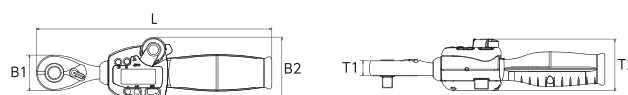


## 3/8"sq. DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE WIRELESS HOST MODULE SET



With special aluminum case  
Size: W265xD190xH95

DIGITAL RATCHET [MEMORQ]									
No. TGED030C3Z	▼g 400 (case: 0.9kg)							1	
3/8"sq. Digital Ratchet [MemorQ] Compact Head Type for Wireless Communication GED030-C3-Z									
Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z									
Digital Ratchet [MemorQ] Body Specifications									
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	1	
GED030-C3-Z	6~30N·m	22	58.4	211	10	48	350	1	

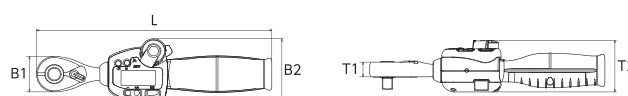


## 3/8"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET



With special aluminum case  
Size: W265xD190xH95

DIGITAL RATCHET [MEMORQ]									
No. TGED060R3Z	▼g 470 (case: 0.9kg)							1	
3/8"sq. Digital Ratchet [MemorQ] for Wireless Communication GED060-R3-Z									
Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z									
Digital Ratchet [MemorQ] Body Specifications									
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	1	
GED060-R3-Z	12~60N·m	33	58.4	217	13.5	48	420	1	

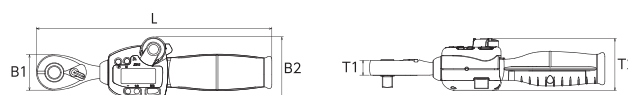


## 3/8"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET



With special aluminum case  
Size: W325xD190xH95

DIGITAL RATCHET [MEMORQ]									
No. TGED085R3Z	▼g 510 (case: 1.1kg)							1	
3/8"sq. Digital Ratchet [MemorQ] for Wireless Communication GED085-R3-Z									
Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z									
Digital Ratchet [MemorQ] Body Specifications									
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	1	
GED085-R3-Z	17~85N·m	33	58.4	271	13.5	48	460	1	



\*Please check the merchandise inventory for a product that is marked by before placing an order.

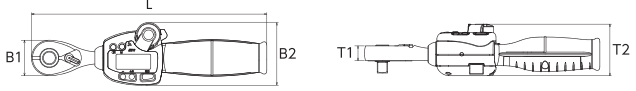


**DIGITAL RATCHET [MEMORQ]**

**No. TGED085R4Z** ▼g 660 (case: 1.1kg) ☺ 1  
 1/2"sq. Digital Ratchet [MemorQ] for Wireless Communication GED085-R4-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**Digital Ratchet [MemorQ] Body Specifications**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☺
GED085-R4-Z	17~85N·m	39.5	58.4	274	18	48	610	1



● 1/2"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET

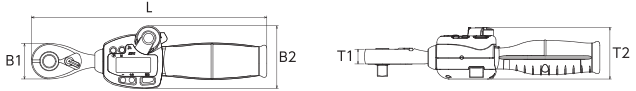


**DIGITAL RATCHET [MEMORQ]**

**No. TGED135R4Z** ▼g 770 (case: 1.6kg) ☺ 1  
 1/2"sq. Digital Ratchet [MemorQ] for Wireless Communication GED135-R4-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**Digital Ratchet [MemorQ] Body Specifications**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☺
GED135-R4-Z	27~135N·m	39.5	58.4	380	18	48	720	1



● 1/2"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET

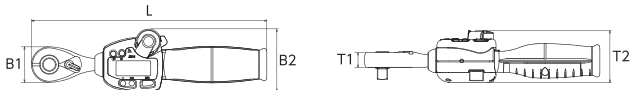


**DIGITAL RATCHET [MEMORQ]**

**No. TGED200R4Z** ▼g 1060 (case: 1.6kg) ☺ 1  
 1/2"sq. Digital Ratchet [MemorQ] for Wireless Communication GED200-R4-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**Digital Ratchet [MemorQ] Body Specifications**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☺
GED200-R4-Z	40~200N·m	39.5	58.4	580	18	48	1010	1



● 1/2"sq. DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET



**DIGITAL RATCHET [MEMORQ]**

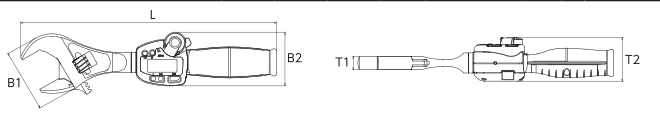
**No. TGED085W36Z** ▼g 630 (case: 1.1kg) ☺ 1  
 Digital Ratchet [MemorQ] Adjustable Wrench Type for Wireless Communication GED085-W36-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**No. TGED135W36Z** ▼g 750 (case: 1.6kg) ☺ 1  
 Digital Ratchet [MemorQ] Adjustable Wrench Type for Wireless Communication GED135-W36-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**No. TGED200W36Z** ▼g 1060 (case: 1.6kg) ☺ 1  
 Digital Ratchet [MemorQ] Adjustable Wrench Type for Wireless Communication GED200-W36-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**Digital Ratchet [MemorQ] Body Specifications**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☺
GED085-W36-Z	17~ 85N·m	69	58.4	275	14.5	48	580	1
GED135-W36-Z	27~135N·m	69	58.4	381	14.5	48	700	1
GED200-W36-Z	40~200N·m	69	58.4	581	14.5	48	1010	1



● DIGITAL RATCHET [MEMORQ] ADJUSTABLE WRENCH TYPE WIRELESS HOST MODULE SET



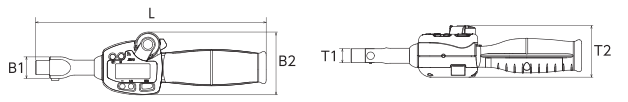
**DIGITAL RATCHET [MEMORQ]**

**No. TGED040X13Z** ▼g 410 (case: 1.1kg) ☺ 1  
 Digital Ratchet [MemorQ] Head Replaceable Type for Wireless Communication GED040-X13-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**No. TGED085X13Z** ▼g 410 (case: 1.1kg) ☺ 1  
 Digital Ratchet [MemorQ] Head Replaceable Type for Wireless Communication GED085-X13-Z  
 Digital Ratchet [MemorQ] Host Module for Wireless Communication GED-Z

**Digital Ratchet [MemorQ] Body Specifications**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☺
GED040-X13-Z	8~40N·m	20	58.4	213	13	48	360	1
GED085-X13-Z	17~85N·m	20	58.4	213	13	48	360	1



● DIGITAL RATCHET [MEMORQ] INTERCHANGEABLE HEAD TYPE WIRELESS HOST MODULE SET



\*Please check the merchandise inventory for a product that is marked by ⚡ before placing an order.

Advanced Digital Torque Tool

# DIGITAL RATCHET [MEMORQ] For Wireless Communication

Wireless communication with PC becomes possible with the use of separately sold host module for wireless communication.



- It is configured of Digital Ratchet for wireless communication [MemorQ] body only.
- To perform the wireless connection with a PC, a host module for wireless communication (GED-Z) is required.
- With a special aluminum case.

## Host module for wireless communication

No.	L	B	T	Cable length	▼g	☒
GED-Z	32	114.5	16	380	50	1



Maximum connectable number: 10 Max. (USB MemorQ cannot be connected)  
 Radiowave frequency: 2.4GHz  
 Communication range: 10~20m (may vary depending on the work environment)



## 1/4"sq. DIGITAL RATCHET [MEMORQ] For Wireless Communication



With special aluminum case  
 Size: W265xD190xH95

### DIGITAL RATCHET [MEMORQ]

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-R2-Z	6~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BR2E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts, BR2E-K, are configured. ➔ P.53



## 3/8"sq. DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE For Wireless Communication

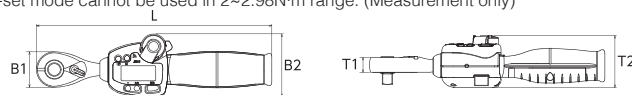


With special aluminum case  
 Size: W265xD190xH95

### DIGITAL RATCHET [MEMORQ]

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-C3A-Z	2~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BR2E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.63
- \* Pre-set mode cannot be used in 2~2.98N·m range. (Measurement only)



## 3/8"sq. DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE For Wireless Communication



With special aluminum case  
 Size: W265xD190xH95

### DIGITAL RATCHET [MEMORQ]

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-C3-Z	6~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BRC3-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.63



## 3/8"sq. DIGITAL RATCHET [MEMORQ] For Wireless Communication

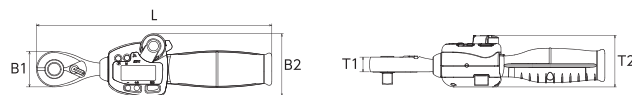


With special aluminum case  
 Size: W265xD190xH95

### DIGITAL RATCHET [MEMORQ]

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED060-R3-Z	12~60N·m	33	58.4	217	13.5	48	420	1

- Minimum display unit is 0.05N·m.
- Repair kit (BR3E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.63



## 3/8"sq. DIGITAL RATCHET [MEMORQ] For Wireless Communication

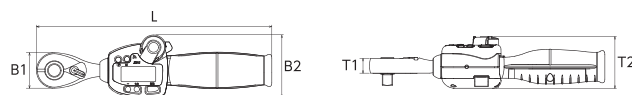


With special aluminum case  
 Size: W325xD190xH95

### DIGITAL RATCHET [MEMORQ]

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-R3-Z	17~85N·m	33	58.4	271	13.5	48	460	1

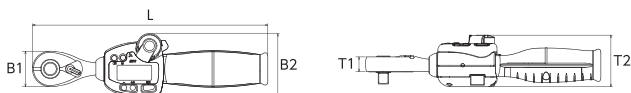
- Minimum display unit is 0.1N·m.
- Repair kit (BR3E-K) is configured for the ratchet head.
- Case: 1.1kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.63



**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-R4-Z	17~85N·m	39.5	58.4	274	18	48	610	1

- Minimum display unit is 0.1N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.1kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For Wireless Communication**

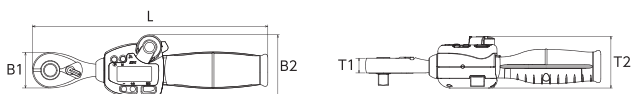


With special aluminum case  
Size: W325xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED135-R4-Z	27~135N·m	39.5	58.4	380	18	48	720	1

- Minimum display unit is 0.1N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.6kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For Wireless Communication**

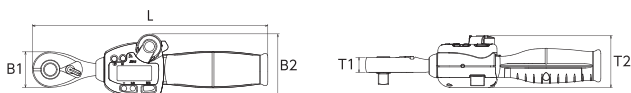


With special aluminum case  
Size: W630xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED200-R4-Z	40~200N·m	39.5	58.4	580	18	48	1010	1

- Minimum display unit is 0.2N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.6kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For Wireless Communication**

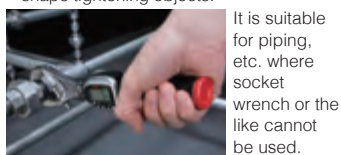


With special aluminum case  
Size: W630xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-W36-Z	17~ 85N·m	69	58.4	275	14.5	48	580	1
GED135-W36-Z	27~135N·m	69	58.4	381	14.5	48	700	1
GED200-W36-Z	40~200N·m	69	58.4	581	14.5	48	1010	1

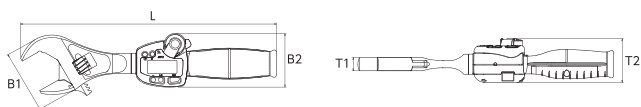
- Minimum display unit is 0.1N·m for GED085-W36-Z and GED135-W36-Z, and 0.2N·m for GED200-W36-Z.
- Adaptive width across flats is 10~36mm.
- \* Accuracy is guaranteed only for the lower jaw measurement direction and hexagonal shape tightening objects.



It is suitable for piping, etc. where socket wrench or the like cannot be used.



High precision measurement is made possible by the adoption of dedicated head which effective length does not change when the aperture changes.



**●DIGITAL RATCHET [MEMORQ]  
ADJUSTABLE WRENCH TYPE  
For Wireless Communication**



With special aluminum case  
Size (TGED085W36Z): W325xD190xH95  
Case: 1.1kg  
Size (TGED135W36Z): W630xD190xH95  
Size (TGED200W36Z): W630xD190xH95  
Case: 1.6kg

**DIGITAL RATCHET [MEMORQ]**

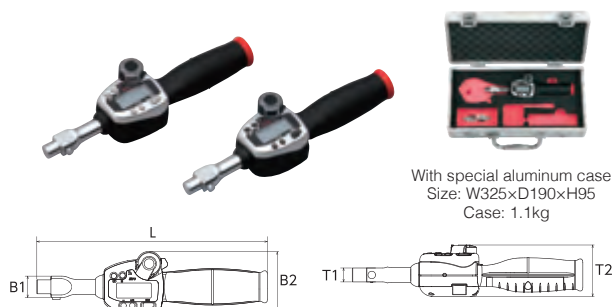
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED040-X13-Z	8~40N·m	20	58.4	213	13	48	360	1
GED085-X13-Z	17~85N·m	20	58.4	213	13	48	360	1

- Head replaceable type Digital Ratchet [MemorQ] that further extends the use range. It is used in combination with various replacement heads.
- Minimum display unit is 0.05N·m for GED040-X3-Z and 0.1N·m for GED085-X13-Z.

**Replacement head that supports a wide range of work scenes ➔ P.178~180**



**●DIGITAL RATCHET [MEMORQ] HEAD  
REPLACEABLE TYPE  
For Wireless Communication**



With special aluminum case  
Size: W325xD190xH95  
Case: 1.1kg

Advanced Digital Torque Tool



# DIGITAL RATCHET [MEMORQ] For USB

- Function that automatically "records and manages" the work history is added to the advanced digital torque tool "Digital Ratchet".
- It is a type that records on the Digital Ratchet body and transfers to a PC via USB, convenient when a PC cannot be placed nearby or in on-site operation.
- With a special aluminum case.

**USB type**

Measurement results can be transferred to a PC via USB.



**Easy one-button record**

Records up to 200 measurement results on the body with REC button. Automatic recording is available by mode switching.



**Exporting CSV data**

Measurement results that have been transferred to a PC can be utilized as quality control or maintenance record by linking to applications.



## 1/4"sq. DIGITAL RATCHET [MEMORQ] For USB

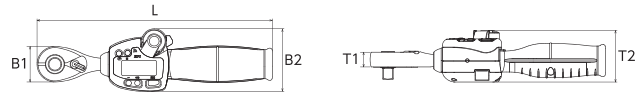


With special aluminum case  
Size: W265xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-R2-U	6~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BR2E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➡ P.53



## 3/8"sq. DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE For USB

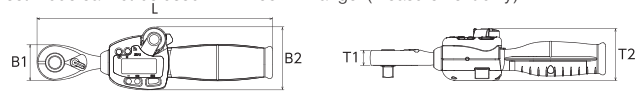


With special aluminum case  
Size: W265xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-C3A-U	2~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BR2E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➡ P.63
- \* Pre-set mode cannot be used in 2~2.98N·m range. (Measurement only)



## 3/8"sq. DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE For USB

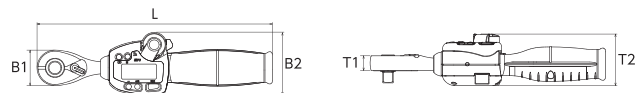


With special aluminum case  
Size: W265xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED030-C3-U	6~30N·m	22	58.4	211	10	48	350	1

- Minimum display unit is 0.02N·m.
- Repair kit (BRC3-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➡ P.63



## 3/8"sq. DIGITAL RATCHET [MEMORQ] For USB

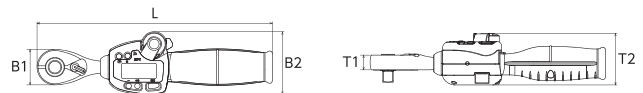


With special aluminum case  
Size: W265xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED060-R3-U	12~60N·m	33	58.4	217	13.5	48	420	1

- Minimum display unit is 0.05N·m.
- Repair kit (BR3E-K) is configured for the ratchet head.
- Case: 0.9kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➡ P.63



## 3/8"sq. DIGITAL RATCHET [MEMORQ] For USB

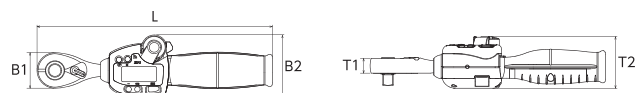


With special aluminum case  
Size: W325xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-R3-U	17~85N·m	33	58.4	271	13.5	48	460	1

- Minimum display unit is 0.1N·m.
- Repair kit (BR3E-K) is configured for the ratchet head.
- Case: 1.1kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➡ P.63

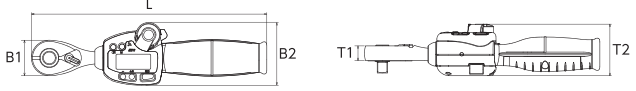


\*Please check the merchandise inventory for a product that is marked by before placing an order.

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-R4-U	17~85N·m	39.5	58.4	274	18	48	610	1

- Minimum display unit is 0.1N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.1kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For USB**

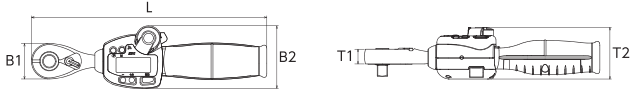


With special aluminum case  
Size: W325xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED135-R4-U	27~135N·m	39.5	58.4	380	18	48	720	1

- Minimum display unit is 0.1N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.6kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For USB**

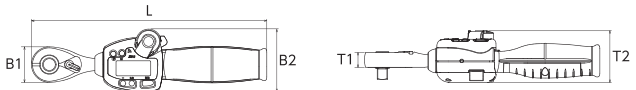


With special aluminum case  
Size: W630xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED200-R4-U	40~200N·m	39.5	58.4	580	18	48	1010	1

- Minimum display unit is 0.2N·m.
- Repair kit (BR4E-K) is configured for the ratchet head.
- Case: 1.6kg
- \* Recommend to calibrate and adjust when using a repair kit.
- \* Spare parts are configured. ➔ P.70



**●1/2"sq. DIGITAL RATCHET [MEMORQ]  
For USB**

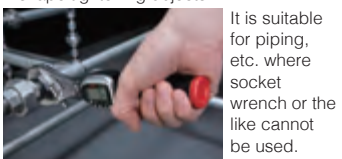


With special aluminum case  
Size: W630xD190xH95

**DIGITAL RATCHET [MEMORQ]**

No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED085-W36-U	17~ 85N·m	69	58.4	275	14.5	48	580	1
GED135-W36-U	27~135N·m	69	58.4	381	14.5	48	700	1
GED200-W36-U	40~200N·m	69	58.4	581	14.5	48	1010	1

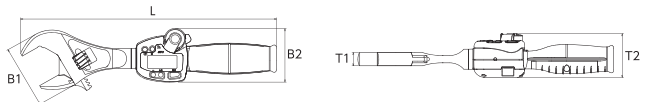
- Minimum display unit is 0.1N·m for GED085-W36-U and GED135-W36-U, and 0.2N·m for GED200-W36-U.
- Adaptive width across flats is 10~36mm.
- \* Accuracy is guaranteed only for the lower jaw measurement direction and hexagonal shape tightening objects.



It is suitable for piping, etc. where socket wrench or the like cannot be used.



High precision measurement is made possible by the adoption of dedicated head which effective length does not change when the aperture changes.



**●DIGITAL RATCHET [MEMORQ]  
ADJUSTABLE WRENCH TYPE  
For USB**



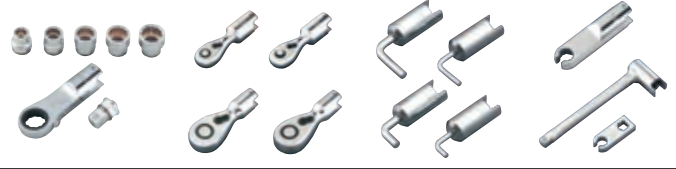
With special aluminum case  
Size (TGED085W36U): W325xD190xH95  
Case: 1.1kg  
Size (TGED135W36U): W630xD190xH95  
Size (TGED200W36U): W630xD190xH95  
Case: 1.6kg

**DIGITAL RATCHET [MEMORQ]**

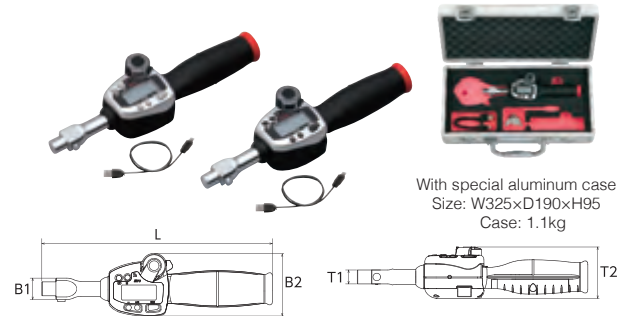
No.	Torque measurement range	B <sub>1</sub>	B <sub>2</sub>	L	T <sub>1</sub>	T <sub>2</sub>	▼g	☒
GED040-X13-U	8~40N·m	20	58.4	213	13	48	360	1
GED085-X13-U	17~85N·m	20	58.4	213	13	48	360	1

- Head replaceable type Digital Ratchet [MemorQ] that further extends the use range. It is used in combination with various replacement heads.
- Minimum display unit is 0.05N·m for GED040-X3-U and 0.1N·m for GED085-X13-U.

**Replacement head that supports a wide range of work scenes ➔ P.178~180**



**●DIGITAL RATCHET [MEMORQ]  
INTERCHANGEABLE HEAD TYPE  
For USB**



With special aluminum case  
Size: W325xD190xH95  
Case: 1.1kg

\*Please check the merchandise inventory for a product that is marked by ⚡ before placing an order.

# 3. MEASURING and INSULATED TOOLS

## TORQUE WRENCHES



### CAUTION

#### TORQUE WRENCHES

- BE SURE TO READ INSTRUCTIONS AND OTHER MANUALS BEFORE USE.
- DO NOT USE A TORQUE WRENCH TO LOOSEN BOLTS.
- DO NOT ATTEMPT TO EXTEND BY CONNECTING A PIPE, ETC.
- DO NOT USE A TORQUE WRENCH AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.
- BE SURE TO INSERT THE SQUARE DRIVE TO THE DEEP END, ETC.

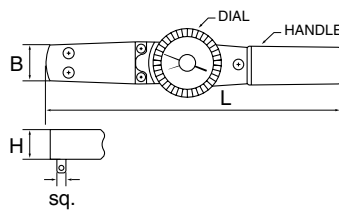
- THE RELATION BETWEEN THE FASTENING TORQUE AND RESISTANT POWER OF THE SCREW VARIES DEPENDING ON PLURAL FACTORS, INCLUDING THE CONDITION AND STRUCTURE OF THE SCREW AND COEFFICIENT OF FRICTION.
- READ THE HANDLING INSTRUCTIONS AND PRECAUTIONS FROM THE MANUFACTURER CAREFULLY BEFORE USING THE TOOL.
- USE THE TORQUE WRENCH WITHIN THE RANGE OF A MEASURABLE TORQUE.
- IT IS RECOMMENDED TO HAVE THE INSTRUMENTS CALIBRATED PERIODICALLY.



### ● TORQUE WRENCH DIAL TYPE



With Plastic case



### TORQUE WRENCH DIAL TYPE

#### Features

The dial scale is easy to read, and the pointer remains in the measured position to facilitate confirmation of the measurement.

#### Accuracy

- The unique, long torsion bar shows the torque difference more clearly and makes the measurement more accurate.
- The pointer system allows detailed confirmation of measurement, facilitating accuracy of measurement.

#### Ease of handling

- The long torsion bar reduces overall size, weight and thickness.
- The measurement scale is indicated in N-m scale in compliance with the SI (international standard). A kgf-cm scale is also provided to meet both past and present standards.
- The scale 0-point located on the center line of the tool facilitates reading as well as counterclockwise torque measurement. Operations in invisible locations (including upside down use of the wrench) are possible thanks to the use of the pointer.

#### Endurance

- The long torsion bar provides good stability. Without excessive force applied, the tool can maintain high accuracy indefinitely.
- The main body is accommodated by a rugged plastic case that is suitable for protection and storage.

No.	sq.	Torque Range kgf-cm	Minimum Scale	L	B	H	▼kg	📦	Main Applications & Purposes
CMD0091	1/4"	1.8~ 9	0.2	290	26	27	0.46	1	Precision measurement and pre-load measurement of low voltage parts and small torque.
CMD0172	3/8"	3.5~ 17.5	0.5	290	26	27	0.46	1	Effective for management of small torque such as bearing pre-load measurement.
CMD0282	3/8"	6~ 28	0.5	290	26	27	0.46	1	Effective for management of small torque such as bearing pre-load measurement.
CMD072	3/8"	14~ 70	2	375	36	27	0.76	1	3/8"sq. basic model, widely applicable to passenger vehicles and motorcycles.
CMD143	1/2"	30~ 140	2	545	48	32	1.34	1	1/2"sq. models which can also be transformed into beam type models. Easy to use with passenger vehicles.
CMD243	1/2"	50~ 240	5	545	48	32	1.33	1	1/2"sq. models which can also be transformed into beam type models. Easy to use with passenger vehicles.
CMD353	1/2"	70~ 350	10	545	48	32	1.34	1	1/2"sq. model with a wide application range.
CMD484	3/4"	100~ 480	10	708	56	39	2.78	1	3/4"sq. model, effective for engines of medium-sized vehicles.
CMD804	3/4"	160~ 800	20	1185	56	38.5	4.1	1	Widely applicable in construction, construction machinery and medium-sized vehicles.
CMD805	1"	160~ 800	20	1185	56	38.5	4.14	1	Widely applicable in construction, construction machinery and medium-sized vehicles.

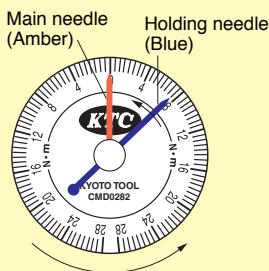
\* The graduations on the scale indicates N-m. (1kgf-m ≒ 10N-m 1N-m ≒ 0.1kgf-m)



• DO NOT APPLY A LOAD LARGER THAN THAT WHICH A FULLY LOADED SCALE CAN HANDLE.

### ● Clockwise torque measurement

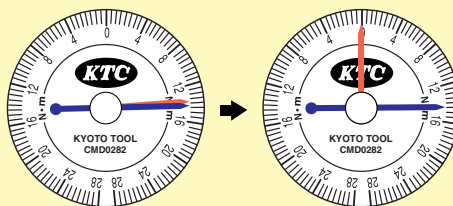
1 Set main pointer needle to 0.



Turn counterclockwise.

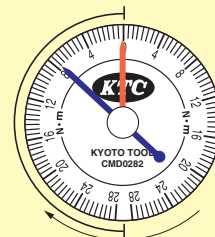
Turn dial counter-clockwise to superimpose holding needle (blue) on main needle (amber). Turn dial further until main needle indicates zero on outer scale.

2 Start measurement.



Turn handle clockwise. The main and holding needles swing until the torque value. When tightening force is released, main needle returns to scale 0 automatically while holding needle remains at torque value. When measuring same torque values successively, it is recommended to leave holding needle in position.

3 To measure the counterclockwise torque:



Turn clockwise

Holding needle is set form reverse direction to clockwise torque measurement, i.e. from left side of main needle (by turning clockwise). Counterclockwise torque should be measured by reading inner scale.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

PRE-SET TORQUE WRENCH

●PRE-SET TORQUE WRENCH



Features

Because they are capable of setting torque value to be measured prior to measurement, the preset torque wrenches are effective in successive operations or operations in places where scale readout is difficult.

Accuracy

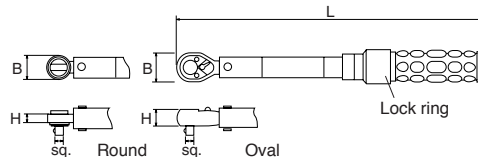
- The unique preset mechanism can set the torque value to be measured easily and accurately in detail.
- The preset value can be locked.

Ease of handling

- The measurement scale is indicated in N-m scale in compliance with the SI (international standard). The scale is stamped so it does not fade out.
- The operator is informed that the preset value is reached by the ratchet which changes angle at the neck.
- The counterclockwise torque can be measured as well as the clockwise torque.
- The head consists of a circular ratchet with a 60-tooth gear (having feed angle 6°), that is suitable for operations in tight spaces.

Endurance

- The main body is accommodated in a rugged plastic case which is suitable for protection and storage.
- The handle grip is made of rubberized material which resists slippage and the effects of shock.
- The entire mechanism is sealed to prevent penetration of dirt and dust, thereby reducing the possibility of malfunction.



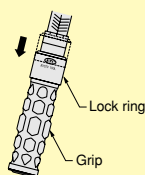
No.	sq.	Torque Range N-m (kgf-cm)	Minimum Scale	Type	L	B	H	▼kg	☒	Main Applications & Purposes
CMPB0152	1/4"	3~ 15	0.1	Oval	247	22	10	0.3	1	Effective for successive tightening with small torque of small parts, etc.
CMPB0253	3/8"	5~ 25	0.1	Oval	278	22	10	0.3	1	Suitable for compact aluminum engines, etc.
CMPB0503	3/8"	10~ 50	0.5	Oval	337	33	13.5	0.8	1	Basic model for motorcycles, but can also be used widely in general applications.
CMPB1003	3/8"	20~100	0.5	Oval	397	33	13.5	0.9	1	3/8"sq. 1000 kgf type. The standard tool of the future.
CMPB0504	1/2"	10~ 50	0.5	Oval	337	33	13.5	0.8	1	1/2"sq. compact and easy to use.
CMPB1004	1/2"	20~100	0.5	Oval	397	33	13.5	0.9	1	1/2"sq. model covering a wide range of torque.
CMPB2004	1/2"	40~200	2	Oval	475	39.5	18	1.2	1	Effective for constructions and medium-sized vehicles.
CMPB3004	1/2"	60~300	2	Oval	480	39.5	18	1.2	1	1/2"sq. model covering a wide range of torque.
CMPB8006	3/4"	150~800	5	Oval	1050	68	29	4.5	1	
CMPB8008	1"	150~800	5	Oval	1050	68	27.5	4.5	1	

\* The graduations on the scale indicates N-m. (1kgf·m ≒ 10N·m 1N·m ≒ 0.1kgf·m)

⚠ CAUTION • WHEN THE WRENCH GENERATES A "CLICK" SOUND OR YOUR HAND FEELS A LIGHT SHOCK, DO NOT APPLY FURTHER LOAD TO THE WRENCH. • DO NOT USE THIS WRENCH FOR LOOSENING A BOLT OR NUT.

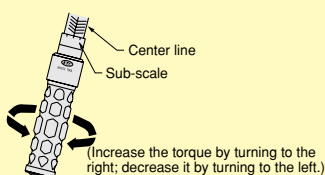
● How to preset the torque.

1 Pull grip down



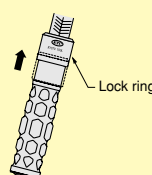
Hold grip and pull it downward while shaking it a little to the left and right.

2 Preset to desired torque



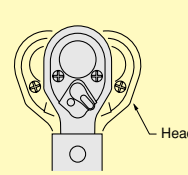
The torque is determined by the main scale and the sub-scale on the grip.

3 Lock the torque.



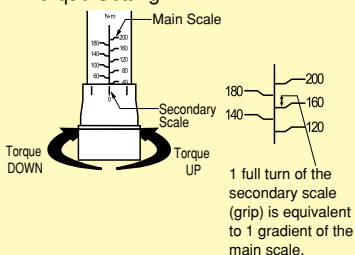
Release your hand from the lock ring, and it will return automatically and the torque will be set.

4 Start measurement.



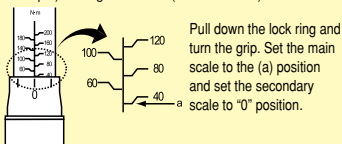
Perform measurement. When preset value is reached, a light shock is felt and neck angle changes.

<Torque Setting>



○ Setting the value of the main scale to a set value.

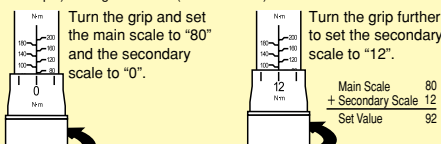
Example) Setting to 40N · m (For CMPA203)



Pull down the lock ring and turn the grip. Set the main scale to the (a) position and set the secondary scale to "0" position.

○ Setting a value between the two scales to a set value.

Example) Setting to 92N · m (For CMPA203)



Turn the grip and set the main scale to "80" and the secondary scale to "0".

Turn the grip further to set the secondary scale to "12".

Main Scale 80 + Secondary Scale 12 = Set Value 92

\*The turning direction of the grip is reversed when setting the torque from a high level.

**TORQUE WRENCH PRE-SET TYPE**



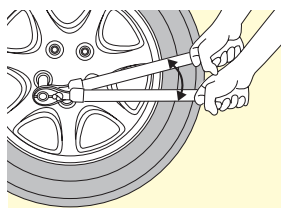
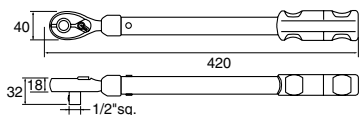
\* It is not covered for repair.

**TORQUE WRENCH PRE-SET TYPE**

No.	Torque measurement range (cN-m)	Minimum scale (cN-m)	D	L	▼g	☒
<b>GDP-080</b>	16~ 80	1	28	140	212	1
<b>GDP-200</b>	40~200	2	28	159	249	1
<b>GDP-450</b>	90~450	5	32	171	330	1

- \* Measurement scale is only cN-m. (1N-m = 100cN-m)
- 90° grip will idly rotate along with a click when the set torque is reached.
- Measurement accuracy is ±6%, passing ISO standards. Measurement direction is right (clockwise) only.
- Bit is detachable by magnet, allowing the use of the bit with 6.3mm axis opposing side that's published in CONVENTIONAL TOOLS. ➔ P.142
- \* Double-headed bit cannot be used.
- \* There are sizes that cannot retain the magnetic force if 1/4"sq. adaptor is used.
- \* Please configure the set torque at the minimum value in storage.

**1/2"sq. WHEEL NUT TORQUE WRENCH SET**  
D.PAT.



Confirm the tightening torque with the wrench positioned between the arrows, as shown in the diagram.

**WHEEL NUT TORQUE WRENCH SET**

No.	kg	☒
<b>TWCMPA221</b>	<b>1.3</b>	<b>1</b>
1/2"sq. Torque wrench for wheel nut		WCMPA103
1/2"sq. Exclusive socket for wheel nut 21mm		B38Z-21H

**Usage**

- This tool is a pre-set type torque wrench that is used to tighten vehicle wheel nuts 17, 19, and 21mm at a specified torque of 103N-m (10.5kgf-m). (The 17, 19mm sockets are sold separately.)
- Applicable for clockwise rotation tightening. (Is not applicable for anti-clockwise rotation tightening)

**Characteristics**

- Reliable operation is possible through torque management. (For confirmation during inspection on completion)
- Work hours have been reduced with the employment of the ratchet head. (36 plate gears) The union structure allows for the firm sustenance of the socket. Socket replacement can be carried out easily.
- The full optimum length is designed so that the tire and the mechanic's hands do not interfere. (Full length has been set at 420mm, 55mm longer than in previous models.) The load on the handle has also been reduced during operation.
- The head angle changes with a light shock to the hands when the tightening torque is reached, enabling recognition of completion.
- The rubber cap attached to the base prevents entry of dirt and dust.
- Provided with a soft case that makes storage easy.

\*Replaceable parts are available for the ratchet section. Check with your dealer for details.

**Compatibility Table (Domestic Vehicles)**

Nut size (mm)	Manufacturer	Examples of Compatible Cars
<b>19</b> <small>*19mm socket is required (sold separately)</small>	Honda, Subaru	All passenger vehicles (except recreational and light vehicles)
	Isuzu	All passenger vehicles
<b>21</b>	Toyota, Nissan	All passenger vehicles (except recreational and light vehicles)
	Mitsubishi, Daihatsu	All passenger vehicles (except recreational and light vehicles)
	Mazda	All passenger vehicles (except recreational and light vehicles)

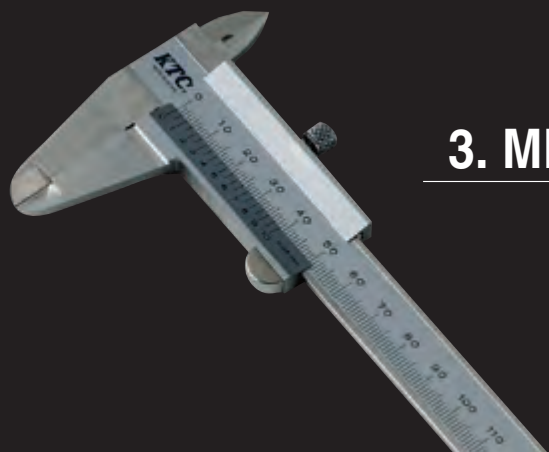
- \* The torque value for light vehicles with 17mm nuts differs from the one for regular vehicles. For this reason, the torque wrench above cannot be used. However, the torque wrench can be used on some foreign cars made outside of Japan.
- \* Compatible with wheel tightening torque value of 103N-m. (Not applicable to certain vehicles and wheels.)
- \* The wrench cannot be used for trucks and recreational vehicles, as the torque value required is too high.
- \* Check the torque value before using wrench on non-standard wheels.



**CAUTION**

1. This torque wrench is exclusively designed for wheel nuts. Do not use this tool to tighten or loosen other bolts/nuts.
2. The wheel tightening torque is set for domestically manufactured vehicle standard wheels. Check the torque settings for special wheels before use.
3. This product is a measurement tool. Take extreme care when handling. Be sure to avoid dropping, throwing, or hitting this product.
4. Hold the grip at the line as the center and apply even firm pressure.
5. Applying pressure at other places (pipe part etc.) than the grip will give inaccurate torque readings.
6. Use this product multiple times to avoid misleading when the tool has been stored for a long time.
7. Do not use during rain, high humidity levels, and in conditions where the tool is exposed to water.
8. Do not disassemble this product. The torque settings can become faulty.
9. Immediately stop use and request for an inspection/ disassembly and adjustment when this product is dropped, submerged in water, emits abnormal sound, or operates faultily.
10. Do not apply force after operation.





# 3. MEASURING and INSULATED TOOLS GAUGES



## CAUTION

### Gauges

- Make sure that you read the Owner's Operator Manual carefully before using the gauges.
- Do not use in areas with high levels of humidity or dust. Damage may occur if the gauges come into direct contact with water or oil.
- Look at the gauge straight on when taking readings.
- Do not use gasoline or thinners for cleaning purposes. These agents could damage the shape of the gauge.

- Do not use the gauge outside its designated usage.
- The precision of the gauge will need to be checked if it has been dropped, is cracked, or has been used in a rough manner.

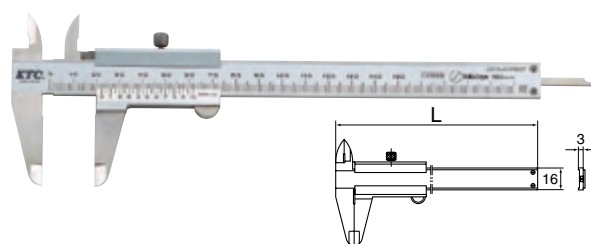
### SLIDE GAUGE

No.	Measuring Range	L	▽g	☞
GMM -15	0~150	230	150	1
-20	0~200	290	180	1
-30	0~300	405	355	1

- Long vernier for easy reading.
- Stepped surface for avoiding entry of dust, etc.

\*Replacement parts are available. Check with your dealer for details.

### ●SLIDE GAUGE



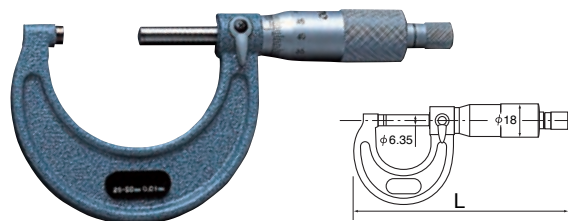
### MICROMETER

No.	Measuring Range	L	▽g	☞
GMM-025	0~25	120	160	1
-050	25~50	145	215	1
-075	50~75	175	315	1

- Painted frame for rust resistance.
- Super hand alloy tip attached.
- With constant pressure device.

\*Replacement parts are available. Check with your dealer for details.

### ●MICROMETER

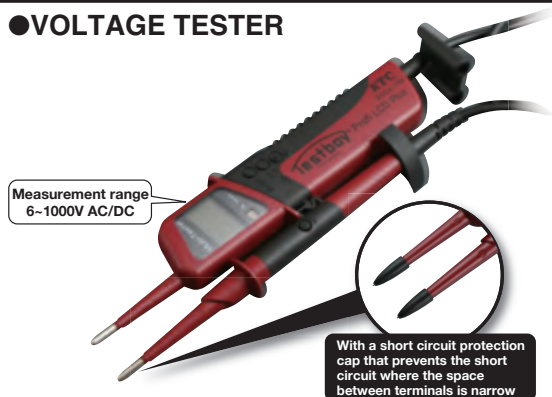


### VOLTAGE TESTER

No.	ZGEV-750	▽g	200	☞	1
Body Size	W70×D30×H238				
Measurement Range	Voltage	6~1000V AC/DC, 0~400Hz			
	Resistance	0~2000Ω voltage			
	Continuity	0~150Ω (sound signal)			
Power	AAA batteries (1.5V DC) × 2				
Available Temperature Range	-10°C~50°C				

- It is a digital tester with small capacity path for measurement.

### ●VOLTAGE TESTER



### ANGULAR TORQUE GAUGE

No.	sq.	A	H	D	L	ℓ	d	▽g	☞
ATG30-1	12.7	24.2	55	78.5	97	52	4.8	365	10

Usage • For the fastening angle measurement of fastening bolt in plastic region (angle fastening bolt).

Features • Small scale can measure in 5° increments, allowing the wide range of use for various engines of every manufacturer. (It can be used for imported cars as well as domestic.)

How to Use 1. Have the head bolt tightened by specific torque using a torque wrench.

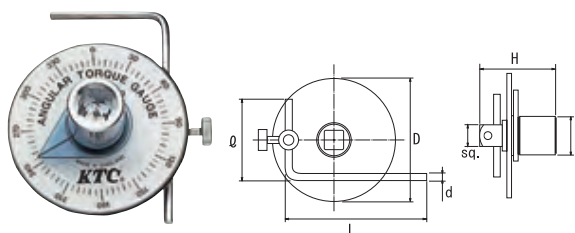


2. Set the angular torque gauge and stop the rotation with L-shape stopper.

3. Set the gauge needle at 0.

4. Tighten up to the specified angle with a spinner handle, etc.

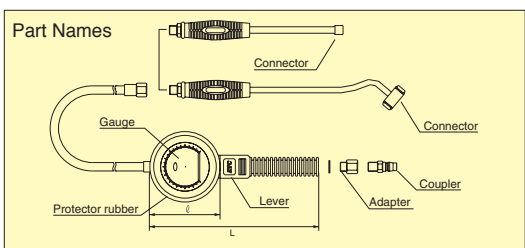
### ●ANGULAR TORQUE GAUGE



- Please don't tighten with a torque wrench when using this product. Torque wrench may be damaged by exceeding the set torque.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● TIRE AIR GAUGE






TIRE AIR GAUGE							
No.	Measuring range	Minimal scale	Thickness	ℓ	L	▼g	📦
AGT231	0~ 500kPa (0~ 5kg/cm <sup>2</sup> )	10kPa	95	100	270	800	1
AGT232	0~1200kPa (0~12kg/cm <sup>2</sup> )	10kPa	95	100	270	800	1

**Purpose**  
 ● To measure, increase and decrease the air pressure of automobile tires.

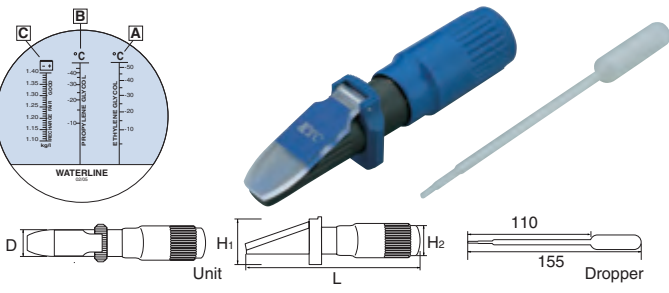
**Application**  
 ● Tire Air Gauge 500: Passenger cars and commercial cars (vans).  
 ● Tire Air Gauge 1200: Motorcycles, passenger cars, trucks and buses.

**Features**  
 ● The lever is lightweight for fine adjustments with ease.  
 ● The gauge is large (ø70mm) and easy to read measurements. The pressure can be measured and decreased without connection to the air hose.  
 ● With the swivel joint, the hose is not easily twisted.  
 ● The ultra thin straight connector on the tip (the tip is 11mm diameter) enables use for almost all aluminum wheels (AGT231).  
 ● The long type double connector facilitates use for double tires (AGT232).  
 ● The connector on the tip is replaceable (option).  
 \*Replacement parts are available. Check with your dealer for details.

The connectors for replacement:

Connectors	Product No.
Straight connector 	AGT23-A1
Double connector 	AGT23-A2
Clip connector 	AGT23-A3

● FLUID TESTER



FLUID TESTER						
No.	D	H <sub>1</sub>	H <sub>2</sub>	L	▼g	📦
AG601	25	40	32	150	150	1

**Attachments:** Dropper for Liquid Measurements, Soft Storage Case (Cloth)

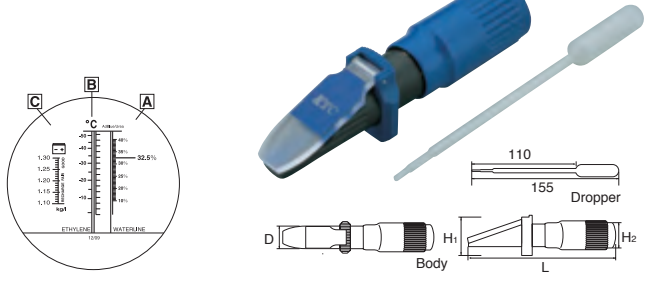
**Usage**  
 ● Measuring coolants freezing temperature (LLC) (Scale "A" · "B" )  
 ● Measuring the relative density of battery electrolyte (Scale "C" )

**Characteristics**  
 ● Measurements can be made simply by dropping liquid on a prism surface and looking through the lens.

**Measurable Range**  
 ● Coolant (LLC) ... Ethylene: 0~-55°C Scale ("A")  
 Propylene: 0~-50°C (Scale "B")  
 Battery fluid ... 1.10~1.40kg/l (minimum scale of 0.01kg/l)

\*Replacement parts are available. Check with your dealer for details.

● FLUID TESTER (Urea concentration testing)



FLUID TESTER						
No.	D	H <sub>1</sub>	H <sub>2</sub>	L	▼g	📦
AG602	25	40	32	150	150	1

**Attachment:** Liquid metering dropper, soft case for body storage (fabric)

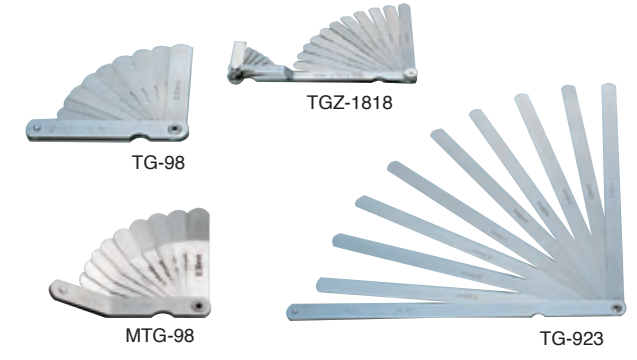
**Usage**  
 ● Urea concentration measurement of urea water for exhaust gas purifying device in large vehicles (scale A)  
 ● Measurement of freezing temperature for coolant (LLC) (Scale B)  
 ● Measurement of specific gravity of battery electrolyte (Scale C)

**Features**  
 ● It can be measured simply by dropping the liquid on the prism surface and looking through the lens.


**Measurement range**  
 ● urea concentration...15~40% (0.5% minimum scale)  
 ● Coolant (LLC)...ethylene: 0~-50°C (5°C minimum scale)  
 ● Battery fluid...1.10~1.40kg/l (0.01kg/l minimum scale)

\*Spare parts are configured. Please contact your dealer for details.

● THICKNESS GAUGE



THICKNESS GAUGE			
<b>No. TG-98</b>	▼g 34	📦 10	
90×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30		
<b>No. TG-923</b>	▼g 79	📦 10	
230×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30		
<b>No. TGB-98</b>	▼g 34	📦 10	
90×13 9pcs. set (in)	.0015 .002 .003 .004 .006 .008 .010 .012 .015		
<b>No. TGB-923</b>	▼g 79	📦 10	
230×13 9pcs. set (in)	.0015 .002 .003 .004 .006 .008 .010 .012 .015		
<b>No. MTG-98 (With angle)</b>	▼g 34	📦 10	
90×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30		
<b>No. TGZ-1818 (Maintenance Gauge Set)</b>	▼g 100	📦 10	
For valve clearance 11pcs. set (mm)	.15 .18 .20 .25 .28 .30 .33 .35 .36 .38 .40		
For point plug 6pcs. set (mm)	.45 .50 .80 .90 1.10 1.30		
Hook for adjusting plug 1pce.			
<b>No. RG-20 (Maintenance Gauge Set)</b>	▼g 100	📦 400	
For valve clearance 13pcs. set (mm)	.05 .15 .18 .20 .25 .28 .30 .33 .35 .36 .38 .40		
For point plug 6pcs. set (mm)	.45 .50 .80 .90 1.10 1.30		
Hook for adjusting plug 1pce.			

\*Please check the merchandise inventory for a product that is marked by  before placing an order.

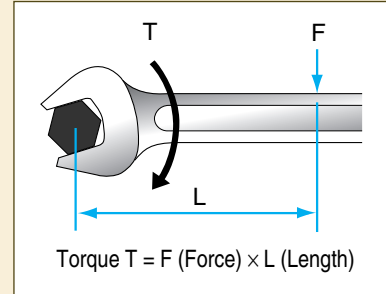
# Torque

## ● What is torque?

As shown in the diagram, the turning pressure (T) that is put upon a bolt when force (F) is applied to a certain point on the spanner's length (L).

(Example) If a force of 100N\*(approx. 10kgf) is applied to the spanner at a length of 1m, the torque is calculated as (F) 100N ~ (L) 1m = 100N · m (approx. 10kgf · m).

If a torque of 100N · m (approx. 10kgf · m) is required to be applied to a 200mm wrench, the force that must be applied to the wrench is 500N (approx. 51kgf). This can be calculated as shown below. Therefore, in normal circumstances it would be difficult to apply this amount of force to a wrench of this length.



$$F \times 0.2m = (T) 100N \cdot m$$

$$F = 100 \div 0.2$$

$$= 500N \text{ (Approx. 51kgf)}$$

## ● Measuring Torque

Torque has conventionally been shown in measurements of kgf · m. However, with the introduction of the “New Measurement Act 1993”, torque is now measured in SI units (ISO International Specification). Units of force are now shown by N (Newton), and torque N · m (Newton-meter).

1N · m is 0.10197kgf · m, and 1kgf · m is 9.8067N · m. Therefore, in actual operations, 1kgf · m can be roughly estimated to be 10N · m.

(Refer to the supplement at the end of the volume regarding Kg and N · m conversions.)

**Tool basics**

### The difference between N (Newton) and kg

The conventional unit of kgf is the force given by the mass of a 1kg object with a standard gravity acceleration rate of 9.8m/s<sup>2</sup>. However, N (Newton) units are simpler, as they refer to the application of acceleration 1m/s<sup>2</sup> of an object with a mass of 1kg.

In other cases, the unit for pressure has changed from kgf/cm<sup>2</sup> to Pa (Pascal).

Note that a unit of kgf/cm<sup>2</sup> can be changed to Pa as shown by the calculation below:

$$1\text{kgf/cm}^2 = 98.0665\text{kPa (kilo-Pascal)} = 0.0980665\text{MPa (mega-Pascal)}$$

## ● Torque / Wrench Length

As torque is measured by “Force × Length”, larger amounts of torque can be applied as the length of the wrench becomes longer. However, the torque of the bolt is specified. There is an appropriate tightening torque for each bolt. The wrench is made to bear the necessary torque, and is of a set length to apply that torque when loosening or tightening bolts.

For example, the specified torque for most wheel nuts of passenger vehicles is set to 103N · m. If tightening a nut with a 400mm wrench, the force required will be 257.5N (approx. 26kgf) as shown below. Bolts may become over-tightened even with a moderate force, if one bends at the waist and then recoils, or if one steps on the wrench when tightening.

$$F \times 0.4m = 103N \cdot m$$

$$F = 103 \div 0.4$$

$$= 257.5N \text{ (Approx. 26kgf)}$$

Take care when using longer wrenches made for use in confined areas. If too much force is applied, the bolt can be severed, or the wrench may even break.

Long wrenches are made to reach difficult places, or to apply required torque with a lesser force. They are not designed to apply excessive torque. Always take care not to apply excessive torque.

# 3. MEASURING and INSULATED TOOLS

## INSULATED TOOLS



### WARNING

#### About the Handling of Insulated Tools

- Before using this product, please fully understand the user's manual and work instructions of the manufacturer.
- Qualifications stipulated by law may be required when working under high voltage. Such work should be performed by a worker who is suitable for the conditions.
- Please ensure in advance that where this product is used is below AC1000V or DC1500V.

- If the red part of this product is worn and yellow part is exposed, please discontinue use immediately.
- Do not use this product in combination with other tools.
- When using this product, please wear protective gear (insulated gloves, insulated shoes, etc.) that have undergone type examination.  
(\* Configured protective gear is also available. Please contact your dealer for details)

### Ideal for the maintenance of hybrid vehicles!! KTC Insulated Tool Series

Strong current flows through next-generation automobiles such as hybrid vehicles (HV) and electric vehicles (EV), making insulated tools essential from the viewpoint of "worker safety" and "equipment damage". While the spread of next-generation automobiles progresses rapidly, maintenance infrastructure is delayed, raising the demand for insulation tools from maintenance shops and accident processing scenes.

#### ● Meets IEC 60900:2004 Standards

It is a product that meets IEC 60900:2004 Standards, the only international standards for insulated tools.

	Electric and electronic technologies	Electric and electronic technologies are the only excluded industries
International standards (World-class)	<b>IEC standards (IEC International Electrotechnical Commission)</b>	ISO standards (ISO International Standardization Organization)
European standards (Regional level)	EN standards (CENELEC European Committee for Electrotechnical Standardization)	EN standards (CEN European Committee for Standardization)

#### ● Absolutely needed items are selected

Process is inspected from the KTC perspective, selecting only the required tools for the maintenance of hybrid vehicles. Unnecessary tools are eliminated, preventing hesitation at work.

#### ● Easy to manage, easy to carry

Dedicated case that protects the tools from ultraviolet rays is plastic and can easily be carried around, with "red" color that stands out at the work site.

It comes with a dedicated tray that can be used for molded storage.

With a voltage tester that can confirm 0V (zero volts) before work (ZTB311V, ZTB310V)



Voltage measurement prior to work is specified in the manufacturer manual.

## Insulated tools that ensure the safety of workers and prevent the equipment damage

- It is a product that meets IEC 60900:2004 Standards, the only international standards for insulated tools.
- It contains tools that are ideal in the maintenance of hybrid vehicles (HV).
- Aperture of the socket prevents the concentration of stress and bolt · nut-friendly power fit shape is used.
- To prevent the falling off of the socket (\*), union mechanism for ratchet handle and "fall-proof screw" for extension bar and T-handle are adopted.
- With a dedicated red tray that stands out in the work site.  
(Case size: W450xD365xH105)

\* "Mechanical lock retention system" is required by IEC 60900:2004 Standards.





2-layer insulation coating for high safety



"Fall-proof screw" that prevents the falling off of the socket

No.	Product Name	Insulated Tool Set A No.ZTB311	Insulated Tool Set B No.ZTB311V	Insulated Tool Set C No.ZTB310	Insulated Tool Set D No.ZTB310V
		▼kg 2.9	▼kg 3.1	▼kg 2.5	▼kg 2.7
ZGEV-750	Voltage Tester		●		●
ZBE3-125	3/8"sq. Extension Bar 125mm	●	●	●	●
ZBE3-250	3/8"sq. Extension Bar 250mm	●	●	●	●
ZBR3	3/8"sq. Ratchet Handle	●	●		
ZTH3	3/8"sq. T-Shaped Wrench	●	●	●	●
ZB3-08	3/8"sq. Socket 8mm (6pt.)	●	●	●	●
ZB3-10	3/8"sq. Socket 10mm (6pt.)	●	●	●	●
ZB3-12	3/8"sq. Socket 12mm (6pt.)	●	●	●	●
ZB3L-08	3/8"sq. Deep Socket 8mm (6pt.)	●	●	●	●
ZB3L-10	3/8"sq. Deep Socket 10mm (6pt.)	●	●	●	●
ZB3L-12	3/8"sq. Deep Socket 12mm (6pt.)	●	●	●	●
ZD1M-100	Flat Screwdriver	●	●	●	●

## INSULATED TOOL SET



No. ZTB311	▼kg 2.9	📦 1
3/8"sq. Extension Bar		ZBE3-125, 250
3/8"sq. Ratchet Handle		ZBR3
3/8"sq. T-Shaped Handle Wrench		ZTH3
3/8"sq. Socket (6pt.)		 ZB3-08, 10, 12
3/8"sq. Deep Socket (6pt.)		 ZB3L-08, 10, 12
Flat Screwdriver		ZD1M-100

## ● INSULATED TOOL SET A

3/8" sq.



## INSULATED TOOL SET



No. ZTB311V	▼kg 3.1	📦 1
3/8"sq. Extension Bar		ZBE3-125, 250
3/8"sq. Ratchet Handle		ZBR3
3/8"sq. T-Shaped Handle Wrench		ZTH3
3/8"sq. Socket (6pt.)		 ZB3-08, 10, 12
3/8"sq. Deep Socket (6pt.)		 ZB3L-08, 10, 12
Flat Screwdriver		ZD1M-100
Voltage Tester		ZGEV-750

## ● INSULATED TOOL SET B

3/8" sq.



## INSULATED TOOL SET



No. ZTB310	▼kg 2.5	📦 1
3/8"sq. Extension Bar		ZBE3-125, 250
3/8"sq. T-Shaped Handle Wrench		ZTH3
3/8"sq. Socket (6pt.)		 ZB3-08, 10, 12
3/8"sq. Deep Socket (6pt.)		 ZB3L-08, 10, 12
Flat Screwdriver		ZD1M-100

## ● INSULATED TOOL SET C

3/8" sq.



## INSULATED TOOL SET







No. ZTB310V	▼kg 2.7	📦 1
3/8"sq. Extension Bar		ZBE3-125, 250
3/8"sq. T-Shaped Handle Wrench		ZTH3
3/8"sq. Socket (6pt.)		 ZB3-08, 10, 12
3/8"sq. Deep Socket (6pt.)		 ZB3L-08, 10, 12
Flat Screwdriver		ZD1M-100
Voltage Tester		ZGEV-750

## ● INSULATED TOOL SET D

3/8" sq.



Insulated tool set A~D are sold only as a set. Tools are supplied for those who use the set.

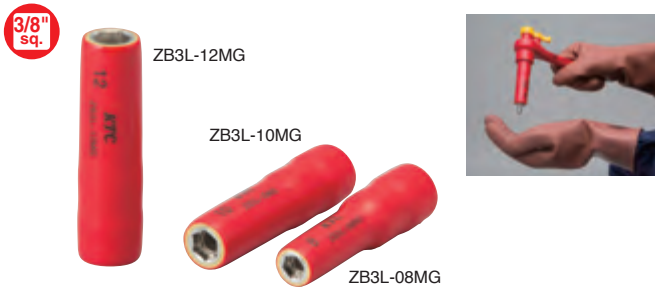
No.	Product Name	
ZB3-08	3/8"sq. Socket 8mm (6pt.)	
ZB3-10	3/8"sq. Socket 10mm (6pt.)	
ZB3-12	3/8"sq. Socket 12mm (6pt.)	
ZB3L-08	3/8"sq. Deep Socket 8mm (6pt.)	
ZB3L-10	3/8"sq. Deep Socket 10mm (6pt.)	
ZB3L-12	3/8"sq. Deep Socket 12mm (6pt.)	
ZBR3	3/8"sq. Ratchet Handle	
ZTH3	3/8"sq. T-Shaped Handle Wrench	
ZBE3-125	3/8"sq. Extension Bar 125mm	
ZBE3-250	3/8"sq. Extension Bar 250mm	
ZD1M-100	Flat Screwdriver	

3/8" sq.



1/4" sq. 3/8" sq.

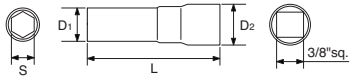
● 3/8"sq. INSULATED MAGNETIC DEEP SOCKET



3/8"sq. INSULATED MAGNETIC DEEP SOCKET

No.	S	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☒
ZB3L-08MG	8	16	22	80	60	1
ZB3L-10MG	10	18	22	85	70	1
ZB3L-12MG	12	21	22	85	90	1

- Prevents the falling of bolt · nut with the built-in magnet in the bore.



**WARNING** • Magnet may break if the product is dropped.

● 3/8"sq. INSULATED TORQUE WRENCH



3/8"sq. INSULATED TORQUE WRENCH

No.	Torque range N·m	Minimum scale	Feed angle	Total length	▼kg	☒
ZGWPA30550	10~50	2.5	11°	370	1.1	1

- It is a pre-set type insulated torque wrench that can be used in combination with insulated tool set (ZTB311, ZTB311V, ZTB310 and ZTB310V).
- It is a product that meets IEC 60900:2004 standards.
- Torque measurement range that's ideal in the maintenance of hybrid vehicles (HV).
- Set torque can be changed simply by pulling and turning the grip end.
- Union mechanism that prevents the dropping of socket.
- Measurement accuracy clears ±8%. (Measurement direction is right-hand thread only)
- Dedicated storage bag included.

**WARNING** • Please do not use this product except for insulated tool set (ZTB311, ZTB311V, ZTB310, ZTB310V).

\* It is not covered for repair.

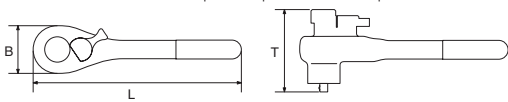
● 1/4"sq. INSULATED RATCHET HANDLE



1/4"sq. INSULATED RATCHET HANDLE

No.	Feed	B	T	L	▼g	☒
ZBR2	10°	40	70	140	300	1

- Union mechanism is adopted to prevent the dropout of the socket.



**WARNING** • Please operate the switching lever on left and right securely since it may be the cause of damage or idling.

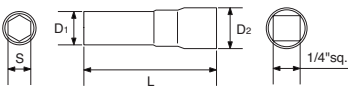
● 1/4"sq. INSULATED DEEP SOCKET



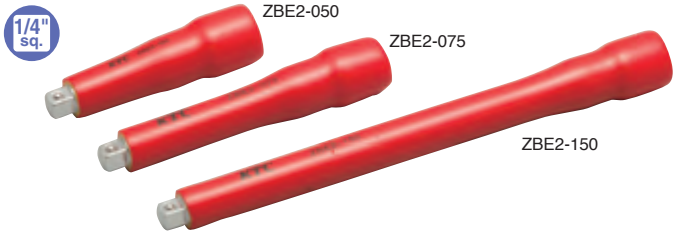
1/4"sq. INSULATED DEEP SOCKET

No.	S	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☒
ZB2L-08	8	17	20	70	40	1
ZB2L-10	10	19	20	70	45	1

- Aperture has the power-fit shape that prevents the concentration of stress and hardly damages the bolt · nut.



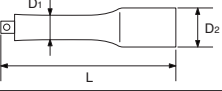
● 1/4"sq. INSULATED EXTENSION BAR



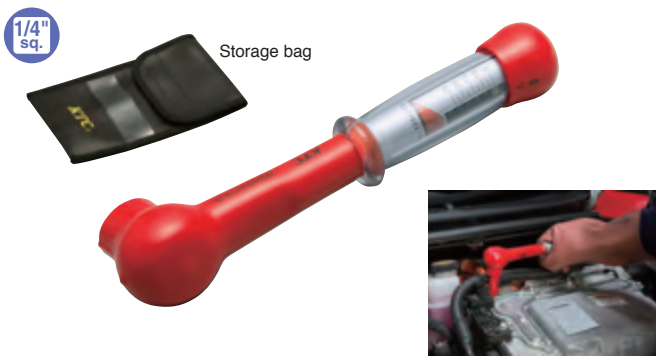
1/4"sq. INSULATED EXTENSION BAR

No.	D <sub>1</sub>	D <sub>2</sub>	L	▼g	☒
ZBE2-050	13	20	70	35	1
ZBE2-075	13	20	90	50	1
ZBE2-150	13	20	170	80	1

- \* Fall prevention screw that prevents the accidental falling of the socket is not adopted.



● 1/4"sq. INSULATED TORQUE WRENCH

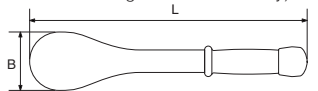


1/4"sq. INSULATED TORQUE WRENCH

No.	Torque range	Minimum scale	Feed	B	L	▼g	☒
ZGWPA20525	5~25N·m	1.25	9°	40	210	390	1

- It is a preset-type insulated torque wrench that can be used in combination with 1/4"sq. insulated tools.
- It is a product that meets IEC60900:2004 standards.
- Torque measurement range that's ideal in the maintenance of hybrid vehicles (HV).
- Set torque can be changed simply by pulling and turning the grip end.
- Measurement accuracy clears ±8%. (Measurement direction is right-hand thread only)
- Dedicated storage bag included.

\* It is not supported for the repair or calibration service.



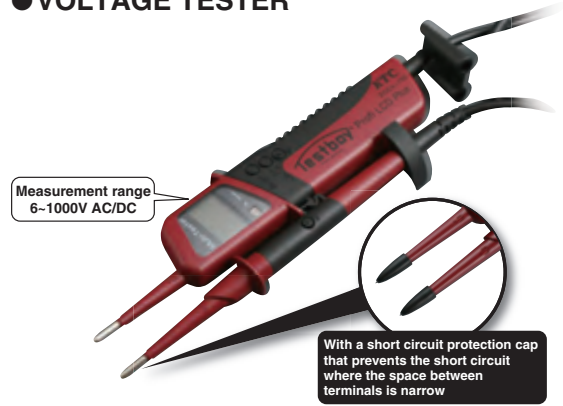
**WARNING** • Please do not use this product except for 1/4"sq. insulated tools.

**VOLTAGE TESTER**

No. ZGEV-750	▼g 200	📦 1
Body Size	W70×D30×H238	
Measurement Range	Voltage 6-1000V AC/DC, 0-400Hz	
	Resistance 0-2000Ω voltage	
	Continuity 0-150Ω (sound signal)	
Power	AAA batteries (1.5V DC) × 2	
Available Temperature Range	-10°C~50°C	

• It is a digital tester with small capacity path for measurement.

● VOLTAGE TESTER



\* It is not covered for repair.



**WARNING**

**Insulated screwdriver types** ⚡1000V

The screwdrivers comply with EN60900 (European Regulation Standardization Committee). This screwdriver withstands up to AC (alternating current) 1000V and DC (direct current) 1500V.

- Disconnect the live wires of the electrical circuit before starting work.
- Insulation is only provided on the grip and the orange-covered section of the shaft.
- Always wear insulated gloves when using this tool.
- Do not use this tool when damage can be seen on the insulation covering or the tool itself.

**INSULATED SCREWDRIVER SET (4pcs.)**

No. PMDEZ4	▼g 270	📦 1
Insulated Screwdriver (Cross)No.1	PDEZ-1	
	No.2 PDEZ-2	
Insulated Screwdriver (Flat) 4×100	MDEZ-4	
	5.5×150 MDEZ-5	



**WARNING**

**Insulated Screwdrivers** ⚡1000V

It complies with EN60900 (European Committee for Standardization Standards). It supports up to AC 1000V and DC 1500V.

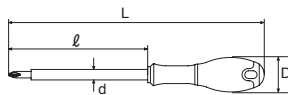
- Please turn off any active line of the electric circuit before work.
- Only the grip and orange cover in the axis part are insulated.
- Insulated gloves must be worn during use.
- Do not use it if damage or the like is seen on the insulation coating or tool body.

● INSULATED SCREWDRIVER SET (4pcs.)



**INSULATED SCREWDRIVER**

No.	Count	d	D	L	ℓ	▼g	📦
PDEZ-1	No.1	7	32	205	100	65	5
PDEZ-2	No.2	8	32	230	125	85	5

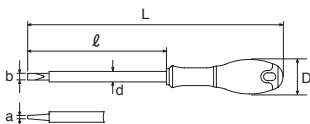


● INSULATED SCREWDRIVER (CROSS) NON-PENETRATING TYPE



**INSULATED SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▼g	📦
MDEZ-4	0.4	4	6	27	202	100	40	5
MDEZ-5	0.9	5.5	7.5	32	255	150	80	5



● INSULATED SCREWDRIVER (FLAT) NON-PENETRATING TYPE



\*Please check the merchandise inventory for a product that is marked by ⚡ before placing an order.

● INSULATED NUT DRIVER

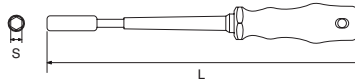
NEW



Tip shape

INSULATED NUT DRIVER

No.	S	L	▼g	☐	
ZND-08	8	225	110	1	



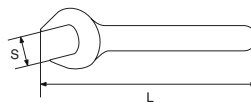
● INSULATED OPEN END WRENCH

NEW



INSULATED OPEN END WRENCH

No.	S	L	▼g	☐	
ZS2-08SE	8	110	25	1	
ZS2-10SE	10	110	30	1	
ZS2-12SE	12	130	60	1	



● INSULATED RESIN NOSE PLIERS

NEW

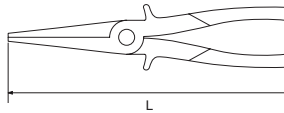


Tip shape

INSULATED RESIN NOSE PLIERS

No.	Material	L	▼g	☐	
ZPSL-220R	Resin	220	145	1	

- Long nose that can be used in narrow, deep spots.
- It can easily remove terminals stuck in place and difficult to remove.
- It is a resin-made that hardly damages the power distribution panel, wiring and the like.



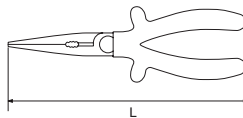
● INSULATED NEEDLE NOSE PLIERS

NEW



INSULATED NEEDLE NOSE PLIERS

No.	L	▼g	☐	
ZPSL-160	160	150	1	



**WARNING** • Only the grip and red cover in the axis part are insulated.

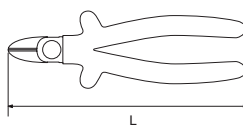
● INSULATED DIAGONAL CUTTING PLIERS

NEW



INSULATED DIAGONAL CUTTING PLIERS

No.	L	▼g	☐	
ZPN1-160	160	210	1	



**WARNING** • Only the grip and red cover in the axis part are insulated.



# POWER TOOLS

## 4. POWER TOOLS

AIR IMPACT WRENCHES  
ELECTRIC IMPACT WRENCHES



# 4. POWER TOOLS

## AIR IMPACT WRENCHES



### WARNING

#### Air Impact Wrenches

- Do not use this machine outside its designated usage.
- Do not use outside the wrench's capability or specifications.
- Do not operate while in an awkward posture.
- Make sure that all operators are wearing safety glasses, earplugs, a hard hat, a dust mask, safety boots, and clothing that comply with the work purpose and environment while working.
- Always use head tools (such as sockets) that are compatible with impact wrenches, and remove the air hose (coupler) before replacing.
- Always make sure the head tools, etc. are securely attached before commencing work.
- Do not touch the drive areas or turning areas of head tools.
- Before use make sure there are no irregularities, such as cracks or irregular operating sounds.
- If there are any abnormalities during use, stop the wrench immediately to inspect, and have the wrench serviced if required.
- Use the specified air pressure.
- Do not use anything other than pressured air to power the machine. Use of high-pressured gas, such as oxygen or propane gas, is prohibited.
- Always attach the air hose (coupler, etc.) securely. The hose will fly off if the air hose becomes loose.
- Always hold the object being worked on securely when using the wrench.
- Do not operate near flammable materials, such as gasoline (petrol) or gas.
- Do not operate the impact wrench in mid-air freely under no-load with the head tool attached as the head tool may fly off.



### CAUTION

#### Air Impact Wrenches

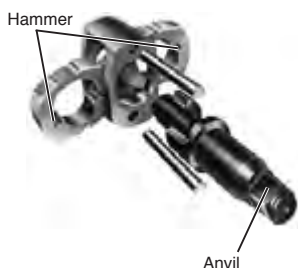
- Handle the machine with care. Do not throw or drop the machine.
- Do not run an impact wrench freely as it may lead to early wear and tear.
- To prevent early wear and tear, do not use the machine continuously on full power for more than a minute.
- Add oil as required through the inlet after each use.
- As the impact wrench cannot control the torque, use a torque wrench to tighten if a specified torque is required.

### Description



#### High power using the twin hammer system

Because the anvil is hit twice per each rotation of the rotor, balanced rotation and stable striking power is achieved. The twin hammer also has high durability, and recoil is low compared to output.



#### Siebel Inlet

Prevents the inlet rotation from twisting the hose.



#### Teasing Throttle

Precise rotation is controlled by the trigger; this allows a smooth operation for loosening and tightening.



#### Air Motor with 7 Vanes

By adding one more vane than existing line and enhanced rotation efficiency.



#### One-Push changeover switch

One-Push changeover switch in one hand.

### 1/2" sq. ● 1/2"sq. IMPACT WRENCH

● It is a standard model with aluminum body that's excellent in cost performance.

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used	▼kg
JAP436	6,800rpm	0.68m <sup>3</sup> /min	NPT1/4"	8mm or more	2.4

• Attachment: Air coupler, air tool oil x1

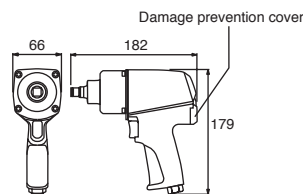
Features ● Single hammer is used that's unified the hammers in twin hammer mechanism, increasing each striking force.

- Teasing throttle which can adjust rotation speed by pulling trigger.
- It comes with a cover that prevents damage to the switch lever.

\* Maximum torque is for left rotation. Torque on the right rotation is 10% less than the left rotation.

\* Both left and right rotations can be adjusted by 2 stages with the regulator.

\* Spare parts are configured. Please contact your dealer for details.

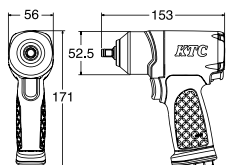


### 3/8" sq. ● 3/8"sq. IMPACT WRENCH (COMPOSITE TYPE)

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used	▼kg
JAP350	11,700rpm	0.481m <sup>3</sup> /min	NPT1/4"	8mm	1.1

• Attachment: 1 Air Coupler (20PM)

Little noise and Low Air Consumption Type for an eco-friendly



- High power and lighter New model of twin hammer.
- High rotational efficiency by new model air motor adopted 7vanes.
- Teasing throttle which can adjust rotation speed by pulling trigger
- Siebel Inlet which prevents the inlet rotation from twisting the hose.
- One-Push changeover switch in one hand.



The regulator and the changeover SW; easy to operate.

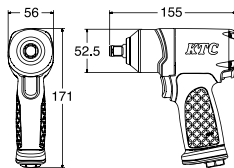


\*Please check the merchandise inventory for a product that is marked by before placing an order.

**1/2" sq. ● 1/2"sq. IMPACT WRENCH (COMPOSITE TYPE)**

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP450	10,000rpm	0.39m <sup>3</sup> /min	NPT1/4"	8mm

• Body of reinforced plastic • Attachment: 1 Air Coupler (NPT1/4)  
By using aluminium hammer case and composite body provides users with weight saving, high mechanical strength and high durability.



- High power and lighter New model of twin hammer.
- High rotational efficiency by new model air motor adopted 7 vanes.
- Teasing throttle which can adjust rotation speed by pulling trigger
- Siebel Inlet which prevents the inlet rotation from twisting the hose.
- One-Push changeover switch in one hand.



The regulator and the changeover SW; easy to operate.

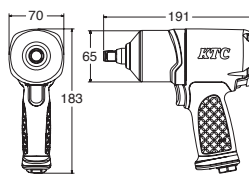
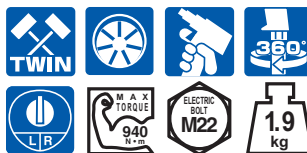
**1/2" sq. ● 1/2"sq. IMPACT WRENCH (COMPOSITE TYPE)**

Overwhelming power of 940N·m that's comparable to 3/4"sq. class  
● Low-noise, low air consumption type that considers the environment.  
● Using aluminum for the hammer case and composite material (special reinforced resin) for the body, weight reduction, high strength and high durability are achieved.

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP460	7,400rpm	0.68m <sup>3</sup> /min	NPT1/4"	11mm or more

- Attachment: Air coupler, air tool oil x 1  
Features
- New model of twin hammer that's simultaneously pursued the weight reduction and power
  - High rotation efficiency with the new air motor that uses 7 vanes
  - Teasing throttle which can adjust rotation speed by pulling trigger
  - 360° swivel inlet that prevents twisting of hose
  - One-Push changeover switch in one hand

\* Maximum torque is for left rotation. Torque on the right rotation is 10% less than the left rotation.  
\* Output adjustment by the regulator cannot be made for the left rotation. Adjustment can be made by pulling the trigger.  
\* Spare parts are configured. Please contact your dealer for details.



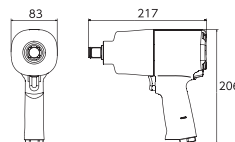
Regulator and switch button with good operability

**3/4" sq. ● 3/4"sq. IMPACT WRENCH (COMPOSITE TYPE)**

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP650A	5,100rpm	1.613m <sup>3</sup> /min	NPT3/8"	11mm or more

- Attachment: Air coupler, air tool oil x 1  
Features
- Twin hammer that's developed for power is adopted.
  - High rotation efficiency with the new air motor that uses 7 vanes.
  - Teasing throttle that can fine-tune the rotation speed by pulling the trigger.
  - 360° swivel inlet that prevents the twisting of air hose.
  - One-push switch button that can easily switch the rotational direction by one hand.
  - High power of 1600N·m max. that's comparable with the inch class.

\* Maximum torque is for left rotation. Torque on the right rotation is 10% less than the left rotation.  
\* Output adjustment by the regulator cannot be made for the left rotation. Adjustment can be made by pulling the trigger.  
\* Spare parts are configured. Please contact your dealer for details.



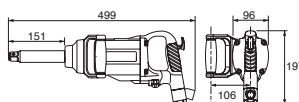
Regulator and switch button with good operability

**3/4" sq. ● 3/4"sq. LIGHTWEIGHT IMPACT WRENCH**

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP675	5000rpm	1.811m <sup>3</sup> /min	PT1/2"	11mm or more

- Attachment: Side handle, air coupler (40PM), air tool oil x 1  
Features
- Recoil to the output is lessened by the adoption of twin-hammer.
  - Regulator function can be adjusted by 3 stages in right and 2 stages in left rotation.
  - Teasing throttle is adopted that can steplessly adjust the rotation speed by trigger.
  - Notch side is minimized on the left-right switch lever, making it resistant to damage from the fall, etc.
  - Side handle uses the band method, allowing it to be fixed at any position in 360° regardless of being left or right-handed.
  - Handle has a nonslip cover.

\* Maximum torque is for left rotation.  
\* Spare parts are configured. Please contact your dealer for details.

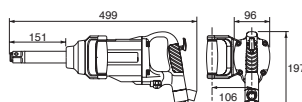


**1" sq. ● 1"sq. LIGHTWEIGHT IMPACT WRENCH**

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP875	5000rpm	1.811m <sup>3</sup> /min	PT1/2"	11mm or more

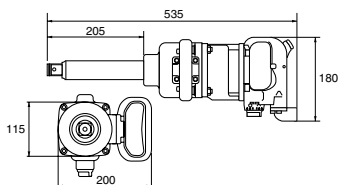
- Attachment: Side handle, air coupler (40PM), air tool oil x 1  
Features
- Recoil to the output is lessened by the adoption of twin-hammer.
  - Regulator function can be adjusted by 3 stages in right and 2 stages in left rotation.
  - Teasing throttle is adopted that can steplessly adjust the rotation speed by trigger.
  - Notch side is minimized on the left-right switch lever, making it resistant to damage from the fall, etc.
  - Side handle uses the band method, allowing it to be fixed at any position in 360° regardless of being left or right-handed.
  - Handle has a nonslip cover.

\* Maximum torque is for left rotation.  
\* Spare parts are configured. Please contact your dealer for details.





Recommended Air Hose  
JAH-110



1" sq.

● **LARGE SIZE 1"sq. "MEGA-IMPACT"**

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP885	5,000rpm	2m <sup>3</sup> /min	PT1/2"	11mm

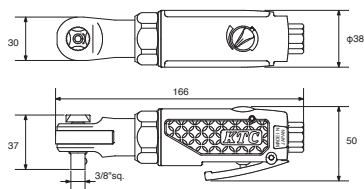
• Attachment: 1 Air Coupler (40PM)

This 1-inch Impact Wrench has the highest torque for its class with an output range up to a maximum torque of 2000N·m.

The tires of large trucks can be easily removed/installed.



\*MEGA-IMPACT is a registered trademark of KYOTO TOOL CO., LTD.



3/8" sq.

● **3/8"sq. COMPOSITE MINI-TYPE MINI-RATCHET**

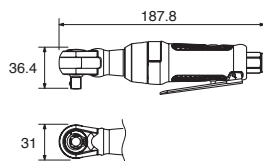
No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR331	250rpm	0.32m <sup>3</sup> /min	PT1/4"	8mm or more

• Attachment: Air coupler, air tool oil x1

Usage ● Used for the quick turning of bolt-nut.

- Features ● Weight reduction of the body is achieved by the full-composite housing.
- Easy-to-carry compact size with short total length.
  - High power of 35N·m practical torque (maximum torque in left rotation is 40N·m).
  - Regulator mechanism that can fine-tune the rotation speed is equipped.
  - Rotation can be fine-tuned by pulling the throttle lever.
  - Durability of ratchet part is improved with the twin-endurance mechanism (more than 2x our conventional product).

\* Spare parts are configured. Please contact your dealer for details.



3/8" sq.

● **3/8"sq. MINI-TYPE MINI-RATCHET**

No.	No. of rotations (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR352	250rpm	0.09m <sup>3</sup> /min	NPT1/4"	8mm

• Attachment: Air coupler (20PM) x1

Features ● Lightweight and compact standard air ratchet.

- Teasing throttle lever that can fine-tune the rotation with the throttle lever.

\* Spare parts are configured. Please contact your dealer for details.

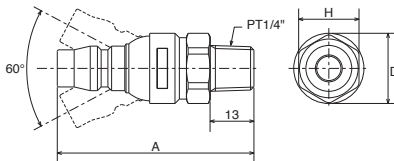


● SWIVEL AIR CONNECTOR

No.	Screw size	A	D	H	▼g
JYP-2F	PT1/4"	58	19.5	19	50

Features ● Plug on the tip can smoothly tilt at 30° in every direction.  
 ● Fatigue of wrist and burden to arm and shoulder are reduced by lessening the tracking of hose during operation.

Material of main body	Steel+Resin
Maximum working pressure	1.0MPa
Withstanding pressure	2.0MPa
Seal material	Nitrile rubber
Operating temperature range	-20°C~+60°C

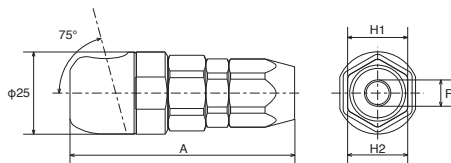


● BALL VALVE AIR COUPLER

No.	Hose size	A	F	H1	H2	▼g
JYDC-1	8.5x12.5	68	6.5	19	19	134

Features ● Reduces the pressure loss due to ball valve mechanism and improves the performance of air tools.  
 ● While having a simple design, pressure-free connection, process residual function and automatic plug fall prevention are equipped.

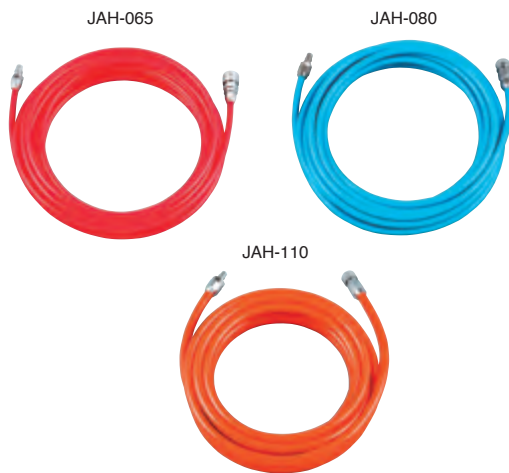
Material of main body	Steel
Maximum working pressure	1.5MPa
Withstanding pressure	2.0MPa
Seal material	Nitrile rubber
Operating temperature range	-20°C~+60°C



● AIR HOSE

No.	Inner diameter	Outer diameter	Hose Color	Hose diameter	Hose plug	Hose socket
JAH-065	ø6.5mm	ø10mm	10m Red	Polyurethane	ø10.1x43.5	ø10.1x53.4
JAH-080	ø8.0mm	ø12mm	10m Blue	Polyurethane	ø12.5x46	ø12.5x55.9
JAH-110	ø11mm	ø16mm	10m Orange	Polyurethane	ø16.5x52	ø16.5x61

• Hose sockets and hose plugs are both manufactured by Nitto Koki.  
 • Attached with 30PM plug and 30SM socket.  
 • The color of the hose is orange (distinguishable).



● AIL TOOL OIL

No.	Net	Container Size	☞
YCO -280	280ml	ø50mmxH210	1

• Oil made especially for air tools.  
 • Suitable for air tools with high RPM.



# 4. POWER TOOLS

# ELECTRIC IMPACT WRENCHES



### WARNING

#### Electric Impact Wrench

- Do not use this machine outside its designated usage.
- Do not use outside the wrench's capability or specifications.
- Do not operate while in an awkward posture.
- Make sure that all operators are wearing safety glasses, earplugs, a hard hat, a dust mask, safety boots, and clothing that comply with the work purpose and environment when working.
- Always use head tools (such as sockets) that are compatible with impact wrenches and make sure that the trigger switch is released before replacement.
- Always make sure the head tools, etc. are securely attached before commencing work.
- Do not touch the drive areas or turning areas of head tools.

- Before use make sure there are no irregularities, such as cracks or irregular operating sounds.
- If there are any abnormalities during use, stop the wrench immediately to inspect, and have the wrench serviced if required.
- Always hold the object being worked on securely when using the wrench.
- Do not operate near flammable materials, such as gasoline (petrol) or gas.
- Do not operate the impact wrench in mid-air freely under no-load with the head tool attached as the head tool may fly off.
- Use a domestic 100V power point to recharge. Avoid usage under direct sunlight or rainfall, and outside 10°C~40°C.
- Do not recharge any batteries, other than ones specified for impact wrenches.
- Do not touch the recharger or battery pack with wet hands.
- Do not throw the battery pack into a fire.



### CAUTION

#### Electric Impact Wrench

- Handle the machine with care. Do not throw or drop the machine.
- Do not run an impact wrench freely as it may lead to early wear and tear.
- To prevent early wear and tear, do not use the machine continuously on full power for more than a minute.

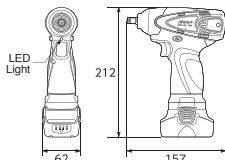
- As the impact wrench cannot control the torque, use a torque wrench to tighten if a specific torque is required.
- Do not short circuit the battery pack terminal.
- Always dispose of battery packs in compliance with local government regulations.

1/4" sq.

## 1/4" CORDLESS IMPACT SCREWDRIVER SET



Lithium ion Battery adopted



\* Battery and charger are not supported for repair.

No. JTAE115

1

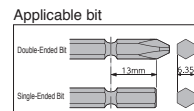
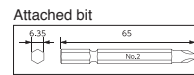
Method	Cordless Rechargeable Electric Impact Driver
Input Voltage	14.4V DC
Practical Torque	110N·m (at 20°C full-charged condition)
No. of Rotations (Unloaded)	0~2,500rpm
Anvil	1/4"
Weight	1.1Kg (Body: 780g / battery pack: 320g)

Special resin case (W350xD285xH90), battery (2pcs.), charger, No.2 cross bit (4pcs.) included

- \* Practical torque is a reference value. Numeric value varies depending on the use environment.
- Compact and lightweight with the compact lithium ion battery.
- Capable of irradiating the target with LED.
- Rapid 40-minute charging. \* Charge time depends on the battery condition and charging environment.



Use a product with the specifications on the right for the cordless impact driver.



### CAUTION

Attached bit is considered as a consumable. Since the bit is configured as a spare part (open price), confirm the price and the like at a KTC dealer.

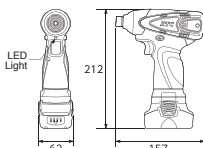
\* Charger is configured as a spare part. Please contact your dealer for details.

3/8" sq.

## 3/8"sq. CORDLESS IMPACT WRENCH SET



Lithium ion Battery adopted



\* Battery and charger are not supported for repair.

No. JTAE315

1

Method	Cordless Rechargeable Electric Impact Wrench
Input Voltage	14.4V DC
Practical Torque	110N·m (at 20°C full-charged condition)
No. of Rotations (Unloaded)	0~2,500rpm
Square	3/8"sq.
Weight	1.1Kg (Body: 780g / battery pack: 320g)

Special resin case (W350xD285xH90), battery (2pcs.) and charger included

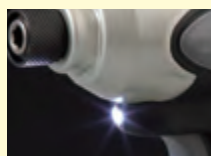
- \* Practical torque is a reference value. Numeric value varies depending on the use environment.
- Compact and lightweight with the compact lithium ion battery.
- Capable of irradiating the target with LED.
- Rapid 40-minute charging. \* Charge time depends on the battery condition and charging environment.

\* Charger is configured as a spare part. Please contact your dealer for details.

### Cordless Impact Driver/Wrench Common Specifications



Compact and lightweight with the compact lithium ion battery.



Work objects are illuminated with the equipped LED light.



Battery indicator that clearly shows the remaining level and 2 safe batteries are included.



Rapid 40-minute charging. \* Charge time depends on the battery condition and charging environment.

● CARBON BRUSH SET FOR REPLACEMENT

**CAUTION** Please simultaneously replace both the left and right for the replacement of carbon brush

No.	Product Name	☒	
JAE101-B	Carbon Brush Set for Replacement	1	

\* It is a common part for 1/4" cordless impact driver set (No.JTAE115) and 3/8"sq. cordless impact wrench set (No.JTAE315).



● BATTERY PACK

No.	Product Name	Capacity	▼g	☒	
JBE14415G	Battery Pack	1.5Ah	320	1	

\* It is a common part for 1/4" cordless impact driver set (No.JTAE115) and 3/8"sq. cordless impact wrench set (No.JTAE315).



**1/4" sq.** Cross Bit for Electric Impact Screwdriver

No.	Size	S1	L	Chuck length: ℓ	▼g	☒	
JP-1-50	No.1	1/4"	50	13	14	1	
JP-1-100	No.1	1/4"	100	13	27	1	
JP-2-50	No.2	1/4"	50	13	14	1	
JP-2-100	No.2	1/4"	100	13	27	1	
JP-3-50	No.3	1/4"	50	13	14	1	
JP-3-100	No.3	1/4"	100	13	27	1	

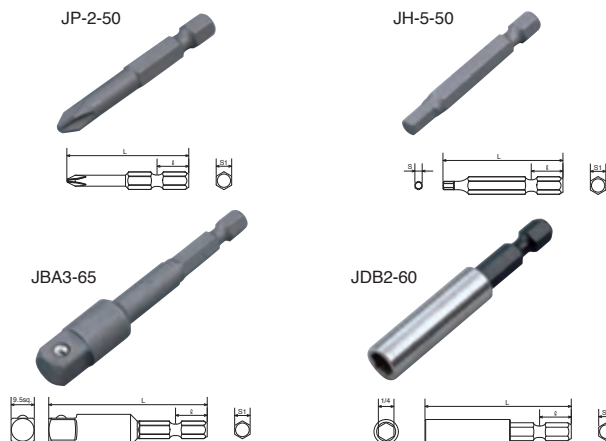
Hex. Bit for Electric Impact Screwdriver

No.	S	S1	L	Chuck length: ℓ	▼g	☒	
JH-3-50	3	1/4"	50	13	14	1	
JH-3-100	3	1/4"	100	13	27	1	
JH-4-50	4	1/4"	50	13	14	1	
JH-4-100	4	1/4"	100	13	27	1	
JH-5-50	5	1/4"	50	13	14	1	
JH-5-100	5	1/4"	100	13	27	1	
JH-6-50	6	1/4"	50	13	14	1	
JH-6-100	6	1/4"	100	13	27	1	

Bit Holder for Electric Impact Screwdriver

No.	Size	S1	L	Chuck length: ℓ	▼g	☒	
JDB2-60	1/4"	1/4"	60	13	38	1	

● BIT FOR ELECTRIC IMPACT SCREWDRIVER



Adapter for Electric Impact Screwdriver

No.	Square	S1	L	Chuck length: ℓ	▼g	☒	
JBA3-65	3/8"sq.	1/4"	65	13	20	1	

**1/2" sq.** ● 1/2"sq. WHEEL NUT DEDICATED CORDLESS TORQUE LIMIT IMPACT WRENCH SET

No. JTAE471	☒ 1
Method	Cordless Rechargeable Electric Impact Wrench
Square	1/2"sq.
Input Voltage	18V DC
Maximum Torque	At Full-power Mode 500N·m (at left and right rotation) * At Temporary Tightening Mode Approx. 15% at full-power mode (right rotation only)
No. of Rotations (Unloaded)	0~1,800rpm
Electric Bolt	Automobile Wheel Nut M10~M14
Workload per Charge (Approximate)	Number of automobile wheel nut loosening: 360 *
Weight	5.1kg (Body: 2.2kg / battery pack: 720g)

Wheel Nut Removal Recommended Tip Tool: Socket for KTC Impact Wrench

\* Maximum torque and workload per charge are reference values, which vary according to the use condition.

Usage ● Loosening and temporary tightening of wheel nuts in automobile.

● Loosening and tightening of bolt-nut.

Features ● Prevents the over-tightening by the adoption of temporary tightening mode that's idea the temporary tightening of wheel nuts.

(Forward rotation: right rotation only)

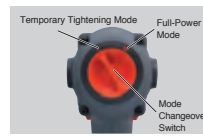
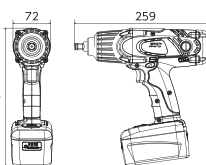
● Temporary tightening mode and full-power mode can be switched. (Forward rotation: 266 right rotation only)

● Additional charging is made possible by the adoption of lithium ion battery.

● With a carrying case that's convenient in storage and carrying.

Torque limit mechanism  
Temporary tightening mode adopted

Lithium ion Battery adopted



Temporary tightening mode and full-power mode can be switched with the mode switch. (Forward rotation: right rotation only)



Battery indicator that shows the remaining level at a glance.

**CAUTION** For the wheel nut that's been tightened using the temporary tightening mode, be sure to use a torque wrench to tighten to the specified torque.

**1/2" sq.** ● 1/2"sq. WHEEL NUT DEDICATED CORDLESS TORQUE LIMIT IMPACT WRENCH (BODY)

No. JAE407	☒ 1
------------	-----

Body only. Battery etc. are not attached.

• If you have a battery pack (No.JBE18030) for KTC 1/2"sq. Cordless Impact Wrench Set (No. JTAE424) and a charger, they can be used in conjunction with this body.

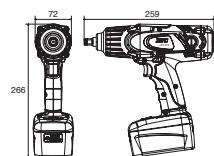


● SPECIAL BATTERY CHARGER FOR LITHIUM ION BATTERY

No.	Product Name	▼g	☒	
JHE180S	Special Battery Charger for Lithium Ion Battery	520	1	

\* Battery and charger are not supported for repair.

Lithium ion Battery adopted



\* Battery and charger are not supported for repair.

1/2" sq.

● 1/2"sq. WHEEL NUT CORDLESS IMPACT WRENCH SET

No. JTAE424	1
Method	Cordless Rechargeable Electric Impact Wrench
Square Drive	12.7sq.
Input Voltage	18V DC
Maximum Torque	500N·m*
No. of Rotations (Unloaded)	0~1,800rpm
Electric Bolt	Automobile Wheel Nut M10~M14
Workload per Charge (Approximate)	Number of automobile wheel nut loosening: 360 *
Mass	5.1kg (Body: 2.2kg / battery pack: 720g)

Wheel Nut Removal Recommended Tip Tool: Socket for KTC Impact Wrench

\* Maximum torque and workload per charge are reference values, which vary according to the use condition.

\* Charger is configured as a spare part. Please contact your dealer for details.

● JTAE471/424 COMMON SUPPLY PARTS

Battery Pack

No.	Product Name	Capacity	▼g	☑	
JBE18030	Battery Pack	3Ah	720	1	

Carbon Brush Set for Replacement

No.	Product Name	Set Contents	☑	
JAE402-B	Spare Carbon Brush Set	Carbon Brush x2 Carbon Brush Nut x2	1	

(Please simultaneously replace both the left and right for the replacement of carbon brush)

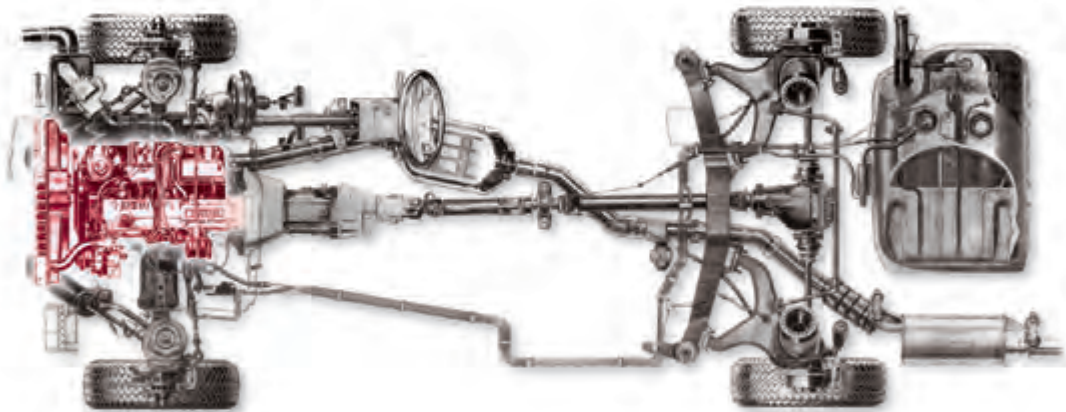




# 5. AUTOMOTIVE SPECIAL TOOLS

ENGINE	
DRIVELINE SYSTEM	
STEERING SYSTEM	
SUSPENSION SYSTEM	
TIRE & WHEEL	
BRAKE SYSTEM	
ELECTRIC SYSTEM	
BODY	

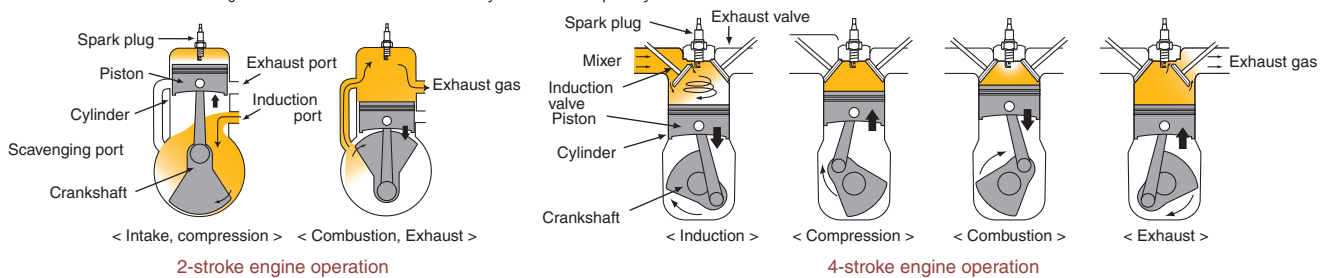
# Mechanism of Engine



### MECHANISM 1

## Combustion setup

Most vehicles nowadays use gasoline engines. However, depending on the combustion type, gasoline engines are divided into "2-stroke" and "4-stroke" categories. Gasoline is burned in the cylinder to create heat energy. Heat energy is then turned into kinetic energy as it is transferred from piston to crankshaft. One engine movement can be divided into 4 steps - induction, compression, combustion, and exhaust. 2-stroke engines only have a two-step up/down piston movement ("Induction and Compression" step and "Combustion and Exhaust" step). 4-stroke engines have four piston movements as previously mentioned. With the same displacement, a 2-stroke has a larger output than a 4-stroke. However, most cars use a 4-stroke engine due to the increased fuel economy and exhaust capability.



### MECHANISM 2

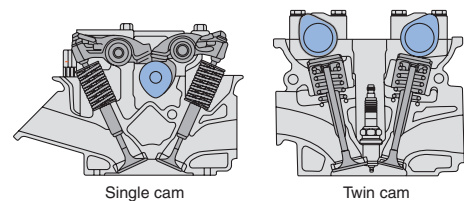
## Engine Makeup

When viewed externally from top to bottom, the engine is divided into an upper cylinder head, a cylinder block, and an oil pan. Many cylinder heads and cylinder blocks are made from cast iron or aluminum alloy. A gasket is placed between the two and they are locked together. This head gasket increases air tightness, and prevents gas, and oil & coolant leaks, as it is a sheet type of packing. The cylinder head is made up of a combustion chamber together with pistons and an intake/exhaust valve & camshaft is built in. A water jacket is provided to circulate coolant around the combustion chamber. In addition, the cylinder block is the main part and houses the pistons. The lower part is made up of a shaft bearing area that holds the crankshaft.

### MECHANISM 3

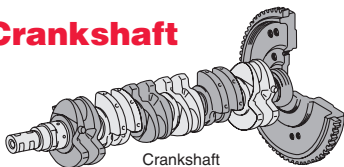
## Valve System

The system that drives the engine intake/exhaust can be a single cam (SOHC) driving the valve with a cam shaft, or a twin cam (DOHC) that separately drives the induction and exhaust valves with two cam shafts. Timing adjustments can be carried out easily to the camshaft as it is of a singular design. However, the operation of the parts situated midway along the shaft is sluggish. Although smooth, high-speed RPM is possible by using just one twin cam for the two camshafts, the structure is complicated and adjustments are difficult.



### MECHANISM 4

## Crankshaft

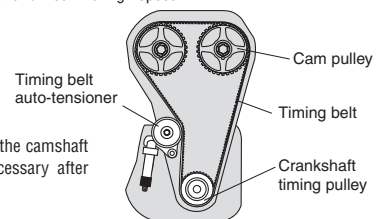


The crankshaft is a component that allows the pistons up/down movements inside the cylinder into a rotary motion, and is built into the lower part of the cylinder block. The crankshaft consists of a crank journal that is on the crankshaft's main axle, a crank pin that connects the piston's connecting rod (con-rod) and a crank arm that connects the crank pin and the crank journal. The crankshaft has been made out of special steel and cast iron for wear resistance, sturdiness and strength, so that large amounts of power can be transferred from the pistons and turned into high speed RPM.

### MECHANISM 5

## Timing belt

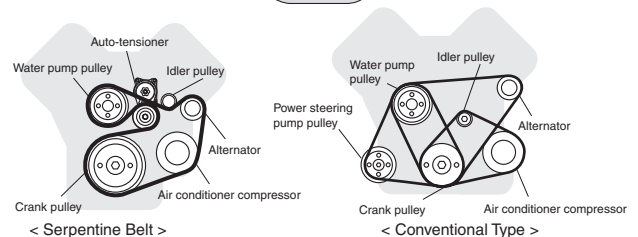
The role of the timing belt (a device with a chain instead of a belt is called a "timing chain") is to transfer power to the camshaft through the cam pulley for valve open/close operation. If the belt system is being used, replacement is necessary after approximately one hundred thousand kilometers.



### MECHANISM 6

## Role of the Belt and Auto-tensioner

On the exterior of the crankshaft timing pulley there is another belt that transfers crankshaft power to the alternator (generator), the air conditioner's condenser, and to the water pump that sends coolant around the engine. Conventionally, a number of belts were used. However, nowadays it has become mainstream to have a single Serpentine Belt driving all the devices at once. An auto-tensioner is installed to adjust the tension of this belt.



# Changing Engine Oil

ENGINE

●SCREWDRIVER ●T-SHAPED WRENCH ●SOCKET ●CLIP CLAMP TOOL

Remove the undercover **1**

●OFFSET WRENCH ●OTHER TOOLS

Remove the drain plug **2**

## Change the oil easily and effectively with a **KTC** oil drainer.

### Use a tray to catch the waste oil.

- Use a large wide hat type funnel to catch the waste oil.
- Use a funnel with an attached net to prevent debris such as drain plug from falling into the tank.
- Remove the wide hat for use in hard to reach areas.
- Offsetting is possible from the unit and the pipe making work easy. (\*This pack (Orirukun) is not included)

### Air pressure for easy discharge of used oil.

- Discharge is possible without a complex operation.
- Discharged hose can be stored when it is not being used.

### A large tank with a level gauge attached.

- The tank's free capacity can be seen and calculated.
- Large amounts of oil can be stored safely in large capacity tanks.

### Moveable parts tray

- Convenient for temporarily storing tools, i.e. draining plug, etc. Size: 95 x 150 x 45

### Pipe handles allow for easy movement.

- Large castors provide easy movement and stability.
- Curbs and steps pose no problems. (2 front wheels)

### The castor wheels are equipped with a double brake mechanism that prevents both travel and swivel.

- The machine can be held steady during operation. (1 rear wheel and both front wheels of the machine (Oriru-kun))

### Oil drainer



Discharge hose



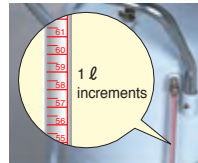
Parts tray



Handle

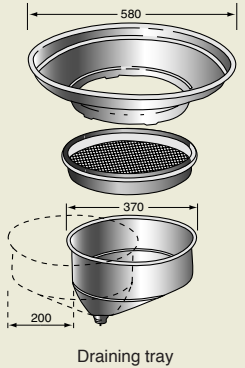


Castors



Level gauge

Drain the oil **3**



Draining tray

### 3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH

No.	S	D	L	ℓ	▼g	☞
AE503-10	10	18	38	8	50	5



- 38mm length body enable to operate in a narrow space.
- Can be used for hexagon socket head type of TOYOTA and NISSAN.
- Less oscillation and stable operation.

### ●3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH



### OIL DRAINER

No.	Draining Tray		Castor's Diameter		Air Coupler Draining for Input	Draining Hose	Draining by Air Pressure	▼kg
	Full Capacity	Wide Pad	Front (fixed)	Rear (moving)				
GOD80B	12 ℓ	●	φ 150	φ 80	20PM by Nitto Koki	φ 19 2m	●	32

- Draining Tray Size: Large Diameter 580 (Small Diameter 370) x Height 300mm

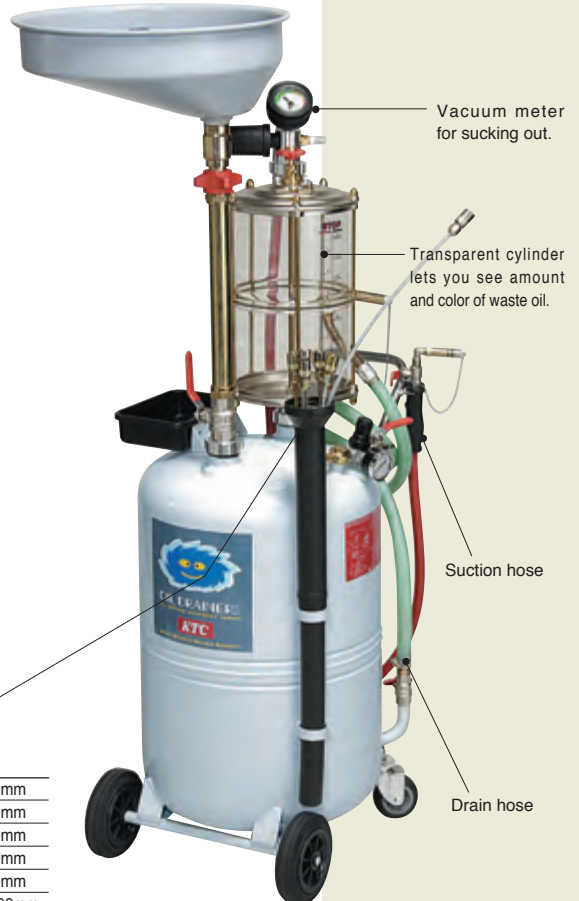
\*Comes in packs of 3

\*Replacement parts are available. Check with your dealer for details.

\*Only use engine oil. Do not use any other type of oil.

**Tank 80 ℓ**

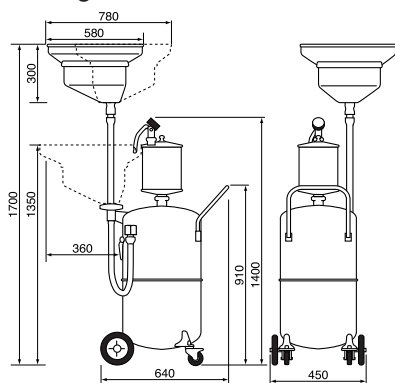
### ●OIL DRAINER



### Multi-functional

The transparent cylinder shows the state of draining clearly.

Talk to customers while checking the waste oil.



### Suction Adaptor

Suction Adaptor A	For Volkswagen
Suction Adaptor B	For BMW

### Suction nozzle (detachable)

Flexible suction nozzle	Made of resin	Outer diameter φ 5×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 8×700mm
Metal suction nozzle	Copper ore	Outer diameter φ 5×700mm
Metal suction nozzle	Copper ore	Outer diameter φ 6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 7×1,000mm

### 3 Drain the oil

#### ● OIL DRAINER [STANDARD TYPE]



#### OIL DRAINER

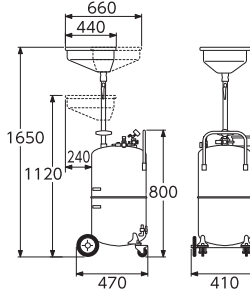
No.	Waste oil tray total capacity	Caster diameter		Input air coupler	Drain hose	Air pressurized oil discharged	▼kg
		Forward (fixed)	Backward (free)				
GOD80E	12 ℓ	φ150	φ80	Nitto Kohki 20PM	φ19 2m	●	29

• Waste oil tray size: 440 diameter × 160mm height  
 \* Spare parts are configured. Please contact your dealer for details.  
 \* Do not use it for oils and fats other than engine oil.

**Tank 80 ℓ**

**Standard Type** Budget model that supports upward and downward draining

Suppressing the overall height, it is safe even in lifting up 1Box type. Space-saving storage with the adoption of straight handle.



#### Suction Adapter

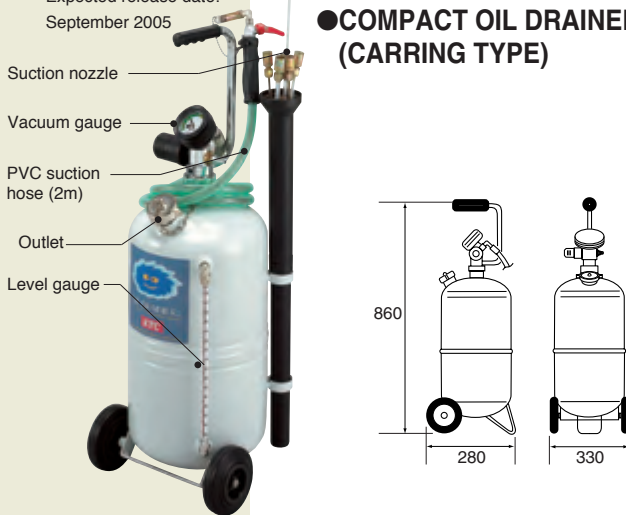
<b>Suction Adapter A</b>	For Volkswagen
<b>Suction Adapter B</b>	For BMW

#### Suction Nozzle (for Draining)

Suction Nozzle	Material	Outside diameter
Flexible Suction Nozzle	Resin	φ5×700mm
Flexible Suction Nozzle	Resin	φ6×700mm
Flexible Suction Nozzle	Resin	φ8×700mm
Flexible Suction Nozzle	Resin	φ7×1,000mm
Metal Suction Nozzle	Copper alloy	φ5×700mm
Metal Suction Nozzle	Copper alloy	φ6×700mm

Expected release date:  
September 2005

#### ● COMPACT OIL DRAINER (CARRING TYPE)



#### OIL DRAINER

No.	Tank		Castor's Diameter Fixed	Air Coupler Draining for Input	Induction Hose	Oil Discharge Methods	▼kg
	Full Capacity	Available Capacity					
GOD24B	24 ℓ	20 ℓ	φ 125	20PM by Nitto Koki	φ 19 2m	manual	13.7

\*Only use engine oil. Do not use any other type of oil.

\*Replacement parts are available. Check with your dealer for details.

**Tank 24 ℓ**

**Movable model**

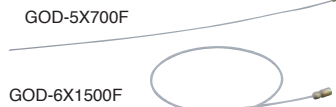
Small, movable, lift-out type.

Convenient for providing outside services

#### Suction nozzle (detachable)

Suction nozzle	Material	Outer diameter
Flexible suction nozzle	Made of resin	φ 5×700mm
Flexible suction nozzle	Made of resin	φ 6×700mm
Flexible suction nozzle	Made of resin	φ 8×700mm
Metal suction nozzle	Copper ore	φ 5×700mm
Metal suction nozzle	Copper ore	φ 6×700mm
Flexible suction nozzle	Made of resin	φ 7×1,000mm

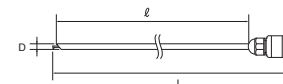
#### ● FLEXIBLE SUCTION NOZZLE FOR OIL DRAINER (GOD24B · GOD80B · GOD80E)



#### NYLON SUCTION TUBE (for GOD24B/GOD80B/GOD80E)

No.	D	L	ℓ	Nozzle Material
GOD-5X700F	5	750	700	Nylon (Reinforced with Metal Core)
GOD-6X700F	6	750	700	
GOD-6X1500F	6	1,550	1,500	
GOD-7X1000F	7	1,050	1,000	
GOD-8X700F	8	750	700	

• GOD-6X1500F has a convenient length for 1BOX cars and the like.

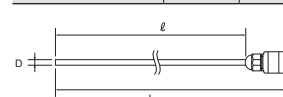


#### ● METAL SUCTION NOZZLE FOR OIL DRAINER (GOD24B · GOD80B · GOD80E)

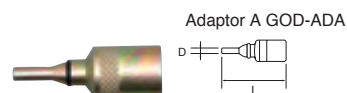


#### BRASS SUCTION TUBE (for GOD24B/GOD80B/GOD80E)

No.	D	L	ℓ	Nozzle Material
GOD-5X700M	5	750	700	Brass
GOD-6X700M	6	750	700	



#### ● SUCTION ADAPTOR FOR OIL DRAINER (GOD24B · GOD80B · GOD80E)



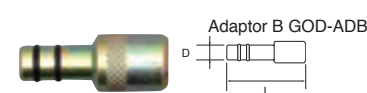
#### SUCTION ADAPTOR (for GOD24B/GOD80B/GOD80E)

No.	D	L
GOD-ADA	5	57
GOD-ADB	13	52

• Adaptor is for mounting on the oil level gauge without the use of nozzle.

GOD-ADA: For Volkswagen

GOD-ADB: For BMW

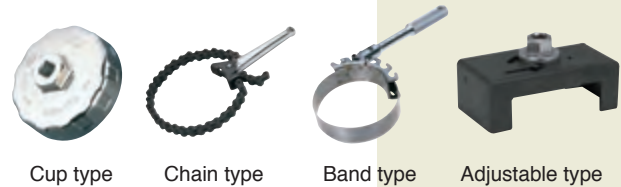


## 4 Remove and replace the oil filter



### KTC Oil Filter Wrench Series

There are four KTC wrenches available to deal with the various types of oil filters - cup type, chain type, band type and adjustable type. In particular, there are 31 sizes in total for the cup size - 12 sizes for domestic cars, 13 sizes for imported cars and 6 sizes for larger vehicles.



### ● Characteristics of KTC Oil Filter Wrenches

#### ● A low height, easy fit, non-slip large design

A design that is restricted in height, easy to operate, and has a large area for the oil filter wrench and the oil filter to work in (depth of the fitting area).

#### ● Improved operation!

With its gripped outer shape, slippage when fitting the oil filter by hand is reduced.

#### ● The aluminum tool weighs only 60% of conventional steel products.

Through aluminum die-casting, the wrench has been molded into a single entity\* to weigh just 60% of conventional steel products.

\*With a large diameter, an insert manufacturing method is employed that has applied steel onto the driving angles (Structural steel).

#### ● Drive tool choice

Depending on the working requirement, an inserting type or a hexagonal type is available. (For domestic and imported vehicles: Use the driver 3/8"sq. hexagonal 2-faced width 24mm) (For larger diameters: Use the 1/2"sq. hexagonal 2-faced width 27mm)

### CUP TYPE OIL FILTER WRENCH SET

#### Cup type oil filter wrench set (12 sets)

No. AVSA12A	▼kg 4.1
Oil filter wrench	AVSA-063, 064, 067, 073, 074, 079, 080, 089, 092, 095, 099, 101
Metal case (390×245×75)	

#### Cup type oil filter wrench set (8 sets)

No. AVSA08A	▼kg 3.7
Oil filter wrench	AVSA-064, 067, 073, 079, 080, 095, 099, 101
Metal case (390×245×75)	



### ●CUP TYPE OIL FILTER WRENCH SET D.PAT.



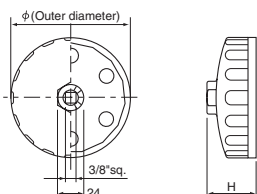
AVSA08A



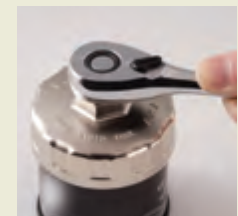
AVSA12A

### Japanese cars CUP TYPE OIL FILTER CARTRIDGE WRENCH

No.	Interior measurement	φ (Outer diameter)	H	Shape	▼g	⊞
AVSA-063	63	72	35	14 Sides	80	10
-064	64	72	35	14 Sides	80	10
-067	66.5	74	35	14 Sides	80	10
-073	72.5	80	35	14 Sides	90	10
-074	74	82	35	15 Sides	90	10
-079	79	86	40	15 Sides	100	10
-080	79.5	86	40	15 Sides	110	10
-089	89	96	40	15 Sides	120	10
-092	92	99	40	15 Sides	130	10
-095	94.5	102	45	15 Sides	140	10
-099	99	106	45	15 Sides	140	10
-101	100.5	108	45	15 Sides	150	10



### ●CUP TYPE OIL FILTER WRENCH D.PAT.



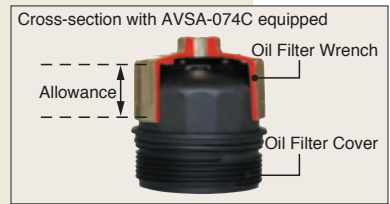
4 Remove and replace the oil filter

**●CUP TYPE OIL FILTER WRENCH DESIGNED FOR AMERICAN & EUROPEAN CARS D.PAT.**



3/8" sq.

● **Designed to grip tightly even when the filter has been expanded by heat.**  
To deal with an oil filter cover made of resin that is heat expanded, the AVSA-074C and 087 version grips the whole length of the filter unlike conventional types. This wrench has been designed to hold the filter tightly even when the filter is heat expanded.

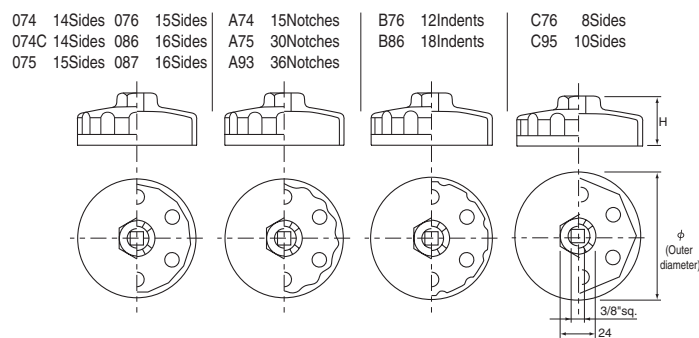


Wax paper replacement type for the replacement of the Volvo oil filter cap

**CUP TYPE OIL FILTER CARTRIDGE WRENCH For American & European cars**

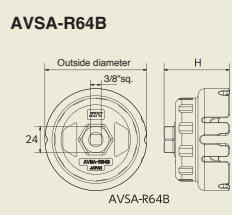
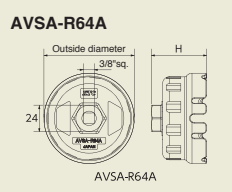
No.	Size dimensions	φ (Outer diameter)	H	Shape	▽g	☐
AVSA-074	74	82	35	14 Sides	90	10
-074C	74C	82.5	50.5	14 Sides	100	10
-075	75	81	35	15 Sides	90	10
-076	76	82	35	15 Sides	90	10
-086	86	95	46.5	16 Sides	120	10
-087	87	96	68	16 Sides	210	10
-A74	A74	81	35	15 Notches	90	10
-A75	A75	82	35	30 Notches	90	10
-A93	A93	100	40	36 Notches	140	10
-B76	B76	83	35	12 Indents	90	10
-B86	B86	93	40	18 Indents	120	10
-C76	C76	86	35	8 Sides	90	10
-C95	C95	103	40	10 Sides	120	10

● A wrench for removing/installing oil filters in imported cars.



**●OIL FILTER WRENCH FOR FILTER PAPER**

3/8" sq.



**For Filter Paper Replacement OIL FILTER WRENCH FOR FILTER PAPER**

No.	Inside diameter	φ (outside diameter)	H	▽g	☐
AVSA-R64A	71	81	50	410	1
AVSA-R64B	81	91	59	540	1

Usage ● For the attachment and removal of the filter paper replacement type.  
Application ● Aluminum/resin filter paper replacement type oil filter cup that's used for Toyota, etc.  
\* Example: Prius · VOXY · Vitz, etc.  
Features ● It is a dedicated tool for the attachment and removal of the aluminum/resin filter paper replacement type oil filter cup that's used for Toyota, etc.  
● Since it drives with the protrusion (rib) of the filter cap, biting and slipping can be prevented.  
● Main Application Small (AVSA-R64A): Prius · VOXY · Vitz, etc., Large (AVSA-R64B): Mark X, Crown, Hiace, etc.



Supports the aluminum/resin filter paper replacement type oil filter cup that's used for Toyota, etc.

**CAUTION** \* Do not use it for cartridge type oil filters.  
\* This product is for manual use. Do not use power tools such as impact wrench.

**●Correspondence Table of Oil Filter Wrench for Filter Paper**

●AVSA-R64A

	Car Name	Model Year	Engine Type
ALUMINIUM (Small) Item Number: 15620-40030	bB	2006 to 2014	K3VE 3S2VE
	COO (Daihatsu)	2006 to 2014	
	DEX (Subaru)	2008 to 2014	
	IQ	2008 to 2014	1KR 1NR
	VITZ	2005 to 2014	
	PASSO/BOON (Daihatsu)	2004 to 2014	1KR 1NR K3VE 3S2VE
	PASSO SETTE	2008	
	RACTIS	2010 to 2014	1NR (1.3L)
	TREZIA		
	PORTE		
SPADE	2012 to 2014	1KR	
COROLLA AXIO	2005 to 2012		
BELTA			
PLASTIC (Small) Item Number: 15620-37010	IST	2007 to 2010	2ZR(1.8L)
	COROLLA AXIO / FIELDER	2006 to 2014	
	RUMION	2007 to 2014	
	WISH	2009 to 2014	
	AURIS	2008 to 2014	
	PRIUS	2005 to 2014	
	PRIUSa/MEBIUS (Daihatsu)	2011 to 2014	
	CT200H	2010 to 2014	
	PREMIO	2007 to 2014	
	ALLION	2011 to 2014	
	ISIS		
	AVENSIS		
	NOAH	2009 to 2014	3ZR
VOXY	2007 to 2014		

●AVSA-R64B

	Car Name	Model Year	Engine Type
ALUMINIUM (Large) Item Number: 15620-31050	IS250 / 350	2005 to 2014	4GR 2GR
	MARK X	2004 to 2014	4GR
	MAJESTA	2003 to 2008	3GR 4GR
	CROWN	2008 to 2014	
	CROWN COMFORT	2007 to 2014	1TR
	GS430/ 350	2005 to 2012	3UZ 2GR
	GS250 / 350 / 450h	2012 to 2014	4GR 2GR
	HILUX SURF	2004 to 2005	2TR
	LAND CRUISER PRADO	2004 to 2014	
	HIACE	2004 to 2014	1TR 2TR
	REGIUSACE		
	DYNA		
	TOYOACE	2007 to 2014	2GR
	VELLFIRE	2008 to 2014	
	ALPHARD	2008 to 2014	
ESTIMA	2006 to 2014		
VANGUARD	2007 to 2012		
PLASTIC (Large) Item Number: 15650-38020	LS600h/LS600nl	2008 to 2014	2UR
	LS460/460l	2006 to 2014	1UR
	GS460	2007 to 2012	
	MAJESTA	2009 to 2014	1GR
	FJ CRUISER	2010 to 2014	
LAND CRUISER PRADO	2009 to 2014		

\*Please check the merchandise inventory for a product that is marked by before placing an order.

1. Remove the undercover → 2. Remove the drain plug → 3. Drain the oil → 4. Remove and replace the oil filter → 5. Refit the drain plug → 6. Refit the undercover

**CUP TYPE OIL FILTER CARTRIDGE WRENCH**

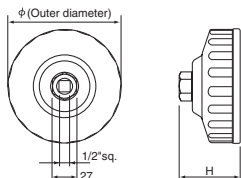
No.	φ (Outer diameter)	H	Shape	▼g	☞
AVSA-101B	117	64	15 Sides	550	10
-106B	124	64	16 Sides	570	10
-108B	125	66	16 Sides	610	10
-110B	125	68	17 Sides	610	10
-118B	135	68	16 Sides	650	10
-125B	142	70	18 Sides	750	10

**Usage**

- Removal of the engine oil filter cartridge for 2-4t class trucks/buses, etc.

**Characteristics**

- By employing the insertion method, iron (steel materials) has been used for the drive parts and the thickness of the aluminum section has been increased for improved durability.



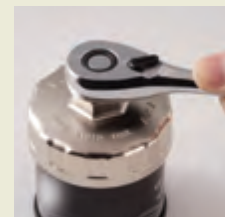
1/2" sq.

**●BIG SIZE CUP TYPE OIL FILTER WRENCH D.PAT.**



Remove and replace the oil filter

4



**CUP TYPE OIL FILTER CARTRIDGE WRENCH SET**

No. AVSA5	▼kg 4.0
Oil filter wrench metal case	AVSA-101B, 106B, 108B, 110B, 118B (430×285×76)

1/2" sq.

**●BIG SIZE CUP TYPE OIL FILTER WRENCH SET (5 sets) D.PAT.**



## Oil Filter Wrench Application Table for Japanese Car

- KTC oil filter wrench (AVSA) has the size that matches the genuine oil filter.
- Size may not match when using market goods or the like (rattling, biting, etc.).
- Even with the same engine model, size may vary depending on the model year and supply period of genuine parts.
- Do not use anything other than the box end oil filter wrench for the filter paper replacement type oil filter cap.

Manufacturer	Engine Model	Oil Filter Wrench
Toyota	1AZ-FSE, 1NZ-FE, 1NZ-FNE, 1NZ-FXE, 1SZ-FE, 1TR-FE, 1TR-FPE, 1ZZ-FE, 2AZ-FE, 2AZ-FSE, 2AZ-FXE, 2E, 2NZ-FE, 2SZ-FE, 2ZZ-GE, 3AR-FAE, 3E, 3S-FE, 3S-FSE, 3S-GE, 3S-GTE, 4A-FE, 4A-FHE, 4A-GE, 4A-GZE, 4E-F, 4E-FE, 4E-FTE, 4S-FE, 5A-FE, 5A-FHE, 5E-FE, 5E-FHE, 5K, 5K-J, 5K-U, 5S-FE, 7A-FE, 7K, 7K-E, EJ-DE, EJ-VE, HC-EJ, K3-VE2, K3-VET, KF, KF-DET, KF-VE	AVSA-064
	1G-FE, 1G-GE, 1G-GEU, 1G-GP, 1G-GPE, 1G-GTEU, 1G-GZE, 1GR-FE (~2009), 1JZ-FSE, 1JZ-GE, 1JZ-GTE, 1KD-FTV, 1MZ-FE, 1N, 1ND-TV, 1RZ, 1RZ-E, 1UR, 1UR-FE, 1UR-FSE, 1UZ, 1UZ-FE, 2JZ-FSE, 2JZ-GE, 2JZ-GTE, 2KD-FTV, 2MZ-FE, 2RZ-E, 2TZ-FE, 2TZ-FZE, 2UZ-FE, 3MZ-FE, 3RZ-FE, 3RZ-FP, 3RZ-FPE, 3UZ-FE, 3VZ-E, 3VZ-FE, 4VZ-FE, 5V-EU, 5VZ-FE, 7M-GE, 7M-GTEU, 1N-T (Available for -099)	AVSA-073
	2Y, 2Y-J, 2Y-PU, 2Y-U, 3Y, 3Y-E, 3Y-EU, 3Y-P, 3Y-PE, 3Y-U, FA20	AVSA-079
	1C, 3B, 3F, 3F-E, 5V-EU, B	AVSA-095
	1FZ-FE, 2L, 2L-T, 2L-TE, 2L-THE, 11B, 14B, 14B-T, 15B-CNG, 15B-F, 15B-FP, 15B-FT, 15B-FTE, 15B-LPG, 1BZ-FNE, 1BZ-FPE	AVSA-095 or -099
	1HD-FT, 1HD-FTE, 1HD-T, 1HZ, 1KZ-TE, 1N, 1PZ, 5L	AVSA-099
	2C, 2C-T, 3C-E, 3C-T, 3C-TE, 3L, 4B	AVSA-099 or -095
	1GZ-FE, 1GZ-FNE	AVSA-110B
	(Filter paper replacement type) 1KR, 1NR, 1NR (1.3L), 2ZR (1.8L), 3SZ-VE, 3ZR, K3-VE	AVSA-R64A
	(Filter paper replacement type) 1GR (2009~), 1TR, 1UR, 2GR, 2TR, 3GR, 4GR	AVSA-R64B
LEXUS	(Filter paper replacement type) 1UR, 2GR, 2UR, 3UZ, 4GR	AVSA-R64B
Nissan	CA16D, CA16DE, CA16S, CG10DE, CG13DE, CGA3DE, CR10DE, CR12DE, CR14DE, HR12DDR, HR12DE, HR15DE, HR16DE, K6A, KA20DE, KA24DE, KA24E, MR16DDT, MR18DE, MR20DD, MR20DD-SM23, MR20DE, MRA8DE, QG13DE, QG15DE, QG18DD, QG18DE, QG18DEN, QR20DD, QR20DE, QR25DD, QR25DE, R06A, R2, RF (2005~), SR16VE, SR18DE, SR18Di, SR20DE, SR20DET, SR20DT, SR20VE, SR20VET, TB45E, TB48DE, VG20DET, VG20DT, VG20E, VG20P, VG30D, VG30DE, VG30DET, VG30DETT, VG30DT, VG30E, VG30ET, VG33E, VH41DE, VH45DE, VK45DD, VK45DE, VQ20DE, VQ23DE, VQ25DD, VQ25DE, VQ25DET, VQ25HR, VQ30DD, VQ30DE, VQ30DET, VQ35DE, VQ35HR, VQ35HR+HM34, VQ37VHR, VR38DETT, Z20	AVSA-064
	RB20D, RB20DE, RB20DET, RB20DT, RB20E, RB20P, RB25D, RB25DE, RB25DET, RB26DETT	AVSA-064 or -080
	3G83, 4A30, F8, L8, RF (2003~)	AVSA-067
	A12, A15, CA18DE, CA18DET, CA18DT, CA18ET, CA18i, CA20, CA20P, CA20S, GA13DE, GA13DS, GA15DE, GA15DS, GA15E, GA15S, GA16DE, GA16DS, MA09ERT, MA10ET, MA10S, NA16, NA16S, NA20, NA20P, NA20PE, NA20S	AVSA-080
	4JG2, R2	AVSA-089
	BD30, CD17, CD20, CD20E, CD20ET, CD20ETi, CD20T, CD20Ti, D5, ED35, FD42, FD46, LD20, LD20T, QD32, QD32ETi, RD28, RD28E, RD28ETi, RD28T, TB42E, TB42S, TD23, TD25, TD27, TD27ETi, TD27T, TD27Ti, TD42, TD42T, Z18P	AVSA-092
	3A90, 3B20, 3G83, 4A30, 4A31, 4A90, 4A91, 4B10, 4B11, 4B12, 4G13, 4G15, 4G19, 4G63, 4G64, 4G91, 4G92, 4G93, 4G94, 4J10, 4J11, 4J12, 6A10, 6A11, 6A12, 6A13, 6B31, 6G7, 6G72, 6G73, 6G74, CR12DE, F8, FE, G13B, G15B, G63B, HR15DE, HR16DE, K12B, MR18DE, R2, RF, VQ25HR, VQ35HR, VQ37VHR	AVSA-064 or -067
	3G83, 3G83	AVSA-067
	4B11, 4G15, 4G32, 4G37, 4G61, 4G63, 4G64, 4G67, 4G69, 4G93, 6A12, 6A13, 6G71, 6G72, 6G72, 6G73,	AVSA-079
	4D56, 4D65, 4D68, R2, WL	AVSA-101B
4M40, 4M41	AVSA-101B or -106B	
4M40 (Delica · Space Gear)	AVSA-106B	
MAZDA	13B, 13B-MSP, 20B, B3, B5, B6, BP, CR12DE, D5, E3, E5, F6A, F8, FE, FP, FP-DE, FS, FS-DE, GA13DE, GA13DS, GA15, GA15DE, GA15DS, HR15DE, J20A, J5, JE, JF, K6A, K8, KF, KJ, KL, MR18DE, P3-VPS, PE-VPR, PE-VPS, PN, PY-VPR, QG13DE, QG15DE, QG18DE, QG18DEN, R06A, SR18DE, Z5, ZJ-VE, ZJ-VEM, ZL, ZY-VE	AVSA-064 or -067
	PE-VPS	AVSA-067
	LF-VD	AVSA-074
	H20A, H25A	AVSA-079
	RF	AVSA-064 or -067, -079, -089
	R2	AVSA-089 or -101B, -064
	CD17, CD20	AVSA-092
	VS, WL, XA	AVSA-101B
	YJ (4HF1), YM (4HG1)	AVSA-108B
	AJ, AJ-DE, GY	AVSA-A93
HONDA	B16A, B16B, B18B, B18C, B20A, B20B, B21A, C35A, D12A, D13B, D13C, D15B, D16A, D17A, E07A, E07Z, ECA, F18A, F18B, F20A, F20B, F20C, F22A, F22B, F22C, F23A, G20A, G25A, H22A, H23A, J25A, J30A, J32A, J35A, J37A, K20A, K20B, K24A, L13A, L15A, LDA, LDA-MF5, LDA-MF6, LEA-MF6, P07A, PA07, R18A, R20A, S07A, ZC	AVSA-063
	4JG2 (1995~), 4JX1, 6VD1, 6VE1, C30A, C32A, C32B, G32A	AVSA-080
	4JG2 (~1995)	AVSA-089
SUZUKI	F6A, F6B, G10, G13B, G15A, G16A, J18A, J20A, J24B, K10A, K10A, K12B, M13A, M15A, M16A, M18A, MR20DE	AVSA-064
K6A, K6A revised	AVSA-064 or -063	
DAIHATSU	CB, CL, EF-CK, EF-CL, EF-CS, EF-DEM, EF-DET, EF-EL, EF-ES, EF-FL, EF-GL, EF-GS, EF-HL, EF-JL, EF-KL, EF-NS, EF-RL, EF-RS, EF-SE, EF-TS, EF-VD, EF-VE, EF-VN, EF-VS, EF-XL, EF-XS, EF-ZL, EF-ZS, EJ-DE, EJ-VE, HC, HC-EJ, HD, HD-EP, HE, HE-EG, JB-DET, JB-EL, JB-JL, JC-DET, K3-VE2, K3-VET, KF-DET, KF-VE	AVSA-064
	(Filter paper replacement type) 1KR, 1NR, 2ZR (1.8L), 3SZ-VE, K3-VE	AVSA-R64A
SUBARU	EA71, EA82, EF10, EF12, EJ15, EJ16, EJ18, EJ20, EJ22, EJ25, EL15, EN07, ER27, FA20, FB16, FB20, FB25, GA15DE, GA15DS, K3-VE, KF, KF-DET, KF-VE, QG15DE, QG18DE	AVSA-064
	6VD1, EG33, FA20	AVSA-079
	EZ30, 4JB1, 4JG2	AVSA-080
	CD17, CD20	AVSA-092
(Filter paper replacement type) 3SZ-VE, K3-VE	AVSA-R64A	
ISUZU	CD17, CD20	AVSA-092
	4XC1, 4XE1, 4XF1, 4EC1, 4EE1, 4ZB1	AVSA-079
	4FC1, 4FC1-T, 4JB1, 4JG2	AVSA-089

\* Data is from September 2013.



# Oil Filter Wrench Application Table for American & European Car

Manufacturer	Car (Engine) Model	Oil Filter Wrench
Volkswagen	Gasoline car	AVSA-074
AUDI	Gasoline car	AVSA-074
Opel	Vita, Astra, Vectra, Calibra, Omega Former Omega AVSA-092	AVSA-075
BMW	3 Series Late E30 Model 4-Cylinder	AVSA-074
	3 Series 4-Cylinder (filter paper replacement type) before '02	AVSA-074C
	N-Series Engine (N42 · N45 · N46 · N52 · N54)	AVSA-086
Mercedes	Gasoline 4, 6, 12-Cylinder *1	AVSA-074
	Class C 272, 273	AVSA-074C
PORSCHE	All current cars	AVSA-074
	Before 93 Model of 911	AVSA-092
Peugeot *2	All cars	AVSA-B76, B86
Citroen *2	GS, GSA, CX2400, CX2500 Diesel	AVSA-B76
	CX2500, AX, BX, ZX, XM-V6	AVSA-B86
	Xantia	
Renault *2	Twingo, Lutecia, Megane	AVSA-B76, B86
	Panda, Uno	AVSA-C76
FIAT	Tipo, Coupe Fiat	AVSA-C95
	Lancia	Thema V 3.0L
Alfa Romeo	Thema 2.0L, Delta, Dedra, Prisma	AVSA-C76
	164, 147	AVSA-C76
Ferrari	155, 75, Spider, 145, 156	AVSA-C95
	328	AVSA-095
Saab	348	AVSA-B86
	All cars	AVSA-075
GM	Cadillac Fleetwood Brougham, former Trans-Am, former Camaro, Chevy G-20	AVSA-092
	Grand-Am	AVSA-075
	Cadillac Concours, Allante, Eldorado, Seville,	AVSA-A74
	Fleetwood Elegans Sedan, Fleetwood 60 Special, Fleetwood	
	Regal, Astro, Bonneville, S-10 Blazer, Blazer Silverado	
Camaro Sports '94 Model or later, Park Avenue, current Corvette, Cadillac Escalade, Hummer H3	AVSA-076	
Ford	Taurus, Seven, Mustang 3.8L, Thunderbird,	AVSA-A75
	Lincoln Continental 3.8L, Probe 2.5L · 3.0L	AVSA-A93
	Thunderbird,	
	Mustang 5.0L · V8 4.6L · 5.8L all models, Explorer, Escape XLT (V6)	AVSA-092
	Mustang GT (V8 2005~)	
	Probe 2.2L	AVSA-064
	Laser gasoline cars, Telstar gasoline cars, Festiva	AVSA-067
	Focus, Escape XLT (direct 4)	AVSA-074
	Ka, Lincoln SL, Mondeo V6	AVSA-076
	Laser diesel cars	AVSA-079
	Telstar diesel cars	AVSA-089
	Mustang GT (V8 2005~)	AVSA-092
	Mondeo	AVSA-095
	Escape 3L (V6) AJ type	AVSA-A74
	Escape 2L (L4)	AVSA-A93
Chrysler	Grand Cherokee, Cherokee	AVSA-092
Rover	Mini M/T, 100 Series, 200 · 400DOHC1.6L	AVSA-076
	200 · 400 · 600 · 800SOHC2.0L	AVSA-079
	Sterling 4-Door Sedan	
200 · 400DOHC 2.0L, 600 · 800DOHC, 2.3L Discovery, Range Rover, MGF1.8L E-RD18K	AVSA-095	
Jaguar	Former V6	AVSA-A75
	Direct 6, V12	AVSA-095
	V8	AVSA-076
Volvo	V40, S40, S60, C70, V70, S80, Cross Country	AVSA-087
	* It cannot be used for the round head oil filter of the former 70 Series ('98 model or earlier).	

\*1. Since the parts for 190E '94 model have been changed, applicable product may not be available.

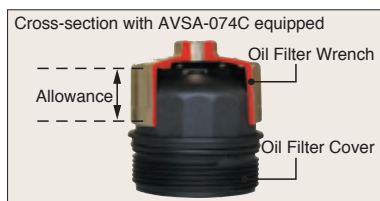
\*2. For Renault, Peugeot and Citroen, size may vary in new car parts, long-life, etc.  
Purchase of both AVSA-B76 and B86 is recommended.

### ● Design that securely hooks onto the filter even in thermal expansion

AVSA-074C and 087 are designed with longer total length than normal type, larger allowance with the oil filter and to firmly hang onto the filter even in thermal expansion to support the resin oil filter cover that expands with heat.

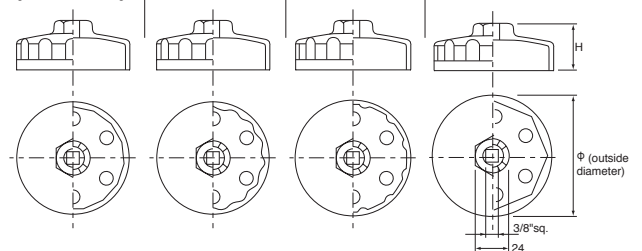


Oil filter cap and replacement filter paper for VOLVO



### ● Shape of cup-type oil filter wrench for imported cars


- |                |               |                |                |               |
|----------------|---------------|----------------|----------------|---------------|
| 074, 14-angle  | 076, 15-angle | A74, 15-convex | B76 12-concave | C76, 8-angle  |
| 074C, 14-angle | 086, 16-angle | A75, 30-convex | B86 18-concave | C95, 10-angle |
| 075, 15-angle  | 087, 16-angle | A93, 36-convex |                |               |



## Oil Filter Wrench Application Table for Large Size Car

Car Name	Car Model	Engine Model	Model Year	Filter Size
Toyota	DYNA-TOYOACE	XZU130, 140	J05C	AVSA-108B
		RX4J	J05CT	AVSA-118B
		RX4JET	J05C	
		XZU3□	S04	AVSA-101B
	Coaster	XZB50	N04C	
Hino	Ranger	BU212M	15B-F	AVSA-099
		HV116HU	14B	
		FC3J	J07C-NA	AVSA-101B
		FB2W	W04D	
	Rainbow	AB2W	W04D	
	Dutro		S05C, S05D	
	Ranger	FC, FD, FF, FT, GD17 □	H07C	AVSA-108B
	Rainbow	KG, RJ, RR, RT, RU17 □	H07C	
	Ranger-Liesse (Bus)	FD, FF, GD, RR, SD2H	H07C	
		RB, RH1W, RH160	W04C	
		FC, FD3W, CH16 □	W06E	
		FB, FC, RH, RX4J	J05C	
		XZU130, 140	J05C	
		FC3J	J07C	
		FD7J	J07E	
	Ranger	FC, FD, FF, FT, GD3H	H07D	
		CH, RJ, RR, RU, RU3H	H07D	
		FD, FE, FF, FT, FX1J	J08C	
		GD, GK, GX, CH, RJ1J	J08C	
RU, RR1J, FC, FD2J		J08C		
FD, FG, GK, RU1H		H06C		
FC5J, FJ5J		J07CT		
FC7J		J07ET		
		J05E		
Ranger	FC1J, FD1J, FE1J	J08C	AVSA-118B	
	FG1J, FJ1J, FT1J	J08C		
	FX1J, GD1J, GK1J	J08C		
	GX1J, CH1J, HR1J	J08C		
	HU1J, RJ1J, RR1J	J08C		
	RU1J	J08C		
Rainbow	RH4J, RX4J	J05CT		
	HU8J, RU8J	J08E		
Ranger	FD8J, FE8J, FG8J	J08E		
	GD8J, GK8J	J08E		
Profia	FH1A, FN1A, FR1A, FW1A	A09C		
	GN1A, PR1A, SH1A	A09C		
Poncho II	BDG-HX6	J05D	AVSA-108B	
ISUZU	Elf	U · KC · KK-NKR66		H2/6~
		KC · KK · KR-NKR71 · 72 · 75		H7/3~
		KR · PB · AFG-NKR81 · 82		H14/5~
		KC · KK-NPR66		H7/3~
		KC/KK/KR/PA/PB-NPR70 · 71 · 72 · 75 · 81		H7/3~
		KR-NKS81E		H14/6~
		PB-NKS81A		H16/6~
	Forward	ADG · PKG-FRR90 (Engine 4HK1-T)		H17/7~
Nissan	Atlas	KC · KK · KR-AKR66 · 71 · 81		H7/6~
		KC/KK/KR/PA/PB/PDG-APR66 · 70 · 71 · 72 · 75		H7/6~
		PB-APS81A		H16/6~
UD	Condor	KC · KK-BKR66 · 71		H7/6~
		KC · KK · PB · PA-BPR66 · 70 · 71 · 72 · 75 · 81		H7/6~
			MD92	AVSA-125B
		MK Series, LK Series	AVSA-118B	
Mitsubishi Fuso	Canter	FE□	4D30	AVSA-101B or -089
		FE□, FG□	4D32	
		FE□, FG□	4D33	~H4, 5
		FE□, FG□	4D33	H4, 5~
		FE□, FF□	4D34	
		FE□, FG□	4D35	
		FE□	4D36	
		FE□	4M51	
		FE□	4M42	AVSA-106B
		FE□, FG□	4M50	
	FE□	4M51		
	Canter · Guts	FB□, FD□	4M40	AVSA-101B or -106B
		FB70B	4M42	AVSA-106B
	Challenger	K94W	4D56	AVSA-101B
K94WG				
	K97WG	4M40	AVSA-101B or -106B	

\* "□" in the table represents multiple models.

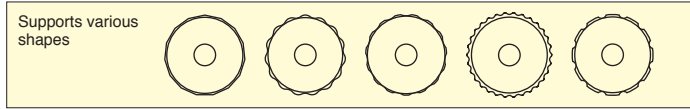
\*Please check the merchandise inventory for a product that is marked by  before placing an order.

**ADJUSTABLE OIL FILTER WRENCH**

No.	Applicable Dia.	D	W	H	▽g	📦
AVSA-6379	φ63~79	56	66	41	300	1

- Usage** ● Cartridge type oil filter removal of light ~ standard-sized vehicles.  
**Application** ● Up to φ63~79 oil filter equipped vehicles (excluding filter paper replacement type).  
 ● Special size oil filter equipped vehicles such as Mazda.  
 ● Imported cars with special shape oil filter.  
**Features** ● Removal dedicated tool for cartridge type oil filters up to φ63~79. (excluding filter paper replacement type)  
 ● It is an adjustable type that supports oil filters of various shapes.

\* Spare parts are configured. Please contact your dealer for details.



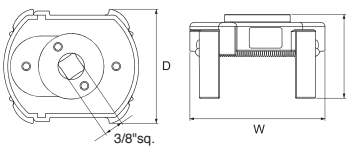
Firmly catches with 3-stage claw. Can easily be mounted by one hand. Work in tight spaces is possible with low height when mounted.

**CAUTION** ● It is dedicated for removal. It cannot be used to attach oil filters.  
 ● Please do not use it for the filter paper replacement type.

**Supply Parts (Drive Set for Adjustable Double Oil Filter Wrench)**

No.	Square	Set Contents	📦
AVSA-6379-K	3/8"sq.	Drive x1, Plate · Steel Spacer · Button Bolt with Hex. Socket (M5xL8) · with Hex. Socket Button Bolt (M4xL5) 2pcs. each	1

**ADJUSTABLE OIL FILTER WRENCH**



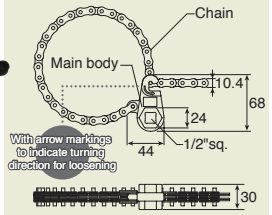
Remove and replace the oil filter **4**



**CHAIN TYPE OIL FILTER WRENCH**

No.	Applicable Dia.	▽g	📦
AE502	φ89~142	600	1

- Usage** ● For removal of cartridge type oil filters from standard~heavy vehicles  
**Application** ● For cartridge type oil filters with outer diameter of 89~142mm (nominal soze 89-125mm).  
**Characteristics**  
 ● Light and compact  
 The tool can operate in a narrow space.  
 ● Drive tools can be chosen according to work condition.  
 A 1/2"sq spinner handle or an off-set wrench (with 24mm width across flat) can be used to operate this tool.  
 ● Loosening can be done securely.  
 This tool is structured to prevent chain from coming off.



**CHAIN TYPE CARTRIDGE WRENCH**

No.	Applicable Dia.	L	▽g	📦
CW-90140	φ90~125(Effective Dia. φ90~140)	140	530	10

- Purpose**  
 For removing and replacing oil filter cartridge and fuel filter.  
 ● Applicable to light and medium size cars up to 4t.  
**Special Features**  
 ● Give little damage on filters.  
 ● Original flex band mechanism avoids concentrated load on cartridges.  
 ● Wide application.  
 ● Can be used on cartridge type filter (φ90~125) and fuel filter.  
 \* Due to the thickness of the chain (10.4mm), cannot be used for some types of filters with narrow niches.

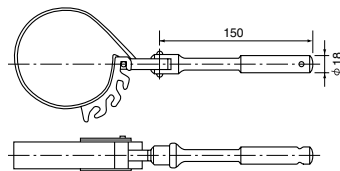
**CHAIN TYPE CARTRIDGE WRENCH**



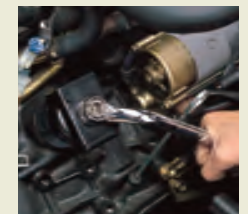
**OIL FILTER CARTRIDGE WRENCH**

No.	Applicable Dia.	▽g	📦
FF-8095	φ80~95	400	10
FF-90110	φ90~110	410	10

- Adjustable band type.  
 ● Easy for squeezing and slip resistance.



**OIL FILTER CARTRIDGE WRENCH**



**STAINLESS SCRAPER**

Refit the drain plug **5**

● OFFSET WRENCH  
 ● DIGITAL RATCHET

● DRAIN PLUG WRENCH

● OTHER TOOLS

- ① Stripping the packing
- ② Attaching the drain plug
- ③ Measuring the tightening torque

● SCREWDRIVER

● T-SHAPED WRENCH

● SOCKET

● OTHER TOOLS

Refit the undercover **6**

## OIL SERVICE STATION

This service station helps you replace the oil with good efficiency.

- On the top cover you can place various parts in order, such as oil container, filters and tools.
- To avoid mixing different kinds of oil, oil jug hooks help you drain oil completely.
- Variety of tools and kits in addition to side pockets. (Endurable load of the side pockets; pocket for packing : 1kg, Small and middle size pockets for AVSA : 1kg each, Large one : 3kg.)
- Oil pan is removable. Use it for draining oil. (See photo-1.)
- Large castors facilitates smooth moving of the station. (Castor size: φ 127 × 32 for fixed type; φ 100 × 51 for movable type with stopper)
- Drawers are pulled out in two directions, so two stools can be laid out for this station.(See photo-2)

### OIL SERVICE STATION SET

#### No. SKR823 System-F-Full set

Number of components included in set:72 ▼kg 50 ☒ 1(3package)

#### No. SKR822 System-S-Standard set

Number of components included in set:67 ▼kg 48 ☒ 1(3package)

#### No. SKR811A System-B-Basic set

Number of components included in set:34 ▼kg 40 ☒ 1(2package)

#### No. SKR81 Unit + Pocket

Number of components included in set:5 ▼kg 33 ☒ 1(1package)

#### Contents

Description	No.	SKR81	SKR811A	SKR822	SKR823	
3/8"sq.Socket(6pt.) <i>POWERSIT</i> (except inch size)	B3-08			●	●	
	-10		●	●	●	
	-11		●	●	●	
	-12		●	●	●	
	-13		●	●	●	
	-14		●	●	●	
	-15		●	●	●	
	-17		●	●	●	
	-19		●	●	●	
	-21		●	●	●	
	-22		●	●	●	
	-24		●	●	●	
	-3/16		●	●	●	
1/2"sq.Socket(6pt.) <i>POWERSIT</i>	B4-26		●	●	●	
	-27		●	●	●	
	-32		●	●	●	
B4-1-1/8		●	●	●		
3/8"sq.Ratchet Handle(Flex-Head)	BRF3		●	●	●	
3/8"sq.Spinner Handle	BS3E		●	●	●	
3/8"sq.Extension Bar	BE3-075		●	●	●	
	-150		●	●	●	
3/8"sq.-Adapter (Indents 1/4"sq × Notches3/8"sq.) (Indents 3/8"sq × Notches1/2"sq.)	BA23		●	●	●	
	BA34		●	●	●	
3/8"Hex.Wrench	BT3-08S		●	●	●	
	-10S		●	●	●	
1/2"sq.Hex. Wrench	BT4-17		●	●	●	
3/8"TORX.Wrench	BT3-T45S		●	●	●	
45°×10"Long Offset Wrench	M5 -1012		●	●	●	
	-1417		●	●	●	
	-1921		●	●	●	
	-2224		●	●	●	
T.Shape Wrench With Short Handle	TH-10N		●	●	●	
Screwdriver(Flat)	D1M2-6		●	●	●	
	-8		●	●	●	
Screwdriver(Cross)	D1P2-2		●	●	●	
	-3		●	●	●	
Heavy Duty Screwdriver(Flat)	FD-250		●	●	●	
Stainless Scraper	KZ1-22		●	●	●	
Boxend Oil Filter Cartridge Wrench	AVSA-063		●	●	●	
	-064		●	●	●	
	-067		●	●	●	
	-073		●	●	●	
	-074		●	●	●	
	-079		●	●	●	
	-080		●	●	●	
	-089		●	●	●	
	-092		●	●	●	
	-095		●	●	●	
	-099		●	●	●	
	-101		●	●	●	
	Boxend Oil Filter Wrench	AVSA-074		●	●	●
		-074C		●	●	●
-075			●	●	●	
-A75			●	●	●	
-076			●	●	●	
-B76			●	●	●	
-C76			●	●	●	
-086			●	●	●	
-B86			●	●	●	
-087			●	●	●	
Boxend Oil Filter Wrench for Big Size	AVSA-101B		●	●	●	
	-106B		●	●	●	
	-108B		●	●	●	
	-110B		●	●	●	
	-118B		●	●	●	
	-125B		●	●	●	
Chain Type Cartridge Wrench	CW-90140		●	●	●	
Fender Cover	AYC-2		●	●	●	
Oil Jog(5e)	AE501		●(2pcs.)	●(2pcs.)	●(2pcs.)	
	SKR-55S	●	●	●(2pcs.)	●(2pcs.)	
Oil Service Station	Pocket (small) for AVSA	●	●	●(2pcs.)	●(2pcs.)	
	Pocket (medium) for AVSA	●	●	●(2pcs.)	●(2pcs.)	
	Pocket (large) for AVSA	●	●	●(2pcs.)	●(2pcs.)	
	Pocket for packing	●(2pcs.)	●(2pcs.)	●(3pcs.)	●(3pcs.)	
	Pocket for waste cloth	●	●	●	●	
Oil Service Station		●	●	●	●	

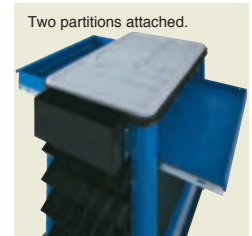
### OIL SERVICE STATION

Photo-1 Removable oil pan



Oil pan size:  
520(L) × 330(W) × 80(H)

Photo-2 Drawers pulled out in two directions.



Two partitions attached.



Oil Service Station System-F (Full set) SKR823

### ●OIL SERVICE STATION SET



Oil Service Station (Main body and pockets)

#### ●Pockets



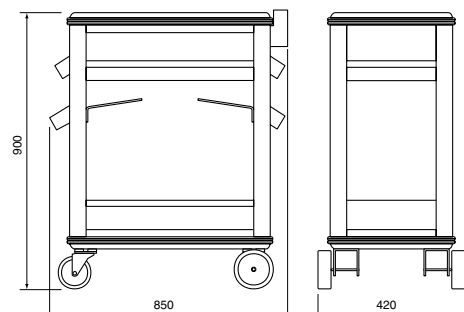
Pocket (large)for AVSA SKR-55L

Pocket for waste cloth SKR-55W

Pocket (medium)for AVSA SKR-55M

Pocket for packing SKR-55P

Pocket (Small)for AVSA SKR-55S



Note : 6pt. Sockets are shown in blue letters. \*Please check the merchandise inventory for a product that is marked by before placing an order.

## COOLANT CHARGER

<b>No. AE401</b>	▼kg 4.5
L×W×H	420×300×450mm
Hose length	2.5m
Effective tank capacity	15 liters
Tank material	Polyethylene
Max. vacuum	Approx. 0.09 Mpa
Air consumption	Approx. 120~190 liters/min~
Applicable air pressure	0.6~1.0 MPa
Ambient temperature	7~50°C

### Air removal is unnecessary after injection coolant! Can be used for two coolants by exchanging tanks.

#### Purpose

- Injection of automobile engine coolant.

#### Application

- For mini-cars, compact cars, and small trucks up to the 1.5-t class. (A cone plug L-size adapter (sold separately) is necessary for some non-Japanese cars.)

#### Features

- Injects coolant efficiently, without mixing in air.
- Tank and body are separable. Two types of coolant (red / green) can be injected by using a spare tank (sold separately).
- Pressure adjustment for injected air is not necessary.
- The switch for alternating between vacuum and injection is close to hand.



#### Spare Tank Set (Tank & caps)

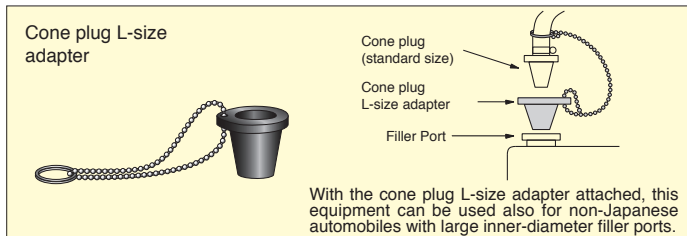
<b>No. AE401-ST</b>	
Total length	420mm(Base length: about 360)
Width	220mm
Height	370mm

#### Cone Plug L-Size Adapter

<b>No. AE401-CPL</b>	
Total length	-
Width	63mm
Height	45mm

#### Application Table for Cone Plug L-Size Adapter

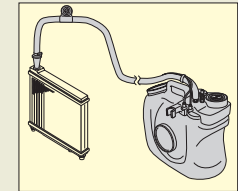
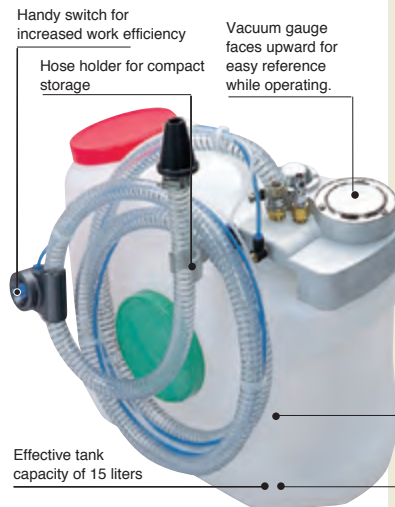
Inner diameter of radiator cap	Main makers & models
34~40mm	Volkswagen (all models) Audi (all models) Volvo (all passenger cars) Rover (200~600 , FREELASDER) Fiat (all models)



## ●COOLANT CHARGER

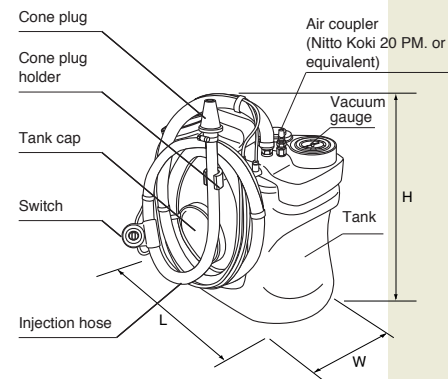
### Replacing fluid Injecting LLC

# 1



Level of colored coolant remaining is readily visible through the tank wall.

Tank design ensures minimal leftover coolant



**1** Replacing fluids  
Injecting LLC  
\*Closing the hose when using the coolant charger

●PINCH OFF PLIERS

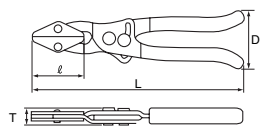


PINCH OFF PLIERS

No.	L	ℓ	D	T	Opening rate	▽g
PSA34	140	33	48	5	23	75
PSA57	233	57	65	18	50	340

- Usage**
- Car hose closing operations.
- Characteristics**
- This tool is convenient when closing hoses in the cooling system, especially when using the coolant charger produced by KTC.
  - Closing the brake hose when removing the strut, etc.
  - Closing the ATF hose when removing/installing the AT.
  - Closing the vacuum hose when inspecting the auxiliary instruments under deceleration, etc.
  - Closing the fuel hose when changing the fuel filter.
  - Closing the fuel and oil hose for motorcycles.
  - The multi-level automatic lock function is employed, enabling the tool to lock the pliers position simply by grasping, allowing for speedy operation.
  - Opening the grip will release the locked pliers position.

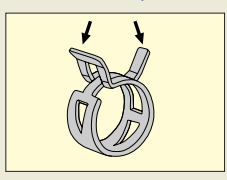
**CAUTION** • Check that the pliers are firmly locked into position before use.



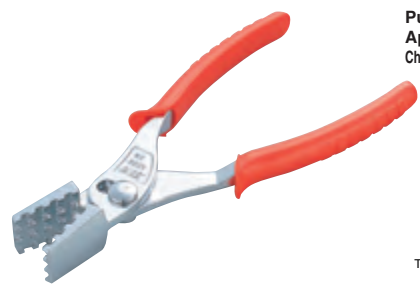
Outer diameter of applicable hose

PSA34	Outer diameter	φ 19mm
PSA57	Outer diameter	φ 41mm

**2** Hose replacement  
①Removing the hose clip.



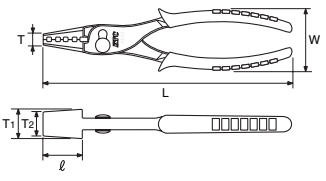
●HOSE CLIP PLIERS



HOSE CLIP PLIERS

No.	L	ℓ	W	T	T <sub>1</sub>	T <sub>2</sub>	▽g
AE92	210	32	50	9	25	20	300

- Purpose**
- Removing/installing hose clips.
- Application**
- Hose clips with diameter of 12-47mm.(except for screw types)
- Characteristics**
- The teeth edges are designed for firm grasping, preventing the hose clip from sliding out of the pliers, this is useful in confined or hard to reach areas. (Fig. 1)
  - The shape (trapezoidal) of the teeth allows grasping from vertical, horizontal, diagonal, and other various positions.
  - A hilt equipped resin grip allows easy gripping and prevents slippage.



Examples of use

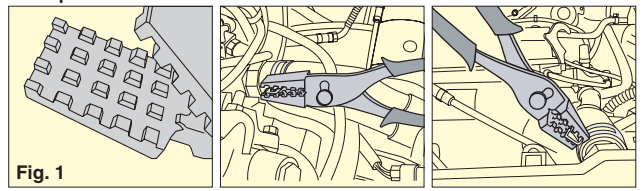


Fig. 1

**2** Hose replacement  
②Since the drive area is 3/8"sq., it can be used together with other power tools.



Example in use: AE921+BE3-150+BE3-Q

●HOSE CLIP TOOL (for mini-vehicles)

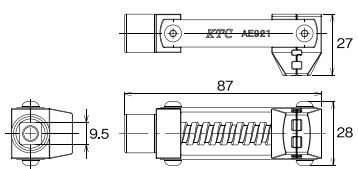


HOSE CLIP TOOL

No. AE921	▽g150	1
-----------	-------	---



- Application**
- Hose clip fixing the cooling system hose of Suzuki vehicles (Wagon R, etc.) (Vehicle type with the lock position facing side or downward)
  - Vehicle type that shows difficulty in work with pliers type tool
- Features**
- Work can be conducted without removing sensors, duct, hose, etc. near the hose clamps.
  - Since the tool is a screw type, it can be held with hose clamps loosened. Assembly/removal can be conducted at a narrow work space.
  - Since the tool has the same end shape as that of AE92, the hose clip does not slip and the tool does not come off abruptly.



\* BE3-Q in the photo is not included in the price.

**SET RADIATOR HOSE PLUCKER**

No. AE45T	▼g 300	
RADIATOR HOSE PLUCKER AE45-1, 2, 3		

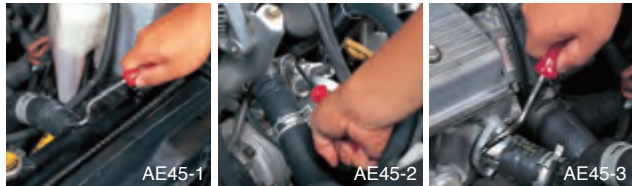
No.	d	D	ℓ	L	▼g	
AE45 -1	6	26	90	185	100	10
-2	6	26	90	185	100	10
-3	6	26	90	185	100	10

**Purpose**

- Pulling out hoses and removing stickies.

**Special Feature**

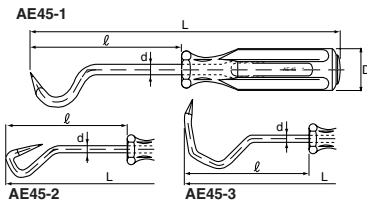
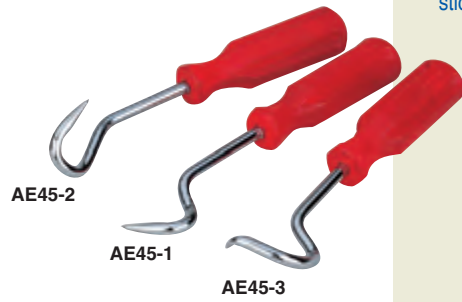
- 3 kinds of pluckers with specially shaped tips for use in narrow spaces.
- Specially angled tip for covering even back side of a hose.



**●RADIATOR HOSE PLUCKER**

Hose replacement  
 ③ Pulling out hoses and removing stickies

2

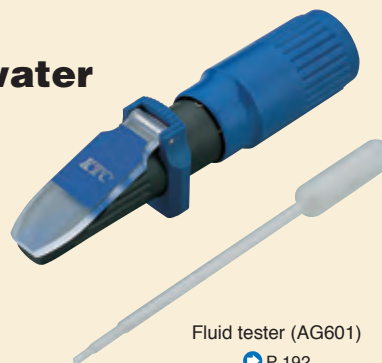


# About the LLC

## ● The role of the engine radiator and water

The engine is continuously exposed to heating from the combustion of fuel, and will naturally overheat if left in this state. The radiator plays the role of sustaining the optimum temperature by cooling the engine.

Cooling devices are divided into air-cooled and water-cooled types. Most cars commonly use the water-cooling system. The water-cooled type circulates cooled water (coolant) throughout the engine system using a water pump in order to cool the engine. The water that is heated from this process is directed back to the radiator for cooling, and is circulated back to the engine. This process is repeated.



Fluid tester (AG601)  
 P.192

## ● LLC

Because the liquid used in the radiator is mainly water, freezing will occur in temperatures less than 0°C, and boiling and evaporation will occur in temperatures over 100°C. Both of the above situations will cause engine trouble. LLC is a product that lowers the water freezing point, and raises the boiling point.

Previous coolants were known as anti-freeze, however, improvements have been made to these products giving them a longer useful life. These are now known as LLC (Long Life Coolant). One of the disadvantages of using anti-freeze was that it would have to be replaced after winter whereas the LLC can be used all year around. One of the disadvantages of using LLC is that the radiator can become blocked causing damage to the water pump and cause overheating and then possible engine trouble.

LLC concentration and freezing temperatures standards

LCC concentration	Freezing temperatures
30%	-15°C
35%	-20°C
40%	-24°C
45%	-28°C
50%	-36°C
55%	-41°C
60%	-54°C

## ● LLC concentration

There is a 30% concentration ratio of LLC in new vehicles. Because the freezing temperature is lowered when the concentration is high, the concentration ratio is increased in cold areas. However, the concentration ratio should not exceed 60%. LLC concentration ratios relating to cold temperatures are shown above. Current temperatures can be tested with the fluid tester (P. 227).

## ● LLC color

LLC main ingredient, ethylene glycol, is a poisonous product. The coolant is colored to help prevent mistaken use. The coolant is red mainly in Toyotas and green mainly in Nissan vehicles. However, the color does not affect performance. However, avoid using two different colored coolants.

## ● LLC toxicity

LLC main ingredient is ethylene glycol and is poisonous to humans. Drinking LLC may lead to death. The recently introduced PRTR law is specific to special chemical substances. Care must be taken when handling.

**Tool basics**

### PRTR Law

PRTR (Pollutant Release and Transfer Register): This law deals with waste matter (pollutants) entering the environment and aims to improve the management of the environment. This law has been designed to build a system that carries out strong control of chemical substances and environmental protection. The law was put into practice in 2001, and obligates those who deal in pollutants, which can endanger the health of others, to understand their actions and report to the Government.

## ● KTC's CO<sub>2</sub> emission cutting proposal

Presently, problems concerning the cutting of CO<sub>2</sub> emissions have been getting much attention. However, KTC believes that CO<sub>2</sub> emissions can be reduced over and above maintenance alone.

This is believed to be the eliminating of idling after LLC is injected when carrying out the air bleeding process. By using the KTC's Coolant Charger (No. AE401), the air bleeding process can be completed without idling after the LLC has been added. This means that if the Coolant Charger was to be utilized in every service center that over 30 million cars (\*1) that have their LLC replaced annually when renewing their fitness certificate, would not need to be idling while the process was carried out. In other words, the air bleeding process time for each vehicle is around 30 minutes. This calculates to about 0.4 liters of fuel and in CO<sub>2</sub> emission terms, around 270 g (\*2). By this calculation, there is around 8,100t of CO<sub>2</sub> being emitted into the atmosphere every time the renewal process is carried on the vehicles out there today.

\*1 The actual figure may be different to what is stated here as the figure of 30 million yearly fitness certificate checks includes light weight, as well as diesel powered vehicles.

\*2 This data has been supplied by the Environmental Department



# Replacing various belts

ENGINE

5 AUTOMOTIVE SPECIAL TOOLS

Can reach a wide range of locations.

## FREE POSITION WRENCH SET

### Usage

- Can be used to tighten and loosen nuts and bolts in confined areas.

### <Example>

- Vehicle engine starters on automobiles, on engine mounts, on manifolds, fitting air conditioners
- Bolts, adjusting bolts on various types of belts, around drive shafts, flanges, and around piping

### Characteristics

- Can be used on a wide range of different sized nuts and bolts. (Photo 1)
- Because the wrench and wrench handle are separate entities, they can be combined at the rear side of the wrench socket to be used in a variety of ways. (Photo 2)
- The wrench itself can be set in 24 different positions at 15° intervals off the handle so that work can be carried out at a variety of different angles.
- If the wrench bit and the exclusive handle are used in the "free" state, the wrench may be operated at a high speed. (Photo 3)
- The wrench is a compact, flat ratchet type (15°)

## FREE POSITION WRENCH SET PAT.P. D.PAT.



Belt replacement 1



<Example>  
Wagon R  
Compressor Removal/Installation

(Photo 1)  
Wide variation of sizes



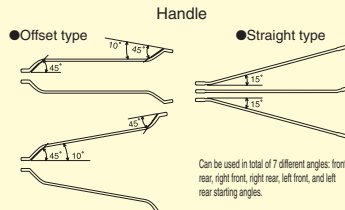
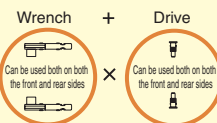
(Photo 2)  
Wrench and handle are separate for combination as required



(Photo 3)  
Fast operation is possible with crank motion.



The wrench, drive and handle combination makes any job possible.



2 × 2 × 7 × 24 = 672 different wrench positions are possible.

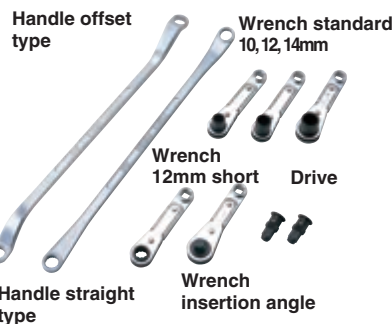
### Free positioning wrench set

No. ATE104	▼kg1.2	☐1
Free positioning wrench	AE101-10, 12, 14	
Free positioning wrench handle	AE102 <Offset>	
	*including drive	

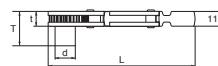
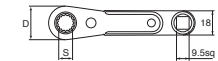
No. ATE107	▼kg1.7	☐1
Free positioning wrench	AE101-10, 12, 14	
12mm short	AE101-12S	
Insertion angle 3/8"sq.	AE101-3R	
Free positioning wrench handle	AE102 <Offset>	
	*including drive	AE103 <Straight>



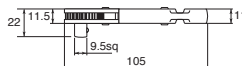
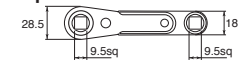
\*ATE104, 107 includes blister tray  
Tray size (L450xW150xH40)



### Standard



### 3/8"sq.

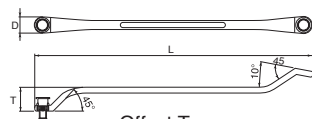


### Free positioning wrench/ standard

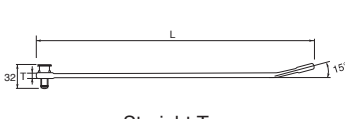
No.	S	D	T	t	d	L	▼g	☐
AE101-10	10	24	24.5	10.5	14.5	106	130	5
-12	12	24	27.5	10.5	17	106	130	5
-13	13	28.5	28	11.5	18.5	106	150	5
-14	14	28.5	28	11.5	20	106	150	5
-15	15	28.5	28	11.5	21	106	150	5
-17	17	34.5	28.5	11.5	24	113	180	5
-19	19	34.5	28.5	11.5	26	113	180	5

[Free positioning wrench series chart]

Product name	Product number	AE102	AE103	ATE104	ATE112	ATE107	
Wrench	Standard	AE101-10		●		●	
		-12		●		●	
		-13			●		
		-14			●		●
		-15					
		-17					
Handle	12mm short	AE101-12S				●	
	Insertion angle 3/8"sq.	AE101-3R			●	●	
	Offset type (45°×45°×10°)	AE102-HD	●		●	●	
	Straight Type (0°×15°)	AE103-HD		●		●	
Drive	AE102-DA	●	●	●	●	●×2	



Offset Type



Straight Type

### Free positioning wrench

No.	S	D	T	t	d	L	▼g	☐
AE101-12S	12	24	14	10.5	17	106	115	5

- Suitable for cooler belt adjustment bolts on the Suzuki Alto Wagon R (F6A, K6A).

### Free position wrench/3.8"sq.

No.	▼g	☐
AE101-3R	155	5



- As the tools are equipped with an insertion angle, it is possible to use the wrench on a 9.5sq standard semi-deep socket or a deep socket, etc.
- The wrench can be used on automobiles ranging from light to One-box type (including imported vehicles). <Recommended for 5.5~14mm hexagonal bolts and nuts with 2-faced widths.>
- Although limited, can also be used as short wrench.

### Free positioning wrench handle (offset type) <AE102-HD+AE102-DA>

No.	D	T	L	▼g	☐
AE102	22	31	370	320	1

### Free positioning wrench handle (straight type) <AE103-HD+AE102-DA>

No.	D	T	L	▼g	☐
AE103	22	7	370	210	1

\*Please check the merchandise inventory for a product that is marked with a red circle before placing an order.

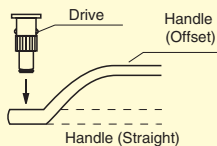
ENGINE

## ● Method of use

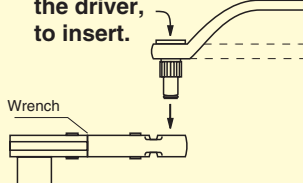
### Connecting the wrench and the handle

- ① Insert the drive to the back of the handle.
- ② Push down on the top of the driver, to insert the driver into the square shaped hole of the wrench.

#### ① Insert the driver



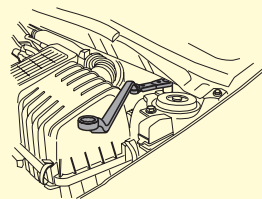
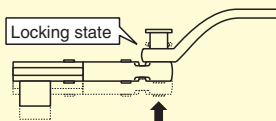
#### ② Push down on the top of the driver, to insert.



### Loosening/tightening bolts & nuts

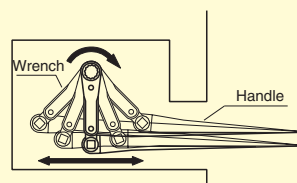
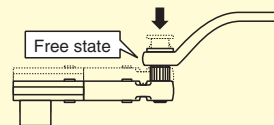
Lock the connecting area of the handle and the wrench together and then set in the desired angle.

(The wrench can be set in 24 positions at 15° increments)




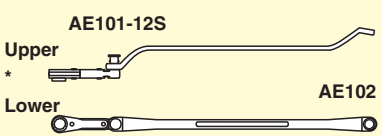

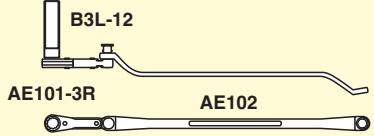

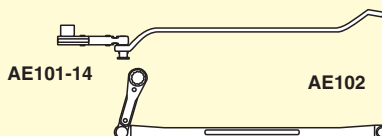

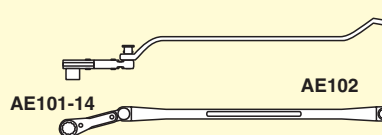

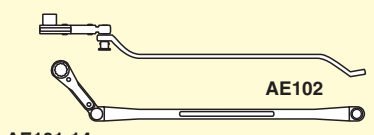

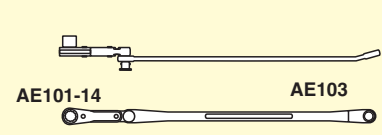
### Place in a free state for high speed rotation

High speed crank operation is possible by pulling and pushing the handle.



The illustrations below show 2 pictures. The upper picture shows what the tool looks like when pieced together. The lower picture shows the fixed angle that the tool is used at.

## ● Examples

<p><b>① Suzuki Alto</b> Cooler belt adjustment</p> <ul style="list-style-type: none"> <li>● A thin shaped socket is extremely effective when used in engine compartment</li> </ul>	<p><b>② Daihatsu Move</b> Alternator belt adjustment</p> <ul style="list-style-type: none"> <li>● This type is easy to use inside engine compartment.</li> </ul>	<p><b>③ Nissan Cube</b> Starter installation bolt</p> <ul style="list-style-type: none"> <li>● This type can be used in a lifted up position.</li> </ul>
 	 	 
<p><b>④ Toyota Bitz</b> Drive shaft mount stay</p> <ul style="list-style-type: none"> <li>● This type can reach deep areas if in a lift up position.</li> </ul>	<p><b>⑤ Toyota Voxy</b> Strut tower installation bolt</p> <ul style="list-style-type: none"> <li>● Excellent for replacing the struts in engine compartment.</li> </ul>	<p><b>⑥ Mitsubishi Chariot Grandes</b> Power steering belt adjustment</p> <ul style="list-style-type: none"> <li>● Can be used in pipe crossing in engine compartment.</li> </ul>
 	 	 

# Serpentine belt replacement

ENGINE

5 AUTOMOTIVE SPECIAL TOOLS

ENGINE

## BELT TENSIONER WRENCH SET

No. ATE175	▼kg 1	📦 1
Belt tensioner wrench	AE107-500	
Exclusive socket 14,17,19mm	AE107-14W,17W,19W	
3/8" sq. Driver	AE107-3A	

### Usage

- This is an exclusive tool for loosening the tensioner when replacing belts used in vehicles that are fitted with auto-tension type drive belts (with 1 belt only).

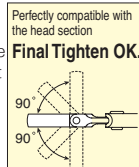
### Application

- Is effective for working on domestic vehicles from light-weight to normal passenger vehicles, and especially on One-box type vehicles (FF vehicles).

### Characteristics

#### Wrench

- This is a thin, exclusive long rotating head ratchet off-set wrench used for working on vehicles fitted with auto-tensioning. A large swing angle can be taken while working inside small engine compartments without interfering with pulleys and other obstacles.
- Provides easy operations on damper type auto-tensioners fitted in many heavy FF vehicles because of a non-slip, easy hold, and resin type grip.

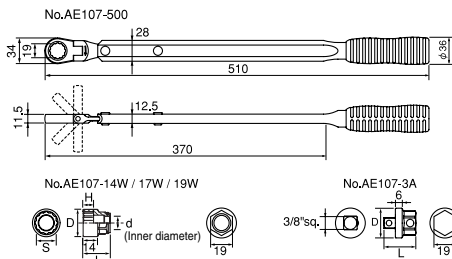
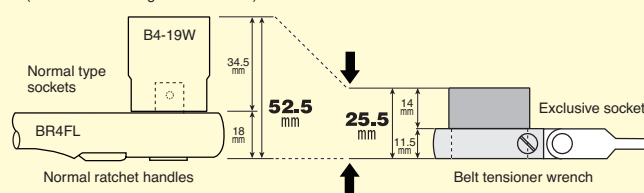


#### Exclusive socket 3/8" sq. Driver

- The exclusive socket can be set at 14/17/19mm, and is convenient where socket length must be changed frequently.
- A pierced type of thin design that helps eliminate slipping off the bolt.
- Normal sockets can also be used as the 3/8"sq driver is installed onto the offset area of auto-tensioner wrench.

### Comparison of the head section

(in the case of using 19mm sockets)



### Replacement parts: Belt tensioner wrench

No.	▼g
AE107-500	850

### Exclusive Socket 3/8"sq. Driver

Product name	No.	S	D	d	H	L	▼g
Exclusive socket 14mm	AE107-14W	14	22	11	8.5	26	35
17mm	-17W	17	24	13	9	26	40
19mm	-19W	19	26	13	9	26	40
3/8" sq. Driver	-3A	-	26	-	-	28	60

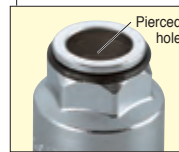
## BELT TENSIONER WRENCH SET

Belt replacement 1

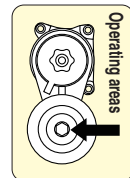
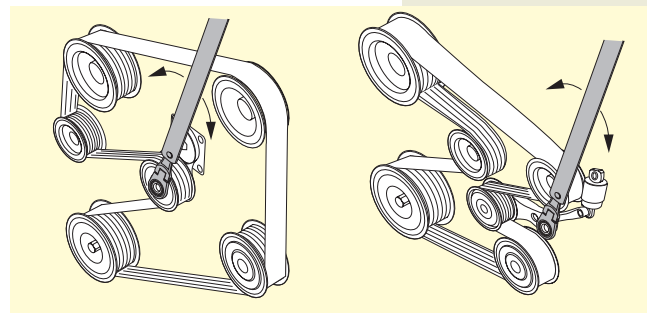


### Exclusive socket

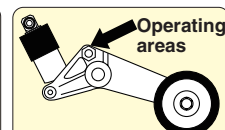
Covers a wide range of domestic vehicles.



Insert the exclusive hexagonal socket into the offset section.



Auto-tensioner



Damper fitted auto-tensioner

- CAUTION**
- Make sure that all operators read the Owner's Operator Manual carefully before usage.
  - Do not use for non-specified purposes.

## BELT TENSIONER WRENCH (OFFSET TYPE)

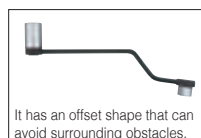
No. AE107-260	▼g 375	📦 1
Belt Tensioner Wrench	Caliber 19mm	

Usage ● Toyota's 2.4ℓ (2AZ) equipped vehicles: Vellfire, Alphard [May '08 or later], Mark X Geo, etc.

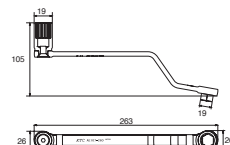
- Features ● Precise work with optimal posture is possible even in tight spaces by using in combination with AE107-500.
- The body has an offset shape to avoid surrounding obstacles.
  - Dedicated design that supports vehicles that can only be worked on from the lower part of engine room.

\* Spare parts are configured. Please contact your dealer for details.

## BELT TENSIONER WRENCH (OFFSET TYPE)



It has an offset shape that can avoid surrounding obstacles.



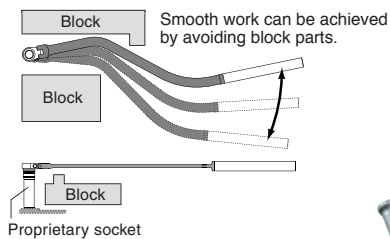
\*Please check the merchandise inventory for a product that is marked by before placing an order.

ENGINE

# Serpentine belt replacement

## 1 Belt replacement

### ●BELT WRENCH SET (for mini-cars only)



#### BELT WRENCH SET (for mini-cars)

No. ATE109		▼ g 410	📦 1
Belt wrench			
Proprietary socket			
No.	Name	▼ g	
AE109-450	Belt wrench	345	
AE109-12W	Proprietary socket	65	

#### Application

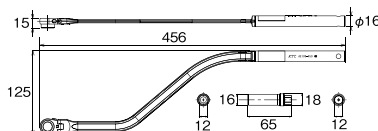
- Replacement and adjustment of Suzuki air conditioner belts (Wagon R [After September, 2008], MR Wagon [After January, 2006]) (Only the main unit)
- Replacement and adjustment of Daihatsu air conditioner and power steering belts (Move [after December, 2008], Tanto [After December, 2007]) (Main unit + proprietary socket)

#### Features

- Smooth work can be achieved by avoiding block with its unique shape.
- Optimum shape can be obtained for the engines of Daihatsu vehicles using the proprietary socket.
- Since a ratchet head is used at the end, work can be comfortably performed.
- Working time can be reduced only by removing the license plate.
- Removal of the bumper for replacement of the belt is not required.

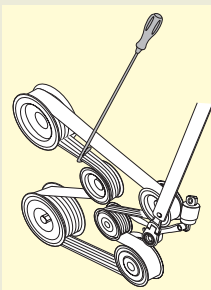


Since work can be performed only by removing the license plate, it is effective for reduction of time.



### ●BELT HOOK TOOL

Expected release date: July 2005



#### BELT HOOK TOOL

No.	d	D	L	ℓ	▼ g	📦
AE108	6	34	660	540	200	1

Removal of auto-tension type drive belts is easier when a belt tensioner wrench (No. ATE175) is used as a set.

#### Usage

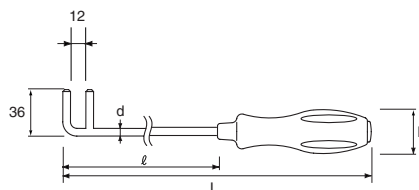
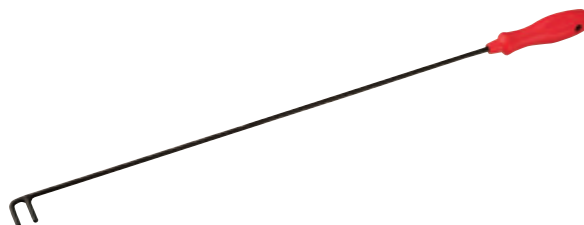
- Acts as a guide when replacing engine belts, and dealing with wiring or piping.

#### Application

- Mainly used in domestic and imported passenger vehicles where V belts and ribbed belts are common. (Belts with 7 ridges or more)

#### Characteristics

- Hooks that use rounded shafts make belt replacement easier and do not damage new belts.
- Belts that are normally difficult to replace, such as the wide and long serpentine belt, are quickly replaced.
- Due to its length (660mm), the tool is very effective in vehicles with tight engine compartments such as in the One-box vehicle type.



# Replacing timing belt

## ENGINE

### ●FREE POSITIONING WRENCH



P.223

### ●HANDY BAR



P.302

### ●FLAT TYPE EXTRA-LONG OPEN END WRENCH



P.121

## Removing belts 1

### CRANK PULLEY HOLDER

No. AE701	▼kg 3.9	📦 1
Crank pulley holder (body)	1	
Pin	2	
Set bolt for the pin (hex hole attached)	M8 Length: 25: 2	
Set bolt (hex hole attached)	M6 Length: 35-40-50-60-70-80-90: 2 of each M8 Length: 40-45-60-75-85-100: 2 of each	
Washers	M6:2 M8:4	

### A new crank pulley holding tool that can deal with various shapes

#### Usage

- Mainly for crank pulley removal operations (timing belt replacement, oil seal replacement, engine O/H operations) in automobiles (FR vehicles) with vertically placed engines. Can be used together with a crank pulley double-strength wrench to loosen the crank pulley lock bolt.

\* The crank pulley pulper manual type (AE702), or the hydraulic type (CPU13) is essential when removing the crank pulley. P.228

#### Application

- Mainly used in vehicles with vertically placed engines. Especially in Toyota JZ type/1G type, Nissan RB type/VG type/VQ type. (Excluding diesel types)
- Exclusive to the V-ribbed belt • Pulley outer diameter: φ90~180
- Where a service tap is included: fits with M6, M8

#### Characteristics

#### Easy to attach

- Simply attach the rotation claw onto the groove of the crank pulley and use the grip to tighten. (The center sliding position can be lined up when fitting the crank pulley.)

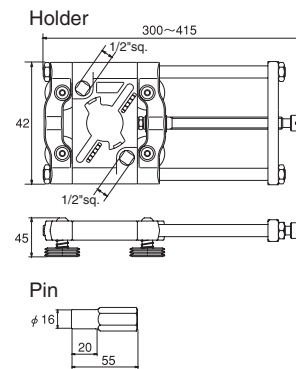
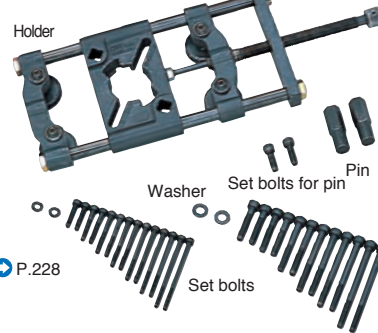
#### Thin Design! (Thickness 45mm)

- It is not necessary to remove the radiator condenser when carrying out work. (Excluding some vehicles)

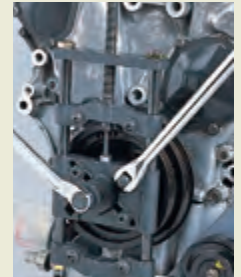
#### Replacement parts

Product name	No.	Contents	📦
Pin set	AE701 -1	Pins: 2 M8 set bolts for pins (hex hole included): length 25: 2 bolts Washer M8: 2	1
Set bolt set	-2	Set bolt (hex hole included) M6: Length: 35-40-50-60-70-80-90: 2 M8: Length: 40-45-60-75-85-100: 2 Washer M6: 2 M8: 2	1

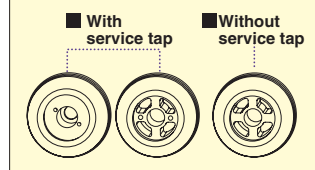
### ●CRANK PULLEY HOLDER PAT.



## Removing crank pulley 2



#### ●Applicable crank pulley shape



### CRANK PULLEY HOLD PLATE

No. CPH1	▼kg 2	📦 1
Crank Pulley Hold Plate	1	
Set Bolt	M6: Length: 30-40-50-60-70-80-90: 2 M8: Length: 40-45-60-75-85-100: 2	
Washer	M6: 2, M8: 2	
ADAPTER	M10: 2	

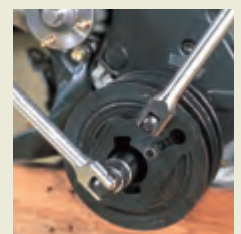
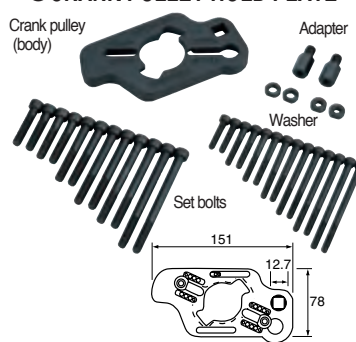
#### Purpose

- Use to hold and take out pulley: plate as fixed with service tap of crank pulley; spinner handle (1/2"sq.) is set in.
- Applicable to crank pulley with service tap.
- Prevents pulley from rotating together and enables fastening/loosening of center lock bolt.
- Usable with AE-10.

\* For removing a crank pulley, AE702 OR CPU 13 is required. P.228

Spare parts (set bolts and washers) are No. CPH128 (Crank Pulley Hold Plate Spare Set). For the details, refer to page 213 (Crank Pulley Tool No. CPHU2).

### ●CRANK PULLEY HOLD PLATE



### CRANK PULLEY LOCK BOLT WRENCH

No.	Handle Opening	Square Drive	L	W	H	▼kg	📦
AE-10	125~1,160	12.7	862	70	60	4.3	1

• Accessories

Square Drive	S37mm L80mm	Each 1 pcs.
Set Bolt	M8x1.25(Length30mm)	2 pcs.

#### Supply Square Drive Short Long

No.	L
AE-10-1	37(Short)
AE-10-2	80(Long)

#### Purpose

- Removing Crank Pulley Lock Bolt for changing Timing Belt, Crank Short, Oil Seal, etc.)

#### Application

- Crank Pulley installed car with service tap except diesel engine over 3,000cc, Toyota3F, 1FZ Type Engine, Nissan VH Type. Engine, RB26DETT Type Engine.
- Can be used on vehicles with crank pulleys that do not have service taps when used with the AE701.

#### Special Feature

- Newly developed multiplying mechanism (Double Reverse) enables to loosen lock bolts without using impact wrenches.
- Can be used without removing radiators and condensers for shorter work time.

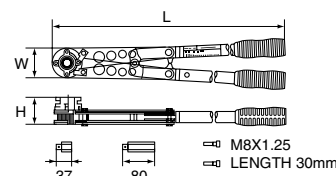
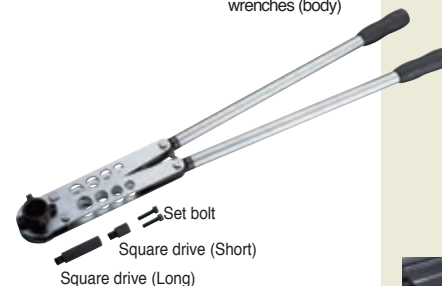
\* CPH1 or AE701 is necessary for this operation.

\* Cannot be used with AE11.

\* Replacement parts are available. Check with your dealer for details.

### ●CRANK PULLEY LOCK BOLT WRENCH

Double-powered wrenches (body)



**CAUTION** • THIS TOOL IS EXCLUSIVELY FOR LOOSENING BOLTS.

## 2 Removing the crank pulley lock bolt



Use situation (AE703)



Use situation (AE703A)

### ● CRANK PULLEY HOLD WRENCH FOR HONDA



1/2" sq.

(AE703)  
\* 24mm wrench or 1/2"sq spinner handle is necessary for this operation.



(AE703A)  
\* 1/2"sq spinner handle is necessary for this operation.

### CRANK PULLEY HOLD WRENCH

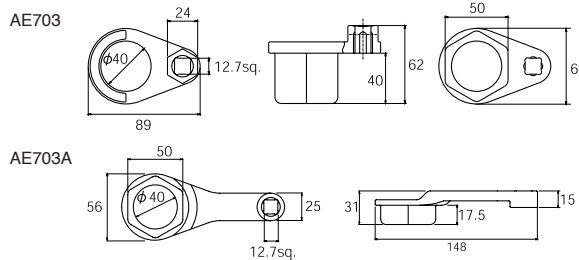
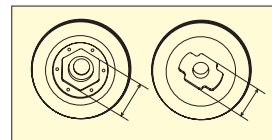
No.	▼g	📦
AE703	450	1
AE703A	400	1

#### Usage

- Crank pulley turn prevention tool for Hondas
- \* Crank pulley removal is not possible.
- Use the AE701( or the CPH1) and the AE702 (or the CPU13) or carry out crank pulley removal.
- ➡ P.227 and P.228.

#### Application

- AE703
- The crank pulley shown in the right hand diagram is a 50mm 2-faced flat type used in Honda cars.
  - \* Cannot be used on some NSX models.
- AE703A
- For Honda Life since 2003 (model JB5-JB8)
  - \* Cannot be used on some of the old model of Honda Lifes (working space: less than 30mm)



## 3 Crank pulley removal

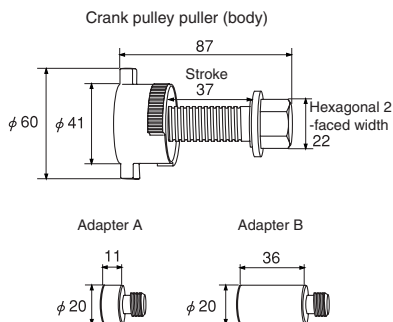


Example of AE701 + AE702 Use



Example of CPH1 + AE702 Use

### ● CRANK PULLEY PULLER (MANUAL TYPE)



### CRANK PULLEY PULLER

No. AE702	▼g 500	📦 1
Crank pulley puller (body)		1
Adapter A		1
Adapter B		1

#### Manual type crank pulley removal tool

##### Usage

- Crank pulley removal.
- \* The crank pulley holder (AE701) or the crank pulley hold plate (CPH1) is essential when removing the crank pulley. ➡ P.227
- \* The clawed crank pulley puller (AE11) cannot be used in a combination.

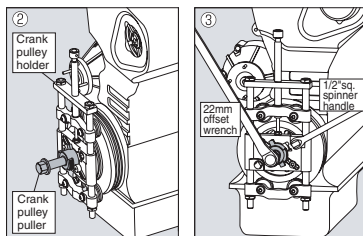
##### Characteristics

- Ideal for work in tight places due to its light weight and compactness.
- Stroke adjustment is possible due to 2 types of adapters.

##### Operating example

When a crank pulley holder (AE701) is utilized

- ① Set the crank pulley holder (AE701 or CPH1) to the crank pulley and remove the lock bolt.



- ② Select the adapter A/B combination and then fit it to the crank pulley holder.

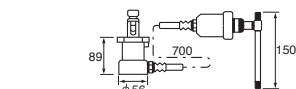
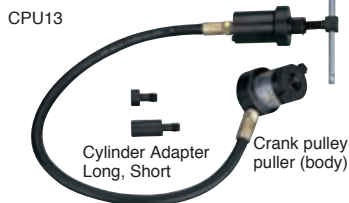
Select the adapter A/B combination according to the required crank pulley removal stroke.

- ③ Use the spinner handle to lock. Using a 22mm offset wrench or a drive tool turn the screw of the crank pulley puller and remove the crank pulley.

##### Replacement parts

Product name	No.	Contents	📦
Adapter A	AE702-1	Adapter A 1	1
Adapter B	-2	Adapter B 1	1

### ● CRANK PULLEY PULLER (HYDRAULIC TYPE)



### CRANK PULLEY PULLER

No. CPU13	▼kg 1.7	📦 1
Crank Pulley Puller	1 pcs.	
Cylinder Adapter	2 pcs.	

#### Purpose

- Pulling out crank pulley.

#### Features

- Strong power by hydraulic pressure.
- The remote control facilitates use of the tools in the limited space of engine room.
- \* For removing the crank pulley AE701 AE11 and CPH1 are required. ➡ P.227
- \* Replacement parts are available. Check with your dealer for details.

#### Service Parts CRANK PULLEY PULLER SPARE SET

No. CPU12	
Cylinder Adapter Long, Short	Each 1 pcs.



Example of CPH1 + CPU13 Use



An example of AE702 + CPU13

**CRANK PULLEY TOOL SET A**

No. ATE7A	▼kg 6.8	📦 1
<b>AE701</b> Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
<b>AE702</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

The application is of a broad variety with a low price on the standard type.

**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

**Application**

- Sets which are available with the either service taps included/excluded.

● **CRANK PULLEY TOOL SET A**



**CRANK PULLEY TOOL SET B**

No. ATE7B	▼kg 8	📦 1
<b>AE701</b> Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
<b>CPU13</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

A wide variety of easy, correct removal techniques is possible due to hydraulics.

**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, hydraulic type

**Application**

- Sets which are available with the either service taps included/excluded.

● **CRANK PULLEY TOOL SET B**



**CRANK PULLEY TOOL SET C**

No. ATE7C	▼kg 1.9	📦 1
<b>CPH1</b> Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	
<b>AE702</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1

\* Metal case is not included.

Reasonable type at a low price.

**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

**Application**

- Sets applicable for pulleys with fitted service taps.

● **CRANK PULLEY TOOL SET C**



**CRANK PULLEY TOOL**

No. CPHU2	▼kg 6	📦 1
<b>CPU13</b> Crank pulley puller (body)		1
Output cylinder adapter		2
<b>CPH1</b> Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: 14 M8: 12	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	

Metal case

**Usage**

- Crank pulley removal with the service tap fitted
- Work time is reduced, as the radiator, condenser does not need to be removed. (Some vehicles may not be included.)
- When outside of the garage, it is not necessary to turn drive tools in the narrow confines of an engine compartment making the job easier.
- Other companies do not stock the outer parts of crank pulleys. However, as the CPHU2 uses service taps, and as the torsion damper rubber does not break down, it can be used freely.
- Torque can be controlled when tightening.
- Service taps are fitted to crank pulleys of vehicles ranging from light weight to normal passenger type and small trucks. (Excluding diesel vehicles that exceed 3000cc)

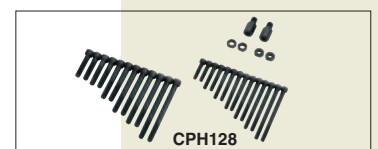
**Replacement parts: Crank pulley holder spare set**

No. CPH128	
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each
Washers	M6: 2 M8: 2
Adapter	M10: 2

● **CRANK PULLEY TOOL**

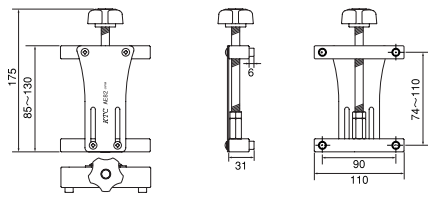
- Removing and fitting crank pulley lock nut

- Crank pulley removal



- 4 Cam pulley lock
- 5 Timing belt replacement
- 6 Fitting the crank pulley, tightening the lock bolt
- 7 Checking Torque

●CAM PULLEY LOCK TOOL



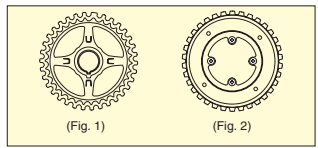
CAM PULLEY LOCK TOOL

No.	▼g	
AE82	860	

The cam pulley ensures excellent locking. It supports smooth timing belt removal.

**Usage** • This is a tool that helps hold the 2-cam pulley's position, and helps prevent slippage when removing the timing belt in DOHC gasoline engines.  
**Application** • Ranges from domestic light weight to normal passenger type vehicles with DOHC gasoline engines (FF, FR vehicles).

- As the insides of cam pulleys in some Honda and Mitsubishi vehicles are uneven, the pulley can move when tools that are in a fixed position are forced from the outside. (Fig. 1)
- It may not be possible to use this tool on some vehicles with adjustable valve timing as the shape can differ. (Fig. 2)



**Characteristics**

- It is possible to fix the cam pulley in a set position during timing belt replacement before removing the timing belt and up to the end of the operation.
- Install by the use of the knob only.
- Operating space is saved when installing/removing the timing belt as the center bolt is in an offset position.
- Is possible to be used in vehicles where there are obstacles between the 2 cam pulleys.



Usage

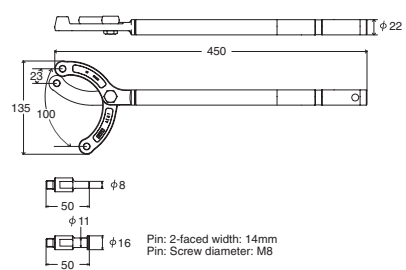
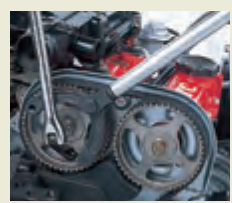
**CAUTION** • Make sure that all operators read the Owner's Operator Manual carefully before usage.

ENGINE

Disassembling, Inspecting and Installing Engine

- 1 Checking Torque

●CAM PULLEY HOLD WRENCH



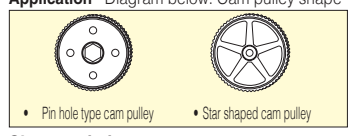
CAM PULLEY HOLD WRENCH

No. AE81	▼kg 1.1	☞1
Cam pulley hold wrench (body)	1	
Straight pin	2	
Flange fitted pin	2	

**Usage**

- Exclusive cam pulley stopper tool

**Application** Diagram below: Cam pulley shape



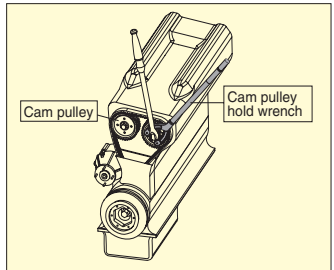
• Pin hole type cam pulley • Star shaped cam pulley

**Characteristics**

- The arm is opened/closed by a spring mechanism; this keeps constant tension on the opening action of the tool increasing safety.
- There are 2 types of stopping pins, both of them fit the 2 types of cam pulleys mentioned above.
- The grip part is knurled, is easy to grasp and power is easy to apply.

**Method of use**

- Select the correct pin (straight/flange fitted) depending on the shape of the cam pulley and then attach it to the arm.
- Adjust the cam pulley so that it touches the pin and does not turn, then using a wrench, loosen (or tighten) the holding bolt.



**Replacement parts**

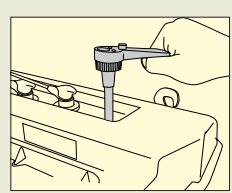
Product name	No.	Contents	☞
Straight pin	AE81-5	Straight pin: 2	1
Flanged pin	-6	Flanged pin: 2	1

**CAUTION** • Make sure that all operators read the Owner's Operator Manual carefully before usage.

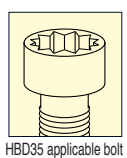
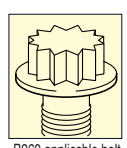
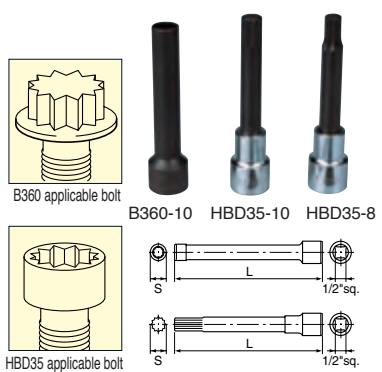
- 2 Removing Head Cover

●HEXAGONAL WRENCHES

- 3 Removing Head Bolt



●1/2"sq. CYLINDER HEAD BOLT WRENCH · SET



CYLINDER HEAD BOLT WRENCH-SET

No. HBD353	▼g 355
HBD35-8, 10	
B360-10	

No.	S	L	▼g	☞
HBD35- 8	8	100	110	5
-10	10	115	115	5
B360 -10	10	130	130	5

**Purpose**

- For fastening/loosening head bolts when removing/installing cylinder heads of engines

**CAUTION** • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

\*Please check the merchandise inventory for a product that is marked by before placing an order.



**CYLINDER HEAD BOLT SOCKET WRENCH · SET**

No. HB352	▼g300	📦 5
HB35-8, 10		



● 1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH-SET

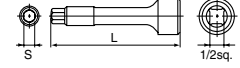
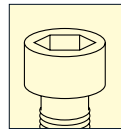
mm

No.	S	L	▼g	📦
HB35 - 8	8	80	140	5
- 8T	8	90	150	5
-10	10	105	160	5

**Purpose**

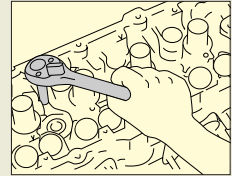
- For use on head bolt with hexagon end.

**CAUTION** • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.



- Hexagon bolt is made of special spring steel for superb durability.
- Also can be used on cap screw bolts (with hexagon hole) 8mm. & 10mm.

**3** Removing Head Bolt



**CYLINDER HEAD BOLT SOCKET WRENCH-SET**

No. B3502	▼kg 1.3	📦 1
B350-10, 12		



● 1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH-SET

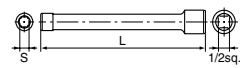
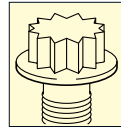
mm(12pt.)

No.	S	L	▼g	📦
B350 -10	10	190	600	5
-12	12	200	700	5

**FPurpose**

- Special wrench for removing/installing engine cylinder head bolts.

**CAUTION** • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.



- Socket part with suitable wall thickness properly treated for superb durability.

**CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET**

No. ATBP603	▼kg 1.6	📦 1
For head bolts	ABP6-14WP	
For head bolts & fly-wheels	ABP6-19WP, 22WP	



● 3/4"sq. CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET

mm(Triple Square)

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	▼g	📦
ABP6-14WP	14	22.5	38	15	140	400	5
-17WP	17	26	38	16	90	540	5
-19WP	19	29	38	16	90	550	5
-22WP	22	33	38	16	120	650	5

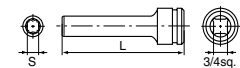
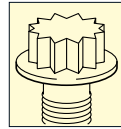
**Usage**

- This is a wrench that is exclusively designed for the removal and installation of engine cylinder head bolts and fly-wheel bolts.

**Characteristics**

- For bolts of Isuzu and Mitsubishi-fuso and fly-wheel bolts.

**CAUTION** • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.



- This 4 pcs. set can be used on both head bolts and fly-wheel bolts of Isuzu and Mitsubishi-Fuso cars.

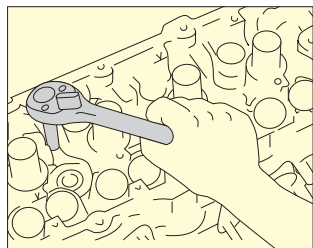
**TRIPLE SQUARE (12P) BIT SOCKET SET**

No. TBT304TS	▼g 320	📦 1
3/8"sq. Triple Square Bit Socket	BT3-M5, M6, M8, M10	
Socket Holder	EHB305	



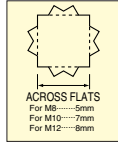
● 3/8"sq. TRIPLE SQUARE BIT SOCKET SET

**CAUTION** • Do not use power tools such as impact wrench.



### 3 Removing Head Bolt

#### ● 3/8" & 1/2"sq. TRIPLE SQUARE (12P) WRENCH



#### TRIPLE SQUARE (12P) WRENCH

No.	S	sq.	D	L	ℓ	▼g	📦
BT3-M 5	M5	9.5	17	72	43	50	10
-M 6	M6	9.5	17	72	43	51	10
-M 8	M8	3/8"	18.5	72	43	65	10
-M10	M10	3/8"	18.5	72	43	65	10
BT4-M12	M12	1/2"	22	76	40	110	10

#### Purpose

- Special wrench for special bolts with triple square holes such as head bolts, flange bolts of torsion joints, etc. of German cars.

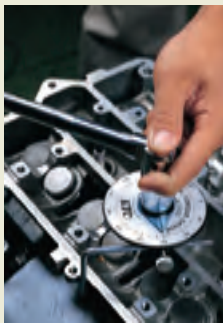


• DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

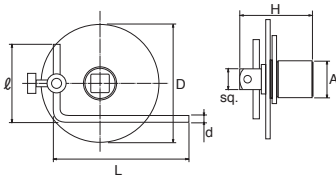
#### ■ Triple Square Replacement Bit

No.	Applicable Part No.	Size	S	S <sub>1</sub>	L
T-M5	BT3-M5	M5	6.3	3.45	52
T-M6	BT3-M6	M6	6.3	4.34	52
T-M8	BT3-M8	M8	8	5.19	52
T-M10	BT3-M10	M10	10	6.96	52

### 4 Installing and Fastening Head Bolt



#### ● ANGULAR TORQUE GAUGE



#### ANGULAR TORQUE GAUGE

No.	sq.	A	H	D	L	ℓ	d	▼g	📦
ATG30-1	1/2"	24.2	55	78.5	97	52	4.8	365	10

#### Usage

- For the fastening angle measurement of fastening bolt in plastic region (angle fastening bolt).

#### Features

- Small scale can measure in 5° increments, allowing the wide range of use for various engines of every manufacturer. (It can be used for imported cars as well as domestic.)



• Please don't tighten with a torque wrench when using this product. Torque wrench may be damaged by exceeding the set torque.

#### How to Use

1. Have the head bolt tightened by specific torque using a torque wrench.



2. Set the angular torque gauge and stop the rotation with L-shape stopper.

3. Set the gauge needle at 0.

4. Tighten up to the specified angle with a spinner handle, etc.

### 5 Torque checks

#### ● TORQUE WRENCH

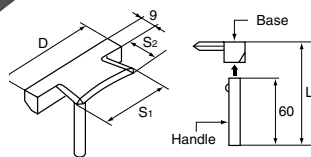
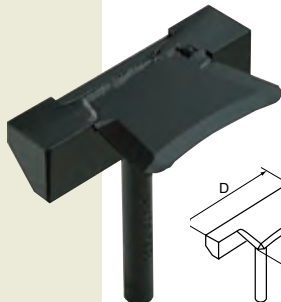


## ENGINE

## Removing oil pan

### 1 Cutting seal

#### ● OIL PAN SEAL CUTTER



#### OIL PAN SEAL CUTTER

No.	D	L	S <sub>1</sub>	S <sub>2</sub>	▼g	📦
TAG-48	70	78	48	24	180	10

#### Purpose

- Applied for removing oil pans with seal packings.

#### Special feature

- Arc shaped cutter for hitting into seal part.
- The side cutter is sharp and when it digs into the base from the side it can slide easily.
- Sharp angled(α°) side cutter for deep contact and secure operation.
- Can be used in narrow spaces without handle.



• USE ANTI-DUST GLASSES WHEN USING THIS TOOL.

### 2 Scraping Seal

#### ● CERAMIC SCRAPER

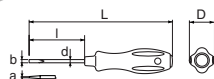
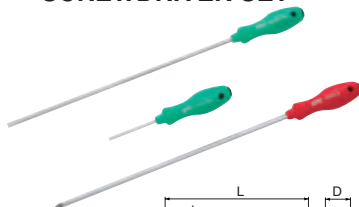


## ENGINES

## Adjustment of idling

### 1 Fastening/Loosening Adjustment Screw

#### ● CARBURETOR SCREWDRIVER SET



#### CARBURETOR SCREWDRIVER SET

No.	CD3	▼g	380	📦	5
Carbjet Screwdriver		CDZ-165			
Long Screwdriver, Flat		MDDZ-400			
Long Screwdriver, Cross		PDDZ-2			

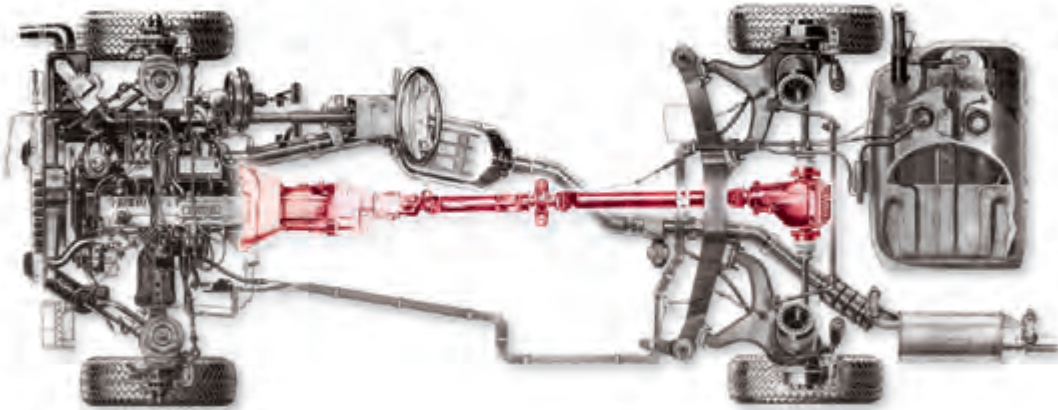
No.	Type	a	b	d	D	L	ℓ	▼g	📦
CDZ-165	Flat	0.7	3.5	3.5	27	155	60	40	5
PDDZ-2	Cross No.2	-	-	6	27	385	290	100	5
MDDZ-400	Flat	0.7	5.5	5.5	27	385	290	90	5

- For adjusting carburetors.



• DO NOT USE THESE TOOLS WITH ELECTRIFIED OBJECTS.  
• DO NOT USE A TOOL FOR PURPOSES OTHER THAN ADJUSTING CARBURETORS.

# Driveline System Mechanism

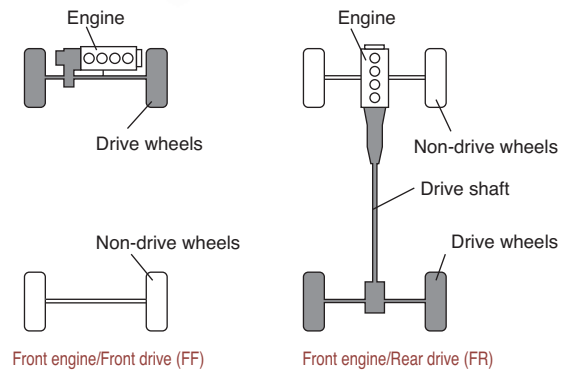


MECHANISM 1

## FF model and FR model

As there are many types of drive mechanisms available in vehicles today, the FF method and the FR method are representative of most of these. Engines that are placed at the front of the chassis and that have the main drive going through the front wheels are known as FF (Front Engine Front Drive). Engines that are placed on the front side of the chassis and have the drive going through the rear wheels are known as FR (Front Engine Rear Drive).

As FR types have the steering mechanism and the drive mechanism separate, the system is easy to work with. However, a drive shaft is necessary to transfer the power from the engine to the rear wheels. Therefore, the drive shaft protrudes from the inner center of the vehicle. On the other hand, FF systems do not need a drive shaft and therefore have the merit of having the inner center of the vehicle free. However, as the steering mechanism and the drive mechanism have to be placed together, the system is more complicated.



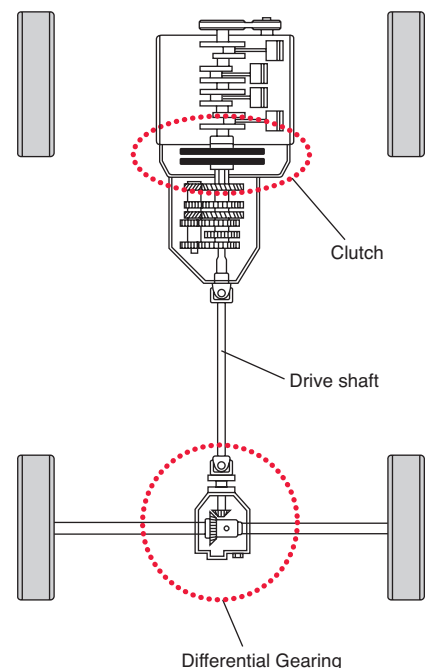
MECHANISM 2

## Clutch

If the engine power and the transmission are connected directly, there is a large burden placed on the engine on starting.

Therefore, at the time of engine start, it is necessary to sever the relation with the transmission. Another way of looking at it is, the engine would stop if the effort of starting the engine were immediately placed on the transmission. It is here that the load is gradually placed on the transmission through a necessary mechanism known as a clutch.

The clutch, or the clutch plate (clutch disc) is fixed to the engine's fly-wheel where it transfers and takes away power from the drive system as it is activated on and off.



MECHANISM 3

## Differential Gearing

The differential gearing plays the role of converting side directional rotation power towards forward motion, in other words, converting the power to forward motion when power is transferred to the rear wheels, it also helps in reducing speed and maximizing torque.

It also plays the role of adjusting the wheel speed on each side when driving around corners.

DRIVELINE

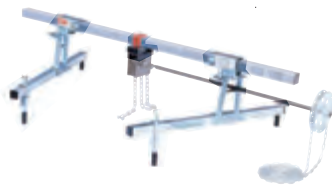
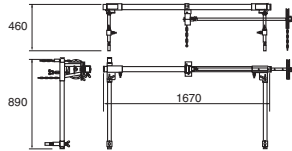
Transmission removal and attachment

1 Hanging Engine

ENGINE HANGER



AE901



AE901K: Slide foot, Slide bar, Height adjustment foot x 2, Lifting tools, Connection plate x 1, and Installation bolts x 8

ENGINE HANGER FOR SHOCK ABSORBING BODY

No.	Capacity (Max. Load)	Winch weight ▼kg	▼kg	☞
AE901	2,450N(250kgf)	6	16	1

Purpose

- Dedicated tool for lifting up and hanging an automobile engine block.

Applications

- Engine block of FF vehicles from mini-cars to medium sized passenger cars (not applicable to the engine of trucks, vans and motorcycles).
- Max usable load: Less than 2,450N (250kgf)

Characteristics

- In recent years, many vehicles have adopted impact absorbent bodies.
- Fenders have been designed so they can be adjusted back to be parallel with the ground even after they have been bent out of place in an accident.
- The tool has been designed to be able to deal with vehicles that have short fender ribs, and fenders that cannot be set correctly which conventional types have not been able to cope with to date.
- The tool can hold the engine in position whilst being able to move the chassis and also lift it up and down.
- The bridge can be set on an angle, and when carrying out belt replacement, the tool can be used to move the bridge from above the belt.
- This winch employs a rear type directional method. The drive area can be switched easily between the right and left sides that help movements to the desired position.
- Even with the chassis in a raised position, the winch can be used temporarily outside the garage by the use of a chain wheel.

\* This tool cannot be used on vehicles with resin set points.

\* Replacement parts are available. Check with your dealer for details.

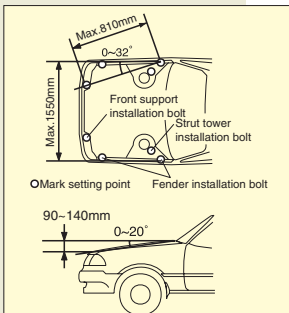
Applicable details

Engine mass	Max usable load=2,450N (250kgf)
Chassis width	Max. slide width of bridge=1,550mm
Length of engine compartment	Foot max. slide width=810mm
Width of engine compartment area	Adjustment angle of slide bar=32° (To the side)
Difference between height and depth of engine compartment	Height adjustment foot retract/extension length=50mm
Incline angle of fender	Within 20°
Max. outer diameter of set point bolts	17.5mm
Max. height of set point bolts	20mm

Engine mechanical hanger optional kit (Kit corresponding to the previous model)

No.	▼kg
AE901K	8.5

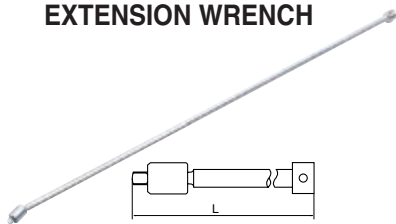
- An optional kit designed for use on previous engine machine hangers (ATH10) bridge (bar), and one that work with impact absorbent bodies.



This product is available as a set of 4 of each vehicle fender installation bolt, front support installation bolt, and strut tower installation bolt. These sets are known as set-points.

2 Removing/Installing Transmission

3/8"•1/2"sq. NEW FLEX EXTENSION WRENCH



NEW FLEX EXTENSION WRENCH

No.	Square Drive	L	▼kg	☞
BEF3020-950	Indents 1/2"sq. Notches 3/8"sq.	950	1.0	5

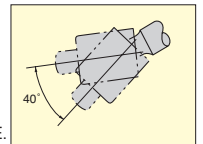
Purpose

- Removing/installing of clutch housing bolts.

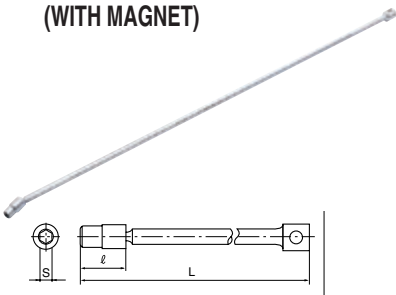
Features

- Tip is 3/8"sq. with flexible head.
- Turns smoothly within the range of 40 degrees.

CAUTION - DO NOT EXTEND THESE TOOLS WITH 2 PCS. OR MORE.



1/2"sq. NEW FLEX WRENCH (WITH MAGNET)



NEW FLEX WRENCH (WITH MAGNET)

No.	S	Socket (ℓ)	L	▼kg	☞
BEF31-12H	12	39	950	1.0	5
-14H	14	41	955	1.1	5
-17H	17	44	955	1.1	5

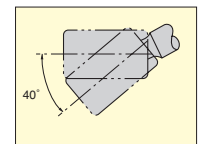
Purpose

- Suitable for disassembling/assembling transmission and clutches.
- Also convenient for dismounting/mounting manifolds or diff-flanges.

Features

- Can be used as T Shape wrench, too.
- Turns smoothly within the range of 40 degrees.

CAUTION - DO NOT EXTEND THESE TOOLS WITH 2 PCS. OR MORE.

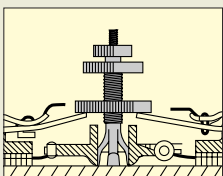


DRIVELINE

Disassembling Clutch

1 Installing Clutch Disc

CLUTCH ALIGNING TOOL

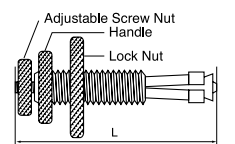


CLUTCH ALIGNING TOOL

No.	L	Applicable diameter	▼g	☞
CGP-1625	132	φ 16~25	120	1

- Innovative Clutch Aligning tool.
- It can be used on the work table.
- Just install the assembled unit on the car. Easy and quick operation.
- Made of special plastic for light and durable body.
- Covers almost all types of cars.

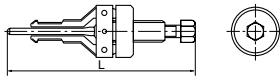
\* Not for use on cars.



**PILOT BEARING & BUSH PULLER**

No.	Applicable Size	L	▼g	📦
PBU-1219	Inner Dia. φ 12~19	145	215	10

- Purpose**
- Light and compact body for easy handling.
- Features**
- Special claws offer firm gripping.
  - Can be operated on the car.
  - Wide application.
  - \* Replacement parts are available. Check with your dealer for details.

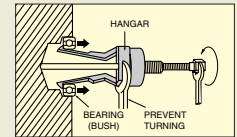


**●PILOT BEARING & BUSH PULLER**



Removing Pilot Bearing

**2**



**Transmission/differential oil replacement**

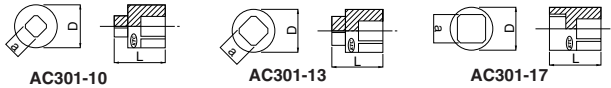
**DRIVELINE**

**DRAIN PLUG SOCKET • SET (3pcs.)**

No.	ATC3013	▼g	245	📦	1
1/2"sq. Drain plug socket		AC301-10,13,17			

No.	a	D	L	▼g	📦
AC301-10	10.5	26.5	31	70	10
-13	13.1	26.5	31	85	10
-17	17.3	26.5	32	90	10

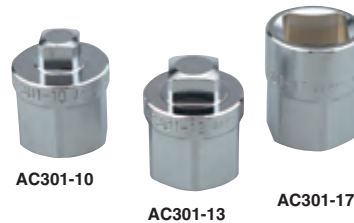
- Usage**
- A tool exclusively designed for tightening and loosening of drain plugs (filler) on transmissions, and differentials for Nissan and Subaru vehicles.
- Application**
- Mainly designed for Nissan FF types manual transmissions (AC301-10)
  - Mainly designed for Nissan manual transmissions, rear differentials, Subaru 4WD rear differentials (AC301-13)
  - Mainly designed for former Nissan FR types manual transmissions (AC301-17)
- Characteristics**
- By employing a 1/2" sq. drive, the tools can cope with drain plugs that have been tightened under heavy torque.
  - Due to its hexagonal shape, the tool can be used with 24mm offset wrenches.



1/2" sq.

**●DRAIN PLUG SOCKET • SET (3pcs.)**

**1**



**3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH**

No.	S	D	L	ℓ	▼g	📦
AE503-10	10	18	38	8	50	5

- 38mm length body enable to operate in a narrow space.
- Can be used for hexagon socket head type of TOYOTA and NISSAN.
- Less oscillation and stable operation.

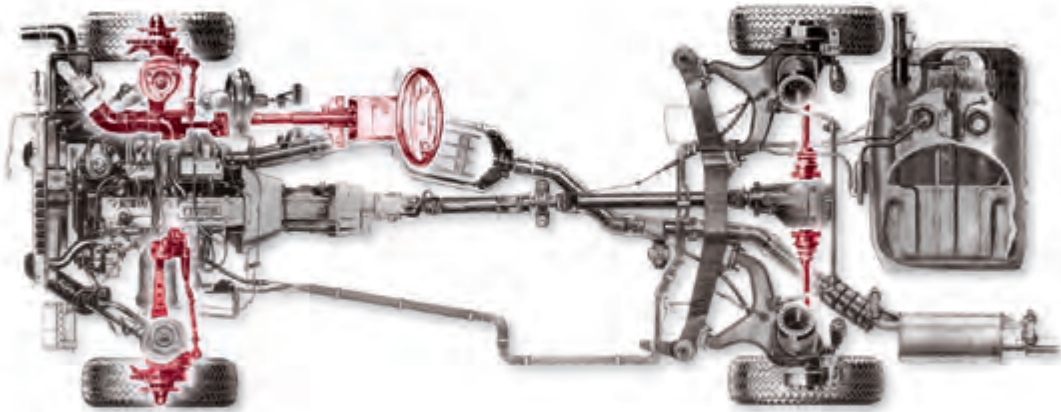


3/8" sq.

**●3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH**



# Steering System Mechanism

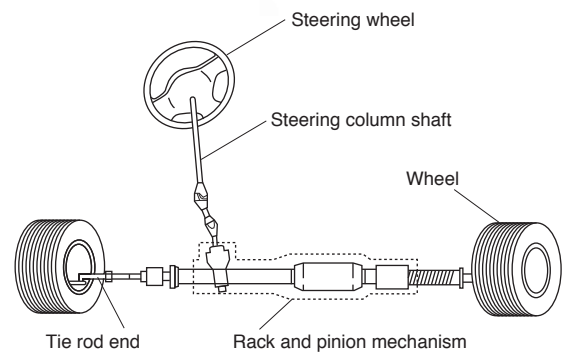


### MECHANISM 1

## Steering system makeup

By operating the steering wheel, the wheel direction is changed making the vehicle change direction. In other words, the steering system is a steering device. The fundamental mechanism allows the vehicle's direction to be changed when movement is transferred through the steering wheel gear box from the handle to the wheels.

There are many types of steering gear mechanisms available for steering systems. However, presently the main type is a combination of a rack and pinion gear. The rack gear connected at both ends by a tie rod is also known as the rack and pin method. However, because a large amount of power is required to change wheel direction, most vehicles now employ power steering mechanisms, which assist through hydraulics, and motorized mechanisms.



### MECHANISM 2

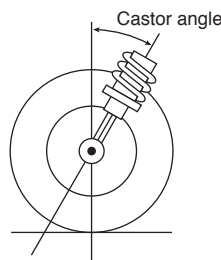
## Wheel alignment

The wheels are fitted on a slight angle (not horizontal or square) to assist steering and drivability, and to keep the vehicle traveling in a straight line. This adjustment is called "wheel alignment" and is made up of 4 elements - caster, camber, toe, king-pin angle.

### Castor

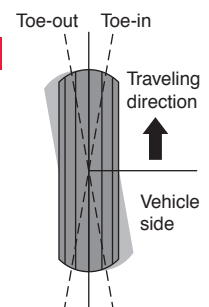
The front wheels are fitted off the axle on an angle, just as castors are fitted on the legs of chairs.

These are known as castors, by being set on an angle, help keep the vehicle in a constant aligned state.



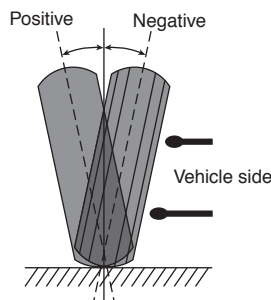
### Toe

Looking at the wheel angle from above, toe-in is known as when the vehicle's tracking moves inwards, and toe-out is known as when the tracking moves outwards. When the camber is set to positive, the tendency for the wheels to head outwards will be eliminated and the vehicle's forward tracking will improve.



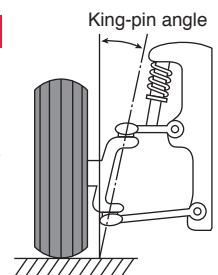
### Camber

The angle seen from the front that is made from the perpendicular line opposed to the ground, and the wheel incline, is known as the camber angle. A negative camber is where the bottom is open, and a positive camber is where the top is open. This affects the vehicle's operation, stability and cornering when turning.



### King-pin angle

When looking at the vehicle from the front, the king-pin axle faces towards the inside of the chassis leaning upwards. The angle that is perpendicular makes a line from the slant and the surface is known as the "king-pin angle". The angle that it is set to keeps the steering wheel in a straight position and also makes the steering return to the straight position after it has been turned.



#### TIE ROD LOCK NUT WRENCH

No.	D	T1	T2	T3	L	ℓ	▽g	☞
AS701	66	15	10	17	220	95	500	5

#### Usage

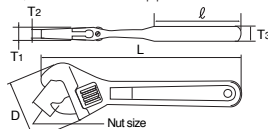
- Tightening and loosening Tie-rod end lock nuts in automobiles (light to normal automobiles)
- Side slip work at times of inspection and tire replacement.
- Rack boots replacement work

#### Application

- Hexagonal, 2-faced 17~24mm width lock nuts for tie-rod ends (covers most domestically made light~normal sized automobiles).

#### Characteristics

- The wrench is designed to grip the angles of the nut firmly and can loosen or tighten nuts without slipping.
- Even when a large amount of force is applied, the user's hand will not slip and injuries will not occur thanks to the width of the grip.
- The length of the tools means it does not become obstructed when the vehicle's steering wheels are at full rotate. This means that the operation can be carried out without removing the tires. (Photo 1)
- As their measurements are provided, the size of the applicable nut can be selected in advance.



#### ●TIE ROD LOCK NUT WRENCH



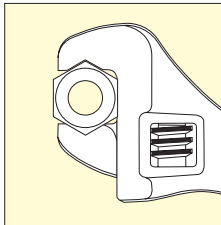
Tightening and loosening Tie-rod end lock nuts

# 1



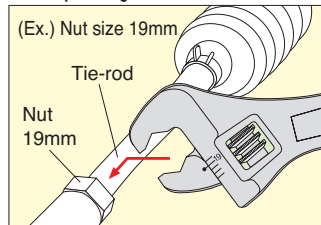
(Photo 1)

#### Holds the nut firmly



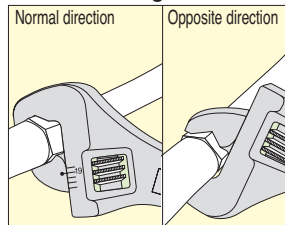
This wrench provides effective nut tightening / loosening without slippage. The shape of the wrench holds the angle of the nut.

#### The simple design of the set is ideal for nut



As the nut size has been set, it can be easily removed without obstructing the tie-rod.

#### The head is angled



As the head is angled it allows for both operating directions as required.

#### SIDE SLIP BOARD SET

No. ATG92	▽kg 31.5	☞ 1(2 Cartons)
Side slip board	AG901	
Step Board	AG902	

#### ●Side slip board

No. AG901	▽kg 21.5	☞ 1
Main body	×1	
Slope for side slip board	×2	

#### ●Step Board

No. AG902	▽kg 10	☞ 1
Main body	×1	
Slope for side slip board	×2 Bolts with hexagonal holes (M5 ×10mm)×2	

#### Characteristics

- Easy use without the need for heavy setting.
- The small and light design allows easy maneuverability.
- A separate type is available for vehicles with wider chassis.
- As the length is short the tool can be set up in tight spaces.
- As the height is low (28mm), vehicles can move on and off easily with slope.
- The displayed value remains at the maximum value.
- The needle can reset back to 0 easily by hand.
- The display range is a wide scale 0~20mm/m for both IN/OUT and is capable of handling imported vehicles as well.



Example of use No. ATG92

#### Usage

- This is a tester that easily reads the amount the vehicle is pulling to the side (side slip), the vehicle's front wheel toe-in and the balance of the camber by simply passing the front wheels of the vehicle over the side-slip board.

#### Application

- Light vehicles to 2 ton class freight trucks
- Vehicles with tires that have a width of 280mm or less

#### Specs.

- \* Weight measure on one side. The weight is shown within the brackets.

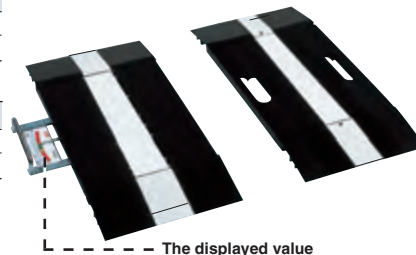
Wheel load tolerance*	750kg (Weight 1500kg)
Display range	Both IN · OUT measurements are 0~20 (mm/m) (Minimum increments of 1mm/m)
Display method	Analog, by needle (1)
Type	Left/Right separate

\* This product is not a vehicle tester for fitness certificate checks.

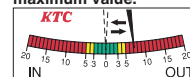
- Replacement parts are available
- Check with your dealer for details.

#### ●SIDE SLIP BOARD SET

Easy checks before vehicle fitness certificate inspections. Fast check, Side slip



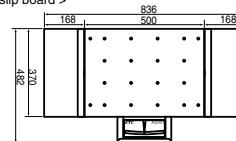
The displayed value remains at the maximum value.



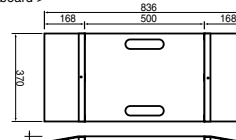
The needle can reset back to 0 easily by hand.

The display range is a wide scale 0~20mm/m for both IN/OUT and is capable of handling imported vehicles as well.





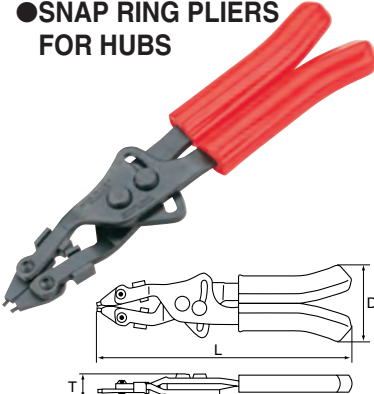

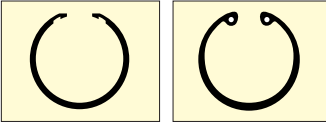
< Side slip board >

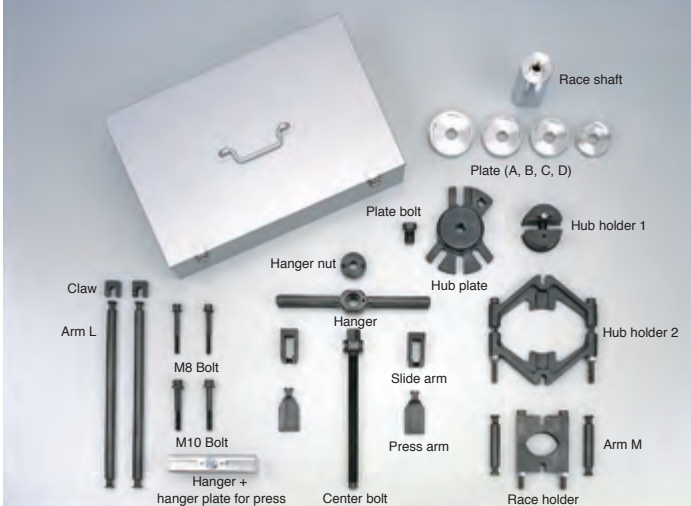


< Step board >



# STEERING Axle disassembling/assembling

1	Wheel removal	<b>●WHEEL CAP WRENCH</b>  P.255															
	① Wheel cap removal ② Wheel nut removal	<b>●IMPACT WRENCH</b>	<b>●WHEEL NUT SOCKET FOR IMPACT WRENCH</b>	<b>●CROSS RIM WRENCH</b>	<b>●OTHER TOOLS</b>												
2	Hub nut removal	<b>●LOCK NUT CHISEL</b>  P.241	<b>●SOCKET</b>	<b>●OTHER TOOLS</b>													
3	Disc caliper removal	<b>●SOCKET</b> <b>●OTHER TOOLS</b>															
4	Tie-rod separation	<b>●TIE-ROD END SEPARATOR</b>  P.240	<b>●BALL JOINT SEPARATOR</b>  P.240	<b>●BOX END WRENCH</b>	<b>●SPINNER HANDLE</b>												
		<b>●PLASTIC HAMMER</b>															
5	Removing the axle assy	<b>●SNAP RING PLIERS FOR HUBS</b>															
6	Snap ring removal		<table border="1"> <thead> <tr> <th>No.</th> <th>D</th> <th>T</th> <th>L</th> <th>▼g</th> <th></th> </tr> </thead> <tbody> <tr> <td>AS307</td> <td>58.5</td> <td>18.2</td> <td>228</td> <td>310</td> <td>5</td> </tr> </tbody> </table>			No.	D	T	L	▼g		AS307	58.5	18.2	228	310	5
			No.	D	T	L	▼g										
AS307	58.5	18.2	228	310	5												
	<b>Usage</b> • Installing and removing the snap ring used in the hubs of vehicles. <b>Application</b> • The open range of the mouth of the snap ring pliers is min. 10mm~max. 36mm <b>Characteristics</b> • Employs a non-stepped, automatic locking device. Can be locked to the desired position. • The lock can be released easily from the handle. • Only the claw can be easily replaced. • All models, except the hole fitted snap ring type, can deal with notched type rings designed for certain models (Toyota).																
<table border="1"> <thead> <tr> <th>No.</th> <th>Contents</th> </tr> </thead> <tbody> <tr> <td>AS3072</td> <td>Claw R/L 1, Installation screws 2</td> </tr> </tbody> </table>			No.	Contents	AS3072	Claw R/L 1, Installation screws 2											
No.	Contents																
AS3072	Claw R/L 1, Installation screws 2																

7	Removal/installation of the axle assy.	<b>●MULTI PULLER</b> <b>All axles can be disassembled and assembled with this set.</b>	<b>Usage</b> • An exclusive tool designed for vehicle axle assembling/ disassembling, steering wheel diff-companion flange mission bearing & gear removal, and also a range of bearing & gear removal.																																					
		<table border="1"> <thead> <tr> <th>Axle</th> <th>Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings</th> </tr> </thead> <tbody> <tr> <td>Steering</td> <td>Removing the steering wheel</td> </tr> <tr> <td>Differential</td> <td>Removing the companion flange</td> </tr> <tr> <td>Transmission</td> <td>Removing bearings and gears</td> </tr> <tr> <td>Others</td> <td>Removing various types of bearings and gears</td> </tr> </tbody> </table>		Axle	Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings	Steering	Removing the steering wheel	Differential	Removing the companion flange	Transmission	Removing bearings and gears	Others	Removing various types of bearings and gears																											
Axle	Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings																																							
Steering	Removing the steering wheel																																							
Differential	Removing the companion flange																																							
Transmission	Removing bearings and gears																																							
Others	Removing various types of bearings and gears																																							
<table border="1"> <thead> <tr> <th>Application</th> </tr> </thead> <tbody> <tr> <td>• Mainly used for the axles of light to normal FF vehicles</td> </tr> <tr> <td>• Applicable for steering wheels, diff-companion flanges, transmission bearings and gears in light to normal vehicles.</td> </tr> </tbody> </table>		Application	• Mainly used for the axles of light to normal FF vehicles	• Applicable for steering wheels, diff-companion flanges, transmission bearings and gears in light to normal vehicles.																																				
Application																																								
• Mainly used for the axles of light to normal FF vehicles																																								
• Applicable for steering wheels, diff-companion flanges, transmission bearings and gears in light to normal vehicles.																																								
<table border="1"> <thead> <tr> <th>Maximum weight when in use</th> <td>19,600 N (2 t)</td> </tr> <tr> <th>Hub bolts</th> <td>4~5 Holes</td> </tr> <tr> <th>Wheel bearing diameter</th> <td>φ 64~ φ 84</td> </tr> <tr> <th>Bearing race diameter</th> <td>φ 47~ φ 63</td> </tr> <tr> <th>Hub holder 1</th> <td>φ 68~84 mm</td> </tr> <tr> <th>Hub holder 2</th> <td>φ 76~106 mm</td> </tr> </thead> </table>		Maximum weight when in use	19,600 N (2 t)	Hub bolts	4~5 Holes	Wheel bearing diameter	φ 64~ φ 84	Bearing race diameter	φ 47~ φ 63	Hub holder 1	φ 68~84 mm	Hub holder 2	φ 76~106 mm																											
Maximum weight when in use	19,600 N (2 t)																																							
Hub bolts	4~5 Holes																																							
Wheel bearing diameter	φ 64~ φ 84																																							
Bearing race diameter	φ 47~ φ 63																																							
Hub holder 1	φ 68~84 mm																																							
Hub holder 2	φ 76~106 mm																																							
<b>Characteristics</b> • The axle can be dismantled and refitted using 1 set. • Is applicable for hub bearings that are attached to either the inner or outer sides. • A hydraulic press can be used making operations both easy and fast. • The removal/installation of the arms is carried out by a one-touch set ball type system. • The center bolt is fitted with a bearing, which makes for a light drive torque. • Is applicable to FR and 4WD rear vehicles, as well as FF axles. • Has a varied use on the steering wheel, differential companion flange, transmission bearing and gearing, as well as the axle. • Is possible for use on the removal of other bearings and gearing from other devices because of interchangeable parts.		<b>Multi puller</b> <table border="1"> <thead> <tr> <th>No. AS301</th> <th>▼kg 17</th> </tr> </thead> <tbody> <tr> <td>Center bolt assy</td> <td>Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)</td> </tr> <tr> <td>Hanger</td> <td>270 × 38 × 37 mm</td> </tr> <tr> <td>Slide arm</td> <td>60.5 × 30 × 20 mm</td> </tr> <tr> <td>Arm M</td> <td>φ 16 × 105 mm</td> </tr> <tr> <td>Hub plate</td> <td>φ 154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)</td> </tr> <tr> <td>Hub holder 1 assy.</td> <td>φ 70 × 34 mm(Wing bolt (M6) inc.)</td> </tr> <tr> <td>Hub holder 2 assy.</td> <td>190/190 mm(Hexagonal adjustment bolt (M10) with hole inc.)</td> </tr> <tr> <td>Race shaft</td> <td>φ 55 × 114 mm(Screw: M18 × 2.0)</td> </tr> <tr> <td>Plate (4 types)</td> <td>A(φ 79 × 15) B(φ 71 × 15) C(φ 67 × 15) D(φ 60 × 15) 1 each</td> </tr> <tr> <td>Hanger assy. for press</td> <td>150 × 50 × 25 mm(Hexagonal bolt (M10) + washer inc.)</td> </tr> <tr> <td>Press arm</td> <td>φ 16 × 75 × 35 mm</td> </tr> <tr> <td>Hanger nut</td> <td>φ 45 × 18mm(Screw: M18 × 2.0)</td> </tr> <tr> <td>Race holder assy.</td> <td>90 × 140 mm(Hexagonal adjustment bolt (M10) with hole inc.)</td> </tr> <tr> <td>Plate bolt</td> <td>Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)</td> </tr> <tr> <td>Arm L</td> <td>φ 16 × 330 mm</td> </tr> <tr> <td>Claw</td> <td>27 × 25 × 12 mm</td> </tr> <tr> <td>M8 Bolt</td> <td>Bolts with hexagonal holes (with washer) × 100 mm</td> </tr> <tr> <td>M10 Bolt</td> <td>M10 hexagonal bolt with hole for M10 (with washer) × 100 mm</td> </tr> </tbody> </table>	No. AS301	▼kg 17	Center bolt assy	Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)	Hanger	270 × 38 × 37 mm	Slide arm	60.5 × 30 × 20 mm	Arm M	φ 16 × 105 mm	Hub plate	φ 154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)	Hub holder 1 assy.	φ 70 × 34 mm(Wing bolt (M6) inc.)	Hub holder 2 assy.	190/190 mm(Hexagonal adjustment bolt (M10) with hole inc.)	Race shaft	φ 55 × 114 mm(Screw: M18 × 2.0)	Plate (4 types)	A(φ 79 × 15) B(φ 71 × 15) C(φ 67 × 15) D(φ 60 × 15) 1 each	Hanger assy. for press	150 × 50 × 25 mm(Hexagonal bolt (M10) + washer inc.)	Press arm	φ 16 × 75 × 35 mm	Hanger nut	φ 45 × 18mm(Screw: M18 × 2.0)	Race holder assy.	90 × 140 mm(Hexagonal adjustment bolt (M10) with hole inc.)	Plate bolt	Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)	Arm L	φ 16 × 330 mm	Claw	27 × 25 × 12 mm	M8 Bolt	Bolts with hexagonal holes (with washer) × 100 mm	M10 Bolt	M10 hexagonal bolt with hole for M10 (with washer) × 100 mm
No. AS301	▼kg 17																																							
Center bolt assy	Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)																																							
Hanger	270 × 38 × 37 mm																																							
Slide arm	60.5 × 30 × 20 mm																																							
Arm M	φ 16 × 105 mm																																							
Hub plate	φ 154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)																																							
Hub holder 1 assy.	φ 70 × 34 mm(Wing bolt (M6) inc.)																																							
Hub holder 2 assy.	190/190 mm(Hexagonal adjustment bolt (M10) with hole inc.)																																							
Race shaft	φ 55 × 114 mm(Screw: M18 × 2.0)																																							
Plate (4 types)	A(φ 79 × 15) B(φ 71 × 15) C(φ 67 × 15) D(φ 60 × 15) 1 each																																							
Hanger assy. for press	150 × 50 × 25 mm(Hexagonal bolt (M10) + washer inc.)																																							
Press arm	φ 16 × 75 × 35 mm																																							
Hanger nut	φ 45 × 18mm(Screw: M18 × 2.0)																																							
Race holder assy.	90 × 140 mm(Hexagonal adjustment bolt (M10) with hole inc.)																																							
Plate bolt	Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)																																							
Arm L	φ 16 × 330 mm																																							
Claw	27 × 25 × 12 mm																																							
M8 Bolt	Bolts with hexagonal holes (with washer) × 100 mm																																							
M10 Bolt	M10 hexagonal bolt with hole for M10 (with washer) × 100 mm																																							

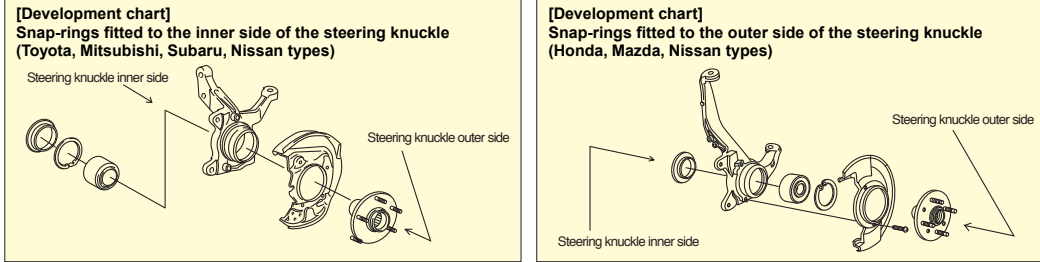
\* Replacement parts are available. Check with your dealer for details.



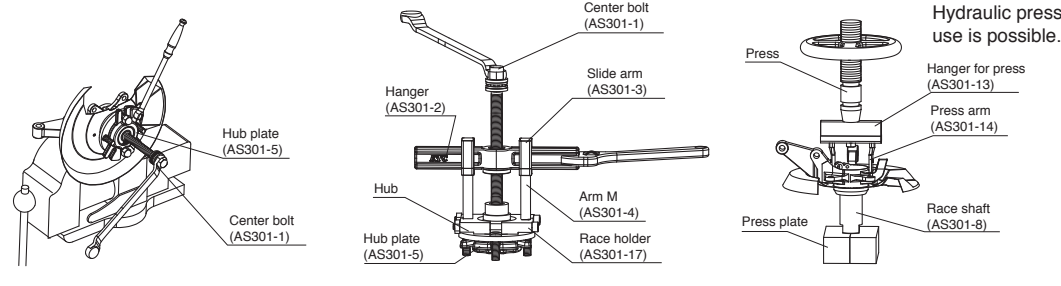
●Ex. Multi puller operation: The following operations are possible by the multi puller.

Removal/installation of the axle assy. **7**

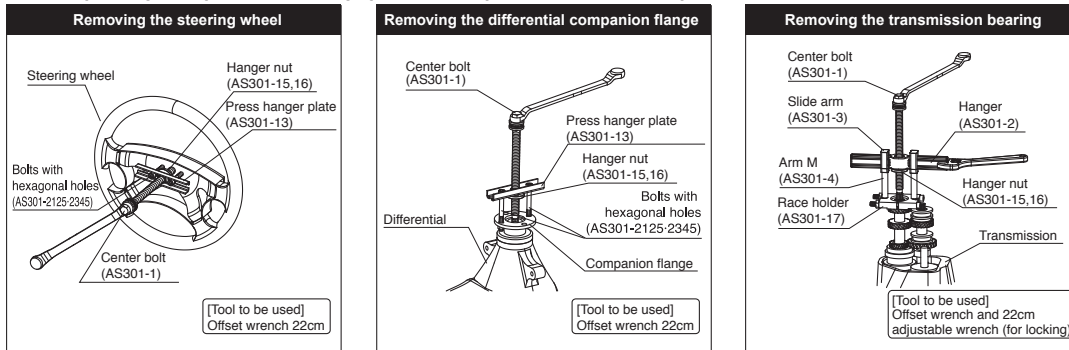
1. Hub removal/installation, Inner race removal/installation, Bearing removal/installation **1 set compatible for multiple makers.**



① Hub removal/installation example    ② Inner race removal/installation example    ③ Bearing removal/installation example



2. Other operating example: The following operations are possible with the multi puller.



Replacement parts

Center bolt Assy. No. AS301-1 Quantity 1 M18 × 2 screws, Full length : 280mm, Hexagonal 2-faced width: 22mm	Race shaft No. AS301-8 Quantity 1 M18 × 2 Screw, φ55 × 114mm	Press arm No. AS301-14 Quantity 2 16 × 75 × 35mm	Bolt set for M8 No. AS301-2125 Quantity 2 M8 hex hole bolt full length 100mm
Hanger No. AS301-2 Quantity 1 270 × 38 × 37mm	Plate A No. AS301-9 Quantity 1 φ79 × 15	Hanger nut No. AS301-15 Quantity 1 M18 × 2 Screw, φ45 × 18mm	Bolt set for M10 No. AS301-2345 Quantity 2 M10 hex hole bolt full length 100mm
Slide arm No. AS301-3 Quantity 2 61 × 30 × 20mm	Plate B No. AS301-10 Quantity 1 φ71 × 15	Hex hole bolt for the hanger nut No. AS301-16 Quantity 2 M5 × 10mm	
Arm M No. AS301-4 Quantity 2 φ16 × 105mm	Plate C No. AS301-11 Quantity 1 φ67 × 15	Race holder Assy. No. AS301-17 Quantity 1 90 × 140mm, M10 hex hole bolt (hex nut) included	
Hub plate No. AS301-5 Quantity 1 Insertion angle 1/2"sq. M18 × 2Screw, φ154 × 24mm	Plate D No. AS301-12 Quantity 1 φ60 × 15mm	Plate bolt No. AS301-18 Quantity 1 M18 × 2 screws, Full length: 34mm, Hexagonal 2-faced width: 22mm	
Hub holder 1 Assy. No. AS301-6 Quantity 1 φ70 × 34mm, Wing bolt M6 included	Hanger Assy. for pressing No. AS301-13 Quantity 1 150 × 64 × 31mm, M10 hex bolt (washer) included	Arm L No. AS301-19 Quantity 2 φ16 × 330mm	
Hub holder 2 Assy. No. AS301-7 Quantity 1 190 × 190mm, M10 hex hole bolt (hex nut) included		Claw Assy. No. AS301-20 Quantity 2 27 × 25 × 12mm	

The equipping of the axle assy. to the chassis **8**

●IMPACT WRENCH    ●WHEEL NUT SOCKET FOR IMPACT WRENCH    ●OTHER TOOLS    ●TORQUE WRENCH SET FOR THE WHEEL NUT

Attaching the wheel **9**

- ①Attaching the wheel nut
- ②Checking torque

\*Please check the merchandise inventory for a product that is marked by before placing an order.

1.Removing wheel→2.Removing tie rod→3.Removing pitman arm→4.Removing lock nut→5.Separating & removing drive shaft & hub→6.Disassembling/Installing drive shaft band→7.The attaching of the drive shaft to the chassis→8.Attaching the wheel

STEERING

Drive shaft disassembling/assembling

1 Removing wheel  
① Removing Wheel Cap

① Removing Wheel Nuts

● WHEEL CAP WRENCH



➔ P.254

● ALUMINUM WHEEL CENTER CAP WRENCH



➔ P.254

● OTHER TOOLS

● IMPACT WRENCH



➔ P.200

● WHEEL NUT SOCKET FOR IMPACT WRENCH



➔ P.256

● CROSS RIM WRENCH



➔ P.134

● OTHER TOOLS

2 Removing tie rod



● TIE ROD END SEPARATOR (OFFSET TYPE)



TIE ROD END SEPARATOR

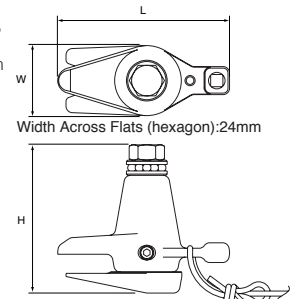
No.	L	W	H	▼kg	📦
AS201	135	55	116	1.6	1

Purpose

- Separating tie rod end.

Features

- Tough! Power increased!
  - Rated output power.15kN(1.5t), maximum power, 30kN(3t)
  - Applicable to larger output power compared with former model (BJU-1945).
- High Durability Design
  - Durability enhanced by offset shape.
- Fits various vehicle models
  - Range of opening: 16mm-50mm
  - Applicable tie rod end: from mini cars to large passenger cars (3L)
- Easy operation raises work efficiency.
  - Use of thrust bolt alone enables easy installation and removal of tie rod end.
  - Smooth job using with a drive tool.
  - Square drive (3/8"sq.) adopted. Can hold counterforce of driving tool.



Application Table

Object		Models	Mini Cars	Compact Cars
Tie Rod End			●	●
Suspension	Upper		●	△
	Lower		×	×



● BALL JOINT SEPARATOR (OFFSET TYPE)

PAT. P



BALL JOINT SEPARATOR (OFFSET TYPE)

No.	L	W	H	▼kg	📦
AS202A	165	70	160~200	3.0	1

Application Table

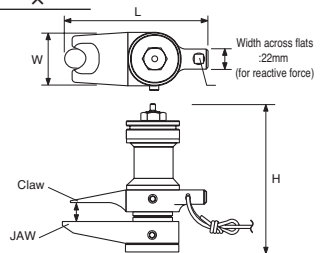
Object		Models	Mini Cars	Compact Cars
Tie Rod End			●	●
Suspension	Upper		●	●
	Lower		●	×

Purpose

- Separating ball joint.

Features

- Study design of the rated output, 2.5t
- Use of thrust bolt alone permits removal and pulling out of rod end.
- Smooth job using with a drive tool.
- Square drive (3/8"sq.) used. Can hold counterforce of driving tool.



Spare parts

No.	Name	▼kg	📦
AS202-A24	Claw	0.7	1
AS202-J	Jaw	0.7	1

3 Removing pitman arm



● PITMAN ARM PULLER



PITMAN ARM PULLER

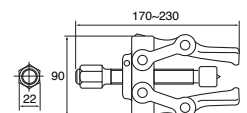
No.	Application	▼kg	📦
PAU-3747	Mini & Compact cars, trucks & tractors	1.5	1

Usage

- Pulls of pitman arm from center shaft quite easily.
- Forged claws with proper heat-treatment.
- A cord supplied for tying to prevent fall off.
- Fastening and claws will contact deeply to inside.

Application

- Pitman outer diameter  $\phi 37 \sim \phi 47$



\*Please check the merchandise inventory for a product that is marked by before placing an order.

**LOCK NUT CHISEL**

No.	a	b	D	L	ℓ	▽g	📦
AS404	0.4	4.5	50	173	51	350	10

**Purpose**

- Removal (Attachment) of sealed type lock nuts on drive shafts.

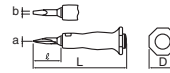
**Application**

- Most of sealed type lock nuts used on drive shafts.

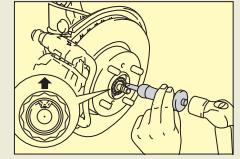
**Features**

- Sealing and pulling up of sealed part lock nuts is possible with one single chisel.
- Ship-shaped tip facilitates pulling up of the caulked part by hitting the chisel head.
- Grip, made of rubber, is easy to handle and is provided with the flange for protection of your hand.
- Forged and strong!

● **LOCK NUT CHISEL**



Removing lock nut **4**



**IMPACT SOCKET FOR HUB NUT**

1/2"sq. Impact Socket For Hub Nut Set

No.	ATS3082	▽g	730	📦	1
Hub Nut Socket	AS308-30W, 32W				

1/2"sq. Impact Hub Nut Socket

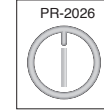
No.	S	D1	D2	H	L	ℓ	▽g	📦
AS308-30W	30	42	29	15	75	55	360	1
AS308-32W	32	44	29	15	75	55	370	1



● **1/2"sq. IMPACT SOCKET FOR HUB NUT PAT.**



Attached pins and rings

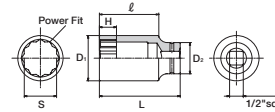


**Usage**

- Impact wrench loosening of double hexagonal shape front (rear) axle hub nuts used in Toyota.

**Features**

- Socket for impact wrench that has adopted the double hex. that matches the shape of hub nut.
- Aperture depth that matches the hub nut shape and thin-walled outside diameter shape are used.
- Semi-deep type with 75mm total length that does not interfere with the drive shaft threaded portion.



**SLIDE HAMMER PULLER**

No.	D1	D2	D3	D4	L	Shocker Weight	Screw Size	▽kg	📦
AUD3	60	68	30	14	580	1.2kg	W9/16-12	2.7	1
AUD4	85	68	30	18	675	3.5kg	M18×2.0	5.5	1

**Purpose**

- Body shop working.

**Application**

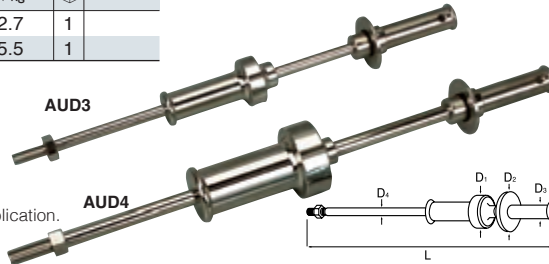
- For mini cars, passenger card and pick up trucks.

**Special features**

- Safety conscious design.
- Big and small hammers with weight 3.5kgs and 1.2kgs for wide application.

**CAUTION** • WHEN USING SLIDE HAMMER, MIND WORKING POSTURE AND THE POSITION OF HANDS. IMPROPER POSITION CAN RESULT IN INJURY.

● **SLIDE HAMMER PULLER**



Separating & removing drive shaft & hub **5**

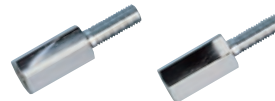
**SLIDE HAMMER PULLER ATTACHMENT**

Screw size conversion adapter set for slide hammer

No.	ATUD302	▽g	600	📦	1
AUD3-1820	Screw Size Puller Side	W9/16-12	Object Side	M18×2.0	
AUD3-G1/2	Screw Size Puller Side	W9/16-12	Object Side	G1/2	

No.	ATUD402	▽g	600	📦	1
AUD4-9/16	Screw Size Puller Side	M18×2.0	Object Side	W9/16-12	
AUD4-G1/2	Screw Size Puller Side	M18×2.0	Object Side	G1/2	

● **SLIDE HAMMER PULLER ATTACHMENT**



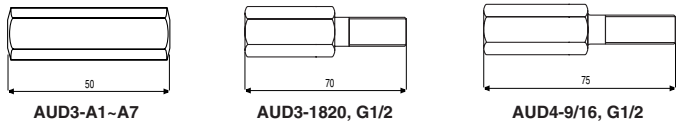
ATUD 302  
ATUD 402

**Screw size convertible adapter set for slide hammer puller**

No.	ATUD307	Screw Size Puller Side	Object Side
AUD3-A1		W9/16-12	M18×1.5 Suzuki
AUD3-A2		W9/16-12	M19×1.5 Toyota
AUD3-A3		W9/16-12	M20×1.0 Nissan, Daihatsu
AUD3-A4		W9/16-12	M20×1.5 Mazda
AUD3-A5		W9/16-12	M22×1.0 Nissan
AUD3-A6		W9/16-12	M22×1.5 Nissan, Mazda, Mitsubishi, Daihatsu
AUD3-A7		W9/16-12	M24×1.5 Nissan, Honda



ATUD 307

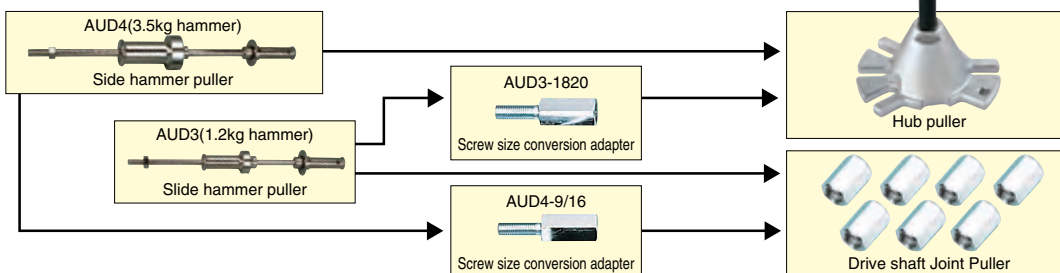


AUD3-A1~A7

AUD3-1820, G1/2

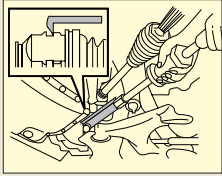
AUD4-9/16, G1/2

**Combination**

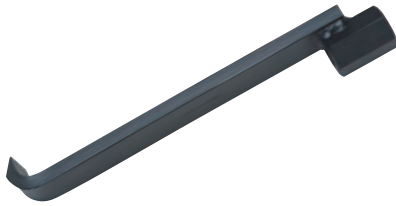


\*Please check the merchandise inventory for a product that is marked by ⚠ before placing an order.

5 Separating & removing drive shaft & hub



●DRIVE SHAFT REMOVER FOR SLIDE HAMMER FOR SLIDE HAMMER

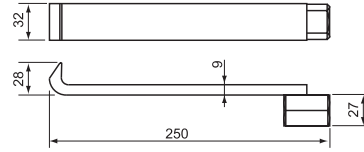


DRIVE SHAFT REMOVER FOR SLIDE HAMMER

No.	Size	Screw Size (puller-side)	▼g	☐
AUD3-AD1	250 × 32 × 28	W9/16-12	660	1

Purpose

- Removing drive shaft from trans-axle (FF vehicle).
- Used exclusively with slide hammer puller (AUD3).



●SLIDE HAMMER PULLER ATTACHMENT



HUB PULLER FOR SLIDE HAMMER

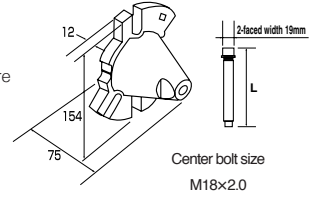
No.	Applicable Hub	▼kg	☐
AS30	PCD100mm~140mm Bolt M14smaller	1.4	1

Purpose

- Drawing axle shaft and brake drum.

Special feature

- Can be used for both 4 holes and 5 holes types.
- Can hold reactive force from driving tool as square drive (3/8"sq.) used.
- Open-end wrench usable as width across flats provided. Can hold counterforce.



Replacement parts

No.	Product name	L	2-faced width	▼g	☐
AS30-1	Center bolt (M18 × 2.0)	138	19	240	1

●HUB PULLER (FOR 6 HOLES) FOR THE SLIDE HAMMER PULLER



HUB PULLER FOR SLIDE HAMMER

No.	Applicable Hub	▼kg	☐
AS309	PCD140mm M14	2.5	1

Usage

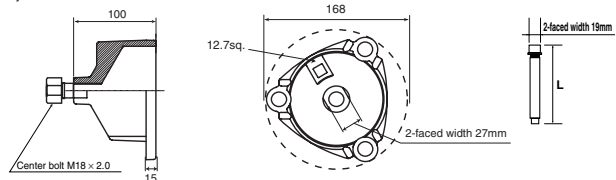
- Pulling out the axle shaft/brake drum and pushing out the drive shaft

Application

- 6 hole type hub for vehicles.

Characteristics

- Deep hole design is compatible with the front free wheel hubs on 4 wheel drive vehicles.
- With a 12.7 sq drive, force application can be maintained by the drive tool.
- The 27mm 2-faced width allows the application force to be maintained while using adjustable wrenches.



Replacement parts

No.	Product name	L	2-faced width	▼g	☐
AS30-1	Center bolt (M18 × 2.0)	138	19	240	1

**BOOT BAND CUTTER**

No.	B <sub>1</sub>	B <sub>2</sub>	T	L	▽g	☒
AS402	24	41	11	193	260	10

**Usage**

- Cutting the boot or boot band of the drive shaft

**Application**

- The stainless boot band of the drive shaft on light weight vehicles to standard vehicles.

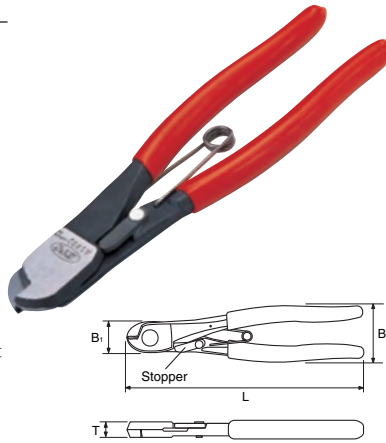


- Rubber drive shaft boot

**Characteristics**

- Cutting can be conducted while the boot band is attached.
  - The boot band can also be cut, increasing overall operation speed. (Fig. 1)
  - The same tool can be used to cut the boot after cutting the band. (Fig. 2)
  - The attached spring allows easy opening while the stopper allows storage in a compact form.
- Pushing the stopper while holding the handle will fix the tool in a position where the handle is closed, reducing the total storage space occupied by the tool. (Fig. 3)
- \* Springs are available as replacement parts. Check with your dealer for details.

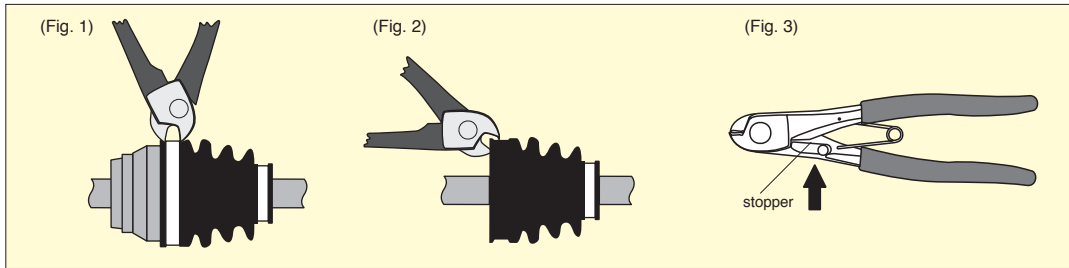
**●BOOT BAND CUTTER**



Disassembling/  
Installing drive  
shaft band

**6**

①Removing  
Boot Band



**EXTERNAL SNAP RING PLIERS**

No.	D	L	ℓ	▽g	☒
AS403A	90	168	21	170	10
AS403B	90	168	21	170	10

**Usage**

- Useful in the removal and installation of snap-rings without grips that aid removal.

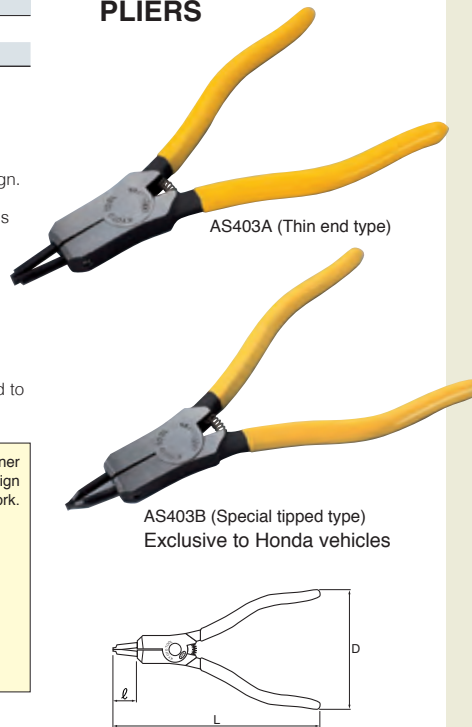
**Application**

- <AS403A>
  - Standard snap-ring without removal aid.
  - Working with narrow rings in openings is easier as the tip of the claw is of a thin design.
- <AS403B>
  - This is a special tool designed for Honda snap-rings that are fitted in narrow openings with their gripping areas placed on an angle.
  - Wear and tear is limited to the claw, and therefore only the claw needs replacing.

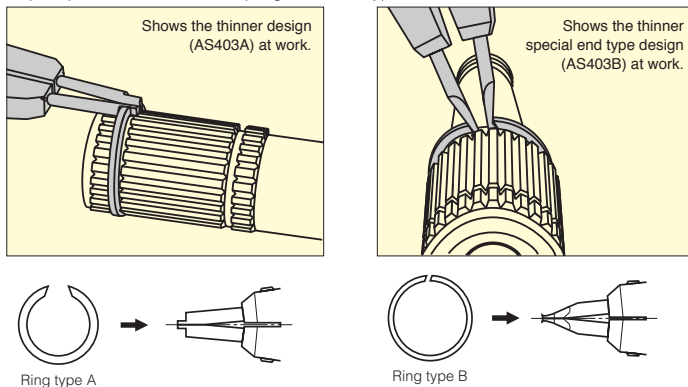
**Characteristics**

- <AS403A>
    - As the tip is of a step fitted shape, previous hard to work with snap-ring removal/installation is now easier.
    - Vertical and horizontal settings are possible depending on the position of the axle.
  - <AS403B>
    - Suitable for snap-ring removal/installation in Honda vehicles that are traditionally hard to work with.
- \* Spare parts are available for springs and claw type screws.

**●EXTERNAL SNAP RING PLIERS**



②Disassembling/  
Installing Import Joint



**PARTS FOR REPLACEMENT END CLAW**

No.	Content of set
AS403A4	AS403A Claws: 4 sets
AS403B4	AS403B Claws: 4 sets

**6** Disassembling/  
Installing drive shaft  
band

③ Fastening/Cutting  
of Boot Band

● **BOOTS BAND TOOL  
WITH CUTTER** PAT. P



**BOOTS BAND TOOL WITH CUTTER**

No.	B	T	t	L	▽g	☐
AS401	26	43	8	160	180	1

**Usage**

- Fastening/cutting of the band fixing the joint boot of drive shaft.

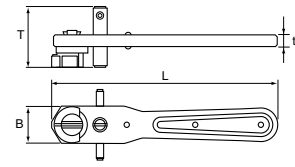
**Application**

- Applicable to quality boot bands (all sizes) for mini cars to compact cars.

**Features**

- Ratchet mechanism ensures effective winding of the band.
- Only one action required for bending and cutting of the band.

\* Not required for the standard boot band designated by manufacturers.



**Method of use**

<p><b>1</b> Set the boot band tool.</p> <p>Insert the boot band attached to the boot of the drive shaft into the slit in the boot band tool.</p>	<p><b>2</b> Twist away the boot band.</p> <p>Twist the boot band by turning the handle clockwise.</p>	<p><b>3</b> Turn back the boot band and cut.</p> <p>Lower the boot band tool (in the direction of the arrow) until the boot band is cut.</p>	<p><b>4</b> Sealing the boot band</p> <p>Adjust and reshape the boot band after cutting using hammers and punches.</p>
--	---	--	--

④ Sealing

● **CENTER PUNCH**



➔ P.161

● **HAMMER**

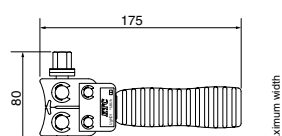
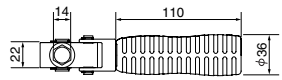


➔ P.158

③ Sealing of the boot  
band



● **BOOT BAND TOOL**



**BOOTS BAND TOOL**

No.	▽g	☐
AS405	750	1

**Usage**

- An exclusive tool used for sealing the boot band on the drive shaft of vehicles

**Application**

- The tool is compatible with light weight to passenger type vehicles using the sealing type boot band.(Can be used for imported vehicles)

**Characteristics**

- Sealing is made easy by a simple bolt screw-in operation.
- The operation is faster and easier when using wrenches, such as the ratchet type, etc. (Hexagonal 2-faced width 14mm)
- As the center bolt is fitted with a flange, an offset wrench can be used and the wrench will not slip off.
- A resin grip is employed for the handle to prevent slippage.
- A claw form has been employed to stop the sealing section from rising.

⚠ CAUTION • Make sure that all operators read the Owner's Operator Manual carefully before usage.

**Method of use**

<p><b>1</b> Widen the claw by turning the center bolt and allow the sealing section of the boot band to enter.</p> <p>⚠ CAUTION Apply molybden grease over the specified area before operating.</p>	<p><b>2</b> Touch the sealing section of the boot band with the claw.</p> <p>⚠ CAUTION Do not grasp the boot with the tip of the claw.</p>	<p><b>3</b> Tighten the bolt using a 14mm drive tool (offset wrench can be used).</p>	<p><b>4</b> Confirm end of operation. Loosen the center bolt and remove the boot band tool.</p> <p>⚠ CAUTION Refer to the maintenance manual of the car manufacturer for each individual sealing dimension before carrying out operation.</p>
---	--	---	---

**7** Housing Nut & Hub  
bolt removal

**8** Attaching the wheel

- ① Attaching the wheel nut
- ② Checking torque

● **IMPACT WRENCH**

● **WHEEL NUT SOCKET  
FOR IMPACT WRENCH**

● **CROSS RIM  
WRENCH**

● **OTHER TOOLS**

● **TORQUE WRENCH SET FOR  
THE WHEEL NUT**

\*Please check the merchandise inventory for a product that is marked by ⚠ before placing an order.

# Housing Nut & Hub Bolt removal

## HOUSING NUT WRENCH (FOR HEXAGONAL AND OCTAGONAL NUTS)

No. AS351	▼kg 4	📦 1
Housing nut wrench for large vehicles (for hexagonal and octagonal nuts) 1		
Metal Case (245x140x110)		

\*Replacement parts are available. Check with your dealer for details.

### Usage

- Loosening / tightening of the rear housing nuts

### Application

- Width across flat rear housing nuts used in heavy vehicles (class 4t)

### Characteristics

- Compatible with both hexagonal and octagonal types  
Specially designed claw to fit both hexagonal and octagonal types
- Special design helps avoid slipping.  
Claws are specially designed to firmly hold the surface of the nut.
- Size is easily adjustable.  
Adjust size simply by tightening hexagonal knob with a 17mm drive tool.

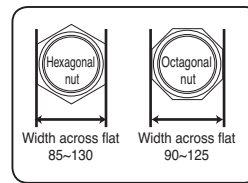
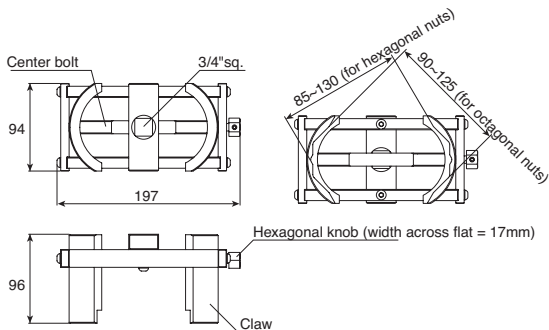
## HOUSING NUT WRENCH FOR LARGE VEHICLES (FOR HEXAGONAL AND OCTAGONAL NUTS) D.PAT.P



Metal case is included



\*3/4"sq drive tool (sold separately) is required for operation.



## HOUSING NUT WRENCH (FOR CIRCULAR NUTS)

No. AS352	▼g 450	📦 1
Housing nut wrench for small vehicles (for circular nuts) (Main body) 1		
Pin A (for pin-hole diameter $\phi$ 6.8~9) 2		
Pin B (for pin-hole diameter $\phi$ 9.1~10) 2		
Wing nut 2		

\*Replacement parts are available. Check with your dealer for details.

### Spare parts

Product name	No.	Tip diameter
Pin A (2)	AS352-2	$\phi$ 6.5
Pin B (2)	-3	$\phi$ 9

### Usage

- Loosening / tightening of the rear housing nuts

### Application

- Width across flat rear housing nuts used in small vehicle (class 2t)

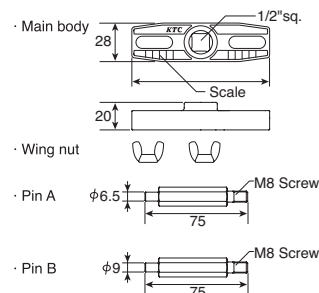
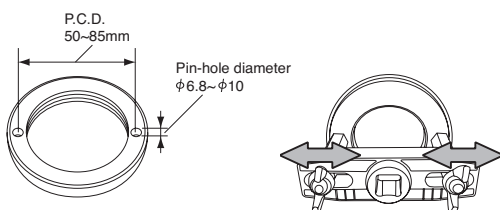
### Characteristics

- Compatible with both hexagonal and octagonal types.  
Pitch is adjustable by sliding the pin.
- Easy to position  
Easy to center as a scale is marked on the wrench.

## HOUSING NUT WRENCH FOR SMALL VEHICLES (FOR CIRCULAR NUTS)



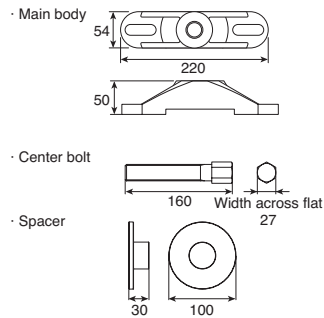
\*1/2"sq drive tool (sold separately) is required for operation.





\*An off-set wrench (with 27mm width across flat) or a socket with a drive tool (sold separately) is required for operation.

### ● REAR HUB PULLER FOR LARGE VEHICLES



### REAR HUB PULLER FOR LARGE VEHICLES

No. AS353	▼kg 3.5	📦 1
Rear hub puller for large vehicles (Main body)	1	
Center bolt	1	
Spacer	1	
Metal Case (245×140×60)		

### Spare parts

Product name	No.	
Center bolt	AS353-2	
Spacer	-3	

### Usage

- For removal of rear wheel hub

### Application

- Rear wheel hubs that are used in large vehicles (class 4t), which fulfills conditions below.
  - 8 or 10 holed (number of axle shaft attachment bolts)
  - P.C.D. 140~188mm
  - The size of axle shaft attachment bolt = M12~16

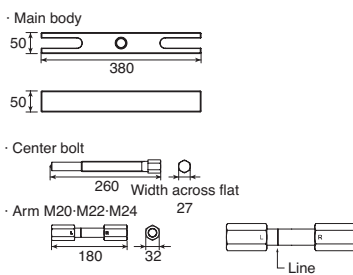
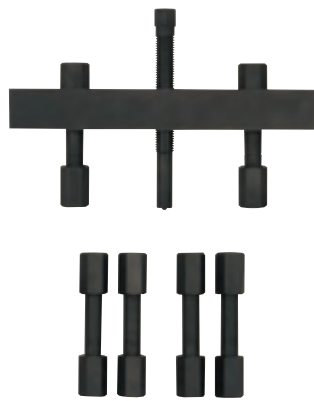
### Characteristics

- Aluminum wheel will not be scratched or damaged. Aluminum wheels will not be scratched as the tool is attached to the axle shaft attachment holes using the axle shaft attachment bolt.
- Light and compact  
Simple to set up.
- Removal operation made easy  
Hub is easily removed by tightening the bolt with an off-set wrench, or a socket with a drive tool (with 27mm width across flat).



\*An off-set wrench (with 27mm width across flat) or a socket with a drive tool (sold separately) is required for operation.

### ● FRONT HUB PULLER FOR LARGE VEHICLES



### FRONT HUB PULLER FOR LARGE VEHICLES

No. AS354	▼kg 12.1	📦 1
Front hub puller for large vehicles (Main body)	1	
Center bolt	1	
Arm M20	2	
Arm M22	2	
Arm M24	2	
Metal Case (380×240×75)		

### Spare parts

Product name	No.	
Center bolt (1)	AS354-2	
Arm M20 (2)	-3	
Arm M22 (2)	-4	
Arm M24 (2)	-5	

### Usage

- For removal of front wheel hub.

### Application

- Front wheel hubs that are used in large vehicles (class 4t), which fulfills conditions below
  - 6, 8, or 10 holed (6/8-hole: JIS system, 10-hole: ISO system) wheels
  - P.C.D. 222.25~335
  - Hub bolt size = M20×1.5, M22×1.5, M24×1.5

### Characteristics

- Aluminum wheel will not be scratched or damaged. Aluminum wheels will not be damaged as hub is removed by attaching this tool to hub bolts.
- Hub can be removed on both left and right wheels with just 1 arm. The arm is engraved with "L" and "R" to distinguish between left and right wheel.
- The tool comes with 3 arm types. There are three types of hub bolt size - M20, 22, and 24. The different sizes can be distinguished with number of lines on the arm. (M20: 1 line, M22: 2 lines, M24: 3 lines)



\*A 1/2"sq spinner handle or an off-set wrench (with 24mm width across flat) (sold separately) is required for operation.



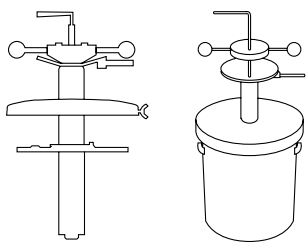


#### GREASE EXCHANGER HIGHLOAD

No.	Applicable Container	Applicable Bearings	▼kg	📦
GZR18	16kg round cans	φ 15~100	19	1

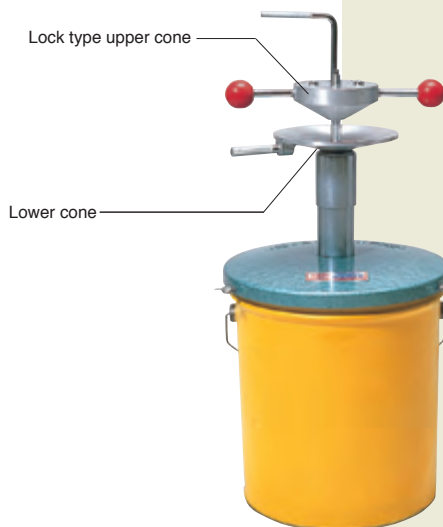
#### Usage

- Suitable for exchanging grease used in heavy-load bearings of large-sized vehicles.
- For exchanging grease in the hub bearings during inspection and servicing of vehicles for general use.
- **Wide range of applications.**  
For bearings of various sizes used in automobiles (from mini-cars to large-sized trucks) and construction machinery.
- **Easy handing, improved work efficiency, keeps hands clean.**  
Grease can be exchanged easily, requiring no skill. Operator's hands stay clean and free of grease, so he can proceed working immediately.
- **Reduced grease consumption by eliminating waste.**  
Only a minimal amount of grease is required, Grease can be used completely to the bottom of a can, so you can save more grease than is possible with manual exchange operation.
- **Simple, highly reliable mechanism.**



Main body appearance    View when the main body is attached

#### ● GREASE EXCHANGER "HIGHLOAD"

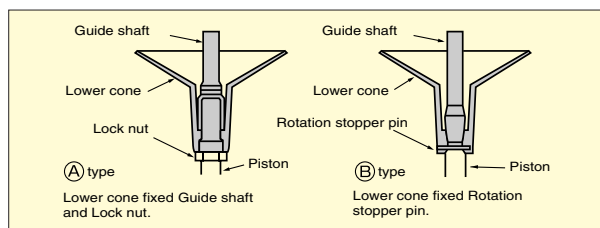


• CZR18 is the heavy-duty model of GZ18.

#### GREASE EXCHANGER HIGHLOAD ASSY.

No. GZR182	▼kg 2.2	📦 1
Upper cone	Applicable Bearings φ 15~100	
Lower cone		
Handle		
Rotation stopper handle		
Guide shaft		

- This kit of replacement parts for upgrading a GZ18 grease exchanger into a "HIGHLOAD" type heavy-duty grease exchanger can be used only with the (A) type model. Adaptability can be confirmed by pressing the bellows below the lower cone and checking if the lock nut is present.
- GZ18 can be used as GZ18 heavy duty model by assembling with these parts.



#### ● ASSEMBLY PARTS FOR GREASE EXCHANGER "HIGHLOAD"



#### GREASE EXCHANGER

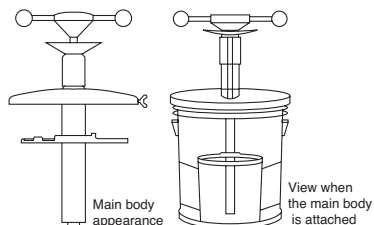
No.	Applicable Container	Applicable Bearings	▼kg	📦
GZ18	16kg round cans	φ 15~100	8.2	1

#### Usage

- Grease charging heavy load bearings of large automobiles.
- Grease charging to hub bearing of various automobiles in inspection or service.

#### Features

- Work time can be reduced to about 1/7 compared to the previous method.
- Useful in wide range of application.
- Keeps your hands clean and raises work efficiency.
- Grease in the can can be used up completely so waste can be eliminated and grease can be saved.
- KTC®-original pumping unit exchanges grease easily by using fresh grease to push out old grease.



Main body appearance    View when the main body is attached

#### ● GREASE EXCHANGER



Condition of Use



● AIR GREASE FEEDER



AIR GREASE FEEDER	
No. AVG35	▼kg 30
Pump type	Air-driven plunger pump
Size	460×360×1,190
Discharge	500g/min. on nozzle side (No.3 grease, 29°C, no load)
Discharge pressure	75~80kg / cm <sup>2</sup>
Air pressure	6~9.8kg / cm <sup>2</sup>
Grease type	No.0~No.3
Can	16kg pail can
Temperature Condition	0~40°C

Applicable bearings	
Cone side	Bore 15 to 100 mm
Hose side	Nozzle Adapter
	Nozzle adapter Bore 45 to 90 mm
	( bearing pitch 15 to 21 mm, equalant. to front-rear ) ( tapered roller bearing for 4 to 10 t vehicles )

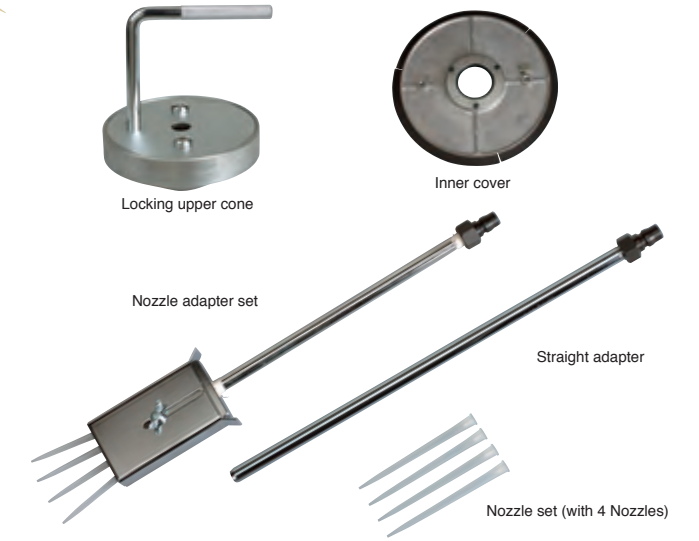
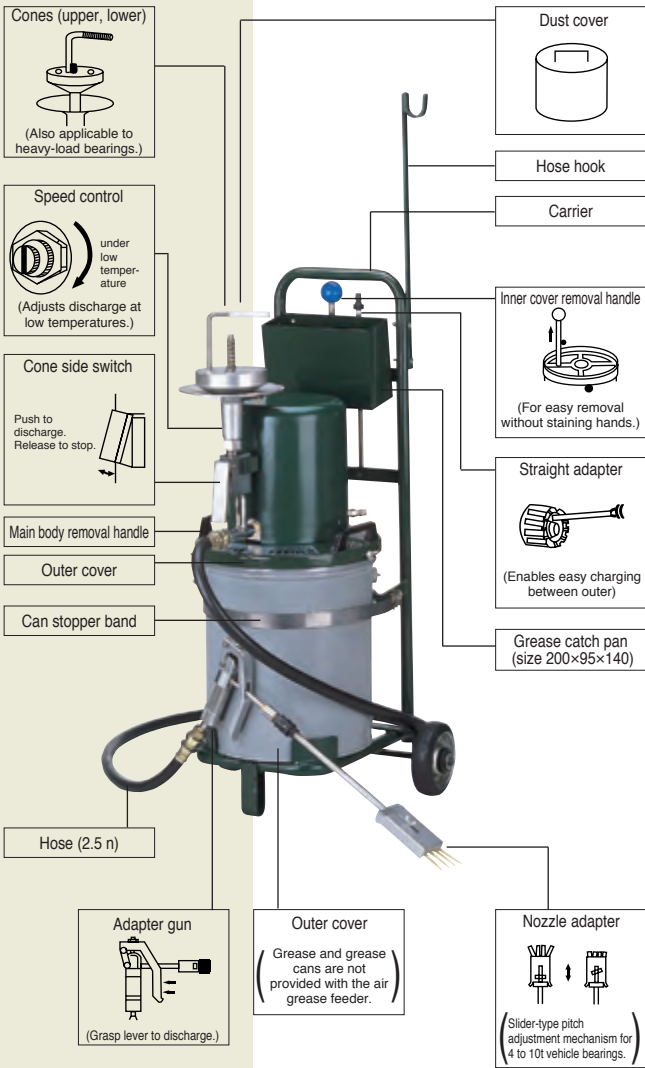
**Usage**  
Dedicated equipment for feeding grease into tapered roller bearings during grease exchange or supply for medium-to large-sized trucks.

**Application**  
Bearings with cone side bores of 15 to 100 mm, hose side bores of 45 to 90 mm and bearing pitches of 15 to 21 mm.

- Features**
- With the nozzle adapter, fresh grease pushes out old grease, without no need to remove each bearing.
  - Grease can also be fed into a removed bearing by installing it on the cone.
  - Grease can be fed even at around-10°C by proper piston speed control operation.
  - Foreign objects (such as moisture and dirt) in compressed air are filtered out by an air filter, preventing air regulator operation failure.
  - The built-in air regulator ensures air supply at optimal pressure.
  - Easy operation and setup reduces work time.
  - The carrier is equipped with a can stopper band and plate that prevents the grease can from falling or being displaced.

- CAUTION**
- DO NOT PULL THE LEVER EVEN AFTER REMOVAL OF THE AIR HOSE. OTHERWISE, GREASE MAY SCATTER INTERNALLY DUE TO RESIDUAL PRESSURE.
  - STORE IN PLACES WHERE YOU CAN AVOID FREEZING.
  - USE CLEAN AIR FOR INPUT.

● Name of parts and their applications



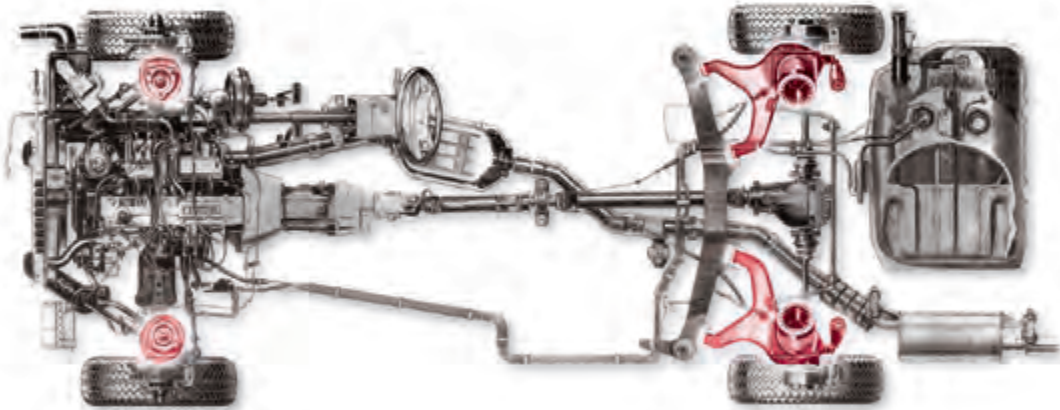
Supply parts

No.	Part Name	Q'ty
AVG35-2	Locking upper cone	1
-4	Inner cover	1
-6	Straight adapter	1
-7	Nozzle adapter set	1 (with 4 nozzles)
-7-7	Nozzle set	1

\* These parts are also optionally available.



# Suspension System Mechanism



MECHANISM 1

## The suspension

Suspension is designed to dissipate the load forced onto a vehicle by absorbing vibration and impact from the road, stabilizing the position of the car while driving, and sustaining the optimum balance of the car for comfortable driving. The suspension is constructed using a combination of spring or shock absorber that absorbs vibration/impact and a stabilizer that reduces horizontal movement (roll).

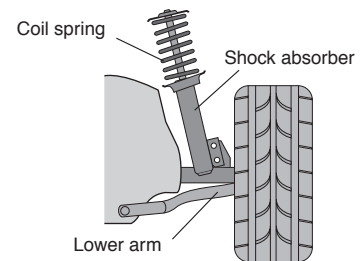
MECHANISM 2

## Types of suspension

### Strut type suspension

The lower part of the suspension system uses the lower arm attached to the chassis to receive the drive shaft where as the upper part is placed on the extension of the king pin, connected to the body with the coil spring attached to the shock absorber.

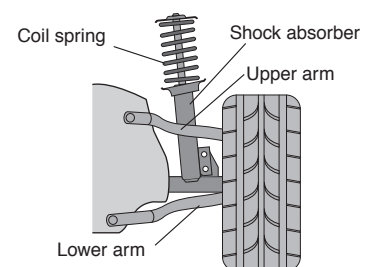
The system allows for a lower number of component parts, providing increased space as a merit, however, is less effective during larger rolls while cornering.



Strut type suspension

### Double wishbone type suspension

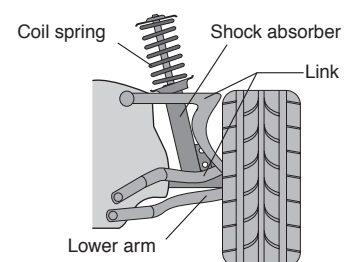
The double wishbone type suspension system has independent moving right hand and left hand parts. The independent hanging type is most common. The two upper and lower suspension arms support the combined shock absorber and coil spring. The wishbone name likens the shape of the arm to the chest bone of birds. The system provides high rigidity, better stability and handling but due to the complex structure, the system occupies space.



Double wishbone type

### Multi-link suspension

The term multi-link is coined as the system is structured by dividing the lower arm into multiple links. The high control ability born of the multiple link system allows the vehicle to sustain the vehicle in an optimum balanced condition during roll, braking, and acceleration. Recently, the system has been used in many luxury vehicles.



Multi-link type

# SUSPENSION Disassembling/Assembling Suspension System

**1** Removing/Installing Wheel  
 ① Remove Wheel Cap  
 ② Remove/Installing Wheel Nuts

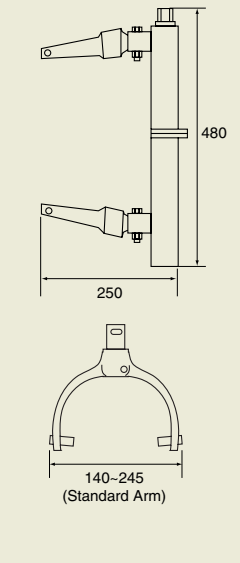
- WHEEL CAP WRENCH
- CENTER CAP WRENCH FOR ALUMINUM WHEEL
- OTHER TOOLS
- IMPACT WRENCH
- WHEEL NUT SOCKET FOR IMPACT WRENCH
- CROSS RIM WRENCH
- OTHER TOOLS

**2** Pinching off Brake Hose  
 ① Block off of Hoses  
 ② Disassembling Pipe

- PINCH OFF PLIERS
- FLARE NUT WRENCH
- OTHER TOOLS



**3** Removing/Installing Suspension System



**STRUT SPRING COMPRESSOR**

No. AS10	kg 6.0	📦 1
Body	AS10-1	
Standard Arm (Dia.90~170)	AS10-2	

**Applicable Coil Spring**

Article	Applicable Capacity
Wire Dia.	18mm or smaller
Outer Dia.	Standard Am... 90~170mm Large Am ..... 135~220mm
Coiling Cycle	2 times or more
Coil Span	20mm or over

**Purpose**

- For removing/installing coil springs used in automotive suspensions.
- Wide application for use on front-& rear-suspension of FWD(FF Cars) and RWD(FR Cars), strut type coil springs, etc.

**Special feature**

- If excessive load is applied on spring compressor, breaking mechanism will work inside the drive of center screw bolts. (Breaking load: 1,300kgs.) (Fig.2)
- Built in center screw bolts for protecting screw part.
- Compact pipe style body for easy operation.

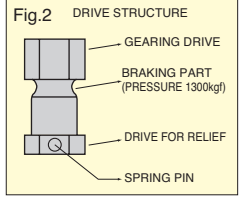
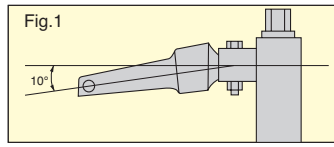
**Body**

No.	Dimension	kg
AS10-1	Length 480× φ 42	3.8

**Arm**

No.	Applicable Diameter	kg	📦
AS10-2	Standard Am Dia. 90~170	2.2	1
AS10-3	Large Am Dia. 135~220	2.5	1

- WARNING**
- BEFORE USING THIS TOOL, CAREFULLY READ THE PROVIDED INSTRUCTIONS.
  - NEVER APPLY OVER TORQUE ALTHOUGH BRAKE MECHANISM WORKS AT THAT TIME.
  - NEVER USE THIS TOOL WITH IMPACT WRENCH.
  - THIS TOOL IS SUITABLE FOR USING ON JAPANESE CARS.



## Cautionary points on handling the spring compressor

As a result of the investigations carried out based on consumer comments and questions concerning the usage of the previous spring compressor SPU-70315 (1987~1995) provided by our company, the following daily uses were occurring. It is requested that the User's manual and cautionary points along with the maintenance procedures of this product are read thoroughly before use.

If any faults are recognized under the inspection items within the inspection guidelines, stop using this product and replace with the spring compressor (product number: AS10) currently provided by our company.

### Explaining the situation

- Recent strut type springs have high spring numbers or illegally modified springs projecting a high stress load. Attachment and removal of springs that exceed the previous safety standards is being conducted.
- The tool is used when the span of the upper and lower arm (that hooks the spring during spring attachment and removal) is short. The spring characteristic allows for the compression that presses the spring to be different even when compressing the same amount.
- The spring is sometimes compressed using prohibited power tools (impact wrench) instead of the hand tool. Using a power tool to compress the spring is dangerous due to the immediate change in tightening strength, which can lead to compression exceeding the permissible range of the product.

The content explained above relates to an extremely dangerous operation on using the tools. Check the following inspection guidelines when using this tool.

Ex.) Standard number of springs (Load necessary in order to compress the spring by 1mm)  
 2 springs wound 363N/mm  
 3 springs wound 180N/mm  
 The compression load can double depending on the condition in which the spring is hooked (wound).

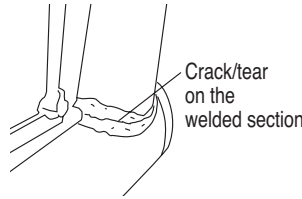
\*Please check the merchandise inventory for a product that is marked by before placing an order.

**Inspection guidelines**

● Inspection spots and inspection methods (do not use if the following inspection items are faulty)

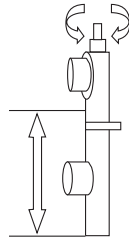
**① Welded spot on the attachment section of the fixed arm**

- Thoroughly clean the welded section using brake cleaners, etc. and visually check for any torn, cracked weld sections. (Cracked or torn sections are faulty)



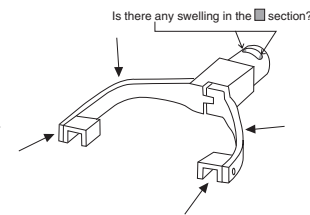
**② Inspecting the center screw bolt**

- From the slide groove on the main unit moving arm, visually inspect for unusual wear or bends on the center screw bolt.



**③ Moving arm friction inspection**

- Turn the head-drive with your hands and check that the moving arm moves smoothly. (When rotation is uneven, the center screw bolt is worn or damaged.)

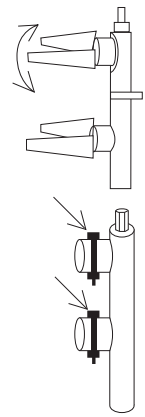


**④ Individual inspection for the fixed and moving arm**

- Remove both arms from the body and inspect for bends and wear.
- Inspect for any deformities on the hole for passing through the attachment bolt.
- Check that the arm can be removed easily.

**⑤ Moving and fixed arm sway inspection**

- After properly attaching the fixed and moving arm to the main unit, check that the neck sways smoothly without unevenness. (If uneven, item (4) is swelled or the attachment section is deformed.)



**⑥ Fixed and moving arm attachment bolt**

- Remove the fixed and moving arm attachment bolt from the main unit and visually check for bends, wear, and damage on the screw section.

If any faults are found in the above inspection, the parts have exceeded their useful life. Continuing to use these parts can cause damage and is dangerous. Avoid use. The listed contents can be used for the inspection for AS10. Please perform these inspections.

**Cautionary points on use**

• Never use an impact wrench as this can cause the spring compressor to break.

**[Pre-use inspection]**

- Perform the following inspections before operation and check for any faults. (Do not use if there are any faults)

- ① Check that the attachment bolts and nuts on Arm 1 and Arm 2 are not loose.
- ② Arm 1 and Arm 2 necks should sway freely.
- ③ Turn the center screw bolt with your hands and check that Arm 2 moves smoothly along its full stroke.
- ④ The hook moves swiftly left and right.
- ⑤ There are no signs of cracking, deformity, or damage.

**[Attaching the spring]**

- ① Attach to the diameter section of the spring when attaching the hook to the spring. (Fig. 2)
- ② Set to the widest position when considering the span of the hook for the upper and lower arms. (Distance between diagram 3A and B)
- ③ The spring pitch number (wind number) for the wind between the left and right hooks for the upper and lower arm must be equal. (Fig. 3)

**[In use]**

- When the tightening force suddenly increases during compression, immediately stop operation and loosen the spring.
- Do not compress until the line spaces between the springs are filled.
- Take care as to avoid having the upper and lower arm attachment bolts touch when using springs with low pitch numbers (fewer winds).
- Many springs with low pitch numbers have a high load. Use a torque wrench to control the torque of the tightening drive when using. (Tightening drive torque should be below 44N-m)

**[Maintenance]**

- Amply support the screw section of the center screw bolt and apply lubricant before use.
- When storing, make sure foreign particles/dust, etc. do not enter the slide groove section of the main unit.
- Do not disassemble or modify this product.

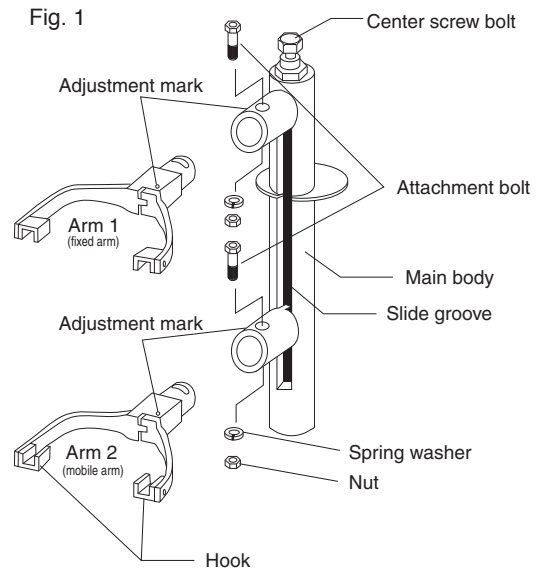


Fig.2 Coil spring

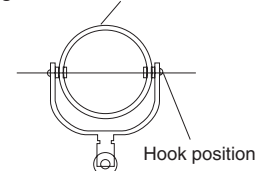
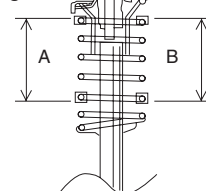


Fig.3



Same right/left pitch (A=B)

**4** Inspecting Torque

● **TORQUE WRENCHES**



➔ P.189

**5** Installing Wheel and Inspecting Torque

● **IMPACT WRENCH**



➔ P.200

● **WHEEL NUT SOCKET FOR IMPACT WRENCH**



➔ P.256

● **CROSS RIM WRENCH**



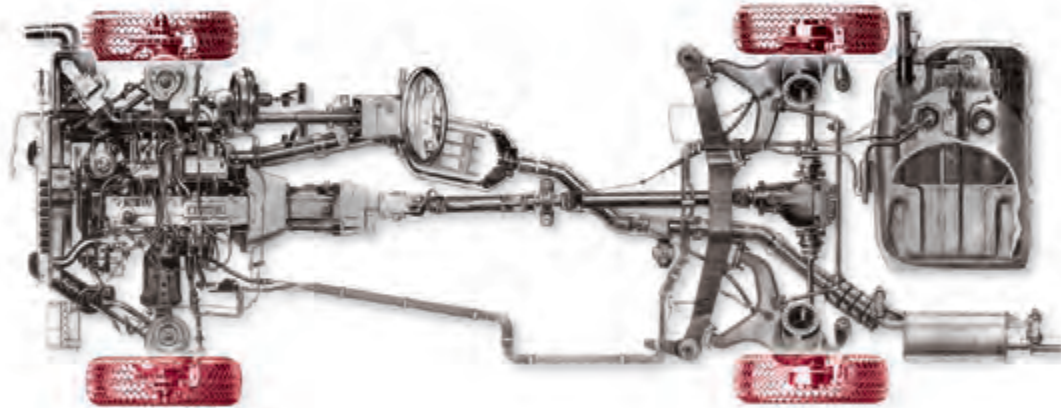
➔ P.134

● **WHEELNUT TORQUE WRENCH**



➔ P.190

# Tire & Wheel Mechanism

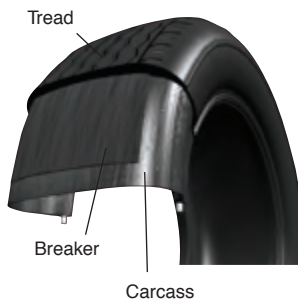


MECHANISM 1

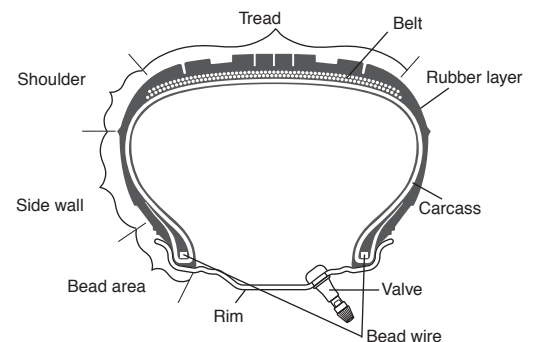
## Function and mechanism of tire

The tires support the weight of the vehicle, they not only transfer the drive and braking power, they also protect the vehicle from road shock and play a role in transferring the vehicle's functionality to the road.

The following details the parts of the tire structure: Tread: This is the area that comes into contact with the road. Shoulder: The area that protects the carcass of the tire. Sidewall: The area where the tire size and the manufactures name is displayed. Bead area: This is made up of the rubber layers, belts, carcass, and bead wire materials and is where the tire is fixed to the rim.



Cross section of a bias tire

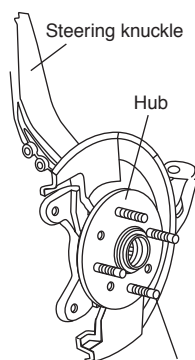


Cross section of a radial tire

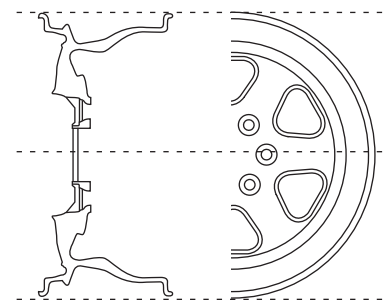
MECHANISM 2

## Wheel & hub

A wheel consists of a rim and tire which is attached to the "hub" assembly. In modern cars the hub is a disc which normally contains 4-6 bolts (or studs) and is attached to the axle by way of the axle nut. The average amount of bolts is between 4-6. The heavier the vehicle, the more wheel nuts/bolts will be required.



Hub bolt (Wheel bolt)

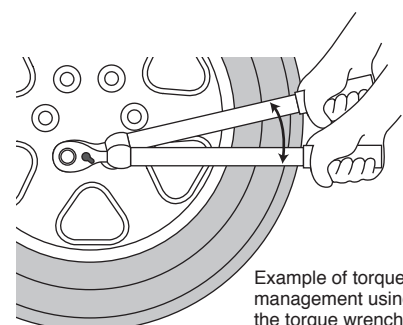


Cross section of wheel

MECHANISM 3

## Torque management suggestion

Not only the tires, but faulty attachment or tightening of the hub bolts (wheel nuts) will largely influence safe driving. For example, if tightening of the hub nut (wheel nut) is weak, the tire can fall off because of vibration. If tightening is too strong, the hub bolt can break. In order to prevent these accidents, the tightening torque should be managed with a torque wrench. The common tightening torque for passenger vehicles is 103N-m and this torque is relatively easy to achieve. If the hub-nut (wheel nut) of your vehicle cannot be loosened with the provided tire wrench (providing there is no rusting), the hub nuts have been tightened excessively.



Example of torque management using the torque wrench

# TIRE & WHEEL Wheel attachment and removal

**1** Installing Fender Cover

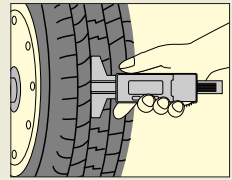
● **FENDER COVER**



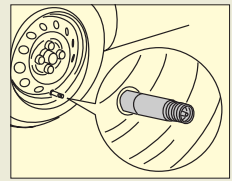
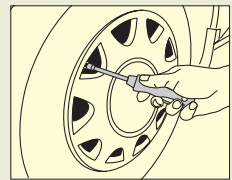
➔ P.303

**2** Inspecting Tire Grooves

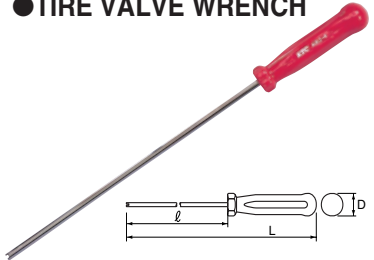
① Checking the tire groove



② Inspection and Adjustment of Air Pressure



● **TIRE VALVE WRENCH**



**TIRE VALVE WRENCH**

No.	D	ℓ	L	▼g	📦
AH2-4	17	165	235	40	1

**Purpose**

- Used to remove/install valve core of tires of mini cars, compact cars, trucks and buses (except for motor cycles, construction vehicles and tire of double tires)

**Features**

- Long shaft enables operation without hitting tire with the tool and improves work efficiency. (The length is 165mm.)
- Thinner handle to turn.

● **TIRE AIR GAUGE**



**TIRE AIR GAUGE**

No.	Range	Minimal indication	Thickness	ℓ	L	▼g	📦
AGT231	0~500kPa (0~5kgf/cm <sup>2</sup> )	10kPa	95	100	270	800	1
AGT232	0~1200kPa (0~12kgf/cm <sup>2</sup> )	10kPa	95	100	270	800	1

**Purpose**

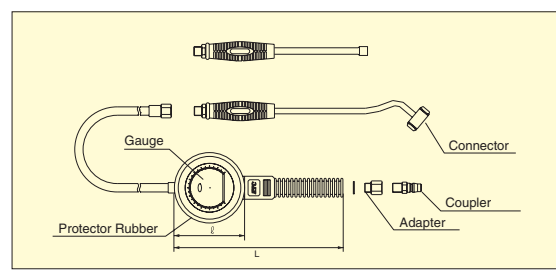
- Measuring, increasing and decreasing air pressure in car tires.

**Application**

- Tire Air Gauge 500: for passenger cars and commercial cars (vans)
- Tire Air Gauge 1200: for motorcycles, passenger cars, trucks and buses.

**Features**

- Light touch lever enables smooth fine adjustment.
- Large gauge (φ 70mm) easy to read measurements. Possible to measure and decrease pressure without connection with the air hose.
- Swivel joint prevents hose twisting.
- Ultra-thin straight connector on the tip (tip: 11mm dia.) facilitates use for most of aluminum wheels (AGT231).
- Double connector usable for outer tire of double tires (AGT232).
- Usable for some of the inner tire depending on the notch shape of the wheel.

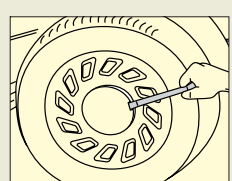
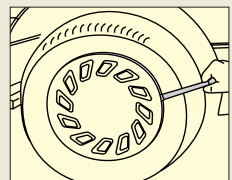


**Connectors for replacement:**

Connectors	No.
Straight connector	AGT23-A1
Double connector	AGT23-A2
Clip Connector	AGT23-A3

**3** Removing/Installing Wheel

① Removing Wheel Cap



● **WHEEL CAP WRENCH**



**WHEEL CAP WRENCH**

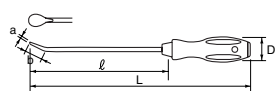
No.	a	b	D	ℓ	L	▼g	📦
AH101	1.3	20	40	215	350	200	5

**Purpose**

- Removing wheel cap from cars.

**Features**

- Thin tip; easy to put in between wheel rim and wheel cap, with lower possibility of damaging wheel cap and wheel.
- Tip is bent for easy operation.
- Hand fitting plastic handle.



● **CENTER CAP WRENCH FOR ALUMINUM WHEEL**



**CENTER CAP WRENCH FOR ALUMINUM WHEEL**

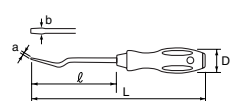
No.	a	b	D	ℓ	L	▼g	📦
AH102	0.7	7	34	115	235	90	5


**Purpose**

- Removing the center cap of aluminum wheel.

**Features**

- Thin tip, easy to put into the notch, with lower possibility of damaging the cap and wheel.
- Tip is bent at two points for easy operation.
- Hand fitting plastic handle.



\*Please check the merchandise inventory for a product that is marked by  before placing an order.



● IMPACT WRENCH



P.200

Removing/Installing Wheel **3**  
 ② Removing/Installing Wheel Nuts



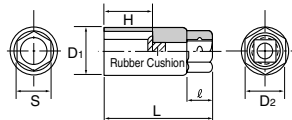
SOCKET FOR ALUMINUM WHEEL

No.	S (Hexagonal)	D <sub>1</sub>	D <sub>2</sub>	H	ℓ	L	▽g	⊞
B35A-17H	17	24	21	22	15	60	140	10
-19H	19	26	21	24	15	60	140	10
-21H	21	27.5	21	27	15	60	140	10

Purpose

- Specially for fasten/loosening aluminum wheel nuts of cars.
- With rubber cushion for plated and painted wheel nut.

**CAUTION** • DESIGNED SPECIALLY FOR THE ALUMINUM WHEEL AND ENDURES LOWER TORQUE BECAUSE OF ITS STRUCTURE.



1/2" sq.

● 1/2"sq. SOCKET SET FOR ALUMINUM WHEEL



WHEEL NUT SOCKET

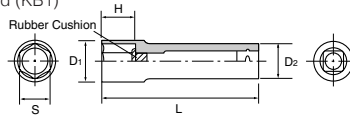
No.	S (Hexagonal)	D <sub>1</sub>	D <sub>2</sub>	H	L	▽g	⊞
B38Z-17H	17	24	22	22	100	200	5
-19H	19	26	22	24	100	200	5
-21H	21	27.5	22	26	100	200	5
-22H	22	29.5	22	27	100	200	5

Purpose

- Specially for fasten/loosening aluminum wheel nuts of cars.

Features

- The whole length is 100mm, designed exclusively to fit the wheel. Use with a torque wrench improves work efficiency.
- With rubber cushion for plated and painted wheel nut.
- 22H is for Land Cruiser 100 and Honda Legend (KB1)



1/2" sq.

● 1/2"sq. WHEEL NUT SOCKET



WHEEL NUT SEMI-LONG SOCKET WRENCH

No.	S (Hex.)	D <sub>1</sub>	D <sub>2</sub>	H	L	▽g	⊞
B38ZM-21H	21	27.5	22	26	130	300	5

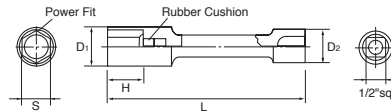
Usage

- It is a socket dedicated for the tightening and loosening of wheel nuts in automobile.

Features

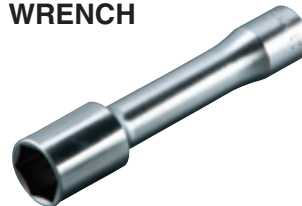
- It is a dedicated design with 130mm total length that matches the body shape.
- Usability is improved by using in combination with a torque wrench.
- It has a rubber cushion that's friendly for plated and coated nuts.

**CAUTION** • Withstand load is structurally low since it is dedicated for wheel nuts.



1/2" sq.

● 1/2"sq. WHEEL NUT SEMI-LONG SOCKET WRENCH



WHEEL NUT LONG SOCKET

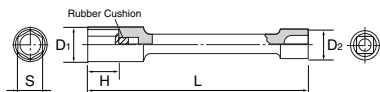
No.	S (Hexagonal)	D <sub>1</sub>	D <sub>2</sub>	H	L	▽g	⊞
B38ZL-17H	17	24	24	22	180	330	5
-19H	19	26	24	24	180	340	5
-21H	21	27.5	24	26	180	350	5

Purpose

- Specially for fasten/loosening aluminum wheel nuts of cars.

Features

- Long size most appropriate for RVs.
- Long size necessitates no extension bar and improves work efficiency.
- With rubber cushion for plated and painted wheel nut.



1/2" sq.

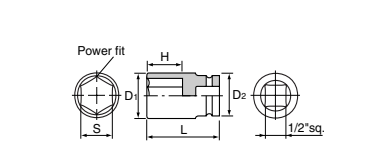
● 1/2"sq. WHEEL NUT LONG SOCKET



**3** Removing/Installing Wheel  
 ② Removing/Installing Wheel Nuts



**● 1/2"sq. IMPACT SOCKET SET FOR ALUMINUM POLISHED NUT (3pcs.)**



**IMPACT SOCKET • SET (3pcs.) FOR ALUMINUM POLISHED NUT**

No. ATBP403AL	415	1
Impact Socket Set For Aluminum Polished Nut		
Metal Case L165xW70xH40		
ABP4-17ALP, 19ALP, 21ALP		

• Set of 3 popular sizes (17, 19, & 21).

**IMPACT SOCKET FOR ALUMINUM POLISHED NUT**

No.	S (Hexagonal)	D1	D2	H	L	▼g	1
ABP4-17ALP	17	26	29	21	49	50	1
-19ALP	19	28.5	29	24	52	60	1
-21ALP	21	31	29	27	55	70	1

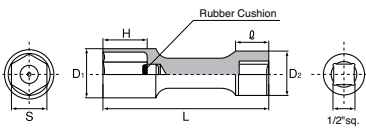
Attached pins and rings  
PR-2026

- For use on aluminum wheel and surface-treated nuts.
- Thin wall type with minimum outer diameter.
- Made of newly developed special aluminum alloy with special heat-treatment for superb durability.

(Caution) Aluminum wheel nut tightening should be conducted according to the set torque defined by each manufacturer.

**CAUTION** • USE ONLY ON WHEEL NUTS.  
 • FASTEN ALUMINUM WHEEL NUTS AT THE SPECIFIED TORQUE.

**● 1/2"sq. Wheel nut socket set for impact wrench (long, thin type) PAT.P.**



**WHEEL NUT SOCKET SET FOR IMPACT WRENCH**

No. TBP4903	560	1
Wheel nut socket for impact wrench		
BP49-17, 19, 21		

No.	S (Hexagonal)	D1	D2	H	ℓ	L	▼g	1
BP49-17	17	24.0	25	22	18	100	180	5
BP49-19	19	26.0	25	24	18	100	190	5
BP49-21	21	27.5	25	26	18	100	190	5
BP49-22	22	29.5	25	27	18	100	210	5

**Usage**

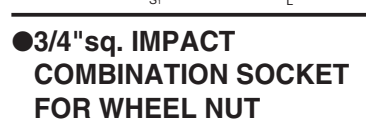
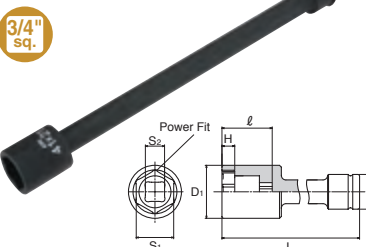
- Compatible with exclusive socket wrenches and impact wrenches used to tighten and loosen vehicle wheel nuts.

**Characteristics**

- Exclusive socket for the aluminum wheel
- A protective rubber cushion has been fitted for chrome or painted nuts.

**CAUTION** • DO NOT USE EXCEPT FOR CAR WHEEL NUTS.  
 • SPECIALLY DESIGNED TO BE THINNER THAN ORDINARY PRODUCTS. DUE TO THE THINNER CONSTRUCTION, THIS SOCKET SET MAY BREAK DEPENDING ON THE WAY OF USE.

**● 3/4"sq. IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT PAT.**



**IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT**

No.	S <sub>1</sub> Hex.	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	ℓ	L	▼kg	1
ABP6ZL-4121TP	41	21	58	38	14	55	450	2.6	1

- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.
- Looseness is eliminated by integrating the combination socket and extension bar, allowing the torque management with higher accuracy even when torque wrench is used.
- With the long design of 450mm total length, it can be used without interference even with the wide body.

Attached pins and rings  
PR-2833

**CAUTION** • Combine the black pin with black ring and silver pin with gray ring.

**● 3/4"sq. IMPACT COMBINATION SOCKET FOR WHEEL NUT**



**IMPACT COMBINATION SOCKET FOR WHEEL NUT** mm

No.	S <sub>1</sub> Hexagonal	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	1
ABP6-3217TP	32	17	46.5	50	12	76	51	780	2
-3517TP	35	17	50	50	13	78	53	840	2
-3820TP	38	20	55	50	14	75	50	850	2
-4119TP	41	19	58	50	14	80	55	900	2
-4120TP	41	20	58	50	14	80	55	900	2
-4121TP	41	21	58	50	14	80	55	900	2

- A single, labor-saving wrench can be used to tighten or loosen both the outer and inner nuts.
- Is very effective for vehicles that have limited wheel and nut clearance due to the thin wall design.
- All the tools necessary for working on medium size (2t class) to large size (4t class) vehicles are provided.

**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.

Attached pins and rings  
PR-4045

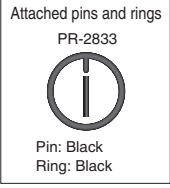
Pin: Silver  
Ring: Grey

\*Please check the merchandise inventory for a product that is marked by before placing an order.

3 Removing/Installing Wheel

IMPACT INNER SOCKET

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦	mm
ABP6-17SQP	17	40	38	18.5	56.5	31.5	370	5	
-19SQP	19	40	38	18.5	56.5	31.5	322	5	
-20SQP	20	40	38	20.5	58.5	33.5	346	5	
-21SQP	21	40	38	22.5	60.5	35.5	350	5	



**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.

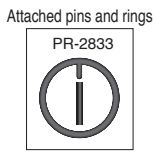
● 3/4"sq. IMPACT INNER SOCKET



IMPACT SOCKET (DEEP)

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
BP6L-33TP	33	48	38	28	100	75	693	5

• Deep thin wall type that supports the new ISO wheel.



**CAUTION** • Combine the black pin with black ring and silver pin with gray ring.

● 3/4"sq. IMPACT SOCKET (DEEP) PAT.



IMPACT SOCKET FOR WHEEL NUT

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦	mm
ABP8-32TP	32	46.5	50	25	80	50	680	2	
-35TP	35	50	50	25	80	50	710	2	
-38TP	38	55	50	30	80	50	800	2	
-41TP	41	58	50	35	80	50	840	2	

• A tool with the thin wall design that can be used for car types with lesser clearance between the wheel hub and wheel nut.  
• The outer diameter has been reduced by 94% in comparison with the previous products.

Usage

• Tightening and loosening wheel nuts (outer nut) for middle size vehicles (2 t~4 t) and large vehicles (4 t and above, such as buses).

**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.



● 1"sq. IMPACT SOCKET FOR WHEEL NUT (THIN)

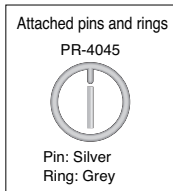


WHEEL NUT COMBINATION SOCKET FOR IMPACT USE

No.	S <sub>1</sub> Hexagonal	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦	mm
ABP8-3517TP	35	17	50	50	13	83	53	830	2	
-3820TP	38	20	55	50	14	80	50	840	2	
-4119TP	41	19	58	50	14	85	55	890	2	
-4120TP	41	20	58	50	14	87	57	900	2	
-4121TP	41	21	58	50	14	87	57	900	2	

• It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.  
• It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.

**CAUTION** • Match the black pin with the black ring, and the silver pin with the grey ring.



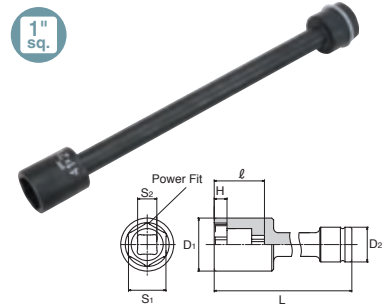
● 1"sq. WHEEL NUT COMBINATION SOCKET FOR IMPACT USE (THIN)



\*Please check the merchandise inventory for a product that is marked by before placing an order.

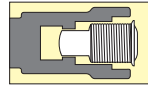
3 Removing/Installing Wheel

● 1"sq. IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT PAT.

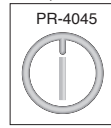


IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT

No.	S <sub>1</sub> Hex.	S <sub>2</sub> Square	D <sub>1</sub>	D <sub>2</sub>	H	ℓ	L	▼kg	📦
ABP8ZL-4121TP	41	21	58	50	14	55	450	2.8	1



Attached pins and rings



- It is a labor-saving tool for the loosening/tightening work of both outer and inner nuts with just 1 wrench.
- It is a thin wall type that's also effective for vehicle models that have less clearance for wheel hubs and wheel nuts.
- Looseness is eliminated by integrating the combination socket and extension bar, allowing the torque management with higher accuracy even when torque wrench is used.
- With the long design of 450mm total length, it can be used without interference even with the wide body.

**CAUTION** • Combine the black pin with black ring and silver pin with gray ring.

● 1"sq. IMPACT SOCKET (DEEP) PAT.

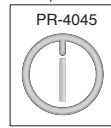


IMPACT SOCKET (DEEP)

No.	S	D <sub>1</sub>	D <sub>2</sub>	H	L	ℓ	▼g	📦
BP8L-33TP	33	48	49.5	25	100	70	832	2

- Deep thin wall type that supports the new ISO wheel.

Attached pins and rings



- CAUTION**
- It may not be usable for some models.
  - Combine the black pin with black ring and silver pin with gray ring.

● CROSS RIM WRENCH



➡ P.134

● 1/2"sq. WHEEL NUT TORQUE WRENCH · SET D.PAT.



WHEEL NUT TORQUE WRENCH · SET

1/2"sq. Wheel Nut Torque Wrench · Set			
No. TWCMPA119	▼kg 1.3	📦 1	
1/2"sq. Wheel Nut Torque Wrench	85N-m		WCMPA085
1/2"sq. Wheel Nut Socket	19mm		B38Z-19H
1/2"sq. Wheel Nut Torque Wrench · Set			
No. TWCMPA221	▼kg 1.3	📦 1	
1/2"sq. Wheel Nut Torque Wrench	103N-m		WCMPA103
1/2"sq. Wheel Nut Socket	21mm		B38Z-21H
1/2"sq. Wheel Nut Torque Wrench · Set			
No. TWCMPA319	▼kg 1.3	📦 1	
1/2"sq. Wheel Nut Torque Wrench	108N-m		WCMPA108
1/2"sq. Wheel Nut Socket	19mm		B38Z-19H
1/2"sq. Wheel Nut Torque Wrench			
No.	Set Torque	▼kg	📦
WCMPA085	85N-m	1.1	1
WCMPA103	103N-m	1.1	1
WCMPA108	108N-m	1.1	1

Usage

- Unipotent torque wrench dedicated for automotive wheel nut.
- Applicable only in clockwise tightening direction. (It does not apply to the reverse screw.)

Application

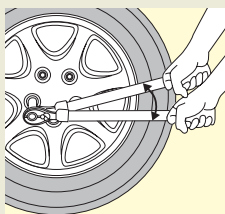
- WCMPA085: 85N-m specified torque (Suzuki, Nissan light vehicles)
- WCMPA103: 103N-m standard torque (Toyota, Daihatsu)
- WCMPA108: 108N-m standard torque (Nissan, Honda)

Features

- High-precision torque management is made possible with the design dedicated for each manufacturer specified torque.
- Total length is optimally set at 420mm to keep hands away from tires.
- Set torque can be determined by the neck cover color.
- Work time is reduced by the adoption of the ratchet head (36-gear).
- \* Repair kit (BR4E-K) is configured.
- \* Recommend to calibrate and adjust when using a repair kit.

**CAUTION** • Please use it upon confirming the manufacturer specified torque.

Details of Wheel Nut Socket  
➡ P.255



Please check the tightening torque within the range of the arrow.

**WHEEL NUT TORQUE WRENCH SET**

No. <b>TWCMPA221</b>	kg <b>1.3</b>	1
1/2"sq. Torque wrench for wheel nut	WCMPA103	
1/2"sq. Exclusive socket for wheel nut 21mm	B38Z-21H	

**Usage**

- This tool is a pre-set type torque wrench that is used to tighten vehicle wheel nuts 17, 19, and 21mm at a specified torque of 103N·m (10.5kgf·m). (The 17, 19mm sockets are sold separately.)
- Applicable for clockwise rotation tightening. (Is not applicable for anti-clockwise rotation tightening)

**Characteristics**

- Reliable operation is possible through torque management. (For confirmation during inspection on completion)
- Work hours have been reduced with the employment of the ratchet head. (36 plate gears) The union structure allows for the firm sustenance of the socket. Socket replacement can be carried out easily.
- The full optimum length is designed so that the tire and the mechanic's hands do not interfere. (Full length has been set at 420mm, 55mm longer than in previous models.) The load on the handle has also been reduced during operation.
- The head angle changes with a light shock to the hands when the tightening torque is reached, enabling recognition of completion.
- The rubber cap attached to the base prevents entry of dirt and dust.
- Provided with a soft case that makes storage easy.

\*Replaceable parts are available for the ratchet section. Check with your dealer for details.

**Compatibility Table (Domestic Vehicles)**

Nut size (mm)	Manufacturer	Examples of Compatible Cars
<b>19</b> <small>*19mm socket is required (sold separately)</small>	Honda, Subaru	All passenger vehicles (except recreational and light vehicles)
	Isuzu	All passenger vehicles
<b>21</b>	Toyota, Nissan	All passenger vehicles (except recreational and light vehicles)
	Mitsubishi, Daihatsu	All passenger vehicles (except recreational and light vehicles)
	Mazda	All passenger vehicles (except recreational and light vehicles)

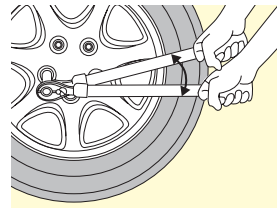
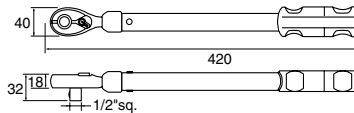
- \* The torque value for light vehicles with 17mm nuts differs from the one for regular vehicles. For this reason, the torque wrench above cannot be used. However, the torque wrench can be used on some foreign cars made outside of Japan.
- \* Compatible with wheel tightening torque value of 103N·m. (Not applicable to certain vehicles and wheels.)
- \* The wrench cannot be used for trucks and recreational vehicles, as the torque value required is too high.
- \* Check the torque value before using wrench on non-standard wheels.

**1/2"sq. WHEEL NUT TORQUE WRENCH SET**

D.PAT.

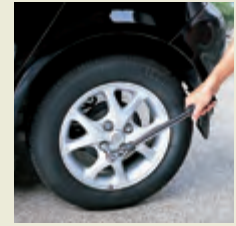


1/2" sq.



Confirm the tightening torque with the wrench positioned between the arrows, as shown in the diagram.

Inspecting Tightening Torque **4**



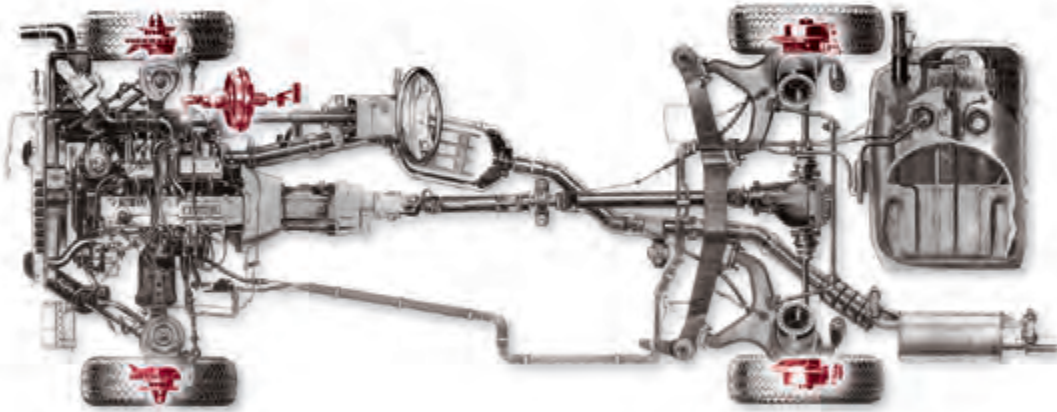
**CAUTION**

1. This torque wrench is exclusively designed for wheel nuts. Do not use this tool to tighten or loosen other bolts/nuts.
2. The wheel tightening torque is set for domestically manufactured vehicle standard wheels. Check the torque settings for special wheels before use.
3. This product is a measurement tool. Take extreme care when handling. Be sure to avoid dropping, throwing, or hitting this product.
4. Hold the grip at the line as the center and apply even firm pressure.
5. Applying pressure at other places (pipe part etc.) than the grip will give inaccurate torque readings.
6. Use this product multiple times to avoid misleading when the tool has been stored for a long time.
7. Do not use during rain, high humidity levels, and in conditions where the tool is exposed to water.
8. Do not disassemble this product. The torque settings can become faulty.
9. Immediately stop use and request for an inspection/disassembly and adjustment when this product is dropped, submerged in water, emits abnormal sound, or operates faultily.
10. Do not apply force after operation.

# 5. AUTOMOTIVE SPECIAL TOOLS

## Dismantling the Mechanism (6)

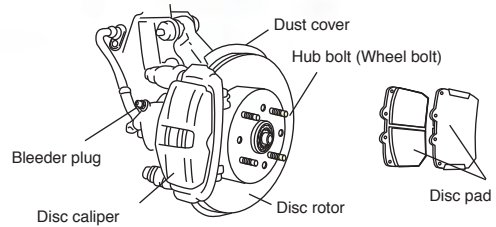
# Brake System Mechanism



### MECHANISM 1

#### How the disc brake works

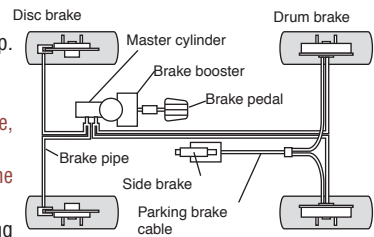
The disc brake is a device that works by pressing a brake pad against the disc rotor that rotates with the wheel. Compared to the drum brake, the disc brake is far more effective and stable, allowing for a larger braking force and is used on the front wheels of passenger vehicles and light trucks.



### MECHANISM 2

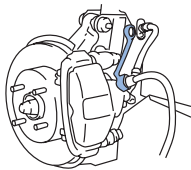
#### Brake system

Braking is one of the basic functions being necessary for vehicles in order to drive, turn and stop. Brakes are an important device necessary for safe driving. The system consists of 2 main operations used by the driver - being the "Brake Pedal" and the "Parking Brake Lever". The master cylinder that converts the pressure directed towards the brake pedal to fluid pressure, further directing the brake fluid to the braking device. The "Brake Pipe" and "Brake Hose" that direct the brake fluid pressure to the braking device from the master cylinder. The "disc Brake" and "Drum Brake" that transfer the braking pressure on the brake pedal to the rotating wheel. Respective categories are raised above.

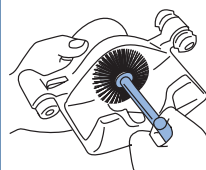


#### Disc brake tools

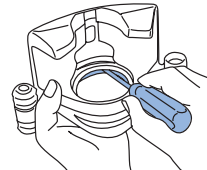
**Offset wrench for bleeder plugs**  
No.ABX7-08-10



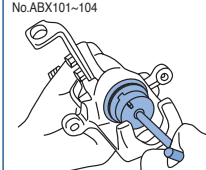
**disc cylinder polisher**  
No.ACPD-54-64



**Seal pick tool**  
No.ABO-100

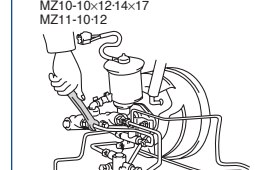


**Disc parking tool**  
(parking attached for discs)  
No.ABX101~104



#### Offset wrench for brake pipes

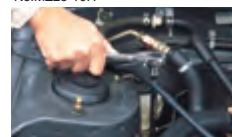
**Offset wrench for brake pipes**  
No.MZ1-10-10x14-10x12-11x12  
MZ10-10x12-14x17  
MZ11-10-12



**Socket for brake pipes**  
No.BZ25-10H



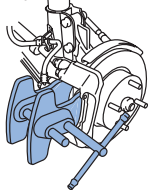
**Claw-foot offset wrench for brake pipes**  
No.MZ25-10H



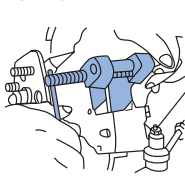
**Rotating offset wrench for brake pipes**  
No.MZF-10



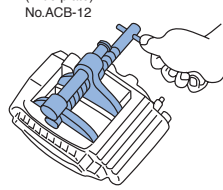
**Disc brake piston tool**  
No.ABX10



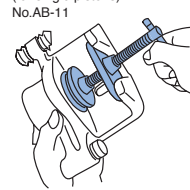
**Disc brake piston tool**  
No.AB-10



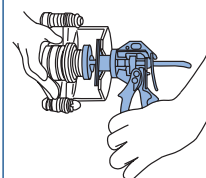
**Disc brake piston tool**  
(wide plate)  
No.ACB-12



**Disc brake piston tool**  
(for single pistons)  
No.AB-11



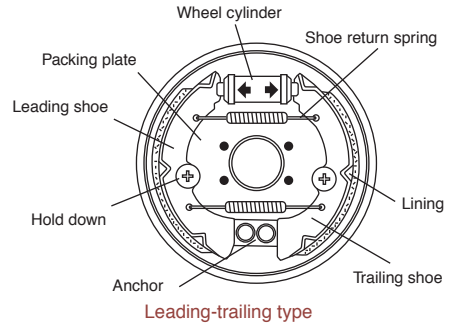
**Brake piston re-setter**  
No.ABX105



**MECHANISM 3**

**How the drum brake works**

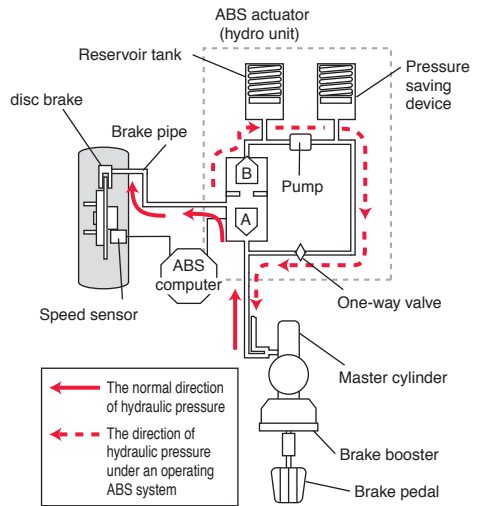
The brake drum is a device that works by pressing a brake shoe against the inner side of a cylindrical drum that rotates with the wheel axle. There are the leading-trailing type, 2 trailing type, and 2 leading type and other different types of drum brakes depending on the operating form of the brake shoe. The leading-trailing type is effective and stable for driving and reversing. However, due to the inferior cooling qualities, drying qualities when wet, and brake fade phenomenon through continuous use, the drum brake is often used for the rear wheel brake only.



**MECHANISM 4**

**How the ABS (Anti-lock Brake System) system works**

ABS is an electronic brake control system that increases braking hydraulic pressure in order to prevent the locking of the tires, providing better driving stability and handling. ABS works by having speed sensors on each wheel detect a slipping condition. The normally open valve A within the ABS actuator (as in the diagram on the right) is closed and valve B open, releasing brake fluid into the reservoir tank. Furthermore, the pump feeds back the brake fluid to the master cylinder for depressurization, mechanically creating a brake-pumping motion. As oil normally does not flow to the ABS actuator, air is not caught within the system when replacing brake fluid.



**Drum brake tools**

<p><b>Cylinder polisher for small type vehicles</b> No.ACP-16A~32A No.ACP-16F~32F</p>	<p><b>C washer tool</b> No.ABX-31</p>	<p><b>Shoe hold spring tool</b> No.ABX-33-34</p>	<p><b>Brake drum screw driver</b> No.AB-5</p>
<p><b>Parking shoe lever tool</b> No.ABX-32</p>	<p><b>Tension spring tool</b> No.AB-7, ABX-35</p>	<p><b>Brake shoe adjustment tool</b> No.ABX301~305</p>	

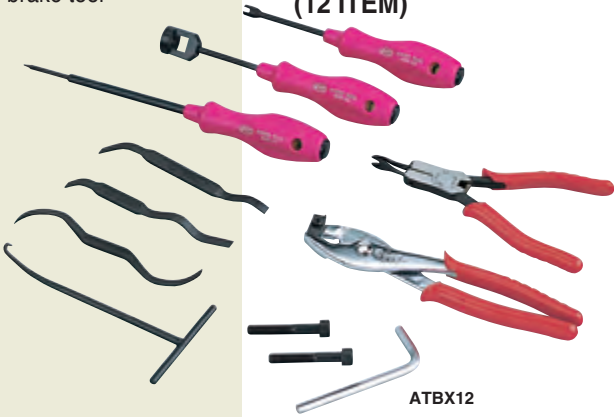
**Large vehicle brake tool**

<p><b>Duo servo type spring tool</b> No.AB-9-LAB-9</p>
<p><b>Brake spring pliers/claw</b> No.ASP-550</p>
<p><b>Cylinder polisher for large type vehicles</b> No.ACP-41~59F</p> <p>Drill (air or electric) Low speed revolution</p>

**BRAKE** **Disassembling/Assembling Brake**

Overall disassembly and attachment of the brake tool

**●DRUM BRAKE SERVICE TOOL SET (12 ITEM)**



ATBX12

**DRUM BRAKE SERVICE TOOL SET (12 item)**

No. ATBX12	kg1.1	☒ 1
Tension spring tool		AB-7
C washer tool		ABX-31
Parking shoe lever tool		ABX-32
Shoe hold spring tool		ABX-33, 34
Tension spring tool		ABX-35
Brake shoe adjustment tool		ABX301, 302, 303
High grade L type standard hex shaft wrench		HLD100-6
Brake drum removal tool (hex hole bolt M8 x 2 pieces)		ATBX14-1
Tray (335 × 230 × 45)		



**Usage**

- A tool set that is exclusively designed for disassembling, attaching, and adjusting the brake drum on vehicles.

**Application**

- The drum brake device that is used on vehicles ranging from light weight class vehicles to small trucks (up to 2 tons)

- The tool set fits within the tool station (P.354-355) alongside the ATBX6.

**●DISC BRAKE SERVICE TOOL SET (6 ITEM)**



ATBX6

**DISC BRAKE SERVICE TOOL SET (6 item)**

No. ATBX6	kg1.6	☒ 1
Disk brake piston tool		ABX10
Disk parking tool		ABX102, 103, 104
Disk parking tool handle		ABX101
Seal pick tool		ABO-100
Tray (335 × 230 × 45)		



**Usage**

- A tool set that is exclusively designed for disassembling, attaching, and adjusting the disk brake on vehicles.

**Application**

- The disk brake device that is used on vehicles ranging from light weight class vehicles to small trucks (up to 2 tons)

- The tool set fits within the tool station (P.354-355) alongside the ATBX12.

**1 Removing Wheel**  
① Removing Wheel cap and Wheel Nuts

**●WHEEL CAP WRENCH**



P.254

**●CENTER CAP WRENCH FOR ALUMINUM WHEEL**



P.254

**●IMPACT WRENCH**



P.200

**●WHEEL NUT SOCKET FOR IMPACT WRENCH**



P.256

**●CROSS RIM WRENCH**



P.134

② Removing hub cap.



**●HUB CAP PLIERS**

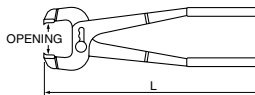


**HUB CAP PLIERS**

No.	Max. Opening	L	▼g	☒
HP-350S	95	350	750	10

**Purpose**

- Removing Hub Cap.
- Can operate by one touch without damaging hub caps.
- Easily taking off caps.
- Free size for wide application.



**●HUB CAP PLIERS**

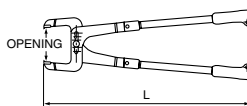


**HUB CAP PLIERS**

No.	Max. Opening	L	▼g	☒
HP-45130	130	490	1350	1

**Purpose**

- Removing Hub Cap.
- For taking off hub grease cap easily without damaging it.
- Adjustable jaw opening, for small cars to middle size trucks.



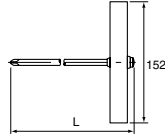


**SCREWDRIVER FOR BRAKE DRUM SCREW**

No.	Tip	L	▼g	☒
AB-5	Cross No.3	270	260	1

- For removing/installing brake drum bis.
- T shape handle with non-slip handle.
- Also used for removing/installing door hinge bolts.

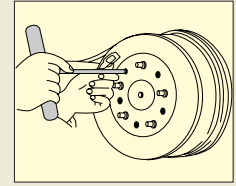
- WARNING**
- DO NOT USE THIS TOOL WITH ELECTRIFIED OBJECTS.
  - USE SCREWDRIVER APPROPRIATE TO SIZE OF THE SCREW.
  - DO NOT USE SCREWDRIVER FOR ANY OTHER PURPOSE.



**SCREWDRIVER FOR BRAKE DRUM SCREW**



Disassembling/Installing drum brake **2**  
 ① Disassembling/Installing shoe



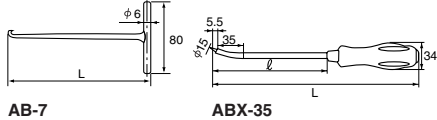
**TENSION SPRING TOOL**

No.	L	ℓ	▼g	☒
AB-7	153	—	90	1
ABX-35	265	145	130	10

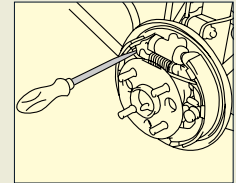
**Purpose**

- Disassembling/installing tension spring for drum brake.

- AB-7** • Tip is designed to prevent spring coming off, and T-shape handle ensures safe operation.
- ABX-35** • Round shaft makes smooth spring movement. The easy-to-hold grip makes installation of spring easier.



**TENSION SPRING TOOL**



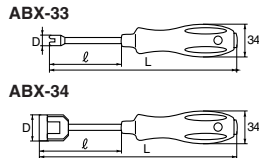
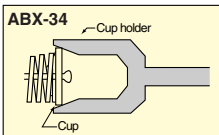
**SHOE-HOLD SPRING CUP TOOL**

No.	D	L	ℓ	▼g	☒
ABX-33	10	195	75	100	10
-34	24	205	85	130	10

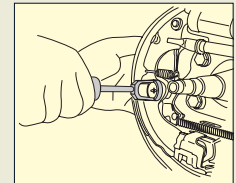
**Purpose**

- Disassembling/installing shoe hold spring for drum brake.

- ABX-33** • Easy-to-hold grip suitable for pressing and turning of screw/pin.
- ABX-34** • Tapered cap holder suitable for good holding enables speed operation.



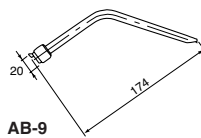
**SHOE-HOLD SPRING CUP TOOL**



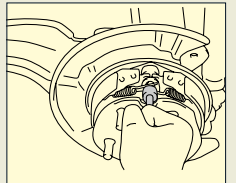
**DUO-SERVO TYPE BRAKE SPRING TOOL**

No.	Application	▼g	☒
AB-9	Medium sized cars (24tons) (2~4t) Hi Ace class	160	5

- Cover almost all models for dismounting/mounting brake shoe return springs using with Brake Spring Plier (ASP-550).



**DUO-SERVO TYPE BRAKE SPRING TOOL**



**PARKING SHOE LEVER TOOL**

No.	L	▼g	☒
ABX-32	177	170	10

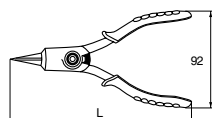
With one motion, parking cable can be installed/removed.

**Purpose**

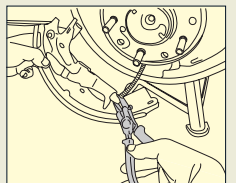
- Removing/installing parking cable.

**Features**

- The claw, designed exclusively for this tool, ensures good holding of the parking cable.

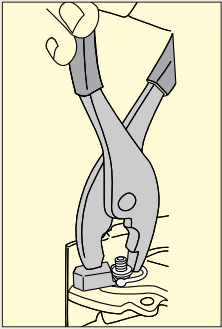
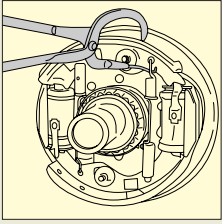


**PARKING SHOE LEVER TOOL**



1 Removing wheel → 2 Disassembling/Installing drum brake → 3 Disassembling/Installing disc pad → 4 Replacing inner parts → 5 Adjusting shoe clearance → 6 Replacing brake oil → 7 Installing wheel & Inspecting torque

2 Disassembling/Installing drum brake



② Cleaning Brake Shoe Bracket of Large Vehicles

● BRAKE SPRING PLIERS & CLAW



BRAKE SPRING PLIERS [Claw (with a pin)]

No.	L	▼g	📦
ASP-550	550	1,200	1

Claw (with a pin)

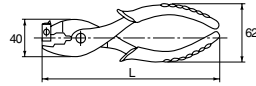
No.	L	▼g	📦
ASP-C	101	35	1

Purpose

- Special tool for removing / setting of large sized vehicle (4-10 tons).
- \*Do not use this claw with BSP-520 (conventional type).



● C-WASHER TOOL



C-WASHER TOOL

No.	L	▼g	📦
ABX-31	203	230	10

Good work efficiency with special claws.

Purpose

- Removing/installing C-washer.

Features

- For quick work, use wedge side of claw to open C-washer flat side to push it out.

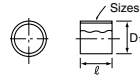
[Removing C-washer]

1. Set wedge side of claw to inside. ① Pull
2. Open C-washer with blade part. (Cross section) Claw, C-washer
3. Turn claw and set flat side to inside for removal. Claw, C-washer

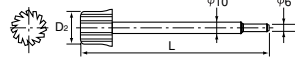
● BRACKET SANDER SET



Supplement paper



Rubber wheel



BRACKET SANDER SET

No.	Contents							Car Models	▼g	📦
	Paper			Rubber Wheel						
	D <sub>1</sub>	ℓ	No.	Pcs.	D <sub>2</sub>	L	Qty.			
APS306	30	25	#60	5	29	177	1	Hino over 8t	160	5
APS326	32	30	#60	5	31	177	1	UD over 8t	160	5
APS356	35	35	#60	5	34	177	1	Fuso, Isuzu over 8t	160	5

SPARE PAPER SET FOR BRACKET SANDER

No.	Contents	Quantity	▼g	📦
APS3010	#60 Paper for φ 30	10pcs.	100	5
APS3210	#60 Paper for φ 32	10pcs.	100	5
APS3510	#60 Paper for φ 35	10pcs.	100	5

Purpose

- Cleaning brake shoe bracket of large vehicles.

Rubber wheel for bracket sander

No.	D <sub>2</sub>	L	▼g	📦
APS-30G	29	177	110	10
APS-32G	31	177	110	10
APS-35G	34	177	110	10

Disassembling/  
Installing disc pad  
① Removing Pad

3

● T-SHAPED DRUM REMOVER

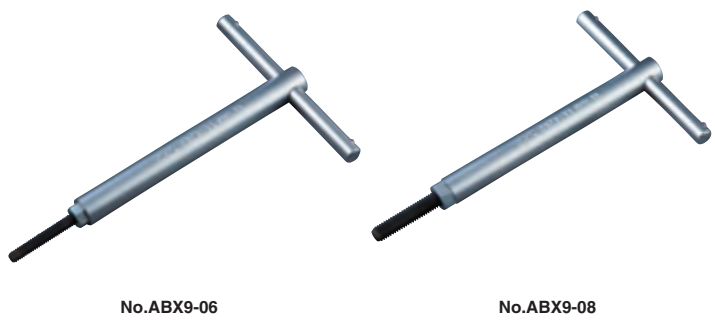
T-SHAPED DRUM REMOVER

No.	a	L	ℓ	D <sub>1</sub>	D <sub>2</sub>	▽g	
ABX9-06	M6	160	100	14	9	200	
ABX9-08	M8	160	100	14	9	200	

- Application**
- Removal of brake drum mainly on mini-vehicles
- Features**
- Since the handle is operated with a sliding mechanism, the brake drum can be smoothly removed without interference of handles each other if two handles are used.
  - Since the end screw is designed to be replaceable, only the end screw can be replaced if the screw is worn off.

Part for replenishment

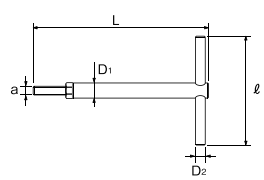
No.	Name	
ABX9-06A	M6 bit	
ABX9-08A	Ma bit	



Since the handle is operated with a sliding mechanism, no interference of handles occurs if two handles are used.



When two handles are used, the brake drum can be removed in a stable manner.



● HEX. WRENCH

● PLIERS

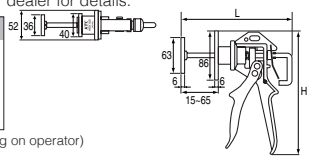
DISK-BRAKE SPREADER

No.	L	H	▽g	
ABX105	145~195	214	750	1

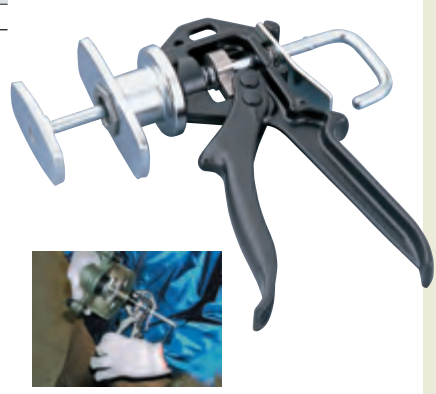
- Usage**
- An exclusive tool designed for disk brake pad replacement, and also pushing out brake caliper pistons (single piston type) during overhauls.
- Characteristics**
- The brake piston is returned easily by just operating the lever.
  - Various positions are possible by turning the handle.
  - One hand operation in removing from the caliper.
  - Parallel movement with no piston damage, direct, straight pushing is possible.
- Application**
- Is applicable for single piston types from light weight vehicles to small trucks (2 ton class)
  - Brake (Cannot be used on parking brake body type brake calipers)
- \*Replacement parts are available. Check with your dealer for details.

**Comparisons with previous KTC products.**

Compared to the previous handle type, piston retrieval is completed in 12 sec\* with just holding the grip.  
A 60% reduction is operation timing compared to previous products.



● DISK-BRAKE SPREADER



● DISK-BRAKE SPREADER D.PAT.

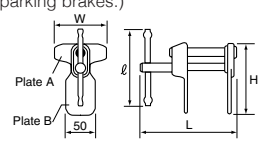


DISC-BRAKE SPREADER

No.	Plate Opening	ℓ	L	W	H	kg	
ABX10	10~75	125	155	86	117	1	5

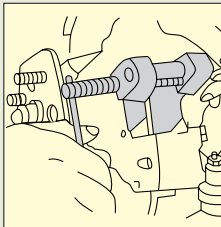
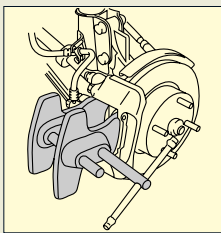
Use of either plate A or B enables application to various car models.

- Purpose**
- Pushing in disc brake piston (single piston/2-piston types).
- Features**
- Applicable to single piston caliper, parallel piston calipers, and opposed piston calipers of mini cars to small trucks (2t).  
(Cannot be used on brake calipers combined with parking brakes.)



\*Please check the merchandise inventory for a product that is marked by before placing an order.

3 Disassembling/  
Installing disc pad  
③ Replacing Piston



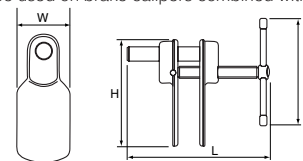
●DISK-BRAKE SPREADER



DISC-BRAKE SPREADER

No.	Plate Opening	ℓ	L	W	H	▽g	📦
AB-10	10~65	115	155	50	115	780	1

- Purpose** • Pushing in disc brake piston (2-piston type).
- Features** • The claw for pushing in the piston makes parallel movement along guide.  
• Operation possible by turn of the handle.  
• Designed to prevent claw from widening the caliper or mounting when putting it in.
- Application** • Applicable for parallel piston caliper and opposed piston caliper of light cars to small trucks (2t). (Cannot be used on brake calipers combined with parking brakes.)



●DISK-BRAKE SPREADER  
(WIDE PLATE) D.PAT.



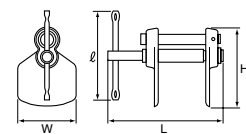
DISC-BRAKE SPREADER

No.	Plate Opening	Handle	Thickness	L	W	H	▽g	📦
ACB-12	10~87	150	5	184	90	120	1400	5

- Application**
- From mini cars to small trucks.
  - Cannot be used on brake calipers combined with parking brakes.
  - Cannot be used on opposite 2 pistons brake caliper on the car.
  - Can be used if it is dismounted from the car.

**Special Features**

- For use on opposite 4 pistons, parallel pistons & single pistons.
- Superb durability.
- Smooth work by handle.



●DISC-BRAKE SPREADER  
SET WIDE TYPE



DISC-BRAKE SPREADER SET WIDE TYPE

No. ATCB5	▽kg 3.0	📦 1
Disc-Brake Spreader (Wide Plate)	ACB-12	
Plate A Set	ATCB2A	
Plate B Set	ATCB2B	

**Usage**

- Disc caliper piston return that's used in disc pad replacement work.

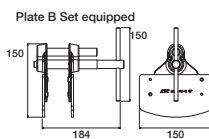
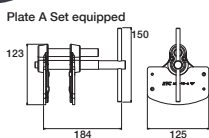
**Application**

- Supports Opposing 4, 6-Piston and Parallel 2-Piston Disc Calipers.
- Plate A Set: Opposing 4-Piston and Parallel 2-Piston Disc Calipers, caliper upper opening size of 125mm or more
- Plate B Set: Opposing 6-Piston Disc Caliper, caliper upper opening size of 150mm or more

**Features**

- Plate can be replaced to fit the used size based on Disc Brake Piston Tool (No.ACB-12).

	Caliper Type	Car Type	Manufacturer	
Plate A 125mm	Parallel 2-Piston Disc Caliper	Small truck	Isuzu	Elf
			Passenger car	Toyota
		Nissan		Cedric, Gloria, Elgrand, Liberty, Serena
		Mazda		MPV, Bongo
Plate B 150mm	Opposing 4-Piston Disc Caliper	Passenger car	Lexus	LS, GS
			Porsche	928
	Opposing 6-Piston Disc Caliper	Lexus	IS F	



●WIDE PLATE for DISC-BRAKE SPREADER  
(ACB-12)



WIDE PLATE for DISC-BRAKE SPREADER (ACB-12)

No. ATCB2A	▽g 670	📦 1
Dedicated Plate	125 x 77 x 11.3	
		x2

- It can be equipped to your disc-brake spreader (wide plate: No.ACB-12).

⚠ CAUTION • Plate set is dedicated for the disc-brake spreader (wide plate: No.ACB-12).

●WIDE PLATE for DISC-BRAKE SPREADER  
(ACB-12)



WIDE PLATE for DISC-BRAKE SPREADER (ACB-12)

No. ATCB2B	▽g 920	📦 1
Dedicated Plate	150 x 87 x 11.3	
		x2

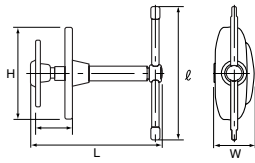
- It can be equipped to your disc-brake spreader (wide plate: No.ACB-12).

⚠ CAUTION • Plate set is dedicated for the disc-brake spreader (wide plate: No.ACB-12).

**DISC-BRAKE SPREADER**

No.	Plate Opening	ℓ	L	W	H	▽g	📦
AB-11	12~77	125	122	36	86	345	1

- Purpose** • Pushing in disc brake piston (single piston type).  
**Features** • With this tool, the plate can make full contact for either high arm or low arm.  
 • Ball-bearing center screw makes smooth movement.  
**Application** • Applicable to single piston caliper of light cars to small vehicle (Max.:2t) (Cannot be used on brake calipers combined with parking brakes.)

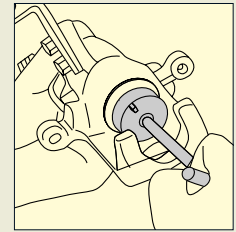


**DISK-BRAKE SPREADER (SINGLE PISTON TYPE) D.PAT.**



Disassembling/Installing disc pad

3



**DISC PARKING TOOL SET (3pcs.)**

**Disc Parking Tool Set**

No.	▽g	📦
ATB13	200	10

Rotor (A-B) (C-D) (E-F) ABX102,103,104



Note: AB101(Handle) is not included in ATB13.

- Features:**  
 • With three types of rotor, applicable to six types of brake piston.  
 • Small outer diameter allows installation through notch portion of the caliper.  
 • Precision-cast tool fits piston shape. Easy selection of applicable rotor and reduced coming off of rotor nail.

**DISC PARKING TOOL SET (3pcs. Set)**



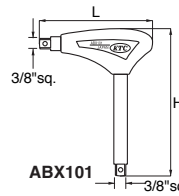
ABX101



ABX102

ABX103

ABX104



ABX101

**Rotor (A&B)**

No.	L	W <sub>1</sub>	W <sub>2</sub>	▽g	📦
ABX102	34	11	16	70	10

**Rotor (C&D)**

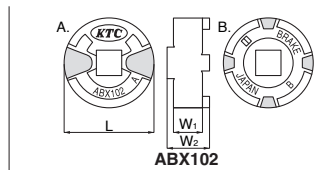
No.	L	W <sub>1</sub>	W <sub>2</sub>	▽g	📦
ABX103	30	11	16	60	10

**Rotor (E&F)**

No.	L	W <sub>1</sub>	W <sub>2</sub>	▽g	📦
ABX104	34	11	16	70	10

**3/8" sq. handle**

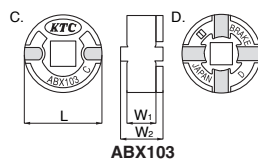
No.	L	W <sub>1</sub>	W <sub>2</sub>	▽g	📦
ABX101	105	135	28	250	10



ABX102

Applicable Makers

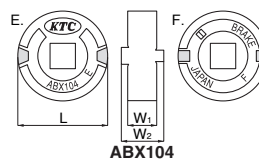
A	B
Toyota, Mitsubishi, Mazda, Daihatsu, Nissan (Akebono Brake)	Nissan



ABX103

Applicable Makers

C	D
Toyota (Aishin), Suzuki	Honda (Nissan), Suzuki



ABX104

Applicable Makers

E	F
Volkswagen, Audi	Subaru

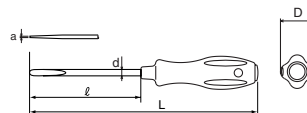
**SEAL PICK TOOL**

No.	a	D	d	L	ℓ	▽g	📦
ABO-100	1	27	5	187	100	55	1

The round tip prevents scratching.

- Purpose**  
 • Peeling off seal from disc brake.  
 • For removing O ring without damaging seals and boots.  
 • Ergonomic grip and long shank for removing seals and boots easily.

**SEAL PICK TOOL**



Replacing inner parts

4

① Seal Picking

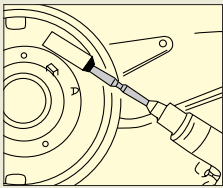


4 Replacing inner parts

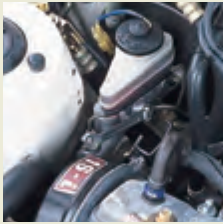
② Cleaning of Cylinder



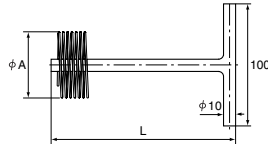
② Cleaning of Cylinder



③ Disassembling of the Pipe



● DISC CYLINDER POLISHER



DISC CYLINDER POLISHER

No.	L	Cylinder Size (φ A)	▼g	☒
ACPD-54	150	48~53	180	1
-64	150	54~60	180	1

- For easy cleaning in disc brake cylinders.
- For cleaning inside the cylinders, rust in the seal groove, dust, etc.
- 2 sizes according to inner diameters of cylinders.
- With hand brush with wear resistance and elasticity.

● BRAKE CYLINDER POLISHER SET (6pcs.)



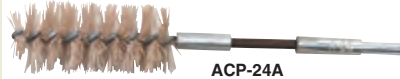
BRAKE CYLINDER POLISHER SET (6pcs.)

No.	ACP6	▼g	400	☒	5
	For Aluminum Alloy Cylinder	φ 16 · φ 24 · φ 32			
	Molded Cylinder	φ 16 · φ 24 · φ 32			

- For easy cleaning in disc brake cylinders.
- For cleaning inside the cylinders, rust in the groove, dust, etc.
- 2 sizes according to inner diameters of cylinders.
- With hard brush with wear resistance and elasticity.

**CAUTION** • BE CAREFUL OF DUST OR NYLON FIBER AS IT MAY CUT AND SCATTER.  
• WEAR EYE GLASSES WHEN USING THE TOOL.

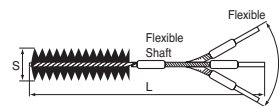
● BRAKE CYLINDER POLISHER



ACP-24A



ACP-24F



BRAKE CYLINDER POLISHER

No.	S	L	Type	▼g	☒
ACP-16A	φ 16	172	Aluminum For cylinder	30	10
-24A	φ 24	175		35	10
-32A	φ 32	175		40	10
ACP-16F	φ 16	172	Mould For cylinder	30	10
-24F	φ 24	175		35	10
-32F	φ 32	175		40	10

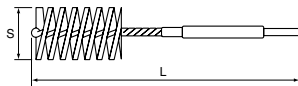
- For cleaning brake wheel & master cylinders.
- Flexible shaft for easy operation.

**CAUTION** • BE CAREFUL OF DUST OR NYLON FIBER AS IT MAY CUT AND SCATTER.  
• WEAR EYE GLASSES WHEN USING THE TOOL.

● BRAKE CYLINDER POLISHER FOR LARGE SIZED VEHICLES



ACP-41F



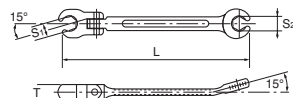
BRAKE CYLINDER POLISHER

No.	S	L	Type	▼g	☒
ACP-41F	φ 41	220	Mould For cylinder	110	5
-51F	φ 51	230		160	5
-59F	φ 59	250		200	5

- The decisive factor is in the nylon threads which contain polishing agent.
- One polisher can be used for over 3000 cylinders.
- Easy to use. Finish in around 15~30 seconds.

**CAUTION** • SCATTERING OF THE NYLON THREADS AND PARTICLES CAN OCCUR, IF BREAKAGE OCCURS.  
• ALWAYS WEAR SAFETY GOGGLES WHEN USING.

● FLEX FLARE NUT WRENCH



FLEX FLARE NUT WRENCH

No.	S1xS2	T	L	▼g	☒
MZF-10	10 x 10	10	143	80	5

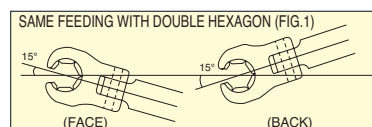
POWERFIT

Purpose

- Fastening/loosening union nuts (flare nuts) on brake and clutch systems of many types of cars from mini-cars to small trucks.

Special Feature

- Flexible head for wider application, particularly narrow space near master cylinders.
- 15° angled Hexagon head for getting same feeding with double hexagon by continuous reversing operation.(Fig.-1)



**BRAKE PIPE TOOL SET (2pcs.)**

No. AB252	▼g 105	📦 10
Socket for Brake Pipe	BZ25-10H	
Claw foot for Brake Pipe	MZ25-10H	

**Purpose**

- Fastening/loosening flare nuts (union nuts) of brake and clutch systems of light cars to small trucks (2t).

**Features**

- Designed to be compact and effective for the flare nut of master cylinder installed in narrow space.

**Application**

- Applicable to flare nuts (10mm) of brake and clutch systems of all models of Japanese cars (mini cars, compact cars, passenger cars, light trucks and small trucks.)

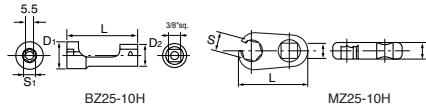
**Socket wrench for brake pipe**

No.	S <sub>1</sub>	D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
BZ25-10H	10	20	17	54	60	1

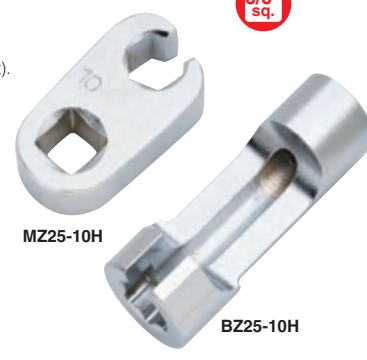
**Claw foot offset wrench for brake pipe**

No.	S	H	L	▼g	📦
MZ25-10H	10	10	40	45	1

- Claw foot offset wrench for brake pipe has an angle of 15 degrees from the center line. The hexagonal end can be used as 12 point end (30 degrees) by repeated operation with the two sides.



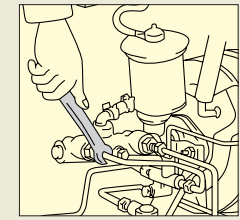
**●BRAKE PIPE TOOL SET (2pcs.)**



Replacing inner parts

4

③Disassembling of the Pipe

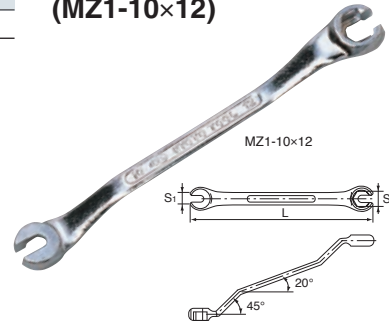


**FLARE NUT WRENCH**

No.	S <sub>1</sub> (Hexagonal shaped) × S <sub>2</sub> (Hexagonal shaped)	L	▼g	📦
MZ1-10 × 12	10 × 12	160	80	5

- Fastening/loosening brake pipe flare nuts of mini, compact & medium sized cars of all car makers.
- 45° angled & straight ends for wider application.

**●FLARE NUT WRENCH (MZ1-10×12)**



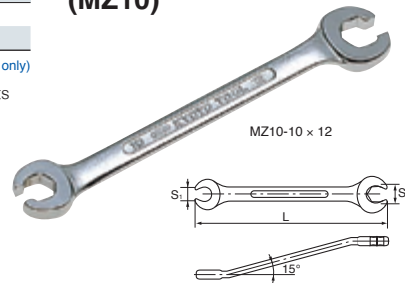
**FLARE NUT WRENCH**

No.	S <sub>1</sub> × S <sub>2</sub>	L	▼g	📦
MZ10-10 × 12	10 × 12	145	80	5
-14 × 17	14 × 17	164	100	5

POWERFIT® (MZ10-10 × 12 only)

- Special wrench for removing/attaching brake pipe flare nuts and clutch pipe flare nuts (hydraulic type only).
- Contacting by 5 points for turning nuts securely.

**●FLARE NUT WRENCH (MZ10)**



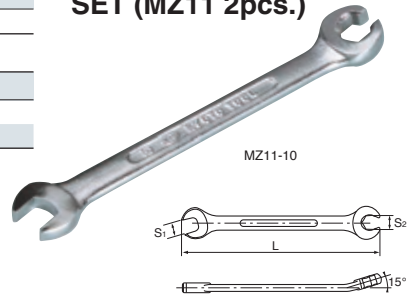
**FLARE NUT WRENCH•SET (2pcs.)**

No. MZ112	▼g 135	📦 10
Flare Nut Wrench	MZ11-10, 12	

No.	S <sub>1</sub> × S <sub>2</sub> (Hexagonal shaped)	L	▼g	📦
MZ11-10	10 × 10	150	60	10
-12	12 × 12	154	75	10

- Combination of Flare Nut Wrench and Open End Wrench.
- Open end for quick turning and sprit-ring end for final tightening.

**●FLARE NUT WRENCH & SET (MZ11 2pcs.)**



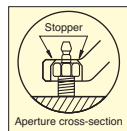
No.	S <sub>1</sub> × S <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦
ABX7-0811	8×11	15.8	18.3	6.3	7.3	127	50	1

**Usage · Application**

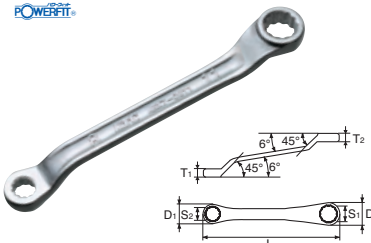
- Loosening/tightening work of 8×11mm bleeder plugs in Toyota Vellfire · Alphard (model year May '08 or later), Estima (model year January '06 or later), etc.

**Features**

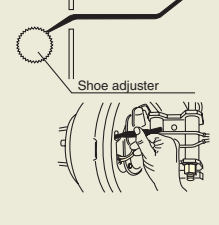
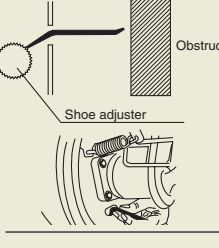
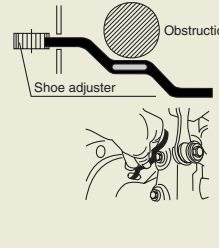
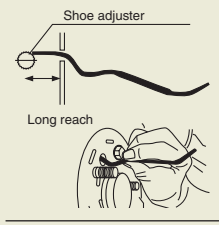
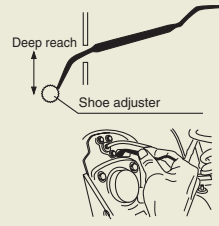
- By combining with the 8×11mm size, 1 unit can support both the front and rear.
- With a stopper provided on the bore top, it can be used while fixed on the hex. part of the bleeder plug.
- Short type that does not interfere with the tire or underbody.



**●BLEEDER PLUG WRENCH**



## 5 Adjusting shoe clearance



### ● BRAKE SHOE ADJUSTER TOOL SET

**Standard Type**

**ABX301**

- Designed for vehicles that have shoe adjusters in hard to reach areas.

**Round Type**

**ABX302**

- Designed for vehicles with substantial distance to the shoe adjuster.

**Offset Type**

**ABX303**

- Designed for vehicles with shock absorbers etc. that obstructs maintenance procedures.

**Short Type**

**ABX304**

- Designed for vehicles that have many obstructions.

**Long Type**

**ABX305**

- Designed for vehicles that have high tension springs.

### BRAKE SHOE ADJUSTER TOOL SET

● For Passenger Cars (3pcs. Set)

No. ATBX33	▼ g 110	📦 10
Brake Shoe Adjuster Tools	ABX301, 302, 303	

● For Medium-Sized Cars (2-3t class) (2pcs. set)

No. ATBX32	▼ g 75	📦 10
Brake Shoe Adjuster Tools	ABX304, 305	

**Purpose**  
 ● Specialized tools for adjusting clearance between drum and brake shoe on drum brakes.

**Application**  
 ● Mainly for minicars and compact cars (ATBX33)  
 ● Mainly for trucks 2-4t (ATBX32)

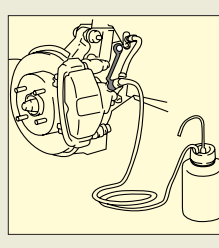
**Features**  
 ● Diverse shapes enable shoe adjustment in places previously inaccessible.  
 ● Each tool has two types of curve and therefore broader application.

No.	Type	Application	L	W <sub>1</sub>	W <sub>2</sub>	▼ g	📦
ABX301	Standard Type	For Passenger Cars	140	12	8	40	10
ABX302	Round Type	For Passenger Cars	140	12	8	33	10
ABX303	Offset Type	For Passenger Cars	140	8	12	39	10
ABX304	Short Type	For Medium-Sized Cars	80	12	8	24	10
ABX305	Long Type	For Medium-Sized Cars	150	12	8	51	10

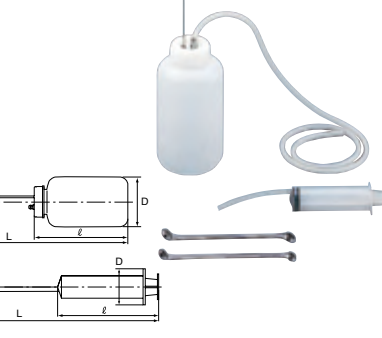
### ● Applicable Models

Type	Maker	Model
ABX301	Toyota	Ardeo / Starlet / Tercel / Corsa Crown / Hiace / Townace / Lightace
	Nissan	Largo / Serena
	Mitsubishi	Toppo / Minica
	Subaru	Pleo / Vivio
	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
ABX302	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Toyota	RAV4 / Ipsum / Gaia / Nadia
	Honda	Effective for adjustment form the drum side
ABX303	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Toyota	Corolla / Marino / Ceres / Sprinter / Vista / Spacio
ABX304	Mazda	Bongo
	Fuso	Fighter / Canter
	Isuzu	Elf (new) / Fargo
	UD	Condor
	Nissan	Bluebird / Primera / Presea / Be-1
	Mitsubishi	Bravo
ABX305	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Toyota	Dyna / Toyoace
	Hino	Dutro / Ranger
	Mazda	Titan
	Isuzu	Elf (earlier models)
	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.	

## 6 Replacing brake oil



### ● BLEEDER WRENCH SET



### BLEEDER WRENCH SET

No. ATBX04	▼ g 320	📦 1
Bleeder Plug Wrench	ABX7-08, 10	
Fluid catch tank (capacity: 1L)	ABX7-T1	
Fluid inhalator (50cc)	ABX7-S1	

### Replacement parts

No.	Product name	Materials	L	ℓ	D	Hose spec.	Capacity	▼ g	📦
ABX7-T1	Fluid catch tank	PE	282	182	100	Soft PVC φ5 × φ8 × 1.1m	1 ℓ	170	1
ABX7-S1	Fluid intake container	PP	240	138	49	Silicone tube φ3 × φ6 × 0.1m	50cc	30	1

Essential Tool for removing air of Brake Oil

**Purpose**  
 ● Replacing brake oil and bleeding air in the pipe.

**Application**  
 ● Applicable to bleeder for light cars to small trucks (2t class)

**Features**  
 ● Convenient combination of a large tank for waste oil and necessary tools for good work efficiency.

### ● BLEEDER PLUG WRENCH



### BLEEDER PLUG WRENCH

No.	S	D	T	L	▼ g	📦
ABX7-08	8	16	7.5	141	60	1
-10	10	19	7.5	143	60	1

Stopper on the top of the opening enables easy operation.

**Purpose**  
 ● Fastening/loosening of bleeder plugs.

**Features**  
 ● Optimal rising angle enhances operability.

\*Please check the merchandise inventory for a product that is marked by before placing an order.



Replacing brake oil **6**

**SOCKET WRENCH FOR ELBOW CONNECTOR**

No.	Sq.	S	D1	D2	H	L	A	B	▼g	☐
ABX6-12	9.5	12	18.5	18	14	50	14	12	60	5
ABX6-14	9.5	14	22	20	17	50	17	14	80	5
ABX6-17	9.5	17	24	22	17	50	17	17	98	5
ABX6-19	9.5	19	26	24	21	50	21	19	110	5
ABX6-22	9.5	22	30	27.5	21	50	21	22	153	5
ABX6-34	12.7	34	45	41	20	44	19.5	27	300	5

**Usage**

- Tightening tool for one-touch elbow connector that's used for trucks of 4t or more.
- Width across flats 34mm is for the tightening and loosening of connector for check valve that's used for Isuzu trucks.
- It can also be used to tighten and loosen elbow connectors (L-shape piping joint) used for general maintenance machinery.

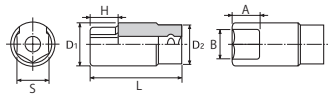


Usage State

**SOCKET WRENCH FOR EIBOW CONNECTOR**



3/8" sq. 1/2" sq. POWERFIT



**BRAKE BLEEDER**

**BRAKE BLEEDER PAT.P.**

Continuous smooth feeding without pausing! Applicable to ABC Models. Quick One-man Operation!

**Purpose**

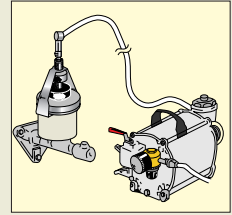
- Replacing brake oil and supplying of brake oil during air-removing.

**Application**

- Applicable to reserve tanks (inner diameter of inlet: φ 18-76) for mini cars and compact cars to small trucks (2t).

**Features**

- Continuous feeling (pressured) shortens work time
- Compact design: simple, low cost, but high performance.
- Easy to operate for air-driven method.
- One touch on the button enables air-removing of the tank.
- Plate rubber adopted for attachment by one action (see attachment A1).
- Expansion rubber with inner pressure ensures excellent contact (see attachments A2, B1 and B2).
- Special attachment enables quick installation (see attachments G1, G2, F1, F2 and H1).



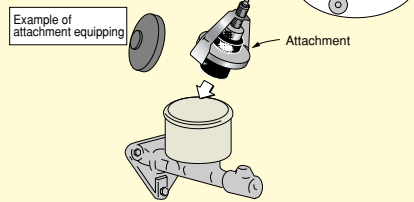
**BRAKE BLEEDER**

No. ABX70	kg 8.5
Brake bleeder main body (with dust-proof cover), L320×W205×H210 Tank Capacity 2 ℓ Feeding Hose 3.5m	
Attachment Set	Attachment A1 ABX70-A1
	Attachment A2 ABX70-A2
	Attachment B1 ABX70-B1
	Attachment B2 ABX70-B2
	Clamp D1 (Claw) ABX70-D1
	Clamp E1 (Chain) ABX70-E1
	Attachment Case Plastic case



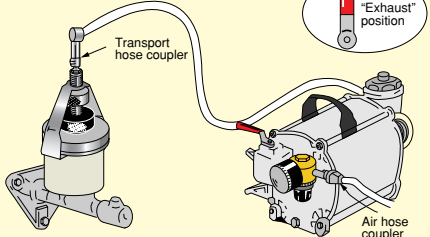
**How to Use Brake Bleeder**

**1 Equip the attachment on the reservoir tank.**



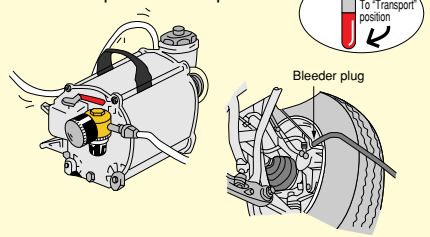
Remove the reservoir tank cap and equip the appropriate attachment on the tank.

**2 Connect hoses.**



Connect the transport hose coupler with attachment and air coupler with brake bleeder.

**3 Transport brake liquid.**



Switch the operation lever to "Transport" and transport brake liquid, replace brake liquid, or relieve air.

No. ATBX70I	Brake Bleeder Main Body (with Dust-Proof Cover) L320×W205×H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2	φ 32-45	Toyota, Nissan, Mitsubishi, Mazda, Daihatsu, Suzuki, Subaru, Isuzu, Daimler-Benz, OPEL, GM	1
Attachment Case				1



Trial set comes at a reasonable price.

- A set including an attachment with most applicable cars.

\*Please check the merchandise inventory for a product that is marked by ⚡ before placing an order.

**7** Installing wheel & Inspecting torque

● **IMPACT WRENCH**



➔ P.200

● **WHEEL NUT SOCKET FOR IMPACT WRENCH**



➔ P.256

● **CROSS RIM WRENCH**



➔ P.134

● **WHEEL NUT TORQUE WRENCH SET**



➔ P.190

**SPECIAL BRAKE BLEEDER SET**

**●Attachment (separately sold)**

Product Name	Product No.	Applicable Size	Applicable Makers (Models)
Attachment A1	ABX70-A1	φ 18~31	Toyota, Nissan, Mitsubishi, Daihatsu, Audi, VW
Attachment A2	ABX70-A2	φ 32~45	Toyota, Nissan, Mitsubishi, Mazda, Daihatsu, Suzuki, Fuji H. I., Isuzu, Daimler-Benz, BMW, Opel, GM
Attachment B1	ABX70-B1	φ 46~60	Toyota, Honda, Mitsubishi, Daihatsu, Suzuki, Fuji H. I., Isuzu
Attachment B2	ABX70-B2	φ 61~76	Toyota, Nissan, Honda, Mitsubishi, Mazda, Suzuki, Fuji H. I.
Attachment F1	ABX70-F1	φ 36	Mazda (mainly Bongo)
Attachment F2	ABX70-F2	φ 60	Daihatsu (mainly one-box wagon)
Attachment G1	ABX70-G1	φ 42.5	Toyota (passenger cars in general)
Attachment G2	ABX70-G2	φ 56	Honda (mainly Acty and Odyssey)
Attachment H1	ABX70-H1	φ 75	Honda (mainly Odyssey)
Clamp D1	ABX70-D1	For ABX70-B1, B2	
Clamp E1	ABX70-E1	For ABX70-B1, B2, H1	

**Features**

- Simple attachment with a fit-and-press type plate rubber (attachment A1)
- Internal pressure-expanded rubber gives excellent contact (attachments A2, B1, B2)
- Special attachment enables easy equipping (attachments G1, G2, F1, F2, H1).

**●For Toyota**

No. ATBX70T			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment B2	ABX70-B2		1
Attachment G1	ABX70-G1		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1

**●For Nissan**

No. ATBX70N			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment A2	ABX70-A2		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1

**●For Honda**

No. ATBX70H			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Clamp E1	ABX70-E1		1
Attachment H1	ABX70-H1		1
Attachment G2	ABX70-G2		1
Attachment Case	Resin Case		1

**●For Mitsubishi**

No. ATBX70M			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Attachment B2	ABX70-B2		1
Clamp D1	ABX70-D1		1
Attachment Case	Resin Case		1

**●For Daihatsu**

No. ATBX70D			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Clamp E1	ABX70-E1		1
Attachment F2	ABX70-F2		1
Attachment Case	Resin Case		1

**●For Mazda**

No. ATBX70MZ			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment F1	ABX70-F1		1
Attachment Case	Resin Case		1

**●For Subaru/Suzuki**

No. ATBX70SS			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1



Attachment A1



Attachment A2



Attachment B1



Attachment B2



Attachment F1



Attachment F2



Attachment G1



Attachment G2



Attachment H1



Clamp D1



Clamp E1



Attachment A1



Attachment A2



Attachment B2 + Clamp E1



Attachment B2 + Clamp D1



Attachment F1



Attachment G1



Attachment H1 + Clamp E1

## Attachment Application Table for Break Bleeder

### ● Toyota

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
bB	NCP31	φ42.5	-	G1
	QNC20	φ54	-	G3
MR2	AW11	φ56	B1+D1	-
MR-S	ZZW30	φ42.5	A2	G1
RAV4 (including EV)	SXA10/10W/11 · ACA21W	φ42.5	A2	G1
Willi Vi	NCP19	φ42.5	-	G1
Willi VS	ZZE127	φ42.5	A2	G1
Isis	ANM10G	φ42.5	A2	G1
Arion	NZT240	φ42.5	A2	G1
Aristo	JZS147/161	φ42.5	A2	G1
Altezza	GXE-10	φ42.5	-	G1
Alphard	ANH10W	φ42.5	A2	G1
Alphard Hybrid	ATH10W Series (2003/7~)	φ42.5	A2	G1
Alex	NZE121	φ42.5	A2	G1
Ist	NCP65	φ42.5	A2	G1
Ipsum	SXM10G · ACM21W	φ42.5	A2	G1
Wish	ZNE10	φ42.5	A2	G1
Vitz	KSP90	φ42.5	A2	G1
	SCP10	φ42.5	-	G1
Wyndham	MCV20 · VCV11	φ42.5	A2	G1
Verossa	JZX110	φ42.5	A2	G1
Estima	MCR30W A2	φ42.5	A2	G1
	TCR11/20G	φ23	A1	-
Estima Hybrid	AHR10W Series (2003/7~2006/5)	φ42.5	A2	G1
	AHR20W Series (2006/6~)			
Opa	ZCT15	φ42.5	A2	G1
Camry Gracia	SXV25W	φ42.5	A2	G1
Carina · Corona	ST202/190/210/AT212	φ42.5	A2	G1
	AT170 (E1)	φ56	B1+D1	-
Carina ED	ST202 · 183	φ42.5	A2	G1
Carib	AE111G/95G	φ42.5	A2	G1
Caldina	ST191/215W	φ42.5	A2	G1
Curren	ST206	φ42.5	A2	G1
Corolla	AE110/101	φ42.5	A2	G1
Corolla Fielder	ZZE123	φ42.5	A2	G1
Cami	J100E	φ54	B1+D1	-
Crown	GS130/131 · MS137JZS143/149/151/155/171	φ42.5	A2	G1
Crown Majesta	JZX149 · UZS186 Series	φ42.5	A2	G1
Grand Hiace	KCH16W	φ42.5	A2	G1
Granvia	RCH11 · VCH10/16 · KCH10/16	φ42.5	A2	G1
Kluger	ACV20	φ42.5	A2	G1
Kluger Hybrid	MHU28W Series (2005/3~)	φ42.5	A2	G1
Cresta	JZX101/90/81	φ42.5	A2	G1
Coaster	HDB10	φ42.5	A2	G1
Cynos	EL5	φ70	B2+D1	-
Supra	GA70 · JZA80	φ42.5	A2	G1
Starlet	EP81/91	φ70	B2+D1	-
Sparky	S221E	φ34	A2	-
Spacio	AE111N	φ42.5	A2	G1
Sprinter	AE101/81	φ42.5	A2	G1
Serra	EXY10	φ70	B2+D1	-
Celica	ST185/202	φ42.5	A2	G1
Celsior	UCF11/21/31	φ42.5	A2	G1
Soarer	JZZ31 · GZ20	φ42.5	A2	G1
Tercel · Corsa	EL51/45/41 (E1)	φ70	B2+D1	-
Dina	BU87	φ23	A1	-
Townace	CR30	φ23	A1	-
Townace Truck	YR28G · YM55	φ23	A1	-
Chaser	1JX100 · GX100/81	φ42.5	A2	G1
Toyoace	LH80	φ42.5	A2	G1
Trueno	AE111/92 A2	φ42.5	A2	G1
Noah	SR40/50 · CR40	φ42.5	A2	G1
Hiace	LH119 · KZH106	φ23	A1	-
	KDH200	φ42.5	A2	G1
Hiace Regius	RCH41W · KCH40W	φ42.5	A2	G1
Hilux	TRN215	φ42.5	A2	G1
Hilux Surf	KZN · RZN185 · LN131V	φ42.5	A2	G1
Harrier	MCU10W	φ42.5	A2	G1
Harrier Hybrid	MHU38W Series (2005/3~)	φ42.5	A2	G1
Vista	SV41/40/32/20	φ42.5	A2	G1
Vista Ardeo	SV50	φ42.5	A2	G1
FunCargo	NCP25/20	φ42.5	-	G1
Platz	SCP11	φ42.5	-	G1
Prius	NHW10/20/30	φ42.5	A2	G1
Pronard	MCX20A	φ42.5	A2	G1
Beita	KSP92	φ42.5	A2	G1
Voxy	AZR60G · ZRR70G	φ42.5	A2	G1
Porte	NNP10	φ42.5	A2	G1
Mark II	GX71 (Later Period)	φ42.5	A2	G1
	GX71 (Early Period)	φ56	B1+D1	-
Mark II Wagon	SXV25W	φ42.5	A2	G1
Mark X	GRX120	φ42.5	A2	G1
LightAce	YR21	φ23	A1	-
Raum	EXZ10	φ42.5	A2	G1
Rush	NCP100	φ42.5	A2	G1
Land Cruiser	HDJ81V/101K · UZJ100	φ42.5	A2	G1
Land Cruiser Prado	KZJ90W/VZJ121W	φ42.5	A2	G1
Levin	AE92	φ42.5	A2	G1

### ● Lexus

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
GS	UZS190 · URS190 Series (2005/7~)	φ42.5	A2	G1
GS Hybrid	GWS191 Series (2006/3~)	φ42.5	A2	G1
LS	USF40 Series (2006/9~)	φ42.5	A2	G1
LS Hybrid	UVF45/46 Series (2007/4~)	φ42.5	A2	G1

### ● Nissan


Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
AD Wagon	WFY10	φ34	A2	-
	H41	φ24	A1	-
	AKR66EA	φ42.5	A2	-
Avenir	W10	φ34	A2	-
Wingroad	WFY11 · Y12	φ34	A2	-
X-TRAIL	PNT30	φ24	A1	-
S-Cargo	G20	φ63	B2+E1	-
Elgrand	AVWE50	φ24	A1	-
Caravan	KRME24	φ24	A1	-
Cube	BZ11	φ24	A1	-
	Z10	φ34	A2	-
Sunny	SB14 · B13	φ34	A2	-
	HB12	φ63	B2+E1	-
Sunny Truck	GB122	φ70	B2+E1	-
Safari	WYY61	φ34	A2	-
Cima	Y34/33/32	φ34	A2	-
Cedric · Gloria				
Silvia	S14/15	φ34	A2	-
	S13	φ70	B2+E1	-
Skyline	R34/33	φ34	A2	-
	R32	φ70	B2+E1	-
Stagea	WGNC34	φ34	A2	-
Cedric	Y31	φ70	B2+E1	-
Cefiro	A33/32 · WPA32	φ34	A2	-
Cefiro Wagon				
Serena	PC24/C25	φ24	A1	-
	KBC23	φ34	A2	-
Tida	C11	φ24	A1	-
Tino	HV10	φ34	A2	-
Terrano	YD21	φ70	B2+E1	-
Basara	JHU30	φ24	A1	-
Vanette	KHGNC22	φ24	A1	-
	SS28V	φ36	-	F1
Pulsar · S-RV	FN15	φ34	A2	-
Fairlady Z	Z33	φ34	A2	-
	GCZ32	φ70	B2+E1	-
Primera	P10 · P11	φ34	A2	-
Primera Wagon				
Primera EV				
Bluebird	EU13 · U14	φ34	A2	-
	U11/12	φ70	B2+E1	-
Bluebird Sylphy	QG10	φ34	A2	-
Prairie EV	HM11 · PM11	φ34	A2	-
Prairie Joy				
Presage	HU30	φ24	A1	-
President	H252	φ34	A2	-
Presea	PR10	φ34	A2	-
March	AK12	φ24	A1	-
	K11	φ34	A2	-
Racine	RFNB14	φ34	A2	-
Largo	W30	φ34	A2	-
Liberty	PM12	φ24	A1	-
R'nessa	NN30	φ34	A2	-
Legalis	JLR50 · JRR30	φ34	A2	-
Leopard	Y33	φ34	A2	-
Laurel	HC34 · GC35	φ34	A2	-
	FNB12	φ63	B2+E1	-
	HC33	φ70	B2+E1	-

### ● Daihatsu

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
MAX	L950S	φ54	-	G3
	S130V	φ34	A2	-
Atrai	S80V/81V	φ60	B1+D1	F2
	A101S	φ54	B1+E1	G3
Applause	G200S	φ54	B1+E1	G3
Charade	J100E	φ54	B1+D1	G3
Terios	V57~	φ23	A1	-
Delta	GR50	φ42.5	A2	-
Delta Wagon	G313G	φ60	B1+E1	-
Pyzar	S100V/110P	φ34	A2	-
Hijet	S80V/82P/83V	φ60	B1+D1	F2
	K100P	φ34	A2	-
Midget	L500S/700S	φ54	B1+D1	G3
Mira	200S · 70V	φ54	B1+E1	-
	L250S	φ54	-	G3
Move	L610S/602S	φ54	B1+E1	G3
	L150S	φ54	-	G3
Rugger	F76G	φ60	B1+E1	-

### ● ISUZU

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
Elf	NPR6~	φ34	A2	-
	NKR~	φ42.5	A2	-
Gemini	JT151F	φ67	B2+D1(E1)	-
Bighorn	UBS69GW	φ54	B1+D1(E1)	-
Fargo	WFS6~	φ33	Not applicable	Not applicable
Forward~	GIGA (4t~10t)	φ49	Not applicable	Not applicable
MU	UCS69DW	φ54	B1+D1(E1)	-

\*Please check the merchandise inventory for a product that is marked by  before placing an order.

**Mitsubishi**

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
ek Wagon	H81W	φ34	A2	-
Outlander	CW5W	φ34	A2	-
GTO	Z16A	φ66	B2+D1	-
RVR · Chariot	N23W/33W	φ66	B2+E1(D1)	-
Airtrek	CU4W	φ34	A2	-
Charisma	DA2A	φ66	B2+D1	-
Galant	EA1A · E33A/35A/52A	φ66	B2+D1	-
Galant	EC5A	φ66	B2+D1	-
Canter	FE437E	φ34	A2	-
Chariot Grandis	N84W	φ34	A2	-
Challenger	K97W	φ66	B2+D1	-
DIAMANTE	F31A/17A	φ66	B2+D1	-
DION	CR9W	φ34	A2	-
DINGO	CQ2A	φ34	A2	-
DEBONAIR	S12A	φ66	B2+D1	-
DELICA	P35W · P51V	φ18	A1	-
DELICA SPACE GEAR	PD8W	φ34	A2	-
TOPPO	H31A/32V	φ58	B1+D1(E1)	-
TOPPO BJ	H46A	φ34	A2	-
PAJERO	V75W	φ34	A2	-
	V26WG/24WG	φ66	B2+D1	-
PAJERO Jr.	H57A	φ58	B1+D1(E1)	-
PAJERO Mini	H56A	φ58	B1+D1(E1)	-
MINICA	H22A	φ58	B1+D1(E1)	-
MINICAB	U41V/41T/11V	φ34	A2	-
MIRAGE	CA1A · CJ2A	φ66	B2+D1	-
LANCER	CK4A	φ66	B2+D1	-
LANCER CEDIA WAGON	CS5W	φ34	A2	-
LIBERO	CB5W	φ66	B2+E1(D1)	-
LEGNUM	EA1W	φ66	B2+D1	-

**Honda**

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
CR-V	RD1	φ56	B1+E1	G2
	EF6	φ56	B1+E1	G2
HR-V	GH3	φ56	-	G2
NSX	NA1	φ75	B2+E1	H1+E1
S-MX	RH1	φ56	B1+D1(E1)	G2
Z	PA1	φ56	B1+D1(E1)	G2
Accord	CF1	φ56	B1+D1(E1)	G2
	CA3 · CD4	φ75	B2+E1	H1+E1
Ascot	CB1	φ75	B2+E1	H1+E1
Inspire · Vigor	CB5	φ75	B2+E1	H1+E1
Integra	DA5	φ56	B1+E1	G2
	DC2	φ75	B2+E1	H1+E1
Elysion	RR3	φ56	B1+D1(E1)	G2
Odyssey	RA6/5	φ56	-	G2
	RA2	φ75	-	H1+E1
Orthia	EL3	φ56	B1+D1(E1)	G2
Capa	GA4	φ56	B1+D1(E1)	G2
Civic	EK3/9	φ56	B1+D1(E1)	G2
	EG8/4 · EF2 · AH	φ56	B1+E1	G2
STEPWGN	RF1	φ56	B1+D1(E1)	G2
STREET-ACTY	HH4/3	φ56	-	G2
STREAM	RN1~6			G2
SABER	UA5	φ56	B1+D1(E1)	G2
Cherokee	MX · R4	φ30	A1	-
TODAY	JW3 · JA4	φ56	B1+E1	G2
Torneo	CF4	φ56	B1+D1(E1)	G2
VAMOS	HM1/2	φ34	A2	-
BEAT	PP1	φ75	B2+E1	H1+E1
Prelude	BB6/5	φ56	B1+D1(E1)	Sealing Cap ASSY+E1 of G2
Prelude	BA5	φ75	B2+E1	H1+E1
Life	JA4	φ56	B1+D1(E1)	G2's
Lagreat	RL1	φ56	-	Sealing Cap
Legend	KA8/7/3	φ56	B1+E1	Cap
Logo	GA3	φ56	B1+E1	ASSY+E1

**Subaru**

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
Impreza	GC8 · GC1 · GF6	φ34	A2	-
	GC8	φ67	B2+D1(E1)	-
Vivio	KW3A · KK3	φ60	B1+D1(E1)	-
Sambar	KS3N · KR6 · KV4	φ34	A2	-
Sambar Dias		φ34	A2	-
Sambar	KV4 · KS4	φ60	B1+D1	-
Domingo	KJ8 · FA7	φ34	A2	-
FORESTER	SF5	φ34	A2	-
Pleo	RA1	φ34	A2	-
Legacy	BG5/6/9 · BH5/BP5	φ34	A2	-
	BG5 · BF5 · BD5	φ67	B2+D1(E1)	-

**Suzuki**

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
kei	HN11S	φ34	A2	-
MR Wagon	MF21S	φ34	A2	-
Alto	CN21S · HA11S	φ34	A2	-
Escudo	TD52W	φ60	B1+D1	-
	TD94	φ34	A2	-
Every	DA52W · DF51	φ34	A2	-
Cultus	AB34S	φ60	A2	-
SX4	TA41S	φ34	A2	-
Carry	DB51 · DA41P	φ34	A2	-
Crescent	GC41W	φ34	A2	-
Jimny	JA12W	φ60	B1+D1	-
	JA51W	φ67	B2+D1(E1)	-
Swift	HT51S	φ34	A2	-
CERVO	CN22S	φ34	A2	-
Wagon R	CT21S/51S	φ34	A2	-
Wagon R Wide	MP61S	φ34	A2	-

**Mazda**

Car Type	Model	Inside Diameter	Attachment	
			Conventional	Dedicated
AZ-Wagon	CY21S	φ34	A2	-
MPV	LY3P	φ36	A2	-
	LVLR	φ36	A2	F1
	LW5W	φ36	Not applicable	-
MS-8	MB5P · MBEP	φ36	A2	F1
RX-7	FC3S · FD3S	φ36	A2	F1
Capella	GF8P · GW8W	φ36	A2	F1
	CG2PP · GV8W · GD8S	φ67	B2+E1	-
Capella Wagon	GW8W	φ36	A2	F1
Carol	AA6PA	φ33	A2	-
Scrum	DL51V	φ34	A2	-
Sentia	HD55/5S · HEEA	φ36	A2	F1
TITAN	WGT4H	φ27.5	A1	-
	(Former)	φ36	-	F1
Demio	DY5W	φ36	A2	F1
	DW5W	φ67	B2+E1	-
Familia	BHALP · BJ3P	φ36	A2	F1
	BHA6R · BG6P · 5P			
FamiliaXG	MFY10	φ34	A2	-
FESTIVA	DA3PF	φ67	B2+E1	-
Premacy	CP8W	φ36	A2	-
FRIENDEE	SGLW	φ36	A2	F1
PROCEED	UF66M	φ36	A2	F1
Persona	MASP	φ67	B2+E1	-
Porter Cab	PC567	φ27.5	A1	-
BONGO	SS88H · SSF8W · SD2AT	φ36	-	F1
Eunos	500 CA8PE	φ36	A2	F1
EUNOS800	TA5P	φ36	A2	F1
Lantis	CBA8P · CBAEP	φ36	A2	F1
Luce H	BEY · HCFS · HCSS	φ36	A2	F1
Laser	BFSFP	φ67	B2+E1	-
Roadster	NA6CE	φ67	B2+E1	-

**Imported Cars**

Manufacturer	Inside Diameter	Car Type	Model	Attachment	
				Conventional	Dedicated
Audi *2	φ30.5	80 2.0E 2.3E A6	8CABK~ 4AAAAR 4AAB~	A1	-
Opel	φ32	Astra	XD200~ BY9506	A2	-
Chrysler	φ32	Current Vita Dodge · Avenger Dodge · Caliber JEEP · Wrangler	ABA-JSD27 ABA-PM20 ABA-JK38S	A2	-
Saturn	φ36	Sedan · Coupe SL~		A2	-
Citroen	φ32	Citroen	VF72AZ	A2	-
FIAT	φ36	Punto	ZFA1880~	A2	-
Ford	φ32	KA Discovery LJ~	WFOBX~	A2	-
Peugeot	φ34	406	B-2343 DVF37CRFSW~	A2	-
Volvo	φ63	V70 Series		B2+D1	-
Mercedes	φ32	Benz E280 E210/202 V12	E-124022 E-12408~ E-1400~ WDB~	A2	-
Renault	φ36	Megane *1 Lutecia	ABA-RK4M	A2	-
Rover	φ33	MINI Cooper 200	XW~	A2	-
BMW	φ32	BMW	E-325 · 318ti	A2	-
GM	φ32	Cadillac	E-AE~	A2	-
VW*2		Golf Polo	1HADZ	A1	-

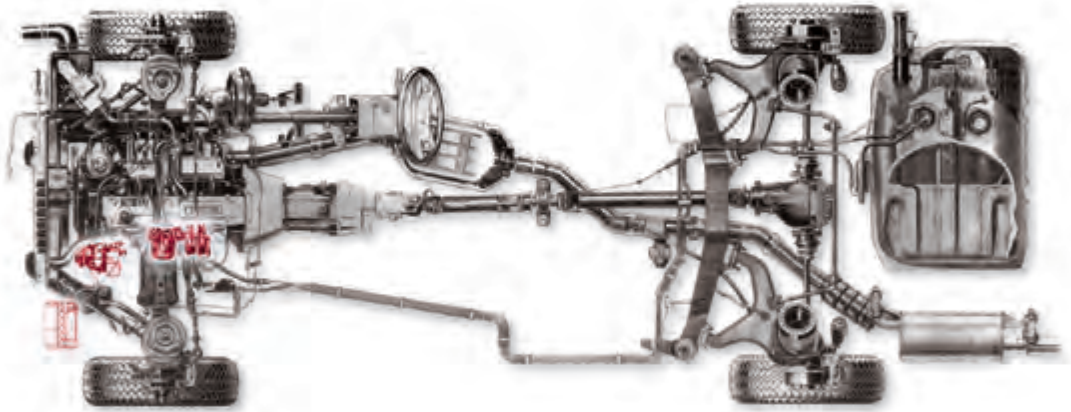
\*1: Battery cover needs to be removed.

\*2: Although Audi and VW apply to A1, since the outside diameter of their filler neck is larger than the rubber of A1, please be careful in center alignment during installation.

**Other Large Trucks**

Manufacturer	Inside Diameter	Type Model	Attachment		
			Conventional	Dedicated	
Hino	φ32	4t Series Ranger	A2	-	
UD	φ92	10t Series Super Dolphin			
Fuso	φ80	4t~10t Condor ~ BigThumb			
	φ80	Old cars			
	φ95	4t~10t Fighter ~ Super Great			
				Not applicable	

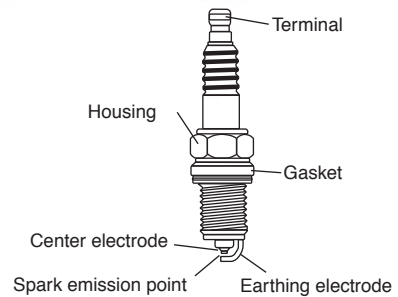
# Electric System Mechanism



MECHANISM 1

## Spark plug

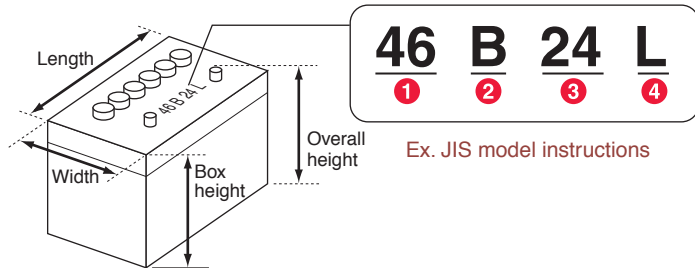
The spark plug is designed to emit a high voltage spark directly into the combustion chamber. It is installed by screwing into the cylinder head. The high voltage enters the spark plug via the top terminal and is transmitted through a ceramic insulator by the central electrode. As the current is grounded to an earthing electrode it creates a spark crossing the "gap". Sparks are discharged from the electrodes in a variety of shapes for different uses and functions.



MECHANISM 2

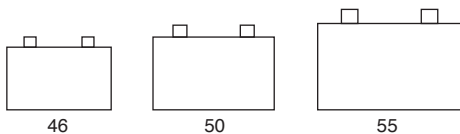
## Battery

As the model of the battery is placed on the topside, it is easy to find out information like capacity, position and size of the terminal polarity, etc. Knowing and understanding these rules makes it easy when selecting a correct battery for each vehicle.



### ① Capacity rank

The performance of the battery is shown here. (Battery capacity and start performance) The higher the numerical value, the higher the capacity, however, there is no "recommended specific" number. For a simple setting to follow (Up to 50: Will produce 2; Over 50: Will produce 5).



### ③ Battery length measurements (approx. cm)

The overall battery measurement is shown (approx. cm)  
Ex.: 46B24L (approx. 24cm)

### ② Battery size (JIS standards: Classification is worked out by Width × Box height)

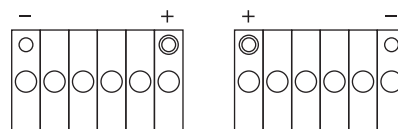
Sizes follow symbols from A → H and get larger in that order.

Symbol	Width	Box height
A	127	162
B	129 (127)	203
D	173	204
E	176	213
F	182	213
G	222	213
H	278	220

(Unit: mm)

### ④ Battery terminal position

Positive terminal position is shown. On the "R" Type, the positive terminal is on the far right side, while on the "L" type, the positive terminal is on the far left side.



MECHANISM 3

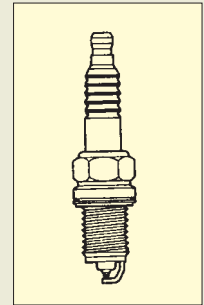
## Alternator

This is a generator that produces electricity while the engine is running. The first type of generators produced electricity in the DC form, however, nowadays they are more stable, producing electricity in the AC form.

# Inspection, Cleaning and Replacing Spark Plug

## Removing Spark Plug Leads 1

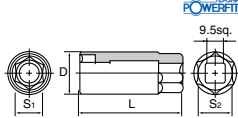
## Removing Spark Plug 2



### SPARK PLUG SOCKET

No.	S <sub>1</sub> (ppt.)	S <sub>2</sub>	D	L	Spark Plug (Type)		▽g	sq.	□
					NGK	ND			
B3A-14SP	14	—	18.5	62			60	3/8"	5
-16SP	16	—	20	65			65		5
B3A-13P	13	17	18	56	ER	r	72	3/8"	5
-16P	16	17	21.5	62	BC,C	PQ,U	100		5
-18P	18	19	23.5	62	D	X	130		5
-20.8P	20.8	24	26.5	62	B	W	170		5

- With Magnet for using in narrow spaces.
- \* B3A-16SP is thin wall type for use on 4-valve engine of Mitsubishi mini cars.
- The B3A-14SP is a socket designed to be compatible with the new Nissan engines HR15DE, MR18DE, MR20DE types.



### 3/8"sq. SPARK PLUG SOCKET



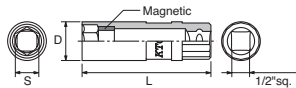
B3A-16SP B3A-16P

- CAUTION**
- Do not place a wrench around the outside of the B3A-14SP and rotate it.

### SPARK PLUG SOCKET

No.	S <sub>1</sub> (ppt.)	S <sub>2</sub>	D	L	Spark Plug (Type)		▽g	sq.	□
					NGK	ND			
B4A-16P	16	—	22	63.5	BC,C	PQ,U	110	12.7	5
-19P	19	—	26.5	65	BM	WM	170		5
-20.8P	20.8	24	26.5	65	B	W	160		5

- With Magnet for using in narrow spaces.
- \* B35P-19H for changing spark plugs on chain saws, mowing machines, small generators, etc.



### 1/2"sq. SPARK PLUG SOCKET



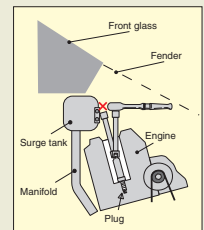
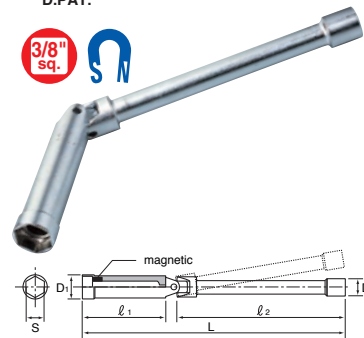
B4A-16P

### UNIVERSAL SPARK PLUG WRENCH

No.	S (ppt.)	D <sub>1</sub>	D <sub>2</sub>	l <sub>1</sub>	l <sub>2</sub>	L	▽g	□
B3F-14SP	14	18.5	17	73	111	192	270	1
-16SP	16	20	18	73	148	230	300	1

- Purpose**
- Removing/installing spark plug.
- Application**
- Mini-van and wagon: effective for use on cars having small clearance between engine and cowl panel. Toyota's Ipsum, Hiace Reijas, Prius, Noa; Honda's Odyssey, and other models.
  - Usable for replacing spark plugs on other models.
- Features**
- No falling of the socket from the extension bar during operation as the 16mm plug socket and the bar are integrated into one piece of tool.
  - Easy insertion into plug hole with universal joint used in the middle of the wrench. (the maximum flexible angle : 90 degrees).
  - For specially thin socket, usable on 4-valve engine of Mitsubishi.

### 3/8"sq. UNIVERSAL SPARK PLUG WRENCH D.PAT.

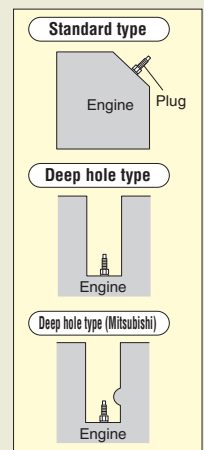
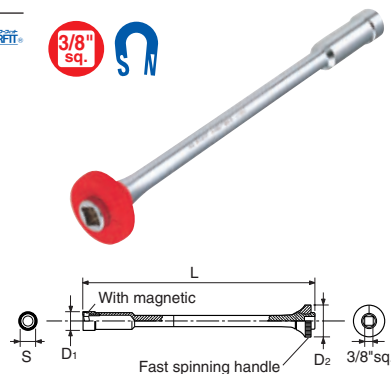


### SUPER LONG PLUG WRENCH

No.	S (ppt.)	D <sub>1</sub>	D <sub>2</sub>	L	▽g	□
B3P-16LL	16	20	35	250	250	5

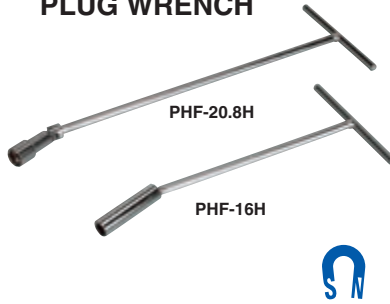
- Purpose**
- Use for spark plug removal/installation.
- Characteristics**
- This is a plug socket, extension bar, and quick spinner all in one new type of plug wrench.
  - The operation is improved by eliminating time wastage and troublesome tool retrieval. The fast handle movement when using the ratchet (quick spin) also brings a positive effect.
  - As the socket section is of a quite thick design, its uses are wide. (It can also be used on Mitsubishi light weight 4-valve engines).
  - Dropping spark plugs is prevented as the tool is magnetic.
  - The tightening angle is determined by a line mark on the side of the quick spinner.

### 3/8"sq. SUPER LONG PLUG WRENCH



2 Removing Spark Plug

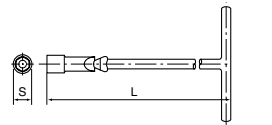
● FLEX SHAPE SPARK PLUG WRENCH



FLEX T SHAPE SPARK PLUG WRENCH

No.	S	L	Spark Plug(Type)		Applicable Car	▼g	📦
			NGK	ND			
PHF-16H	16	385	BC, C	PQ, U	Toyota 4A-G, IG-G Nissan VG20, VG30 Others Twin CAM For Multi Valves	500	10
-20.8H	20.8	530	B	W		600	10

- T shape handle and magnetized socket with flex joint.
- For changing spark plugs in deep narrow quarters.



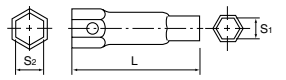
● SPARK PLUG WRENCH



SPARK PLUG WRENCH

No.	S (6pt.)		L	Applicable Car		▼g	📦
	S <sub>1</sub>	S <sub>2</sub>		NGK	ND		
PH-16×21	16	20.8	115	BU, C	PQ, U	130	5
	B			W			

- Can be used for 2 types of spark plugs.



● COMPACT SPARK PLUG WRENCH SET



COMPACT SPARK PLUG WRENCH SET

No. B126P	▼kg 1	📦 1
Spark Plug Wrench	B12P-16H, 18H, 20.8H	
Special Extension Socket	BE12-30, 45	
Ratchet Box-End Wrench	RM-10×12	
Metal Case L185×W105×H35	B126P-M	

- New type Spark Plug Wrench Set specially designed for use on motorcycles.
- Most usable sizes for wider application.

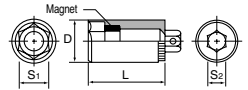
● COMPACT SPARK PLUG WRENCH SOCKET



COMPACT SPARK PLUG WRENCH SOCKET

No.	S <sub>1</sub> (6pt.)	S <sub>2</sub>	D	L	Applicable Plug(Type)		▼g	📦
					NGK	ND		
B12P-16H	16	12	21.5	61	BC, C	PQ, U	100	5
	-18H	18	12	23.5	61	D	X	120
-20.8H	20.8	12	26.5	61	B	W	150	5

- New type Spark Plug Wrench
- Most suitable for the latest models of motorcycles and agri-machines with small hexagon head. (Can be used in the space where Ratchet Handles cannot be used due to the shape of the frame, cowring, or cylinder head.)
- Can be used on mini motorcycles.



● SPECIAL EXTENSION SOCKET

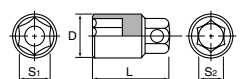


SPECIAL EXTENSION SOCKET

No.	S <sub>1</sub> (6pt.)	S <sub>2</sub>	D	L	▼g	📦
BE12-30	12	12	17	30	40	5
-45	12	12	17	45	60	5

Purpose

- Extending plug wrench (B12P-) for motorcycles.



ELECTRIC SYSTEM

Disassembling Alternator

Removing Alternator Belt 1

● FREE POSITIONING WRENCH



➔ P.223

● FLAT TYPE EXTRA LONG BOXEND WRENCH



➔ P.121

● HANDY BAR



➔ P.302



# Disassembling Alternator

ELECTRIC SYSTEM

## ARMATURE BEARING PULLER

No.	BEARING APPLICABLE RANGE	▼g	📦
ABU-1935	Outer φ 19~35 Inner φ 7 Over	210	1

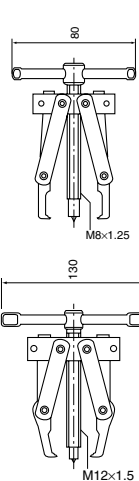
• For small bearings.

### Purpose

- For generators and alternators with built-in cooling fans.
- For removing armature bearings of reduction type starter motor, power tools, cleaner, etc.

No.	BEARING APPLICABLE RANGE	▼g	📦
ABU-3262	Outer φ 32~62 Inner φ 10 Over (No.6201~6305)	890	1

- For mini cars to big sized vehicles.
- Thin tip of claw for using in narrow space.
- Can be used by fixing the back by vise for narrow niche. (Fig.1)
- In case of bigger niche, preventing the tool from turning itself by using adjustable wrench, etc. (Fig.2)



### Bearing Application Chart

Inner	No.	Outer	Inner	No.	Outer
7	607 *	19	12	6001 *	28
	627	22		6201 *	32
	637	26		6801	21
8	608 *	22	6901	24	
	628	24	16001	28	
	638	28	6002	32	
	698	19	6202 *	35	
	B8-74D *	22	6802	24	
9	609	24	6902	28	
	629 *	26	16002	32	
	639	30	6003 *	35	
10	699	20	6803	26	
	6000 *	6	6903	30	
	6200	30	16003	35	
	6300	35			
	6800	19			
	6900	22			
	B10-46D *	23			

\*Frequently used types  
Note: For other bigger types than the above mentioned, please use ABU-3262.

## ● ARMATURE BEARING PULLER D.PAT.



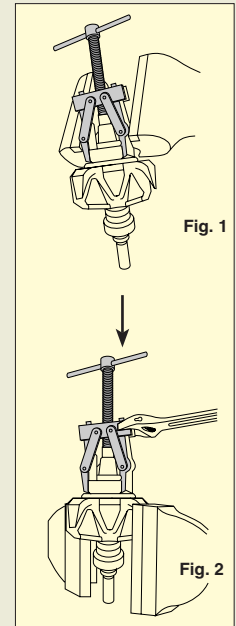
No.ABU-1935



No.ABU-3262

Disassembling Alternator

2



# Headlight Axis Adjustment

ELECTRIC SYSTEM

## HEADLIGHT ADJUST WRENCH

No.	▼g	📦
AMLB0810	290	1

Main Body Extension socket (Overall length 20mm)

### Purpose

- Adjustment of headlight axis adjustment screws used on asymmetrical left-night odd-shaped headlights of automobiles.

### Application

- Headlight axis adjustment screws with a width across flats of 8mm for automobiles from mini to standard sizes. Cannot be applied for models which do not use asymmetrical left-right odd-shaped headlights (sealed-beam headlights, etc.) and for one-box vehicles.

### Features

- The 320mm-long body and timing belt enables headlight axis adjustment by remote operation from outside the engine room, without need to insert a tool or hand into the narrow area around headlights.
- The aluminum body has reduced main body weight to about 200 grams, making the wrench easy and less fatiguing to work with.
- The grip handle assures smooth, precise rotation in both directions, just like a stubby screwdriver.
- Usable with a wide range of vehicle models, because a total of four socket lengths, 0mm, 10mm, 20mm and 30mm, can be selected for use in combination with the extension socket. (Extension socket: No.AMLB8-0820)

### REPLACEMENT PARTS

No.	Description	▼g	📦
AMLB0810-320	Body	160	
-08	Extension Socket 8mm	20	
-10	Extension Socket 10mm	25	
-12	Extension Socket 12mm	30	
-H	Grip Handle	55	

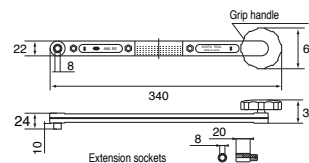
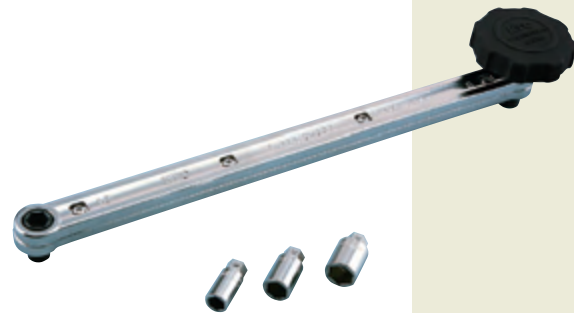
### BELT EXCHANGE SET

No.	Content
AMLB0810-1	Belt • Screw • Nut

## ● HEADLIGHT ADJUSTMENT WRENCH

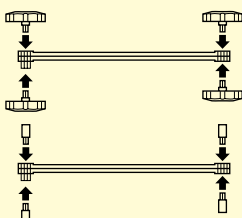
Headlight Axis Adjustment

1

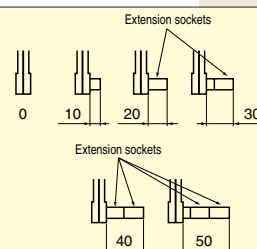


### VARIETY OF USE

- The grip handle and extension socket can be attached to any of the four positions on the wrench bore.



- Any of four socket lengths of 0, 10, 20 and 30mm can be selected for combination with the extension socket. It is also possible to increase the socket length to 40 or 50mm by connecting extension sockets. (The headlight adjustment wrench is provided with an extension socket in the set. Connection of two extension sockets requires purchase of another optionally available extension socket.)

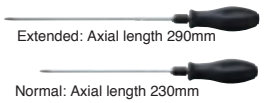


- Select the socket length and grip handle position according to the vehicle model and turn the headlight axis adjustment screw.

ELECTRIC SYSTEM **Headlight Axis Adjustment**

1 Headlight Axis Adjustment

●HEADLIGHT ADJUST SCREWDRIVER



HEADLIGHT ADJUST SCREWDRIVER

No.	Count	D	d	s	L		ℓ		▽g	📦
					Normal	Extended	Normal	Extended		
AD701	No.2	39	5	6.3	340	400	230	290	180	1

Usage

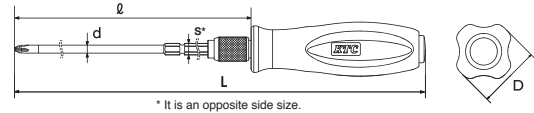
- Headlight optical axis adjustment dedicated screwdriver (cross No.2) for automobile, etc.

Application

- Screw for headlight optical axis adjustment is cross No.2.

Features

- Telescopic type with the axial length of 230mm · 290mm.
- Normally, it is set at the size (340mm total length) that easily fits in a tool box.
- Supports vehicle models with narrow service hole with the fine axis diameter of 5mm.



- Axis is non-through type.
- Magnet is not attached on the tip.

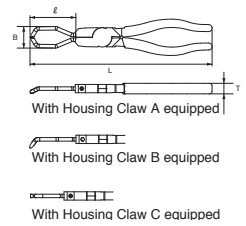
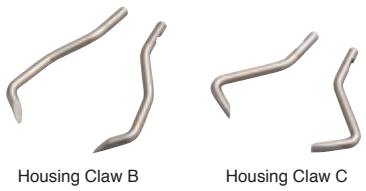


It cannot be used for some imported cars with special screw shapes.

ELECTRICAL DEVICE **Electric Works**

1 Removing Connectors

●CONNECTOR HOUSING PLIERS D.PAT.P.



\* AD101 is a set of the body and 3 types of housing claw (A, B, C).

CONNECTOR HOUSING PLIERS

No.	Attached Claw	L	ℓ	B	T	▽g	📦
AD101	Claw A	208	53	25	12	177	5
	Claw B	209	54	25	12	177	
	Claw C	194	39	34	12	176	

Usage

- Unlocking and extraction of connector housing.

Features

- Smoothly unlocks small, thin or recessed lock that's difficult to work with.
- Supports various shapes with 3 types of claw with different bending angles and tip shapes.
- Long claw that can avoid bundled wirings and reach deep places is adopted.
- \* Spare parts are configured. Please contact your dealer for details.



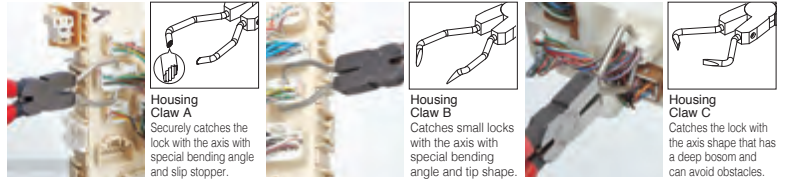
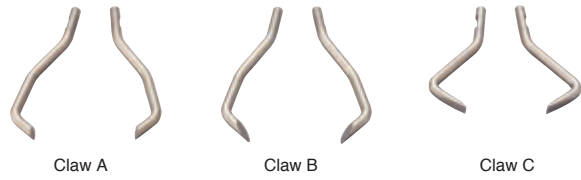
Please do not use it for usages other than the application.

Supply Parts

No.	Product Name	Set Contents	▽g	📦
AD101-123	Claw Set	Housing Claw A, B, C, 1 each	20	5

Hex. socket screws are not included.

- If you already own the KTC straight snap ring pliers for hole (No.SCP-171, 1715), it can be used by replacing the claw. (Either screw can be used for the set screw. ) P.283



Housing Claw A  
Securely catches the lock with the axis with special bending angle and slip stopper.

Housing Claw B  
Catches small locks with the axis with special bending angle and tip shape.

Housing Claw C  
Catches the lock with the axis shape that has a deep bosom and can avoid obstacles.

**CONNECTOR TOOL SET**

No. ECC6	▼g 300	1
Connector coupling tool	ECC-1R, 2R, 3R	
Connector terminal tool	ECC-1T, 2T, 3T	

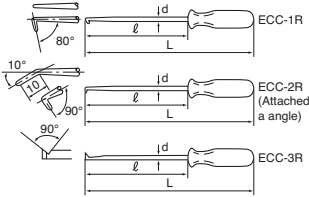
Connector coupling and connector terminal removal tool set

No.	d	L	ℓ	▼g	1
ECC-1R	4	300	215	58	5
-2R	4	300	215	58	5
-3R	4	300	215	58	5
-1T	4	150	65	40	5
-2T	4	150	65	40	5
-3T	4	150	65	40	5

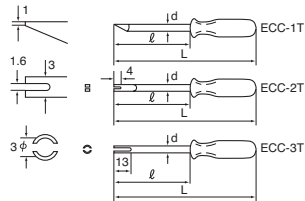
**Features**

- Dedicated tools are easy to handle and remove.
- Easy operation in tight, hard-to-reach spaces.
- Parts can be removed without damage.

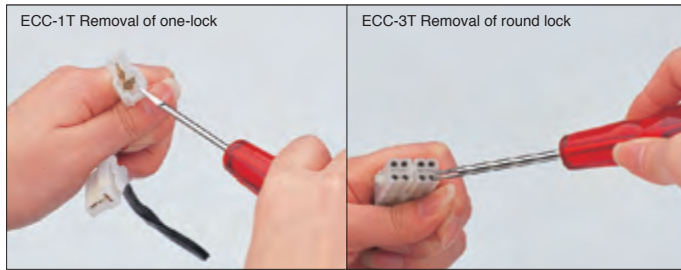
**Connector coupling tool**



**Connector terminal tool**



**Connector terminal tools**



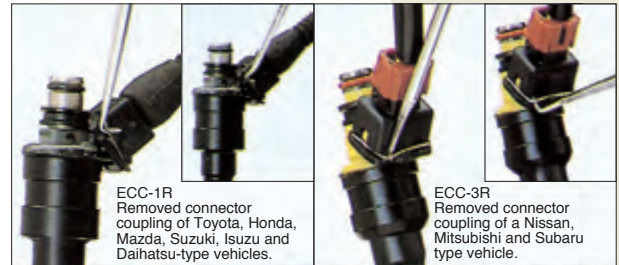
**CONNECTOR TOOL SET**

Removing Connectors

1



**Connector Coupling tools**



**MULTI-PURPOSE CRIMPING PLIERS**

No.	L	B	T	▼g	1
AD102A	187	56	22	160	10

**Usage**

- For the wire harness repair of automobiles.

**Application**

- Applicable wires: JASO AVS AVSS 0.3, 0.5, 0.85, 1.25.

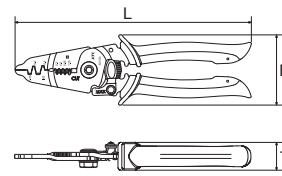
**Features**

- Supports automotive low-voltage wires 0.3 · 0.5 · 0.85 · 1.25.
- Supports 3 usages of wire cutting · wire stripping · terminal crimping.
- With the lock function that's convenient in storage.



- WARNING** • Do not use it where current is live.
- It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

**MULTI-PURPOSE CRIMPING PLIERS (FOR AUTOMOTIVE THREAD) D.PAT.P.**



**MULTI-PURPOSE CRIMPING PLIERS**

No.	L	B	T	▼g	1
AD102B	220	62.5	22.5	200	10

**Usage**

- wire cutting · wire stripping · terminal crimping.

**Features**

- Supports 3 usages of wire cutting · wire stripping · terminal crimping.
- With the lock function that's convenient in storage.

**Application**

- Wire Stripping · Cutting

mm	0.25	0.3	0.4	0.5	0.65	0.8	1.0
AWG	30	28	26	24	22	20	18

**Crimping part (open barrel terminal)**

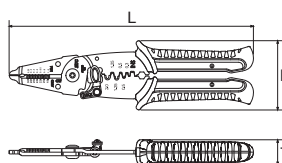
0.3sq.	0.5sq.	1.25sq.
--------	--------	---------

**Crimping part (sleeve terminal)**

0.5sq.	1.25sq.	2.0sq.
--------	---------	--------

- WARNING** • Do not use it where current is live.
- It is a simple crimping tool that does not have a molding confirmation mechanism. It cannot be used in work that needs to guarantee the reliability

**MULTI-PURPOSE CRIMPING PLIERS**



\*Please check the merchandise inventory for a product that is marked by before placing an order.

ELECTRIC SYSTEM

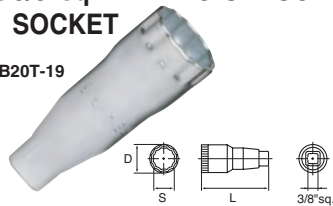
# Removing/Installing Thermo-sensor and Oxygen Sensor

## 1 Removing/Installing Thermo-sensor and Oxygen Sensor



### ● 3/8"sq. THERMO-SENSOR SOCKET

B20T-19



#### THERMO-SENSOR SOCKET

No.	S	D	L	▼g	☞
B20T-19	19	26	73	55	1

- Purpose** • Specially designed in accordance with the size shape of thermo-sensor.  
**Application** • For Toyota, Nissan, Mazda, Honda and Daihatsu cars.  
**Special features** • Thin wall type with small diameter for using in narrow engine rooms.

**CAUTION** • DO NOT USE THIS SOCKET FOR ANY PURPOSE, EXCEPT FOR REMOVING/INSTALLING THERMO-SENSORS.

### ● 3/8"sq. O<sub>2</sub> SENSOR SOCKET · SET

AD501-22W



#### O<sub>2</sub> SENSOR SOCKET · SET

No.	▼g	☞
AD501-22W	290	1
O <sub>2</sub> Sensor Socket · Set	AD501-22W	
O <sub>2</sub> Sensor Socket Attachment	AD501-A	

- Features**  
 • Designed with the shape that matches O<sub>2</sub> sensors and optimal length.  
 • With 2 types of drive (3/8"sq. square, 19mm flats) configured, it supports the use of many driving tools.  
 • Obstacles can be avoided by using the attachment.

#### O<sub>2</sub> SENSOR SOCKET · SET

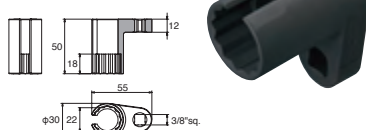
No.	▼g	☞
AD501-22W	200	1

#### O<sub>2</sub> SENSOR SOCKET ATTACHMENT

No.	▼g	☞
AD501-A	90	1

**CAUTION** • When tightening the O<sub>2</sub> sensor, use a torque wrench and tighten at the torque designated by the manufacturer.

### ● 3/8"sq. O<sub>2</sub> SENSOR WRENCH



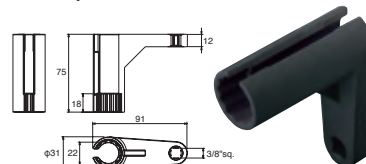
#### O<sub>2</sub> SENSOR WRENCH

No.	Aperture	Total length	▼g	☞
AD502-22W	22	55	210	1

- Features**  
 • It has a short total length that can be used in tight spaces.  
 • The drive offsets to avoid obstacles.  
 • Driving tool of 3/8"sq. square can be used.

**CAUTION** • When tightening the O<sub>2</sub> sensor, use a torque wrench and tighten at the torque designated by the manufacturer.

### ● 3/8"sq. O<sub>2</sub> SENSOR WRENCH LONG TYPE



#### O<sub>2</sub> SENSOR WRENCH

No.	▼g	☞
AD503-22W	350	1

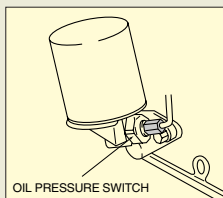
- Features**  
 • It has a unique shape for avoiding obstacles and allows the removal of O<sub>2</sub> sensors without removing the front bumper, improving comfort in work.  
 • It is an item that, by adopting the shape that supports not only new Daihatsu models but also existing Daihatsu models and Suzuki, covers most of the light vehicles.

**CAUTION** • When tightening the O<sub>2</sub> sensor, use a torque wrench and tighten at the torque designated by the manufacturer.

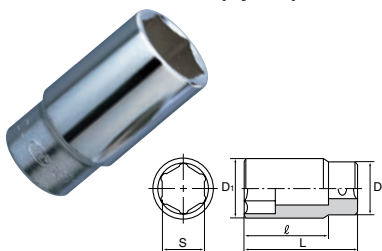
ELECTRIC SYSTEM

# Removing/Installing Oil Pressure SW

## 1 Removing/Installing Oil Pressure SW



### ● 3/8"sq. OIL PRESSURE SOCKET · SET (2pcs.)



#### OIL PRESSURE SOCKET · SET (2pcs.)

No.	▼g	☞
B202HD	470	1
Oil Pressure Socket	B20-24HD,27HD	

No.	S (6pt.)	D <sub>1</sub>	D <sub>2</sub>	ℓ	L	▼g	☞
B20-24HD	24	32.5	28.5	46	58	230	1
-26HD	26	35	30	46	58	230	1
-27HD	27	36.5	31	46	58	240	1

- Purpose**  
 • For removing/installing oil pressure switch.  
**Special features**  
 • With 3/8"square female drive for easy operation.

ELECTRIC SYSTEM

# Battery replacement

Removing vehicle batteries



This tool is great for removing batteries from hard to reach areas. There is a rubber pad on the gripping part of the tool to prevent scratching the battery.

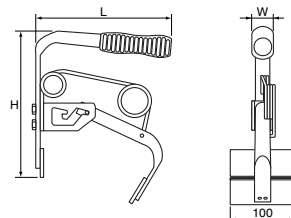
### ● BATTERY CATCHER



#### BATTERY CATCHER

No.	L	W	H	▼kg	☞
ADV2	193	33	215	0.95	1

- Usage**  
 • Useful in battery removal and carrying  
**Application**  
 • From light weight vehicles to passenger and one-box car batteries.  
 • Battery width 120~180mm, Less than 22kg in mass.  
 (Sample battery size: JIS26A17RL~95D31RL)  
 \* Replacement grips are available. Check with your dealer or service provider for details.

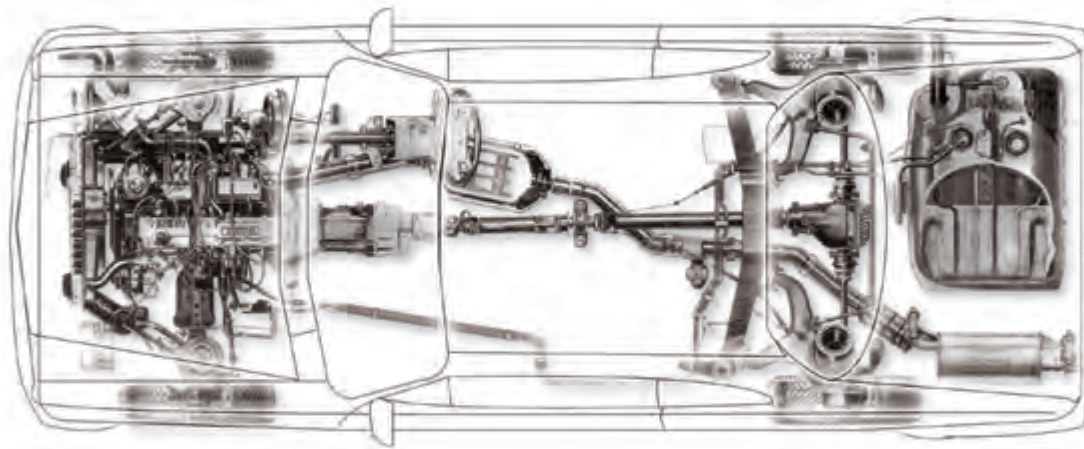


\*Please check the merchandise inventory for a product that is marked by before placing an order.

# 5. AUTOMOTIVE SPECIAL TOOLS

## Dismantling the Mechanism (8)

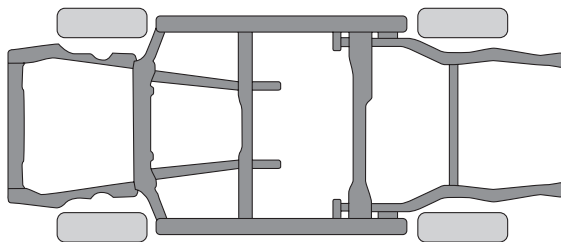
# Body Mechanism



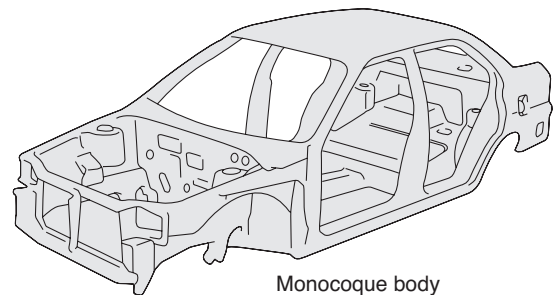
**MECHANISM 1**

### Frame and monocoque body

The framework that is designed as a base for vehicles is called the Frame. The engine & suspension, steering mechanisms, body, are fitted to this. This structure is seen more frequently these days compared with previous models. In recent years, as the merit of a more rigid body that is even more lightweight is achieved, the monocoque body, where the frame is one with the body, is becoming more popular.



Frame



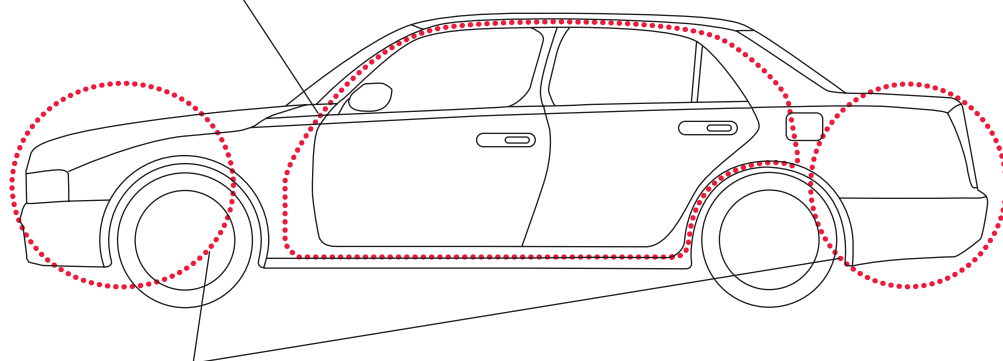
Monocoque body

**MECHANISM 2**

### Impact absorbing body

Monocoque bodies are a countermeasure for impacts. There is a variety of names for these; impact absorbing body, crushable body, etc. However, these body structures all come from the "Front/Rear Impact Absorption" and "Strengthened cabin to protect vehicle occupants" designs. The names differ depending on the maker, however, GOA, ZONE, G-CON, RIZE, MAGMA, TAF, TECT. New cyclic structure bodies are in use at present.

Cabin: Strengthened cabin designed to protect vehicle occupants in an accident.



Front/Rear structure: Front/Rear structural design to absorb impact force at the time of an accident.

BODY

Maintenance of Body

Damage Diagnosis/Estimates

●BODY COMPASS PAT.P.

Estimates are more accurate.

No.	L	H	▼kg	☞
AP901	1,016	58	2	1

Usage

This is an exclusive tool (estimates etc.) designed to assess the damage to a vehicle's body after an accident.

Application

From light weight vehicles to normal passenger types (also compatible with foreign vehicles)

Damage assessment range	40~1700mm
Body measurement hole diameter	φ 5~10mm

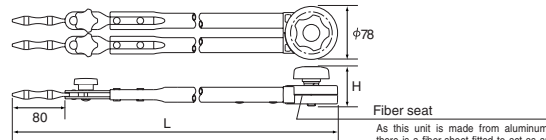
Characteristics

Sealing is made easy by a simple bolt screw-in operation. The operation is faster and easier when using wrenches, such as the ratchet type, etc. (Hexagonal 2-faced width 14mm)

As the center bolt is fitted with a flange, an offset wrench can be used and the wrench will not slip off.

A resin grip is employed for the handle to prevent slippage.

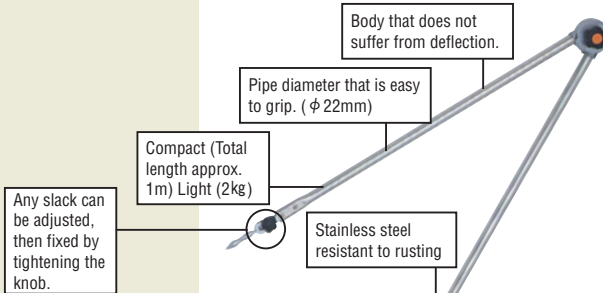
Fitted with a claw shape that does not allow the sealed areas to lift.



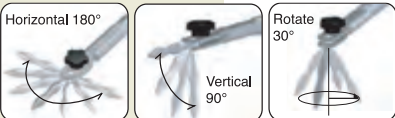
Replacement parts

Product name	No.
Fiber-sheet	AP901-1

\* Replacement parts are available. Check with your dealer for details.



The end rod can be moved at will and can be inserted in the set holes.



CAUTION \* Make sure that all operators read the Owner's Operator Manual carefully before usage.

Repair of Sheet Metal

●SLIDE HAMMER PULLER ATTACHMENT SET (5pcs.)

SLIDE HAMMER PULLER ATTACHMENT SET

No. AUD55T	▼kg 13.5	☞1
SLIDE HAMMER PULLER	AUD5	
SLIDE HAMMER PULLER ATTACHMENT	AUD5-B2,B21,B3,F1	

Usage

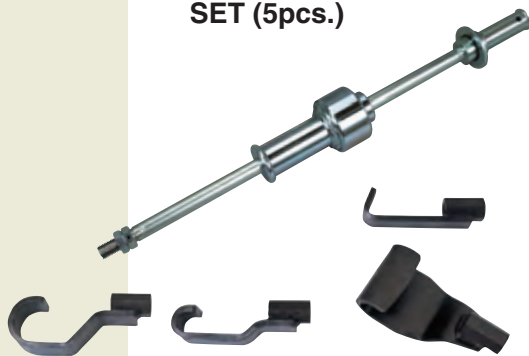
Body shop working

Application

For mini cars, passenger cars and pick up trucks.

Special features

Big and small hammer with weight 3.5kgs and 1.2kgs for wide application.



CAUTION \* TAKE YOUR FOOTHOLD SECURELY, MAINTAIN GOOD POSTURE, AND MIND POSITION OF YOUR HANDS WHEN USING THE SLIDE HAMMER.

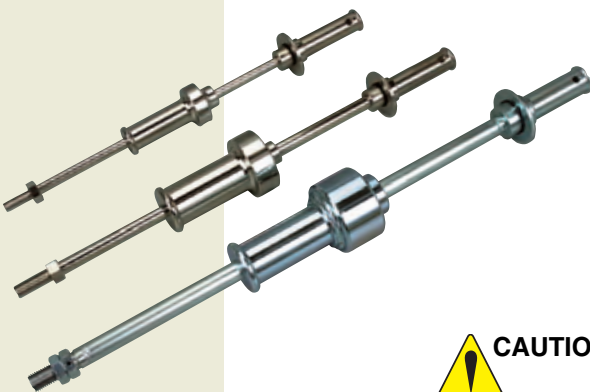
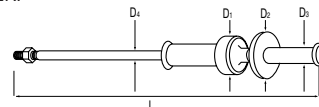
●SLIDE HAMMER PULLER

SLIDE HAMMER PULLER

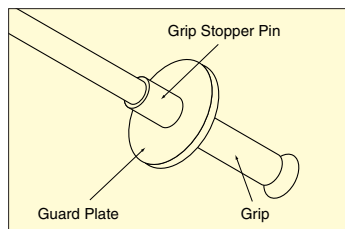
No.	D1	D2	D3	D4	L	Weight Shocker	Screw Size	▼kg	☞
AUD3	60	68	30	14	580	1.2kg	W9/16-12	2.7	1
AUD4	85	68	30	18	675	3.5kg	M18 × 2.0	5.5	1
AUD5	96	80	36	25	825	5.3kg	M22 × 2.5	8.4	1

Wide range of application with shockers of 3 different weight, i. e. 5.3kgs., 3.5kgs., and 1.2kg.  
Applicable to mini/compact cars and small trucks.

CAUTION \* TAKE YOUR FOOTHOLD SECURELY, MAINTAIN GOOD POSTURE, AND MIND POSITION OF YOUR HANDS WHEN USING THE SLIDE HAMMER.



CAUTION



BEFORE USING TOOLS.

- READ INSTRUCTION MANUALS BEFORE USE.
- TAKE YOUR FOOTHOLD SECURELY AND TAKE A GOOD BALANCE WHEN USING.

FOR YOUR SAFETY:

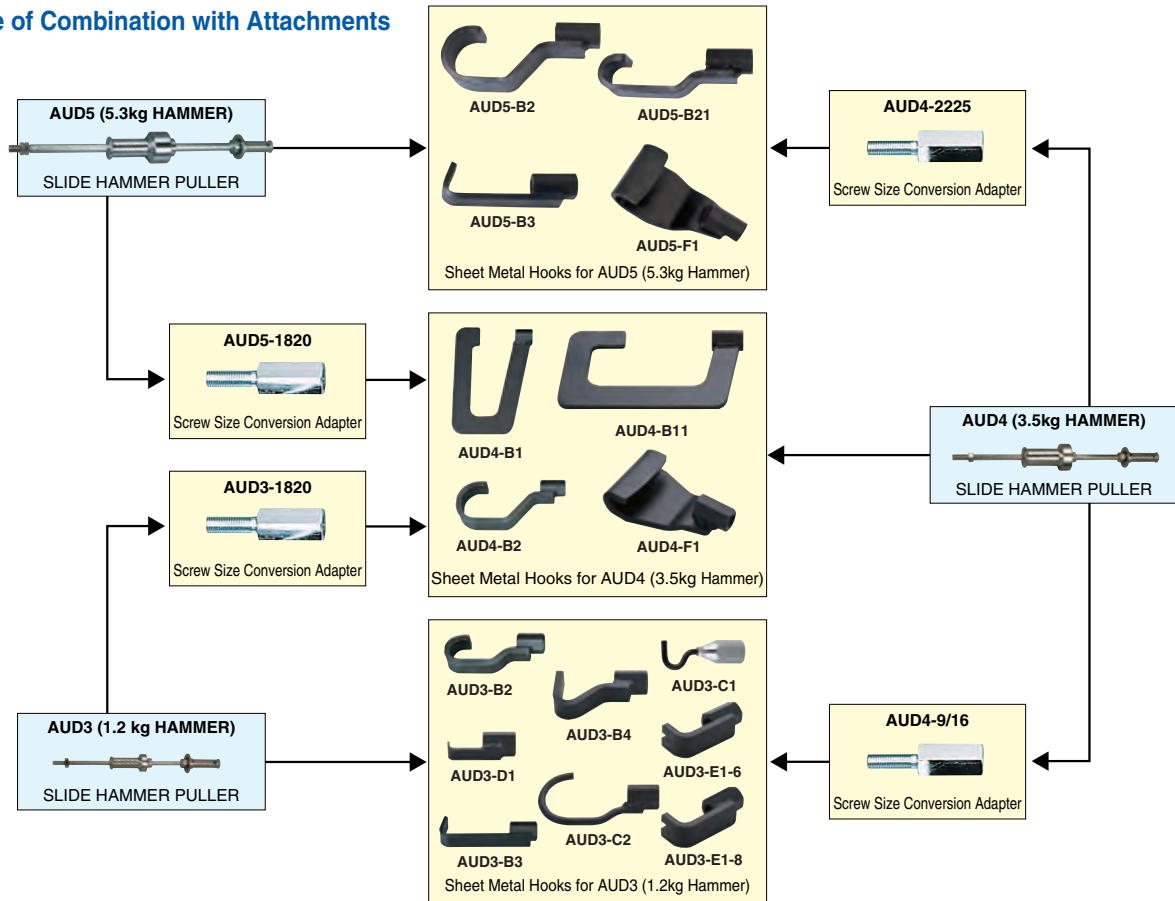
- ENSURE GRIP STOPPER PIN HAS BEEN INSERTED. (SEE FIGURE BELOW. AUD5 DOES NOT HAVE THE PIN.)
- HOLD THE TOOL WITH BOTH HANDS TO PREVENT UNEXPECTED MOVEMENT OF SHOCKER.
- USE IT ALONE.
- BE SURE TO INSTALL NUT TO TIP OF SHAFT. DO NOT ALLOW SHOCKER TO MOVE TOWARD TIP.
- BE SURE TO FIX ATTACHMENTS WITH CLOSED NUT.
- APPLY THIS TOOL TO THE PART FREE FROM DAMAGE BY HITTING.
- DO NOT ATTEMPT TO MODIFY A TOOL, OTHERWISE, YOU MAY DEGRADE QUALITY CONSIDERABLY.

FOR DAMAGE PREVENTION

- SELECT ATTACHMENTS APPROPRIATE TO THE WORK.
- BE CAREFUL NOT TO DROP THE TOOL. DO NOT PLACE ANYTHING ON THE TOOL.
- DO NOT ALLOW MOISTURE, CHEMICALS, IRON POWDER OR DUST TO COVER THE TOOL.

# Use slide hammer puller together with the attachments (separately sold).

## Example of Combination with Attachments



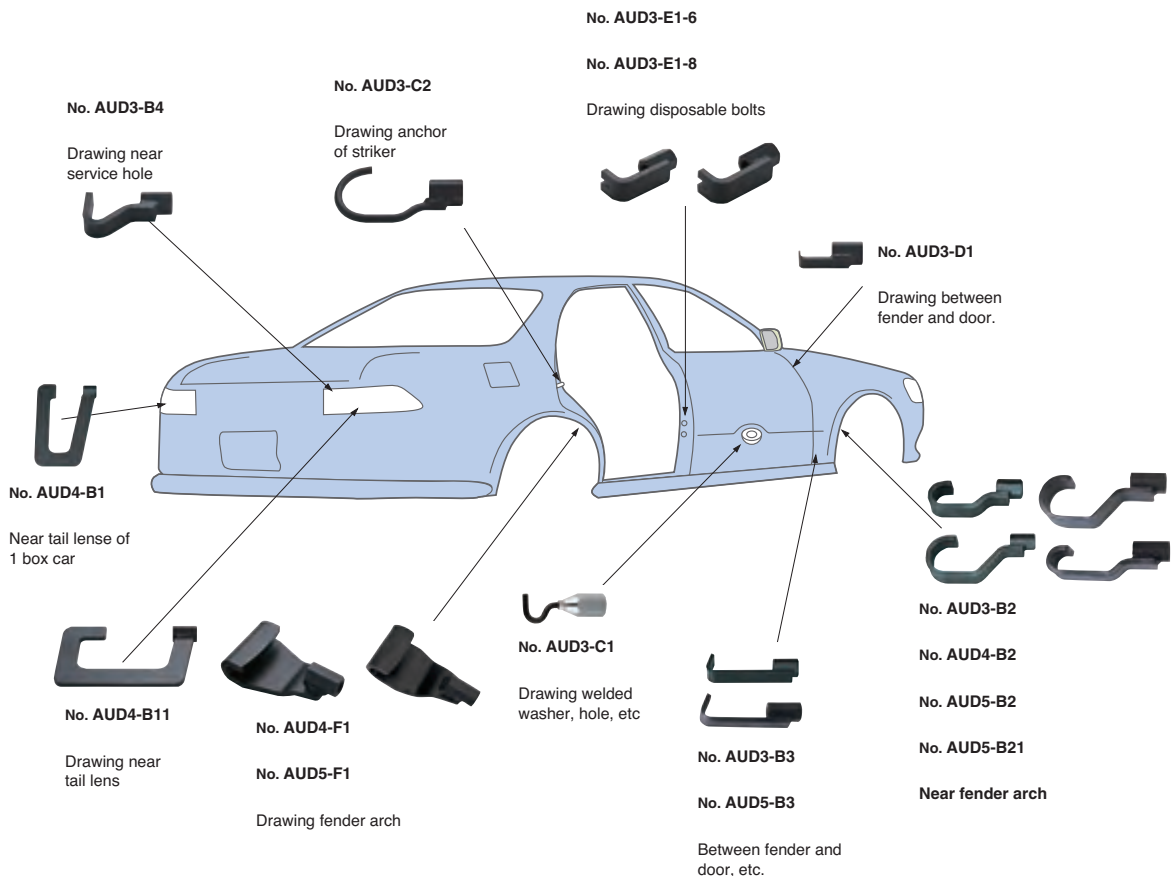
### Application

Applicable to mini/compact cars and trucks.

### How to Use

- To tip of the slide hammer puller, install attachment appropriate to work.
- Fix the attachment to puller with enclosed nut and offset wrench or similar tool.
- Slide the shocker and start to work.

### ●Example of Sheet Metal Drawing Operation



\*Please check the merchandise inventory for a product that is marked by before placing an order.

● **SLIDE HAMMER PULLER ATTACHMENT HOOK**

**SLIDE HAMMER PULLER ATTACHMENT HOOK**

**SLIDE HAMMER PULLER ATTACHMENT SET (4pcs)**

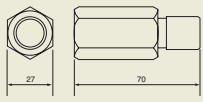
No. ATUD304	▼kg 1.35	📦 1
Attachments for Sheet Metal	AUD3-B4,C2,D1,E1-8	

**SLIDE HAMMER PULLER ATTACHMENT SET (3pcs)**

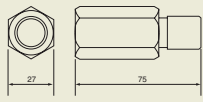
No. ATUD303	▼kg 1.17	📦 1
Attachments for Sheet Metal	AUD3-B2,B3,C1	

**SLIDE HAMMER PULLER ATTACHMENT**

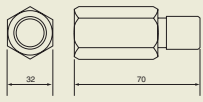
No.	AUD3-B2	AUD3-B3	AUD3-B4	AUD3-C1
	530g	500g	430g	140g
Screw Size at Puller side	W9/16-12	W9/16-12	W9/16-12	W9/16-12
Thickness x Width (mm)	9 x 32	9 x 32	9 x 25	Length 105
No.	AUD3-C2	AUD3-D1	AUD3-E1-6	AUD3-E1-8
	300g	220g	400g	400g
Screw Size at Puller side	W9/16-12	W9/16-12	W9/16-12	W9/16-12
Thickness x Width (mm)	Length 120	4.5 x 19	9 x 32	9 x 32
No.	AUD4-B1	AUD4-B11	AUD4-B2	AUD4-F1
	1.35kg	1.2kg	840g	1.1kg
Screw Size at Puller side	M18 x 2.0	M18 x 2.0	M18 x 2.0	M18 x 2.0
Thickness x Width (mm)	9 x 35	9 x 35	9 x 38	6 x 100
No.	AUD5-B2	AUD5-B21	AUD5-B3	AUD5-F1
	1.3kg	1.1kg	850g	1.9kg
Screw Size at Puller side	M18 x 2.0	M18 x 2.0	M18 x 2.0	M18 x 2.0
Thickness x Width (mm)	9 x 35	9 x 35	9 x 38	6 x 100



AUD3-1820, G1/2



AUD4-9/16, G1/2, 2225



AUD5-1820, G3/4

● **ADAPTER-SET FOR SLIDE HAMMER PULLER**



**ADAPTER-SET FOR SLIDE HAMMER PULLER**

**ADAPTER-SET FOR SLIDE HAMMER PULLER (2pcs.)**

No. ATUD302	▼g 600	📦 1
Adapter	AUD3-1820, G1/2	

No. ATUD402	▼g 600	📦 1
Adapter	AUD4-9/16, G1/2	

No.	Length	▼g	Screw Size (Puller)	(mm)	Screw Size (Object)	(mm)	Outer Hex A/F (mm)
AUD3-1820	70	300	W9/16-12	(14.2 x 2.1)	M18 x 2.0	—	27
AUD3-G1/2	70	300	W9/16-12	(14.2 x 2.1)	G1/2	(20.8)	27
AUD4-9/16	75	300	M18 x 2.0	—	W9/16-12	(14.2 x 2.1)	27
AUD4-G1/2	75	300	M18 x 2.0	—	G1/2	(20.8)	27
AUD4-2225	75	300	M18 x 2.0	—	M22 x 2.5	—	27
AUD5-1820	75	350	M22 x 2.5	—	M18 x 2.0	—	32
AUD5-G3/4	75	350	M22 x 2.5	—	G3/4	(26.4)	32

• Setting 12 kinds of attachments quite easily.  
Adapter for changing screw sizes enables setting 12 kinds of attachments easily for big or small hammer.



# Modification of Body

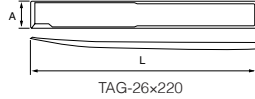
## BODY

### FLAT CHISEL

No.	A	L	▼g	☞
TAG-25×170	25	170	160	10
-26×220 (with rubber stopper)	26	220	270	10

- Flat & light body. Curved shape for easy use.
- Side blade for effective work. (Fig.1)
- Rubber stopper for safety job. (TAG-26×220)

**CAUTION** • WEAR SAFETY EYE GLASSES WHEN USING THIS TOOL.



### ●FLAT CHISEL D.PAT.



### Cutting Body

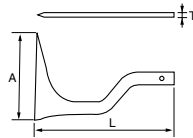


### BODY PANEL EDGEWAYS CHISEL

No.	L	A	T	▼kg	☞
TAGZ-200×320	320	200	9	1	10

- Sharped edge on one side for effective lining on the corner of panel.
- Good impact transmission with center striking part for easy lining job.
- Various lining works are possible (Ex.1 : Removing inner cover of a door and inserting this tool through service hole, then hitting end of this tool for lining.  
Ex.2 : At the corner of a panel or a narrow space, putting the edge of this tool into the damaged part and adjusting the direction of lining by hitting each part for lining.)

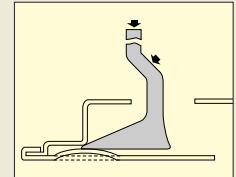
**CAUTION** • WEAR SAFETY EYE GLASSES WHEN USING THIS TOOL.



### ●BODY PANEL EDGEWAYS CHISEL



### Line Alignment



### AUTO PUNCH

No.	L	ℓ1	ℓ2	D1	D2	▼g
UDP-4	160	90	70	28	34	160

#### Punches for Replacement

No. UDP-4-1
-------------

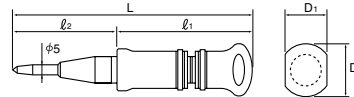
#### Application

- For making when attaching optional parts. To eliminating distortion during sheet metal processing.
- For marking the fitting point to engage the parts.

#### Features

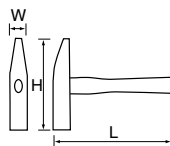
- Punch tip is made of highly durable hard steel.
- Continuous operations enhance operability.
- Quick marking with one hand without a hammer.
- Strength of punching adjustable by turning the handle.
- \* Harder punch: turn clockwise. Softer punch: turn counter-clockwise.
- \* The punch is made of abrasion-resistant SK steel.

### ●AUTO PUNCH



### SHEET METAL PROCESSING HAMMER

No.	Usage	L	W	H	▼g	☞
UD5-1	Tapping at room temperature	250	38	190	1600	1
-2	Variagation	300	30	143	290	1
-3	Side repair from interior	300	30	100	300	1
-4	Vertical repairs from interior	300	50	100	390	1



### ●SHEET METAL PROCESSING HAMMER



### ULTRA LONG T-TYPE TORX BIT SOCKET FOR DOOR HANDLE

No.	Nominal	D	L	ℓ	▼g
AP205-T20	T20	17	229	200	10
AP205-T25	T25	17	229	200	10

#### Application

- Attaching and detaching of the outer handle in imported cars; mainly Mercedes Benz C-Class · E-Class (AP205-T20) and BMW (AP205-T25).

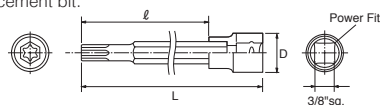
#### Features

- It is an ultra-long type that does not interfere with the thickness of the door or door molding, making it ideal for the attaching and detaching of outer handles.
- Tip bit can be replaced.

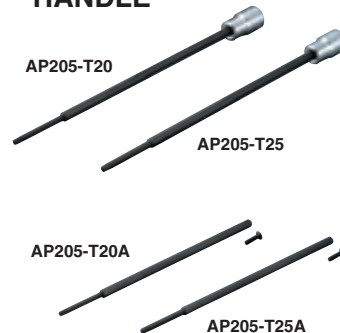
#### Replacement Bit

No.	Nominal
AP205-T20A	T20
AP205-T25A	T25

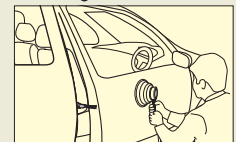
\* Set screw is attached with the replacement bit.



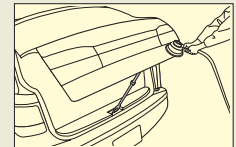
### ●3/8"sq. ULTRA LONG T-TYPE TORX BIT SOCKET FOR DOOR HANDLE



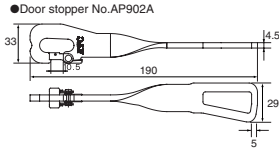
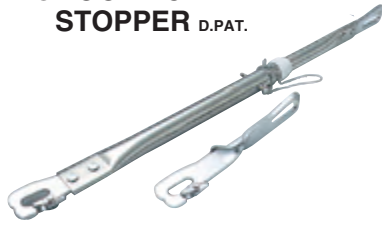
### Working door sheet metal



### Working rear gate sheet metal



● DOOR · GATE STOPPER D.PAT.



- CAUTION**
- Make sure that it is removed from the striker side when removing as there is a chance of scratching the body.
  - Make sure that all operators read the Owner's Operator Manual carefully before usage.

DOOR · GATE STOPPER

No. ATP9022	▼ g 700
Door stopper	AP902A
Gate stopper	AP902B

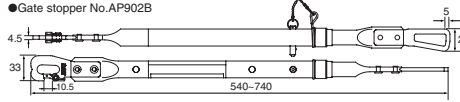
Product name	No.	Full length	▼ g
Door stopper	AP902A	190	200
Gate stopper	AP902B	540~740	500

**Application**

- An exclusive tool for working sheet metal or part replacement on doors and rear gates when slightly open.
- Door striker in the shape shown below. \* Striker size: Less than φ 10mm (Does not fit chassis that are fitted with auto-lock door mechanisms)

**Characteristics**

- Sets the part using the door locking area. • Can be used on most models.
- Removal/Installation is made easier.



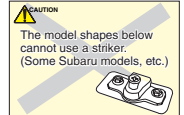
Applicable striker



Replacement parts Extend/retractable pin-set for the gate stopper

No.	
AP902B-1	

\* Exclusive for the gate stopper (No. AP902B). Contact your supplier or dealer for a replacement if this part is lost.



BODY

Welding

Protection of Front Shields and Seats



● PROTECLOTH



PROTECLOTH With Straps

No.	Size	Fixing Strap	☐
AYPC-1	1250×1730	930mm×2	1

No.	Size	☐
AYPC-2	820×1920	1
-4	1700×1920	1
-6	1700×2920	1

Purpose

• Protecting front shields, seats, etc. from sparks caused by welding operation.

Special Features

- With magic tape straps for fixing on front shields & seats. (AYPC-1)
- No magnets to damage car bodies by abrasion.
- Sheet approval No. JIS1323A. Temperature limit for continuous use : 1,000.C. Maximum : 1,650C.
- Containing no asbestos so harmless for human bodies.

● DISPOSABLE RESPIRATOR (3pcs.) YAMAMOTO

Expected release date: July 2005



DISPOSABLE RESPIRATOR (3pcs.)

No.	Type	Possible operating time	▼ g	☐
YEA-4000	Head-band type	12 hrs	11	10

Characteristics

- High capacity mask that has passed national standards (Classification DS2)
- As there are no metal parts in use, replacement is easy.
- Fitted with a tough, rigid rubber belt that is difficult to sever.
- Adjust the length of the belt.



Anti-sever belt & rubber type belt



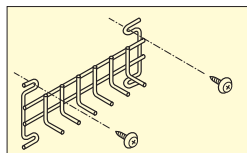
Belt length adjustment parts

\* YAMAMOTO is the registered trademark of Yamamoto Kogyo Co., Ltd.

BODY

Removal of Interior · Exterior Parts

● CLIP CLAMP TOOL SET [11pcs.]



Convenient hanger is included

CLIP CLAMP TOOL SET

No. ATP11	▼ g 1990
Angle Small	AP20-6
Angle Medium	AP20-10
Angle Large	AP20-13
Long Middle	AP20L-10
Long Large	AP20L-13
Straight Small	AP20-6B
Straight Middle	AP20-10B
Straight Large	AP20-13B
Long Straight Middle	AP20L-10B
Long Straight Large	AP20L-13B
Long Movable Support	AP20L-P

Usage

• Removal of linings and clips in automobile.

Application

• Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars.

Features

- Convenient hanger is included.
- Please refer to P.290 for each single item.

**CLIP CLAMP TOOL SET**

<b>No. ATP03A</b>	<b>▼g 340</b>
Angle Small	AP20-6
Angle Medium	AP20-10
Angle Large	AP20-13

**Usage**

- Removal of linings and clips in automobile.

**Application**

- Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars. Please refer to [P.290](#) for each single item.

**●CLIP CLAMP TOOL SET ANGLE [3pcs.]**



**CLIP CLAMP TOOL SET**

<b>No.ATP03B</b>	<b>▼g 370</b>
Straight Small	AP20-6B
Straight Middle	AP20-10B
Straight Large	AP20-13B

**Usage**

- Removal of linings and clips in automobile.

**Application**

- Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars. Please refer to [P.290](#) for each single item.

**●CLIP CLAMP TOOL SET STRAIGHT [3pcs.]**



**CLIP CLAMP TOOL SET**

<b>No. ATP03C</b>	<b>▼g 720</b>
Long Medium Straight	AP20L-10B
Long Large Straight	AP20L-13B
Long Movable Support	AP20L-P

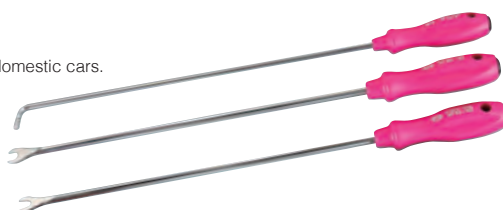
**Usage**

- Removal of linings and clips in automobile.

**Application**

- Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars. Please refer to [P.290](#) for each single item.

**●CLIP CLAMP TOOL SET LONG-STRAIGHT [3pcs.]**



**CLIP CLAMP TOOL SET**

<b>No. ATP2032A</b>	<b>▼g 130</b>
Angle Short Small	AP203-6A
Angle Short Medium	AP203-10A

**Usage**

- Removal of linings and clips in automobile.

**Application**

- Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars. Please refer to [P.290](#) for each single item.

**●CLIP CLAMP TOOL SET ANGLE SHORT [2pcs.]**



**CLIP CLAMP TOOL SET**

<b>No. ATP02</b>	<b>▼g 560</b>
Long Middle	AP20L-10
Long Large	AP20L-13

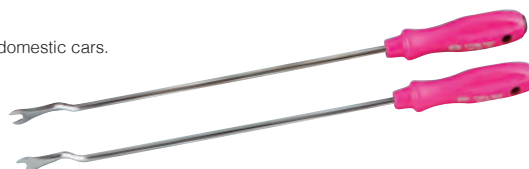
**Usage**

- Removal of linings and clips in automobile.

**Application**

- Ideal for the lining of doors, backdoors, quarter panels, floors, etc. in domestic cars. Please refer to [P.290](#) for each single item.

**●CLIP CLAMP TOOL SET LONG ANGLE [2pcs.]**



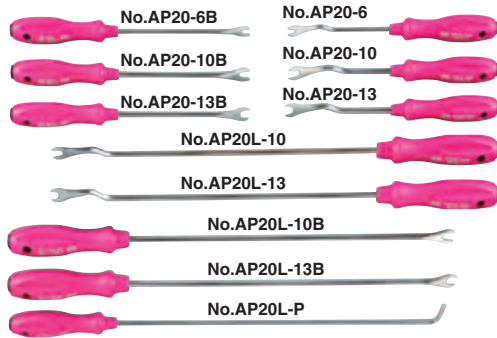
**BODY**

**Removing Interior Fixtures and Exterior Parts**

**1** Removing Interior Fixtures and Exterior Parts  
 Removing Interior Fixtures and Clips



**CLIP CLAMP TOOL · SET** D.PAT.



**Full Set Covers Wide Applications.**

**Purpose**

- Removing upholstery and clips of cars.

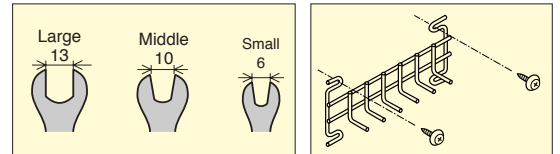
**Application**

- Optimal for upholstery such as panels of front/rear doors flooring, quarter panels.

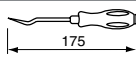
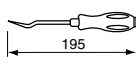
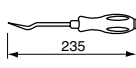
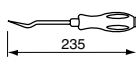
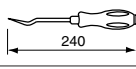
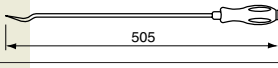
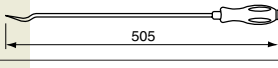
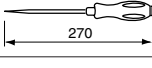
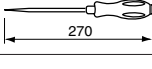
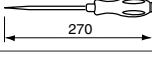
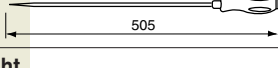
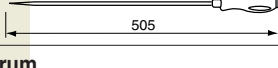
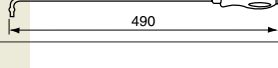
**Features**

- Applicable to three sizes of clips. Comes in two types, curved and straight.
- Tip of large-size clip clamp tool is specially designed to fit clip shape.
- Full set (No. ATP11) includes a useful hanger. (Figure 1)

**Tip Sizes**

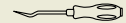


(Fig.1) Useful Hanger  
 \*(only for ATP11)

Product Name, Product Number	Size	▼g	☐	Angle Short Set	Angle Set	Straight Set	Long Angle Set	Long Straight Set	Full Set
Angle short small No.AP203-6A		6	60	10	●				
Angle short middle No.AP203-10A		10	70	10	●				
Small No.AP20-6		6	100	10		●			●
Middle No.AP20-10		10	120	10		●			●
Large No.AP20-13		13	120	10		●			●
Long-Middle No.AP20L-10		10	280	10			●		●
Long-Large No.AP20L-13		13	280	10			●		●
Straight-Small No.AP20-6B		6	110	10				●	●
Straight-Middle No.AP20-10B		10	130	10				●	●
Straight-Large No.AP20-13B		13	130	10				●	●
Long-Middle-Straight No.AP20L-10B		10	280	10					●
Long- Large -Straight No.AP20L-13B		13	280	10					●
Long-Movable Fulcrum No.AP20L-P		-	160	10					●
				ATP2032A	ATP03A	ATP03B	ATP02	ATP03C	ATP11

**Angle Type**

Short



Long




**Straight Type**

Short



Long+Movable Fulcrum



\*Please check the merchandise inventory for a product that is marked by  before placing an order.

**HANDY REMOVER · SET**

No. ATP2014	▼g 140	5
HANDY REMOVER	AP201-10A, 10P, N, W	

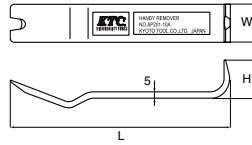
**Purpose**

Removing upholstery and clips on cars.

- Applicable to variety of work.
- Handy and colorful (4 types)

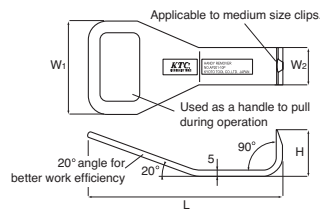
**Medium Size**

No.	L	W	H	▼g	5
AP201-10A	180	30	31	30	5



**Pull Type (Medium size)**

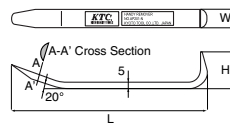
No.	L	W1	W2	H	▼g	5
AP201-10P	160	75	30	40	40	5



**Narrow Type**

No.	L	W	H	▼g	10
AP201-N	160	15	30	10	10

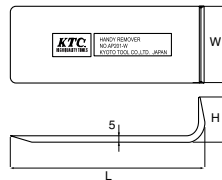
- The round bottom designed to avoid interference with instrument panel when removing the cluster of the panel.



**Wide Type**

No.	L	W	H	▼g	5
AP201-W	160	60	35	60	5

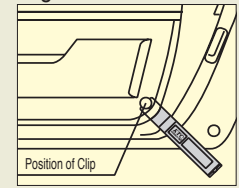
- Flat blade suitable for removing glued parts such as laces.



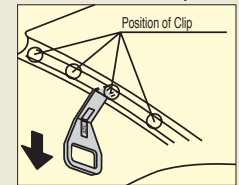
**●HANDY REMOVER**



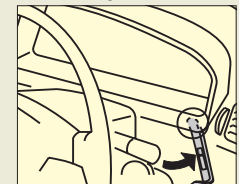
Removing upholstery in general



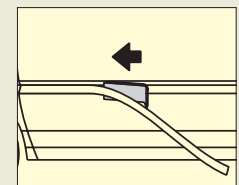
Removing upholstery in general including ones around the pillar



Removing upholstery



Removing laces



**CLIP CLAMP TOOL · SET**

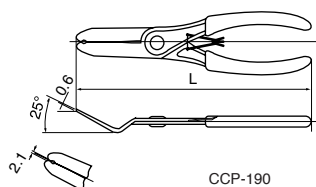
No. ATP2012	▼g 170	1
Clip Clamp Plier	CCP-190	
Clip Clamp Remover	AP201-10A	

- Clip Clamp Pliers : For removing clips and clamps.
- Clip Clamp Remover : For removing plastic and rubber fixtures.

**CLIP CLAMP PLIERS**

No.	L	▼g	1
CCP-190	190	140	1

- For removing clips by clamping the shafts without damaging them.
- Holding the clip shaft in 3.5mm combined hole on the edge of the blade.
- \* Springs are available as replacement parts. Check with your dealer for details.



**●CLIP CLAMP TOOL · SET**



●HANDY REMOVER · SET

HANDY REMOVER · SET

HANDY REMOVER SET

No.	ATP2015	▼g	125	📦	5
Narrow Type Remover	AP201-CN				
Flat Type Remover	AP201-CF				
Spoon Type Spatula	AP201-HS				
Narrow Type Spatula	AP201-HN				
Flat Type Spatula	AP201-HF				

Usage

- Remover has a new shape that allows the removal of clips in deep areas.
- Spatula type supports the removal of audio panels and service hole caps.

Features

- Strong, hard remover is achieved by the use of fibered resin.
- It has a thin tip shape that does not easily damage the olefin resin with soft surface that's been used in recent vehicles.

HANDY REMOVER SPATULA SET

No.	ATP201H3	▼g	70	📦	5
Spoon Type Spatula	AP201-HS				
Narrow Type Spatula	AP201-HN				
Flat Type Spatula	AP201-HF				

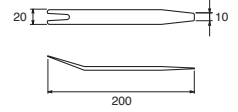
Usage

- Supports the removal of audio panels and service hole caps.
- It is removed by lifting up using the narrow or flat type, then prying open with the spoon type.

Narrow Type Remover

No.	▼g	📦	
AP201-CN	21	5	

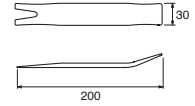
- With the thin tip shape, it can be inserted even in small gaps.



Flat Type Remover

No.	▼g	📦	
AP201-CF	31	5	

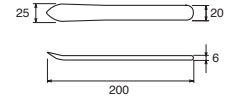
- Flat shape is maintained up to the grip, making it ideal for the removal of clips in deep places.



Spoon Type Spatula

No.	▼g	📦	
AP201-HS	26	5	

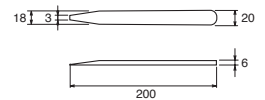
- By enlarging the tip shape, it is effective in prying open the panel that's been lifted by AP201-HN · AP201-HF.



Narrow Type Spatula

No.	▼g	📦	
AP201-HN	22	5	

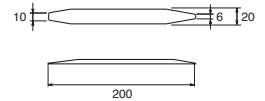
- By narrowing the tip, it can be used in places that used to need protection for the flat screwdriver tip.



Flat Type Spatula

No.	▼g	📦	
AP201-HF	22	5	

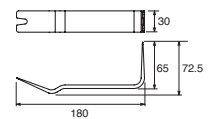
- By narrowing the tip, it supports the notch portion of switch base cover, etc.



Standard Type Remover

No.	▼g	📦	
AP201-C	31	5	

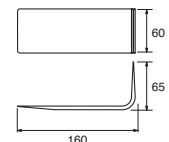
- With the thin tip shape, it can be inserted even in small gaps.



Wide Type Remover

No.	▼g	📦	
AP201-WA	56	5	

- With the thin tip shape, it can be inserted even in small gaps.



Removal of lining



Usage example: AP201-CN



AP201-CN



Usage example: AP201-CF



AP201-CF

Removal of lining  
Removal of audio panels, etc.



Usage example: AP201-HS+  
AP201-HN



AP201-HS

Lining · Hole Plug  
Switch Base Cover



Usage example: AP201-HN



AP201-HN

Hole Plug  
Switch Base Cover

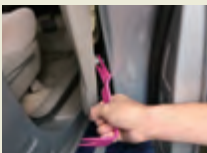


Usage example: AP201-HF



AP201-HF

Removal of lining  
(doors, etc.)



Usage example: AP201-C

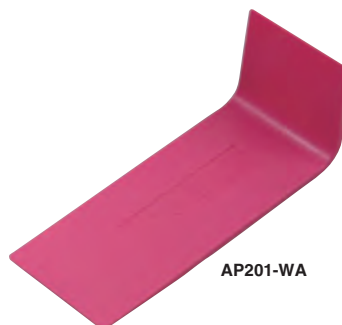


AP201-C

Removal of lining



Usage example: AP201-WA



AP201-WA

**CLIP CLAMP PLIERS**

**SET**

No. ATP2022	▼g 290
CLIP CLAMP PLIERS	AP202A, AP202B

No.	Type	L	W1	W2	T	▼g	☒
AP202A	35°	196	25	53	9	145	5
AP202B	80°					145	5

**Purpose**

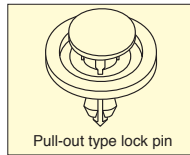
- Removal and installation of shaft of plastic clips used on front/rear bumpers, front fender faces, etc.. at time of removal and insertion.

**Application**

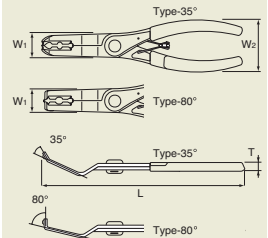
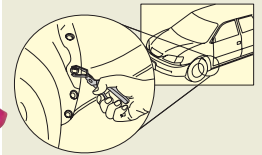
- Plastic clips with pull-out type lock pin (Shaft diameter : 5-10, in case of installing the clips.)

**Features**

- Lock pin (lock release) can be done with ease. (Fig.1)
- Clip can be pulled out after pulling out the lock pin. (Fig.2)
- Easy clamping and inserting of clip shaft at clip installation into car body (Fig.3)
- Pliers tip shaped to prevent damage to a clip.
- Pliers tip is angled to avoid damage to car body and interior covers.
- Pliers tip provided with arrow mark for easy alignment with the clip.

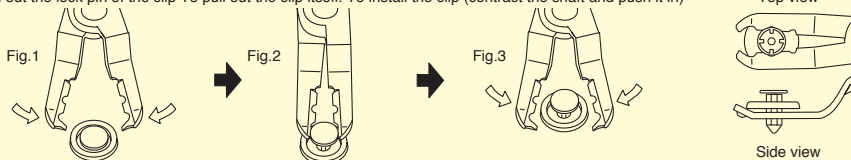


**●CLIP CLAMP PLIERS 35° · 80° (for pulling out lock pins)**



**●How to Use the Pliers**

To pull out the lock pin of the clip To pull out the clip itself. To install the clip (contract the shaft and push it in)



**CLIP CLAMP PLIER · SET**

**Clip Clamp Tool Set**

No. ATP2022A	▼g 300
Clip Clamp Pliers	AP202C, AP202D

**Clip Clamp Pliers D.PAT.P**

No.	Type	L	B1	B2	T	▼g	☒
AP202C	20°	202	25	53	9	150	5
AP202D	80°	200	25	53	9	150	5

**Usage**

- Removal of 3-groove lock pin extraction type resin clip that's used inside the tire housing, undercover, bumper, etc. of automobile, as well as tightening and inserting of shaft when equipped.

**Application**

- 3-groove lock pin extraction type resin clip that's used in Suzuki, Mazda and Nissan of '08 or later (clip equipped: φ5~φ10 shaft diameter)

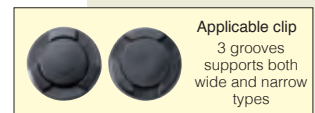
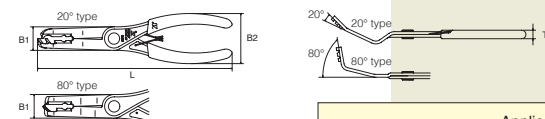
**Features**

- It claws onto the lock pin from 3 directions to prevent the pin from breaking and allow the easy work.

\* Spare parts are configured. Please contact your dealer for details.



**●CLIP CLAMP PLIERS 20° · 80° 3-CLAW TYPE · SET (for EXTRACTING 3-GROOVE TYPE TRIM CLIPS) D.PAT.**



**CLIP CLAMP PLIER**

No.	Type	L	B1	B2	T	▼g	☒
AP208A	35°	167	18	53	9	120	5
AP208B	80°	162	18	53	9	120	5

**Usage**

- Removal of lock pin extraction type resin clip that's used in the front and rear bumpers, front fender liners, etc. of automobile as well as tightening and inserting of shaft when equipped.

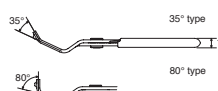
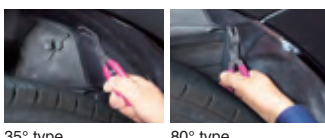
**Application**

- 2-groove and 4-groove lock pin extraction type resin clips. (clip equipped: φ5~φ10 shaft diameter)

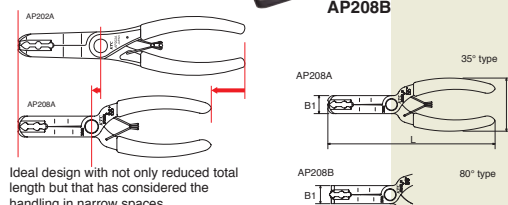
**Features**

- Since the short total length does not easily interfere, it can be used without removing the tire.

\* Spare parts are configured. Please contact your dealer for details.



**●CLIP CLAMP PLIERS 35° · 80° SHORT TYPE for WHELL HOUSING**

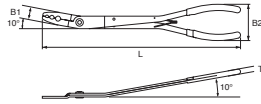


\*Please check the merchandise inventory for a product that is marked with a lightning bolt icon before placing an order.

● TRIM CLIP PLIER FOR REAR GARNISH D.PAT.



AP207



TRIM CLIP PLIER

No.	L	B <sub>1</sub>	B <sub>2</sub>	T	▼g	☐
AP207	320	20	58	6	220	1

Usage

- Removal of the trim clip for rear garnish in automobile.

Application

- Trim clip for rear garnish that's used in Toyota, Nissan, Honda, Mazda, Suzuki, etc.

Features

- It does not damage the clip, allowing it to be reused.
- Long total length allows the use for clips in deep places.
- Angled tip can easily dodge obstacles (wiring, etc.).

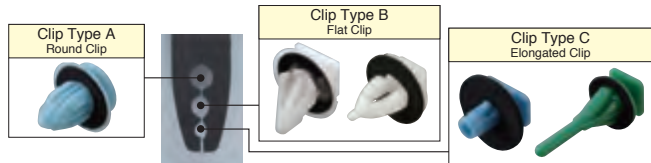
⚠ CAUTION • Do not use for other than the trim clip for rear garnish.



Firmly catches the lock

Usable in narrow, low places

Usable in deep, difficult places



● TELESCOPIC DRIVER · SET



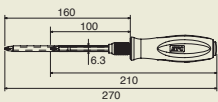
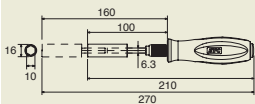
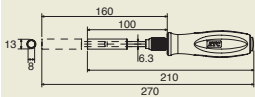
AD601-08



AD601-10



AD601-P2



TELESCOPIC DRIVER · SET  
TELESCOPIC DRIVER SET

No.	▼g	530
Telescopic Driver 8mm (bore: hex.)	AD601-08	
Telescopic Driver 10mm (bore: hex.)	AD601-10	
Telescopic Driver Cross No.2	AD601-P2	

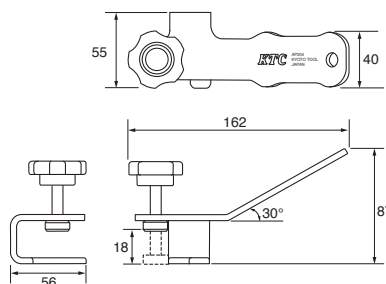
Features

- Axial length can stretch between 100mm and 160mm, allowing 1 unit to have 2 roles.
- Tip with magnet can hold the bolt.
- Magnet at the tip moves, changing the height of the magnet for both with and without tray, securely holding the bolt. (AD601-08, AD601-10)

Telescopic Driver

No.	Tip Shape · Bore Size	▼g	☐
AD601-08	Hex. · 8mm	180	10
AD601-10	Hex. · 10mm	200	10
AD601-P2	Cross · No.2	150	10

● WIPER ARM REMOVER



WIPER ARM REMOVER

No.	Full length	▼g
AP204	162	300

Usage

- Exclusive tools for removing car wiper arms.

Application

- Can be used on vehicles ranging from light to RVs that use full-con and semi-con type shield wipers.

\* There are some vehicle types that cannot use this system.

Characteristics

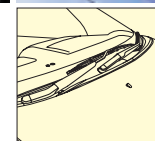
- Once the wiper arm is attached, removal can take place easily with only little effort.

Full-con shield, wipers

- Type of pivot part of the wiper arm is hidden by the bonnet.

Semi-con shield, wipers

- The pivot part of the wiper arm pivot visible.





# Removal, Installation and Adjustment of Doors

BODY

15 AUTOMOTIVE SPECIAL TOOLS

## COURTESY LAMP SWITCH STOPPER

No.	L	D	AAA	▽g	☐
ATP32	79	40	2	25x2	5

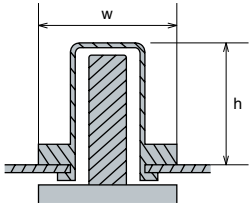
### Usage

- When the door has been left in an open state, press the Courtesy switch to shut off the cabin's lamp and to stop the "open door alarm" from sounding.

### Characteristics

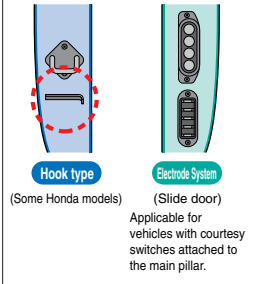
- Simply grasp the lever to apply or remove.
- As the switch has been made out of engineering plastic with glass fiber, it is both robust and light.
- The switch's rubber does not scratch.

### Applicable courtesy lamp switch size



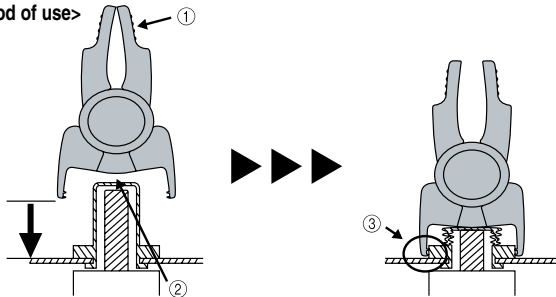
Width (w): 21.5-28.5mm  
Height (h): Over 10mm when switch is OFF

### Courtesy switch shapes that are not applicable.



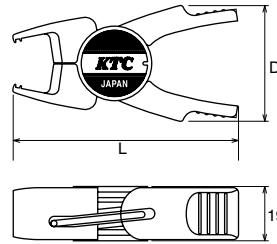
Applicable for vehicles with courtesy switches attached to the main pillar.

### <Method of use>



- Grasp the lever part and open at the edge of the body.
- Push vertically towards the courtesy switch push.
- Fit so that the base of the courtesy switch's rubber cover catches the body's edge.
- Make sure of secure installation.

## COURTESY LAMP SWITCH STOPPER

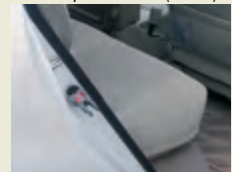


Stopping the door caution alarm **1**

Example of use (Front)



Example of use (Rear)



CAUTION • Do not close the door when tool in use.

## DOOR BELT MOLDING REMOVER

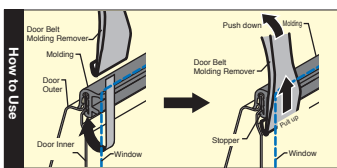
No.	B	D	L	I	▽g	☐
AP206	22	34	220	100	120	10

### Usage

- It is a dedicated tool for the removal of door belt molding (drain molding) that's used in light and standard-sized vehicles (limited to domestic. Some models are not supported).

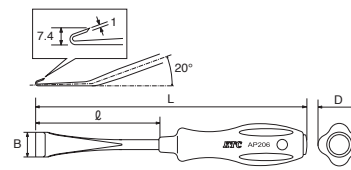
### Features

- It uses the tip claw shape that can easily be inserted into small gaps and slide.
- It has the angle that's hard to bend and can easily lift the door belt molding, improving workability.
- Easy-to-grip resin grip that minimizes the hand sore is adopted.



- CAUTION
- Please be sure to work upon confirming the removal method on the maintenance manual.
  - There are types in some vehicle models that cannot be removed by this remover. Door belt molding (drain molding), clip or the like may be damaged if forced.

## DOOR BELT MOLDING REMOVER



## DOOR HINGE BOLT WRENCH SET (2pcs.)

No.	▽g	☐
DMZ2	450	10

Door Hinge Bolt Wrench 12, 14

No.	S	D	L	▽g	☐
DMZ-12	12	19	300	200	10
-14	14	22	300	250	10

### Purpose

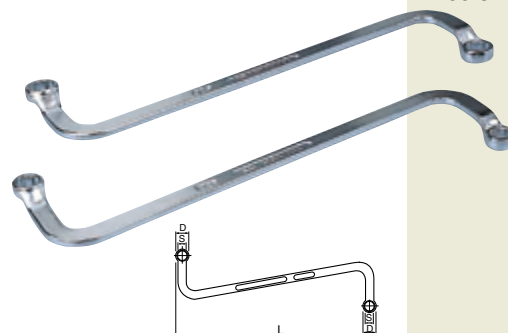
- Special wrench for adjusting, removing and installing doors.

### Features

- Can be used in narrow quarters where conventional wrenches cannot be used.
- Combination of 12x12(14x14) enables using right side and left side effectively.

S	Applicable car Maker
12	Toyota, Nissan, Mitsubishi, Honda, Mazda, Subaru, Daihatsu
14	Toyota, Daihatsu, Mitsubishi

## DOOR HINGE BOLT WRENCH SET

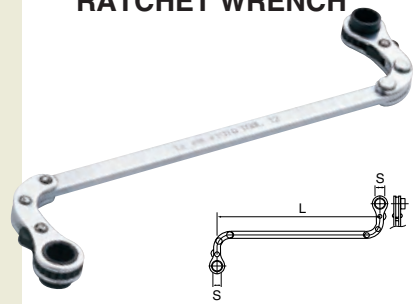


Removal, Installation and Adjustment of Doors **2**

BODY

2 Removal, Installation and Adjustment of Doors

● DOOR HINGE BOLT RATCHET WRENCH



DOOR HINGE BOLT RATCHET WRENCH

No.	S	L	▼g	📦
DMR-12	12	250	250	10

Features

- Ratchet end for effective use in narrow spaces.
- Can be used from upper and lower sides of a hinge and left & right door.
- "S" shaped body for bypassing obstacles.
- Extruded shape of socket enables use on concave press-hinges, bypassing other bolts.
- 12 points ratchet end allows easy fitting into hinge bolts.

3 Adjustment of Door Striker

● TORX® WRENCH

● TORX® DRIVER

● OTHER TOOLS

BODY

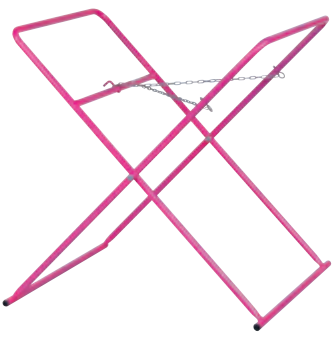
Painting

Painting bumpers, fenders and doors

● SPRAY HANGER

SPRAY HANGER

No.	LxWxH standard (maximum value)	▼kg	📦
AP502	800x705x800(960)	7.3	1



- With 4 pads

Usage

- Painting and drying work carried out on body parts that have been laid flat such as doors, engine hoods, rear gates and the bumpers of light to regular sized vehicles.
- Replacement parts

Characteristics

- The height can be adjusted to two levels (800mm and 960mm) by the ring hook position of the chain, according to the size of the object, or to the worker's height.
- Also applicable for long wrap around bumpers. (Maximum value)
- The legs are of flat steel with grating for grip.
- Folding type for compact storage.
- Light construction for easy movement.

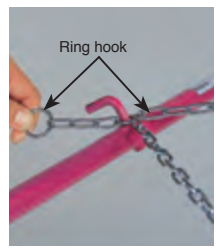
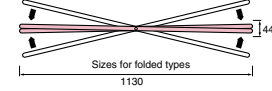
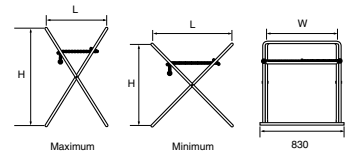
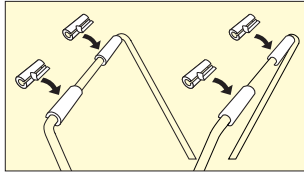


Can work on long wrap around bumpers.

SPRAY HANGER

No. AP502PA	▼g 40	📦 1
-------------	-------	-----

Pads x 4 (for replacement)



The height can be adjusted to two levels (800mm and 960mm) by the ring hook position of the chain.

**TILTING SPRAY HANGER**

No.	A	B	C	D	E	Accessories	▼kg	📦
TSR1380	1350	834	800	400	400	Panel stays 1 kit Bumper stays 1 kit	17	1

**Purpose**

- Spraying of bumpers, fenders, doors, etc. of up to the smallest-sized vehicles.

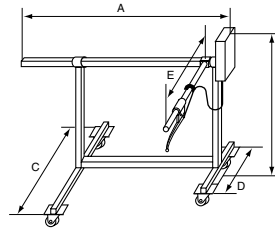
**Features**

- The object can be rotated, so even portions which are hard to spray can be sprayed efficiently.
- The rotation angle can be adjusted in increments as fine as 15°. An object can be fixed at a desired position according to the progress of work.
- The versatile stays can move freely, vertically and horizontally, and can also be fixed.
- Three kinds of stays can be used to spray paint on bumpers, fenders doors, engine hood, etc. (but not on tail gates).
- The stay for use with engine hoods is optional.
- The rotary mechanism has been designed not to turn more than 180° at any time, even if the lock wire is damaged.



● **TILTING SPRAY HANGER**

Spraying Bumper, Fender and Door



**Option (Engine hood stay)**

No. TSR1380-OP1



TSR1380-OP1

● **Usage example**

Fender



Panel stay

Engine hood



Engine hood stay (Option)

Bumper



Bumper stay

Door



Bumper stay

**SPRAY HANGER**

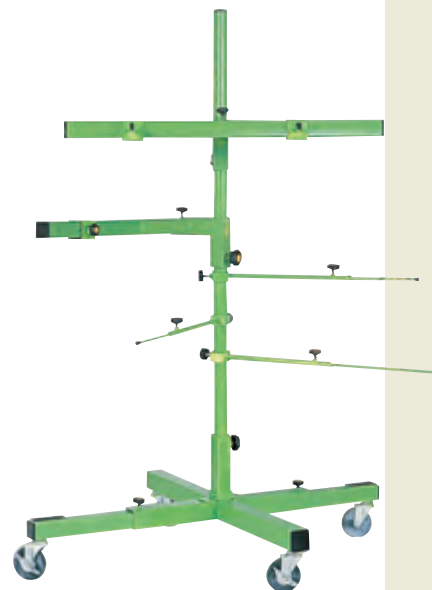
No.	H	▼kg	📦
TS1500	1685	28	1

A-single unit can be used to spray paint and dry parts including urethane bumpers, doors and tail gates.

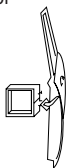
- The universal arms can rotate freely 360°, improving efficiency by allowing for fine work to proceed on two sides simultaneously.
- Parts are attached to newly designed hooks and can be transported easily.
- Rugged construction and contractable feet make it possible to spray heavy objects.
- The universal casters with 100mm diameter transport the stand freely even inside a booth or on a grating.
- Attached parts can be detached easily, so the storage space can be saved.
- Both the front and back sides of parts can be dried simultaneously to reduce expense.
- Rubber caps are provided to prevent parts damage, and rubber mats are attached on the base extensions to facilitate installation.



● **SPRAY HANGER**

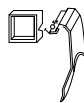


Door



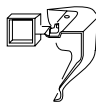
Hook A/B

Fender

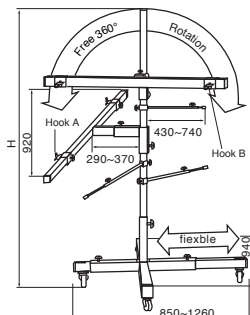


Hook B

Bumper



Hook A/B





# 6. OTHER TOOLS and EQUIPMENT

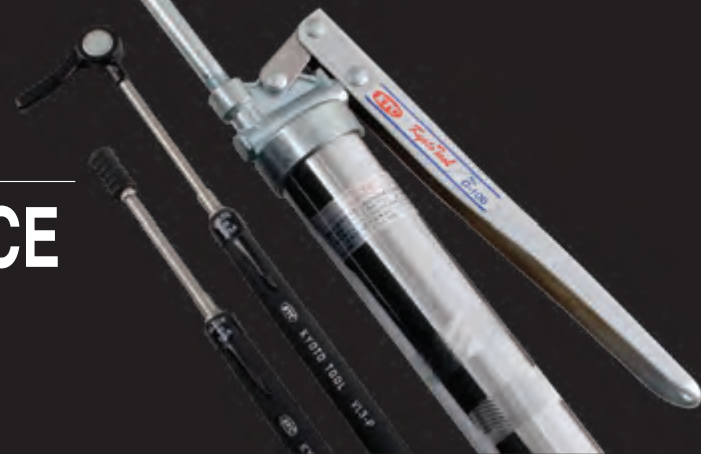
AUTOMOTIVE MAINTENANCE ACCESSORIES  
LIGHTS



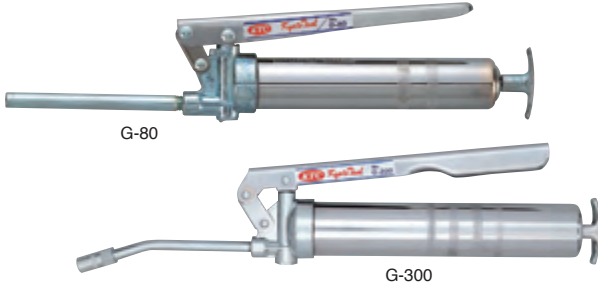
OTHER TOOLS and EQUIPMENT

## 6. OTHER TOOLS and EQUIPMENT

# AUTOMOTIVE MAINTENANCE ACCESSORIES



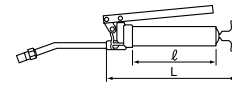
### ● GREASE GUN



#### GREASE GUN

No.	Capacity	Discharge per time (cc)	Max. Discharge Pressure (kg/cm <sup>2</sup> )	Tube Dia.	L	ℓ	Nozzle No.	▼g	☐
G - 80	80	0.75	25	32	214	145	G-120NS	500	10
-100	100	0.75	25	38	238	175	G-190NC	600	10
-200	200	1.27	25	48	330	138		900	10
-300	300	1.23	25	48	320	235		930	10
-500	500	1.00	25	62	340	265		1200	10

• Can be used in narrow space.



### ● GREASE GUN (Cartridge Type)

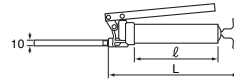


#### GREASE GUN

No.	Capacity	Discharge per time (cc)	Max. Discharge Pressure (kg/cm <sup>2</sup> )	Tube Dia.	L	ℓ	Nozzle No.	▼g	☐
CG-400	400	1.45	25	56	360	290	G-250NS	1950	10

#### Characteristics

- Cartridge type for easy grease charging. For saving grease.
- Comes with 1 cartridge. (Chassis Grease No.1 400g)



### ● NOZZLE FOR GREASE GUN



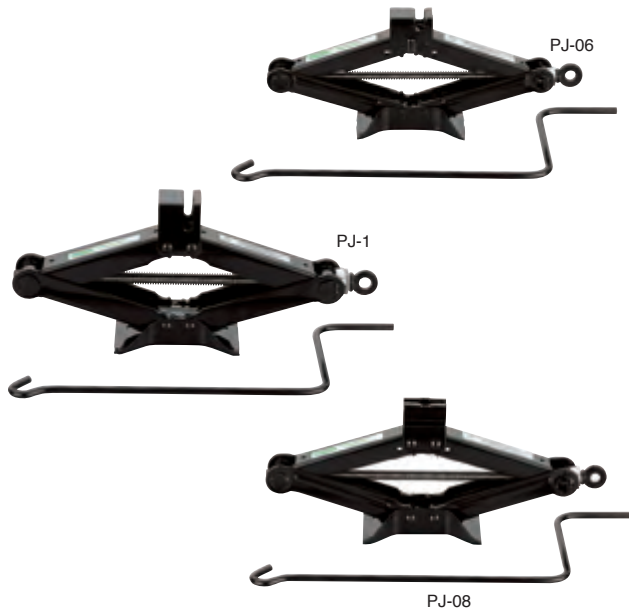
#### NOZZLE FOR GREASE GUN

No.	Type	L	▼g	☐
G -120NS	Straight	120	30	1
-180NS	Straight	180	60	1
-250NS	Straight	250	200	1
-450NS	Straight	450	270	1
G -190NC	Chuck	163	100	1
G -330NH	Hydro-hose	337	140	10

#### Characteristics

- Exchangeable nozzles for multi purposes such as straight nozzles for pouring into the deep narrow space, freely twisting hydro-hose nozzles and chuck nozzles.

### ● PANTOGRAPH JACK



#### PANTOGRAPH JACK

No.	Capacity kg	Height		ℓ	L	W <sub>1</sub>	W <sub>2</sub>	Car Model	▼kg	☐
		Max.	Min.							
PJ-06	600	340	90	130	380	40	90	Mini cars & Mini trucks	1.8	10
-08	800	380	105	140	410	45	100	Passenger cars under 2,000cc	2.4	5
- 1	1000	415	115	150	440	45	120	Passenger cars over 2,000cc	3.7	5

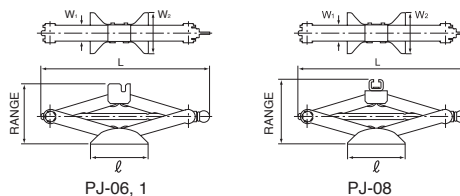
#### Characteristics

- Trapezoidal thread made by roll forming applied in the screw part for precision and durability.
- Comes with handle.
- PJ-08 has a movable head.

#### Spare parts

No.	Pats name	Length	▼kg	☐
PJ-06-H	Handle	460	0.3	1

- CAUTION** • READ THE PROVIDED INSTRUCTION CAREFULLY BEFORE USE.  
 • DO NOT USE FOR THE LOAD OVER THE SPECIFIED CAPACITY.  
 • DO NOT PUT YOUR BODY OR ANY PART OF YOUR BODY SUCH AS HAND, FOOT, FINGER, ETC. BELOW THE CAR JACKED UP.



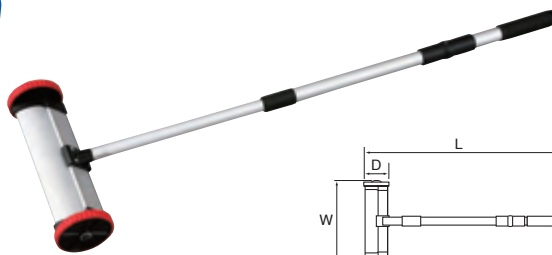
\*Please check the merchandise inventory for a product that is marked by before placing an order.

**MAGNETIC FINDER**

No.	L	W	D	Attractive Force (Reference)	▼kg	☞
VK-300	720~1035	318	95	Approx. 400g	1.3	1
VK-400	720~1035	398	95	Approx. 600g	1.5	1

- It is a cleaning tool that collects the parts and scraps that are scattered on the floor or passage of factory, etc.
- Casters allow the smooth work.
- With the release function that releases the magnetic force by handle, collected chips and the like can be safely removed.
- Handle is telescopic that's convenient in storage.

**● MAGNETIC FINDER**



**HAND PICKER**

No.	L	▼g
VS4-3	512	170

**Purpose**

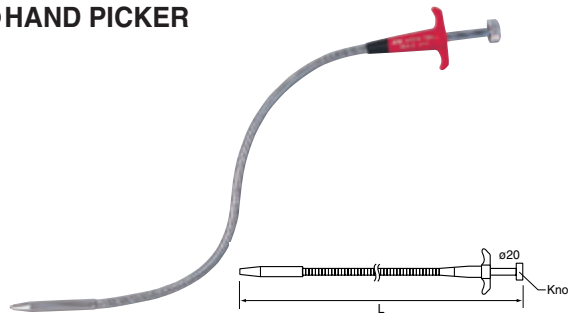
- A tool for picking up small objects fallen into narrow space you cannot reach or in liquid such as water.

**Features**

- Flexible rubber shaft you can bend in any way.
- Three claws easily catch resin, rubber, or aluminum objects which magnets cannot pick up.
- Large knob makes operation easy.



**● HAND PICKER**



**MAGNETIC PICK-UP TOOL**

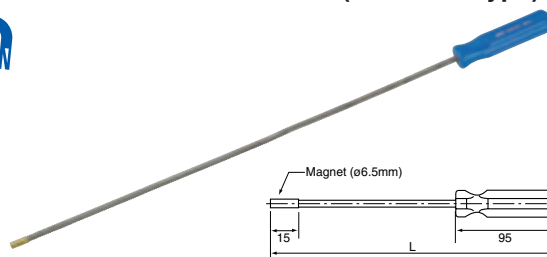
No.	L	Magnet Outer Diameter	Magnet holding capacity (g)	▼g	☞
VL2-HD	520	6.5	450	115	20

**Special features**

- Neodymium magnet applied for much stronger power for picking up.
- Magnetized flexible pick-up tool.
- Convenient for picking up articles dropped in narrow quarters, inside machines, liquids or chips in grooves or holes.

**CAUTION** • DO NOT USE WHERE ANY BAD EFFECT CAN BE CAUSED BY MAGNETISM.  
• DO NOT USE IN VERY HOT PLACE.

**● MAGNETIC PICK-UP TOOL (Powerful Type)**



**MAGNETIC PICK-UP TOOL**

**Telescopic Motion Shaft**

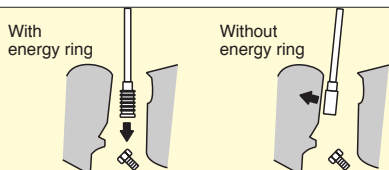
No.	Tip	L	ℓ	Magnet Diameter	Magnet Hanging Power (kg)	▼g
VL3-1	Small	185~815	145	8	1.3	70
VL3-2	Medium	185~815	145	15.6	6.3	90
VL3-P	Hook Type	185~815	145	12.6	1.1	70

**Special features**

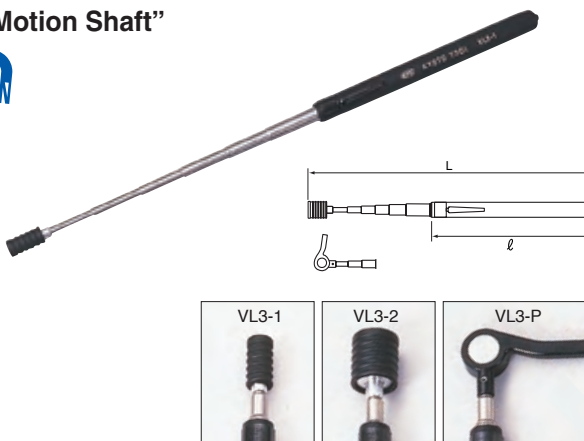
- 7-step shaft makes easy length adjustment.
- With a hook useful for storing in pockets.
- Energy ring reduces magnetism on the side, avoiding adherence to side objects in narrow space.

**[Adoption of Energy Ring] (except VL3-P)**

Side magnetism is reduced and catches the object quickly even in narrow and deep space.



**● MAGNETIC PICK-UP TOOL "Telescopic Motion Shaft"**



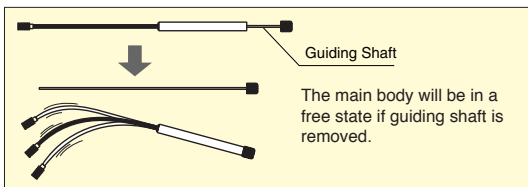
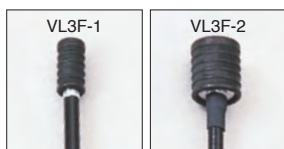
**MAGNETIC PICK-UP TOOL**

**Free Shaft**

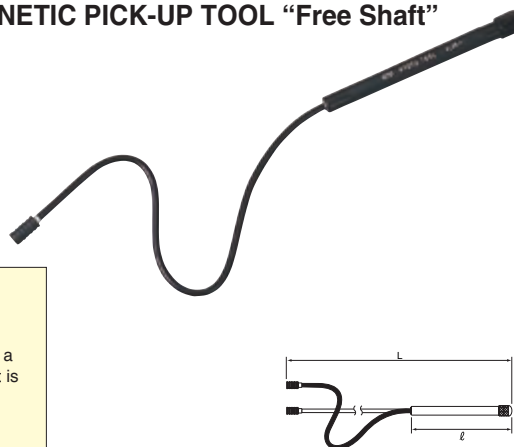
No.	Tip	L	ℓ	Magnet Diameter	Magnet Hanging Power (kg)	▼g
VL3F-1	Small	560	165	8	1.3	110
VL3F-2	Medium			15.6	6.3	130

**Special features**

- Free Shaft allows complicated moves.
- Magnet's direction can be determined from knob operation at grip end.
- The main body will be in a free state if you remove guiding shaft.
- Shaft section is coated with resin, making cleaning an easy job



**● MAGNETIC PICK-UP TOOL "Free Shaft"**



● CHECK MIRROR



CHECK MIRROR

No.	Mirror Size	L	ℓ	▽g
VS-2	Medium 44×66	190~870	145	70
VS-3	Large 56×92	200~890		80

- Purpose**
- For inspection side or back of engine room or engine auxiliaries.
- Features**
- Mirror section has an acrylic resin mirror which is difficult to break.
  - Ball joint enables wide range of angles (Fig.1).
  - Retention power is increased by fixing the ball joint with a bolt nut. (Fig.2)
  - 7-step shaft makes length adjustment easy.
  - For grip section a soft grip is employed. Easy to grip, hard to slip.

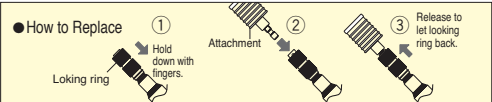
● MAG-MIRROR SET



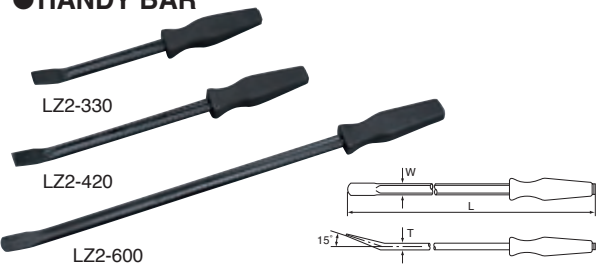
MAG-MIRROR SET

No. VLS5	▽g 280
Telescopic movement shaft	Full length: 180~810
Magnet	Small Magnet diameter: 8
Magnet	Medium Magnet diameter: 15.6
Mirror	Size:44×66
Magnifier	Size:44×66

• wider range of application with change of attachments (4 pcs.) to meet your requirements.



● HANDY BAR

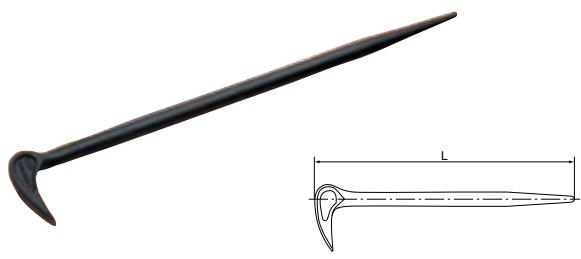


HANDY BAR

No.	Name	W	T	L	▽g	☐
LZ2-330	Handy Bar, Mini	19	10	330	530	5
-420	Handy Bar, Short	9	10	420	635	5
-600	Handy Bar, Long	19	10	600	800	5

- Purpose**
- Prying : For adjusting tension belts such as V-belt
  - Widening : For removing missons from engines
  - Drawing : For drawing drive shafts from missions (def)
- : For separating struts and lower arms
  - : For removing oil seals, gears, bearings, etc.

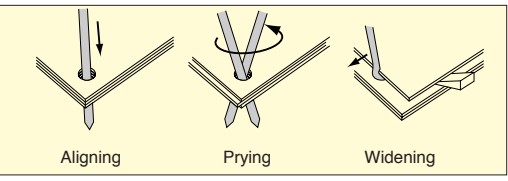
● ROLLING WEDGE BAR



ROLLING WEDGE BAR

No.	Shank Dia.	L	▽g	☐
LZ1-450	ø16	410	685	1

• Convenient tool aligning, prying, widening, hitting, etc.



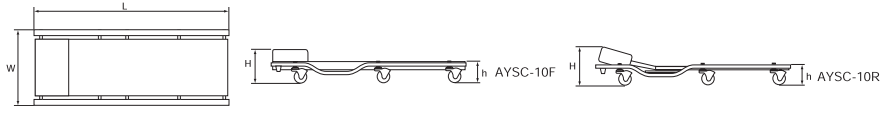
● SERVICE CREEPER



SERVICE CREEPER

No.	L	W	H	h	Special Features	▽kg	☐
AYSC-20F	1030	440	105	85	6 wheels type for superb operability Big sized head rest applied for easy operation	7.5	1
-20R	1030	440	125~240	90	Made of sponge Made of urethane with head rest	8.5	1

- All items have swivel castors for good movability.
- ⚠ CAUTION • DO NOT USE ANY CASTORS WHICH ARE WEARED, OLD OR CANNOT TURN SMOOTHLY
- DO NOT USE ON ANY SLOPE AND/OR ROUGH SURFACE.



\*Castors are set as replacement parts.  
Check with your dealer for details.



**FENDER COVER**

No.	Size	▼g	📦
AYC-2	400×1100	750	1

- Features**
- Built-in magnet rubber in 4 positions make attachment to fender easy.
  - With folding (stitches) easy to set on the fender.
  - Inside is made of soft cloth that does not hurt the body, while outer surface is soft vinyl leather which absorbs shock.
  - Work on car suspension possible even when the cover is on. Long enough to cover long nose cars.
- CAUTION**
- DO NOT USE IN PLACES WHERE MAGNETISM MAY AFFECT ELECTRONIC PARTS, ETC.
  - MAGNET RUBBER PART TENDS TO COLLECT STEEL POWDER. REMOVE THE POWDER BEFORE USE.

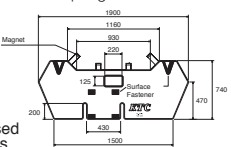
● **FENDER COVER**



**FRONT COVER**

No.	AYC-3	▼kg	1.1
-----	-------	-----	-----

- Application Features**
- Compact cars and minivans of light (excluding 1Box and truck) or standard size.
  - V-folded shape with surface fastener is used on the fender corner, precisely fitting light vehicles with the vehicle width adjusting mechanism. By expanding the folded part, it fits from compact cars to minivans.
  - By adopting a slit on the license plate section, work from the service hole is possible while the front cover is attached. (Light vehicles)
  - With an opening given on the hood lock part, the hood can be closed while the front cover is attached on the vehicle.
  - Front fabric uses the material with excellent oil resistance that prevents oil or the like from seeping in, allowing it to be easily wiped with a rag or the like, and the back fabric uses a sponge material that is less likely to damage the body.



It can be expanded to be used for compact cars to minivans.

● **FRONT COVER** D.PAT.



**COVERING SET**

Covering Set		No.	ATYC4014	▼kg	1.1
Seat Cover · Steering Cover · Floor Mat Cover · Scuff Plate Cover			AYC401, AYC402, AYC403, AYC404		

Seat Cover D.PAT.		No.	AYC401	▼g	450
-------------------	--	-----	--------	----	-----

- Usage Application Features**
- Prevents contamination on the seat in maintenance and inspection.
  - Supports from light vehicles to standard-sized minivans.
  - Wide design that supports bench seat in light vehicles.
  - Opened shoulder part that supports the driver's seatbelt (convertibles) and passenger seatbelt (pillar-less).
  - Shift prevention cushion prevents the cover from shifting and achieves comfortable work.



Headrest part securely fits the height of the headrest by the strap on the back.

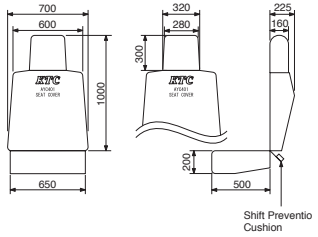


Seatbelt can be inspected while the seat cover is attached.

● **COVERING SET**



AYC401



Shift Prevention Cushion

Steering Cover		No.	AYC402	▼g	70
----------------	--	-----	--------	----	----

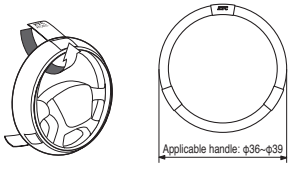
- Usage Application Features**
- Prevents contamination on the handle in maintenance and inspection.
  - Supports from light vehicles to standard-sized minivans.
  - Supports the steering of  $\phi 36\sim 39$ .
  - \* It may not be able to be attached depending on the handle shape.
  - Opened handle center part that allows the easy maintenance and inspection of meters, etc.
  - Fixed band is adopted which prevents slipping and shifting even when operating the handle left and right in looseness inspection.



Shift-resistant fixed band is included.



AYC402



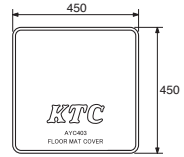
Applicable handle:  $\phi 36\sim\phi 39$

Floor Mat Cover		No.	AYC403	▼g	230
-----------------	--	-----	--------	----	-----

- Usage Application Features**
- Prevents contamination on the floor mat in maintenance and inspection.
  - Supports from light vehicles to standard-sized minivans.
  - PVC that hardly slips even in working under rain is used on the front fabric and EVA that prevents slippage is used on the back fabric.
  - It can be used repeatedly, reducing the cost compared to disposable type.



AYC403



Scuff Plate Cover		No.	AYC404	▼g	290
-------------------	--	-----	--------	----	-----

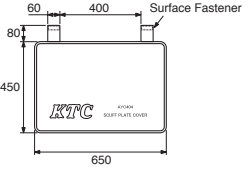
- Usage Application Features**
- Prevents contamination on the scuff plate in maintenance and inspection.
  - Prevents scratches on the scuff plate during the fault diagnosis that uses OBD.
  - Supports from light vehicles to standard-sized minivans.
  - PVC that hardly slips even in working under rain is used on the front fabric and EVA that prevents slippage is used on the back fabric.



Drop-prevention function (surface fastener) is adopted. Idea for the fault diagnosis that uses OBD.



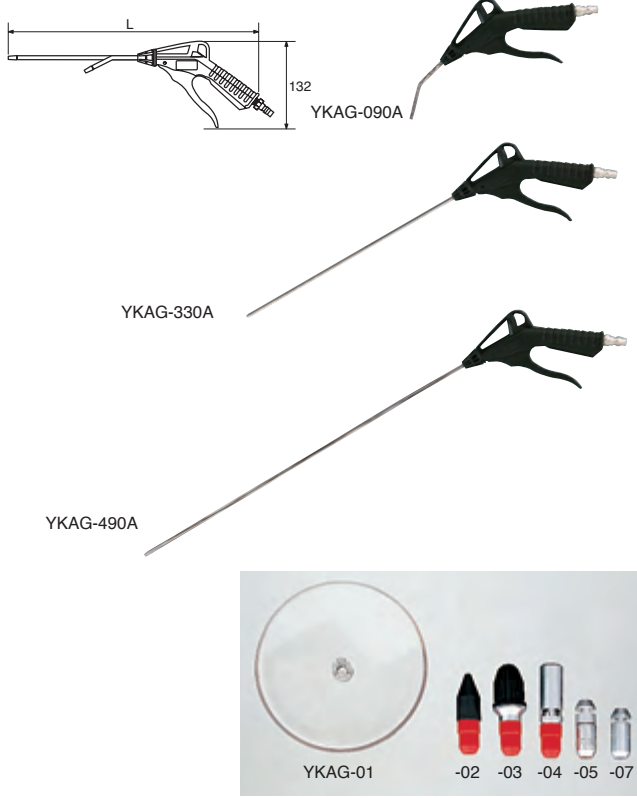
AYC404



**CAUTION** Please do not drive or operate while this product group is equipped on the vehicle.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● AIR BLOW GUN



AIR BLOW GUN

No.	Nozzle Length	Dia.	Material	Temp	L	▼g
YKAG-090A	90	0D ø6 1D ø4	Poliacetar Oxymethylene	- 40°C ~+60°C	254	145
-330A	320				492	180
-490A	490				666	210

\*For YKAG-090 only, the nozzle has 30° angle.

**Purpose**

- Blowing off dusts, misture, etc.

**Special Feature**

- Made of POM plastic light body and lever.
- 3 sizes of bodies and 7 kinds of accessories for multi purposes.

■ Optional Accessories

No.	Name	Size	Purpose
YKAG-01	Chip Shield	ø100	Avoiding blow-back in operation.
-02	Rubber Chip	50	For use in painted sur. face and soft material
-03	Silencer	55	For minimizing noise under 79 dB.
-04	Ventury	55	For strong blowing off.
-05	Air Curtain	35	Preventing blow-back.
-06	Extension	385	For doing remotejob.
-07	By-pass	30	For using in lower pressure.

\*For YKAG-090A only, the nozzle has 30° angle.

**CAUTION** • BE CAREFUL OF DUST WHICH MAY SCATTER.  
• WEAR SAFETY GLASSES AND A MASK WHEN USING THE TOOL.

● COMPACT AIR BLOW GUN OPTIONAL NOZZLE






COMPACT AIR BLOW GUN OPTIONAL NOZZLE

No.	Product Name
YKAGC-S	Silencer nozzle
YKAGC-95	95mm tube nozzle
YKAGC-R	Rubber chip nozzle

● It is an optional part for compact air blow gun (YKAGC-102).

\* Compact air blow gun (YKAGC-102) is discontinued.

 YKAGC-S Silencer nozzle It has the silencing effect of up to 79 db.	 YKAGC-95 95mm tube nozzle For the air blowing of dust, dirt and moisture found in normal work	 YKAGC-R Rubber chip nozzle For the blowing of painted surfaces and soft materials that does not damage around work
--	--	---

**SAFETY GLASSES**

No.	Type	Lens	Frame Color	Width×Max. Height	▼g	☒
YDA-360	1 Single lens	PET	Clear	150×56	52	10
-715	1 Single lens	PET-AF	Blur	140×56	39	10
-730	1 Single lens	PET-AF	Crystal Blue	160×64	43	10

- Can be fitted over prescription spectacles (YDA-360 only)
- Side length is adjustable (YDA-715, 221)
- To ensure comfortable operation, safety glasses have upper and side lenses to protect the worker's eyes from any flying debris.
- To ensure a comfortable fit and to prevent dust from getting in, the upper part of the safety glasses is made of elastomer cushion. This cushion will soften the shock if hit by flying debris. (YDA-715, 730)
- The lens can be adjusted for a perfect fit. (4 Levels, 38 Degrees) (YDA-715, 730)



Lens adjustment is possible (YDA-715, 730)

\*YAMAMOTO is the registered trademark of the Yamamoto Kogaku Co., Ltd.

● SAFETY GLASSES



**SAFETY GOGGLE**

No.	Lens	Frame Color	Frame Material	Width×Max. Height	▼g	☒
YDB-530	Acety, Mistless, PET-AF	Clear	Flexible vinyl	150×56	85	10

- Can be fitted over prescription spectacles
- Can be used together with a mask
- The strap turns at the frame, preventing twist.
- Can also be fitted while wearing a safety helmet.

● SAFETY GOGGLES



\*YAMAMOTO is the registered trademark of the Yamamoto Kogaku Co., Ltd.

**MAGNETIC PARTS TRAY**

No.	Material	Thickness (mm)	Size	▼g	☒
YKPT-RM	SUS430	0.5	∅150×41	370	1
-SM	SUS430	0.5	240×140×42	700	1
-MM	SUS430	0.6	358×158×42	1080	1
-LM	SUS430	0.6	294×275×42	1430	1

- Made of stainless steel tray for strong rust resistance.
  - Rubber mounted magnet holds in 1,000 gauss magnetizing power.
- ⚠ CAUTION • DO NOT USE IN PLACES WHERE MAGNETISM MAY CAUSE TROUBLES.

● MAGNETIC PARTS TRAY



YKPT-LM

**STAINLESS PARTS TRAY**

No.	Material	Thickness (mm)	Size	▼g	☒
YKPT-20	SUS304	0.5	200×120×45	160	1
YKPT-22	SUS304	0.5	220×132×46	185	1
YKPT-24	SUS304	0.5	240×144×48	225	1
YKPT-26	SUS304	0.5	260×156×50	260	1
YKPT-28	SUS304	0.5	280×168×50	290	1
YKPT-30	SUS304	0.5	300×180×55	350	1
YKPT-33	SUS304	0.5	330×198×57	400	1
YKPT-36	SUS304	0.5	360×216×60	465	1
YKPT-40	SUS304	0.6	400×240×66	740	1
YKPT-44	SUS304	0.6	440×264×71	840	1
YKPT-48	SUS304	0.6	480×288×77	980	1
YKPT-52	SUS304	0.6	520×312×82	1200	1

(Optional) Special Partition Plate for Parts Tray (YKPT-20)

No.	Material	Thickness (mm)	Size	▼g	☒
YKPT-20S	SUS304	1.0	180×100×20	70	1

- Efficiency of disassembly work improved by keeping parts in good order.
- Purpose**
- For temporarily placing parts of disassembled automobiles, motorcycles, or machines.
- Features**
- Various sizes of tray help you put disassembled parts in good order.
  - Trays can be stacked for storage.
  - Made of durable stainless steel.

● STAINLESS PARTS TRAY



\*Please check the merchandise inventory for a product that is marked by before placing an order.

● PARTS TRAY SET

STAINLESS PARTS TRAY SET



No. TYKPT4A ▼kg 1.7  
1 each of YKPT-20, 26, 33, 40 and partitioning plate for 20.



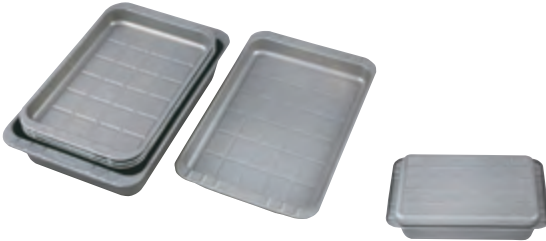
No. TYKPT5A ▼kg 1.7  
YKPT-20 (2), 24 (2), 40 (1), and partitioning plates (2) for 20.



No. TYKPT4B ▼kg 1.9  
1 each of YKPT-24, 30, 36, and 44

● PARTS TRAY SET

PARTS TRAY SET



Can be stored by stacking

No. TYKPT5 ▼kg 9.6 1

Parts Tray	YKPT-51L, 59L, 51H, 59H (1pcs. each)
Parts Tray (Punching Metal Type)	YKPT-51P (1pcs.)

- It can be stacked and stored to save the space.
- Seamless one-piece draw forming eliminates the concern for liquid such as water and oil to leak.
- Rust is prevented by the use of galvanized plate. (YKPT-51P is uni-chrome plated)
- YKPT-51P is a punching metal type.

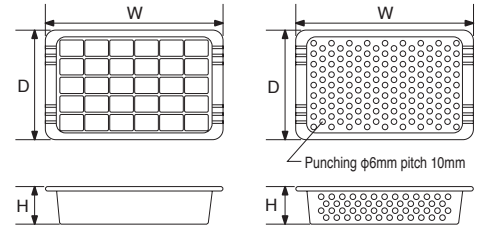
● PARTS TRAY

PARTS TRAY



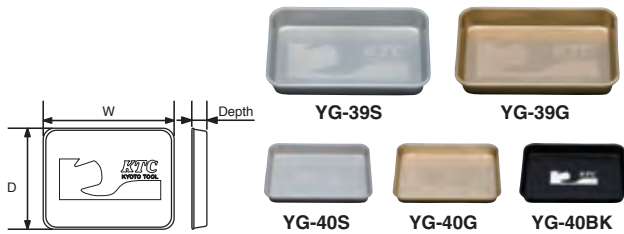
No.	W	D	H	Capacity (ℓ)	▼kg	Material
YKPT-51L	510	320	45	5	1.3	Galvanized Sheet Iron
YKPT-59L	595	360	45	6	1.8	Galvanized Sheet Iron
YKPT-51H	510	320	120	14	2.0	Galvanized Sheet Iron
YKPT-59H	595	360	115	17.5	2.7	Galvanized Sheet Iron
YKPT-51P	510	320	120	Punching Metal Type	1.8	Galvanized Sheet Iron

- It can be stacked and stored to save the space.
- Seamless one-piece draw forming eliminates the concern for liquid such as water and oil to leak.
- Rust is prevented by the use of galvanized plate. (YKPT-51P is uni-chrome plated)
- YKPT-51P is a punching metal type.



● ALUMINUM PARTS TRAY LARGE & SMALL

ALUMINUM PARTS TRAY



No.	W	D	Depth	Color	Material	▼kg	1
YG-40S	210	150	30	Silver	Aluminum	1	
YG-40BK	210	150	30	Black	Aluminum	1	
YG-40G	210	150	30	Golden	Aluminum	1	
YG-39S	350	270	40	Silver	Aluminum	1	
YG-39BK	350	270	40	Black	Aluminum	1	
YG-39G	350	270	40	Golden	Aluminum	1	

Aluminum tray. Our logo, with its wrench motif, is laser-engraved across it. Use it for holding parts removed from cars or motorcycles during maintenance, or for catching oil.

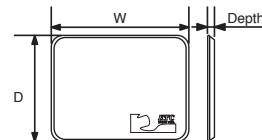
● ALUMINUM GARAGE TRAY

GARAGE TRAY



No.	W	D	Depth	Color	Material	▼kg	1
YG-41S	695	395	10	Silver	Aluminum	1.6	1

Large aluminum maintenance tray. Use it for holding large parts or tools while you're giving your car or motorcycle the maintenance it deserves. Or place it under the vehicle to keep your floor free of oil stains. Aluminum alloy for excellent rust- and corrosion-resistance, weighing just 1.6 kg. Easy cleanup too.



\*Please check the merchandise inventory for a product that is marked by before placing an order.

# 6. OTHER TOOLS and EQUIPMENT

# LIGHTS



### CAUTION LED LIGHTS

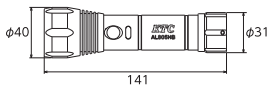
- Do not look directly at LED.
- Do not use oxyride or secondary batteries (NiCd, NiMh).

- It does not have the waterproof or dustproof function. Do not use in water or rain.
- Do not disassemble or modify.

### LED HAND LIGHT

No.	Color (Body)	Size (φ is head part)	Number of LED	Power consumption	▼g (Battery not included)	☐
AL805HB	Gunmetal gray	φ40×141	1	High 3W Low 1W	125	1

- Brightness is increased by 3W high-brightness LED equipped on the compact aluminum body. (Our conventional product comparison)
  - High (3W) and Low (1W) can be switched.
  - With an indicator that changes its color from green to red when the battery power is low.
  - With a convenient strap hole. (Strap is not attached)
- \* Spare parts are configured. Please contact your dealer for details.



LED	3W×1pcs.
LED rated life	35,000 hours
Use battery	AAA batteries (1.5V) × 3
Continuous use time (Alkaline battery, at room temperature)	High approx. 1.5 hours Low approx. 3.0 hours
Available temperature range	-20~60°C
Available humidity range	85% or less

\* Continuous use time is an estimate, which depends on the use condition.

### LED HAND LIGHT



■ It can switch between High (3W) and Low (1W)

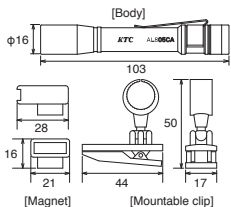


\* It is not covered for repair.

### LED COMPACT LIGHT

No.	Color (Body)	Size (φ is head part)	Number of LED	Power consumption	▼g (Battery not included)	☐
AL805CA	Gunmetal gray	φ16×103	1	0.25W	23	1

- It can be used for a longer period of time (approx. 4 times our conventional product) by the increase in the LED light performance.
- New circuit that reduces the power consumption is equipped on the small aluminum body.
- It supports various work scenes with the use of clip, mountable clip and magnet.
- Flexible arm of the mountable clip can be rotated by 360° to fine-tune the angle.



LED	0.25W×1pcs.
LED rated life	40,000 hours
Use battery	AAA batteries (1.5V) × 1
Continuous use time (Alkaline battery, at room temperature)	Approx. 3.5 hours
Available temperature range	-20~60°C
Available humidity range	90% or less

\* Continuous use time is an estimate, which depends on the use condition.

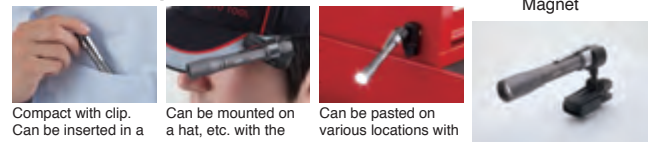
### LED COMPACT LIGHT



Mountable clip



Magnet



Compact with clip. Can be inserted in a chest pocket.

Can be mounted on a hat, etc. with the mountable clip.

Can be pasted on various locations with the magnet.

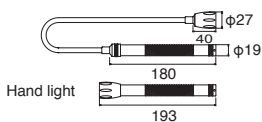
Combined state

\* It is not covered for repair.

### LED FLEXIBLE LIGHT

No.	Color (Body)	Size (φ is head part)	Number of LED	Power consumption	▼g (Battery not included)	☐
AL805F	650	420	1	1.00W	125	1

- LED with higher directivity and brightness compared to the conventional LED is adopted.
- Body is made of lightweight and strong aluminum.



LED	1.00W×1pcs.
LED rated life	100,000 hours
Use battery	AA batteries (1.5V DC) × 3
Continuous use time (Alkaline battery, at room temperature)	Approx. 8 hours (at room temperature)
Available temperature range	-20~+60°C
Available humidity range	90%

### LED FLEXIBLE LIGHT



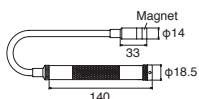
\* It is not covered for repair.

It also works as a hand light.

### MAGNETIC HAND WITH LED LIGHT

No.	Total length	Flexible arm length	Number of LED	Power consumption	▼g (Battery not included)	☐
AL805MG	600	420	1	0.25W	96	1

- Strong magnet is built into the head.
- Body is made of lightweight and strong aluminum.



LED	0.25W×1pcs.
LED rated life	100,000 hours
Use battery	AA batteries (1.5V DC) × 2
Continuous use time (Alkaline battery, at room temperature)	Approx. 40 hours (at room temperature)
Available temperature range	-20~+60°C
Available humidity range	90%

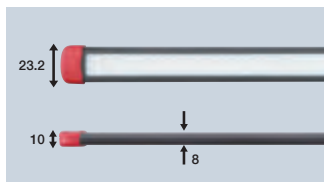
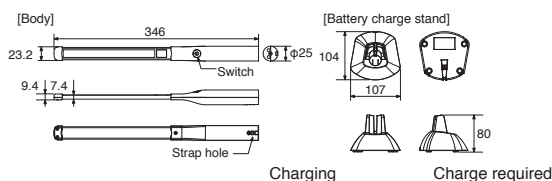
### MAGNETIC HAND WITH LED LIGHT



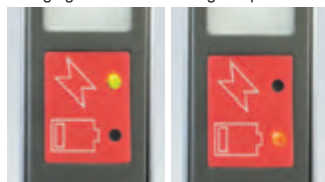
\* It is not covered for repair.

\*Please check the merchandise inventory for a product that is marked with ⚡ before placing an order.

● CORDLESS LED LIGHT (SLIM TYPE) D.PAT.P.



Thin and narrow slim body is adopted.



Battery indicator that can be read at a glance.



- Do not look directly at LED.
- Do not equip anything other than the attached strap.
- Do not use in water or rain.

CORDLESS LED LIGHT

No.	Number of LED	Available temperature range	Brightness (total flux)	Power consumption	Continuous use time	Charging time	▼g	☐
AL807	12	0~50°C	High 240lm Low 150lm	High 3.6W Low 1.9W	High approx. 2 hours Low approx. 4 hours	Approx. 2 hours	130	1

\* Continuous use time is an estimate, which depends on the use condition.  
\* Charge time depends on the battery condition and charging environment.

- Attachment: Battery charge stand, AC adaptor, strap
- It is an indoor working light with slim body.
  - With thin, narrow and long slim body and cordless charging, work in tight and deep places such as engine room is possible.
  - With the adoption of 12 LED and diffusion plate, unpleasant shadow during work is reduced, making it easy on the eyes.
  - Long life is achieved by protecting the LED with heat sink.
  - Accidental fall is prevented with strap.
  - 2-stage brightness adjustment is possible with the switch.
  - Charging type and cordless, it can be maneuvered in tight places.
  - Balanced body shape with weight on the grip.

■ Supply parts

No.	Product Name
AL807-S	Battery Charge Stand
AL807-A	AC Adaptor
AL807-P	Strap

■ AC Adaptor

Input Voltage	AC100V
Input Frequency	50~60Hz
Output Voltage	DC5.5V
Output Current	2.5A
Maximum Power	13.75W
Cord Length	1.2m



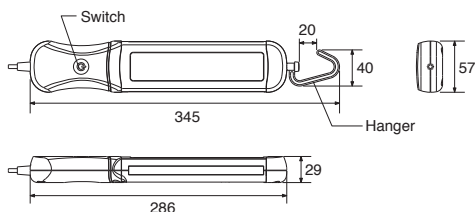
Accidental fall is prevented with the strap.



Can be charged with the strap attached.

\* It is not covered for repair.

● LED LIGHT D.PAT.P.



Hanger can become a stand.



Power cord holder for extension cord connection is attached.



- Do not look directly at LED.
- Do not use in water or rain.

LED LIGHT

No.	Number of LED	Available temperature range	Cord length	Brightness (total flux)	Power consumption	▼g	☐
AL806	12	0~50°C	5m	440lm	8W	400	1
AL806S	12	0~50°C	0.5m	440lm	8W	300	1

Attachment: Hanger · mounting screws, AC adaptor, power cord holder

- Indoor working light with bright and wide light that's easy on the eyes.
- With the adoption of 12 LED and diffusion plate, unpleasant shadow is reduced, brightly illuminating the work area.
- Long life is achieved by protecting the LED with heat sink.
- 4-stage brightness adjustment is possible with the switch.
- Suspension angle can be adjusted by the hanger mounting position.
- Body is drip-proof and AC100V power dedicated.

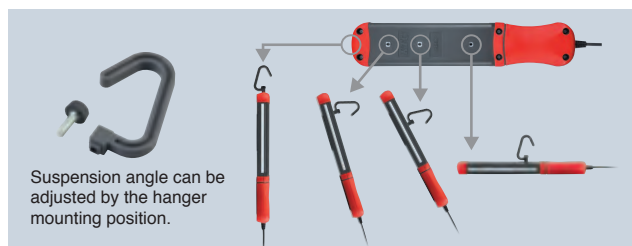
■ Supply parts

No.	Product Name
AL806-1	Hanger · mounting screws
AL806-2	AC Adaptor
AL806-3	Power cord holder

■ AC Adaptor

Input Voltage	AC100V
Input Frequency	50~60Hz
Output Voltage	DC24V
Output Current	0.5A
Maximum Power	12W

Short cord type is available



Suspension angle can be adjusted by the hanger mounting position.

Hanger can be fixed in top 8 directions and back 4 directions according to the work environment.

# 7. MOTORCYCLE TOOLS

MOTORCYCLE TOOLS  
BICYCLE TOOLS



# 7. MOTORCYCLE TOOLS

## MOTORCYCLE TOOLS

### ● PORTABLE TOOL BAG (MEDIUM) SET

3/8" sq.



Details of Tool Bag [P.316](#)  
 Details of Portable Tool Bag [P.311](#)

#### PORTABLE TOOL BAG SET

No. SK3230	▼kg 2.5	📦 1
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-150
3/8"sq. Ratchet Handle		BR3E
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Combination Pliers (with Soft Grip)		PJ-150
Needle Nose Pliers (Standard Type)		PSL-150
Adjustable Wrench		WM-200
Ratchet Screwdriver	DBR14	(Bit Size: Cross No.1, 2, 3, Flat 5.5, 6, 8 Hex: 2.5, 3, 4, 5, Torx: T15, T20, T25, T30)
Tool Bag (Black)		MCKB-B
Portable Tool Bag		BKB-M

- It is a carrying set with carefully selected tools in the easy-to-carry shoulder bag.
- It has a reflector line that increases the visibility from the car at night.
- It has pursued the safety without compromising the design as a bag.
- Auxiliary belt is added to suppress the movement of the bag even in violent ride.

### ● PORTABLE TOOL BAG (LARGE) SET

3/8" sq.



Details of Tool Bag [P.316](#)  
 Details of Portable Tool Bag [P.311](#)

#### PORTABLE TOOL BAG SET

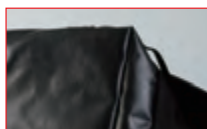
No. SK3231	▼kg 2.5	📦 1
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 14
3/8"sq. Extension Bar	POWERFIT	BE3-150
3/8"sq. Ratchet Handle		BR3E
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Combination Pliers (with Soft Grip)		PJ-150
Needle Nose Pliers (Standard Type)		PSL-150
Adjustable Wrench		WM-200
Ratchet Screwdriver	DBR14	(Bit Size: Cross No.1, 2, 3, Flat 5.5, 6, 8 Hex: 2.5, 3, 4, 5, Torx: T15, T20, T25, T30)
Tool Bag (Black)		MCKB-B
Portable Tool Bag		BKB-L

- It is a carrying set with carefully selected tools in the easy-to-carry shoulder bag.
- It has a reflector line that increases the visibility from the car at night.
- It has pursued the safety without compromising the design as a bag.
- Auxiliary belt is added to suppress the movement of the bag even in violent ride.

#### Features of Portable Tool Bag (No.BKB-M, BKB-L)



Red KTC logo is woven on the front



Strength is improved with the tarpaulin on the bottom

Surface

Back



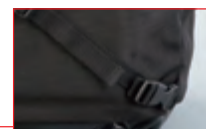
Adjustment Buckle

Auxiliary Belt



Tool storage part that's protected by pad. Tool storage part is equipped. It can carry sensitive Digital Ratchet.

Middle



Auxiliary belt has snaps on both ends to make it easy for both right and left-handed person to attach it.

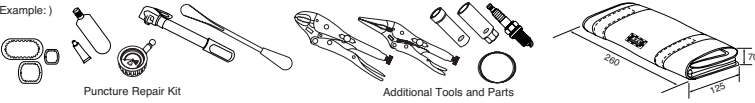


**RIDER'S MAINTENANCE TOOL SET**

<b>No. MCK317</b>	▼kg 1.8	📦 1
3/8"sq. Semi-deep socket (6pt.)	POWERFIT B3M-08, 10, 12, 14	
3/8"sq. Slide-head handle	BHM3	
3/8"sq. Extension bar	BE3-150	
3/8"sq. Hexagonal wrench	HB20-4, 5, 6	
Combination wrench	POWERFIT MS2-08, 10, 12, 14, 17	
Interchangeable driver set	DB4 Cross (No.2, No.3) Flat (head width 4.6)	
Pliers	PJ-150	
Adjustable Wrench	MW-200	
Tool Bag (Black)	MCKB-B (260x125x70mm when folded)	

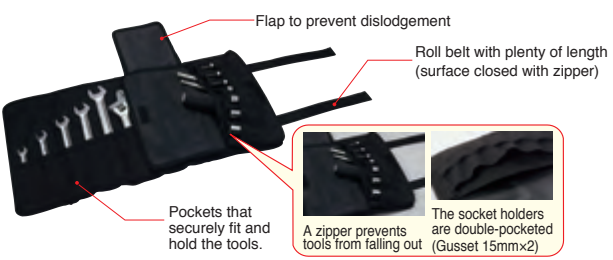
**MODEL CHANGE** This model supercedes the MCK11, MCK21A.

- The socket will allow easy operation in areas where open end wrenches and offset wrenches cannot reach.
  - The drive tools employ a slide head handle and an extension bar for easy operation.
  - The case can be folded down when traveling.
  - The zipper prevents tools from falling out.
  - By laying out the tool bag, it can be used as a replacement for tools/parts tray.
  - Plenty of space (second stage pocket, etc.) for storing tools. E.g. Extra/spare parts, that are not included in the set.
- Convenient for storing extra tools and spare parts.



\*MOTO CLUB is the registered trademark of KYOTO TOOL CO., LTD.

**3/8" sq. ● RIDER'S MAINTENANCE TOOL SET**



**MOTORCYCLE TOOL SET**

<b>No. SK35610XMC</b>	▼kg 18	📦 1 (2 Cartons)
<b>Total 56 pcs.</b>		
• SK35610XMCT	Tools x 1	
• SKX0213	Chest x 1	

Contents		
3/8"sq. Socket (6pt.)	POWERFIT	B3-08, 10, 12, 13, 14
3/8"sq. Deep Socket (6pt.)	POWERFIT	B3L-08, 10, 12, 14
3/8"sq. Hex. Bit Socket	POWERFIT	BT3-03, 04, 05, 06
3/8"sq. Ratchet Handle		BR3E
3/8"sq. Spinner Handle		BS3E
3/8"sq. Quick Spinner	POWERFIT	BE3-Q
3/8"sq. Extension Bar	POWERFIT	BE3-075, 150
Box End Wrench (45° x 6° Long)	POWERFIT	M5-0810, 1113, 1214, 1719, 2224
Ratchet Combination Wrench		MSR1A-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver (Flat)		D1M2-5, 6
Plastic Grip Screwdriver (Cross)		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver (Flat)		D1MS-6
Plastic Grip Stubby Screwdriver (Cross)		D1PS-2
Split Grip Screwdriver Through Type (Flat)		FD-250
Carburetor Jet Screwdriver		CDZ-165
Combination Pliers (with Soft Grip)		PJ-200
Adjustable Wrench		WM-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Combination Hammer		UD7-10
Locking Plier		150LN, 175CR
L Shape Long Ball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
3/8"sq. T-Shaped Handle		TH20
Magnetic Parts Tray		YKPT-RM
Tray		ETKT64-001A1 (Ratchet) ETKT64-001B1 (Offset Wrench) ETKT64-001B2 (Scissors)

• The case is listed on P.334.

- It is a set with carefully selected tools ideal for the maintenance of motorcycles.

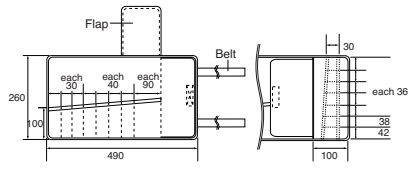
**3/8" sq. ● MOTORCYCLE TOOL SET**



**TOOL BAG**

No.	Size when spread out	▼g
<b>MCKB-B</b>	260 x 490 (Not including belt and flap)	270

- Tool bag used for riders maintenance tool set.
- Materials: Nylon (Main body), PVC (Main body back), PP (rims, tapes)



**● Tool Bag (Black)**



When Folded

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● MOTORCYCLE TOOL STATION® SET



**MOTORCYCLE TOOL STATION® SET**

No. SK7006B ▼kg 50.5 1 (2 Cartons)

80 tools/parts included

- SK7006BT Tools/Parts x1
- SKR703A Tool Station x1

• A special new motorcycle tool set enclosed in the tool station.

Please refer P.22.

\*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

● MOTORCYCLE TOOL STATION® SET



**MOTORCYCLE TOOL STATION® SET**

No. SK6006B ▼kg 39.5 1 (2 Cartons)

69 tools/parts included

- SK6006BT Tools/Parts x1
- SKR602A Tool Station x1

• A special new motorcycle tool set enclosed in the tool station.

Please refer P.22.

\*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

● DRIVE CHAIN TOOL SET



**DRIVE CHAIN TOOL SET**

No. MCCU14 Number ▼kg 2.2 1

Main body	1	
Outer Bolt	1	
Inner Bolt	1	
Handle	1	
For cutter pin 4050	1	40 and 50 series cutting
For cutter guide 4050	1	40 and 50 series cutting
For cutter pin 60	1	60 series cutting
For press fit plate 40	1	Press fitting type 40 series
For 52	1	Press fitting type 52 series
For 50	1	Press fitting type 50 (530) series
For 60	1	Press fitting type 60 series
Press Fit Caulking Receival Plate	1	For press fitting in all sizes / Caulking receiver
Caulking pin	1	Caulking all sizes
Metal Case	1	L270xW145xH32

**Usage**

- For motorcycle drive chain replacements.
- For removing chain pin, press fitting joint plates (including clip type), and caulking joint pins.

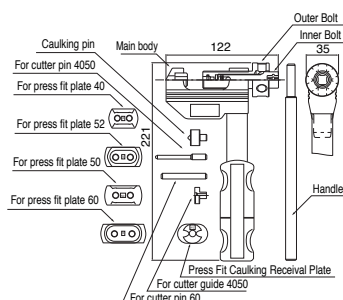
**Application**

- For chain sizes: 420 · 428 · 520 · 525 · 50 (530) · 532 · 630 · 632

**Characteristics**

- This tool can be used for most domestic motorcycles.
- Based on strength analysis, the design is in an optimum shape for durability and lightness that even professionals will approve.
- Highly durable cutter pin & caulk pin is made from heat-treated special steel (SK type).
- These parts have been designed to facilitate workflow.
- Bolt removal is not required as cutter pins can be replaced from the front of the inner bolt.
- The cutter pin can be used frequently in 40 and 50 series.
- Press fitting is designed for all sizes (press fitting caulk receiving plate), and as it can also be used in caulking, this allows for a much smoother operation.
- The inner bolt does not need to be set after the joint pin has been removed as the plate press fitting uses the same outer bolt.
- The grip and handle are designed so that strength may be applied easily.

\*A drive tool such as a separate 3/8"sq. ratchet tool is required when using this tool.



■ Replacement Parts

No.	Product	1
MCCU-BA	Outer Bolt	1
-BB	Inner Bolt	1
-H	Handle	1
-CA	For cutter pin 4050	1
-CG	For cutter guide 4050	1
-CB	For cutter pin 60	1
-PA	For press fit plate 40	1
-PB	For press fit plate 52	1
-PC	For press fit plate 50	1
-PD	For press fit plate 60	1
-PT	Press Fit Caulking Receival Plate	1
-KA	Caulking pin	1

## VALVE SPRING COMPRESSOR

No. MCVU5	▼kg 1.4	📦 1
Body	L290~420×H172	
Attachment	MCVU-A16, A20, A24, A28	

\*The attachment can also be used for a valve spring compressor (VSU4).

No.	Part Name	D <sub>1</sub>	D <sub>2</sub>	ℓ	📦
MCVU-A16	Attachment ø16.5	17	19	50	1
-A20	Attachment ø20	20	22	50	1
-A24	Attachment ø24	24	26	50	1
-A28	Attachment ø28	28	31	50	1

\*The attachment can also be used for a valve spring compressor (VSU4).

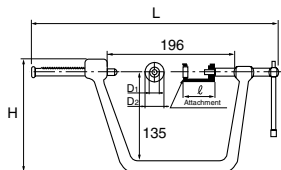


This model supercedes the VSU4.

## Purpose

SPECIAL TOOL FOR MAINTENANCE ON INTAKE & EXHAUST VALVE (REMOVING/INSTALLING VALVE SPRING) OF 4 CYCLE ENGINE.

- Guide Attachment of 4 sizes (ø16.5, 20, 24, 28) covers most types of motorcycles.
- Guide Attachment can be replaced by one-touch and wide opening for smooth operation on valve cotter.



## ● VALVE SPRING COMPRESSOR



## WIRE TWISTER

No.	L	Twistable Radius	▼g	📦
WTP-210	205	0.8	240	1

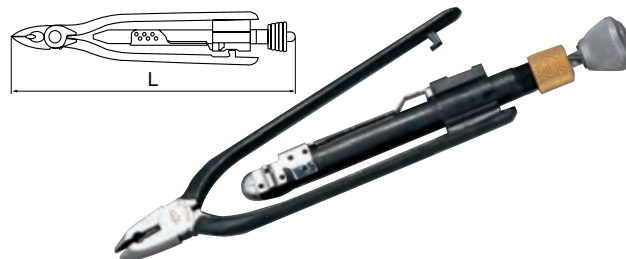
## Purpose

- For twisting wire to wire-lock bolt's head.
- Rotates clockwise



When used

## ● WIRE TWISTER



## SPARK PLUG WRENCH (SHORT TYPE)

No.	S	D <sub>1</sub>	D <sub>2</sub>	L	▼g	📦
MCPS-20.8	20.8	34	32	170	176	5

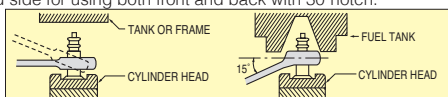
## Purpose

SPECIAL WRENCH FOR REPLACING SPARK PLUG (20.8mm) OF 2-CYCLE WATER-COOLING ENGINE.

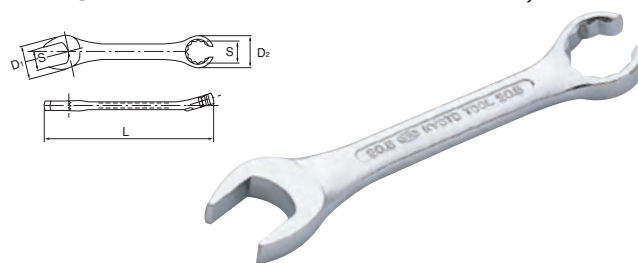
- Short length (170mm) for handy work.
- Convenient for use in narrow space where Socket Type Spark Plug Wrench cannot be applied.

(Open End) ● With 15°degreed side for using both front and back with 30°notch.

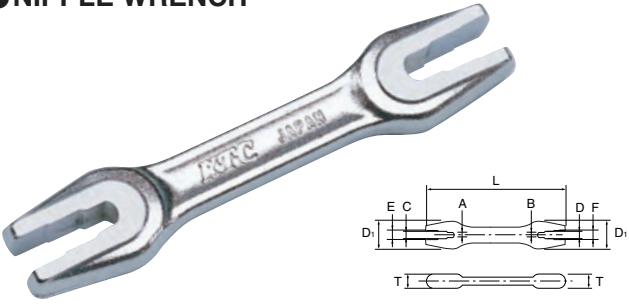
(Box End) ● Can be used on hexagon part such as below tank.



## ● 20.8mm SPARK PLUG WRENCH, SHORT



● NIPPLE WRENCH



**NIPPLE WRENCH**

No.	D <sub>1</sub>	A	B	C	D	E	F	T	L	▼g	
MCS2-100	20	4.5	5.1	5.8	6.1	6.4	6.6	10	100	80	1

**Purpose**  
SPECIAL WRENCH FOR FASTENING, ADJUSTING & CHECKING WHEEL SPOKE NIPPLE.

- One wrench applied to 6 sizes (4.5, 5.1, 5.8, 6.1, 6.4, 6.6) covering most of motorcycles.
- Small and light tool convenient for touring, racing etc.
- Drop forged and heat treated body for superb durability.
- The wrench is made with a high thickness (10mm) to help prevent nipples from scratching and losing their shape.

● TIRE VALVE WRENCH

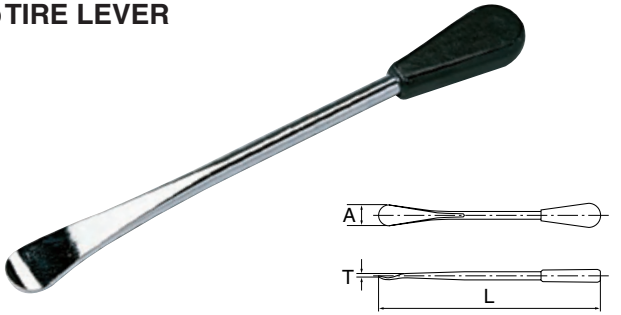


**TIRE VALVE WRENCH**

No.	a	b	D	e	L	▼g	
MVC-30	2.2	4.5	29	15	35	20	1

- Compact size covering many types of motorcycles when conventional long tools cannot be used.
- "Must Have" for repairing flat tires or changing tires/tubes.

● TIRE LEVER

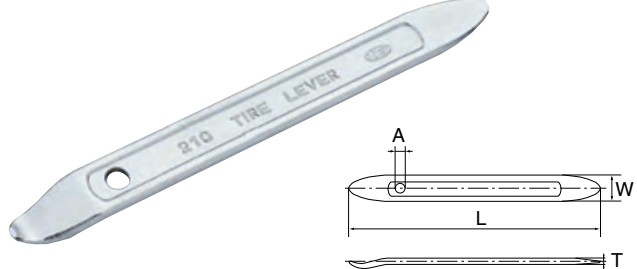


**TIRE LEVER**

No.	A	T	L	▼g	
MCOL-260	23	1	265	170	5

- Thin and smooth tip provides smooth operation.
- Properly heat-treated for superb durability.
- Comfortable rubber handle with oil resistance enables sure gripping.

● TIRE LEVER



**TIRE LEVER**

No.	A	W	T	L	▼g	
OHZ-210	7	22	5.5	210	100	1

- Short body (210mm) convenient for touring, etc.
- Drop forged and properly heat-treated for superb durability.

# 7. MOTORCYCLE TOOLS

# BICYCLE TOOLS

## BICYCLE TOOL SET

No. **SK34010CY**

Total 40 pcs. ▼kg 4.1 ☒ 1

• Plastic Hard Case EKP-5

### Contents

3/8"sq. Socket (6pt.) <sup>POWERFIT</sup>	B3-08, 09, 10, 11, 12, 13, 14, 15
3/8"sq. Hex. Bit Socket <sup>POWERFIT</sup>	BT3-03, 04, 05, 06, 08
3/8"sq. T-Type Torque Bit Socket <sup>POWERFIT</sup>	BT3-T25, T30
3/8"sq. Extension Bar <sup>POWERFIT</sup>	BE3-075
3/8"sq. Ratchet Handle	BR3E
Cross Plastic Grip Screwdriver Through Type	D7P2-2
Flat Plastic Grip Screwdriver Through Type	D7M2-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Wrench <sup>POWERFIT</sup>	MS2-08, 10, 12, 13
Diagonal Cutting Pliers	PN1-150
Needle Nose Pliers (Standard Type)	PSL-150
MiniHammer	TUD3S
Adjustable Wrench	WM-250
Pedal Wrench	CP2-15A
Tire Lever Set (2 pcs.)	CTR12
3/8"sq. Socket Holder	EHB315

- The case is listed on P.344.
- Basic model for bicycle maintenance that adopts a plastic single-door case.
- The case has an easy-to-carry compact size.

3/8" sq.

## ● BICYCLE TOOL SET



\* Please use the dedicated cutter for the cutting of various bicycle cables.

## BICYCLE TOOL SET

No. **SK34410XCY**

Total 44 pcs. ▼kg 15 ☒ 1 (2 Cartons)

• SK34410XCYT Tools × 1  
• SKX0213 Chest × 1

### Contents

3/8"sq. Digital Ratchet Small Torque Type	GEK030-C3A
3/8"sq. Socket (6pt.) <sup>POWERFIT</sup>	B3-08, 09, 10, 11, 12, 13, 14, 15
3/8"sq. Hex. Bit Socket <sup>POWERFIT</sup>	BT3-03, 04, 05, 06, 08
3/8"sq. T-Type Torque Bit Socket <sup>POWERFIT</sup>	BT3-T25, T30
3/8"sq. Extension Bar <sup>POWERFIT</sup>	BE3-075
3/8"sq. Ratchet Handle	BR3E
Cross Plastic Grip Screwdriver Through Type	D7P2-2
Flat Plastic Grip Screwdriver Through Type	D7M2-6
L-Shaped Long Ball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Wrench <sup>POWERFIT</sup>	MS2-08, 10, 12, 13, 14, 15
Diagonal Cutting Pliers	PN1-150
Needle Nose Pliers (Standard Type)	PSL-150
Plastic Hammer	K9-6
Adjustable Wrench	WM-250
Pedal Wrench	CP2-15A
3/8"sq. Pedal Wrench (Crowfoot Wrench Type)	CP1-15
Tire Lever Set (2 pcs.)	CTR12
3/8"sq. Socket Holder	EHB315

- It is a Digital Ratchet adopted model for bicycle maintenance (torque measurement range: 2~30 N·m).
- Stationary chest with a plenty of storage is adopted for the case.
- The case is listed on P.344.

3/8" sq.

## ● BICYCLE TOOL SET



\* Please use the dedicated cutter for the cutting of various bicycle cables.

\* Digital Ratchet is a registered trademark of KYOTO TOOL.

## BICYCLE TOOL SET

No. **CTX309**

Total 9 pcs. ▼kg 0.8 ☒ 1

• Active Tool Bag BKB-S

### Contents

L-Shaped Ball Point Hex. Wrench	HLDA250-03, 04, 05, 06, 08
Palm Driver (Cross)	PDEA-2
MiniHammer	TUD3S
Tire Lever Set (2 pcs.)	CTR12

- It is a bicycle tool set in a compact active tool bag that focuses on the work efficiency in the daily maintenance of bicycle.

• Bag is listed on P.316.

\* "Standard retail price" displayed product is different from normal pricing.

## ● BICYCLE TOOL SET



● BICYCLE TOOL SET



**BICYCLE TOOL SET**

<b>No. CTX316</b>		
<b>Total 16 pcs.</b>	▼kg 1.2	📦 1
• Active Tool Bag	BKB-S	
<b>Contents</b>		
L-Shaped Ball Point Hex. Wrench	HLDA250-03, 04, 05, 06, 08	
Replacement Driver Set	DB4 (Cross: No.2 x No.3, Flat: Tip Width 4 x 6, Handle)	
Combination Wrench <b>POWERFIT</b>	MS2-08, 09, 10	
Combination Wrench	MS3-15T	
Needle Nose Plier	PSL-150	
MiniHammer	TUD3S	
Tire Lever Set (2 pcs.)	CTR12	

- It is a bicycle tool set in a compact active tool bag that focuses on the work efficiency in the daily maintenance of bicycle.
- The scope of work is expanded by the inclusion of replacement driver set and combination wrench.
- Tools can be loaded and unloaded while hanging on the shoulder, increasing the work efficiency.

● BICYCLE TOOL SET DIGITAL RATCHET MODEL



**BICYCLE TOOL SET**

<b>No. CTX320</b>		
<b>Total 20 pcs.</b>	▼kg 2	📦 1
• Active Tool Bag	BKB-S	
<b>Contents</b>		
3/8"sq. Digital Ratchet Small Torque Type	GEK030-C3A	
3/8"sq. Hex. Bit Socket <b>POWERFIT</b>	BT3-04, 05, 06	
L-Shaped Ball Point Hex. Wrench	HLDA250-03, 04, 05, 06, 08	
Replacement Driver Set	DB4 (Cross: No.2 x No.3, Flat: Tip Width 4 x 6, Handle)	
Combination Wrench <b>POWERFIT</b>	MS2-08, 09, 10	
Combination Wrench	MS3-15T	
Needle Nose Plier	PSL-150	
MiniHammer	TUD3S	
Tire Lever Set (2 pcs.)	CTR12	

- It is a bicycle tool set in a compact active tool bag that focuses on the work efficiency in the daily maintenance of bicycle.
- It is a torque management model that includes small torque type Digital Ratchet. (Torque measurement range: 2~30N·m)
- Tools can be loaded and unloaded while hanging on the shoulder, increasing the work efficiency.

\* Digital Ratchet is a registered trademark of KYOTO TOOL.

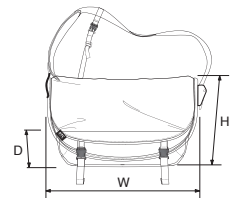
● PORTABLE TOOL BAG



**PORTABLE TOOL BAG**

No.	W	D	H	▼g	📦
<b>BKB-M</b>	450	200	250	730	1
<b>BKB-L</b>	520	200	260	940	1

- Shoulder bag that's also ideal in the storage of bicycle maintenance tools.
- Uses a fabric with excellent durability.
- It has a reflector line that increases the visibility from the car at night.
- It has pursued the safety without compromising the design as a bag.
- Auxiliary belt is added to suppress the movement of the bag even in violent ride.
- Shoulder strap length can easily be adjusted with the buckle.



Auxiliary belt has snaps on both ends to make it easy for both right and left-handed person to attach it. Strength is improved with the tarpaulin on the bottom

Tool storage part that's protected by pad. Tool storage part is equipped. Sensitive Digital Ratchet can also be carried.



It firmly fits on the body, increasing the stability  
The model height: 170cm  
Active Tool Bag: No.BKB-M (left), No.BKB-L (right)

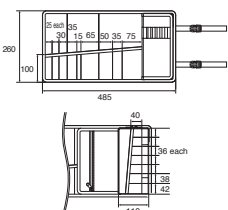
● PORTABLE TOOL BAG



**PORTABLE TOOL BAG**

No.	Expanded size	▼g	📦
<b>BKB-S</b>	485x260 (excluding belt and flap)	280	1

- Tool bag that's also ideal in the storage of bicycle maintenance tools.
- It is a roll type that compactly fits when carrying around.
- It prevents the tools from jumping out with the resin buckle clasp.
- It can be used as a tray for parts or tools by spreading it out.
- Tools can be loaded and unloaded while hanging on the shoulder, increasing the work efficiency.
- Strap can be removed.



When Folded



Tools can be loaded and unloaded while hanging it on the shoulder.  
The model height: 170cm

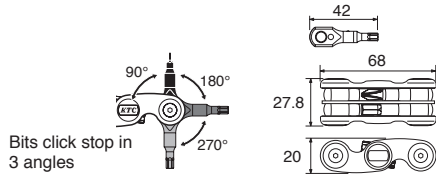
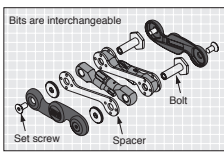
Pocket under the socket storage part has a pad for relieving the impact

\*Please check the merchandise inventory for a product that is marked by before placing an order.

**MULTI TOOL for BICYCLE**

<b>No. HLM04</b>	▼g 95	📦 1
Hex. Bit	4, 5, 6	
Cross Bit	No.2	

- It has the outer shape that allows the easy retrieval of bits.
- With each bit independent structure, bits next to each other will not pop out.
- It has an easy-to-use structure that click stops at each point (90°, 180°, 270°).
- Bits can be interchanged as desired.



● **MULTI TOOL for BICYCLE (4 Bits) D. PAT.**

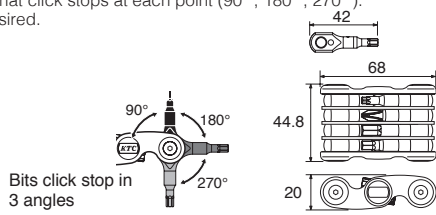
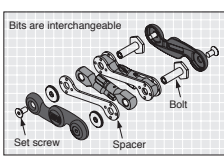


- ⚠️ **CAUTION** • Please apply force in the rotation direction of the bolt. Tip may get damaged if force is applied in the falling direction of the axis.

**MULTI TOOL for BICYCLE**

<b>No. HLM08</b>	▼g 175	📦 1
Hex. Bit	2, 2.5, 3, 4, 5, 6	
Cross Bit	No.2	
Torx Bit	T25	

- It has the outer shape that allows the easy retrieval of bits.
- With each bit independent structure, bits next to each other will not pop out.
- It has an easy-to-use structure that click stops at each point (90°, 180°, 270°).
- Bits can be interchanged as desired.



● **MULTI TOOL for BICYCLE (8 Bits) D. PAT.**



- ⚠️ **CAUTION** • Please apply force in the rotation direction of the bolt. Tip may get damaged if force is applied in the falling direction of the axis.

**BIT FOR MULTI TOOL**

No.	Product Name	📦
HLM-H02	Multi Tool Hex. Bit 2mm	1
HLM-H025	Multi Tool Hex. Bit 2.5mm	1
HLM-H03	Multi Tool Hex. Bit 3mm	1
HLM-H04	Multi Tool Hex. Bit 4mm	1
HLM-H05	Multi Tool Hex. Bit 5mm	1
HLM-H06	Multi Tool Hex. Bit 6mm	1
HLM-2P	Multi Tool Cross Bit No.2	1
HLM-T25	Multi Tool Torx Bit T25	1

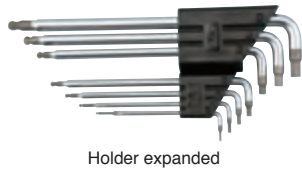
● **BIT FOR MULTI TOOL**



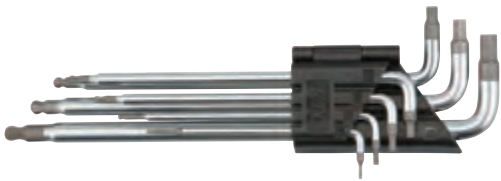
**L-SHAPED BALL POINT HEX. WRENCH SET (7pcs.)**

<b>No. HLDA2507</b>	▼g 230	📦 1
L-Shaped Ball Point Hex. Wrench 1.5, 2, 2.5, 3, 4, 5, 6		

- Round handle axis is used to prevent bending during use.
- Chrome-plated finish gives great texture, appearance and rust resistance.
- Excellent wear resistance and twist strength with the use of special steel alloy.
- Foldable original holder that's convenient in transport and tool management.



● **L-SHAPED BALL POINT HEX. WRENCH SET (7pcs.)**

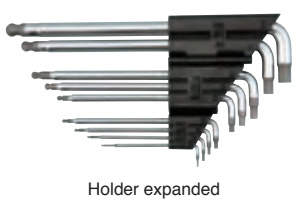


- ⚠️ **CAUTION** • Since the ball point has a low torque limit, please be careful not to apply too much force.
- Swing angle of the ball point will vary depending on the variation in the size and bolt.
- Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

**L-SHAPED BALL POINT HEX. WRENCH SET (9pcs.)**

<b>No. HLDA2509</b>	▼g 630	📦 1
L-Shaped Ball Point Hex. Wrench 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10		

- Round handle axis is used to prevent bending during use.
- Chrome-plated finish gives great texture, appearance and rust resistance.
- Excellent wear resistance and twist strength with the use of special steel alloy.
- Foldable original holder that's convenient in transport and tool management.



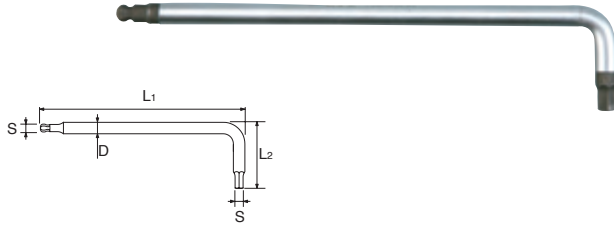
● **L-SHAPED BALL POINT HEX. WRENCH SET (9pcs.)**



- ⚠️ **CAUTION** • Since the ball point has a low torque limit, please be careful not to apply too much force.
- Swing angle of the ball point will vary depending on the variation in the size and bolt.
- Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● L-SHAPED BALL POINT HEX. WRENCH

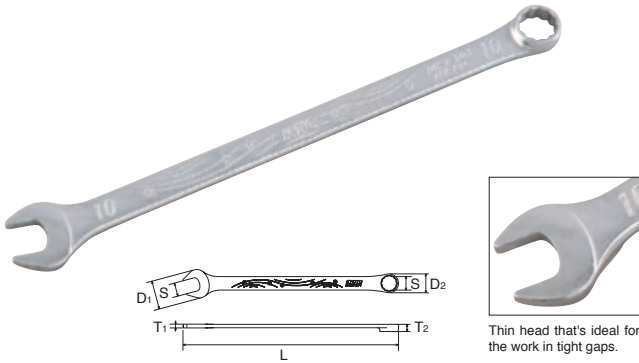


L-SHAPED BALL POINT HEX. WRENCH

No.	S	D	L <sub>1</sub>	L <sub>2</sub>	▼g	📦
HLDA250-015	1.5	3	82	19	4	1
HLDA250-02	2	3	98	20	6	1
HLDA250-025	2.5	4	114	22	12	1
HLDA250-03	3	5	131	25	21	1
HLDA250-04	4	6	148	31	35	1
HLDA250-05	5	7	167	35	55	1
HLDA250-06	6	8	188	40	80	1
HLDA250-08	8	10	210	46	140	1
HLDA250-10	10	12	236	52	225	1

- CAUTION**
- Since the ball point has a low torque limit, please be careful not to apply too much force.
  - Swing angle of the ball point will vary depending on the variation in the size and bolt.
  - Please apply force in the rotation direction of the bolt. There is a risk of damage from the bent part if excessively pulled up or pushed down.

● COMBINATION WRENCH



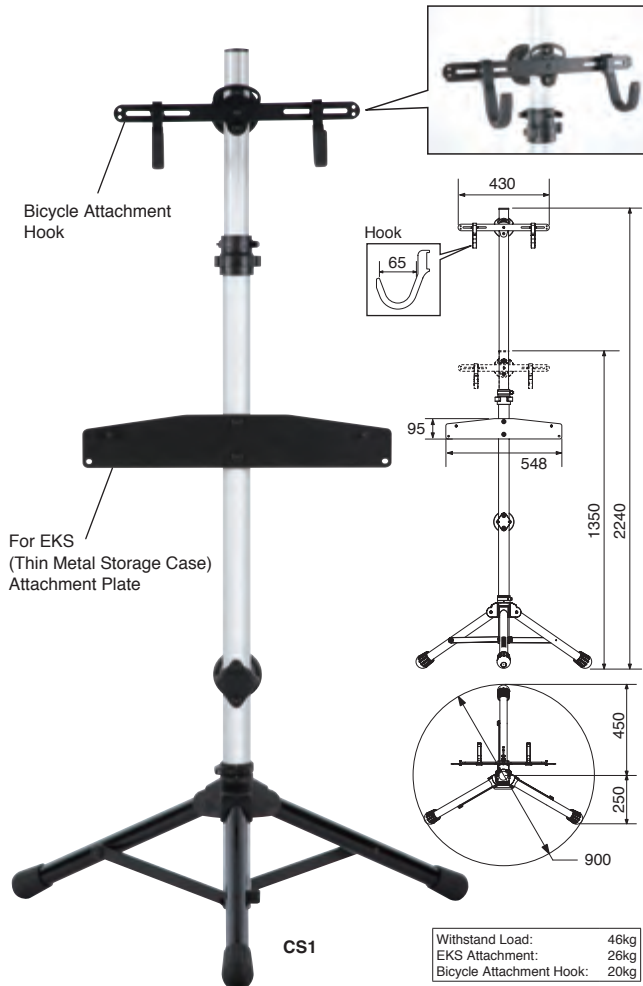
COMBINATION WRENCH

No.	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	S	▼g	📦
MS3-08T	18	11.5	3	4.5	150	8	25	1
MS3-10T	21.5	14.5	3	5.5	180	10	40	1
MS3-15T	32	21	4.2	8	240	15	105	1

- It is a thin combination wrench with the beautiful engraving of cherry blossoms drifting in the river.
- For the adjustment of various wires (8mm)
- For the attachment and detachment of light, fender and brake shoe (10mm)
- For the attachment and detachment of wheels and support wheels for children (15mm)

- CAUTION**
- Since it is a thin type with long total length, please be careful not to apply too much force.

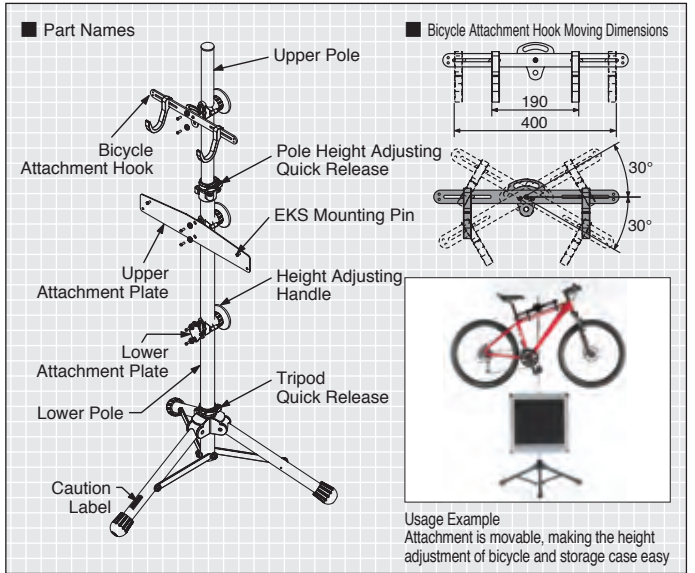
● BICYCLE DISPLAY STAND



BICYCLE DISPLAY STAND

No. CS1	▼kg 8	📦 1
---------	-------	-----

- BICYCLE DISPLAY STAND
- It is a self-supporting tripod type bicycle display stand with stability.
  - Thin metal case (EKS-101,103 P.342) can be equipped.
  - Tripod can be folded, making it convenient in transport and storage.
  - Bicycle attachment hook is available as an optional item.  
Another bicycle can be placed instead of the thin metal case.
  - \* Spare parts are configured. Please contact your dealer for details.



■ Option

No. CS1-A1	▼g 500	📦 1
------------	--------	-----

Bicycle Attachment Hook



- CAUTION**
- It may not be usable depending on the bicycle shape.
  - It is not a stand for the bicycle maintenance.
  - It is not possible to add an EKS attachment plate to place 2 units of EKS (thin metal case).
  - Please be sure to have fall prevention during installation.

Withstand Load:	46kg
EKS Attachment:	26kg
Bicycle Attachment Hook:	20kg



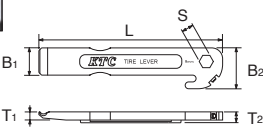
**TIRE LEVER SET (2pcs.)**

No.	S	B <sub>1</sub>	B <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▽g	📦
CTR12	Surface: 9, Back: 10	20	30	6	8	135	22x2pcs.	1

- Thin tip and long claw make it easy to pick up beads.
- With a guide angle given on the back rim side, it can easily be inserted between the tire and rim.
- It has a hook on the tip and opposite side to hook on a spoke.
- It has an offset wrench for the removal of rim nut that fixes the valve on the rim.
- It has an air removal pin for Schrader valve that removes the air in the tube.



Usage state      Offset wrench for the removal of rim nut      Air removal pin for Schrader valve



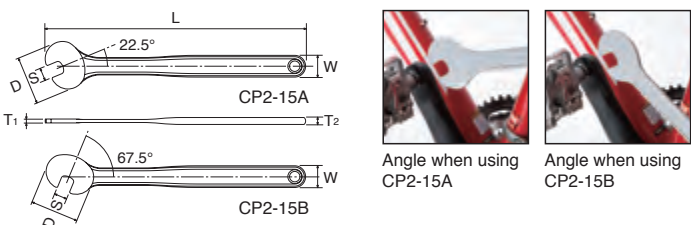
● **TIRE LEVER SET (2pcs.)** D.PAT.



**PEDAL WRENCH**

No.	S	D	W	L	T <sub>1</sub>	T <sub>2</sub>	▽g	📦
CP2-15A	15	56	25	300	4.5	8	270	1
CP2-15B	15	56	25	300	4.5	8	270	1

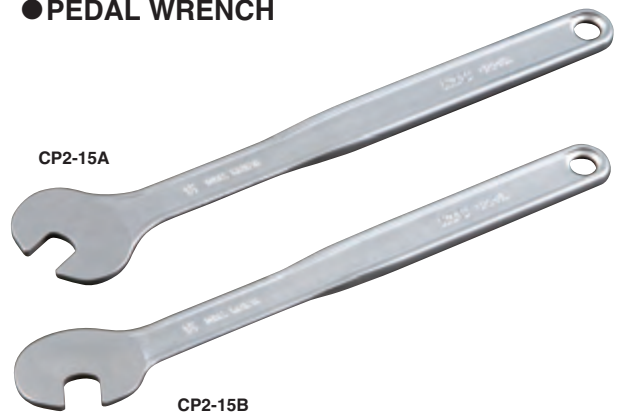
- Wrench tip is made thin, supporting various pedals.
- 2-item configuration in wrench tip angle (22°30', 67°30') that supports pedals with mounting angle that's difficult to work with.



Angle when using CP2-15A      Angle when using CP2-15B

⚠ CAUTION • Please do not use it other than for attaching and detaching bicycle pedals.

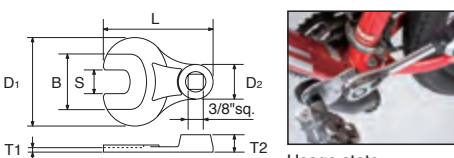
● **PEDAL WRENCH**



**PEDAL WRENCH (CROWFOOT WRENCH TYPE)**

No.	S	D <sub>1</sub>	D <sub>2</sub>	B	T <sub>1</sub>	T <sub>2</sub>	L	▽g	📦
CP1-15	15	56	22	35	4.5	11	69.5	90	1

- It has a 3/8"sq. drive that allows the torque to be checked with a torque wrench.
- Wrench tip is made thin, supporting various pedals.



Usage state (Combination with GEK085-R3)

⚠ CAUTION • Please do not use it other than for attaching and detaching bicycle pedals.

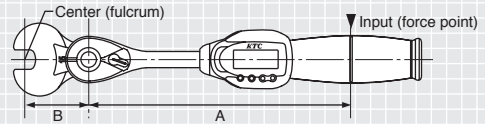
● **PEDAL WRENCH (CROWFOOT WRENCH TYPE)** D.PAT.



**Torque conversion of pedal wrench (crowfoot wrench type)**

Torque value is determined by the distance from the fulcrum to force point and the force applied to the force point. Torque cannot be accurately measured if crowfoot type wrench is used, since the distance from the fulcrum to force point that's originally set on the torque wrench changes. Start working upon determining the value to be input on the torque wrench from the required torque value before measurement.

■ Torque conversion when using Digital Ratchet



Torque conversion formula:  $\frac{A}{(A+B)} \times \text{Required torque value} = \text{Input torque value}$   
 Insert the wrench all the way in for the accurate measurement.

■ Combination conversion example with Digital Ratchet

Product Number	Conversion rate	Required torque value		
		30N·m	35N·m	40N·m
GEK030-C3/GWEC3-030	75%	22.4	-	-
GEK060-R3/GWE3-060	75%	22.4	26.1	29.9
GEK085-R3/GWE3-085	80%	24.0	28.0	32.0

\* Conversion rate is an approximate. Please calculate in the manner described on left to obtain the accurate value.  
 Example: When tightening a pedal of 40N·m specific torque with Digital Ratchet GEK085-R3, the conversion rate is 80%, making the set torque of Digital Ratchet 32N·m.

■ Recommended torque wrench



Digital Ratchet GEK085-R3  
 Torque range: 17~85N·m

For more information on Digital Ratchet, Please see P.176.

**Related Items**



Digital Ratchet ® Small Torque Type P.175



Bit Socket P.93~115



L-Shaped Hex-Key Wrench P.99~102

\*Please check the merchandise inventory for a product that is marked with a red lightning bolt icon before placing an order.



# PLUMBING TOOLS

## 8. PLUMBING TOOLS

PLUMBING TOOLS

# 8. PLUMBING TOOLS

## PLUMBING TOOLS




**CAUTION** Ratchet pipe cutters, Miniature ratchet tube cutter, Tube cutter, Flex pipe cutter, PVC cutter

- Make sure that you read the Owner's Operator Manual carefully before use.
- Do not use these tools to cut unspecified materials.
- Do not use the tools if they are cracked, chipped, worn or deformed, etc.
- Do not customize tools. The tools quality will decrease significantly if heated or modified.

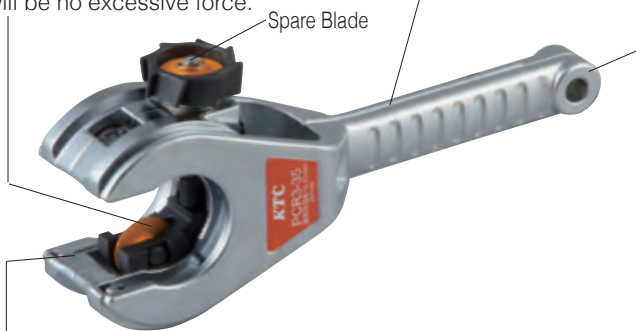
Application Table of Ratchet Pipe Cutters

	Product and Product Code	Application	Copper Pipe	Steel Pipe	Wiring tube	Stainless steel pipe for general piping	Stainless steel pipe for piping	SUS Flexible Pipe	Plastic Pipe			
									Rigid poly(vinyl chloride) pipes for waterworks	Polyethylene pipes for waterworks	Polyethylene pipes for gas	
Ratchet Pipe Cutters	PCR3-35 Ratchet Pipe Cutter 	Nominal		10A~25A		13Su~30Su	10A~25A					
		Applicable Thickness		Max.3.2mm		Max.1.2mm	Max.3mm					
	PCR3-66 Ratchet Pipe Cutter For Large Size 	Nominal		25A~50A	G36~G54 C39~C63	30Su~60Su	25A~50A					
		Applicable Thickness		Max.3.8mm	Max.G54: 2.8mm Max.C63: 2mm	Max.1.5mm	Max.3mm					
	PCRT2-35 Ratchet Pipe Cutter For Copper And Plastic Pipe 	Nominal	$\frac{1}{2}'' \sim 1\frac{1}{4}''$							13~25	10~25	20~25
		Applicable Thickness	Max.1.65mm							Max.3.5mm	Max.5mm	Max.3.4mm
	PCRT2-66 Ratchet Pipe Cutter For Copper And Plastic Pipe, Large Size 	Nominal	$1\frac{1}{4}'' \sim 2\frac{1}{2}''$							30~50	25~50	25~50
		Applicable Thickness	Max.2.03mm							Max.4.5mm	Max.6.5mm	Max.5.5mm
	PCRT-23 D.PAT. Miniature Ratchet Pipe Cutter 	Nominal	$\frac{1}{4}'' \sim \frac{7}{8}''$									
		Covered copper piping	$\frac{1}{4}'' \sim \frac{1}{2}''$									
Applicable Thickness		Max.1.24mm										
Rotary Pipe Cutters	PC2-66 Tube Cutter 	Nominal	$\frac{1}{4}'' \sim 2\frac{1}{4}''$			8Su~60Su			13~50			
		Applicable Thickness	Max.2mm			Max.1.5mm			Max.4.5mm			
	ZC30 Tube Cutter 	Nominal	$\frac{1}{4}'' \sim 1''$						13~20	10~20	15~20	
		Applicable Thickness	Max.2mm						Max.3mm	Max.3mm	Max.3mm	
	FV20 Flex pipe cutter 	Nominal							$\frac{1}{2}'' \sim \frac{3}{4}''$			
		Applicable Thickness							Max.0.3mm			

\*Please check the merchandise inventory for a product that is marked by  before placing an order.

● **RATCHET PIPE CUTTER** PAT. D. PAT.

- Cut surface smooth because blade is a thin, special type.
- By automatic feeding mechanism, cutter maintains a stable feeding (force). There will be no excessive force.
- Body is made of aluminum. with chrome plated surface having good wear-resistance.

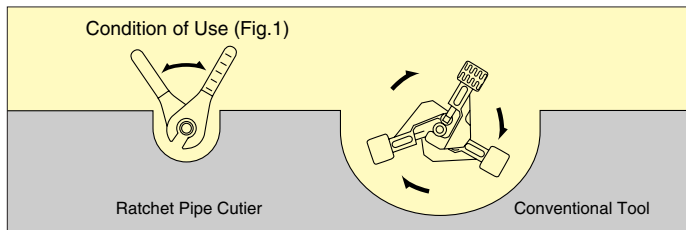


- Has a wide application up to outer diameter of 15.88mm (PCR3-35, PCRT2-35 only).
- Easy cutting in tight space.

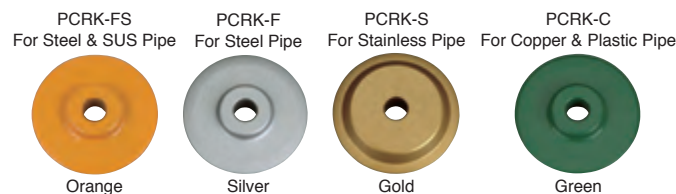


- Purpose : For cutting various pipes from water supply pipes to electric or gas pipes.

- Cutting is possible with the handle's swing of 8° Works well in cutting operation in a narrow space.



- Spare Blades : Spare blades are colored differently for each applicable pipe. It is easy to distinguish.



● **How to Use**

- 1** Turn the rotary head to fit the main body and the opening section of rotary head.
- 2** If cutter interferes with inserting pipe in the opening, turn the knob and move the cutter until pipe can be inserted.
- 3** Fit the pipe on the roller, turn the knob until it gets a little tight, and pinch the pipe with the cutter.
- 4** If you move the grip forward and backward, rotary head turns and with automatic cutter feeding mechanism, pipe is cut.

**RATCHET PIPE CUTTER**

No.	L	W	Radius of Gyration	H	▼g
PCR3-35	240	102	70	54	960

\*A blade for steel pipes is attached on the main body.

Applicable Spare Blades

No.	Contents	
PCRK-FS	For Steel & SUS Pipe	1 piece
PCRK-S	For SUS Pipe	1 piece

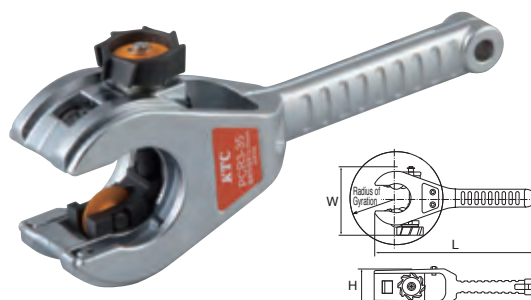
Applicable Outer Diameter: 15.88~35mm

Steel Pipe: Maximum thickness 3.2mm, Nominal 10A~25A

SUS Pipe: Maximum thickness 1.5-3.0mm, Nominal 15A~25A

Spare Blades: PCRK-FS (Orange) For Steel & SUS Pipes, PCRK-S (Gold) For Stainless Pipes

● **RATCHET PIPE CUTTER** PAT. D. PAT.



\*Replacement blade for steel & SUS pipes is included.

**RATCHET PIPE CUTTER**

No.	L	W	Radius of Gyration	H	▼g
PCR3-66	335	135	90	62	1,750

\*A blade for steel pipe is attached on the main body.

Applicable Spare Blades

No.	Contents	
PCRK-FS	For Steel & SUS Pipe	1 piece
PCRK-S	For SUS Pipe	1 piece

Applicable Outer Diameter: 35~66mm

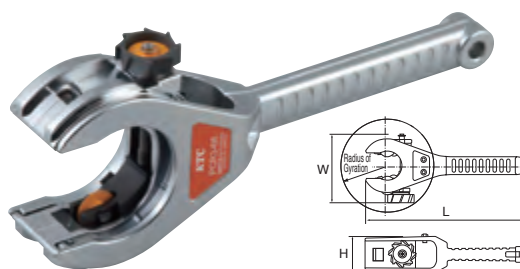
Steel Pipe: Maximum thickness 3.8mm, Nominal 25A~50A

SUS Pipe: Maximum thickness 1.5-3.0mm, Nominal 25A~40A

Spare Blades: PCRK-FS (Orange) For Steel & SUS Pipes, PCRK-S (Gold) For Stainless Pipes

● **RATCHET PIPE CUTTER FOR LARGE SIZE**

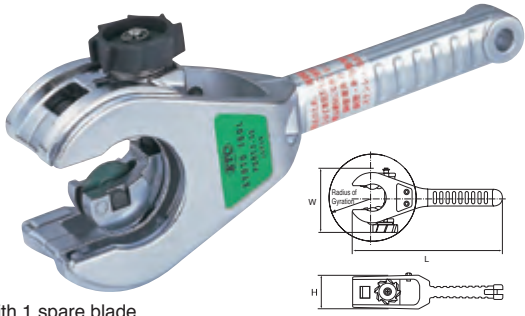
PAT. D. PAT.



\*Replacement blade for steel & SUS pipes is included.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

● RATCHET PIPE CUTTER FOR COPPER AND PLASTIC PIPE PAT. D. PAT.



\*With 1 spare blade

RATCHET PIPE CUTTER FOR COPPER AND PLASTIC PIPE

No.	L	W	Radius of Gyration	H	▽g
PCRT2-35	240	102	70	54	960

\*Cannot be used on steel or SUS pipes.

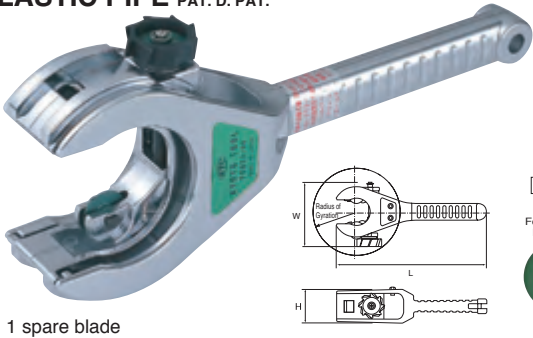
Applicable Spare Blades

No.	Contents	
PCRK-C	For Copper & Plastic Pipe	1 piece

Applicable Outer Diameter: 15.88~35mm

Copper Pipe	Rigid polyvinyl chloride pipes for waterworks	Polyvinyl pipes for waterworks	Polyvinyl pipes for gas
Maximum thickness 1.65mm Nominal 1/2"~1 1/4"	Maximum thickness 3.5mm Nominal 13~25	Maximum thickness 5.0mm Nominal 10~25	Maximum thickness 3.4mm Nominal 20~25

● RATCHET PIPE CUTTER FOR COPPER AND PLASTIC PIPE PAT. D. PAT.



\*With 1 spare blade

RATCHET PIPE CUTTER FOR COPPER AND PLASTIC PIPE

No.	L	W	Radius of Gyration	H	▽g
PCRT2-66	335	135	90	62	1,650

\*Cannot be used on steel or SUS pipes.

Applicable Spare Blades

No.	Contents	
PCRK-C	For Copper & Plastic Pipe	1 piece

Applicable Outer Diameter: 35~66mm

Copper pipe	Rigid polyvinyl chloride pipes for waterworks	Polyvinyl pipes for waterworks	Polyvinyl pipes for gas
Maximum thickness 2.03mm Nominal 1 1/2"~2 1/2"	Maximum thickness 4.5mm Nominal 30~50	Maximum thickness 6.5mm Nominal 25~50	Maximum thickness 5.5mm Nominal 20~50

● MINI RATCHET TUBE CUTTER FOR COPPER D. PAT.

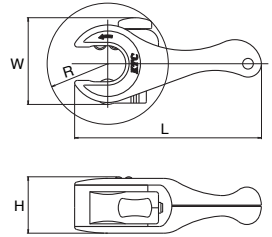


Applicable Outer Diameter: 6~23mm

Bare Copper pipe	Coated Copper Pipes
Maximum thickness 1.24mm Nominal 1/4"~3/8"	Maximum thickness 1.24mm Nominal 1/4"~1/2"



You can cut the pipe even on wall side or in parallel piping.



MINI RATCHET TUBE CUTTER

No.	L	W	H	Radius of Gyration	▽g
PCRT-23	140	64	42	45	180

Applicable Spare Blades

No.	Included Items	
PCRK-CM	For Copper Pipe	1 piece

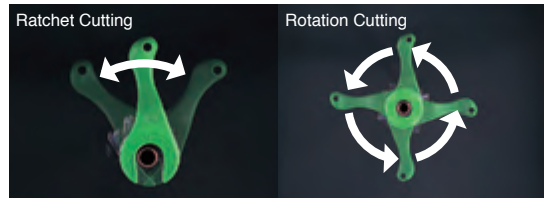
Purpose

● For cutting copper pipes for air conditioners, and bare or coated copper pipes for water/hot water supply.

Features

- With ratchet mechanism, you can cut pipes even in tight spaces such as wall side or where pipes are located next to each other.
- If work space permits, you can cut pipes by rotating the cutter.
- Cutter's automatic feeding mechanism enables quick cutting without tightening the knob more than once. Difference from conventional type cutters.
- With resin body and aluminum rotary head, the cutter weighs only 180g, allowing you to work with one hand (weight is approximately 2/3 of out conventional model ZC30).
- Streamlined handle shape assures operation in less wearing condition compared with conventional wrench.
- Body in light green which stands out even in somber places.
- Resin used for the body is recyclable polyamide.

● Two functions with 1 cutter.



● How to Use

- Turn the rotary head and fit the main body and the opening section of rotary head.
- Counter clockwise  
Cutter Knob

If cutter interferes with inserting pipe in the opening, turn the knob counterclockwise and move the cutter until pipe can be inserted.
- clockwise 360°×4 turns

Fit the copper pipe on the roller, turn the knob about 4 complete turns.
- Move the handle forward and backward or rotate to cut the pipe. Automatic cutter feeding mechanism cuts the pipe completely.

**TUBE CUTTER**

No.	L	W	H	▼g
ZC30	126	42	45	270

\*A blade for copper, resin and stainless steel flexible pipe is attached on the main body.

**Purpose**

● For cutting copper or resin pipes.

**Features**

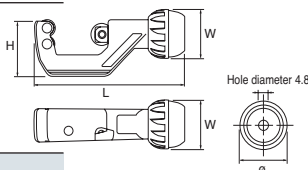
● Adoption of resin roller and assisting roller has reduces deformation of pipe, burrs, etc. on the cut surface.

**Spare Blade**

No.	Cutting Dia.	Maximum Thickness	Quantity
ZCK305	Cooper Pipe (ø3~30)	2.0mm	5 pieces
	Plastic Pipe (ø3~30)	3.0mm	
	Stainless Steel Flexible Pipe (ø3~30)	0.3mm	
ZCK305S	Thin-wall Stainless Steel Pipe (ø3~30)	1.0mm	5 pieces

• Rigidity against torsion and stability during cutting have been increased.

● **TUBE CUTTER** D. PAT.



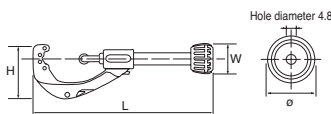
\*With 1 spare blade

**TUBE CUTTER**

No.	Cutting Dia.	L	W	H	▼g	☐
PC2-66	ø6~66	201~282	42	90.5	730	1

• For cutting and chamfering copper pipes, copper pipes, etc.

● **TUBE CUTTER**



\*With 1 spare blade

**Spare Blade**

No.	Content	Quantity
PCK305	For Copper Pipe	5pcs.
PCK305S	For Stainless Pipe	5pcs.
PC2665C	For P.V.C. Pipe	5pcs.

**FLEX TUBE CUTTER**

No.	L	W	H	▼g
FV20	126	42	45	220

**Purpose**

● For cutting stainless steel flexible pipes.

**Application**

● Stainless Steel Flexible Pipes for Gas Piping. Nominal 8A~20A  
 ● Stainless Steel Flexible Pipes for Water/Hot Water Supply. Nominal 13, 20 (except spiral types)

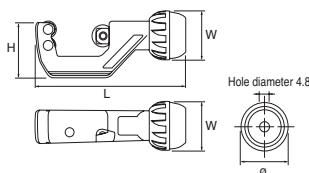
**Features**

● Adoption of resin roller and assisting roller has reduced deformation of pipe, burrs, etc. on the cut surface.

**Spare Blade**

No.	Cutting Dia.	Maximum Thickness	Quantity
ZCK305	Stainless Steel Flexible Pipe (ø3~30)	0.3mm	5 pieces

● **FLEX TUBE CUTTER** D. PAT.



\*With 1 spare blade

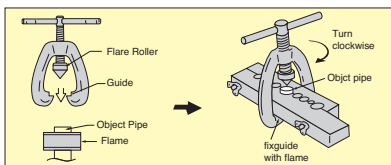
**TUBING TOOL SET**

No. VS31	▼kg 1.8	☐ 1
Tube Cutter (ø3~30)	ZC30	
Flaring Tool		
Metal Case L230xW130xH35		

**Application**

Pipe Type	Size
Brake Pipe, Copper Pipe	3/16 · 1/4 · 5/16 · 3/8 · 7/16 · 1/2 · 5/8

• A set of flaring tool and tube cutter necessary for flaring of connection section of brake pipes or air conditioner pipes.



⚠ CAUTION • Make sure that you read the Owner's Operator Manual carefully before use.



**Related Items**



Adjustable Wrench

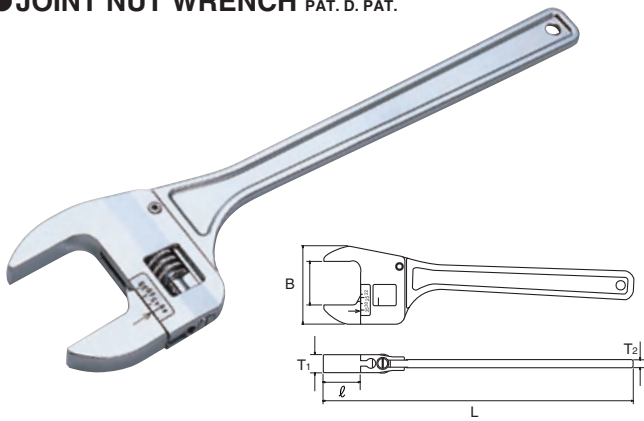


Pipe Wrench

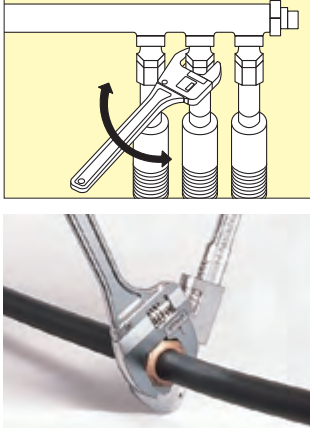


Aluminum Pipe Wrench ➔ P.167

● JOINT NUT WRENCH PAT. D. PAT.



Also applicable to work on headers of cross-linked pipes.



JOINT NUT WRENCH

No.	B	T <sub>1</sub>	T <sub>2</sub>	Applicable Nut Width Across Flats	L	ℓ	▽g	⊞
FMR260	66	15	7.5	22~35	260	31	500	5
FMR330	88	15	7.5	35~49	330	43	700	5

Purpose

● A Wrench for tightening and loosening of mechanical joints for gas, water, hot water, or air conditioning pipes.

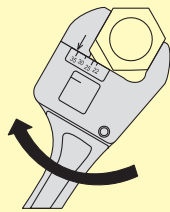
Features

- With ratchet mechanism, quick tightening and loosening of nuts possible with ease even in narrow spaces.
- Spanner type end enables application to both hexagonal and octagonal nuts with one wrench.
- Applicable to joints of different sizes.
- Engraved scale facilitates adjustment of size.

No. (Applicable Nut Width Across Flats)		FMR260	FMR330
Type of Joint			
Stainless Steel Flexible Pipe Joint for Water and Hot Water	Hexagonal	8A, 10A, 13A, 15A, 16A	20A
Metal Joints for Polyethylene Water Pipe	Hexagonal/Octagonal	13A	13A, 20A, 25A
Union Nuts for Water Supply	Hexagonal/Octagonal	13A	20A, 25A
Flex Pipe Joint for Gas	Hexagonal	8A, 10A, 15A, 20A	20A, 25A
Stainless Steel Flexible Pipe Joint for Water and Hot Water	Hexagonal	1/2", 3/4"	—
Flare Pipe Joint for Air Conditioner	Hexagonal	3/8", 1/2", 5/8"	3/4"

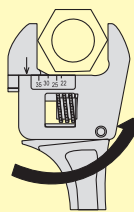
● How to Use Adjust the opening of joint nut wrench to fit width across flat of the nut in advance.

1 Tighten the nut.



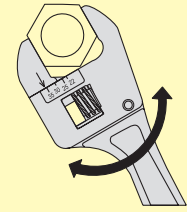
Turn the nut to tightening direction with joint nut wrench.

2 Turn the joint nut wrench back to loosening direction.



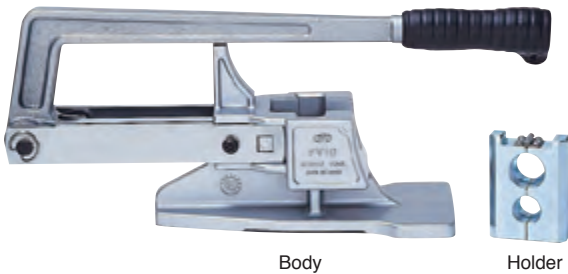
With nut still held in between, turn the wrench to loosening direction.

3 Tighten the nut



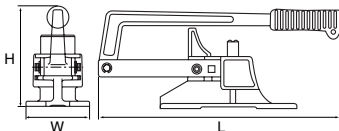
Repeat procedures 1 and 2 to complete.

● FLANGING TOOL



Body

Holder



FLANGING TOOL

No.	L	W	H	▽kg
FV10	350	90	145	3.7

Flange can easily be made with a simple operation.

Purpose

● A tool to make sealing surface on joint section of stainless steel flexible pipes for water/hot water supply.

Application

● Stainless flex pipes, nominal 13.20 (except spiral shapes).

Features

- You only push down the handle to make flanges quickly and efficiently.
- It applies force to create uniform flanges.
- One holder is applicable to flexible pipes of 2 different sizes.

Holder

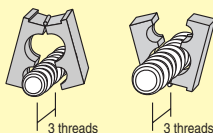
No.	▽g
FV10-1	310



● How to Use

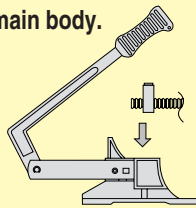
1 Set flexible pipe on the holder.

Nomination 13 (1/2") Nomination 20 (3/4")



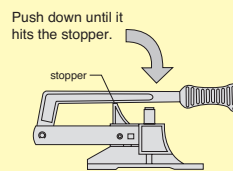
Set the flexible pipe into the holder of appropriate size with 3 threads projecting out of the holder end.

2 Attach the holder onto the main body.

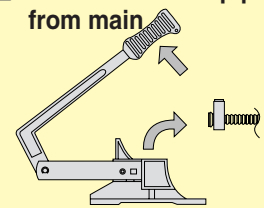


Attach the holder fixed with flexible pipe into the tool.

3 Push down the handle. 4 Take out the flex pipe from main



Push down the handle until it hits the stopper.



Pull up the handle and take out the flex pipe with holder.



**PIPE BENDER FOR STAINLESS FLEXIBLE PIPE**

No.	Shoe Side Handle			Guiding Handle			▼kg	📦
	W	H	L	W	H	L		
FV30	210	77	803	112	65	700	3.5	1

**Purpose**

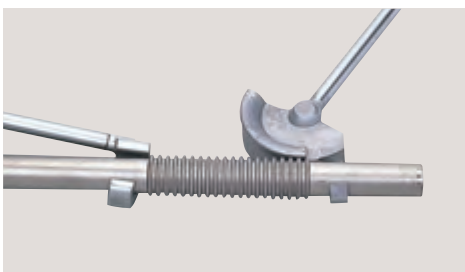
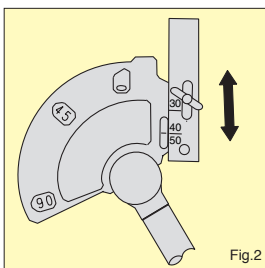
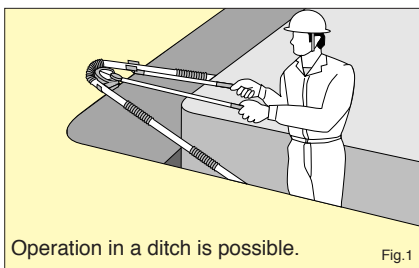
- A special tool for bending wavy stainless steel pipes used in piping from water supply pipe to meter up to 90 degrees.

**Application**

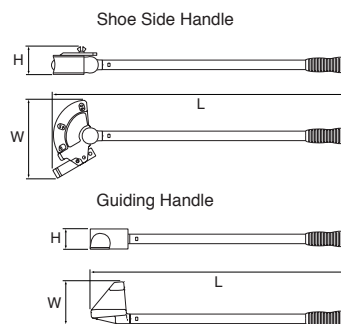
- Wavy Stainless Steel Pipes (Nomination 30su, 40su, 50su.)  
(Cannot be used for bending any other types of pipes.)

**Features**

- Use of guiding handle ; eliminates need of setting the pipe on the ground. Operation in a ditch (for piping) is possible (Fig.1).
- No need for complicated preparations. You can quickly, easily and smoothly bend the stainless steel pipe.
- With indication of angle (Fig.2).
- Mobile hook enables most appropriate bending for the pipe size.
- Made of high strength aluminum, the tool is light and easy to carry around.



**● PIPE BENDER FOR STAINLESS FLEXIBLE PIPE**

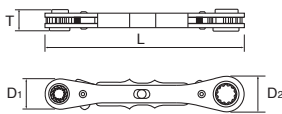


**4 SIZE STANDARD RATCHET BOXEND WRENCH**

No.	Normal size	D <sub>1</sub>	D <sub>2</sub>	T	L	▼g	📦
MR-0813	8×12 · 10×13	21	25	15	143	130	10
-1014	10×13 · 12×14	25	28	15	166	160	10

**Features**

- Thin socket convenient for work in narrow spaces.
- Side is green which stands out in working environment. Made of resin and light.
- Wave shape grip : hand-fitted and easy to transmit force.



**● 4 SIZE STANDARD RATCHET BOXEND WRENCH**



- CAUTION**
- The changeover switch must be operated properly to prevent breakages and idling.
  - For temporary tightening only. Do not carry out the final tightening adjustment with this tool.

**4 SIZE LONG RATCHET BOXEND WRENCH**

No.	Normal size	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	D <sub>1</sub>	D <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	L	▼g	📦
MR-0813L	8×12 · 10×13	10	17.5	15	17.5	21	25	34.5	44.5	143	180	10
-1014L	10×13 · 12×14	15	18	15	30	25	28	39.5	57.5	166	230	10

A "must" for piping work. Works in various situations.

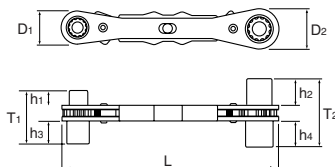


**Purpose**

- Tightening various cable way or piping support materials.

**Features**

- Long socket enables to work in deep sections.
- Side is green which stands out in working environment. Made of resin and light.
- Wave shape grip ; hand-fitted and easy to transmit force.



**● 4 SIZE LONG RATCHET BOXEND WRENCH**



- CAUTION**
- The changeover switch must be operated properly to prevent breakages and idling.
  - For temporary tightening only. Do not carry out the final tightening adjustment with this tool.



# TOOL STORAGE

## 9. TOOL STORAGE

TOP CHEST

ROLLER CABINET

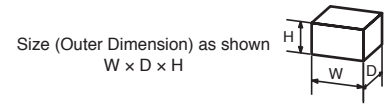
TOOL STATION, WAGON, and WALL HUNGING CASE

SPLIT-OPEN and TOP OPENING TOOL CASE

ACCESSORIES



# STORAGE TOOL COMPARISON CHEST



No.	EKR-1003	EKR-1004	SKX3306	EKR-113	EKR-103	SKX0213	SKX0012
Number of Drawers	3	4	3 + 3	3	3	3	2
Size (Outer Dimension)	725 x 390 x 410	725 x 390 x 410	660 x 310 x 370	540 x 280 x 335	510 x 275 x 325	520 x 215 x 300	300 x 150 x 145
Color	3 Silver-Red-Black	3 Silver-Red-Black	1 Red	1 Red+Silver+Black	1 Red+Silver	3 Silver-Red-Black	1 Red

# ROLLER CABINET & WAGON

No.	EKX-118	EKW-1005	EKW-1007	SKX3805	SK300-M	SK200-M	DC-904FA
Number of Drawers	8	5	7	5	-	2	4
Size (Outer Dimension)	740 x 540 x 1230	740 x 470 x 910	740 x 470 x 910	680 x 460 x 975	700 x 450 x 890	575 x 485 x 1130	580 x 450 x 900
Color	1 Silver + Red + Black	3 Silver-Red-Black	3 Silver-Red-Black	1 Red	1 Green	1 Light blue	1 Red

No.	DC-602F	SKX0514	SKR703A	SKR402A	SKX2704	SKX2614	SKX2613
Number of Drawers	2	4	3	2	Shelf 4	Shelf 1 Drawer 2	Shelf 3 Drawer 1
Size (Outer Dimension)	580 x 450 x 650	320 x 150 x 285	670 x 420 x 900	670 x 420 x 770	715 x 410 x 1011	775 x 515 x 880	715 x 410 x 880
Color	1 Red	1 Red	1 Silver	1 Silver	1 Red	1 Red	1 Red

# SPLIT-OPEN & SINGLE-DOOR CASE

No.	EK-1	SK330P-M	SK120-M	EK-3	EK-5	EKP-1
Size (Outer Dimension)	-	-	With tray for parts	-	-	With tray for parts
	430 x 225 x 225	445 x 280 x 250	405 x 200 x 170	410 x 210 x 150	375 x 175 x 112	540 x 350 x 350
Color	1 Silver	1 Red	1 Red	1 Silver	1 Silver	1 Red

No.	EKP-5	TCP1-1	EKB-2	EKB-1	EKB-3	
Size (Outer Dimension)	With tray for parts	-	-	-	-	
	385 x 202 x 140	385 x 190 x 65	455 x 190 x 60	275 x 150 x 50	275 x 150 x 35	
Color	1 Red	1 Beige	1 Silver	1 Silver	1 Silver	

: Plastic

\*Please check the merchandise inventory for a product that is marked by before placing an order.

# 9. TOOL STORAGE TOP CHEST



## ●CHEST (3 STAGES, 3 DRAWERS) D.PAT.

No. **EKR-1003** (Silver) ▼kg 35 ☞ 1

No. **EKR-1003R** (Red) ▼kg 35 ☞ 1

No. **EKR-1003BK** (Black) ▼kg 35 ☞ 1

- Body Size W725 × D390 × H410
- Top Part w695 × d340 × h65 Withstand Load 20kg
- Drawer Size w600 × d325 × h45 × 2 Withstand Load 15kg  
w600 × d325 × h105 × 1 Withstand Load 20kg
- Top Mat × 1 • Drawer Mat × 4 • Partition Plate × 2 • Key × 2



Drawer Removal Method ☞ P.333

\* Spare parts are configured. Please contact your dealer for details.



## ●CHEST (4 STAGES, 4 DRAWERS)

No. **EKR-1004** (Silver) ▼kg 39 ☞ 1

No. **EKR-1004R** (Red) ▼kg 39 ☞ 1

No. **EKR-1004BK** (Black) ▼kg 39 ☞ 1

- Body Size W725 × D390 × H410
- Top Part w695 × d340 × h65 Withstand Load 20kg
- Drawer Size w600 × d325 × h45 × 4 Withstand Load 15kg
- Top Mat × 1 • Drawer Mat × 4 • Partition Plate × 2 • Key × 2



Drawer Removal Method ☞ P.333

\* Spare parts are configured. Please contact your dealer for details.



## ●FLAT CHEST (3 STAGES, 3 DRAWERS)

No. **EKR-2003** (Silver) ▼kg 33 ☞ 1

No. **EKR-2003R** (Red) ▼kg 33 ☞ 1

No. **EKR-2003BK** (Black) ▼kg 33 ☞ 1

- Body Size W725 × D390 × H330
- Top Area Withstand Load 20kg
- Drawer Size w600 × d325 × h45 × 2 Withstand Load 15kg  
w600 × d325 × h105 × 1 Withstand Load 20kg
- Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 2 • Key × 2



Drawer Removal Method ☞ P.333

\* Spare parts are configured. Please contact your dealer for details.



### Top Cover



The top cover and grounded part of the body use the surface joint method rather than the steel plate cross-section.

### Corner Bumper



Corner bumper reduces the risk of accidental injury. It also contributes to the protection of the chest body.

#### Function and Design

#### Inner Latch Mechanism Adopted Large Front Mold

Drawer uses the all-stage inner latch mechanism that prevents it from suddenly popping out. Durability is enhanced by separating the mold and latch.



#### Reliable usability

#### Rail Guard Thick Steel Plate Adopted

Drawer rail uses the mounting method by guide. Secures the rigidity of the drawer with plentiful 1.2mm thick steel plate, sustaining the comfortable use for a long period of time.





EKR-113

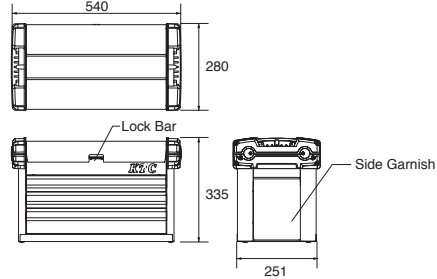
●CHEST (3 STAGES, 3 DRAWERS)

No.	<b>EKR-113</b>	▼kg 14	📦 1
• Body Size	W540 × D280 × H335		
• Top Part	w445 × d225 × h75	(Withstand Load 8.5kg)	
• Drawer (Stage 1~2)	w420 × d215 × h45 × 2	(Withstand Load 5kg)	
(Stage 3)	w420 × d215 × h75 × 1	(Withstand Load 8.5kg)	
• Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 3			



Drawer Removal Method ➔ P.333

\* Spare parts are configured. Please contact your dealer for details.



\*"Side garnish" has a structure that disengages for optional mounting.



EKR-103



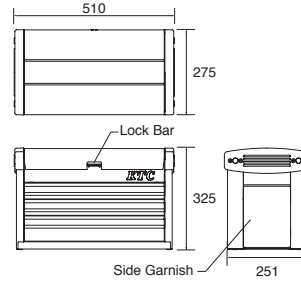
●CHEST (3 STAGES, 3 DRAWERS) D.PAT. Good Design Award Winning Product

No.	<b>EKR-103</b>	▼kg 13	📦 1
• Body Size	W510 × D275 × H325		
• Top Part	w445 × d225 × h75	(Withstand Load 8.5kg)	
• Drawer (Stage 1~2)	w420 × d215 × h45	(Withstand Load 5kg)	
(Stage 3)	w420 × d215 × h75	(Withstand Load 8.5kg)	
• Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 3			



Drawer Removal Method ➔ P.333

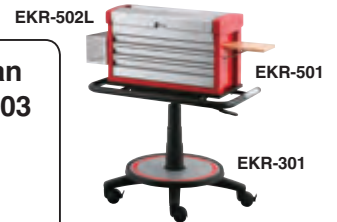
\* Spare parts are configured. Please contact your dealer for details.



\*"Side garnish" has a structure that disengages for optional mounting.

Useful accessories can be installed on EKR-103 and 113.

Photo at Right: EKR-103  
+ Lift (EKR-301)  
+ Side Table (EKR-501)  
+ Side Pocket L (EKR-502L)



Shape focused on storage



3/8"sq. deep socket or the like can be vertically stored in the top part.



Non-wasteful storage is possible with extra space in the drawer depth direction.



By making the third drawer deeper, items such as chemicals can finally be stored.



Drawer lock mechanism is released at the opening angle of about the half of conventional products\*. There is no need to widely open the top cover.

\*Comparison with our SKX0213

Shape focused on storage plus α

The top cover design is reminiscent of the engine head cover. Handles are built-in at shoulder width, allowing the chest to be comfortably carried. Back side of the handle has a shape that does not hurt the hand.

(Handle back side photo is shown unpainted for clarity purposes, unlike the actual product.)



Handle back

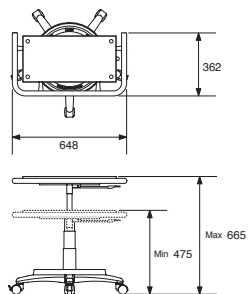


Aluminum legs that protect the chest bottom not only protect the case itself but do not scratch the location.

●CASTER TABLE for EKR-103 & EKR-113

No.	▼kg	📦
EKR-301	10	1

- Dedicated stand for the chest (EKR-103 · EKR-113).
- Lift is continuously adjustable by operating the gas damper with lever.
- Top plate can rotate in every direction at 360°.
- Stability and mobility are ensured with the adoption of 5-legged casters.



Usage state

**CAUTION** • Do not place more than withstand load.

**Withstand Load: 40Kg**

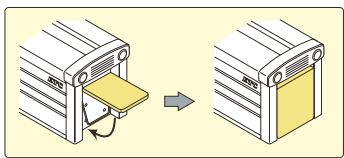
●SIDE TABLE for EKR-103 & EKR-113

No.	W	D	H	▼g	📦
EKR-501	180	149	13	315	1

- Dedicated wooden side table for the chest (EKR-103 · EKR-113).
- Small items, removed parts and the like can be placed.
- It can be stored in the side of the chest (EKR-103 · EKR-113) when not used.

**CAUTION** • Do not place more than withstand load.

**Withstand Load: 2Kg**



Usage state

●LARGE SIZE SIDE POCKET for EKR-103 & EKR-113

No.	W	D	H	▼g	📦
EKR-502L	250	100	121	900	1

- Dedicated side pocket for the chest (EKR-103 · EKR-113).
- Small items, removed parts and the like can be stored.
- Spray cans, rags and the like can be stored.
- Made of punching metal.

**CAUTION** • Do not place more than withstand load.

**Withstand Load: 2Kg**



Usage state

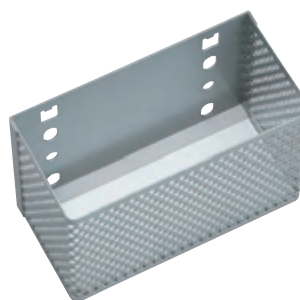
●SMALL SIZE SIDE POCKET for EKR-103 & EKR-113

No.	W	D	H	▼g	📦
EKR-502S	148	72	100	480	1

- Dedicated side pocket for the chest (EKR-103 · EKR-113).
- Small items, removed parts and the like can be stored.
- Spray cans, rags and the like can be stored.
- Made of punching metal.

**CAUTION** • Do not place more than withstand load.

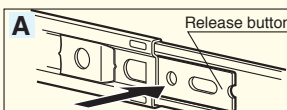
**Withstand Load: 2Kg**



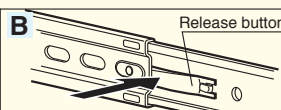
Usage state

Drawer removal method for chests · roller cabinets

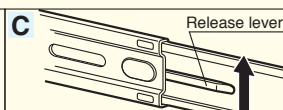
Type	No.
A	EKX-118 (Stage 4~8) SKX2704/2613 SKX3306
B	SKX2614
C	EKX-118 (Stage 1~3) EKR-113/EKR-103 SKX0213/SKX3805 SKX3306 (Small Drawer) SKX3805
D	SKR703A/SKR602A SKR502A/SKR402A
E	EKR-1003/EKR-1004 EKR-2003 EKW-1005/EKW-1007 EKW-2006/EKW-2008



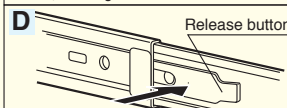
Lock is released by pressing the release button on both sides of the drawer, allowing the drawer to be removed.



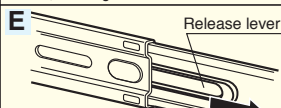
Lock is released by pressing the release button on both sides of the drawer, allowing the drawer to be removed.



Lock is released by moving the release lever on both sides of the drawer up or down, allowing the drawer to be removed.



Lock is released by pressing the release button on both sides of the drawer, allowing the drawer to be removed.



Lock is released by pulling the release lever on both sides of the drawer, allowing the drawer to be removed.

**CAUTION**  
PLEASE REMOVE ALL STORED ITEMS BEFORE REMOVING THE "DRAWER". IF REMOVED WHILE ITEMS ARE STORED, THE "DRAWER" MAY FALL AND CAUSE INJURY.



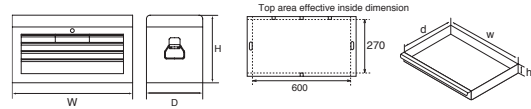
●CHEST (4 STAGES, 6 DRAWERS)

No.	<b>SKX3306</b>	▼kg 23	📦 1
• Body Size	W660 × D310 × H370		
• Top Part	w650 × d300 × h65, Withstand Load 15kg		
• Drawer Size	w170 × d270 × h40 × 3, Withstand Load 10kg w570 × d270 × h40 × 2, Withstand Load 15kg w570 × d270 × h60 × 1, Withstand Load 15kg		
• Top Mat × 1 • Drawer Mat: Large × 3, Small × 3 • Partition Plate × 3 • Key × 2			



**MODEL CHANGE** It is the successor model of SKX3206.

- Drawer Removal Method [P.333](#)
- 2 stays are adopted with the stopper function that prevents the lid from suddenly closing.
  - Ball bearing slide rail is adopted for the smooth opening and closing of the drawer.
  - All-stage locking system that can lock all drawers stages upon closing them along with the lid.
- \* Spare parts are configured. Please contact your dealer for details.



SKX0213

●CHEST (3 STAGES, 3 DRAWERS)

No.	<b>SKX0213</b> (Solid Red)	▼kg 11	📦 1
• Body Size	W520 × D215 × H300		
• Top Part	w500 × d200 × h60 (Withstand Load 8.5kg)		
• Drawer Size	w455 × d190 × h45 × 3 (Withstand Load 5kg)		
• Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 3			



Drawer Removal Method [P.333](#)  
\* Spare parts are configured. Please contact your dealer for details.



SKX0213S

●CHEST (3 STAGES, 3 DRAWERS)

No.	<b>SKX0213S</b> (Metallic Silver)	▼kg 11	📦 1
• Body Size	W520 × D215 × H300		
• Top Part	w500 × d200 × h60 (Withstand Load 8.5kg)		
• Drawer Size	w455 × d190 × h45 × 3 (Withstand Load 5kg)		
• Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 3			



Drawer Removal Method [P.333](#)  
\* Spare parts are configured. Please contact your dealer for details.



SKX0213BK

●CHEST (3 STAGES, 3 DRAWERS)

No.	<b>SKX0213BK</b> (Solid Black)	▼kg 11	📦 1
• Body Size	W520 × D215 × H300		
• Top Part	w500 × d200 × h60 (Withstand Load 8.5kg)		
• Drawer Size	w455 × d190 × h45 × 3 (Withstand Load 5kg)		
• Top Mat × 1 • Drawer Mat × 3 • Partition Plate × 3			



Drawer Removal Method [P.333](#)  
\* Spare parts are configured. Please contact your dealer for details.

- Compact size with excellent storage space.
  - It is compact while having a large storage space, with a convenient side handle for easy carrying.
- \*Spare parts are configured. Please contact your dealer for details.



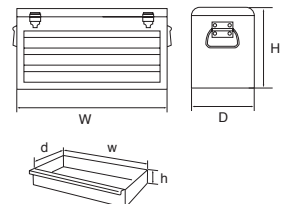
Bearing rail is adopted on the drawer for the smooth opening and closing.



KTC logo is embossed on the top.



Top panel is punched for a sense of rigidity





# 9. TOOL STORAGE ROLLER CABINET



## ●ROLLER CABINET (5 STAGES, 5 DRAWERS)

No. **EKW-1005** (Silver) ▼kg 74 ☰ 1

No. **EKW-1005R** (Red) ▼kg 74 ☰ 1

No. **EKW-1005BK** (Black) ▼kg 74 ☰ 1

- Body Size W740 × D470 × H910 (including Caster H180)  
Handle Protruding Dimension 85 φ29  
Top Withstand Load: 140kg  
Maximum Withstand Load: 350kg (including the product weight)
- Drawer Size w600 × d405 × h45 × 2, Withstand Load 15kg  
w600 × d405 × h105 × 2, Withstand Load 20kg  
w600 × d405 × h230 × 1, Withstand Load 30kg
- Top Mat × 1 • Drawer Mat × 7 • Partition Plate × 4 • Key × 2



Drawer Removal Method P.333

\* Spare parts are configured. Please contact your dealer for details.



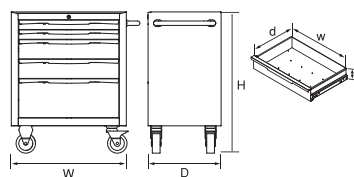
EKW-1005



EKW-1005BK



EKW-1005R



## ●ROLLER CABINET (7 STAGES, 7 DRAWERS)

No. **EKW-1007** (Silver) ▼kg 82 ☰ 1

No. **EKW-1007R** (Red) ▼kg 82 ☰ 1

No. **EKW-1007BK** (Black) ▼kg 82 ☰ 1

- Body Size W740 × D470 × H910 (including Caster H180)  
Handle Protruding Dimension 85 φ29  
Top Withstand Load: 140kg  
Maximum Withstand Load: 350kg (including the product weight)
- Drawer Size w600 × d405 × h45 × 4, Withstand Load 15kg  
w600 × d405 × h105 × 3, Withstand Load 20kg
- Top Mat × 1 • Drawer Mat × 7 • Partition Plate × 4 • Key × 2



Drawer Removal Method P.333

\* Spare parts are configured. Please contact your dealer for details.



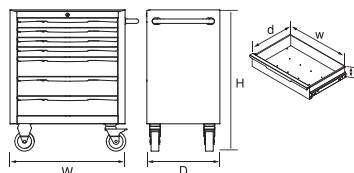
EKW-1007



EKW-1007BK



EKW-1007R



## ●BASE CABINET (6 STAGES, 6 DRAWERS)

No. **EKW-2006** (Silver) ▼kg 84 ☰ 1

No. **EKW-2006R** (Red) ▼kg 84 ☰ 1

No. **EKW-2006BK** (Black) ▼kg 84 ☰ 1

- Body Size W740 × D470 × H910 (including Base H50)  
Top Withstand Load: 140kg
- Drawer Size w600 × d405 × h45 × 2, Withstand Load 15kg  
w600 × d405 × h105 × 3, Withstand Load 20kg  
w600 × d405 × h230 × 1, Withstand Load 30kg
- Top Mat × 1 • Drawer Mat × 8 • Partition Plate × 4 • Key × 2



Drawer Removal Method P.333

\* Base cabinet (EKW-2006/EKW-2008 Series) supports the anchor bolt installation to the floor.  
\* Spare parts are configured. Please contact your dealer for details.



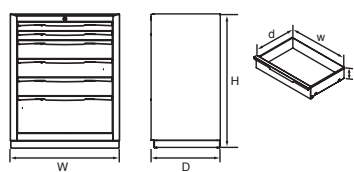
EKW-2006



EKW-2006BK



EKW-2006R



### Wide Body



Wide body that can store long objects horizontally. Highly practical size setting that prioritizes the usability at the maintenance site.

### 2-Way Lock & Large Wheel



Free caster uses the 2-way locking mechanism that simultaneously locks the rotation of the wheel and base.

#### Balanced Rigidity and Beauty

##### Inner Frame CO<sub>2</sub> Spot Welding

Flat side surfaces of EKW is achieved with the inner frame that secures the rigidity. The same inner frame structure is used for EKR.

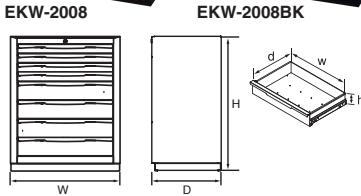


#### Commitment for Safety

##### Round Shape Edge Wrapping

Thorough bending is given for parts that come in contact with a human body. Not only the external but the cross-section of the drawer is processed, reducing the risk of injury such as cuts.





● **BASE CABINET (8 STAGES, 8 DRAWERS)**

No. <b>EKW-2008</b> (Silver)	▼kg 95	📦 1
No. <b>EKW-2008R</b> (Red)	▼kg 95	📦 1
No. <b>EKW-2008BK</b> (Black)	▼kg 95	📦 1

- Body Size W740 × D470 × H910 (including Base H50)  
Top Withstand Load: 140kg
- Drawer Size w600 × d405 × h45 × 4, Withstand Load 15kg  
w600 × d405 × h105 × 4, Withstand Load 20kg
- Top Mat × 1 • Drawer Mat × 8 • Partition Plate × 4 • Key × 2



Drawer Removal Method [P.333](#)  
 \* Base cabinet (EKW-2006/EKW-2008 Series) supports the anchor bolt installation to the floor.  
 \* Spare parts are configured. Please contact your dealer for details.



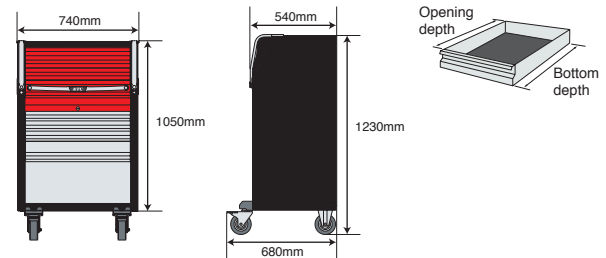
● **ROLLER CABINET (8 STAGES, 8 DRAWERS) D.PAT.**

No. <b>EKX-118</b>	▼kg 110	📦 1
--------------------	---------	-----

- Body Size W740 × D540 × H1230
- Drawer Size (Stage 1~3) w600 × d325 × h55 (Withstand Load 15kg)
- Drawer Size (Stage 4) w600 × d410~435 × h100 (Withstand Load 20kg)
- Drawer Size (Stage 5~6) w600 × d410 × h40 (Withstand Load 15kg)
- Drawer Size (Stage 7) w600 × d410~435 × h100 (Withstand Load 20kg)
- Drawer Size (Stage 8) w600 × d410~435 × h290 (Withstand Load 30kg)
- \* Depth of 4th and 7~8th stages differ in size of the opening and bottom parts. (See figure below)
- Partition Plate × 6 • Drawer Mat × 8 • Key × 2



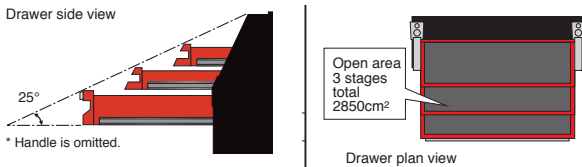
Drawer Removal Method [P.333](#)  
 \* Spare parts are configured. Please contact your dealer for details.



Devised throughout for safety and comfort

**Wide & Low Body**

Improved storage capacity while being compact, it has a user-friendly ingenious trapezoidal form  
 By combining the cabinet and chest into 1 unit, extra structure becomes unnecessary, significantly improving the volumetric efficiency. With the total height that's indexed from the average height of Japanese, even the uppermost drawer stage can be easily accessed. The body top part has an ingenious trapezoidal form. Drawer is opened in terraced shape, allowing the stored items to be looked over at a glance. Safety lock mechanism is adopted with the centroid of 1st to 3rd drawer stage backwards and 4th to 8th drawer stage opening only 1 stage at a time, preventing the falling of the cabinet.



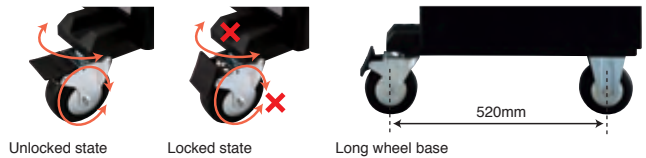
**Soft Closing Drawer**

Soft suction rail that slowly retracts the drawer is adopted (stages 4~8 only)  
 Soft closing mechanism is adopted that brakes just before closing the drawer, slowly retracting it thereafter. Fine movement can be experienced.



**2-Way Lock & Long Wheel Base Caster**

**Safety design that prevents the falling of the cabinet**  
 Frontal free caster uses the 2-way locking mechanism that simultaneously locks the rotation of the wheel and base. Safety is improved with the long wheelbase design that's offset to the outer body, preventing the cabinet from falling.



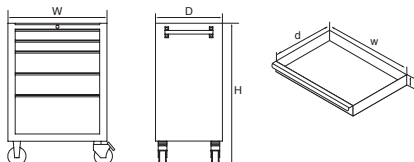
● **ROLLER CABINET (5 STAGES, 5 DRAWERS)**

No. <b>SKX3805</b>	▼kg 60	📦 1
--------------------	--------	-----

- Body Size W680 × D460 × H975
- Top Part w675 × d455, Withstand Load: 140kg
- Drawer Size w580 × d405 × h60 × 2, Withstand Load 15kg  
w580 × d405 × h135 × 2, Withstand Load 20kg  
w580 × d405 × h210 × 1, Withstand Load 30kg
- Top Mat × 1 • Drawer Mat × 5 • Partition Plate × 5 • Key × 2



It is the successor model of SKX3705.  
 Drawer Removal Method [P.333](#)  
 • Free caster simultaneously locks the rotation of the wheel and base. 2-way locking mechanism is adopted.  
 • Ball bearing slide rail is adopted for the smooth opening and closing of the drawer.  
 • All-stage locking system that can simultaneously lock all drawer stages upon closing them and turning the key.  
 \* Spare parts are configured. Please contact your dealer for details.



# TOOL STATION, WAGON, and WALL HUNGING CASE

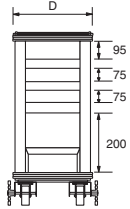
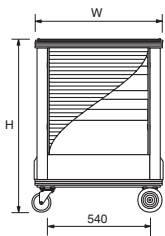


## No. SKR703A ▼kg 39 1

- Unit size: W 670 x D 420 x H 900
- Size of trays: w 478 x d 360 x h 45 x 3 (Movable)
- Top mat x 1
- Partition panels x 8
- Dial lock x 1



- High-grade model.
- Lockable shutter-ideal for controlling stored items.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



## ●TOOL STATION®

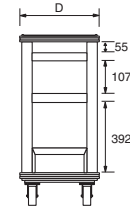
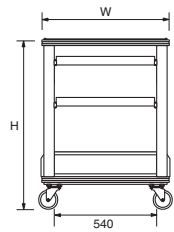


## No. SKR602A ▼kg 30 1

- Unit size: W 670 x D 420 x H 900
- Size of trays: w 510 x d 360 x h 45 x 2 (Movable)
- Top mat x 1
- Partition panels x 8



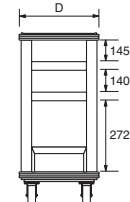
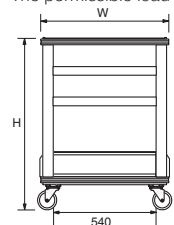
- Standard model.
- Practical and functional: front and back are clearly defined/efficient use of workshop space.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



## No. SKR502A ▼kg 26 1

- Unit size: W 670 x D 420 x H 900
- Size of trays: w 536 x d 360 x h 45 x 2 (Fixed)
- Top mat x 1
- Partition panels x 8

- Basic model.
- Front and back are clearly defined. The basic functions have been condensed into this model.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



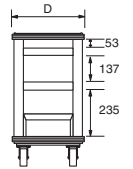
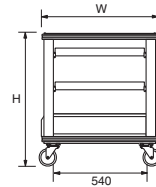
\*Refer to P.338 for methods on removing the drawer.

\*Replacement parts are available. Check with your dealer for details

\*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

No. **SKR402A** ▼kg 27 1

- Unit size: W 670 x D 420 x H 770
- Size of trays: w 510 x d 360 x h 45 x 2 (Movable)
- Top mat x1
- Partition panels x 8
- Compact model
- Height is 770 mm, lower than other models
- Being a low-line model, it is well suited for work in low places.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



\*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

\*Replacement parts are available. Check with your dealer for details

● OPTION



● **SCREWDRIVER HOLDER**

No.	
SKR-51	



● **SPRAY CYLINDER HOLDER**

No.	
SKR-53	



● **T-SHAPED WRENCH HOLDER**

No.	
SKR-52G	



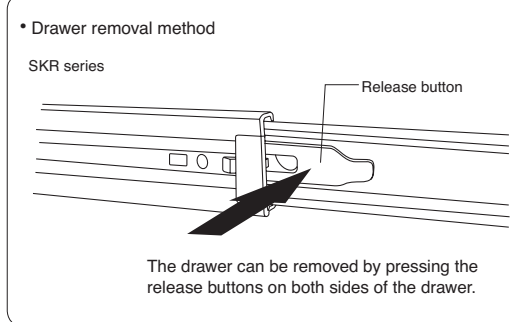
● **SIDE PUNCHING BOARD**

No.	
SKR-54S	

Panel hole ø3mm  
For  
SKR502A · SKR602A  
Accessories (for Side Punching Board)

SKR-54-A	4
SKR-54-B	4
SKR-54-C	4

\*Tools and spray cans seen within the pictures are examples of storage methods. These products are not included within the displayed retail price.



● Options-Part Hook Sets (for Side Punching Board)

Product name	No.	Q'ty	Shape	Application
Hook Set A	SKR-54-A	10		Sockets
Hook Set B	SKR-54-B	10		Ratchet handles, screwdrivers, box end wrenches, etc
Hook Set C	SKR-54-C	10		Open end wrenches, combination wrenches, etc.
Hook Set D	SKR-54-D	10		Box end wrenches (larger sizes)
Hook Set E	SKR-54-E	10		Sockets (larger sizes)

Product name	No.	Q'ty	Shape	Application
Hook J Set	SKR-54-J	10		Grip of pliers, rotation stopper of screwdrivers, etc.
Hook K Set	SKR-54-K	10		Deep sockets, etc.

Hook screw (M3 x pitch 0.5, axis diameter ø5mm)

● Side Pockets with Lining



Convenient pockets left and right. For holding spray cans, cleaning rags, etc. Pockets include lining to stop scratches and damage when placing or removing items, and prevent injury from items catching on edges.

• 703A, 602A, 502A, 402A

● Removable Trays



Trays can be removed completely, enabling exchange of trays as needed.

• 703A, 602A, 402A

● Sliding Shutter



The sliding shutter permits safeguarding and control of stored items. The shutter can be easily opened and closed with one hand.

• 703A

● Lockable



The unit is lockable, to reduce risk of theft.

• 703A

● Low Front Panel



With low front panel, the opening is larger, making it easier to place or remove large or heavy objects.

• 602A, 502A, 402A

● 4 Universal Castors



The four castors turn smoothly in all directions. Stoppers on castors hold the unit stationary.

• 602A, 502A, 402A (Model 703A has two castors)

● Options



A range of options can be attached at the holes on the inner sides of the supports.

• 703A, 602A, 502A, 402A

● Use of the Rear Panel



Publicity or advertisements (by special order) on the rear panel can effectively promote your business in many ways. Front and back are clearly defined.

• 602A

Special Orders

- Color of the storage unit
- Advertisement / company name on the rear panel.
- \* Please ask at any KTC branch, sales office, dealer, or retail shop.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

●WAGON (1 STAGE, 2 DRAWERS)

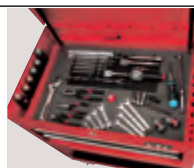
No. **SKX2614** ▼kg 48 📦 1

- Body Size W775 × D515 × H880
- Drawer Size w630 × d445 × h65 × 2 (Withstand Load 25kg)
- Bottom shelf size w755 × d480 × h90 × 1 (Withstand Load 50kg)
- Top Space Mat × 1 • Drawer Mat × 2 • Tray Mat × 1



Drawer Removal Method ➔ P.333

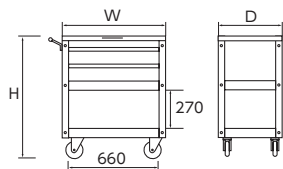
- All-wheel free caster (φ100 × 30mm) is adopted (Inner 2 wheels are with stoppers)
- The top opens for tools to be stored. Both sides have holders where drivers and the like can be stored.
- 2-stage locking method  
Lock of the drawer can be operated with the lever inside the top, and the top can be locked with a key.
- It is assembled by the customer.



<Top opened>

\* Tools are sold separately.

\*Spare parts are configured. Please contact your dealer for details.



●WAGON (4 STAGES, 1 DRAWER)

No. **SKX2704** ▼kg 29 📦 1

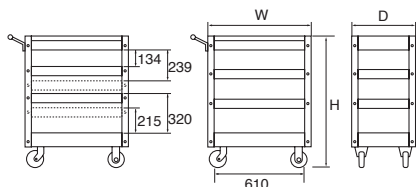
- Body Size W715 × D410 × H1011
- Drawer Size w570 × d275 × h65 × 1, (Withstand Load 5kg)
- Middle shelf size w705 × d400 × h60 × 2 (Withstand Load 15kg)
- Bottom shelf size w705 × d400 × h90 × 1 (Withstand Load 20kg)
- Top Mat × 1 • Drawer Mat × 1 • Tray Mat × 3



Drawer Removal Method ➔ P.333

- Free casters (2 wheels) with stopper and fixed casters (2 wheels). (φ100 × 30mm)
- Chest and the like can be placed on top. SKX0213, SKX0213S, SKX0213BK and SKX3306 can be placed on the top. (Top Withstand Load: 20kg)
- It is assembled by the customer.
- Mounting position of 2 stages on the middle shelf can be adjusted when assembling. (approx. 10mm)

\*Spare parts are configured. Please contact your dealer for details.



●WAGON (3 STAGES, 1 DRAWERS)

No. **SKX2613** ▼kg 24 📦 1

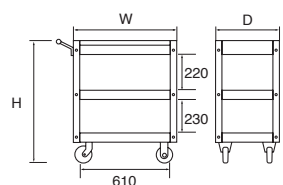
- Body Size W715 × D410 × H880
- Drawer Size w570 × d275 × h65 × 1, (Withstand Load 5kg)
- Middle shelf size w700 × d400 × h90, (Middle shelf withstand load 15kg)
- Bottom shelf size w700 × d400 × h90, (Bottom shelf withstand load 20kg)
- Top Mat × 1 • Drawer Mat × 1 • Tray Mat × 2



Drawer Removal Method ➔ P.333

- Free casters (2 wheels) with stopper and fixed casters (2 wheels). (φ100 × 30mm)
- Chest and the like can be placed on top. SKX0213, SKX0213S, SKX0213BK and SKX3306 can be placed on the top plate. (Top Withstand Load: 20kg)
- It is assembled by the customer.

\*Spare parts are configured. Please contact your dealer for details.





SK200-M

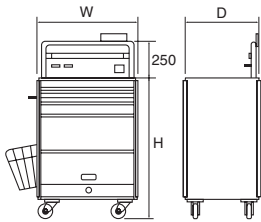


SK300-M

●MECHANIC DESK CASE®

No. <b>SK200-M</b>	▼kg 50	📦 1	
• Size	W575×D485×H880		
• Drawer Size	w504×d407×h50		
	w504×d407×h85		
• Divider · Large×4 · Middle×6 · Small×5	• Top mat	×1	
• Tool holder	×1	• Binder stand×1 pair	
• Spray can stopper	×2	• Basket	×1
• Magnet base attached pipe	×1	• Key	×2

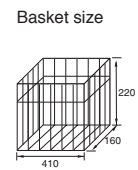
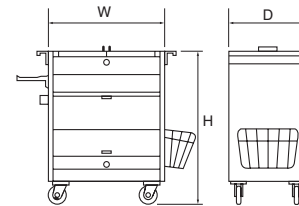
• Specially developed for car mechanics. Practical functions will enhance work efficiency.



●WORK TRUCK CASE

No. <b>SK300-M</b>	▼kg 50	📦 1
• Size	W700×D450×H890	
• Divider · Large (Height 50mm) ×4 · Large (Height 40mm) ×1 · Small×2		
• T type wrench hanger	×1	
• Grease pump holder	×1	
• Basket	×1	
• Key	×2	

• Specially developed for mechanics of large vehicles; functional and easy storing.



- Strong magnetic catch board for temporary holding tools.
- One-touch spray can fixer.



- Convenient bottom space with up and down drawer and lock.
- All free-way castors for smooth moving. (All of with stoppers)
- Rubber protector for not damaging other objects.



- Top cover is made of 2mm thick steel for using as work table.
- Upper layer box space with dividers for storing big size tools.



- Convenient holder for keeping hammers, etc.



- A drawer can be locked to prevent the case from falling down.
- Tool-shaped tray for easy management. (Top drawer only)



- Convenient holder for keeping hammers, etc.
- With basket for keeping waste cloth, etc.




- With basket for keeping waste cloth, etc.

\*Spray cans seen within the pictures are examples of storage methods. These products are not included within the displayed retail price.

\*MECHANIC DESK is a registered trademark of KYOTO TOOL CO., LTD.

\*Replacement parts are available. Check with your dealer for details

\*Please check the merchandise inventory for a product that is marked by  before placing an order.



DC-904FA



DC-9036A



DC-9038A



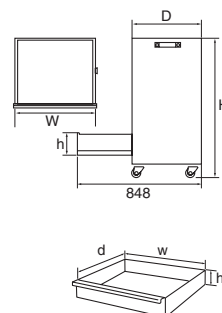
DC-602F



DC-6024



DC-6035



\*Spray cans seen within the pictures are examples of storage methods. These products are not included within the displayed retail price.

●WAGON (5 STAGE 4 DRAWER 1 LOCKER)

No. <b>DC-904FA</b>	▼kg 32	📦 1	 
• Main unit size	W580×D450×H900		
• Drawer size	w485×d410×h 40×1 w485×d410×h 90×2 w485×d410×h140×1		
• Locker space opening	w525×d410×h290×1		

- \*Dividers within each of the drawers are sold separately. (Vertical ×2 +horizontal ×2 set)
- Comes with a drawer and locker (compartment).
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (6 STAGE 6 DRAWER)

No. <b>DC-9036A</b>	▼kg 40	📦 1	 
• Main unit size	W580×D450×H900		
• Drawer size	w485×d410×h 40×1 w485×d410×h 90×2 w485×d410×h140×3		

- \*Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- Convenient for storing small items with 6 individual drawers.
- All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (8 STAGE 8 DRAWER)

No. <b>DC-9038A</b>	▼kg 44	📦 1	 
• Main unit size	W580×D450×H900		
• Drawer size	w485×d410×h 40×3 w485×d410×h 90×4 w485×d410×h140×1		

- \*Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- Convenient for storing small items with 8 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (3 STAGE 2 DRAWER 1 LOCKER)

No. <b>DC-602F</b>	▼kg 23	📦 1	 
• Main unit size	W580×D450×H650		
• Drawer size	w485×d410×h 40×1 w485×d410×h 90×1		
• Locker space opening	w525×d410×h245×1		

- \*Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Comes with a drawer and locker (compartment).
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (4 STAGE 4 DRAWER)

No. <b>DC-6024</b>	▼kg 28	📦 1	 
• Main unit size	W580×D450×H650		
• Drawer size	w485×d410×h 90×3 w485×d410×h140×1		

- \*Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Convenient for storing small items with 4 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (5 STAGE 5 DRAWER)

No. <b>DC-6035</b>	▼kg 29	📦 1	 
• Main unit size	W580×D450×H650		
• Drawer size	w485×d410×h 40×2 w485×d410×h 90×2 w485×d410×h140×1		

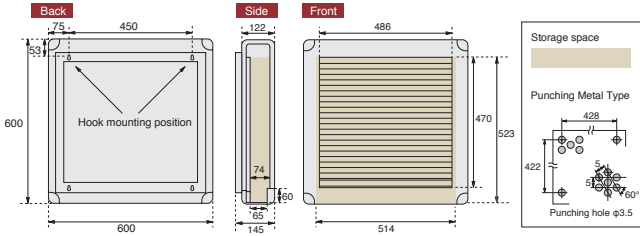
- \*Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Convenient for storing small items with 5 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

\*Please check the merchandise inventory for a product that is marked by before placing an order.

\*Replacement parts are available. Check with your dealer for details



When open



**CAUTION** Installation with an anchor is required whether wall-mounted or free-standing. Walls may need to be reinforced depending on the material and structure.

**THIN METAL STORAGE CASE (PUNCHING METAL TYPE)**

No.	<b>EKS-101</b>	▼kg 14	📦 1
• Body Size	W600 × D145 × H600		
• Attachment	Hook A x5	Hook B x10	Hook C x10
	Hook D x10	Hook J x5	Hook K x5

**New wave tool case that's evolved into a decor**

Thin storage case with the maintenance style like never before that freely fits in various spaces. Tools can be viewed in a glance by opening the shutter, with smooth retrieval and storage.



\* Tools are sold separately.

Tools of your choice can be stored by combining the punching board and various hooks. Padlocking is possible once the shutter is closed. \*Key is sold separately.

Please purchase a separately sold hook set as needed. Please refer to P.338 for details of the hook. Body withstand load (loading capacity): 12kg, hook withstand load (per 1): 1kg

**Supply Parts**

No.	Product Name	Size	📦
<b>EKS-501</b>	Punching Board for Thin Metal Storage Case	W470 × D11 × H522	1

\* Hook is not included.



**DESKTOP STAND SET FOR THIN METAL STORAGE CASE**

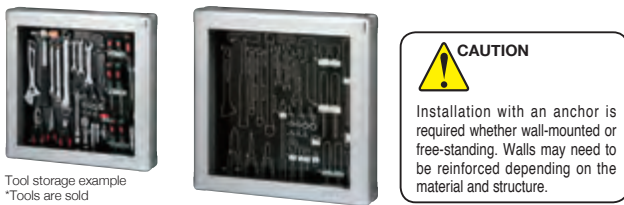
No.	<b>EKS-911</b>	▼kg 16.6	📦 1
• Thin Metal Storage Case (Punching Board Type)	EKS-101		
• Desktop Stand for Thin Metal Storage Case	EKS-301		

- It is a set of the punching board type thin metal storage case EKS-101 and dedicated stand.
- With the thinness of 240mm depth, work space can be assured even when placed on a desk.
- With the slope of 10°, stored tools can easily be viewed.
- With a pad for not damaging the installation surface.

**DESKTOP STAND FOR THIN METAL STORAGE CASE** EKS body dedicated

No.	L	W	H	h	T	▼kg	📦
<b>EKS-301</b>	240	50	197	55	3.2	2.6	1

• Dedicated stand that allows the thin metal storage case EKS-101 and 103 to be used not only wall-mounted but independently.

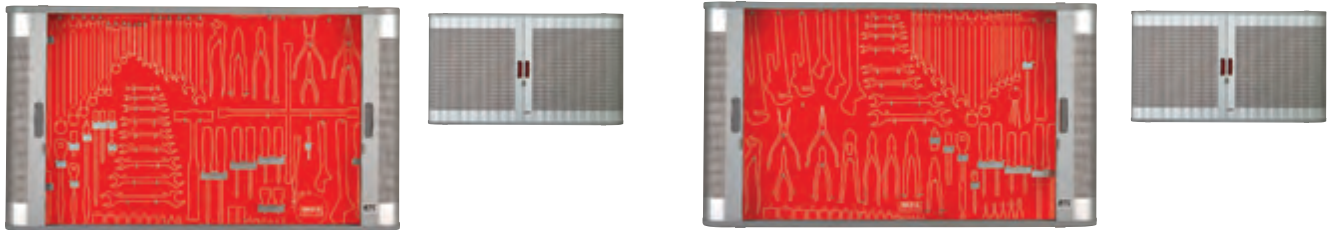


**THIN METAL STORAGE CASE**

No.	<b>EKS-103</b>	▼kg 14	📦 1
• Body Size	W600 × D145 × H600		

Thin metal storage case for the tool set SK3568SS. With shadow pictures, it is also useful in the tool management. (Please refer to P.26 for more information on SK3568SS.)

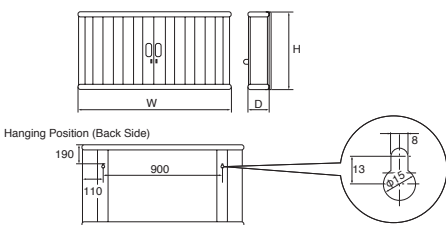
It can be changed to the punching board type by mounting the punching board EKS-501 for thin metal storage case.



**WALL HUNGING TOOL CHEST (FOR VEHICLE MAINTENANCE)**

No.	<b>MK91A-M</b>	▼kg 18	📦 1
• Body Size	W1125 × D145 × H630		
• Color	Shutter: Silver, Tool Hanging Panel: Red		

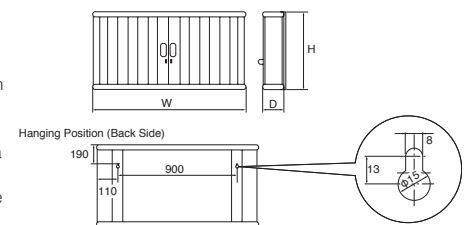
- Tool-shaped shadow pictures for hanging tools up.
- Hang-on-wall type with sliding shutter for security.
- It can be locked with a padlock, etc. (This product does not have a key.)



**WALL HUNGING TOOL CHEST (FOR GENERAL MACHINERY MAINTENANCE)**

No.	<b>MK81A-M</b>	▼kg 18	📦 1
• Body Size	W1125 × D145 × H630		
• Color	Shutter: Silver, Tool Hanging Panel: Red		

- Tool-shaped shadow pictures for hanging tools up.
- Hang-on-wall type with sliding shutter for security.
- It can be locked with a padlock, etc. (This product does not have a key.)



\*Please check the merchandise inventory for a product that is marked by before placing an order.



# 9.TOOL STORAGE SPLIT-OPEN and TOP OPENING TOOL CASE



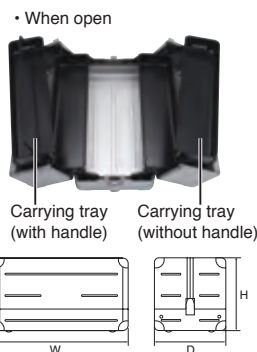
## ●SPLIT-OPEN METAL CASE D.PAT.P.

No. <b>EK-1</b>	▼kg 6.0	📦 1
• Size	W430xD225xH225	
• Carrying tray size (with/without handle)	w390xd100xh45	

- Two types of removable carrying trays (with/without handle) have been set on the upper level. The unit can be easily transported after having included the necessary tools for the given working environment.
- The retractable handle provides precise movement without slack, preventing involuntary movement. Units can be loaded on top of each other by retracting the handle.
- Corners employ the R form for the benefit of users and the surrounding environment.
- The unit is composed of steel material.



EK-1



## ●SPLIT-OPEN METAL CASE

No. <b>EK-10</b>	▼kg 7	📦 1
• Body Size	W440xD233xH230	
• Carrying tray size (with · without handle)	w390xd100xh45	

- It can be locked with a padlock, etc. (This product does not have a key. )
- 2 types of removable carrying tray (with · without handle) is set on the upper stage. It can easily be carried to work sites with only what is needed.
- Retractable handle has precise movement without rattling or accidental falling. It can be stacked by putting down the handle.
- Corner pad protects the body even in a harsh environment.
- Corner pad is made of impact · scratch resistant rubber.
- Steel is used for the material.
- \* Carrying tray is set as a spare part. Please contact your dealer for details.



### EK-1 Features



- Retractable handle that does not accidentally fall
- Round shape for the safety of people and objects

### EK-10 Features

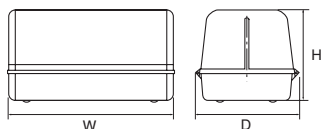


- Extra attention paid to the lock too  
Lock on the case side can be locked with a padlock.
- Corner pad  
Corners use rubber pads for the safety of people and objects.

## ●SPLIT-OPEN PLASTIC HARD CASE

No. <b>SK330P-M</b>	▼kg 4.0	📦 1
• Size	W445xD280xH250	

- The grip and lock can be accommodated flush with the top cover, making the flat top panel design flat and neat. Ease of storage has been improved and the grip has been made even easier to grasp.
- The case weight has been reduced considerably. It is now only 4 kg, 30% less than our previous steel case product.
- Excellent oil resistance, shock resistance and strength-a tool box for the future!
- Made of Mostron plastic exclusively developed for automobiles. This tool case is lightweight, rugged and very easy to use.



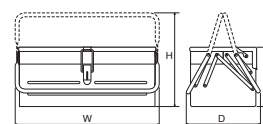
SK330P-M



Look at the flatness. The grip and the lock are below the surface.

## ●SPLIT-OPEN METAL CASE (RETRACTABLE HANDLE)

No. <b>SKC-MA</b>	▼kg 3.9	📦 1
• Body size	W460xD230xH280 (including handle) Retractable Handle: h190	
• Body inside dimension	w410xd198xh130	
• Tray size	w410xd87xh49	
	Partition plate mounting pitch: 57, tray partition plate x 12	



\*Replacement parts are available. Check with your dealer for details

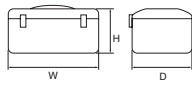
\*Please check the merchandise inventory for a product that is marked with before placing an order.

●TOP OPENING METAL CASE

No. <b>EK-3</b>	▼kg 3.0	📦 1
• Size	W410×D210×H150	
• Carrying case	w390×d100×h45	

**MODEL CHANGE** This model supercedes the SK-40M, SK20-M

- Padlocks can be used to lock the unit. (This product does not include a lock function)
- The handle will not protrude when storing.
- A fixed tray is included in the unit for the storage of small screws and parts.
- The carrying tray (metallic) with handle can be removed from the unit case for easy transporting.
- The unit is composed of steel material.

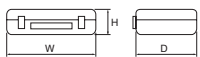


EK-3

●TOP OPENING METAL CASE

No. <b>EKB-1</b>	▼kg 0.8	📦 1
• Size	W275×D150×H50	

- Trunk type metal cases.
- Convenient for storage of tools and parts.

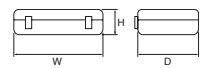


EKB-1

●METAL CASE

No. <b>EKB-3</b>	▼g 600	📦 1
• Body size	W275×D150×H35	

- It is useful for the management of tools, parts, etc.
- Steel is used for the material.



EKB-3

●PLASTIC HARD CASE

No. <b>EKP-1</b>	▼kg 3.5	📦 1
• Body size	W540×D360×H350	
• Inside tray size	w290×d285×h90	
• Inside dimension (with inside tray)	w410×d275×h200	



EKP-1

●METAL CASE

No. <b>B4110-MA</b>	▼kg 3.1	📦 1
• Body size	W545×D185×H85	
• Inside dimensions	w530×d170×h80	

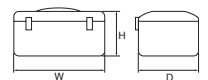


B4110-MA

●METAL CASE

No. <b>EK-5</b>	▼kg 1	📦 1
• Body size	W375×D175×H112	

- Compact metal case that follows the stylish design of EK Series.
- It can be locked with a padlock, etc. (This product does not have a key.)
- It is useful for categorizing tools in the factory or carrying to the work place with only the necessary tools.
- Handle does not protrude and top is flattened at storage, making it easy for objects to be placed on top of the case.
- Steel is used for the material.

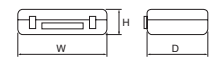


EK-5

●TOP OPENING METAL CASE

No. <b>EKB-2</b>	▼kg 1.6	📦 1
• Size	W455×D190×H60	

- Trunk type metal cases.
- Convenient for storage of tools and parts.

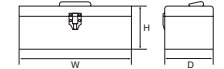


EKB-2

●TOP OPENING METAL CASE

No. <b>SK120-M</b>	▼kg 4.0	📦 1
• Size	W405×D200×H170	
• Middle-sizes tray	w390×d110×h45	
• Carrying case	w390×d110×h35	
• Tray for parts	w155×d 65×h20	

- Practical size easy to carry with big storing capacity.



SK120-M

●PLASTIC HARD CASE

No. <b>EKP-5</b>	▼g 900	📦 1
• Body size	W385×D202×H140	
• Inside tray size	w345×d148×h32	
• Inside dimension (with inside tray)	w345×d150×h65, inside tray partition plate × 2	

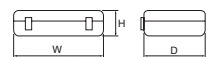


EKP-5

●TOP OPENING PLA-HARD CASE

No. <b>TCP1-1</b>	▼kg 0.8	📦 1
• Size	W385×D190×H65	

- So far we have the image that tool case=steel=durable while plastic may be fragile. To change such image, we have chosen a completely brand-new material. Mostron : new plastic exclusively developed for automobiles. This tool case is lightweight, rugged and very easy to use.



TCP1-1

\*Please check the merchandise inventory for a product that is marked by before placing an order.

# 9. TOOL STORAGE ACCESSORIES



## ● MINI CHEST & MINI CABINET SET

No. **SKX0010R** ▼kg 7.5  1

- Set Contents  
 MINI Chest (2 Stages, 2 Drawers): SKX0012  
 MINI Cabinet (4 Stages, 4 Drawers): SKX0514



Drawer Removal Method  P.333

• For the comfortable storage of tools, accessories and parts.

Authentic, full-featured hobby case for any desired use.

\* Spare parts are configured. Please contact your dealer for details.

### ● Usage example



\*Tools are sold separately.

## ● MINI CHEST (2 STAGES, 2 DRAWERS)

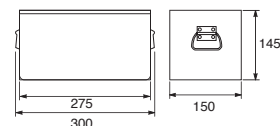
No. **SKX0012** ▼kg 3.1  1

- Body Size W300xD150xH145 (including side handles)
- Top Size w270xd140xh30x1
- Drawer Size w215xd130xh38x2
- Top Mat x 1 • Drawer Mat x 2



Drawer Removal Method  P.333

\* Spare parts are configured. Please contact your dealer for details.



## ● MINI CABINET (4 STAGES, 4 DRAWERS)

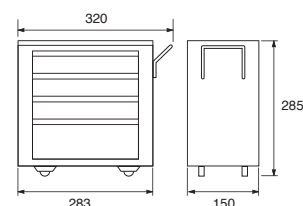
No. **SKX0514** ▼kg 4.4  1

- Body Size W320xD150xH285 (including side handles)
- Drawer Size w215xd130xh38x3
- Drawer Mat x 4 • Mini Cabinet Dedicated Mat x1 (It can't be locked.)




Drawer Removal Method  P.333

\* Spare parts are configured. Please contact your dealer for details.



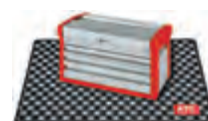
Mini Cabinet Dedicated Mat

### GARAGE MAT

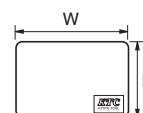
No.	Size	▼kg	
EKR-701	W900xD600	1.3	1

- It is a conventional mat that can be used in various maintenance contexts.
- Prevent damage to the floor and case by laying it under a chest or split-open case. It also prevents scratches and dirt from the direct placement of parts.
- Mat can be laid when working in low position such as kneeling to reduce the knee ache.
- Material: polypropylene

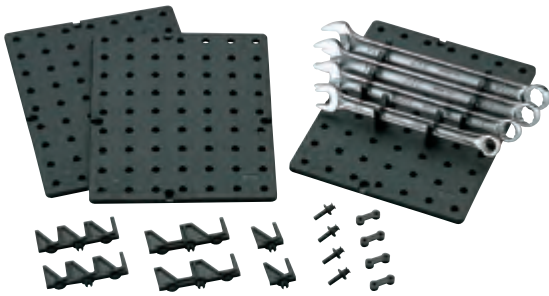
### ● GARAGE MAT



Usage state



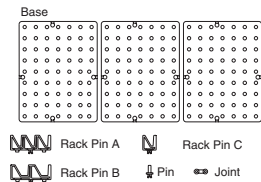
● WRENCH RACK (For open end wrenches, offset wrenches, and combination wrenches)



[Suggested Use]



• Tools are sold separately.



Three bases cover the floor of chest draw (SKX0203, 0203S, 0203B, 1202, 1203)

WRENCH RACK

No. TEH1SM	
Base	180×140×5.5 3 Bases
Rack Pin A	For small size (approx. 19×21) 3 holders ×4
Rack Pin B	For large size (approx. 19×21~24×27) 2 holders ×2
Rack Pin C	For small size 1 holder ×4
Pin	4
Joint	4

Replacement Parts

No.	Product	Amount
EH1SM210	Rack Pin A	10
EH1SM310	Rack Pin B	10
EH1SM410	Rack Pin C	10
EH1SM510	Pin	10
EH1SM610	Joint	10

- Allows for tidy storage in cabinets and toolboxes.
- SKX0203, 0203S, 0203B, 1202, 1203 (P.353) will fit perfectly when 3 racks are lined up.
- The base and rack pin can be arranged to your personal preference.
- Made with lightweight and chemically stable PP plastic.
- Organized tools will enable more efficient servicing, which will appeal to the customer.

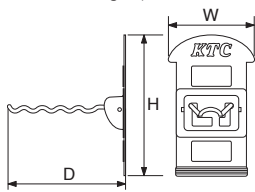
● MAGNETIC T-SHAPED WRENCH HOLDER



MAGNETIC T-SHAPED WRENCH HOLDER

No.	W	D	H	▼g	☐
YKHD-5TM	110	155	180	370	1

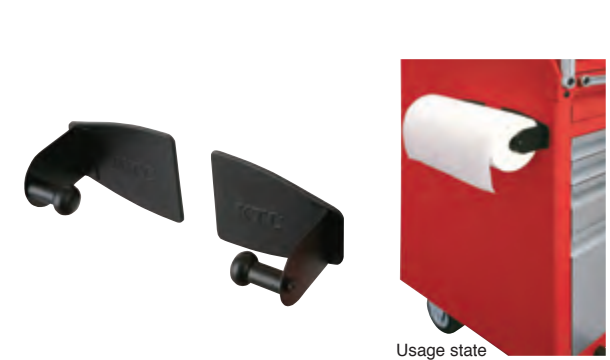
- It is a T-shape wrench holder that can be mounted by magnet.
- Arm can be folded when not in use.
- Sliding is prevented with rubber mold.



**CAUTION** • Do not place more than the withstand load.  
• Please install it on a flat iron plate with 0.8mm thickness or more.

Withstand Load: 3Kg

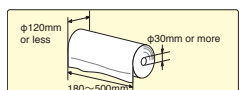
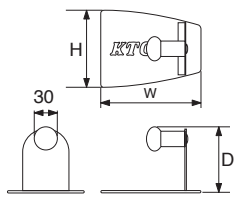
● MAGNETIC PAPER HOLDER



MAGNETIC PAPER HOLDER

No.	W	D	H	▼g	☐
YKHD-RPM	130	85	102	640 (2 pcs.)	1

- Rolled paper rag can be attached with magnet.
- Left and right are independent, supporting the paper rag of φ120mm and 500mm width max.
- Sliding is prevented with the powerful rubber magnet.



**CAUTION** • Do not place more than the withstand load.  
• Please install it on a flat iron plate with 0.8mm thickness or more.

Withstand Load: 1Kg

● HOLDER FOR IMPACT WRENCH



HOLDER FOR IMPACT WRENCH

No.	W <sub>1</sub>	W <sub>2</sub>	D	H	▼kg	☐
YKHD-01	150	104	110	380	1	1

- Application** ● 1/2"sq. impact wrench with the hammer case of 82mm or less.  
● Square 1/2"sq. socket.
- Features** ● Can be mounted on a cabinet or the like by powerful magnet.  
● Stores an impact wrench neatly, allowing the smooth retrieval.  
● Holder for impact wrench is processed for antiskid, preventing accidental fall.  
● With a holder that allows the storage of 1/2"sq. socket.  
(It cannot be inserted into the socket holder with pin · ring attached.)  
● Rubber is attached on the back magnet to prevent damage to the mounted object.

Supply Parts

No.	Product Name	▼g
YKHD-01A	Clip for Holder for Impact Wrench	10

- CAUTION** • Do not place more than the withstand load.
- WARNING** • Be sure to remove the air hose when storing an impact wrench.

**MAGNETIC SPRAY CAN HOLDER**

No.	W	D	H	▼kg	📦
YKHD-02	405	100	134	1.1	1

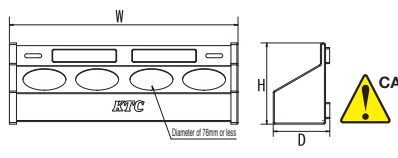
Attachment: Mounting screw × 2, mounting spacer × 2, antiskid sheet × 1.

**Application**

- Spray can with the diameter of 76mm or less and height of 350mm or less.

**Features**

- 4-hole type that can be mounted on a cabinet or the like by powerful magnet.
  - Holder with depth that can store long cans such as parts cleaner.
  - With antiskid sheet that prevents stored items from falling and suppresses noise when storing.
  - Cover on both sides is resin-made that's safe for people and objects.
  - Rubber is attached on the back magnet to prevent damage to the mounted object.
  - It can be screw-fastened with the attached mounting screws and spacers.
- (Our roller cabinet EKW-1000 Series and No.SKX3805 are supported)



**Withstand Load: 4Kg**



- Do not place more than the withstand load.

●MAGNETIC SPRAY CAN HOLDER



Usage state

**MAGNETIC PARTS BOWL**

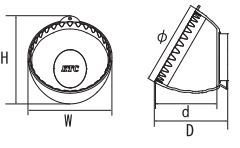
No.	Material of main body	φ (outer diameter)	W	D	d	H	▼g	📦
YKHD-03S	ABS	114	114	99	83	113	180	1
YKHD-03L	ABS	153	153	132	114	161	380	1

**Usage**

- Storage bowl for screws, parts, accessories, etc.

**Features**

- Can be freely mounted on a cabinet or the like by powerful magnet.
- Store the removed screws during work to prevent loss.
- With the deep bowl shape, storage of plastic parts, etc. that don't adhere to the magnet is also possible.
- ABS with excellent crack and oil resistance is adopted.
- Resin-made that prevents accidental injury or damage to the parts.
- Rubber is attached on the magnet to prevent damage to the mounted object.



**Withstand Load: 1Kg**

YKHD-03S, 03L common



- Since it is resin, please do not apply heat.
- Do not place more than the withstand load.

●MAGNETIC PARTS BOWL



Usage state

**MAGNET SHEET**

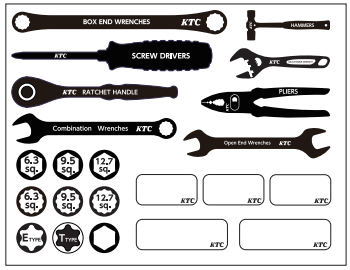
No.	Sheet size	📦
EHMG-1	W290 x H245	1

■ Stickers: 19 types total (22pcs.)

Offset Wrench	x1	6.3sq. (Hex., 12pt.)	x1 each
Driver	x1	9.5sq. (Hex., 12pt.)	x1 each
Ratchet Handle	x1	12.7sq. (Hex., 12pt.)	x1 each
Combination Wrench	x1	E-Type Torx	x1
Hammer	x1	T-Type Torx	x1
Adjustable Wrench	x1	Socket (Hex.)	x1
Pliers	x1	Label (Small)	x3
Spanner	x1	Label (Large)	x2

- Stored items such as tools and squares can be displayed, allowing them to be checked at a glance.
- It can be used as a clasp for documents, etc.

●MAGNET SHEET



Usage state

Alphabetical Index (Product No.)

A							
AB-10	266	ACP6	268	AL805F	307	APS3510	264
AB-11	267	ACPD-54 · 64	268	AL805HB	307	APS356	264
AB252	269	AD101	149 · 280	AL805MG	307	APS-35G	264
AB-5	263	AD101-123	149 · 280	AL806 · S · 1~3	308	APWA-350~600	167
AB-53	64	AD102A	153 · 281	AL807 · S · A · P	308	AS10	250
AB-7	263	AD102B	153 · 281	AMLB0810	279	AS10-1	250
AB-9	263	AD501-22W	282	AMLB0810-08~320-H	279	AS10-2	250
ABO-100	267	AD501-A	282	AMLB0810-1	279	AS10-3	250
ABP4-17ALP~21ALP	256	AD502-22W	282	AP-175	152	AS201	240
ABP6-14WP~22WP	231	AD503-22W	282	AP20-10	290	AS202A	240
ABP6-17SQP~21SQP	85 · 257	AD601-08	294	AP20-10B	290	AS202-A24	240
ABP6-17Y~21Y	91	AD601-10	294	AP201-10A	291	AS202-J	240
ABP6-3217TP~4121TP	84 · 256	AD601-P2	294	AP201-10P	291	AS30	242
ABP6ZL-4121TP	256	AD701	280	AP20-13	290	AS301	238
ABP8-17SQP~21SQP	87	ADV2	282	AP20-13B	290	AS30-1	242
ABP8-17Y~21Y	91	AE-10	227	AP201-C	292	AS307	238
ABP8-32TP~41TP	86 · 257	AE-10-1	227	AP201-CF	292	AS3072	238
ABP8-3517TP~4121TP	86 · 257	AE101-10~19	223	AP201-CN	292	AS308-30W	241
ABP8ZL-4121TP	87 · 258	AE101-12S	223	AP201-HF	292	AS308-32W	241
ABU-1935	279	AE101-3R	223	AP201-HN	292	AS309	242
ABU-3262	279	AE102	223	AP201-HS	292	AS351	245
ABX10	265	AE-10-2	227	AP201-N	291	AS352	245
ABX101	64 · 267	AE103	223	AP201-W	291	AS353	246
ABX102	267	AE107-260	225	AP201-WA	292	AS354	246
ABX103	267	AE107-500	225	AP202A	293	AS401	244
ABX104	267	AE108	226	AP202B	293	AS402	152 · 243
ABX105	265	AE109-12W	226	AP202C	293	AS403A	243
ABX301	270	AE109-450	226	AP202D	293	AS403A4	243
ABX302	270	AE401	219	AP203-10A	290	AS403B	243
ABX303	270	AE401-CPL	219	AP203-6A	290	AS403B4	243
ABX304	270	AE401-ST	219	AP204	294	AS404	241
ABX305	270	AE45T	221	AP205-T20	287	AS405	244
ABX-31	264	AE45T-1~3	221	AP205-T20A	287	AS701	237
ABX-32	263	AE503-10	209 · 235	AP205-T25	287	ASP-550	264
ABX-33 · 34	263	AE701	227	AP205-T25A	287	ASP-C	264
ABX-35	263	AE702	228	AP206	295	ATBP403AL	256
ABX6-12~34	61 · 70 · 271	AE702-1 · 2	228	AP20-6	290	ATBP603	231
ABX70	271	AE703	228	AP20-6B	290	ATBX04	270
ABX7-08 · 10	270	AE703A	228	AP207	294	ATBX12	262
ABX7-0811	269	AE81	230	AP208A	293	ATBX13	267
ABX70-A1 · A2	273	AE81-5 · 6	230	AP208B	293	ATBX32	270
ABX70-B1 · B2	273	AE82	230	AP20L-10	290	ATBX33	270
ABX70-D1	273	AE901	234	AP20L-10B	290	ATBX6	262
ABX70-E1	273	AE901K	234	AP20L-13	290	ATBX70I	271
ABX70-F1 · F2	273	AE92	220	AP20L-13B	290	ATC3013	235
ABX70-G1 · G2	273	AE921	220	AP20L-P	290	ATCB2A	266
ABX70-H1	273	AG601	192	AP502	296	ATCB2B	266
ABX7-S1	270	AG602	192	AP502PA	296	ATCB5	266
ABX7-T1	270	AG901	237	AP901	284	ATD5012	282
ABX9-06	265	AG902	237	AP901-1	284	ATD6013	294
ABX9-06A	265	AGT231	192 · 254	AP902A	288	ATE104	223
ABX9-08	265	AGT232	192 · 254	AP902B	288	ATE107	223
ABX9-08A	265	AGT23-A1	192 · 254	AP902B-1	288	ATE109	226
AC301-10-13-17	235	AGT23-A2	192 · 254	APS3010	264	ATE175	225
ACB-12	266	AGT23-A3	192 · 254	APS306	264	ATE7A	229
ACP-16A~32A	268	AH101	254	APS-30G	264	ATE7B	229
ACP-16F~32F	268	AH102	254	APS3210	264	ATE7C	229
ACP-41F~59F	268	AH2-4	254	APS326	264	ATG30-1	191 · 232
		AL805CA	307	APS-32G	264	ATG92	237

ATP02	289	AVSA-6379-K	217	B3TW-08~17	60	BHM3	64
ATP03A	289	AVSA-A74~A93	212	B40-17~85	74	BHM4	71
ATP03B	289	AVSA-B76 · B86	212	B4-08~36	68	BJ2	54
ATP03C	289	AVSA-C76 · B95	212	B4-08W~36W	68	BJ3	65
ATP11	288	AVSA-R64A	212	B4110-MA	344	BJ4	72
ATP2012	291	AVSA-R64B	212	B4-3/8~1-3/8	68	BJF20	65
ATP2014	291	AYC-2	303	B4-3/8W~1-3/8W	68	BJF30	72
ATP2015	292	AYC-3	303	B45-17~63	75	BJP4	83
ATP201H3	292	AYC401	303	B4A-16P~20.8P	277	BJP6	85
ATP2022	293	AYC402	303	B4-E8~E24	112	BKB-L	316
ATP2022A	293	AYC403	303	B4L-08~36	69	BKB-M	316
ATP2032A	289	AYC404	303	B4L-08W~36W	69	BKB-S	316
ATP32	295	AYPC-1·2·4·6	288	B4L-3/8~1-3/8	69	BL40-500	76
ATP9022	288	AYSC-20F · 20R	302	B4L-3/8W~1-3/8W	69	BNS3-08W~19W	60
ATS3082	241			B4TW-17~24	69	BO30-280	71
ATUD302	241 · 286			B50-27~100	77	BO40-320	76
ATUD303	286			BA23	54	BO50-600	77
ATUD304	286			BA3040	72	BP3L-06T~22T	79
ATUD307	241			BA32	65	BP3L-06TP~22TP	79
ATUD402	241 · 286			BA34	65	BP3LL-10TP~19TP	80
ATYC4014	303			BA4030	76	BP3M-07T~22T	79
AUD3	241 · 284			BA43	72	BP3M-07TP~22TP	79
AUD3-4-5	284			BAD-0 · 50 · 75	140	BP4-08~32	81
AUD3-1820	286			BAE23	55 · 66	BP4-08P~32P	80
AUD3-AD1	242			BAE234	66	BP49-17~22	83 · 256
AUD3-B2	286			BAE34	66	BP4L-10T~32T	82
AUD3-B3	286			BAP34	80	BP4L-10TP~32TP	82
AUD3-B4	286			BAP43	83	BP4L-17JUP~24JUP	83
AUD3-C1	286			BAP46	83	BP4LL-12TP~22TP	82
AUD3-C2	286			BAP64	85	BP4M-08T~36T	81
AUD3-D1	286			BAP64-150	85	BP4M-08TP~36TP	81
AUD3-E1-6	286			BAP68	85	BP6-17P~46P	84
AUD3-E1-8	286			BAP86	87	BP6L-19TP~46TP	84
AUD3-G1/2	286			BAP86-150	87	BP6L-33TP	85 · 257
AUD4	241 · 284			BB40-1-1/16~2	75	BP7-300~900	153
AUD4-2225	286			BD10	53	BP7-300-K~900-K	153
AUD4-9/16	286			BD20	64	BP8-21P~70P	86
AUD4-B1	286			BE12-30 · 45	278	BP8L-22TP~70TP	86
AUD4-B11	286			BE2-030~600	54	BP8L-33TP	87 · 258
AUD4-B2	286			BE2-030JW~270JW	54	BPZ2-215C	153
AUD4-F1	286			BE2-Q	54	BR2E	52
AUD4-G1/2	286			BE3-030~1000	65	BR2E-K	52 · 53
AUD5-1820	286			BE3-030JW~1000JW	65	BR2F	53
AUD55T	284			BE3-Q	64	BR2FL	53
AUD5-B2	286			BE4-050~1000	72	BR2FS	53
AUD5-B21	286			BE4-050JW~270JW	72	BR2L	52
AUD5-B3	286			BE40-75~400	76	BR2S	52
AUD5-F1	286			BE4-Q	71	BR3A	61
AUD5-G3/4	286			BE50-200-400	77	BR3A-K	61 · 63
AVG35	248			BEF3020-950	234	BR3E	61
AVG35-2~7-7-7	248			BEF31-12H~17H	234	BR3E-K	61 · 62
AVSA-063~101	211			BEP3-075-100	80	BR3F	61
AVSA-074~087	212			BEP4-075-100-150	83	BR3FL	62
AVSA-074C~C95	212			BEP6-100-150-250	85	BR3L	61
AVSA08A	211			BEP8-150-200-250	87	BR4E	70
AVSA-101B~125B	213			BES10-150	54	BR4E-K	70
AVSA12A	211			BES21-200	65	BR4F	70
AVSA5	213			BH40	76	BR4FL	70
AVSA-6379	217			BHM2	53	BR4L	70
		<b>B</b>					
		B126P	278				
		B12P-16H-18H-20.8H	278				
		B20-24HD-26HD-27HD	282				
		B202HD	282				
		B2-032~14	51				
		B2-055~14W	51				
		B20T-19	282				
		B2-1/8~9/16	51				
		B2-7/32~9/16W	51				
		B2-E4~E10	111				
		B2L-032~14	52				
		B2L-055W~14W	52				
		B2L-1/8~9/16	52				
		B2L-7/32W~9/16W	52				
		B3-055~24	57				
		B3-055W~24W	57				
		B3-1/4~7/8	57				
		B3-1/4W~7/8W	57				
		B350-10 · 12	231				
		B3502	231				
		B35A-17H · 19H · 21H	255				
		B360-10	230				
		B38Z-17H~22H	255				
		B38ZL-17H~21H	255				
		B38ZM-21H	255				
		B3A-13P · 16P · 18P · 20.8P	277				
		B3A-14SP · 16SP	277				
		B3-E5~E16	111				
		B3F-14SP · 16SP	277				
		B3L-055~24	58				
		B3L-055W~24W	58				
		B3L-08MGA	59				
		B3L-1/4~7/8	58				
		B3L-1/4W~7/8W	58				
		B3L-10MGA	59				
		B3L-12MGA	59				
		B3L-13MGA	59				
		B3L-14MGA	59				
		B3LL-10 · 12	59				
		B3M-055~24	58				
		B3M-055W~24W	58				
		B3P-16LL	277				
		B3TLL2	59				

BR6A	75	BT3-T20L~T55L	109	CTR12	319	<b>E</b>			
BR6A-K	75	BT3-T20S~T55S	108	CTX309	315	ECC-1R~3R	281		
BR8A	77	BT4-05~17	98	CTX316	316	ECC-1T~3T	281		
BR8A-K	77	BT4-05BPL~08BPL	99	CTX320	316	ECC6	281		
BRA21	63	BT4-05L~17L	98	CW-90140	217	EH1SM210 · 310 · 410 · 510 · 610	346		
BRC3E	62	BT4-2P · 3P	97			EHB205	55		
BRC3F	62	BT4-3/16~5/8	98	<b>D</b>				EHB210	55
BRC3FS	62	BT4-3/16BPL~5/16BPL	99	D12M2-5~8	145	EHB215	55		
BRC3-K	62 · 63	BT4-3/16L~5/8L	98	D12P2-1~215	145	EHB27	55		
BRC3S	62	BT4-6M	97	D1H-015~08	104	EHB305	66		
BRG3	63	BT4-M5~M12	232	D1H-015BP~08BP	104	EHB310	66		
BRM40	76	BT4-T30~T70	109	D1H-1/16~5/16	104	EHB315	66		
BS2E	53	BT4-T30H~T70H	115	D1H-1/16BP~5/16BP	104	EHB35	66		
BS2E-K	53	BT4-T30HL~T70HL	115	D1M2-5~8	137	EHB405	73		
BS2L	53	BT4-T30L~T70L	110	D1M2-530~830	137	EHB410	73		
BS3E	63	BT52P	142	D1MS-6	137	EHB45	73		
BS3E-K	63	BT53P	142	D1P2-1~3	137	EHBA210	55		
BS3L	63	BTP3-04P~12P	88 · 97	D1P2-130~330	137	EHBA310	66		
BS40-500	76	BTP3-T20P~T45P	88	D1PS-2	137	EHBA410	73		
BS4-780	71	BTP4-06P~17P	88	D1T-T6~T50	111	EHBAC-3	66		
BS4-780-1	71	BZ14-08W~14W	130	D1T-T8H~T50H	116	EHBAC-4	73		
BS4E	70	BZ14-BA3	130	D7M2-5~615	144	EHBASC	55 · 66 · 73		
BS4E-K	70	BZ25-10H	269	D7M-5~630	144	EHDB06	142		
BS4L	70			D7P-1~230	144	EHMG-1	347		
BS6-1050	76	<b>C</b>		D7P2-1~215	143	EHS-1	125		
BS6-K	76	CCP-190	291	D7SM-410~475	144	EK-1	343		
BSD20	64	CD3	232	D7SP-0010~175	144	EK-10	343		
BSD30	71	CDZ-165	232	D8M2-5~615	145	EK-3	344		
BSR30	73	CG-400	300	D8M-5~620	145	EK-5	344		
BSR354	73	CGP-1625	234	D8P-1~220	145	EKB-1	344		
BSR35-6~12	73	CMD0091	188	D8P2-1~215	145	EKB-2	344		
BT2-03~06	93	CMD0172	188	D9M-625	144	EKB-3	344		
BT2-03BPL~06BPL	94	CMD0282	188	D9P-125 · 225	144	EKP-1	344		
BT2-03BPL~08BPL	97	CMD072	188	DB4	140	EKP-5	344		
BT2-03L~06L	94	CMD143	188	DB4-H-M-P	140	EKR-1003	331		
BT2-1/8~1/4	93	CMD243	188	DBR03	141	EKR-1003BK	331		
BT2-1/8BPL~1/4BPL	94	CMD353	188	DBR03-01	141	EKR-1003R	331		
BT2-1/8L~1/4L	94	CMD484	188	DBR14	141	EKR-1004	331		
BT2-1P-2P	93	CMD804	188	DBR14-01~15	141	EKR-1004BK	331		
BT2-6M	93	CMD805	188	DBR14-02	141	EKR-1004R	331		
BT2-T6~T30	108	CMPB0152	189	DBR14-04	141	EKR-103	332		
BT2-T6L~T30L	108	CMPB0253	189	DBR14-05	141	EKR-113	332		
BT2-T8H~T30H	113	CMPB0503	189	DBR14-06	141	EKR-2003	331		
BT2-T8HL~T30HL	114	CMPB0504	189	DBR14-BD2	141	EKR-2003BK	331		
BT3-03~12	96	CMPB1003	189	DBR16	141	EKR-2003R	331		
BT3-03L~12L	96	CMPB1004	189	DBR16-01	141	EKR-301	333		
BT3-03S~12S	95	CMPB2004	189	DC-6024	341	EKR-501	333		
BT3-03SS~12SS	95	CMPB3004	189	DC-602F	341	EKR-502L	333		
BT3-1/8~7/16	96	CMPB8006	189	DC-6035	341	EKR-502S	333		
BT3-1/8BPL~5/16BPL	97	CMPB8008	189	DC-9036A	341	EKR-701	345		
BT3-1/8L~7/16L	96	CP1-15	319	DC-9038A	341	EKS-101	342		
BT3-1/8S~7/16S	95	CP2-15A · 15B	319	DC-904FA	341	EKS-103	342		
BT3-1P~3P	94	CPH1	227	DIGITALRATCHET	185	EKS-301	342		
BT3-6M	94	CPH128	229	DMR-12	296	EKS-501	342		
BT3-M5~M10	232	CPHU2	229	DMZ-12 · 14	295	EKS-911	342		
BT3-T20~T55	109	CPU12	228	DMZ2	295	EKW-1005	335		
BT3-T20H~T55H	114	CPU13	228	DPP-165	152	EKW-1005BK	335		
BT3-T20HL~T55HL	115	CS1	318			EKW-1005R	335		
BT3-T20HS~T55HS	114	CS1-A1	318			EKW-1007	335		





LT30H	116	MK91A-M	342	PBE50-150-200-250	91	PSL-200L	150
LT40	110	MR-0813-1014	124 · 327	PBJ30	91	PSN-175	147
LT40H	116	MR-0813L	124 · 327	PBJ31L-17H~24H	91	PWA-150~900	167
LT45	110	MR-1014L	327	PBJ40	91		
LT45H	116	MR1-0607F~2224F	122	PBU-1219	235		
LT50	110	MR15L-10F~19F	123	PC2-66	325	<b>R</b>	
LT50H	116	MR1A-0810F~1719F	122	PC2665C	325	RGG-20	192
LT55	110	MR1S-0810F~1719F	123	PCK305	325	RM03	123
LT55H	116	MS2-032~46	128	PCK305S	325	RM22	142
LT6	110	MS2-1/8~1-1/2	128	PCR2-35	322	RM32	142
LT8	110	MS30-8~19	132	PCR2-66	322	RM-8X9~14X17	123
LT8H	116	MS3-08T · 10T · 15T	318	PCR3-35	323		
LTX12	110	MSR1A-08~24	129	PCR3-66	323	<b>S</b>	
LTXH11	116	MSR1A-08F~19F	129	PCRK-C	324	S20-10X12~19X17	126
LZ1-450	302	MSR2A-08~19	129	PCRK-CM	324	S2-05507~4146	126
LZ2-330 · 420 · 600	302	MSR2S-08F~19F	130	PCRK-FS	323	S206	126
		MSR2SA-08~17	129	PCRK-S	323	S2-1/4X5/16~1-1/8X1-1/4	126
		MTG-98	192	PCRT-23	324	S30-8~19	132
<b>M</b>		MVC-30	314	PCRT2-35	324	S6T20	91
M1004	121	MWA-150~450	167	PCRT2-66	324	S6T25	91
M100-7X8~22X24	121	MZ10-10X12-14X17	269	PD-1~4	139	S6T30	91
M1505	121	MZ1-10x12	269	PDD1-1~3	138	S6T40	91
M150-8X10~22X24	121	MZ11-10-12	269	PDDZ-2	139 · 232	S6T45	91
M151-10X12~14X17	121	MZ112	269	PDEA-00~3-P	138	SCP-171-1715	147
M1603	121	MZ25-10H	269	PDEZ-1	197	SCP-171LL	147
M160-8X10~27X30	121	MZF-10	268	PDEZ-2	197	SCP-172L	148
M215P	120			PH-16x21	278	SCP-172LL	148
M2506	120			PH45-323	158	SD1-P · M	139
M2510	120	<b>O</b>		PH68-344	158	SD30-8H	142
M253	121	OHZ-210	314	PHB20-4~12	91	SD30-B	142
M25-5.5X7~24X27	121			PHB30-6~17	91	SD3-M	140
M256	120	<b>P</b>		PHF16H · 20.8H	278	SD3-P	140
M258	120	PAU-3747	240	PJ-06-08-1	300	SD4-P	140
M274	122	PB22-7H~22H	90	PJ-06-H	300	SD6	142
M27-8H~14H	122	PB25-6H~22H	90	PJ-150-200-250	146	SDM-1.0-1.6-1.8	142
M30-8~19	132	PB30-8H~32H	90	PJ-150A-200A-250A	146	SDP-1~3	142
M5-05507~4146	119	PB31A-17H	90	PK-2125~8217	161	SK031S	32
M5-1/4X5/16~1-1/8X1-1/4	119	PB31A-19H	90	PK-2125-4~8217-4	161	SK120-M	344
M5S-05507~1921	120	PB31A-21H	90	PK3	161	SK200A	23
MB25-3/8X7/16~15/16X1	121	PB32-10H~32H	90	PK8	161	SK200-M	340
MCCU14	312	PB35-10H~32H	90	PMD18	138	SK300A	24
MCCU-BA·BB·CA·CB·CG·H	312	PB40-17H~46H	90	PMDEA8	138	SK300-M	340
MCCU-PA·PB·PC·PD·PT·KA	312	PB42Z-14~22	90	PMDEZ4	197	SK302	24
MCK317	34 · 311	PB43-3217~4121	90	PN1-125~200	151	SK306M-S	30
MCKB-B	311	PB45-19H~46H	90	PNC-125	151	SK306P-S	31
MCOL-260	314	PB50-21H~70H	90	PP-30	322	SK3126MC	29
MCPS-20.8	313	PB53-3517~4121	90	PR-1519	88	SK322P	34
MCS2-100	314	PB54-32H~41H	91	PR-1822	88	SK3230	34 · 310
MCVU5	313	PB55-22H~70H	91	PR-2026	88	SK3231	34 · 310
MCVU-A16~A28	313	PBA2030	91	PR-2833	88	SK3249S	33
MD-50~300	139	PBA3020	91	PR-4045	88	SK330P-M	343
MDD1-75~150	139	PBA3040	91	PR-4348	88	SK34010CY	35 · 315
MDDZ-400	139 · 232	PBA4030	91	PS6-302	149	SK34010PS	33
MDE1A-50~200	138	PBA4030-150	91	PS6-304	149	SK3434S	33
MDEA-75~150-M	138	PBA4050	91	PSA34	220	SK34410XC	35 · 315
MDEZ-4	197	PBA5040	91	PSA57	220	SK348S	32
MDEZ-5	197	PBA5040-150	91	PSL-150-200	150	SK35310XBK1	36
MK81A	25	PBE20-75-100	91	PSL-150BN-200BN-200BN1	151	SK35310XBK2	36
MK81A-M	342	PBE30-75-100-150	91	PSL-175N	150	SK35310XS1	36
MK91A	25	PBE40-100-150-250	91			SK35310XS2	36

SK3536P	31	SKR811A	218	TB305E	57	TBT3L06BPH	97
SK3546BX	28	SKR822	218	TB306WG1	55 · 175	TBT3L07BPH	97
SK3550W	30	SKR823	218	TB306WG2	55 · 175	TBT3L08T	109
SK35610XMC	29 · 311	SKX0010R	345	TB306WG3	55 · 175	TBT3L08TH	115
SK3567X	28	SKX0012	345	TB308	56	TBT3L09BH	96
SK3568SS	26	SKX0213	334	TB308BX	56	TBT3L09H	96
SK3650E	18	SKX0213BK	334	TB308X	56	TBT3S08T	108
SK3650EZ	17	SKX0213S	334	TB310	57	TBT3S08TH	114
SK3650X	27	SKX0514	345	TB312X	56	TBT3S09BH	95
SK3650XBK	27	SKX2613	339	TB314	56	TBT3S09H	95
SK3650XS	27	SKX2614	339	TB317X	56	TBT3SS09H	95
SK36813X	26	SKX2704	339	TB318	56	TBT407H	98
SK36813XX	26	SKX3306	334	TB3E09	111	TBT407T	109
SK406M-S	30	SKX3805	336	TB3L05	59	TBT407TH	115
SK406P-S	31	SM306	131	TB3L05MGA	59	TBT409BH	98
SK4418WMM	37	SOCP-130	149	TB3L10	59	TBT410H	98
SK44310M	37	SOP-171	148	TB3L11X	56	TBT4L04BPH	99
SK444S	32	SOP-171LL	148	TB3M05	58	TBT4L04BPH	99
SK4510MXBK	38	SOP-172	148	TB3TW06	60	TBT4L07T	110
SK4510MXS	38	SOP-172LL	148	TB3TW10	60	TBT4L07TH	115
SK4510W	30	SOP-173	148	TB3X20	57	TBT4L09BH	98
SK4518WMM	37	SPC0110	149	TB405	68	TBT4L09H	98
SK4526P	31	SPC0110L	149	TB406WG1	66 · 175	TBTP306P	88 · 97
SK45310M	37	SPC0210	149	TB410	66	TBTP406P	88
SK4580E	18	SPC110	149	TB410E	68	TBZ1406	130
SK4580EZ	17	SPC110L	149	TB410W	66	TBZ1407	130
SK4586X	29	SPC210	149	TB410X	66	TCP1-1	344
SK5006	19	SPC310	149	TB410XE	68	TD1H10B	104
SK5016	20	SPC5	149	TB413	67	TD1H5	104
SK5026M	21	SPD-150C-175C-200C	150	TB413X	67	TD1H8	104
SK59310XX	27	SPD-175	150	TB415BX	67	TD1HBP10B	104
SK6006	19	SPP-175	152	TB415W	67	TD1HBP5	104
SK6006B	22 · 312			TB415X	67	TD1HBP8	104
SK6016	20			TB420X	67	TD1T12	111
SK6026M	21			TB4E09	112	TD1T5	111
SK7006	19			TB4L05	68	TD1TH11	116
SK7006B	22 · 312			TB4L10E	68	TD2798	143
SK7016	20			TB4L10X	67	TD3M	142
SK7026M	21			TB4TW05	69	TD4P	142
SK8038EX	16			TB610A	73	TD5100M	142
SK8100A	15			TB614A	73	TD52P	142
SK8100ABK	15			TB615A	74	TD702	143
SK8100AR	15			TB618BA	74	TD798	143
SK8300A	14			TB619A	74	TD902	143
SK8300ABK	14			TBNS305W	60	TDH5	142
SK8300AR	14			TBP4903	256	TDH6	142
SK8600A	12			TBT205H	93	TDT5	142
SK8600ABK	12			TBT206BH	93	TEH1SM	346
SK8600AR	12			TBT208TH	113	TG-923	192
SKC-MA	343			TBT209T	108	TG-98	192
SKR402A	338			TBT2L04BPH	94	TGB-923	192
SKR502A	337			TBT2L04H	94	TGB-98	192
SKR-51	338			TBT2L06BH	94	TGED030C3AZ	182
SKR-52G	338			TBT2L06BPH	94	TGED030C3Z	182
SKR-53	338			TBT2L08TH	114	TGED030R2Z	182
SKR-54S	338			TBT2L09T	108	TGED040X13Z	183
SKR602A	337			TBT304TS	231	TGED060R3Z	182
SKR703A	337			TBT308T	109	TGED085R3Z	182
SKR81	218			TBT308TH	114	TGED085R4Z	183

**T**

TGED085W36Z	183			<b>U</b>			<b>Y</b>	ZD1M-100	195
TGED085X13Z	183	UD1-10	159			YCO-280	203	ZGEV-750	191 · 197
TGED135R4Z	183	UD1-10B	159			YDA-360~730	305	ZGWPA20525	196
TGED135W36Z	183	UD1802C	160			YDB-530	305	ZGWPA30550	196
TGED200R4Z	183	UD1802F	160			YEA-4000	288	ZKF1-2H	165
TGED200W36Z	183	UD1802P	160			YG-39BK	306	ZKF1-2HR	165
TGEK040X132	178	UD2-10	159			YG-39G	306	ZKF1-2R	165
TGEK085X132	178	UD2-10-1	159			YG-39S	306	ZKF1-2S	165
TGX13E1002	180	UD2502C	160			YG-40BK	306	ZKF1-2T	165
TGX13MR147	179	UD2502F	160			YG-40G	306	ZKF2-2H	166
TGZ-1818	192	UD2502P	160			YG-40S	306	ZKF2-2HR	166
TH20	63	UD3-10	159			YG-41S	306	ZKF2-2R	166
TH-8~21	133	UD3-10-1	159			YGJ-40·60·80·120	166	ZKF2-HR	166
TH-8N~12N	133	UD4-10	159			YKAG-01~07	304	ZND-08	198
THF20-700	64	UD5-1~4	160 · 287			YKAG-090A·330A·490A	304	ZPN1-160	198
THF2-10~17	134	UD6-10	159			YKAGC-95	304	ZPSL-160	198
THF2-10L~17L	134	UD7-10	158			YKAGC-R	304	ZPSL-220R	198
TKZ1153	163	UD7-10-1	158			YKAGC-S	304	ZS2-08SE	198
TKZ232A	164	UD8-10	158			YKHD-01	346	ZS2-10SE	198
TKZ3183	165	UD8-10-1	158			YKHD-01A	346	ZS2-12SE	198
TM305	132	UD9-1 · 2	160			YKHD-02	347	ZTB310	195
TM506	119	UDC-10·13·16·19·25	161			YKHD-03L	347	ZTB310V	195
TM506B	119	UDHT-2~49	160			YKHD-03S	347	ZTB311	195
TM508	119	UDP-10·13	161			YKHD-5TM	346	ZTB311V	195
TM510	119	UDP-4	161 · 287			YKHD-RPM	346	ZTH3	195
TM5S05	120	UDP-4-1	161 · 287			YKPT-20~52	305		
TMDB8	142					YKPT-20S	305	<b>Number</b>	
TMR105	122			<b>V</b>		YKPT-51H	306	07	156
TMR1S05	123	VK-300	301			YKPT-51L	306	07A	156
TMS208	127	VK-400	301			YKPT-51P	306	08	156
TMS208B	127	VL2-HD	301			YKPT-59H	306	08A	156
TMS210	127	VL3-1	301			YKPT-59L	306	9AC	156
TMS212	127	VL3-2	301			YKPT-RM · SM · MM · LM	305	12LC	156
TMS305	132	VL3F-1	301			YTBR-112~1222	166	130WR	154
TMSR2S06	130	VL3F-2	301			YTHB-100	166	150LN	154
TPMD18	137	VL3-P	301			YWP-400~1200	166	150R	155
TS1500	297	VLS5	302					150SP	155
TS206	125	VS-2	302			<b>Z</b>		18DR	156
TS206A	125	VS-3	302			ZB2L-08	196	200R	155
TS206B	125	VS31	325			ZB2L-10	196	21	156
TS208	125	VS4-3	301			ZB3-08	195	21A	156
TS210	125					ZB3-10	195	22	156
TS305	132			<b>W</b>		ZB3-12	195	22A	156
TSR1380	297	WCMPA085	258			ZB3L-08	195	250CR	154
TSR1380-OP1	297	WCMPA103	258			ZB3L-08MG	196	250R	154
TUD3L	160	WCMPA108	258			ZB3L-10	195	250WR	154
TUD3S	160	WEE12×14L	112			ZB3L-10MG	196	280R	155
TUD6	160	WEE6×7L	112			ZB3L-12	195	280SP	155
TWCMPA119	258	WEE8×10L	112			ZB3L-12MG	196	34	156
TWCMPA221	190 · 259	WM-150~300	167			ZBE2-050	196	460R	155
TWCMPA319	258	WPD1-250 · 300	146			ZBE2-075	196	460SP	155
TWEE3L	112	WPDA-250	146			ZBE2-150	196	51	156
TYKPT4A	306	WTP-210	313			ZBE3-125	195	51A	156
TYKPT4B	306					ZBE3-250	195	510R	155
TYKPT5	306			<b>X</b>		ZBR2	196	52	156
TYKPT5A	306	XH-14-21~19-27	134			ZBR3	195	52A	156
TZKF105	165	XH30	71			ZC30	325	610R	155
						ZCK305	325	610SP	155
						ZCK305S	325	91	156

---

91A	156
92	156
92A	156
100LN	154
100SP	155
100WR	154
101	157
102	157
103	157
137	156
175CR	154
175R	154
175WR	154
225LN	154
225R	155

## Alphabetical Index (Product Name)

A		
ABRASIVE PAPER WATERPROOF		
ABRASIVE PAPER	166	
ADJUSTABLE OIL FILTER WRENCH	217	
ADJUSTABLE WRENCH	167	
AIL TOOL OIL	203	
AIR BLOW GUN	304	
AIR GREASE FEEDER	248	
AIR HOSE	203	
ALL PURPOSE SHEARS	152	
ALUMINUM GARAGE TRAY	306	
ALUMINUM PARTS TRAY LARGE & SMALL	306	
ALUMINUM PIPE WRENCH	167	
ALUMINUM SOCKET HOLDER	55 · 66 · 73	
ANGLE CUTTER (TRUE FLUSH CUT)	151	
ANGULAR TORQUE GAUGE	191 · 232	
ARMATURE BEARING PULLER	279	
ASSEMBLY PARTS FOR GREASE EXCHANGER "HIGHLOAD"	247	
AUTO PUNCH	161 · 287	
B		
BABY SCREWDRIVER	140	
BALL JOINT SEPARATOR (OFFSET TYPE)	240	
BALL VALVE AIR COUPLER	203	
BALL-PEEN HAMMER	158	
BAND HOLD CUTTING PLIERS	151	
BASE CABINET (6 STAGES, 6 DRAWERS)	335	
BASE CABINET (8 STAGES, 8 DRAWERS)	336	
BATTERY CATCHER	282	
BATTERY PACK	205	
BELT HOOK TOOL	226	
BELT TENSIONER WRENCH (OFFSET TYPE)	225	
BELT TENSIONER WRENCH SET	225	
BELT WRENCH SET (for mini-cars)	226	
BENT EXTERNAL SNAP RING PLIERS	148	
BENT INTERNAL SNAP RING PLIERS	148	
BICYCLE DISPLAY STAND	318	
BICYCLE TOOL SET	35 · 315 · 316	
BICYCLE TOOL SET DIGITAL RATCHET MODEL	316	
BIG SIZE CUP TYPE OIL FILTER WRENCH	213	
BIG SIZE CUP TYPE OIL FILTER WRENCH SET	213	
BIT FOR ELECTRIC IMPACT SCREWDRIVER	205	
BIT FOR MULTI TOOL	317	
BLEEDER PLUG WRENCH	270	
BLEEDER WRENCH SET	270	
BODY COMPASS	284	
BODY PANEL EDGEWAYS CHISEL	287	
BOLT CLIPPER	153	
BOOT BAND CUTTER	152 · 243	
BOOT BAND TOOL	244	
BOOTS BAND TOOL WITH CUTTER	244	
BOX END OIL FILTER WRENCH FOR FILTER PAPER	212	
BOX END WRENCH SET	119 · 120	
BRACKET SANDER SET	264	
BRAKE BLEEDER	271	
BRAKE CYLINDER POLISHER FOR LARGE SIZED VEHICLES	268	
BRAKE CYLINDER POLISHER SET	268	
BRAKE PIPE TOOL SET	269	
BRAKE SHOE ADJUSTER TOOL SET	270	
BRAKE SPRING PLIERS & CLAW	264	
BRAKE TOOL OFFSET TYPE SET	180	
BRAKE TOOL STRAIGHT TYPE	180	
BRUSH	166	
C		
C-WASHER TOOL	264	
CAM PULLEY HOLD WRENCH	230	
CAM PULLEY LOCK TOOL	230	
CARBON BRUSH SET FOR REPLACEMENT	205	
CARBURETOR SCREWDRIVER SET	232	
CASTER TABLE for EKR-103 & EKR-113	333	
CENTER CAP WRENCH FOR ALUMINUM WHEEL	254	
CENTER PUNCH	161	
CERAMIC & STAINLESS SCRAPER SET A · B	163	
CERAMIC SCRAPER	163	
CERAMIC SCRAPER LONG	163	
CERAMIC SCRAPER SHORT	163	
CHAIN TYPE CARTRIDGE WRENCH	217	
CHAIN TYPE OIL FILTER WRENCH	217	
CHECK MIRROR	302	
CHEST (3 STAGES, 3 DRAWERS)	331 · 332 · 334	
CHEST (4 STAGES, 4 DRAWERS)	331	
CHEST (4 STAGES, 6 DRAWERS)	334	
CHISEL	161	
CLIP CLAMP PLIERS 20° · 80° 3-CLAW TYPE · SET	293	
CLIP CLAMP PLIERS 35° · 80° SHORT TYPE for WHELL HOUSING	293	
CLIP CLAMP PLIERS 35° · 80°	293	
CLIP CLAMP TOOL SET	288~291	
CLIP CLAMP TOOL SET ANGLE	289	
CLIP CLAMP TOOL SET ANGLE SHORT	289	
CLIP CLAMP TOOL SET LONG ANGLE	289	
CLIP CLAMP TOOL SET LONG-STRAIGHT	289	
CLIP CLAMP TOOL SET STRAIGHT	289	
CLUTCH ALIGNING TOOL	234	
COMBINATION HAMMER	158 · 159	
COMBINATION PLIERS	146	
COMBINATION WRENCH	128 · 318	
COMBINATION WRENCH SET	127	
COMPACT AIR BLOW GUN OPTIONAL NOZZLE	304	
COMPACT FLEX SHORT RATCHET HANDLE	62	
COMPACT OIL DRAINER (CARRING TYPE)	210	
COMPACT SHORT RATCHET HANDLE	62	
COMPACT SPARK PLUG WRENCH SET	278	
COMPACT SPARK PLUG WRENCH SOCKET	278	
COMPONENT HAMMER	159	
COMPOSITE MINI-TYPE MINI-RATCHET	202	
CONNECTOR HOUSING PLIERS	149 · 280	
CONNECTOR TOOL SET	281	
COOLANT CHARGER	219	
D		
DEEP SOCKET	52 · 58 · 69 · 75	
DEEP SOCKET SET	52 · 59 · 68	
DEEP SOCKET WRENCH SET	51 · 56 · 67	
DESKTOP STAND SET FOR THIN METAL STORAGE CASE	342	
DIAGONAL CUTTING PLIERS	151	
DIGITAL RATCHET	176 · 177	
DIGITAL RATCHET [MEMORQ] ADJUSTABLE WRENCH TYPE For USB	187	
DIGITAL RATCHET [MEMORQ] ADJUSTABLE WRENCH TYPE For Wireless Communication	185	
DIGITAL RATCHET [MEMORQ] ADJUSTABLE WRENCH TYPE WIRELESS HOST MODULE SET	183	
DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE For USB	186	
DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE For Wireless Communication	184	
DIGITAL RATCHET [MEMORQ] COMPACT HEAD TYPE WIRELESS HOST MODULE SET	182	
DIGITAL RATCHET [MEMORQ] For USB	186 · 187	
DIGITAL RATCHET [MEMORQ] For Wireless Communication	184 · 185	
DIGITAL RATCHET [MEMORQ] HEAD REPLACEABLE TYPE For Wireless Communication	185	
DIGITAL RATCHET [MEMORQ] INTERCHANGEABLE HEAD TYPE For USB	187	
DIGITAL RATCHET [MEMORQ] INTERCHANGEABLE HEAD TYPE WIRELESS HOST MODULE SET	183	
DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE For USB	186	
DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE For Wireless Communication	184	
COPPER HAMMER		
COPPER HAMMER	159	
CORDLESS IMPACT SCREWDRIVER SET		
CORDLESS IMPACT SCREWDRIVER SET	205	
CORDLESS IMPACT WRENCH SET		
CORDLESS IMPACT WRENCH SET	205	
CORDLESS LED LIGHT (SLIM TYPE)		
CORDLESS LED LIGHT (SLIM TYPE)	308	
COURTESY LAMP SWITCH STOPPER		
COURTESY LAMP SWITCH STOPPER	295	
COVERING SET		
COVERING SET	303	
CRANK PULLEY HOLD PLATE		
CRANK PULLEY HOLD PLATE	227	
CRANK PULLEY HOLD WRENCH		
CRANK PULLEY HOLD WRENCH	228	
CRANK PULLEY HOLDER		
CRANK PULLEY HOLDER	227	
CRANK PULLEY LOCK BOLT WRENCH		
CRANK PULLEY LOCK BOLT WRENCH	227	
CRANK PULLEY PULLER (HYDRAULIC TYPE)		
CRANK PULLEY PULLER (HYDRAULIC TYPE)	228	
CRANK PULLEY PULLER (MANUAL TYPE)		
CRANK PULLEY PULLER (MANUAL TYPE)	228	
CRANK PULLEY TOOL		
CRANK PULLEY TOOL	229	
CRANK PULLEY TOOL SET		
CRANK PULLEY TOOL SET	229	
CROSS · FLAT BIT SOCKET		
CROSS · FLAT BIT SOCKET	93 · 94 · 97	
CROSS RIM WRENCH		
CROSS RIM WRENCH	134	
CROWFOOT WRENCH		
CROWFOOT WRENCH	60	
CROWFOOT WRENCH SET		
CROWFOOT WRENCH SET	60	
CUP TYPE OIL FILTER WRENCH		
CUP TYPE OIL FILTER WRENCH	211	
CUP TYPE OIL FILTER WRENCH DESIGNED FOR AMERICAN & EUROPEAN CARS		
CUP TYPE OIL FILTER WRENCH DESIGNED FOR AMERICAN & EUROPEAN CARS	212	
CUP TYPE OIL FILTER WRENCH SET		
CUP TYPE OIL FILTER WRENCH SET	211	
CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET		
CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET	231	
CYLINDER HEAD BOLT SOCKET WRENCH-SET		
CYLINDER HEAD BOLT SOCKET WRENCH-SET	231	
CYLINDER HEAD BOLT WRENCH-SET		
CYLINDER HEAD BOLT WRENCH-SET	230	

DIGITAL RATCHET [MEMORQ] SMALL TORQUE TYPE WIRELESS HOST MODULE SET	182
DIGITAL RATCHET [MEMORQ] WIRELESS HOST MODULE SET	182 · 183
DIGITAL RATCHET ® ADJUSTABLE WRENCH TYPE	177
DIGITAL RATCHET ® COMPACT HEAD TYPE	176
DIGITAL RATCHET ® INTERCHANGEABLE HEAD TYPE	178
DIGITAL RATCHET ® INTERCHANGEABLE HEAD TYPE 3/8"sq. RATCHET HEAD SET	178
DIGITAL RATCHET ® SCREWDRIVER TYPE	180
DIGITAL RATCHET ® SMALL TORQUE TYPE	176
DIGITAL RATCHET TOOL SET	36
DISC BRAKE SERVICE TOOL SET	262
DISC CYLINDER POLISHER	268
DISC PARKING TOOL SET	267
DISC-BRAKE SPREADER SET WIDE TYPE	266
DISK-BRAKE SPREADER	265 · 266
DISK-BRAKE SPREADER (SINGLE PISTON TYPE)	267
DISK-BRAKE SPREADER (WIDE PLATE)	266
DISPOSABLE RESPIRATOR	288
DOOR · GATE STOPPER	288
DOOR BELT MOLDING REMOVER	295
DOOR HINGE BOLT RATCHET WRENCH	296
DOOR HINGE BOLT WRENCH SET	295
DOUBLE-FLEX RATCHET BOX END WRENCH	122
DOUBLE-FLEX RATCHET BOX END WRENCH SET	122
DOUBLE-HEAD HAMMER	160
DRAIN PLUG SOCKET · SET	235
DRIVE ADAPTOR	130
DRIVE CHAIN TOOL SET	312
DRIVE SHAFT REMOVER FOR SLIDE HAMMER	242
DRUM BRAKE SERVICE TOOL SET	262
DUO-SERVO TYPE BRAKE SPRING TOOL	263

## E

E-TYPE TORX LONG BOXEND WRENCH SET	112
E-TYPE TORX WRENCH · SET	111 · 112
END CUTTING PLIERS	151
ENGINE HANGER	234
ENGINEER'S FILE (WOODEN HANDLE)	166
EXTENSION BAR	54 · 65 · 72 · 76 · 77
EXTERNAL SNAP RING PLIERS	148 · 243
EXTRA-LONG RATCHET BOX END WRENCH	123
EXTRA-LONG RATCHET BOX END WRENCH (FLEX TYPE)	123
EXTRA-LONG SPINNER HANDLE	71 · 76

## F

FENDER COVER	303
FLANGING TOOL	326
FLARE NUT WRENCH	269
FLARE NUT WRENCH & SET	269
FLAT CHEST (3 STAGES, 3 DRAWERS)	331

FLAT CHISEL	287
FLAT TYPE EXTERNAL SNAP RING PLIERS	148
FLAT TYPE EXTRA-LONG BOX END WRENCH	121
FLAT TYPE LONG BOX END WRENCH	121
FLAT TYPE SHORT BOX END WRENCH	121
FLEX BALL JOINT	65 · 72
FLEX FLARE NUT WRENCH	268
FLEX LONG RATCHET HANDLE	53 · 62 · 70
FLEX RATCHET HANDLE	53 · 61 · 70
FLEX SHORT RATCHET HANDLE	53
FLEX T-SHAPED SPARK PLUG WRENCH	278
FLEX T-SHAPED WRENCH	134
FLEX T-SHAPED WRENCH (LONG)	64 · 134
FLEX TUBE CUTTER	325
FLEX-HEAD SOCKET · SET	127
FLEXIBLE EXTENSION BAR	54 · 65
FLEXIBLE SUCTION NOZZLE FOR OIL DRAINER	210
FLEX-SOCKET SPANNER	127
FLEX-SOCKET SPANNER · SET	127
FLUID TESTER	192
FLUID TESTER (Urea concentration testing)	192
FOLDING HEX-KEY WRENCH	103
FOLDING T-TYPE TORX WRENCH	110
FREE POSITION WRENCH SET	223
FRONT COVER	303
FRONT HUB PULLER FOR LARGE VEHICLES	246

## G

GARAGE MAT	345
GEAR PULLER	167
GREASE EXCHANGER	247
GREASE EXCHANGER HIGHLOAD	247
GREASE GUN	300
GREASE GUN (Cartridge Type)	300

## H

HAND PICKER	301
HANDLE	64
HANDY BAR	302
HANDY REMOVER	291
HANDY REMOVER · SET	292
HARD METAL SCRAPER	164
HARD METAL SCRAPER LONG	165
HARD METAL SCRAPER SHORT	164
HARD STEEL SCRAPER	165
HARD STEEL SCRAPER LONG	165
HARD STEEL SCRAPER SET	165
HARD STEEL SCRAPER SHORT	165
HEAD · BAR	76
HEADLIGHT ADJUST SCREWDRIVER	280
HEADLIGHT ADJUST WRENCH	279
HEAVY DUTY SCREWDRIVER	139
HEAVY DUTY WATERPUMP PLIERS	146
HEX BOX END WRENCHS · SET	122
HEX. BIT SOCKET	93 · 98
HEX. BIT SOCKET DRAIN PLUG WRENCH	209 · 235
HEX. BIT SOCKET SET	96 · 98

HEX. HEAD SHORT TYPE	179
HEX. HEAD STANDARD TYPE	179
HIGH CLASS SCRAPER SET	164
HIGH CLASS STICKER SCRAPER · SPARE BLADE	166
HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH	101
HIGH GRADE L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET	100 · 101
HIGH GRADE L-SHAPED LONG HEX-KEY WRENCH SET	99 · 100
HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH	99 · 100
HIGH GRADE L-SHAPED STANDARD BALL POINT HEX-KEY WRENCH SET	100 · 102
HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH	99
HIGH GRADE L-SHAPED STANDARD HEX-KEY WRENCH SET	99
HIGH MECHANIC TOOL SET	12~15
HOLDER FOR IMPACT WRENCH	346
HOSE CLIP PLIERS	220
HOSE CLIP TOOL (for minivehicles)	220
HOUSING NUT WRENCH FOR LARGE VEHICLES	245
HOUSING NUT WRENCH FOR SMALL VEHICLES	245
HUB CAP PLIERS	262
HUB PULLER FOR SLIDE HAMMER	242

## I

IMPACT ADAPTOR	80 · 83 · 85 · 87
IMPACT COMBINATION SOCKET FOR WHEEL NUT	84 · 256
IMPACT EXTENSION BAR	80 · 83 · 85 · 87
IMPACT HEX. WRENCH	88 · 97
IMPACT HEX. WRENCH SET	97
IMPACT INNER SOCKET	85 · 87 · 257
IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT	87 · 256 · 258
IMPACT SCREWDRIVER SET	142
IMPACT SOCKET (DEEP · THIN)	87
IMPACT SOCKET (DEEP THIN WALL) WITH PIN · RING	79
IMPACT SOCKET (DEEP)	82 · 84 · 86 · 257 · 258
IMPACT SOCKET (DEEP) WITH PINS & RINGS	82 · 84 · 257 · 258
IMPACT SOCKET (LONG)	79 · 82
IMPACT SOCKET (SEMI-DEEP THIN WALL) WITH PIN · RING	79
IMPACT SOCKET (SEMI-DEEP)	79 · 81
IMPACT SOCKET (SEMI-DEEP) WITH PINS & RINGS	81
IMPACT SOCKET (STANDARD)	81 · 84 · 86
IMPACT SOCKET (STANDARD) WITH PINS & RINGS	80
IMPACT SOCKET FOR HUB NUT	241
IMPACT SOCKET FOR UNIVERSAL JOINT	83
IMPACT SOCKET FOR WHEEL NUT	86 · 257
IMPACT SOCKET FOR WHEEL NUT (DEEP · THIN)	85
IMPACT SOCKET FOR WHEEL NUT (THIN)	86
IMPACT SOCKET LONG SOCKET	80
IMPACT SOCKET LONG SOCKET (THIN WALL) WITH PIN · RING	80

IMPACT SOCKET SET FOR ALUMINUM POLISHED NUT	256	LOCKING PLIERS SHEET METAL TOOL	155	MULTI-PURPOSE CRIMPING PLIERS (FOR AUTOMOTIVE THREAD)	153 · 281
IMPACT UNIVERSAL JOINT	83 · 85	LOCKING PLIERS SWIVEL PAD CLAMP	155	<b>N</b>	
IMPACT WRENCH	200	LOCKING PLIERS-CURVED JAW	154	NAIL AND HAND BRUSH	166
IMPACT WRENCH (COMPOSITE TYPE)	200 · 201	LOCKING PLIERS-CURVED JAW (WIRE CUTTER)	154	NEEDLE NOSE PLIERS (BENT NOSE TYPE)	151
INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER	142	LOCKING PLIERS-LARGE JAW	156	NEEDLE NOSE PLIERS (LONG TYPE)	150
INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER BIT SET	142	LOCKING PLIERS-STRAIGHT JAW	154	NEEDLE NOSE PLIERS (SLIM TYPE)	150
INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER OFFSET TYPE	142	LOCTITE (PREVENTS LOOSENING OF SCREWS)	308	NEEDLE NOSE PLIERS (STANDARD TYPE)	150
INSULATED DEEP SOCKET	196	LOCTITE (TIGHTENS JOINTS)	308	NEW FLEX EXTENSION WRENCH	234
INSULATED DIAGONAL CUTTING PLIERS	198	LONG BALL POINT HEX. BIT SOCKET	94 · 99	NEW FLEX WRENCH (WITH MAGNET)	234
INSULATED EXTENSION BAR	196	LONG BALL POINT HEX. BIT SOCKET SET	97	NIPPLE WRENCH	314
INSULATED MAGNETIC DEEP SOCKET	196	LONG BOX END WRENCH	119 · 121	NOZZLE FOR GREASE GUN	300
INSULATED NEEDLE NOSE PLIERS	198	LONG BOX END WRENCH SET	120	<b>O</b>	
INSULATED NUT DRIVER	198	LONG DEEP SOCKET · SET	59	O2 SENSOR SOCKET · SET	282
INSULATED OPEN END WRENCH	198	LONG HEX. BIT SOCKET	94 · 96 · 98	O2 SENSOR WRENCH	282
INSULATED RATCHET HANDLE	196	LONG HEX. BIT SOCKET SET	96 · 98	OIL DRAINER	209
INSULATED RESIN NOSE PLIERS	198	LONG PLIERS SERIES	149	OIL DRAINER [STANDARD TYPE]	210
INSULATED SCREWDRIVER (CROSS) NON-PENETRATING TYPE	197	LONG RATCHET HANDLE	52 · 61 · 70	OIL FILTER CARTRIDGE WRENCH	217
INSULATED SCREWDRIVER (FLAT) NON-PENETRATING TYPE	197	LONG SPINNER HANDLE	53 · 63 · 70	OIL PAN SEAL CUTTER	232
INSULATED SCREWDRIVER SET	197	LONG T-TYPE TORX BIT SOCKET FOR TAMPER RESISTANT FASTENERS	114 · 115	OIL PRESSURE SOCKET · SET	282
INSULATED TOOL SET	195	<b>M</b>		OIL SERVICE STATION SET	218
INSULATED TORQUE WRENCH	196	MAG-MIRROR SET	302	OPEN END WRENCH	126
INTERCHANGEABLE SCREWDRIVER SET	140	MAGNET SHEET	347	OPEN END WRENCH HOLDER	125
INTERNAL DRIVE ADAPTOR	65 · 83	MAGNETIC DEEP SOCKET	59	OPEN END WRENCH SET	125
INTERNAL SNAP RING PLIERS	147	MAGNETIC DEEP SOCKET SET	59	OPTIONAL SET FOR MOTORCYCLES	29
INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS	149	MAGNETIC FINDER	301	OPTIONAL TOOL SET FOR THE SPLIT OPEN HARD PLASTIC CASE	31
INTERNAL × EXTERNAL DRIVE ADAPTOR	54 · 72 · 76	MAGNETIC HAND WITH LED LIGHT	307	OPTIONAL TOOL SET FOR THE SPLIT OPEN METAL CASE	30
<b>J</b>					
JOINT NUT WRENCH	326	MAGNETIC PAPER HOLDER	346	<b>P</b>	
<b>K</b>					
KNOCK PIN PUNCH SET	161	MAGNETIC PARTS BOWL	347	PALM SCREWDRIVER	138
<b>L</b>					
L-SHAPED BALL POINT HEX. WRENCH	318	MAGNETIC PARTS TRAY	305	PALM SCREWDRIVER SET	138
L-SHAPED BALL POINT HEX. WRENCH SET	317	MAGNETIC PICK-UP TOOL (Powerful Type)	301	PALM THIN BLADE SCREWDRIVER	138
L-SHAPED HANDLE	71 · 76 · 77	MAGNETIC PICK-UP TOOL "Free Shaft"	301	PANEL CLAMP	156
L-SHAPED HEX-KEY WRENCH SET	102	MAGNETIC PICK-UP TOOL "Telescopic Motion Shaft"	301	PANTOGRAPH JACK	300
L-SHAPED LONG BALL POINT HEX-KEY WRENCH SET	102	MAGNETIC SPRAY CAN HOLDER	347	PARKING SHOE LEVER TOOL	263
LARGE SIZE 1"sq. "MEGA-IMPACT"	202	MAGNETIC T-SHAPED WRENCH HOLDER	346	PARTS TRAY	306
LARGE SIZE SIDE POCKET for EKR-103 & EKR-113	333	MECHANIC DESK CASE®	340	PARTS TRAY SET	306
LED COMPACT LIGHT	307	MECHANIC DESK SET	23	PEDAL WRENCH	319
LED FLEXIBLE LIGHT	307	MECHANIC KIT	25	PEDAL WRENCH (CROWFOOT WRENCH TYPE)	319
LED HAND LIGHT	307	MECHANIC TOOL SET	26~34	PILOT BEARING & BUSH PULLER	235
LED LIGHT	308	METAL CASE	344	PIN & RING SET FOR IMPACT WRENCH	88
LIGHTWEIGHT IMPACT WRENCH	201	METAL SUCTION NOZZLE FOR OIL DRAINER	210	PINCH OFF PLIERS	220
LOCK NUT CHISEL	241	MICROMETER	191	PIPE BENDER FOR STAINLESS FLEXIBLE PIPE	327
LOCKING PLIERS C-CLAMP	155	MINI CABINET (4 STAGES, 4 DRAWERS)	345	PIPE WRENCH	167
LOCKING PLIERS CHAIN CLAMP	155	MINI CHEST & MINI CABINET SET	345	PITMAN ARM PULLER	240
LOCKING PLIERS LONG NOSE (WIRE CUTTER)	154	MINI CHEST (2 STAGES, 2 DRAWERS)	345	PLASTIC GRIP BALL POINT HEX. DRIVER SET	104
LOCKING PLIERS PANEL CLAMP	155	MINI CLIPPER	153	PLASTIC GRIP HEX. DRIVER SET	104
		MINI HAMMER-SET	160	PLASTIC GRIP LONG SCREWDRIVER	139
		MINI RATCHET TUBE CUTTER FOR COPPER	324	PLASTIC GRIP SCREWDRIVER	138 · 139
		MINI STUBBY SCREWDRIVER	140	PLASTIC GRIP SCREWDRIVER SET	138
		MINI-TYPE MINI-RATCHET	202	PLASTIC HAMMER	158 · 159
		MOTORCYCLE TOOL SET	29 · 311	PLASTIC HARD CASE	344
		MOTORCYCLE TOOL STATION® SET	22 · 312	PLATE TYPE CUTTER	152
		MULTIPLICATIVE CUTTING PLIERS	152	PORTABLE TOOL BAG	316
		MULTIPLICATIVE SIDE CUTTING PLIERS	152		
		MULTI-PURPOSE CRIMPING PLIERS	153 · 281		



PORTABLE TOOL BAG SET	34	SEMI-SHORT RATCHET COMBINATION (OFFSET TYPE)	129	SPEEDER HANDLE	64 · 71
PORTABLE TOOL BAG SET	310	SERVICE CREEPER	302	SPEEDING CROSS WRENCH	71
PRE-SET TORQUE WRENCH	189	SHEET METAL PROCESSING HAMMER	160 · 287	SPINNER HANDLE	53 · 63 · 70
PROFIT® TOOL COMBINATION WRENCH · SET	132	SHOCK-LESS HAMMER	159	SPINNER HANDLE · L-SHAPED HANDLE	76
PROFIT® TOOL OFFSET WRENCH & OPEN END WRENCH SET	131	SHOE-HOLD SPRING CUP TOOL	263	SPLIT-OPEN METAL CASE	343
PROFIT® TOOL OFFSET WRENCH · SET	132	SHORT BOX END WRENCH	121	SPLIT-OPEN METAL CASE (RETRACTABLE HANDLE)	343
PROFIT® TOOL OPEN END WRENCH	132	SHORT HEX. BIT SOCKET	95	SPLIT-OPEN PLASTIC HARD CASE	343
PROTECLOTH	288	SHORT HEX. BIT SOCKET SET	95	SPRAY CYLINDER HOLDER	338
<b>Q</b>					
QUICK SPINNER	54 · 64 · 71	SHORT RATCHET BOX END WRENCH	123	SPRAY HANGER	296 · 297
QUICK SPINNING ADAPTOR	55 · 66	SHORT RATCHET COMBINATION WRENCH (FLEX TYPE)	130	STAINLESS PARTS TRAY	305
QUICK SPINNING ADAPTOR · SET	66	SHORT RATCHET COMBINATION WRENCH SET	130	STAINLESS SCRAPER	164
<b>R</b>					
RADIATOR HOSE PLUCKER	221	SHORT RATCHET HANDLE	52	STAINLESS SCRAPER LONG	164
RATCHET ADAPTOR	63	SHORT RATCHET HANDLE	52	STAINLESS SCRAPER SET	163
RATCHET BOX END WRENCH	123	SHORT STUBBY SCREWDRIVER	140	STAINLESS SCRAPER SHORT	164
RATCHET BOX END WRENCH HEAD	179	SHORT T-TYPE TORX BIT SOCKET FOR TAMPER RESISTANT FASTENERS	114 · 115	STANDARD LONG SCREWDRIVER	137
RATCHET BOX END WRENCH HEAD SET	179	SIDE CUTTING PLIERS	150	STANDARD SCREWDRIVER · STUBBY SCREWDRIVER	137
RATCHET COMBINATION WRENCH & SOCKET SET	130	SIDE CUTTING PLIERS (COATED HANDLE)	150	STANDARD SCREWDRIVER SET	137
RATCHET COMBINATION WRENCH (OFFSET TYPE)	129	SIDE PUNCHING BOARD	338	STICKER SCRAPER & SPARE BLADE	166
RATCHET COMBINATION WRENCH (STRAIGHT TYPE)	129	SIDE SLIP BOARD SET	237	STRUT SPRING COMPRESSOR	250
RATCHET HANDLE	52 · 61 · 63 · 70 · 75 · 77	SIDE TABLE for EKR-103 & EKR-113	333	STUBBY SCREWDRIVER	139
RATCHET HANDLE (ROUND HEAD)	76	SLIDE GAUGE	191	STUD BOLT REMOVER · SET	73
RATCHET HEAD	178	SLIDE HAMMER PULLER	241 · 284	STUD REMOVER	73
RATCHET HEAD REPAIR KIT	62 · 63	SLIDE HAMMER PULLER ATTACHMENT	241 · 242	SUCTION ADAPTOR FOR OIL DRAINER	210
RATCHET PIPE CUTTER	323	SLIDE HAMMER PULLER ATTACHMENT SET	284	SUPER LONG PLUG WRENCH	277
RATCHET PIPE CUTTER FOR COPPER AND PLASTIC PIPE	324	SLIDE HEAD HANDLE	53 · 64 · 71	SWIVEL AIR CONNECTOR	203
RATCHET PIPE CUTTER FOR LARGE SIZE	323	SLIM TYPE OPEN END WRENCH	126	<b>T</b>	
RATCHET SCREWDRIVER	141	SMALL FILE	165	T-SHAPED DRUM REMOVER	265
REAR HUB PULLER FOR LARGE VEHICLES	246	SMALL SIZE SIDE POCKET for EKR-103 & EKR-113	333	T-SHAPED HEX. WRENCH	103
RIDER'S MAINTENANCE TOOL SET	34 · 311	SNIP (STRAIGHT LEFT CUTTING)	157	T-SHAPED WRENCH	63 · 133
ROLLER CABINET (5 STAGES, 5 DRAWERS)	335 · 336	SNIP (STRAIGHT RIGHT CUTTING)	157	T-SHAPED WRENCH HOLDER	338
ROLLER CABINET (7 STAGES, 7 DRAWERS)	335	SNIP (STRAIGHT WIDE CURVES CUTTING)	157	T-SHAPED WRENCH WITH SHORT HANDLE	133
ROLLER CABINET (8 STAGES, 8 DRAWERS)	336	SOCKET	51 · 57 · 68 · 74 · 75 · 77	T-TYPE IMPACT WRENCH & SET	88
ROLLER CABINET SET	16	SOCKET FOR 14mm RATCHET	130	T-TYPE LONG TORX BIT SOCKET	108
ROLLING WEDGE BAR	302	SOCKET FOR ALUMINUM WHEEL	256	T-TYPE LONG TORX BIT SOCKET · SET	109 · 110
RUBBER HAMMER	159	SOCKET HOLDER · CLIP SET	55 · 66 · 73	T-TYPE SHORT TORX BIT SOCKET	108
<b>S</b>					
SAFETY GLASSES	305	SOCKET SET	51 · 57 · 68	T-TYPE TORX BIT SOCKET	108
SAFETY GOGGLES	305	SOCKET SET FOR ALUMINUM WHEEL	255	T-TYPE TORX BIT SOCKET FOR TAMPER RESISTANT FASTENERS	113 · 114
SCREW PLIERS	146	SOCKET WRENCH FOR ELBOW CONNECTOR	61 · 70 · 271	T-TYPE TORX BIT SOCKET · SET	109
SCREWDRIVER FOR BRAKE DRUM SCREW	263	SOCKET WRENCH SET	50 · 51 · 56 · 57 · 66 · 67 · 73 · 74	T-TYPE TORX DRIVER · SET	111
SCREWDRIVER HOLDER	338	SOCKET WRENCH SET DIGITAL RATCHET MODEL	50 · 55 · 66	T-TYPE TORX DRIVER SET FOR TAMPER RESISTANT FASTENERS	116
SCREWDRIVER TYPE HANDLE	53 · 64	SOFT GRIP SCREWDRIVER	143 · 144	T-TYPE TORX L-SHAPED WRENCH	110
SEAL PICK TOOL	267	SOFT GRIP SCREWDRIVER GIFT SET	143	T-TYPE TORX L-SHAPED WRENCH FOR TAMPER RESISTANT FASTENERS	116
SEMI-DEEP SOCKET	58	SOFT GRIP SCREWDRIVER SET	143	T-TYPE TORX L-SHAPED WRENCH SET	110
SEMI-DEEP SOCKET SET	58	SOFT ROUND SCREWDRIVER	145	T-TYPE TORX L-SHAPED WRENCH SET FOR TAMPER RESISTANT FASTENERS	116
SEMI-SHORT RATCHET COMBINATION (FLEX TYPE)	129	SOFT STUBBY SCREWDRIVER	144	TELESCOPIC DRIVER · SET	294
		SPARE BLADE FOR BOLT CLIPPER	153	TENSION SPRING TOOL	263
		SPARE TIPS FOR SNAP RING PLIERS	149	TEST HAMMER	160
		SPARK PLUG SOCKET	277	THERMO-SENSOR SOCKET	282
		SPARK PLUG WRENCH	278	THICKNESS GAUGE	192
		SPARK PLUG WRENCH, SHORT	313	THIN METAL STORAGE CASE	342
		SPECIAL BATTERY CHARGER FOR LITHIUM ION BATTERY	205	THIN METAL STORAGE CASE (PUNCHING METAL TYPE)	342
		SPECIAL EXTENSION SOCKET	278	TIE ROD END SEPARATOR (OFFSET TYPE)	240

TIE ROD LOCK NUT WRENCH	237
TILTING SPRAY HANGER	297
TIRE AIR GAUGE	192 · 254
TIRE LEVER	314
TIRE LEVER SET	319
TIRE VALVE WRENCH	254 · 314
Tool Bag	311
TOOL SET	17 · 18 · 26 · 27 · 37 · 38
TOOL STATION®	337
TOOL STATION® SET	19~21
TOP OPENING METAL CASE	344
TOP OPENING PLA-HARD CASE	344
TORQUE WRENCH DIAL TYPE	188
TORQUE WRENCH PRE-SET TYPE	190
TRIM CLIP PLIER FOR REAR GARNISH	294
TRIPLE SQUARE (12P) BIT SOCKET SET	231
TRIPLE SQUARE (12P) WRENCH	232
TRUCK MECHANIC TOOL SET	24
TUBE CUTTER	325
TUBING TOOL SET	325
TWIST SOCKET	60 · 69
TWIST SOCKET · SET	60
TWIST SOCKET SET	69

## U

ULTRA LONG T-TYPE TORX BIT SOCKET FOR DOOR HANDLE	287
UNIVERSAL JOINT	54 · 65 · 72
UNIVERSAL SPARK PLUG WRENCH	277

## V

VALVE SPRING COMPRESSOR	313
VOLTAGE TESTER	191 · 197

## W

WAGON (1 STAGE, 2 DRAWERS)	339
WAGON (3 STAGE 2 DRAWER 1 LOCKER)	341
WAGON (3 STAGES, 1 DRAWERS)	339
WAGON (4 STAGE 4 DRAWER)	341
WAGON (4 STAGES, 1 DRAWER)	339
WAGON (5 STAGE 4 DRAWER 1 LOCKER)	341
WAGON (5 STAGE 5 DRAWER)	341
WAGON (6 STAGE 6 DRAWER)	341
WAGON (8 STAGE 8 DRAWER)	341
WALL HANGING TOOL CHEST (FOR GENERAL MACHINERY MAINTENANCE)	342
WALL HANGING TOOL CHEST (FOR VEHICLE MAINTENANCE)	342
WATERPUMP PLIERS WITH SLOTTED HANDLE-END	147
WHEEL CAP WRENCH	254
WHEEL NUT COMBINATION SOCKET FOR IMPACT USE	86 · 257
WHEEL NUT COMBINATION SOCKET FOR IMPACT USE (THIN)	86
WHEEL NUT CORDLESS IMPACT WRENCH SET	86
WHEEL NUT DEDICATED CORDLESS TORQUE LIMIT IMPACT WRENCH (BODY)	205
WHEEL NUT DEDICATED CORDLESS TORQUE LIMIT IMPACT WRENCH SET	205
WHEEL NUT LONG SOCKET	255

WHEEL NUT SEMI-LONG SOCKET WRENCH	255
WHEEL NUT SOCKET	255
WHEEL NUT SOCKET SET FOR IMPACT WRENCH	255
WHEEL NUT SOCKET SET FOR IMPACT WRENCH (LONG, THIN TYPE)	83 · 256
WHEEL NUT TORQUE WRENCH · SET	258 · 259
WHEEL NUT TORQUE WRENCH SET	190
WIDE C-CLAMP	156
WIDE PLATE for DISC-BRAKE SPREADER	266
WIPER ARM REMOVER	294
WIRE TWISTER	313
WOBBLE EXTENSION BAR	54 · 65 · 72
WOODEN GRIP SCREWDRIVER	139 · 145
WORK TRUCK CASE	340
WRENCH RACK	346

## Number

4 SIZE LONG RATCHET BOXEND WRENCH	124 · 327
4 SIZE STANDARD RATCHET BOXEND WRENCH	124 · 327