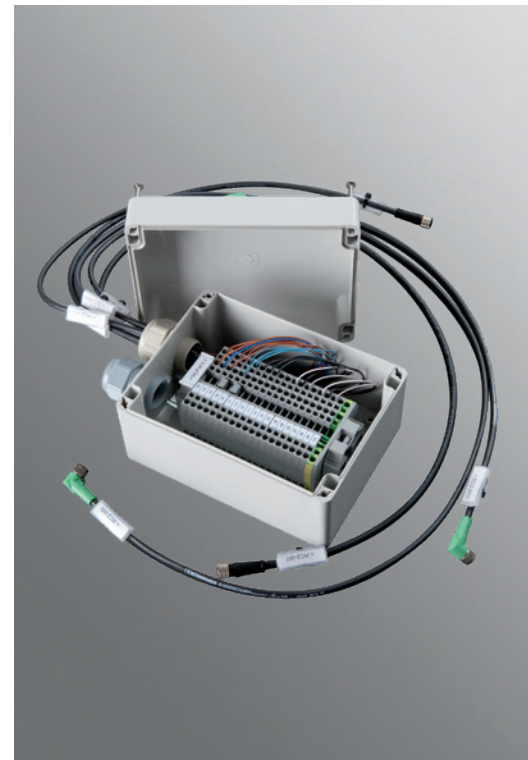




**Complete Range
Enclosure Systems**



BERNSTEIN AG – A Success Story



Safety for man and machine

BERNSTEIN AG ranks among the world's leading providers of industrial safety technology. With our comprehensive range of switches, sensors, enclosures, suspension systems and other components for industrial applications, we offer our customers effective and versatile solutions.

In-depth market knowledge, the close proximity to end users as well as years of experience in mechanical engineering and electronics are reflected down to the last detail in our products.

By conforming to international safety guidelines, our products perfectly integrate in individual system solutions. Our focus is complete commitment to safety for man, machine and industrial processes.

Our expertise for your safety

With sound application expertise we support our customers from all branches of industry in the planning and implementation of systems designed to meet stringent safety requirements. In addition to classic plant and machine construction, we look after customers in the lift construction, automotive, agriculture, conveyor construction, automation engineering, wood-working, renewable energy, AS-Interface and EX.

Our knowledge is your success



GERMANY
Porta Westfalica
BERNSTEIN
BUSINESS CENTER



GERMANY
Hille-Hartum



EUROPE
Budapest (Hungary)
BERNSTEIN Kft.



ASIA
Taicang (China)
BERNSTEIN Safe Solutions

Our philosophy

Customer Satisfaction is our number one priority. For us, Quality is more than making a good product, it's about designing them to perfectly match ALL of your needs.

Customized Solutions are fully integrated into our business and form part of our everyday working life. Employees are treated as our greatest asset as they are responsible for the quality and success of our products. All BERNSTEIN TEAM members are trained and educated to the highest possible standard so they can deliver "Best in Class" Service and Support. The BERNSTEIN TEAM will support you both personally and professionally, working together we will provide you with the best Safe Solution – for any size of project.

Future-proof solutions

Our objective is to actively influence technical innovation and modern application solutions. BERNSTEIN has therefore always been at the centre of defining trends in technology. With an unwavering commitment to the future we will continue providing the best possible answers in terms of technology, ecology and economic efficiency.

That is our definition of progress!

BERNSTEIN AG

The Product Lines

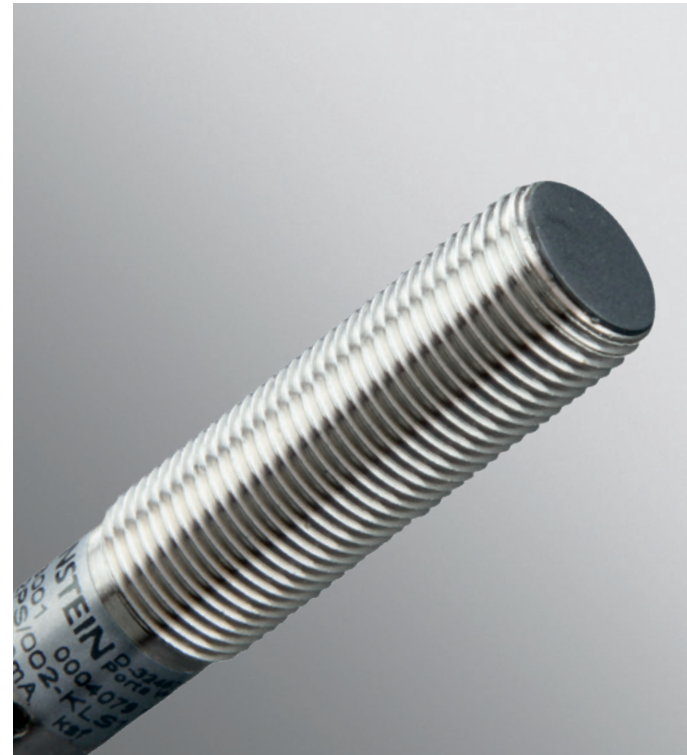
Switch system



Switch system – Economy meets safety

BERNSTEIN electromechanical switches offer a convincing price/performance ratio and impress with their extreme reliability for many different operating voltages. The range extends from limit switches, encapsulated in insulating material or metal, through foot switches to safety switching devices. The AS-i compatible products save time and material in installation and provide cost advantages in operation. The comprehensive range of designs and sizes, the possible switching functions and the choice of actuators make virtually any application reality.

Sensor systems



Sensor systems – Compact intelligence

The extremely fast and exceptionally precise BERNSTEIN sensors operate without interference and wear in all applications. The tried-and-tested reliability and the compact dimensions are greatly appreciated in all branches of industry. Matching the specific application, in addition to ultrasonic sensors and level switches, customers can choose from a wide range of inductive, capacitive, magnetic or optical sensors. Alongside the comprehensive standard range of sensors, we also offer comprehensive development and design for individual solutions.

Enclosure systems



Enclosure systems – Function and design

With its long tradition in manufacturing enclosures, BERNSTEIN combines superior enclosure technology, designed for encapsulating a diverse range of applications, with ultramodern and variable suspension systems. An extensive range of aluminium and plastic terminal boxes as well as the wiring and circuitry in standard and control enclosures conforming to specific customer requirements round off the product portfolio. Our enclosures conform to standards used in medical technology, industry as well as food and EX applications.

Product Line Enclosure Systems



Enclosure systems – Function and design

Functional design, high quality and durability are essential prerequisites for effective system integration. We incorporate customised wiring and specific component configurations in our expanded enclosure production process, which includes the preassembly of mounting rails or the installation of PLC/IPS solutions of all renowned manufacturers. In cooperation with our customers, this extremely pragmatic project planning results in fast and exceptionally reliable solutions.

In the modular aluminium control enclosure systems we combine state-of-the-art design with outstanding technical features to individually and efficiently encapsulate industrial controllers and operator panels. Our extensive range of suspension systems perfectly enhance this product portfolio.

The same meticulous attention to detail is reflected in our range of stainless steel control enclosures. These products are ideally suited for applications where the use of stainless steel is essential on account of special requirements and ambient conditions. With special sizes, different surface finishes and the comprehensive range of stainless steel suspension systems we offer unlimited scope for individualisation.

All state-of-the-art BERNSTEIN suspension systems are characterised by variable layout, advanced design and ease of installation.

Integrated diversity

Modern industrial design, perfected ergonomics and a host of combinable components create innovative system solutions based on modular principles. BERNSTEIN standard enclosures with quick-release fasteners, flexible internal articulated hinges and international approvals give our customers ample scope in the choice of enclosures best suited for their specific application.

With a range of materials such as plastic, metal and stainless steel, BERNSTEIN has the ideal solution for all applications. Backed by our quality manufacturing guarantee we will do whatever it takes to make sure that BERNSTEIN enclosures provide the perfect solution.

Services and standards

- Bespoke solutions
- Lower costs thanks to all-encompassing system
- Supply of complete systems and their project integration
- System components procured by BERNSTEIN
- Compliance with applicable product and industrial standards
- International approvals

System solutions / EX

Type **Page**



BERNSTEIN System solutions **12**
Comprehensive range of services from BERNSTEIN enclosure systems



EX **14**
EX-approved products for potentially explosive atmospheres

Selection criteria and general technical information on enclosures **18**
(IP classification, chemical resistance, etc.)

Standard enclosures

Type **Page**



Aluminium enclosures **26**
Type CA
• High mechanical loading capacity
• High corrosion resistance
• IP66
• Accessories
• Assembly, aluminium enclosures



Polycarbonate enclosures **46**
Type CT
• Medium mechanical loading capacity
• Conditional suitability, for outdoor use
• IP65
• Accessories
• Assembly, polycarbonate and ABS enclosures

ABS enclosures
Type CT
• Low mechanical loading capacity
• Limited suitability for outdoor use
• IP65
• Accessories



Polyester enclosures **60**
Type CP
• High mechanical loading capacity
• Very high corrosion resistance
• Excellent suitability for outdoor use
• IP66
• Accessories

Control enclosures

Type **Page**

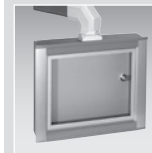
Overview Aluminium-Control enclosures **72**



Control enclosures **74**
Type CC-5000 neXt
• Modular aluminium enclosure concept
• Direct installation of commercially avlb. controllers
• Different front panel installation options
• Customer-specific dimensions



Control enclosures **78**
Type CC-4000/CC-4000 SL
• Modular aluminium enclosure concept
• Direct installation of commercially avlb. controllers
• Different front panel installation options
• Customer-specific dimensions
• Stand



Light-duty control enclosures **82**
Type CC-3000
• Modular, flat aluminium slimline concept
• Direct installation of commercially avlb. controllers
• Different front panel installation options
• Customer-specific dimensions

Accessories Control enclosures **86**

Checklists **94**

Free-standing column CS-4000 neXt



Type Page

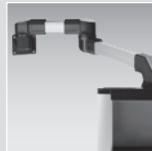
Free-standing column CS-4000 neXt 104

- Ideal combination of ergonomic visualization and optimal integration of operating and input devices
- Flexible concept for tailor-made solutions

Suspension systems

Type Page

Selection criteria for suspension systems 114



Light-duty suspension system 116

Type CS-2000 SL 45/60

- Modular suspension system concept in two colours for light mechanical loads
- Alum. connecting sections with/without cable duct
- Installation openings at joints

CS-3000 Family 129



Light-duty suspension system 132

Type CS-3000 neXt

- Modular suspension system concept for light mechanical loads
- Anodised aluminium tubing as connecting element and cable duct
- Installation openings at joints



Medium-duty suspension system 142

Type CS-3000

- Modular suspension system concept for medium mechanical loads
- Anodised aluminium tubing as connecting element and cable duct
- Installation openings at joints

Accessories CS-3000 Family 155



Heavy-duty suspension system 156

Type CS-2000 System 80

- Modular suspension system concept for heavy mechanical loads
- Steel tubing as connecting element and cable duct
- Installation openings at joints

Accessories for suspension CS-2000 SL and System 80 166

Stainless steel range

Type Page



Suspension system for light to medium loads 168

Type CS-480 NR

- Material 1.4305
- Protection class IP66

BERNSTEIN System Solutions

Expertise from under one roof

Comprehensive range of services from BERNSTEIN enclosure systems

BERNSTEIN specialises in products that reliably protect your technical equipment from damage, the environment or unauthorised access.

Bespoke, individually designed system solutions are based on tried-and-tested enclosure technology combined with BERNSTEIN suspension systems.

Tailored wiring and the installation of components can now be integrated directly in the expanded enclosure production process.

Starting with the preassembly of mounting rails and terminals through cable configuration to component mounting and complete wiring in the enclosure.

BERNSTEIN – Your solution specialist.

New system integration approaches such as the installation and preassembly of:

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers

Your benefits:

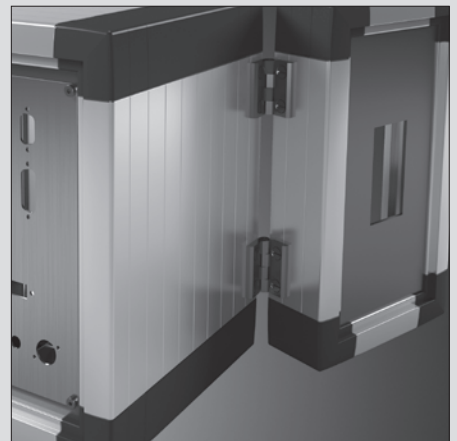
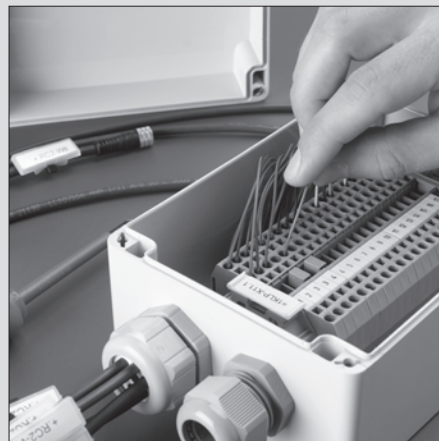
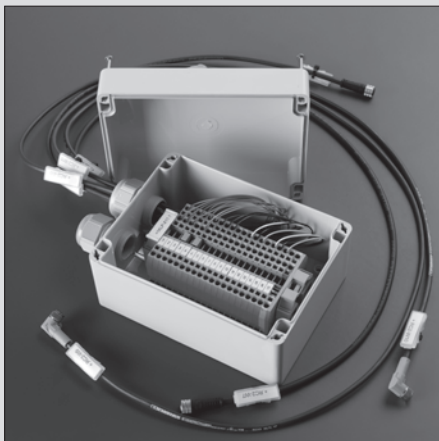
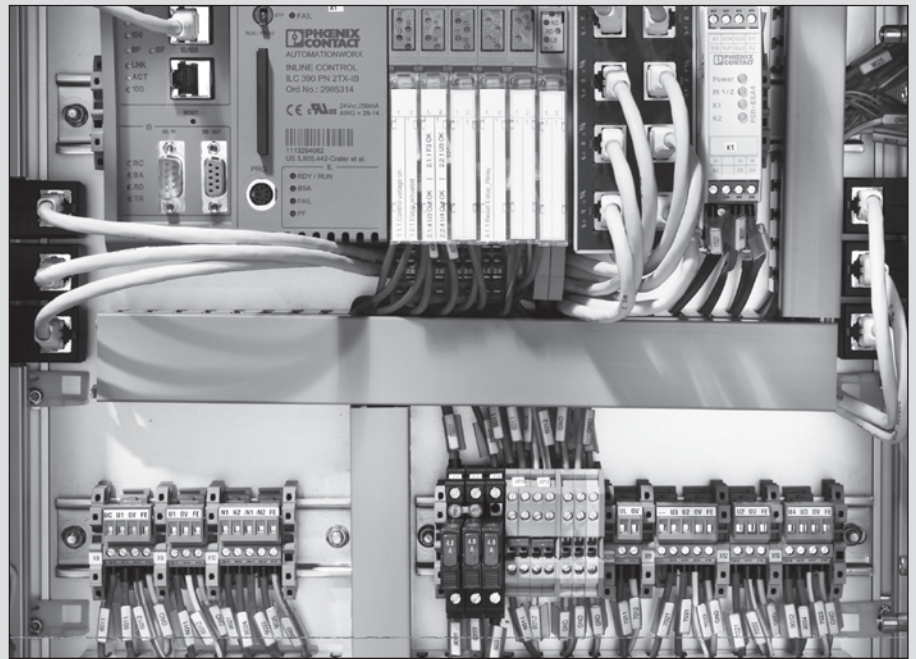
- **Solution specifically tailored** to customer requirements
- System solution phased directly into production process
- Compliance with **applicable product and industrial standards** (EX, IP-classes)
- Administration expenditure and costs reduced by
 - **Purchase and stock keeping** of components by BERNSTEIN
 - No residual quantities of individual components
 - Use of standard components
 - No costs incurred for **assembling individual components** – delivery of complete systems
 - Acceptance of part projects by BERNSTEIN, therefore, reduced assembly and component mounting costs
- **Integration** of BERNSTEIN switch and sensor systems
- System components procured by BERNSTEIN



Combination of BERNSTEIN enclosures and customer technologies

As a solution specialist, BERNSTEIN has available core expertise in mechanical applications and a comprehensive range of tools to suit the most diverse configuration requirements.

- **Customised enclosure modifications, freely selectable dimensions and configurations created by:**
 - Holes
 - Threads
 - Apertures
 - Pre-punched blanks
- **Preassembly, mounting and wiring of:**
 - Mounting panels and support rails
 - Hinges and mounting brackets
 - Terminals and screwed cable glands
 - Circular connectors
- **Individual powder coating also available in special colours in own production process**



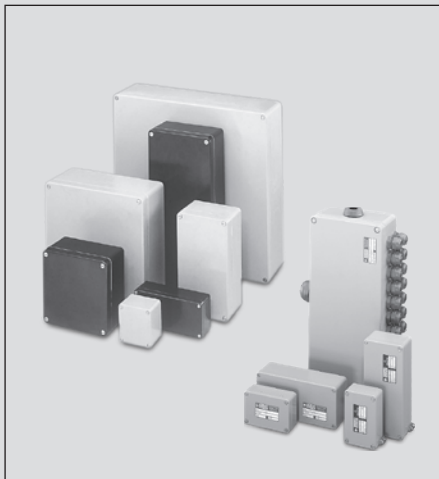
EX

EX-approved products for potentially explosive atmospheres

- Ex e, Ex ia and Ex e/ia terminal boxes made from polyester and aluminium
- Ex d / Ex tb limit switches, rope pull switches and foot switches
- Ex mb / Ex tb magnetic switches
- Ex ib inductive Namur sensors



Services, training, system solutions, project- and customer-specific solutions.



Terminal enclosures and empty enclosures

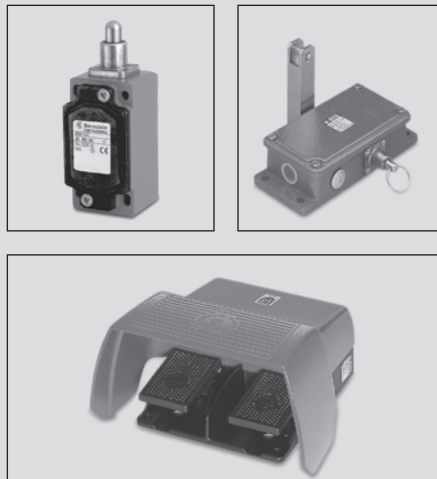
Only materials that correspond to the temperature range required for Ex enclosures are used in these enclosures and components.

The minimum type of protection rating of all enclosures and screw connections is IP64, other protection classes available on request.

The latching devices on the enclosures are available as captive screw connections.

Various CA versions are available with flange plates.

All built-in components must conform to the relevant approvals.



Momentary contact, cable pull and foot switches

An Ex d-certified switching element lies at the core of these Ex-approved switches.

It is mounted in the corresponding switch enclosures. The mechanical actuator and its installation are certified separately.

The approval of additional actuators and switch enclosures from other series is possible on request.

All switches and momentary contact switches feature one NO contact and one NC contact.



Magnetic switches, inductive Namur sensors

For magnetic switches, protection against ignition energy is achieved by encapsulation. For Inductive Namur sensors, protection is achieved by the principle of intrinsic safety.

Magnetic switches and Namur sensors have a Factory fitted connection cable.











This cable is permanently attached to the body and forms part of the approval.

All sensors are certified for a surface temperature of + 80 °C.

Services offered by the BERNSTEIN-EX experts:

- Approval of a stainless steel enclosure with freely definable dimensions
- Approvals assistance for plant operators
- Approval of switching and control elements in all enclosures
- Approval of plug-in devices in all enclosures
- Component mounting and wiring of enclosures according to customer specifications
- Training courses for planners and plant operators
- Cross-product system solutions
- Customer-specific development and project management on request
- TR (EAC) and NEC (North America) approvals on request
- Approval according to IEC Ex on request

Explosion protection at a glance

	II2G	Ex	ia	IIC	T6	TÜV	2008	ATEX	1234	-
Type approval to directive 2014/34/EU	Application	Explosion protection	Type of protection	Device group	Temperature class	Inspection authority	Year	As per directive 2014/34/EU	Consecutive number	Additional conditions
Protection Concept										
Symbol	Type of protection							Standards		
	Ex "d"	Flameproof encapsulation Switching devices, motors, transformers etc. IEC60079-1							IEC / EN 60079-1	
	Ex "p"	Pressurised encapsulation Control cabinets px = Use in Zone 1, 2 py = Use in Zone 1, 2 pz = Use in Zone 2			pb = Use in Zone 21, 22 pc = Use in Zone 22		IEC / EN 60079-2			
	Ex "q"	Powder-filled encapsulation Transformers, capacitors							IEC / EN 60079-5	
	Ex "o"	Oil immersion encapsulation Transformers, load resistors							IEC / EN 60079-6	
	Ex "e"	Increased safety Terminal boxes, control cabinets, enclosures for installing devices of other protection class							IEC / EN 60079-7	
	Ex "i"	Intrinsically safe Terminal boxes, control cabinets, sensors, measurement and control equipment ia = Use in Zone 0, 1, 2, 20, 21, 22 ib = Use in Zone 1, 2, 21, 22							IEC / EN 60079-11	
		Intrinsically safe systems							IEC / EN 60079-25	
	Ex "n"	Non sparking Systems that, due to their design, cannot spark							IEC / EN 60079-15	
	Ex "m"	Encapsulation Command and signalling devices, sensors, display/indicator devices ma = Use in Zone 0, 1, 2, 20, 21, 22 mb = Use in Zone 1, 2, 21, 22							IEC / EN 60079-18	
	Ex "op"	Optical radiation op is = Intrinsically safe optical radiation op pr = Protected optical radiation op sh = Shutdown optical radiation							IEC / EN 60079-28	
	Ex „t“	Protection by enclosure Switching devices, Terminal boxes, control cabinets ta = Use in Zone 20, 21, 22 tb = Use in Zone 21, 22 tc = Use in Zone 22							IEC / EN 60079-31	
IP Protection Classes										
IP 1st digit	Contact	Foreign bodies			IP 2nd digit	Water	Max. permissible surface temperature	Temperature classes for gases		
0	No protection	No protection			0	No protection	450°	T1		
1	Large body parts	Solid object > 50 mm			1	Water dripping vertically	300°	T2		
2	Finger	Solid object > 12.5 mm			2	Water dripping at angle up to 15°	200°	T3		
3	Tool > 2.5 mm	Solid object > 2.5 mm			3	Water sprayed at an angle up to 60°	135°	T4		
4	Tool > 1 mm	Solid object > 1 mm			4	Spayed water 360°	100°	T5		
5	Complete protection	Dust accumulation			5	Hose water 360°	85°	T6		
6	Complete protection	Dust infiltration			6	Strong hose water 360°	Explosion groups for gases			
				7	Temporary submersion	Group	Typical gas	Ignition energy		
				8	Submersion	I	Methane	280 µJ		
Device group I Mining										
I M1	Safety provided by 2 safety measures, 2 faults									
I M2	Shutdown on occurrence of explosive atmosphere									
Device group II All potentially explosive atmospheres except mining										
Explosion groups for dusts										
II 1	Zone 0	Zone 20	Safety provided by 2 safety measures, 2 faults				Group	Dust		
II 2	Zone 1	Zone 21	Safety in the event of frequent equipment malfunctions, 1 fault				IIIA	combustible flyings		
II 3	Zone 2	Zone 22	Safety in trouble-free operation				IIIB	non-conductive dust		
							IIIC	conductive dust		
Zone categories, device group II										
Additional conditions										
Hazard permanent or frequent	Gas as per IEC / EN Zone 0		Dust as per IEC / EN Zone 20		-		No restriction			
occasional	Zone 1		Zone 21		X		Special conditions			
rare, temporary no longer than 30 min per year	Zone 2		Zone 22		U		Component certification Parts certification			



Empty enclosures for use in potentially explosive atmospheres

EX-U certified empty aluminium CA enclosures

BERNSTEIN CA enclosures have been tested by an internationally recognised and certified inspection authority and certified through type approval testing for use in areas with potentially explosive dust and gas atmospheres. Used as terminal and control enclosures, the aluminium pressure die-cast enclosures are designed to accept corresponding mechanical and electrical equipment. The enclosures come with operating instructions, type identification plate and CE Declaration of Conformity. Either an EPDM or silicone seal can be used. The enclosures can be fitted at the factory with external hinges.

External dimensions in mm	Type	Art. No. with silicone seal	Art. No. with EPDM seal
58 x 64 x 36	CA-060	1064005000	1064000000
98 x 64 x 36	CA-080	1084005000	1084000000
150 x 64 x 36	CA-100	1104005000	1104000000
75 x 80 x 57	CA-130	1134005000	1134000000
125 x 80 x 57	CA-150	1154005000	1154000000
175 x 80 x 57	CA-170	1174005000	1174000000
250 x 80 x 57	CA-190	1194005000	1194000000
122 x 122 x 80	CA-210	1214005000	1214000000
122 x 122 x 90	CA-215	1214005050	1214000050
122 x 122 x 80	CA-220	1224005000	1224000000
220 x 122 x 80	CA-230	1234005000	1234000000
220 x 122 x 90	CA-235	1234005050	1234000050
220 x 122 x 80	CA-240	1244005000	1244000000
360 x 122 x 80	CA-250	1254005000	1254000000
160 x 160 x 90	CA-270	1274005000	1274000000
160 x 160 x 90	CA-280	1284005000	1284000000
260 x 160 x 90	CA-290	1294005000	1294000000
260 x 160 x 90	CA-300	1304005000	1304000000
360 x 160 x 90	CA-310	1314005000	1314000000
560 x 160 x 90	CA-330	1334005000	1334000000
200 x 230 x 110	CA-350	1354005000	1354000000
200 x 230 x 180	CA-360	1364005000	1364000000
280 x 230 x 110	CA-370	1374005000	1374000000
330 x 230 x 110	CA-380	1384005000	1384000000
330 x 230 x 180	CA-390	1394005000	1394000000
400 x 230 x 110	CA-400	1404005000	1404000000
600 x 230 x 110	CA-420	1424005000	1424000000
402,5 x 310 x 110	CA-450	1454005000	1454000000
402,5 x 310 x 180	CA-460	1464005000	1464000000
600 x 310 x 110	CA-470	1474005000	1474000000
600 x 310 x 180	CA-480	1484005000	1484000000

Technical Data:

- Protection class IP66 to IEC/EN 600079-0, IEC/EN 60529
- Ex-Identification
 II 2G Ex eb IIC Gb
 II 2D Ex tb IIC Db
- Impact strength > 7 Joules
- Operating temperature depending on type of seal max. -55 °C to +135 °C
- Enclosure colour RAL 7001 (silver grey)
- Powder-coating corrosion protection
- Certificates:
 IBEExU 16 ATEX 1130 U
 IECEx IBE 15.0025U
 TS RU S-DE GB06.W.00375 (EAC)

EX-U certified empty polyester CP enclosures

BERNSTEIN CPG and CPS enclosures have been tested by an internationally recognised and certified inspection authority and certified through type approval testing for use in areas with potentially explosive dust and gas atmospheres. Used as terminal and control enclosures, the glass-fibre reinforced polyester enclosures are designed to accept corresponding mechanical and electrical equipment. The enclosures come with operating instructions, type identification plate and CE Declaration of Conformity. Either an EPDM or silicone seal can be used. The enclosures can be fitted at the factory with external hinges.

External dimensions in mm	Type	Art. No. with silicone seal	Art. No. with EPDM seal	Type	Art. No. with silicone seal	Art. No. with EPDM seal
80 x 75 x 55	CP-140	4144005000	4144000000	CPS-140	5144005000	5144000000
80 x 75 x 75	CP-145	4144005050	4144000050	CPS-145	5144005050	5144000050
110 x 75 x 55	CP-150	4154005000	4154000000	CPS-150	5154005000	5154000000
110 x 75 x 75	CP-155	4154005050	4154000050	CPS-155	5154005050	5154000050
160 x 75 x 55	CP-170	4174005000	4174000000	CPS-170	5174005000	5174000000
160 x 75 x 75	CP-175	4174005050	4174000050	CPS-175	5174005050	5174000050
190 x 75 x 55	CP-190	4194005000	4194000000	CPS-190	5194005000	5194000000
190 x 75 x 75	CP-195	4194005050	4194000050	CPS-195	5194005050	5194000050
122 x 120 x 90	CP-220	4224005000	4224000000	CPS-220	5224005000	5224000000
220 x 120 x 90	CP-240	4244005000	4244000000	CPS-240	5244005000	5244000000
160 x 160 x 90	CP-280	4284005000	4284000000	CPS-280	5284005000	5284000000
260 x 160 x 90	CP-300	4304005000	4304000000	CPS-300	5304005000	5304000000
360 x 160 x 90	CP-320	4324005000	4324000000	CPS-320	5324005000	5324000000
560 x 160 x 90	CP-330	4334005000	4334000000	CPS-330	5334005000	5334000000
255 x 250 x 120	CP-370	4374005000	4374000000	CPS-370	5374005000	5374000000
400 x 250 x 120	CP-400	4404005000	4404000000	CPS-400	5404005000	5404000000
400 x 405 x 120	CP-450	4454005000	4454000000	CPS-450	5454005000	5454000000
400 x 405 x 165	CP-460*	4464005000*	4464000000*			

*Protection class IP65

Technical Data:

- Protection class IP66 to IEC/EN 60079-0, IEC/EN 60529
- Ex-Identification
 - ⊕ II 2G Ex eb IIC Gb
 - ⊕ II 2D Ex tb IIIC Db
- Impact strength > 7 Joules
- Operating temperature depending on type of seal max. -55 °C to +135 °C
- Enclosure colour RAL 7000 (squirrel grey) CPG
- Enclosure colour RAL 9005 (jet black) CPS
- Certificates:
 - IBExU 16 ATEX 1197 U
 - IECEX IBE 16.0036U
 - TS RU S-DE GB06.W.00375 (EAC)

General Technical Information

Enclosure selection criteria

The following questions are designed to help you find the optimum enclosure for your specific application. In addition to the given criteria, your individual requirements are also of decisive importance.

1. How big should the enclosure be?

- PC-board size
- Number of terminals
- Number of screwed cable glands per side
- etc.

2. What ambient conditions should be taken into account?

- Moisture
- Climatic conditions
- Temperature
- Chemical exposure in the form of cleaning agents, oils, lubricants, etc.
- Electromagnetic compatibility
- etc.

3. What mechanical loads will the enclosure be subjected to?

- Impact
- Pressure
- Bending
- etc.

4. What additional features are required?

- Special coating:
Special colour, special finish (chromalizing, EMC protective paint, etc.), screenprint and labels etc.
- Connectors
- Screw connections (number per side)
- Inspection window
- Preassembly with mounting panel, mounting rails, terminals, external and internal articulated hinges, etc.
- etc.

5. What other components can be installed for you?

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers
- etc.

You will find further details in Section "System Solutions" from Page 12 onwards.

6. Which type of approval do you need?

You find all current approvals on www.bernstein.eu

7. What else can we install for you?

Talk to us. We will help you realise your challenge.

Definition of Protection Classes in accordance with IEC 60529, VDE 470 T 1

The protection class of an enclosed device denotes the degree of protection. The degree of protection includes the protection of persons against contact with parts under voltage and the protection of equipment against the infiltration of foreign bodies and water. BERNSTEIN standard enclosures largely correspond to protection class IP65.

Protection class designation

In accordance with DIN EN 60529 the protection class designation consists of a two-digit code.

Meaning of 1st digit:

Protection class against contact and infiltration of foreign bodies

Meaning of 2nd digit:

Protection class against infiltration of water

Example: Protection class IP65

1. Digit (6):

Complete protection against contact with components under voltage or with internal moving parts = protection against dust infiltration

2. Digit (5):

A water jet directed from all directions at the enclosure must not have damaging effects = protection against water jets (hoseproof)

Foreign body protection			Moisture protection		
1 st digit	Meaning	Explanation	2 nd digit	Meaning	Explanation
IP0X	No protection		IPX0	No protection	
IP1X	Protection against foreign bodies with a diameter of 50 mm or greater	Solid object (sphere, Ø 50 mm) must not fully penetrate	IPX1	Protection against dripping water	Vertically falling droplets must not have a damaging effect
IP2X	Protection against foreign bodies with a diameter of 12.5 mm or greater	Solid object (sphere, Ø 12.5 mm) must not fully penetrate	IPX2	Protection against dripping water when the enclosure is tilted at an angle of up to 15°	Vertically falling droplets must not have a damaging effect when the enclosure is tilted at an angle of up to 15° either side of the perpendicular
IP3X	Protection against foreign bodies with a diameter of 2.5 mm or greater	Solid object (sphere, Ø 2.5 mm) must not fully penetrate	IPX3	Protection against spray water	Water sprayed at an angle of up to 60° either side of the perpendicular must not have a damaging effect
IP4X	Protection against foreign bodies with a diameter of 1 mm or greater	Solid object (sphere, Ø 1 mm) must not fully penetrate	IPX4	Protection against splash water	Water sprayed against the enclosure from any direction must not have a damaging effect
IP5X	Protection against harmful dust deposits	Dust penetration is not completely prevented. However, the amount of penetration must not impair the function or safety of the device.	IPX5	Protection against hose water	Water sprayed in jet from against the enclosure from any direction must not have a damaging effect
IP6X	Protection against dust penetration, dustproof	No penetration of dust at a negative pressure of 20 mbar in the enclosure	IPX6	Protection against strong hose water	Water sprayed in strong jet from against the enclosure from any direction must not have a damaging effect
			IPX7	Protection against the effect when temporarily submerged in water	Water must not enter in harmful quantities when the enclosure is submerged under standardised pressure and time conditions
			IPX8	Protection against the effects of continuous immersion in water	Water may not ingress in a volume that would cause harmful effects when the shell is continuously submerged in water under conditions agreed between manufacturer and user . The conditions must, however, be more difficult than those for code number IPX7.
			IPX9K	Protection against water during high pressure/steam jet cleaning (as per DIN EN 40050, Part 9)	Water sprayed at greatly increased pressure against the enclosure from any direction must not have a damaging effect

General Technical Information

Mechanical strength

Selection is based on the corresponding properties of the material to be used. The table below provides an overview of the main material properties of aluminium, polycarbonate, ABS, polyester and stainless steel.

Material property	Standard	Unit	Aluminium	Polycarbonate	ABS	Polyester	Stainless steel
Density	DIN 53479	g/cm ³	2.65	1.2	1.05	1.8	7.9
Impact resistance	DIN 53453	mJ/mm ²	150 – 300	65	60	80	
Toughness	DIN 53453	mJ/mm ²	90 – 200	20	10	4	
Tensile strength	DIN 53455	N/mm ²	180 – 300	65	43	45	500 – 700
Elongation of break	DIN 53455	%	60 – 90	90	20	20	< 60
Modulus of elasticity (bending test)	DIN 53457	N/mm ²	75000	2300	2100	6500	200000
Flexural stress at given strain	DIN 53452	N/mm ²		95	90	100	
Flammability	UL 94	Class		V 2	HB	V 0	
Volume resistivity	DIN 53482	Ohm x cm		10 ¹⁵	10 ¹³	3 x 10 ¹⁴	
Surface resistance	DIN 53482	Ohm x cm		≥ 10 ¹⁵	4 x 10 ¹⁴	> 10 ¹²	
Dielectric strength	DIN 53481	kV/mm		25 – 40	24	25 – 40	
Thermal conductivity (20°C)	DIN 52612	W/mK	120 – 160	0.21	0.18	0.25	16.3
Electrical conductivity (20°C)		m/Ohm mm ²	15 – 22				

Chemical resistance

The table below provides an overview of the chemical resistance of BERNSTEIN aluminium, polycarbonate, ABS, polyester and stainless steel enclosures to chemicals commonly used. The specified values are reference values relating to different concentrations and ambient temperatures that have varying influences on materials. This also applies to simultaneous exposure to several chemicals. Corresponding trials are therefore recommended.

All tests were carried out at room temperature. The chemical resistance may change in combination with different media. Therefore, no responsibility can be accepted for the correctness of this information.

Chemical	ABS	Polycarbonate	Polyester	Aluminium	Stainless steel
Acetone	-	-	-	+	+
Formic acid	40%	-	+	o	+
Ammonia	25%	-	-	+	□
Benzine	-	o	+	+	+
Benzene	-	-	+	+	+
Brake fluid	o	-	+	□	(+)
Butane	+	+	+	+	(+)
Butanol	□	□	+	□	(+)
Calcium chloride	+	+	+	+	o
Chlorobenzene	-	-	+	+	+
Diesel oil	+	o	+	□	(+)
Acetic acid	25%	10%	5%	+	+
Formaldehyde	30%	□	30%	+	+
Freon 113	-	+	+	□	□
Fruit juice	+	+	+	□	+
Glycerine	+	o	+	+	+
Fuel oil	o	o	+	+	+
Hydraulic oil	□	+	+	□	+
Caustic potash solution	50%	-	-	□	□
Potassium chloride	□	+	+	o	o
Potassium hydroxide	< = 50 %	□	5%	-	+
Linseed oil	+	+	+	+	+
Methanol	+	-	+	+	+
Methylene chloride	-	-	+	+	□
Lactic acid	80%	+	+	+	o
Mineral oils	+	+	+	□	+
Engine oils	+	+	+	□	+
Sodium carbonate	+	+	10%	o	+
Sodium chloride	+	+	+	o	+
Sodium hydroxide	+	□	5%	+	+
Caustic soda	50%	-	40%	□	□
Nitric acid	-	10%	10%	+	+
Hydrochloric acid	o	20%	+	+	-
Lubricating oil	□	+	+	+	+
Carbon disulphide	-	-	-	+	+
Sulphuric acid	50%	50%	10%	o	+
Soap solution	□	o	+	□	□
Detergent	□	+	□	□	(+)
Turpentine oil	□	o	+	□	+
Carbon tetrachloride	-	-	+	+	+
Toluene	-	-	+	+	□
Trichloroethylene	-	-	+	+	+
Water (distilled water, river water, tap water, sea water)	+	+	+	□	+
Tartaric acid	+	+	+	□	+
Xylene	-	-	+	+	+
Zinc sulphate	+	+	+	o	+
Citric acid	+	10%	+	+	o

+: Resistant to all concentrations
 %: Resistant to max. % concentrations
 o: Conditionally resistant
 -: Not resistant
 □: No data
 (): Estimated value

General Technical Information

Chemical resistance of enclosure seals

The following table provides an overview of the chemical resistance of enclosure seals. The specified values are reference values relating to different concentrations and ambient temperatures. This also applies to simultaneous exposure to several chemicals. Corresponding trials are therefore recommended.

All tests were carried out at room temperature. The chemical resistance may change in combination with different media. Therefore, no responsibility can be accepted for the correctness of this information.

Chemical	CR	Silicone	EPDM	NBR	Polyurethane	PVC
Acetone	o	-	+	-	-	-
Formic acid	o	+	o	-	-	-
Ammonia	10%	+	+	o	+/-	o
Benzine	o	-	-	o	-	+
Benzene	-	-	-	-	□	-
Brake fluid	o	+	+	-	-	□
Butane	+	-	-	+	□	50%
Butanol	+	-	+	o	-	o
Calcium chloride	□	□	+	+	+	+
Chlorobenzene	-	-	-	-	-	-
Diesel oil	o	-	-	□	o	o
Acetic acid	-	o	-	-	+/-	+
Formaldehyde	□	+	40%	o	□	-
Freon 113	o	□	□	+	□	□
Fruit juice	+	+	+	o	□	+
Glycerine	+	+	+	+	+	+
Fuel oil	o	o	-	+	□	o
Hydraulic oil	□	o	-	o	□	□
Caustic potash solution	+	-	< 50%	o	□	+
Potassium chloride	+	+	+	+	□	+
Potassium hydroxide	o	o	+	+	-	□
Linseed oil	+	+	o	+	o	+
Methanol	+	+	+	o	+/-	+
Methylene chloride	-	-	-	-	-	-
Lactic acid	+	□	< 10%	o	□	10%
Mineral oils	o	o	-	+	+/-	+
Engine oils	o	+	-	+	□	+
Sodium carbonate	□	+	+	+	□	□
Sodium chloride	+	+	+	+	+	+
Sodium hydroxide	50%	o	+	o	-	+
Caustic soda	50%	< 10%	+	o	□	60%
Nitric acid	-	< 10%	-	-	-	< 30%
Hydrochloric acid	o	< 10%	+	-	o < 10%	< 20%
Lubricating oil	o	+	o	+	□	+
Carbon disulphide	-	-	-	-	□	-
Sulphuric acid	50%	o	-	-	- (concentrated)	< 60%
Soap solution	□	+	□	+	+	o
Detergent	o	+	o	+	□	□
Turpentine oil	□	-	-	o	+/-	+
Carbon tetrachloride	-	-	-	-	-	-
Toluene	-	-	-	-	-	-
Trichloroethylene	-	-	-	-	-	-
Water (distilled water, river water, tap water, sea water)	+	+	+	80°C	+	40°C
Tartaric acid	o	+	+	+	□	+
Xylene	-	-	-	-	-	-
Zinc sulphate	+	+	+	+	□	+
Citric acid	+	+	+	+	+	10%

+: Resistant to all concentrations
 %: Resistant to max. % concentrations
 o: Conditionally resistant
 -: Not resistant
 □: No data
 +/-: Suitability strongly influenced by the specific substance or concentration

Quality manufacturing guarantee

Reliable, flexible, personal: BERNSTEIN System Solutions

Outsourcing is a matter of trust. You need a competent service provider who you can rely on, who is flexible and who is always prepared to listen.

BERNSTEIN is your dependable partner.

With more than 30 years of experience to look back on, we offer comprehensive know-how in enclosure technology and corresponding applications.

Take advantage of the BERNSTEIN system solution service for enclosures with personal on-site support.

Benefit from all the advantages offered by BERNSTEIN!

You will find further information on system solutions on Page 12.

Our range of services for standard enclosure modifications:

- Standard enclosures perfectly tailored to your requirements
- Mechanical machining (even complicated contours) by CNC machining centres
- RoHS-compliant surface treatment for use in corrosive environments
- Special coating in accordance with RAL specification
- Screen print or engraving of enclosure surface
- Special coating and conductive seal for HF-proof version
- Installation of individual components from the BERNSTEIN range of accessories as well as other customer-specific components
- Electrical wiring of components according to your specifications

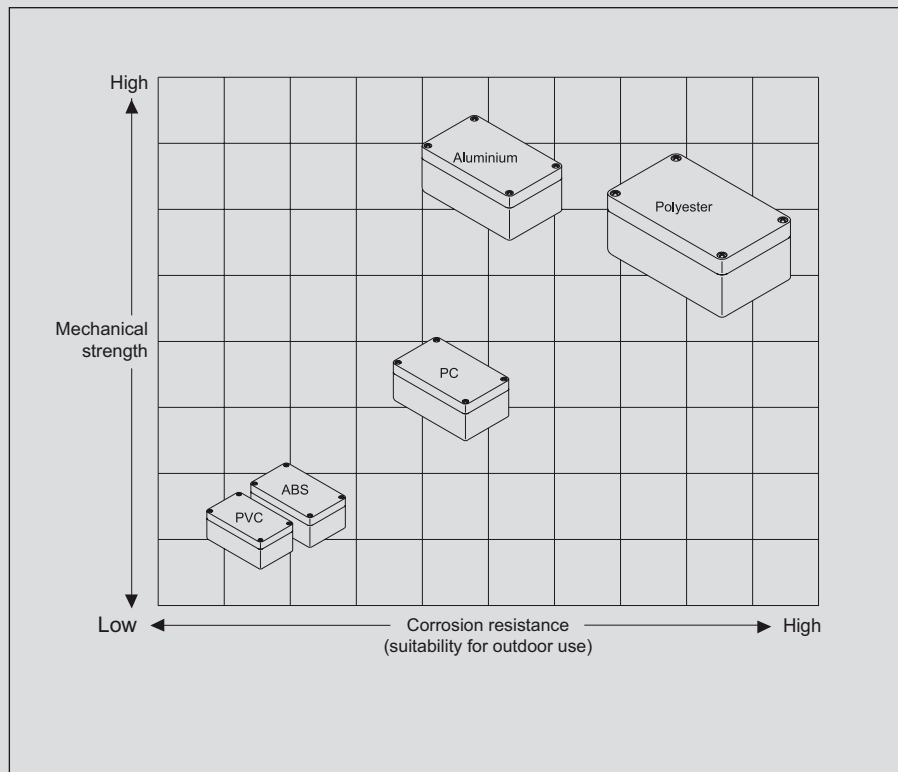
Your benefits:

- Personal advice on site
- Reduced vertical integration
- The enclosure modified to your specification can be directly incorporated in your production process

Standard Enclosures – General Technical Information

Mechanical strength of standard enclosures

The illustration shows the suitability of different enclosure materials (standard enclosure) in terms of mechanical stress and corrosive environments.



Manufacturing standard for standard enclosures

Technical information on enclosure manufacture

As an ISO-9001-2008-certified company, BERNSTEIN has defined a manufacturing standard that applies to all machining orders (unless other requirements are specified).

Dimension tolerances

When preparing details for enclosure machining (see following drawings, showing orientation of enclosure when set up for machining), tolerances used for the first machining operation on each set up, are according to ISO 2768-mH.

If other dimensions or reference edges are used, the following maximum general tolerances are applicable for the first machining operation on each enclosure per set up (see table below).

Tolerances between further machining operations compared to each other can be limited to ± 0.1 mm.

General tolerances Standard range

Material/enclosure type	General tolerance
CA-020 to CA-480	DIN 1688
Cast aluminium	
CT-50 to CT-91	DIN 16901
PC/ABS	
CP-140 to CP-460	
Polyester mats	DIN 16901

Minimum purchase quantities

In order to keep enclosure machining as cost-effective for the user as possible, the following minimum purchase quantities are suggested:

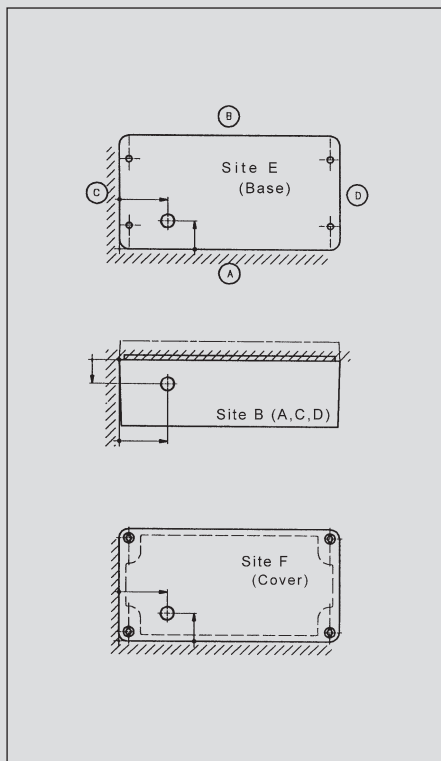
Designation	Minimum purchase quantity
CA-020 ... CA-080	20 pieces
CA-100 ... CA-190	10 pieces
CA-210 ... CA-310	10 pieces
CA-330 ... CA-480	5 pieces
CP-140 ... CP-195	20 pieces
CP-220 ... CP-320	10 pieces
CP-330 ... CP-460	5 pieces
CT-50 ... CT-76	20 pieces
CT-78 ... CT-89	10 pieces

These quantities should be regarded as the minimum, if the customised enclosures are to be produced economically. Production includes mechanical machining, special coating, screen-printing, engraving or assembly of accessories. BERNSTEIN will of course be pleased to advise you.

Reference edges for manufacturing standard

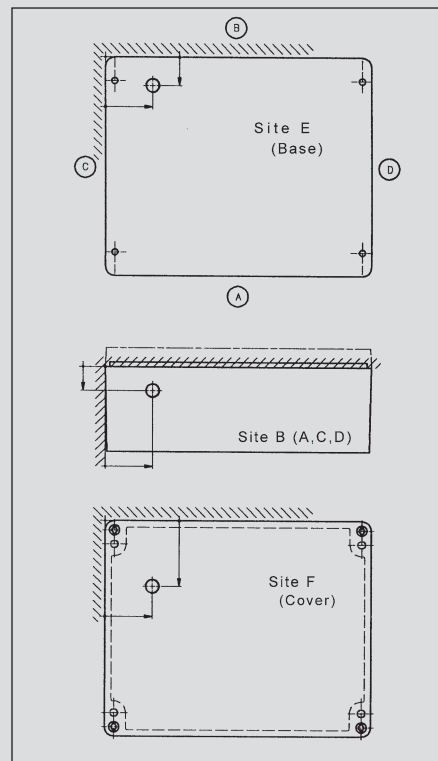
Series

CA-020 to CA-240, CA-270 to CA-300
CT-50 to CT-82, CP-140 to CP-300



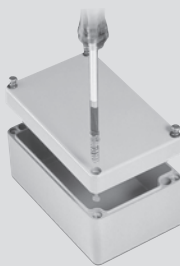
Series

CA-250, CA-310 to CA-480
CT-84 to CT-91, CP-320 to CPS-590



The BERNSTEIN quick-release fastener and flexible internal articulated hinge

Invented and patented by BERNSTEIN – the quick-release fastener and its internal articulated hinge



- Reduced time and costs
- Easy to use

1. Press and turn by 90°

- Easy opening and closing

2. Simple connection check

- No need for mechanical testing

3. Safe

- Quick-release fastener is tensioned and snaps firmly in. Cover will not open when subjected to shaking and vibration.

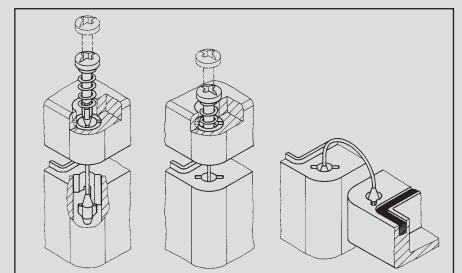
4. Effortless mounting

- Self-latching and locking function ensures straightforward mounting or retrofit.

Quick-release fastener/internal articulated hinge – for securing covers to enclosure bodies.

- Subsequent mounting possible without the need for mechanical machining.
- Strain relief and captive mounting of the cover are guaranteed.

The flexible internal articulated hinges can be easily fitted in the enclosures without the need for mechanical machining and reliably hold the enclosure cover after opening. The hinges provide effective strain relief and captive mounting of the enclosure cover



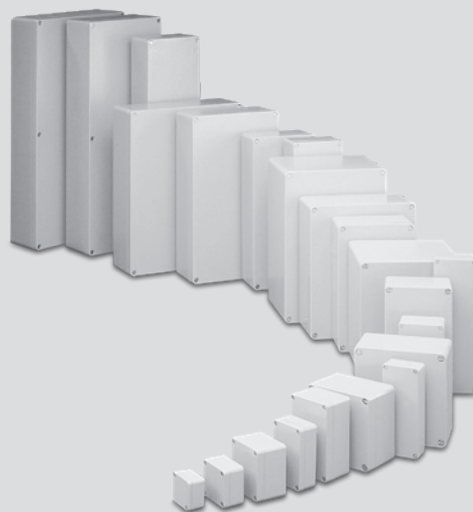
Aluminium Enclosure Series CA

BERNSTEIN aluminium enclosures have a well proven record of success in encapsulating electrical, electronic or pneumatic components, while also being ideally suited for applications in potentially explosive atmospheres. All enclosures comply with protection class IP66 according to DIN EN 60529 (optionally IP67).

BERNSTEIN aluminium enclosures feature earthing screws (copper-plated, M4 or M6) in the body and in the cover for connecting PE conductors. The surfaces under the earthing screws are left blank. The screws for mounting the covers on BERNSTEIN enclosures are made from stainless steel and are held captive by the self-latching hinge integrated in the cover. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. BERNSTEIN aluminium enclosures are finished as standard in RAL 7001 (silver grey).

BERNSTEIN uses pressure die-casting or gravity die-casting moulds to manufacture the aluminium enclosures.

The mounting flanges or even the earthing socket on the inside of the enclosure can be used for mounting and securing built-in components (mounting rail, mounting plate, pc board etc.). These mounting points on the inside of the enclosures are located at different levels and in different positions. The dimensioned drawings on the following pages show the relevant positions.



Technical data

Material

Aluminium pressure die-casting or gravity die-casting

Seal

Foamed PUR seal
Neoprene (CR) round cord (silicone-free),
silicone round cord, EPDM round cord

Cover screws

Stainless steel, captive, cross recessed head

Optionally:

- Stainless steel, captive hexagon socket head cap screws
- Sealed cover screws, steel (9 S 20 K), slot head (on request)

Coating

Standard: RAL 7001 (silver grey)

Optionally:

- Special RAL colours
- Special coatings

Temperature range of CA enclosures, standard powder-coated finish

-30°C to +80°C

Please contact us for higher temperature ranges.

Temperature range of seals

Standard:

-40°C bis +100°C (PUR seal)

Alternatively:

-30°C to +80°C (Neoprene seal)
-60 °C to +130°C (silicone seal)
or rather -35°C to +100°C (EPDM seal)

Protection class

IP66

IP67 with PUR seal

Approbations

Germanischer Lloyd

c UL us (Label on demand)

ATEX



Aluminium enclosure						
Dimensions/mm					Article number	Type
L	x	W	x	H		
50	x	45	x	30	1020000000	CA-020
58	x	64	x	36	1060000000	CA-060
98	x	64	x	36	1080000000	CA-080
150	x	64	x	36	1100000000	CA-100
75	x	80	x	57	1130000000	CA-130
75	x	80	x	57	1140000000	CA-140
125	x	80	x	57	1150000000	CA-150
125	x	80	x	57	1160000000	CA-160
175	x	80	x	57	1170000000	CA-170
175	x	80	x	57	1180000000	CA-180
250	x	80	x	57	1190000000	CA-190
122	x	122	x	80	1210000000	CA-210
122	x	122	x	90	1210000050	CA-215
122	x	122	x	80	1220000000	CA-220
220	x	122	x	80	1230000000	CA-230
220	x	122	x	90	1230000050	CA-235
220	x	122	x	80	1240000000	CA-240
360	x	122	x	80	1250000000	CA-250
160	x	160	x	90	1270000000	CA-270
160	x	160	x	90	1280000000	CA-280
260	x	160	x	90	1290000000	CA-290
260	x	160	x	90	1300000000	CA-300
360	x	160	x	90	1310000000	CA-310
560	x	160	x	90	1330000000	CA-330
200	x	230	x	110	1350000000	CA-350
200	x	230	x	180	1360000000	CA-360
280	x	230	x	110	1370000000	CA-370
330	x	230	x	110	1380000000	CA-380
330	x	230	x	180	1390000000	CA-390
401	x	230	x	110	1400000000	CA-400
600	x	230	x	110	1420000000	CA-420
402	x	310	x	110	1450000000	CA-450
402	x	310	x	180	1460000000	CA-460
600	x	310	x	110	1470000000	CA-470
600	x	310	x	180	1480000000	CA-480

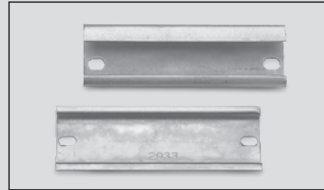
Assembling of components

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



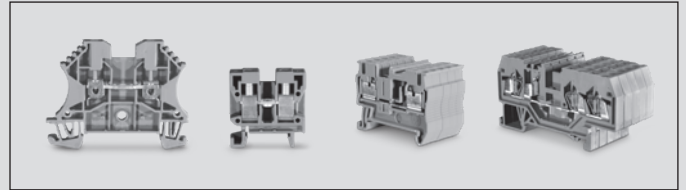
Mounting plates

made from galvanised steel plate (thickness: CA-060 to CA-310, CA-350 to CA-400: 1.5 mm; CA-330, CA-420 to CA-480: 2.5 mm) for versatile mounting of built-in components.



Mounting rails

conforming to Standards TS 15 or TS 32 and TS 35 made from steel; surface treated for accepting terminal blocks.



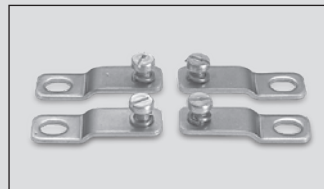
Terminal blocks

of all renowned manufacturers are used.



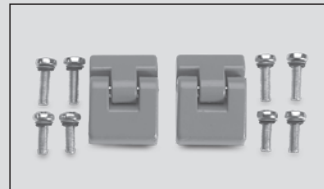
Earthing bars

made from galvanised steel for combining and connecting PE conductors.



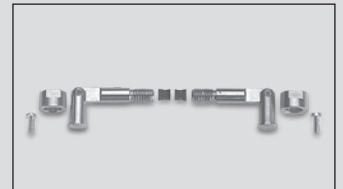
External mounting brackets

made from stainless steel for mounting enclosures without opening the covers. Variable mounting in 90°-steps thanks to contour in base of enclosure.



External articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 155°. Cast aluminium (painted in RAL 7001 – specific colour according to enclosure specification possible). Machining is required for mounting on enclosures.



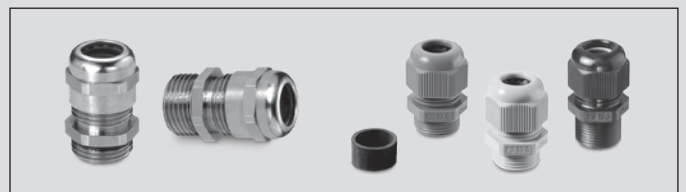
Internal articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 95°. Stainless steel. Machining is required for mounting on enclosures.



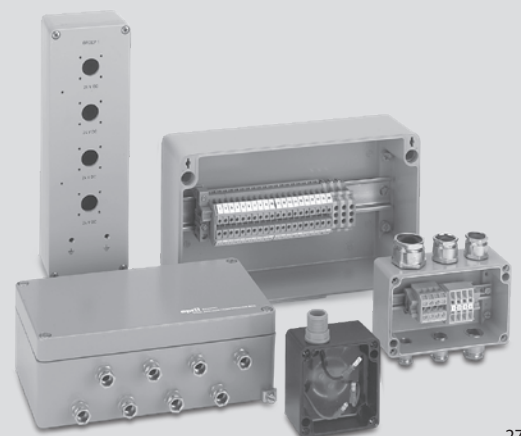
Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). For a conductive connection, grooves and springs of the enclosure must be left blank.



Cable glands

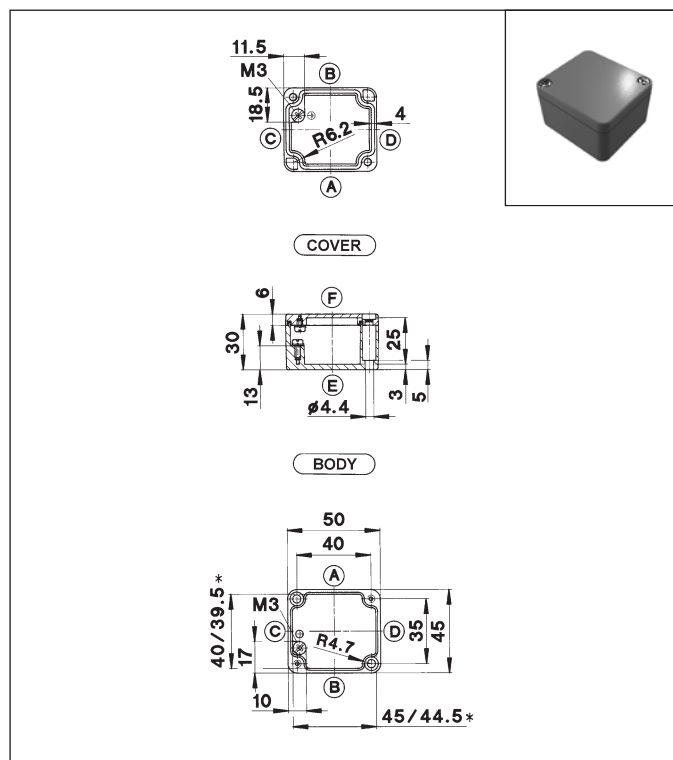
plastic cable glands (polyamide PAGV-2, RAL 7001) or brass cable glands. Sealing element CR/NBR. Temperature range: -20°C to +100°C (see also page 71). Other cable glands on demand.



Aluminium Enclosures – Series CA

50 x 45 x 30 mm

CA-020 Aluminium enclosures

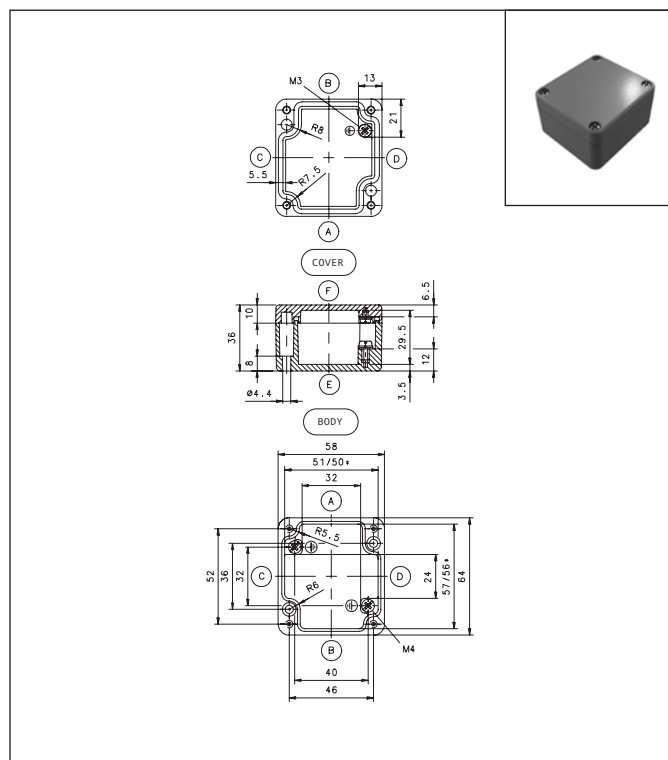


* Smaller dimension at mounting plate support

Type	CA-020
Weight (g)	70
External dimension (mm)	50 x 45 x 30
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1020000000
unwashed, not painted, loose accessories	1020034000
Accessories (individual part or installation kit)	
Mounting plate	-
Mounting rail TS 15	-
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	-
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	1 0 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

58 x 64 x 36 mm

CA-060 Aluminium enclosures

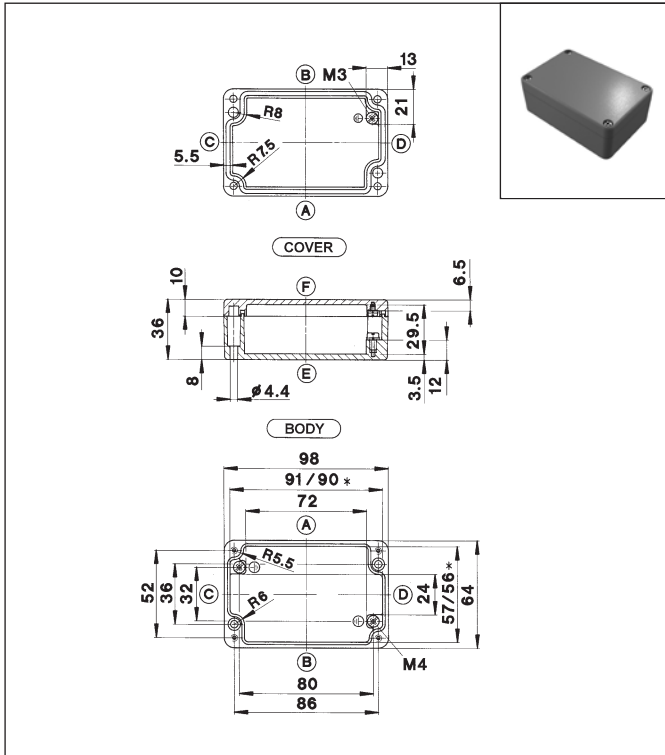


* Smaller dimension at mounting plate support

Type	CA-060
Weight (g)	160
External dimension (mm)	58 x 64 x 36
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1060000000
unwashed, not painted, loose accessories	1060038000
Accessories (individual part or installation kit)	
Mounting plate	9511001000
Mounting rail TS 15	9820000000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	2 1 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

98 x 64 x 36 mm

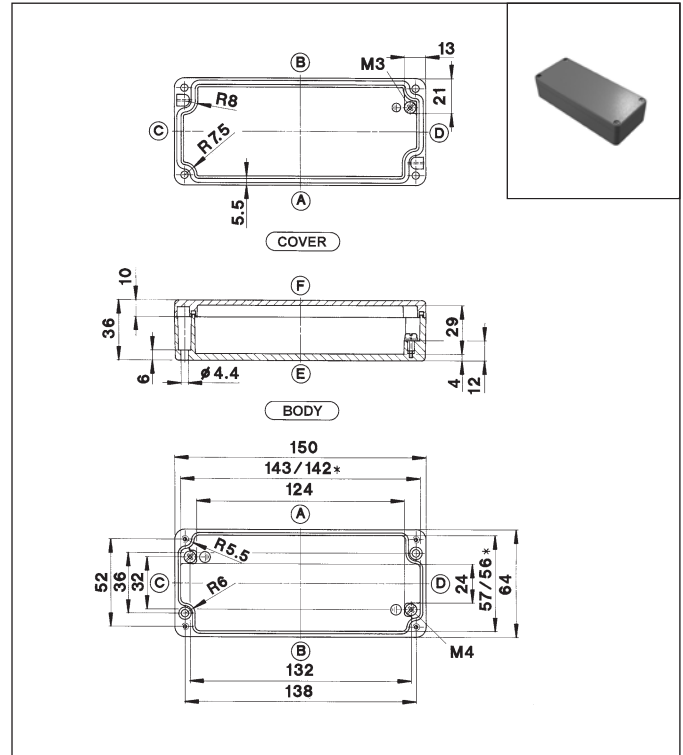
CA-080
Aluminium enclosures



150 x 64 x 36 mm

CA-100
Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CA-080
Weight (g)	220
External dimension (mm)	98 x 64 x 36
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1080000000
unwashed, not painted, loose accessories	1080042000
Accessories (individual part or installation kit)	
Mounting plate	9511002000
Mounting rail TS 15	9820005000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	4 3 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

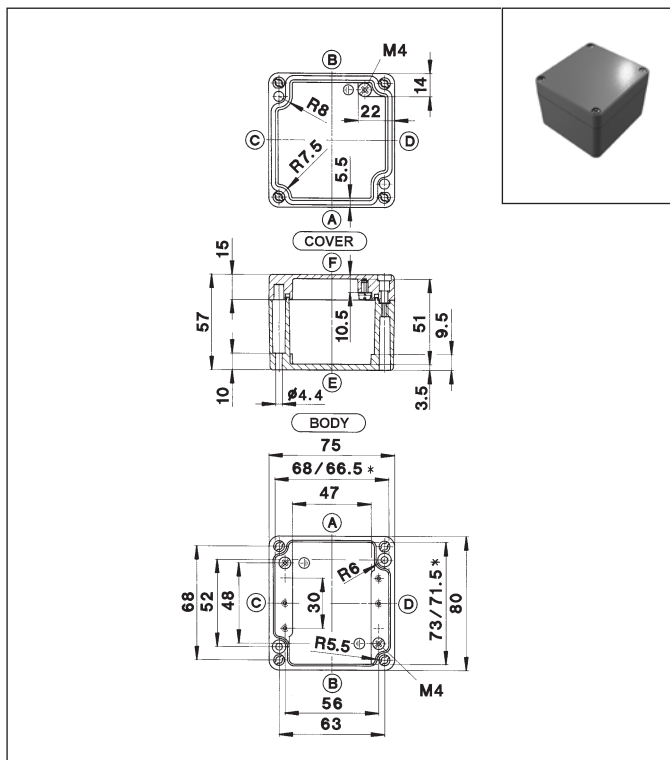
* Smaller dimension at mounting plate support

Type	CA-100
Weight (g)	330
External dimension (mm)	150 x 64 x 36
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1100000000
unwashed, not painted, loose accessories	1100053000
Accessories (individual part or installation kit)	
Mounting plate	9511003000
Mounting rail TS 15	9820011000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	-
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	6 4 0 0 0 0 0 0
Side C/D	1 0 0 0 0 0 0 0
** Enclosure preparation required	

Aluminium Enclosures – Series CA

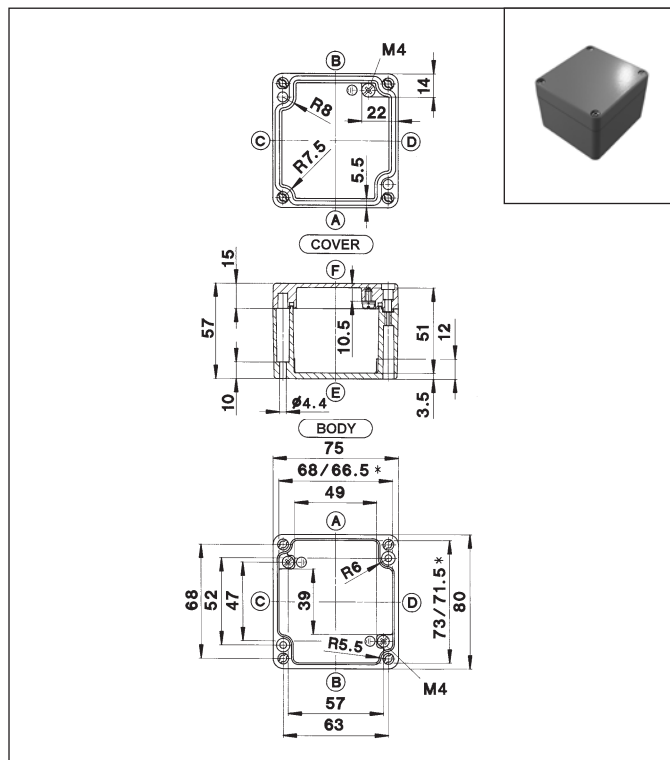
75 x 80 x 57 mm

CA-130 Aluminium enclosures



75 x 80 x 57 mm

CA-140 Aluminium enclosures



* Smaller dimension at mounting plate support

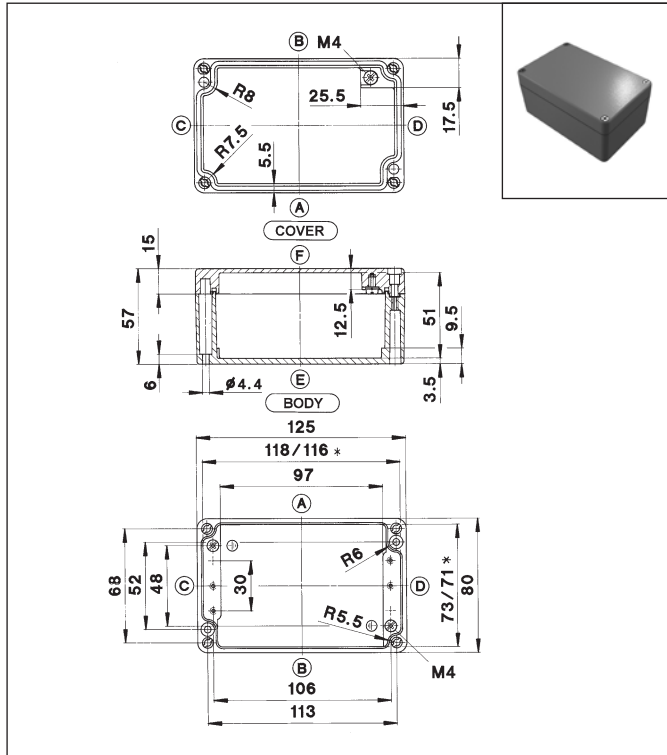
* Smaller dimension at mounting plate support

Type	CA-130
Weight (g)	280
External dimension (mm)	75 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1130000000
unwashed, not painted, loose accessories	1130057000
Accessories (individual part or installation kit)	
Mounting plate	9823015000
Mounting rail TS 15	9820002000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	5 2 1 0 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0
** Enclosure preparation required	

Type	CA-140
Weight (g)	280
External dimension (mm)	75 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1140000000
unwashed, not painted, loose accessories	1140080000
Accessories (individual part or installation kit)	
Mounting plate	9511004000
Mounting rail TS 15	9820035000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	5 2 1 1 0 0 0 0
Side C/D	3 2 1 1 0 0 0 0
** Enclosure preparation required	

125 x 80 x 57 mm

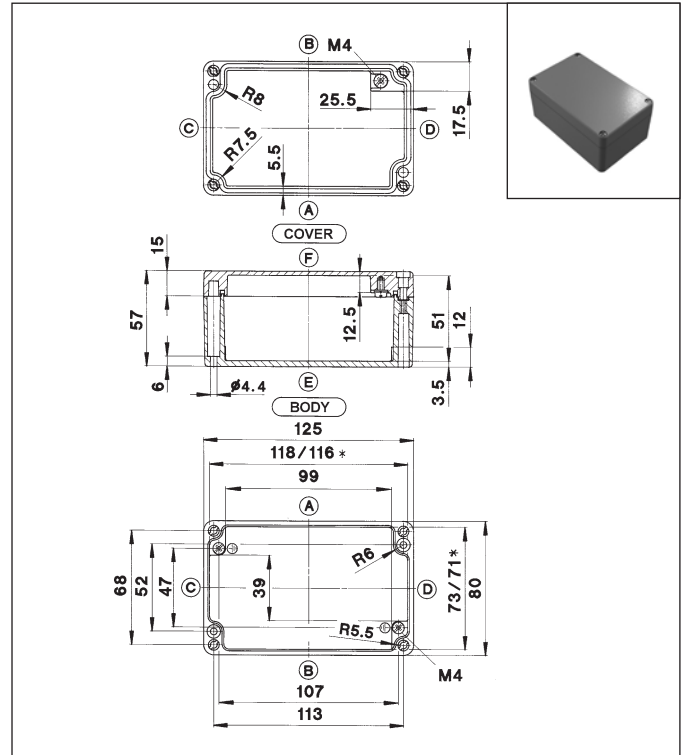
CA-150
Aluminium enclosures



125 x 80 x 57 mm

CA-160
Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

Type	CA-150
Weight (g)	435
External dimension (mm)	125 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1150000000
unwashed, not painted, loose accessories	1150019000
Accessories (individual part or installation kit)	
Mounting plate	9823016000
Mounting rail TS 15	9820010000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	10 4 3 2 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0

** Enclosure preparation required

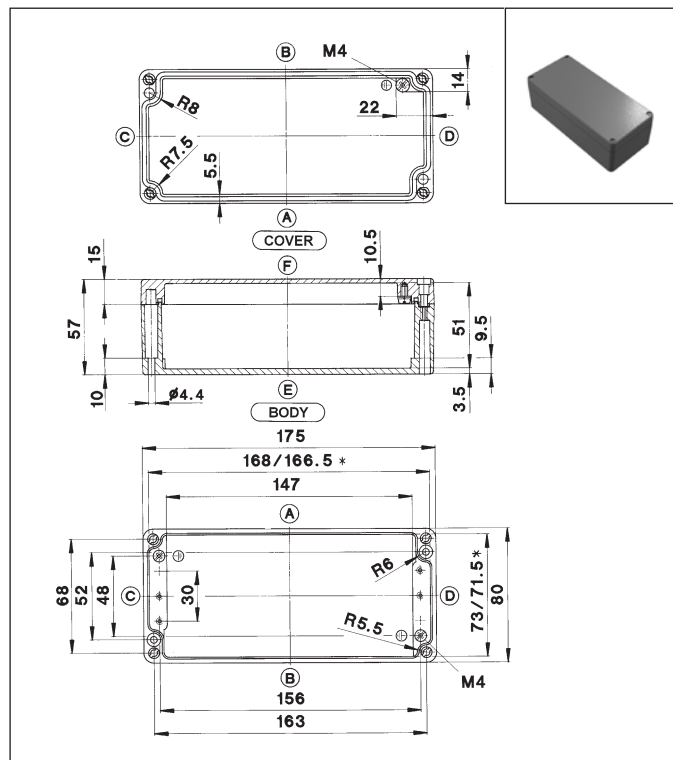
Type	CA-160
Weight (g)	435
External dimension (mm)	125 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1160000000
unwashed, not painted, loose accessories	1160045000
Accessories (individual part or installation kit)	
Mounting plate	9511005000
Mounting rail TS 15	9820036000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	10 4 3 2 0 0 0 0
Side C/D	4 2 1 1 0 0 0 0

** Enclosure preparation required

Aluminium Enclosures – Series CA

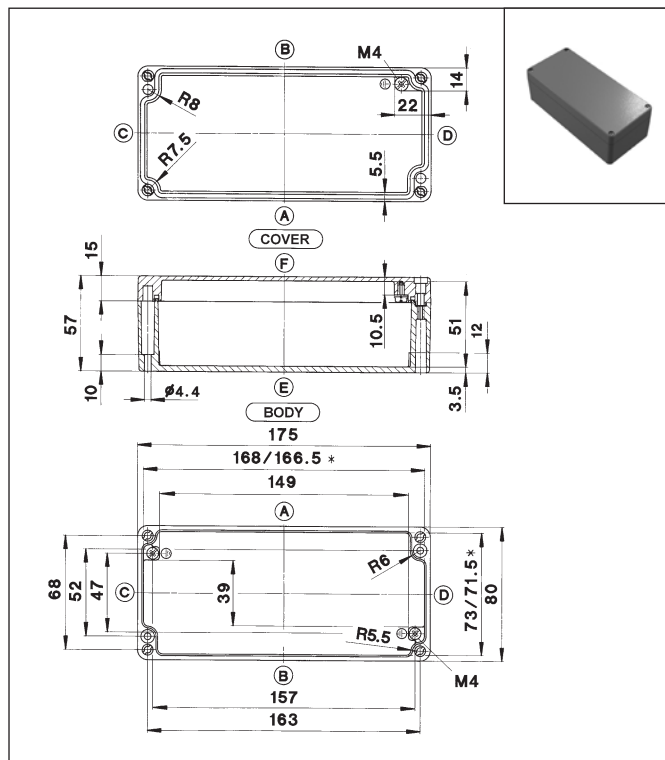
175 x 80 x 57 mm

CA-170
Aluminium enclosures



175 x 80 x 57 mm

CA-180
Aluminium enclosures



* Smaller dimension at mounting plate support

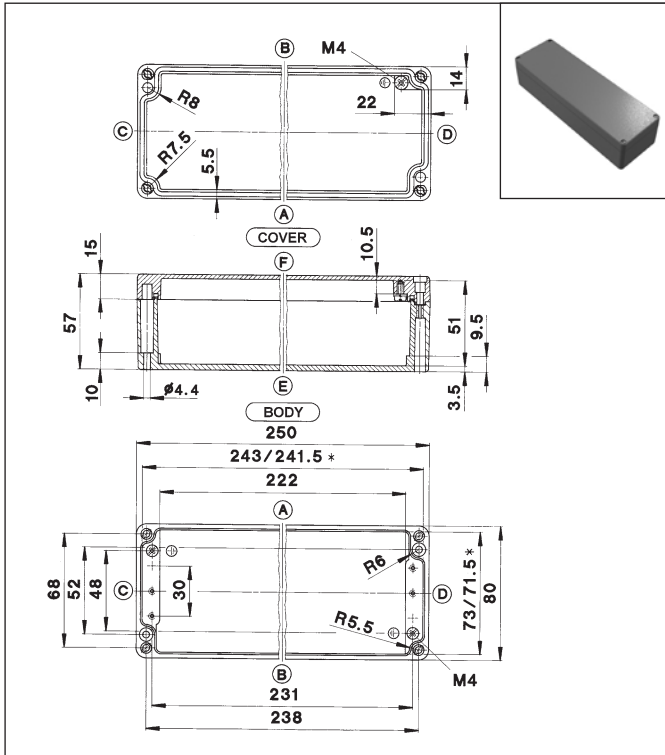
* Smaller dimension at mounting plate support

Type	CA-170
Weight (g)	530
External dimension (mm)	175 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1170000000
unwashed, not painted, loose accessories	1170016000
Accessories (individual part or installation kit)	
Mounting plate	9823017000
Mounting rail TS 15	9820014000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	14 6 4 4 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0
** Enclosure preparation required	

Type	CA-180
Weight (g)	530
External dimension (mm)	175 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1180000000
unwashed, not painted, loose accessories	1180040000
Accessories (individual part or installation kit)	
Mounting plate	9511006000
Mounting rail TS 15	9820037000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	14 6 4 4 0 0 0 0
Side C/D	4 2 1 1 0 0 0 0
** Enclosure preparation required	

250 x 80 x 57 mm

CA-190
Aluminium enclosures



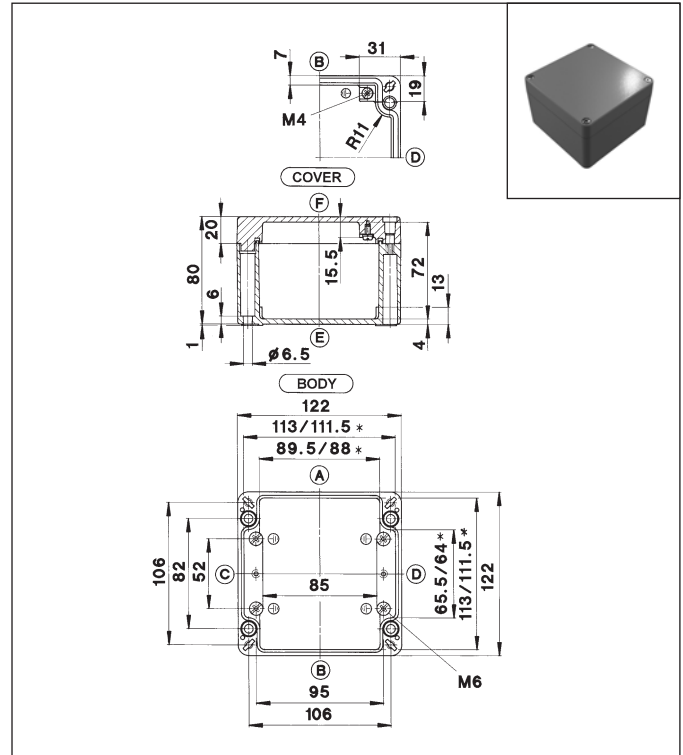
* Smaller dimension at mounting plate support

Type	CA-190
Weight (g)	710
External dimension (mm)	250 x 80 x 57
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1190000000
Unwashed, not painted, loose accessories	1190026000
Accessories (individual part or installation kit)	
Mounting plate	9823021000
Mounting rail TS 15	9820019000
Mounting rail TS 32	-
Mounting rail TS 35	-
Earthing rail	-
External mounting brackets	-
External articulated hinges	9801044000
Internal articulated hinges with cover guide**	-
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	22 9 7 5 0 0 0 0
Side C/D	3 2 1 0 0 0 0 0
** Enclosure preparation required	

122 x 122 x 80 mm

CA-210
Aluminium enclosures

CAD files available
at www.bernstein.eu



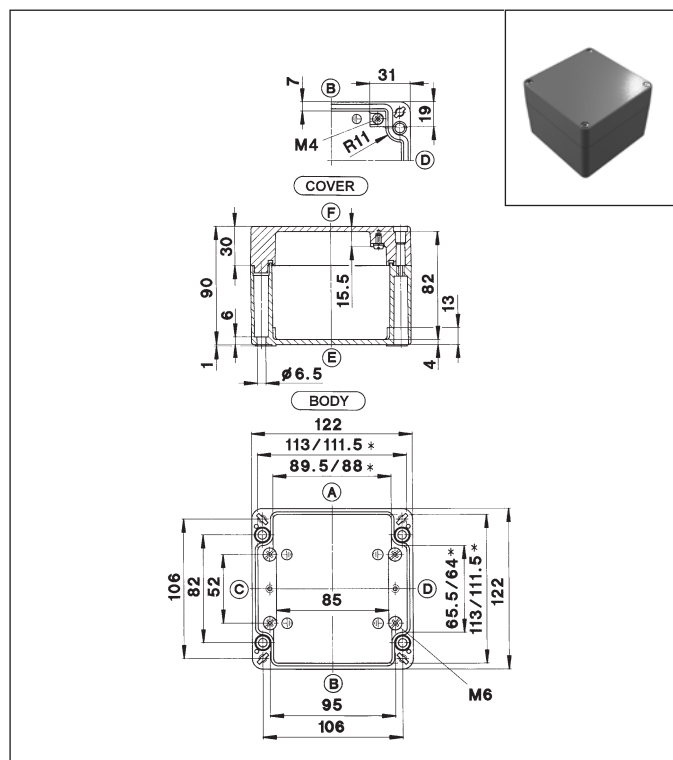
* Smaller dimension at mounting plate support

Type	CA-210
Weight (g)	940
External dimension (mm)	122 x 122 x 80
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1210000000
Unwashed, not painted, loose accessories	1210016000
Accessories (individual part or installation kit)	
Mounting plate	9511150000
Mounting rail TS 15	9820019000
Mounting rail TS 32	9821000000
Mounting rail TS 35	9822001000
Earthing rail	9810002000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

Aluminium Enclosures – Series CA

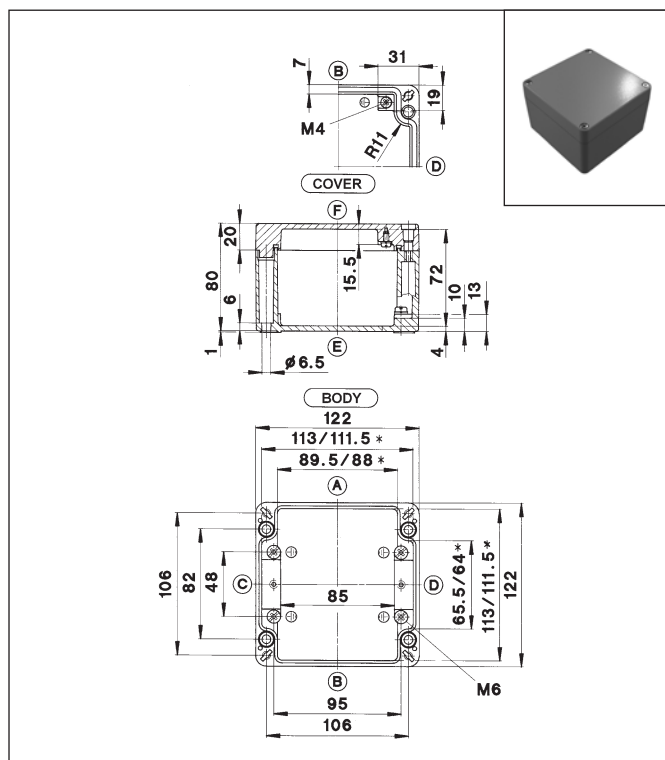
122 x 122 x 90 mm

CA-215 Aluminium enclosures



122 x 122 x 80 mm

CA-220 Aluminium enclosures



* Smaller dimension at mounting plate support

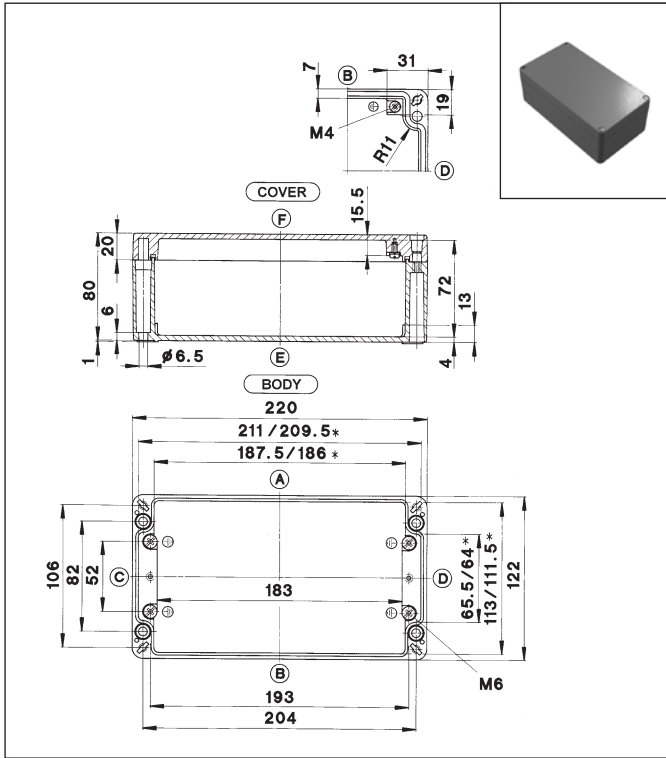
* Smaller dimension at mounting plate support

Type	CA-215
Weight (g)	940
External dimension (mm)	122 x 122 x 90
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1210000050
unwashed, not painted, loose accessories	1210012050
Accessories (individual part or installation kit)	
Mounting plate	9511150000
Mounting rail TS 15	-
Mounting rail TS 32	9821000000
Mounting rail TS 35	9822001000
Earthing rail	9810002000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

Type	CA-220
Weight (g)	940
External dimension (mm)	122 x 122 x 80
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1220000000
unwashed, not painted, loose accessories	1220061000
Accessories (individual part or installation kit)	
Mounting plate	9511008000
Mounting rail TS 15	-
Mounting rail TS 32	9821000000
Mounting rail TS 35	9822001000
Earthing rail	9810002000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	12 6 4 2 2 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

220 x 122 x 80 mm

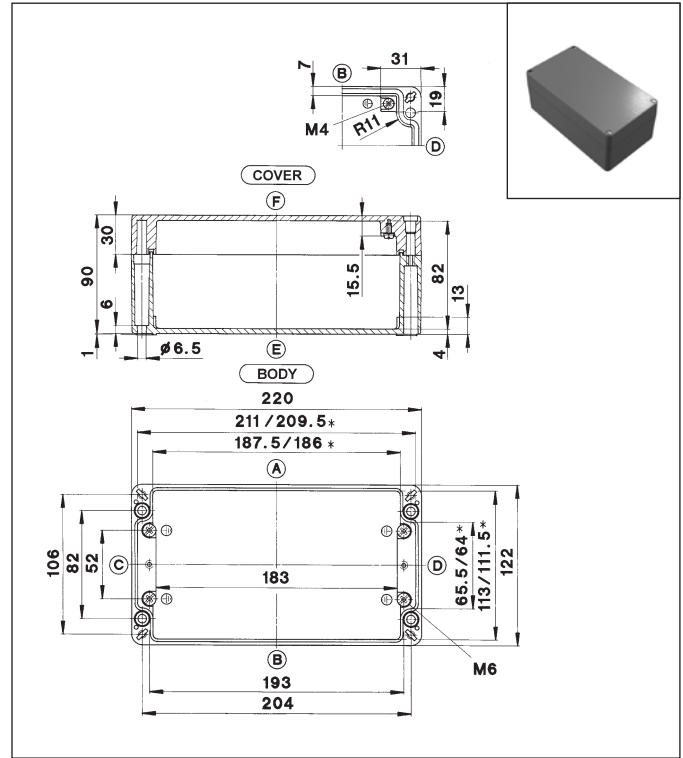
CA-230
Aluminium enclosures



220 x 122 x 90 mm

CA-235
Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

Type	CA-230
Weight (g)	1410
External dimension (mm)	220 x 122 x 80
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1230000000
unwashed, not painted, loose accessories	1230015000
Accessories (individual part or installation kit)	
Mounting plate	9511095000
Mounting rail TS 15	-
Mounting rail TS 32	9821005000
Mounting rail TS 35	9822007000
Earthing rail	9810008000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0

** Enclosure preparation required

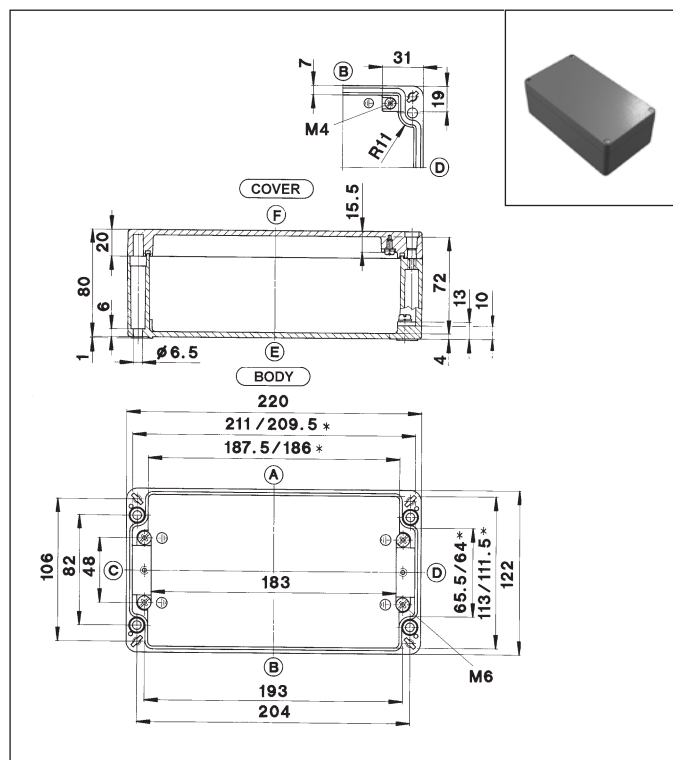
Type	CA-235
Weight (g)	1410
External dimension (mm)	220 x 122 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1230000050
unwashed, not painted, loose accessories	1230012050
Accessories (individual part or installation kit)	
Mounting plate	9511095000
Mounting rail TS 15	-
Mounting rail TS 32	9821005000
Mounting rail TS 35	9822007000
Earthing rail	9810008000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0

** Enclosure preparation required

Aluminium Enclosures – Series CA

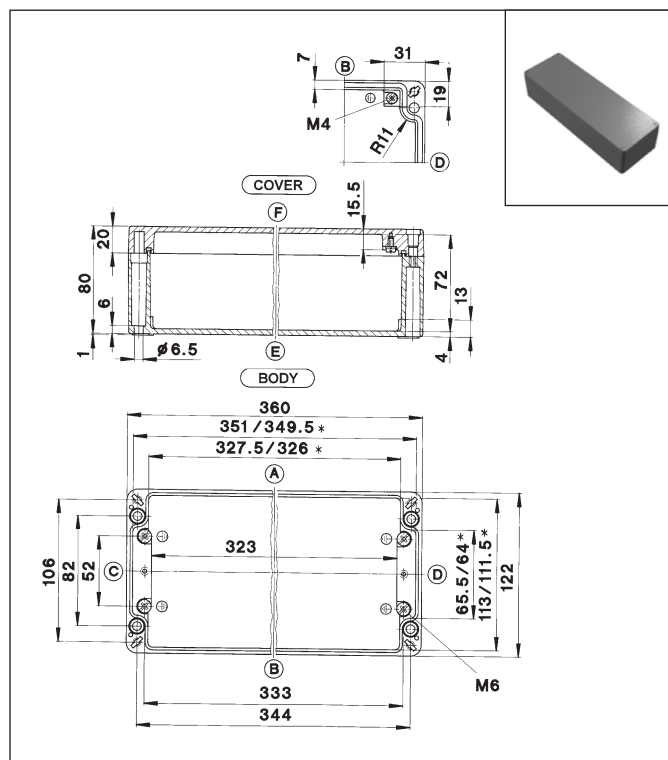
220 x 122 x 80 mm

CA-240 Aluminium enclosures



360 x 122 x 80 mm

CA-250 Aluminium enclosures



* Smaller dimension at mounting plate support

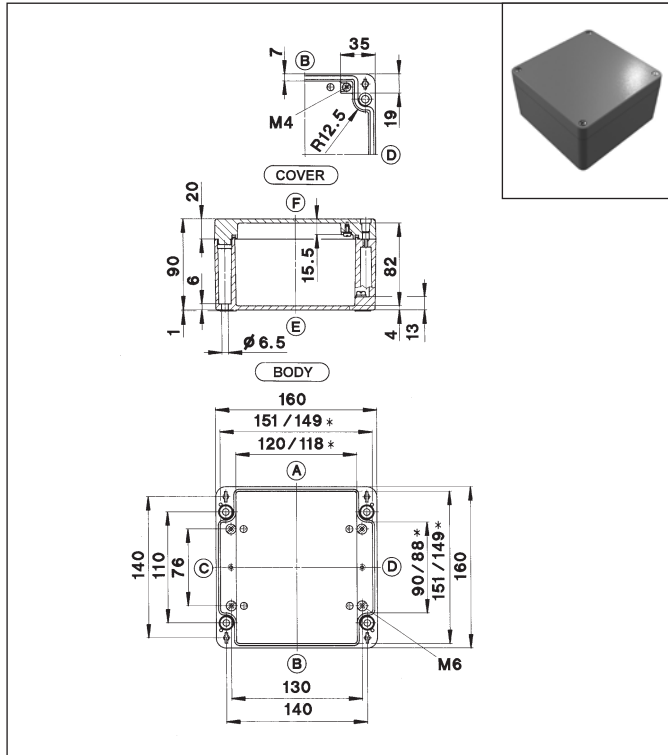
* Smaller dimension at mounting plate support

Type	CA-240
Weight (g)	1410
External dimension (mm)	220 x 122 x 80
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1240000000
unwashed, not painted, loose accessories	1240082000
Accessories (individual part or installation kit)	
Mounting plate	9511009000
Mounting rail TS 15	-
Mounting rail TS 32	9821005000
Mounting rail TS 35	9822007000
Earthing rail	9810008000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	27 12 8 5 4 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

Type	CA-250
Weight (g)	1860
External dimension (mm)	360 x 122 x 80
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1250000000
unwashed, not painted, loose accessories	1250011000
Accessories (individual part or installation kit)	
Mounting plate	9511174000
Mounting rail TS 15	-
Mounting rail TS 32	9821012000
Mounting rail TS 35	9822015000
Earthing rail	9810014000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801031000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	48 21 16 9 6 0 0 0
Side C/D	5 2 2 1 0 0 0 0
** Enclosure preparation required	

160 x 160 x 90 mm

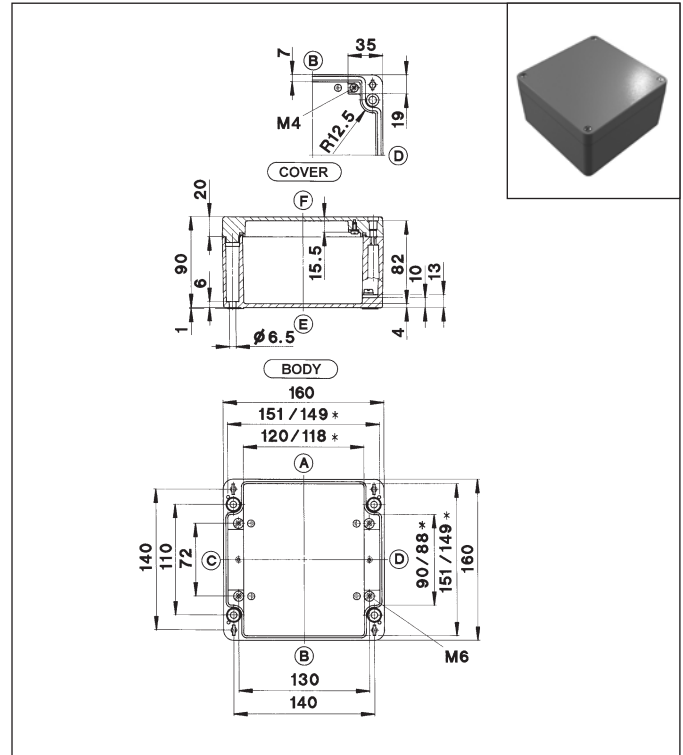
CA-270
Aluminium enclosures



160 x 160 x 90 mm

CA-280
Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CA-270
Weight (g)	1410
External dimension (mm)	160 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1270000000
unwashed, not painted, loose accessories	1270013000
Accessories (individual part or installation kit)	
Mounting plate	9511149000
Mounting rail TS 15	-
Mounting rail TS 32	9821002000
Mounting rail TS 35	9822003000
Earthing rail	9810004000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	20 9 6 4 2 2 1 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

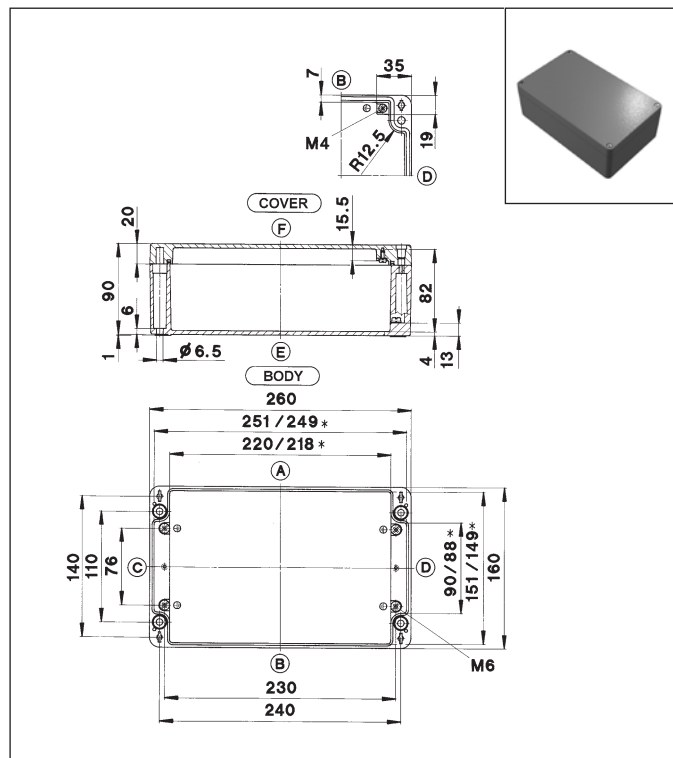
* Smaller dimension at mounting plate support

Type	CA-280
Weight (g)	1410
External dimension (mm)	160 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1280000000
unwashed, not painted, loose accessories	1280033000
Accessories (individual part or installation kit)	
Mounting plate	9511011000
Mounting rail TS 15	-
Mounting rail TS 32	9821002000
Mounting rail TS 35	9822003000
Earthing rail	9810004000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	20 9 6 4 2 2 1 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

Aluminium Enclosures – Series CA

260 x 160 x 90 mm

CA-290 Aluminium enclosures

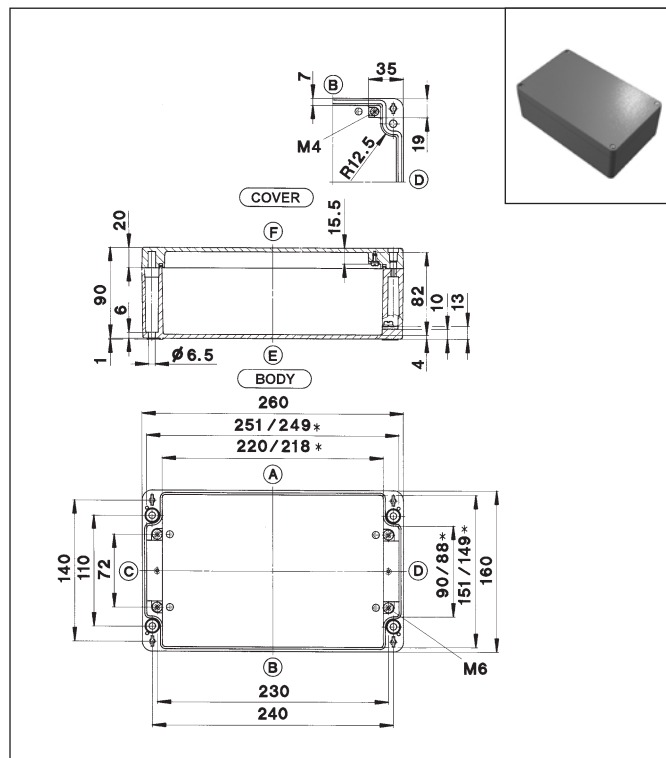


* Smaller dimension at mounting plate support

Type	CA-290
Weight (g)	1960
External dimension (mm)	260 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1290000000
unwashed, not painted, loose accessories	1290011000
Accessories (individual part or installation kit)	
Mounting plate	9511096000
Mounting rail TS 15	-
Mounting rail TS 32	9821008000
Mounting rail TS 35	9822011000
Earthing rail	9810010000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	36 17 12 7 4 3 3 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

260 x 160 x 90 mm

CA-300 Aluminium enclosures

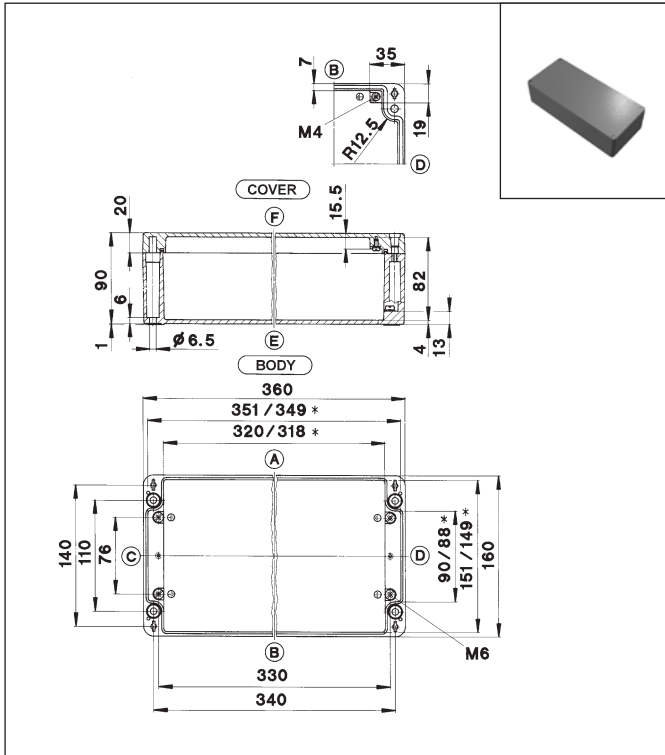


* Smaller dimension at mounting plate support

Type	CA-300
Weight (g)	1960
External dimension (mm)	260 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1300000000
unwashed, not painted, loose accessories	1300041000
Accessories (individual part or installation kit)	
Mounting plate	9511012000
Mounting rail TS 15	-
Mounting rail TS 32	9821008000
Mounting rail TS 35	9822011000
Earthing rail	9810010000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	36 17 12 7 4 3 3 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

360 x 160 x 90 mm

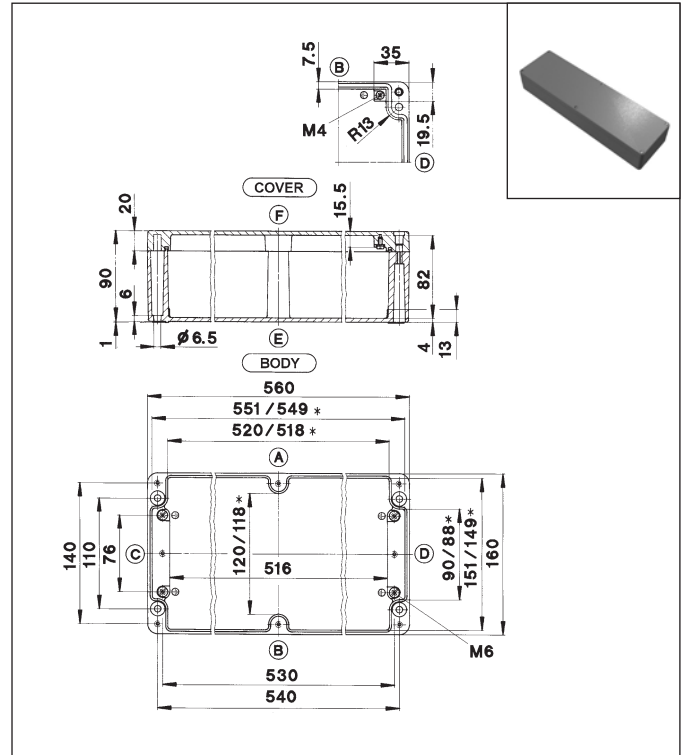
CA-310
Aluminium enclosures



560 x 160 x 90 mm

CA-330
Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CA-310
Weight (g)	2550
External dimension (mm)	360 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1310000000
unwashed, not painted, loose accessories	1310071000
Accessories (individual part or installation kit)	
Mounting plate	9511175000
Mounting rail TS 15	-
Mounting rail TS 32	9821012000
Mounting rail TS 35	9822015000
Earthing rail	9810042000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	54 26 18 11 6 5 4 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

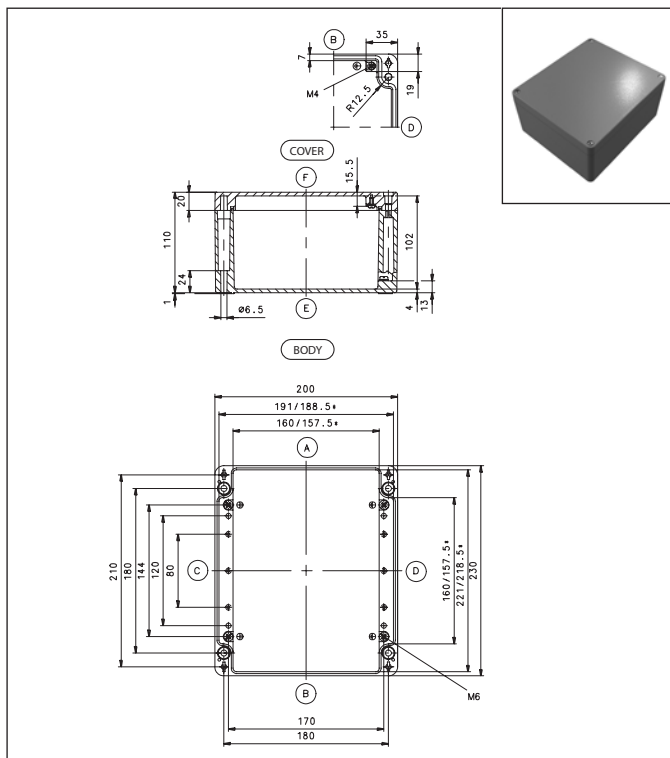
* Smaller dimension at mounting plate support

Type	CA-330
Weight (g)	4310
External dimension (mm)	560 x 160 x 90
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1330000000
unwashed, not painted, loose accessories	1330022000
Accessories (individual part or installation kit)	
Mounting plate	9511014000
Mounting rail TS 15	-
Mounting rail TS 32	9821015000
Mounting rail TS 35	9822018000
Earthing rail	9810016000
External mounting brackets	9824024000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	84 40 28 16 10 8 6 0
Side C/D	8 4 3 2 2 0 0 0
** Enclosure preparation required	

Aluminium Enclosures – Series CA

200 x 230 x 110 mm

CA-350 Aluminium enclosures

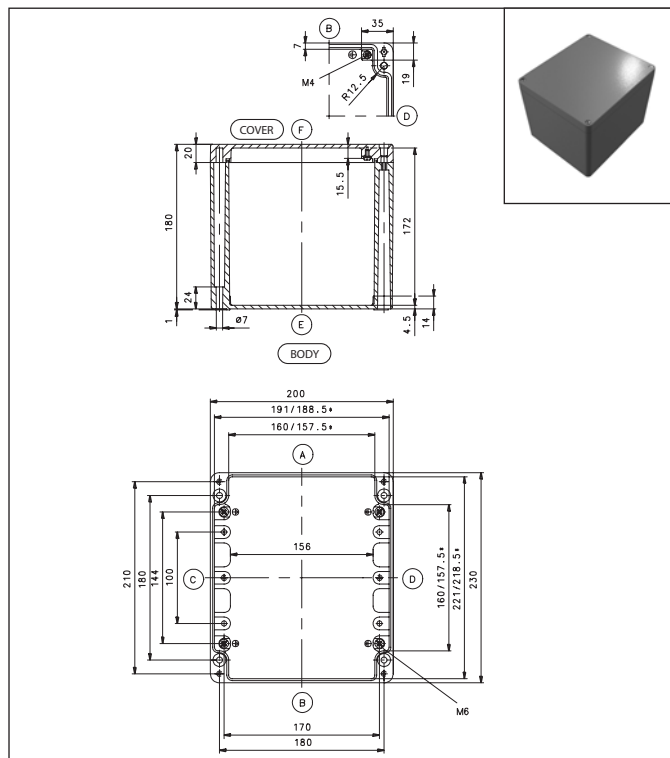


* Smaller dimension at mounting plate support

Type	CA-350
Weight (g)	2730
External dimension (mm)	200 x 230 x 110
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1350000000
unwashed, not painted, loose accessories	1350017000
Accessories (individual part or installation kit)	
Mounting plate	9511015000
Mounting rail TS 15	-
Mounting rail TS 32	9821003000
Mounting rail TS 35	9822005000
Earthing rail	9810007000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	35 15 12 8 4 3 2 2
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

200 x 230 x 180 mm

CA-360 Aluminium enclosures

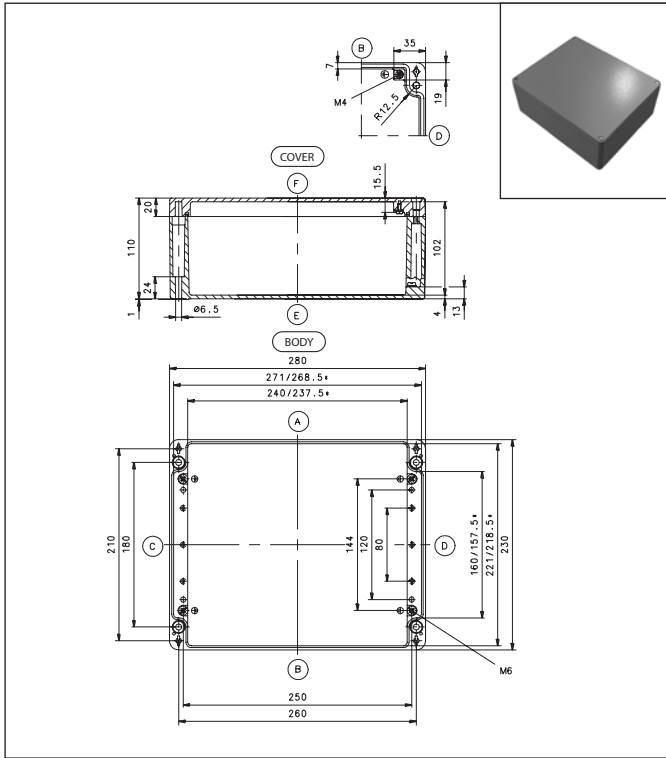


* Smaller dimension at mounting plate support

Type	CA-360
Weight (g)	3680
External dimension (mm)	200 x 230 x 180
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1360000000
unwashed, not painted, loose accessories	1360043000
Accessories (individual part or installation kit)	
Mounting plate	9511015000
Mounting rail TS 15	-
Mounting rail TS 32	9821003000
Mounting rail TS 35	9822005000
Earthing rail	9810007000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	56 32 20 13 9 5 4 4
Side C/D	52 27 18 12 8 5 3 3
** Enclosure preparation required	

280 x 230 x 110 mm

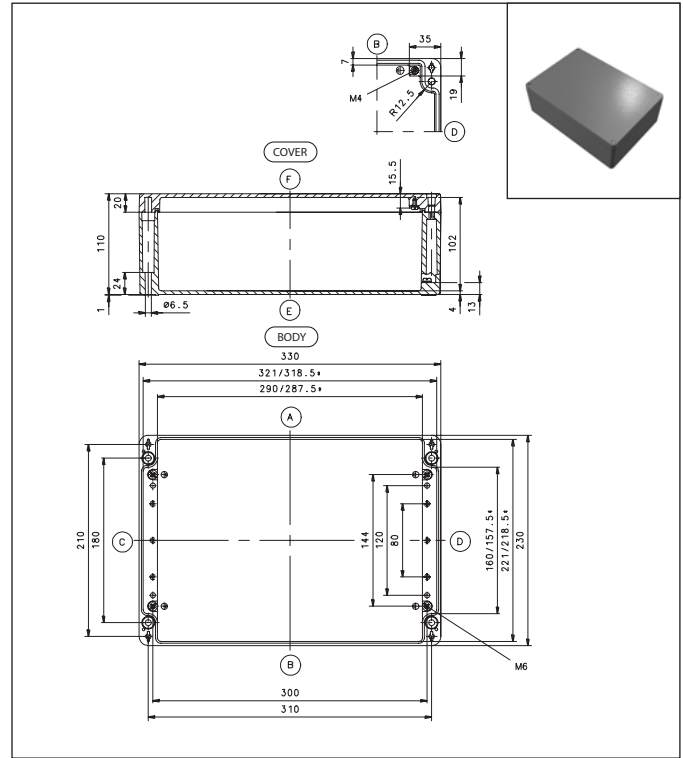
CA-370 Aluminium enclosures



330 x 230 x 110 mm

CA-380 Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CA-370
Weight (g)	3840
External dimension (mm)	280 x 230 x 110
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1370000000
unwashed, not painted, loose accessories	1370015000
Accessories (individual part or installation kit)	
Mounting plate	9511016000
Mounting rail TS 15	-
Mounting rail TS 32	9821009000
Mounting rail TS 35	9822012000
Earthing rail	9810011000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	53 25 18 11 7 4 3 3
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

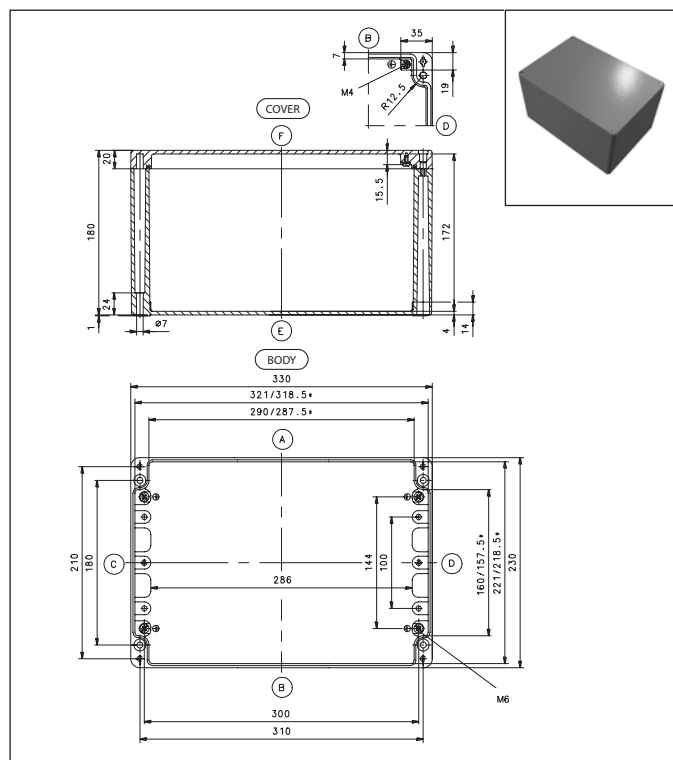
* Smaller dimension at mounting plate support

Type	CA-380
Weight (g)	4270
External dimension (mm)	330 x 230 x 110
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1380000000
unwashed, not painted, loose accessories	1380014000
Accessories (individual part or installation kit)	
Mounting plate	9511017000
Mounting rail TS 15	-
Mounting rail TS 32	9821011000
Mounting rail TS 35	9822014000
Earthing rail	9810013000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	65 30 23 12 9 5 4 3
Side C/D	24 12 8 5 3 2 2 1
** Enclosure preparation required	

Aluminium Enclosures – Series CA

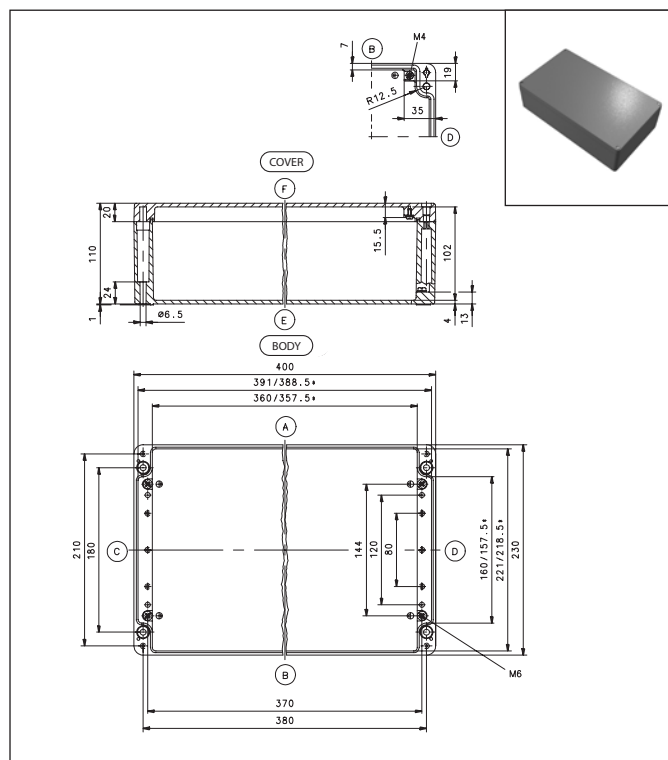
330 x 230 x 180 mm

CA-390 Aluminium enclosures



400 x 230 x 110 mm

CA-400 Aluminium enclosures



* Smaller dimension at mounting plate support

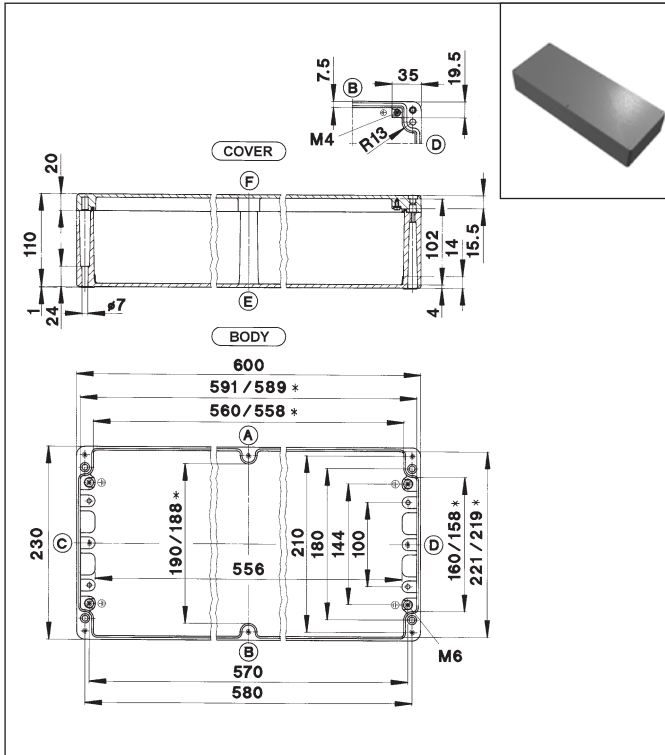
Type	CA-390
Weight (g)	5300
External dimension (mm)	330 x 230 x 180
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1390000000
unwashed, not painted, loose accessories	1390012000
Accessories (individual part or installation kit)	
Mounting plate	9511017000
Mounting rail TS 15	-
Mounting rail TS 32	9821011000
Mounting rail TS 35	9822014000
Earthing rail	9810013000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	108 54 40 25 15 9 8 6
Side C/D	52 27 18 12 8 5 3 3
** Enclosure preparation required	

* Smaller dimension at mounting plate support

Type	CA-400
Weight (g)	4870
External dimension (mm)	400 x 230 x 110
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1400000000
unwashed, not painted, loose accessories	1400013000
Accessories (individual part or installation kit)	
Mounting plate	9511294000
Mounting rail TS 15	-
Mounting rail TS 32	9821014000
Mounting rail TS 35	9822017000
Earthing rail	9810015000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	80 38 27 17 11 6 5 4
Side C/D	26 12 8 5 3 2 2 1
** Enclosure preparation required	

600 x 230 x 110 mm

CA-420
Aluminium enclosures



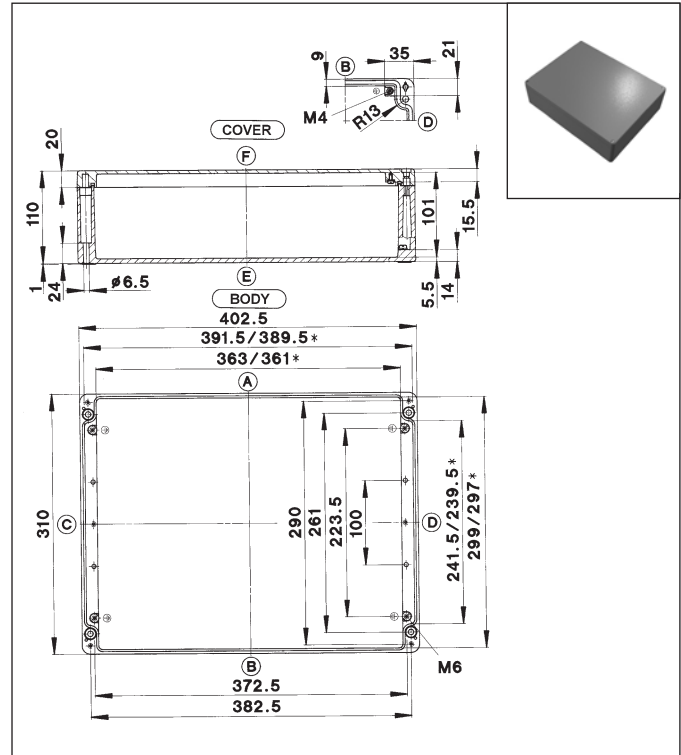
* Smaller dimension at mounting plate support

Type	CA-420
Weight (g)	6380
External dimension (mm)	600 x 230 x 110
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1420000000
Unwashed, not painted, loose accessories	1420011000
Accessories (individual part or installation kit)	
Mounting plate	9511019000
Mounting rail TS 15	-
Mounting rail TS 32	9821016000
Mounting rail TS 35	9822019000
Earthing rail	9810017000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	120 56 42 24 16 8 8 6
Side C/D	28 13 8 5 3 2 2 1
** Enclosure preparation required	

402,5 x 310 x 110 mm

CA-450
Aluminium enclosures

CAD files available
at www.bernstein.eu



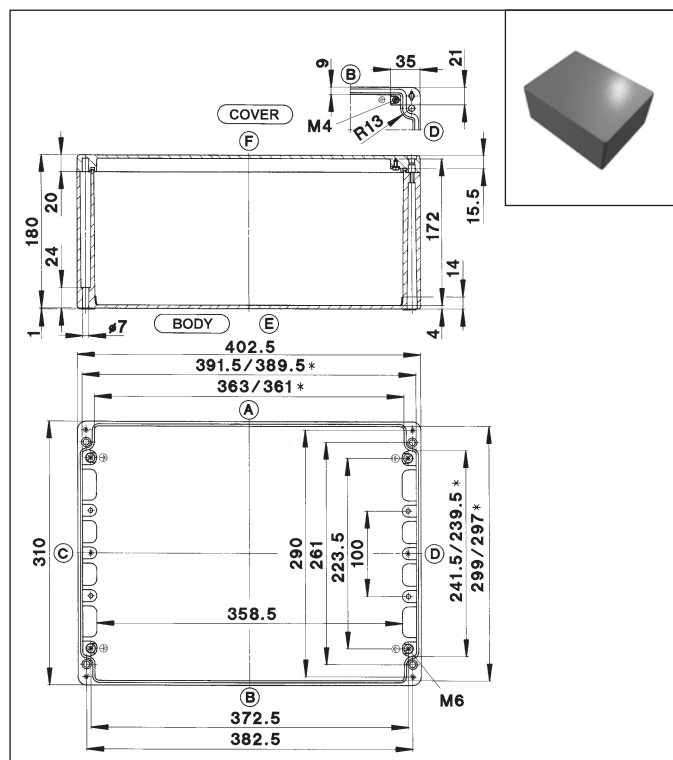
* Smaller dimension at mounting plate support

Type	CA-450
Weight (g)	5810
External dimension (mm)	402,5 x 310 x 110
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1450000000
Unwashed, not painted, loose accessories	1450025000
Accessories (individual part or installation kit)	
Mounting plate	9511020000
Mounting rail TS 15	-
Mounting rail TS 32	9821014000
Mounting rail TS 35	9822017000
Earthing rail	9810015000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	80 38 27 17 11 6 5 4
Side C/D	38 21 13 7 5 4 3 2
** Enclosure preparation required	

Aluminium Enclosures – Series CA

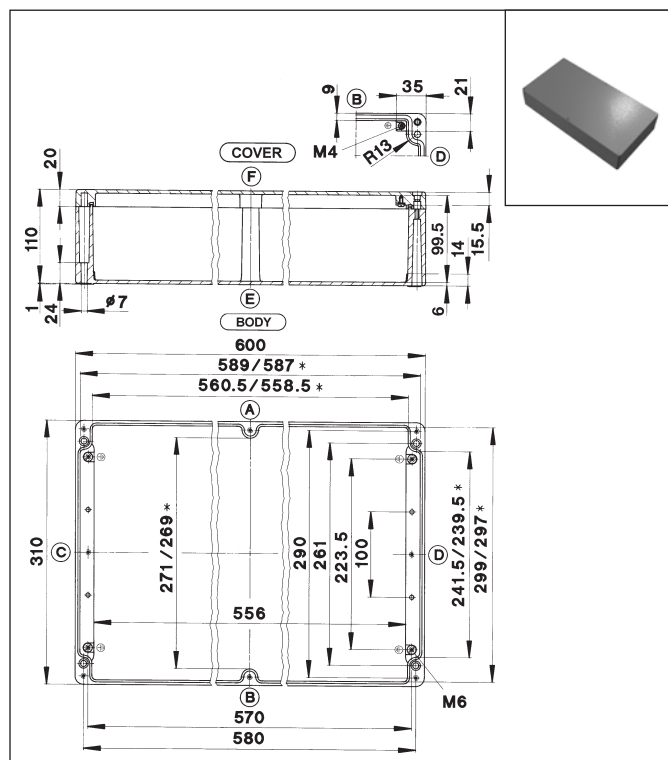
402,5 x 310 x 180 mm

CA-460
Aluminium enclosures



600 x 310 x 110 mm

CA-470
Aluminium enclosures



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

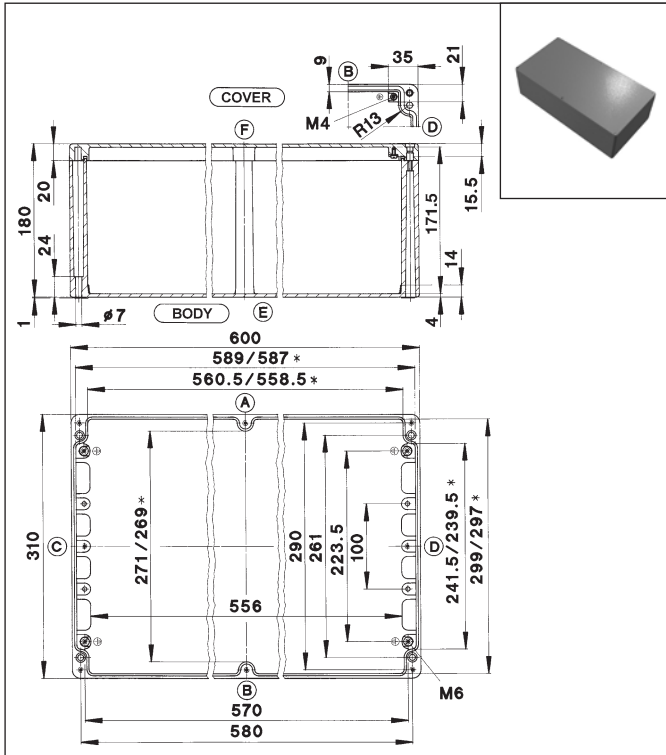
Type	CA-460
Weight (g)	7420
External dimension (mm)	402,5 x 310 x 180
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1460000000
unwashed, not painted, loose accessories	1460049000
Accessories (individual part or installation kit)	
Mounting plate	9511020000
Mounting rail TS 15	-
Mounting rail TS 32	9821014000
Mounting rail TS 35	9822017000
Earthing rail	9810015000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	136 68 50 30 21 12 10 8
Side C/D	74 38 28 18 12 8 6 3
** Enclosure preparation required	

Type	CA-470
Weight (g)	8480
External dimension (mm)	600 x 310 x 110
Ordering data Enclosure (painted) with seal (PUR) with cover screws	Part number 1470000000
unwashed, not painted, loose accessories	1470062000
Accessories (individual part or installation kit)	
Mounting plate	9511021000
Mounting rail TS 15	-
Mounting rail TS 32	9821016000
Mounting rail TS 35	9822019000
Earthing rail	9810017000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	120 56 42 24 16 8 8 6
Side C/D	38 17 13 7 5 4 3 2
** Enclosure preparation required	

600 x 310 x 180 mm

CA-480 Aluminium enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CA-480
Weight (g)	10840
External dimension (mm)	600 x 310 x 180
Ordering data Enclosure (painted) with seal (PUR)	Part number
with cover screws	1480000000
unwashed, not painted, loose accessories	1480017000
Accessories (individual part or installation kit)	
Mounting plate	9511021000
Mounting rail TS 15	-
Mounting rail TS 32	9821016000
Mounting rail TS 35	9822019000
Earthing rail	9810017000
External mounting brackets	9824023000
External articulated hinges	9801047000
Internal articulated hinges with cover guide**	9801030000
Silicone seal for extended temperature range (by the metre)	on request
Maximum possible number of threads	
ISO M	12 16 20 25 32 40 50 63
Side A/B	200 100 76 46 30 18 14 12
Side C/D	74 38 28 18 12 8 6 5

** Enclosure preparation required

Polycarbonate and ABS Enclosures – Series CT

BERNSTEIN Series CT plastic enclosures are manufactured from high-grade polycarbonate or ABS. They are particularly suitable for encapsulating electrical and electronic components as well as complete small-scale controllers. All enclosures are available with a transparent polycarbonate cover. The enclosures correspond to protection class IP65 in accordance with DIN EN 60529.

Attachment bosses are provided on the base of the plastic enclosures for mounting built-in components. The components can be simply secured with the self-tapping mounting screws that come with the enclosure. With their attachment bosses in the base, BERNSTEIN plastic enclosures offer many direct mounting options. Mounting rails can be installed without mounting plates on the central bosses.

BERNSTEIN Series CT enclosures are supplied as standard with the quick-release fastener developed and patented by BERNSTEIN. The quick-release fasteners that come with the enclosure are simply pressed and locked into the holes in the cover. They are made from stainless steel. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. BERNSTEIN polycarbonate and ABS enclosures are produced as standard in the colour RAL 7035 (light grey). On account of its material properties, the polycarbonate version offers specific advantages in terms of impact strength, UV resistance and operating temperature range. Thanks to the many attachment bosses in the body, both versions provide many direct mounting options.

Technical data

Material

Polycarbonate, transparent polycarbonate or ABS

Seal

Foamed PUR seal
Neoprene (CR) round cord (silicone-free)
Silicone round cord

Quick-release fastener

Stainless steel, self-locking, cross recessed head

Optionally:

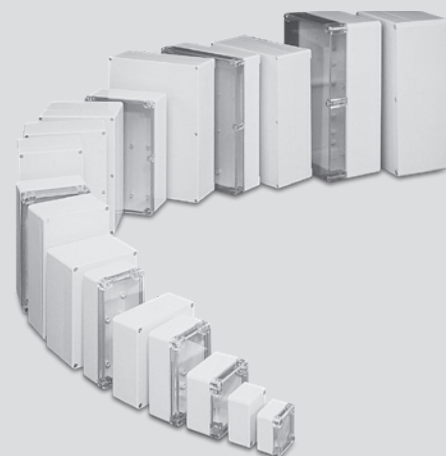
Stainless steel cover screw, cross recessed head
Sealed cover screws, galvanised steel, (9 S 20 K), slot head

Colour

RAL 7035 (light grey)
Other colours (dyeing) for large quantities available on request

Temperature range of CT enclosures

-40°C to +120°C (Polycarbonate)
-40°C to +80°C (ABS)



Temperature range of seals

Standard:
-40°C to +100°C (PUR seal)
Optionally:
-30°C to +80°C (Neoprene seal)
-60°C to +130°C (silicone seal)

Protection class

IP65

Approbations

(Label on demand)
c UL us (polycarbonate enclosures)
c CSA us (polycarbonate enclosures)



Dimensions/mm L x W x H	Polycarbonate enclosure		Polycarbonate enclosure with transparent cover (PC)		ABS enclosure		ABS enclosure with transparent cover (PC)	
	Article number	Type	Article number	Type	Article number	Type	Article number	Type
52 x 50 x 35	2500000000	CT-501	2501000000	CT-501 T	3500000000	CT-502	3501000000	CT-502 T
65 x 50 x 35	2520000000	CT-521	2521000000	CT-521 T	3520000000	CT-522	3521000000	CT-522 T
82 x 80 x 55	2540000000	CT-541	2541000000	CT-541 T	3540000000	CT-542	3541000000	CT-542 T
82 x 80 x 85	2560000000	CT-561	2561000000	CT-561 T	3560000000	CT-562	3561000000	CT-562 T
120 x 80 x 55	2580000000	CT-581	2581000000	CT-581 T	3580000000	CT-582	3581000000	CT-582 T
120 x 80 x 85	2600000000	CT-601	2601000000	CT-601 T	3600000000	CT-602	3601000000	CT-602 T
160 x 80 x 55	2620000000	CT-621	2621000000	CT-621 T	3620000000	CT-622	3621000000	CT-622 T
160 x 80 x 85	2640000000	CT-641	2641000000	CT-641 T	3640000000	CT-642	3641000000	CT-642 T
122 x 120 x 55	2660000000	CT-661	2661000000	CT-661 T	3660000000	CT-662	3661000000	CT-662 T
122 x 120 x 85	2680000000	CT-681	2681000000	CT-681 T	3680000000	CT-682	3681000000	CT-682 T
160 x 120 x 90	2720000000	CT-721	2721000000	CT-721 T	3720000000	CT-722	3721000000	CT-722 T
200 x 120 x 75	2760000000	CT-761	2761000000	CT-761 T	3760000000	CT-762	3761000000	CT-762 T
200 x 120 x 90	2780000000	CT-781	2781000000	CT-781 T	3780000000	CT-782	3781000000	CT-782 T
240 x 120 x 100	2800000000	CT-801	2801000000	CT-801 T	3800000000	CT-802	3801000000	CT-802 T
200 x 150 x 75	2820000000	CT-821	2821000000	CT-821 T	3820000000	CT-822	3821000000	CT-822 T
240 x 160 x 90	2840000000	CT-841	2841000000	CT-841 T	3840000000	CT-842	3841000000	CT-842 T
240 x 160 x 120	2860000000	CT-861	2861000000	CT-861 T	3860000000	CT-862	3861000000	CT-862 T
250 x 160 x 90	2900000000	CT-901	2901000000	CT-901 T	3900000000	CT-902	3901000000	CT-902 T
250 x 160 x 120	2910000000	CT-911	2911000000	CT-911 T	3910000000	CT-912	3911000000	CT-912 T
360 x 200 x 150	2880000000	CT-881	2881000000	CT-881 T	3880000000	CT-882	3881000000	CT-882 T
300 x 230 x 86	2870000000	CT-871	2871000000	CT-871 T	3870000000	CT-872	3871000000	CT-872 T
300 x 230 x 110	2890000000	CT-891	2891000000	CT-891 T	3890000000	CT-892	3891000000	CT-892 T

Assembling of components

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



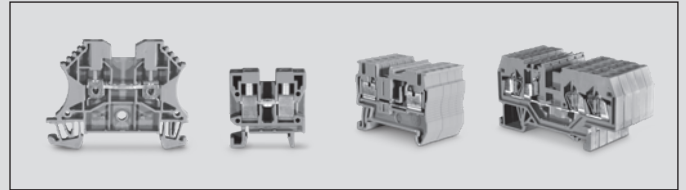
Mounting plates

Made from laminated paper (Pertinax) (thickness: CT-50 to CT-60: 1.5 mm; CT-62 to CT-78: 2.0 mm; CT-80 to CT-91: 2.5 mm) for versatile mounting of built-in components.



Mounting rails

conforming to standards TS15 or TS32 and TS 35 made from steel; surface treated for accepting terminal blocks.



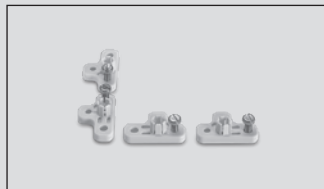
Terminal blocks

of all renowned manufacturers are used.



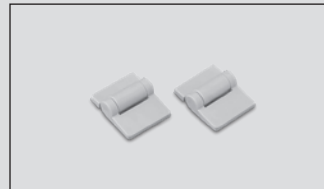
Earthing bars

made from galvanised steel for combining and connecting PE conductors.



External mounting brackets

made from polycarbonate for mounting enclosures without opening the covers. Different bracket arrangement options offset by 90°. Colour RAL 7035.



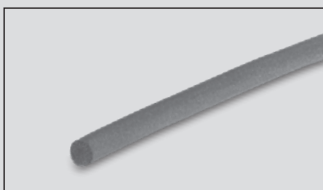
External articulated hinges

made from polycarbonate for hinged mounting of enclosure cover. Opening range of cover approx. 195°, latching at 170°, articulated hinges are simply pressed into holes (CT-88: secured by screws).



Flexible quick-release fastener/internal articulated hinges

for captive mounting and strain relief for enclosure cover. Cover opening range > 180°. Stainless steel with injection-moulded polyamide ends.



Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). If a HF seal is used, an additional coating of the inside of the enclosure is required.



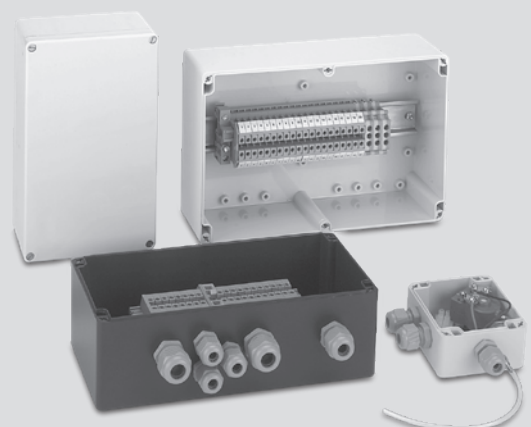
Brass press-in bushes

with metric fastening screws M3 (M4 on CT-88), for mounting built-in components with metric screws in the mounting bushes in the enclosure body.



Cable glands

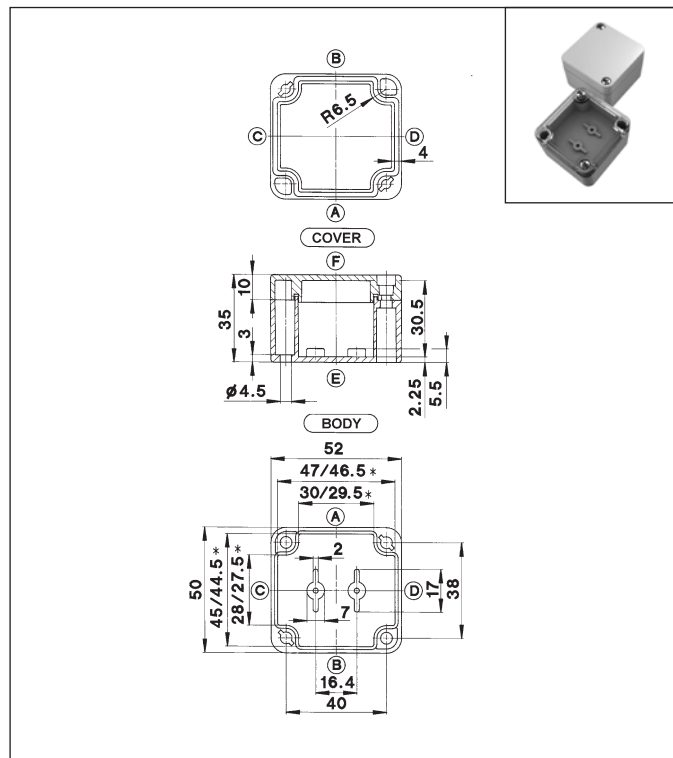
Euro-2000 (Euro-Top) screwed cable glands, plastic (polyamide 6, RAL 7035), including integrated strain relief. Sealing element NEOPRENE. Temperature range: -30°C bis +80°C (see also page 71). Other cable glands on demand.



Polycarbonate and ABS Enclosures – Series CT

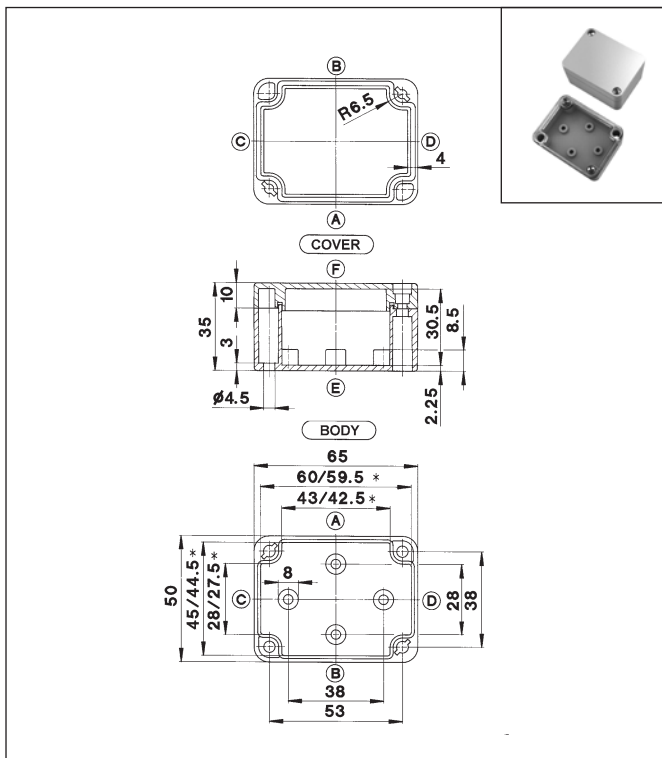
52 x 50 x 35 mm

CT-501 Polycarbonate enclosures
CT-502 ABS enclosures



65 x 50 x 35 mm

CT-521 Polycarbonate enclosures
CT-522 ABS enclosures



* Smaller dimension at mounting plate support

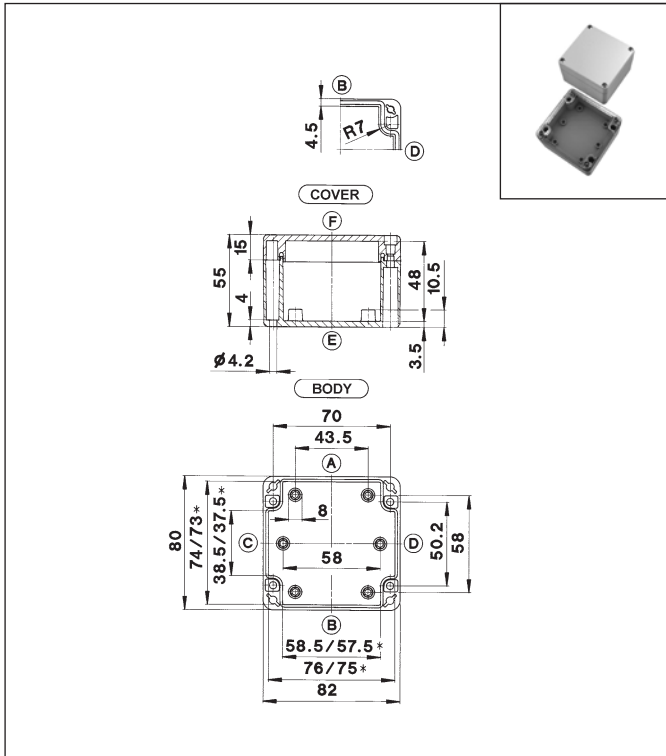
* Smaller dimension at mounting plate support

Type	CT-501 PC	CT-502 ABS
Weight (g)	40 (PC)	38 (ABS)
External dimension (mm)	52 x 50 x 35	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2500000000	
PC, with screw fastener	2500001000	
PC, with transparent cover (PC) and quick-release fastener	2501000000	
ABS, with quick-release fastener	3500000000	
ABS, with screw fastener	3500001000	
ABS, with transparent cover (PC) and quick-release fastener	3501000000	
Accessories (individual part or installation kit)		
Mounting plate	9512009000	
Mounting rail TS 15	-	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	-	
External articulated hinges**	-	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	-	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	1	0 0 0 0 0 0 0 0
Side C/D	1	0 0 0 0 0 0 0 0
** Enclosure preparation required		

Type	CT-521 PC	CT-522 ABS
Weight (g)	50 (PC)	47 (ABS)
External dimension (mm)	65 x 50 x 35	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2520000000	
PC, with screw fastener	2520001000	
PC, with transparent cover (PC) and quick-release fastener	2521000000	
ABS, with quick-release fastener	3520000000	
ABS, with screw fastener	3520001000	
ABS, with transparent cover (PC) and quick-release fastener	3521000000	
Accessories (individual part or installation kit)		
Mounting plate	9512010000	
Mounting rail TS 15	9820001000	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	-	
External articulated hinges**	-	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	2	0 0 0 0 0 0 0 0
Side C/D	0	0 0 0 0 0 0 0 0
** Enclosure preparation required		

82 x 80 x 55 mm

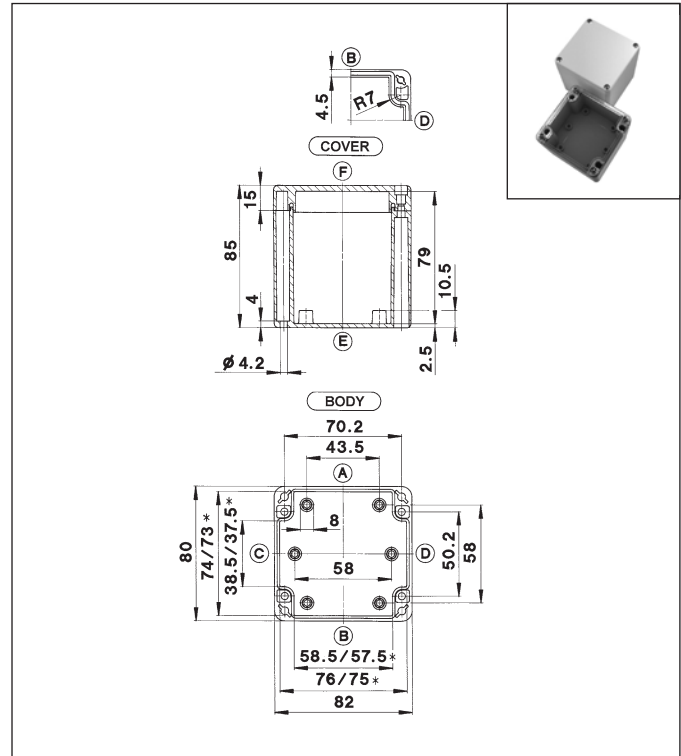
CT-541 Polycarbonate enclosures
CT-542 ABS enclosures



82 x 80 x 85 mm

CT-561 Polycarbonate enclosures
CT-562 ABS enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CT-541 PC	CT-542 ABS
Weight (g)	140 (PC)	116 (ABS)
External dimension (mm)	82 x 80 x 55	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2540000000	
PC, with screw fastener	2540001000	
PC, with transparent cover (PC) and quick-release fastener	2541000000	
ABS, with quick-release fastener	3540000000	
ABS, with screw fastener	3540001000	
ABS, with transparent cover (PC) and quick-release fastener	3541000000	
Accessories (individual part or installation kit)		
Mounting plate	9512011000	
Mounting rail TS 15	9820004000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822000000	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	5	2 2 0 0 0 0 0
Side C/D	2	1 0 0 0 0 0 0

** Enclosure preparation required

* Smaller dimension at mounting plate support

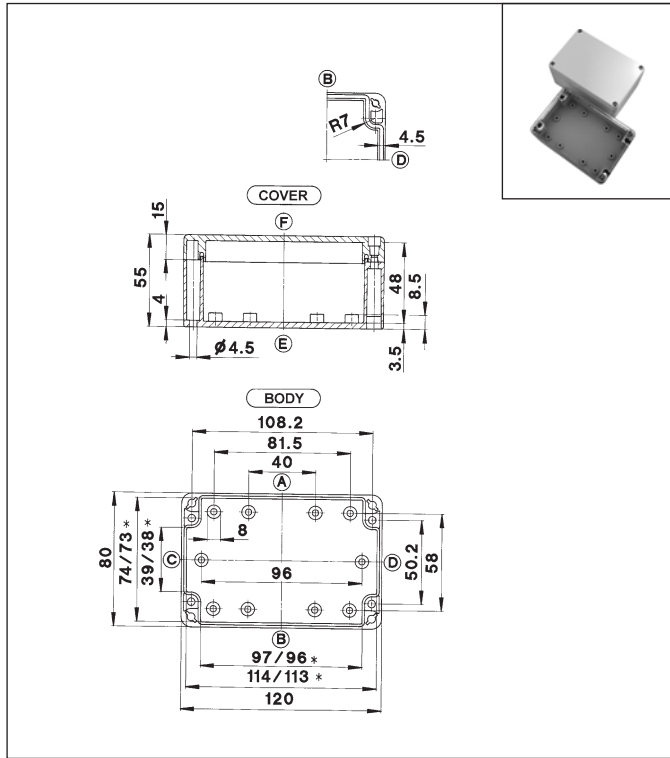
Type	CT-561 PC	CT-562 ABS
Weight (g)	175 (PC)	150 (ABS)
External dimension (mm)	82 x 80 x 85	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2560000000	
PC, with screw fastener	2560001000	
PC, with transparent cover (PC) and quick-release fastener	2561000000	
ABS, with quick-release fastener	3560000000	
ABS, with screw fastener	3560001000	
ABS, with transparent cover (PC) and quick-release fastener	3561000000	
Accessories (individual part or installation kit)		
Mounting plate	9512011000	
Mounting rail TS 15	9820004000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822000000	
Earthing rail (secured on central bosses C/D)	-	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	10	5 3 2 1 1 1 0
Side C/D	5	2 1 1 1 0 0 0

** Enclosure preparation required

Polycarbonate and ABS Enclosures – Series CT

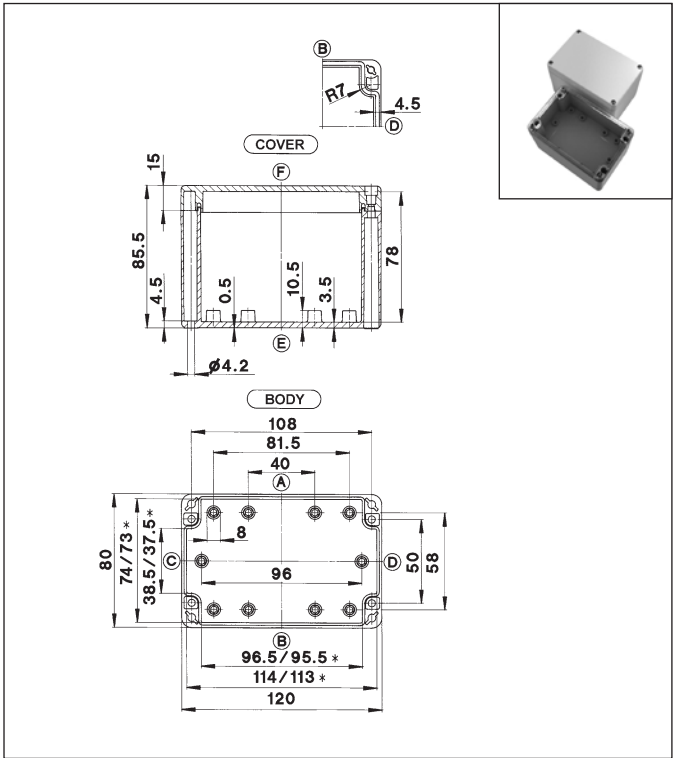
120 x 80 x 55 mm

CT-581 Polycarbonate enclosures
CT-582 ABS enclosures



120 x 80 x 85 mm

CT-601 Polycarbonate enclosures
CT-602 ABS enclosures



* Smaller dimension at mounting plate support

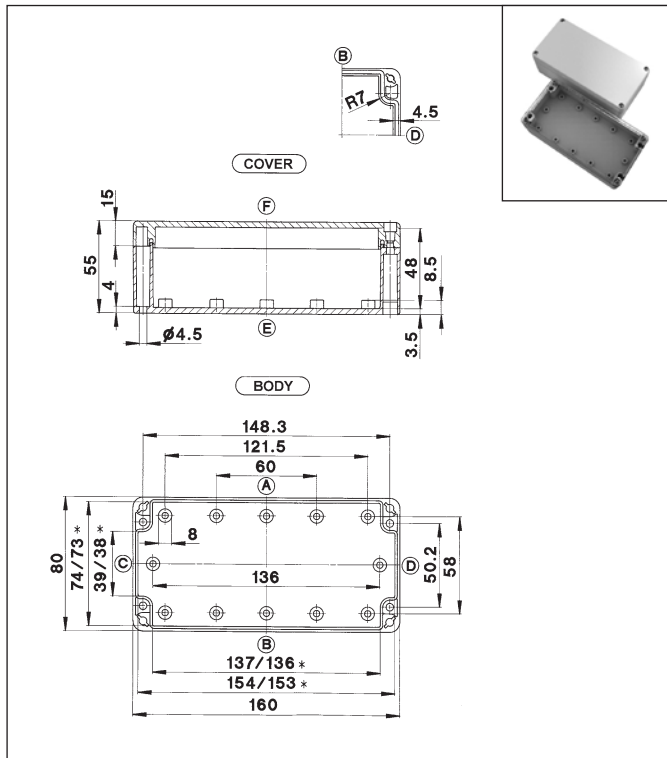
* Smaller dimension at mounting plate support

Type	CT-581 PC	CT-582 ABS
Weight (g)	180 (PC)	135 (ABS)
External dimension (mm)	120 x 80 x 55	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2580000000	
PC, with screw fastener	2580001000	
PC, with transparent cover (PC) and quick-release fastener	2581000000	
ABS, with quick-release fastener	3580000000	
ABS, with screw fastener	3580001000	
ABS, with transparent cover (PC) and quick-release fastener	3581000000	
Accessories (individual part or installation kit)		
Mounting plate	9512012000	
Mounting rail TS 15	9820009000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810001000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	auf Anfrage	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	9	4 3 2 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0
** Enclosure preparation required		

Type	CT-601 PC	CT-602 ABS
Weight (g)	225 (PC)	192 (ABS)
External dimension (mm)	120 x 80 x 85	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2600000000	
PC, with screw fastener	2600001000	
PC, with transparent cover (PC) and quick-release fastener	2601000000	
ABS, with quick-release fastener	3600000000	
ABS, with screw fastener	3600001000	
ABS, with transparent cover (PC) and quick-release fastener	3601000000	
Accessories (individual part or installation kit)		
Mounting plate	9512012000	
Mounting rail TS 15	9820009000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810001000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	15	6 6 3 2 1 1 0
Side C/D	5	2 1 1 1 0 0 0
** Enclosure preparation required		

160 x 80 x 55 mm

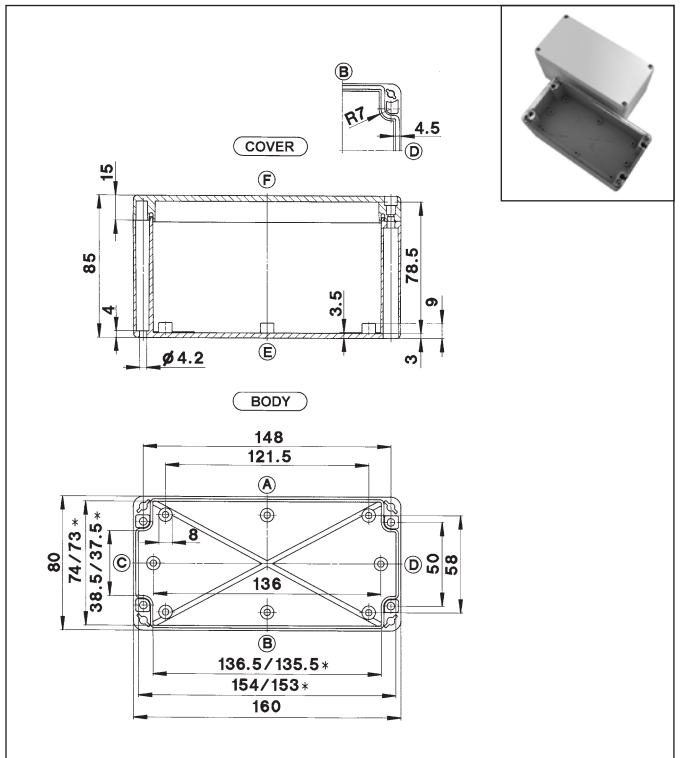
CT-621 Polycarbonate enclosures
CT-622 ABS enclosures



160 x 80 x 85 mm

CT-641 Polycarbonate enclosures
CT-642 ABS enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

Type	CT-621 PC	CT-622 ABS
Weight (g)	225 (PC)	199 (ABS)
External dimension (mm)	160 x 80 x 55	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2620000000	
PC, with screw fastener	2620001000	
PC, with transparent cover (PC) and quick-release fastener	2621000000	
ABS, with quick-release fastener	3620000000	
ABS, with screw fastener	3620001000	
ABS, with transparent cover (PC) and quick-release fastener	3621000000	
Accessories (individual part or installation kit)		
Mounting plate	9512013000	
Mounting rail TS 15	9820013000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810005000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	11	5 4 3 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0

** Enclosure preparation required

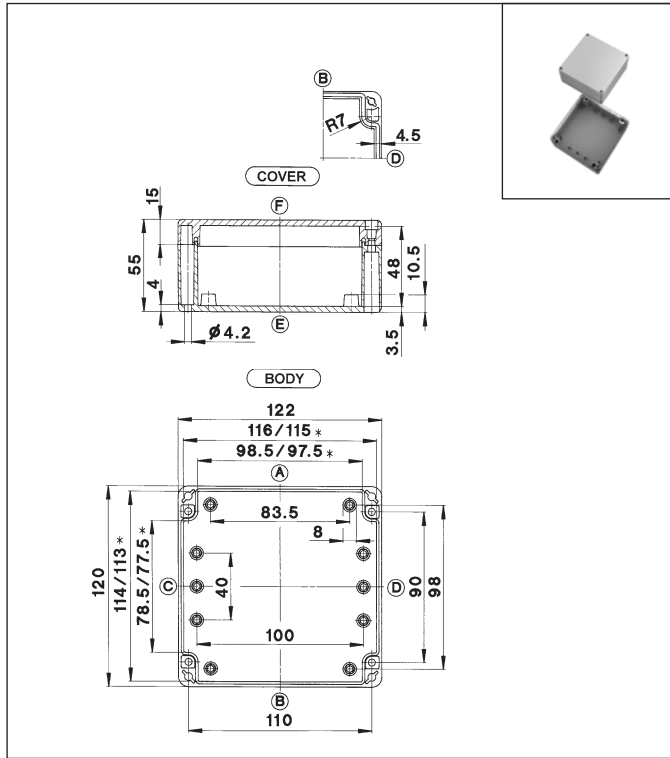
Type	CT-641 PC	CT-642 ABS
Weight (g)	240 (PC)	225 (ABS)
External dimension (mm)	160 x 80 x 85	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2640000000	
PC, with screw fastener	2640001000	
PC, with transparent cover (PC) and quick-release fastener	2641000000	
ABS, with quick-release fastener	3640000000	
ABS, with screw fastener	3640001000	
ABS, with transparent cover (PC) and quick-release fastener	3641000000	
Accessories (individual part or installation kit)		
Mounting plate	9512013000	
Mounting rail TS 15	9820013000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810005000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	auf Anfrage	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	22	10 8 5 3 2 2 0
Side C/D	5	2 1 1 1 0 0 0

** Enclosure preparation required

Polycarbonate and ABS Enclosures – Series CT

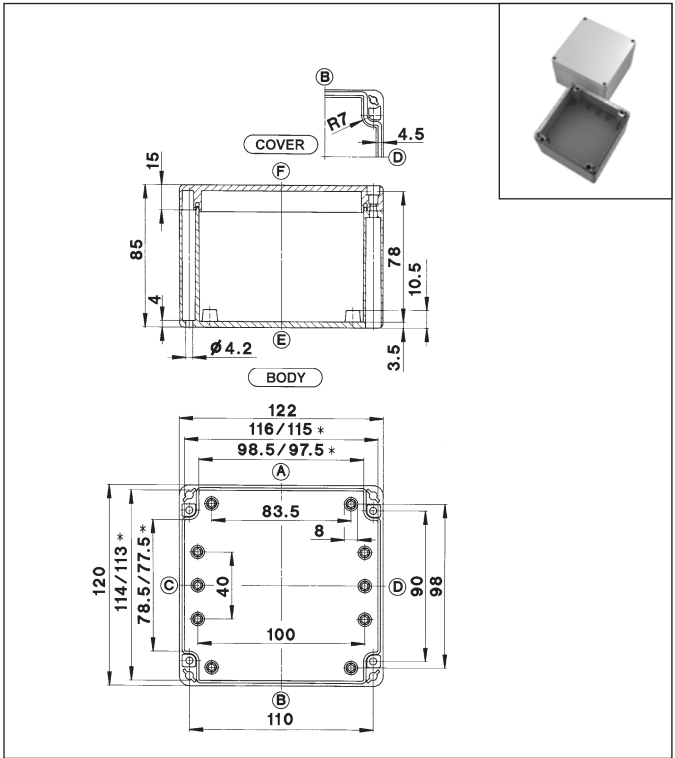
122 x 120 x 55 mm

CT-661 Polycarbonate enclosures
CT-662 ABS enclosures



122 x 120 x 85 mm

CT-681 Polycarbonate enclosures
CT-682 ABS enclosures



* Smaller dimension at mounting plate support

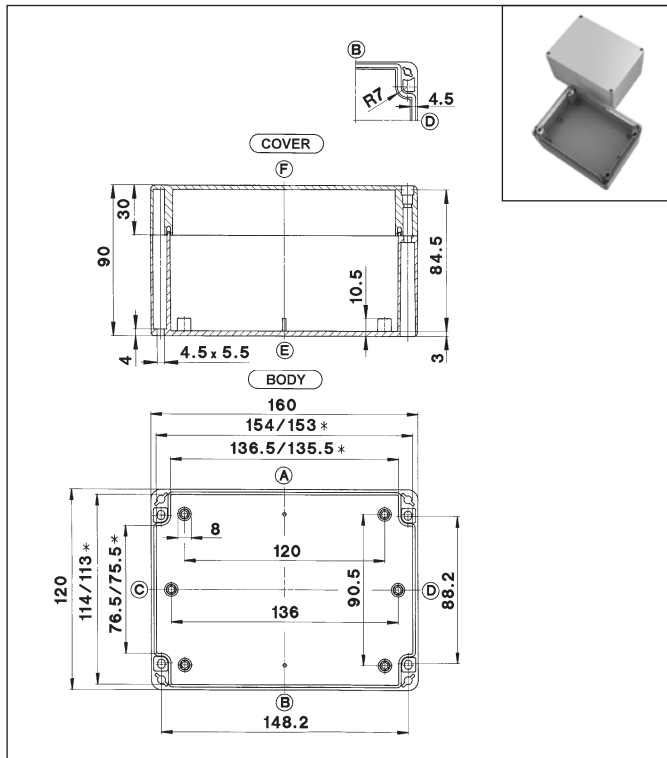
* Smaller dimension at mounting plate support

Type	CT-661 PC	CT-662 ABS
Weight (g)	240 (PC)	218 (ABS)
External dimension (mm)	122 x 120 x 55	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2660000000	
PC, with screw fastener	2660001000	
PC, with transparent cover (PC) and quick-release fastener	2661000000	
ABS, with quick-release fastener	3660000000	
ABS, with screw fastener	3660001000	
ABS, with transparent cover (PC) and quick-release fastener	3661000000	
Accessories (individual part or installation kit)		
Mounting plate	9512014000	
Mounting rail TS 15	9820008000	
Mounting rail TS 32	-	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810003000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	9 4 3 2 0 0 0 0	
Side C/D	4 3 2 0 0 0 0 0	
** Enclosure preparation required		

Type	CT-681 PC	CT-682 ABS
Weight (g)	295 (PC)	269 (ABS)
External dimension (mm)	122 x 120 x 85	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2680000000	
PC, with screw fastener	2680001000	
PC, with transparent cover (PC) and quick-release fastener	2681000000	
ABS, with quick-release fastener	3680000000	
ABS, with screw fastener	3680001000	
ABS, with transparent cover (PC) and quick-release fastener	3681000000	
Accessories (individual part or installation kit)		
Mounting plate	9512014000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821001000	
Mounting rail TS 35	9822002000	
Earthing rail (secured on central bosses C/D)	9810003000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	15 6 6 3 20 1 1 0	
Side C/D	10 3 3 2 1 0 0 0	
** Enclosure preparation required		

160 x 120 x 90 mm

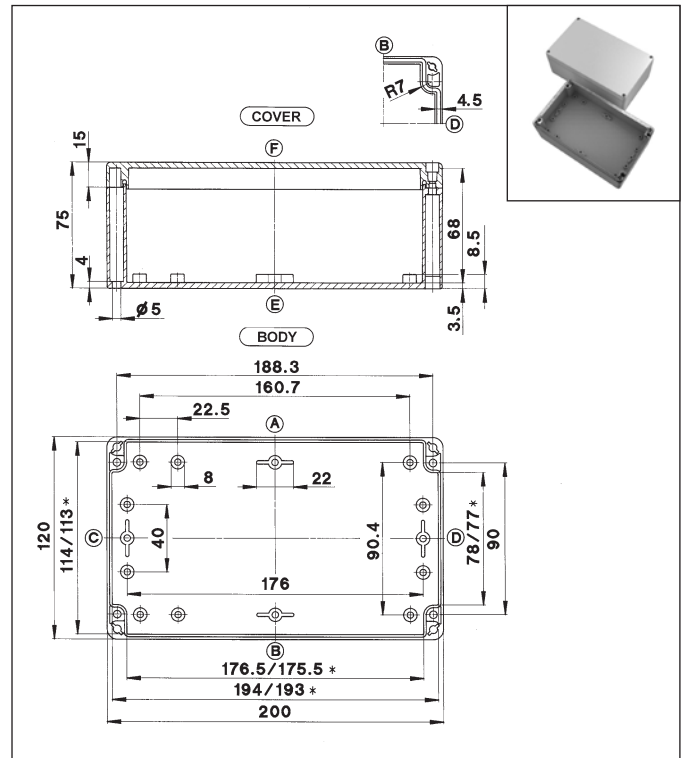
CT-721 Polycarbonate enclosures
CT-722 ABS enclosures



200 x 120 x 75 mm

CT-761 Polycarbonate enclosures
CT-762 ABS enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CT-721 PC	CT-722 ABS
Weight (g)	360 (PC)	310 (ABS)
External dimension (mm)	160 x 120 x 90	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2720000000	
PC, with screw fastener	2720001000	
PC, with transparent cover (PC) and quick-release fastener	2721000000	
ABS, with quick-release fastener	3720000000	
ABS, with screw fastener	3720001000	
ABS, with transparent cover (PC) and quick-release fastener	3721000000	
Accessories (individual part or installation kit)		
Mounting plate	9512036000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821025000	
Mounting rail TS 35	9822028000	
Earthing rail (secured on central bosses C/D)	9810040000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	18	10 7 3 3 0 0 0
Side C/D	9	5 2 2 1 0 0 0

** Enclosure preparation required

* Smaller dimension at mounting plate support

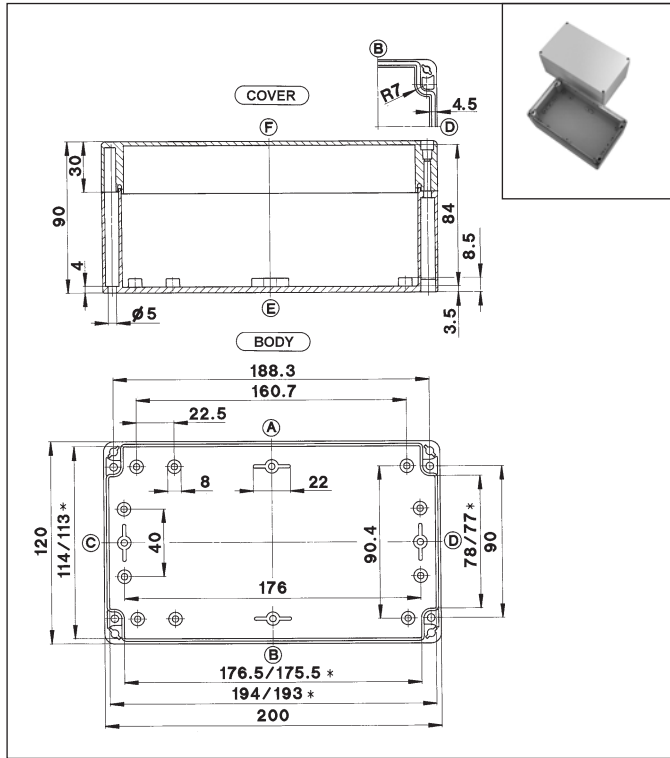
Type	CT-761 PC	CT-762 ABS
Weight (g)	400 (PC)	373 (ABS)
External dimension (mm)	200 x 120 x 75	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2760000000	
PC, with screw fastener	2760001000	
PC, with transparent cover (PC) and quick-release fastener	2761000000	
ABS, with quick-release fastener	3760000000	
ABS, with screw fastener	3760001000	
ABS, with transparent cover (PC) and quick-release fastener	3761000000	
Accessories (individual part or installation kit)		
Mounting plate	9512015000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821004000	
Mounting rail TS 35	9822006000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	26	12 8 5 3 0 0 0
Side C/D	10	5 2 2 1 0 0 0

** Enclosure preparation required

Polycarbonate and ABS Enclosures – Series CT

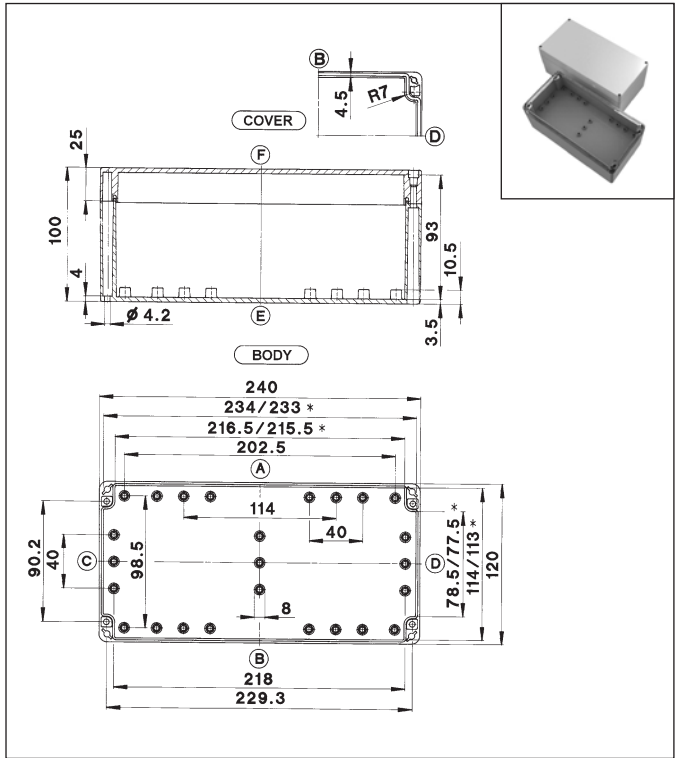
200 x 120 x 90 mm

CT-781 Polycarbonate enclosures
CT-782 ABS enclosures



240 x 120 x 100 mm

CT-801 Polycarbonate enclosures
CT-802 ABS enclosures



* Smaller dimension at mounting plate support

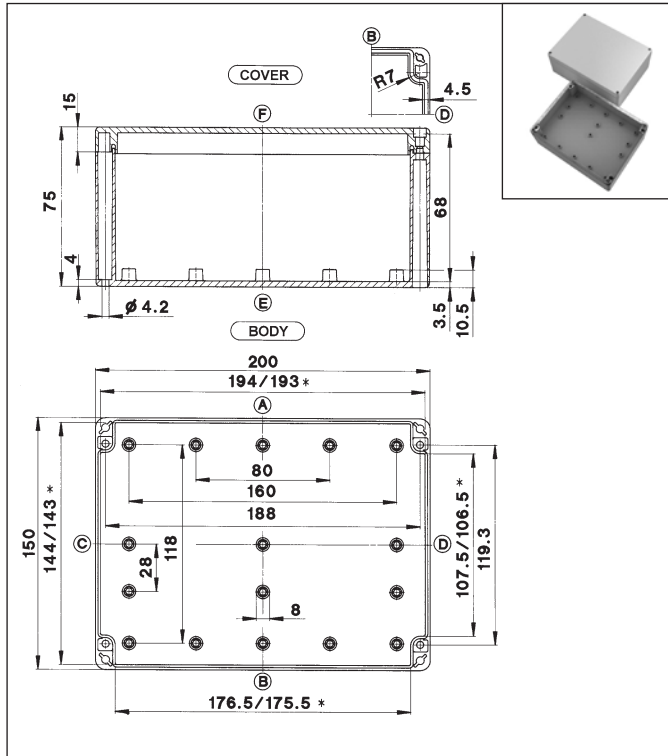
* Smaller dimension at mounting plate support

Type	CT-781 PC	CT-782 ABS
Weight (g)	420 (PC)	365 (ABS)
External dimension (mm)	200 x 120 x 90	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2780000000	
PC, with screw fastener	2780001000	
PC, with transparent cover (PC) and quick-release fastener	2781000000	
ABS, with quick-release fastener	3780000000	
ABS, with screw fastener	3780001000	
ABS, with transparent cover (PC) and quick-release fastener	3781000000	
Accessories (individual part or installation kit)		
Mounting plate	9512015000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821004000	
Mounting rail TS 35	9822006000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	26	12 8 5 3 0 0 0
Side C/D	10	5 2 2 1 0 0 0
** Enclosure preparation required		

Type	CT-801 PC	CT-802 ABS
Weight (g)	540 (PC)	478 (ABS)
External dimension (mm)	240 x 120 x 100	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2800000000	
PC, with screw fastener	2800001000	
PC, with transparent cover (PC) and quick-release fastener	2801000000	
ABS, with quick-release fastener	3800000000	
ABS, with screw fastener	3800001000	
ABS, with transparent cover (PC) and quick-release fastener	3801000000	
Accessories (individual part or installation kit)		
Mounting plate	9512016000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801078000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	17 12 6 5 3 3 2
Side C/D	10	6 3 2 1 1 0 0
** Enclosure preparation required		

200 x 150 x 75 mm

CT-821 Polycarbonate enclosures
CT-822 ABS enclosures



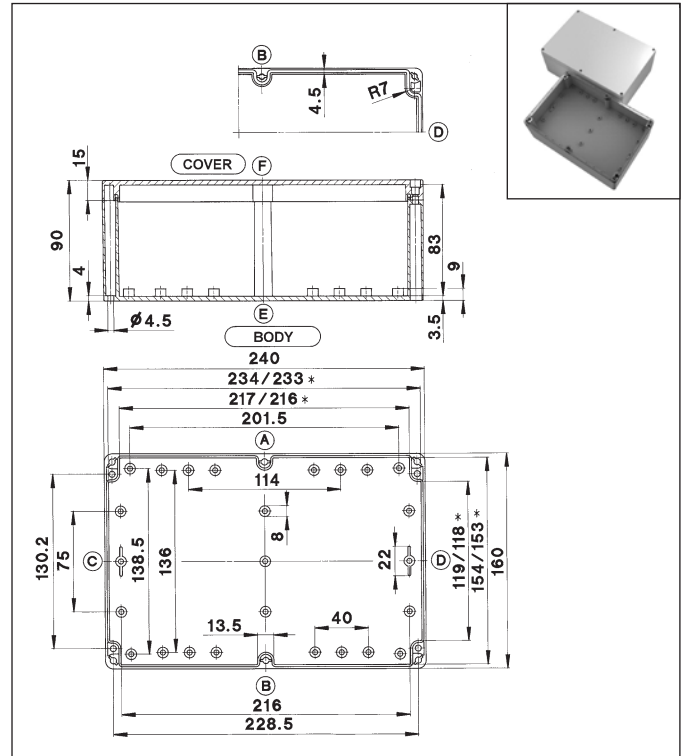
* Smaller dimension at mounting plate support

Type	CT-821 PC	CT-822 ABS
Weight (g)	475 (PC)	425 (ABS)
External dimension (mm)	200 x 150 x 75	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2820000000	
PC, with screw fastener	2820001000	
PC, with transparent cover (PC) and quick-release fastener	2821000000	
ABS, with quick-release fastener	3820000000	
ABS, with screw fastener	3820001000	
ABS, with transparent cover (PC) and quick-release fastener	3821000000	
Accessories (individual part or installation kit)		
Mounting plate	9512017000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821017000	
Mounting rail TS 35	9822020000	
Earthing rail (secured on central bosses C/D)	9810006000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	22	12 9 5 3 0 0 0
Side C/D	12	6 3 2 2 0 0 0

** Enclosure preparation required

240 x 160 x 90 mm

CT-841 Polycarbonate enclosures
CT-842 ABS enclosures



* Smaller dimension at mounting plate support

Type	CT-841 PC	CT-842 ABS
Weight (g)	650 (PC)	528 (ABS)
External dimension (mm)	240 x 160 x 90	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2840000000	
PC, with screw fastener	2840001000	
PC, with transparent cover (PC) and quick-release fastener	2841000000	
ABS, with quick-release fastener	3840000000	
ABS, with screw fastener	3840001000	
ABS, with transparent cover (PC) and quick-release fastener	3841000000	
Accessories (individual part or installation kit)		
Mounting plate	9512018000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	36	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0

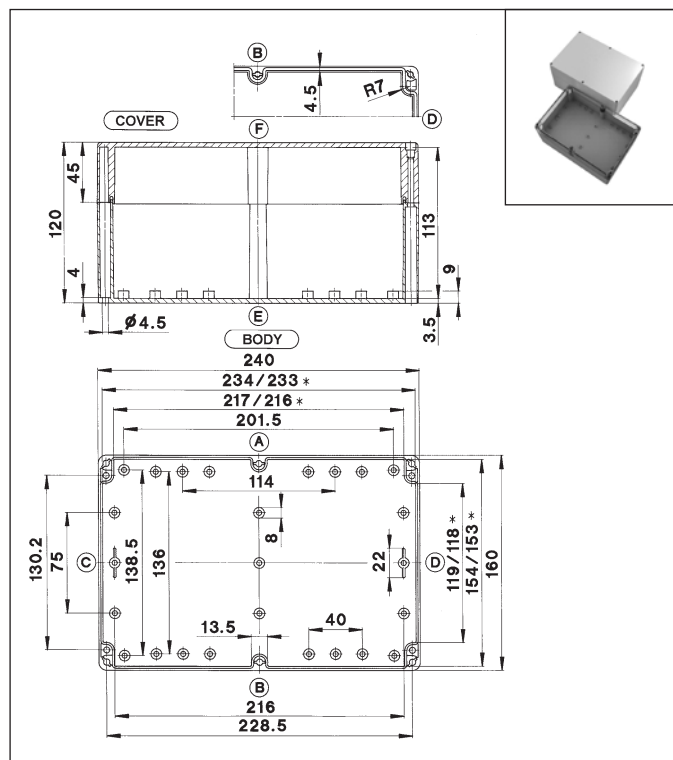
** Enclosure preparation required

CAD files available
at www.bernstein.eu

Polycarbonate and ABS Enclosures – Series CT

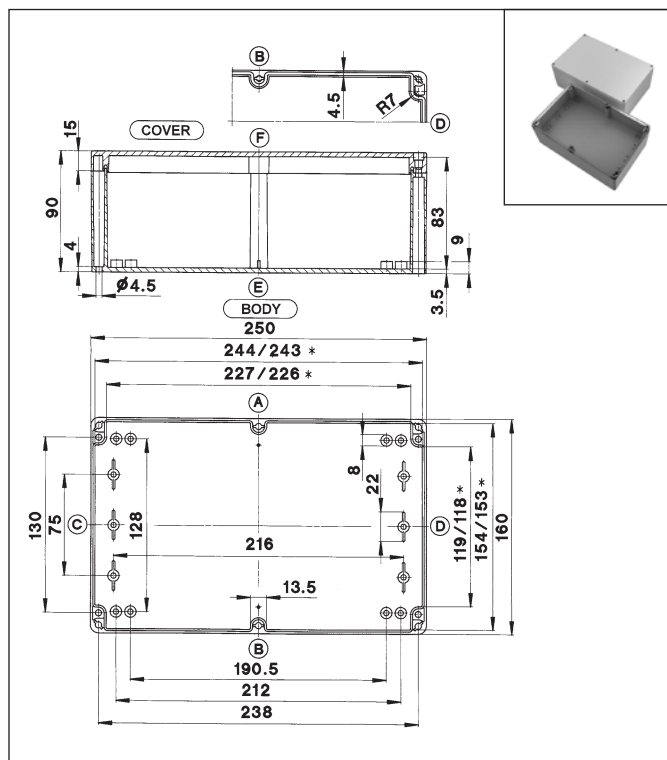
240 x 160 x 120 mm

CT-861 Polycarbonate enclosures
CT-862 ABS enclosures



250 x 160 x 90 mm

CT-901 Polycarbonate enclosures
CT-902 ABS enclosures



* Smaller dimension at mounting plate support

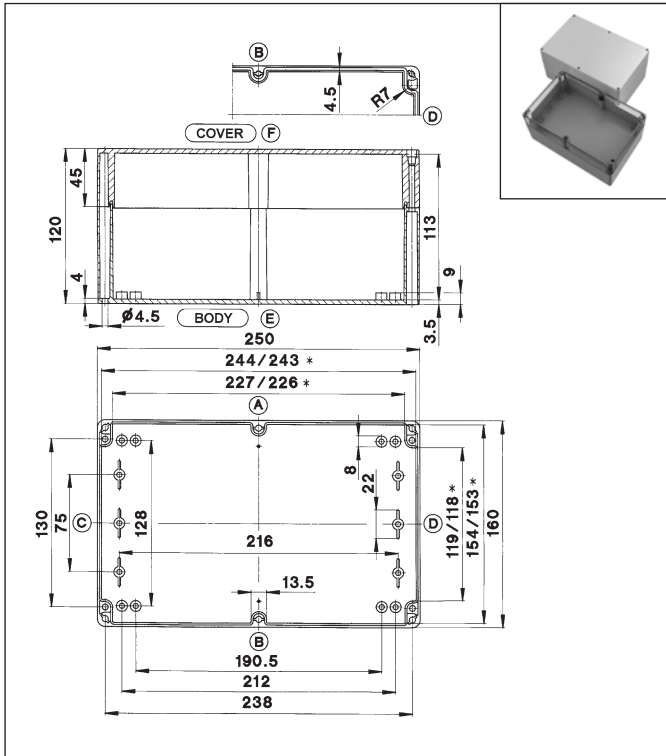
* Smaller dimension at mounting plate support

Type	CT-861 PC	CT-862 ABS
Weight (g)	785 (PC)	636 (ABS)
External dimension (mm)	240 x 160 x 120	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2860000000	
PC, with screw fastener	2860001000	
PC, with transparent cover (PC) and quick-release fastener	2861000000	
ABS, with quick-release fastener	3860000000	
ABS, with screw fastener	3860001000	
ABS, with transparent cover (PC) and quick-release fastener	3861000000	
Accessories (individual part or installation kit)		
Mounting plate	9512018000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801080000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	36	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0
** Enclosure preparation required		

Type	CT-901 PC	CT-902 ABS
Weight (g)	680 (PC)	550 (ABS)
External dimension (mm)	250 x 160 x 90	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2900000000	
PC, with screw fastener	2900001000	
PC, with transparent cover (PC) and quick-release fastener	2901000000	
ABS, with quick-release fastener	3900000000	
ABS, with screw fastener	3900001000	
ABS, with transparent cover (PC) and quick-release fastener	3901000000	
Accessories (individual part or installation kit)		
Mounting plate	9512187000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801076000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	38	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0
** Enclosure preparation required		

250 x 160 x 120 mm

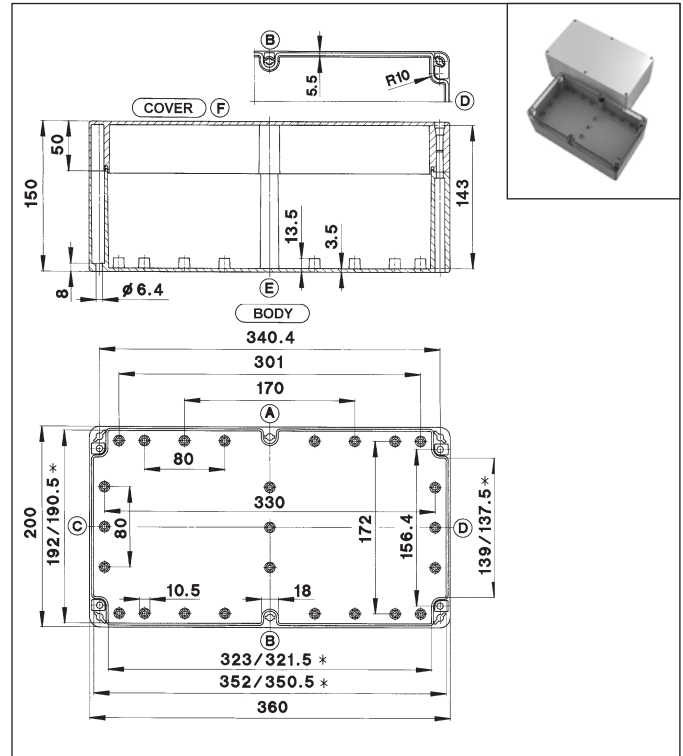
CT-911 Polycarbonate enclosures
CT-912 ABS enclosures



360 x 200 x 150 mm

CT-881 Polycarbonate enclosures
CT-882 ABS enclosures

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

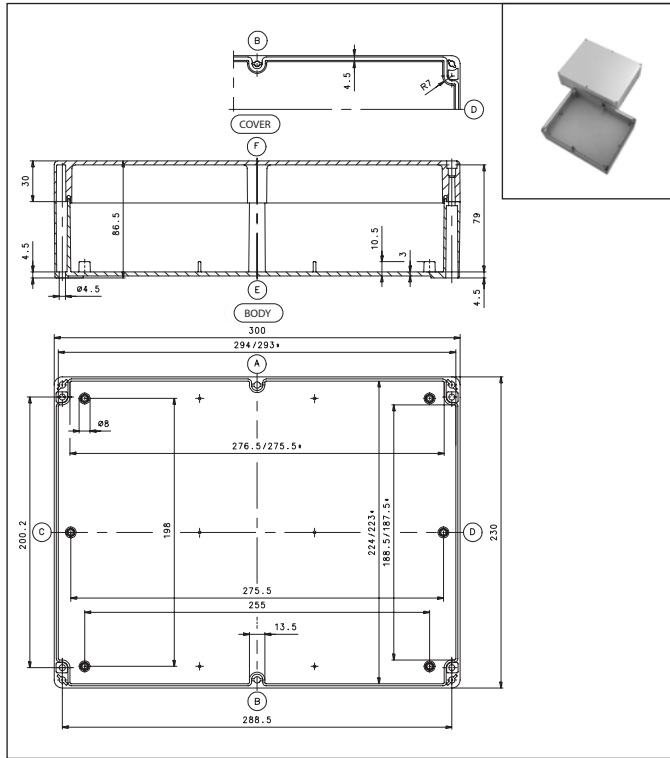
Type	CT-911 PC	CT-912 ABS
Weight (g)	830 (PC)	660 (ABS)
External dimension (mm)	250 x 160 x 120	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2910000000	
PC, with screw fastener	2910001000	
PC, with transparent cover (PC) and quick-release fastener	2911000000	
ABS, with quick-release fastener	3910000000	
ABS, with screw fastener	3910001000	
ABS, with transparent cover (PC) and quick-release fastener	3911000000	
Accessories (individual part or installation kit)		
Mounting plate	9512187000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821006000	
Mounting rail TS 35	9822008000	
Earthing rail (secured on central bosses C/D)	9810009000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801080000	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800040000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	38	16 12 8 4 2 2 2
Side C/D	17	8 5 3 2 2 1 0
** Enclosure preparation required		

Type	CT-881 PC	CT-882 ABS
Weight (g)	1550 (PC)	1375 (ABS)
External dimension (mm)	360 x 200 x 150	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2880000000	
PC, with screw fastener	2880001000	
PC, with transparent cover (PC) and quick-release fastener	2881000000	
ABS, with quick-release fastener	3880000000	
ABS, with screw fastener	3880001000	
ABS, with transparent cover (PC) and quick-release fastener	3881000000	
Accessories (individual part or installation kit)		
Mounting plate	9512020000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821013000	
Mounting rail TS 35	9822016000	
Earthing rail (secured on central bosses C/D)	9810034000	
External mounting brackets	-	
External articulated hinges**	9802026000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	-	
Silicone seal for extended temperature range (by the metre)	on request	
Mounting bushes with 4 screws M3 x 8	9800026000 (M4 x 8)	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	70	32 24 16 10 6 4 4
Side C/D	26	11 8 5 3 2 2 1
** Enclosure preparation required		

Polycarbonate and ABS Enclosures – Series CT

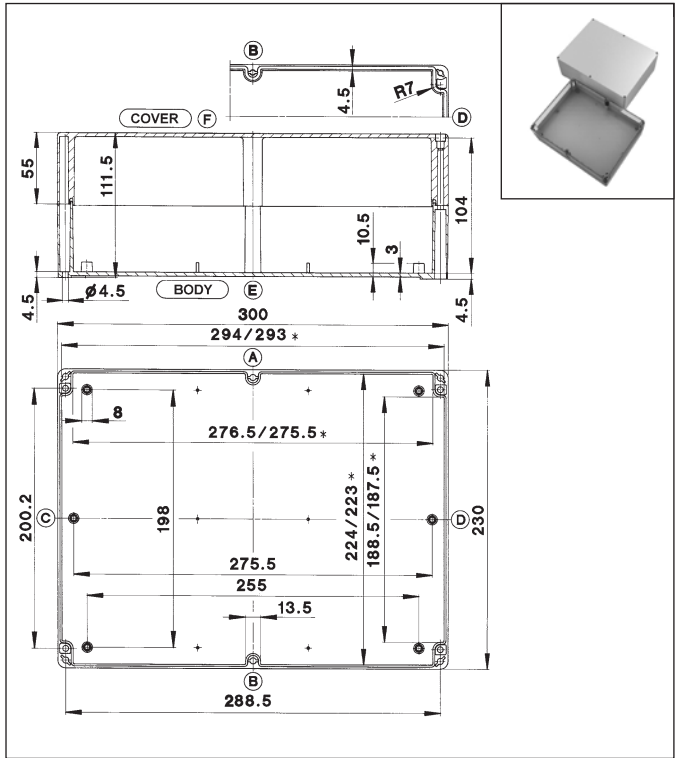
300 x 230 x 86 mm

CT-871 Polycarbonate enclosures
CT-872 ABS enclosures



300 x 230 x 110 mm

CT-891 Polycarbonate enclosures
CT-892 ABS enclosures



* Smaller dimension at mounting plate support

* Smaller dimension at mounting plate support

Type	CT-871 PC	CT-872 ABS
Weight (g)	915 (PC)	850 (ABS)
External dimension (mm)	300 x 230 x 86	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2870000000	
PC, with screw fastener	2870001000	
PC, with transparent cover (PC) and quick-release fastener	2871000000	
ABS, with quick-release fastener	3870000000	
ABS, with screw fastener	3870001000	
ABS, with transparent cover (PC) and quick-release fastener	3871000000	
Accessories (individual part or installation kit)		
Mounting plate	9512019000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821010000	
Mounting rail TS 35	9822013000	
Earthing rail (secured on central bosses C/D)	9810012000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801079000	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	14 10 6 4 0 0 0
Side C/D	21	13 5 4 2 0 0 0
** Enclosure preparation required		

Type	CT-891 PC	CT-892 ABS
Weight (g)	1155 (PC)	1000 (ABS)
External dimension (mm)	300 x 230 x 110	
Ordering data Enclosure (painted) with seal (PUR)	Part number	
PC, with quick-release fastener	2890000000	
PC, with screw fastener	2890001000	
PC, with transparent cover (PC) and quick-release fastener	2891000000	
ABS, with quick-release fastener	3890000000	
ABS, with screw fastener	3890001000	
ABS, with transparent cover (PC) and quick-release fastener	3891000000	
Accessories (individual part or installation kit)		
Mounting plate	9512019000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821010000	
Mounting rail TS 35	9822013000	
Earthing rail (secured on central bosses C/D)	9810012000	
External mounting brackets	9802002000	
External articulated hinges**	9802025000	
Internal articulated hinges, flexible, for enclosure with quick-release fastener	9801082000	
Silicone seal for extended temperature range (by the metre)	-	
Mounting bushes with 4 screws M3 x 8	9800025000	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	34	14 10 6 4 0 0 0
Side C/D	21	13 5 4 2 0 0 0
** Enclosure preparation required		

Polyester Enclosures – Series CP

BERNSTEIN Series CP and CPS polyester enclosures are produced from highgrade glass fibre-reinforced polyester. Thanks to their reduced surface resistance ($R_o < 109 \text{ Ohm}$), the black polyester enclosures meet the requirements for Ex applications. Polyester enclosures are therefore particularly suitable for accepting and encapsulating electrical and electronic components as well as control components in harsh environments or potentially explosive atmospheres (see Page 14). All enclosures achieve protection class IP66 in accordance with DIN EN 60529 (optionally IP67).

Corresponding to their size, BERNSTEIN polyester enclosures feature M4 or M6 mounting elements in the enclosure body. These mounting bushes are embedded in a flange on the narrow sides of the base and accept mounting plates, mounting rails, pc boards etc.

The captive stainless steel cover screws are retained by a self-latching element integrated in the cover. The threaded bushes for mounting the cover are also made from stainless steel. The protection class (on the standard enclosure) is ensured by a factory-fitted seal. The polyester enclosures are available as standard in grey (RAL 7000, squirrel grey) or black (RAL 9005, jet black) material.

Technical data

Material

Glass fibre-reinforced polyester in grey or black

Seal

Foamed PUR seal
Neoprene (CR) round cord (siliconized), EPDM round cord

Cover screws

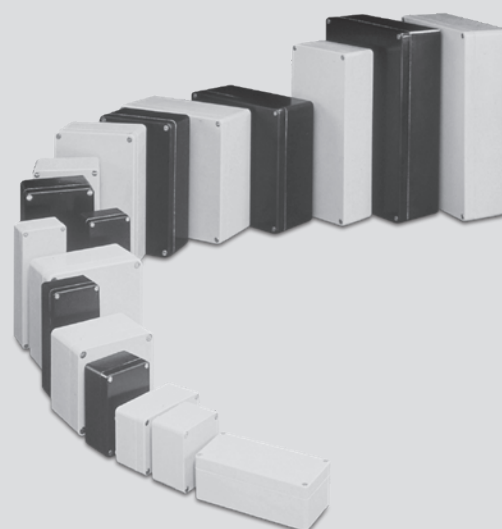
Stainless steel, captive, cross recessed head
Optionally:
Socket head cap screws, stainless steel, captive
Sealed cover screws, stainless steel, slot head

Colour

RAL 7000 (squirrel grey)
bzw. RAL 9005 (jet black)
Other colours (coating or dyeing) available on request for large quantities.

Temperature range of CP enclosures

-60°C to +165°C



Temperature range of seals

Standard:
-40°C to +100°C (PUR seal)
Optionally:
-30°C to +80°C (Neoprene seal)
-60°C to +130°C (silicone seal) or
-35°C to +100°C (EPDM seal)

Protection class

IP66
IP67 with PUR seal

Approbations

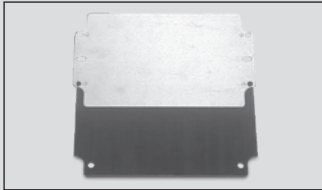
Germanischer Lloyd
c UL us (Label on demand)
c CSA us (Label on demand)
ATEX, IECEx



					Polyester enclosure (grey)		Polyester enclosure (black)	
Dimensions/mm					Article number	Type	Article number	Type
L	x	W	x	H				
80	x	75	x	55	4140000000	CP-140	5140000000	CPS-140
80	x	75	x	75	4140000050	CP-145	5140000050	CPS-145
110	x	75	x	55	4150000000	CP-150	5150000000	CPS-150
110	x	75	x	75	4150000050	CP-155	5150000050	CPS-155
160	x	75	x	55	4170000000	CP-170	5170000000	CPS-170
160	x	75	x	75	4170000050	CP-175	5170000050	CPS-175
190	x	75	x	55	4190000000	CP-190	5190000000	CPS-190
190	x	75	x	75	4190000050	CP-195	5190000050	CPS-195
122	x	120	x	90,5	4220000000	CP-220	5220000000	CPS-220
220	x	120	x	90,5	4240000000	CP-240	5240000000	CPS-240
160	x	160	x	91	4280000000	CP-280	5280000000	CPS-280
260	x	160	x	91	4300000000	CP-300	5300000000	CPS-300
360	x	160	x	91	4320000000	CP-320	5320000000	CPS-320
560	x	160	x	91	4330000000	CP-330	5330000000	CPS-330
255	x	250	x	120	4370000000	CP-370	5370000000	CPS-370
400	x	250	x	120	4400000000	CP-400	5400000000	CPS-400
400	x	405	x	120	4450000000	CP-450	5450000000	CPS-450
400	x	405	x	165	4460000000	CP-460	5460000000	CPS-460

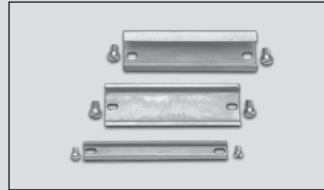
Assembling of components

This is just a selection of possible assembly components that BERNSTEIN offers. Contact us, we can incorporate components from all leading manufacturers to satisfy your individual demand. You find further information about "System solutions" on page 12.



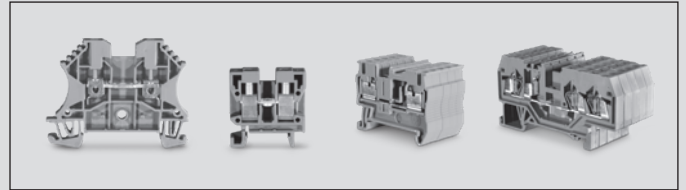
Mounting plates

made from galvanised steel plate or laminated paper (thickness: CP-140 to CP 195 laminated paper 1.5 mm; CP-220 to CP-320 and CP-370 to CP-460 steel plate 1.5 mm; CP-330 steel plate 2.5 mm) for versatile mounting of built-in components.



Mounting rails

conforming to Standards TS 15 or TS 32 and TS 35 made from steel; surface treated for accepting terminal blocks.



Terminal blocks

of all renowned manufacturers are used.



Earthing bars

made from galvanised steel for combining and connecting PE conductors.



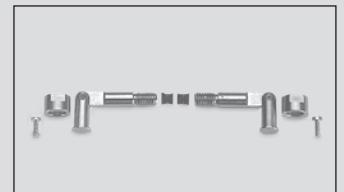
External mounting brackets

made from metal for mounting enclosures without opening the covers. The brackets are always fitted across the shorter sides of the enclosure.



External articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 155°. Cast aluminium (painted in RAL 7001 – specific colour according to enclosure specification possible). Machining is required for mounting on enclosures.



Internal articulated hinges

for hinged mounting of enclosure cover. Opening range of cover approx. 95°. Stainless steel. Machining is required for mounting on enclosures.



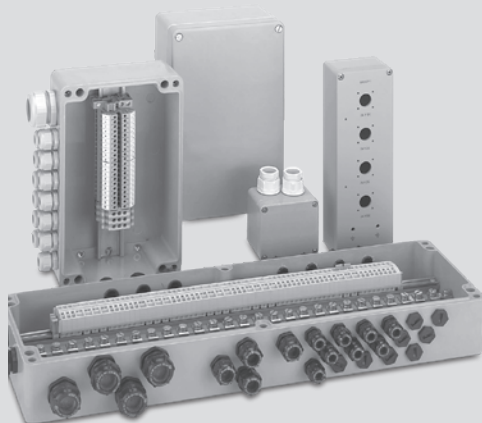
Silicon, EPDM or HF seal

with increased temperature resistance (see indications left side) or to protect sensitive electronic equipment against high-frequency radiation (HF seal). If a HF seal is used, an additional coating of the inside of the enclosure is required.



Cable glands

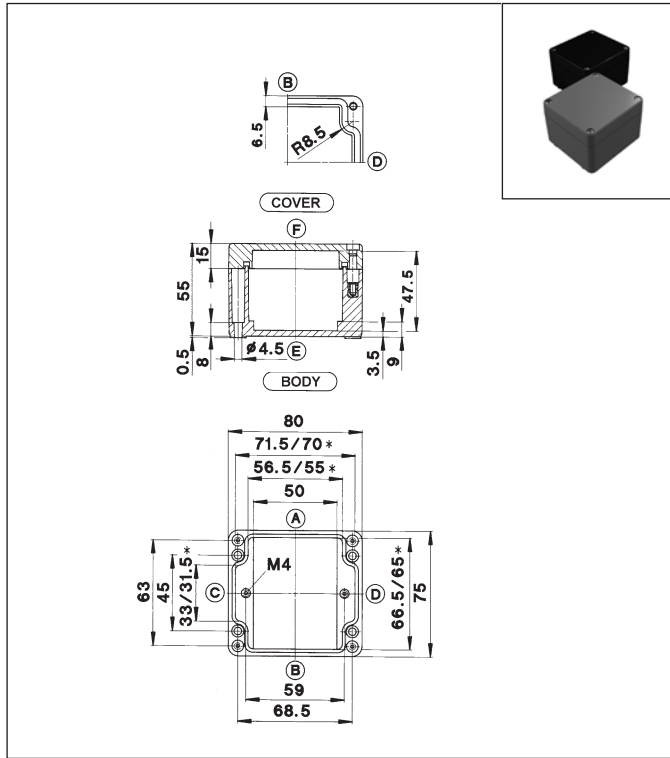
plastic cable glands (polyamide PAGV-2, RAL 7001) or brass cable glands. Sealing element CR/NBR. Temperature range: -20°C to +100°C (see also page 71). Other cable glands on demand.



Polyester Enclosures – Series CP

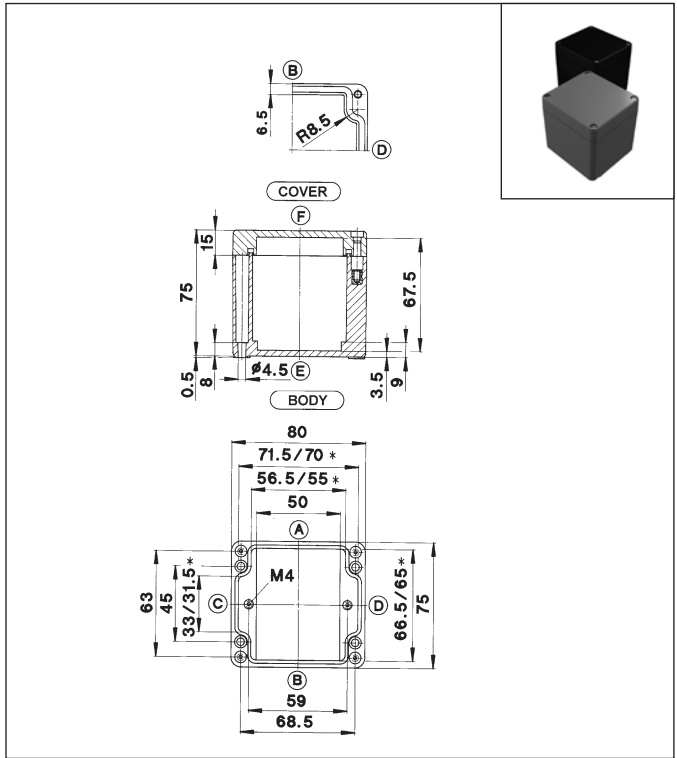
80 x 75 x 55 mm

CP-140 RAL 7000 (squirrel grey)
CPS-140 RAL 9005 (jet black)



80 x 75 x 75 mm

CP-145 RAL 7000 (squirrel grey)
CPS-145 RAL 9005 (jet black)



* Smaller dimension at mounting plate support

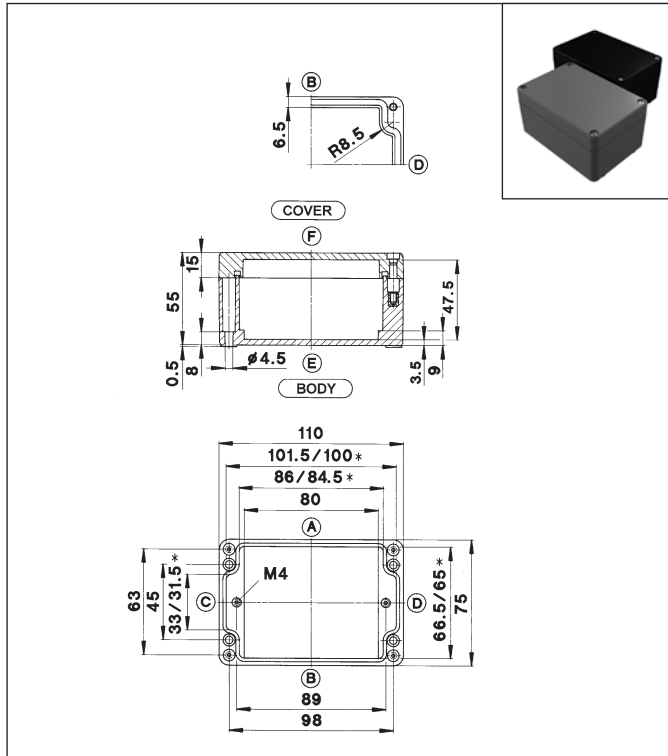
* Smaller dimension at mounting plate support

Type	CP-140	CPS-140						
Weight (g)	230	230						
External dimension (mm)	80 x 75 x 55							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	414000000							
RAL 9005 (jet black), with cover screws	514000000							
Accessories (individual part or installation kit)								
Mounting plate	982300000							
Mounting rail TS 15	982000300							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	982400000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	5	2	2	1	0	0	0	0
Side C/D	2	1	1	0	0	0	0	0
** Enclosure preparation required								

Type	CP-145	CPS-145						
Weight (g)	300	300						
External dimension (mm)	80 x 75 x 75							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	414000050							
RAL 9005 (jet black), with cover screws	514000050							
Accessories (individual part or installation kit)								
Mounting plate	982300000							
Mounting rail TS 15	982000300							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	982400000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	8	4	2	1	1	0	0	0
Side C/D	4	1	1	1	1	0	0	0
** Enclosure preparation required								

110 x 75 x 55 mm

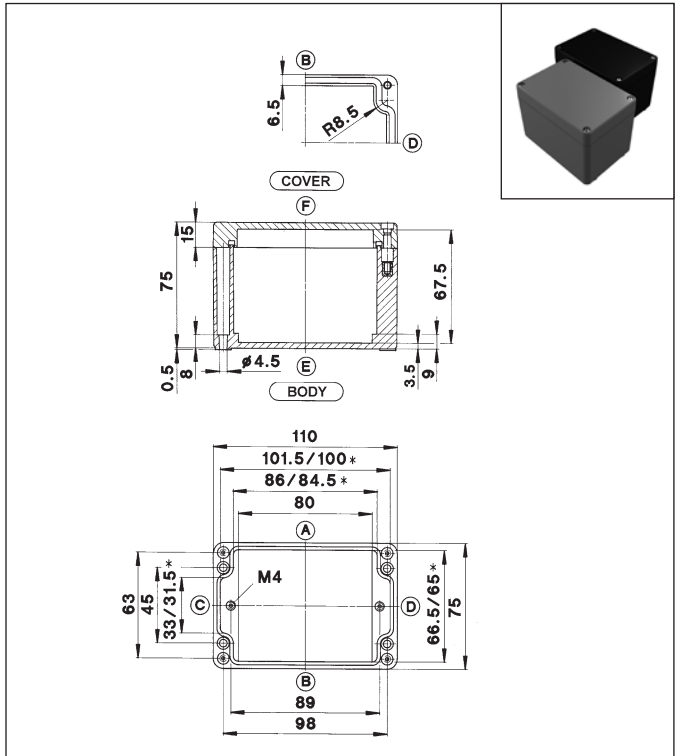
CP-150 RAL 7000 (squirrel grey)
CPS-150 RAL 9005 (jet black)



110 x 75 x 75 mm

CP-155 RAL 7000 (squirrel grey)
CPS-155 RAL 9005 (jet black)

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CP-150	CPS-150						
Weight (g)	295	295						
External dimension (mm)	110 x 75 x 55							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	415000000							
RAL 9005 (jet black), with cover screws	515000000							
Accessories (individual part or installation kit)								
Mounting plate	9823001000							
Mounting rail TS 15	9820006000							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	9824000000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	8	3	2	2	0	0	0	0
Side C/D	2	1	1	0	0	0	0	0

** Enclosure preparation required

* Smaller dimension at mounting plate support

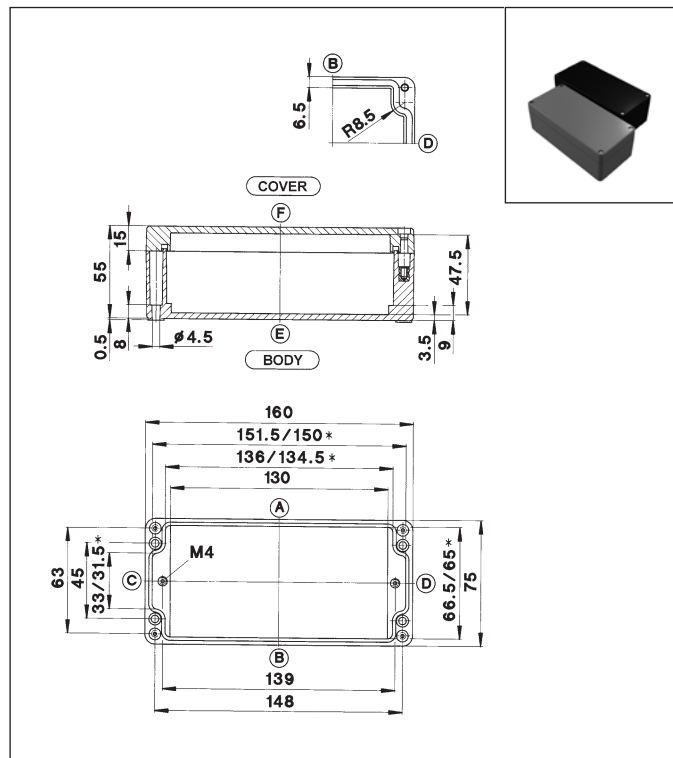
Type	CP-155	CPS-155						
Weight (g)	360	360						
External dimension (mm)	110 x 75 x 75							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4150000050							
RAL 9005 (jet black), with cover screws	5150000050							
Accessories (individual part or installation kit)								
Mounting plate	9823001000							
Mounting rail TS 15	9820006000							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	9824000000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	12	6	3	2	2	0	0	0
Side C/D	4	1	1	1	1	0	0	0

** Enclosure preparation required

Polyester Enclosures – Series CP

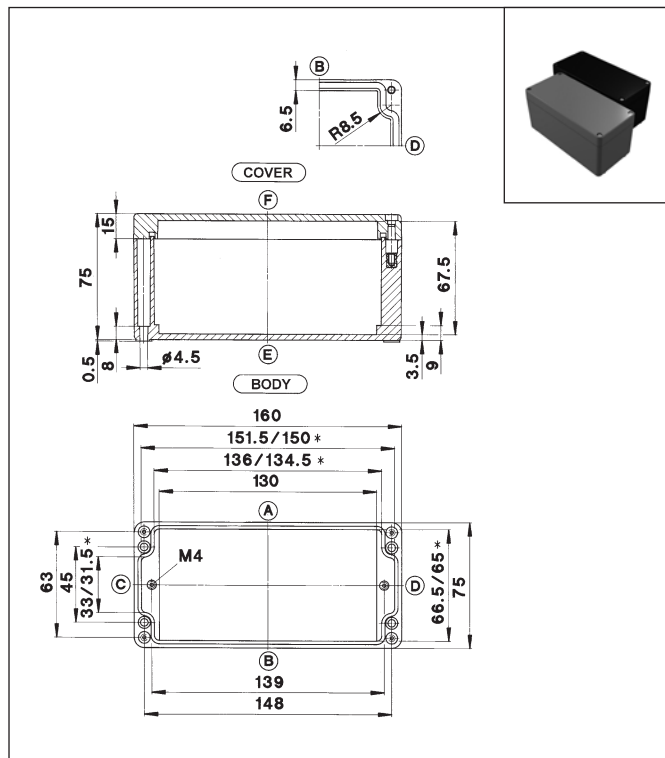
160 x 75 x 55 mm

CP-170 RAL 7000 (squirrel grey)
CPS-170 RAL 9005 (jet black)



160 x 75 x 75 mm

CP-175 RAL 7000 (squirrel grey)
CPS-175 RAL 9005 (jet black)



* Smaller dimension at mounting plate support

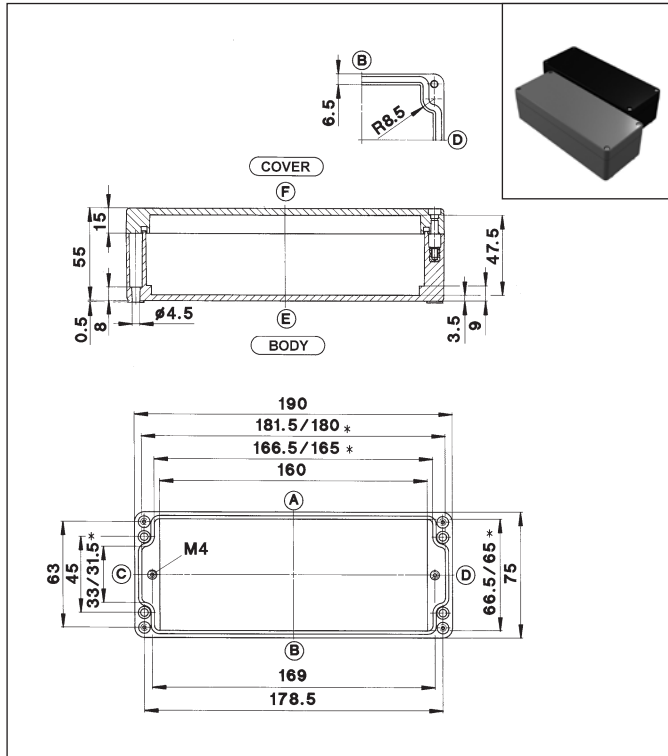
Type	CP-170	CPS-170
Weight (g)	405	405
External dimension (mm)	160 x 75 x 55	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4170000000	
RAL 9005 (jet black), with cover screws	5170000000	
Accessories (individual part or installation kit)		
Mounting plate	9823002000	
Mounting rail TS 15	9820012000	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	9824000000	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	12	5 4 3 0 0 0 0
Side C/D	2	1 1 0 0 0 0 0
** Enclosure preparation required		

* Smaller dimension at mounting plate support

Type	CP-175	CPS-175
Weight (g)	460	460
External dimension (mm)	160 x 75 x 75	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4170000050	
RAL 9005 (jet black), with cover screws	5170000050	
Accessories (individual part or installation kit)		
Mounting plate	9823002000	
Mounting rail TS 15	9820012000	
Mounting rail TS 32	-	
Mounting rail TS 35	-	
Earthing rail	-	
External mounting brackets	9824000000	
External articulated hinges for CP** enclosures	-	
External articulated hinges for CPS** enclosures	-	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	18	10 6 4 3 0 0 0
Side C/D	4	1 1 1 1 0 0 0
** Enclosure preparation required		

190 x 75 x 55 mm

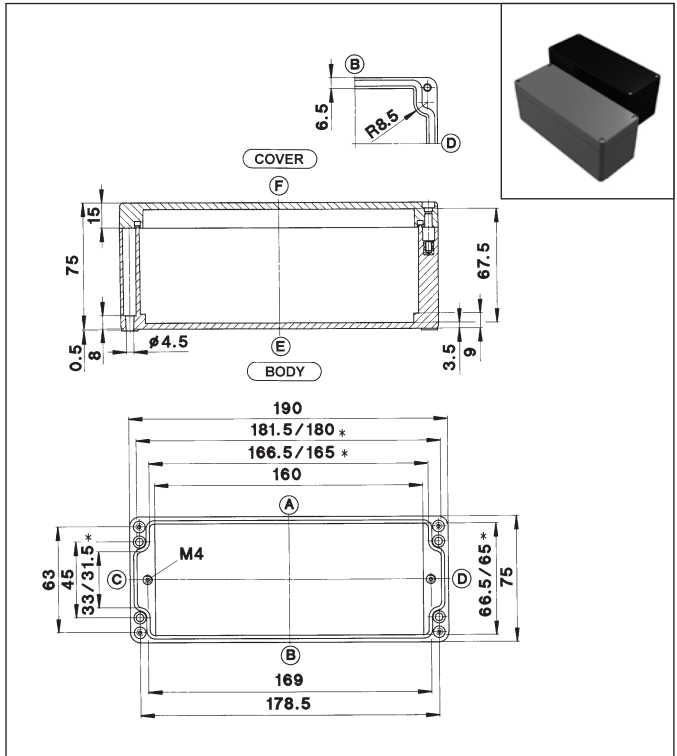
CP-190 RAL 7000 (squirrel grey)
CPS-190 RAL 9005 (jet black)



190 x 75 x 75 mm

CP-195 RAL 7000 (squirrel grey)
CPS-195 RAL 9005 (jet black)

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CP-190	CPS-190						
Weight (g)	450	450						
External dimension (mm)	190 x 75 x 55							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4190000000							
RAL 9005 (jet black), with cover screws	5190000000							
Accessories (individual part or installation kit)								
Mounting plate	9823003000							
Mounting rail TS 15	9820015000							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	9824000000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	16	7	5	4	0	0	0	0
Side C/D	2	1	1	0	0	0	0	0

** Enclosure preparation required

* Smaller dimension at mounting plate support

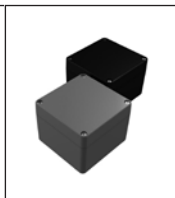
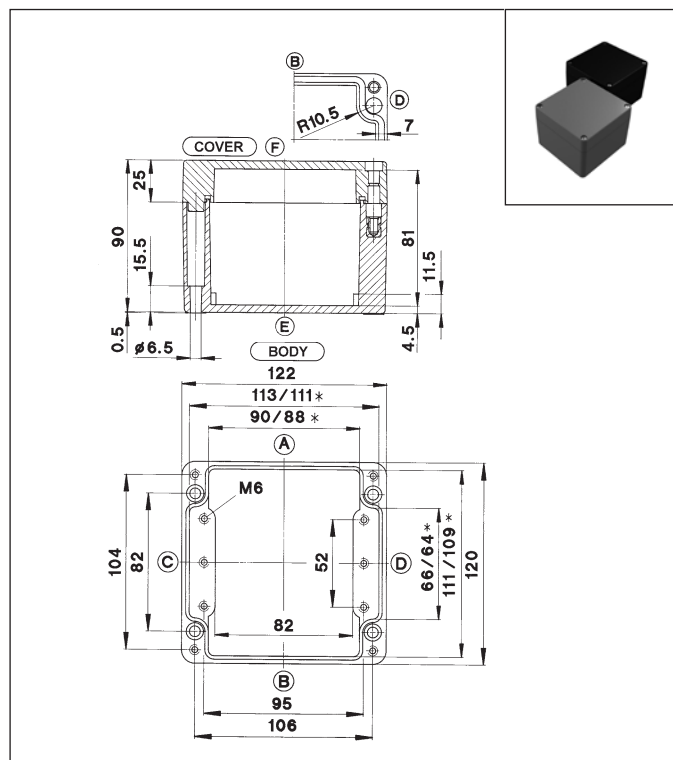
Type	CP-195	CPS-195						
Weight (g)	530	530						
External dimension (mm)	190 x 75 x 75							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4190000050							
RAL 9005 (jet black), with cover screws	5190000050							
Accessories (individual part or installation kit)								
Mounting plate	9823003000							
Mounting rail TS 15	9820015000							
Mounting rail TS 32	-							
Mounting rail TS 35	-							
Earthing rail	-							
External mounting brackets	9824000000							
External articulated hinges for CP** enclosures	-							
External articulated hinges for CPS** enclosures	-							
Internal articulated hinges with cover guide**	-							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	24	12	8	4	3	0	0	0
Side C/D	4	1	1	1	1	0	0	0

** Enclosure preparation required

Polyester Enclosures – Series CP

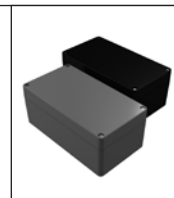
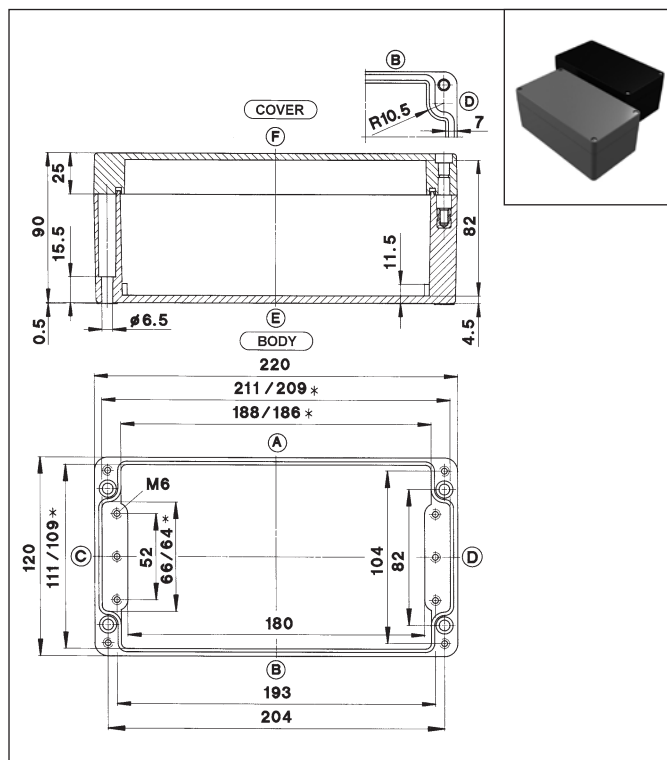
122 x 120 x 90,5 mm

CP-220 RAL 7000 (squirrel grey)
CPS-220 RAL 9005 (jet black)



220 x 120 x 90,5 mm

CP-240 RAL 7000 (squirrel grey)
CPS-240 RAL 9005 (jet black)



* Smaller dimension at mounting plate support

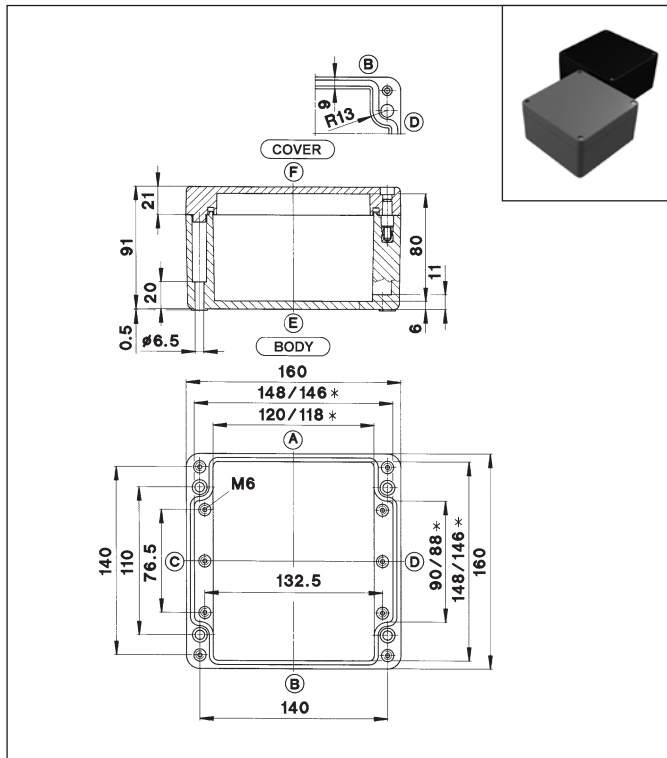
Type	CP-220	CPS-220
Weight (g)	750	750
External dimension (mm)	122 x 120 x 90,5	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4220000000	
RAL 9005 (jet black), with cover screws	5220000000	
Accessories (individual part or installation kit)		
Mounting plate	9823004000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821000000	
Mounting rail TS 35	9822001000	
Earthing rail	9810002000	
External mounting brackets	9824001000	
External articulated hinges for CP** enclosures	9801045000	
External articulated hinges for CPS** enclosures	9801046000	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	13	6 4 3 2 1 0 0
Side C/D	6	3 2 2 1 0 0 0
** Enclosure preparation required		

* Smaller dimension at mounting plate support

Type	CP-240	CPS-240
Weight (g)	1060	1060
External dimension (mm)	220 x 120 x 90,5	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4240000000	
RAL 9005 (jet black), with cover screws	5240000000	
Accessories (individual part or installation kit)		
Mounting plate	9823005000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821005000	
Mounting rail TS 35	9822007000	
Earthing rail	9810008000	
External mounting brackets	9824001000	
External articulated hinges for CP** enclosures	9801045000	
External articulated hinges for CPS** enclosures	9801046000	
Internal articulated hinges with cover guide**	-	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	27	12 9 6 4 3 0 0
Side C/D	6	3 2 2 1 0 0 0
** Enclosure preparation required		

160 x 160 x 91 mm

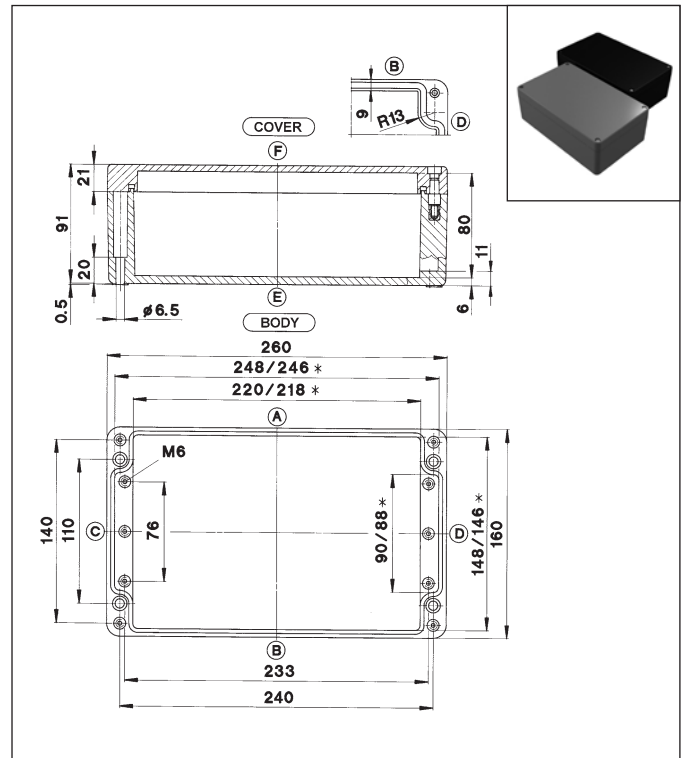
CP-280 RAL 7000 (squirrel grey)
CPS-280 RAL 9005 (jet black)



260 x 160 x 91 mm

CP-300 RAL 7000 (squirrel grey)
CPS-300 RAL 9005 (jet black)

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CP-280	CPS-280						
Weight (g)	1130	1130						
External dimension (mm)	160 x 160 x 91							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4280000000							
RAL 9005 (jet black), with cover screws	5280000000							
Accessories (individual part or installation kit)								
Mounting plate	9823006000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821002000							
Mounting rail TS 35	9822003000							
Earthing rail	9810004000							
External mounting brackets	9824004000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	18	8	6	4	2	2	1	0
Side C/D	9	4	3	2	2	1	0	0

** Enclosure preparation required

* Smaller dimension at mounting plate support

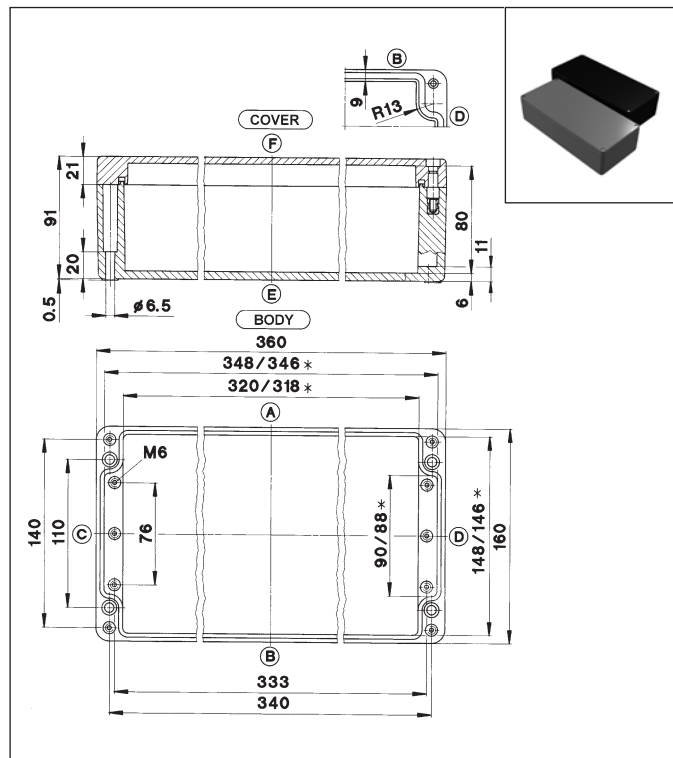
Type	CP-300	CPS-300						
Weight (g)	1710	1710						
External dimension (mm)	260 x 160 x 91							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4300000000							
RAL 9005 (jet black), with cover screws	5300000000							
Accessories (individual part or installation kit)								
Mounting plate	9823007000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821008000							
Mounting rail TS 35	9822011000							
Earthing rail	9810010000							
External mounting brackets	9824004000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	33	15	12	8	4	3	3	0
Side C/D	9	4	3	2	2	1	0	0

** Enclosure preparation required

Polyester Enclosures – Series CP

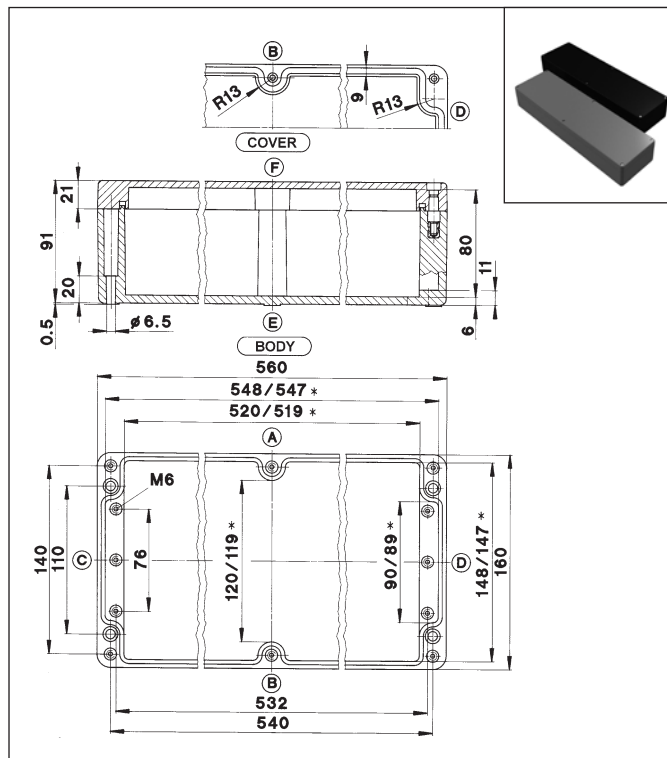
360 x 160 x 91 mm

CP-320 RAL 7000 (squirrel grey)
CPS-320 RAL 9005 (jet black)



560 x 160 x 91 mm

CP-330 RAL 7000 (squirrel grey)
CPS-330 RAL 9005 (jet black)



* Smaller dimension at mounting plate support

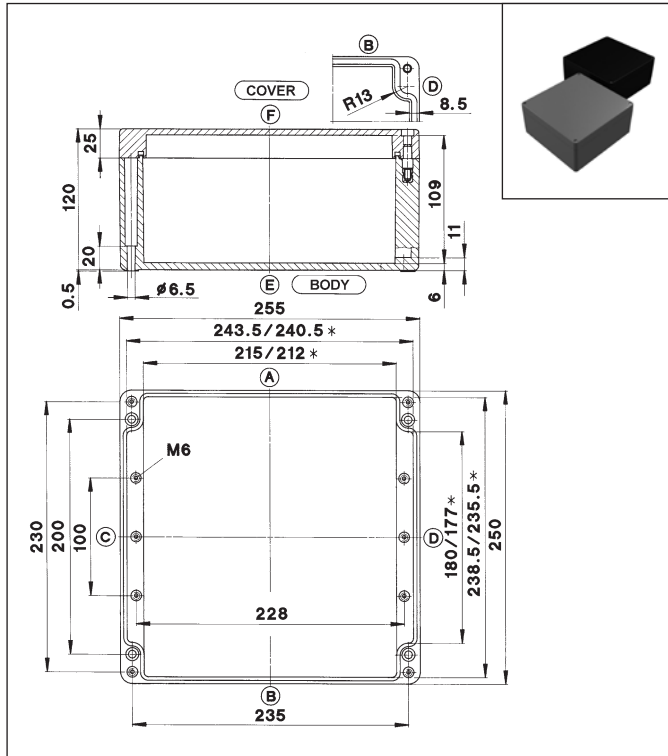
* Smaller dimension at mounting plate support

Type	CP-320	CPS-320						
Weight (g)	2150	2150						
External dimension (mm)	360 x 160 x 91							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4320000000							
RAL 9005 (jet black), with cover screws	5320000000							
Accessories (individual part or installation kit)								
Mounting plate	9823008000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821012000							
Mounting rail TS 35	9822015000							
Earthing rail	9810014000							
External mounting brackets	9824004000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	48	23	18	11	7	5	4	0
Side C/D	9	4	3	2	2	1	0	0
** Enclosure preparation required								

Type	CP-330	CPS-330						
Weight (g)	3185	3185						
External dimension (mm)	560 x 160 x 91							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4330000000							
RAL 9005 (jet black), with cover screws	5330000000							
Accessories (individual part or installation kit)								
Mounting plate	9823085000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821015000							
Mounting rail TS 35	9822018000							
Earthing rail	9810016000							
External mounting brackets	9824004000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	76	40	28	18	10	8	6	0
Side C/D	9	4	3	2	2	1	0	0
** Enclosure preparation required								

255 x 250 x 120 mm

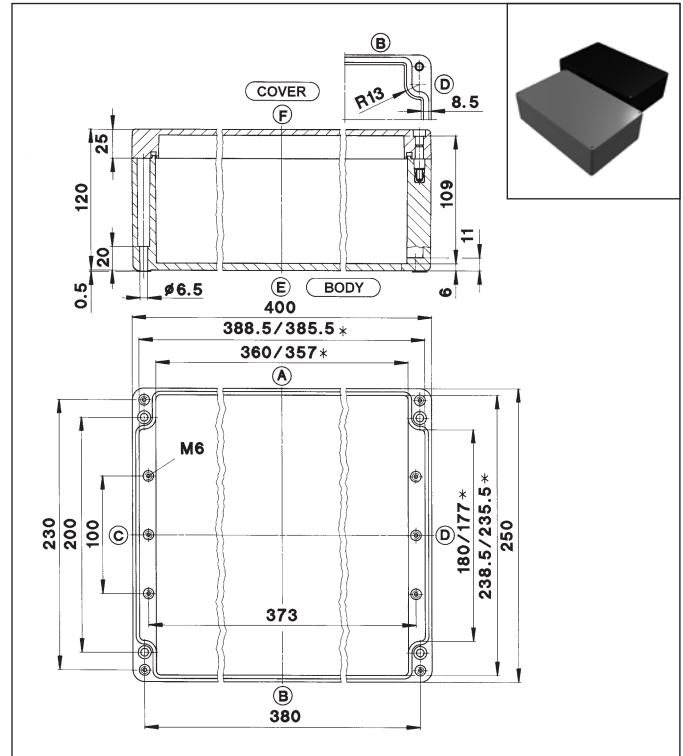
CP-370 RAL 7000 (squirrel grey)
CPS-370 RAL 9005 (jet black)



400 x 250 x 120 mm

CP-400 RAL 7000 (squirrel grey)
CPS-400 RAL 9005 (jet black)

CAD files available
at www.bernstein.eu



* Smaller dimension at mounting plate support

Type	CP-370	CPS-370						
Weight (g)	2650	2650						
External dimension (mm)	255 x 250 x 120							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4370000000							
RAL 9005 (jet black), with cover screws	5370000000							
Accessories (individual part or installation kit)								
Mounting plate	9823009000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821007000							
Mounting rail TS 35	9822010000							
Earthing rail	9810035000							
External mounting brackets	9824011000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	42	23	17	11	7	4	3	3
Side C/D	32	14	10	16	4	3	2	2

** Enclosure preparation required

* Smaller dimension at mounting plate support

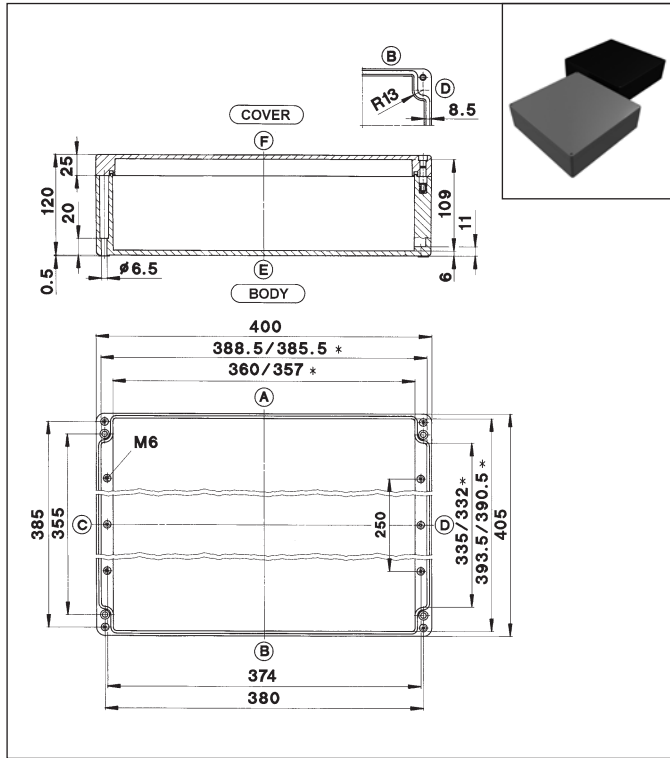
Type	CP-400	CPS-400						
Weight (g)	3650	3650						
External dimension (mm)	400 x 250 x 120							
Ordering data Enclosure with seal (PUR)	Part number							
RAL 7000 (squirrel grey), with cover screws	4400000000							
RAL 9005 (jet black), with cover screws	5400000000							
Accessories (individual part or installation kit)								
Mounting plate	9823010000							
Mounting rail TS 15	-							
Mounting rail TS 32	9821014000							
Mounting rail TS 35	9822017000							
Earthing rail	9810015000							
External mounting brackets	9824011000							
External articulated hinges for CP** enclosures	9801045000							
External articulated hinges for CPS** enclosures	9801046000							
Internal articulated hinges with cover guide**	9801032000							
Silicone seal for extended temperature range (by the metre)	on request							
Maximum possible number of threads								
ISO M	12	16	20	25	32	40	50	63
Side A/B	74	38	27	17	13	6	5	4
Side C/D	32	14	10	8	4	3	2	2

** Enclosure preparation required

Polyester Enclosures – Series CP

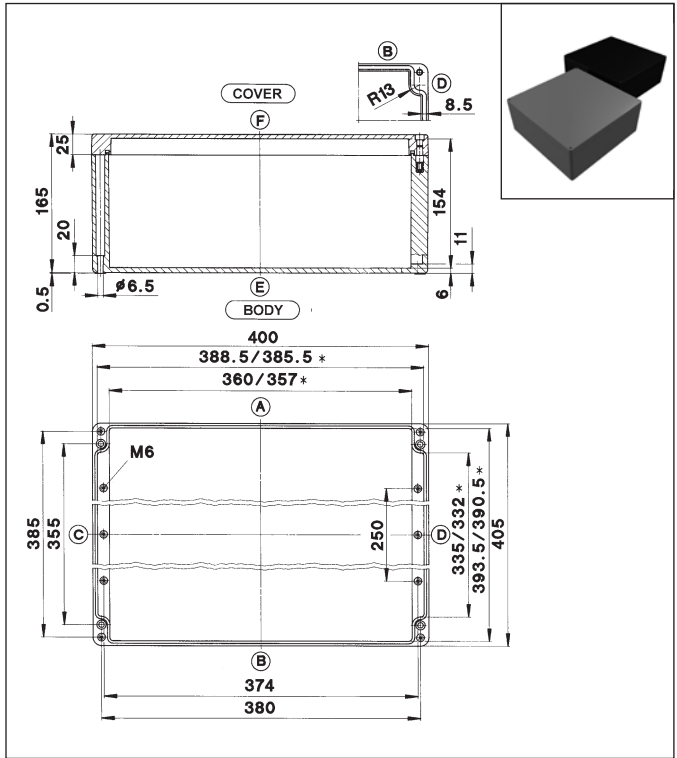
400 x 405 x 120 mm

CP-450 RAL 7000 (squirrel grey)
CPS-450 RAL 9005 (jet black)



400 x 405 x 165 mm

CP-460 RAL 7000 (squirrel grey)
CPS-460 RAL 9005 (jet black)





* Smaller dimension at mounting plate support



* Smaller dimension at mounting plate support



Type	CP-450	CPS-450
Weight (g)	5580	5580
External dimension (mm)	400 x 405 x 120	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4450000000	
RAL 9005 (jet black), with cover screws	5450000000	
Accessories (individual part or installation kit)		
Mounting plate	9823011000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821014000	
Mounting rail TS 35	9822017000	
Earthing rail	9810015000	
External mounting brackets	9824012000	
External articulated hinges for CP** enclosures	9801045000	
External articulated hinges for CPS** enclosures	9801046000	
Internal articulated hinges with cover guide**	9801032000	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	74	38 27 17 13 6 5 4
Side C/D	57	29 20 15 7 5 4 4
** Enclosure preparation required		

Type	CP-460	CPS-460
Weight (g)	7740	7740
External dimension (mm)	400 x 405 x 165	
Ordering data Enclosure with seal (PUR)	Part number	
RAL 7000 (squirrel grey), with cover screws	4460000000	
RAL 9005 (jet black), with cover screws	5460000000	
Accessories (individual part or installation kit)		
Mounting plate	9823011000	
Mounting rail TS 15	-	
Mounting rail TS 32	9821014000	
Mounting rail TS 35	9822017000	
Earthing rail	9810015000	
External mounting brackets	9824012000	
External articulated hinges for CP** enclosures	9801045000	
External articulated hinges for CPS** enclosures	9801046000	
Internal articulated hinges with cover guide**	9801032000	
Silicone seal for extended temperature range (by the metre)	on request	
Maximum possible number of threads		
ISO M	12	16 20 25 32 40 50 63
Side A/B	105	56 40 27 20 10 9 8
Side C/D	92	45 30 23 12 9 6 5
** Enclosure preparation required		

Screwed Cable Glands for Standard Enclosures

Plastic cable glands in RAL 7001			Thread size	Cable ø (mm)	* 	Article number
Colour	RAL 7001		M12 x 1,5	3-6	15	9432462000
Temperature range	-20°C to +100°C		M16 x 1,5	5-10	20	9432463000
Protection class	IP68		M20 x 1,5	8-13	24	9432464000
Material	Polyamide PAG V-2		M25 x 1,5	11-17	29	9432465000
Sealing element	CR/NBR		M32 x 1,5	15-21	36	9432466000
			M40 x 1,5	19-28	46	9432467000
			M50 x 1,5	27-35	55	9432468000
			M63 x 1,5	32-42	68	9432469000
			PG7	3-6,5	15	9432291000
			PG9	4-8	19	9432292000
			PG11	5-10	22	9432293000
			PG13,5	6-12	24	9432294000
			PG16	10-14	27	9432295000
			PG21	13-18	33	9432296000
			PG29	18-25	42	9432297000
			PG36	22-32	53	9432298000
			PG42	30-38	60	9432299000
			PG48	34-44	65	9432300000

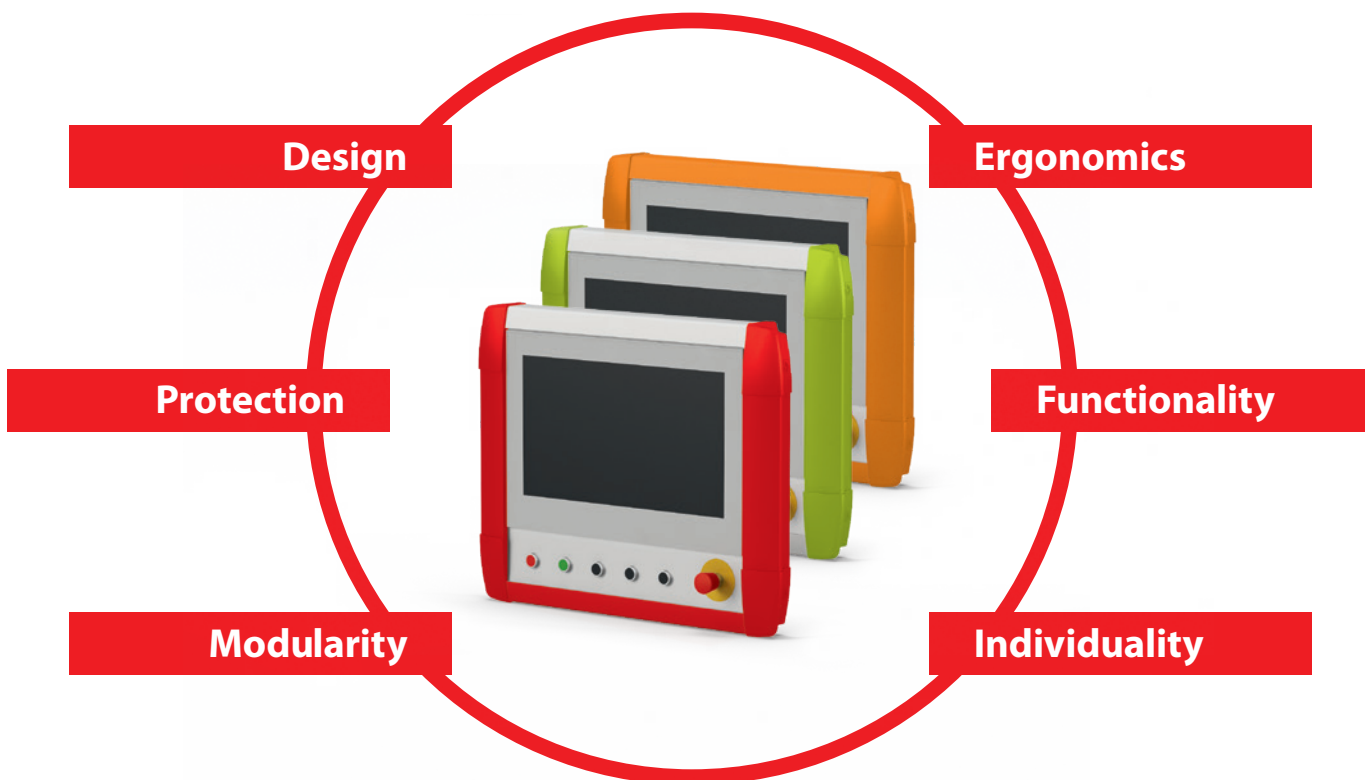
Plastic cable glands in RAL 7035			Thread size	Cable ø (mm)	* 	Article number
Colour	RAL 7035		M12 x 1,5	3-6,5	15	9432549000
Temperature range	-30°C to +80°C		M16 x 1,5	5-10	22	9432455000
Protection class	IP68		M20 x 1,5	6-12	24	9432548000
Material	Polyamide 6		M20 x 1,5	10-14	27	9432456000
Sealing element	Neoprene		M25 x 1,5	13-18	33	9432457000
			M32 x 1,5	18-25	36	9432458000
			M40 x 1,5	22-23	46	9432459000
			M50 x 1,5	30-38	60	9432460000
			M63 x 1,5	34-44	65	9432461000
			PG7	3-6,5	15	9432445000
			PG9	4-8	19	9432446000
			PG11	5-10	22	9432447000
			PG13,5	6-12	24	9432448000
			PG16	10-14	27	9432449000
			PG21	13-18	33	9432450000
			PG29	18-25	42	9432451000

Brass cable glands for standard enclosures type CA			Thread size	Cable ø (mm)	* 	Article number
Temperature range	-20°C to +100°C		M12 x 1,5	3-6	14	9431280000
Protection class	IP68		M16 x 1,5	5-9	17	9431281000
Material	Brass		M20 x 1,5	9-13	22	9431282000
Sealing element	CR/NBR		M25 x 1,5	11-16	27	9431283000
			M32 x 1,5	14-21	34	9431284000
			M40 x 1,5	19-27	43	9431285000
			M50 x 1,5	24-35	55	9431286000
			M63 x 1,5	32-42	65	9431287000
			PG7	3-6,5	14	9431165000
			PG9	4-8	17	9431166000
			PG11	5-10	20	9431167000
			PG13,5	6-12	22	9431168000
			PG16	10-14	24	9431169000
			PG21	13-18	30	9431170000
			PG29	18-25	40	9431171000
			PG36	24-32	50	9431172000
			PG42	30-38	57	9431173000
		PG48	34-44	64	9431174000	

*  WAF (mm)

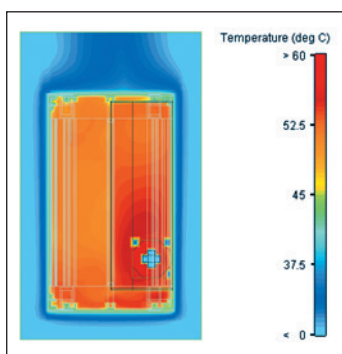
Control Enclosures by BERNSTEIN

Design aspects along with modularity, functionality and ergonomics, are rapidly becoming more and more important for plant and machinery manufacturers, especially when selecting the appropriate control enclosure for their machines and installations. To meet the increasing demand for aesthetically pleasing enclosures, we have developed a new BERNSTEIN Control Enclosure System. See for yourself.



Optimum heat dissipation due to single-walled sections

Due to the single-walled version of the aluminium sections, a good and passive heat dissipation that complies with the protection class IP65 is assured. For applications with an increased requirement for heat dissipation, wear resistant and maintenance-free ventilators or air conditioners are available.



Suspension system attachment

The suspension systems from BERNSTEIN also combine functionality with attractive design. The high quality material is extremely stable, easy to clean, and simple and quick to install. An extremely high load capacity allows individual configurations for different requirements.



Modular Aluminium Control Enclosure CC-5000 ^{neXt}

Protection in its most beautiful form

The aluminium control enclosure CC-5000 neXt offers a unique design with a number of accessories such as the status light. The rounded contours ensure the enclosure is highly recognisable in machinery and mechanical engineering applications. Dimensions up to a maximum 1000 mm in height and width with possible installation depths from 53 to 334 mm.



Modular Aluminium Control Enclosures CC-4000 and CC-4000 SL

The technical features of the CC-4000 enclosures encapsulate industrial controllers and operator control panels for centralised and decentralised automation in production processes. Thanks to the modular design, the enclosure dimensions can be freely selected (up to 800 x 800) with depths ranging from 52 mm up to maximum 646 mm.

The CC-4000 SL has an elegant and lean profile design, making the complete machine and system appear modern and dynamic.



Modular Aluminium Light-Duty Control Enclosure CC-3000

The CC-3000 is especially suitable for encapsulating control units, industrial computers and display components. It can be freely selected in height and width up to a maximum dimension of approximately 600 x 600 mm.

Different enclosure depths are possible due to the combination of aluminium sections (120 mm and 200 mm) with the additional door section (55 mm). BERNSTEIN offers sections in standard and handle versions.



Modular Aluminium Control Enclosure CC-5000 neXt

Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Innovative and modern industrial design
- Rounded edges, no risk of physical injury
- High-quality extruded aluminium sections (naturally anodised)
- Customised colours from RAL range
- Single-walled sections that provide outstanding heat dissipation
- Integrated recessed grips for simple handling
- Protection class IP65
- Operating temperature -30 °C to +80 °C
- Internally mounted front panel
- Door configurations for direct access to the interior
- Slimline design for configuring flat screen systems

Material

- Extruded sections Aluminium
- Die-cast corners Aluminium
- Die-cast caps Aluminium
- Sealings between section and corner module PUR
- Sealings for front panel and rear panel EPDM, PUR and PVC
- Hinge (for section combinations) Aluminium
- Articulated hinge (for enclosure with single sections) Aluminium
- Front panel, rear panel Aluminium

Colour

- Sections naturally anodised (standard)
- Front panel, rear panel naturally anodised (standard)
- Corner modules RAL 9006, white aluminium (standard)
- All components can be optionally powder-coated to a wide variety of RAL colours

Dimensions

- Width x height maximum: 1000 mm x 1000 mm
- Width x height minimum: 277 mm x 377 mm

Control Enclosure versions

The dimensions of the control enclosure CC-5000 neXt (along with our existing series CC-3000, CC-4000 and CC-4000 SL) are freely selectable. Nine possible depths are available. The obtained installation depths range from 53 mm to 334 mm. The width and height dimensions are offered up to 1000 mm in either direction.

Frames can be used in individual or multiple combinations. Innovative console configurations are possible thanks to a connecting element which has been designed in line with the new design.

Checklist CC-5000 neXt on page 94.

Modular system



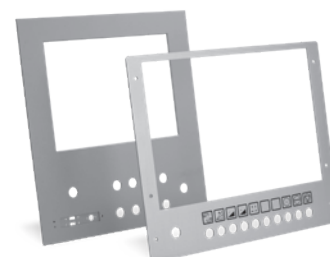
Approvals

c UL us
(label on demand)



Front panel

- Internally-mounted front panel through clamping tie bar
- Machining for integrating IPCs or Panel-PCs, push buttons and interfaces or engravings on demand
- Screen print according to your specifications



Individual colour combination

You are even able to personalise the colour of the enclosure to your specific corporate identity. Corner modules, front and rear panel, as well as the sections can all be optionally powder-coated to a wide variety of RAL colours. The corner modules are powder coated to RAL 9006 as standard, and the extruded sections are anodised (see CC-5000 neXt on page 74).



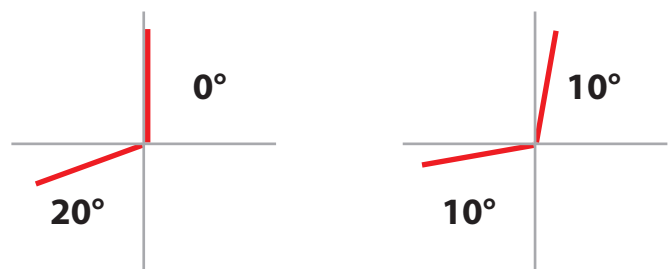
Console version



System features

For console versions, the keyboard is located in a separate housing. The coupling head specially aligned to this enclosure series makes the control panel (upper section) and the keyboard console (lower section) a compact unit.

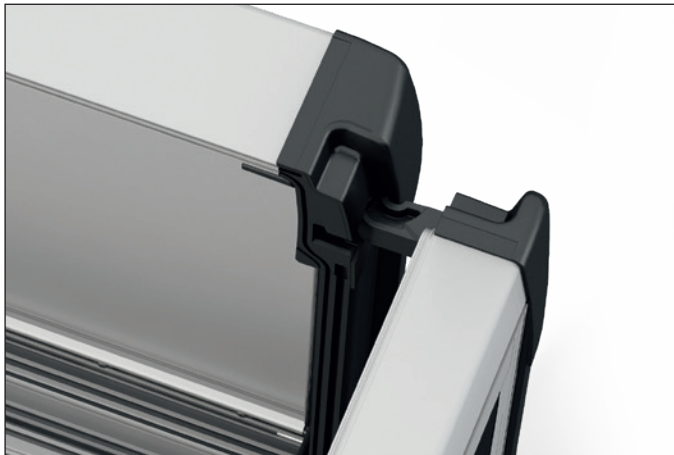
The keyboard console can be inclined downwards by 20 degrees (when the control panel is positioned vertically) or 10 degrees (when the control panel is inclined backwards by 10 degrees).



Modular Aluminium Control Enclosure CC-5000 next

Highlights

Hinge



- New concealed hinge design
- Hinge is unseen when door is closed
- Unique in the market today

Door centring



- Door centred via alignment feature
- Invisible in closed position
- Secure door closing


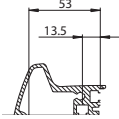
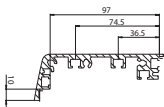
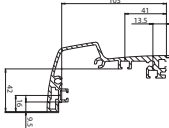
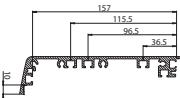
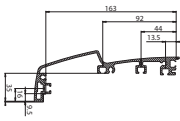
Optional signal light



- Signal light integrated in the design (RGB-LED)







Individual frames



External dimension	Internal dimension	Horizontal section	Vertical (handle) section
75 mm	53 mm		
125 mm	103 mm		
185 mm	163 mm		

Double frames (see figure vertical handle sections)



External dimension	Internal dimension	
150 mm (75 + 75)	114 mm	
200 mm (75 + 125 or 125 + 75)	164 mm	
250 mm (125 + 125)	214 mm	
260 mm (75 + 185 or 185 + 75)	224 mm	
310 mm (125 + 185 or 185 + 125)	274 mm	
370 mm (185 + 185)	334 mm	

Modular Aluminium Control Enclosures CC-4000 and CC-4000 SL

Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Simple and modern industrial design
- Freely selectable width and height (max. 800 x 800)
- Depths from 52 mm up to max. 646 mm
- High-quality aluminium casting with surface finish
- Coloured areas that emphasize the design
- Single-walled aluminium sections that provide outstanding heat dissipation
- Integrated handle elements with vertical section
- Protection class IP65
- Front panels internally-mounted or externally-mounted
- Simple installation of control units, or visualisation devices, thanks to all-round mounting grooves inside the enclosure



Product features SL (in addition to CC-4000)

- Two enclosure depths (55 and 99 mm)
- Slimline design

Checklist CC-4000 on page 98 onwards.

Approvals

- c UL us (label on demand)
- TÜV



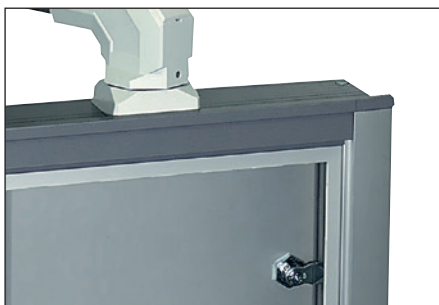
Handle sections left: CC-4000 SL
Handle sections right: CC-4000



Application with control unit, partition and two-row operator control panel



Application with control unit



CC-4000 SL with suspension system attachment CS-2000 SL and front panel aperture



CC-4000 SL with partition and externally-mounted two-row operator control panel

- Externally mounted front panel:
Inner depth = Outer depth - 14 mm
- Internally mounted front panel:
Inner depth = Outer depth - 20 mm

CC-4000

Thanks to a variant modular system, we are able to offer enclosures according to customer needs. The desired width or height can be achieved by cutting and processing the sections. Based on our aluminium frame sections, depths from 52 mm up to maximum of 646 mm are possible.

You determine the type of access

- Hinged rear panel
- Frame section as front door for hinged mounted controller
- Frame section as rear door with articulated hinge (fixed or detachable) for servicing purposes



The single-walled aluminium section offers superior heat dissipation. In double-walled enclosures, the entrapped air acts as an insulator. Rear panel heatsink, internal ventilators or climate devices can be used for challenging applications. You will find further information in our accessory program for control enclosures.

The BERNSTEIN suspension systems are ideal for attaching control enclosures to machines, walls or the floor (see "suspension systems" chapter). Selection of the suitable system depends on the arm length and the total weight of the enclosure. We would be pleased to assist you in selecting the right system for your application.



Opening CC-4000 enclosure from front with hinged frame section



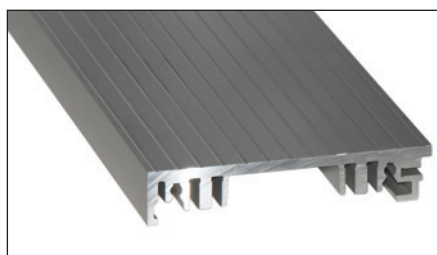
Opening CC-4000 enclosure from rear with flush-closing door



Detaching entire frame section



Ergonomically formed handles make safe handling easy

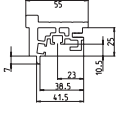

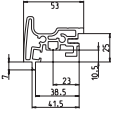

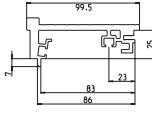

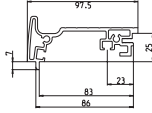



Generously sized cable channels and all-round mounting grooves to install control units

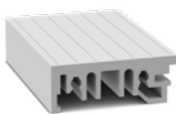
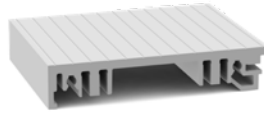
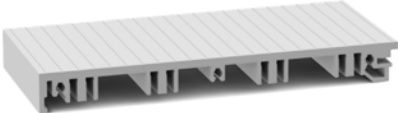


Different enclosure depths thanks to the combination of frame and extension sections

Front section SL version

External dimension	Internal dimension	Horizontal section		Vertical (handle) section	
55 mm	35 mm				
99 mm	79 mm				

Extension section for front section

External dimension	Internal dimension	
68 mm	68 mm	
128 mm	128 mm	
228 mm	228 mm	

Modular Aluminium Light-Duty Control Enclosure CC-3000

Product features

- Custom versions can be supplied to meet individual customer specifications (see "Checklists" chapter)
- Monitor-based industrial design
- Freely selectable width and height (max. 600 x 600)
- Customised colours from RAL range
- Five possible enclosure designs
- Optimum heat dissipation due to single-walled sections
- Front panels internally-mounted or externally-mounted
- Protection class IP65
- Screw-fixed or hinged rear panel
- Rear panel attachments without restricting installation space
- Internal grooves for fixing components
- Extensive range of accessories (see chapter „Accessories“)

Material

- Extruded aluminium section Al Mg Si 05
- Pressure die-cast aluminium corners Al Si 12
- Seals between section and corner module Plastic
- Seal between front panel and rear panel CR
- Hinge, articulated hinge Al Mg Si 05
- Front panel, rear panel Al Mg

Colour

- Sections naturally anodised
- Front panel, rear panel naturally anodised
- Corner modules RAL 9006



Approvals

c UL us
(label on demand)



✓ Checklist CC-3000 on page 102.



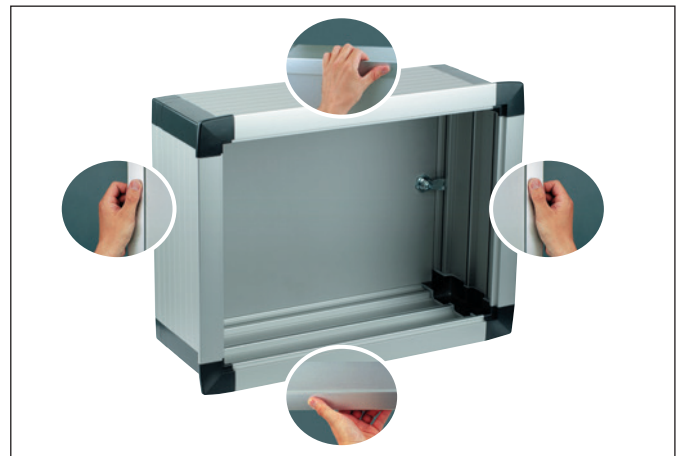
No handles



Handles on left and right



Handles on left, right and bottom (U-shaped)



Handles all round

Besides width, the height and depth can also be freely selected:

- Door hinge mounted on left or right
- Machining of the enclosures for mounting suspension systems
- Colour of corner modules
- Ready-to-use front panels according to customer specifications (incl. screen print or engraving)
- Specific preparation and wiring (see page 12, „System Solutions“)

A checklist will help you to define the required enclosure configuration while also serving as enquiry and order form (see page 102, „Checklists“).

Modular Aluminium Light-Duty Control Enclosure CC-3000



Fixed rear panel



Hinged rear panel with lock

The rear panel can be screwed down or configured as a door. The door version is used with hinges or articulated hinges and the installation space is not restricted.



Internally-mounted front panel

BERNSTEIN offers a practical assembly system to make installation simple - machining of the front plate is not necessary in this case. The fixing elements can easily be moved inside the enclosure, making it easier for the user to adjust if required.



Externally-mounted front panel

The advantages of an externally mounted front panel are that there is no longer a profile edge, and an additional installation space is created. Elements including threaded studs welded on the back of the front panel enable fixing - the same applies when the door extension is used.

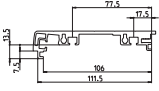

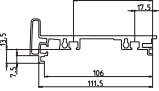

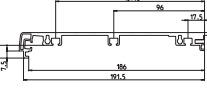

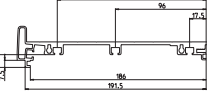

Built-in components

The extruded aluminium section features all-round grooves, allowing components to be simply secured with spring nuts without the need for mechanical modification to the enclosure.



All-round mounting grooves simplify installation



Frame section

External dimension	Internal dimension	Horizontal section		Handle section	
120 mm	103 mm				
200 mm	183 mm				

Door section

External dimension	Internal dimension	Horizontal section	Handle section
55 mm	46 mm		

Double frames (see figure vertical handle sections)

External dimension	Internal dimension	
175 mm (120 + 55)	149 mm	
255 mm (200 + 55)	229 mm	

Front panel / rear panel externally mounted lead to an additional installation depth of 8 mm.

Aluminium section depth comparison: 200 mm (left) and 120 mm (right) Version: hinged door



Example photo Single frame



Example photo Double frame

Attachment solutions for control enclosures

**Single coupling head
(suspended console version)**
Article number 9808013100



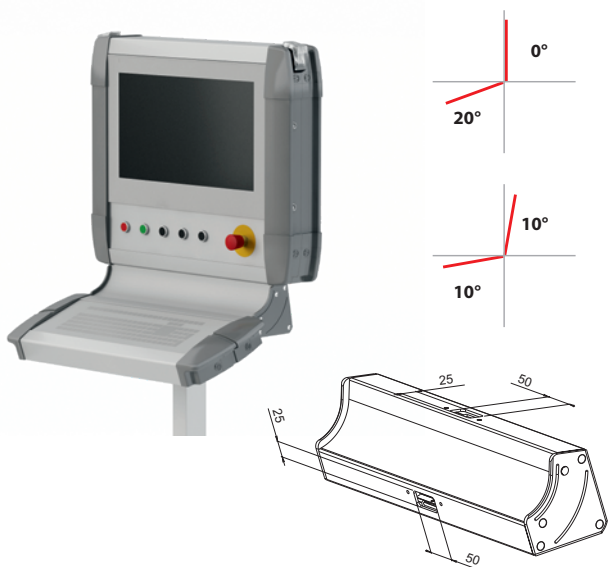
The coupling head (single) combines the upper section of the console that is attached to a suspension system from above with the lower section. The lower section of the console can be seamlessly adjusted between 0 and 30°. Through the installation openings to the sides, cables can easily be positioned. The coupling head is available in RAL 7035 or in RAL 9006. Other colours are available on request.

**Double coupling head
(console version with suspension system attachment)**
Article number 9808013000



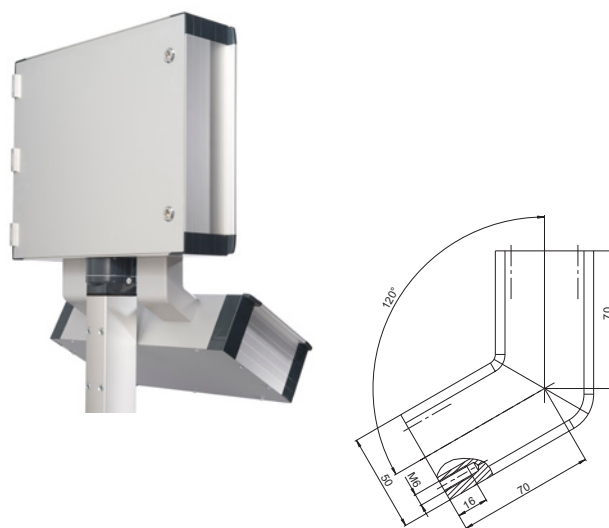
The coupling head (double) combines the upper section of the console with the lower section. The suspension system is attached using a CS-3000 coupling head. An infinitely variable angle adjustment of the upper section (0 - 30°) and of the lower section (0 - 20°) is possible. The coupling head is available as standard in RAL 7016 and in RAL 9006, other colours are available on request.

Coupling head CC-5000 neXt



The coupling head section is particularly suitable for applications where the focus is on a design-based solution. The section offers a very solid connection when using heavy and large enclosures thanks to plane support. The rear side has an installation opening for optimal cable leadthrough. The section is anodised and the side caps are offered in RAL 9006 as standard - other colours can be defined when filling out the checklist.

Rigid coupling head
Article number 9806493000



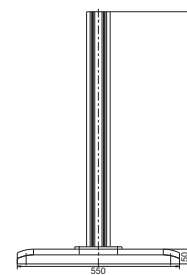
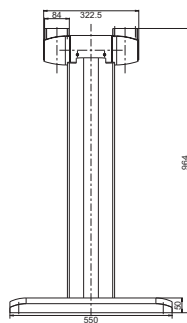
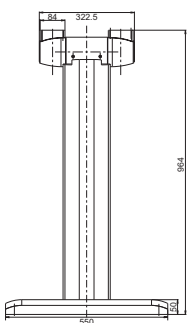
For the attachment of the console upper section to the lower section. The lower section of the console is fixed and inclined by 30°. The cable channel is realised by the coupling head. The coupling heads are coated similar to RAL 9006. Set of 2 pieces, complete with installation material.



Single stand
Article number 1016786000

Console stand
Article number 1016787000

Stand CC-3000
Article number 1016509100



Upright stand with integrated coupling head for hinged attachment (infinitely variable adjustment from 0° to 30°) on BERNSTEIN control enclosures. Colour RAL 7035
Complete with installation material and instructions; mechanical machining in control enclosures is necessary.

Upright stand with integrated coupling head for hinged attachment of BERNSTEIN control enclosures (infinitely variable adjustment from 0° to 30°) and keyboard enclosures (infinitely variable adjustment from 0° to 20°). Colour RAL 7035
Complete with installation material and instructions; mechanical machining in control and keyboard enclosures is necessary.

Upright stand with straight column for mounting control enclosures. Coated similar to RAL 7035. Please order castors and coupling components separately.

Tube 80 with cable channel

Industrial castors
Article number 9808012800



Set of castors, consisting of 4 swivel wheels. Complete with installation material and instructions. Load-bearing capacity of each castor 50 kg
Construction height 100 mm
Castors Ø 75 mm

Equipment castors
Article number 9808015300



Set of castors, consisting of 4 swivel wheels, including 2 with brake. Complete with installation instructions. Load-bearing capacity of each castor 70 kg.
Construction height 90 mm
Castors Ø 75 mm

Support feet
Article number 9808012900



Vertically adjustable feet (1 set = 4 pieces). Complete with installation material and instructions.

Adjustable construction height approx. 37 - 50 mm

Accessories for control enclosures

Accessories for control enclosures

CC-3000, CC-4000, CC-4000 SL and CC-5000

BERNSTEIN not only offers innovative control enclosures that can be perfectly configured to suit your specific requirements with our comprehensive range of accessories that you will find on the following pages but our system solution service also realises complete enclosure solutions.n“.

The range of accessories covers the following areas:

- **Attachment solutions**
Whether suspended, upright or mobile – we have the right system for any configuration.
- **Interface solutions**
With the interfaces laptops, programming devices, diagnostic facilities, modems etc. can be easily connected to built-in components for servicing purposes. Simply open the cover and connect. Protection class IP65 is retained (cover closed).
- **Keyboard solutions**
Data input devices do not always have to be in the way. We have available excellent solutions for storing such devices and cleverly integrating them in the overall concept while retaining the user-friendly ergonomics of the system.
- **Handle solutions**
The BERNSTEIN range of accessories also includes practical handles to ensure the enclosures are handled safely.
- **Safety solutions**
Your safety is our concern – we therefore offer a range of accessories that help and protect.
- **Heat dissipation solutions**
Heat dissipation is a key problem which we will gladly resolve for you. Take the easy way out and contact us. We have the right enclosures, suitable equipment and the necessary know-how to effectively solve heat dissipation problems.
- **Cable solutions**
It is often necessary to route cables into the enclosure – whether single core or preassembled cables, we have the right solution.
- **Front panel solutions**
The front is the most important side of the enclosure. Here everything must be right and should look exactly as you imagined. Take advantage of our service to help you find the appropriate accessories.

Our comprehensive range of accessories is listed on the following pages.

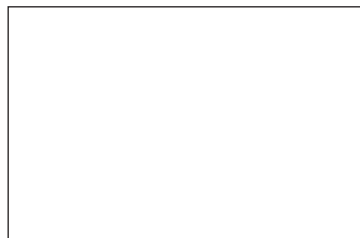
Article	Thin Client wall mount bracket – enclosure attachment	Tabletop feet, adjustable	Tabletop feet (StopChoc)
Article number	9805332000	9806014000	9806500000

Accessories



Design	Particularly suitable for mounting an enclosure on safety gate posts that can accept 40, 60 and 80 mm post attachments. The plastic mount is silicone-free. Designed for standard M6 attachment. The maximum load for central mounting is 20 kg. The wall / post attachment, Art. No. 9805333000, is additionally required for a complete system.	Simple plastic tabletop feet for control enclosures; feet can be set upright to adjust enclosure inclination. Installation altitude 48 mm Set of 4 pieces	Vibration-absorbing tabletop feet for control enclosures, ideal for mobile use in close proximity to machines or sensitive electronic equipment. Set of 4 pieces
---------------	---	---	---

Article	Suspension system covers CS-2000 SL / CS-3000 / CS-3000 neXt	CS-2000 System 80	
Article number	9806495000	9806499000	



Design	For closing off unused BERNSTEIN suspension system connection points (Couplings). Finish similar to RAL 9006. Other RAL colours available on request. 9806495000 Flange size 60 mm 9806499000 Flange size 80 mm		
---------------	---	--	--

Article	Carrying handle		
Article number	9806490000		

Handle solutions



Design	Black carrying handle especially for small enclosures in mobile applications.		
---------------	---	--	--

Accessories for control enclosures

Article	CC handle	Corner handle set	Positioning handle
Article number	see specification	9806026000	see specification

Handle solutions



Design	<p>Straight, anodised aluminium handle.</p> <p>9808015000 Length 140 mm</p> <p>9808014900 Length 200 mm</p> <p>9808014600 Length 350 mm</p>	<p>2x black foam-coated corner handles.</p>	<p>Anodised, ergonomically designed, formed aluminium positioning handle.</p> <p>9808015100 Length 250 mm</p> <p>9808015200 Length 350 mm</p>
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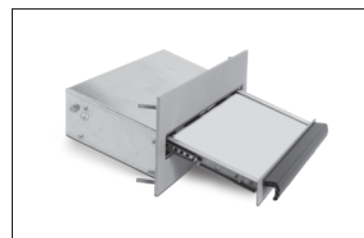
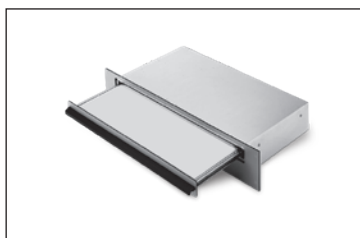
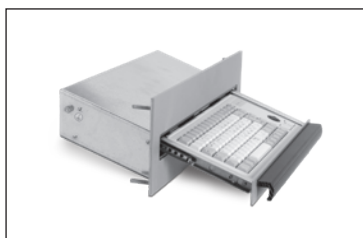
Article	Keyboard shelf	Fold-down keyboard panel	Keyboard drawer 483 x 89 x 155 mm (19"/2HM)
Article number	9806175000	9806488000	9806744000

Keyboard / support solutions



Design	<p>Sheet metal, finish similar to RAL 9006. 2x M5 holes required in enclosure. Stainless steel version available on request.</p> <p>495 x 255 mm</p>	<p>Made from coated sheet steel, finish similar to RAL 9006. Dimensions: 483x249x50 mm. IP54 rating when open.</p>	<p>With mounting pin, no lock, IP65 rating when closed. Including German USB keyboard with integrated trackball. Other language-version keyboards and drawer with lock available.</p>
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Article	Keyboard drawer 483 x 134 x 155 mm (19"/3HM) 20° inclination	Keyboard drawer 483 x 89 x 155 mm (19"/2HM) without keyboard	Keyboard drawer 483 x 134 x 155 mm (19"/3HM) 20° inclination without keyboard
Article number	9806745000	9286098000	9286112000



Design	<p>With mounting pin, no lock, IP65 rating when closed. Including German USB keyboard. Other language-version keyboards and drawer with lock available. Keyboard is inclined by 20°.</p>	<p>With mounting pin, no lock, IP65 rating when closed.</p>	<p>With mounting pin, no lock, IP65 rating when closed, without keyboard.</p>
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Article	Interface insert	Interface insert	Interface insert
Article number			9421311000

Interface solutions



Design	<p>9421300000 2x USB 2.0 Type A shielded</p> <p>9421284000 2x USB 2.0 Type A with 0.7 m cable and connector</p>	<p>9421310000 1x Sub-D9 / 1xSub-D25, female / male</p> <p>9421308000 1x Sub-D9 / 1xSub-D15, female / female</p>	<p>1x RJ45 / USB BF-A / Sub-D9</p> <p>Other interface inserts on request</p>
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Article	Interface insert	Interface flap single	double	RJ-45 interface	USB interface
Article number	9421307000	9421283000	9421306000	9806519000	9421319000



Design	Earthed socket outlet 250V	<p>Metal silver-coloured interface cover, various snap-in inserts for modular configurations. Plastic, transparent version and latching on request. 3 mm two-way key or rotary knob.</p> <p>Dimension: 66 x 120 mm</p>	<p>Dimension: 131 x 120 mm</p>	<p>Interfaces with captive dust cap, protection class IP65.</p> <p>Mounted in a 22.5 mm hole in the enclosure or front panel.</p> <p>With connector and cable</p>
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Article	Set of spring nuts M4	M5	Mounting brackets	Mounting rail service
Article number	9806006000	9806007000	9806008000	On request

Interior accessories



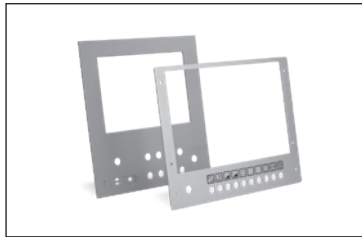
Design	Set of 10	<p>For attaching mounting plates or other built-in components in enclosures.</p> <p>Dimension: 30 x 20 mm for M5 screws</p> <p>Set of 4 including installation material</p>	<p>On request we will cut mounting rails to size for your enclosure (TS32 / TS35 for accepting terminal blocks).</p> <p>Please contact us.</p>
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Accessories for control enclosures

Article	Earthing kit, door and externally mounted front panel	Earthing kit, door and externally mounted front panel	Set of clamping elements (PC477/577/677)
Article number	9806507000	9806506000	9806324000
			
Design	Copper strap	Additional earthing kit for earthing externally mounted front panels or doors (green / yellow).	Set of 6 clamping elements for direct installation of Siemens Simatic Panel PC 477/577/677
Article	Front panel seal	Front panel mounting kit CC-3000 / CC-4000	Front panel mounting kit CC-5000 neXt
Article number	9806373000	9806925000	9806893000
			
Design	2 m front panel flat seal, 6 x 2 mm, grey	For internal / external mounting of the front panel 10 mounting elements	For internal fixing of the front panel 10 mounting elements
Article	Door arrester		
Article number	9806503000		
			
Design	For locking door in open position and for limiting opening range (approx.100°) for CC-3000 / CC-4000.		

Article	Front panel preparation service	Crystal clear makrolon front cover	TFT monitor mounting bracket
Article number	on request	on request	9806679000

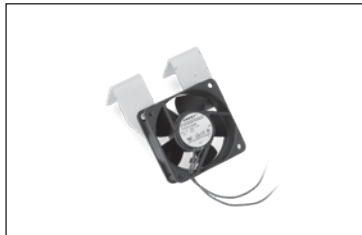
Machining service / special solutions



Design	We machine aluminium front and rear panels individually to suit your specific requirements. Engraving or various printing processes also possible on request. Simply provide us with a drawing with your requirements.	Please contact us regarding the protection of a commercially available monitor that is secured in the enclosure by means of a TFT monitor mounting bracket.	Commercially available displays can be easily secured in modern control enclosures, thus encapsulating them in a way that meets industrial standards. For display, pivotable with Vesa adapters 75 or 100 (15" to 20").
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Article	Fan mounting bracket set	Filter fan set PF1000	Air conditioner
Article number	9806491000	9806492000	230 V, 320 W, L35L35 230 V, 400 W, L35L35 9421279000 9421276000

Heat dissipation solutions



Design	Set of 2 brackets for axial or radial fan, RAL 7035.	230 V filter fan + outlet filter 24 m ³ /h, IP54 Dimension: 109 x 109 x 49/19 mm 1 pc per unit 12 V / 24 V / 48 V on request	9421279000 270 x 520 x 110 mm, 13.3 kg 9421276000 520 x 340 x 110 mm, 14.8 kg further cooling capacities on request
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BERNSTEIN Services

New system integration approaches such as the installation and preassembly of:

- Power supply systems
- Operating and control elements
- Membrane keypads
- Displays, power supply and data cables
- I/O assemblies
- Ethernet components
- PLC/IPC solutions of all renowned manufacturers

Services:

- Wiring
- Worked-out circuit diagram
- Installation of components
- Acceptance test

Checklist Enclosure CC-5000 neXt

Customer:	Customer No.: *	Article No.: *
Address:		
Telephone:	E-mail:	
Contact person:	Department:	
<input type="checkbox"/> Pricing enquiry	Target price:	Quantity:
<input type="checkbox"/> Enquiry	Enquiry No.: *	Annual requirement:
<input type="checkbox"/> Order	KPA: *	Delivery date:

1 Checklist for:

- Standard
- Console encl., upper part
- Console encl., lower part

▶ please fill in checklist for console versions

Adjustment

Anticipated installation weight: _____ kg

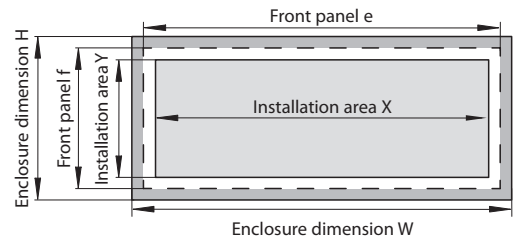
2 Dimensions (mm)

Installation area (X x Y) _____ x _____

Enclosure dimensions (W x H) _____ x _____
 = X + 152 = Y + 91

Front panel dimensions (e x f) _____ x _____
 with airflow humidity of 0.5 mm
 = X + 20 = Y + 21

Rear panel dimensions b x h _____ x _____
 with airflow humidity of 1 mm
 = X + 107 = Y + 78

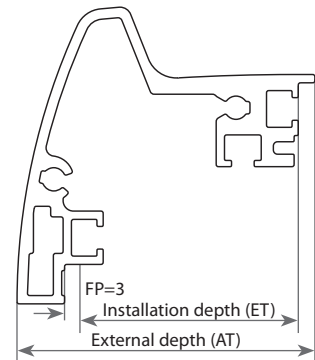


External dimensions min. 277 x 392 mm, max. 1000 x 1000 mm (W x H)

3 Profile selection

Select 1 enclosure section (optional, add up to a maximum of 1 door section!)

External depth 0 mm	Front door	Enclosure section (fixed area!)			Rear door
Choice of desired external depth AT	<input type="checkbox"/> 75	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 75
	<input type="checkbox"/> 125	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 125
	<input type="checkbox"/> 185	<input type="checkbox"/> 75	<input type="checkbox"/> 125	<input type="checkbox"/> 185	<input type="checkbox"/> 185



Information about section depth dimensions									
Installation depth ET (mm)	53	103	114	163	164	214	224	274	334
External depth AT (mm)	75	125	150	185	200	250	260	310	370
Basis section	75	75	75+75		75+125				
	125		125			125+125			
	185			185			185+75	185+125	185+185

Section combination: Hinges with BERNSTEIN logo (Ø 20 mm)

4 Door mounting

left or right

5 Lock

Square (mm): 6 7 8 T-handle without lock**

Triangle (mm): 7 8 6,5 (CNOMO) T-handle with lock**

Two-way bit (mm): 3 Standard 5 E1 (without key)

Daimler Benz: T-handle E1 (without key)**

Special lock _____ (** = not for 75 section)

6 Front panel *Internally mounted*

- none
- mounted
- Front panel mounting kit

Rear panel

Enclosure with door section

- none
- mounted

Rear panel

Enclosure without door section

- Standard hinge (with BERNSTEIN logo)
- screw-mounted (externally)
- VESA attachment to the rear

(screw-fixed rear panel); (rear panel thickness of 4 mm, possible at an installation area height of Y > 500 mm)

7 Partition

- not mounted
- vertical Qty: _____ Partition height 28 mm. Leave 1 mm space between front panel and partition. Partition protrudes 3.7 mm beyond the front panel.
- horizontal Qty: _____

Operator panel

- 1st Operator panel (w x h) _____ x _____ not mounted
- 2nd Operator panel (w x h) _____ x _____ mounted
- 3rd Operator panel (w x h) _____ x _____

8 Keyboard drawer *(at 155 mm installation depth)* *(interlock via magnetic lock)*

- without keyboard, 0°, Height 89 mm
- without keyboard, 20°, Height 134 mm
- with keyboard, 0°, USB, Height 89 mm
- with keyboard, 20°, USB, Height 134 mm
- to customer specification (description under 11)
- secured via lock (optional)

- none

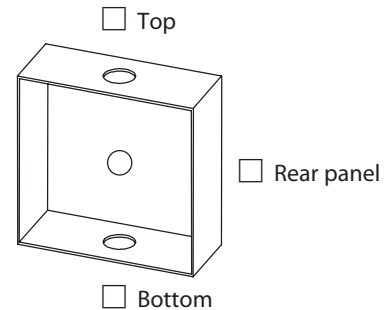
Keyboard configuration

- German (Standard)
- English (GB)
- English (USA)
- Other language: _____

9 Preparation for susp. system

	Component selection	75	125	185
CS-3000 neXt adapter small	<input type="checkbox"/>			
Flange coupling standard*	<input type="checkbox"/>			
Flange coupling system 80	<input type="checkbox"/>			
Turn/tilt coupling	<input type="checkbox"/>			
Tilt adapter	<input type="checkbox"/>			
CS-2000 SL base coupling	<input type="checkbox"/>			
Coupling head	<input type="checkbox"/>			
Coupling head, single	<input type="checkbox"/>			
Automotive adapter	<input type="checkbox"/>			
WS coupling	<input type="checkbox"/>			
CS-3000/48	<input type="checkbox"/>			
VESA-100 <i>(Rear panel attachment)</i>	<input type="checkbox"/>			
Preparation on customer request (see below)	<input type="checkbox"/>			

Entry/support position



- no preparation
- SS cover, top
- SS cover, bottom

= Component not possible

* CS-3000 neXt / CS-3000 / CS-2000 SL/50/60

** CS-3000 neXt/ CS-3000 with adapter (narrow sect. 1015300011)

10 Surface finish

Standard

- Horizontal sections anodised, natural
- Vertical sections anodised, natural
- Corner modules RAL 9006 Standard
- Front panel anodised, natural
- Rear panel anodised, natural
- Partition anodised, natural

Special colour RAL

- _____
- _____
- _____
- _____
- _____

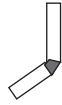
11 Accessories, Remarks

<input type="checkbox"/> Annexes number of _____	VKF*	TA*	AV*	
<input type="checkbox"/> No Annexes				

* Completed by BERNSTEIN

Checklist Console Version CC-5000 neXt

1 Checklist for:



Console attachment

Article No. Console Enclosure, upper part * _____

Article No. Console Enclosure, lower part * _____

2 Type of console connection Only one choice is possible

Console connector section	Console connector	Console coupling
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		

3 Preparation for suspension system in the console connector section *

Only one choice is possible

- preparation
- no preparation
- = Component not possible

	CS-2000 SL45/60, CS-3000, CS-3000 neXt	CS-2000 Sys80
Coupling or Elbow coupling	<input type="checkbox"/>	
New adapter flange (Automotive)		

4 Surface finish

	Standard	Special colour RAL
Console connector section (section)	<input type="checkbox"/> anodised, natural	<input type="checkbox"/> _____
Console connector section (end caps)	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____
Console connector	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____
Console coupling	<input type="checkbox"/> RAL 9006 Standard	<input type="checkbox"/> _____

5 Accessories, Remarks

<input type="checkbox"/> Annexes number of _____	VKF*	TA*	AV*	
<input type="checkbox"/> No Annexes				

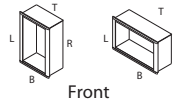
Checklist Enclosure CC-4000

Customer	*Product group	*Code	*Article number
Address		Customer No.	
Telephone	Telefax	Industry	
Contact person		Department	
<input type="checkbox"/> Pricing enquiry			
		Target price	Quantity
<input type="checkbox"/> Enquiry			
		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order			

Delivery date

1 Enclosure

- Standard
- Console encl., upper section
- Console encl., lower section



Anticipated installation weight
_____ kg

2 Dimensions (mm)

External encl. dimensions

Width x height (W x H) _____ X _____

19" Enclosure W x H _____ X _____

H = (n x HM) + 97 - 1 HM = 44,45 HM = _____

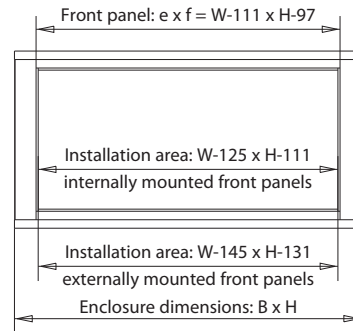
***Front panel dim.** (e x f) _____ X _____

e x f = W - 111 x H - 97

****Rear panel dim.** (w x h) _____ X _____

W x H = W - 61 x H - 47

W x H = W - 63 x H - 47 (hinged rear panel)



3 Type of section

- Section without ribbing

4 Enclosure depth, ext.

Frame section

- with 3 mm deep FP support
- 140 200 290

Extension

- 68 128 228 128 68

- or _____ → with 6.5 mm deep FP support
- 52 80

- 68 128 228 128 68

Internal depth for internally mounted FP with 3 mm deep FP support

When using 6,5 mm FP support, the internal depth is reduced by 3,5 mm

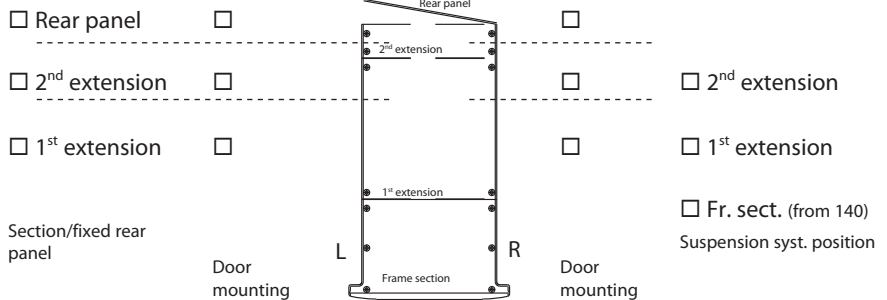
Section	52	80	120	140	148	180	188	200	208	216	248	268	276	280	290	308	328	336	348	358	368	376	396	408	418	426	428	436	456	486	496	518	A**			
	38	66	106	126	134	166	174	186	194	202	234	254	262	266	276	294	314	322	334	344	354	362	382	394	404	412	414	422	442	472	482	504	I**			
52	●		●			●	●				●			●		●			●					●												
80		●			●				◆	●			◆			◆		■				●						◆								
140				●					●			●	●								●			●				●					●			
200								●				◆					●	◆						◆				●					●			
290															●						●					●	●					●		●		
68			●		●		●		●	●	●	◆	◆					◆	●	●			●	◆			●		●		●	◆				
68							●			●			●					◆						●			●									
128								◆		●	●	◆				●	●	■	●					◆	●	●		◆	●	●	●	●				
128																●		■						●												
228														●		◆			●			●	●		●			●	◆	◆		◆	◆	●		

** A = External depth, I = Internal depth Internal depth is increased by 6 mm for external mounting. ◆ ■ = Alternative combination

* Completed by BERNSTEIN AG

5 Door mount. (susp. syst.)

Automotive version



- Rear panel
- 2nd extension
- 1st extension
- Section/fixed rear panel

- 2nd extension
- 1st extension
- Fr. sect. (from 140)

6 Partition

- not mount.
- vertical mount.on right horizontal bottom mount.
- Qty _____ mount. on left Qty _____ top mounted

- Operator panel, anodis., int. mount. Dim.: g x h (g = Width, h = Height)
- 1st operator panel _____ x _____
- 2nd operator panel _____ x _____
- 3rd operator panel _____ x _____

(Important! Partition height for frame section with 3 mm FP support = 20 mm/front panel support 6.5 mm = 25 mm)

7 Front panel

- none
- with 3 mm, int. mount.
- 3 mm, ext. mount.

Rear panel

- none
- ext. screw-mounted
- heat sink rear panel

- standard hinge
- screw-moun. rear pan. art hinge

Access., front panel

- for INTERNALLY mounted panels: seal strip and mounting material
- for EXTERNALLY mounted panels: seal strip/washers/nuts M5
- 19" installation kit (9806232000): screws and captive nuts M6
- set of clamping elements for SIMATIC Panel PC

Keyboarddrawer from 180 mm depth

- (2HM = 89 mm, 3HM = 134 mm)
- without keyboard, 0°, without lock, 2HM
- without keyboard, 20°, without lock, 3HM
- with keyboard, 0°, without lock, Germ., PS2, 2HM
- with keyboard, 20°, without lock, Germ., PS2, 3HM
- to customer specification (description under 13)

8 Lock

- Square (mm): 6 7 8 (Standard) Triangle (mm): 7 8
- Two-way bit (mm): 3 5
- Daimler Benz T-handle without lock T-handle with lock Customer specification

9 Preparation for susp. syst.

Type of coupling

- Turn/tilt coupling (from section 128)
- Flange (see System)
- Tilt adapter (from section 200)
- Coupling head CC-4000
- Console connector
- Automotive adapter
- KDL 16/4

only with automotive adapter without SS preparation (KDL = cable gland strip)

- Grommet 3–4 mm
- _____ Qty

No

- WS coupling
- CS-3000/48
- Special preparation to customer specificat.

KDL 24/5

- Grommet 6–7 mm
- _____ Qty

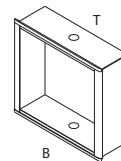
System

- SL (only section 80)
- CS-3000 (fr. sect. 128)
- 80 (from section 128)
- SS cover, top
- SS cover, bottom
- SS in section _____

- Dummy grommet
- _____ Qty

Top

Bottom



10 Surface finish

- Horizontal sections:
- Vertical sections:
- Partition:
- Front panels:
- Rear panels:

Standard

- RAL 9006, powder-coated
- anodised, natural
- RAL 9006, powder-coated
- anodised, natural
- anodised, natural

Customer specification

- _____
- _____
- _____
- _____

11 Automotive version: double GK seal, braided earthing strap, front door arrester

12 Climate control data for checking heat dissipation over enclosure surface
 _____ (Pv) total installed power loss _____ (°C) ambient temperature at enclosure location
 _____ (°C) max. temperature, installation (e.g. PC) _____ (V) power supply for active cooling

13 Accessories, Remarks

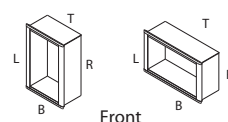
- annexes
- no annexes

Checklist Enclosure CC-4000 SL

Customer	*Product group	*Code	*Article number
Address			Customer No.
Telephone	Telefax	Industry	
Contact person			Department
<input type="checkbox"/> Pricing enquiry			
		Target price	Quantity
<input type="checkbox"/> Enquiry			
		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order			
Delivery date			

1 Enclosure

- Standard
- Console enclosure, upper section
- Console enclosure, lower section



Anticipated installation weight _____ kg

2 Dimensions (mm)

External enclosure dimensions

Width x height (w x h) _____ x _____

19" Enclosure

_____ x _____

$H = (n \times HM) + 73 - 1 \text{ HM} = 44,45$ $HM \equiv$ _____

Front panel dim. (e x f)

_____ x _____

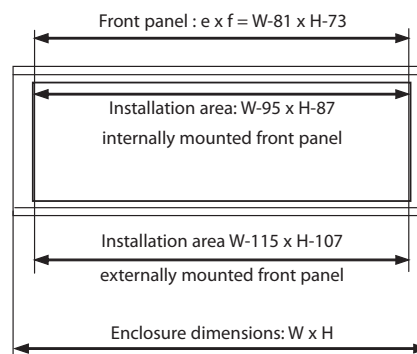
$e \times f = B - 81 \times H - 73$

Rear panel dim. (w x h)

_____ x _____

$w \times h = W - 31 \times H - 23$

$w \times h = W - 33 \times H - 23$ (hinged rear panel)



3 Type of section

- Section without ribbing

4 Enclosure depth, ext. (frame section with 6.5 mm deep FP support)

- 55 99

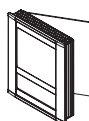
Section	55	99	External depth (mm)
	35	79	Internal depth (mm)

(Internal depth increased by 6 mm for external mounting)

5 Door mounting



- Fixed rear panel



Door mounting, **left**

- Standard hinge
- Screw-mount. rear pan. articul. hinge



Door mounting, **right**

- Standard hinge
- Screw-mounted rear panel articulated hinge

* Completed by BERNSTEIN AG

6 Partition (Important! Partition height for frame section = 25 mm)

not mounted(Standard)

vertical

_____ Qty.

waagerecht

_____ Qty.

mounted on right

mounted on left

bottom mounted

top mounted

operator panel anodised, natural
(not mounted for inside) s = 3 mm

Dimension: g x h
(g = Width, h = Height)

1st operator control pan. _____ X _____

2nd operator control pan. _____ X _____

7 Front panel

none

with: 3 mm, int. mounted

3 mm, ext. mounted

Accessories, front panel

for INTERNALLY mounted panels: seal strip and mounting material

for EXTERNALLY mounted panels: seal strip/washers/nuts M5

19" installation kit (9806232000): screws and captive nuts M6

set of clamping elements for SIMATIC Panel PC 670/870

Rear panel

none

with: 3 mm, externally screw-mount.

3 mm, hinged

8 Lock

Square (mm): 6

7

8 (Standard)

T-handle without lock

Triangle (mm): 7

8

E1

Two-way bit (mm): 3

5

Special lock/customer specification

Daimler Benz:

9 Preparation for suspension syst. No

Type of coupling/system

SL flange / turn/tilt coupling (only section 99)

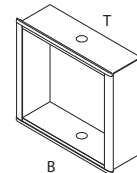
Coupling head CC-4000

Special preparation to customer specification

Top

Side:

Bottom



10 Surface finish

Horizontal sections:

Vertical sections:

Partition:

Front panels:

Rear panels:

Standard

RAL 9006, powder-coated

anodised, natural

RAL 9006, powder-coated

anodised, natural

anodised, natural

Customer specification

11 EMV Version (electromagnetic compatibility)

Conductive connection between enclosure body, door, FP and RP

12 Automotive version; braided earthing strap

13 Climate control data for checking heat dissipation over enclosure surface

_____ (PV) total installed power loss

_____ (°C) ambient temperature at enclosure location

_____ (°C) max. temperature of installation (e.g. PC)

_____ (V) power supply for active cooling

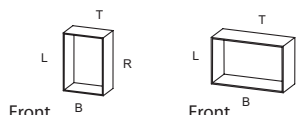
14 Accessories, Remarks annexes no annexes

Checklist Enclosure CC-3000

Customer	*Product group	*Code	*Article number
Address		Customer No.	
Telephone	Telefax	Industry	
Contact person		Department	
<input type="checkbox"/> Pricing enquiry			
		Target price	Quantity
<input type="checkbox"/> Enquiry			
		*Enquiry No.	Annual requirement
<input type="checkbox"/> Order			
Delivery date			

1 Enclosure

- Standard
- Console enclosure, upper section
- Console enclosure, lower section



Anticipated installation weight _____ kg

2 Dimensions (mm) (always referred to the standard section)

External enclosure dimensions

Width x height (W x H) _____ x _____

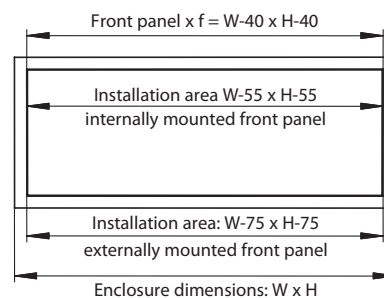
Front panel dimensions (e x f)

e x f = W - 40 x H - 40 _____ x _____

Rear panel dimensions W x H

Screw-fixed rear panel: W x H = W - 7 x H - 7

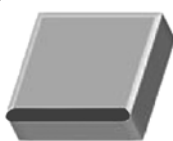
Hinged rear panel: W x H = W - 9 x H - 9



3 Front design (handle selection)



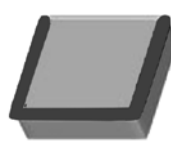
None



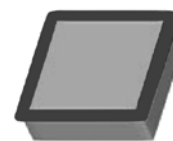
Bottom



Left + right



Left + right + bottom



All-round

(Important! The external enclosure dimensions increase by 16.5 mm on the side where a handle strip is selected)

4 Enclosure without door section

Enclosure depth

External depth

120 mm

200 mm

Front panel position

Installation depth

Internal 103 mm

External 111 mm

Internal 183 mm

External 191 mm

Rear panel position

Screw-fixed or hinged

Screw-fixed

With standard hinge

With screw-mounted rear panel hinge

5 Enclosure with door section 55 (FP = Front panel, RP = Rear panel)

Front door

or

Rear door

External articulated hinges

55 + 120

120 + 55

FP and RP internal

Installation depth 149 mm

FP internal and RP external

Installation depth 157 mm

FP external and RP internal

Installation depth 157 mm

FP and RP external

Installation depth 166 mm

55 + 200

200 + 55

Installation depth 229 mm

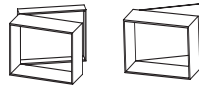
Installation depth 237 mm

Installation depth 237 mm

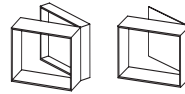
Installation depth 246 mm

* Completed by BERNSTEIN AG

6 Door mounting

 Left


or



or

 Right

7 Lock

Square (mm): 6

7

8 (Standard)

T-handle without lock

Triangle (mm): 7

8

6,5 (CNOMO)

T-handle with lock

Two-way bit (mm): 3

5

E1 (without key)

Daimler Benz:

Special lock/customer specification

T-handle E1 (without key)

8 Front panel

 None

 With

Keyboard drawer

from 175 mm depth (2HE = 89 mm, 3HE = 134 mm)

 Without keyboard, 0°, without lock, 2HM

19" Installation kit _____ Qty.

9 Rear panel

 None

 With

 Without keyboard, 20°, without lock, 3HM

 Clamping element for Simatic

 With keyboard, 0°, without lock, German, PS2, 2HM

 With keyboard, 20°, without lock, German, PS2, 3HM

 To customer specification (description under Point 14)

10 Partition (partition height 13 mm)

 Vertical

_____ Qty.

 Not mounted (standard)

 Mounted on right

 Mounted on left

 Horizontal

_____ Qty.

 unmounted (standard)

 Bottom mounted

 Top mounted

11 Partial front panels

 none

1st operator panel: _____ Width x _____ Height

 Not mounted

 INTERNALLY mounted

 EXTERNALLY mounted

_____ (Art. No. BP)

2nd operator panel: _____ Width x _____ Height

 Not mounted

 INTERNALLY mounted

 EXTERNALLY mounted

_____ (Art. No. BP)

12 Preparation for suspension system None

 Standard preparation (flange SL/CS-3000)

 Turn/tilt coupling

 Tilt adapter (only section 200)

 Flange coupling 80 (only section 200)

 Console connector

 Automotive adapter

 WS coupling

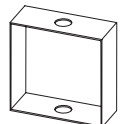
 CS-3000/48

 Special preparation to

customer specification (see below)

 Top

Side

 Bottom


SS cover, top SS cover, bottom

13 Surface finish

Basic sections:

Door sections:

Corner modules/end caps:

Partition:

Front panels:

Rear panels:

Standard

 Anodised, natural

 Anodised, natural

 RAL 9006, powder-coated

 Anodised, natural

 Anodised, natural

 Anodised, natural

Customer specification

Article number FP: _____

Article number RW: _____

14 Accessories, Remarks (included in delivery specification: key (except E1 lock) and earthing kit)

 KDL 16/4

 KDL 24/5

 Grommet 3–4 mm

 Grommet 6–7 mm

 Dummy grommet

Only with automotive adapter or without SS preparation (KDL = cable gland strip)

_____ Qty.

_____ Qty.

_____ Qty.

Additionally: _____

 Annexes

Slsmn. _____ TAV _____ TAV _____

 No Annexes

Free-standing column CS-4000^{neXt}

Flexible concept as console or column configuration

The new suspension system CS-4000 neXt ideally combines ergonomic visualisation and optimum integration of operating and input devices.

The console and column version design offers individual solutions for customer specific applications.

In contrast to traditional suspension system visualisation solutions with individual screens or IPCs, the CS-4000 neXt fulfills the requirements of the Machinery Directive through the integration of emergency stop devices.

Product features

- High protection class IP65 at area of closed column chamber
- Internal cable routing
- IPC and keyboard shelf holder can be positioned individually
- IPC holder with graduated tilt control
- Optional integrated control elements (to fulfil the Machine Directive 2006/42/EG)
- Column of high-quality extruded aluminium sections (naturally anodised, 2-chamber column)
- Customer-specific length of the column possible

Scopes of application

- Production lines in the automotive industry
- Plant and machine construction with decentralised controlling concept
- Decentralised display or HMI positioning

CS-4000^{neXt}



Console version

Column version



- ① Column
- ② Slider or mounting element
- ③ IPC with holder: Mounting height variable, graduated tilt control
- ④ Push button cover for control elements
- ⑤ Keyboard shelf (pull-out mousepad is optional)
- ⑥ Cable conduit cover (access through open column chamber)
- ⑦ Base – fixed or rotatable

Extensive accessories see on page 113



Free-standing column CS-4000^{next}

The compact console version



Fixed tilt angle

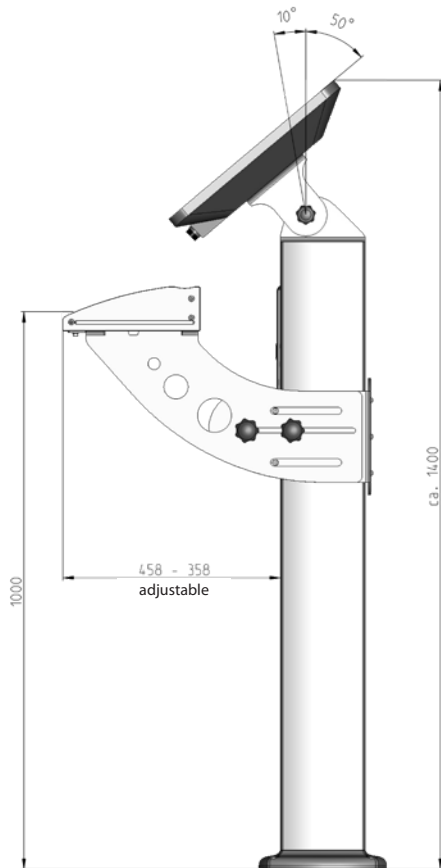
- Fixed tilt angle of 35°
- Suitable for VESA 75/100, 48 mm round tube (customer specific attachment on request)



Tilt adapter flex for console column

- For the adjustment of the IPC tilt angle for console configurations
- Inclination in 5° steps adjustable from 0° to 60°
- Star grip for locking the selected position
- Suitable for VESA 75/100, 48 mm round tube (customer specific attachment on request)
- Optional gaiter for IPC with open connection area

Ergonomic measurements according to DIN 33402-2

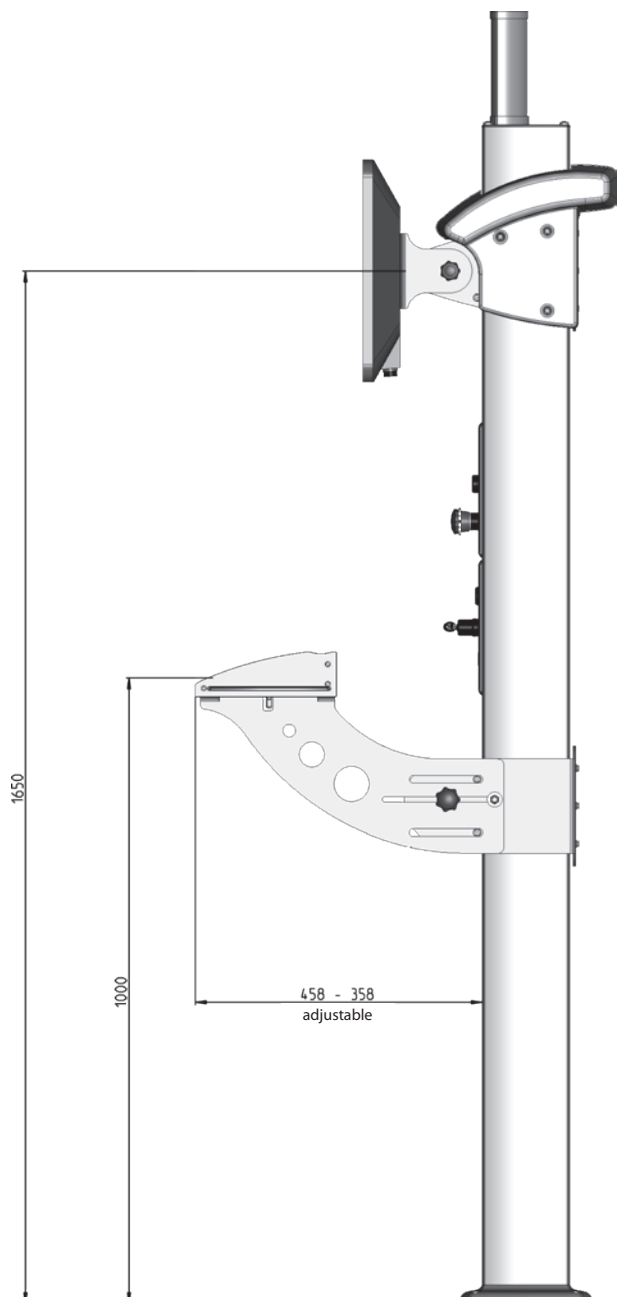


Console version

- Max. height 1350 mm for 35°
- Direct assembly of the IPC on tilt adapter
- Inclination in 5° steps adjustable from 0° to 60°
- Keyboard height (standard value 1.000–1.100 mm)
 - Bottom edge of keyboard 950–1.100 mm
 - Corresponding fixing position of the mounting element / slider

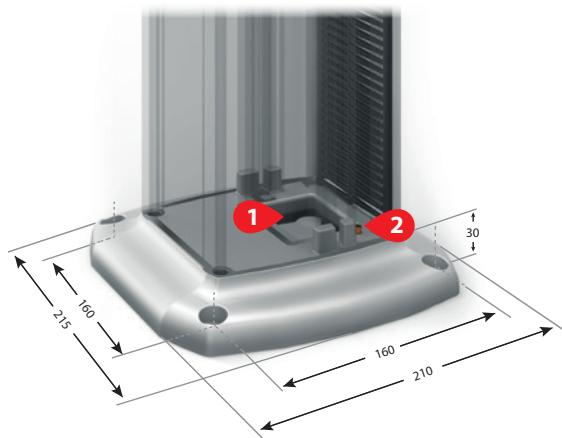
Column version

- Visualisation height (standard value 1,650 mm)
 - Centre of the screen 1,650 ± 50 mm
 - Corresponding fixing position of the mounting element / slider
- Desk area height (standard value 1,000 - 1,100 mm)
 - Lower edge of the keyboard 950 - 1,100 mm
 - Corresponding fixing position of the mounting element / slider



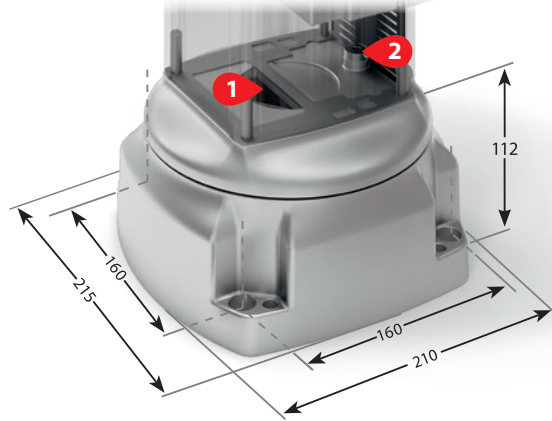
Free-standing column CS-4000 next

Base plate versions



Fixed base plate

- Cable entry into the open column chamber ①
- Connection for potential equalisation ②
- Optionally supplied with levelling adjustment screws

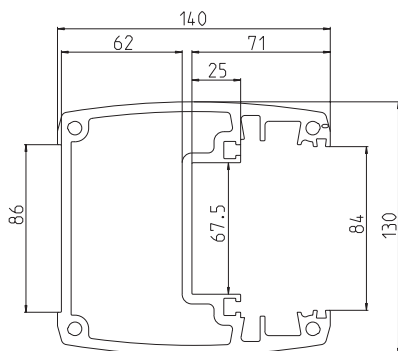


Rotatable base

- Angle of rotation 300° with limit stop
- Protection degree IP65
- Installation area for mounting the cable entry system (e.g. Icotek KEL, Contaclip KDSClick) for cable entry into the closed column chamber ①
- Connection for potential equalisation ②
- Optionally supplied with levelling adjustment screws

Aluminium column with double chamber system

- Closed column chamber ① (Protection degree IP65)
- Open column chamber ② for IPC and keyboard shelf holder positioning and cable routing
- Cable routing via open column chamber
- Open column chamber (back side) optically closed through brush strip



Slider Individual height adjustment

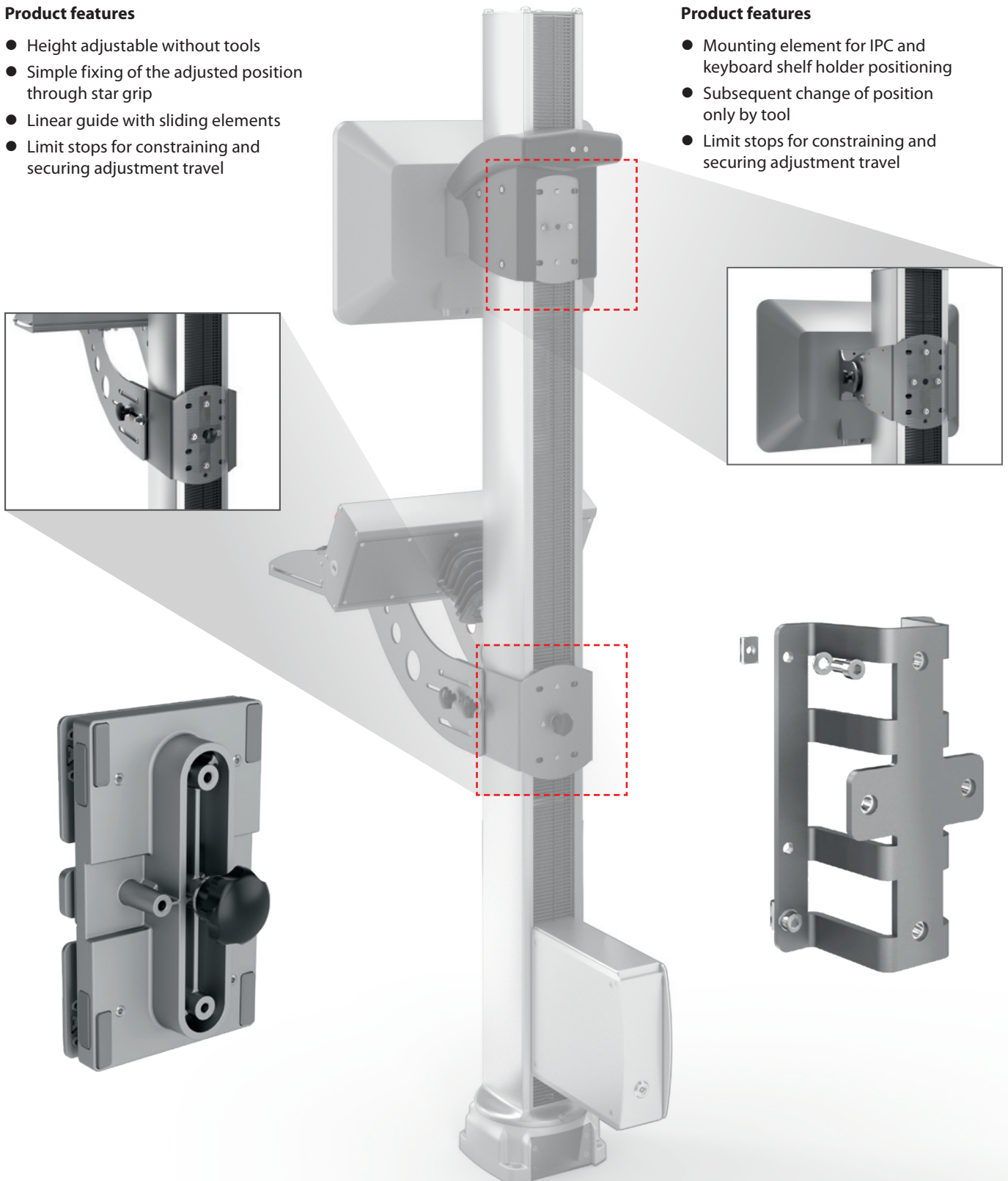
Product features

- Height adjustable without tools
- Simple fixing of the adjusted position through star grip
- Linear guide with sliding elements
- Limit stops for constraining and securing adjustment travel

Mounting element for a fixed height

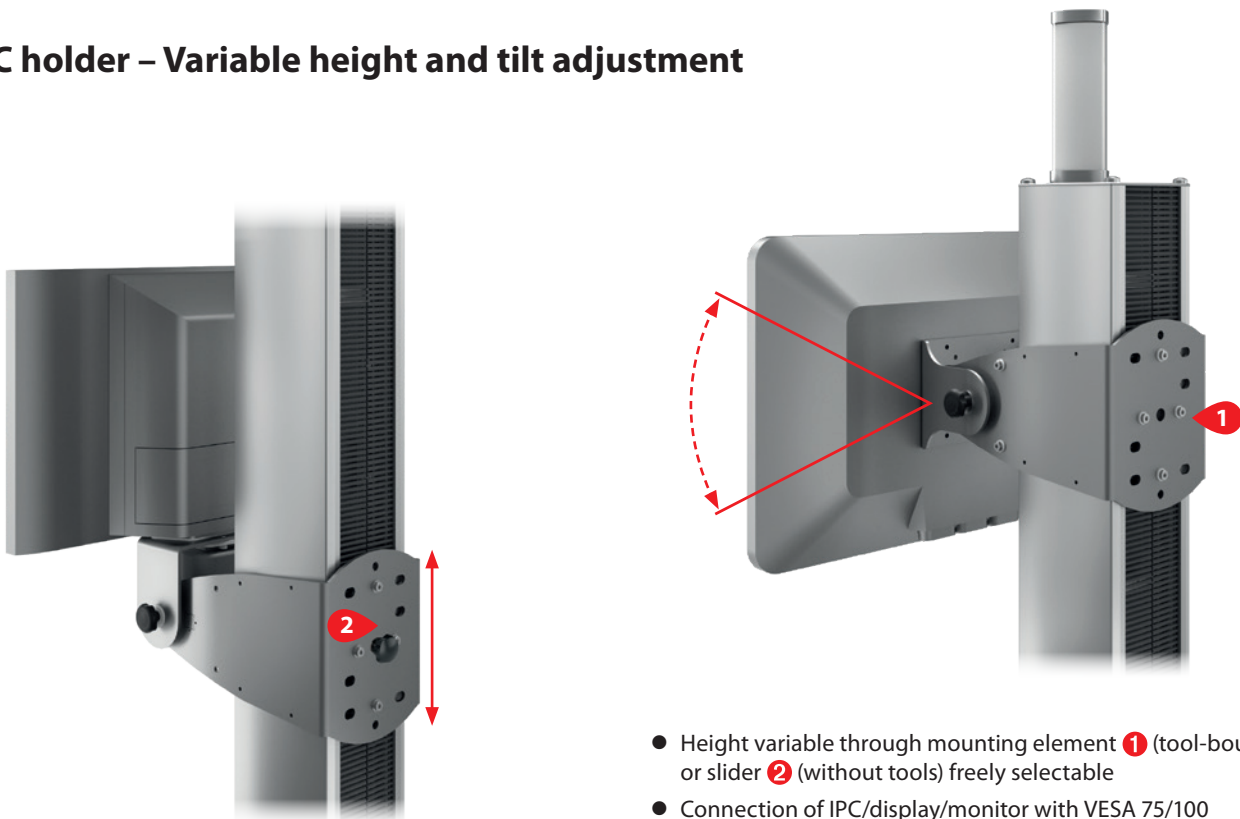
Product features

- Mounting element for IPC and keyboard shelf holder positioning
- Subsequent change of position only by tool
- Limit stops for constraining and securing adjustment travel



Free-standing column CS-4000^{next}

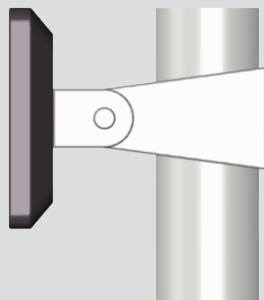
IPC holder – Variable height and tilt adjustment



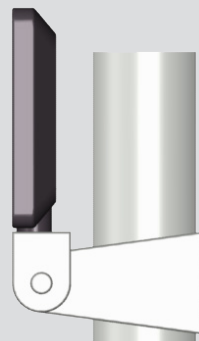
- Height variable through mounting element **1** (tool-bound) or slider **2** (without tools) freely selectable
- Connection of IPC/display/monitor with VESA 75/100 or Ø 48 round tube
- Maximum inclination $\pm 24^\circ$ (depending on connection type)

Possible connection type

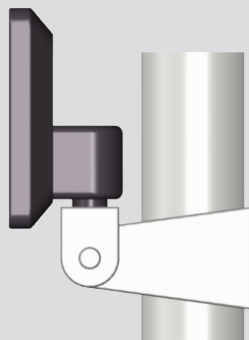
VESA 75/100
Connection from behind



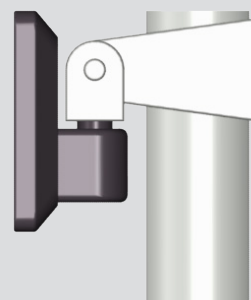
Siemens Pro
Connection from below



Round tube Ø 48 mm
Connection from below



Round tube Ø 48 mm
Connection from above



Keyboard shelf – Choice of two versions

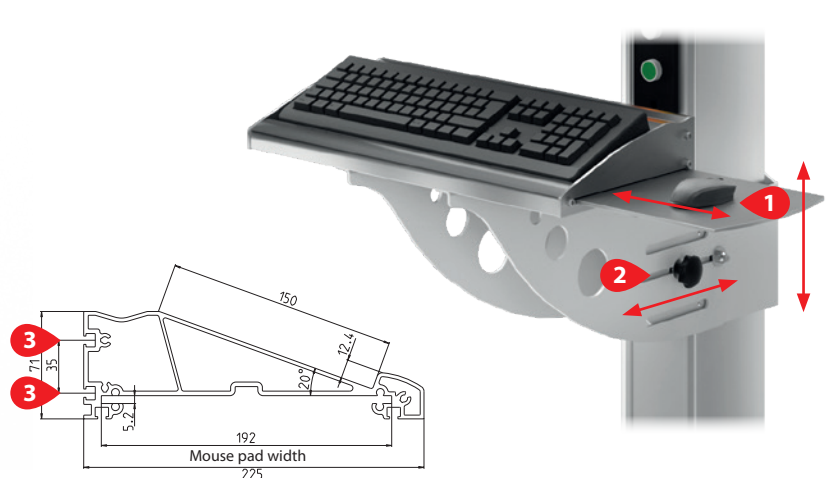
Fixed keyboard shelf

- Height variable through mounting element / slider
- Extruded aluminium sections (naturally anodised)
- Optional mousepad to be pulled out to the right or left side **1**
- Fastening option in the back cover **3**



Adjustable keyboard shelf

- Height variable through mounting element / slider
- Extruded aluminium sections (naturally anodised)
- Optional mousepad to be pulled out to the right or left side **1**
- Maximum possible depth adjustment 100 mm **2**
- Fastening option in the back cover **3**



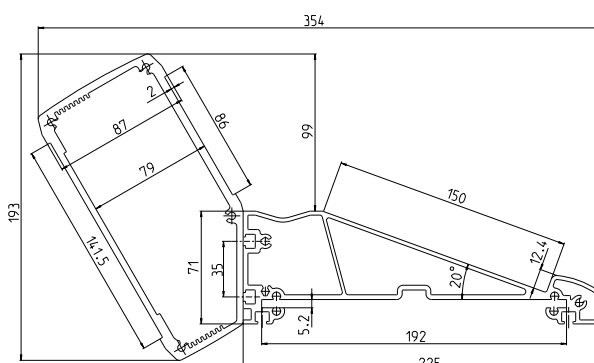
Control console

Integration of all necessary command modules and signal units

The emergency stop function is still fully guaranteed in case of necessary replacement of the IPC.

For the installation of ...

- Command and signalling devices such as push buttons, emergency stop buttons, etc.
- Main switches, key switches
- *Electronic KeySystem (EKS)* – Transponder-based read/write stations
- Adaptable in width individually
- Extruded aluminium sections (naturally anodised)
- Adaptation to keyboard shelf
- Screw-fixed rear panel

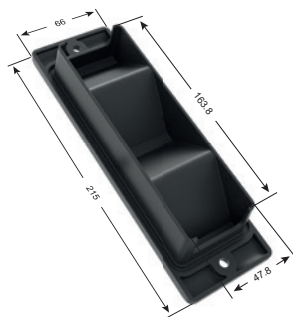
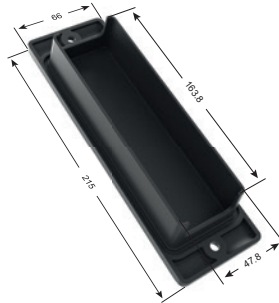


Free-standing column CS-4000 neXt

Covers and inspection window with various equipment variants

Push button cover

- Cover for control elements
- Optional integrated emergency stop device and key switch
- Maximum of 5 push buttons or 3 push buttons with identification label
- Installation from the front
- IP65 due to foamed sealing
- Installation area 165 × 60 mm



Cable conduit cover

- Cable conduit cover with 45-degree bevelled curve for optimum bending radius
- Cable entry into the closed column chamber ①
- IP65 due to foamed sealing
- Maximum installation area 2 × M25

Inspection window cover

- For monitoring and control of signalling and built-in devices such as MURR compact module
- Aluminium cover with acrylic glass cover
- Compatible with CS-4000 neXt column section
- Adaptable to AIDA mixing module



Aluminium cover

- Main switches
- Machine operator identification systems
- Key Panels

Accessories

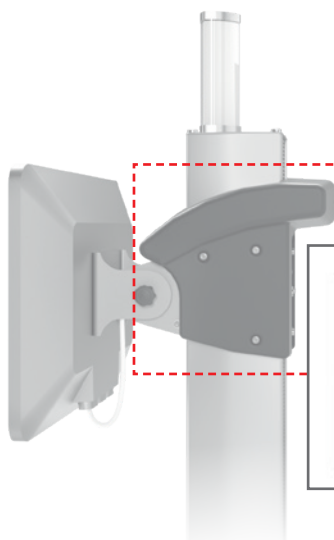
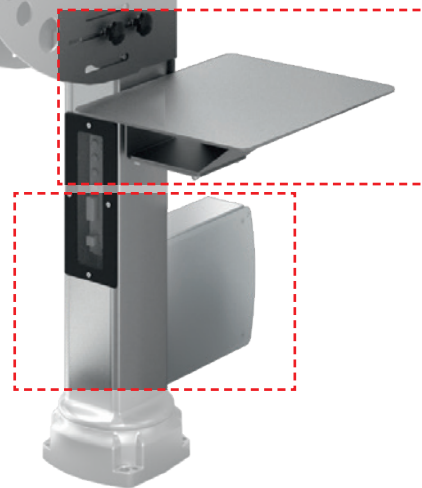


Universal tray

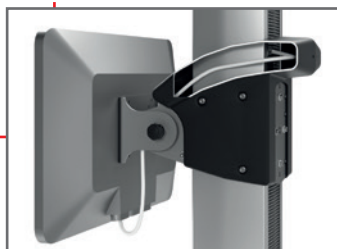
- Safe storage area for printers, PC hardware or similar periphery units
- Fixing to the assembling element or slider on the back side of the column
- Individual mounting on left, on right or even on both sides
- Storage area 450 × 300 mm (adjustable according to your wish)

Box PC holder

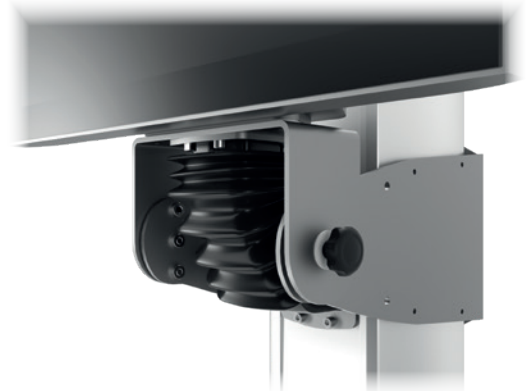
- For safe storage of customary box PCs
- Front side with opening flap – lockable with customary sash locks, e.g. two-way bit
- Protection degree IP65
- Cable entry via closed column chamber
- Inside dimensions (LxWxH): 210 x 60 x 215 mm



Cable channel



Gaiter channel



Signal lamp cover



Selection criteria for suspension systems

Mechanical load

Different types of suspension systems can support different loads. The most important parameter when determining the right type of suspension system is the mechanical load in the respective application, which consists of the suspended enclosure with its built in components and the length of the extension arm.

After determining the suspended weight and the length of the extension arm in the suspension system, the overview opposite will help you select the right system.

Please note that when using a turn / tilt coupling for mounting the enclosure at the end of the suspension system, the enclosure itself should not exceed a load of 300 N.

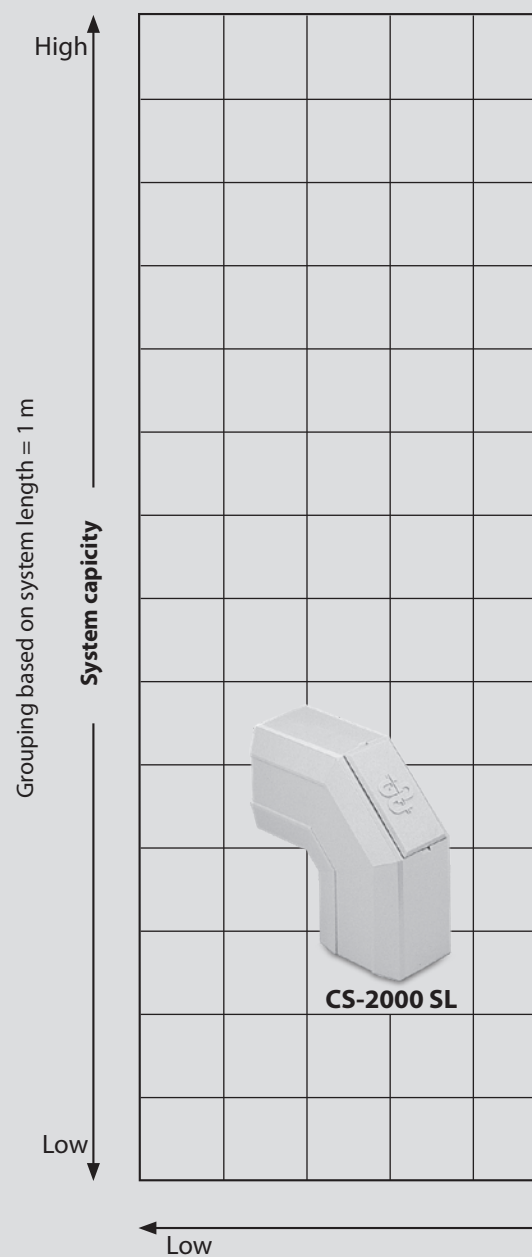
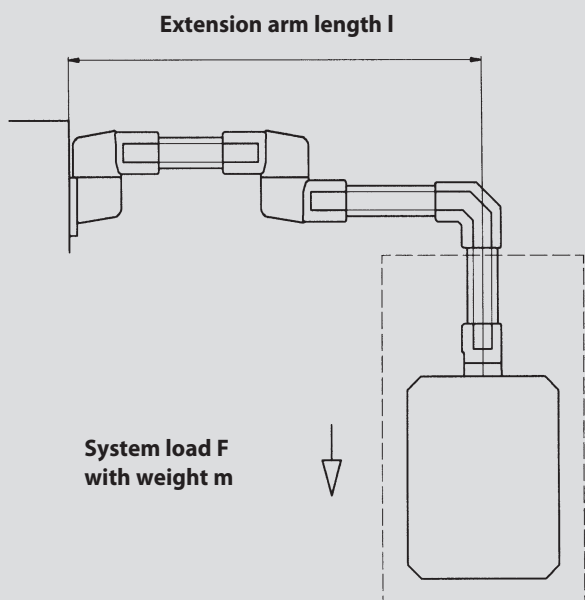
Calculation of force F (system load) as a function of enclosure weight m:

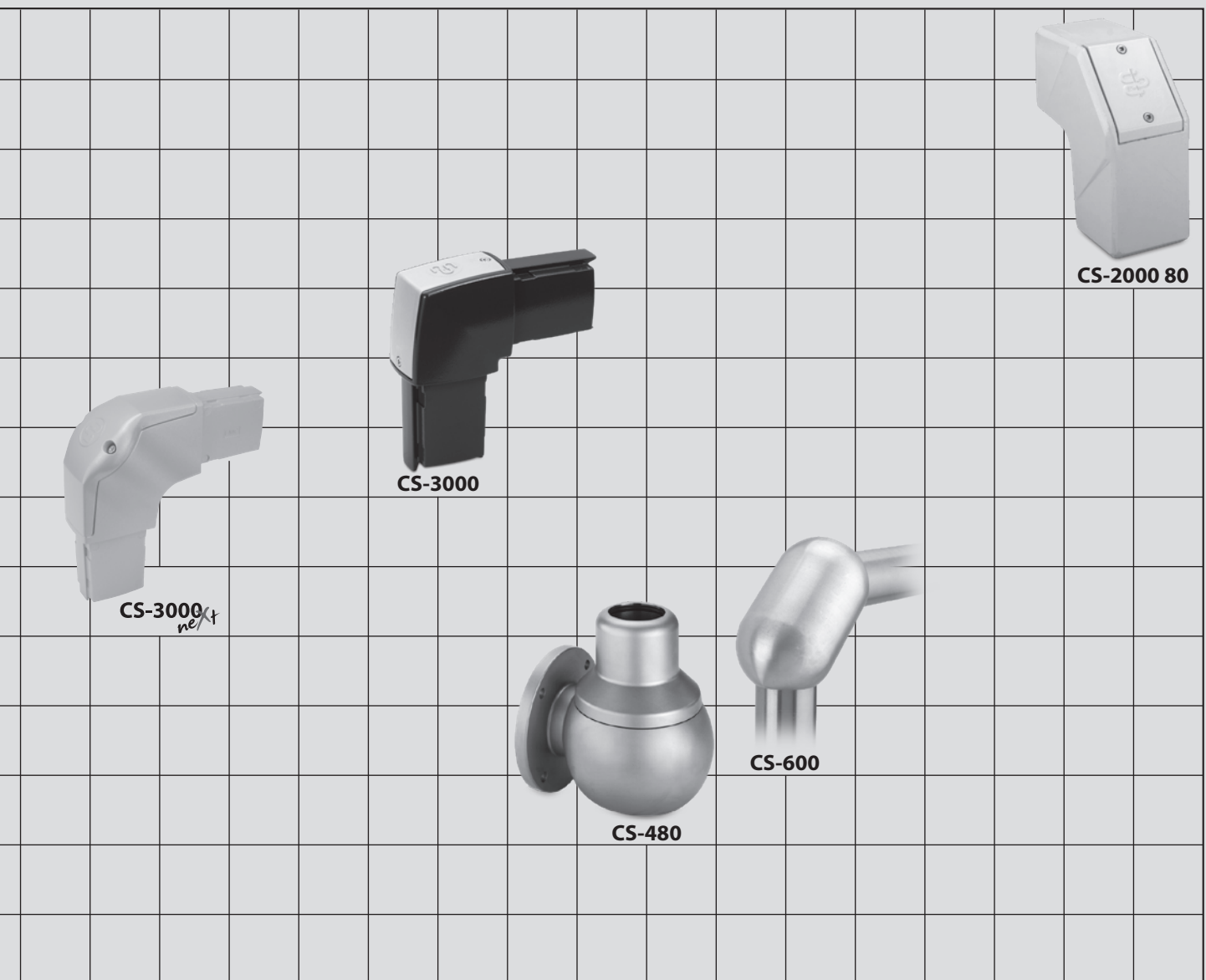
$$F (N) = m (kg) \times g (ms^{-2})$$

System load F = enclosure weight m multiplied by acceleration due to gravity

$$F (N) = m (kg) \times 9,81 (ms^{-2})$$

The illustration opposite shows an overview of the various suspension systems. You will find more detailed information on the exact loads of the individual systems in the following sections.





Performance

High 

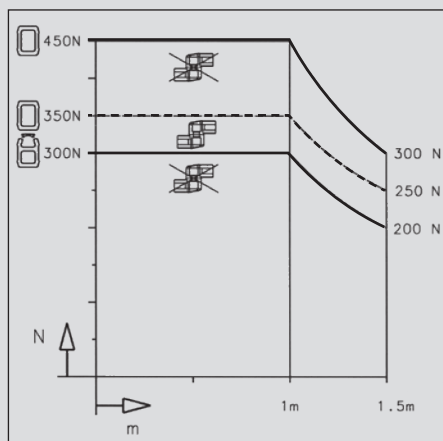
- Configuration options
- Mechanical stability
- Resistance

Light-Duty Suspension System CS-2000 SL 45 / 60

The CS-2000 SL light-duty suspension system is specially designed for accepting small, lightweight control enclosures and features short extension arms. In addition to the components in light grey RAL 7035, a version in white aluminium RAL 9006 is now available that elegantly complements our CC-3000, CC-4000 / CC-4000 SL and CC-5000 neXt control enclosures (see page 72 onwards).

System structure

Individual components of the suspension system are combined with an optionally closed or partially open aluminium connection section to achieve the required configuration in accordance with the load diagram (with the exception of panel couplings).



Load diagram

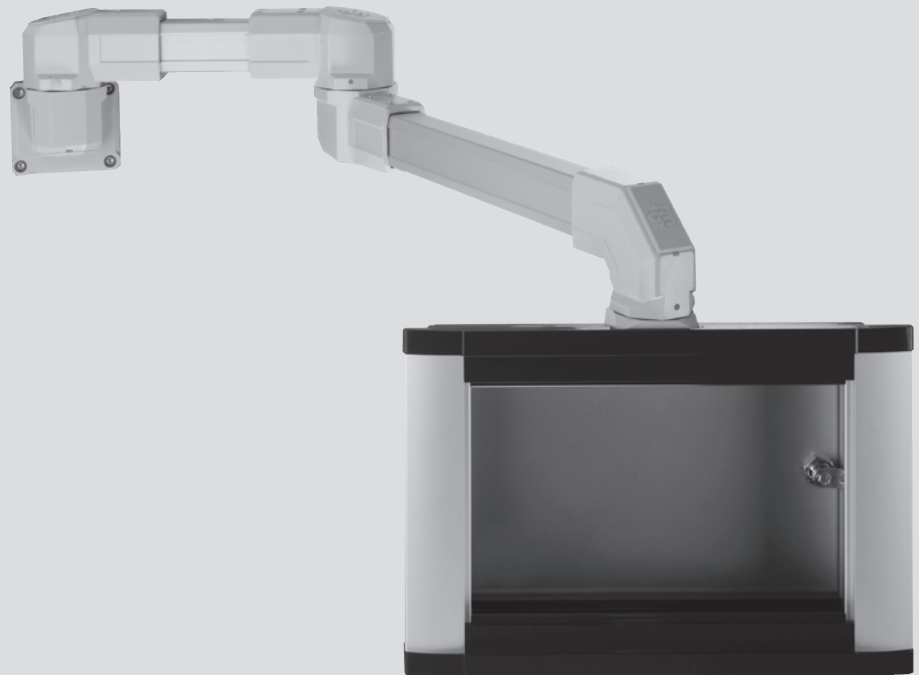
The above diagram shows the load bearing capacity of the CS-2000 SL range of suspension systems (with the exception of panel couplings).

The load bearing capacity of the system changes depending on the type of connecting section used (partially open or closed) or whether an intermediate joint is used.

The following safety factor generally applies:

With an additional load of 75 kg, the suspension system can be subjected to load for 5 seconds without plastic deformation occurring.

The overview on pages 114 / 115 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.



CS-2000 SL Standard
RAL 7035 light grey or
RAL 9006 white aluminium

Materials

- Components: cast aluminium
- Installation opening: POM
- Bearing: POM
- Seals: CR
- Extruded aluminium connecting section
- Connecting section covers on open section: EPDM

Colours

- Suspension system components: light grey RAL 7035
alternatively: white aluminium RAL 9006
- Connecting section: silver (natural) anodised

System features

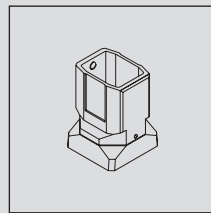
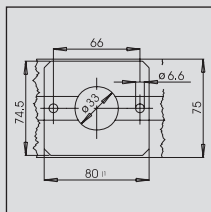
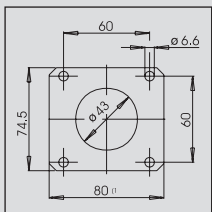
Installation opening at all joints

- Optionally closed or open connecting section can be used
- Clear passage opening in closed system: $\varnothing 40 \text{ mm} = 12.5 \text{ cm}^2$ at narrowest point (bearing opening)
- Clear passage opening in partially open system:
 - 2.76 cm^2 at narrowest point (entry of section in components)
 - 7.40 cm^2 in closed tube
- Easily retrofittable swivel angle limitation on couplings and joints
- Couplings have a small narrow flange for mounting on very narrow enclosures
- Overhead installation of all components possible
- Protection class IP65 (closed aluminium connection section)

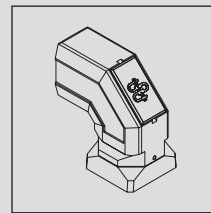
Enclosure preparation for mounting couplings

The geometry of the flange on the straight coupling and on the elbow coupling makes it possible to mount even extremely narrow enclosures. Two centrally arranged threads, with which the coupling is secured to narrow enclosures, are additionally provided for this purpose.

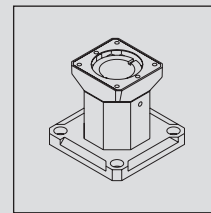
However, the coupling is mounted as standard by means of the four outer flange mounting threads, compatible and interchangeable with the flange mounting pattern of the CS-3000 suspension system. With a diameter of 43 mm, the hole for the cable leadthrough is adapted to the narrowest point in the suspension system (a minimum diameter of 40 mm is available in the bearing opening in the components).



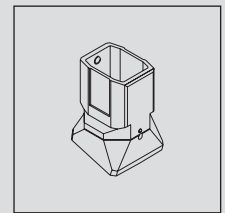
Straight coupling
Article number
1015163000
1015328000



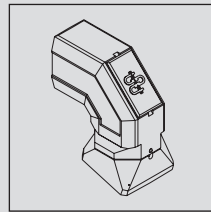
Elbow coupling
Article number
1015165000
1015329000



Base coupling
Article number
1015167000
1015343000

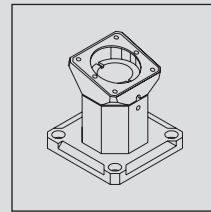


Tilt coupling
Article number
1015164000
1015330000



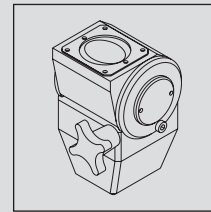
Tilt elbow coupling

Article number
1015166000
1015331000



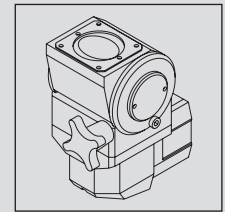
Tilt base coupling

Article number
1015168000
1015344000



Turn / tilt coupling

Article number
1015169000
1015332000

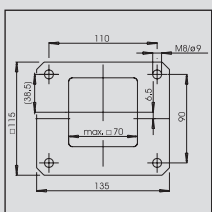


Turn / tilt elbow couplin

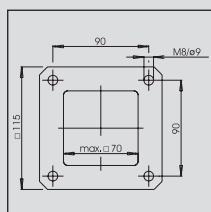
Article number
1015170000
1015333000

Machining mounting surfaces for suspension systems

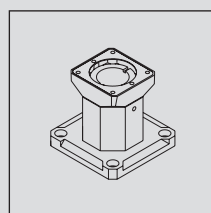
The various elements of the suspension systems can be mounted on walls or floors as well as on or at machines and systems. The corresponding machining drawings for the individual components of the suspension system are shown here.



Wall joints

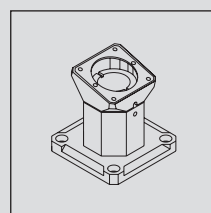


Base and top joint components



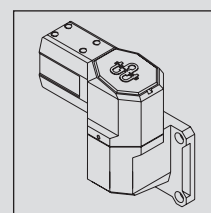
Base coupling

Article number
1015167000
1015343000



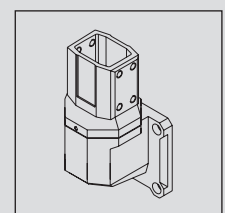
Tilt base coupling

Article number
1015168000
1015344000



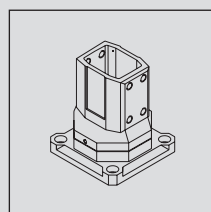
Wall joint, horizontal outlet

Article number
1015176000
1015339000



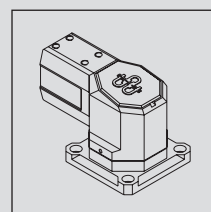
Wall joint, vertical outlet

Article number
1015177000
1015338000



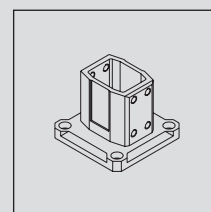
Rotary base

Article number
1015178000
1015341000



Top joint

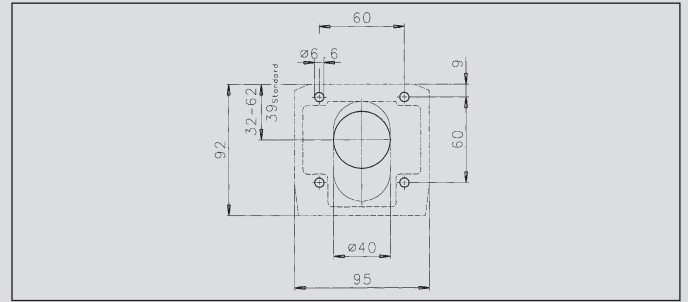
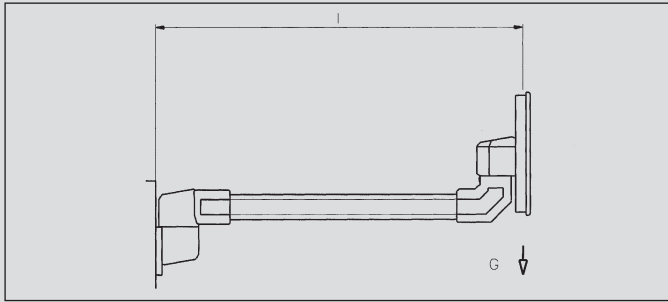
Article number
1015175000
1015340000



Base / wall flange

Article number
1015179000
1015342000

Light-Duty Suspension System CS-2000 SL 45 / 60



Load, panel components

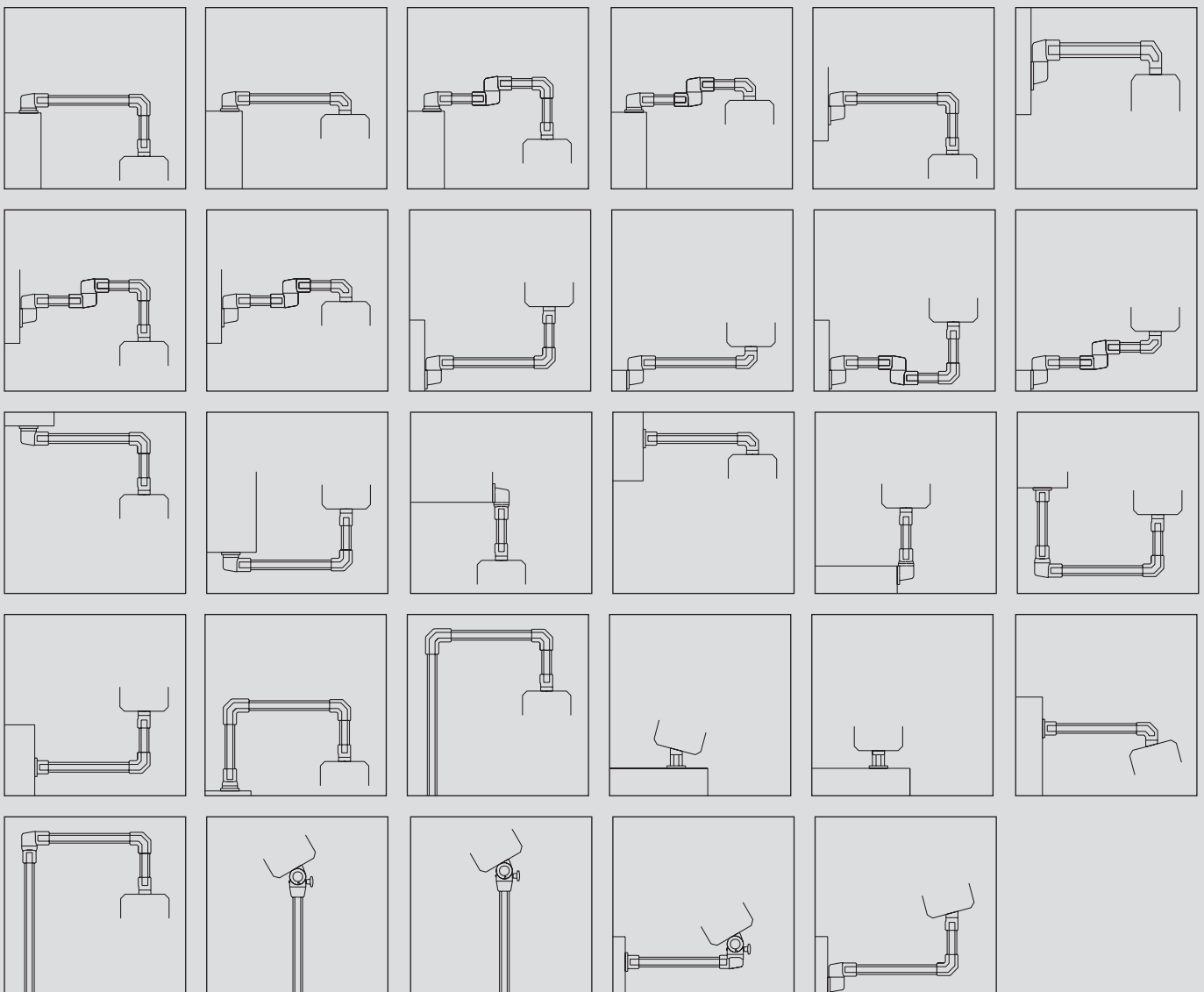
Mechanical properties

Max. load G 250 N
 Max. System length L 1500 mm

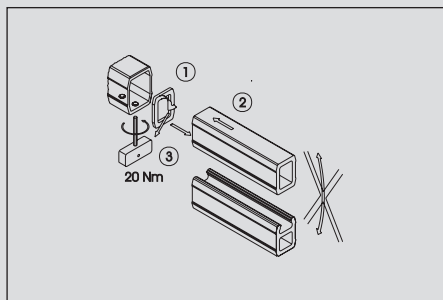
Drawing for preparing enclosure rear panel for attaching panel couplings

System combinations

The large number of components and different versions of the connecting sections enable many different combinations. A selection of the possible configuration is shown below

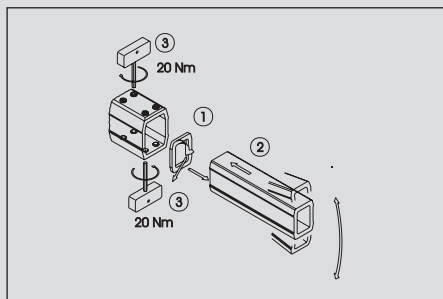


Assembling the connecting sections



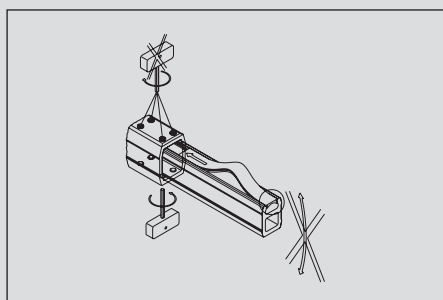
[A] Open or closed section in straight coupling and elbow coupling:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3).



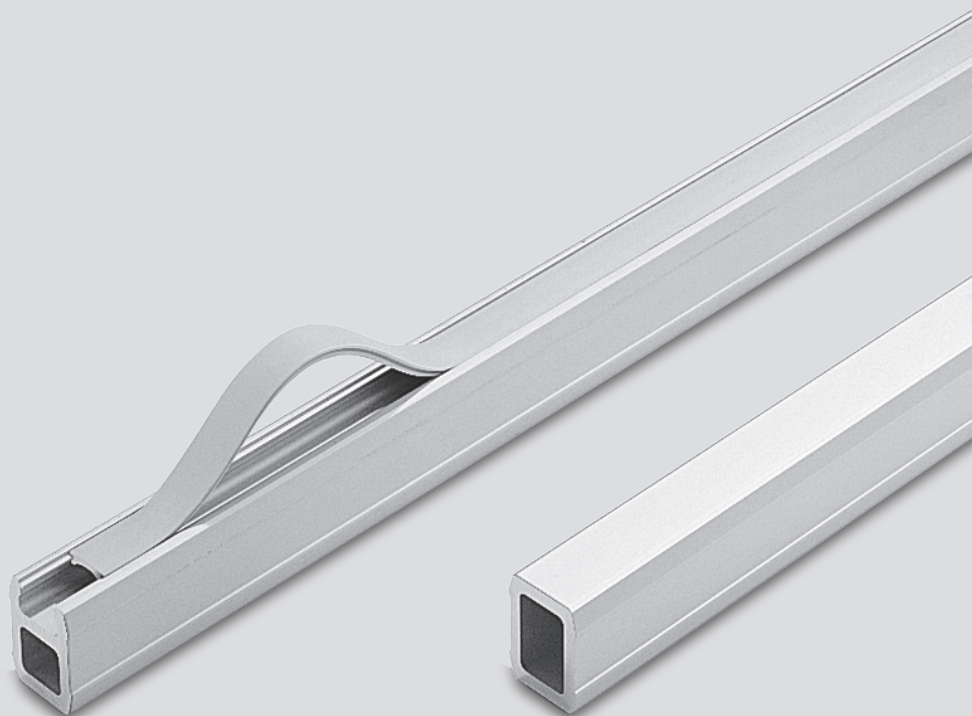
[B] Closed section in suspension system components with eight mounting screws:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3) while adjusting the section.



[C] Open section in suspension system components with eight mounting screws:

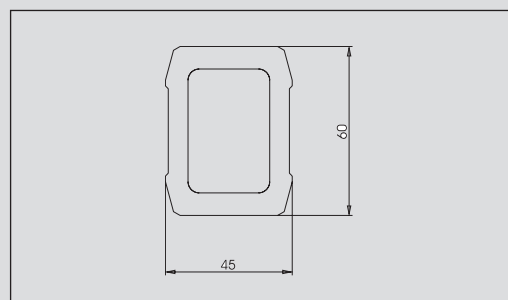
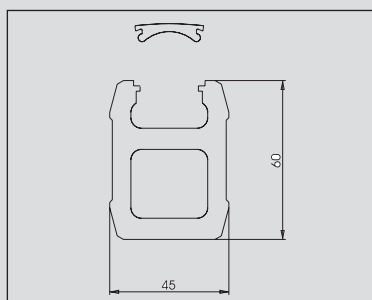
Adhere seal to connecting section, fit connecting section in suspension system component, only fit the four mounting screws on the closed part of the tubing, install cover seal.



Connecting sections

The connecting section is a drawn aluminium AlMgSi 0.5 bar. The surface is anodised and therefore corresponds to a colour similar to RAL 9006. The connecting section can be used both in open as well as in completely closed cable ducts. The partly open section has an EPDM cover, coloured similar to RAL 7042. This flexible plastic cover can be easily withdrawn and reinserted.

Open section		Closed section	
Dimensions (mm)	Article number	Dimensions (mm)	Weights in kg
45 x 60 x 250	9524001000	45 x 60 x 250	0.90
45 x 60 x 500	9524002000	45 x 60 x 500	1.80
45 x 60 x 750	9524003000	45 x 60 x 750	2.60
45 x 60 x 1000	9524004000	45 x 60 x 1000	3.50
45 x 60 x 1250	9524005000	45 x 60 x 1250	4.40
45 x 60 x 1500	9524006000	45 x 60 x 1500	5.20
45 x 60 x 2000	9524008000	45 x 60 x 2000	6.90



You will find an aid for selecting the load bearing capacity on pages 114 / 115.

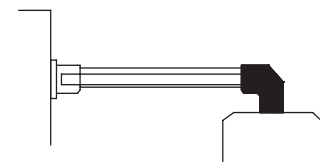
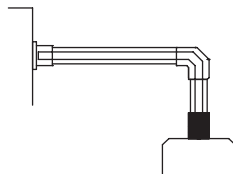
Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Straight coupling CS-2000 SL		Elbow coupling CS-2000 SL	
Article number	(colour)	1015163000	RAL 7035 light grey	1015165000	RAL 7035 light grey
		1015369000	RAL 9006 white aluminium	1015370000	RAL 9006 white aluminium

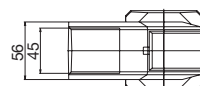
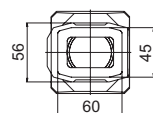
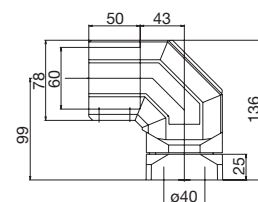
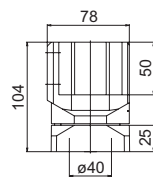
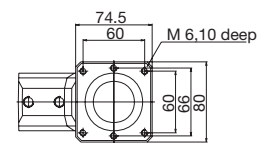
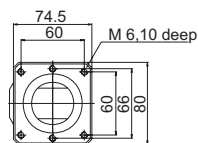


Details	Angle of rotation 300° with stop. Complete with installation material and seals	Installation opening with snap-on plastic cover. Angle of rotation 300° with stop. Complete with installation material and seals
Weight in g	740	960
Material	Aluminium	Aluminium
Accessories (retrofitable)	Swivel angle limiter 9805129000	Swivel angle limiter 9805129000
see pages 166 / 167		

Application example



Dimensions in mm

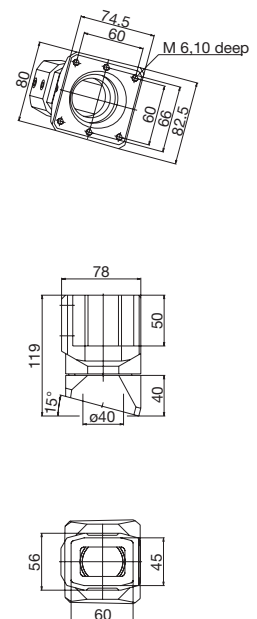
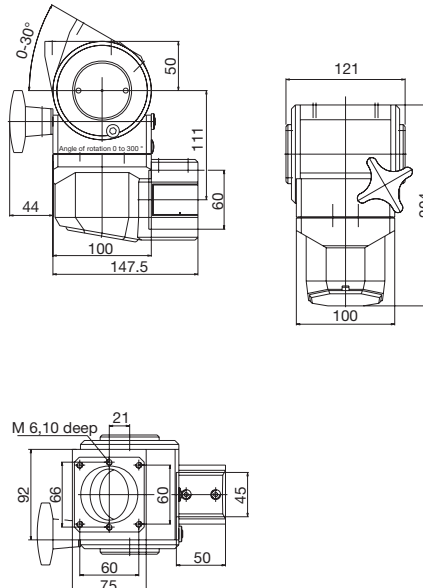
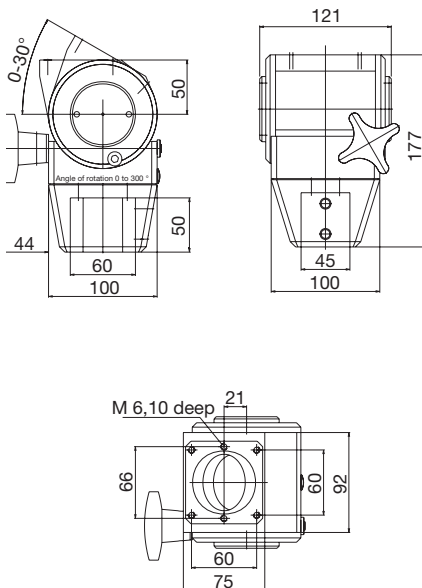
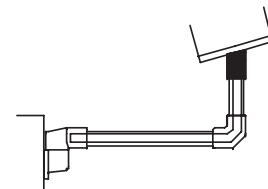
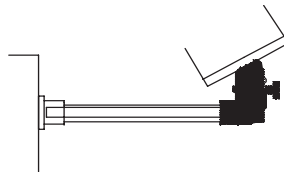


CAD files available
at www.bernstein.eu

Turn / tilt coupling CS-2000 SL		Turn / tilt elbow coupling CS-2000 SL		Tilt coupling CS-2000 SL	
1015169000	RAL 7035 light grey	1015170000	RAL 7035 light grey	1015164000	RAL 7035 light grey
1015371000	RAL 9006 white aluminium	1015372000	RAL 9006 white aluminium	1015373000	RAL 9006 white aluminium



Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N	Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N	Tilt angle 15°. Angle of rotation 300° with stop. Complete with installation material and seals
3000	3300	1100
Aluminium	Aluminium	Aluminium
Swivel angle limiter 9805130000	Swivel angle limiter 9805130000	Swivel angle limiter 9805129000



Light-Duty Suspension System CS-2000 SL 45 / 60

Article	Tilt elbow coupling CS-2000 SL	Base coupling CS-2000 SL
Article number (colour)	1015166000 RAL 7035 light grey 1015374000 RAL 9006 white aluminium	1015167000 RAL 7035 light grey 1015375000 RAL 9006 white aluminium



Details	Tilt angle 15°. Installation opening with snap-on plastic cover. Angle of rotation 300° with stop. Complete with installation material and seals	Angle of rotation 300° with stop. Complete with installation material for enclosure and seals
Weight in g	1400	1180
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 166 / 167	Swivel angle limiter 9805129000	Swivel angle limiter 9805129000

Application example		

Dimensions in mm		

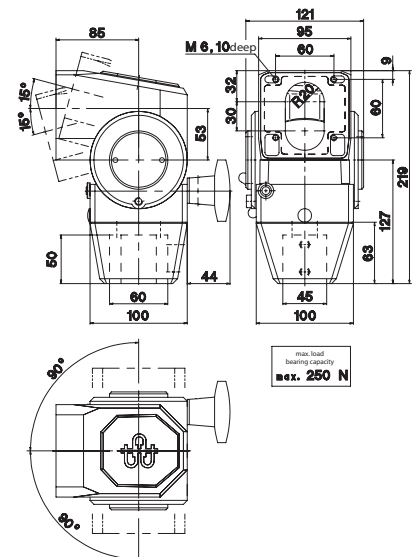
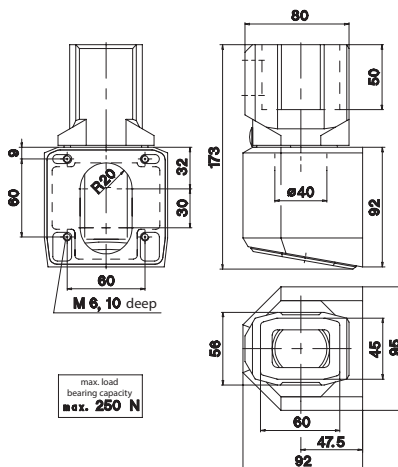
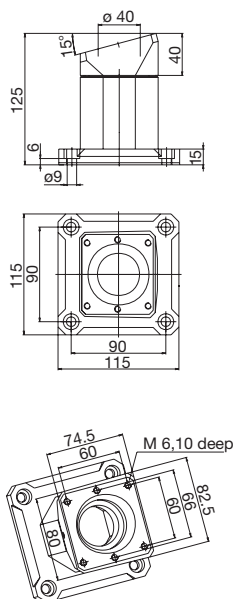
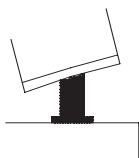
CAD files available at www.bernstein.eu

Tilt base coupling CS-2000 SL		Panel coupling		Panel turn / tilt coupling S	
1015168000	RAL 7035 light grey	1015232000	RAL 7035 light grey	1015235000	RAL 7035 light grey
1015376000	RAL 9006 white aluminium	1015377000	RAL 9006 white aluminium	1015378000	RAL 9006 white aluminium



Angle of rotation 300° with stop. Fixed inclination of 15°. Complete with installation material for enclosure and seals	For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm	For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm
1200	3000	3400
Aluminium	Aluminium	Aluminium

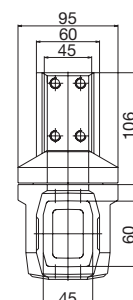
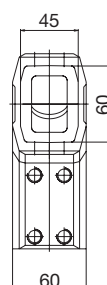
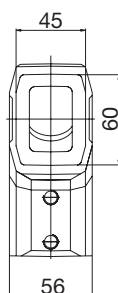
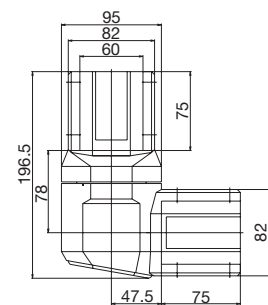
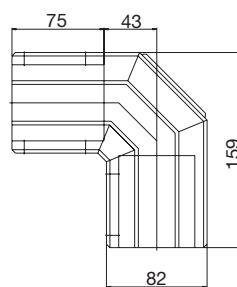
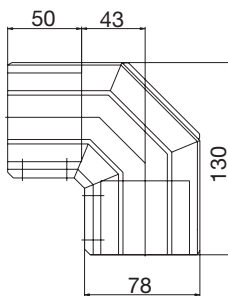
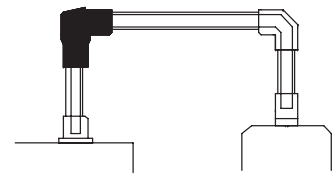
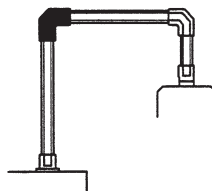
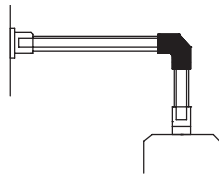
Swivel angle limiter	9805129000	
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Elbow CS-2000 SL		Elbow for torque load CS-2000 SL		Plug-on joint CS-2000 SL	
1015171000	RAL 7035 light grey	1015172000	RAL 7035 light grey	1015173000	RAL 7035 light grey
1015381000	RAL 9006 white aluminium	1015382000	RAL 9006 white aluminium	1015383000	RAL 9006 white aluminium



Installation opening with snap-on plastic cover. Complete with seals	Increased wall strength. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals	Swivel angle 300° with stop. Installation opening with snap-on plastic cover. Complete with seals
590	1000	1850
Aluminium	Aluminium	Aluminium
		Swivel angle limiter 9805132000



Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Intermediate joint CS-2000 SL		Top joint CS-2000 SL	
Article number	(colour)	1015174000	RAL 7035 light grey	1015175000	RAL 7035 light grey
		1015384000	RAL 9006 white aluminium	1015385000	RAL 9006 white aluminium



Details	Swivel angle 360° with limit stop. Installation openings both ends. Adjustment facility. Complete with seals	Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals
Weight in g	2130	1720
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 166 / 167	Swivel angle limiter 9805132000	Swivel angle limiter 9805132000

Application example

Dimensions in mm	

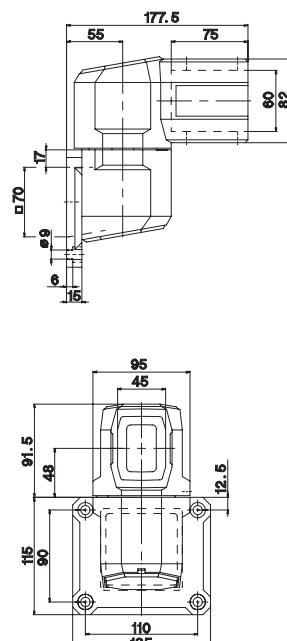
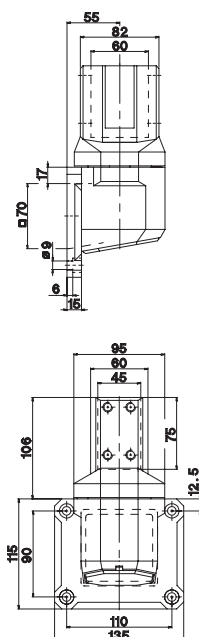
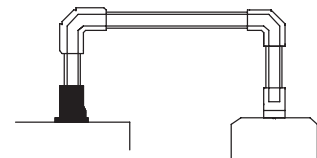
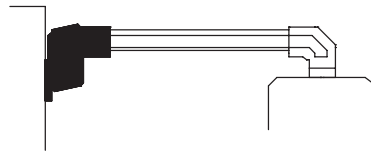
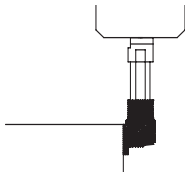
CAD files available
at www.bernstein.eu

Wall joint, vertical outlet CS-2000 SL		Wall joint, horizontal outlet CS-2000 SL		Base, rotary CS-2000 SL	
1015177000	RAL 7035 light grey	1015176000	RAL 7035 light grey	1015178000	RAL 7035 light grey
1015386000	RAL 9006 white aluminium	1015387000	RAL 9006 white aluminium	1015388000	RAL 9006 white aluminium



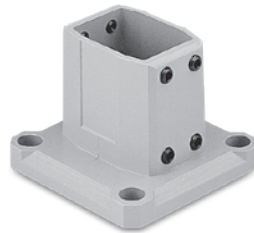
Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals	Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals	Angle of rotation 300° with stop Adjustment facility. Complete with seals
1840	2090	1460
Aluminium	Aluminium	Aluminium

Swivel angle limiter	9805132000	Swivel angle limiter	9805132000	Swivel angle limiter	9805132000
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Light-Duty Suspension System CS-2000 SL 45 / 60

Article		Base, wall flange CS-2000 SL		Free-standing base CS-2000 SL	
Article number	(colour)	1015179000	RAL 7035 light grey	1015180000	RAL 7035 light grey
		1015389000	RAL 9006 white aluminium	1015390000	RAL 9006 white aluminium



Details	Adjustment facility. Complete with seals	Base for free-standing applications
Weight in g	690	11820
Material	Aluminium	Aluminium
Accessories (retrofitable)		Castors and support feet see page 167

Application example		
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Dimensions in mm		
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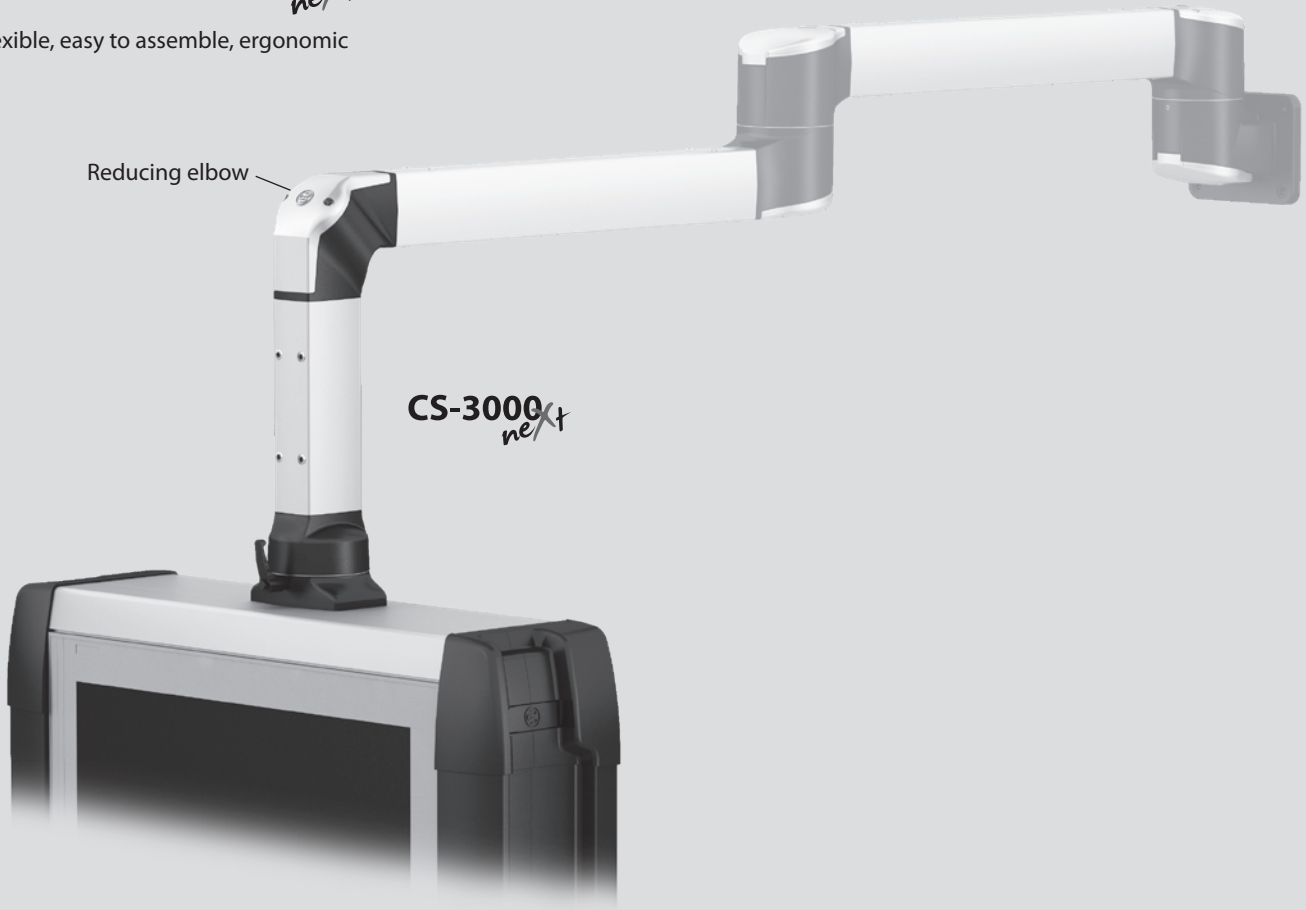
CAD files available at www.bernstein.eu

BERNSTEIN Aluminium Suspension Systems

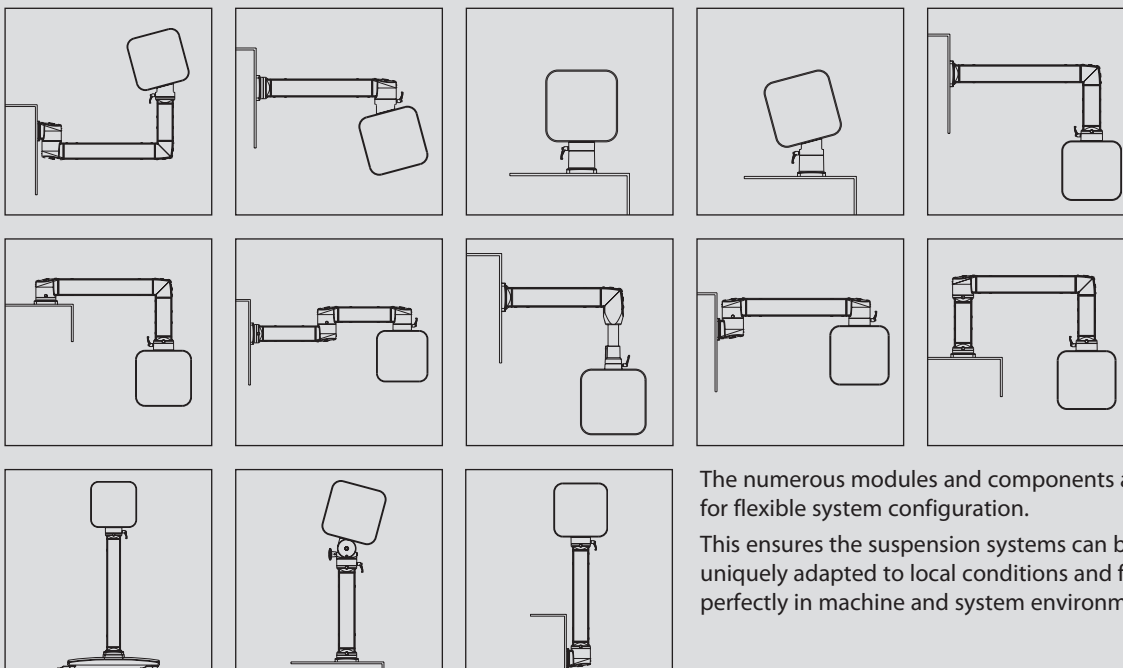
CS-3000 and CS-3000_{next}

flexible, easy to assemble, ergonomic

CS-3000



Application examples for CS-3000 / CS-3000_{next} suspension system – Versatile configuration options



The numerous modules and components allow for flexible system configuration. This ensures the suspension systems can be uniquely adapted to local conditions and fit perfectly in machine and system environments.

Suspension System CS-3000 Family

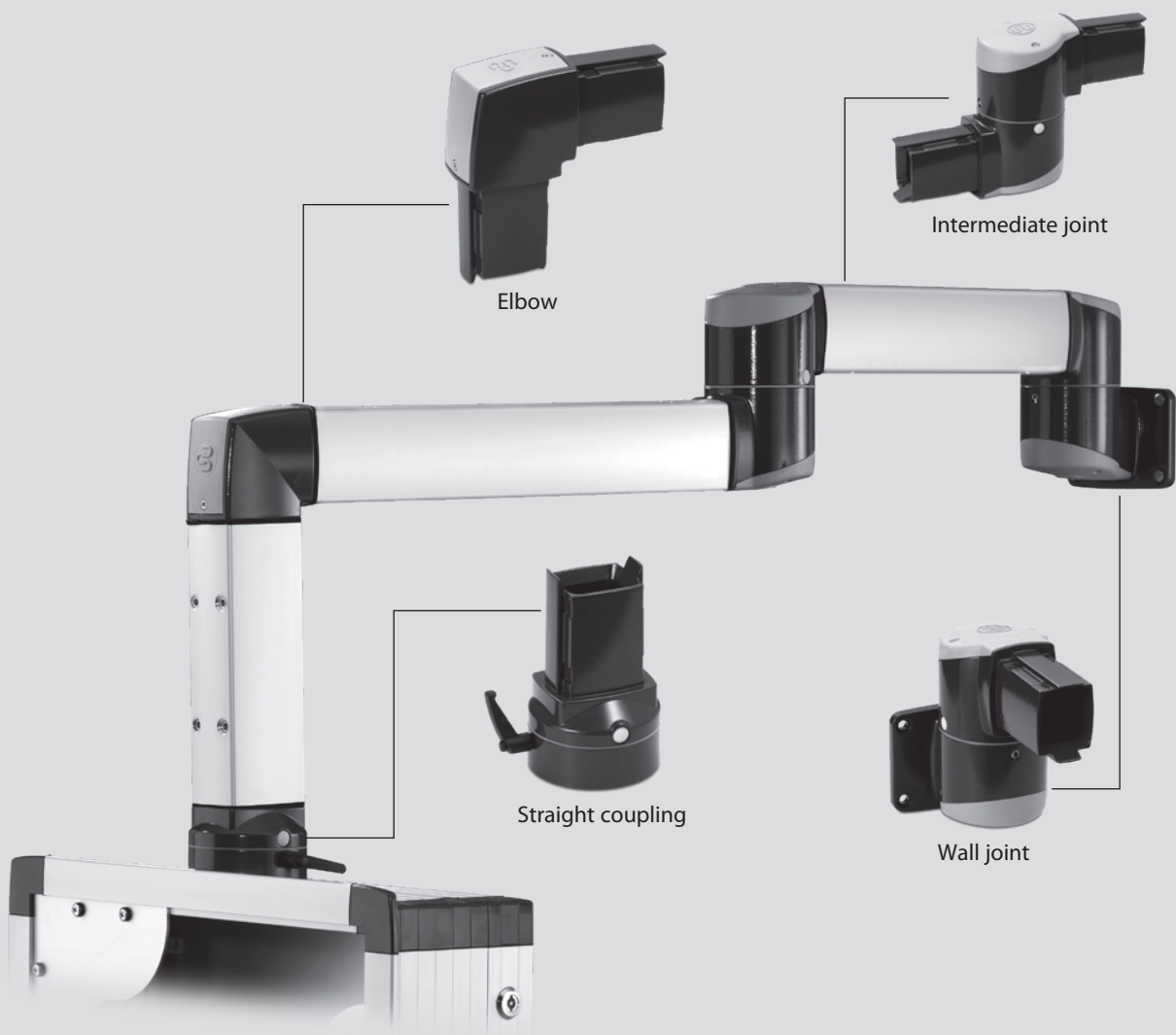
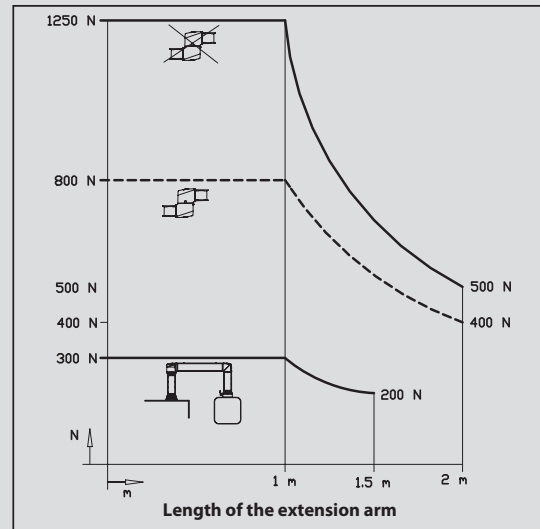
Flexible and efficient: The BERNSTEIN CS-3000

In the main, system constructors expect modern suspension systems to feature variable configuration, progressive design and complete ease installation.

BERNSTEIN sets standards with the CS-3000: Modern industrial design, well-conceived ergonomics! The combinable components create an innovative system solution based on modular principles for attaching enclosures, especially the BERNSTEIN CC-3000, CC-4000, CC-4000 SL and CC-5000 neXt enclosures (see page 72 onwards), to machines and systems.

The particular ease of assembly and installation of the CS-3000 is reflected in substantial time savings and cost efficiency.

Load diagram for static load capacity CS-3000

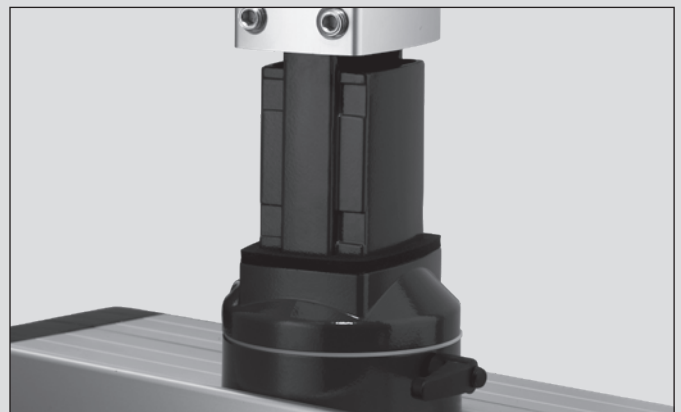


In addition to the positively locking tube mounting screws other features include:

- **Six-fold form-fit** thanks to component contour in tube attachment area (the otherwise optional safety hole additionally required for overhead installation is rendered unnecessary)
- **One-man installation** of the complete system
- **Infinitely variable system alignment** by means of tube mounting screws
- **Subsequent alignment** at any time without dismantling the complete system
- Cable and installation openings at all joints in the system
- Different tube lengths for variable configuration
- Tube machined at one end can be cut to required length (machining templates supplied)
- **Adjustable torque**
Fine adjustment of firmness by means of clamping lever or screw



Intelligent design with smooth flowing transition lines for ease of cleaning



Six-fold form-fit thanks to component contour in tube attachment area



Effortless readjustment possible at any time without the need to dismantle the complete system

Other system features:

- Anodises aluminium tubes for long service life and reliable operation
- Smooth flowing transition lines from the tube to other components prevent dirt built-up (easy to clean)
- Coated tube mounting screws for sealing threaded holes and secure screw connections
- Elegant appearance with narrow sections connected by adapting the cross section from square to round tube
- Modular coupling configurations possible (also subsequently), e.g. with adapter for narrow enclosures or tilt adapter
- Well-conceived ergonomics for easy and virtually fatigue-free operation
- An ideal single-source solution for BERNSTEIN control enclosures
- Protection class IP65

Suspension System CS-3000 *neXt*

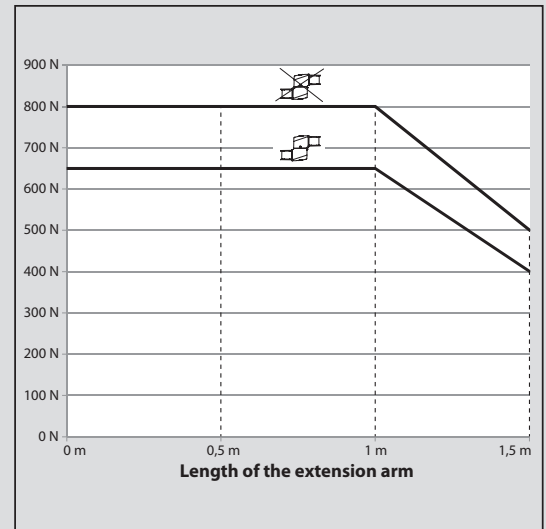
Technology meets design: The BERNSTEIN CS-3000 neXt

The CS-3000 neXt combines functionality with an appealing design. The new system is an important addition to the CS-3000 series, it is easy to clean and benefits from simplified installation, outstanding visual characteristics such as smooth transitions between tube and component and the high quality which BERNSTEIN is known for. The wide range of components, the high strength of the system and the load capacity provide individual solutions.

Standard colouring:
Components finished to RAL 9006 white aluminium or
RAL 7016 anthracite grey
Connection section: Natural anodised finish

Components (incl. caps) and connection sections can be optionally special-coated to a wide variety of RAL colours.

Load diagram for static load capacity CS-3000 neXt

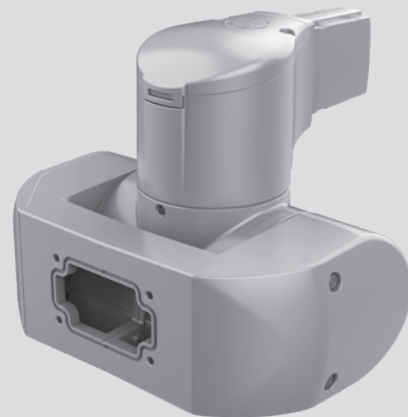


NEW

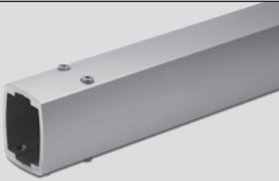
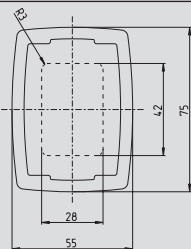
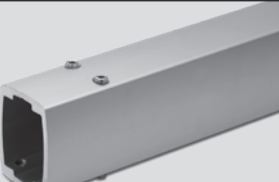
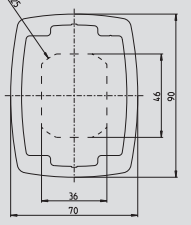
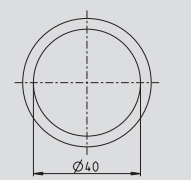

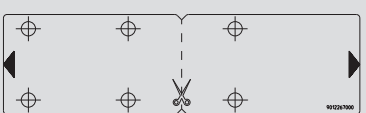
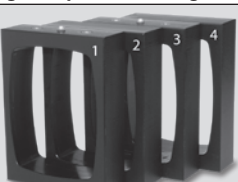

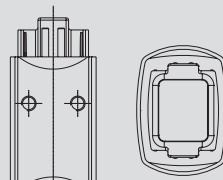
Highlights



Turn/tilt coupling S
for CS-3000 and CS-3000 neXt



Turn/tilt coupling W
for CS-3000 and CS-3000 neXt

CS-3000 neXt Aluminium connection section				
	Standard lengths (available from stock)	Article number	Weights in kg	
	Tube cross section x Length			
	Length 55 x 75 x 250 mm	9524700001	0.90	
	Length 55 x 75 x 500 mm	9524700002	1.70	
	Length 55 x 75 x 750 mm	9524700003	2.60	
	Length 55 x 75 x 1000 mm	9524700004	3.40	
	Length 55 x 75 x 1250 mm	9524700005	4.30	
	Length 55 x 75 x 1500 mm	9524700006	5.20	
				
CS-3000 Aluminium connection section				
	Tube cross section x Length			
	Length 70 x 90 x 250 mm	9524500001	1.30	
	Length 70 x 90 x 500 mm	9524500002	2.50	
	Length 70 x 90 x 750 mm	9524500003	3.70	
	Length 70 x 90 x 1000 mm	9524500004	5.00	
	Length 70 x 90 x 1250 mm	9524500005	6.20	
	Length 70 x 90 x 1500 mm	9524500006	7.50	
	Length 70 x 90 x 1750 mm	9524500007	8.70	
	Length 70 x 90 x 2000 mm	9524500008	10.00	
	Tubes machined at one end (machining templates supplied, available from stock)			
	70 x 90 x 1000 mm	9524500009	5.00	
70 x 90 x 2000 mm	9524500010	10.00		
If one of our standard lengths does not suit your requirements, we can also supply tubes machined at one end. Simply shorten to the required length and use the supplied template to machine the shortened end.				
				
CS-3000 neXt				
Round aluminium tubing Round aluminium tubes are available in different lengths. We can also supply completely machined tubes to the length you require. (prices and delivery time on request)				
	Diameter x Wall thickness x Length			
	Length 48 x 4 x 250 mm	9521400000		0.40
	Length 48 x 4 x 500 mm	9521401000		0.80
	Length 48 x 4 x 750 mm	9521402000		1.10
Length 48 x 4 x 1000 mm	9521403000	1.50		
Special tube lengths	Machined tubes to required lengths We can also supply completely machined tubes to the length you require (price and delivery time on request).			
Drilling label for special tube lengths				
	Using the template, bore the holes in the exact positions. Choose the appropriate connection section and order the number of drilling templates required.			
	CS-3000	9012267000		
	CS-3000 neXt	9012328000		
Drilling jigs for special tube lengths				
	Once the tube has been cut to its desired length, drilling jigs can be fitted. The jigs ensure a stable base and help prevent tube damaged. The integrated drill bushes specify the location of the threaded holes and guide the drill.			
	CS-3000 (Four-part set)	9806935000		
	CS-3000 neXt (Three-part set)	9806936000		
Tube adapter for CS-3000 for special lengths without tube preparation				
	Once the tube has been shortened, the adapter can be screwed to the tube. The tube adapter can then be fixed to the component and the system can be adjusted as required. Attention: Install the tube adapter only onto the housing side, see application example on page 153! Additional information is also available on page 153.			
	RAL 9006 white aluminium	1015300208		0.70
	RAL 7016 anthracite grey	1015300039		0.70

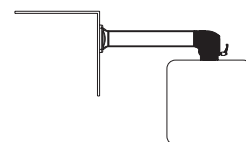
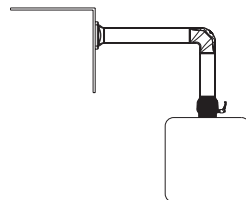
Suspension System CS-3000 next

Article		Straight coupling	Elbow coupling
Article number	(colour)	1017300002 1017300017	1017300003 1017300018
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

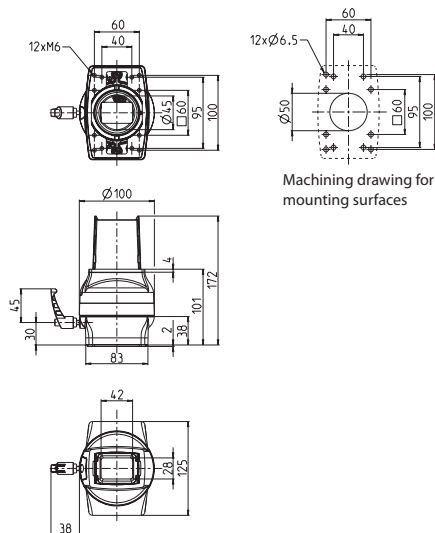


Details	Angle of rotation 300° with stop. Adapter (narrow enclosures) is required for attachment to enclosures < 83 mm	Angle of rotation 300° with stop, screw-fit installation opening
Weight in g	1630	2070
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 155	Swivel angle limiter 9806906000	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000

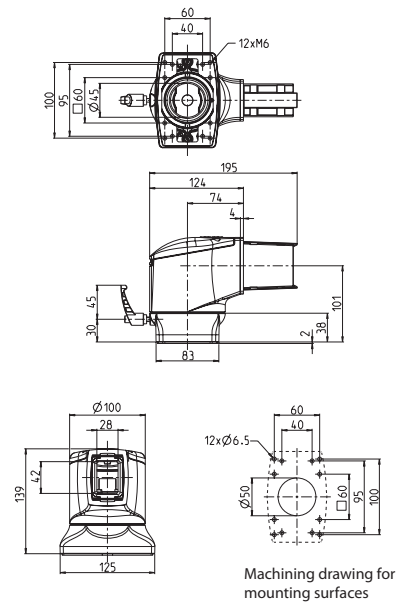
Application example



Dimensions in mm



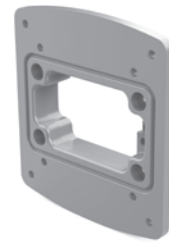
Machining drawing for mounting surfaces



Machining drawing for mounting surfaces

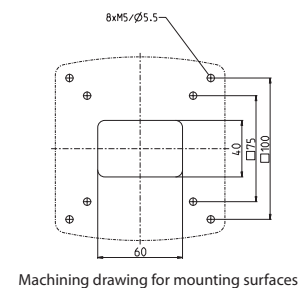
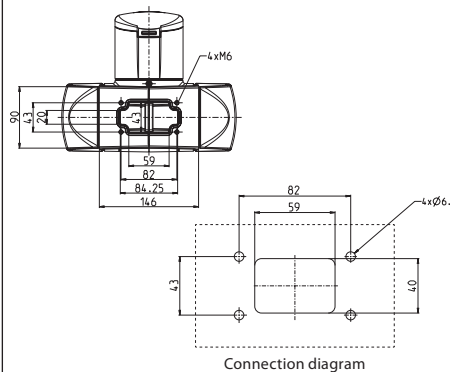
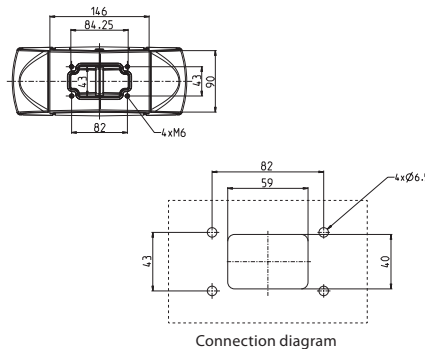
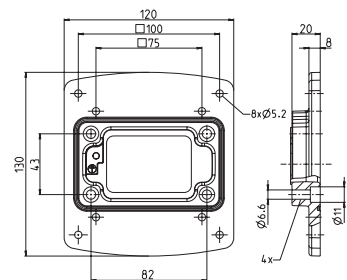
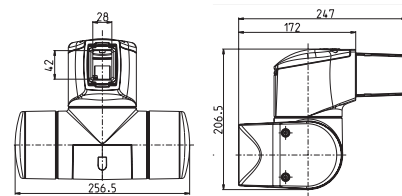
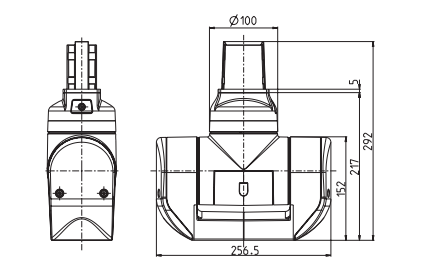
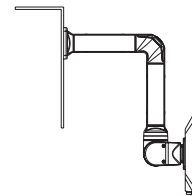
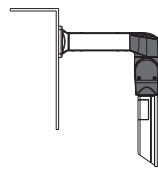
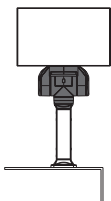
CAD files available at www.bernstein.eu

Turn/tilt coupling S		Turn/tilt coupling W		Adapter plate VESA 75/100	
1017300072	RAL 9006 white aluminium	1017300070	RAL 9006 white aluminium	9806000044	RAL 9006 white aluminium
1017300073	RAL 7016 anthracite grey	1017300071	RAL 7016 anthracite grey	9806000045	RAL 7016 anthracite grey



For connecting panels / displays / IPC with screw-fixed rear panel, fixing hole pattern adaptable to customer specifications. Angle of rotation 300° with stop Tilt angle with adjustable stop: +/-105° (without attachments like panel / display / IPC) Screw-fixed installation opening, suitable for DVI connectors 4600 Aluminium	For connecting panels / displays / IPC with screw-fixed rear panel, fixing hole pattern adaptable to customer specifications. Angle of rotation 300° with stop Tilt angle with adjustable stop: +/-105° (without attachments like panel / display / IPC) Screw-fixed installation opening, suitable for DVI connectors 5100 Aluminium	All that will be needed (in addition for the turn/tilt coupling) to connect with panels / displays / IPC to the rear side with VESA 75/100 hole pattern 300 Aluminium
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Swivel angle limiter	9806906000	Swivel angle limiter	9806906000
		Signal lamp adapter	9805400000



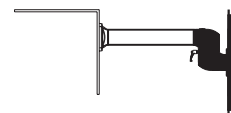
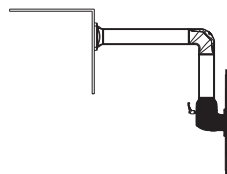
Suspension System CS-3000 next

Article		Panel coupling S	Panel coupling W
Article number	(colour)	1017300004 1017300019	1017300005 1017300020
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

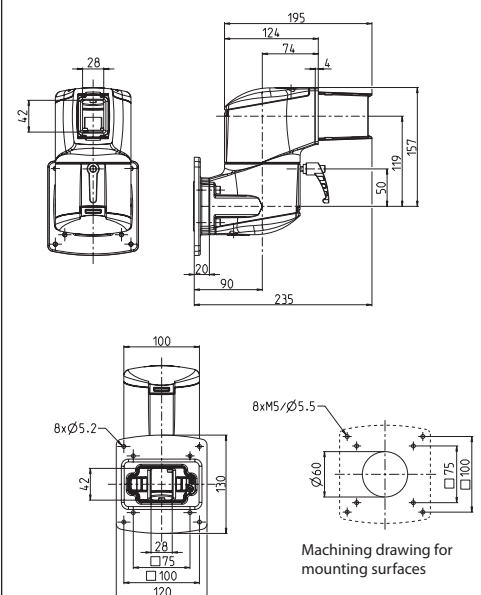
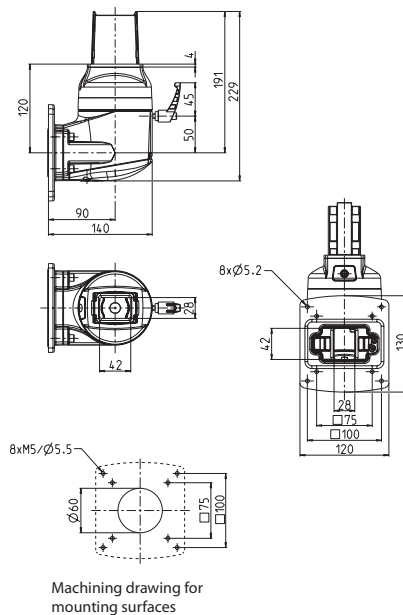


Details	For attachments to the rear of panels / displays or control enclosures with screw-fit rear panel. Standard hole pattern VESA 75/100 Angle of rotation 300° with stop, screw-fit installation opening	For attachments to the rear of panels / displays or control enclosures with screw-fit rear panel. Standard hole pattern VESA 75/100 Angle of rotation 300° with stop, screw-fit installation opening
Weight in g	2530	2970
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 155	Swivel angle limiter 9806906000	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000

Application example



Dimensions in mm



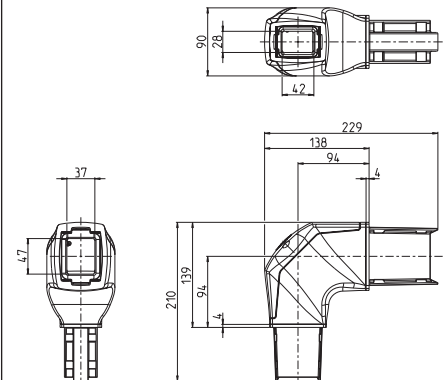
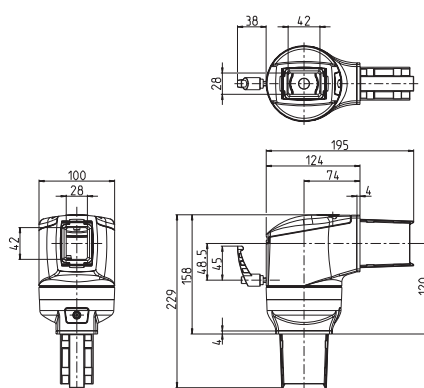
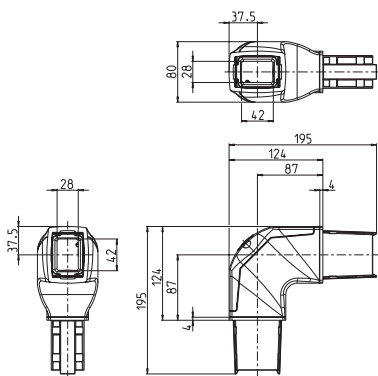
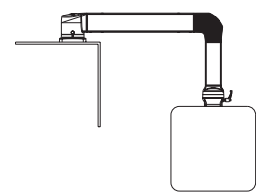
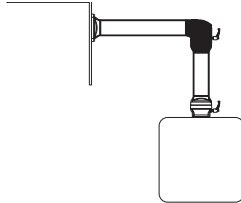
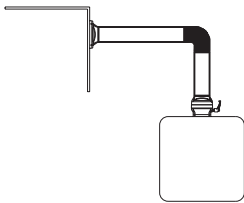
CAD files available
at www.bernstein.eu

Elbow		Elbow, rotary		Reducing elbow	
1017300007	RAL 9006 white aluminium	1017300008	RAL 9006 white aluminium	1017300009	RAL 9006 white aluminium
1017300022	RAL 7016 anthracite grey	1017300023	RAL 7016 anthracite grey	1017300024	RAL 7016 anthracite grey



Screw-fit installation opening	Angle of rotation 300° with stop, screw-fit installation opening	Elbow coupling for combining CS-3000 neXt with the CS-3000 suspension systems, screw-fit installation opening
1250	2320	1770
Aluminium	Aluminium	Aluminium

Signal lamp adapter	9805401000	Swivel angle limiter	9806906000	Signal lamp adapter	9805402000
		Signal lamp adapter	9805400000		



Suspension System CS-3000 next

Article		Intermediate joint	Top joint
Article number	(colour)	1017300010 RAL 9006 white aluminium 1017300025 RAL 7016 anthracite grey	1017300014 RAL 9006 white aluminium 1017300029 RAL 7016 anthracite grey



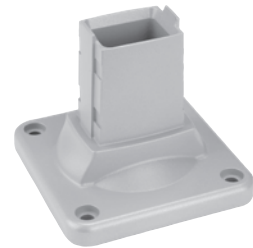
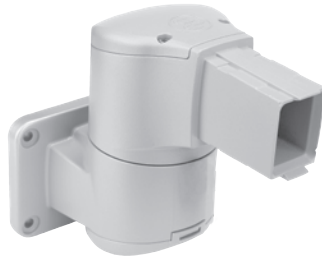
Details	Angle of rotation 300° with stop, 2 screw-fit installation openings	Angle of rotation 300° with stop, screw-fit installation opening
Weight in g	2740	2200
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 155	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000	Swivel angle limiter 9806906000 Signal lamp adapter 9805400000

Application example

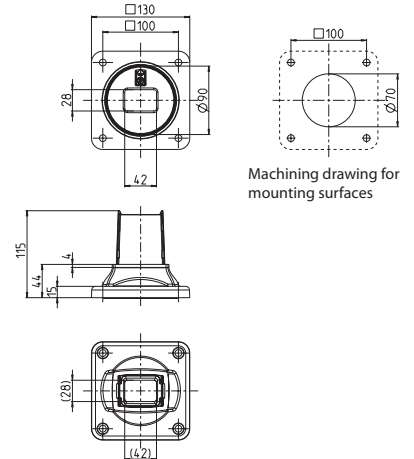
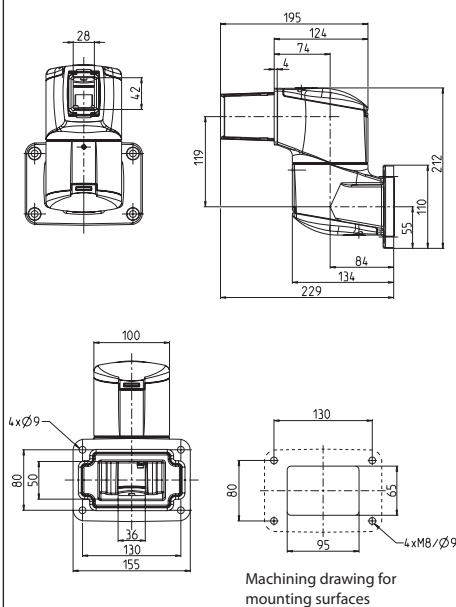
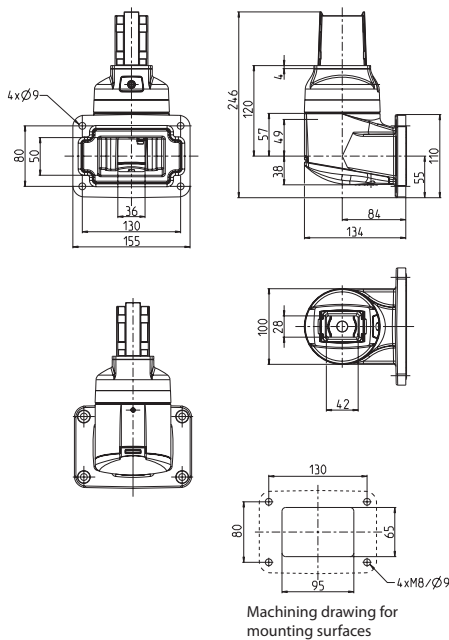
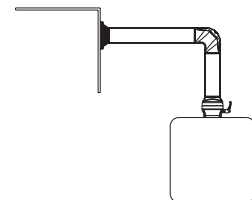
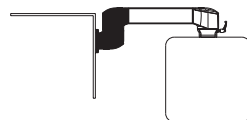
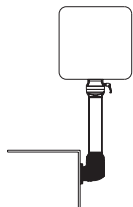
Dimensions in mm	
 	<p>Machining drawing for mounting surfaces</p> <p>4xMB/Ø9</p>

CAD files available at www.bernstein.eu

Wall joint S		Wall joint W		Base / wall flange	
1017300011	RAL 9006 white aluminium	1017300012	RAL 9006 white aluminium	1017300015	RAL 9006 white aluminium
1017300026	RAL 7016 anthracite grey	1017300027	RAL 7016 anthracite grey	1017300030	RAL 7016 anthracite grey

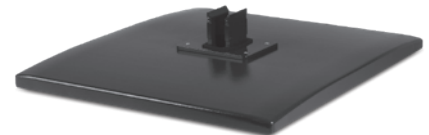


Angle of rotation 300° with stop, screw-fit installation opening	Angle of rotation 300° with stop, 2 screw-fit installation openings	
2490	2930	830
Aluminium	Aluminium	Aluminium
Swivel angle limiter 9806906000	Swivel angle limiter 9806906000	
Signal lamp adapter 9805400000	Signal lamp adapter 9805400000	

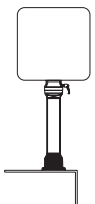
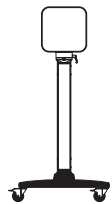


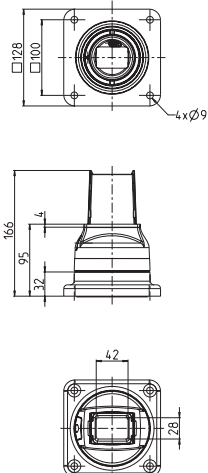
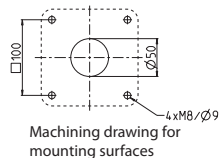
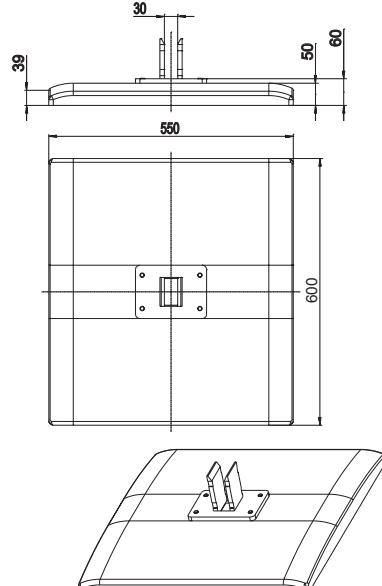
Suspension System CS-3000 next

Article		Base, rotary		Large free-standing base	
Article number	(colour)	1017300013	RAL 9006 white aluminium	1017300068	RAL 9006 white aluminium
		1017300028	RAL 7016 anthracite grey	1017300069	RAL 7016 anthracite grey



Details	Angle of rotation 300° with stop	
Weight in g	1770	11660
Material	Aluminium	Steel / Aluminium
Accessories (retrofitable)	Swivel angle limiter 9806906000	Castors and support feet see page 155

Application example		
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Dimensions in mm	  <p>Machining drawing for mounting surfaces</p>	
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CAD files available at www.bernstein.eu

Adapter (narrow enclosures)

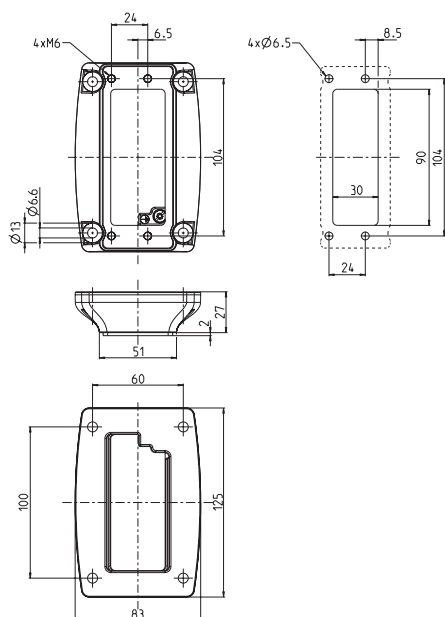
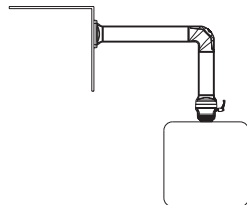
1017300001 RAL 9006 white aluminium
1017300016 RAL 7016 anthracite grey



Only to be used together with couplings.
 (for attachment to narrow enclosures with
 depths < 83 mm)

300

Aluminium



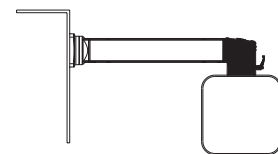
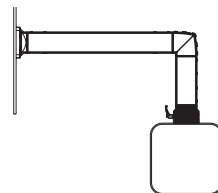
Suspension System CS-3000

Article		Straight coupling	Elbow coupling
Article number	(colour)	1015300177 1015300001	1015300178 1015300002
		RAL 9006 white aluminium RAL 7016 anthracite grey	RAL 9006 white aluminium RAL 7016 anthracite grey

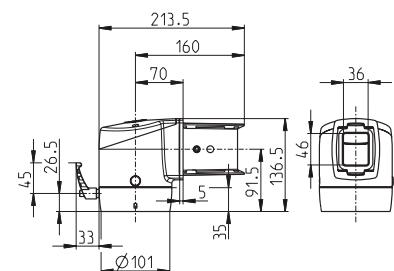
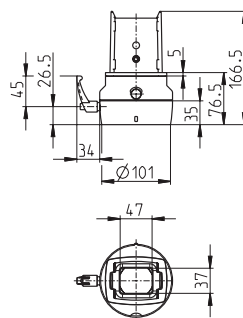
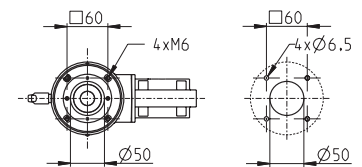
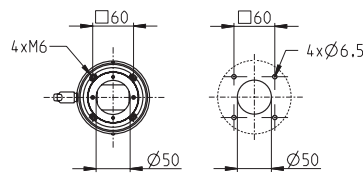


Details	Angle of rotation 300° with stop Adaptation on narrow enclosures < 101 mm, see page 153	Angle of rotation 300° with stop, installation opening including screw-fit plastic cover
Weight in g	1450	2070
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 152, 153, 155	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806942000 SIMATIC Pro® adapter RAL 7016 9806941000 Tilt adapter 30° RAL 9006 1015300193 Tilt adapter 30° RAL 7016 1015300012	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806942000 SIMATIC Pro® adapter RAL 7016 9806941000 Tilt adapter 30° RAL 9006 1015300193 Tilt adapter 30° RAL 7016 1015300012

Application example



Dimensions in mm



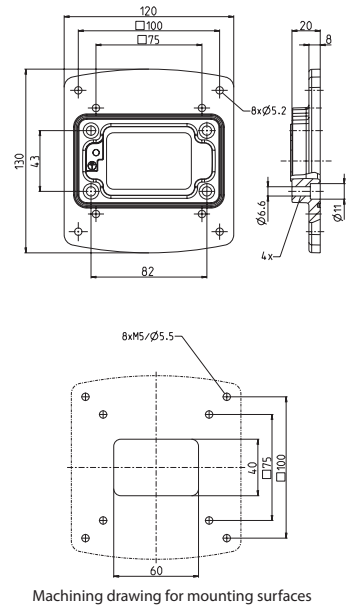
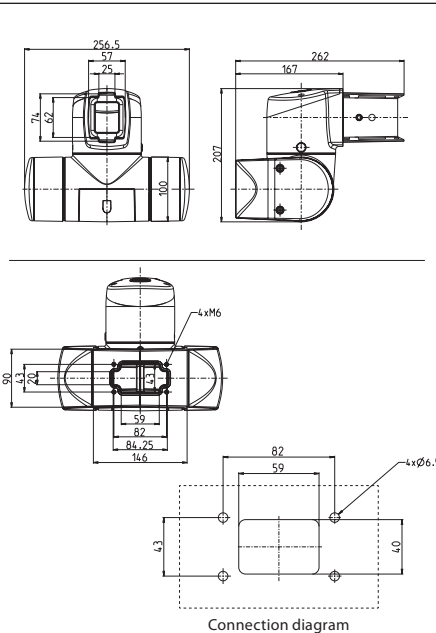
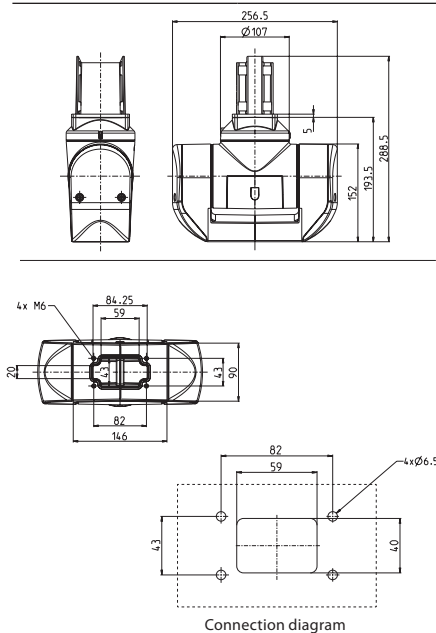
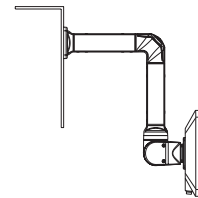
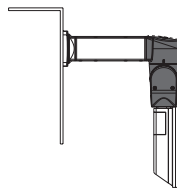
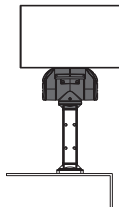
CAD files available
at www.bernstein.eu

Turn/tilt coupling S		Turn/tilt coupling W		Adapter plate VESA 75/100	
1015300265	RAL 9006 white aluminium	1015300262	RAL 9006 white aluminium	9806000044	RAL 9006 white aluminium
1015300266	RAL 7016 anthracite grey	1015300263	RAL 7016 anthracite grey	9806000045	RAL 7016 anthracite grey



For connecting panels / displays / IPC with screw-fixed rear panel, fixing hole pattern adaptable to customer specifications. Angle of rotation 300° with stop Tilt angle with adjustable stop: +/-105° (without attachments like panel / display / IPC) Screw-fixed installation opening, suitable for DVI connectors 4700 Aluminium	For connecting panels / displays / IPC with screw-fixed rear panel, fixing hole pattern adaptable to customer specifications. Angle of rotation 300° with stop Tilt angle with adjustable stop: +/-105° (without attachments like panel / display / IPC) Screw-fixed installation opening, suitable for DVI connectors 5200 Aluminium	All that will be needed (in addition for the turn/tilt coupling) to connect with panels / displays / IPC to the rear side with VESA 75/100 hole pattern 300 Aluminium
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Swivel angle limiter	9805296000	Swivel angle limiter	9805296000
		Signal lamp adapter	9805317000



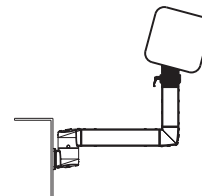
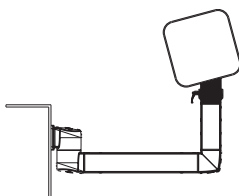
Suspension System CS-3000

Article		Tilt coupling 15° A	Tilt coupling 15° B
Article number	(colour)	1015300179 RAL 9006 white aluminium 1015300013 RAL 7016 anthracite grey	1015300180 RAL 9006 white aluminium 1015300014 RAL 7016 anthracite grey

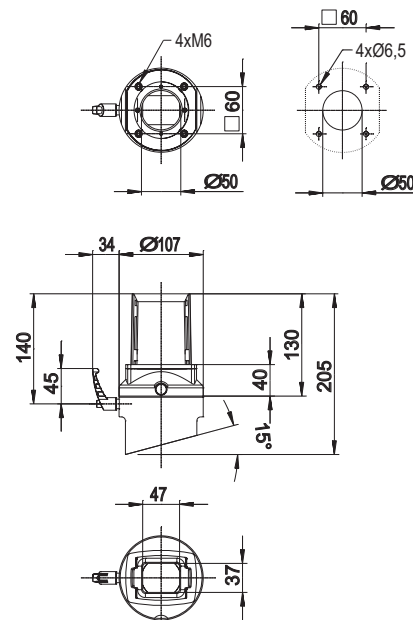
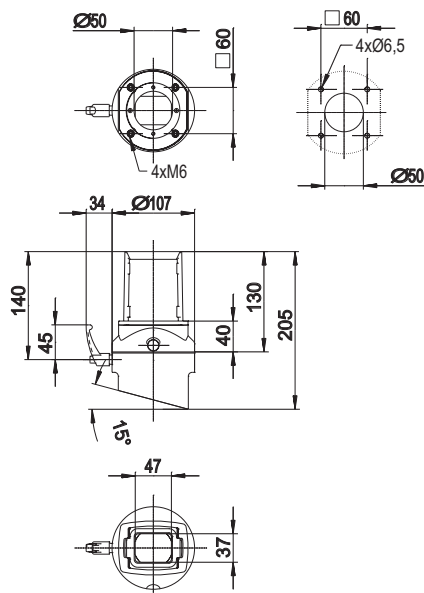


Details	Angle of rotation 300° with stop, fixed tilt of 15° (variant A tilted back)	Angle of rotation 300° with stop, fixed tilt of 15° (variant B tilted forward)
Weight in g	1680	1680
Material	Aluminium	Aluminium
Accessories (retrofitable) see pages 152, 153, 155	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806940000 SIMATIC Pro® adapter RAL 7016 9806939000	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806940000 SIMATIC Pro® adapter RAL 7016 9806939000

Application example



Dimensions in mm

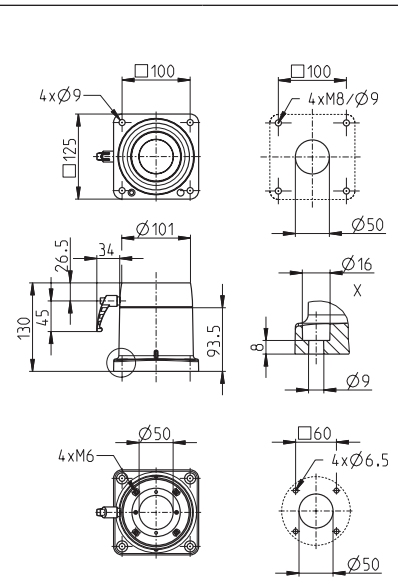
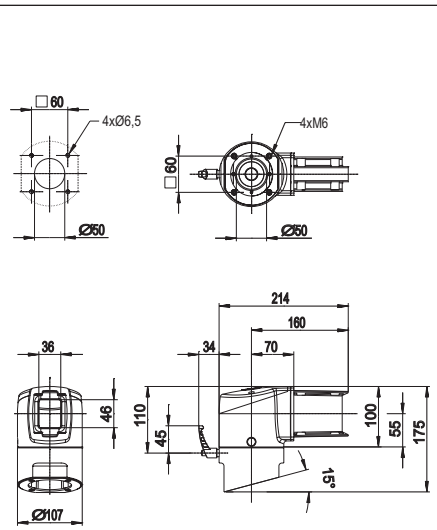
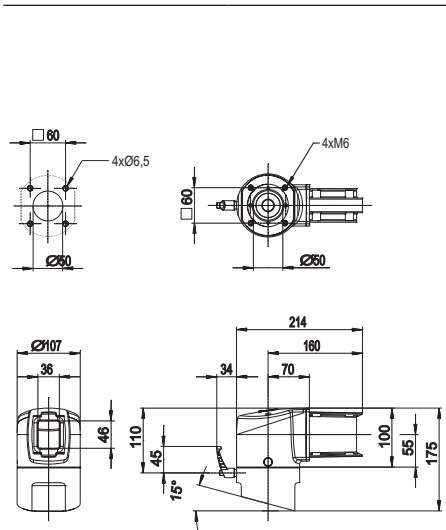
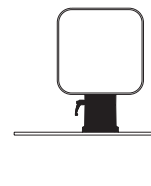
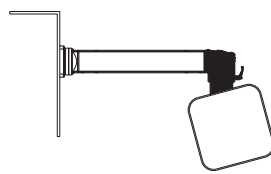
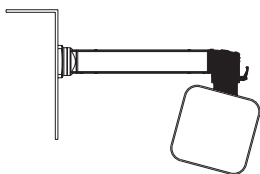


CAD files available
at www.bernstein.eu

Tilt elbow coupling 15° A		Tilt elbow coupling 15° B		Base coupling	
1015300181	RAL 9006 white aluminium	1015300182	RAL 9006 white aluminium	1015300183	RAL 9006 white aluminium
1015300015	RAL 7016 anthracite grey	1015300016	RAL 7016 anthracite grey	1015300017	RAL 7016 anthracite grey



Angle of rotation 300° with stop, fixed tilt of 15°, installation opening including screw-fit plastic cover (variant A tilted back)	Angle of rotation 300° with stop, fixed tilt of 15°, installation opening including screw-fit plastic cover (variant B tilted forward)	Angle of rotation 300° with stop
2160	2160	2120
Aluminium	Aluminium	Aluminium
Swivel angle limiter 9805296000	Swivel angle limiter 9805296000	Swivel angle limiter 9805296000
SIMATIC Pro® adapter RAL 9006 9806940000	SIMATIC Pro® adapter RAL 9006 9806940000	SIMATIC Pro® adapter RAL 9006 9806942000
SIMATIC Pro® adapter RAL 7016 9806939000	SIMATIC Pro® adapter RAL 7016 9806939000	SIMATIC Pro® adapter RAL 7016 9806941000
Signal lamp adapter 9805317000	Signal lamp adapter 9805317000	Tilt adapter 30° RAL 9006 1015300193
		Tilt adapter 30° RAL 7016 1015300012



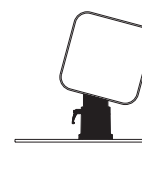
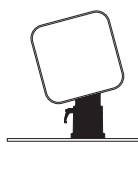
Suspension System CS-3000

Article		Tilt base coupling 15° A	Tilt base coupling 15° B
Article number	(colour)	1015300184 RAL 9006 white aluminium 1015300018 RAL 7016 anthracite grey	1015300185 RAL 9006 white aluminium 1015300019 RAL 7016 anthracite grey

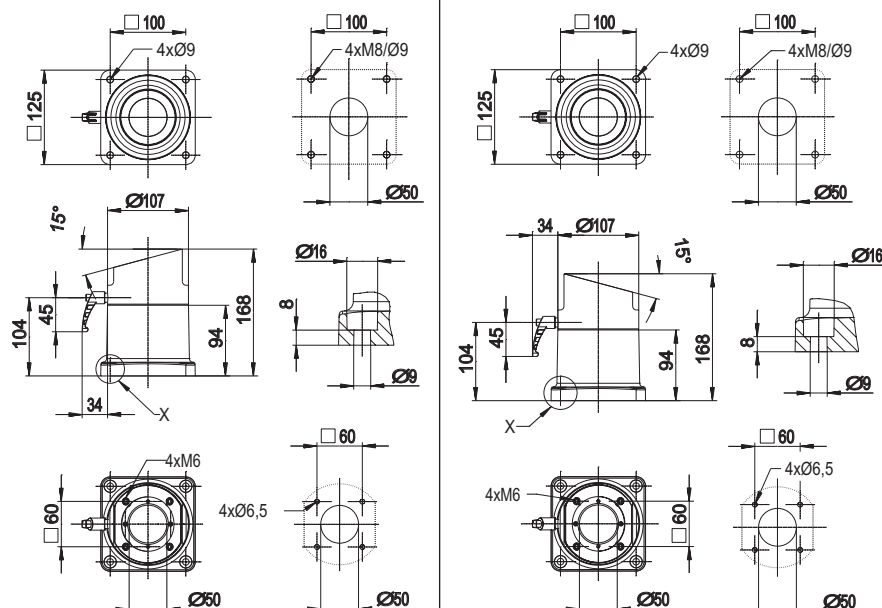


Details	Angle of rotation 300° with stop, fixed tilt of 15° (variant A tilted back)	Angle of rotation 300° with stop, fixed tilt of 15° (variant B tilted forward)
Weight in g	2340	2340
Material	Aluminium	Aluminium
Accessories (retrofitable) see page 155	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806940000 SIMATIC Pro® adapter RAL 7016 9806939000	Swivel angle limiter 9805296000 SIMATIC Pro® adapter RAL 9006 9806940000 SIMATIC Pro® adapter RAL 7016 9806939000

Application example



Dimensions in mm

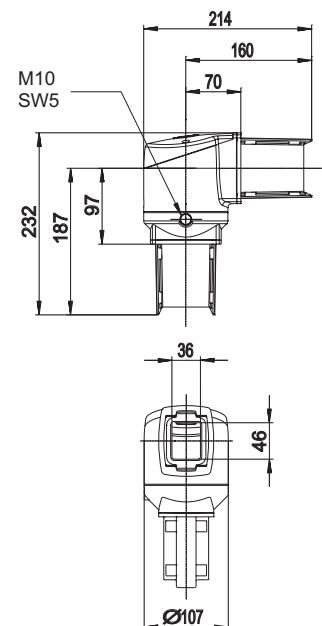
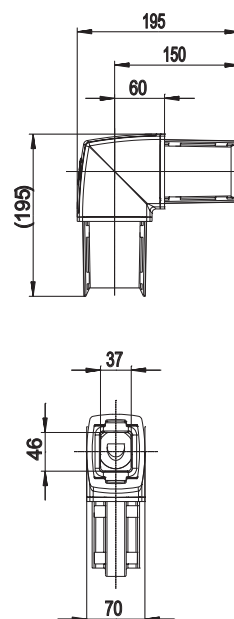
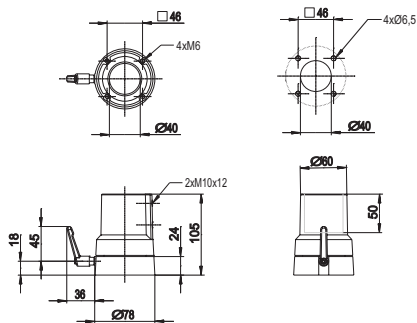
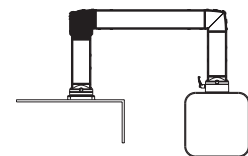
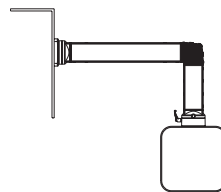
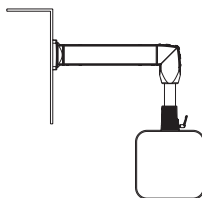


CAD files available
at www.bernstein.eu

Straight coupling 48		Elbow		Elbow, rotary	
1013056000	RAL 9006 white aluminium	1015300195	RAL 9006 white aluminium	1015300196	RAL 9006 white aluminium
1013050000	RAL 7016 anthracite grey	1015300008	RAL 7016 anthracite grey	1015300009	RAL 7016 anthracite grey



Angle of rotation 300° with stop, only compatible with 48 mm round tube, adapter 9806520000 is required for attachment to 80 mm section	With installation opening including screw-fit plastic cover	Angle of rotation 300° with stop, installation opening including screw-fit plastic cover
1760	1680	2460
Aluminium	Aluminium	Aluminium
	Signal lamp adapter 9805318000	Swivel angle limiter 9805296000
		Signal lamp adapter 9805317000



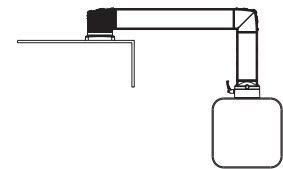
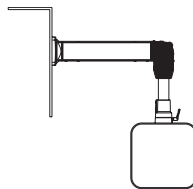
Suspension System CS-3000

Article		Elbow, reduced RD 48		Top joint	
Article number	(colour)	1015300197	RAL 9006 white aluminium	1015300198	RAL 9006 white aluminium
		1015300020	RAL 7016 anthracite grey	1015300003	RAL 7016 anthracite grey

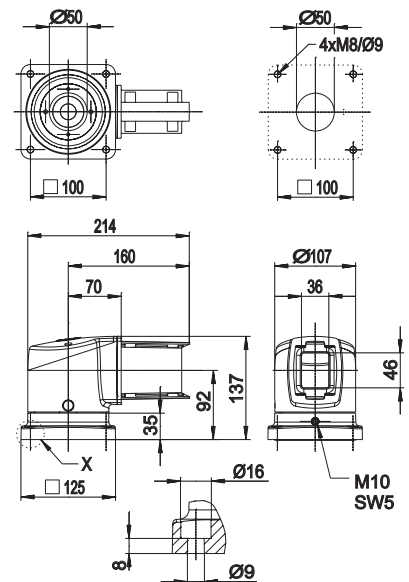
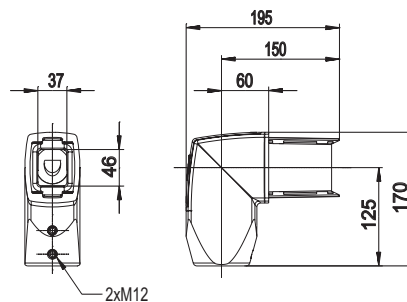
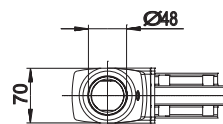


Details	Reducer elbow from the square tube to 48 mm round tube	Angle of rotation 300° with stop, installation opening including screw-fit plastic cover
Weight in g	1920	2250
Material	Aluminium	Aluminium
Accessories (retrofitable)	Signal lamp adapter 9805318000	Swivel angle limiter 9805296000
see page 155		Signal lamp adapter 9805317000

Application example



Dimensions in mm

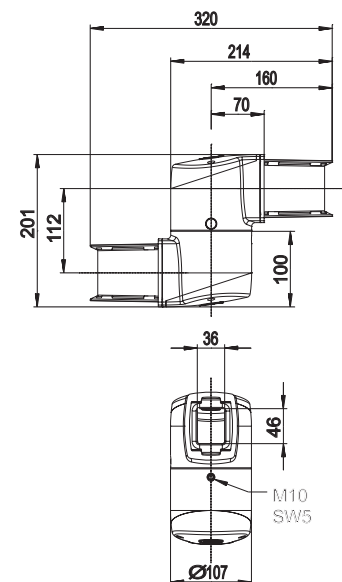
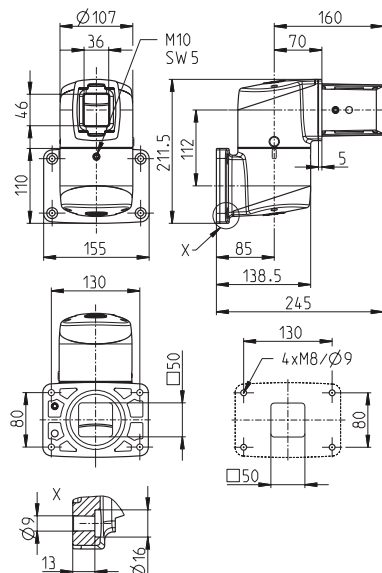
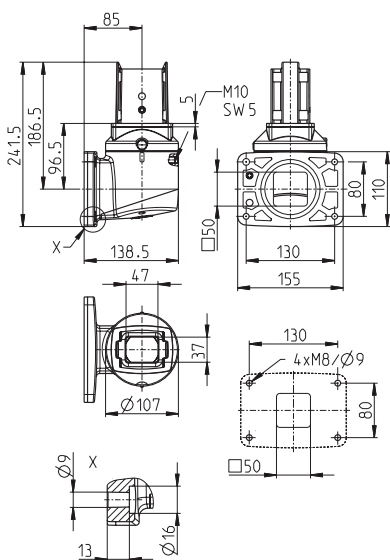
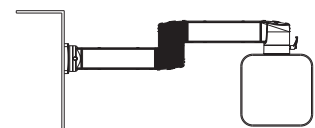


CAD files available
at www.bernstein.eu

Wall joint S		Wall joint W		Intermediate joint	
1015300199	RAL 9006 white aluminium RAL 7016 anthracite grey	1015300200	RAL 9006 white aluminium RAL 7016 anthracite grey	1015300201	RAL 9006 white aluminium RAL 7016 anthracite grey
1015300006		1015300007		1015300004	



Angle of rotation 300° with stop, installation opening including screw-fit plastic cover		Angle of rotation 300° with stop, 2 installation openings including screw-fit plastic covers		Angle of rotation 300° with stop, 2 installation openings including screw-fit plastic covers	
2450		2930		2940	
Aluminium		Aluminium		Aluminium	
Swivel angle limiter	9805296000	Swivel angle limiter	9805296000	Swivel angle limiter	9805296000
Signal lamp adapter	9805317000	Signal lamp adapter	9805317000	Signal lamp adapter	9805317000



Suspension System CS-3000

Article		CS-3000 HV module, vertically adjustable		CS-3000 HV module, vertically adjustable	
Article number	(colour)	see details see details	RAL 9006 white aluminium RAL 7016 / anodised aluminium	see details see details	RAL 9006 white aluminium RAL 7016 / anodised aluminium



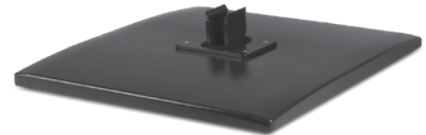
Details	RAL 9006		RAL 7016		RAL 9006		RAL 7016	
		Module 1000/100	1015300202	Module 1000/150	1015300212	Module 800/100	1015300203	Module 800/150
	Module 1000/200	1015300213	Module 1000/300	1015300214	Module 800/200	1015300216	Module 800/300	1015300217
	Modular height 1000 mm; see page 154 for detailed information on selection of suitable damper force.				Modular height 800 mm; see page 154 for detailed information on selection of suitable damper force.			
Weight in g	7030				6020			
Material	Aluminium				Aluminium			
Accessories (retrofitable)	see page 155							

Application example		

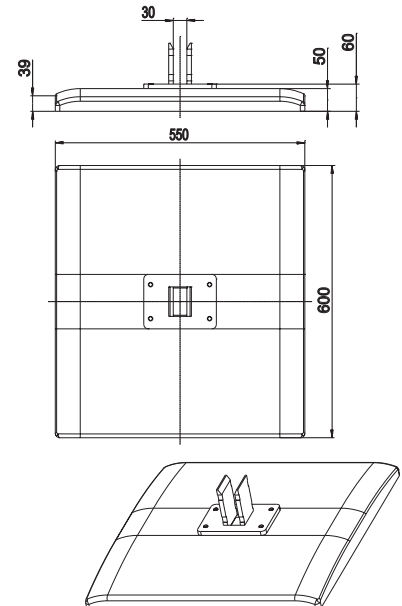
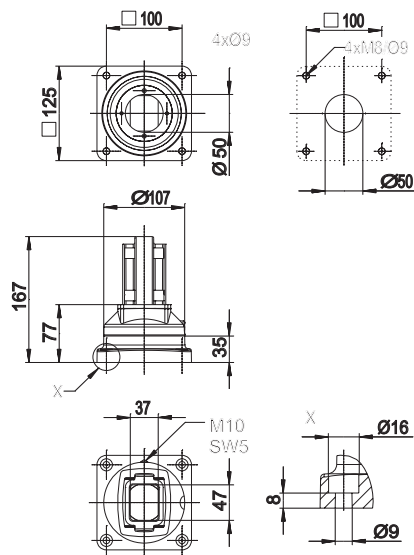
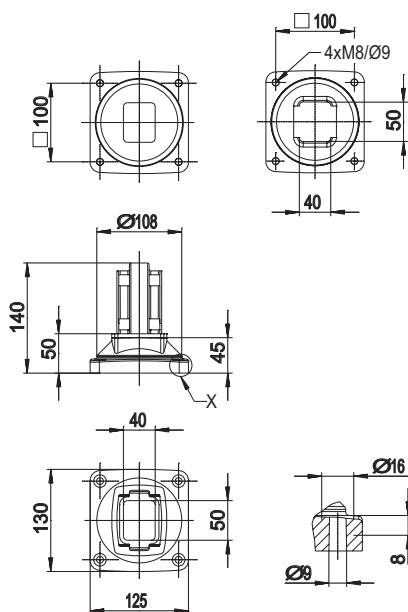
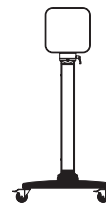
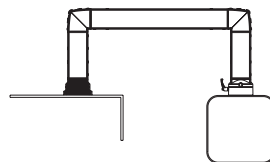
Dimensions in mm		

CAD files available at www.bernstein.eu

Base / wall flange		Base, rotary		Large free-standing base	
1015300204	RAL 9006 white aluminium	1015300205	RAL 9006 white aluminium	1015300206	RAL 9006 white aluminium
1015300010	RAL 7016 anthracite grey	1015300005	RAL 7016 anthracite grey	1015300027	RAL 7016 anthracite grey

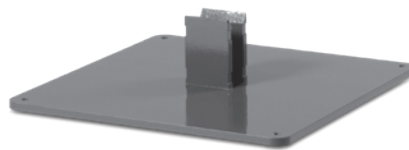


	Angle of rotation 300° with stop	
1300	1780	11660
Aluminium	Aluminium	Steel / Aluminium
	Swivel angle limiter 9805296000	Castors and support feet see page 155




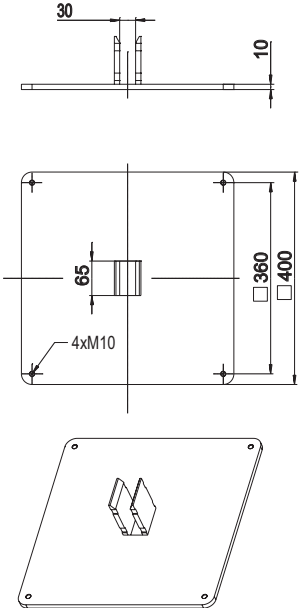
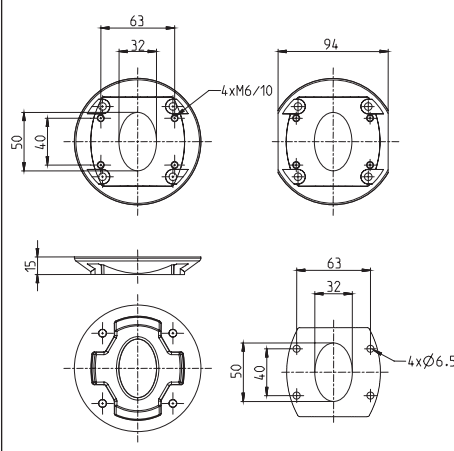
Suspension System CS-3000

Article		Small free-standing base	SIMATIC Pro® Adapter
Article number	(colour)	1015300207 1015300028	RAL 9006 white aluminium RAL 7016 anthracite grey
			Article numbers see couplings page 142 onwards



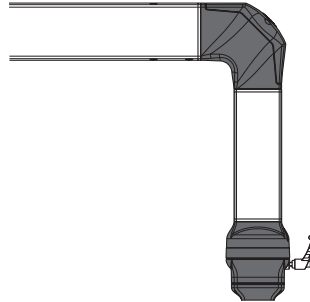
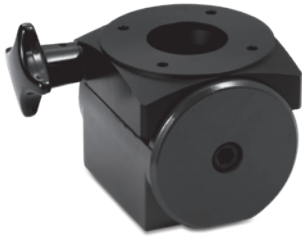
Details		The SIMATIC Pro® Adapter is used for the direct connection between Siemens SIMATIC Pro® Displays and CS-3000 couplings and tilt couplings
Weight in g	13220	140
Material	Steel	Aluminium
Accessories (retrofitable) see page 155	Castors and support feet see page 155	

Application example		
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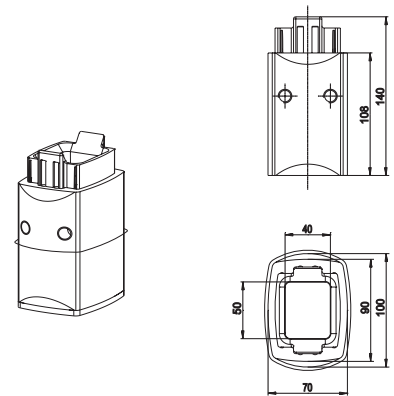
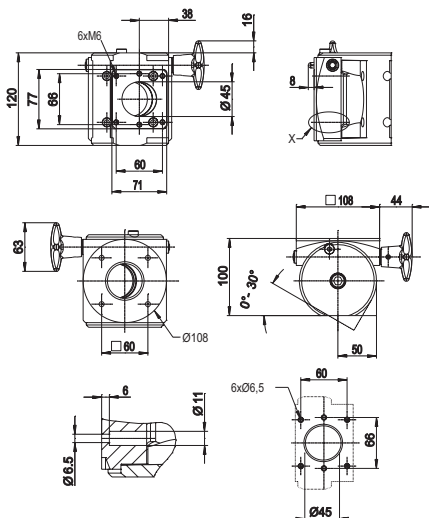
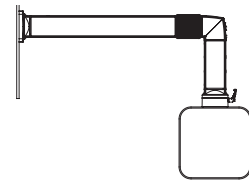
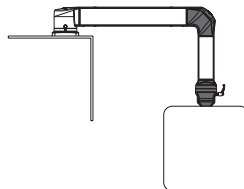
Dimensions in mm		
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CAD files available at www.bernstein.eu

Tilt adapter (30° infinitely variable)		Adaptation on narrow enclosures	Tube adapter for CS-3000	
1015300193	RAL 9006 white aluminium		1015300208	RAL 9006 white aluminium
1015300012	RAL 7016 anthracite grey		1015300039	RAL 7016 anthracite grey



Used only together with couplings; infinitely variable tilt up to 30°, maximum load max. 300 N, not compatible with straight coupling 48, page 147 as well as Siemens SIMATIC Pro® couplings	Connection to enclosures with widths < 101 mm in combination with the CS-3000 neXt suspension system; Required components: Reducing elbow, coupling, adapter for narrow enclosures see page 134 onwards	Once the tube had been shortened, the adapter can be screwed to the tube. The tube adapter can then be fixed to the component and the system can be adjusted as required Attention: Install the tube adapter only onto the housing side, see application example!
1840	Depending on version	720
Aluminium	Aluminium	Aluminium



Suspension System CS-3000

CS-3000 HV – Vertically adjustable modules for optimum ergonomics

With the vertically adjustable CS-3000 HV, BERNSTEIN offers an innovative expansion to the CS-3000 suspension system. Flexible height adjustment and internal cable routing make the HV version even easier to install and operate.

With a variable lift range of 250 mm, the support system can be adjusted infinitely variable to the required working height. The integrated gas-filled damper system ensures the enclosure can be raised with minimum effort while preventing it from dropping suddenly after the clamping lever is released. This means added convenience but above all greater safety.

The CS-3000 HV is available as an optionally mobile stand base or wall-mounted version and can be easily integrated in an existing CS-3000 system.



Overview of advantages:

- Thanks to the 250 mm variable lift, the ideal viewing height can be adjusted for each operator
- Gas-filled damper system provides effective support during lifting and prevents the supported enclosure dropping suddenly after the clamping lever is released
- Internal cable routing
- Straightforward integration in CS-3000 suspension system

Selection criteria

- Selection of the size of gas-pressurised damper depends on the total weight and the ambient temperature
- The total weight is calculated from:
Enclosure + installed equipment + coupling components

Article numbers see page 150 onwards

Ambient temperature	40°C	100 N (6–11 kg)	150 N (11–19 kg)	200 N (19–29 kg)	300 N (29–39 kg)
	30°C	100 N (5.5–10.5 kg)	150 N (10.5–18 kg)	200 N (18–27.5 kg)	300 N (27.5–37 kg)
	20°C	100 N (5–10 kg)	150 N (10–17 kg)	200 N (17–26 kg)	300 N (26–35 kg)
Damper force / total weight					

Materials

- Anodised aluminium tubing
- Pressure die-cast aluminium components
- Polyamide covers for installation openings
- POM bearing
- Neoprene seals

Colours

- Suspension system components:
RAL 7016 anthracite grey / RAL 9006 white aluminium
- Connecting tubes: silver (natural) anodised

Accessories

Article	Adapter flange	Adapter plates	Signal lamp adapter	
Article number				
				
Design	For large enclosures with door section and / or keyboard 1016896000 RAL 9006 1016897000 RAL 7016	9806678000 RAL 7016 For connecting adapter flange to coupling 48 9806520000 RAL 7016 Required together with coupling RD 48 for attachment to CC-4000 section 80	For connecting commercially available 25 mm diameter signal lamps CS-3000 9805317000 for joint components 9805318000 for elbow components CS-3000 neXt 9805400000 for joint components 9805401000 for elbow components 9805402000 Reducing elbow	
Article	Swivel angle limiter CS-3000	Setscrew	Screw cover set	
Article number	9805296000			
	CS-3000 neXt 9806906000			
				
Design	CS-3000 Swivel angle limiter for coupling and joint components. Adjustable in steps of 13.7°. Contains ten ø 10 mm steel balls. CS-3000 neXt Adjustable in steps of 30°. Contains 6 swivel angle limiter.	CS-3000 9263077000 Setscrew ISO 4029, M12 x 12 mm with hexagon socket CS-3000 neXt 9263096000 Setscrew ISO 4029, M10 x 10 mm with hexagon socket	Plastic sealing caps (colour similar to RAL 9006) for use with set screws. Set of 50 CS-3000 9806590000 CS-3000 neXt 9806000028	
Article	Industrial castors	Apparatus castors	Support feet	Floor anchoring brackets
Article number	9808012800	9808015300	9808012900	9808014100
				
Design	Castor set, consisting of 4 steering castors. Complete with installation material and instructions. Load-bearing capacity of each castor 50 kg. Construction height 100 mm Castors Ø 75 mm	Castor set, consisting of 4 steering castors, 2 castors with total locking. Complete with installation instructions. Load-bearing capacity of each castor 70 kg. Construction height 90 mm Castors Ø 75 mm	Vertically adjustable feet (1 set = 4 pieces). Complete with installation material and instructions. Adjustable construction height approx. 37 - 50 mm	Floor fixing kit consists of 4 mounting brackets for the large stand. Complete with installation material and instructions.

Heavy-Duty Suspension System CS-2000 System 80

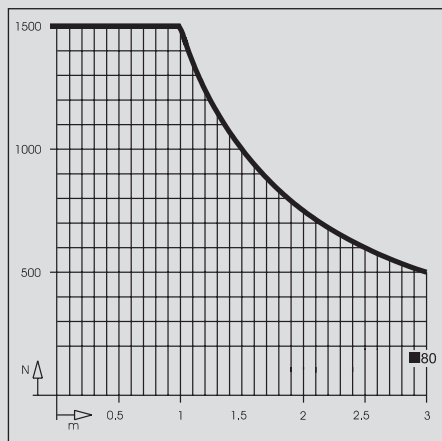
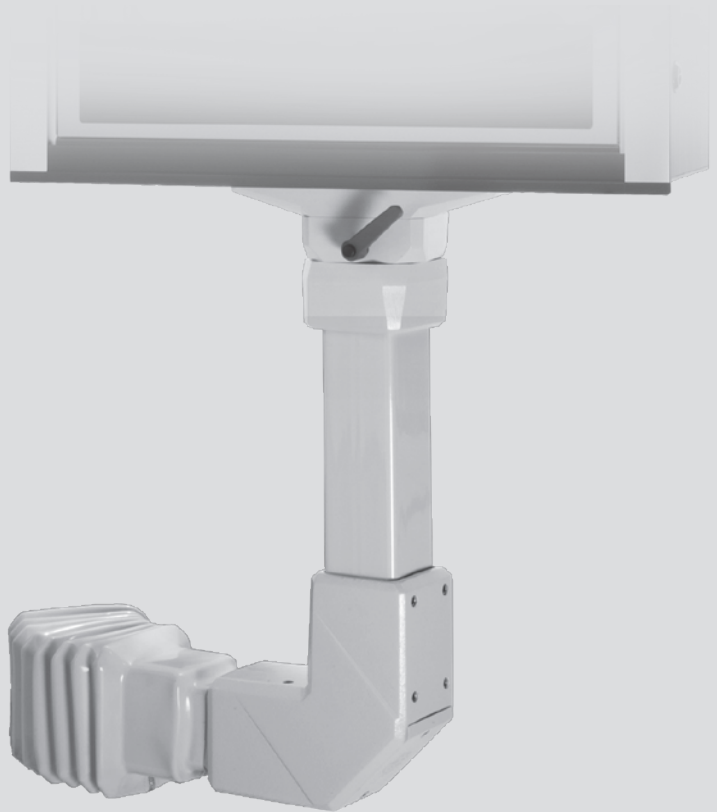
With its large number of components, the BERNSTEIN CS-2000 System 80 suspension system offers technically perfected solutions for a wide range of applications.

System structure

The following conditions are decisive for selecting the right system:

- Load of overall system
- Clear cable leadthrough if necessary
- System constellation

After determining the correct size of suspension system, the corresponding components and tubes are selected to build up the required system constellation.



Load diagram

The overview on Pages 114 / 115 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.

Materials

- Aluminium components: cast aluminium
- Cast steel components: GGG 40
- Welded steel structures: St 37
- Support tubes: St 37
- Bearings: St/PTFE or POM
- Seals: CR
- Installation openings: cast aluminium
- Gaiters: PVC

Colours

- Suspension system components: light grey, RAL 7035
- Gaiters: light grey, RAL 7035
- Tubing: light grey, RAL 7035

System features

- Installation openings at all joints for easy cable installation
- Integrated strain relief for gripping cables
- Maintenance-free no-play bearings in all joints and couplings
- Adjustment facilities for precisely aligning support tubes
- Wall and intermediate joints with adjustable torque and retrofitable swivel angle limiter (available as accessory)
- Flange couplings with adjustable firmness and retrofitable rotation angle limiter
- Overhead installation of all components possible

Heavy-Duty Suspension System CS-2000 System 80

Article		Standard coupling, flange CS-2000		Elbow coupling, flange CS-2000	
Article number	(colour)	1016702000	RAL 7035 light grey	1016705000	RAL 7035 light grey
		1016876000	RAL 9006 white aluminium	1016877000	RAL 9006 white aluminium



Details	Angle of rotation 300° with stop. Complete with seals and mounting screws. Adjustable torque	Angle of rotation 300° with stop. Complete with seals and mounting screws. Adjustable torque. Installation opening
Weight in g	3270	4100
Material	Aluminium	Aluminium
Accessories (retrofitable)	Swivel angle limiter 9805176000	Swivel angle limiter 9805176000 Signal lamp adapter 9805189000
	see pages 166 / 167	

Application example		

Dimensions in mm		

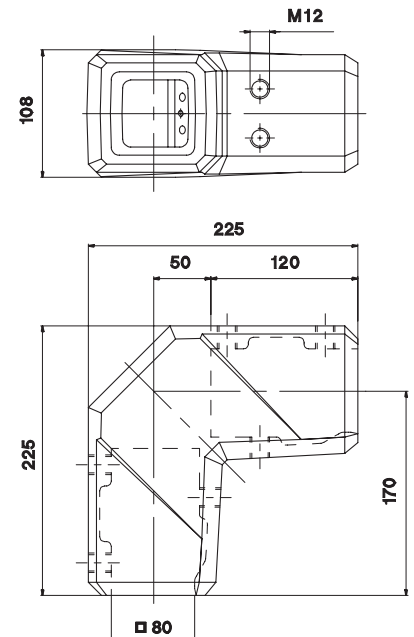
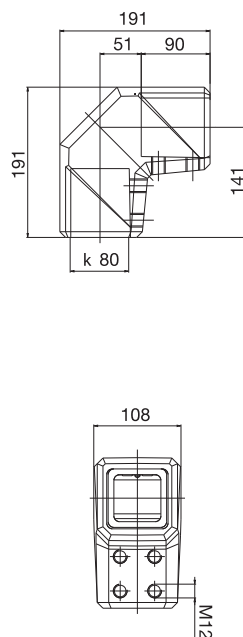
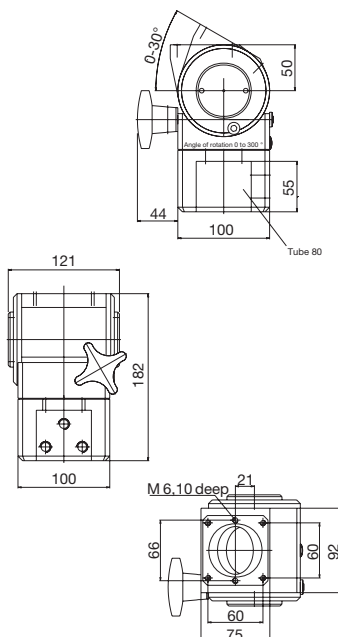
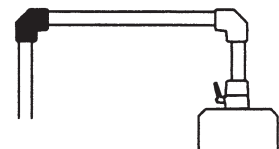
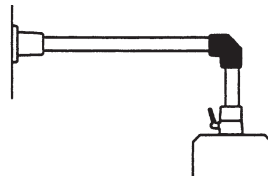
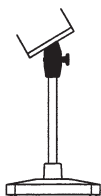
CAD files available
at www.bernstein.eu

Turn / tilt coupling CS-2000		Elbow CS-2000		Elbow for torque load CS-2000	
1016321000	RAL 7035 light grey	1016708000	RAL 7035 light grey	1016711000	RAL 7035 light grey
1016878000	RAL 9006 white aluminium	1016879000	RAL 9006 white aluminium	1016880000	RAL 9006 white aluminium



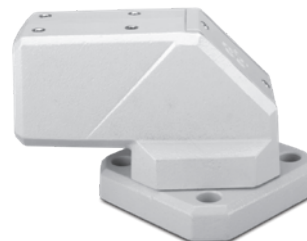
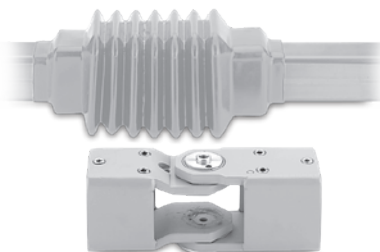
Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with seals and mounting screws	Installation opening. Complete with seals	Increased load bearing capacity. Complete with seals. Installation opening
2900	2900	8500
Aluminium and PA	Aluminium	GGG

Swivel angle limiter	9805130000	Signal lamp adapter	9805189000	Signal lamp adapter	9805189000
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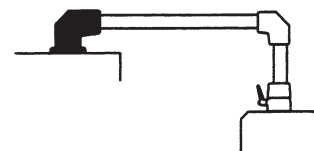
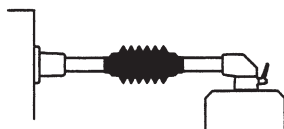
Heavy-Duty Suspension System CS-2000 System 80

Article	Intermediate joint CS-2000	Top joint CS-2000
Article number (colour)	1016471000 RAL 7035 light grey 1016881000 RAL 9006 white aluminium	1016714000 RAL 7035 light grey 1016882000 RAL 9006 white aluminium

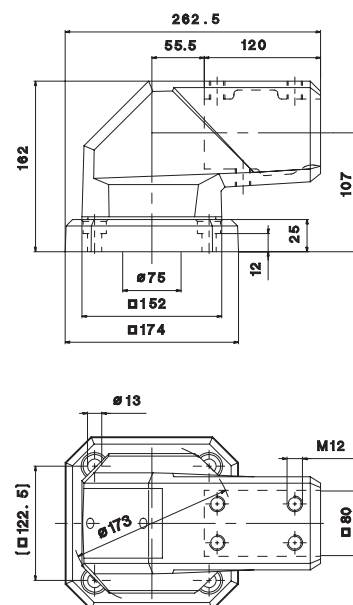
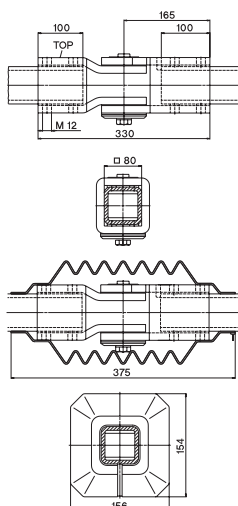


Details	With gaiter attached with zip fastener. Swivel angle 180° with stop on both sides. Torque adjustment	Angle of rotation 306° with stop. Complete with seals and mounting screws.
Weight in g	9700	20620
Material	Steel	GGG
Accessories (retrofitable) see pages 166 / 167	Swivel angle limiter 9805062000	Swivel angle limiter 9805177000 Signal lamp adapter 9805188000

Application example

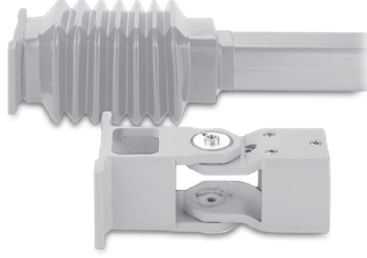
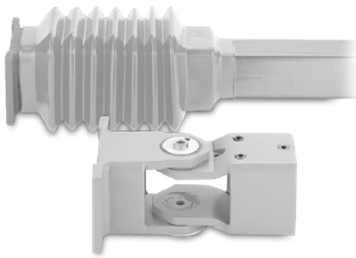


Dimensions in mm



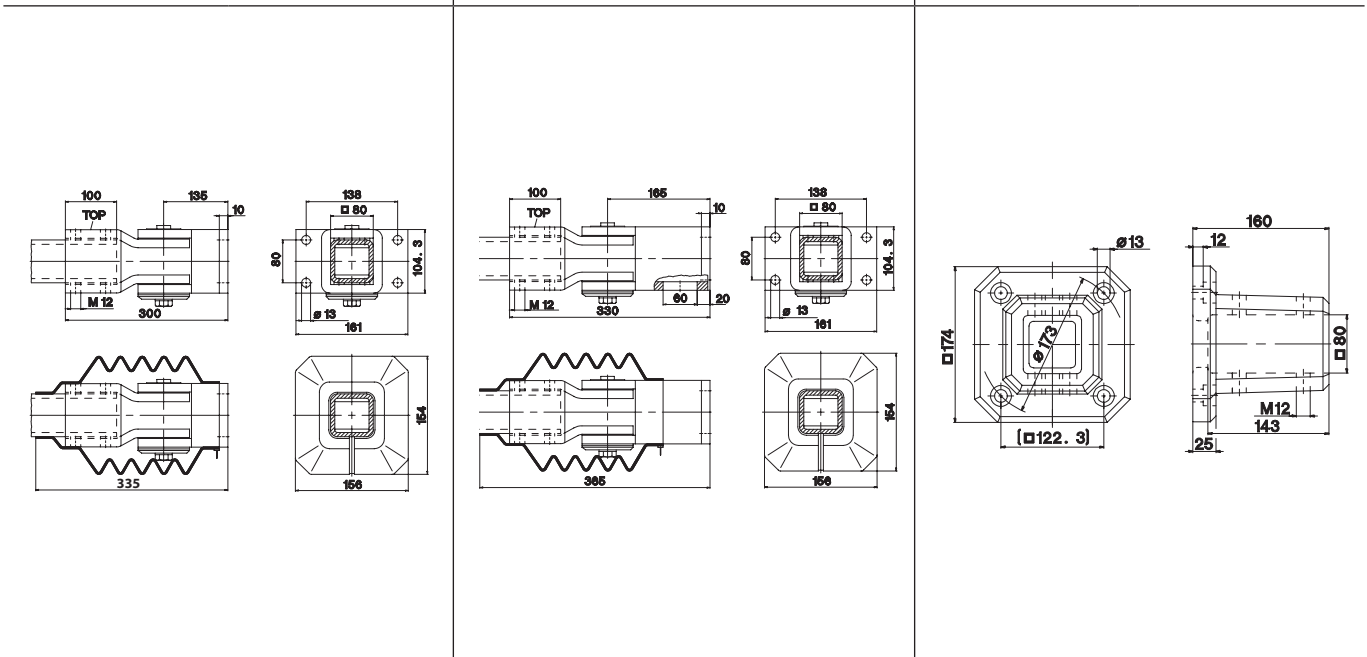
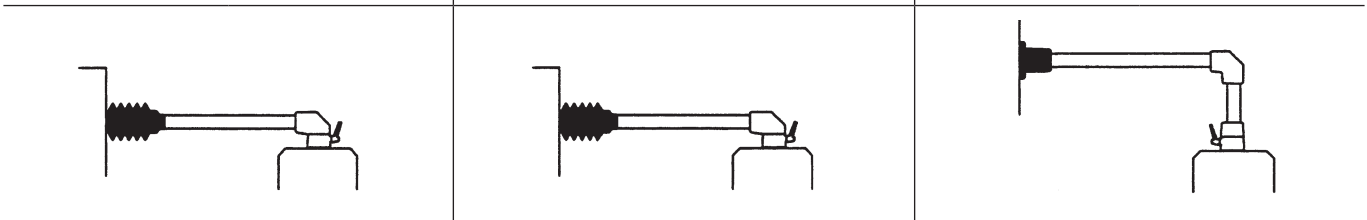
CAD files available
at www.bernstein.eu

Wall joint CS-2000		Wall joint for cable leadthrough CS-2000		Wall flange CS-2000	
1016473000	RAL 7035 light grey	1016474000	RAL 7035 light grey	1016472000	RAL 7035 light grey
1016883000	RAL 9006 white aluminium	1016884000	RAL 9006 white aluminium	1016885000	RAL 9006 white aluminium



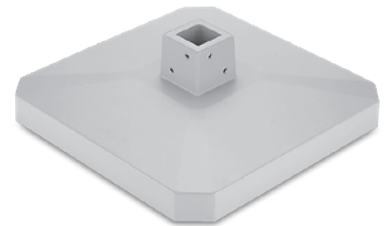
With gaiter attached with zip fastener. Swivel angle 180° with stop on both sides. Torque adjustment	With gaiter attached with zip fastener. Swivel angle 180° with stop on both sides. Torque adjustment	Complete with seals
9250	9500	9100
Steel	Steel	GGG

Swivel angle limiter	9805062000	Swivel angle limiter	9805062000
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Heavy-Duty Suspension System CS-2000 System 80

Article		Base CS-2000	Free-standing base CS-2000
Article number	(colour)	1016475000 RAL 7035 light grey 1016886000 RAL 9006 white aluminium	1016323000 RAL 7035 light grey 1016887000 RAL 9006 white aluminium



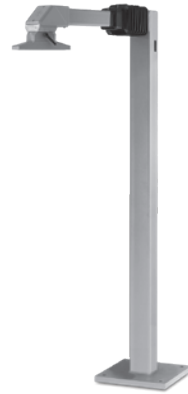
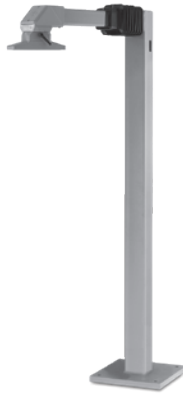
Details	Complete with seals	For free-standing applications
Weight in g	9240	14300
Material	GGG	Aluminium
Accessories (retrofitable) see pages 166 / 167		Castors and Support feet see pages 166 / 167

Application example		
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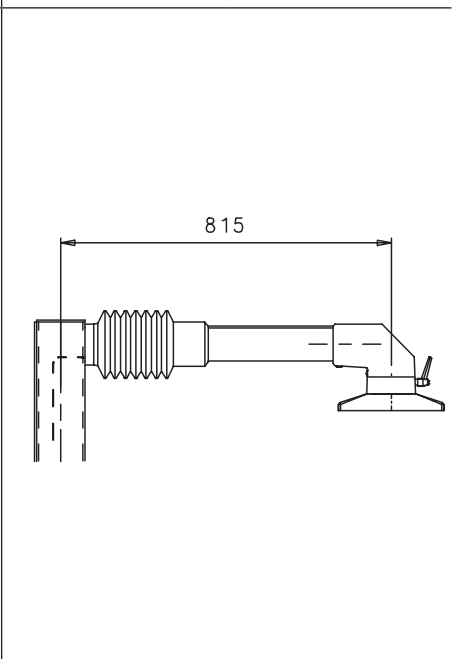
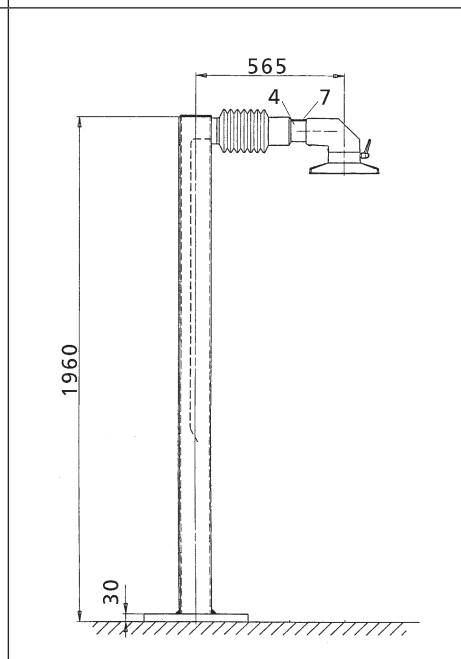
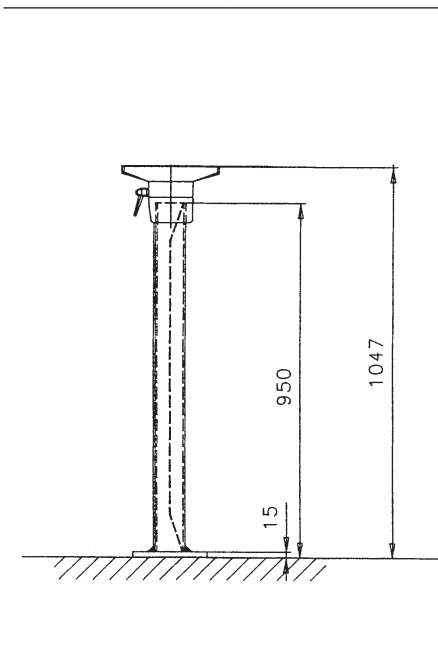
Dimensions in mm	 	
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CAD files available at www.bernstein.eu

Support column, upright version		Support column, suspended version, 250 mm tube		Support column, suspended version, 500 mm tube	
1016558000	RAL 7035 light grey	1016555000	RAL 7035 light grey	1016556000	RAL 7035 light grey
1016888000	RAL 9006 white aluminium	1016889000	RAL 9006 white aluminium	1016890000	RAL 9006 white aluminium

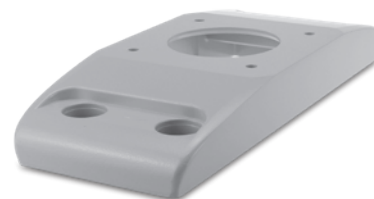
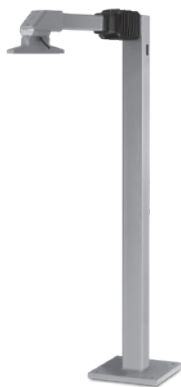


27220	102000	105000
Steel / Aluminium	Steel / Aluminium	Steel / Aluminium

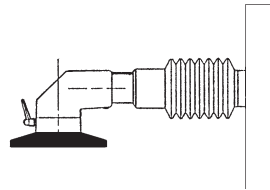


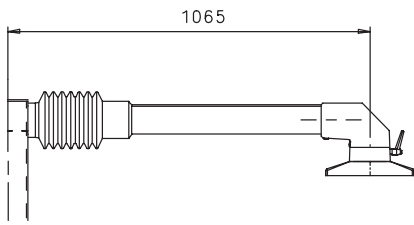
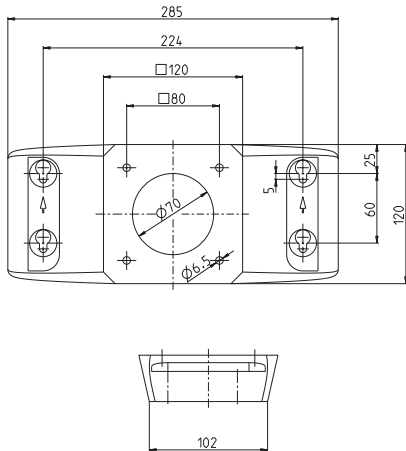
Heavy-Duty Suspension System CS-2000 System 80

Article		Support column, suspended version, 750 mm tube	Automotive adapter CS-2000
Article number	(colour)	1016557000 RAL 7035 light grey 1016891000 RAL 9006 white aluminium	1016898000 RAL 7035 light grey 1016896000 RAL 9006 white aluminium



Details		
Weight in g	41000	1100
Material	Steel / Aluminium	Aluminium
Accessories (retrofitable)	see pages 166 / 167	

Application example		
		

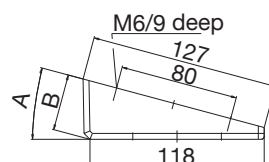
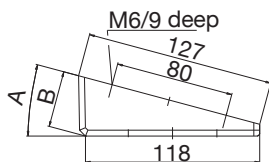
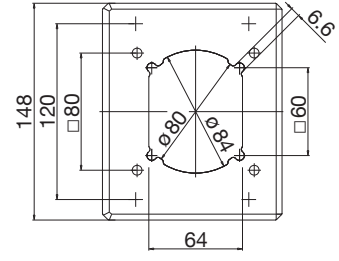
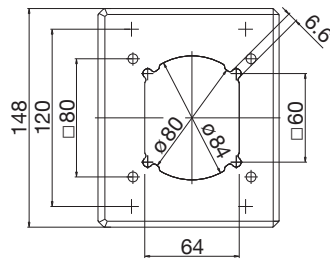
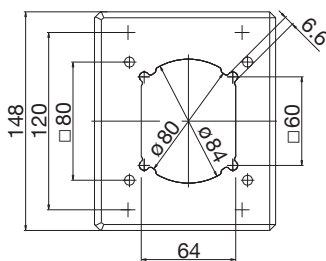
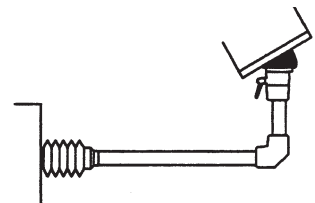
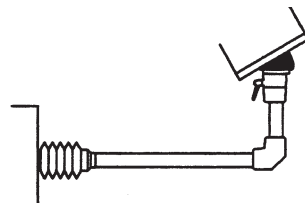
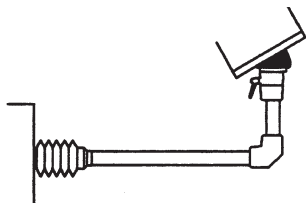
Dimensions in mm		
		

CAD files available at www.bernstein.eu

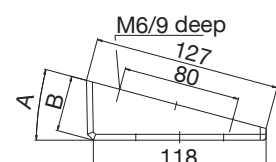
Tilt adapter CS-2000 15°		Tilt adapter CS-2000 30°		Tilt adapter CS-2000 60°	
1016459000	RAL 7035 light grey	1016460000	RAL 7035 light grey	1016461000	RAL 7035 light grey
1016892000	RAL 9006 white aluminium	1016893000	RAL 9006 white aluminium	1016894000	RAL 9006 white aluminium



A = 15°, B = 39	A = 30°, B = 66	A = 60°, B = 111
460	600	800
Aluminium	Aluminium	Aluminium

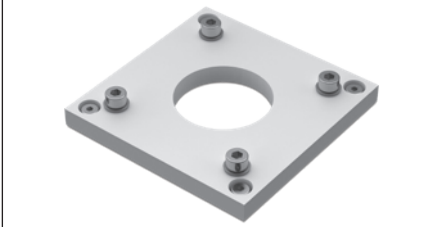
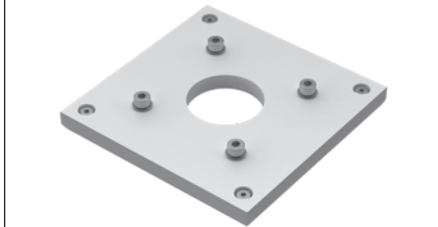

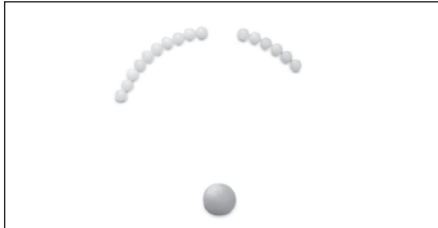




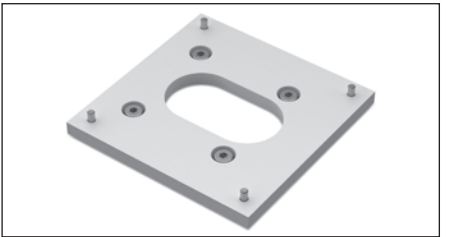
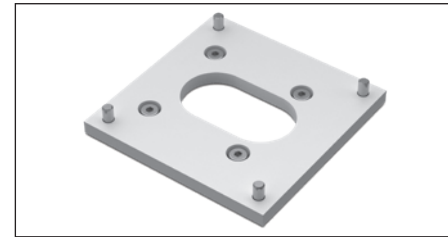

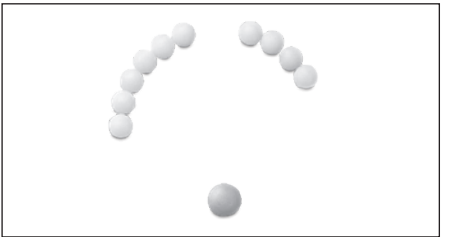
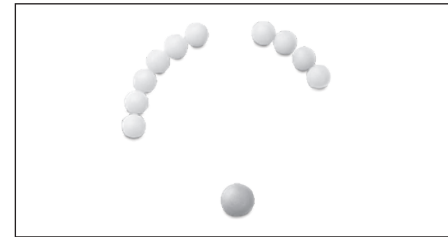
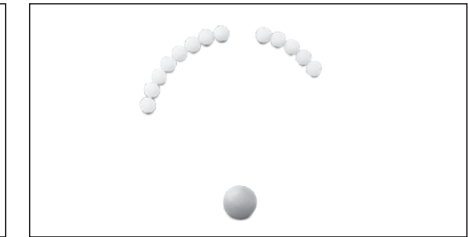



Example illustration



Example illustration

Accessories for Suspension Systems CS-2000 SL and System 80

Article Article number	CS-1000 VESA 75 / M4 9806675000	CS-1000 VESA 100 / M4 9806676000				
						
Design	For rear attachment of monitors or similar with VESA 75 flange on CS-1000 suspension arm system	For rear attachment of monitors or similar with VESA 100 flange on CS-1000 suspension arm system				
Article Article number	Swivel angle limiter for coupling components, CS-2000 SL system 9805129000	Swivel angle limiter for coupling components, CS-2000 System 80 9805176000				
						
Design	Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA.	Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 9°. Material PA.				
Article Article number	Signal lamp adapter CS-2000 System 80 <table border="1" data-bbox="576 1581 1015 1637"> <tr> <td>Elbow components</td> <td>Top joint</td> </tr> <tr> <td>9805189000</td> <td>9805188000</td> </tr> </table>	Elbow components	Top joint	9805189000	9805188000	Signal lamp adapter CS-2000 SL 45/60 Elbow components 9806345000
Elbow components	Top joint					
9805189000	9805188000					
						
Design	Easy-to-retrofit signal lamp adapter. Installation opening for signal lamp tubes with outside diameter of 25 mm, secured on side with setscrews. Material aluminium	Easy-to-retrofit signal lamp adapter. Installation opening for signal lamp tubes with outside diameter of 25 mm, secured on side with setscrews. Material aluminium				

<p>CS-2000 SL Panel VESA 100 / M4</p> <p>9806677000</p>	<p>CS-2000 SL Panel VESA 100 / M6</p> <p>9806698000</p>	<p>Swivel angle limiter for wall and intermediate joints CS-2000 System 80</p> <p>9805062000</p>
		
<p>For rear attachment of monitors or similar with VESA 100 flange by means of CS-2000-SL panel couplings (with M4 thread for monitors)</p>	<p>For rear attachment of monitors or similar with VESA 100 flange by means of CS-2000-SL panel couplings (with M4 thread for monitors)</p>	<p>Swivel angle limiter as retrofitable accessory kit for wall and intermediate joints. Swivel angle range adjustable and fixed in steps of 15°. Material steel.</p>
<p>Swivel angle limiter for joint components System CS-2000 SL</p> <p>9805132000</p>	<p>Swivel angle limiter for joint components CS-2000 System 80</p> <p>9805177000</p>	<p>Swivel angle limiter for turn / tilt couplings System CS-2000 SL and CS-2000 System 80</p> <p>9805130000</p>
		
<p>Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 14°. Material PA</p>	<p>Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA</p>	<p>Easy-to-retrofit swivel angle limiter. After installation, the balls limit the swivel angle. Adjustable in steps of 8.5°. Material PA</p>
<p>Swivel castors for large free-standing bases CS-2000 SL and CS-2000 System 80</p> <p>9806044000</p>	<p>Fixed castors for large free-standing bases CS-2000 SL and CS-2000 System 80</p> <p>9806043000</p>	<p>Adjustment feet for large free-standing bases CS-2000 SL and CS-2000 System 80</p> <p>9806297000</p>
		
<p>Complete with installation material and instructions for large free-standing bases. Set of 2</p>	<p>Complete with installation material and instructions for large free-standing bases. Set of 2.</p>	<p>Complete with installation material and instructions for large free-standing bases. Set of 2</p>

Stainless Steel Suspension System CS-480 NR

Product features

The CS-480 NR suspension system was specifically developed for mounting control enclosures in hygienic areas in the food and pharmaceutical industries.

Thanks to the variety of different models, the CS-480 NR ensures absolute flexibility. You have the choice between a combination of tubes shaped to customer specifications and suspension system components or, if time is pressing, you can combine the preshaped tubes and coupling sleeves available from stock with the suspension system components.



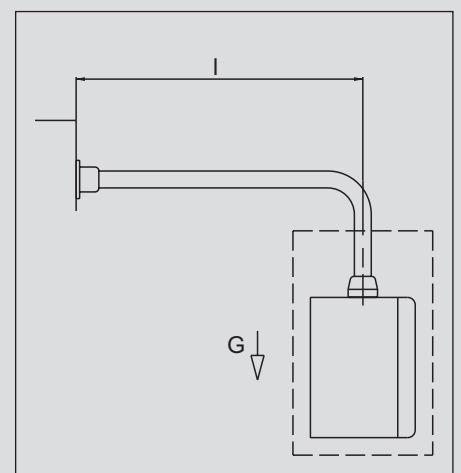
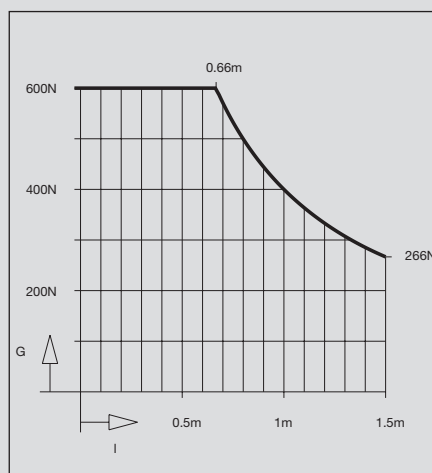
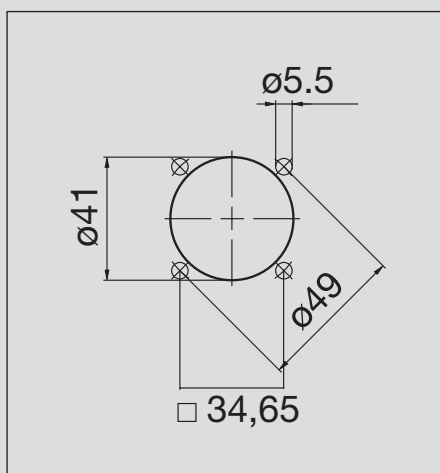
System features

- Installation openings at bearing components with horizontal outlet
- Easy mounting by clamping the support tubes
- Load bearing capacity 400 N at 1 m
- Protection class IP66/NEMA 4X
- Material 1.4305
- Torque preset at factory



Enclosure preparation for mounting couplings

The dimensions of the coupling hole pattern for preparing the enclosure are shown in the following drawing.



Materials and surfaces

- Stainless steel support tubes 1.4301
- Stainless steel components 1.4305
- Bearings POM
- O-rings NBR

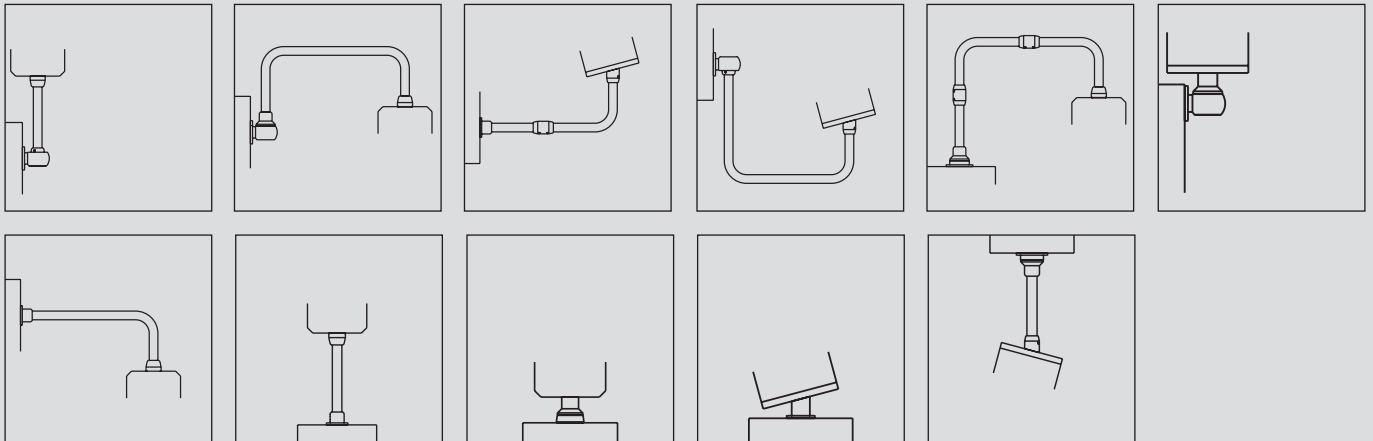
Load diagram

Refer to the diagram for the load bearing capacity of the CS-480 NR suspension system. Approval for higher loads is to be obtained separately. The system length l refers to the length specification in the diagram.

The overview on Pages 114 / 115 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.

System combinations

The following selection illustrates the high degree of flexibility that can be achieved in configuring the suspension system:



Support tubes

Support tubes with 48.3 mm outside diameter; wall thickness 3.6 mm, straight tubes

	Length mm	Article number	Weights in kg
	250	9523501000	1.00
	500	9523502000	1.90
	750	9523503000	2.90
	1000	9523504000	4.10
	1250	9523505000	4.90
	1500	9523506000	5.80

Increased flexibility with L-shaped tubes and coupling sleeves

The use of L-shaped tubes and coupling sleeves together with straight support tubes can render unnecessary time-consuming manufacture of support tubes to customer specifications, L-shaped tubes

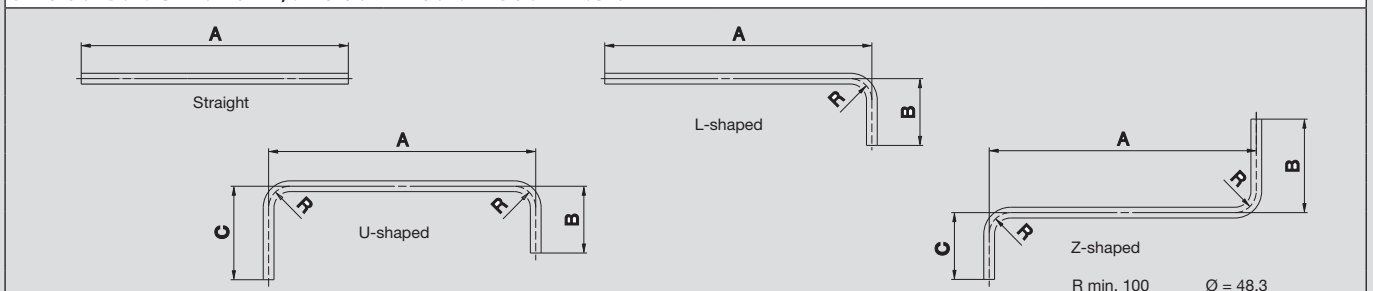
	250 x 250	9523500001	1.80
	500 x 500	9523500011	3.60
	Coupling sleeve	1013051200	

Support tubes to customer specifications

Different versions of formed support tubes for the BERNSTEIN CS-480 NR suspension system are available on request. To order customised tubes simply quote the shape (e.g. straight, L-, U- or Z-shaped) and the dimensions.

Note:

Dimension B and C min. 220 mm; dimension A in U and Z version min. 320 mm



Stainless Steel Suspension System CS-480 NR

Article	Straight coupling (for attaching enclosure)	Tilt coupling (for attaching enclosure)
Article number	1013050100	1013050300



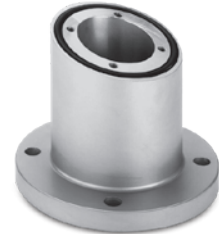
Details	Flange coupling for mounting enclosures. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material	Rigid flange coupling with 15° tilt for mounting enclosures. Complete with seals and mounting material
Weight in g	1400	1000
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
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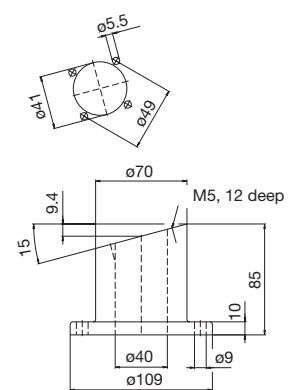
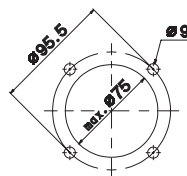
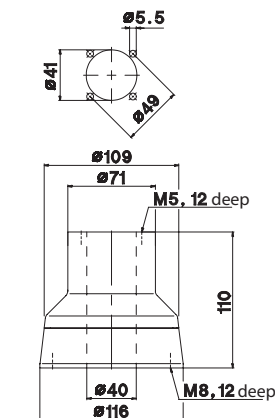
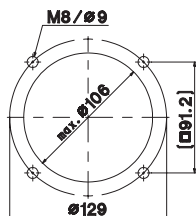
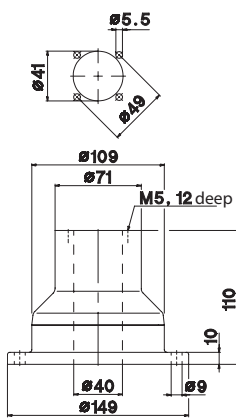
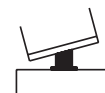
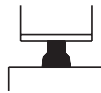
Dimensions in mm		

CAD files available at www.bernstein.eu

Rotary base coupling, external mounting	Rotary base coupling, internal mounting	Base tilt coupling
1013050700	1013050800	1013050400



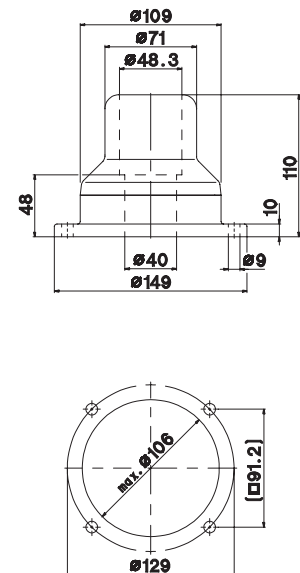
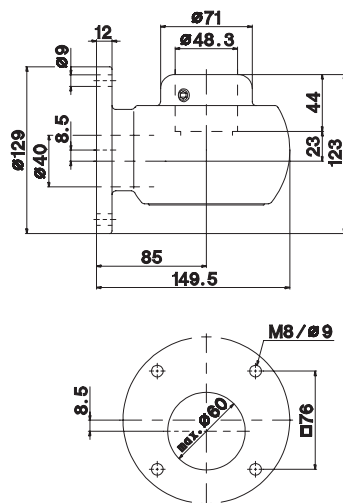
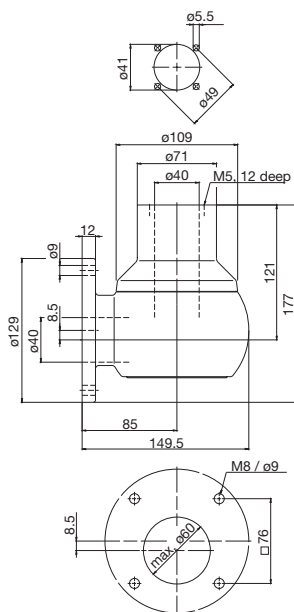
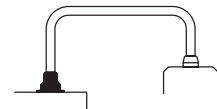
Rotary base coupling (external mounting) for directly mounting enclosures on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material	Rotary base coupling (internal mounting) for directly mounting enclosures on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals and mounting material	Rigid tilt coupling with 15° tilt for directly mounting enclosures on horizontal surfaces. Complete with seals and mounting material
4500	4100	1900
Stainless steel	Stainless steel	Stainless steel



Wall coupling S 1013051000	Wall bracket S 1013051100	Rotary base socket, external mounting 1013050500
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<p>Rotary wall coupling for directly mounting on vertical machine surfaces. Angle of rotation 340° with limit stop. Cover for easy cable installation. Preset torque. Maintenance-free bearings. Complete with seals and mounting material</p>	<p>Wall bracket with vertical outlet for mounting on vertical surfaces. Cover for easy cable installation. Complete with seals</p>	<p>Rotary base for mounting on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals</p>
<p>7300 Stainless steel</p>	<p>7700 Stainless steel</p>	<p>4200 Stainless steel</p>

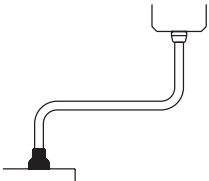
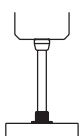


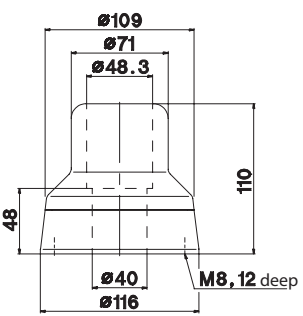
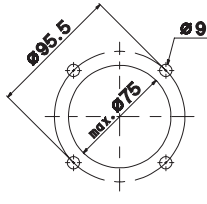
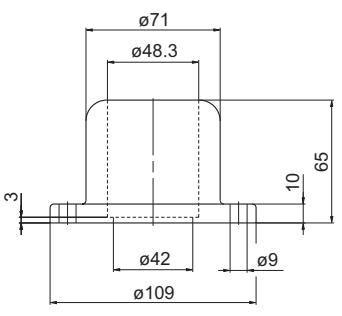
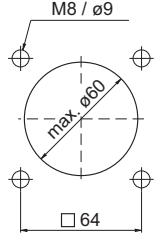
Stainless Steel Suspension System CS-480 NR

Article	Rotary base socket, internal mounting	Base / wall flange
Article number	1013050600	1013050200



Details	Rotary base for mounting on machines or floors. Angle of rotation 340° with limit stop. Preset torque. Maintenance-free bearings. Complete with seals	Base or wall flange for mounting on horizontal and vertical surfaces. Complete with seals
Weight in g	3800	1400
Material	Stainless steel	Stainless steel
Accessories (retrofitable)		

Application example		
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Dimensions in mm	 	 
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CAD files available at www.bernstein.eu

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