

## ULTRASTAR

SAE J2064 TYPE B



### KEY FEATURES

- Very low permeability to refrigerant fluids (performance with R134a < 5 kg/m<sup>2</sup>/yr), equivalent to type E hoses - High flexibility

### APPLICATIONS & FLUIDS

- Bus and off-highway equipment air conditioning systems;

### TECHNICAL DATA

PART. REF.	HOSE SIZE		R.O.D.		O.D.		MAX W.		BURST		MIN. BEND		WEIGHT		FITTINGS		
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	Std1	Std2
H01133005*	5	- 4	3/16"	11.2	0.44	13.0	0.51	35	500	150	2170	85	3.35	217	0.15	SC+C00300-04	SF+K00400-04
H01133008*	8	- 6	5/16"	15.4	0.61	17.2	0.68	35	500	150	2170	85	3.35	336	0.23	SC+C00300-06	SF+K00400-06
H01133010*	10	- 8	13/32"	17.5	0.69	19.3	0.76	35	500	150	2170	95	3.74	385	0.26	SC+C00300-08	SF+K00400-08
H01133012*	12	- 10	1/2"	21.6	0.85	23.4	0.92	35	500	150	2170	115	4.53	533	0.36	SC+C00300-10	SF+K00400-10
H01133016*	16	- 12	5/8"	25.5	1.00	27.3	1.07	35	500	150	2170	135	5.31	676	0.45	SC+C00300-12	SF+K00400-12
H01133022*	22	- 16	7/8"	29.5	1.16	31.5	1.24	35	500	150	2170	100	3.94	724	0.49	SC+C00300-16	SF+K00400-16
H01133028*	28	- 20	1.1/8"	36.1	1.42	38.1	1.50	35	500	150	2170	120	4.72	874	0.59	SC+C00300-20	SF+K00400-20
H01133035*	35	- 24	1.3/8"	42.8	1.69	44.8	1.76	35	500	150	2170	120	4.72	1214	0.82		SF+K00400-24

### CONTINUOUS SERVICE TEMPERATURE RANGE

-40 °F / 257 °F  
-40 °C / 125 °C

### MAX OPERATING TEMPERATURE

140 °C, 284 °F

### TUBE

Unique molecular barrier compound made from synthetic rubber (IIR) and advanced nano-materials

### REINFORCEMENT

One steel wire braid

### COVER

High temperature and environmental resistant synthetic rubber

### APPLICABLE SPECS

SAE J2064 Type B Class I

### TYPE APPROVALS

GOST-R

## REFRIMASTER PLUS

SAE J2064 TYPE E



### KEY FEATURES

- Universal hose, compatible with the most common refrigerants and compressor lubricants - Low permeability to refrigerant fluid - Field attachable and crimped solutions available with Frigoclic® insert - Small bending radius - Improved resistance to kinking effect

### APPLICATIONS & FLUIDS

- Air conditioning systems (Off-Highway machines, buses, ...). Mobile Refrigeration systems;

### TECHNICAL DATA

PART. REF.	HOSE SIZE		R.O.D.		O.D.		MAX W.		BURST		MIN. BEND		WEIGHT		FITTINGS		
	DN	dash	inch	mm	inch	mm	inch	bar	psi	bar	psi	mm	inch	g/m	lb/ft	Std1	Std2
H09071008*	8	- 6	5/16"			12.9	0.51	35	500	250	3620	40	1.57	80	0.05	FC+C00700-06	FC+C01000-06
H09071010*	10	- 8	13/32"			16.2	0.64	35	500	250	3620	50	1.97	140	0.09	FC+C00700-08	FC+C01000-08
H09071013*	13	- 10	1/2"			20.6	0.81	35	500	150	2170	70	2.76	235	0.16	FC+C00750-10	FC+C01050-10
H09071016*	16	- 12	5/8"			24.0	0.94	35	500	150	2170	80	3.15	285	0.19	FC+C00750-12	FC+C01050-12
H09071022*	22	- 16	7/8"			31.0	1.22	35	500	150	2170	120	4.72	405	0.27	FC+C00750-16	FC+C01050-16

### CONTINUOUS SERVICE TEMPERATURE RANGE

-40 °F / 257 °F  
-40 °C / 125 °C

### MAX OPERATING TEMPERATURE

140 °C, 284 °F

### TUBE

High temperature resistant thermoplastic (PA) veneer

### REINFORCEMENT

One textile braid

### COVER

High temperature and environmental resistant synthetic rubber (EPDM)

### APPLICABLE SPECS

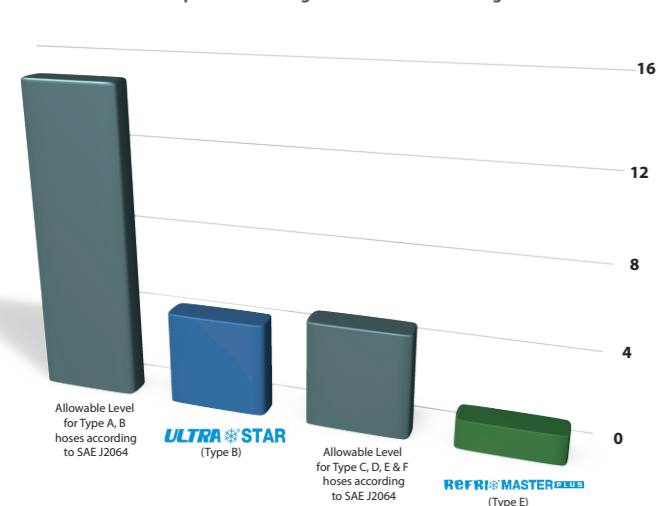
SAE J2064 Type E Class I



## TWO OPTIONS - INFINITE POSSIBILITIES

In the refrigeration and climate control industries applications vary widely, but the standards of quality required are uniformly high. Manuli Refri Division have produced refrigeration hoses which are some of the best and most versatile products on the market, offering two distinct solutions, UltraStar™ and RefriMaster™ Plus. Both ranges share the distinction of having extremely low permeability rates - far exceeding the requirements of SAE J2064 - and having a wide range of standard and customised fitting solutions, including crimped, reusable and field attachable options.

Comparison of Refrigerant Permeation Through Hoses



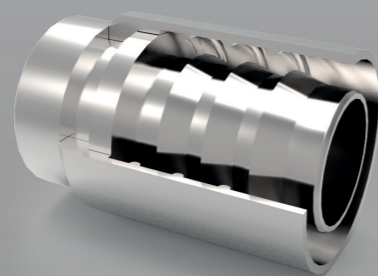
## ULTRA STAR

A hydraulic style (Type B - SAE J2064), rubber hose with superior permeability performance.

- Suitable for refrigeration and climate control applications
- Excellent structural strength
- Unique nano-material compound allows superb performance, giving a Type B hose performance in excess of Type C, D, E & F requirements (SEA J2064)
- Available in a wide range of sizes from DN 5 to DN 35
- Excellent flexibility and low minimum bend radius
- Optional crimped and reusable fitting solutions

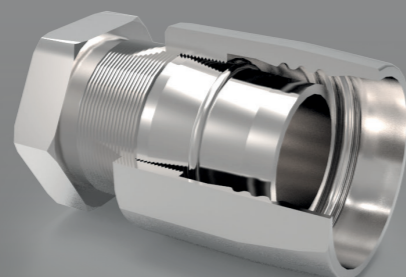


## FITTING SOLUTIONS FOR ULTRASTAR



### STAR-CRIMP™

The factory standard crimped fitting solution designed for controlled and repeatable crimping operations



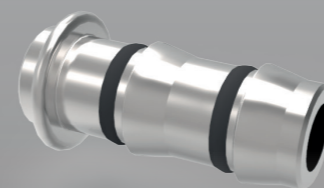
### STAR-FIT™

Reusable and field attachable fitting solution designed to enable reduced maintenance costs and easy assembly both in the factory and in the field

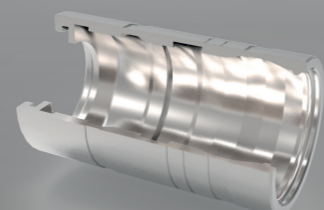
## FITTING SOLUTIONS FOR REFRIMASTER PLUS

### FRIGOCLIC™

A single insert with two distinct closing options to suit both the factory assembly and field service markets



A complete range of crimped fittings designed for repeatable, controlled crimping operations



Field attachable clip ideally suited to facilitate complex or bespoke routings and maintenance in the field



## REFRI MASTER PLUS

Compact construction style (Type E - SAE J2064) hose with high flexibility and exceptional permeability performance.

- Suitable for refrigeration and climate control applications
- Excellent compatibility with common refrigerant gases - R134a, R404a, R407C, R401A & HFO 1234yf
- Extremely low permeability rate across all sizes
- Improved flexibility and minimum bending radius
- High temperature resistance - up to 140°C
- Great resistance to kinking and collapse
- Optional crimped and field-attachable solutions

*Synthetic rubber outer cover made from an improved EPDM based compound*

*Textile braid reinforcement*

*Synthetic rubber inner tube with a thermoplastic (PA) veneer*