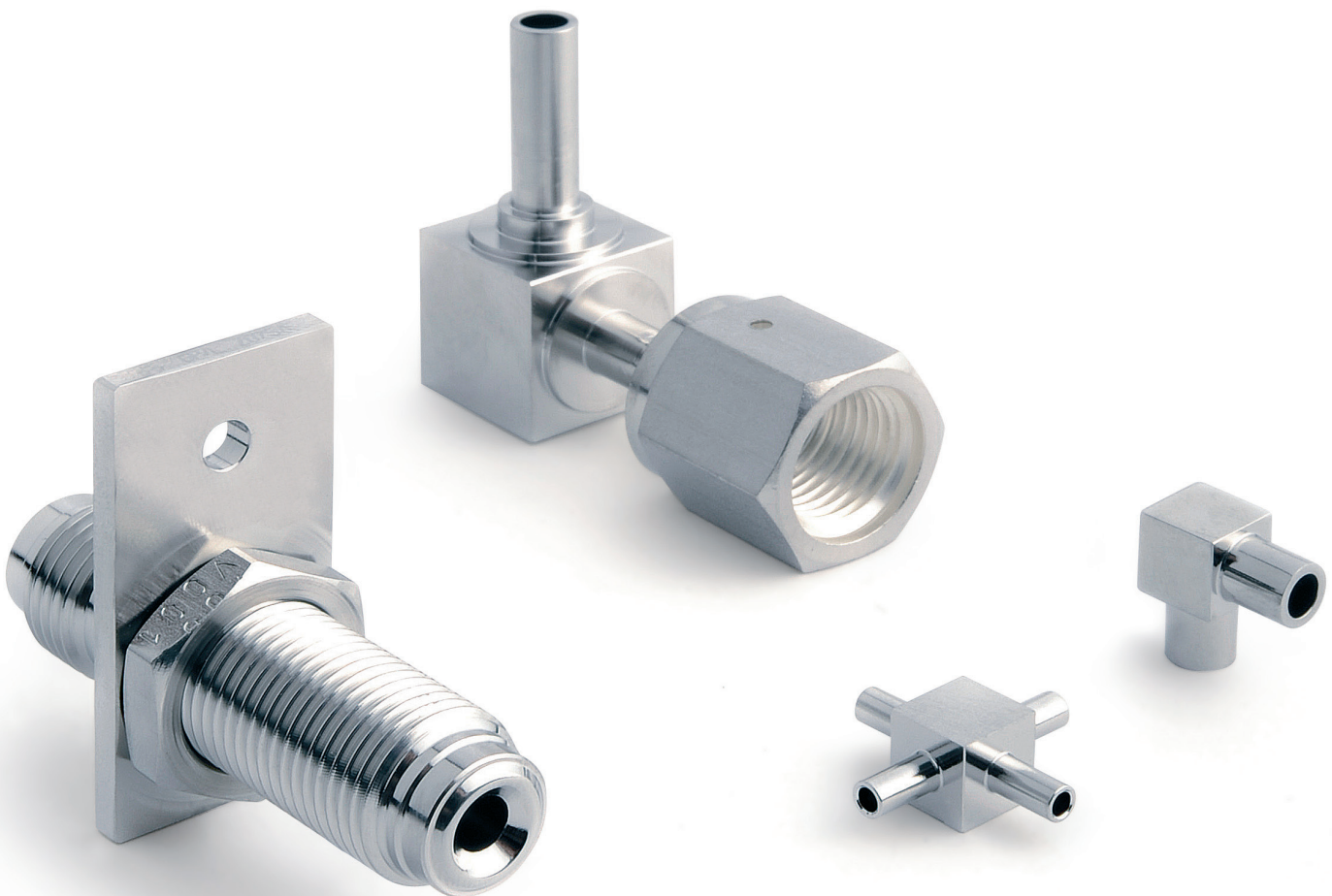




**ROTAREX**  
EQUIPMENT



ULTRA HIGH PURITY FITTINGS

**FLOWTEKNIK**  
SCANDINAVIA APS





# TABLE OF CONTENTS

---

<b>PRODUCT RANGE OVERVIEW</b>	P.004
<b>INTRODUCTION</b>	P.008
- Informations	P.008
- Descriptions	P.009
- Assembly	P.010
- Micro Fittings	P.011
- Weld Fittings	P.011
- Technical data	P.012
- Nomenclature	P.014
<b>PRODUCTS</b>	P.016
- Metal Gasket Face Seal Fittings	P.016
- Space savers Fittings	P.036
- High flow Fittings	P.050
- Micro Fittings	P.053
- Weld Fittings	P.059

# METAL GASKET FACE SEAL FITTINGS



**DNI-R/JSS-R** P. 016



**DNI/JSS** P. 016



**FN** P. 017



**MN** P. 017



**SMN** P. 017



**EBF** P. 018



**EBM** P. 018



**EBL** P. 018



**MG.EMC** P. 019



**MG.EM** P. 019



**EMCS-AB** P. 020



**EMS-AB** P. 020



**EMC-AB** P. 021



**EM-AB** P. 021



**EMR-AB** P. 022



**EFC** P. 022



**RSW** P. 022



**EF** P. 023



**EM** P. 023



**TA** P. 023



**MG.EFC** P. 024



**MG.EF** P. 024



**EFR-AB** P. 024



**EFC-AB** P. 025



**EF-AB** P. 025



**UM** P. 026



**DMRU** P. 026



**STMC** P. 026



**RA** P. 027



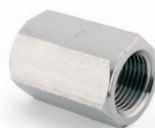
**RB** P. 027



**U-FM** P. 027



**CG** P. 028



**DFRU** P. 028



**U-F** P. 028



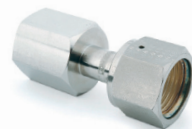
**UM-NPT** P. 029



**UF-NPT** P. 029



**UM-NPTF** P. 030



**UF-NPTF** P. 030













**UM-DB** P. 031



**UF-DB** P. 031

# METAL GASKET FACE SEAL FITTINGS (continued)

				
<b>BUP</b> P. 032	<b>TC</b> P. 032	<b>BU</b> P. 000	<b>BU-ABW</b> P. 033	<b>BU-NPT</b> P. 033
				
<b>BU-DB</b> P. 033	<b>E-NPT</b> P. 034	<b>E</b> P. 034	<b>T</b> P. 035	<b>C</b> P. 035

# SPACE SAVER FITTINGS

					
<b>ED-2M</b> P. 036	<b>ED-FM</b> P. 036	<b>ED-2F</b> P. 036	<b>EX M-</b> P. 037	<b>MG. EX M.-</b> P. 037	<b>EX F.-</b> P. 037
					
<b>MG.EX F.-</b> P. 037	<b>TD-3M</b> P. 038	<b>TD-F.2M</b> P. 038	<b>TD-MFM</b> P. 038	<b>TD-FMF</b> P. 039	<b>TD-M.2F</b> P. 039
					
<b>TD-3F</b> P. 039	<b>TX-.M.-</b> P. 040	<b>MG.TX-.M.-</b> P. 040	<b>TX-.F.-</b> P. 040	<b>MG.TX-.F.-</b> P. 040	<b>TX2-.M</b> P. 041
					
<b>MG.TX2-.M</b> P. 041	<b>TX2-.F</b> P. 041	<b>MG.TX2-.F</b> P. 041	<b>TX-.2M</b> P. 042	<b>MG.TX-.2M</b> P. 042	<b>TX-.FM</b> P. 042
					
<b>MG.TX-.FM</b> P. 042	<b>TX-.MF</b> P. 043	<b>MG.TX-.MF</b> P. 043	<b>TX-.2F</b> P. 043	<b>MG.TX-.2F</b> P. 043	<b>TX M.-.M</b> P. 044

## SPACE SAVER FITTINGS (continued)



**MG-TX M.-M** P. 044



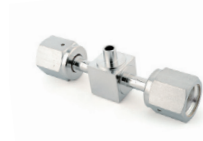
**TX F.-M** P. 044



**MG.TX F.-M** P. 045



**TX-F-F** P. 045



**MG.TX F.-F** P. 045



**CD-4M** P. 046



**CD-F.3M** P. 046



**CD-2M.2F** P. 046



**CD-FMFM** P. 047



**CD-4F** P. 047



**CX M.-M.-** P. 048



**MG.CX M.-M.-** P. 048



**CX F.-M.-** P. 048



**MG.CX F.-M.-** P. 049



**CX F.-F.-** P. 049



**MG.CX F.-F.-** P. 049

## HIGH FLOW FITTINGS



**FN-HF** P. 050



**MN-HF** P. 050



**EM-HF** P. 050



**UM-ABW HF** P. 051



**UM-AB HF** P. 051



**BU-HF** P. 051



**E-HF** P. 052



**T-HF** P. 052

# MICRO FITTINGS

<b>MG.RU-</b> P. 053	<b>MG.E-</b> P. 053	<b>MG.FE-</b> P. 053	<b>MG.EL-</b> P. 054	<b>MG.E5-</b> P. 054
<b>MG.RE-</b> P. 055	<b>-/MG.E-</b> P. 055	<b>MG.T-</b> P. 056	<b>MG.FT-</b> P. 056	<b>MG.TL-</b> P. 057
<b>MG.TUL</b> P. 057	<b>MG.RT-</b> P. 058	<b>MG.C-</b> P. 058		

# WELD FITTINGS

<b>US-AB</b> P. 059	<b>RU-ABW</b> P. 059	<b>RU-AB</b> P. 059	<b>E-ABW</b> P. 060	<b>RE-ABW</b> P. 060
<b>E-AB</b> P. 061	<b>RE-AB</b> P. 061	<b>T-ABW</b> P. 062	<b>RT-ABW</b> P. 062	<b>RTCA-W</b> P. 063
<b>MTCA-AB</b> P. 063	<b>T-AB</b> P. 064	<b>RT-AB</b> P. 064	<b>C-ABW</b> P. 065	<b>C-AB</b> P. 065

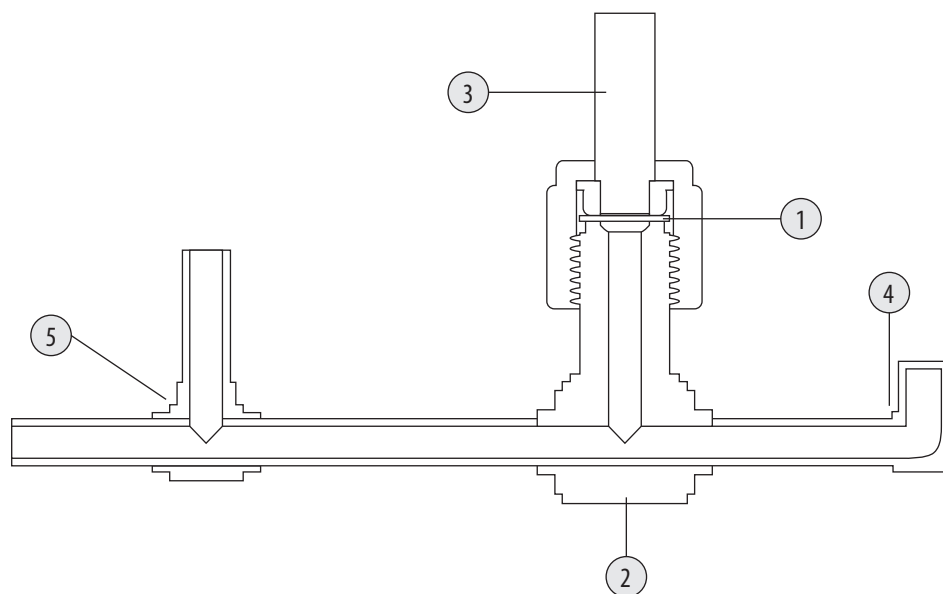
# INFORMATION

### GAZEL® FITTINGS HAVE BEEN INTRODUCED OVER THE WORLD TO MEET FIVE MAIN REQUIREMENTS:

- Provide quick assembly and dismantling of components and tubing.
- Guarantee perfect leak free service under vacuum and pressure.
- Achieve high quality butt welding between tube and fittings.
- Reduce dead volumes and measurements.
- Answer to highest advanced specifications.

### OUR RANGE IS SPLIT UP INTO FIVE LARGE FAMILIES OF FITTINGS:

- 1 Metal gasket Face Seal Fittings
- 2 Space savers fittings (combination of detachable and orbital weld ends)
- 3 High-Flow fittings
- 4 Micro fittings
- 5 Weld fittings



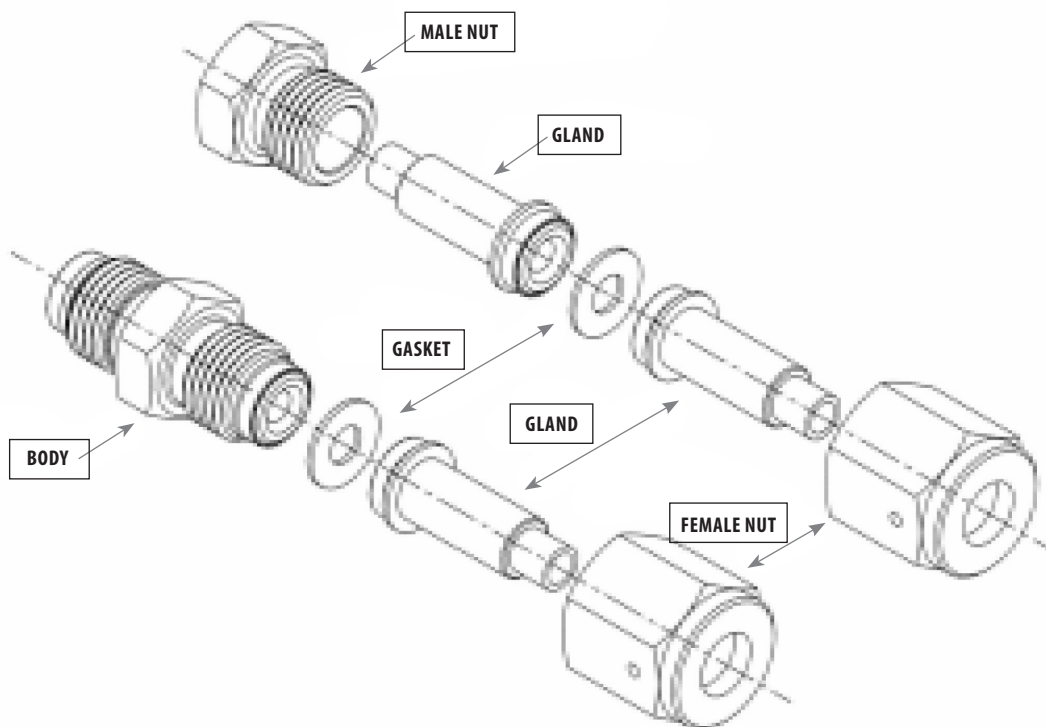
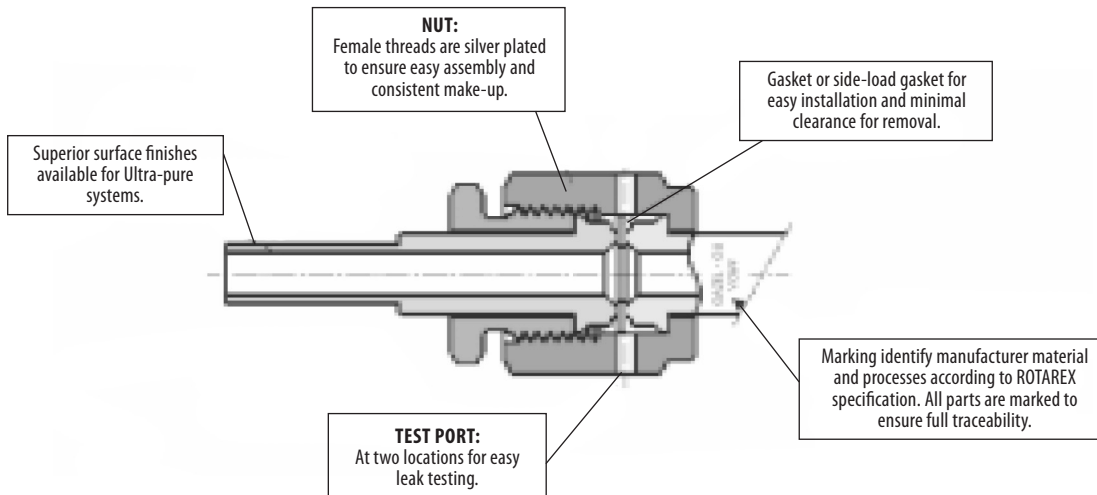


# DESCRIPTION

## GAZEL® METAL GASKET FACE SEAL FITTING

GAZEL® components offer the high purity of a metal to metal seal, providing leak-free service from critical vacuum to high pressure.

The seal on a GAZEL® assembly is made when the gasket is compressed by two highly polished beads during the engagement of a male nut or body hex and a female nut.



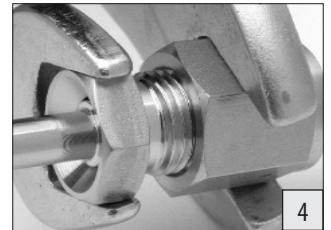
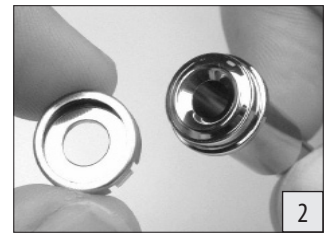
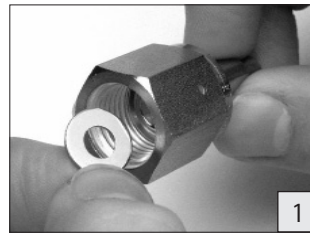
# ASSEMBLY

When using an original style gasket, place it into the female nut whenever possible. No special positioning is needed, because the gasket is self-aligning. (see picture 1)

When using a gasket retainer assembly, press the assembly onto the gland as shown. The retainer assembly will locate the gasket over the bead and hold it in place. Be careful not to scratch or nick the bead as this may affect fitting performance. (see picture 2)

To assemble the connection, hold the male nut or body hex stationary. Tighten the female nut finger-tight. (see picture 3)

Hold the male nut or body hex stationary with a backup wrench. Tighten the female nut 1/8 turn past finger-tight for 316L stainless steel and nickel gaskets. (see picture 4)

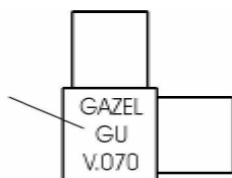


Excessive over-tightening will damage the sealing beads and possibly cause system leakage. The using of a new gasket is necessary for each assembly (the gasket is of single use).

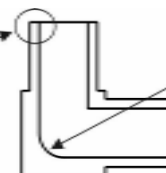
## MICRO FITTINGS

A variety of Micro fittings is available with controlled surface finishes, electropolishing and optimal cleaning according to the ROTAREX Specification and SEMASPEC to meet U.H.P system requirements.

Laser marking identifies manufacturer, material and processes according to the ROTAREX Specification. All parts are laser marked to ensure full traceability.



Square, sharp, burr-free tube weld ends enhance alignment maintain tube wall uniformity, and promote weld repeatability.



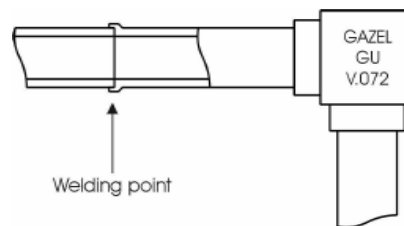
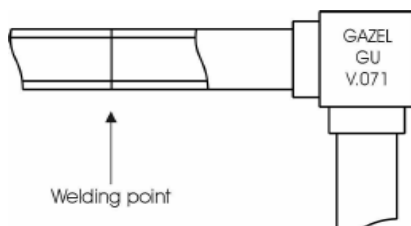
Radius junction allows for a smooth flow transition and is designed to eliminate pockets and entrapment zones.

These Micro fittings provide compact U.H.P designs for use with orbital weld equipment.

## WELD FITTINGS

We provide two types of configurations for the welding section:

- Without shoulder
- With shoulder



### WITHOUT SHOULDER

This is the optimal configuration for butt welding using an automatic TIG welding machine.

### WITH SHOULDER

Automatic welding configuration with shoulder to facilitate meeting under difficult welding conditions such as not easily accessible or outside piping.

## TECHNICAL DATA

### MATERIALS

Products	Material	Specifications
Gasket	Nickel	ASTM B-162
	316L Stainless steel	ASTM A-167
Nuts	316L Stainless steel	ASME SA-479, ASTM A-276
Glands, Bodies	316L Stainless steel	Barstock: ASME SA-479, ASTM A-276
	low sulfur	Forgings: ASTM A-182
	VIM VAR 316L Stainless steel	Barstock: ASME SA-479, ASTM A-276 Forgings: ASTM A-182

### DIMENSIONS

Dimensions are in millimeters and in inches.  
Dimensions are only for reference and are subject to change.

Size		Fractional						Metric					Jis	
		1/8"	1/4"	3/8"	1/2"	3/4"	1"	6 mm	8 mm	10 mm	12 mm	18 mm	1/4"	3/8"
Nominal wall thickness	mm	0,71	0,89	0,89	1,25	1,25	1,65	1	1	1	1	1,5	1	1
	inch	0,028	0,035	0,035	0,049	0,049	0,065	0,039	0,039	0,039	0,039	0,059	0,039	0,039
Pressure ratings	PSIG	5100	5100	3300	3500	2400	2400	6800	4800	3500	3100	3000	5600	3300
	Bar	350	350	220	240	160	160	460	330	240	210	200	380	240

### INTERNAL SURFACE FINISH

Grade	Surface finish		Electropolishing
	Ra $\mu$ m	Ra $\mu$ inch	
GP	0,15	5	Int. / Ext.
GS	0,40	16	Ext.

### FULL TRACEABILITY

Laser etch marking identifies manufacturer, material, processes and surface levels.

### PACKAGING

Double packing in class 10 clean room.

## TECHNICAL DATA (continued)

---

### TESTING

---

Gazel fittings has been helium leak tested to a rate of 10 –10 std cm<sup>3</sup>/sec.

### PRESSURE RATINGS

---

Pressure ratings are calculated in accordance with power piping code ANSI B 31.1 for stainless steel fittings at ambient temperature.

### MAX. TEMPERATURE

---

Material	Temperature	
	°C	°F
Nickel	315	600
316L Stainless steel VIM VAR and low sulfur	537	1000

### PRODUCT INSPECTION AND TEST

---

#### Product inspection

- Dimensional inspection
- Internal and external visual
- Inspection
- Internal roughness measurement

The following tests are carried out at the request of customers:

- ESCA: Electron Spectroscopy for Chemical Analyses
- AES: Argon Electron Spectroscopy
- Corrosion test
- Internal fitting measurement

### THREE STAR QUALITY PROCESS

---

- ISO 9001 Certification  
N°:DE-062832 Q1.
- Fully integrated processing  
(machining, electropolishing, decontamination,  
packaging, orbital welding).
- Fully traceability at all steps (SPC CAQS).
- Continuous monitoring of key process parameters.

# NOMENCLATURE

## HOW TO ORDER

- The part number on the fittings data sheets designate the type and the size.
- Just add the material and the surface finish composition symbols shown below.

**EXAMPLE:**

- For material composition add A,L,V,M,N or H.
- For surface finish add GS or GP.

## PART NUMBER



**EXAMPLE: EMC 14 AB \ V \ GP**

- ① Gives the type and size of the fittings
- ② A = 316L Standard  
L = 316L Low Sulfur (av. S: 0.005%)  
V = 316L VIM VAR  
M = Low Manganese (on request)  
N = NICKEL  
H = Hastelloy® C-22 (on request)
- ③

Grade	Surface finish		Electropolishing
	Ra μm	Ra μinch	
GP	0,15	5	Int. / Ext.
GS	0,40	16	Ext.

Diameter	Fractional							Metric					Jis	
	1/16"	1/8"	1/4"	3/8"	1/2"	3/4"	1"	6 mm	8 mm	10 mm	12 mm	18 mm	1/4"	3/8"
Size Part Number	116	18	14	38	12	34	100	6M	8M	10M	12M	18M	14J	38J

# NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

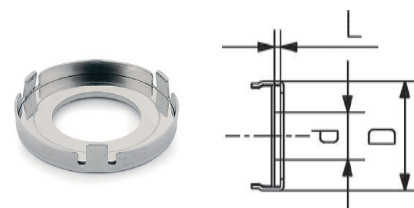
---

---

## GASKET | NICKEL GASKET & RETAINER

### TUBE SIZE

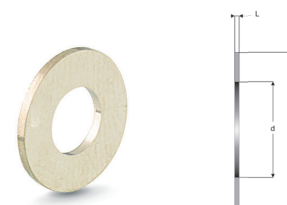
Tube O.D.	Part number	L		d		D	
		mm	inch	mm	inch	mm	inch
¼", 6 mm, 8 mm	DNI 14 R <sup>3</sup>	0,7	0,03	6,1	0,24	12,7	0,50
⅜", ½", 10 mm, 12 mm	DNI 12 R <sup>3</sup>	0,7	0,03	11,2	0,44	20,1	0,79
¾", 18 mm	DNI 34 R	0,7	0,03	16,8	0,66	29,0	1,14
1"	DNI 100 R	0,7	0,03	22,6	0,89	25,6	1,40



## GASKET | NICKEL

### TUBE SIZE

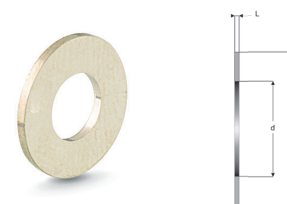
Tube O.D.	Part number	L		d		D	
		mm	inch	mm	inch	mm	inch
⅛"	DNI 18	0,5	0,02	2,3	0,09	6,6	0,26
¼", 6 mm, 8 mm	DNI 14	0,7	0,03	6,1	0,24	11,9	0,47
⅜", ½", 10 mm, 12 mm	DNI 12	0,7	0,03	11,2	0,44	19,8	1,78
¾", 18 mm	DNI 34	0,7	0,03	16,8	0,66	29,0	1,14
1"	DNI 100	0,7	0,03	22,6	0,89	35,6	1,40



## GASKET | SILVER PLATED 316L

### TUBE SIZE

Tube O.D.	Part number	L		d		D	
		mm	inch	mm	inch	mm	inch
⅛"	JSS 18	0,5	0,02	2,3	0,09	6,6	0,26
¼", 6 mm, 8 mm	JSS 14 <sup>1,2</sup>	0,7	0,03	6,1	0,24	11,9	0,47
⅜", ½", 10 mm, 12 mm	JSS 12 <sup>1</sup>	0,7	0,03	11,2	0,44	19,8	1,78
¾", 18 mm	JSS 34 <sup>1</sup>	0,7	0,03	16,8	0,66	29,0	1,14
1"	JSS 100 <sup>1</sup>	0,7	0,03	22,6	0,89	35,6	1,40



<sup>1</sup> On request: for silver plated Nickel, use the prefix JNI (Example: JNI 14)

<sup>2</sup> On request: blind gasket, use part number JSS 14 EB

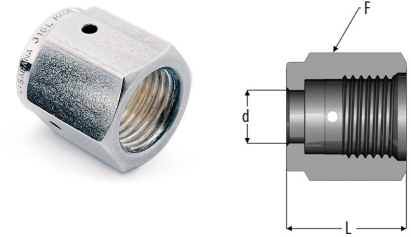
<sup>3</sup> On request in stainless steel, use the prefix JSS (Example: JSS 14 R)



## NUTS | FEMALE NUT

### TUBE SIZE

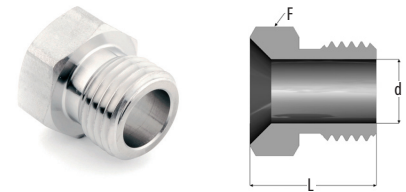
Tube O.D.	Part number	L		d		F
		mm	inch	mm	inch	mm
1/8"	FN 18	13,5	0,53	5,3	0,21	11,1
1/4", 6 mm, 8 mm	FN 14	20,6	0,81	9,1	0,36	19,1
3/8", 1/2", 10 mm, 12 mm	FN 12	22,4	0,88	15,5	0,61	27,0
3/4", 18 mm	FN 34	28,4	1,12	22,6	0,89	38,1
1"	FN 100	34,0	1,34	30,5	1,20	44,5



## NUTS | MALE NUT

### TUBE SIZE

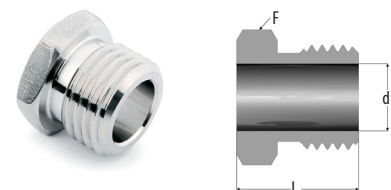
Tube O.D.	Part number	L		d		F
		mm	inch	mm	inch	mm
1/8"	MN 18	12,7	0,50	5,3	0,21	9,5
1/4", 6 mm, 8 mm	MN 14 <sup>1</sup>	18,0	0,71	9,1	0,36	15,9
3/8", 1/2", 10 mm, 12 mm	MN 12	20,6	0,81	15,5	0,61	23,8
3/4", 18 mm	MN 34	25,4	1,00	22,6	0,89	33,3
1"	MN 100	30,2	1,19	30,5	1,20	41,3



## NUTS | SHORT MALE NUT

### TUBE SIZE

Tube O.D.	Part number	L		d		F
		mm	inch	mm	inch	mm
1/4", 6 mm, 8 mm	SMN 14	13,7	0,54	9,1	0,36	15,9
1/4", 6 mm, 8 mm	SMN 14.6	16,5	0,65	9,1	0,36	15,9

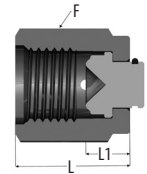


<sup>1</sup> A taper at the hex allows the nut to move around 90° tube bends

## PLUGS | FEMALE CAP

### TUBE SIZE

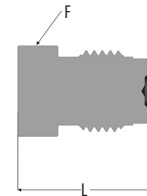
Tube O.D.	Part number	L		L1		F
		mm	inch	mm	inch	
¼", 6 mm, 8 mm	EBF 14 <sup>1</sup>	23,9	0,94	11,2	0,44	19,1
⅜", ½", 10 mm, 12 mm	EBF 12 <sup>1</sup>	25,6	1,01	11,4	0,45	27,0
¾", 18 mm	EBF 34	32,8	1,29	13,7	0,54	38,1
1"	EBF 100	39,1	1,54	16,0	0,63	44,5



## PLUGS | MALE PLUG

### TUBE SIZE

Tube O.D.	Part number	L		F
		mm	inch	
⅛"	EBM 18	17,3	0,68	9,5
¼", 6 mm, 8 mm	EBM 14 <sup>2,3</sup>	23,4	0,92	15,9
⅜", ½", 10 mm, 12 mm	EBM 12 <sup>3</sup>	27,4	1,08	23,8
¾", 18 mm	EBM 34	36,3	1,43	33,3
1"	EBM 100	38,6	1,52	41,3



## PLUGS | GLAND PLUG

### TUBE SIZE

Tube O.D.	Part number	L	
		mm	inch
⅛"	ELB 18	17,8	0,70
¼", 6 mm, 8 mm	ELB 14 <sup>4</sup>	33,3	1,31
⅜", ½", 10 mm, 12 mm	ELB 12	38,1	1,50
¾", 18 mm	ELB 34	50,8	2,00
1"	ELB 100	56,4	2,22



<sup>1</sup> On request with lanyard, use EBF1 as a part number (Example: EBF1 14)

<sup>2</sup> Also available as a rotatable plug. Ordering number: EBMR 14

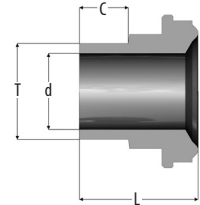
<sup>3</sup> On request with lanyard, use EBML as a part number (Example: EBML 14)

<sup>4</sup> On request it can be delivered with L = 19.0 (0.75") Part number: EB 14

## GLANDS | MINI SHORT FEMALE GLAND

### TUBE SIZE

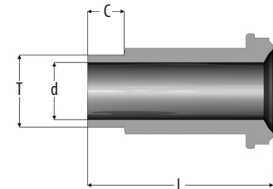
Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
¼"	MG.EMC 14 <sup>1</sup>	15,2	0,60	4,6	0,18	6,4	0,25	0,89	0,035	5100	350
⅜"	MG.EMC 38	15,7	0,62	7,7	0,30	6,4	0,25	0,89	0,035	3300	220
½"	MG.EMC 12	15,7	0,62	10,2	0,40	6,4	0,25	1,25	0,049	3500	240
<b>METRIC</b>											
6 mm	MG.EMC 6M	15,2	0,60	4,0	0,16	6,4	0,25	1,0	0,039	6800	460
8 mm	MG.EMC 8M	15,7	0,62	6,0	0,24	6,4	0,25	1,0	0,039	4800	330
<b>JIS</b>											
¼"	MG.EMC 14J	15,2	0,60	4,4	0,17	6,4	0,25	1,0	0,039	5600	380
⅜"	MG.EMC 38J	15,7	0,62	7,5	0,39	6,4	0,25	1,0	0,039	3500	240



## GLANDS | MINI MALE GLAND

### TUBE SIZE

Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
⅛"	MG.EM 18 <sup>2</sup>	23,4	0,92	2,1	0,08	6,4	0,25	0,71	0,028	5100	350
¼"	MG.EM 14	30,5	1,20	4,6	0,18	6,4	0,25	0,89	0,035	3300	220
⅜"	MG.EM 38	32,8	1,29	7,7	0,30	6,4	0,25	0,89	0,035	3300	240
½"	MG.EM 12	32,8	1,29	10,2	0,40	6,4	0,25	1,25	0,049	3500	240
<b>METRIC</b>											
6 mm	MG.EM 6M	30,5	1,20	4,0	0,16	6,4	0,25	1,0	0,039	6800	460
<b>JIS</b>											
¼"	MG.EM 14J	30,5	1,20	4,4	0,17	6,4	0,25	1,0	0,039	5600	380
⅜"	MG.EM 38J	32,8	1,29	7,5	0,29	6,4	0,25	1,0	0,039	3500	240

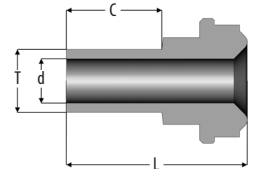


1) On request in Alloy C-22 (HC22) material  
2) Minimum quantity

## GLANDS | AUTOMATIC TUBE WELD SHORT FEMALE GLAND

### TUBE SIZE

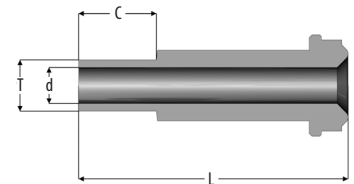
Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
¼"	EMCS 14 AB	18,3	0,72	4,6	0,18	9,6	0,38	0,89	0,035	5100	350
½"	EMCS 12 AB	18,8	0,74	10,2	0,40	9,6	0,38	1,25	0,049	3500	240
<b>JIS</b>											
¼"	EMCS 14J AB	18,3	0,72	4,4	0,17	9,6	0,38	1,0	0,039	5600	380
⅜"	EMCS 38J AB	18,8	0,74	7,5	0,29	9,6	0,38	1,0	0,039	3500	240



## GLANDS | AUTOMATIC TUBE WELD MALE GLAND

### TUBE SIZE

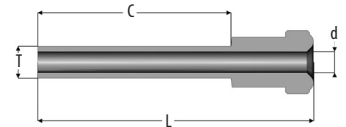
Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
¼"	EMCA 14 AB	33,3	1,31	4,6	0,18	9,1	0,36	0,89	0,035	5100	350
¼"	EMS 14 AB	33,5	1,32	4,6	0,18	9,6	0,38	0,89	0,035	5100	350
½"	EMS 12 AB	33,8	1,33	10,2	0,40	9,6	0,38	1,25	0,049	3500	240
<b>JIS</b>											
¼"	EMS 14J AB	33,5	1,32	4,4	0,17	9,6	0,38	1,0	0,039	5600	380
⅜"	EMS 38J AB	35,8	1,41	7,5	0,29	9,6	0,38	1,0	0,039	3500	240



## GLANDS | AUTOMATIC TUBE WELD SHORT FEMALE GLAND

### TUBE SIZE

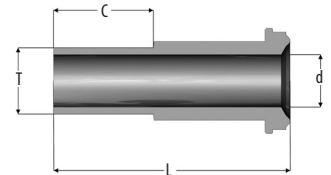
Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
½"	EMC 18 AB <sup>2</sup>	27,4	1,08	2,1	0,08	19,1	0,75	0,71	0,028	5100	350
¼"	EMC 14 AB <sup>2</sup>	27,9	1,10	4,6	0,18	19,1	0,75	0,89	0,035	5100	350
⅜"	EMC 38 AB <sup>2</sup>	28,4	1,12	7,7	0,30	19,1	0,75	0,89	0,035	3300	220
½"	EMC 12 AB <sup>2</sup>	28,4	1,12	10,2	0,40	19,1	0,75	1,25	0,049	3500	240
<b>METRIC</b>											
6 mm	EMC 6M AB	29,5	1,16	4,0	0,16	19,1	0,75	1,0	0,039	6800	460
8 mm	EMC 8M AB	29,5	1,16	6,0	0,24	19,1	0,75	1,0	0,039	4800	330
10 mm	EMC 10M AB	29,5	1,16	8,0	0,31	19,1	0,75	1,0	0,039	3500	240
12 mm	EMC 12M AB	29,5	1,16	10,0	0,39	19,1	0,75	1,0	0,039	3100	210
18 mm	EMC 18M AB <sup>2</sup>	31,0	1,22	15,0	0,59	19,1	0,75	1,5	0,059	3000	200
<b>JIS</b>											
¼"	EMC 14J AB	27,9	1,10	4,4	0,17	19,1	0,75	1,0	0,039	5600	380
⅜"	EMC 38J AB	28,4	1,12	7,5	0,29	19,1	0,75	1,0	0,039	3300	240



## GLANDS | AUTOMATIC TUBE WELD MALE GLAND

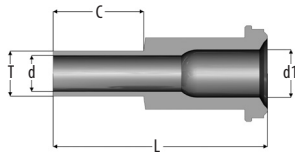
### TUBE SIZE

Tube O.D.	Part number	L		d		C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
<b>FRACTIONAL</b>											
⅝"	EM 18 AB <sup>2)</sup>	36,1	1,42	2,1	0,08	19,1	0,75	0,71	0,028	5100	350
¼"	EM 14 AB <sup>1</sup>	43,2	1,70	4,6	0,18	19,1	0,75	0,89	0,035	5100	350
⅜"	EM 38 AB	45,5	1,79	7,7	0,30	19,1	0,75	0,89	0,035	3300	220
½"	EM 12 AB	45,5	1,79	10,2	0,40	19,1	0,75	1,25	0,049	3500	240
¾"	EM 34 AB	51,6	2,03	16,5	0,65	19,1	0,75	1,25	0,049	2400	160
1"	EM 100 AB	58,9	2,32	22,1	0,87	19,1	0,75	1,65	0,065	2400	160
<b>METRIC</b>											
6 mm	EM 6M AB	43,1	1,70	4,0	0,16	19,1	0,75	1,0	0,039	6800	460
8 mm	EM 8M AB	43,1	1,70	6,0	0,24	19,1	0,75	1,0	0,039	4800	330
10 mm	EM 10M AB	45,5	1,79	8,0	0,31	19,1	0,75	1,0	0,039	3500	240
12 mm	EM 12M AB	45,5	1,79	10,0	0,39	19,1	0,75	1,0	0,039	3100	210
18 mm	EM 18M AB	51,6	2,03	15,0	0,59	19,1	0,75	2,5	0,059	3100	200
<b>JIS</b>											
¼"	EM 14J AB	43,2	1,70	4,4	0,17	19,1	0,75	1,0	0,039	5600	380
⅜"	EM 38J AB	45,5	1,79	7,5	0,29	19,1	0,75	1,0	0,039	3300	240



1) On request in Alloy C-22 (HC22) material  
2) Minimum quantity

## GLANDS | AUTOMATIC TUBE WELD REDUCING MALE GLAND



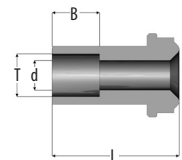
### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		C		Nominal Wall Thickness		Working Pressure	
			mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
1/2"	1/4"	EMR 12 14 AB	45,5	1,79	10,2	0,40	4,6	0,18	19,1	0,75	0,89	0,035	3500	240
1/2"	3/8"	EMR 12 38 AB	45,5	1,79	10,2	0,40	7,7	0,30	19,1	0,75	0,89	0,035	3300	220
1/2"	1/4"	EMCR 12 14 AB	28,4	1,12	10,2	0,40	4,6	0,18	19,1	0,75	0,89	0,035	3500	240
1/2"	3/8"	EMCR 12 38 AB <sup>1</sup>	28,4	1,12	10,2	0,40	7,7	0,30	19,1	0,75	0,89	0,035	3300	220

## GLANDS | SHORT SOCKET WELD GLAND

### TUBE SIZE - FRACTIONAL

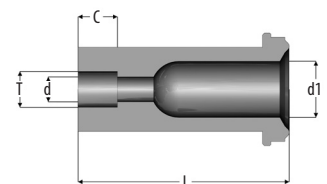
T Tube O.D.	Part number	L		d		B	Working Pressure	
		mm	inch	mm	inch		PSIG	bar
1/4"	EFCS 14	12,7	0,50	4,6	0,18	7,9	5500	370
1/4"	EFC 14	19,1	0,75	4,6	0,18	7,1	5500	370



## GLANDS | REDUCING SOCKET WELD GLAND

### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		B	Working Pressure	
			mm	inch	mm	inch	mm	inch		PSIG	bar
1/4"	1/8"	RSW 14 18	33,3	1,31	4,6	0,18	2,1	0,08	2,5	8000	550
1/2"	1/4"	RSW 12 14	38,0	1,50	10,2	0,40	4,6	0,18	7,1	3500	240

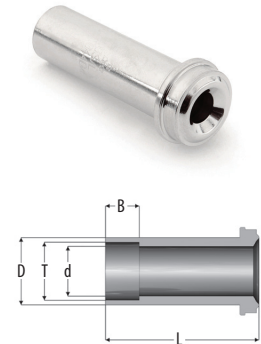


1) On request in Alloy C-22 (HC22) material

## GLANDS | SOCKET WELD GLAND

### TUBE SIZE - FRACTIONAL

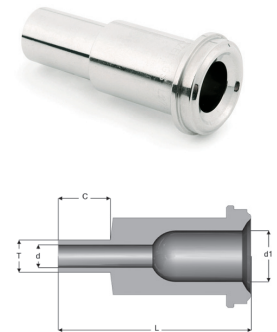
T Tube O.D.	Part number	L		d		D	B	Working Pressure	
		mm	inch	mm	inch			PSIG	bar
1/16"	EF 116 <sup>1,2</sup>	17,8	0,70	1,5	0,06	3,3	2,5	9000	620
1/8"	EF 18	17,8	0,70	2,1	0,08	5,1	2,5	7100	480
1/4"	EF 14	33,3	1,31	4,6	0,18	8,9	7,1	5500	370
3/8"	EF 38	38,1	1,50	7,7	0,30	15,2	8,0	3500	240
1/2"	EF 12	38,1	1,50	10,2	0,40	15,2	9,6	3000	200
3/4"	EF 34	50,8	2,00	16,5	0,65	22,4	11,2	2800	190
1"	EF 100	56,4	2,22	22,1	0,87	30,2	15,7	2400	160



## GLANDS | MALE WELD GLAND

### TUBE SIZE - FRACTIONAL

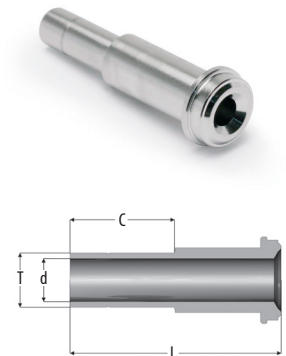
T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		C		Working Pressure	
			mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
1/8"	1/8"	EM 18	17,8	0,70	1,5	0,06	2,1	0,08	7,1	0,28	9000	620
1/4"	1/8"	EMR 14 18	33,3	1,31	1,5	0,06	2,1	0,08	7,1	0,28	8000	550
1/4"	1/4"	EM 14	33,3	1,31	3,0	0,12	4,6	0,18	10,4	0,41	8000	550
1/2"	1/4"	EMR 12 14	38,1	1,50	3,0	0,12	4,6	0,18	10,4	0,41	3500	240
1/2"	3/8"	EM 38	38,1	1,50	7,1	0,28	7,7	0,30	10,4	0,41	3500	240
1/2"	1/2"	EM 12	38,1	1,50	10,2	0,40	10,2	0,40	12,7	0,50	3500	240
3/4"	3/4"	EM 34	50,8	2,00	13,5	0,53	16,5	0,65	15,7	0,62	3000	200
1"	1"	EM 100	56,4	2,22	19,1	0,75	22,1	0,87	20,6	0,81	2400	160



## GLANDS | TUBE ADAPTER

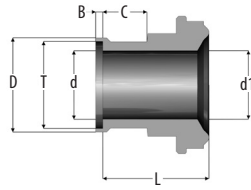
### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	Part number	L		d		C		Working Pressure	
		mm	inch	mm	inch	mm	inch	PSIG	bar
1/4"	TA 14	41,0	1,61	4,6	0,18	16,2	0,64	2400	160
3/8"	TA 38	46,0	1,81	7,7	0,30	17,8	0,70	1500	100
1/2"	TA 12	49,3	1,94	10,2	0,40	24,4	0,96	1500	100



1) Use DNI 18 and FN 18 or MN 18  
2) Minimum quantity

## GLANDS | MINI SHORT FEMALE GLAND



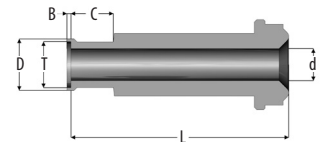
### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		D	B	C		Nominal Wall Thickness		Working Pressure	
			mm	inch	mm	inch	mm	inch			mm	inch	mm	inch	PSIG	bar
1/4"	1/8"	MG.EFC 14 18	15,6	0,61	4,6	0,18	2,1	0,08	3,8	0,3	6,4	0,25	0,71	0,028	5100	350
1/4"	1/4"	MG.EFC 14	15,7	0,62	4,6	0,18	4,6	0,18	7,4	0,5	6,4	0,25	0,89	0,035	5100	350
3/8"	3/8"	MG.EFC 38	16,5	0,65	7,7	0,30	7,7	0,30	10,5	0,8	6,4	0,25	0,89	0,035	3300	220
1/2"	1/2"	MG.EFC 12	16,7	0,66	10,2	0,40	10,2	0,40	14,0	1,0	6,4	0,25	1,25	0,049	3500	240

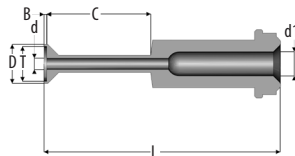
## GLANDS | MINI MALE GLAND

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		D	B	C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch			mm	inch	mm	inch	PSIG	bar
1/8"	MG.EF 18	23,8	0,94	2,1	0,08	3,8	0,5	6,4	0,25	0,71	0,028	5100	350
1/4"	MG.EF 14	31,0	1,22	4,6	0,18	7,4	0,5	6,4	0,25	0,89	0,035	5100	350
1/2"	MG.EF 12	33,8	1,33	10,2	0,40	14,0	1,0	6,4	0,25	1,3	0,049	3500	240



## GLANDS | AUTOMATIC TUBE WELD REDUCING GLAND



### TUBE SIZE - FRACTIONAL

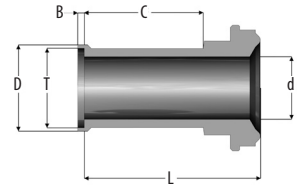
T Tube O.D.	Part number	L		d1		d		D	B	C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch			mm	inch	mm	inch	PSIG	bar
1/4"	EFR 14 18 AB	43,5	1,71	4,6	0,18	2,1	0,08	3,8	0,5	19,1	0,75	0,71	0,028	5100	350
1/4"	EFCR 14 18 AB	28,2	1,11	4,6	0,18	2,1	0,08	3,8	0,5	19,1	0,75	0,71	0,028	5100	350
1/2"	EFR 12 14 AB	46,2	1,82	10,2	0,40	4,6	0,18	7,4	0,5	19,1	0,75	0,89	0,035	3500	240
1/2"	EFR 12 38 AB	46,2	1,82	10,2	0,40	7,7	0,30	14,0	0,8	19,1	0,75	0,89	0,035	3500	240



## GLANDS | AUTOMATIC TUBE WELD SHORT FEMALE GLAND

### TUBE SIZE

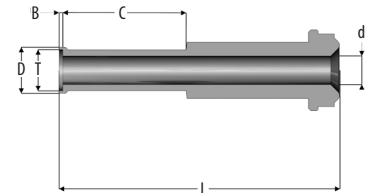
T Tube O.D.	Part number	L		d		D	B	C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch			mm	mm	mm	inch	mm	inch
<b>FRACTIONAL</b>													
¼"	EFC 14 AB	28,4	1,12	4,6	0,18	7,4	0,5	19,1	0,75	0,89	0,035	5100	350
⅜"	EFC 38 AB	29,2	1,15	7,7	0,30	10,5	0,8	19,1	0,75	0,89	0,035	3300	220
½"	EFC 12 AB	29,5	1,16	10,2	0,40	14,0	1,0	19,1	0,75	1,25	0,049	3500	240
<b>METRIC</b>													
6 mm	EFC 6M AB	30,0	1,18	4,0	0,16	6,9	0,5	19,1	0,75	1,0	0,039	6800	460
8 mm	EFC 8M AB	30,2	1,19	6,0	0,24	8,9	0,8	19,1	0,75	1,0	0,039	4800	330
10 mm	EFC 10M AB	31,0	1,22	8,0	0,31	10,9	0,8	19,1	0,75	1,0	0,039	3500	240
12 mm	EFC 12M AB	30,5	1,20	10,0	0,39	13,2	1,0	19,1	0,75	1,0	0,039	3100	210
<b>JIS</b>													
¼"	EFC 14J AB	43,7	1,72	4,4	0,17	7,4	0,5	19,1	0,75	1,0	0,039	5600	380
⅜"	EFC 38J AB	46,2	1,82	7,5	0,29	10,5	0,8	19,1	0,75	1,0	0,039	3500	240



## GLANDS | AUTOMATIC TUBE WELD MALE GLAND

### TUBE SIZE

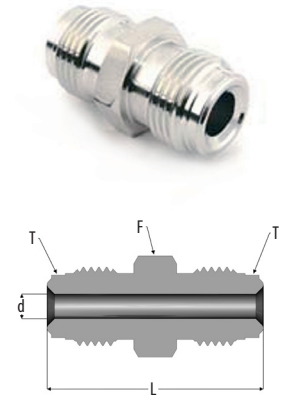
T Tube O.D.	Part number	L		d		D	B	C		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch			mm	mm	mm	inch	mm	inch
<b>FRACTIONAL</b>													
¼"	EF 14 AB	43,7	1,72	4,6	0,18	7,4	0,5	19,1	0,75	0,89	0,035	5100	350
⅜"	EF 38 AB	46,2	1,82	7,7	0,30	10,5	0,8	19,1	0,75	0,89	0,035	3300	220
½"	EF 12 AB	46,5	1,83	10,2	0,40	14,0	1,0	19,1	0,75	1,25	0,049	3500	240
¾"	EF 34 AB	52,6	2,07	16,5	0,65	20,3	1,0	19,1	0,75	1,25	0,049	2400	160
½"	EF 100 AB	65,3	2,57	22,1	0,87	26,9	1,0	24,4	0,75	1,65	0,065	2400	160
<b>METRIC</b>													
6 mm	EF 6M AB	43,7	1,72	4,0	0,16	6,9	0,5	19,1	0,75	1,0	0,039	6800	460
8 mm	EF 8M AB	44,0	1,73	6,0	0,24	8,9	0,8	19,1	0,75	1,0	0,039	4800	330
12 mm	EF 12M AB	46,5	1,83	10,0	0,39	13,2	1,0	19,1	0,75	1,0	0,039	3500	240
18 mm	EF 18M AB	52,6	2,07	15,0	0,59	19,2	1,0	19,1	0,75	1,5	0,059	3100	210
<b>JIS</b>													
¼"	EF 14J AB	43,7	1,72	4,4	0,17	7,4	0,5	19,1	0,75	1,0	0,039	5600	380
⅜"	EF 38J AB	46,2	1,83	7,5	0,29	10,5	0,8	19,1	0,75	1,0	0,039	3500	240



## UNIONS | DOUBLE MALE UNION

### TUBE SIZE - FRACTIONAL

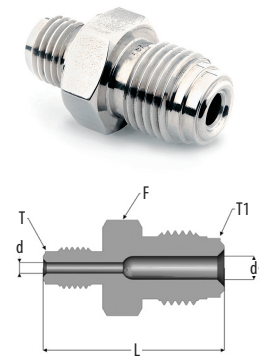
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		PSIG	bar
1/8"	UM 18 <sup>1</sup>	28,7	1,13	2,1	0,08	9,5	9000	620
1/4"	UM 14 <sup>1</sup>	39,4	1,55	4,6	0,18	15,9	8000	550
1/2"	UM 12 <sup>1</sup>	46,7	1,84	10,2	0,40	23,8	3500	240
3/4"	UM 34 <sup>1</sup>	62,0	2,44	16,5	0,65	33,3	3000	200
1"	UM 100 <sup>1</sup>	65,8	2,59	22,1	0,87	41,3	2400	160



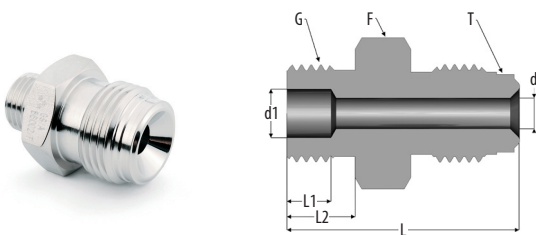
## UNIONS | DOUBLE MALE REDUCING UNION

### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		F	Working Pressure	
			mm	inch	mm	inch	mm	inch		PSIG	bar
1/4"	1/8"	DMRU 14 18 <sup>1</sup>	34,8	1,37	2,1	0,08	4,6	0,18	15,9	8000	550
1/2"	1/4"	DMRU 12 14 <sup>1</sup>	43,4	1,71	4,6	0,18	10,2	0,40	23,8	3500	240



## UNIONS | STRAIGHT THREAD MALE CONNECTOR, O-RING



### TUBE SIZE - FRACTIONAL

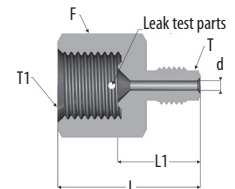
T Tube O.D.	Part number	L		L1	L2	d1		d		F	G	O-ring Size N°	Working Pressure	
		mm	inch			mm	inch	mm	inch				PSIG	bar
1/4"	STMC 14 <sup>1,2</sup>	33,8	1,33	6,4	9,9	7,1	0,28	4,6	0,18	19,1	9-16"-18	FLUOROCARBON 906	4500	310
1/2"	STMC 12 12 <sup>1,2</sup>	42,2	1,66	10,2	12,7	15	0,59	7,1	0,28	25,4	7/8"-14	FLUOROCARBON 910	3500	240
1/2"	STMC 12 14 <sup>1,2</sup>	37,6	1,48	6,4	9,9	7,1	0,28	7,1	0,28	23,8	3/4"-18	FLUOROCARBON 906	3500	240

1) These fittings should be assembled only with rotating male or female nuts  
 2) O-rings fluorocarbon FKM standard, other materials on request

## UNIONS | REDUCING ADAPTER

### TUBE SIZE - FRACTIONAL

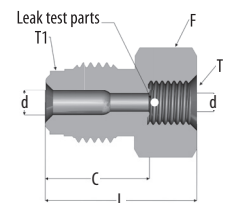
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d		F		Working Pressure	
			mm	inch		mm	inch	mm	PSIG	bar	
1/4"	1/8"	RA 14 18 <sup>1</sup>	30,2	1,19	17,5	2,1	0,08	19,1	8000	550	
1/2"	1/4"	RA 12 14 <sup>1</sup>	35,8	1,41	21,6	4,6	0,18	27,0	3500	240	



## UNIONS | REDUCING ADAPTER

### TUBE SIZE - FRACTIONAL

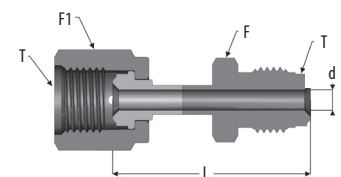
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d		F		Working Pressure	
			mm	inch		mm	inch	mm	PSIG	bar	
1/4"	1/8"	RB 14 18 <sup>1</sup>	36,9	1,06	19,3	3,6	0,14	15,9	8000	550	
1/2"	1/4"	RB 12 14 <sup>1</sup>	35,8	1,41	23,1	6,3	0,25	23,8	3500	240	



## UNIONS | MALE FEMALE UNION

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch			PSIG	bar
1/4"	U 14 FM <sup>1</sup>	43,4	1,71	4,6	0,18	15,9	19,1	5100	350

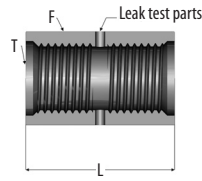


1) These fittings should be assembled only with rotating male or female nuts

## UNIONS | COUPLING

### TUBE SIZE - FRACTIONAL

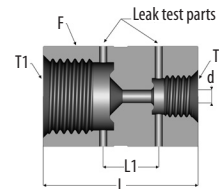
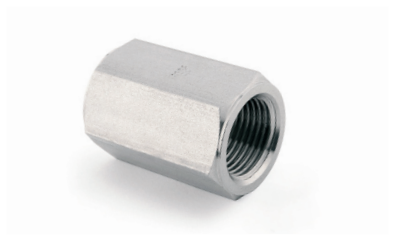
T Tube O.D.	Part number	L		F
		mm	inch	mm
1/8"	CG 18 <sup>1</sup>	16,8	0,66	11,1
1/4"	CG 14 <sup>1</sup>	30,2	1,19	19,1
1/2"	CG 12 <sup>1</sup>	33,3	1,31	27,0
3/4"	CG 34 <sup>1</sup>	42,7	1,68	38,1
1"	CG 100 <sup>1</sup>	51,8	2,04	44,5



## UNIONS | DOUBLE FEMALE REDUCING UNION

### TUBE SIZE - FRACTIONAL

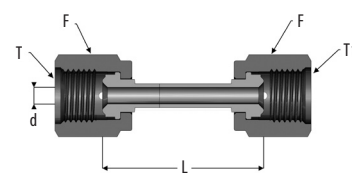
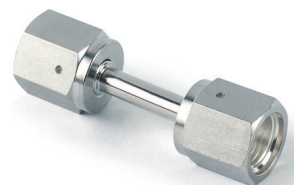
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d		F	Working Pressure	
			mm	inch		mm	inch		PSIG	bar
1/4"	1/8"	DFRU 14 18 <sup>1</sup>	29,5	1,16	9,1	3,3	0,13	19,1	8000	550
1/2"	1/4"	DFRU 12 14 <sup>1</sup>	35,8	1,41	8,9	6,3	0,25	27,0	3500	240



## UNIONS | DOUBLE FEMALE UNION

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		PSIG	bar
1/4"	U 14 F <sup>2</sup>	43,4	1,71	4,6	0,18	19,1	5100	350
1/2"	U 12 F <sup>2</sup>	46,7	1,84	10,2	0,40	27,0	3500	240

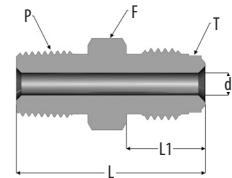


1) These fittings should be assembled only with rotating male or female nuts  
 2) On request it can be delivered with a double female, reducing union 1/2" F and 1/4" F (Part number UR 12 14 F)

## UNIONS | MALE CONNECTOR

### TUBE SIZE - FRACTIONAL

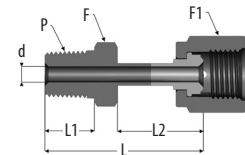
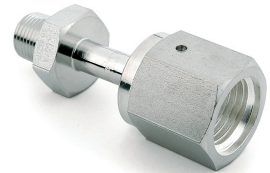
T Tube O.D.	P NPT	Part number	L		L1	d		F mm	Working Pressure	
			mm	inch	mm	mm	inch		PSIG	bar
1/8"	1/16"	UM 18 NPT 116 <sup>1,2</sup>	27,2	1,07	9,6	2,1	0,08	9,5	9000	620
1/8"	1/8"	NPT 18 <sup>1</sup>	27,2	1,07	9,6	2,1	0,08	9,5	9000	620
1/4"	1/8"	UM 14 NPT 18 <sup>1</sup>	33,3	1,31	9,6	4,6	0,18	15,9	8000	550
1/4"	1/4"	NPT 14 <sup>1</sup>	37,8	1,49	14,2	4,6	0,18	15,9	8000	550
1/2"	3/8"	UM 12 NPT 38 <sup>1</sup>	41,9	1,65	14,2	9,7	0,38	23,8	3500	240
1/2"	1/2"	NPT 12 <sup>1</sup>	46,7	1,84	19,1	10,2	0,40	23,8	3500	240
3/4"	3/4"	NPT 34 <sup>1</sup>	55,6	2,19	19,1	15,8	0,62	33,3	3000	200
1"	1"	NPT 100 <sup>1</sup>	62,7	2,47	22,3	22,3	0,88	41,3	2400	160



## UNIONS | FEMALE CONNECTOR

### TUBE SIZE - FRACTIONAL

T Tube O.D.	T Tube O.D.	Part number	L		L1	L2	d		F mm	F1 mm	Working Pressure	
			mm	inch	mm	mm	mm	inch			PSIG	bar
1/4"	1/8"	UF 14 NPT 18	40,1	1,58	9,6	24,1	4,6	0,18	15,9	19,1	5100	350
1/4"	1/4"	NPT 14 F	45,5	1,79	14,2	23,4	4,6	0,18	15,9	19,1	5100	350
1/2"	3/8"	UF 12 NPT 38	48,0	1,89	14,2	25,4	9,9	0,39	23,8	27,0	3500	240
1/2"	1/2"	NPT 12 F	53,1	2,09	19,1	25,6	9,9	0,39	23,8	27,0	3500	240

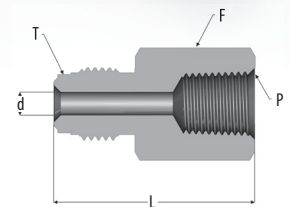


1) These fittings should be assembled only with rotating male or female nuts  
2) Minimum quantity

## UNIONS | FEMALE CONNECTOR

### TUBE SIZE - FRACTIONAL

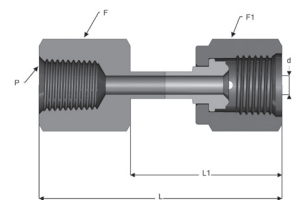
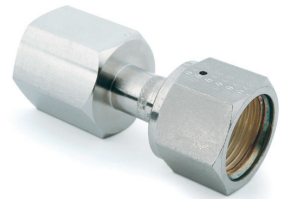
T Tube O.D.	P NPT	Part number	L		d		F	Working Pressure	
			mm	inch	mm	inch		PSIG	bar
1/8"	1/16"	UM 18 NPTF 116 <sup>1</sup>	27,9	1,10	2,3	0,09	11,1	6700	460
1/8"	1/8"	UM 18 NPTF 18 <sup>1</sup>	30,2	1,19	2,3	0,09	14,3	6500	440
1/4"	1/8"	UM 14 NPTF 18 <sup>1</sup>	35,8	1,41	4,6	0,18	15,9	8000	550
1/4"	1/4"	UM 14 NPTF 14 <sup>1</sup>	39,1	1,54	4,6	0,18	19,1	6600	450
1/2"	3/8"	UM 12 NPTF 38 <sup>1</sup>	44,7	1,76	10,2	0,40	23,8	3500	240
1/2"	1/2"	UM 12 NPTF 12 <sup>1</sup>	50,5	1,99	10,2	0,40	27,0	3500	240
3/4"	3/4"	UM 34 NPTF 34 <sup>1</sup>	59,7	2,36	15,7	0,62	33,3	3000	200
1"	1"	UM 100 NPTF 100 <sup>1</sup>	63,8	2,51	22,1	0,87	41,3	2400	160



## UNIONS | FEMALE CONNECTOR

### TUBE SIZE - FRACTIONAL

T Tube O.D.	P NPT	Part number	L		L1	d		F	F1	Working Pressure	
			mm	inch		mm	inch			mm	mm
1/4"	1/4"	UF 14 NPTF 14	45,2	1,78	23,4	4,6	0,18	19,1	19,1	5100	350
1/2"	3/8"	UF 12 NPTF 38	49,5	1,95	26,9	10,2	0,40	27,0	27,0	3300	220
1/2"	1/2"	UF 12 NPTF 12	55,4	2,18	26,4	10,2	0,40	27,0	27,0	3500	240

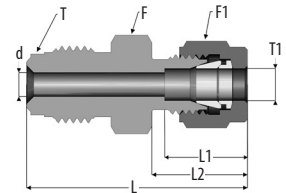
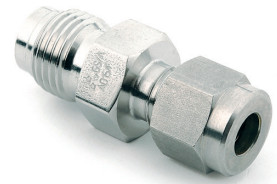


1) These fittings should be assembled only with rotating male or female nuts

## UNIONS | TUBE FITTING MALE CONNECTOR

### TUBE SIZE - FRACTIONAL

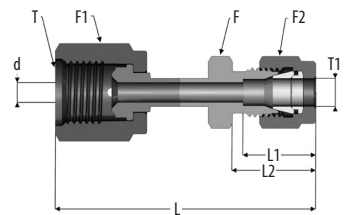
T Tube O.D.	T1 Tube O.D.	Part number	L		L1	L2	d		F	F1	Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
¼"	⅜"	UM 14 18 DB <sup>1</sup>	38,9	1,53	12,7	15,2	2,1	0,08	15,9	11,1	8000	550
¼"	¼"	UM 14 14 DB <sup>1</sup>	41,1	1,62	15,2	17,8	4,6	0,18	15,9	14,3	8000	550
½"	⅜"	UM 12 38 DB <sup>1</sup>	46,7	1,84	16,8	19,3	7,7	0,30	23,8	17,5	3500	240
½"	½"	UM 12 12 DB <sup>1</sup>	49,5	1,95	22,9	21,8	10,2	0,40	23,8	22,2	3500	240



## UNIONS | TUBE FITTING FEMALE CONNECTOR

### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		L1	L2	d		F	F1	F2	Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	mm	mm	PSIG	bar
¼"	¼"	UF 14 14 DB	49,3	1,94	15,2	17,8	4,6	0,18	15,9	19,1	14,3	5100	350
½"	⅜"	UF 12 38 DB	50,0	1,97	16,8	19,3	7,7	0,30	23,8	27,0	17,5	3300	220
½"	½"	UF 12 12 DB	56,6	2,23	22,9	21,8	10,2	0,40	23,8	27,0	22,2	3500	240

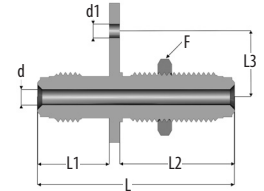


1) These fittings should be assembled only with rotating male or female nuts

## BULKHEAD UNIONS | BULKHEAD UNION

### TUBE SIZE - FRACTIONAL

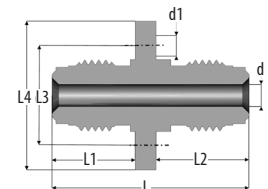
T Tube O.D.	Part number	L		L1	L2	L3	d		dt	F	Panel hole size	Working Pressure	
		mm	inch	mm	mm	mm	mm	inch	mm	mm	mm	PSIG	bar
¼"	BU 14 <sup>1</sup>	56,6	2,23	20,5	33,0	19,0	4,6	0,18	4,0	19,1	15,1	8000	550



## BULKHEAD UNIONS | BULKHEAD UNION

### TUBE SIZE - FRACTIONAL

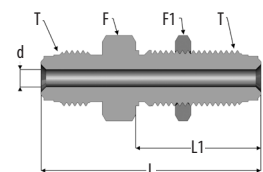
T Tube O.D.	Part number	L		L1	L2	L3	L4	d		d1	Working Pressure	
		mm	inch	mm	mm	mm	mm	mm	inch	mm	PSIG	bar
¼"	TC 14 <sup>1</sup>	39,8	1,57	16,8	18,8	30,0	20,0	4,6	0,18	3,5	8000	550



## BULKHEAD UNIONS | BULKHEAD UNION

### TUBE SIZE - FRACTIONAL

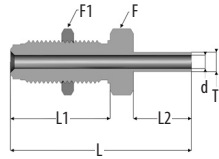
T Tube O.D.	Part number	L		L1	d		F	F1	Panel hole size	Max panel thickness		Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	inch	mm	inch	PSIG	bar
¼"	BU 14 <sup>1</sup>	56,6	2,23	33,0	4,6	0,18	19,1	19,1	15,1	11,1	0,44	8000	550
¼"	BUS 14 <sup>1</sup>	46,2	1,82	25,1	4,6	0,18	19,1	19,1	15,1	3,3	0,13	8000	550
½"	BU 12 <sup>1</sup>	66,3	2,61	37,6	10,2	0,40	27,0	27,0	23,0	12,7	0,50	3500	240
½"	BUS 12 <sup>1</sup>	54,4	2,14	28,2	10,2	0,40	27,0	27,0	23,0	3,3	0,13	3500	240



1) These fittings should be assembled only with rotating male or female nuts



## BULKHEAD UNIONS | BUTTWELD BULKHEAD UNION

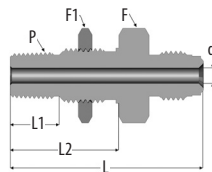


### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d		C		F	F1	Panel hole size	Max panel thickness	Working Pressure	
		mm	inch	mm	mm	inch	mm	inch	mm	mm	mm	mm	PSIG	bar
1/4"	BU 14 ABW <sup>1</sup>	59,9	2,36	33,0	4,6	0,18	19,1	0,75	19,1	19,1	15,1	11,1	5100	350
1/4"	BUS 14 ABW <sup>1</sup>	49,5	1,95	25,1	4,6	0,18	19,1	0,75	19,1	19,1	15,1	3,3	5100	350

① These fittings should be assembled only with rotating male or female nuts

## BULKHEAD UNIONS | BULKHEAD NPT UNION

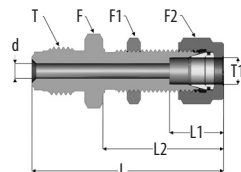
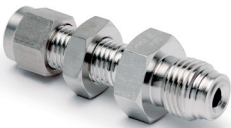


### TUBE SIZE - FRACTIONAL

T Tube O.D.	P NPT	Part number	L		d		L1	L2	F	F1	Panel hole size	Max panel thickness	Working Pressure	
			mm	inch	mm	inch	mm	mm	mm	mm	mm	mm	PSIG	bar
1/4"	1/4"	BU 14 NPT 14 <sup>1</sup>	56,1	2,21	4,6	0,18	14,2	31,5	23,8	23,8	16,7	9,7	8000	550
1/2"	1/4"	BU 12 NPT 14 <sup>1</sup>	59,4	2,34	10,2	0,40	14,2	31,5	23,8	23,8	16,7	9,7	3500	240

① These fittings should be assembled only with rotating male or female nuts

## BULKHEAD UNIONS | TUBE FITTING BULKHEAD CONNECTOR



### TUBE SIZE - FRACTIONAL

T Tube O.D.	T1 Tube O.D.	Part number	L		L1	L2	d		F	F1	F2	Working Pressure	
			mm	inch	mm	inch	mm	mm	mm	mm	mm	PSIG	bar
1/4"	1/4"	BU 14 14 DB <sup>1</sup>	57,2	2,25	15,2	33,5	4,6	0,18	19,1	19,1	14,3	5100	350
1/4"	1/4"	BUS 14 14 DB <sup>1</sup>	47,8	1,88	15,2	26,7	4,6	0,18	19,1	19,1	14,3	5100	350
1/2"	3/8"	BU 12 38 DB <sup>1</sup>	64,5	2,54	16,8	36,8	7,7	0,30	23,8	23,8	17,5	3300	220
1/2"	1/2"	BU 12 12 DB <sup>1</sup>	69,6	2,74	22,9	41,9	10,2	0,40	23,8	23,8	22,2	3500	240

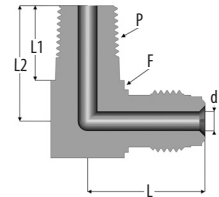
① These fittings should be assembled only with rotating male or female nuts

1) These fittings should be assembled only with rotating male or female nuts

## ELBOWS | MALE NPT ELBOW

### TUBE SIZE - FRACTIONAL

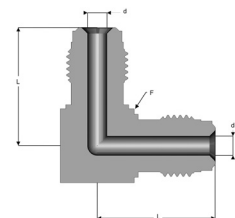
T Tube O.D.	P NPT	Part number	L		L1	L2	d		F	Working Pressure	
			mm	inch	mm	mm	mm	inch		mm	PSIG
1/4"	1/8"	E 14 NPT 18 <sup>1</sup>	27,2	1,07	9,6	22,1	4,6	0,18	17,0	80000	550
1/4"	1/4"	E 14 NPT 14 <sup>1</sup>	27,2	1,02	14,2	26,7	4,6	0,18	17,0	80000	550
1/2"	3/8"	E 12 NPT 14 <sup>1</sup>	36,8	1,45	14,2	32,0	10,2	0,40	24,0	3500	240
1/2"	1/2"	E 12 NPT 12 <sup>1</sup>	36,8	1,45	19,1	36,8	10,2	0,40	24,0	3500	240



## ELBOWS | UNION ELBOW

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		mm	PSIG
1/8"	E 18 <sup>1</sup>	22,6	0,89	2,1	0,08	12	9000	620
1/4"	E 14 <sup>1</sup>	27,2	1,07	4,6	0,18	17	8000	550
1/2"	E 12 <sup>1</sup>	36,8	1,45	10,2	0,40	24	3500	240
3/4"	E 34 <sup>1</sup>	48,8	1,92	16,5	0,65	35	3000	200
1"	E 100 <sup>1</sup>	50,8	2,00	22,1	0,87	41	2400	160

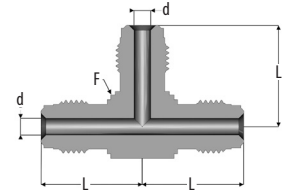
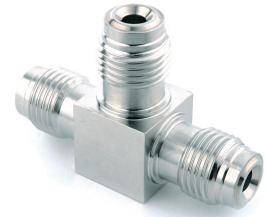


1) These fittings should be assembled only with rotating male or female nuts

## TEES | UNION TEE

### TUBE SIZE - FRACTIONAL

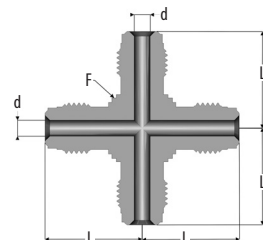
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		mm	PSIG
1/8"	T 18 <sup>1</sup>	22,6	0,89	2,1	0,08	12	9000	620
1/4"	T 14 <sup>1</sup>	27,2	1,07	4,6	0,18	17	8000	550
1/2"	T 12 <sup>1</sup>	36,8	1,45	10,2	0,40	24	3500	240
3/4"	T 34 <sup>1</sup>	48,8	1,92	16,5	0,65	35	3000	200
1"	T 100 <sup>1</sup>	50,8	2,00	22,1	0,87	41	2400	160



## CROSSES | UNION CROSS

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		mm	PSIG
1/8"	C 18 <sup>1</sup>	22,6	0,89	2,1	0,08	12	9000	620
1/4"	C 14 <sup>1</sup>	27,2	1,07	4,6	0,18	17	8000	550
1/2"	C 12 <sup>1</sup>	36,8	1,45	10,2	0,40	24	3500	240
3/4"	C 34 <sup>1</sup>	48,8	1,92	16,5	0,65	35	3000	200
1"	C 100 <sup>1</sup>	50,8	2,00	22,1	0,87	41	2400	160

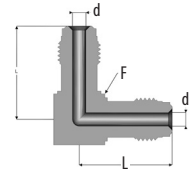


1) These fittings should be assembled only with rotating male or female nuts

## TEES | ELBOW SERIE ED

### TUBE SIZE - FRACTIONAL

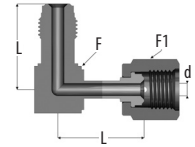
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch	mm	PSIG	bar
1/4"	ED 14 2M	31,0	1,22	4,6	0,18	17	8000	550



## TEES | ELBOW SERIE ED

### TUBE SIZE - FRACTIONAL

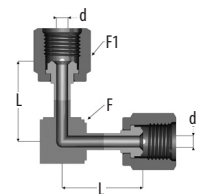
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	ED 14 FM	31,0	1,22	4,6	0,18	17	19,1	5100	350



## TEES | ELBOW SERIE ED

### TUBE SIZE - FRACTIONAL

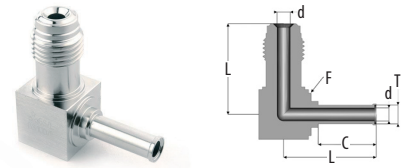
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	ED 14 2F	31,0	1,22	4,6	0,18	17	19,1	5100	350
1/4"	EDCA 14 2F	25,4	1,00	4,6	0,18	7,9	19,1	5100	350



## TEES | ELBOW SERIE EX

### TUBE SIZE - FRACTIONAL

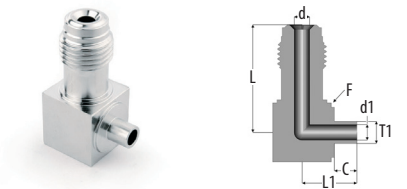
T Tube O.D.	Part number	L		d	C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	PSIG	bar
¼"	EX M. 14W <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17,0	5100	350



## TEES | MINI ELBOW SERIE MG.EX

### TUBE SIZE - FRACTIONAL

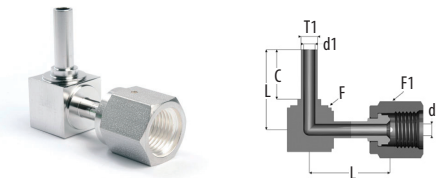
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d1	d	C		F	Working Pressure	
			mm	inch	mm	mm	mm	mm	inch	mm	PSIG	bar
¼"	¼"	MG. EX M.14	31,0	1,22	15,9	4,6	4,6	6,4	0,25	17,0	5100	350
⅜"	¼"	MG. EX M.38	31,0	1,22	15,9	7,7	4,6	6,4	0,25	17,0	3300	220
½"	¼"	MG. EX M.12	31,0	1,22	15,9	10,2	4,6	6,4	0,25	17,0	3500	240



## TEES | ELBOW SERIES EX

### TUBE SIZE - FRACTIONAL

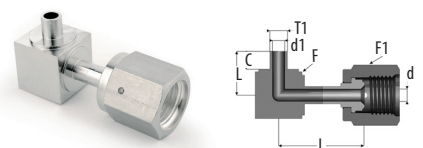
T Tube O.D.	Part number	L		d	C	F	F1	Working Pressure		
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
¼"	EX F. 14W <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17,0	19,1	5100	350



## TEES | ELBOW SERIES EX

### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d1	d	C		F	F1	Working Pressure	
			mm	inch	mm	mm	mm	mm	inch	mm	mm	PSIG	bar
¼"	¼"	MG. EX F.14	31,0	1,22	15,9	4,6	4,6	6,4	0,25	17,0	19,1	5100	350
⅜"	¼"	MG. EX F.38	31,0	1,22	15,9	7,7	4,6	6,4	0,25	17,0	19,1	3300	220
½"	¼"	MG. EX F.12	31,0	1,22	15,9	10,2	4,6	6,4	0,25	17,0	19,1	3500	240

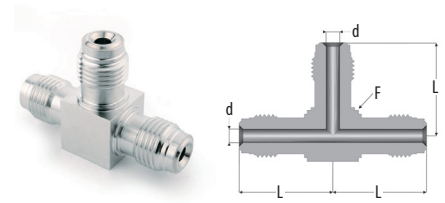


1) On request: it can be delivered with shoulder (Example: EX M.14)

## TEES | TEE SERIE TD

### TUBE SIZE - FRACTIONAL

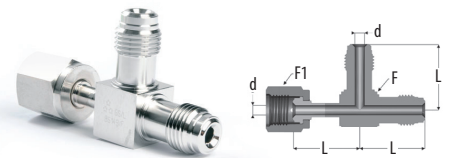
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch	mm	PSIG	bar
1/4"	TD 14 3M	31,0	1,22	4,6	0,18	17	8000	550



## TEES | TEE SERIE TD

### TUBE SIZE - FRACTIONAL

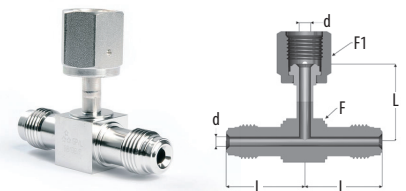
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TD 14 F.2M	31,0	1,22	4,6	0,18	17	19,1	5100	350



## TEES | TEE SERIE TD

### TUBE SIZE - FRACTIONAL

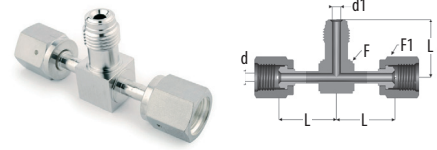
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TD 14 MFM	31,0	1,22	4,6	0,18	17	19,1	5100	350



## TEES | TEE SERIE TD

## TUBE SIZE - FRACTIONAL

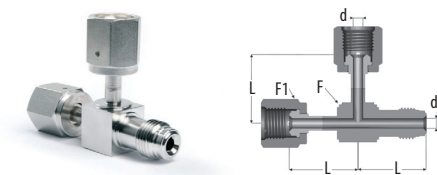
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TD 14 FMF	31,0	1,22	4,6	0,18	17	19,1	5100	350



## TEES | TEE SERIE TD

## TUBE SIZE - FRACTIONAL

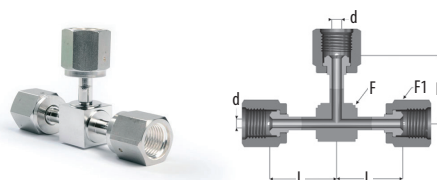
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TD 14 M.2F	31,0	1,22	4,6	0,18	17	19,1	5100	350



## TEES | TEE SERIE TD

## TUBE SIZE - FRACTIONAL

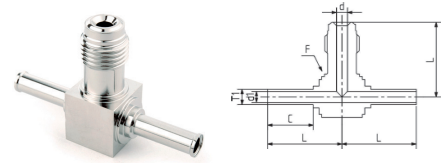
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TD 14 3F	31,0	1,22	4,6	0,18	17	19,1	5100	350
1/4"	TDCA 14 3F	25,4	1,00	4,6	0,18	7,9	19,1	5100	350



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

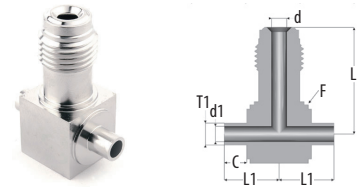
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d	C		F	Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	PSIG	bar
¼"	¼"	TX 14 W.M.14W <sup>1</sup>	31,0	1,22	4,6	4,6	19,1	0,75	17,0	5100	350
⅜"	¼"	TX 38 W.M.38W <sup>1</sup>	31,0	1,22	7,7	4,6	19,1	0,75	17,0	3300	220
½"	¼"	TX 12 W.M.12W <sup>1</sup>	31,0	1,22	10,2	4,6	19,1	0,75	17,0	3500	240



## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

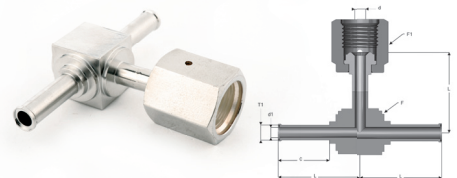
T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d1	d	C		F	Working Pressure	
			mm	inch	mm	mm	mm	mm	inch	mm	PSIG	bar
¼"	¼"	MG.TX 14.M.14	31,0	1,22	15,9	4,6	4,6	6,4	0,25	17,0	5100	350
⅜"	¼"	MG.TX 38.M.38	31,0	1,22	15,9	7,7	4,6	6,4	0,25	17,0	3300	220



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

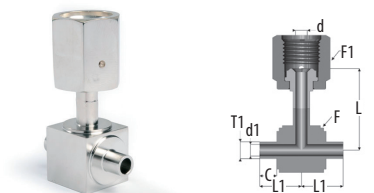
T1 Tube O.D.	T Tube O.D.	Part number	L		d1	d	C		F	F1	Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
¼"	¼"	TX 14W.F.14W <sup>1</sup>	31,0	1,22	4,6	4,6	19,1	0,75	17,0	19,1	5100	350
⅜"	¼"	TX 38W.F.38W <sup>1</sup>	31,0	1,22	7,7	4,6	19,1	0,75	17,0	19,1	3300	220



## TEES | TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

T1 Tube O.D.	T Tube O.D.	Part number	L		L1	d1	d	C		F	F1	Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar	
¼"	¼"	MG.TX 14.F.14	31,0	1,22	15,9	4,6	4,6	6,4	0,25	17,0	19,1	5100	350
⅜"	¼"	MG.TX 38.F.38	31,0	1,22	15,9	7,7	4,6	6,4	0,25	17,0	19,1	3300	220



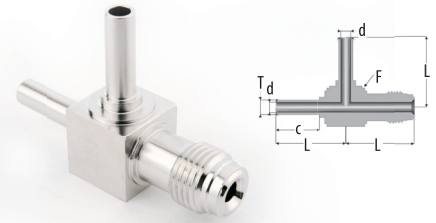
1) On request: it can be delivered with shoulder (Example: TX 14.M.14)



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

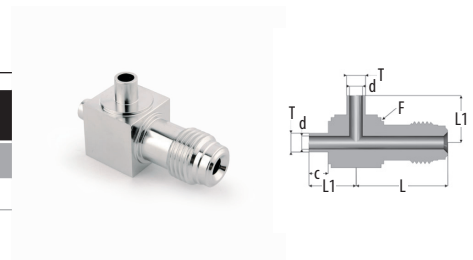
T Tube O.D.	Part number	L		C		d	F	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	TX 214W.M <sup>1</sup>	31,0	1,22	19,1	0,75	4,6	17	5100	350



## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

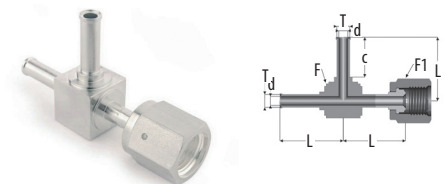
T Tube O.D.	Part number	L		L1	d	C		F	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	PSIG	bar
1/4"	MG.TX 214 M	31,0	1,22	15,9	4,6	6,4	0,25	17,0	5100	350



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

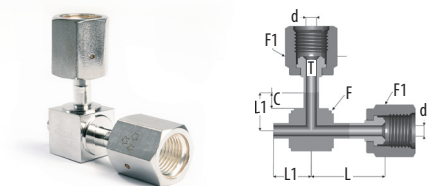
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
1/4"	RX 214W.F <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
1/4"	MG.TX 214 F	31,0	1,22	15,9	4,6	6,4	0,25	17,0	19,1	5100	350

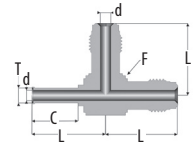
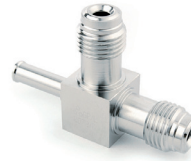


1) On request: it can be delivered with shoulder (Example: TX 214.M)

## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

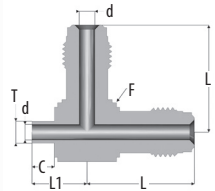
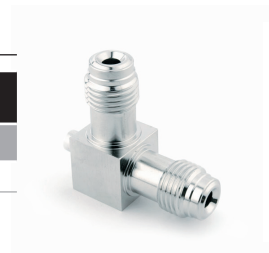
T Tube O.D.	Part number	L		d	C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	PSIG	bar
1/4"	TX 14W.2M <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	5100	350



## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

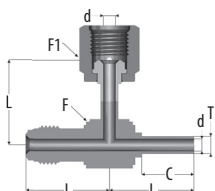
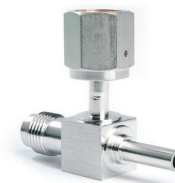
T Tube O.D.	Part number	L		L1	d	C		F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	PSIG	bar
1/4"	MG.TX 14.2M	31,0	1,22	15,9	4,6	6,4	0,25	17	5100	350



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

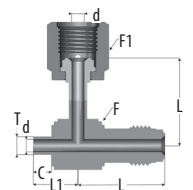
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
1/4"	TX 14W.FM <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## TEES | TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
1/4"	MG.TX 14.FM	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350

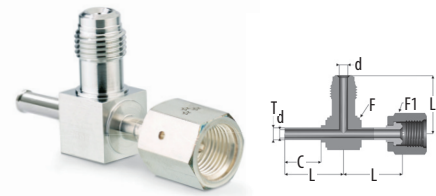


<sup>1)</sup> On request: it can be delivered with shoulder (Example: TX 14.2M)

## TEES | TEE SERIE TX

## TUBE SIZE - FRACTIONAL

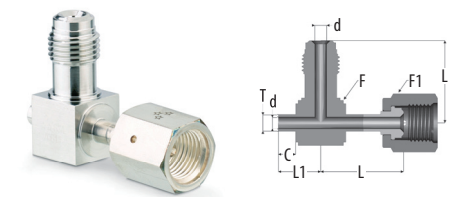
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
1/4"	TX 14W.MF <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## TEES | MINI TEE SERIE MG.TX

## TUBE SIZE - FRACTIONAL

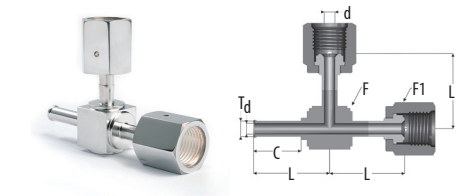
T Tube O.D.	Part number	L		L1	d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
1/4"	MG.TX 14.MF	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350



## TEES | TEE SERIE TX

## TUBE SIZE - FRACTIONAL

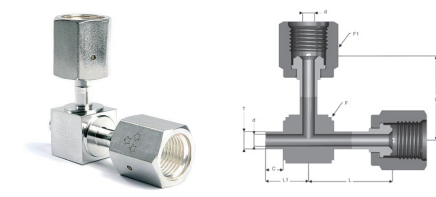
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
1/4"	TX 14W.2F <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## TEES | MINI TEE SERIE MG.TX

## TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar
1/4"	MG.TX 14.2F <sup>1</sup>	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350

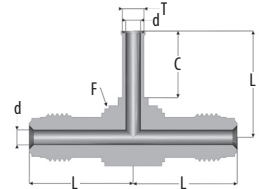
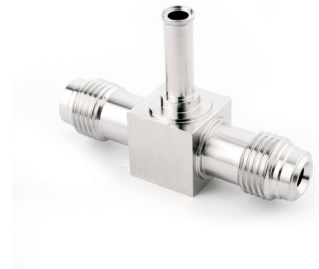


1) On request: it can be delivered with shoulder (Example: TX 14.MF)

## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

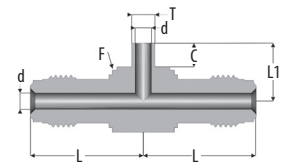
T Tube O.D.	Part number	L		d	C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	PSIG	bar
¼"	TX M.14W.M <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	5100	350



## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

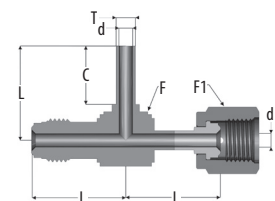
T Tube O.D.	Part number	L		L1	d	C		F	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	PSIG	bar
¼"	MG.TX M.14.M	31,0	1,22	15,9	4,6	6,4	0,25	17	5100	350



## TEES | TEE SERIE TX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d	C	F	F1	Working Pressure		
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
¼"	TX F.14W.M <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350

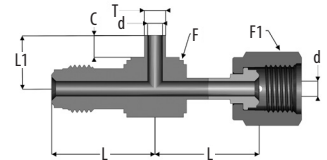
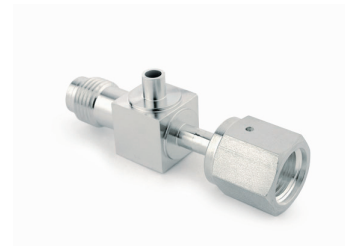


1) On request: it can be delivered with shoulder (Example: TX M.14.M)

## TEES | MINI TEE SERIE MG.TX

### TUBE SIZE - FRACTIONAL

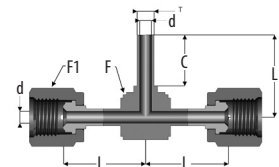
T Tube O.D.	Part number	L		L1	d		C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar	
¼"	MG.TX.F.14.M	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350	



## TEES | MINI TEE SERIE TX

### TUBE SIZE - FRACTIONAL

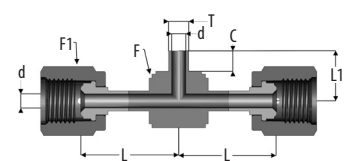
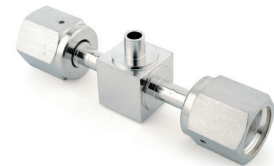
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
¼"	TX.F.14W.F <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## TEES | MINI TEE SERIES MG.TX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d		C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar	
¼"	MG.TX.F.14.F	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350	

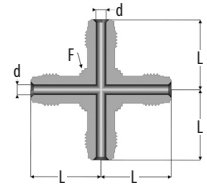


1) On request: it can be delivered with shoulder (Example: TX.F.14.F)

## CROSSES | CROSS SERIE CD

### TUBE SIZE - FRACTIONAL

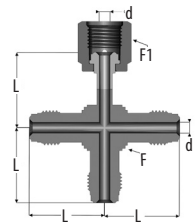
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch	mm	PSIG	bar
¼"	CD 14 4M	31,0	1,22	4,6	0,18	17	8000	550



## CROSSES | CROSS SERIE CD

### TUBE SIZE - FRACTIONAL

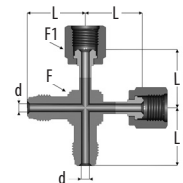
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
¼"	CD 14 F.3M	31,0	1,22	4,6	0,18	17	19,1	5100	350



## CROSSES | CROSS SERIE CD

### TUBE SIZE - FRACTIONAL

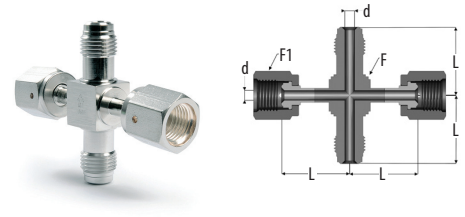
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
¼"	CD 14 2M.2F	31,0	1,22	4,6	0,18	17	19,1	5100	350



## CROSSES | CROSS SERIE CD

### TUBE SIZE - FRACTIONAL

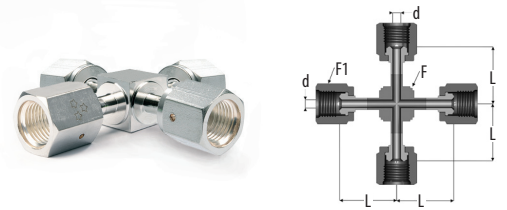
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	CD 14 FMFM	31,0	1,22	4,6	0,18	17	19,1	5100	350



## CROSSES | CROSS SERIE CD

### TUBE SIZE - FRACTIONAL

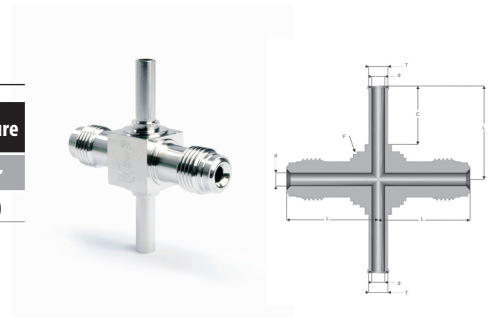
T Tube O.D.	Part number	L		d		F	F1	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
1/4"	CD 14 4F	31,0	1,22	4,6	0,18	17	19,1	5100	350



## CROSSES | CROSS SERIE CX

### TUBE SIZE - FRACTIONAL

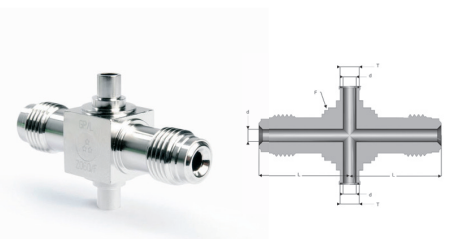
T Tube O.D.	Part number	L		d	C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	PSIG	bar
1/4"	CX.M14W.M.14W <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	5100	350



## CROSSES | MINI CROSS SERIE MG.CX

### TUBE SIZE - FRACTIONAL

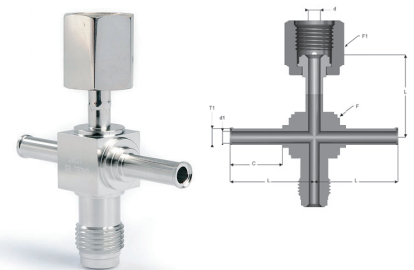
T Tube O.D.	Part number	L		L1	d	C		F	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	PSIG	bar
1/4"	MG.CXM.14.M.14	31,0	1,22	15,9	4,6	6,4	0,25	17	5100	350



## CROSSES | CROSS SERIE CX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
1/4"	CX.F.14W.M12W <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



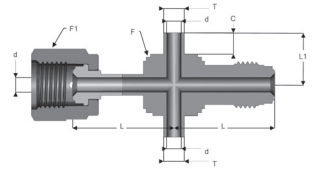
1) On request: it can be delivered with shoulder (Example: CX.M.14.M.14)



## CROSSES | MINI CROSS SERIE MG.CX

### TUBE SIZE - FRACTIONAL

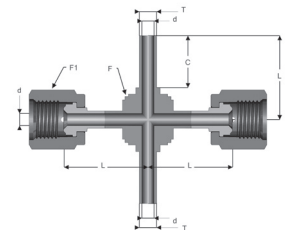
T Tube O.D.	Part number	L		L1	d		C		F	F1	Working Pressure	
		mm	inch		mm	mm	inch	mm	mm	PSIG	bar	
¼"	MG.CX.F.14.M.14	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350	



## CROSSES | CROSS SERIE CX

### TUBE SIZE - FRACTIONAL

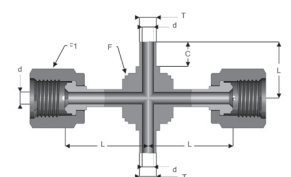
T Tube O.D.	Part number	L		d	C		F	F1	Working Pressure	
		mm	inch	mm	mm	inch	mm	mm	PSIG	bar
¼"	CX.F.14W.F.14W <sup>1</sup>	31,0	1,22	4,6	19,1	0,75	17	19,1	5100	350



## CROSSES | MINI CROSS SERIE MG.CX

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d		C		F	F1	Working Pressure	
		mm	inch	mm	mm	mm	inch	mm	mm	PSIG	bar	
¼"	MG.CX.F.14.F.14	31,0	1,22	15,9	4,6	6,4	0,25	17	19,1	5100	350	

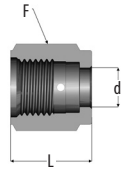


1) On request: it can be delivered with shoulder (Example: CX.F.14.F.14)

## NUTS | FEMALE NUT FOR HIGH FLOW APPLICATIONS

### TUBE SIZE - FRACTIONAL

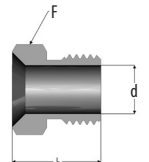
T Tube O.D.	Part number	L		d		Thread size	F
		mm	inch	mm	inch		
3/8"	FN 14 HF	20,6	0,81	19,1	0,75	1/16" - 18	19,1



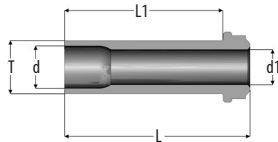
## NUTS | MALE NUT FOR HIGH FLOW APPLICATIONS

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		Thread size	F
		mm	inch	mm	inch		
3/8"	MN 14 HF	18,3	0,72	9,9	0,39	1/16" - 18	17



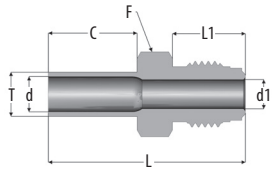
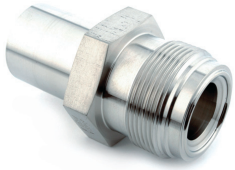
## GLANDS | SHORT MALE GLAND FOR HIGH FLOW APPLICATIONS



### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1		d1		d		Nominal Wall Thickness		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	PSIG	bar
3/8"	EMC 14 38 HF	15,2	0,60	10,4	0,41	6,4	0,25	7,7	0,30	0,89	0,035	3300	220
3/8"	EMS 14 38 HF	30,2	1,19	25,4	1,00	6,4	0,25	7,7	0,30	0,89	0,035	3300	220
3/8"	EM 14 38 HF	33,3	1,31	28,4	1,12	6,4	0,25	7,7	0,30	0,89	0,035	3300	220

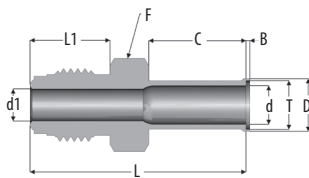
## GLANDS | AUTOMATIC BUTTWELD BODY FOR HIGH FLOW APPLICATIONS



### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d1		d		C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	inch	mm	inch	mm	PSIG	bar
3/8"	UM 14 38 ABW HF	42,7	1,68	15,7	6,4	0,25	7,7	0,30	19,1	0,30	19,1	3300	220

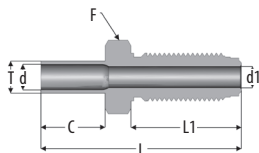
## GLANDS | AUTOMATIC BUTTWELD BODY FOR HIGH FLOW APPLICATIONS



### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d1		d		D	B	C		F	Working Pressure	
		mm	inch	mm	mm	inch	mm	inch	mm	mm	mm	inch	mm	PSIG	bar
3/8"	UM 14 38 AB HF	43,4	1,71	15,7	6,4	0,25	7,7	0,30	10,5	0,8	19,1	0,75	15,7	3300	220

## BULKHEAD UNIONS | BUTTWELD BULKHEAD UNION FOR HIGH FLOW APPLICATIONS



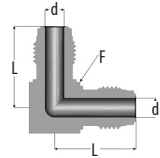
### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		L1	d1		d		C	F	F1	Panel Hole Size	Max Panel Thickness	Working Pressure	
		mm	inch	mm	mm	inch	mm	inch	mm	inch	mm			inch	PSIG
3/8"	BU 14 38 HF	59,9	2,36	33,0	6,4	0,25	7,7	0,30	19,1	0,75	19,1	15,1	11,2	3300	220

## ELBOWS & TEES | ELBOW FOR HIGH FLOW APPLICATIONS

### TUBE SIZE - FRACTIONAL

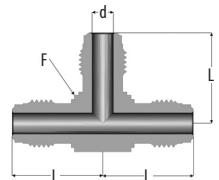
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		PSIG	bar
¼"	E 14 HF	27,2	1,07	6,4	0,25	17	8000	550



## ELBOWS & TEES | TEE FOR HIGH FLOW APPLICATIONS

### TUBE SIZE - FRACTIONAL

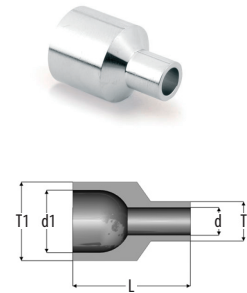
T Tube O.D.	Part number	L		d		F	Working Pressure	
		mm	inch	mm	inch		PSIG	bar
¼"	T 14 HF	27,2	1,07	6,4	0,25	17	8000	550



## REDUCER | MINI REDUCING UNION WITHOUT SHOULDER

### TUBE SIZE

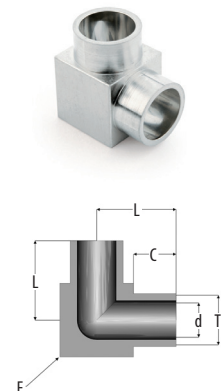
T1 Tube O.D.	T Tube O.D.	Part number	L		d1	d	Working Pressure	
			mm	inch	mm	mm	PSIG	bar
<b>FRACTIONAL</b>								
1/4"	1/8"	MG.RU 14 18 1,2	19,1	0,75	4,6	1,5	5100	350
3/8"	1/4"	MG.RU 38 14 2	19,1	0,75	7,7	4,6	3300	220
1/2"	1/4"	MG. RU 12 14 2	19,1	0,75	10,2	4,6	3500	240
1/2"	3/8"	MG.RU 12 38 2	19,1	0,75	10,2	7,7	3300	220
<b>JIS</b>								
3/8"	1/4"	MG.RU 38J 14J 2	19,1	0,75	7,5	4,4	3500	240
1/2"	1/4"	MG.RU 12 14J 2	19,1	0,75	10,2	4,4	3500	240
1/2"	3/8"	MG.RU 12 38J 2	19,1	0,75	10,2	7,5	3500	240



## ELBOWS | MINI ELBOW WITHOUT SHOULDER

### TUBE SIZE

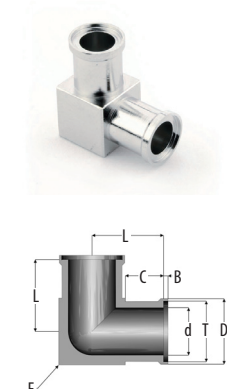
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>										
1/8"	MG.E 18	10,4	0,41	1,5	0,06	6,4	0,25	7,9	5100	350
1/4"	MG.E 14	10,4	0,41	4,6	0,18	6,4	0,25	7,9	5100	350
3/8"	MG.E 38	11,9	0,47	7,7	0,30	6,4	0,25	11,1	3300	220
1/2"	MG.E 12	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3500	240
<b>METRIC</b>										
6 mm	MG.E 6M	10,4	0,41	4,0	0,16	6,4	0,25	7,9	5600	380
10 mm	MG.E 10M	11,9	0,47	8,0	0,31	6,4	0,25	11,1	3500	240
12 mm	MG.E 12M	13,5	0,53	10,0	0,39	6,4	0,25	14,3	3100	210
<b>JIS</b>										
1/4"	MG.E 14J	10,4	0,41	4,4	0,17	6,4	0,25	7,9	5600	380
3/8"	MG.E 38J	11,9	0,47	7,5	0,29	6,4	0,25	11,1	3500	240



## ELBOWS | MINI ELBOW WITH SHOULDERS

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		D		B	C	F	Working Pressure		
		mm	inch	mm	inch	mm	inch	mm	mm	inch	mm	PSIG	bar
1/8"	MG.FE 18	10,4	0,41	1,5	0,06	3,8	0,15	0,5	6,4	0,25	7,9	5100	350
1/4"	MG.FE 14	10,4	0,41	4,6	0,18	7,4	0,29	0,5	6,4	0,25	7,9	5100	350
3/8"	MG.FE 38	11,9	0,47	7,7	0,30	10,5	0,41	0,8	6,4	0,25	11,1	3300	220

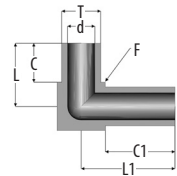


1) On request: it can be delivered with shoulder (Example: MG.FRU 14.18)  
 1) On request: it can be delivered in metric (Example: MG.RU 8M 6M)

## ELBOWS | MINI ELBOW WITHOUT SHOULDER

### TUBE SIZE

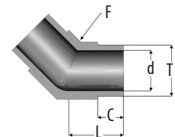
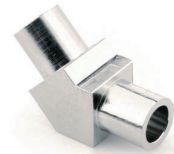
T Tube O.D.	Part number	L		L1		d		C		C1		F	Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>														
¼"	MG.EL 14.2	10,4	0,41	15,5	0,61	4,6	0,18	6,4	0,25	11,4	0,45	7,9	5100	350
¼"	MG.EL 14.3	10,4	0,41	16,8	0,66	4,6	0,18	6,4	0,25	12,7	0,50	7,9	5100	350
¼"	MG.EL 14.4	15,5	0,61	15,5	0,61	4,6	0,18	11,4	0,45	11,4	0,45	7,9	5100	350
¼"	MG.EL 14.5	16,8	0,66	16,8	0,66	4,6	0,18	12,7	0,50	12,7	0,50	7,9	5100	350
<b>JIS</b>														
¼"	MG.EL 14J.2	10,4	0,41	15,5	0,61	4,4	0,17	6,4	0,25	11,4	0,45	7,9	5600	380
¼"	MG.EL 14J.3	10,4	0,41	16,8	0,66	4,4	0,17	6,4	0,25	12,7	0,50	7,9	5600	380
¼"	MG.EL 14J.4	15,5	0,61	15,5	0,61	4,4	0,17	6,4	0,25	12,7	0,50	7,9	5600	380
¼"	MG.EL 14J.5	16,8	0,66	16,8	0,66	4,4	0,17	12,7	0,50	12,7	0,50	7,9	5100	380



## ELBOWS | MINI ELBOW 45° WITHOUT SHOULDER

### TUBE SIZE

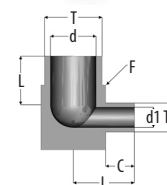
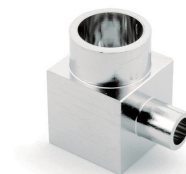
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>										
¼"	MG.ES 14	10,4	0,41	4,6	0,18	6,4	0,25	7,9	5100	350
⅜"	MG.ES 38	11,9	0,47	7,7	0,30	6,4	0,25	11,1	3300	220
½"	MG.ES 12	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3500	240
<b>JIS</b>										
¼"	MG.E5 14J	10,4	0,41	4,4	0,17	6,4	0,25	7,9	5600	380
⅜"	MG.ES 38J	11,9	0,47	7,5	0,29	6,4	0,25	11,1	3500	240



## ELBOWS | MINI REDUCING ELBOW WITHOUT SHOULDER

### TUBE SIZE

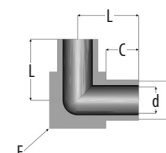
T Tube O.D.	Part number	L		C		d1	d	F	Working Pressure	
		mm	inch	mm	inch	mm	mm	mm	PSIG	bar
<b>FRACTIONAL</b>										
3/8"	MG.RE 38 14	11,9	0,47	6,4	0,25	7,7	4,6	11,1	3300	220
1/2"	MG.RE 12 14	13,5	0,53	6,4	0,25	10,2	4,6	14,3	3500	240
1/2"	MG.RE 12 38	13,5	0,53	6,4	0,25	10,2	7,7	14,3	3300	220
<b>METRIC</b>										
10 mm	MG.RE 10M 6M	11,9	0,47	6,4	0,25	8,0	4,0	11,1	3500	240
12 mm	MG.RE 12M 10M	13,5	0,53	6,4	0,25	10,0	4,0	14,3	3500	240
<b>JIS</b>										
3/8"	MG.RE 38J 14J	11,9	0,47	6,4	0,25	7,5	4,4	11,1	3500	240
1/2"	MG.RE 12 14J	13,5	0,53	6,4	0,25	10,2	4,4	14,3	3500	240
1/2"	MG.RE 12 38J	13,5	0,53	6,4	0,25	10,2	7,5	14,3	3500	240



## ELBOWS | MINI 3 DIMENSIONAL ELBOW WITHOUT SHOULDER

### TUBE SIZE

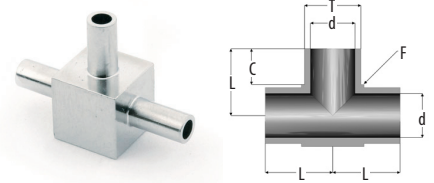
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>										
1/4"	14/MG.E 14	10,4	0,41	4,6	0,18	6,4	0,25	7,9	5100	350
3/8"	38/MG.E 38	11,9	0,47	7,7	0,30	6,4	0,25	11,1	3300	220
1/2"	12/MG.E 38	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3100	210
<b>JIS</b>										
1/4"	14J/MG.E 14J	10,4	0,41	4,4	0,17	6,4	0,25	7,9	5600	380
3/8"	38J/MG.E 38J	13,5	0,53	7,5	0,30	6,4	0,25	11,1	3500	240



## TEES | MINI TEE WITHOUT SHOULDER

### TUBE SIZE

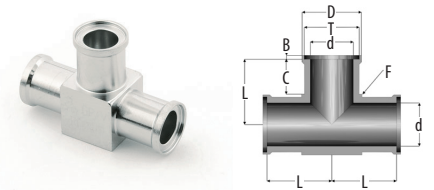
T Tube O.D.	Part number	L		d		C		F		Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	PSIG	bar	
<b>FRACTIONAL</b>											
1/8"	MG.T 18	10,4	0,41	1,5	0,06	6,4	0,25	7,9	5100	350	
1/4"	MG.T 14 <sup>1</sup>	10,4	0,41	4,6	0,18	6,4	0,25	7,9	5100	350	
3/8"	MG.T 38 <sup>1</sup>	11,9	0,47	7,7	0,30	6,4	0,25	11,1	3300	220	
1/2"	MG.T 12	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3500	240	
<b>METRIC</b>											
6 mm	M.G.T 6M	10,3	0,41	4,0	0,16	6,4	0,25	7,9	6800	460	
10 mm	MG.T 10M	11,9	0,47	8,0	0,31	6,4	0,25	11,1	3500	240	
12 mm	MG.T 12M	13,5	0,53	10,0	0,39	6,4	0,25	14,3	3500	240	
<b>JIS</b>											
3/8"	MG.FT 18	10,4	0,41	4,4	0,17	6,4	0,25	7,9	5600	380	
1/2"	MG.T 38J	11,9	0,47	7,5	0,30	6,4	0,25	11,1	3300	220	



## TEES | MINI TEE WITH SHOULDERS

### TUBE SIZE - FRACTIONAL

T Tube O.D.	Part number	L		d		D	B	C		F		Working Pressure	
		mm	inch	mm	inch	mm	mm	mm	inch	mm	PSIG	bar	
1/8"	MG.FT 18	10,4	0,41	1,5	0,06	3,8	0,5	6,4	0,25	7,9	5100	350	
1/4"	MG.FT 14	10,4	0,41	4,6	0,18	7,4	0,5	6,4	0,25	7,9	5100	350	
3/8"	MG.FT 38	11,9	0,47	7,7	0,30	10,5	0,8	6,4	0,25	11,1	3300	220	



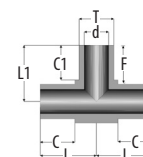
1) On request in Alloy C-22 (HC22) material



## TEES | MINI TEE WITHOUT SHOULDER

### TUBE SIZE

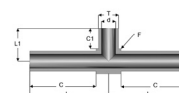
T Tube O.D.	Part number	L		L1		d		C		C1		F	Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>														
1/4"	MG.TL 14.6	10,4	0,41	15,5	0,61	4,6	0,18	6,4	0,25	11,4	0,45	7,9	5100	350
<b>JIS</b>														
3/8"	MG.TL 14J.6	10,4	0,41	15,5	0,61	4,4	0,17	6,4	0,25	11,4	0,45	7,9	5600	380



## TEES | MINI TEE WITHOUT SHOULDER

### TUBE SIZE

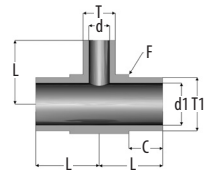
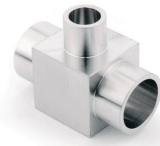
T Tube O.D.	Part number	L		L1		d		C		C1		F	Working Pressure	
		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>														
1/4"	MG.TUL 14.1	24,9	0,98	10,4	0,41	4,6	0,18	21,1	0,83	6,4	0,25	7,9	5100	350
<b>JIS</b>														
1/4"	MG.TUL 14J.1	24,9	0,98	10,4	0,41	4,4	0,17	21,1	0,83	6,4	0,25	7,9	5600	380



## TEES | MINI REDUCING TEE WITHOUT SHOULDER

### TUBE SIZE

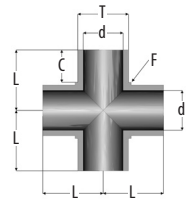
T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		C		F		Working Pressure	
			mm	inch	mm	mm	mm	inch	mm	PSIG	bar			
<b>FRACTIONAL</b>														
3/8"	1/4"	MG.RT 38 14	11,9	0,47	7,7	4,6	6,4	0,25	11,1	3300	220			
1/2"	1/4"	MG.RT 12 14	13,5	0,53	10,2	4,6	6,4	0,25	14,3	3500	240			
1/2"	3/8"	MG.RT 12 38	13,5	0,53	10,2	7,7	6,4	0,25	14,3	3300	220			
<b>METRIC</b>														
6 mm	6 mm	MG.RT 10M 6M	11,9	0,47	8,0	4,0	6,4	0,25	11,1	3500	240			
10 mm	6 mm	MG.RT 12M 6M	13,5	0,53	10,0	4,0	6,4	0,25	14,3	3500	240			
<b>JIS</b>														
3/8"	1/4"	MG.RT 38J 14J	11,9	0,47	7,5	4,4	6,4	0,25	11,1	3500	240			
1/2"	1/4"	MG.RT 12 14J	13,5	0,53	10,2	4,4	6,4	0,25	14,3	3500	240			
1/2"	3/8"	MG.RT 12 38J	13,5	0,53	10,2	7,5	6,4	0,25	14,3	3500	240			



## CROSSES | MINI CROSS WITHOUT SHOULDER

### TUBE SIZE

T Tube O.D.	Part number	L		d		C		F		Working Pressure		
		mm	inch	mm	inch	mm	inch	mm	PSIG	bar		
<b>FRACTIONAL</b>												
1/8"	MG.C 18	10,4	0,41	1,5	0,06	6,4	0,25	7,9	5100	350		
1/4"	MG.C 14 <sup>1</sup>	10,4	0,41	4,6	0,18	6,4	0,25	7,9	5100	350		
3/8"	MG.C 38 <sup>1</sup>	11,9	0,47	7,7	0,30	6,4	0,25	11,1	3300	220		
1/2"	MG.C 12	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3500	240		
<b>METRIC</b>												
6 mm	MG.C 6M	10,3	0,41	4,0	0,16	6,4	0,25	7,9	6800	460		
10 mm	MG.C 10M	11,9	0,47	8,0	0,31	6,4	0,25	11,1	3300	240		
12 mm	MG.C 12M	13,5	0,53	10,2	0,40	6,4	0,25	14,3	3500	210		
<b>JIS</b>												
1/4"	MG.C 14J	10,3	0,41	4,4	0,17	6,4	0,25	7,9	5600	380		
3/8"	MG.C 38J	11,9	0,47	7,5	0,29	6,4	0,25	11,1	3500	240		



1) On request in Alloy C-22 (HC22) material

## UNIONS | AUTOMATIC BUTTWELD SHORT UNION WITH SHOULDERS

### TUBE SIZE

T Tube O.D.	Part number	L		d		D	B	Working Pressure	
		mm	inch	mm	inch	mm	mm	PSIG	bar
<b>FRACTIONAL</b>									
1/4"	US 14 AB	1,2	0,05	4,6	0,18	7,3	0,30	5100	350
3/8"	US 38 AB	1,6	0,06	7,7	0,30	10,4	0,50	3300	220
1/2"	US 12 AB	2,0	0,08	10,2	0,40	13,9	0,60	3500	240



## UNIONS | AUTOMATIC BUTTWELD REDUCING UNION WITHOUT SHOULDER

### TUBE SIZE

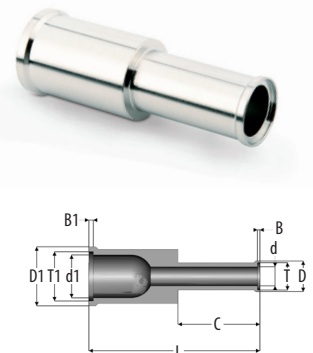
T1 Tube O.D.	T Tube O.D.	Part number	L		d1	d	C		Working Pressure	
			mm	inch	mm	mm	mm	inch	PSIG	bar
<b>FRACTIONAL</b>										
3/8"	1/4"	RU 38 14 ABW	38,1	1,50	7,7	4,6	19,1	0,75	3300	220
1/2"	1/4"	RU 12 14 ABW	38,1	1,50	10,2	4,6	19,1	0,75	3500	240
1/2"	3/8"	RU 12 38 ABW	38,1	1,50	10,2	7,7	19,1	0,75	3300	220
3/4"	1/2"	RU 34 12 ABW	38,1	1,50	16,5	10,2	19,1	0,75	2400	160
<b>METRIC</b>										
8 mm	6 mm	RU 8M 6M ABW	38,1	1,50	6,0	4,0	19,1	0,75	4800	330
12 mm	6 mm	RU 12M 6M ABW	38,1	1,50	10,0	4,0	19,1	0,75	3100	210
12 mm	8 mm	RU 12M 8M ABW	38,1	1,50	10,0	6,0	19,1	0,75	3100	210
18 mm	6 mm	RU 18M 6M ABW	38,1	1,50	15,0	4,0	19,1	0,75	3100	210
18 mm	12 mm	RU 18M 12M ABW	38,1	1,50	15,0	10,0	19,1	0,75	3100	210
<b>JIS</b>										
3/8"	1/4"	RU 38J 14J ABW <sup>1</sup>	38,1	1,50	7,5	4,4	19,1	0,75	3500	240
1/2"	1/4"	RU 12 14J ABW <sup>1</sup>	38,1	1,50	10,2	4,4	19,1	0,75	3500	240
1/2"	3/8"	RU 12 38J ABW <sup>1</sup>	38,1	1,50	10,2	7,5	19,1	0,75	3500	240



## UNIONS | AUTOMATIC BUTTWELD REDUCING UNION WITH SHOULDERS

### TUBE SIZE

T1 Tube O.D.	T Tube O.D.	Part number	L		d1	d	D1	D	B1	B	C		Working Pressure	
			mm	inch	mm	mm	mm	mm	mm	mm	mm	inch	PSIG	bar
<b>FRACTIONAL</b>														
3/8"	1/4"	RU 38 14 AB	40,1	1,58	7,7	4,6	10,5	7,4	0,8	0,5	19,1	0,75	3300	220
1/2"	1/4"	RU 12 14 AB	40,1	1,58	10,2	7,7	14,0	7,4	1,0	0,5	19,1	0,75	3500	240
1/2"	3/8"	RU 12 38 AB	40,4	1,59	10,2	4,0	14,0	10,5	1,0	0,8	19,1	0,75	3300	220
3/4"	1/2"	RU 34 12 AB	40,6	1,60	16,5	10,2	20,3	14,0	1,0	1,0	19,1	0,75	2400	160
<b>METRIC</b>														
8 mm	6 mm	RU 8M 6M AB	39,9	1,57	6,0	4,0	8,9	6,9	0,8	0,5	19,1	0,75	4800	330
12 mm	6 mm	RU 12M 6M AB	40,1	1,58	10,0	6,0	13,2	6,9	1,0	0,5	19,1	0,75	3100	210
12 mm	8 mm	RU 12M 8M AB	40,4	1,59	10,0	10,0	13,2	8,9	1,0	0,8	19,1	0,75	3100	210
<b>JIS</b>														
3/8"	1/4"	RU 38J 14J AB	40,1	1,58	7,5	4,4	10,3	7,2	0,8	0,5	19,1	0,75	3500	240
1/2"	1/4"	RU 12 14J AB	40,1	1,58	10,2	4,4	14,0	7,2	1,0	0,5	19,1	0,75	3500	240
1/2"	3/8"	RU 12 38J AB	40,4	1,59	10,2	7,5	14,0	10,3	1,0	0,8	19,1	0,75	3500	240

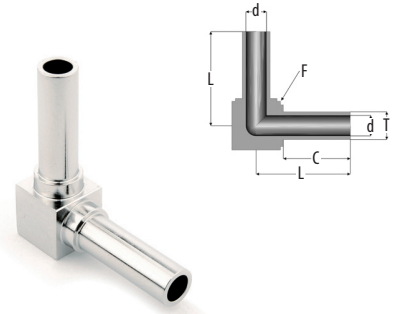


1) On request, it can be delivered with C=10mm (Example: RU 38J 14J ABW)

## ELBOWS | AUTOMATIC BUTTWELD ELBOW WITHOUT SHOULDER

### TUBE SIZE

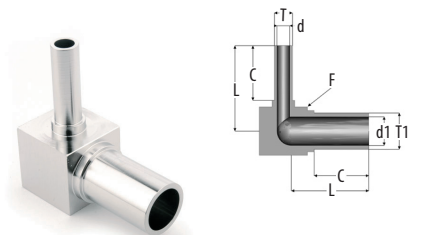
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>										
¼"	E 14 ABW	27,0	1,06	4,6	0,18	19,1	0,75	10	5100	350
¼"	ECA 14 ABW	31,2	1,23	4,6	0,18	19,1	0,75	10	5100	350
⅜"	E 38 ABW	27,0	1,06	7,7	0,30	19,1	0,75	14	3300	220
⅜"	ECA 38 ABW	30,5	1,20	7,7	0,30	19,1	0,75	14	3300	220
½"	E 12 ABW	30,0	1,18	10,2	0,40	19,1	0,75	17	3500	240
½"	ECA 12 ABW	34,0	1,34	10,2	0,40	19,1	0,75	17	3500	240
¾"	E 34 ABW	35,0	1,38	16,5	0,65	19,1	0,75	24	2400	160
1"	E 100 ABW	40,0	1,57	22,1	0,87	24,4	0,96	35	2400	160
<b>METRIC</b>										
6 mm	E 6M ABW	27,0	1,06	4,0	0,16	19,1	0,75	10	6800	460
8 mm	E 8M ABW	27,0	1,06	6,0	0,24	19,1	0,75	14	4800	330
10 mm	E 10M ABW	27,0	1,06	8,0	0,31	19,1	0,75	14	3500	240
12 mm	E 12M ABW	30,0	1,18	10,0	0,39	19,1	0,75	17	3100	210
<b>JIS</b>										
¼"	E 14J ABW <sup>1</sup>	27,0	1,06	4,4	0,17	19,1	0,75	10	5600	380
⅜"	E 38J ABW <sup>1</sup>	27,0	1,06	7,5	0,29	19,1	0,75	14	3500	240



## ELBOWS | AUTOMATIC BUTTWELD REDUCING ELBOW WITHOUT SHOULDER

### TUBE SIZE

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		C		F	Working Pressure	
			mm	inch	mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>													
⅜"	¼"	RE 38 14 AB	27,0	1,06	7,7	0,30	4,6	0,18	19,1	0,75	14	3300	220
½"	¼"	RE 12 14 AB	30,0	1,18	10,2	0,40	4,6	0,18	19,1	0,75	17	3500	240
½"	⅜"	RE 12 38 AB	30,0	1,18	10,2	0,40	7,7	0,30	19,1	0,75	17	3300	220
<b>JIS</b>													
⅜"	¼"	RE 38J 14J AB	27,0	1,06	7,5	0,29	4,4	0,17	19,1	0,75	14	3500	240
½"	¼"	RE 12 14J AB	30,0	1,18	10,2	0,40	4,4	0,17	19,1	0,75	17	3500	240
½"	⅜"	RE 12 38J AB	30,0	1,18	10,2	0,40	7,5	0,29	19,1	0,75	17	3500	240

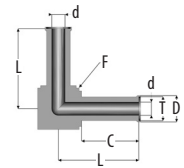


1) On request, it can be delivered with C=10mm (Example: ES 14J ABW)

# ELBOWS | AUTOMATIC BUTTWELD ELBOW WITH SHOULDERS

## TUBE SIZE

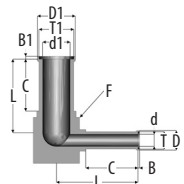
T Tube O.D.	Part number	L		d		D	B	C		F	Working Pressure	
		mm	inch	mm	inch	mm	mm	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>												
1/4"	E 14 AB	27,0	1,06	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
1/4"	ECA 14 AB	31,7	1,25	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
3/8"	E 38 AB	27,0	1,06	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
3/8"	ECA 38 AB	31,2	1,23	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
1/2"	E 12 AB	30,0	1,18	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
1/2"	ECA 12 AB	35,0	1,38	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
3/4"	E 34 AB	35,0	1,38	16,5	0,65	20,3	1,0	19,1	0,75	24	2400	160
1"	E100 AB	40,0	1,57	22,1	0,87	26,9	1,0	24,4	0,96	35	2400	160
<b>METRIC</b>												
6 mm	E 6M AB	27,0	1,06	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
6 mm	ECA 6M AB	31,8	1,25	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
8 mm	E 8M AB	27,0	1,06	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
8 mm	ECA 8M AB	32,0	1,26	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
10 mm	E 10M AB	27,0	1,06	8,0	0,31	10,9	0,8	19,1	0,75	14	3500	240
10 mm	ECA 10M AB	34,8	1,37	8,0	0,31	11,0	0,8	19,1	0,75	14	3500	240
12 mm	E 12M AB	30,0	1,18	10,0	0,39	13,2	1,0	19,1	0,75	17	3100	210
12 mm	ECA 12M AB	35,0	1,38	10,0	0,39	13,2	1,0	19,1	0,75	17	3100	210
18 mm	ECA 18M AB	38,6	1,52	15,0	0,59	19,2	1,0	19,1	0,75	24	3000	200
<b>JIS</b>												
1/4"	E 14J AB	27,0	1,06	4,4	0,17	7,2	1,0	19,1	0,75	10	5600	380
3/8"	E 38J AB	27,0	1,06	7,7	0,30	10,3	1,0	19,1	0,75	14	3500	240



# ELBOWS | AUTOMATIC BUTTWELD REDUCING ELBOW WITH SHOULDERS

## TUBE SIZE

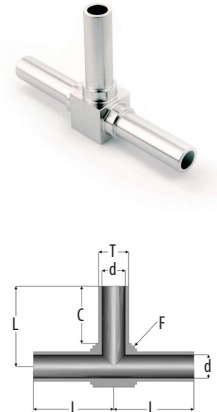
T1 Tube O.D.	T Tube O.D.	Part number	L		d1	D1	B1	d	D	B	C		F	Working Pressure	
			mm	inch	mm	mm	mm	mm	mm	mm	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>															
3/8"	1/4"	RE 38 14 AB	27,0	1,06	7,7	10,5	0,8	4,6	7,4	0,5	19,1	0,75	14	3300	220
1/2"	1/4"	RE 12 14 AB	30,0	1,18	10,2	14,0	1,0	4,6	7,4	0,5	19,1	0,75	17	3500	240



## TEES | AUTOMATIC BUTTWELD TEE WITHOUT SHOULDER

### TUBE SIZE

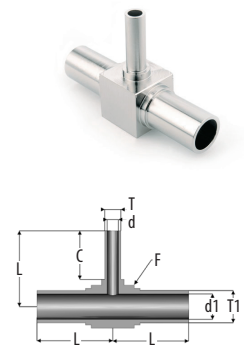
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch		mm	PSIG
<b>FRACTIONAL</b>										
¼"	T 14 ABW	27,0	1,06	4,6	0,18	19,1	0,75	10	5100	350
¼"	TCA 14 ABW	31,2	1,23	4,6	0,18	19,1	0,75	10	5100	350
⅜"	T 38 ABW	27,0	1,06	7,7	0,30	19,1	0,75	14	3300	220
⅜"	TCA 38 ABW	30,5	1,20	7,7	0,30	19,1	0,75	14	3300	220
½"	T 12 ABW	30,0	1,18	10,2	0,40	19,1	0,75	17	3500	240
½"	TCA 12 ABW	34,0	1,34	10,2	0,40	19,1	0,75	17	3500	240
¾"	T 34 ABW	35,0	1,38	16,5	0,65	19,1	0,75	24	2400	160
1"	T 100 ABW	40,0	1,57	22,1	0,87	24,4	0,96	35	2400	160
<b>METRIC</b>										
6 mm	T 6M ABW	27,0	1,06	4,0	0,16	19,1	0,75	10	6800	460
6 mm	TCA 6M ABW	31,2	1,06	4,0	0,16	19,1	0,75	10	6800	460
8 mm	E 8M ABW	27,0	1,06	6,0	0,24	19,1	0,75	14	4800	330
10 mm	E 10M ABW	27,0	1,06	8,0	0,31	19,1	0,75	14	3500	240
12 mm	E 12M ABW	30,0	1,18	10,0	0,39	19,1	0,75	17	3100	210
12 mm	TCA 12M ABW	34,0	1,34	10,0	0,39	19,1	0,75	17	3100	210
<b>JIS</b>										
¼"	T 14J ABW <sup>1</sup>	27,0	1,06	4,4	0,17	19,1	0,75	10	5600	380
⅜"	T 38J ABW <sup>1</sup>	27,0	1,06	7,5	0,29	19,1	0,75	14	3500	240



## TEES | AUTOMATIC BUTTWELD REDUCING TEE WITHOUT SHOULDER

### TUBE SIZE

T1 Tube O.D.	T Tube O.D.	Part number	L		d1		d		C	F	Working Pressure		
			mm	inch	mm	inch	mm	inch			mm	PSIG	bar
<b>FRACTIONAL</b>													
⅜"	¼"	RT 38 14 ABW	27,0	1,06	7,7	0,30	4,6	0,18	19,1	0,75	14	3300	220
½"	¼"	RT 12 14 ABW	30,0	1,18	10,2	0,40	4,6	0,18	19,1	0,75	17	3500	240
½"	⅜"	RT 12 38 ABW	30,0	1,18	10,2	0,40	7,7	0,30	19,1	0,75	17	3300	220
<b>METRIC</b>													
8 mm	6 mm	RT 8M 6M ABW	27,0	1,06	6,0	0,24	4,0	0,16	19,1	0,75	14	4800	330
12 mm	6 mm	RT 12M 6M ABW	30,0	1,18	10,0	0,39	4,0	0,16	19,1	0,75	17	3100	210
12 mm	8 mm	RT 12M 8M ABW	30,0	1,18	10,0	0,39	6,0	0,24	19,1	0,75	17	3100	210
18 mm	6 mm	RT 18M 6M ABW	35,0	1,38	15,0	0,59	4,0	0,16	19,1	0,75	24	3000	200
18 mm	12 mm	RT 18M 12M ABW	35,0	1,38	15,0	0,59	10,0	0,39	19,1	0,75	24	3000	200
<b>JIS</b>													
⅜"	¼"	RE 38J 14J ABW <sup>1</sup>	27,0	1,06	7,5	0,29	4,4	0,17	19,1	0,75	14	3500	240
½"	¼"	RE 12 14J ABW <sup>1</sup>	30,0	1,18	10,2	0,40	4,4	0,17	19,1	0,75	17	3500	240
½"	⅜"	RE 12 38J ABW <sup>1</sup>	30,0	1,18	10,2	0,40	7,5	0,29	19,1	0,75	17	3500	240

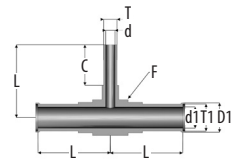


<sup>1)</sup> On request, it can be delivered with C=10mm (Example: TS 14J ABW)

## TEES | AUTOMATIC BUTTWELD REDUCING TEE

### TUBE SIZE

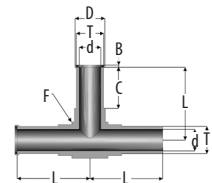
T1 Tube O.D.	T Tube O.D.	Part number	L		d1	D1	B1	d	C		F	Working Pressure	
			mm	inch	mm	mm	mm	mm	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>													
3/8"	1/4"	RTCA 38 14 W	31,2	1,23	31,2	10,5	0,8	4,6	19,1	0,75	14	3300	220
1/2"	1/4"	RTCA 12 14 W	34,5	1,36	35,0	14,0	1,0	4,6	19,1	0,75	17	3500	240
1/2"	3/8"	RTCA 12 38 W	34,3	1,35	35,0	14,0	1,0	7,7	19,1	0,75	17	3500	240
<b>METRIC</b>													
12 mm	6 mm	RTCA 12M 6M W	34,5	1,36	35,0	13,2	1,0	4,0	19,1	0,75	17	3100	210



## TEES | AUTOMATIC BUTTWELD TEE

### TUBE SIZE

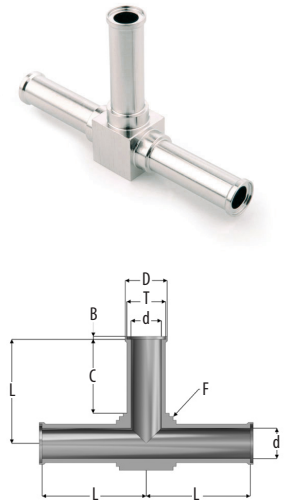
T Tube O.D.	Part number	L		d		D	B	C		F	Working Pressure	
		mm	inch	mm	mm	mm	mm	mm	inch	mm	PSIG	bar
<b>FRACTIONAL</b>												
1/4"	MTCA 14 AB	31,2	1,23	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
3/8"	MTCA 38 AB	30,5	1,20	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
1/2"	MTCA12 AB	34,0	1,34	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240



## TEES | AUTOMATIC BUTTWELD TEE WITH SHOULDERS

### TUBE SIZE

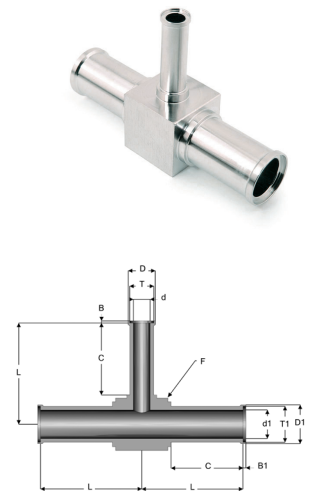
T Tube O.D.	Part number	L		d		D	B	C		F	Working Pressure	
		mm	inch	mm	inch			mm	inch		mm	PSIG
<b>FRACTIONAL</b>												
¼"	T 14 AB	27,0	1,06	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
¼"	TCA 14 AB	31,7	1,25	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
⅜"	T 38 AB	27,0	1,06	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
⅜"	TCA 38 AB	31,2	1,23	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
½"	T 12 AB	30,0	1,18	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
½"	TCA 12 AB	35,0	1,38	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
¾"	T 34 AB	35,0	1,38	16,5	0,65	20,3	1,0	19,1	0,75	24	2400	160
1"	T 100 AB	40,0	1,57	22,1	0,87	26,9	1,0	24,4	0,96	35	2400	160
<b>METRIC</b>												
6 mm	T 6M AB	27,0	1,06	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
6 mm	TCA 6M AB	31,8	1,25	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
8 mm	T 8M AB	27,0	1,06	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
8 mm	TCA 8M AB	32,0	1,26	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
10 mm	T 10M AB	27,0	1,06	8,0	0,31	10,9	0,8	19,1	0,75	14	3500	240
10 mm	TCA 10M AB	34,8	1,37	8,0	0,31	10,9	0,8	19,1	0,75	14	3500	240
12 mm	T 12M AB	30,0	1,18	10,0	0,39	13,2	1,0	19,1	0,75	17	3100	210
12 mm	TCA 12M AB	35,0	1,38	10,0	0,39	13,2	1,0	19,1	0,75	17	3100	210
18 mm	TCA 18M AB	38,6	1,52	15,0	0,59	19,2	1,0	19,1	0,75	24	3000	200
<b>JIS</b>												
¼"	T 14J AB	27,0	1,06	4,4	0,17	7,2	0,5	19,1	0,75	10	5600	380
⅜"	T 38J AB	27,0	1,06	7,5	0,30	10,3	0,8	19,1	0,75	14	3500	240



## TEES | AUTOMATIC BUTTWELD REDUCING TEE WITH SHOULDERS

### TUBE SIZE

T1 Tube O.D.	T Tube O.D.	Part number	L		d1	D1	B1	d	D	B	C	F	Working Pressure		
mm	inch		mm	inch	mm	mm	mm	mm	mm	mm	inch	mm	PSIG	bar	
<b>FRACTIONAL</b>															
⅜"	¼"	RT 38 14 AB	27,0	1,06	7,7	7,4	0,8	4,6	7,4	0,5	19,1	0,75	14	3300	220
⅜"	¼"	RTCA 38 14 AB	31,8	1,25	7,7	10,5	0,8	4,6	7,4	0,5	19,1	0,75	14	3300	220
½"	¼"	RT 12 14 AB	30,0	1,18	10,2	14,0	1,0	4,6	7,4	0,5	19,1	0,75	17	3500	240
½"	¼"	RTCA 12 14 AB	35,0	1,38	10,5	14,0	1,0	4,6	7,4	0,5	19,1	0,75	17	3500	240
½"	⅜"	RT 12 38 AB	30,0	1,18	10,2	14,0	1,0	7,7	10,5	0,8	19,1	0,75	17	3300	220
½"	⅜"	RTCA 12 38 AB	35,0	1,38	10,5	20,3	1,0	7,7	10,5	0,8	19,1	0,75	17	3300	220
¾"	⅜"	RT 34 38 AB	35,0	1,38	16,5	20,3	1,0	7,7	10,5	0,8	19,1	0,75	24	2400	160
¾"	⅜"	RTCA 34 38 AB	35,0	1,38	16,5	20,3	1,0	10,2	14,0	1,0	19,1	0,75	24	2400	160
<b>METRIC</b>															
12 mm	6 mm	RT 12M 6M AB	30,0	1,18	10,0	13,2	1,0	4,0	6,9	0,5	19,1	0,75	17	3100	210
12 mm	6 mm	RTCA 12M 6M AB	34,0	1,34	10,0	13,2	1,0	4,0	6,9	0,5	19,1	0,75	17	3100	210
12 mm	8 mm	RT 12M 8M AB	30,0	1,18	10,0	13,2	1,0	6,0	6,9	0,5	19,1	0,75	17	3100	210
<b>JIS</b>															
⅜"	¼"	RT 38J 14J AB	27,0	1,06	7,7	10,3	0,8	4,4	7,2	0,5	19,1	0,75	14	3500	240
½"	¼"	RT 12 14J AB	30,0	1,18	10,2	14	1,0	4,4	7,2	0,5	19,1	0,75	17	3500	240
½"	⅜"	RT 12 38J AB	30,0	1,18	10,2	14	1,0	7,5	10,3	0,8	19,1	0,75	17	3500	240

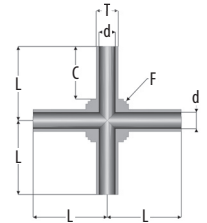




## TEES | AUTOMATIC BUTTWELD CROSS WITHOUT SHOULDER

### TUBE SIZE

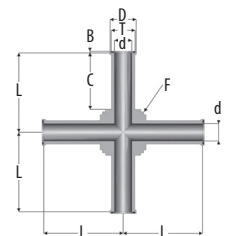
T Tube O.D.	Part number	L		d		C		F	Working Pressure	
		mm	inch	mm	inch	mm	inch		PSIG	bar
<b>FRACTIONAL</b>										
¼"	C 14 ABW	27,0	1,06	4,6	0,18	19,1	0,75	10	5100	350
⅜"	C 38 ABW	27,0	1,06	7,7	0,30	19,1	0,75	14	3300	220
½"	C 12 ABW	30,0	1,18	10,2	0,40	19,1	0,75	17	3500	240
<b>METRIC</b>										
6 mm	C 6M ABW	27,0	1,06	4,0	0,16	19,1	0,75	10	6800	460
8 mm	C 8M ABW	27,0	1,06	6,0	0,24	19,1	0,75	14	4800	330
12 mm	C 12M ABW	30,0	1,18	10,0	0,39	19,1	0,75	17	3100	210



## TEES | AUTOMATIC BUTTWELD CROSS WITH SHOULDERS

### TUBE SIZE

T Tube O.D.	Part number	L		d		D	B	C		F	Working Pressure	
		mm	inch	mm	inch			mm	inch		mm	PSIG
<b>FRACTIONAL</b>												
¼"	C 14 AB	27,0	1,06	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
¼"	CCA 14 AB	31,8	1,25	4,6	0,18	7,4	0,5	19,1	0,75	10	5100	350
⅜"	C 38 AB	27,0	1,06	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
⅜"	CCA 38 AB	31,2	1,23	7,7	0,30	10,5	0,8	19,1	0,75	14	3300	220
½"	C 12 AB	30,0	1,18	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
½"	CCA 12 AB	34,3	1,35	10,2	0,40	14,0	1,0	19,1	0,75	17	3500	240
<b>METRIC</b>												
6 mm	C 6M AB	27,0	1,06	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
6 mm	CCA 6M AB	31,2	1,23	4,0	0,16	6,9	0,5	19,1	0,75	10	6800	460
8 mm	C 8M AB	27,0	1,06	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
8 mm	CCA 8M AB	31,2	1,23	6,0	0,24	8,9	0,8	19,1	0,75	14	4800	330
10 mm	CCA 10M AB	32,5	1,28	8,0	0,31	10,9	0,8	19,1	0,75	14	3500	240
12 mm	CCA 12M AB	32,5	1,28	10,0	0,39	13,2	1,0	19,1	0,75	17	3100	210



# A WORLD OF GAS CONTROL SOLUTIONS

COMPLETE SOLUTIONS FROM SOURCE TO PROCESS.

ROTAREX is helping engineers worldwide to get better gas results: from ultra high purity production and medical care facilities to industrial and LPG applications, as well as alternative energy vehicles, fire suppression, diving, aerospace, cryogenics, laboratory, petro-chemical and welding. ROTAREX applies over 90 years of know-how and experience to custom design, develop and manufacture the high performance valves, regulators and fittings to suit your needs, all in one hand. Discover the difference ROTAREX can make in your world.

**CYLINDER VALVES**

**EQUIPMENT**

**FIRETEC**

**AUTOMOTIVE**

**LPG/SRG**

**MEDITEC**





**INDUSTRIAL  
CYLINDER VALVES**



**UHP  
CYLINDER VALVES**



**MEDICAL VALVES  
& REGULATORS**



**SPECIALTY GAS VALVES  
REGULATORS & FITTINGS**



**CRYOGENIC VALVES**



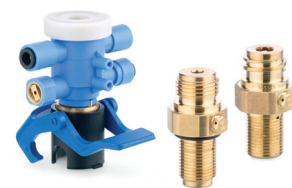
**AUTOMOTIVE**



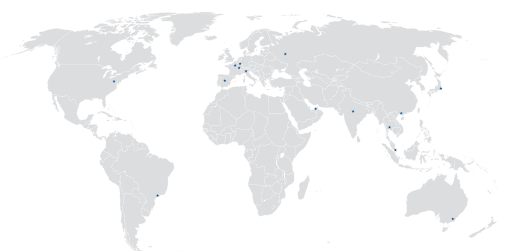
**FIRE SUPPRESSION**



**LPG VALVES  
REGULATORS & GAUGES**



**WATERTEC**



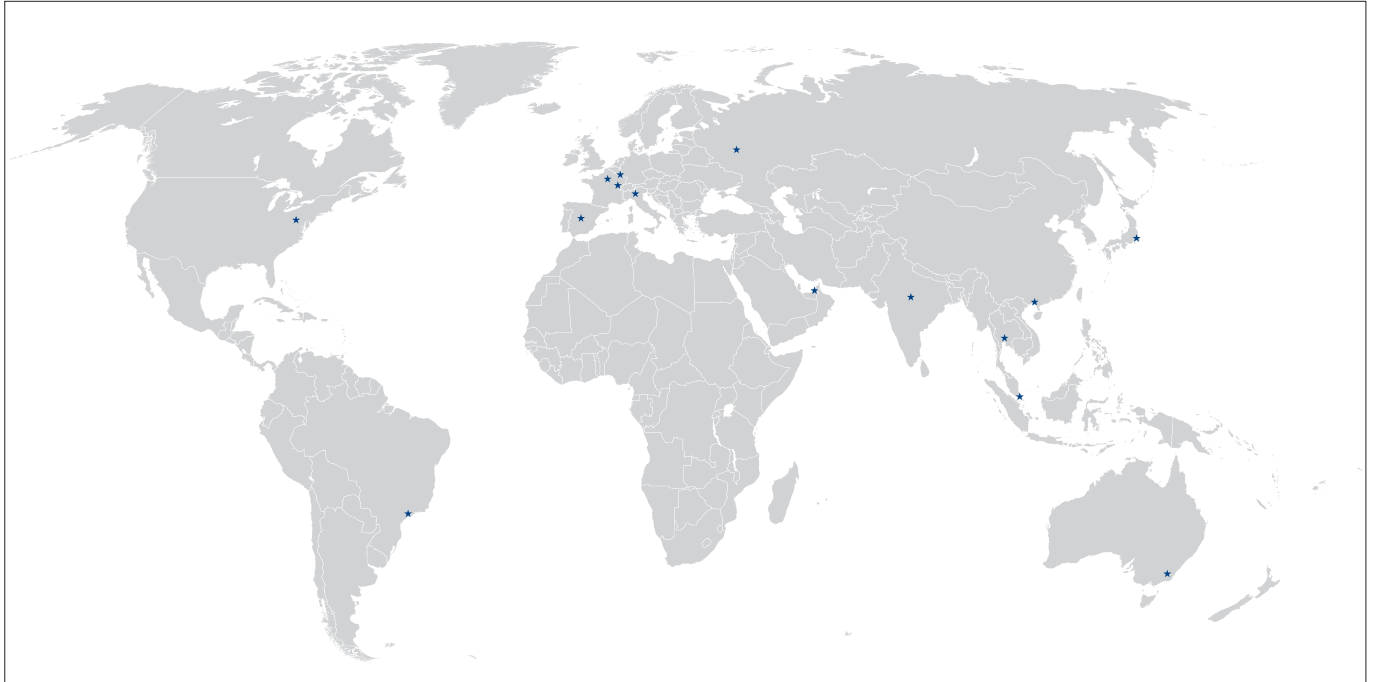
**WORLDWIDE HEADQUARTERS**

**ROTAREX S.A.**  
24, rue de Diekirch, BP 19  
L-7505 Lintgen  
Luxembourg  
Tel.: +352 32 78 32-1  
Fax: +352 32 78 32-854  
E-mail: info@rotarex.com

**FLOWTEKNIK**  
SCANDINAVIA APS



RUGVÆNGET 1 9 C  
2600 TAASTRUP  
INFO@PGFLOWTEKNIK.DK  
WWW.PGFLOWTEKNIK.DK



**REGIONAL / COUNTRY HEAD QUARTERS**

**NORTH AMERICA**

**USA**  
**Rotarex North America**  
221 Westec Drive  
Westmoreland Technology Park I  
Mt. Pleasant, Pennsylvania 15666 USA  
Tel.: +1 724-696-43 40  
Fax: +1 724-696-43 64  
E-mail: info@northamerica.rotarex.com

**SOUTH AMERICA**

**BRASIL**  
**Rotarex Brazil Ltda**  
Cond. Ind. Portal da Anhanguera Estr. Municipal  
Gov. Mário Covas, S/N  
13279-411 Bairro Macuco -Valinhos  
São Paulo Brazil  
Tel.: +55 19 3518 0800  
Fax: +55 19 3869-1503  
E-mail: info@brazil.rotarex.com

**EUROPE**

**GERMANY, NORDIC, UK**

5 rue de Labergement  
BP. 10, F 21110 Genlis  
France - Europe  
Tel.: +33 380 476 100  
E-mail: info@smt.rotarex.com

**EUROPE**

**FRANCE, BENELUX**  
24, rue de Diekirch, BP 19  
L-7505 Lintgen, Luxembourg  
Tel.: +352 32 78 32-1  
Fax: +352 32 78 32 317  
E-mail: salesequipment@rotarex.com

**ITALY**

**Rotarex Italia S.r.l.**  
46 Via Giacomo Matteotti  
I-25080, Cliverghe di Mazzano (BS) Italy  
Tel.: +39 030 212 05 50  
Fax: +39 030 212 23 62  
E-mail: info@italia.rotarex.com

**SPAIN**

**Rotarex Spain**  
C/Alcala, 4ª Oficina 404  
28014 Madrid  
Tel.: +34 (91) 570 89 05  
Mobile: +34 (650) 908 856  
E-mail: info@spain.rotarex.com

**RUSSIA**

**Rotarex Rus**  
Tverskaya street, 20/1 bldg. 1 of 506  
125009, Moscow Russia  
Tel.: +7 985 125 7776  
Skype: rotarexrus  
E-mail: info@russia.rotarex.com

**POLAND**

**Rotarex Polska**  
13 Gröbli  
PL 49-300 Brzeg, Poland  
Tel.: +48 77 416 40 16  
Fax: +48 77 416 20 99  
E-mail: info@poland.rotarex.com

**ASIA**

**MIDDLE EAST**

**Rotarex Middle East**  
Jebel Ali Free Zone - Lob 14 #224  
P.O. Box 261952 - JAFZA  
Dubai, U.A.E.  
Tel.: +971 (0) 4 88 76 701  
Fax: +971 (0) 4 88 76 702  
E-mail: info@middle-east.rotarex.com

**CHINA**

**Rotarex Star**  
60 Yuan Zhong Road  
Shanghai Nanhui Industrial Zone  
201300, Shanghai China  
Tel.: +86-21 5800 4000  
Fax: +86-21 5800 3226  
E-mail: info@china.rotarex.com

**SINGAPORE**

**Rotarex Fareast Pte Ltd**  
10 Ubi Crescent  
Ubi Techpark, Lobby C, #06-55  
408564 Singapore  
Tel.: +65 64 72 37 27  
Fax: +65 64 72 45 28  
E-mail: info@singapore.rotarex.com

**JAPAN**

**Rotarex Japan Ltd**  
2F, S-1 Bldg, 2-10-6 Shiba  
Minato-Ku, Tokyo  
105-0014 JAPAN  
Tel.: +81 3 6809 6973  
Fax: +81 3 6809 6975  
E-mail: info@japan.rotarex.com

**INDIA**

**Rotarex ENGG. PVT. LTD.**  
C-105, Mahindra Apartments  
Vikasपुरi, New Delhi 110018  
mob.: +91-9873467666  
E-mail: atul.nigam@rotarex.in

**THAILAND**

**Rotarex (Thailand) Co Ltd.**  
297, Watglee Tower  
3rd floor, Unit C, Surawong Road  
Suriyawong, Bangrak,  
Bangkok 10500 Thailand  
Tel.: +66 2635 71 79  
E-mail: info@thailand.rotarex.com

**SOUTH KOREA**

**Rotarex Luz Tech Co.**  
305-500, 547 Yongsan-dong  
Yuseong-gu  
Taejon, Korea  
Tel.: +82 42 825 8911  
Fax: +82 42 825 8913  
E-mail: info@rotarex.co.kr

**OCEANIA**

**AUSTRALIA**

**Rotarex Australia/New Zealand**  
Hornsby Heights,  
Sydney, NSW, 2077  
Tel.: +61 477 477 481  
E-mail: info@australia.rotarex.com