



HAM-LET HI-TECH COMPONENTS

ORBITAL WELD AND METAL GASKET
FACE SEAL FITTINGS



- ✓ High Tech Components suitable for many applications
- ✓ Mainly for Face-Seal or Welded connections
- ✓ Mechanical-Polished or Electropolished



TECHNICAL INFORMATION

We specialize in the design and production of high-quality, specially manufactured valves and fittings for High-Purity and Ultra High-Purity applications.

A joint effort of our expert engineers and technicians resulted in the development of a complete line that reflects the company's deep understanding of the critical requirements of the semiconductor, biotech, and pharmaceutical industries.

We are a leader in the manufacture of fittings and valves for clean industries and consistently spearhead significant new developments in this field. HTC has broken new ground in surface finishing techniques by implementing improved electro-polishing processes.

PLATING

HTC female nuts are silver plated in order to reduce the risk of galling and to improve the ability to reproduce the fitting. This high-quality plating also reduces the torque required for the fitting assembly.

Reference Spec: Meeting and exceeding - Mil Spec: QQ-S-365

Note: Do not apply any type of cleaning acid and/or electropolishing solutions to any female threads. These solutions damage the silver-plating and invalidate any expressed or implied warranty.

WELDING

Options: butt weld, shoulder weld, socket weld
Reference Specs: All welded products are manufactured and welded according to SEMI .F78,F81

TESTING

UCT FS follows the relevant ASTM, ANSI, ASME, ISO, SEMI & SEMASPEC standards for testing and for qualifying processes and results.

JAPANESE STANDARDS

Upon request, UCT can manufacture HTC® product line to meet Japanese standards:

- Low manganese material specifications (JIS)
- Wall thickness
- Hardness

TEMPERATURE RATING

Products	Material	°F	°C
HTC face seal fittings	SST 316L	1000	538
	SST 316L Var or Vim / Var ¹	1000	538
HTC welding fittings	SST 316L	1000	538
	SST 316L Var or Vim/Var ¹	1000	538
HTC gaskets	SST 316	1000	538
	NICKEL	600	315

HELIUM LEAK

All UCT Face seal products are tested and qualified to a maximum leak rate of 4×10^{-9} std cm³/sec with silver-plating, and to a maximum leak rate of 4×10^{-11} std cm³/sec with unplated gaskets.

MATERIAL TRACEABILITY

All HTC components are heat coded for full traceability

PACKAGING

Each "E" finished component is double-bagged to ensure component cleanliness and to protect it from environmental contamination. The inner bag is nylon 6 and vacuum sealed. The outer bag is polyethylene.

INTERNATIONAL CERTIFICATIONS

ISO 9001, Certified by S.I.I.

PRESSURE RATING

Products	Material	Size	Wall Thickness	Pressure Rating	
			mm	psi	bar
HTC Fittings	316L or 316LV	1/8"	0.028	8550	590
		1/4"	0.035	5200	359
		3/8"	0.035	3350	231
		1/2"	0.049	3750	259
		3/4" ^{1/2}	0.065	3350	231
		3/4" ^{1/2}	0.049	2400	165
		1" ^{1/2}	0.065	2400	165

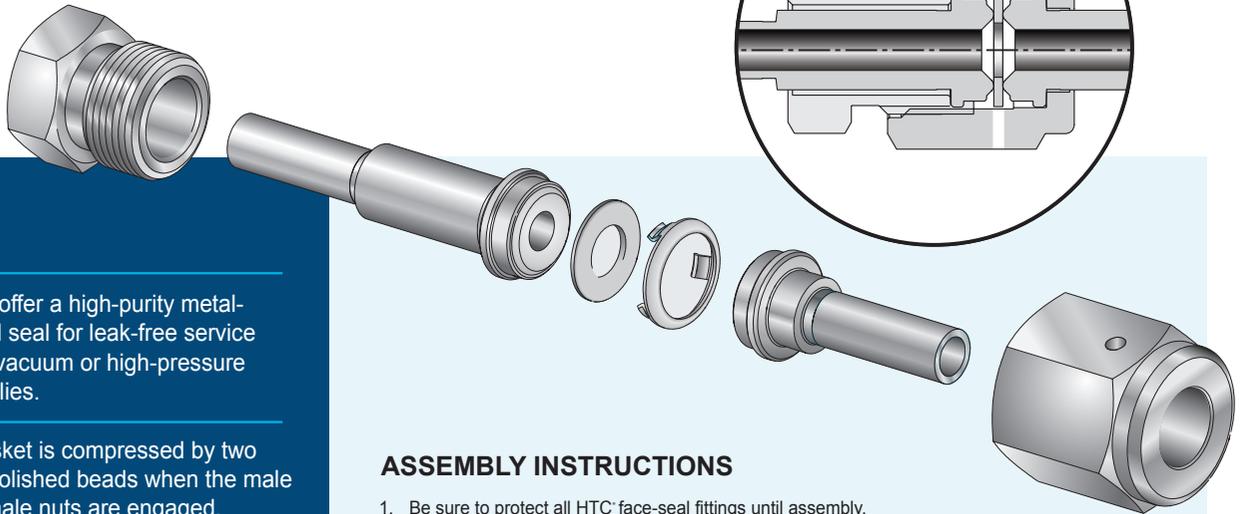
3/4" & 1" sizes are not standard, but can be manufactured upon request.

Pressure ratings are calculated in accordance with ANSI Code for Pressure Piping ASME B31.3, Process Piping, and ASME B31.1, Power Piping, for stainless steel fittings. All working pressures are at 4:1 safety factor. Pressure indicated in the catalog is at room temperature.

For more information refer to HTC standard operation procedure (SOP) #9709

¹ Per SEMI F20 last revision

GLAND MAKE-UP



Glands offer a high-purity metal-to-metal seal for leak-free service in high-vacuum or high-pressure assemblies.

The gasket is compressed by two highly polished beads when the male and female nuts are engaged.

The gland bead to bead assembly compresses a soft-metal gasket-to-seal. This assembly can be locked by the HAM-LET Grip-Kit.

Visual test and leak testing are performed through two test ports in opposite locations from the female nut.

ASSEMBLY INSTRUCTIONS

1. Be sure to protect all HTC face-seal fittings until assembly. Exercise great care so that the sealing surfaces are not scratched, damaged or contaminated in any way during handling and assembly.
2. Always use a clean environment, and always employ proper cleanroom protocol for the make-up and assembly of high-purity fittings and applications.
3. **Make-up instructions:**
Hand-tighten the female nut to the male nut/body the finger tight. Tighten the female nut 1/8 turn past the finger tight point. Always torque the female nut while keeping the male nut/body stationary.
Face-seal connections are remakable - please use a new gasket for each remake.

MATERIALS

Products	Level "E" ¹			Level "H" ²		
	Treatment	Ra (Microinch)		Treatment	Ra (Microinch)	
		Max	Average		Max	Average
Glands	Electropolished	10	5	Non-Electropolished	15	10
Mini butt weld	Electropolished	10	5	Non-Electropolished	15	10
Shaped unions	Electropolished	10	5	Non-Electropolished	20	15
Long weld shaped connectors	Electropolished	10	5	Non-Electropolished	15	10
Threaded straight connectors	Electropolished	10	5	Non-Electropolished	20	15

¹"E" level - Electropolished | ²"H" level - Not Electropolished

GLANDS

LONG GLAND

Without shoulder
GL-W



7

LONG GLAND

With shoulder
GL-S



7

MALE GLAND

Without shoulder
GM-W



8

SHORT GLAND

Without shoulder
GS-W



8

SHORT GLAND

With shoulder
GS-S



9

MINI SHORT GLAND

Without shoulder
MGS-W



9

MINI SHORT GLAND

With shoulder
MGS-S



10

GLAND ADAPTER TO LET-LOK[®]

AG



10

MALE GLAND

Short tube Without shoulder
MG-W



10

SOCKET WELD GLAND

GSW



11

SHAPED UNIONS

ELBOW UNION

EU



12

TEE UNION

TU



12

CROSS UNION

CU



12

MALE ELBOW

EM



13

THREADED STRAIGHT CONNECTORS

MALE UNION

UM



14

MALE REDUCING UNION

RUM



14

MALE TO MALE NPT CONNECTOR

CM



14

BULKHEAD UNION

BU



15

SHORT BULKHEAD UNION

SBU



15

MALE TO NPT BULKHEAD CONNECTOR

BCM



15

MALE TO SEAL O-RING CONNECTOR

CMOB



16

MALE TO FEMALE NPT CONNECTOR

FC



16

MALE TO LET-LOK UNION

UGL



16

MALE TO BULKHEAD LET-LOK UNION

BUL



17

MALE TO SHORT BULKHEAD LET-LOK UNION

SBUL



17

BULKHEAD TO TUBE UNION

Without shoulder
BHUT-W



17

SHORT BULKHEAD TO TUBE UNION

Without shoulder
SBHUT-W



18

CAPS, NUTS & PLUGS

COUPLING
CP



18

TAPERED MALE NUT
TNM



20

DOUBLE FEMALE UNION
DFU



18

SHORT MALE NUT
SNM



20

FEMALE NUT
NF



19

FEMALE CAP
CF



19

MALE PLUG
MP



19

MALE NUT
NM



20

SWIVEL CONNECTORS

FEMALE TO MALE UNION
UMF



21

FEMALE TO MALE NPT CONNECTOR
MCF



21

FEMALE TO FEMALE UNION
UFF



21

FEMALE TO FEMALE NPT CONNECTOR
FCF



22

FEMALE TO LET-LOK® CONNECTOR
FHTL



22

FEMALE CROSS UNION
CFFFF



22

FEMALE TEE UNION
TFFF



23

FEMALE ELBOW UNION
EFF



23

HIGH-FLOW CONNECTORS

LONG HIGH-FLOW GLAND
HGL



24

HIGH-FLOW TO TUBE UNION
HMT



24

HIGH-FLOW FEMALE NUT
HNF



24

HIGH-FLOW MALE NUT
HNM



25

HIGH-FLOW ELBOW UNION
HEU



25

HIGH-FLOW TEE UNION
HTU



25

GASKETS

GASKET
GA



26

RETAINED GASKET
GA-RT



26

VERTICAL LOAD GASKET
GA-VL



27

VERTICAL LOAD GASKET BLIND
GA-VL BLIND



27

MINI BUTTWELDS

MINI ELBOW

Without shoulder
ME-W



28

MINI ELBOW REDUCER

Without shoulder
MER-W



28

MINI ELBOW 45°

Without shoulder
ME-45°-W



29

MINI ELBOW

With extended leg
Without shoulder
MEX-W



29

MINI TEE

Without shoulder
MT-W



29

MINI TEE REDUCER

Without shoulder
MTR-W



30

MINI CROSS

Without shoulder
MC-W



30

MINI TRI-EL

Without shoulder
MTB-W



31

REDUCING UNION

Without shoulder
RU-W



31

LONG WELD CONNECTORS

ELBOW

Without shoulder
EW-W



32

TEE

Without shoulder
TW-W



32

TEE REDUCER

Without shoulder
TWR-W



33

CROSS

Without shoulder
CW-W



33

REDUCER

Without shoulder
RW-W



34

REDUCER BIG SIZE

Without shoulder
RW-W



34

BUTTWELD UNION

Without shoulder
UB-W



34

BUTTWELD UNION

With shoulder
UB-S



35

BUTTWELD UNION

With locator and
shoulder
UBL-S



35

ORDERING INFORMATION:

V - GL - 1/2 - W - E

Material Designator	
P	316L/316L VOD (AOD)
V	SST 316L Var ^{1,2}
H	Alloy C-276
HC22	Alloy C-22
Ni ³	Nickel
SS ³	SST

Type of Fitting Designator
GL

Size Designator	
1/8"	6 mm
1/4"	8 mm
3/8"	10 mm
1/2"	12 mm
3/4"	18 mm
1"	25 mm

End Designator	
S	With shoulder
W	Without shoulder

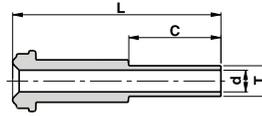
Purity Level	
To indicate the desired level of polish, please add "E" or "H" to the part number:	
E	With electropolish
H	Without electropolish

¹ Per SEMI F20 last revision

² Vim/Var material available upon request, "-VV"

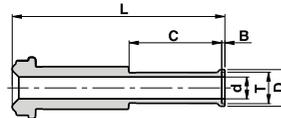
³ For gaskets only

GL-W
LONG GLAND
Without shoulder



Ordering Information	Face Seal Size	L		C		d		T	W.T.	
	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
GL-1/8-W	1/8	36.1	1.42	19.1	0.75	1.90	0.07	1/8"	-	0.028
GL-1/4 X 1/8-W	1/4	36.1	1.42	19.1	0.75	1.90	0.07	1/8"	-	0.028
GL-1/4-W	1/4	43.2	1.70	19.1	0.75	4.60	0.18	1/4"	-	0.035
GL-3/8-W	1/2	45.5	1.79	19.1	0.75	7.70	0.30	3/8"	-	0.035
GL-1/2-W	1/2	45.5	1.79	19.1	0.75	10.2	0.40	1/2"	-	0.049
GL-1/2-W 1.41	1/2	35.8	1.41	9.6	0.38	10.2	0.40	1/2"	-	0.049
GL-1/2-W W.T.=0.065	1/2	45.5	1.79	19.1	0.75	9.50	0.37	1/2"	-	0.065
GL-1/2 X 1/4-W	1/2	45.5	1.79	19.1	0.75	4.60	0.18	1/4"	-	0.035
GL-3/4-W W.T.=0.049	3/4	51.6	2.03	19.1	0.75	16.6	0.65	3/4"	-	0.049
GL-3/4-W W.T.=0.065	3/4	51.6	2.03	19.1	0.75	15.8	0.62	3/4"	-	0.065
GL-1-W W.T.=0.065	1	58.9	2.32	19.1	0.75	22.1	0.87	1"	-	0.065
GL-6MM-W	1/4	43.2	1.70	19.1	0.75	4.00	0.16	6mm	1.00	-
GL-8MM-W	1/4	43.2	1.70	19.1	0.75	6.00	0.24	8mm	1.00	-
GL-10MM-W	1/2	45.5	1.79	19.1	0.75	8.00	0.31	10mm	1.00	-
GL-12MM-W	1/2	45.5	1.79	19.1	0.75	10.0	0.39	12mm	1.00	-
GL-18MM-W	3/4	51.6	2.03	19.1	0.75	15.0	0.59	18mm	1.50	-

GL-S
LONG GLAND
With shoulder

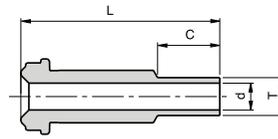


Ordering Information	Face Seal Size	L		C		d		B		D		T	W.T.	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
GL-1/4-S	1/4	43.7	1.72	19.1	0.75	4.6	0.18	0.6	0.02	7.4	0.29	1/4"	-	0.035
GL-3/8-S	1/2	46.2	1.82	19.1	0.75	7.7	0.30	0.8	0.03	10.4	0.41	3/8"	-	0.035
GL-1/2-S	1/2	46.5	1.83	19.1	0.75	10.2	0.40	1.0	0.04	14.0	0.55	1/2"	-	0.049
GL-1/2-S W.T.=0.065	1/2	46.5	1.83	19.1	0.75	9.5	0.37	1.0	0.04	14.0	0.55	1/2"	-	0.065
GL-6MM-S	1/4	43.7	1.72	19.1	0.75	4.0	0.16	0.5	0.02	7.0	0.27	6mm	1.00	-
GL-12MM-S	1/2	46.5	1.83	19.1	0.75	10.0	0.39	1.0	0.04	13.2	0.52	12mm	1.00	-

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

GM-W
MALE GLAND

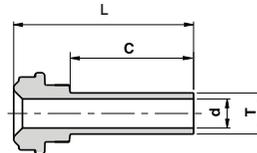
Without shoulder



Ordering Information	Face Seal Size	L		C		d		T
	inch	mm	inch	mm	inch	mm	inch	Tube O.D
GM-1/8-W	1/8	17.8	0.70	7.10	0.28	1.90	0.07	1/8
GM-1/4-W	1/4	33.3	1.31	10.4	0.41	3.00	0.12	1/4
GM-3/8-W	1/2	38.1	1.50	10.4	0.41	7.10	0.28	3/8
GM-1/2-W	1/2	38.1	1.50	12.7	0.50	10.2	0.40	1/2
GM-3/4-W	3/4	50.8	2.00	15.7	0.62	13.5	0.53	3/4
GM-1-W	1	56.4	2.22	20.6	0.81	19.1	0.75	1

GS-W
SHORT GLAND

Without shoulder

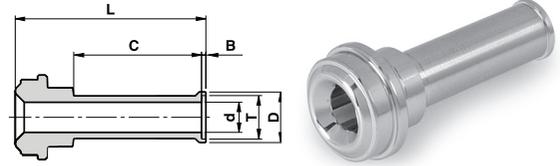


Ordering Information	Face Seal Size	L		C		d		T	W.T.	
	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
GS-1/8-W	1/8	27.4	1.08	19.1	0.75	1.90	0.07	1/8"	-	0.028
GS-1/4-W	1/4	27.9	1.10	19.1	0.75	4.60	0.18	1/4"	-	0.035
GS-1/4 X 1/8 -W	1/4	27.9	1.10	19.1	0.75	1.90	0.07	1/8"	-	0.028
GS -1/4-W 0.72	1/4	18.3	0.72	9.6	0.38	4.60	0.18	1/4"	-	0.035
GS-3/8-W	1/2	28.4	1.12	19.1	0.75	7.70	0.30	3/8"	-	0.035
GS-1/2-W	1/2	28.4	1.12	19.1	0.75	10.2	0.40	1/2"	-	0.049
GS-1/2-W W.T.=0.065	1/2	28.4	1.12	19.1	0.75	9.50	0.37	1/2"	-	0.065
GS-1/2-W-0.74	1/2	18.8	0.74	9.7	0.38	10.2	0.40	1/2"	-	0.049
GS-1/2 X 1/4-W	1/2	28.4	1.12	19.1	0.75	4.60	0.18	1/4"	-	0.035
GS-3/4-W W.T.=0.049	3/4	29.0	1.14	19.1	0.75	16.6	0.65	3/4"	-	0.049
GS-3/4-W W.T.=0.065	3/4	29.0	1.14	19.1	0.75	15.8	0.62	3/4"	-	0.065
GS-1-W W.T.=0.065	1	32.0	1.26	19.1	0.75	22.1	0.87	1"	-	0.065
GS-6MM-W	1/4	29.4	1.16	19.1	0.75	4.00	0.16	6mm	1.00	-
GS-8MM-W	1/4	29.5	1.16	19.1	0.75	6.00	0.24	8mm	1.00	-
GS-10MM-W	1/2	29.4	1.16	19.1	0.75	8.00	0.31	10mm	1.00	-
GS-12MM-W	1/2	29.4	1.16	19.1	0.75	10.0	0.39	12mm	1.00	-
GS-18MM-W	3/4	31.0	1.22	19.1	0.75	15.0	0.59	18mm	1.50	-

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

GS-S
SHORT GLAND

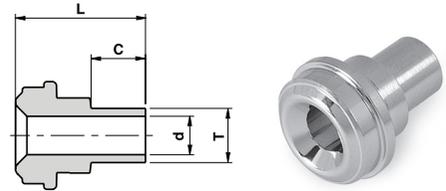
With shoulder



Ordering Information	Face Seal Size	L		C		d		B		D		T	W.T.	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
GS-1/4-S	1/4	28.5	1.12	19.1	0.75	4.60	0.18	0.60	0.02	7.40	0.29	1/4"	-	0.035
GS-3/8-S	1/2	29.2	1.15	19.1	0.75	7.70	0.30	0.80	0.03	10.4	0.41	3/8"	-	0.035
GS-1/2-S	1/2	29.4	1.16	19.1	0.75	10.2	0.40	1.00	0.04	14.0	0.55	1/2"	-	0.049
GS-1/2-S W.T.=0.065	1/2	29.4	1.16	19.1	0.75	9.50	0.37	1.00	0.04	14.0	0.55	1/2"	-	0.065
GS-6MM-S	1/4	30.0	1.18	19.1	0.75	4.00	0.16	0.50	0.02	7.00	0.27	6mm	1.00	-
GS-12MM-S	1/2	30.5	1.20	19.1	0.75	10.0	0.39	1.00	0.04	13.2	0.52	12mm	1.00	-

MGS-W
MINI SHORT GLAND

Without shoulder

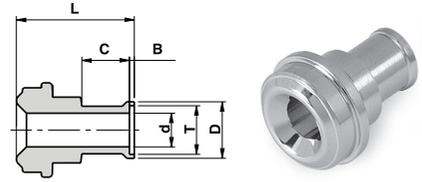


Ordering Information	Face Seal Size	L		C		d		T	W.T.	
	inch	mm	inch	mm	inch	mm	inch	inch / mm	mm	inch
MGS-1/4-W	1/4	15.2	0.60	6.40	0.25	4.60	0.18	1/4"	-	0.035
MGS-3/8-W	1/2	15.8	0.62	6.40	0.25	7.70	0.30	3/8"	-	0.035
MGS-1/2-W	1/2	15.8	0.62	6.40	0.25	10.2	0.40	1/2"	-	0.049
MGS-1/2-W W.T.=0.065	1/2	15.8	0.62	6.40	0.25	9.50	0.37	1/2"	-	0.065
MGS-6MM-W	1/4	15.2	0.60	6.40	0.25	4.00	0.16	6mm	1.00	-
MGS-8MM-W	1/4	15.8	0.62	6.40	0.25	6.00	0.24	8mm	1.00	-
MGS-10MM-W	1/2	15.8	0.62	6.40	0.25	8.00	0.31	10mm	1.00	-
MGS-12MM-W	1/2	15.8	0.62	6.40	0.25	10.0	0.39	12mm	1.00	-

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

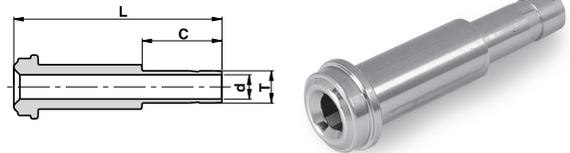
MGS-S MINI SHORT GLAND

With shoulder



Ordering Information	Face Seal Size	L		C		d		B		D		T Tube O.D	W.T.	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
MGS-1/4-S	1/4	15.8	0.62	6.4	0.25	4.60	0.18	0.6	0.02	7.40	0.29	1/4"	-	0.035
MGS-3/8-S	1/2	16.5	0.65	6.4	0.25	7.70	0.30	0.8	0.03	10.4	0.41	3/8"	-	0.035
MGS-1/2-S	1/2	16.8	0.66	6.4	0.25	10.2	0.40	1.0	0.04	14.0	0.55	1/2"	-	0.049
MGS-1/2-S W.T.=0.065	1/2	16.8	0.66	6.4	0.25	9.50	0.37	1.0	0.04	14.0	0.55	1/2"	-	0.065
MGS-6MM-S	1/4	15.8	0.62	6.4	0.25	4.00	0.16	0.5	0.02	7.00	0.27	6mm	1.00	-
MGS-8MM-S	1/4	16.5	0.65	6.4	0.25	6.00	0.24	0.8	0.03	8.90	0.35	8mm	1.00	-
MGS-10MM-S	1/2	16.5	0.65	6.4	0.25	8.00	0.31	0.8	0.03	10.9	0.43	10mm	1.00	-
MGS-12MM-S	1/2	16.8	0.66	6.4	0.25	10.0	0.39	1.0	0.04	13.2	0.52	12mm	1.00	-

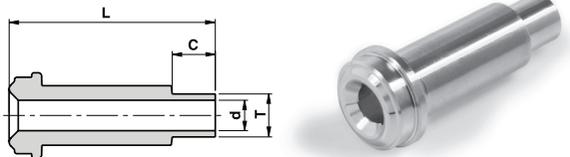
AG GLAND ADAPTER TO LET-LOK



Ordering Information	Face Seal Size	L		C		d		T Tube O.D
	inch	mm	inch	mm	inch	mm	inch	inch/mm
AG-1/4	1/4	41.2	1.62	15.9	0.62	4.3	0.17	1/4"
AG-3/8	1/2	46.0	1.81	17.5	0.69	6.8	0.27	3/8"
AG-1/2	1/2	49.3	1.94	24.4	0.96	9.4	0.37	1/2"
AG-6MM	1/4	41.2	1.62	15.7	0.62	4.0	0.16	6mm

MG-W MALE GLAND

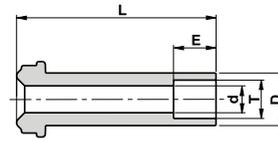
Short tube without shoulder



Ordering Information	Face Seal Size	L		C		d		T Tube O.D	W.T.	
	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch
MG-1/4-W	1/4	30.5	1.20	6.4	0.25	4.60	0.18	1/4"	-	0.035
MG-1/4-W 1.32	1/4	33.5	1.32	9.6	0.38	4.60	0.18	1/4"	-	0.035
MG-3/8-W	1/2	32.8	1.29	6.4	0.25	7.70	0.30	3/8"	-	0.035
MG-1/2-W	1/2	32.8	1.29	6.4	0.25	10.2	0.40	1/2"	-	0.049
MG-6MM-W	1/4	30.5	1.20	6.4	0.25	4.00	0.16	6mm	1.00	-
MG-8MM-W	1/4	30.5	1.20	6.4	0.25	6.00	0.24	8mm	1.00	-
MG-10MM-W	1/2	32.8	1.29	6.4	0.25	8.00	0.31	10mm	1.00	-
MG-12MM-W	1/2	32.8	1.29	6.4	0.25	10.0	0.39	12mm	1.00	-

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

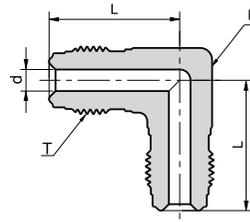
GSW SOCKET WELD GLAND



Ordering Information	Face Seal Size	L		d		E		D		T
	inch	mm	inch	mm	inch	mm	inch	mm	inch	Tube O.D
GSW-1/8	1/8	17.8	0.70	2.40	0.09	2.50	0.10	5.10	0.20	1/8
GSW-1/4	1/4	33.3	1.31	4.60	0.18	7.10	0.28	8.90	0.35	1/4
GSW-1/4-W-0.75"	1/4	19.1	0.75	4.60	0.18	7.10	0.28	8.90	0.35	1/4
GSW-1/4-W-0.50"	1/4	12.7	0.50	4.60	0.18	7.10	0.28	8.90	0.35	1/4
GSW-3/8	1/2	38.1	1.50	7.10	0.28	7.90	0.31	15.2	0.60	3/8
GSW-1/2	1/2	38.1	1.50	10.2	0.40	9.60	0.38	15.2	0.60	1/2
GSW-3/4	3/4	50.8	2.00	15.7	0.62	11.2	0.44	22.4	0.88	3/4
GSW-1	1	56.4	2.22	22.1	0.87	15.7	0.62	30.2	1.19	1

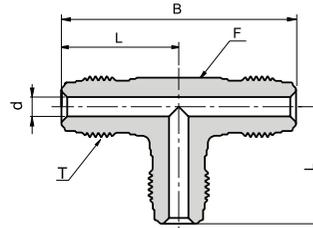
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the Part Number.

EU ELBOW UNION



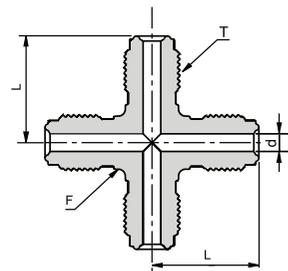
Ordering Information	Face Seal Size	L		d		F	T
	inch	mm	inch	mm	inch	inch	inch
P-EU-1/4	1/4	27.2	1.07	4.60	0.18	1/2	9/16-18
P-EU-1/2	1/2	36.8	1.45	10.2	0.40	13/16	7/8-14
P-EU-3/4	3/4	48.8	1.92	15.8	0.62	1 1/4	1 1/4 -18

TU TEE UNION



Ordering Information	Face Seal Size	L		B		d		F	T
	inch	mm	inch	mm	inch	mm	inch	inch	inch
P-TU-1/4	1/4	27.2	1.07	54.4	2.14	4.60	0.18	1/2	9/16-18
P-TU-1/2	1/2	36.8	1.45	73.6	2.90	10.2	0.40	13/16	7/8-14
P-TU-3/4	3/4	48.8	1.92	97.6	3.84	15.8	0.62	1 1/4	1 1/4 -18

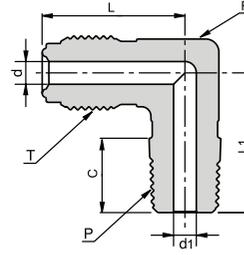
CU CROSS UNION



Ordering Information	Face Seal Size	L		d		F	T
	inch	mm	inch	mm	inch	inch	inch
P-CU-1/4	1/4	27.2	1.07	4.60	0.18	1/2	9/16-18
P-CU-1/2	1/2	36.8	1.45	10.2	0.40	13/16	7/8-14

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

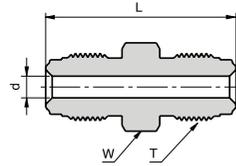
EM
MALE ELBOW



Ordering Information	Face Seal Size	L		L1		C		d		d1		F	T Thread Size	P NPT-M
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
P-EM-1/4 X 1/8	1/4	27.2	1.07	22.1	0.87	9.60	0.38	4.60	0.18	4.60	0.18	1/2	9/16-18	1/8
P-EM-1/4 X 1/4	1/4	27.2	1.07	26.7	1.05	14.2	0.56	4.60	0.18	4.60	0.18	1/2	9/16-18	1/4
P-EM-1/4 X 1/2	1/4	34.0	1.33	36.8	1.44	19.0	0.75	4.60	0.18	9.50	0.37	13/16	9/16-18	1/2
P-EM-1/2 X 1/4	1/2	36.8	1.23	33.5	1.32	14.2	0.56	10.2	0.40	4.60	0.18	13/16	7/8-14	1/4
P-EM-1/2 X 3/8	1/2	36.8	1.45	32.0	1.26	14.2	0.56	10.2	0.40	9.50	0.37	13/16	7/8-14	3/8
P-EM-1/2 X 1/2	1/2	36.8	1.45	36.8	1.45	19.0	0.75	10.2	0.40	10.2	0.40	13/16	7/8-14	1/2

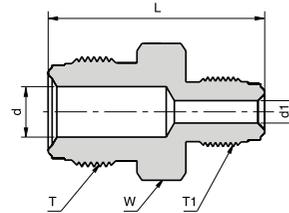
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

UM
MALE UNION



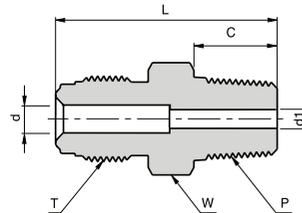
Ordering Information	Face Seal Size	L		d		W	T
	inch	mm	inch	mm	inch	inch	inch
P-UM-1/4	1/4	39.4	1.55	4.60	0.18	5/8	9/16 - 18
P-UM-1/2	1/2	46.7	1.84	10.2	0.40	15/16	7/8 - 14
P-UM-3/4	3/4	62.0	2.44	15.8	0.62	1 5/16	1 1/4 - 18
P-UM-1	1	65.8	2.59	22.2	0.87	1 5/8	1 1/2 - 20

RUM
MALE REDUCING UNION



Ordering Information	Face Seal Size	Face Seal Size 1	L		d		d1		W	T	T1
	inch	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
P-RUM-1/4 X 1/8	1/4	1/8	34.8	1.37	4.60	0.18	2.4	0.09	5/8	9/16-18	5/16-24
P-RUM-1/2 X 1/4	1/2	1/4	43.4	1.71	10.2	0.40	4.6	0.18	15/16	7/8-1/4	9/16 -18

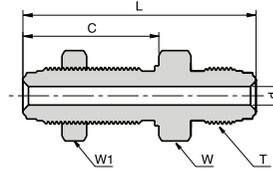
CM
MALE TO MALE
NPT CONNECTOR



Ordering Information	Face Seal Size	L		C		d		d1		W	T	P
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
P-CM-1/4 X 1/8	1/4	33.3	1.31	9.6	0.38	4.60	0.18	4.60	0.18	5/8	9/16 - 18	1/8
P-CM-1/4 X 1/4	1/4	37.8	1.49	14.2	0.56	4.60	0.18	4.60	0.18	5/8	9/16 - 18	1/4
P-CM-1/4 X R1/4 BSPT	1/4	37.8	1.49	14.2	0.56	4.60	0.18	4.60	0.18	5/8	9/16 - 18	1/4 BSPT
P-CM-1/2 X 1/4	1/2	41.9	1.65	14.2	0.56	10.2	0.40	7.10	0.28	15/16	7/8 - 14	1/4
P-CM-1/2 X 3/8	1/2	41.9	1.65	14.2	0.56	9.60	0.38	9.60	0.38	15/16	7/8 - 14	3/8
P-CM-1/2 X 1/2	1/2	46.7	1.84	19.0	0.75	10.2	0.40	10.2	0.40	15/16	7/8 - 14	1/2
P-CM-3/4 X 3/4	3/4	55.6	2.19	19.0	0.75	15.8	0.62	15.8	0.62	1 5/16	1 1/4 - 18	3/4
P-CM-1 X 1	1	62.7	2.47	23.9	0.94	22.2	0.87	22.2	0.87	1 5/8	1 1/2 - 20	1

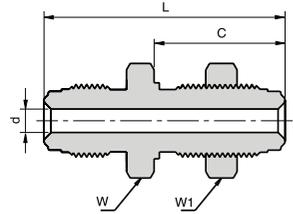
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

BU BULKHEAD UNION



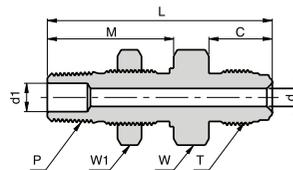
Ordering Information	Face Seal Size	L		C		d		W	W1	T Thread Size	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch
P-BU-1/4	1/4	56.6	2.23	33.0	1.30	4.60	0.18	3/4	3/4	9/16 -18	19/32
P-BU-1/2	1/2	65.3	2.57	37.6	1.48	10.2	0.40	1 1/16	1 1/16	7/8 -14	29/32

SBU SHORT BULKHEAD UNION



Ordering Information	Face Seal Size	L		C		d		W	W1	T Thread Size	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch
P-SBU-1/4	1/4	46.2	1.82	25.1	0.99	4.60	0.18	3/4	3/4	9/16-18	19/32
P-SBU-1/2	1/2	54.4	2.14	28.2	1.11	10.2	0.40	1 1/16	1 1/16	7/8-14	29/32

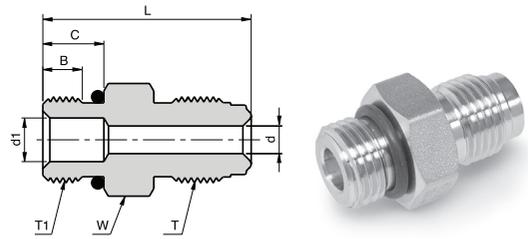
BCM MALE TO NPT BULKHEAD CONNECTOR



Ordering Information	Face Seal Size	L		C		d		M	d1	W	W1	T Thread Size	P NPT-M	Panel Hole Drill Size		
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch		
P-BCM-1/4 X 1/4-H	1/4	56.1	2.21	15.8	0.62	4.60	0.18	31.5	1.24	7.1	0.28	13/16	13/16	9/16 -18	1/4	21/32
P-BCM-1/2 X 1/4-H	1/2	59.4	2.34	17.8	0.70	10.2	0.40	31.5	1.24	7.1	0.28	15/16	13/16	7/8 -14	1/4	21/32

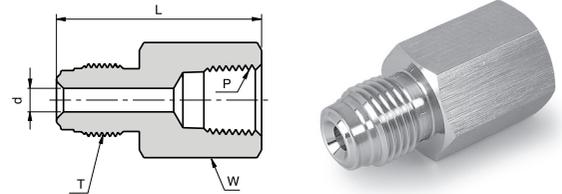
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

CMOB
MALE TO SEAL
O-RING CONNECTOR



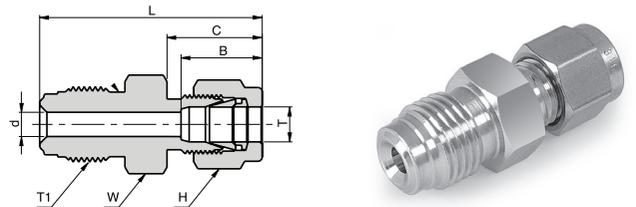
Ordering Information	Face Seal Size	L		C		B		d		d1		W	T	T1	O-Ring Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	
P-CMOB-1/4 X 9/16-H	1/4	33.8	1.33	9.9	0.39	6.40	0.25	4.6	0.18	7.10	0.28	3/4	9/16 -18	9/16 -18	3-906
P-CMOB-1/2 X 7/8-H	1/2	42.2	1.66	12.7	0.50	10.2	0.40	7.1	0.28	15.0	0.59	1	7/8 -14	7/8 -14	3-910
P-CMOB-1/2 X 9/16-H	1/2	37.6	1.48	9.9	0.39	6.40	0.25	7.1	0.28	7.10	0.28	15/16	7/8 -14	9/16 -18	3-906

FC
MALE TO FEMALE
NPT CONNECTOR



Ordering Information	Face Seal Size	L		d		W	T	P
	inch	mm	inch	mm	inch	inch	inch	inch
P-FC-1/4 X 1/8	1/4	35.8	1.41	4.60	0.18	5/8	9/16 -18	1/8
P-FC-1/4 X 1/4	1/4	39.1	1.54	4.60	0.18	3/4	9/16 -18	1/4
P-FC-1/2 X 1/4	1/2	39.1	1.54	10.2	0.40	15/16	7/8 -14	1/4
P-FC-1/2 X 3/8	1/2	44.7	1.76	10.2	0.40	15/16	7/8 -14	3/8
P-FC-1/2 X 1/2	1/2	50.5	1.99	10.2	0.40	1 1/16	7/8 -14	1/2
P-FC-3/4 X 3/4	3/4	59.9	2.36	15.8	0.62	1 5/16	1 1/4 -18	3/4
P-FC-1 X 1	1	63.8	2.51	22.1	0.87	1 5/8	1 1/2 -20	1

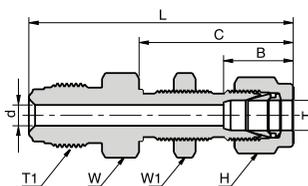
UGL
MALE TO LET-LOK UNION



Ordering Information	Face Seal Size	L		C		B		d		W	H	T	T1
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch
P-UGL-1/4 X 1/8-H	1/4	38.9	1.53	15.2	0.60	12.7	0.50	4.60	0.18	5/8	7/16	1/8	9/16 - 18
P-UGL-1/4 X 1/4-H	1/4	41.1	1.62	17.8	0.70	15.2	0.60	4.60	0.18	5/8	9/16	1/4	9/16 - 18
P-UGL-1/4 X 3/8-H	1/4	42.1	1.66	19.4	0.76	16.8	0.66	4.60	0.18	5/8	11/16	3/8	9/16 - 18
P-UGL-1/2 X 3/8-H	1/2	46.7	1.84	19.4	0.76	16.8	0.66	7.10	0.28	15/16	11/16	3/8	7/8 - 14
P-UGL-1/2 X 1/2-H	1/2	49.5	1.95	22.9	0.90	21.8	0.86	10.2	0.40	15/16	7/8	1/2	7/8 - 14

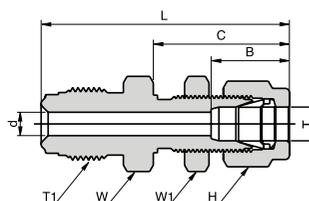
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

BUL MALE TO BULKHEAD LET-LOK UNION



Ordering Information	Face Seal Size	L		C		B		d		W	W1	H	T	T1	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch	inch
P-BUL-1/4 X 1/4-H	1/4	57.2	2.25	33.5	1.32	15.2	0.60	4.60	0.18	5/8	5/8	9/16	1/4	9/16 - 18	29/64
P-BUL-1/2 X 3/8-H	1/4	64.5	2.54	36.8	1.45	16.8	0.66	7.10	0.28	15/16	3/4	11/16	3/8	7/8 - 14	37/64
P-BUL-1/2 X 1/2-H	1/2	69.9	2.74	41.9	1.65	22.9	0.90	10.2	0.40	15/16	15/16	7/8	1/2	7/8 - 14	49/64

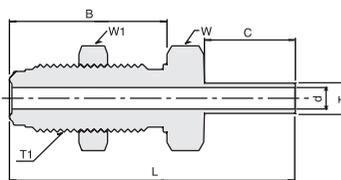
SBUL MALE TO SHORT BULKHEAD LET-LOK UNION



Ordering Information	Face Seal Size	L		C		B		d		W	W1	H	T	T1	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch	inch
P-SBUL-1/4 X 1/4	1/4	47.8	1.88	26.7	1.05	15.2	0.60	4.6	0.18	5/8	5/8	9/16	1/4	9/16-18	29/64

BHUT-W BULKHEAD TO TUBE UNION

Without shoulder

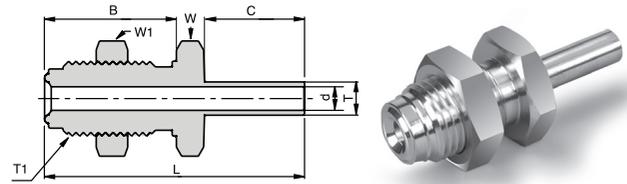


Ordering Information	Face Seal Size	L		B		C		d		W	W1	T	T1	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
P-BHUT-1/4 X 1/4-W	1/4	59.9	2.36	33.0	1.30	19.1	0.75	4.60	0.18	3/4	3/4	1/4	9/16 - 18	19/32
P-BHUT-1/2 X 1/2-W	1/2	66.6	2.62	37.6	1.48	19.1	0.75	10.2	0.40	1 1/16	1 1/16	1/2	7/8 - 14	29/32

Dimensions are for reference only and are subject to change without notice. When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

SBHUT-W SHORT BULKHEAD TO TUBE UNION

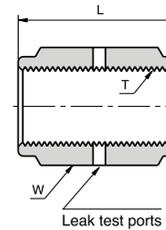
Without shoulder



Ordering Information	Face Seal Size	L		B		C		d		W	W1	T Tube O.D.	T1 Thread Size	Panel Hole Drill Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
P-SBHUT-1/4 X 1/4-W	1/4	49.5	1.95	25.1	0.99	19.1	0.75	4.60	0.18	3/4	3/4	1/4	9/16 - 18	19/32
P-SBHUT-1/2 X 1/2-W	1/2	58.7	2.31	29.7	1.17	19.1	0.75	10.2	0.40	1 1/16	1 1/16	1/2	7/8 - 14	29/32

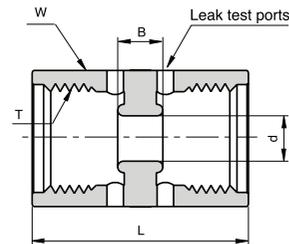
CAPS, NUTS & PLUGS

CP COUPLING



Ordering Information	Face Seal Size	L		W	T Thread Size
	inch	mm	inch	inch	inch
P-CP-1/4	1/4	30.2	1.19	3/4	9/16 -18
P-CP-1/2	1/2	33.3	1.31	1 1/16	7/8 -14
P-CP-3/4	3/4	42.7	1.68	1 1/2	1 1/4 -18
P-CP-1	1	51.8	2.04	1 3/4	1 1/2 -20

DFU DOUBLE FEMALE UNION

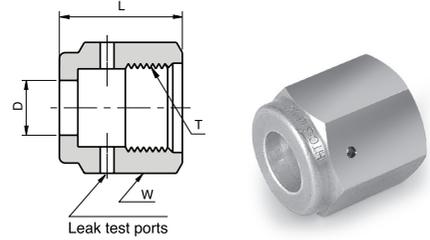


Ordering Information	Face Seal Size	L		B		d		W	T Thread Size
	inch	mm	inch	mm	inch	mm	inch	inch	inch
P-DFU-1/4	1/4	30.2	1.19	6.0	0.24	6.40	0.25	3/4	9/16 - 18
P-DFU-1/2	1/2	33.3	1.31	6.0	0.24	14.0	0.55	1 1/16	7/8 - 14

Caution: This fitting should be used with a swivel male connector only.

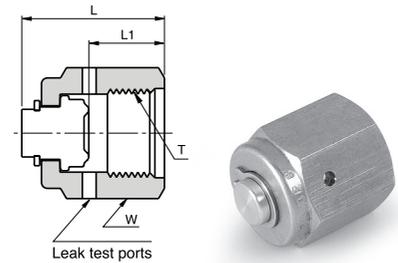
Dimensions are for reference only and are subject to change without notice. When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

NF FEMALE NUT



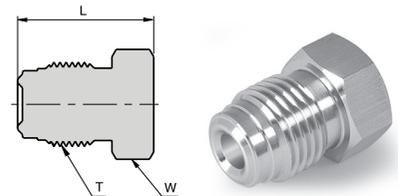
Ordering Information	Face Seal Size	L		D		W	T
	inch	mm	inch	mm	inch	inch	inch
P-NF-1/8	1/8	13.6	0.54	5.30	0.21	7/16	5/16-24
P-NF-1/4	1/4	20.6	0.81	9.20	0.36	3/4	9/16-18
P-NF-1/2	1/2	22.5	0.88	15.5	0.61	1 1/16	7/8-14
P-NF-3/4	3/4	28.5	1.12	22.6	0.89	1 1/2	1 1/4-18
P-NF-1	1	34.0	1.34	30.6	1.20	1 3/4	1 1/2-20

CF FEMALE CAP



Ordering Information	Face Seal Size	L		L1		W	T
	inch	mm	inch	mm	inch	inch	inch
P-CF-1/8	1/8	16.6	0.65	8.40	0.33	7/16	5/16-24
P-CF-1/4	1/4	23.9	0.94	12.7	0.50	3/4	9/16-18
P-CF-1/2	1/2	25.6	1.01	14.2	0.56	1 1/16	7/8-14
P-CF-3/4	3/4	32.3	1.27	19.1	0.75	1 1/2	1 1/4-18
P-CF-1	1	39.0	1.53	23.4	0.92	1 3/4	1 1/2-20

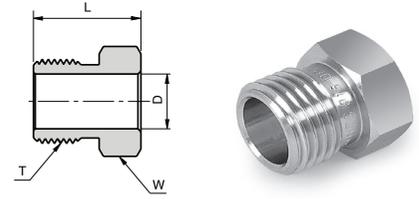
MP MALE PLUG



Ordering Information	Face Seal Size	L		W	T
	inch	mm	inch	inch	inch
P-MP-1/8	1/8	17.3	0.68	3/8	5/16 - 24
P-MP-1/4	1/4	23.4	0.92	5/8	9/16 - 18
P-MP-1/2	1/2	27.4	1.08	15/16	7/8 - 14
P-MP-3/4	3/4	36.3	1.43	1 5/16	1 1/4 - 18
P-MP-1	1	38.6	1.52	1 5/8	1 1/2 - 20

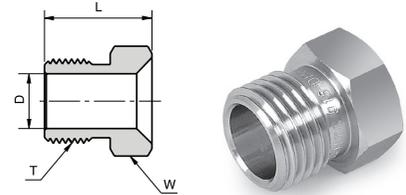
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

NM MALE NUT



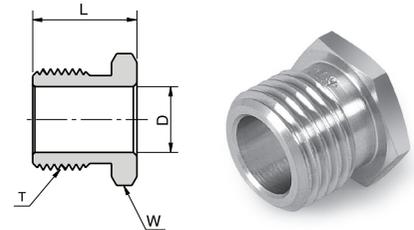
Ordering Information	Face Seal Size	L		D		W	T
	inch	mm	inch	mm	inch	inch	Thread Size
P-NM-1/8	1/8	12.7	0.50	5.30	0.21	3/8	5/16-24
P-NM-1/4	1/4	18.0	0.71	9.20	0.36	5/8	9/16-18
P-NM-1/2	1/2	20.6	0.81	15.5	0.61	15/16	7/8-14
P-NM-3/4	3/4	25.4	1.00	22.7	0.89	1 5/16	1 1/4-18
P-NM-1	1	30.2	1.19	30.5	1.20	1 5/8	1 1/2-20

NM TAPERED TAPERED MALE NUT



Ordering Information	Face Seal Size	L		D		W	T
	inch	mm	inch	mm	inch	inch	Thread Size
P-NM-1/4 TAPERD	1/4	18.0	0.71	9.20	0.36	5/8	9/16-18

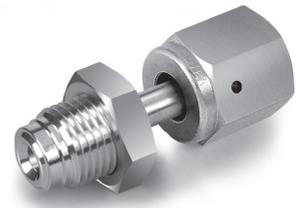
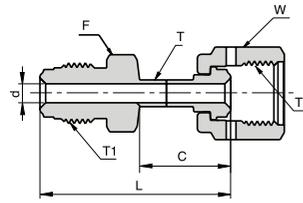
SNM SHORT MALE NUT



Ordering Information	Face Seal Size	L		D		W	T
	inch	mm	inch	mm	inch	inch	Thread Size
P-SNM-1/4 .54	1/4	13.7	0.54	9.20	0.36	5/8	9/16-18
P-SNM-1/4 .65	1/4	16.5	0.65	9.20	0.36	5/8	9/16-18

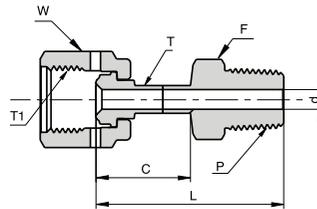
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

UMF
FEMALE TO MALE UNION



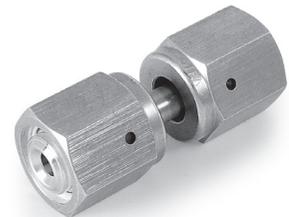
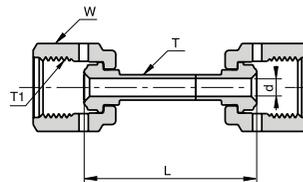
Ordering Information	Face Seal Size	L		C		d		F	W	T	T1	T2
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
P-UMF-1/4 X 1/4	1/4	45.2	1.78	21.6	0.85	4.60	0.18	5/8	3/4	1/4	9/16 - 18	9/16 - 18
P-UMF-1/2 X 1/2	1/2	49.8	1.96	22.1	0.87	10.2	0.40	15/16	1-1/16	1/2	7/8 - 14	7/8 - 14

MCF
FEMALE TO MALE NPT CONNECTOR



Ordering Information	Face Seal Size	L		C		d		F	W	T	T1	P
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
P-MCF-1/4 X 1/4	1/4	45.5	1.79	23.4	0.92	4.60	0.18	9/16	3/4	1/4	9/16 - 18	1/4
P-MCF-1/2 X 1/2	1/2	53.1	2.09	25.6	1.01	10.2	0.40	7/8	1 1/16	1/2	7/8 - 14	1/2

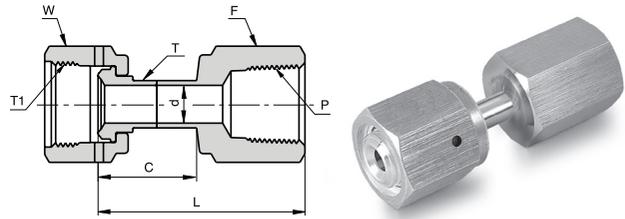
UFF
FEMALE TO FEMALE UNION



Ordering Information	Face Seal Size	L		d		W	T	T1
	inch	mm	inch	mm	inch	inch	inch	inch
P-UFF-1/4 X 1/4	1/4	43.0	1.69	4.60	0.18	3/4	1/4	9/16 - 18
P-UFF-1/2 X 1/2	1/2	44.1	1.73	10.2	0.40	1 1/16	1/2	7/8 - 14

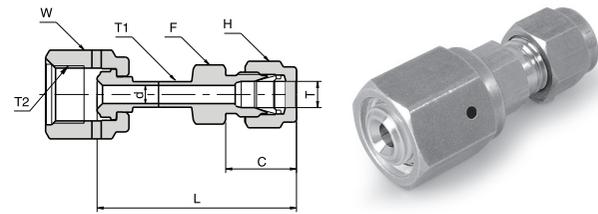
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

FCF
FEMALE TO FEMALE
NPT CONNECTOR



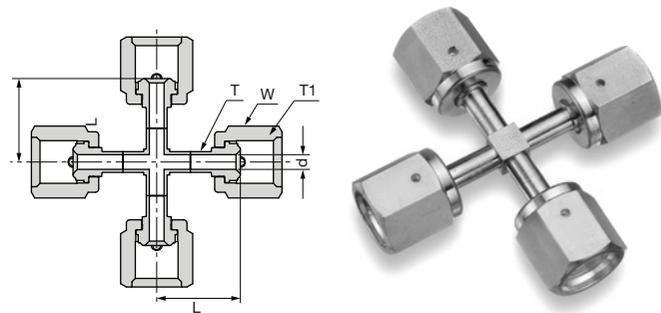
Ordering Information	Face Seal Size	L		C		d		F	W	T	T	P
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
P-FCF-1/4 X 1/4	1/4	45.0	1.77	23.4	0.92	4.60	0.18	3/4	3/4	1/4	9/16 - 18	1/4
P-FCF-1/2 X 1/2	1/2	54.8	2.16	26.4	1.04	10.2	0.40	1 1/16	1 1/16	1/2	7/8 - 14	1/2

FHTL
FEMALE TO
LET-LOK CONNECTOR



Ordering Information	Face Seal Size	L		C		d		F	W	H	T	T1	T2
	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch	inch
P-FHTL-1/4 X 1/4	1/4	49.3	1.94	17.8	0.70	4.60	0.18	1/2	3/4	9/16	1/4	1/4	9/16 - 18
P-FHTL-1/2 X 1/2	1/2	56.6	2.23	21.8	0.86	10.2	0.40	13/16	1 1/16	7/8	1/2	1/2	7/8 - 14

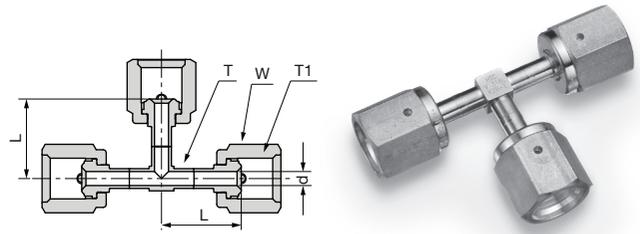
CFFFF
FEMALE
CROSS UNION



Ordering Information	Face Seal Size	L		d		W	T	T
	inch	mm	inch	mm	inch	inch	inch	inch
V-CFFFF-1/4	1/4	25.4	1	4.60	0.18	3/4	1/4	9/16-18

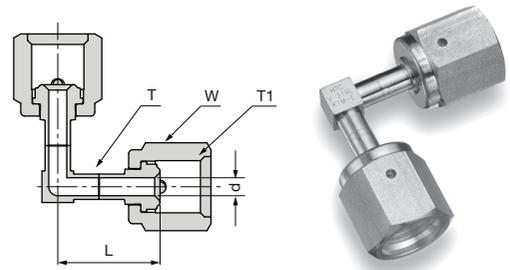
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

TFFF
FEMALE
TEE UNION



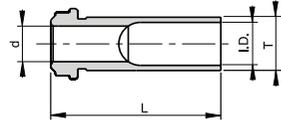
Ordering Information	Face Seal Size	L		d		W	T Tube O.D	T Thread Size
	inch	mm	inch	mm	inch	inch	inch	inch
V-TFFF-1/4	1/4	25.4	1	4.60	0.18	3/4	1/4	9/16-18
V-TFFF-1/2	1/2	29.2	1.5	10.2	0.40	1-1/16	1/2	7/8-14

EFF
FEMALE
ELBOW UNION



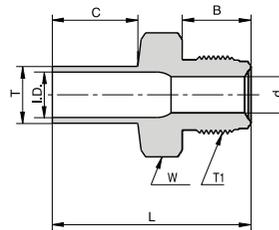
Ordering Information	Face Seal Size	L		d		W	T Tube O.D	T Thread Size
	inch	mm	inch	mm	inch	inch	inch	inch
V-EFF-1/4	1/4	25.4	1	4.60	0.18	3/4	1/4	9/16-18
V-EFF-1/2	1/2	29.2	1.5	10.2	0.40	1-1/16	1/2	7/8-14

HGL LONG HIGH-FLOW GLAND



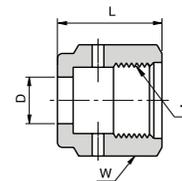
Ordering Information	Face Seal Size	L		d		T Tube O.D.	I.D.	
	inch	mm	inch	mm	inch	inch	mm	inch
HGL-3/8 - 0.60	1/4	15.2	0.60	6.40	0.25	3/8	7.7	0.30
HGL-3/8 - 1.13	1/4	28.7	1.13	6.40	0.25	3/8	7.7	0.30
HGL-3/8 - 1.19	1/4	30.2	1.19	6.40	0.25	3/8	7.7	0.30
HGL-3/8 - 1.31	1/4	33.3	1.31	6.40	0.25	3/8	7.7	0.30

HMT HIGH-FLOW MALE TO TUBE



Ordering Information	Face Seal Size	L		B		C		d	W	T Tube O.D.	T1 Thread Size	I.D.		
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch	
P-HMT-1/4	1/4	42.7	1.68	15.8	0.62	19.1	0.75	6.40	0.25	5/8	3/8	9/16 - 18	7.7	0.30

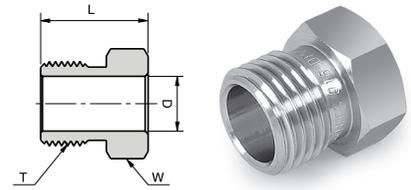
HNF HIGH-FLOW FEMALE NUT



Ordering Information	Face Seal Size	L		D		W	T Thread Size
	inch	mm	inch	mm	inch	inch	inch
P-HNF-1/4	1/4	20.6	0.81	10.0	0.39	3/4	9/16 - 18

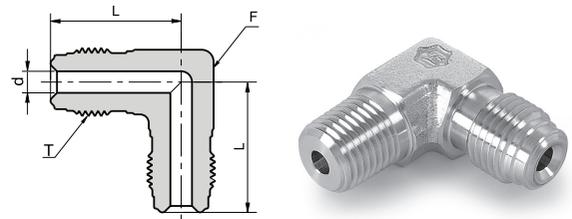
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

HNM
HIGH-FLOW MALE NUT



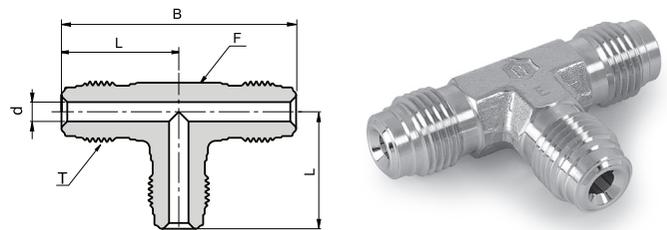
Ordering Information	Face Seal Size	L		D		T	W
	inch	mm	inch	mm	inch	inch	inch
P-HNM-1/4	1/4	18.0	0.71	10.0	0.39	9/16 - 18	5/8

HEU
HIGH-FLOW ELBOW UNION



Ordering Information	Face Seal Size	L		d		F	T
	inch	mm	inch	mm	inch	inch	Thread Size
P-HEU-1/4	1/4	27.2	1.07	6.40	0.25	1/2	9/16-18

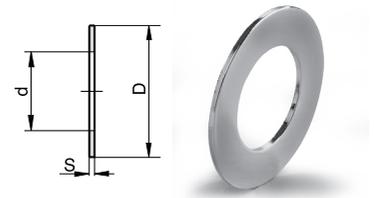
HTU
HIGH-FLOW TEE UNION



Ordering Information	Face Seal Size	L		B		d		F	T
	inch	mm	inch	mm	inch	mm	inch	inch	Thread Size
P-HTU-1/4	1/4	27.2	1.07	54.4	2.14	6.40	0.25	1/2	9/16-18

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

GA GASKET



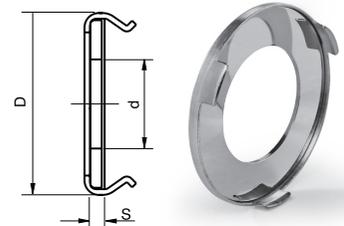
UNPLATED GASKETS

Ordering Information	Face Seal Size	D		d		S	
	inch	mm	inch	mm	inch	mm	inch
GA-1/4-E	1/4	11.9	0.47	5.60	0.22	0.7	0.028
GA-1/2-E	1/2	19.8	0.78	11.2	0.44	0.7	0.028
GA-3/4-E	3/4	29.0	1.14	16.8	0.66	0.7	0.028
GA-1-E	1	353.6	1.40	22.6	0.89	0.7	0.028

SILVER-PLATED GASKETS

Ordering Information	Face Seal Size	D		d		S	
	inch	mm	inch	mm	inch	mm	inch
GA-1/4 SILVER PLATED	1/4	11.9	0.47	5.60	0.22	0.7	0.028
GA-1/2 SILVER PLATED	1/2	19.8	0.78	11.2	0.44	0.7	0.028

GA-RT RETAINED GASKET



UNPLATED RETAINED GASKETS

Ordering Information	Face Seal Size	D		d		S	
	inch	mm	inch	mm	inch	mm	inch
GA-1/4 -RT-E	1/4	12.7	0.50	6.10	0.24	0.7	0.028
GA-1/2 -RT-E	1/2	20.1	0.79	11.1	0.44	0.7	0.028
GA-3/4-RT-E	3/4	29.0	1.14	16.8	0.66	0.7	0.028
GA-1-RT-E	1	35.6	1.40	22.6	0.89	0.7	0.028

SILVER-PLATED RETAINED GASKETS

Ordering Information	Face Seal Size	D		d		S	
	inch	mm	inch	mm	inch	mm	inch
GA-1/4-RT SILVER PLATED	1/4	12.7	0.50	6.10	0.24	0.7	0.028
GA-1/2-RT SILVER PLATED	1/2	20.1	0.79	11.1	0.44	0.7	0.028

SS - GA-1/4

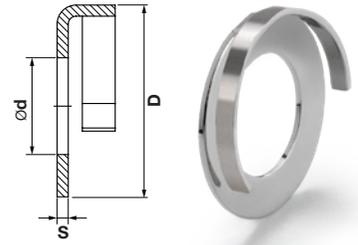
HOW TO ORDER:

Example:

Material Description	
SS	Stainless steel
NI	Nickel

Dimensions are for reference only, and are subject to change without notice.

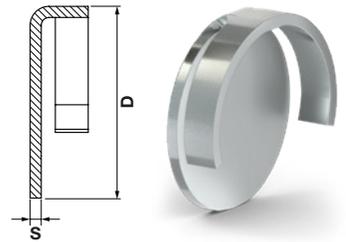
GA-VL VERTICAL LOAD GASKET



UNPLATED GASKETS

Ordering Information	Face Seal Size	D		d		S	
	inch	mm	inch	mm	inch	mm	inch
SS-GA-1/4-VL-E	1/4	12.3	0.48	6.20	0.24	0.7	0.028
SS-GA-1/2-VL-E	1/2	19.7	0.78	11.0	0.43	0.7	0.028
NI-GA-1/4-VL-E	1/4	12.3	0.48	6.20	0.24	0.7	0.028
NI-GA-1/2-VL-E	1/2	19.7	0.78	11.0	0.43	0.7	0.028

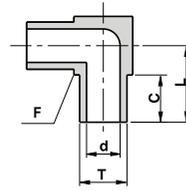
GA-VL BLIND VERTICAL LOAD GASKET BLIND



UNPLATED GASKETS

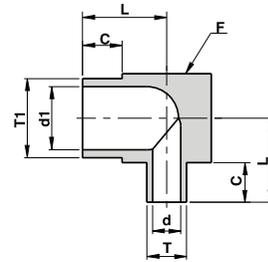
Ordering Information	Face Seal Size	D		S	
	inch	mm	inch	mm	inch
SS-GA-1/4-VL-E BLIND	1/4	12.3	0.48	0.7	0.028

ME-W
MINI ELBOW
Without shoulder



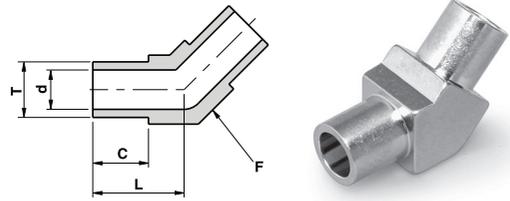
Ordering Information	L		C		d		F	T	W.T.	
	mm	inch	mm	inch	mm	inch	inch	inch / mm	mm	inch
V-ME-1/8-W	10.3	0.41	6.4	0.25	1.90	0.07	5/16	1/8"	-	0.028
V-ME-1/4-W	10.3	0.41	6.4	0.25	4.60	0.18	5/16	1/4"	-	0.035
V-ME-3/8-W	11.9	0.47	6.4	0.25	7.70	0.30	7/16	3/8"	-	0.035
V-ME-1/2-W	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2"	-	0.049
V-ME-1/2-W W.T.=0.065	13.5	0.53	6.4	0.25	9.50	0.37	9/16	1/2"	-	0.065
V-ME-6MM-W	10.3	0.41	6.4	0.25	4.00	0.16	5/16	6mm	1.00	-
V-ME-8MM-W	11.9	0.47	6.4	0.25	6.00	0.24	7/16	8mm	1.00	-
V-ME-10MM-W	11.9	0.47	6.4	0.25	8.00	0.31	7/16	10mm	1.00	-
V-ME-12MM-W	13.5	0.53	6.4	0.25	10.0	0.39	9/16	12mm	1.00	-

MER-W
MINI ELBOW REDUCER
Without shoulder



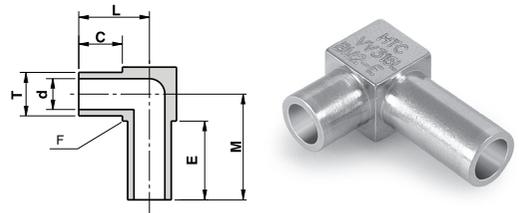
Ordering Information	L		C		d1		d		F	T1	W.T. (T1)		T	W.T. (T)	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch/mm	mm	inch	inch/mm	mm	inch
V-MER-1/4 X 1/8-W	10.3	0.41	6.4	0.25	4.60	0.18	1.90	0.07	5/16	1/4"	-	0.035	1/8"	-	0.028
V-MER-3/8 X 1/4-W	11.9	0.47	6.4	0.25	7.70	0.30	4.60	0.18	7/16	3/8"	-	0.035	1/4"	-	0.035
V-MER-1/2 X 1/4-W	13.5	0.53	6.4	0.25	10.2	0.40	4.60	0.18	9/16	1/2"	-	0.049	1/4"	-	0.035
V-MER-1/2 X 3/8-W	13.5	0.53	6.4	0.25	10.2	0.40	7.70	0.30	9/16	1/2"	-	0.049	3/8"	-	0.035
V-MER-8MM X 6MM-W	11.9	0.47	6.4	0.25	6.00	0.24	4.00	0.16	7/16	8mm	1.00	-	6mm	1.00	-
V-MER-12MM X 6MM-W	13.5	0.53	6.4	0.25	10.0	0.39	4.00	0.16	9/16	12mm	1.00	-	6mm	1.00	-
V-MER-12MM X 8MM-W	13.5	0.53	6.4	0.25	10.0	0.39	6.00	0.24	9/16	12mm	1.00	-	8mm	1.00	-

ME-45°-W
MINI ELBOW 45°
 Without shoulder



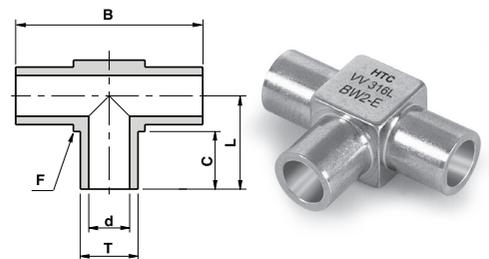
Ordering Information	L		C		d		F	T	W.T.	
	mm	inch	mm	inch	mm	inch	inch	inch / mm	mm	inch
V-ME-1/4-W-45DEG	10.3	0.41	6.4	0.25	4.60	0.18	5/16	1/4"	-	0.035
V-ME-3/8-W-45DEG	11.9	0.47	6.4	0.25	7.70	0.30	7/16	3/8"	-	0.035
V-ME-1/2-W-45DEG	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2"	-	0.049
V-ME-1/2-W-45DEG W.T.065	13.5	0.53	6.4	0.25	9.50	0.37	9/16	1/2"	-	0.065
V-ME-6MM-W-45DEG	10.3	0.41	6.4	0.25	4.00	0.16	5/16	6mm	1.00	-
V-ME-8MM-W-45DEG	11.9	0.47	6.4	0.25	6.00	0.24	7/16	8mm	1.00	-
V-ME-10MM-W-45DEG	11.9	0.47	6.4	0.25	8.00	0.31	7/16	10mm	1.00	-
V-ME-12MM-W-45DEG	13.5	0.53	6.4	0.25	10.0	0.39	9/16	12mm	1.00	-

MEX-W
MINI ELBOW
 With extended leg
 Without shoulder



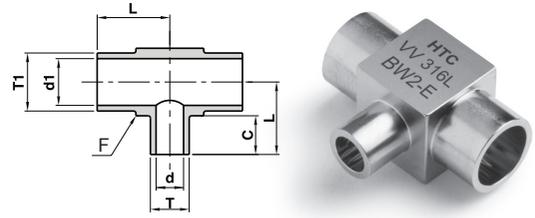
Ordering Information	L		C		M		E		d		F	T	W.T.
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
V-MEX-1/4-W 0.41X0.66	10.3	0.41	6.4	0.25	16.8	0.66	12.7	0.50	4.6	0.18	5/16	1/4"	0.035
V-MEX-1/4-W 0.41X0.61	10.3	0.41	6.4	0.25	15.4	0.61	11.4	0.45	4.6	0.18	5/16	1/4"	0.035
V-MEX-1/4-W 0.66X0.66	16.8	0.66	12.7	0.50	16.8	0.66	12.7	0.50	4.6	0.18	5/16	1/4"	0.035

MT-W
MINI TEE
 Without shoulder



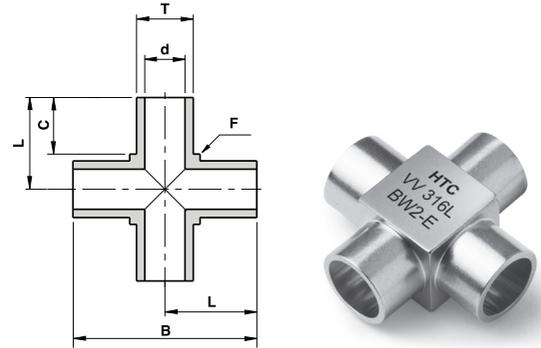
Ordering Information	L		B		C		d		F	T	W.T.	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch / mm	mm	inch
V-MT-1/8-W	10.3	0.41	20.7	0.81	6.4	0.25	1.90	0.07	5/16	1/8"	-	0.028
V-MT-1/4-W	10.3	0.41	20.7	0.81	6.4	0.25	4.60	0.18	5/16	1/4"	-	0.035
V-MT-3/8-W	11.9	0.47	23.9	0.94	6.4	0.25	7.70	0.30	7/16	3/8"	-	0.035
V-MT-1/2-W	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2"	-	0.049
V-MT-1/2-W W.T.=0.065	13.5	0.53	27.1	1.07	6.4	0.25	9.50	0.37	9/16	1/2"	-	0.065
V-MT-6MM-W	10.3	0.41	20.7	0.81	6.4	0.25	4.00	0.16	5/16	6mm	1.00	-
V-MT-8MM-W	11.9	0.47	23.9	0.94	6.4	0.25	6.00	0.24	7/16	8mm	1.00	-
V-MT-10MM-W	11.9	0.47	23.9	0.94	6.4	0.25	8.00	0.31	7/16	10mm	1.00	-
V-MT-12MM-W	13.5	0.53	27.1	1.07	6.4	0.25	10.0	0.39	9/16	12mm	1.00	-

MTR-W
MINI TEE REDUCER
Without shoulder



Ordering Information	L		B		C		d1		d		F	T1 Tube O.D	W.T. (T1)		T Tube O.D	W.T. (T)	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch/mm	mm	inch	inch/mm	mm	inch
V-MTR-1/2 X 1/4-W	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	4.6	0.18	9/16	1/2"	-	0.049	1/4"	-	0.035
V-MTR-1/2 X 3/8-W	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	7.7	0.30	9/16	1/2"	-	0.049	3/8"	-	0.035
V-MTR-3/8 X 1/4-W	11.9	0.47	23.9	0.94	6.4	0.25	7.70	0.30	4.6	0.18	7/16	3/8"	-	0.035	1/4"	-	0.035
V-MTR-8MMX6MM-W	11.9	0.47	23.9	0.94	6.4	0.25	6.00	0.24	4.0	0.16	7/16	8mm	1.00	-	6mm	1.00	-
V-MTR-12MMX6MM-W	13.5	0.53	27.1	1.07	6.4	0.25	10.0	0.39	4.0	0.16	9/16	12mm	1.00	-	6mm	1.00	-
V-MTR-12MMX8MM-W	13.5	0.53	27.1	1.07	6.4	0.25	10.0	0.39	6.0	0.24	9/16	12mm	1.00	-	8mm	1.00	-

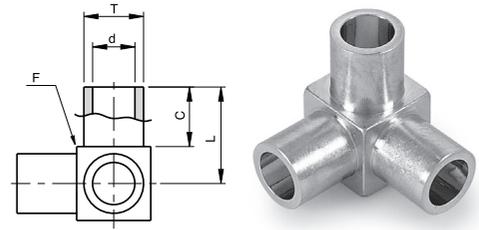
MC-W
MINI CROSS
Without shoulder



Ordering Information	L		B		C		d		F	T Tube O.D	W.T.	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch/mm	mm	inch
V-MC-1/8-W	10.3	0.41	20.7	0.81	6.4	0.25	1.90	0.07	5/16	1/8"	-	0.028
V-MC-1/4-W	10.3	0.41	20.7	0.81	6.4	0.25	4.60	0.18	5/16	1/4"	-	0.035
V-MC-3/8-W	11.9	0.47	23.9	0.94	6.4	0.25	7.70	0.30	7/16	3/8"	-	0.035
V-MC-1/2-W	13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2"	-	0.049
V-MC-1/2-W W.T.=0.065	13.5	0.53	27.1	1.07	6.4	0.25	9.50	0.37	9/16	1/2"	-	0.065
V-MC-6MM-W	10.3	0.41	20.7	0.81	6.4	0.25	4.00	0.16	5/16	6mm	1.00	-
V-MC-8MM-W	11.9	0.47	23.9	0.94	6.4	0.25	6.00	0.24	7/16	8mm	1.00	-
V-MC-10MM-W	11.9	0.47	23.9	0.94	6.4	0.25	8.00	0.31	7/16	10mm	1.00	-
V-MC-12MM-W	13.5	0.53	27.1	1.07	6.4	0.25	10.0	0.39	9/16	12mm	1.00	-

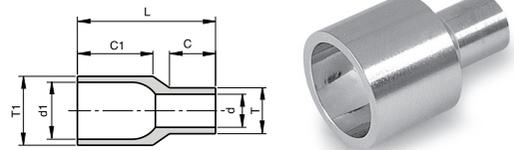
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

MTB-W
MINI TRI-EL
Without shoulder



Ordering Information	L		C		d		F	T Tube O.D	W.T.	
	mm	inch	mm	inch	mm	inch	inch	inch / mm	mm	inch
V-MTB-1/8-W	10.3	0.41	6.4	0.25	1.90	0.07	5/16	1/8"	-	0.028
V-MTB-1/4-W	10.3	0.41	6.4	0.25	4.60	0.18	5/16	1/4"	-	0.035
V-MTB-3/8-W	11.9	0.47	6.4	0.25	7.70	0.30	7/16	3/8"	-	0.035
V-MTB-1/2-W	13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2"	-	0.049
V-MTB-6MM-W	10.3	0.41	6.4	0.25	4.00	0.16	5/16	6mm	1.00	-
V-MTB-8MM-W	11.9	0.47	6.4	0.25	6.00	0.24	7/16	8mm	1.00	-
V-MTB-10MM-W	11.9	0.47	6.4	0.25	8.00	0.31	7/16	10mm	1.00	-
V-MTB-12MM-W	13.5	0.53	6.4	0.25	10.0	0.39	9/16	12mm	1.00	-

RU-W
REDUCING UNION
Without shoulder



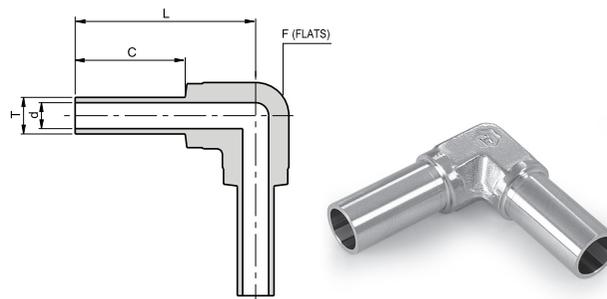
Ordering Information	L		C1		C		d1		d		T1 Tube O.D	W.T. (T1)		T Tube O.D	W.T. (T)	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch	inch/mm	mm	inch
RU-1/4 X 1/8-W	19.1	0.75	10.4	0.41	6.4	0.25	4.60	0.18	1.9	0.07	1/4"	-	0.035	1/8"	-	0.028
RU-3/8 X 1/4-W	19.1	0.75	10.4	0.41	6.4	0.25	7.70	0.30	4.6	0.18	3/8"	-	0.035	1/4"	-	0.035
RU-1/2 X 1/4-W	19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	4.6	0.18	1/2"	-	0.049	1/4"	-	0.035
RU-1/2 X 3/8-W	19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	7.7	0.30	1/2"	-	0.049	3/8"	-	0.035
RU-1 X 1/2-W	19.1	0.75	10.4	0.41	6.4	0.25	22.1	0.87	10.2	0.40	1"	-	0.065	1/2"	-	0.049
RU-8MM X 6MM-W	19.1	0.75	10.4	0.41	6.4	0.25	6.00	0.24	4.0	0.16	8mm	1.00	-	6mm	1.00	-
RU-10MM X 6MM-W	19.1	0.75	10.4	0.41	6.4	0.25	8.00	0.31	4.0	0.16	10mm	1.00	-	6mm	1.00	-
RU-10MM X 8MM-W	19.1	0.75	10.4	0.41	6.4	0.25	8.00	0.31	6.0	0.24	10mm	1.00	-	8mm	1.00	-
RU-12MM X 6MM-W	19.1	0.75	10.4	0.41	6.4	0.25	10.0	0.39	4.0	0.16	12mm	1.00	-	6mm	1.00	-
RU-12MM X 8MM-W	19.1	0.75	10.4	0.41	6.4	0.25	10.0	0.39	6.0	0.24	12mm	1.00	-	8mm	1.00	-
RU-12MM X 10MM-W	19.1	0.75	10.4	0.41	6.4	0.25	10.0	0.39	8.0	0.31	12mm	1.00	-	10mm	1.00	-

Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

LONG WELD CONNECTORS

EW-W ELBOW

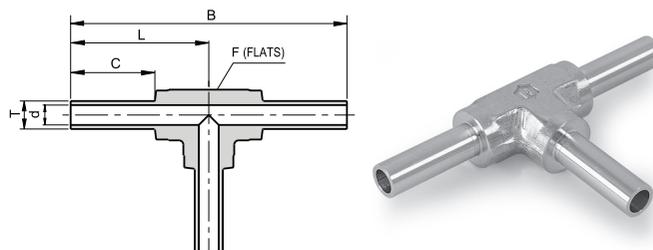
Without shoulder



Ordering Information	L		C		d		F	T	W.T.	
	mm	inch	mm	inch	mm	inch	inch	inch/mm	mm	inch
P-EW-1/4-W	31.2	1.23	19.1	0.75	4.60	0.18	7/16	1/4"	-	0.035
P-EW-3/8-W	30.5	1.20	19.1	0.75	7.07	0.30	7/16	3/8"	-	0.035
P-EW-1/2-W	34.0	1.34	19.1	0.75	10.2	0.40	11/16	1/2"	-	0.049
P-EW-1/2-W W.T.=0.065	34.0	1.34	19.1	0.75	9.50	0.37	11/16	1/2"	-	0.065
P-EW-3/4-W W.T.=0.049	37.1	1.46	19.1	0.75	16.6	0.65	15/16	3/4"	-	0.049
P-EW-3/4-W W.T.=0.065	37.1	1.46	19.1	0.75	15.8	0.62	15/16	3/4"	-	0.065
P-EW-1-W W.T.=0.065	47.0	1.85	24.4	0.96	22.1	0.87	1 3/8	1"	-	0.065
P-EW-6M-W	31.2	1.23	19.1	0.75	4.00	0.16	7/16	6mm	1.00	-
P-EW-8MM-W	31.2	1.23	19.1	0.75	6.00	0.24	7/16	8mm	1.00	-
P-EW-10MM-W	34.0	1.34	19.1	0.75	8.00	0.31	11/16	10mm	1.00	-
P-EW-12MM-W	34.0	1.34	19.1	0.75	10.0	0.39	11/16	12mm	1.00	-

TW-W TEE

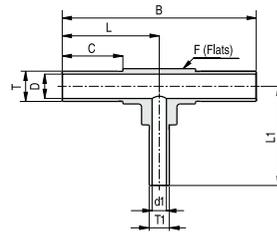
Without shoulder



Ordering Information	L		B		C		d		F	T	W.T.	
	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch/mm	mm	inch
P-TW-1/4-W	31.2	1.23	62.5	2.46	19.1	0.75	4.60	0.18	7/16	1/4"	-	0.035
P-TW-3/8-W	30.5	1.20	61.0	2.40	19.1	0.75	7.70	0.30	7/16	3/8"	-	0.035
P-TW-1/2-W	34.0	1.34	68.1	2.68	19.1	0.75	10.2	0.40	11/16	1/2"	-	0.049
P-TW-1/2-W W.T.=0.065	34.0	1.34	68.1	2.68	19.1	0.75	9.50	0.37	11/16	1/2"	-	0.065
P-TW-3/4-W W.T.=0.065	37.1	1.46	74.2	2.92	19.1	0.75	15.8	0.62	15/16	3/4"	-	0.065
P-TW-3/4-W W.T.=0.049	37.1	1.46	74.2	2.92	19.1	0.75	16.6	0.65	15/16	3/4"	-	0.049
P-TW-1-W W.T.=0.065	47.0	1.85	94.0	3.70	24.4	0.96	22.1	0.87	1 3/8	1"	-	0.065
P-TW-6MM-W	31.2	1.23	62.5	2.46	19.1	0.75	4.00	0.16	7/16	6mm	1.00	-
P-TW-8MM-W	31.2	1.23	62.5	2.46	19.1	0.75	6.00	0.24	7/16	8mm	1.00	-
P-TW-10MM-W	34.0	1.34	68.1	2.68	19.1	0.75	8.00	0.31	11/16	10mm	1.00	-
P-TW-12MM-W	34.0	1.34	68.1	2.68	19.1	0.75	10.0	0.39	11/16	12mm	1.00	-

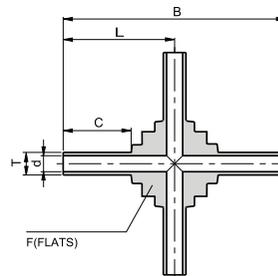
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

TWR-W
TEE REDUCER
Without shoulder



Ordering Information	L		L1		B		C		d		d1		F	T Tube O.D.	W.T. (T)	T1 Tube O.D.	W.T. (T1)
	mm	inch	inch	inch/mm	inch/mm	inch/mm	inch/mm										
P-TWR-3/8X1/4-W	30.5	1.20	31.2	1.23	61.0	2.40	19.1	0.75	7.7	0.30	4.60	0.18	7/16	3/8"	0.035"	1/4"	0.035"
P-TWR-1/2X1/4-W	34.0	1.34	34.0	1.34	68.0	2.68	19.1	0.75	10.2	0.40	4.60	0.18	11/16	1/2"	0.049"	1/4"	0.035"
P-TWR-1/2X3/8-W	34.0	1.34	34.0	1.34	68.0	2.68	19.1	0.75	10.2	0.40	7.70	0.30	11/16	1/2"	0.049"	3/8"	0.035"
P-TWR-3/4X1/4-W W.T.= 0.049 X 0.035	37.1	1.46	37.1	1.46	74.2	2.92	19.1	0.75	16.6	0.65	4.60	0.18	15/16	3/4"	0.049"	1/4"	0.035"
P-TWR-3/4X1/4-W W.T.=0.065 X 0.035	37.1	1.46	37.1	1.46	74.2	2.92	19.1	0.75	15.8	0.62	4.60	0.18	15/16	3/4"	0.065"	1/4"	0.035"
P-TWR-3/4X1/2-W W.T.=0.049	37.1	1.46	37.1	1.46	74.2	2.92	19.1	0.75	16.6	0.65	10.2	0.40	15/16	3/4"	0.049"	1/2"	0.049"
P-TWR-12MMX6MM-W	34.0	1.34	34.0	1.34	68.0	2.68	19.1	0.75	10.0	0.39	4.00	0.16	11/16	12mm	1.00mm	6mm	1.00mm

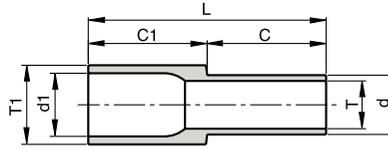
CW-W
CROSS
Without shoulder



Ordering Information	L		B		C		d		F	T Tube O.D.	W.T.	
	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	inch/mm	mm	inch
P-CW-1/4-W	31.2	1.23	62.5	2.46	19.1	0.75	4.60	0.18	17mm	1/4"	-	0.035
P-CW-3/8-W	30.5	1.20	61.0	2.40	19.1	0.75	7.70	0.30	17mm	3/8"	-	0.035
P-CW-1/2-W	31.0	1.22	62.0	2.44	19.1	0.75	10.2	0.40	17mm	1/2"	-	0.049
P-CW-1/2-W W.T.=0.065	31.0	1.22	62.0	2.44	19.1	0.75	9.50	0.37	17mm	1/2"	-	0.065
P-CW-6MM-W	31.2	1.23	62.5	2.46	19.1	0.75	4.00	0.16	17mm	6mm	1.00	-
P-CW-8MM-W	30.5	1.20	61.0	2.40	19.1	0.75	6.00	0.24	17mm	8mm	1.00	-
P-CW-10MM-W	31.0	1.22	62.0	2.44	19.1	0.75	8.00	0.31	17mm	10mm	1.00	-
P-CW-12MM-W	31.0	1.22	62.0	2.44	19.1	0.75	10.0	0.39	17mm	12mm	1.00	-

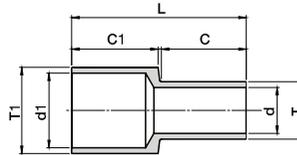
Dimensions are for reference only and are subject to change without notice.
When ordering, be sure to add the Surface-Finish Designator (either H or E) to the part number.

RW-W
REDUCER
Without shoulder



Ordering Information	L		C		d1		d		T1 Tube O.D.	W.T. (T1)		T Tube O.D.	W.T. (T)	
	mm	inch	mm	inch	mm	inch	mm	inch	inch/mm	mm	inch	inch/mm	mm	inch
RW-1/4X1/8-W	38.1	1.50	19.1	0.75	4.60	0.18	1.9	0.07	1/4"	-	0.035	1/8"	-	0.028
RW-3/8X1/4-W	38.1	1.50	19.1	0.75	7.70	0.30	4.6	0.18	3/8"	-	0.035	1/4"	-	0.035
RW-1/2X1/4-W	38.1	1.50	19.1	0.75	10.2	0.40	4.6	0.18	1/2"	-	0.049	1/4"	-	0.035
RW-1/2X3/8-W	38.1	1.50	19.1	0.75	10.2	0.40	7.7	0.30	1/2"	-	0.049	3/8"	-	0.035
RW-8MM X 6MM-W	38.1	1.50	19.1	0.75	6.00	0.24	4.0	0.16	8mm	1.00	-	6mm	1.00	-
RW-10MM X 6MM-W	38.1	1.50	19.1	0.75	8.00	0.31	4.0	0.16	10mm	1.00	-	6mm	1.00	-
RW-10MM X 8MM-W	38.1	1.50	19.1	0.75	8.00	0.31	6.0	0.24	10mm	1.00	-	8mm	1.00	-
RW-12MM X 6MM-W	38.1	1.50	19.1	0.75	10.0	0.39	4.0	0.16	12mm	1.00	-	6mm	1.00	-
RW-12MM X 8MM-W	38.1	1.50	19.1	0.75	10.0	0.39	6.0	0.24	12mm	1.00	-	8mm	1.00	-
RW-12MM X 10MM-W	38.1	1.50	19.1	0.75	10.0	0.39	8.0	0.31	12mm	1.00	-	10mm	1.00	-

RW-W
REDUCER BIG SIZE
Without shoulder



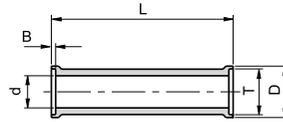
Ordering Information	L		C1		C		d1		d		T1 Tube O.D.	W.T. (T1)		T Tube O.D.	W.T. (T)	
	mm	inch	inch/mm	mm	inch	inch/mm	mm	inch								
RW-3/4X1/2 W W.T.=0.049	38.5	1.51	19.1	0.75	19.1	0.75	16.6	0.65	10.2	0.40	3/4"	-	0.049	1/2"	-	0.049
RW-3/4X1/2 W W.T.=0.065X0.049	38.5	1.51	19.1	0.75	19.1	0.75	15.8	0.62	10.2	0.40	3/4"	-	0.065	1/2"	-	0.065
RW-3/4X1/4 W W.T.=0.049X0.035	38.5	1.51	19.1	0.75	19.1	0.75	16.6	0.65	4.6	0.18	3/4"	-	0.049	1/4"	-	0.049
RW-1X1/2 W W.T.= 0.065X0.049	40.5	1.59	19.1	0.75	19.1	0.75	22.1	0.87	10.2	0.40	1"	-	0.065	1/2"	-	0.049

UB-W
BUTTWELD UNION
Without shoulder



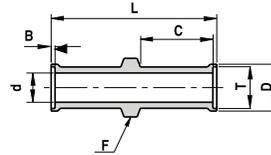
Ordering Information	L		d		T Tube O.D.	W.T.
	mm	inch	mm	inch	inch	inch
UB-1/4-W	24.3	0.96	4.60	0.18	1/4	0.035
UB-3/8-W	23.9	0.94	7.70	0.30	3/8	0.035
UB-1/2-W	23.4	0.92	10.2	0.40	1/2	0.049

UB-S
BUTTWELD UNION
With shoulder



Ordering Information	L		d		B		D		T	W.T.
	mm	inch	mm	inch	mm	inch	mm	inch	Tube O.D.	inch
UB-1/4-S	25.4	1.00	4.60	0.18	0.55	0.02	7.4	0.29	1/4	0.035
UB-3/8-S	25.4	1.00	7.70	0.30	0.76	0.03	10.4	0.41	3/8	0.035
UB-1/2-S	25.4	1.00	10.2	0.40	1.00	0.04	14.0	0.55	1/2	0.049

UBL-S
BUTTWELD UNION
With locator and shoulder



Ordering Information	L		C		d		B		D		F		T	W.T.
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Tube O.D.	inch
UBL-1/2-S	43.9	1.73	19.1	0.75	10.2	0.40	1.0	0.04	14.0	0.55	15.2	0.60	1/2	0.049

