

Ultra High Purity

WELD & METAL SEAL FITTINGS



Weld & Metal Seal Fittings

Ordering Information

*Additional configurations available upon request.

A	B	C	D	E	-	F	Standard feature
SM	4	FG	N	6	-	P	Optional

A	Materials
	Glands, Bodies, and Nuts
SM	316L Stainless Steel
DM	316L Stainless Steel VAR
	Gaskets
SM	316L Stainless Steel
NI	Nickel

B	Connection Size																								
	ASTM Tube																								
	<table border="1"> <thead> <tr> <th style="background-color: #4a7ebb; color: white;">Designator</th> <th style="background-color: #4a7ebb; color: white;">Nominal Size</th> <th style="background-color: #4a7ebb; color: white;">Outside Diameter</th> <th style="background-color: #4a7ebb; color: white;">Wall Thickness</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">1/4 in.</td> <td style="text-align: center;">6.35 mm</td> <td style="text-align: center;">1.0 mm</td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">3/8 in.</td> <td style="text-align: center;">9.53 mm</td> <td style="text-align: center;">1.0 mm</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">1/2 in.</td> <td style="text-align: center;">12.7 mm</td> <td style="text-align: center;">1.24 mm</td> </tr> <tr> <td style="text-align: center;">12</td> <td style="text-align: center;">3/4 in.</td> <td style="text-align: center;">19.05 mm</td> <td style="text-align: center;">1.65 mm</td> </tr> <tr> <td style="text-align: center;">16</td> <td style="text-align: center;">1 in.</td> <td style="text-align: center;">25.4 mm</td> <td style="text-align: center;">1.65 mm</td> </tr> </tbody> </table>	Designator	Nominal Size	Outside Diameter	Wall Thickness	4	1/4 in.	6.35 mm	1.0 mm	6	3/8 in.	9.53 mm	1.0 mm	8	1/2 in.	12.7 mm	1.24 mm	12	3/4 in.	19.05 mm	1.65 mm	16	1 in.	25.4 mm	1.65 mm
Designator	Nominal Size	Outside Diameter	Wall Thickness																						
4	1/4 in.	6.35 mm	1.0 mm																						
6	3/8 in.	9.53 mm	1.0 mm																						
8	1/2 in.	12.7 mm	1.24 mm																						
12	3/4 in.	19.05 mm	1.65 mm																						
16	1 in.	25.4 mm	1.65 mm																						

Optional End Connection Sizes

For drop size fittings, first size the run and add the suffix "X" then a size designator for the branch. (i.e. Reducer for 3/8" O.D. tube and 1/4" male pipe thread would be 6X4)

C	Body Type
R	Reducer
E	Elbow
HE	45° Elbow
T	Tee
CR	Cross
TB	Tribow
FG	Female Gland
MG	Male Gland
SSG	Socket Weld Short Gland
SLG	Socket Weld Long Gland
RSLG	Reducing Socket Weld Gland
BG	Blind Gland
MWG	Male Weld Gland
TA	Tube Adapter
MU	Double Male Union
MRU	Double Male Reducing Union
BHU	Bulkhead Union
TC	TBW Connector

C	Body Type (continued)
TBHC	TBW Bulkhead Connector
CG	Coupling
FRU	Double Female Reducing Union
RA	Reducing Adapter
RB	Reducing Bushing
ME	Male Elbow
UE	Union Elbow
UT	Union Tee
UC	Union Cross
SC	SUPERLOK Tube Fitting Connector
BHSC	SUPERLOK Tube Fitting Bulkhead Connector
BHMC	Bulkhead Male Connector
MC	Male Connector
FC	Female Connector
GR	Gasket Retainer Assembly
GT	Gasket
BGT	Blind Gasket
FN	Female Nut
MN	Male Nut
PG	Plug
CP	Cap
PGC	Plug (Cable Type)
HFN	High Flow Female Nut
HMN	High Flow Male Nut
HLG	High Flow Long Gland
HTC	High Flow TBW Connector
HBHC	High Flow TBW Bulkhead Connector
WMC	Welded Male Connector
WFC	Welded Female Connector
WSC	Welded Lok Connector
WFU	Welded Female Union

D	Threads Type								
	<table border="1"> <thead> <tr> <th style="background-color: #4a7ebb; color: white;">Designator</th> <th style="background-color: #4a7ebb; color: white;">Thread Option</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">N</td> <td>NPT (National Pipe Thread)</td> </tr> <tr> <td style="text-align: center;">R</td> <td>PT (Tapered Thread)</td> </tr> <tr> <td style="text-align: center;">U</td> <td>SAE (Unified)</td> </tr> </tbody> </table>	Designator	Thread Option	N	NPT (National Pipe Thread)	R	PT (Tapered Thread)	U	SAE (Unified)
Designator	Thread Option								
N	NPT (National Pipe Thread)								
R	PT (Tapered Thread)								
U	SAE (Unified)								

Weld & Metal Seal Fittings

E	Tube Length	
	6	6.35 mm
	10	10 mm
	19	19.05 mm
	22	22.5 mm
	23	23.3 mm

F	Wetted Surface Grade	
	Glands, Bodies, and Nuts	
	BA is standard. No part designator needed.	
	P	EP
	Gaskets	
	Leave Blank: <i>Unplated gasket</i>	
	SP	Silver plated

Part Number Examples

	SM8FG6-P		SM6X4R19		SM16T23	
Material	SM	316L Stainless Steel	SM	316L Stainless Steel	SM	316L Stainless Steel
Connection Size	8	1/2 in	6X4	3/8 in. (Run) X 1/4 in. (Branch)	16	1 in.
Body Type	FG	Female Gland	R	Reducer	T	Tee
Thread Type		<i>Not applicable</i>		<i>Not applicable</i>		<i>Not applicable</i>
Tube Length	6	6.35 mm	19	19.05 mm	23	23.3 mm
Surface Grade	P	EP Grade		BA Grade (<i>standard</i>)		BA Grade (<i>standard</i>)

	DM4MEN-P		NI16GT		SM4GR-SP	
Material	DM	316L Stainless Steel VAR	NI	Nickel	SM	316L Stainless Steel
Connection Size	4	1/4 in. (Run) X 1/4 in. NPT thread (Branch)	16	1 in.	4	1/4 in.
Body Type	ME	Male Elbow	GT	Gasket	GR	Gasket Retainer
Thread Type	N	NPT (National Pipe Thread)		<i>Not applicable</i>		<i>Not applicable</i>
Tube Length		<i>Not applicable</i>		<i>Not applicable</i>		<i>Not applicable</i>
Surface Grade	P	EP Grade		Unplated (<i>standard</i>)	SP	Silver plated

Vacuum Coupling (BVC) Fittings

Vacuum Coupling (BVC) Fittings provide the high purity of a metal-to-metal seal for leak-free service from vacuum to positive pressure applications. The gasket is compressed by two highly polished beads when a male nut and a female nut are engaged.

Gasket: unplated stainless steel 316L (standard), unplated nickel, silver-plated stainless steel 316L or nickel, or special request
































































As standard, BVC fittings are marked with manufacturer, material, grade, traveler number, and material heat code designator (HCN).

Standard surface finish: Ra 0.25µm (Ra 10 µin)

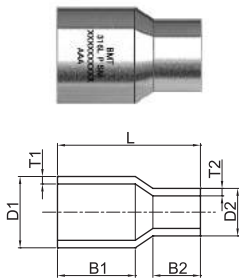
Test port allows easy leak testing

The female nut is silver plated to ensure consistent torque and easy assembly.

Body Type

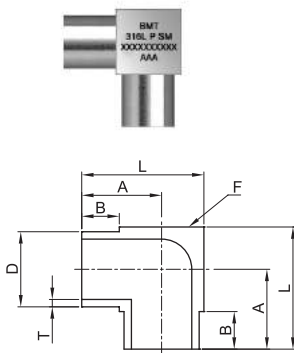
Micro Weld Fittings		 Male Weld Gland	Gaskets	
 Micro Reducer		 Tube Adapter	 Gasket Retainer Assembly	
 Micro 90° Elbow		 Double Male Union	 Gasket	
 Micro Reducing 90° Elbow		 Double Male Reducing Union	 Blind Gasket	
 Micro 45° Elbow		 Bulkhead Union	Nuts, Caps and Plugs	
 Micro Tee		 Tube Butt Weld (TBW) Connector	 Female Nut	
 Micro Reducing Tee		 Tube Butt Weld (TBW) Bulkhead Connector	 Male Nut	
 Micro Cross		 Coupling	 Plug	
 Micro Tribow		 Double Female Reducing Union	 Cap	
Forged Weld Fittings		 Reducing Adapter	 Plug (Cable Type)	
 90° Elbow		 Reducing Bushing	High - Flow Connection - "H" Type	
 Reducing 90° Elbow		 Male Elbow (NPT)	 High Flow Female Nut	
 Tee		 Male Elbow (PT)	 High Flow Male Nut	
 Reducing Tee		 Union Elbow	 High Flow Long Gland	
 Cross		 Union Tee	 High Flow Tube Butt Weld (TBW) Connector	
 Reducer		 Union Cross	 High Flow Tube Butt Weld (TBW) Bulkhead Connector	
Glands		 SUPERLOK Tube Fitting Connector	Welded Assembly	
 Female Gland		 SUPERLOK Tube Fitting Bulkhead Connector	 Welded Male Connector (PT)	
 Male Gland		 Bulkhead Male Connector (NPT)	 Welded Male Connector (NPT)	
 Socket Weld Short Gland		 Male Connector (PT)	 Welded Female Connector (PT)	
 Socket Weld Long Gland		 Male Connector (NPT)	 Welded Female Connector (NPT)	
 Reducing Socket Weld Long Gland		 Male Connector (ST)	 Welded Lok Connector	
 Blind Gland		 Female Connector (PT)	 Welded Female Union	
		 Female Connector (NPT)		

Micro Weld Fittings



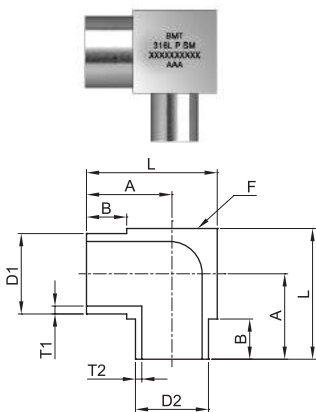
Micro Reducer

Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	B1	B2	L
	Size (in)	Size	Size (in)	Size					
SM4X2R6	1/4"	6.35	1/8"	3.18	1.00	0.70	10.40	6.35	19.10
SM6X4R6	3/8"	9.53	1/4"	6.35	1.00	1.00	10.40	6.35	19.10
SM8X4R6	1/2"	12.70	1/4"	6.35	1.24	1.00	10.40	6.35	19.10
SM8X6R6	1/2"	12.70	3/8"	9.53	1.24	1.00	10.40	6.35	19.10
SM12X4R6	3/4"	19.05	1/4"	6.35	1.65	1.00	10.40	6.35	19.10
SM12X6R6	3/4"	19.05	3/8"	9.53	1.65	1.00	10.40	6.35	19.10
SM12X8R6	3/4"	19.05	1/2"	12.70	1.65	1.24	10.40	6.35	19.10



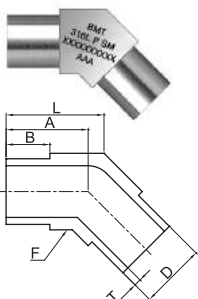
Micro 90° Elbow

Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM2E6	1/8"	3.18	0.70	10.32	6.35	7.94	14.29
SM4E6	1/4"	6.35	1.00	10.32	6.35	7.94	14.29
SM6E6	3/8"	9.53	1.00	11.91	6.35	11.11	17.46
SM8E6	1/2"	12.70	1.24	13.50	6.35	14.29	20.64
SM12E6	3/4"	19.05	1.65	16.68	6.35	20.65	27.00



Micro Reducing 90° Elbow

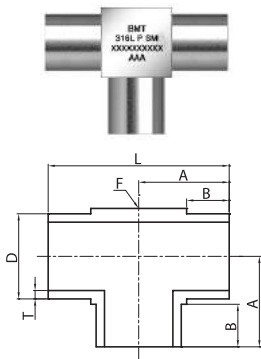
Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	A	B	F Body	L
	Size (in)	Size	Size (in)	Size						
SM4X2E6	1/4"	6.35	1/8"	3.18	1.00	0.70	10.32	6.35	7.94	14.29
SM6X4E6	3/8"	9.53	1/4"	6.35	1.00	1.00	11.91	6.35	11.11	17.46
SM8X4E6	1/2"	12.70	1/4"	6.35	1.24	1.00	13.50	6.35	14.29	20.64
SM8X6E6	1/2"	12.70	3/8"	9.53	1.24	1.00	13.50	6.35	14.29	20.64
SM12X4E6	3/4"	19.05	1/4"	6.35	1.65	1.00	16.68	6.35	20.65	27.00
SM12X6E6	3/4"	19.05	3/8"	9.53	1.65	1.00	16.68	6.35	20.65	27.00
SM12X8E6	3/4"	19.05	1/2"	12.70	1.65	1.24	16.68	6.35	20.65	27.00



Micro 45° Elbow

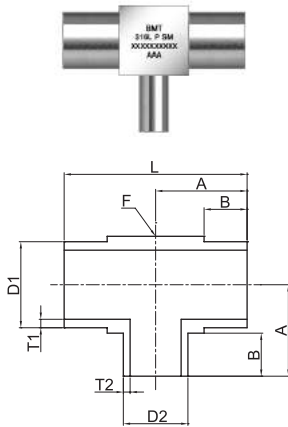
Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM2HE6	1/8"	3.18	0.70	10.32	6.35	7.94	11.96
SM4HE6	1/4"	6.35	1.00	10.32	6.35	7.94	11.96
SM6HE6	3/8"	9.53	1.00	11.91	6.35	11.11	14.21
SM8HE6	1/2"	12.70	1.24	13.50	6.35	14.29	16.46
SM12HE6	3/4"	19.05	1.65	16.68	6.35	20.65	20.95

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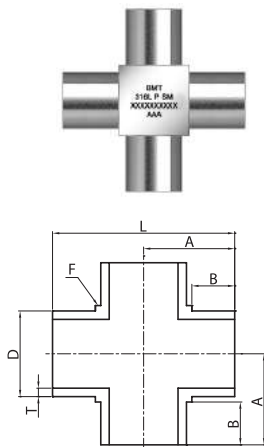
Micro Tee

Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM2T6	1/8"	3.18	0.70	10.32	6.35	7.94	20.64
SM4T6	1/4"	6.35	1.00	10.32	6.35	7.94	20.64
SM6T6	3/8"	9.53	1.00	11.91	6.35	11.11	23.81
SM8T6	1/2"	12.70	1.24	13.50	6.35	14.29	26.99
SM12T6	3/4"	19.05	1.65	16.68	6.35	20.65	33.35



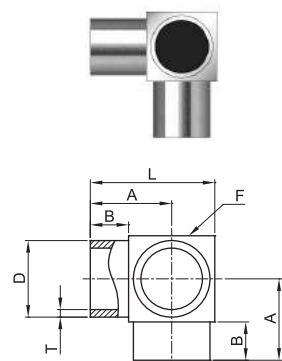
Micro Reducing Tee

Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	A	B	F Body	L
	Size (in)	Size	Size (in)	Size						
SM4X2T6	1/4"	6.35	1/8"	3.18	1.00	0.70	10.35	6.35	7.94	20.64
SM6X4T6	3/8"	9.53	1/4"	6.35	1.00	1.00	11.91	6.35	11.11	23.81
SM8X4T6	1/2"	12.70	1/4"	6.35	1.24	1.00	13.50	6.35	14.29	27.00
SM8X6T6	1/2"	12.70	3/8"	9.53	1.24	1.00	13.50	6.35	14.29	27.00
SM12X4T6	3/4"	19.05	1/4"	6.35	1.65	1.00	16.68	6.35	20.65	27.00
SM12X6T6	3/4"	19.05	3/8"	9.53	1.65	1.00	16.68	6.35	20.65	27.00
SM12X8T6	3/4"	19.05	1/2"	12.70	1.65	1.24	16.68	6.35	20.65	27.00



Micro Cross

Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM2CR6	1/8"	3.18	0.70	10.32	6.35	7.94	20.64
SM4CR6	1/4"	6.35	1.00	10.32	6.35	7.94	20.64
SM6CR6	3/8"	9.53	1.00	11.91	6.35	11.11	23.81
SM8CR6	1/2"	12.70	1.24	13.50	6.35	14.29	27.00
SM12CR6	3/4"	19.05	1.65	16.68	6.35	20.65	33.35

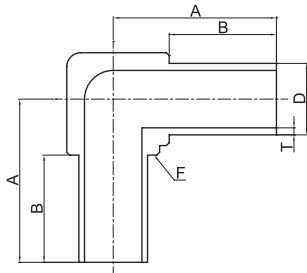


Micro Tribow

Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM2TB6	1/8"	3.18	0.70	10.32	6.35	7.94	14.29
SM4TB6	1/4"	6.35	1.00	10.32	6.35	7.94	14.29
SM6TB6	3/8"	9.53	1.00	11.91	6.35	11.11	17.46
SM8TB6	1/2"	12.70	1.24	13.50	6.35	14.29	20.64
SM12TB6	3/4"	19.05	1.65	16.68	6.35	20.65	27.00

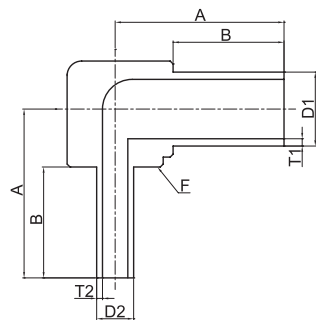
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Forged Weld Fittings



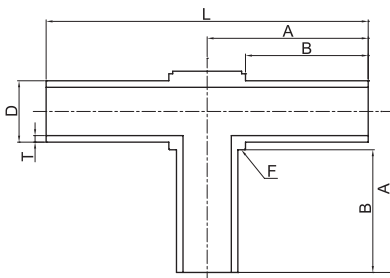
90° Elbow

Part No.	Tube OD (D)		T	A	B	F Body
	Size (in)	Size				
SM4E19	1/4"	6.35	1.00	25.00	19.05	11.10
SM6E19	3/8"	9.53	1.00	25.00	19.05	12.40
SM8E19	1/2"	12.70	1.24	29.00	19.05	17.00
SM12E22	3/4"	19.05	1.65	33.50	22.50	25.00
SM16E23	1"	25.40	1.65	38.30	23.30	30.00
SM4E10	1/4"	6.35	1.00	15.90	10.00	11.10
SM6E10	3/8"	9.53	1.00	15.90	10.00	12.40
SM8E10	1/2"	12.70	1.24	19.90	10.00	17.00
SM12E10	3/4"	19.05	1.65	22.40	10.00	25.00
SM16E10	1"	25.40	1.65	24.95	10.00	30.00



Reducing 90° Elbow

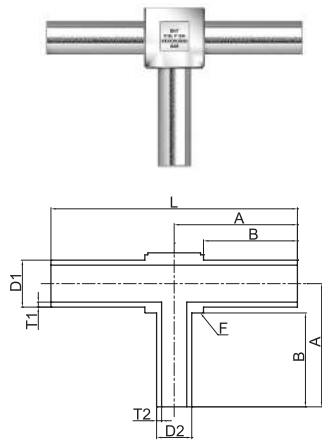
Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	A	B	F Body
	Size (in)	Size	Size (in)	Size					
SM6X4E19	3/8"	9.53	1/4"	6.35	1.00	1.00	25.00	19.05	12.4
SM8X4E19	1/2"	12.70	1/4"	6.35	1.24	1.00	29.00	19.05	17.0
SM8X6E19	1/2"	12.70	3/8"	9.53	1.24	1.00	29.00	19.05	17.0
SM12X4E22	3/4"	19.05	1/4"	6.35	1.65	1.00	33.50	22.50	25.0
SM12X6E22	3/4"	19.05	3/8"	9.53	1.65	1.00	33.50	22.50	25.0
SM12X8E22	3/4"	19.05	1/2"	12.70	1.65	1.24	33.50	22.50	25.0
SM16X4E23	1"	25.40	1/4"	6.35	1.65	1.00	38.30	23.30	30.0
SM16X8E23	1"	25.40	1/2"	12.70	1.65	1.24	38.30	23.30	30.0
SM16X12E23	1"	25.40	3/4"	19.05	1.65	1.65	38.30	23.30	30.0



Tee

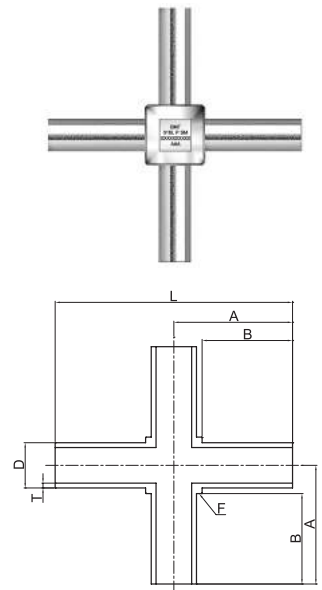
Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM4T19	1/4"	6.35	1.00	25.00	19.05	11.1	50.00
SM6T19	3/8"	9.53	1.00	25.00	19.05	12.4	50.00
SM8T19	1/2"	12.70	1.24	29.00	19.05	17.0	58.00
SM12T22	3/4"	19.05	1.65	33.50	22.50	25.0	67.00
SM16T23	1"	25.40	1.65	38.30	23.30	30.0	76.60
SM4T10	1/4"	6.35	1.00	15.90	10.00	11.1	31.80
SM6T10	3/8"	9.53	1.00	15.90	10.00	12.4	31.80
SM8T10	1/2"	12.70	1.24	19.90	10.00	17.0	39.80
SM12T10	3/4"	19.05	1.65	22.40	10.00	25.0	44.80
SM16T10	1"	25.40	1.65	24.95	10.00	30.0	49.90

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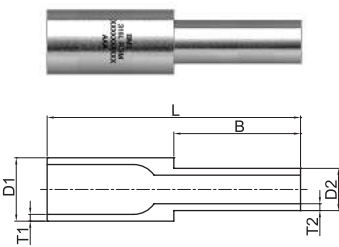
Reducing Tee

Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	A	B	F Body	L
	Size (in)	Size	Size (in)	Size						
SM6X4T19	3/8"	9.53	1/4"	6.35	1.00	1.00	25.00	19.05	12.4	50.00
SM8X4T19	1/2"	12.70	1/4"	6.35	1.24	1.00	29.00	19.05	17.0	58.00
SM8X6T19	1/2"	12.70	3/8"	9.53	1.24	1.00	29.00	19.05	17.0	58.00
SM12X4T22	3/4"	19.05	1/4"	6.35	1.65	1.00	33.50	22.50	25.0	67.00
SM12X6T22	3/4"	19.05	3/8"	9.53	1.65	1.00	33.50	22.50	25.0	67.00
SM12X8T22	3/4"	19.05	1/2"	12.70	1.65	1.24	33.50	22.50	25.0	67.00
SM16X4T23	1"	25.40	1/4"	6.35	1.65	1.00	38.30	23.30	30.0	76.60
SM16X8T23	1"	25.40	1/2"	12.70	1.65	1.24	38.30	23.30	30.0	76.60
SM16X12T23	1"	25.40	3/4"	19.05	1.65	1.65	38.30	23.30	30.0	76.60
SM6X4T10	3/8"	9.53	1/4"	6.35	1.00	1.00	15.90	10.00	12.4	31.80
SM8X4T10	1/2"	12.70	1/4"	6.35	1.24	1.00	19.90	10.00	17.0	39.80
SM8X6T10	1/2"	12.70	3/8"	9.53	1.24	1.00	19.90	10.00	17.0	39.80
SM12X4T10	3/4"	19.05	1/4"	6.35	1.65	1.00	22.40	10.00	25.0	44.80
SM12X6T10	3/4"	19.05	3/8"	9.53	1.65	1.00	22.40	10.00	25.0	44.80



Cross

Part No.	Tube OD (D)		T	A	B	F Body	L
	Size (in)	Size					
SM4CR19	1/4"	6.35	1.00	25.00	19.05	11.1	50.00
SM6CR19	3/8"	9.53	1.00	25.00	19.05	12.4	50.00
SM8CR19	1/2"	12.7	1.24	29.00	19.05	17.0	58.00
SM12CR22	3/4"	19.05	1.65	31.50	22.50	25.0	67.00
SM16CR23	1"	25.4	1.65	34.00	23.30	30.0	76.60
SM4CR10	1/4"	6.35	1.00	15.90	10.00	11.1	31.80
SM6CR10	3/8"	9.53	1.00	15.90	10.00	12.4	31.80
SM8CR10	1/2"	12.7	1.24	19.90	10.00	17.0	39.80
SM12CR10	3/4"	19.05	1.65	22.40	10.00	25.0	44.80
SM16CR10	1"	25.4	1.65	24.95	10.00	30.0	49.90

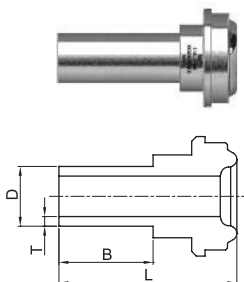


Reducer

Part No.	Tube OD (D1)		Tube OD (D2)		T1	T2	B	L
	Size (in)	Size	Size (in)	Size				
SM6X4R19	3/8"	9.53	1/4"	6.35	1.00	1.00	19.05	38.1
SM8X4R19	1/2"	12.70	1/4"	6.35	1.24	1.00	19.05	38.1
SM8X6R19	1/2"	12.70	3/8"	9.53	1.24	1.00	19.05	38.1
SM12X4R19	3/4"	19.05	1/4"	6.35	1.65	1.00	19.05	42.9
SM12X6R19	3/4"	19.05	3/8"	9.53	1.65	1.00	19.05	42.9
SM12X8R19	3/4"	19.05	1/2"	12.70	1.65	1.24	19.05	42.9
SM16X4R19	1"	25.40	1/4"	6.35	1.65	1.00	19.05	42.9
SM16X6R19	1"	25.40	3/8"	9.53	1.65	1.00	19.05	42.9
SM16X8R19	1"	25.40	1/2"	12.70	1.65	1.24	19.05	42.9
SM16X12R19	1"	25.40	3/4"	19.05	1.65	1.65	19.05	42.9
SM6X4R10	3/8"	9.53	1/4"	6.35	1.00	1.00	10.00	20.0
SM8X4R10	1/2"	12.70	1/4"	6.35	1.24	1.00	10.00	20.0
SM8X6R10	1/2"	12.70	3/8"	9.53	1.24	1.00	10.00	20.0
SM16X4R10	3/4"	19.05	1/4"	6.35	1.65	1.00	10.00	20.0
SM16X6R10	3/4"	19.05	3/8"	9.53	1.65	1.00	10.00	20.0
SM16X8R10	3/4"	19.05	1/2"	12.70	1.65	1.24	10.00	20.0

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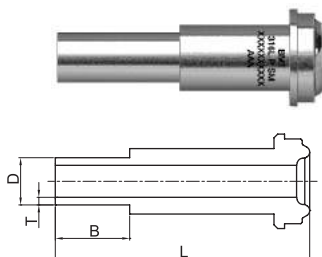
Glands



Female Gland

Part No.	Head Size (in)	Tube OD (D)		T	B	L	ANS (in)
		Size (in)	Size				
SM2FG19	1/8"	1/8"	3.18	0.70	19.05	27.40	1/8"
SM4FG6	1/4"	1/4"	6.35	1.00	6.35	15.24	1/4"
SM4FG10	1/4"	1/4"	6.35	1.00	10.00	18.89	1/4"
SM4FG19	1/4"	1/4"	6.35	1.00	19.05	27.94	1/4"
SM6FG6	1/2"	3/8"	9.53	1.00	6.35	15.75	1/2"
SM6FG10	1/2"	3/8"	9.53	1.00	10.00	19.40	1/2"
SM6FG19	1/2"	3/8"	9.53	1.00	19.05	28.45	1/2"
SM8FG6	1/2"	1/2"	12.70	1.24	6.35	15.75	1/2"
SM8FG10	1/2"	1/2"	12.70	1.24	10.00	19.40	1/2"
SM8FG19	1/2"	1/2"	12.70	1.24	19.05	28.45	1/2"
SM12FG19	3/4"	3/4"	19.05	1.65	19.05	34.50	3/4"
SM16FG19	1"	1"	25.40	1.65	19.05	38.60	1"
SM8X4FG6	1/2"	1/4"	6.35	1.00	6.35	15.75	1/2"
SM8X4FG10	1/2"	1/4"	6.35	1.00	10.00	19.40	1/2"
SM8X4FG19	1/2"	1/4"	6.35	1.00	19.05	28.45	1/2"

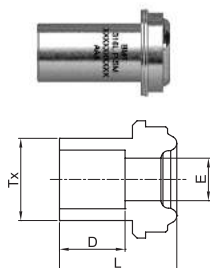
ANS : Available Nut Size



Male Gland

Part No.	Head Size (in)	Tube OD (D)		T	B	L	ANS (in)
		Size (in)	Size				
SM2MG19	1/8"	1/8"	3.18	0.70	19.05	36.00	1/8"
SM4MG6	1/4"	1/4"	6.35	1.00	6.35	30.48	1/4"
SM4MG10	1/4"	1/4"	6.35	1.00	10.00	34.13	1/4"
SM4MG19	1/4"	1/4"	6.35	1.00	19.05	43.18	1/4"
SM6MG6	1/2"	3/8"	9.53	1.00	6.35	32.77	1/2"
SM6MG10	1/2"	3/8"	9.53	1.00	10.00	36.42	1/2"
SM6MG19	1/2"	3/8"	9.53	1.00	19.05	45.47	1/2"
SM8MG6	1/2"	1/2"	12.70	1.24	6.35	32.77	1/2"
SM8MG10	1/2"	1/2"	12.70	1.24	10.00	36.42	1/2"
SM8MG19	1/2"	1/2"	12.70	1.24	19.05	45.47	1/2"
SM12MG19	3/4"	3/4"	19.05	1.65	19.05	51.56	3/4"
SM16MG19	1"	1"	25.40	1.65	19.05	58.93	1"
SM8X4MG6	1/2"	1/4"	6.35	1.00	6.35	32.77	1/2"
SM8X4MG10	1/2"	1/4"	6.35	1.00	10.00	36.42	1/2"
SM8X4MG19	1/2"	1/4"	6.35	1.00	19.05	45.47	1/2"

ANS : Available Nut Size

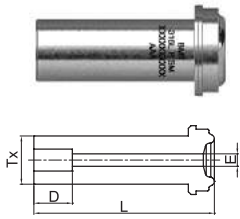


Socket Weld Short Gland

Part No.	Head Size (in)	Sokcet Size (in)	D	E	L	Tx
SM4SSG	1/4"	1/4"	7.1	4.6	12.7	8.9

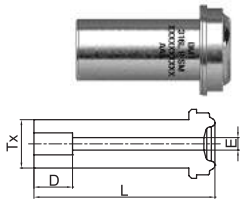
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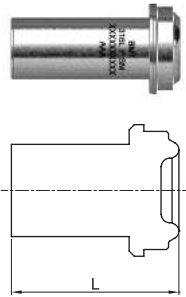
Socket Weld Long Gland

Part No.	Head Size (in)	Sokcet Size (in)	D	E	L	Tx
SM2SLG	1/8"	1/8"	2.5	2.30	17.8	5.1
SM4SLG	1/4"	1/4"	7.1	4.60	33.3	8.9
SM6SLG	1/2"	1/2"	7.9	7.10	38.1	15.2
SM8SLG	1/2"	1/2"	9.6	10.22	38.1	15.2
SM12SLG	3/4"	3/4"	11.2	15.75	50.8	22.4
SM16SLG	1"	1"	15.7	22.10	56.4	30.2



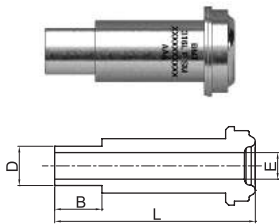
Reducing Socket Weld Long Gland

Part No.	Head Size (in)	Sokcet Size (in)	D	E	L	Tx
SM4X2RSLG	1/4"	1/8"	2.5	2.30	33.3	8.9
SM8X4RSLG	1/2"	1/4"	7.1	4.60	38.1	15.2



Blind Gland

Part No.	Head Size (in)	L	Part No.	Head Size (in)	L
SM2BG	1/8"	17.8	SM12BG	3/4"	50.8
SM4BG	1/4"	33.3	SM16BG	1"	56.4
SM8BG	1/2"	38.1			



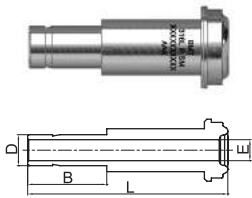
Male Weld Gland

Part No.	Head Size (in)	Tube OD (D)		E	B	L	ANS (in)
		Size (in)	Size				
SM2MWG	1/8"	1/8"	3.18	1.5	7.1	17.8	1/8"
SM4MWG	1/4"	1/4"	6.35	3.0	10.4	33.3	1/4"
SM6MWG	1/2"	3/8"	9.53	7.1	10.4	38.1	3/8"
SM8MWG	1/2"	1/2"	12.70	10.2	12.7	38.1	1/2"

ANS : Available Nut Size

NOTE:

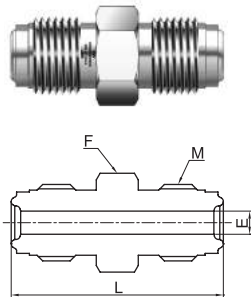
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Tube Adapter

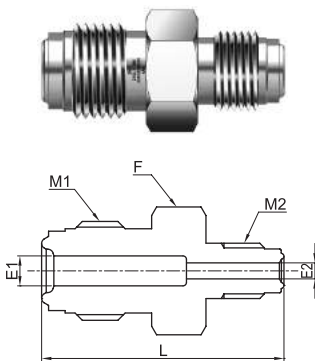
Part No.	Head Size (in)	Tube OD (D)		E	B	L	ANS (in)
		Size (in)	Size				
SM4TA	1/4"	1/4"	6.35	4.3	16.2	41.0	1/4"
SM6TA	1/2"	3/8"	9.53	6.8	17.8	46.0	3/8"
SM8TA	1/2"	1/2"	12.70	9.4	24.4	49.3	1/2"

ANS : Available Nut Size



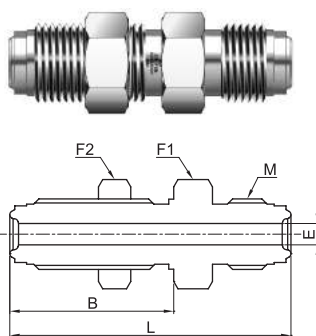
Double Male Union

Part No.	Head Size (in)	E	L	F HEX.	M
SM2MU	1/8"	2.30	28.70	9.52	5/16-24UNF
SM4MU	1/4"	4.35	39.37	15.88	9/16-18UNF
SM8MU	1/2"	10.22	46.74	23.81	7/8-14UNF
SM12MU	3/4"	15.75	61.98	33.34	1 1/4-18UNEF
SM16MU	1"	22.10	65.79	41.28	1 1/2-20UN



Double Male Reducing Union

Part No.	Head Size (in)	Head Size (in)	E1	E2	F HEX.	L	M1	M2
SM4X2MRU	1/4"	1/8"	2.30	4.35	15.88	34.8	9/16-18UNF	5/16-24UNF
SM8X4MRU	1/2"	1/4"	4.35	10.22	23.81	43.4	7/8-14UNF	9/16-18UNF

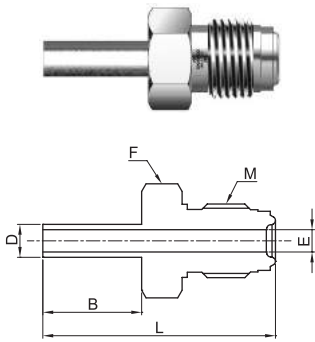


Bulkhead Union

Part No.	Head Size (in)	E	B	L	F1 HEX.	F2 HEX.	M
SM4BHU	1/4"	4.35	33.00	56.60	19.05	19.05	9/16-18UNF
SM8BHU	1/2"	10.22	37.60	65.25	26.90	26.90	7/8-14UNF
SM12BHU	3/4"	15.75	43.40	79.00	38.10	38.10	1 1/4-18UNEF
SM16BHU	1"	22.10	47.10	86.00	44.40	44.40	1 1/2-20UN

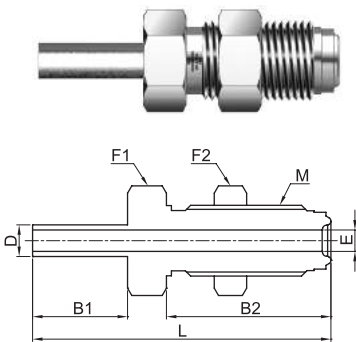
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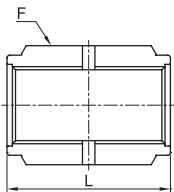
Tube Butt Weld (TBW) Connector

Part No.	Head Size (in)	Tube OD (D)		B	E	L	F HEX.	M
		Size (in)	Size					
SM4TC	1/4"	1/4"	6.35	19.05	4.35	42.65	15.88	9/16-18UNF
SM6TC	1/2"	3/8"	9.53	19.05	10.22	46.70	23.81	7/8-14UNF
SM8TC	1/2"	1/2"	12.70	19.05	10.22	46.70	23.81	7/8-14UNF
SM12TC	3/4"	3/4"	19.05	19.05	15.75	55.55	33.34	1 1/4-18UNEF



Tube Butt Weld (TBW) Bulkhead Connector

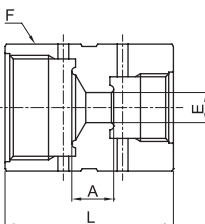
Part No.	Head Size (in)	Tube OD (D)		E	B1	B2	L	F1 HEX.	F2 HEX.	M
		Size (in)	Size							
SM4TBHC	1/4"	1/4"	6.35	4.35	19.05	33.00	59.85	19.05	19.05	9/16-18UNF
SM8TBHC	1/2"	1/2"	12.70	10.22	19.05	37.60	65.25	26.90	26.90	7/8-14UNF
SM12TBHC	3/4"	3/4"	19.05	15.75	19.05	43.25	71.30	38.10	38.10	1 1/4-18UNEF



Coupling

Part No.	Head Size (in)	F HEX.	L
SM2CG	1/8"	11.11	16.8
SM4CG	1/4"	19.05	30.2
SM8CG	1/2"	26.98	33.3

Part No.	Head Size (in)	F HEX.	L
SM12CG	3/4"	38.10	42.7
SM16CG	1"	44.45	51.8



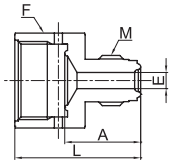
Double Female Reducing Union

Part No.	Head Size (in)	Head Size (in)	E	F HEX.	A	L
SM8X4FRU	1/2"	1/4"	6.4	26.98	8.9	35.8

NOTE:

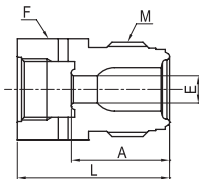
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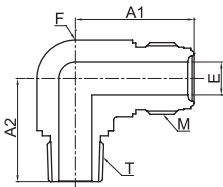
Reducing Adapter

Part No.	Head Size (in)	Head Size (in)	E	F HEX.	A	L	M
SM2X4RA	1/8"	1/4"	2.3	19.05	17.5	30.2	5/16-24UNF
SM4X8RA	1/4"	1/2"	4.6	26.98	21.6	35.8	9/16-18UNF



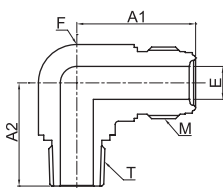
Reducing Bushing

Part No.	Head Size (in)	Head Size (in)	E	F HEX.	A	L	M
SM4X2RB	1/4"	1/8"	3.3	19.05	19.3	26.9	9/16-18UNF
SM8X4RB	1/2"	1/4"	6.4	23.81	23.1	35.8	7/8-14UNF



Male Elbow (NPT)

Part No.	Head Size (in)	T (NPT)	E	A1	A2	F Body	M
SM4MEN	1/4"	1/4"	4.35	27.18	27.18	15.9	9/16-18UNF
SM8MEN	1/2"	1/2"	10.22	36.83	36.83	23.8	7/8-14UNF
SM12MEN	3/4"	3/4"	15.75	48.80	43.50	33.3	1 1/4-18UNF

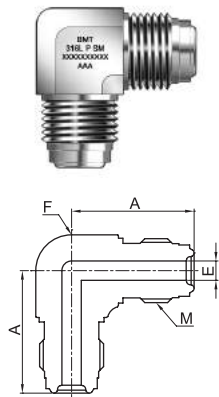


Male Elbow (PT)

Part No.	Head Size (in)	T (PT)	E	A1	A2	F Body	M
SM4MER	1/4"	1/4"	4.35	27.18	27.18	15.9	9/16-18UNF
SM8MER	1/2"	1/2"	10.22	36.83	36.83	23.8	7/8-14UNF
SM12MER	3/4"	3/4"	15.75	48.80	43.50	33.3	1 1/4-18UNF

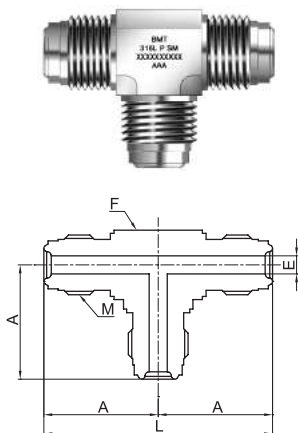
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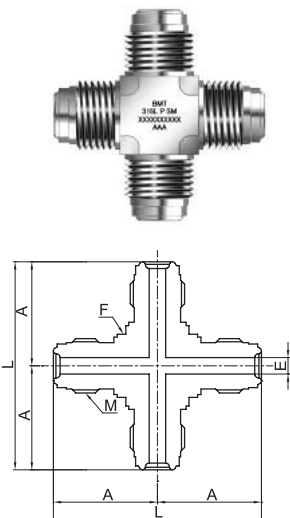
Union Elbow

Part No.	Head Size (in)	E	A	F Body	M
SM4UE	1/4"	4.35	27.18	15.9	9/16-18UNF
SM8UE	1/2"	10.22	36.83	23.8	7/8-14UNF
SM12UE	3/4"	15.75	48.77	33.3	1 1/4-18UNEF
SM16UE	1"	22.10	50.80	42.2	1 1/2-20UN



Union Tee

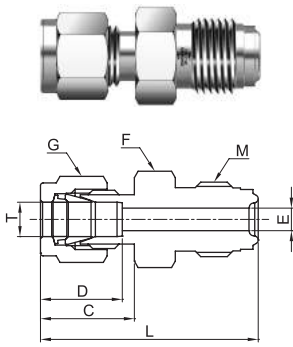
Part No.	Head Size (in)	E	A	L	F Body	M
SM4UT	1/4"	4.35	27.18	54.36	15.9	9/16-18UNF
SM8UT	1/2"	10.22	36.83	73.66	23.8	7/8-14UNF
SM12UT	3/4"	15.75	48.77	97.54	33.3	1 1/4-18UNEF
SM16UT	1"	22.10	50.80	101.60	42.2	1 1/2-20UN



Union Cross

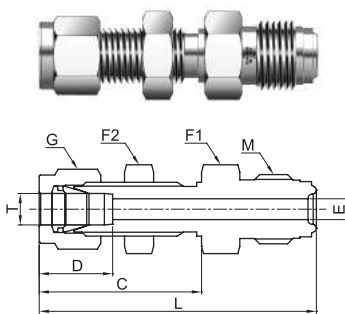
Part No.	Head Size (in)	E	A	L	F Body	M
SM4UC	1/4"	4.35	27.18	54.36	15.9	9/16-18UNF
SM8UC	1/2"	10.22	36.83	73.66	23.8	7/8-14UNF
SM12UC	3/4"	15.75	48.77	97.54	33.3	1 1/4-18UNEF
SM16UC	1"	22.10	50.80	101.60	42.2	1 1/2-20UN

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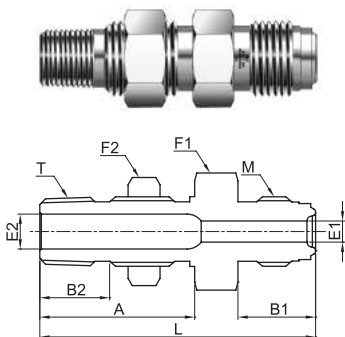
SUPERLOK Tube Fitting Connector

Part No.	Head Size (in)	Tube Size (in)	C	D	E	F HEX.	G HEX.	L	T (in)	M
SM4SC	1/4"	1/4"	17.80	15.20	4.35	15.90	14.29	41.1	1/4"	9/16-18UNF
SM8SC	1/2"	1/2"	21.80	22.90	10.22	23.81	22.23	49.5	1/2"	7/8-14UNF



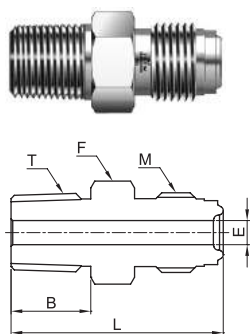
SUPERLOK Tube Fitting Bulkhead Connector

Part No.	Head Size (in)	Tube Size (in)	C	D	E	F1 HEX.	F2 HEX.	G HEX.	L	T (in)	M
SM4BHSC	1/4"	1/4"	33.5	15.2	4.6	15.87	15.87	14.28	57.2	1/4"	9/16-18UNF
SM8BHSC	1/2"	1/2"	41.9	22.9	10.22	23.81	23.81	22.22	69.5	1/2"	7/8-14UNF



Bulkhead Male Connector (NPT)

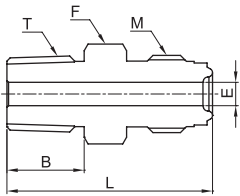
Part No.	Head Size (in)	T (NPT)	B1	B2	E1	E2	F1 HEX.	F2 HEX.	A	L	M
SM4BHMCN	1/4"	1/4"	15.7	14.2	4.60	7.1	20.63	20.63	31.5	56.1	9/16-18UNF



Male Connector (PT)

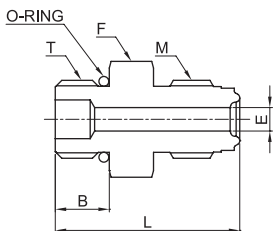
Part No.	Head Size (in)	T (PT)	E	B	L	F HEX.	M
SM2MCR	1/8"	1/8"	2.30	9.60	27.20	11.11	5/16-24UNF
SM4MCR	1/4"	1/4"	4.35	14.22	37.84	15.90	9/16-18UNF
SM8MCR	1/2"	1/2"	10.22	19.05	46.74	23.80	7/8-14UNF
SM12MCR	3/4"	3/4"	15.75	19.05	55.63	33.30	1 1/4-18UNEF
SM16MCR	1"	1"	22.10	23.88	62.74	42.20	1 1/2-20UN

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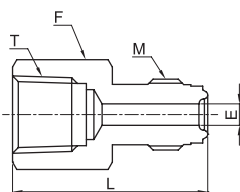
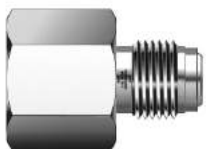
Male Connector (NPT)

Part No.	Head Size (in)	T (NPT)	E	B	L	F HEX.	M
SM2MCN	1/8"	1/8"	2.30	9.60	27.20	11.11	5/16-24UNF
SM4MCN	1/4"	1/4"	4.35	14.22	37.84	15.90	9/16-18UNF
SM8MCN	1/2"	1/2"	10.22	19.05	46.74	23.80	7/8-14UNF
SM12MCN	3/4"	3/4"	15.75	19.05	55.63	33.30	1 1/4-18UNEF
SM16MCN	1"	1"	22.10	23.88	62.74	42.20	1 1/2-20UN



Male Connector (SAE)

Part No.	Head Size (in)	T (SAE)	E	B	L	F HEX.	M
SM4X6MCU	1/4"	9/16-18UNF	4.35	9.9	33.8	19.05	9/16-18UNF
SM8X10MCU	1/2"	7/8-14UNF	10.22	12.7	42.2	25.4	7/8-14UNF
SM8X6MCU	1/2"	9/16-18UNF	10.22	9.9	37.6	23.8	7/8-14UNF
SM12X14MCU	3/4"	1 3/16-12UNF	15.75	15	51.5	34.9	1 1/4-18UNEF

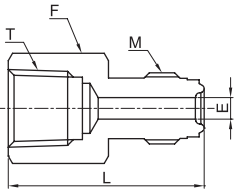


Female Connector (PT)

Part No.	Head Size (in)	T (PT)	E	L	F HEX.	M
SM2FCR	1/8"	1/8"	2.3	30.2	14.28	5/16-24UNF
SM4FCR	1/4"	1/4"	4.35	39.1	19.05	9/16-18UNF
SM8FCR	1/2"	1/2"	10.22	50.5	26.98	7/8-14UNF
SM12FCR	3/4"	3/4"	15.75	59.9	33.33	1 1/4-18UNEF
SM16FCR	1"	1"	22.1	63.8	41.27	1 1/2-20UN

NOTE:

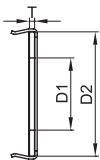
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Female Connector (NPT)

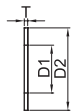
Part No.	Head Size (in)	T (NPT)	E	L	F HEX.	M
SM2FCN	1/8"	1/8"	2.3	30.2	14.28	5/16-24UNF
SM4FCN	1/4"	1/4"	4.35	39.1	19.05	9/16-18UNF
SM8FCN	1/2"	1/2"	10.22	50.5	26.98	7/8-14UNF
SM12FCN	3/4"	3/4"	15.75	59.9	33.33	1 1/4-18UNEF
SM16FCN	1"	1"	22.1	63.8	41.27	1 1/2-20UN

Gaskets



Gasket Retainer Assembly

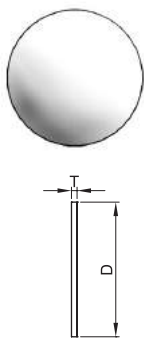
Part No.	Head Size (in)	T	D1	D2
SM4GR	1/4"	0.80	5.60	11.85
SM8GR	1/2"	0.80	11.20	19.27
SM12GR	3/4"	0.80	16.70	27.90
SM16GR	1"	0.80	22.60	34.20



Gasket

Part No.	Head Size (in)	T	D1	D2
SM2GT	1/8"	0.80	2.30	6.60
SM4GT	1/4"	0.80	5.60	12.70
SM8GT	1/2"	0.80	11.20	19.80
SM12GT	3/4"	0.80	16.70	29.00
SM16GT	1"	0.80	22.60	35.80

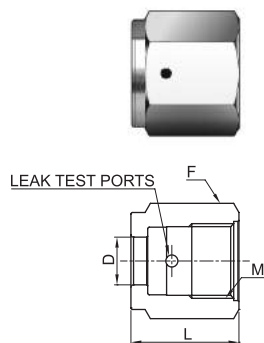
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Blind Gasket

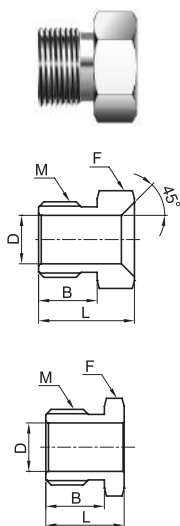
Part No.	Head Size (in)	T	D
SM4BGT	1/4"	0.80	11.90
SM8BGT	1/2"	0.80	19.80
SM12BGT	3/4"	0.80	28.90
SM16BGT	1"	0.80	35.50

Nuts, Caps and Plugs



Female Nut

Part No.	Head Size (in)	L	D	F Hex.	M
SM2FN	1/8"	13.5	5.3	11.11	5/16-24UNF
SM4FN	1/4"	20.5	9.1	19.05	9/16-18UNF
SM8FN	1/2"	22.3	15.5	26.99	7/8-14UNF
SM12FN	3/4"	28.4	22.6	38.1	1 1/4-18UNEF
SM16FN	1"	34.0	30.5	44.45	1 1/2-20UN



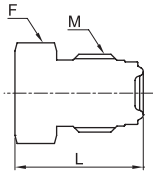
Male Nut

Part No.	Head Size (in)	L	B	D	F Hex.	M
SM2MN	1/8"	12.70	8.20	5.30	9.52	5/16-24UNF
SM4MN	1/4"	18.00	11.00	9.10	15.88	9/16-18UNF
SM4MNS*	1/4"	13.70	11.00	9.10	15.88	9/16-18UNF
SM8MN	1/2"	20.50	12.70	15.50	23.81	7/8-14UNF
SM12MN	3/4"	25.40	16.00	22.60	33.34	1 1/4-18UNEF
SM16MN	1"	30.20	20.00	30.50	41.28	1 1/2-20UN

*SM4MNS : Short Male nut 1/4" only

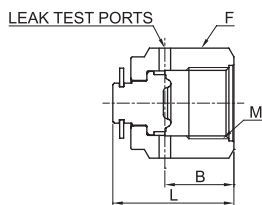
Short Male nut 1/4" only

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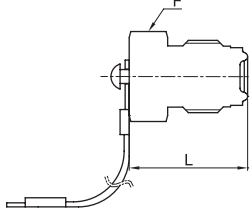
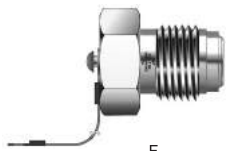
Plug

Part No.	Head Size (in)	L	F HEX.	M
SM2PG	1/8"	17.3	9.52	5/16-24UNF
SM4PG	1/4"	23.37	15.88	9/16-18UNF
SM8PG	1/2"	27.43	23.81	7/8-14UNF
SM12PG	3/4"	36.32	33.34	1 1/4-18UNEF
SM16PG	1"	38.61	41.28	1 1/2-20UN



Cap

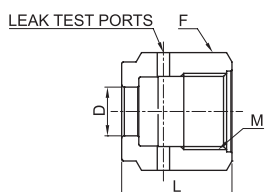
Part No.	Head Size (in)	L	B	F Hex.	M
SM2CP	1/8"	16.00	7.60	11.11	5/16-24UNF
SM4CP	1/4"	24.20	11.18	19.05	9/16-18UNF
SM8CP	1/2"	25.50	11.43	26.99	7/8-14UNF
SM12CP	3/4"	32.77	13.72	38.10	1 1/4-18UNEF
SM16CP	1"	39.12	16.00	44.45	1 1/2-20UN



Plug (Cable Type)

Part No.	Head Size (in)	F HEX.	L	Cable Length
SM4PGC	1/4"	15.88	23.37	260
SM8PGC	1/2"	23.81	27.43	260

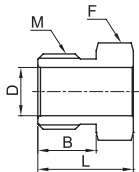
High - Flow Connection - "H" Type



High Flow Female Nut

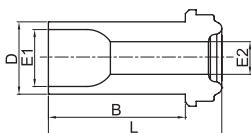
Part No.	Head Size (in)	L	D	F HEX.	M
SM4HFN	1/4"	20.57	9.9	19.05	9/16-18UNF

NOTE:
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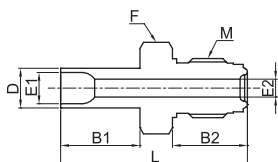
High Flow Male Nut

Part No.	Head Size (in)	B	L	D	F HEX.	M
SM4HMN	1/4"	11.0	18.03	9.9	15.88	9/16-18UNF



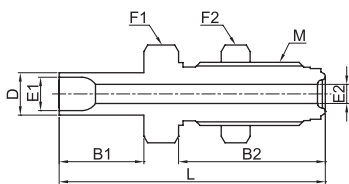
High Flow Long Gland

Part No.	Head Size (in)	Tube OD (D)		B	L	E1	E2
		Size (in)	Size				
SM4X6HLG	1/4"	3/8"	9.53	28.4	33.2	7.5	6.28



High Flow Tube Butt Weld (TBW) Connector

Part No.	Head Size (in)	Tube OD (D)		E1	E2	B1	B2	L	F HEX.	M
		Size (in)	Size							
SM4X6HTC	1/4"	3/8"	9.53	7.5	6.35	19.05	15.8	42.75	15.88	9/16-18UNF

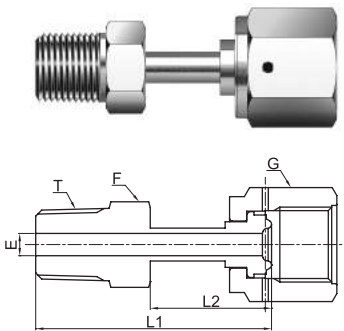


High Flow Tube Butt Weld (TBW) Bulkhead Connector

Part No.	Head Size (in)	Tube OD (D)		B1	B2	E1	E2	L	F1 HEX.	F2 HEX.	M
		Size (in)	Size								
SM4X6HBHC	1/4"	3/8"	9.53	19.05	33	7.5	6.35	59.85	19.05	19.05	9/16-18UNF

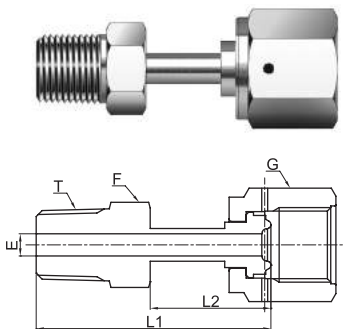
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Welded Assembly



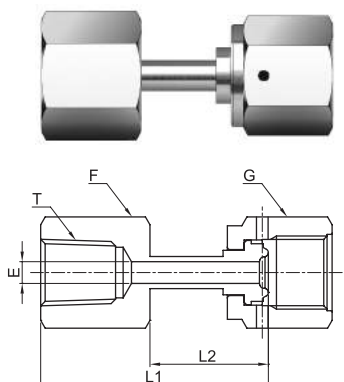
Welded Male Connector (PT)

Part No.	Head Size (in)	T (PT)	E	L1	L2	F HEX.	G HEX.
SM4WMCR	1/4"	1/4"	4.35	45.5	23.4	14.29	19.05
SM8WMCR	1/2"	1/2"	10.22	53.1	25.6	22.23	26.66



Welded Male Connector (NPT)

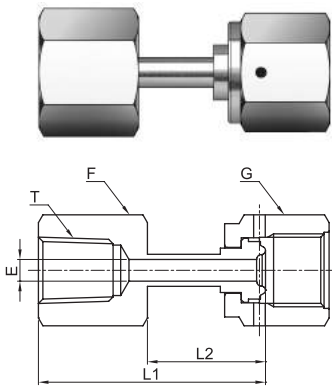
Part No.	Head Size (in)	T (NPT)	E	L1	L2	F HEX.	G HEX.
SM4WMCN	1/4"	1/4"	4.35	45.5	23.4	14.29	19.05
SM8WMCN	1/2"	1/2"	10.22	53.1	25.6	22.23	26.66



Welded Female Connector (PT)

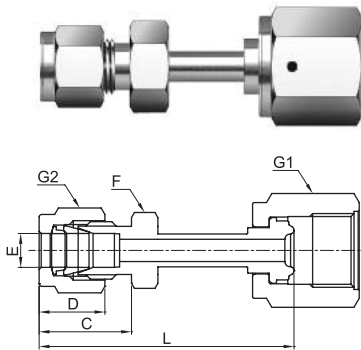
Part No.	Head Size (in)	T (PT)	E	L1	L2	F HEX.	G HEX.
SM4WFCR	1/4"	1/4"	4.35	45.0	23.4	19.05	19.05
SM8WFCR	1/2"	1/2"	10.22	55.4	26.4	26.99	26.99

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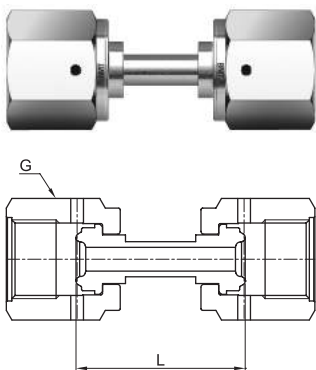
Welded Female Connector (NPT)

Part No.	Head Size (in)	T (NPT)	E	L1	L2	F HEX.	G HEX.
SM4WFCN	1/4"	1/4"	4.35	45.0	23.4	19.05	19.05
SM8WFCN	1/2"	1/2"	10.22	55.4	26.4	26.99	26.99



Welded Lok Connector

Part No.	Head Size (in)	Tube Size (in)	C	D	E	L	F HEX.	G1 HEX.	G2 HEX.
SM4WSC	1/4"	1/4"	17.78	15.24	4.35	49.28	12.70	19.00	17.00
SM8WSC	1/2"	1/2"	21.84	22.86	10.22	56.64	20.64	26.00	19.00



Welded Female Union

Part No.	Head Size (in)	L	G HEX.
SM4WFU	1/4"	43.4	19.05
SM8WFU	1/2"	46.7	26.99

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