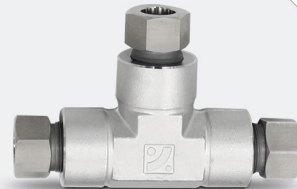
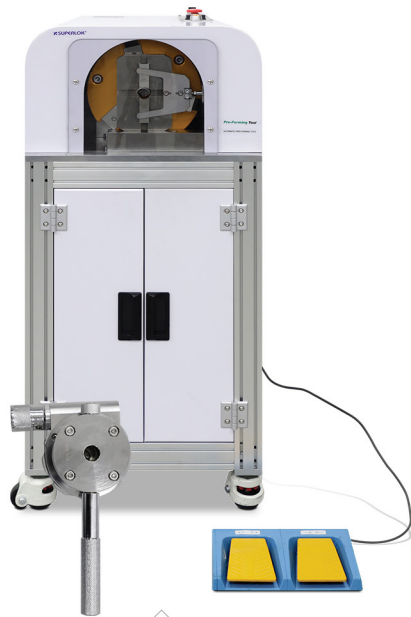


Pre-forming Fitting



Pre-Forming Fitting

Features

Pre-forming Fitting features double ferrule compression system that provides leak-tight sealing for medium-pressure rated up to 15,000 psig (1,034 bar) with different special tubing materials. It is best suitable for applications requiring medium pressure control, excellent corrosion resistance, and/or heavy-wall & special-material tubing.



Specifications

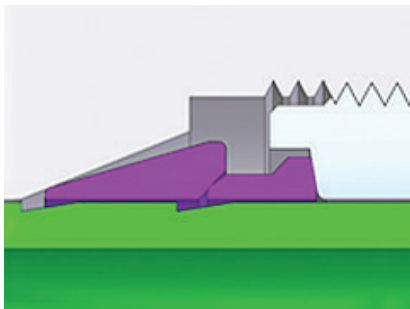
- Size: 1/4 in. to 1 in., 6mm to 25mm
- Materials: Titanium, Super Duplex, Alloy C-276, Alloy 400, Alloy 20 or 316 stainless steel
- Temperature: -423 to 1200°F (-252 to 649°C)
- Pressure Rating: up to 15,000 psig (1,034 bar)

Materials

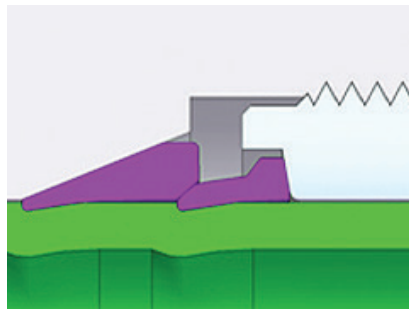
Fitting Materials	Bar Stock	Forging
316 Stainless Steel	A276	A182
Alloy 20	B473	B462
Alloy 400	B164	B564
Alloy C-276	B574	B564
SAF 2507	A479	A182
Titanium	B348	B381

Design and Construction

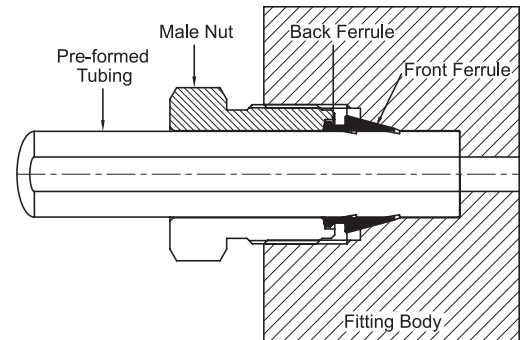
- Pre-Forming Fitting offers an easy, quick construction of airtight seal for medium pressure control system with double ferrule structure and easy-to-use Preforming Tool for tubing.
- Pre-Forming Fitting features mechanical grip with double ferrule to maintain consistent, reliable clamping force even when environmental variations such as vibration and temperature changes are present. Its excellent control enables a construction of a stable fluid system withstanding extreme conditions.
- It consists of body, front/back ferrule, and nut. When the nut is tightened, each front ferrule is clamped to the pre-formed tubing to form an airtight seal. In the meantime, the back ferrule hinges on grooves of the preformed tubing to provide additional grip to further strengthen the seal.



Prior to Make-up



After Make-up



Ordering Information

Example :

P M C - 4 F - 4 N - T I
 1 2-1 2-2 3

Example :

P R U T - ^{Port 1}8 F - ^{Port 2}8 F - ^{Port 3}4 F - F 5 3
 1 2-1 2-1 2-1 3

1. Type of Fitting

- PSU = Straight Union
- PUE = Union Elbow
- PUT = Tee
- PUC = Cross
- PCP = Cap
- PPG = Plug
- PMN = Male Nut
- PMC = Male Connector
- PSMC = SAE/MS O-ring Male Connector
- PR = Reducer
- PAU = An Union

Ordering numbers for Tees and Crosses



- TEE:
First indicate the size of the run (1 to 2) and then the size of the branch (3).
- CROSS:
First indicate the size of the run (1 to 2) and then the size of the branch (3 to 4).

2. Size

2-1. Tube O.D

Fractional Tube	O./D (Inch)	1/4	3/8	1/2	3/4	1
	Designator		4F	6F	8F	12F
Metric Tube	O.D (mm)	6	10	12	20	25
	Designator	6MF	10MF	12MF	20MF	25MF

2-2. Thread Size

Size (inch)	1/8	1/4	3/8	1/2	3/4	1
Medium Pressure C&T	-	MP4	MP6	MP9	MP12	MP16
High Pressure C&T	HP2	HP4	HP6	HP9	HP12	HP16
NPT	2N	4N	6N	8N	12N	16N
ISO Tapered	2R	4R	6R	8R	12R	16R
ISO Parallel	2G	4G	6G	8G	12G	16G
Unified Screw	2U	4U	6U	8U	12U	16U

3. Fitting Material

- (Blank) = 316 Stainless Steel
- A20 = Alloy 20
- M40 = Alloy 400
- 276 = Alloy C-276
- F53 = SAF 2507
- TI = Titanium

※ Any special sizes and configurations not mentioned in this publication, please consult BMT (SUPERLOK) sales representative for availability.

Pre-forming Instructions

Tubing needs to be pre-formed using our Pre-forming Tool before installation. Both Manual (PTFT-M series) and Automatic (PTFT-E series) are available.

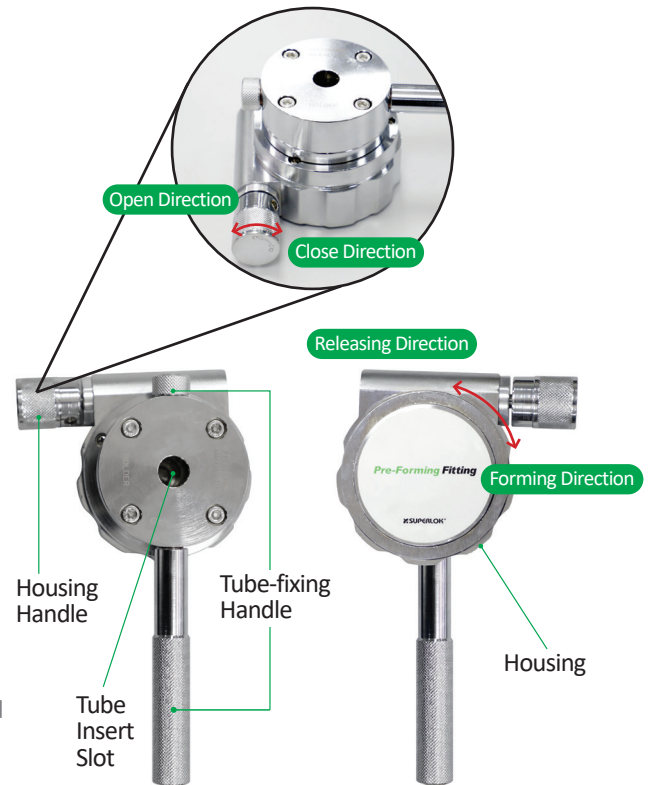
Manual Pre-forming

Manual Tool Ordering Number:

PTFT-M-T1 for 1/4 to 1/2 in, 6 to 12mm tubing

PTFT-M-T2 for 3/4 to 1 in, 20 to 25mm tubing

1. Turn the tube-fixing handle in the open direction and insert the tube it contacts the end of the housing.
2. Continue turning the housing handle in the close direction until the tube becomes fixed.
3. Turn the tube-fixing handle in the close direction to securely fix the tube.
4. Hold the tube-fixing handle with one hand and the housing with another hand and turn the housing in the forming direction two or three times.
5. Turn the housing handle in the close direction and then turn the housing in the forming direction again two or three times.
6. Fully turn the housing handle in the close direction and then turn the housing to the forming direction about 10 times.
7. Turn the housing handle in the open direction two or three times and then turn the housing in the releasing direction two or three times.
8. Turn the tube-fixing handle in the open direction and remove the pre-formed tube.



! If an emergency occurs while the machine is operating, press the stop button or emergency stop button to stop the pre-forming tool.

Automatic Pre-forming

Automatic Tool Ordering Number:

PTFT-E-T1 for 1/4 to 9/16 in, 6 to 12mm tubing

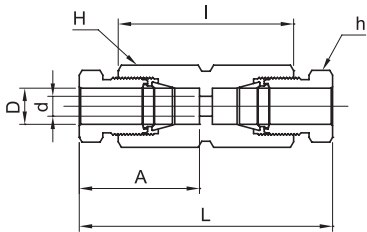
PTFT-E-T2 for 3/4 to 1 in, 20 to 25mm tubing

1. Connect the power cord to a power outlet and turn the unit on with its control panel.
2. Insert the tubing for pre-forming until it contacts the end of the insert slot. Please check if the lamp is on thereafter.
3. Fix the tubing on the slot by pressing the foot pedal while holding the tubing with a hand until it is completely fixed.
4. Press the start button on the control panel.
5. The tool automatically rotates 15 times to completely form the tubing.
6. Press the foot pedal to release the tubing.
7. Remove the pre-formed tubing.



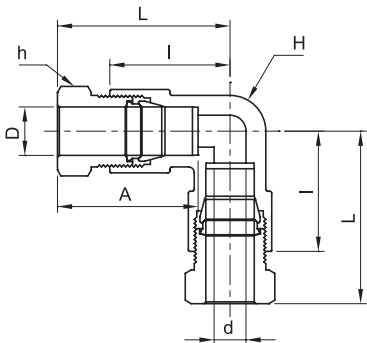
Table of Dimensions

PSU Straight Union



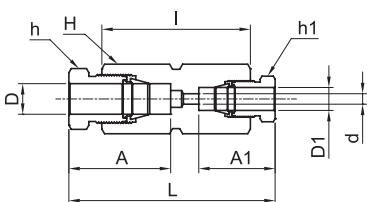
Part No.	Tube O.D D (inch)	d	Width Across Flat		L	I	A
			H (inch)	h (inch)			
PSU - 4F	1/4	3.3	5/8	9/16	80.4	55.0	37.7
PSU - 6F	3/8	5.3	3/4	11/16	89.8	56.4	41.4
PSU - 8F	1/2	7.1	1	7/8	102.0	66.4	46.4
PSU - 12F	3/4	14.2	1-3/8	1-1/4	136.1	84.0	61.0
PSU - 16F	1	17.5	1-3/4	1-1/2	170.0	108.0	75.5

PUE Union Elbow



Part No.	Tube O.D D (inch)	d	Width Across Flat		L	I	A
			H (inch)	h (inch)			
PUE - 4F	1/4	3.3	5/8	9/16	80.4	55.0	37.7
PUE - 6F	3/8	5.3	3/4	11/16	89.8	56.4	41.4
PUE - 8F	1/2	7.1	1	7/8	102.0	66.4	46.4
PUE - 12F	3/4	14.2	1-3/8	1-1/4	136.1	84.0	61.0
PUE - 16F	1	17.5	1-3/4	1-1/2	170.0	108.0	75.5

PSRU Preforming Straight Reducing Union

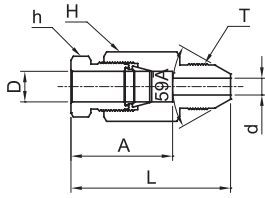


Part No.	Tube O.D D (inch)	d	Tube O.D D1 (inch) C&T	Width Across Flat			L	A	A1
				H (inch)	h (inch)	h1 (inch)			
PSRU - 6F - 4F	3/8	3.3	1/4	3/4	11/16	9/16	85.8	41.4	37.7
PSRU - 8F - 4F	1/2	3.3	1/4	1	7/8	9/16	97.0	46.4	37.7
PSRU - 8F - 6F	1/2	5.3	3/8	1	7/8	11/16	101.0	46.4	41.4
PSRU - 9F - 8F	9/16	7.1	1/2	1-1/16	15/16	7/8	103.6	47.8	46.4
PSRU - 12F - 8F	3/4	7.1	1/2	1-3/8	1-1/4	7/8	128.0	61.0	46.4
PSRU - 16F - 12F	1	14.2	3/4	1-3/4	1-1/2	1-1/4	165.0	75.5	61.0

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PCA

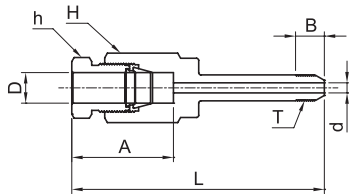
Preforming Cone&Thread Adapter - One-Piece



Part No.	Tube O.D D (inch)	d	C&T Size (inch)	Thread T (inch)	Width Across Flat		L	A
					H (inch)	h (inch)		
PCA - 4F - MP4	1/4	2.8	1/4	7/16-20 UN	5/8	9/16	59.5	37.7
PCA - 4F - MP6	1/4	3.3	3/8	9/16-18 UN	5/8	9/16	65.4	37.7
PCA - 6F - MP6	3/8	5.3	3/8	9/16-18 UN	3/4	11/16	68.8	41.4
PCA - 6F - MP9	3/8	5.3	9/16	13/16-16 UN	7/8	11/16	70.4	41.4
PCA - 8F - MP9	1/2	7.1	9/16	13/16-16 UN	1	7/8	78.9	46.4
PCA - 9F - MP9	9/16	7.9	9/16	13/16-16 UN	1-1/8	15/16	81.1	47.8
PCA - 12F - MP9	3/4	7.9	9/16	13/16-16 UN	1-1/2	1-1/4	97.6	61.0
PCA - 12F - MP12	3/4	11.4	3/4	3/4-14 UNF	1-1/2	1-1/4	100.0	61.0
PCA - 16F - MP12	1	11.4	3/4	3/4-14 UNF	1-7/8	1-1/2	118.7	75.5
PCA - 16F - MP16	1	14.2	1	1-3/8-12 UN	1-7/8	1-1/2	130.0	75.5

PCA

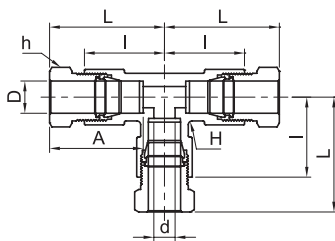
Preforming Cone&Thread Adapter - Tube Nipple



Part No.	Tube O.D D (inch)	d	C&T Size (inch)	Thread T (inch)	Width Across Flat		L	A	B
					H (inch)	h (inch)			
PCA - 4F - 4CR	1/4	2.8	1/4	1/4-28 L.H.	5/8	9/16	78.8	37.7	7.9
PCA - 6F - 6CR	3/8	5.3	3/8	3/8-24 L.H.	3/4	11/16	89.2	41.4	9.9
PCA - 8F - 9CR	1/2	7.9	9/16	9/16-18 L.H.	1	7/8	108.6	46.4	11.9
PCA - 12F - 9CR	3/4	7.9	9/16	9/16-18 L.H.	1-1/2	1-1/4	125.5	61.0	11.9
PCA - 16F - 12CR	1	10.9	3/4	3/4-16 L.H.	1-7/8	1-1/2	144.6	75.5	15.7
PCA - 16F - 16CR	1	14.2	1	1-14 L.H.	1-7/8	1-1/2	164.0	75.5	19.8

PUT

Tee

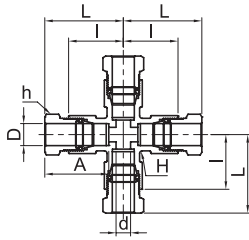


Part No.	Tube O.D D (inch)	d	Width Across Flat		L	I	A
			H (inch)	h (inch)			
PUT - 4F	1/4	3.3	11/16	9/16	41.7	29.0	37.7
PUT - 6F	3/8	5.3	13/16	11/16	48.7	32.0	41.4
PUT - 8F	1/2	7.1	1	7/8	54.8	37.0	46.4
PUT - 12F	3/4	14.2	1-13/32	1-1/4	68.0	42.0	61.0
PUT - 16F	1	17.5	1-7/8	1-1/2	90.2	59.2	75.5

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PUC

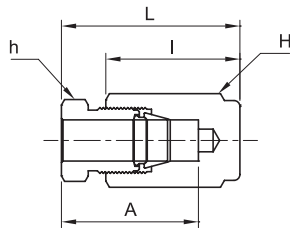
Cross



Part No.	Tube O.D D (inch)	d	Width Across Flat		L	I	A
			H (inch)	h (inch)			
PUC - 4F	1/4	3.3	11/16	9/16	41.7	29.0	37.7
PUC - 6F	3/8	5.3	13/16	11/16	48.7	32.0	41.4
PUC - 8F	1/2	7.1	1	7/8	54.8	37.0	46.4
PUC - 12F	3/4	14.2	1-13/32	1-1/4	62.0	42.0	61
PUC - 16F	1	17.5	1-7/8	1-1/2	90.2	59.2	75.5

PCP

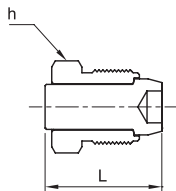
Cap



Part No.	Tube O.D D (inch)	Width Across Flat		L	I	A
		H (inch)	h (inch)			
PCP - 4F	1/4	5/8	9/16	46.7	34.0	37.7
PCP - 6F	3/8	3/4	11/16	49.2	32.5	41.4
PCP - 8F	1/2	1	7/8	55.6	37.8	46.4
PCP - 12F	3/4	1-3/8	1-1/4	74.1	48.0	61.0
PCP - 16F	1	1-3/4	1-1/2	91.5	60.5	75.5

PPG

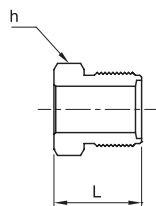
Plug



Part No.	Tube O.D D (inch)	Width Across Flat	L
		h (inch)	
PPG - 4F	1/4	9/16	28.8
PPG - 6F	3/8	11/16	33.5
PPG - 8F	1/2	7/8	40.1
PPG - 12F	3/4	1-1/4	50.3
PPG - 16F	1	1-1/2	64.4

PMN

Male Nut



Part No.	Tube O.D D (inch)	Width Across Flat	L
		h (inch)	
PMN - 4F	1/4	9/16	21.3
PMN - 6F	3/8	11/16	23.5
PMN - 8F	1/2	7/8	28.9
PMN - 12F	3/4	1-1/4	37.1
PMN - 16F	1	1-1/2	51.0

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BMT Co., Ltd.

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