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i n n o v a t i o n s . o f . c u s t o m e r s

# Leak - Proof Flow & Control Solution Partner

The Best Partner  
for Value Creation

**BITE** - JIS B2351 Tube Fittings

**HanSun**

한선엔지니어링(주)  
HANSUN ENGINEERING CO., LTD.







## Certificate List



API Spec.Q1



API Monogram



ABS



Lloyd's



DNV



GL



BV



KR



NK



CCS



Gost - R



ECE R110 / ISO / 5500 / NGV 3.1 / CSA 12.3

## GENERAL INFORMATION FOR OUR BITE TYPE TUBE FITTINGS.

HANSUN bite type tube fittings are precision-machined, under strict quality control. HANSUN bite type tube fittings are the flareless tube fitting with the visible bite. This added safety feature makes them the preferred fitting for non-flared tube connections.

### How Do They Work?

The bite type flareless hydraulic tube fitting is designed to work on medium to heavy wall tubing that is hard to flare. It consists of three parts:

1. body, 2. sleeve, 3. nut. (As shown in Fig-1)

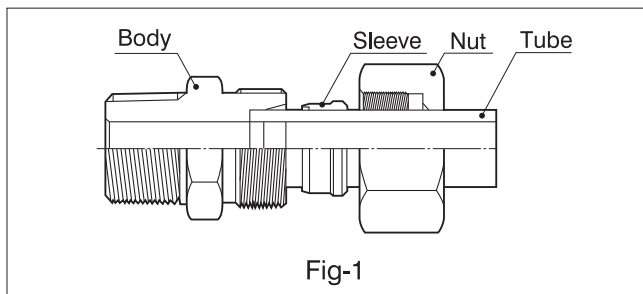


Fig-1

The sleeve is driven forward on the tube by the nut. As the sleeve moves forward it meets the seal seat angle of the body which causes the sleeve to cam inward into the tube. The sleeve then bites into the tube causing a small ridge of tube material to be pushed up in front of the biting edge of the sleeve. (As shown in Fig-2 & 3)

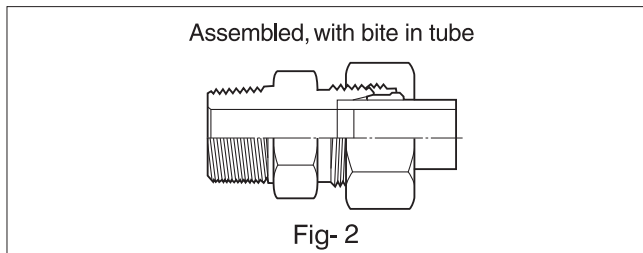


Fig-2

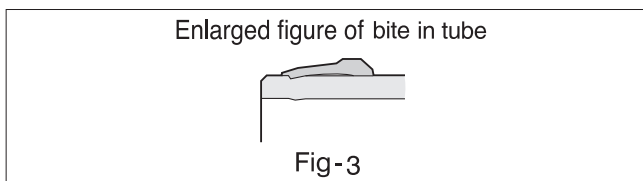


Fig-3

The make-up of the fitting is critical in that the tube must be bottomed against the tube stop in the body or presetting tool during make up. If it is not bottomed the tube will move forward with the sleeve and a bite will not be achieved. Make sure the tube is bottomed.

A check is possible to see if the tube is bottomed during make up. To make this check inspect the end of the tube and see if a circular appearing ring has been impressed into the tube end face. This impression may be caused by the tube stop which has a slight reverse angle rather than a flat face.

### Material Specifications

Parts	Steel	Stainless Steel	Brass
Forged Body	S20C-S48C	SUS316	C3771
Bar Stock Body	S20C-S48C	SUS316	C3604
Cold Formed Nut	S10C-S20C		
Bar Stock Nut	S20C-S48C	SUS316-SUS304	C3604
Sleeve	S10C	SUS316-SUS304	C3604

### Applicable Pressure Rating

Our standard specifications of the fittings are as follows.

Fitting Size (applicable Tube O.D)	4~15	16~22	25~28	30~38	40~45
Rated pressure (kgf/cm <sup>2</sup> )	500	400	350	250	210
Max. working temperature (°C)	300				

The Rated Pressure for the fittings are determined based on the results of the design specification confirmed by severe repetitive tests; the rated pressures are determined for each size of fittings while the safety factor of as much as 4 is taken into account in the design.

### Suitable Tubing Materials

Common material of tubing includes :

**Steel** - Seamless, fully annealed, also welded and redrawn type suitable for bending. Maximum hardness, Rockwell B72.

**Stainless Steel** - Seamless, fully annealed and welded redrawn, fully annealed suitable for bending. Maximum hardness. Rockwell B90.

**Copper** - Seamless coils. soft or light annealed, maximum hardness Rockwell F55. Straight lengths. light drawn and general purpose. Maximum hardness of 60 on Rockwell 30T scale.

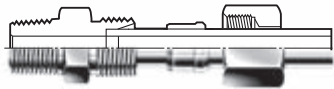
## ASSEMBLY INSTRUCTIONS

### Cutting The Tube

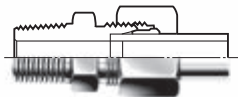
Cut tube squarely and de-burr lightly the end both internally and externally.

### Sleeve Placement

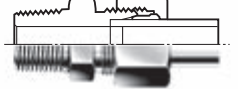
Slip nut and sleeve onto tubing. Be sure the long straight end of the sleeve points toward tube end.



Nut and sleeve on tube



Tube bottomed in fitting



Assembled with bite on tube

### Lubrication

Lightly lubricate threads on tool or body as well as the tail and lead end of the sleeve with extreme friction lubricant.

### Pre-Setting

Insert tube end into tool or fittings until it sits on the shoulder (to hold tube motionless during pre-setting) and screw the nut down with finger tight.

### Final Setting

Wrench nut down 1-1/2 turns to pre-set the sleeve (Reliable make-up of all flareless tube fittings is dependent upon the sleeve traveling a prescribed distance into tapered fitting throat in order to bite into the tube and effect a positive grip and seal.

## REASSEMBLE FOR FINAL INSTALLATION

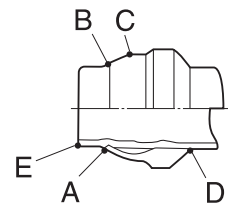
Insert the tube into the fitting body and wrench the nut down until a sudden increase in torque occurs. From this point turn the nut an additional 1/4 to 1/3 turn (1-1/2 to 2 wrench flats) to again spring the sleeve into place to seal against the tubing and the fitting body.

## INSPECTION OF BITE

All HANSUN bite type tube fittings must be disassembled and inspected for proper make-up before final assembly. Detailed inspection procedures are outlined below and must be followed regardless of the method used to pre-set the sleeve to the tube.

## You Should Make Certain That

1. A ridge of metal has been raised above the tube surfaces, to a height of at least 50% of the thickness of the sleeve leading edge, completely around the tube (A)
2. While the leading edge of the sleeve may be coined flat (B) there is a slight bow to the balance of the pilot section (C)
3. The tail or back end of the sleeve is snugged against the tube (D)
4. There is a slight indentation all around the end of the tube (E) that indicates the tube was bottomed in the tool or fitting during pre-setting (unless evidence of this complete contact is visible the sleeve cannot be considered properly pre-set).















































5. Avoid rotating the sleeve. Steel sleeve should not be capable of moving back and forth along tube, beyond the bite area (stainless steel sleeve will move more than steel because of its spring back characteristics).

## TROUBLE SHOOTING

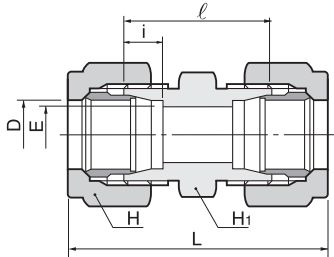
Problems with bite type hydraulic fittings are most often traced to faulty make-up procedures. Look for the following:

1. **Tube not bottomed** - Check for the indentation on the tube end or compare length from end of tube to the front end of the sleeve with that of a known good assembly.
2. **Lack of bite** - Inspect for turned up ridge of material. A failure to achieve this ridge can be traced either to the fact that the nut was not tightened enough or that the tube was not bottomed against the stop which allowed the tube to travel forward with the sleeve
3. **Sleeve cocked on tube** - The sleeve is cocked on the tube when the tube assembly is off axis with that of the body. Generally this condition is caused by faulty tube bending. All bent tube assemblies should drop into the fitting body prior to make up.
4. **No bite** - If all of the above checks have been made and the sleeve still shows no sign of biting the tube, it may be that the tube is too hard.

<b>BU</b> Straight Union 7 	<b>BOLM</b> O-Seal Male Elbow 14 	<b>BC</b> Cap 20 	<b>BHBLF</b> Hose Bulkhead Female Elbow 25 
<b>BL</b> Union Elbow 7 	<b>BSLM</b> Banjo Elbow 15 	<b>BP</b> Plug 20 	<b>BCW</b> Welding Connector 26 
<b>BT</b> Union Tee 8 	<b>BBTM</b> Male Branch Tee 15 	<b>BN</b> Nut 21 	<b>BBUW</b> Welding Bulkhead Union 26 
<b>BBU</b> Straight Bulkhead Union 8 	<b>BRTM</b> Male Run Tee 16 	<b>BS</b> Sleeve 21 	<b>BA-R</b> Adapter 27 
<b>BBL</b> Bulkhead Elbow 9 	<b>BBFC</b> Bulkhead Female Connector 16 	<b>BHUM</b> Hose Male Union 22 	<b>BA-G</b> Adapter (For Copper Gasket) 27 
<b>BLMC</b> Long Male Connector 9 	<b>BFC</b> Female Connector 17 	<b>BHUF</b> Hose Female Union 22 	<b>BR</b> Reducer 28 
<b>BMC-R</b> Male Connector 10 	<b>BGC</b> Gauge Connector 17 	<b>BHBM</b> Hose Bulkhead Male Union 23 	<b>BLA</b> Positionable Elbow 28 
<b>BMC-G</b> Male Connector 11 	<b>BLF</b> Female Elbow 18 	<b>BHBF</b> Hose Bulkhead Female Union 23 	<b>BBTA</b> Positionable Branch Tee 29 
<b>BOM</b> Male Connector (For O-Ring) 12 	<b>BBTF</b> Female Branch Tee 18 	<b>BHLM</b> Hose Male Elbow 24 	<b>BRTA</b> Positionable Run Tee 29 
<b>BLM</b> Male Elbow 13 	<b>BRTF</b> Female Run Tee 19 	<b>BHLF</b> Hose Female Elbow 24 	<b>BAP-1</b> Air Purge Valve (Tube End) 30 
<b>BLLM</b> Long Male Elbow 14 	<b>BJ</b> Jig 19 	<b>BHBLM</b> Hose Bulkhead Male Elbow 25 	<b>BAP-2</b> Air Purge Valve (Thread End) 30 

# BU

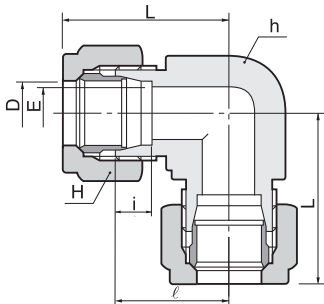
## Straight Union



Designations	Tube O.D.		E	Width across flat		i	l	Approx L
	D			H <sub>1</sub>	H			
BU-06	6		4	14	14	7	30	51
BU-08	8		6	17	17	7	31	52
BU-10	10		8	17	19	7	31	54
BU-12	12		10	19	22	7	31	54
BU-15	15		12	24	27	7.5	36	61
BU-16	16		13	27	30	7.5	36	61
BU-18	18		14	27	32	8	36	61
BU-20	20		17	30	36	8	38	63
BU-22	22		18	32	36	9	38	63
BU-25	25		20	36	41	10	38	66
BU-28	28		22	41	46	10	43	71
BU-30	30		25	41	46	10	43	72
BU-32	32		26	46	50	11	44	73
BU-35	35		28	46	55	11	44	79
BU-38	38		32	50	60	12	46	85
BU-40	40		32	55	60	12	55	94
BU-42	42		34	55	60	12	55	94
BU-06A	1/8	10.5	8	17	19	7	31	54
BU-08A	1/4	13.8	11	22	24	7.5	38	60
BU-10A	3/8	17.3	14	27	32	8	38	61
BU-15A	1/2	21.7	18	32	36	9	38	63
BU-20A	3/4	27.2	22	41	46	10	43	71
BU-25A	1	34.0	28	46	55	11	44	79
BU-32A	1-1/4	42.7	34	60	65	12	57	98
BU-40A	1-1/2	48.6	40	65	75	12	60	103

# BL

## Union Elbow

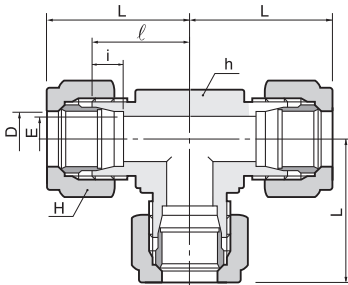


Designations	Tube O.D.		E	Width across flat		i	l	Approx L
	D			h	H			
BL-06	6		4	14	14	7	20	30.5
BL-08	8		6	17	17	7	23	33.5
BL-10	10		8	17	19	7	23	34.5
BL-12	12		10	19	22	7	24	35.5
BL-15	15		12	24	27	7.5	29	41.5
BL-16	16		13	27	30	7.5	32	44.5
BL-18	18		14	27	32	8	32	44.5
BL-20	20		17	30	36	8	33	45.5
BL-22	22		18	32	36	9	34	46.5
BL-25	25		20	36	41	10	36	49.5
BL-28	28		22	41	46	10	41	55
BL-30	30		25	41	46	10	41	55.5
BL-32	32		26	46	50	11	45	59.5
BL-35	35		28	46	55	11	48	63.5
BL-38	38		32	50	60	12	50	69.5
BL-40	40		32	55	60	12	55	74.5
BL-42	42		34	55	60	12	55	74.5
BL-06A	1/8	10.5	8	17	19	7	23	34.5
BL-08A	1/4	13.8	11	22	24	7.5	28	40
BL-10A	3/8	17.3	14	27	32	8	32	44.5
BL-15A	1/2	21.7	18	32	36	9	34	46.5
BL-20A	3/4	27.2	22	41	46	10	41	55
BL-25A	1	34.0	28	46	55	11	46	63.5
BL-32A	1-1/4	42.7	34	60	65	12	57	77.5
BL-40A	1-1/2	48.6	40	65	75	12	62	83.5

# Bite Type Tube Fittings - JIS B2351

## BT

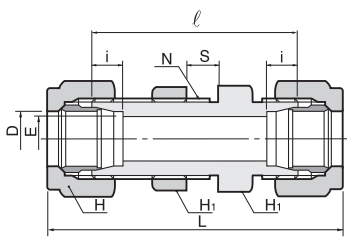
### Union Tee



Designations	Tube O.D.		E	Width across flat		i	l	Approx L
	D			h	H			
BT-06	6		4	14	14	7	20	30.5
BT-08	8		6	17	17	7	23	33.5
BT-10	10		8	17	19	7	23	34.5
BT-12	12		10	19	22	7	24	35.5
BT-15	15		12	24	27	7.5	29	41.5
BT-16	16		13	27	30	7.5	32	44.5
BT-18	18		14	27	32	8	32	44.5
BT-20	20		17	30	36	8	33	45.5
BT-22	22		18	32	36	9	34	46.5
BT-25	25		20	36	41	10	36	49.5
BT-28	28		22	41	46	10	41	55
BT-30	30		25	41	46	10	41	55.5
BT-32	32		26	46	50	11	45	59.5
BT-35	35		28	46	55	11	46	63.5
BT-38	38		32	50	60	12	50	69.5
BT-40	40		32	55	60	12	55	74.5
BT-42	42		34	55	60	12	55	74.5
BT-06A	1/8	10.5	8	17	19	7	23	34.5
BT-08A	1/4	13.8	11	22	24	7.5	28	40
BT-10A	3/8	17.3	14	27	32	8	32	44.5
BT-15A	1/2	21.7	18	32	36	9	34	46.5
BT-20A	3/4	27.2	22	41	46	10	41	55
BT-25A	1	34.0	28	46	55	11	46	63.5
BT-32A	1-1/4	42.7	34	60	65	12	57	77.5
BT-40A	1-1/2	48.6	40	65	75	12	62	83.5

## BBU

### Straight Bulkhead Union

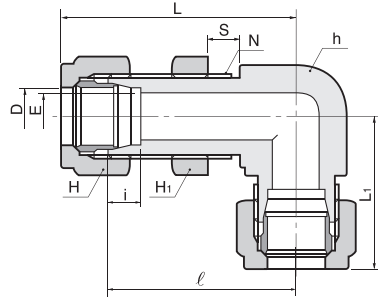


Designations	Tube O.D.		E	Width across flat		i	l	Approx L	Panel Hole Drill Size N	Max. Panel Thickness S
	D			H <sub>1</sub>	H					
BBU-06	6		4	17	14	7	51	72	12.5	13
BBU-08	8		6	19	17	7	51	72	14.5	13
BBU-10	10		8	22	19	7	52	75	16.5	13
BBU-12	12		10	24	22	7	52	75	18.5	13
BBU-15	15		12	27	27	7.5	59	84	22.5	15
BBU-16	16		13	30	30	7.5	61	86	24.5	15
BBU-18	18		14	32	32	8	63	88	26.5	15
BBU-20	20		17	32	36	8	63	88	28.5	15
BBU-22	22		18	36	36	9	64	89	30.5	15
BBU-25	25		20	41	41	10	64	91	35.5	15
BBU-28	28		22	46	46	10	69	97	38.5	15
BBU-30	30		25	46	46	10	69	98	40.5	15
BBU-32	32		26	50	50	11	73	102	42.5	15
BBU-35	35		28	50	55	11	73	108	45.5	15
BBU-38	38		32	55	60	12	76	115	48.5	15
BBU-40	40		32	60	60	12	87	126	52.5	15
BBU-06A	1/8	10.5	8	22	19	7	52	75	16.5	13
BBU-08A	1/4	13.8	11	27	24	7.5	59	83	20.5	15
BBU-10A	3/8	17.3	14	32	32	8	63	88	26.5	15
BBU-15A	1/2	21.7	18	36	36	9	64	89	30.5	15
BBU-20A	3/4	27.2	22	46	46	10	69	97	38.5	15
BBU-25A	1	34.0	28	50	55	11	73	108	45.5	15
BBU-32A	1-1/4	42.7	34	65	65	12	90	131	56.5	15
BBU-40A	1-1/2	48.6	40	70	75	12	93	136	64.5	15



# BBL

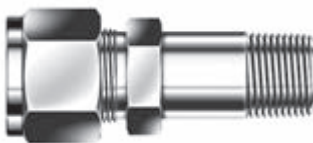
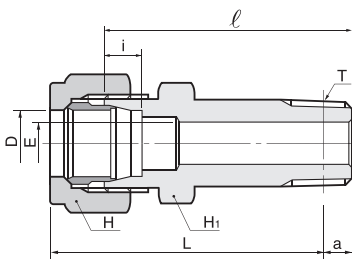
## Bulkhead Elbow



Designations	Tube O.D.		Width across flat			i	l	Approx		Panel Hole Drill Size N	Max. Panel Thickness S
	D	E	h	H <sub>1</sub>	H			L <sub>1</sub>	L		
BBL-06	6	4	17	17	14	7	45	33.5	55.5	12.5	13
BBL-08	8	6	19	19	17	7	46	34.5	56.5	14.5	13
BBL-10	10	8	22	22	19	7	48	37.5	59.5	16.5	13
BBL-12	12	10	24	24	22	7	49	38.5	60.5	18.5	13
BBL-15	15	12	27	27	27	7.5	57	43.5	69.5	22.5	15
BBL-16	16	13	30	30	30	7.5	59	45.5	71.5	24.5	15
BBL-18	18	14	32	32	32	8	63	45.5	75.5	26.5	15
BBL-20	20	17	32	32	36	8	65	45.5	77.5	28.5	15
BBL-22	22	18	36	36	36	9	65	48.5	77.5	30.5	15
BBL-25	25	20	41	41	41	10	68	52.5	81.5	35.5	15
BBL-28	28	22	41	46	46	10	70	55	84	38.5	15
BBL-30	30	25	46	46	46	10	74	60.5	88.5	40.5	15

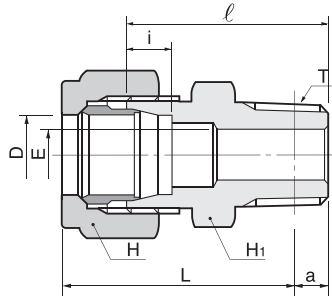
# BLMC

## Long Male Connector



Designations	Tube O.D.		(PT)	E	Basic Gauge length a	Width across flat		i	l	Approx L
	D	T				H <sub>1</sub>	H			
BLMC-06-01R	6	1/8	4	3.97	14	14	7	63	69.5	
BLMC-08-02R	8	1/4	6	6.01	17	17	7	70	74.5	
BLMC-10-02R	10	1/4	7	6.01	17	19	7	71	76.5	
BLMC-10-03R	10	3/8	8	6.35	19	19	7	72	77	
BLMC-12-02R	12	1/4	7	6.01	19	22	7	71	76.5	
BLMC-12-03R	12	3/8	9	6.35	19	22	7	72	77	
BLMC-15-03R	15	3/8	9	6.35	24	27	7.5	81	87	
BLMC-15-04R	15	1/2	12	8.16	24	27	7.5	86	90.5	
BLMC-16-04R	16	1/2	12	8.16	27	30	7.5	86	90.5	
BLMC-18-04R	18	1/2	12	8.16	27	32	8	86	90.5	
BLMC-20-06R	20	3/4	16	9.53	30	36	8	92	95	
BLMC-22-06R	22	3/4	16	9.53	32	36	9	93	96	
BLMC-25-08R	25	1	20	10.39	36	41	10	99	102	
BLMC-28-08R	28	1	22	10.39	41	46	10	104	107.5	
BLMC-30-10R	30	1-1/4	25	12.70	46	46	10	109	111	
BLMC-32-10R	32	1-1/4	26	12.70	46	50	11	110	112	
BLMC-06A-02R	1/8	10.5	1/4	7	6.01	17	19	7	71	76.5
BLMC-08A-03R	1/4	13.8	3/8	9	6.35	22	24	7.5	81	86.5
BLMC-10A-03R	3/8	17.3	3/8	9	6.35	27	32	8	81	87
BLMC-15A-06R	1/2	21.7	3/4	16	9.53	32	36	9	93	96
BLMC-20A-08R	3/4	27.2	1	22	10.39	41	46	10	104	107.5

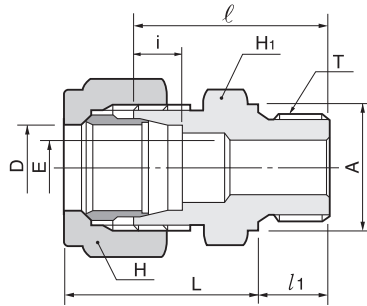
## BMC-R Male Connector



Designations	Tube O.D.		(PT) T	E	Basic Gauge length a	Width across flat		i	l	Approx L
	D					H <sub>1</sub>	H			
BMC-06-01R	6		1/8	4	3.97	14	14	7	28	34.5
BMC-06-02R	6		1/4	4	6.01	17	14	7	33	37.5
BMC-06-03R	6		3/8	4	6.35	17	14	7	34	38.5
BMC-08-01R	8		1/8	4	3.97	17	17	7	29	35.5
BMC-08-02R	8		1/4	6	6.01	17	17	7	33	37.5
BMC-10-02R	10		1/4	7	6.01	17	19	7	33	38.5
BMC-10-03R	10		3/8	8	6.35	19	19	7	34	39
BMC-10-04R	10		1/2	8	8.16	22	19	7	39	42.5
BMC-12-02R	12		1/4	7	6.01	19	22	7	33	38.5
BMC-12-03R	12		3/8	9	6.35	19	22	7	34	39
BMC-12-04R	12		1/2	10	8.16	22	22	7	39	42.5
BMC-15-03R	15		3/8	9	6.35	24	27	7.5	37	43
BMC-15-04R	15		1/2	12	8.16	24	27	7.5	41	45.5
BMC-16-03R	16		3/8	9	6.35	27	30	7.5	37	43
BMC-16-04R	16		1/2	12	8.16	27	30	7.5	41	45.5
BMC-18-04R	18		1/2	12	8.16	27	32	8	41	45.5
BMC-20-04R	20		1/2	12	8.16	30	36	8	43	47.5
BMC-20-06R	20		3/4	16	9.53	30	36	8	45	48
BMC-22-04R	22		1/2	12	8.16	32	36	9	43	47.5
BMC-22-06R	22		3/4	16	9.53	32	36	9	45	48
BMC-25-08R	25		1	20	10.39	36	41	10	49	52
BMC-28-08R	28		1	22	10.39	41	46	10	51	54.5
BMC-30-08R	30		1	22	10.39	41	46	10	51	55
BMC-30-10R	30		1-1/4	25	12.70	46	46	10	55	57
BMC-32-10R	32		1-1/4	26	12.70	46	50	11	55	57
BMC-35-10R	35		1-1/4	28	12.70	46	55	11	55	60
BMC-38-12R	38		1-1/2	32	12.70	50	60	12	57	64
BMC-40-12R	40		1-1/2	32	12.70	55	60	12	62	69
BMC-42-12R	42		1-1/2	34	12.70	55	60	12	62	69
BMC-06A-01R	1/8	10.5	1/8	4	3.97	17	19	7	29	36.5
BMC-06A-02R	1/8	10.5	1/4	7	6.01	17	19	7	33	38.5
BMC-08A-02R	1/4	13.8	1/4	7	6.01	22	24	7.5	36	42
BMC-08A-03R	1/4	13.8	3/8	9	6.35	22	24	7.5	37	42.5
BMC-10A-03R	3/8	17.3	3/8	9	6.35	27	32	8	37	43
BMC-10A-04R	3/8	17.3	1/2	12	8.16	27	32	8	41	45.5
BMC-15A-04R	1/2	21.7	1/2	12	8.16	32	36	9	43	47.5
BMC-15A-06R	1/2	21.7	3/4	16	9.53	32	36	9	45	48
BMC-20A-06R	3/4	27.2	3/4	16	9.53	41	46	10	48	52.5
BMC-20A-08R	3/4	27.2	1	22	10.39	41	46	10	51	54.5
BMC-25A-08R	1	34.0	1	22	10.39	46	55	11	52	59
BMC-25A-10R	1	34.0	1-1/4	28	12.70	46	55	11	55	60
BMC-32A-10R	1-1/4	42.7	1-1/4	31	12.70	60	65	12	64	72
BMC-32A-12R	1-1/4	42.7	1-1/2	34	12.70	60	65	12	64	72
BMC-40A-12R	1-1/2	48.6	1-1/2	36	12.70	65	75	12	67	76
BMC-40A-16R	1-1/2	48.6	2	40	15.88	65	75	12	71	76.5

# BMC-G

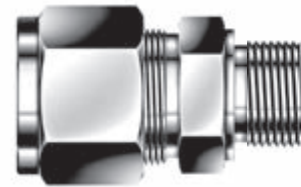
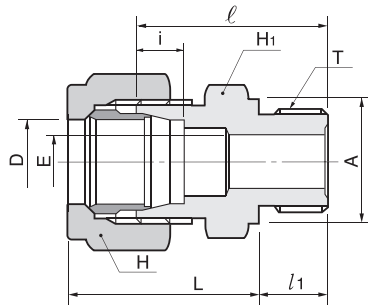
## Male Connector



Designations	Tube O.D.		(PF) T	E	Width across flat		i	l	A	l <sub>1</sub>	Approx
	D				H <sub>1</sub>	H					L
BMC-06-01G	6		1/8	4	14	14	7	28	14	8	30.5
BMC-06-02G	6		1/4	4	19	14	7	33	18	12	31.5
BMC-08-01G	8		1/8	4	17	17	7	28	14	8	30.5
BMC-08-02G	8		1/4	6	19	17	7	33	18	12	31.5
BMC-10-02G	10		1/4	6	19	19	7	33	18	12	32.5
BMC-10-03G	10		3/8	8	22	19	7	34	21.5	12	33.5
BMC-12-02G	12		1/4	6	19	22	7	33	18	12	32.5
BMC-12-03G	12		3/8	8	22	22	7	34	21.5	12	33.5
BMC-12-04G	12		1/2	10	27	22	7	39	25.5	14	36.5
BMC-15-03G	15		3/8	8	24	27	7.5	37	21.5	12	37.5
BMC-15-04G	15		1/2	12	27	27	7.5	41	25.5	14	39.5
BMC-16-04G	16		1/2	12	27	30	7.5	41	25.5	14	39.5
BMC-18-04G	18		1/2	12	27	32	8	41	25.5	14	39.5
BMC-20-06G	20		3/4	16	32	36	8	46	31.5	16	42.5
BMC-22-04G	22		1/2	12	32	36	9	43	25.5	14	41.5
BMC-22-06G	22		3/4	16	32	36	9	46	31.5	16	42.5
BMC-25-06G	25		3/4	16	36	41	10	46	31.5	16	43.5
BMC-25-08G	25		1	20	41	41	10	50	38	18	45.5
BMC-28-08G	28		1	22	41	46	10	52	38	18	48
BMC-30-08G	30		1	22	41	46	10	52	38	18	48.5
BMC-30-10G	30		1-1/4	25	50	46	10	57	48.5	20	51.5
BMC-32-10G	32		1-1/4	26	50	50	11	57	48.5	20	51.5
BMC-35-10G	35		1-1/4	28	50	55	11	57	48.5	20	54.5
BMC-38-12G	38		1-1/2	32	55	60	12	58	53.5	21	56.5
BMC-40-12G	40		1-1/2	32	55	60	12	62	53.5	21	60.5
BMC-42-12G	42		1-1/2	34	55	60	12	62	53.5	21	60.5
BMC-06A-01G	1/8	10.5	1/8	4	17	19	7	29	14	8	32.5
BMC-06A-02G	1/8	10.5	1/4	6	19	19	7	33	18	12	32.5
BMC-08A-02G	1/4	13.8	1/4	6	22	24	7.5	36	18	12	36
BMC-08A-03G	1/4	13.8	3/8	8	22	24	7.5	36	21.5	12	36
BMC-10A-03G	3/8	17.3	3/8	8	27	32	8	38	21.5	12	38.5
BMC-10A-04G	3/8	17.3	1/2	12	27	32	8	41	25.5	14	39.5
BMC-15A-04G	1/2	21.7	1/2	12	32	36	9	43	25.5	14	41.5
BMC-15A-06G	1/2	21.7	3/4	16	32	36	9	46	31.5	16	42.5
BMC-20A-06G	3/4	27.2	3/4	16	41	46	10	50	31.5	16	48
BMC-20A-08G	3/4	27.2	1	22	41	46	10	52	38	18	48
BMC-25A-08G	1	34.0	1	22	46	55	11	54	38	18	53.5
BMC-25A-10G	1	34.0	1-1/4	28	50	55	11	57	48.5	20	54.5
BMC-32A-10G	1-1/4	42.7	1-1/4	31	60	65	12	63	48.5	20	63.5
BMC-32A-12G	1-1/4	42.7	1-1/2	34	60	65	12	64	53.5	21	63.5
BMC-40A-12G	1-1/2	48.6	1-1/2	36	65	75	12	65	53.5	21	65.5
BMC-40A-16G	1-1/2	48.6	2	40	70	75	12	73	66	25	69.5

## BOM

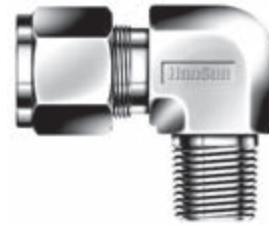
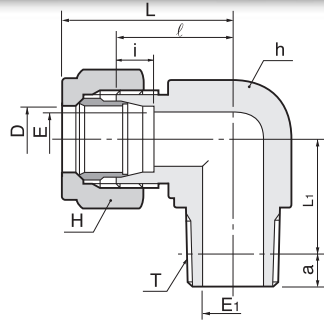
Male Connector  
(For O-Ring)



Designations	Tube O.D.		(PF) T	E	Width across flat		i	A	l <sub>1</sub>	ℓ	Appr L
	D				H <sub>1</sub>	H					
BOM-06-01G	6		1/8	4	14	14	7	14	8	28	30.5
BOM-06-02G	6		1/4	4	19	14	7	19	12	33	31.5
BOM-08-01G	8		1/8	4	17	17	7	14	8	28	30.5
BOM-08-02G	8		1/4	6	19	17	7	19	12	33	31.5
BOM-10-02G	10		1/4	6	19	19	7	19	12	33	32.5
BOM-10-03G	10		3/8	8	22	19	7	22	12	34	33.5
BOM-12-02G	12		1/4	6	19	22	7	19	12	33	32.5
BOM-12-03G	12		3/8	8	22	22	7	22	12	34	33.5
BOM-12-04G	12		1/2	10	27	22	7	27	14	39	36.5
BOM-15-03G	15		3/8	8	24	27	7.5	22	12	37	37.5
BOM-15-04G	15		1/2	12	27	27	7.5	27	14	41	39.5
BOM-16-04G	16		1/2	12	27	30	7.5	27	14	41	39.5
BOM-18-04G	18		1/2	12	27	32	8	27	14	41	39.5
BOM-20-06G	20		3/4	16	36	36	8	36	16	46	42.5
BOM-22-06G	22		3/4	16	36	36	9	36	16	46	42.5
BOM-25-06G	25		3/4	16	36	41	10	36	16	46	43.5
BOM-25-08G	25		1	20	41	41	10	41	18	50	45.5
BOM-28-08G	28		1	22	41	46	10	41	18	52	48
BOM-30-08G	30		1	22	41	46	10	41	18	52	48.5
BOM-30-10G	30		1-1/4	25	50	46	10	50	20	57	51.5
BOM-32-10G	32		1-1/4	26	50	50	11	50	20	57	51.5
BOM-35-10G	35		1-1/4	28	50	55	11	50	20	57	54.5
BOM-38-12G	38		1-1/2	32	55	60	12	55	21	58	56.5
BOM-40-12G	40		1-1/2	32	55	60	12	55	21	62	60.5
BOM-42-12G	42		1-1/2	34	55	60	12	55	21	62	60.5
BOM-06A-01G	1/8	10.5	1/8	4	17	19	7	14	8	29	32.5
BOM-06A-02G	1/8	10.5	1/4	6	19	19	7	19	12	33	32.5
BOM-08A-02G	1/4	13.8	1/4	6	22	24	7.5	19	12	36	36
BOM-08A-03G	1/4	13.8	3/8	8	22	24	7.5	22	12	36	36
BOM-10A-03G	3/8	17.3	3/8	8	27	32	8	22	12	38	38.5
BOM-10A-04G	3/8	17.3	1/2	12	27	32	8	27	14	41	39.5
BOM-15A-04G	1/2	21.7	1/2	12	32	36	9	27	14	43	41.5
BOM-15A-06G	1/2	21.7	3/4	16	36	36	9	36	16	46	42.5
BOM-20A-06G	3/4	27.2	3/4	16	41	46	10	36	16	50	48
BOM-20A-08G	3/4	27.2	1	22	41	46	10	41	18	52	48
BOM-25A-08G	1	34.0	1	22	46	55	11	41	18	54	53.5
BOM-25A-10G	1	34.0	1-1/4	28	50	55	11	50	20	57	54.5
BOM-32A-10G	1-1/4	42.7	1-1/4	31	60	65	12	50	20	63	63.5
BOM-32A-12G	1-1/4	42.7	1-1/2	34	60	65	12	55	21	64	63.5
BOM-40A-12G	1-1/2	48.6	1-1/2	36	65	75	12	55	21	65	65.5
BOM-40A-16G	1-1/2	48.6	2	40	75	75	12	75	25	73	69.5

# BLM

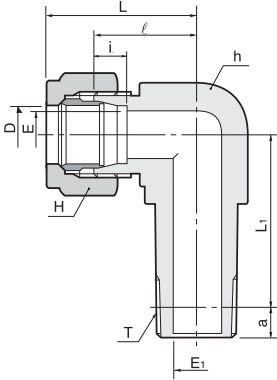
## Male Elbow



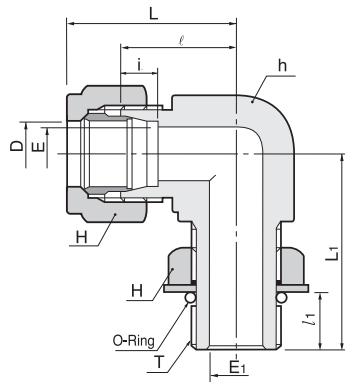
Designations	Tube O.D.		(PT) T	E	E <sub>1</sub>	Basic Gauge length a	Width across flat		i	ℓ	Approx	
	D						h	H			L	L <sub>1</sub>
BLM-06-01R	6		1/8	4	4	3.97	14	14	7	20	30.5	14
BLM-06-02R	6		1/4	4	7	6.01	17	14	7	23	33.5	17
BLM-08-01R	8		1/8	6	4	3.97	17	17	7	23	33.5	16
BLM-08-02R	8		1/4	6	7	6.01	17	17	7	23	33.5	18
BLM-10-02R	10		1/4	8	7	6.01	17	19	7	23	34.5	19
BLM-10-03R	10		3/8	8	9	6.35	19	19	7	24	35.5	19.5
BLM-10-04R	10		1/2	8	12	8.16	22	19	7	29	40.5	26
BLM-12-02R	12		1/4	10	7	6.01	19	22	7	24	35.5	20
BLM-12-03R	12		3/8	10	9	6.35	19	22	7	24	35.5	20.5
BLM-12-04R	12		1/2	10	12	8.16	24	22	7	29	40.5	26
BLM-15-03R	15		3/8	12	9	6.35	24	27	7.5	29	41.5	23.5
BLM-15-04R	15		1/2	12	12	8.16	24	27	7.5	29	41.5	26
BLM-16-03R	16		3/8	13	9	6.35	27	30	7.5	32	44.5	25.5
BLM-16-04R	16		1/2	13	12	8.16	27	30	7.5	32	44.5	27
BLM-18-03R	18		3/8	14	9	6.35	27	32	8	32	44.5	27.5
BLM-18-04R	18		1/2	14	12	8.16	27	32	8	32	44.5	30
BLM-20-04R	20		1/2	17	12	8.16	30	36	8	33	45.5	32
BLM-20-06R	20		3/4	17	16	9.53	30	36	8	33	45.5	30.5
BLM-22-04R	22		1/2	18	12	8.16	32	36	9	34	46.5	32
BLM-22-06R	22		3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM-25-06R	25		3/4	20	16	9.53	36	41	10	36	49.5	33.5
BLM-25-08R	25		1	20	22	10.39	36	41	10	36	49.5	35.5
BLM-28-06R	28		3/4	22	16	9.53	41	46	10	41	55	37.5
BLM-28-08R	28		1	22	22	10.39	41	46	10	41	55	39.5
BLM-30-08R	30		1	25	22	10.39	41	46	10	41	55.5	39.5
BLM-30-10R	30		1-1/4	25	31	12.70	46	46	10	46	60.5	42.5
BLM-32-10R	32		1-1/4	26	31	12.70	46	50	11	46	60.5	43.5
BLM-35-10R	35		1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BLM-38-12R	38		1-1/2	32	36	12.70	50	60	12	50	69.5	48.5
BLM-40-12R	40		1-1/2	32	36	12.70	55	60	12	55	74.5	49.5
BLM-42-12R	42		1-1/2	34	36	12.70	55	60	12	55	74.5	49.5
BLM-06A-01R	1/8	10.5	1/8	8	4	3.97	17	19	7	23	34.5	17
BLM-06A-02R	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BLM-08A-02R	1/4	13.8	1/4	11	7	6.01	22	24	7.5	28	40	22
BLM-08A-03R	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BLM-10A-03R	3/8	17.3	3/8	14	9	6.35	27	32	8	32	44.5	27.5
BLM-10A-04R	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BLM-15A-04R	1/2	21.7	1/2	18	12	8.16	32	36	9	34	46.5	32
BLM-15A-06R	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BLM-20A-06R	3/4	27.2	3/4	22	16	9.53	41	46	10	41	55	37.5
BLM-20A-08R	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BLM-25A-08R	1	34.0	1	28	22	10.39	46	55	11	46	63.5	44.5
BLM-25A-10R	1	34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BLM-32A-10R	1-1/4	42.7	1-1/4	34	31	12.70	60	65	12	57	77.5	51.5
BLM-32A-12R	1-1/4	42.7	1-1/2	34	36	12.70	60	75	12	57	77.5	51.5
BLM-40A-12R	1-1/2	48.6	1-1/2	40	36	12.70	65	75	12	62	83.5	57.5
BLM-40A-16R	1-1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58

## BLLM

### Long Male Elbow



Designations	Tube O.D. (PT)		E	E1	Basic Gauge length a	Width across flat		i	ℓ	Approx	
	D	T				h	H			L	L1
BLLM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	36
BLLM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	43
BLLM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	46
BLLM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	52
BLLM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	53
BLLM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	61.5
BLLM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	67
BLLM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	70
BLLM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	77
BLLM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	82.5
BLLM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	83.5
BLLM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	90.5
BLLM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	91.5
BLLM-28-08R	28	1	22	22	10.39	41	46	10	41	55	104.5
BLLM-30-10R	30	1-1/4	25	31	12.70	46	46	10	46	60.5	104.5
BLLM-32-10R	32	1-1/4	26	31	12.70	46	50	11	46	60.5	104.5
BLLM-35-10R	35	1-1/4	28	31	12.70	46	55	11	46	63.5	121.5



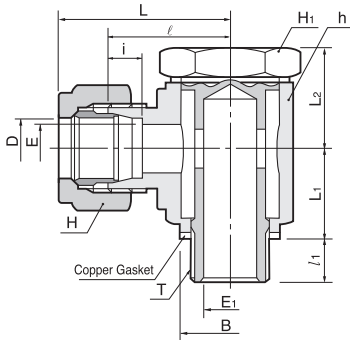
## BOLM

### O-Seal Male Elbow

Designations	Tube O.D. (PF)		E	E1	Width across flat			i	l1	ℓ	Approx	
	D	T			h	H1	H				L1	L
BOLM-06-01G	6	1/8	4	4	14	14	14	7	10	20	30	30.5
BOLM-08-02G	8	1/4	6	6	17	19	17	7	12	23	34	33.5
BOLM-10-02G	10	1/4	8	6	17	19	19	7	12	23	35	34.5
BOLM-12-02G	12	1/4	10	6	19	19	22	7	12	24	36	35.5
BOLM-12-03G	12	3/8	10	9	19	22	22	7	12	24	36	35.5
BOLM-12-04G	12	1/2	10	12	24	27	22	7	16	24	46	35.5
BOLM-15-03G	15	3/8	12	9	24	22	27	7.5	12	29	40	41.5
BOLM-15-04G	15	1/2	12	12	24	27	27	7.5	16	29	46	41.5
BOLM-16-04G	16	1/2	13	12	24	27	30	7.5	16	32	46	44.5
BOLM-18-04G	18	1/2	14	12	30	27	32	8	16	32	52	44.5
BOLM-20-06G	20	3/4	17	16	30	36	36	8	17	33	52	45.5
BOLM-22-06G	22	3/4	18	16	32	36	36	9	17	34	52	46.5
BOLM-25-06G	25	3/4	20	16	36	36	41	10	17	36	60	49.5
BOLM-25-08G	25	1	20	22	36	41	41	10	21	36	62	49.5
BOLM-28-08G	28	1	22	22	41	41	46	10	21	41	62	55
BOLM-30-08G	30	1	25	22	41	41	46	10	21	41	66	55.5
BOLM-30-10G	30	1-1/4	25	31	46	50	46	10	21	44	66	58.5
BOLM-32-10G	32	1-1/4	26	31	46	50	50	11	21	46	66	60.5
BOLM-35-10G	35	1-1/4	28	31	46	50	55	11	21	46	66	63.5
BOLM-38-12G	38	1-1/2	32	36	50	55	60	12	21	50	73	69.5

# BSLM

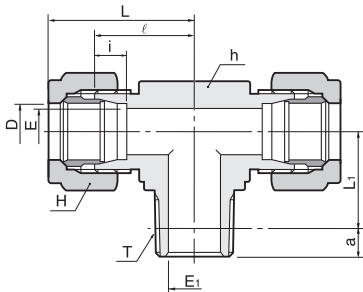
## Banjo Elbow



Designations	Tube O.D. (PF)		Width across flat			Approx			B						
	D	T	E <sub>1</sub>	E	h	H <sub>1</sub>	H	i		l <sub>1</sub>	ℓ	L <sub>1</sub>	L <sub>2</sub>	L	
BSLM-06-01G	6	1/8	4	4	17	17	14	7	8	23	13	14	33.5	14	
BSLM-08-02G	8	1/4	7	6	22	22	17	7	12	25	16	17	35.5	18	
BSLM-10-02G	10	1/4	7	8	22	22	19	7	12	25	16	17	36.5	18	
BSLM-12-03G	12	3/8	9	10	27	27	22	7	12	29	19	22	40.5	21.5	
BSLM-15-04G	15	1/2	12	12	36	30	27	7.5	14	36	24	28	48.5	25.5	
BSLM-16-04G	16	1/2	12	13	36	30	30	7.5	14	36	24	28	48.5	25.5	
BSLM-18-04G	18	1/2	12	14	36	30	32	8	14	36	24	28	48.5	25.5	
BSLM-20-06G	20	3/4	16	17	41	41	36	8	16	38	28	32	50.5	31.5	
BSLM-22-06G	22	3/4	16	18	42	41	36	9	16	38	28	32	50.5	31.5	
BSLM-25-08G	25	1	22	20	50	50	41	10	18	42	37	38	55.5	38	
BSLM-28-08G	28	1	22	22	50	50	46	10	18	42	37	38	56	38	
BSLM-06A-02G	1/8	10.5	1/4	7	8	22	22	19	7	12	25	16	17	36.5	18
BSLM-08A-03G	1/4	13.8	3/8	9	11	27	27	24	7.5	12	29	19	22	41	21.5
BSLM-10A-04G	3/8	17.3	1/2	12	14	36	30	32	8	14	36	24	28	48.5	25.5
BSLM-15A-06G	1/2	21.7	3/4	16	18	41	41	36	9	16	38	28	32	50.5	31.5
BSLM-20A-08G	3/4	27.2	1	22	22	50	50	46	10	18	42	37	38	56	38

# BBTM

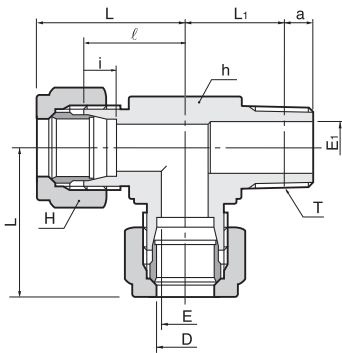
## Male Branch Tee



Designations	Tube O.D. (PT)		E	E <sub>1</sub>	Basic Gauge length a	Width across flat		i	ℓ	Approx		
	D	T				h	H			L	L <sub>1</sub>	
BBTM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	14	
BBTM-06-02R	6	1/4	4	7	6.01	17	14	7	23	33.5	17	
BBTM-08-01R	8	1/8	6	4	3.97	17	17	7	23	33.5	16	
BBTM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	18	
BBTM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	19	
BBTM-10-03R	10	3/8	8	9	6.35	19	19	7	24	35.5	19.5	
BBTM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	18	
BBTM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	20.5	
BBTM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	23.5	
BBTM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	26	
BBTM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	27	
BBTM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	30	
BBTM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	30.5	
BBTM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	32.5	
BBTM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	33.5	
BBTM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	35.5	
BBTM-28-08R	28	1	22	22	10.39	41	46	10	41	55	39.5	
BBTM-30-08R	30	1	25	22	10.39	41	46	10	41	55.5	39.5	
BBTM-30-10R	30	1-1/4	25	31	12.70	46	46	10	46	60.5	42.5	
BBTM-32-10R	32	1-1/4	26	31	12.70	46	50	11	46	60.5	43.5	
BBTM-35-10R	35	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5	
BBTM-38-12R	38	1-1/2	32	36	12.70	50	60	12	50	69.5	48.5	
BBTM-40-12R	40	1-1/2	32	36	12.70	55	60	12	55	74.5	49.5	
BBTM-06A-02R	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BBTM-08A-03R	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BBTM-10A-04R	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BBTM-15A-06R	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BBTM-20A-08R	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BBTM-25A-10R	1	34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BBTM-32A-12R	1-1/4	42.7	1-1/2	34	36	12.70	60	65	12	57	77.5	51.5
BBTM-40A-16R	1-1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58

## BRTM

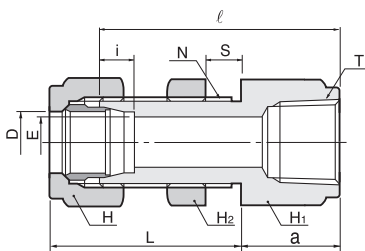
### Male Run Tee



Designations	Tube O.D. (PT)		E	E <sub>1</sub>	Basic Gauge length a	Width across flat			i	ℓ	Approx	
	D	T				h	H	L			L <sub>1</sub>	
BRTM-06-01R	6	1/8	4	4	3.97	14	14	7	20	30.5	14	
BRTM-06-02R	6	1/4	4	7	6.01	17	14	7	23	33.5	17	
BRTM-08-01R	8	1/8	6	4	3.97	17	17	7	23	33.5	16	
BRTM-08-02R	8	1/4	6	7	6.01	17	17	7	23	33.5	18	
BRTM-10-02R	10	1/4	8	7	6.01	17	19	7	23	34.5	19	
BRTM-10-03R	10	3/8	8	9	6.35	19	19	7	24	35.5	19.5	
BRTM-12-02R	12	1/4	10	7	6.01	19	22	7	24	35.5	18	
BRTM-12-03R	12	3/8	10	9	6.35	19	22	7	24	35.5	20.5	
BRTM-15-03R	15	3/8	12	9	6.35	24	27	7.5	29	41.5	23.5	
BRTM-15-04R	15	1/2	12	12	8.16	24	27	7.5	29	41.5	26	
BRTM-16-04R	16	1/2	13	12	8.16	27	30	7.5	32	44.5	27	
BRTM-18-04R	18	1/2	14	12	8.16	27	32	8	32	44.5	30	
BRTM-20-06R	20	3/4	17	16	9.53	30	36	8	33	45.5	30.5	
BRTM-22-06R	22	3/4	18	16	9.53	32	36	9	34	46.5	32.5	
BRTM-25-06R	25	3/4	20	16	9.53	36	41	10	36	49.5	33.5	
BRTM-25-08R	25	1	20	22	10.39	36	41	10	36	49.5	35.5	
BRTM-28-08R	28	1	22	22	10.39	41	46	10	41	55	39.5	
BRTM-30-08R	30	1	25	22	10.39	41	46	10	41	55.5	39.5	
BRTM-30-10R	30	1-1/4	25	31	12.70	46	46	10	46	60.5	42.5	
BRTM-32-10R	32	1-1/4	26	31	12.70	46	50	11	46	60.5	43.5	
BRTM-35-10R	35	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5	
BRTM-38-12R	38	1-1/2	32	36	12.70	50	60	12	50	69.5	48.5	
BRTM-40-12R	40	1-1/2	32	36	12.70	55	60	12	55	74.5	49.5	
BRTM-06A-02R	1/8	10.5	1/4	8	7	6.01	17	19	7	23	34.5	19
BRTM-08A-03R	1/4	13.8	3/8	11	9	6.35	22	24	7.5	28	40	22.5
BRTM-10A-04R	3/8	17.3	1/2	14	12	8.16	27	32	8	32	44.5	30
BRTM-15A-06R	1/2	21.7	3/4	18	16	9.53	32	36	9	34	46.5	32.5
BRTM-20A-08R	3/4	27.2	1	22	22	10.39	41	46	10	41	55	39.5
BRTM-25A-10R	1	34.0	1-1/4	28	31	12.70	46	55	11	46	63.5	45.5
BRTM-32A-12R	1-1/4	42.7	1-1/2	34	36	12.70	60	65	12	57	77.5	51.5
BRTM-40A-16R	1-1/2	48.6	2	40	46	15.88	65	75	12	62	83.5	58

## BBFC

### Bulkhead Female Connector

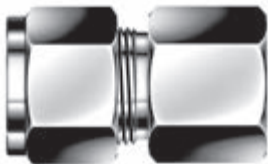
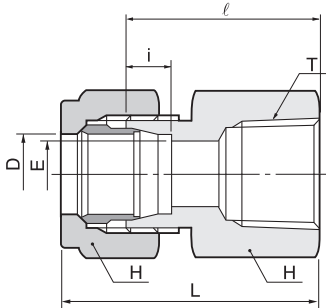


Designations	Tube O.D. (PT)		E	Width across flat			i	ℓ	a	Approx L	Panel Hole Drill Size N	Max. Panel Thickness S
	D	T		H <sub>1</sub>	H <sub>2</sub>	H						
BBFC-06-01R	6	1/8	4	17	17	14	7	45	13	42.5	12.5	13
BBFC-08-02R	8	1/4	6	19	19	17	7	50	18	42.5	14.5	13
BBFC-10-02R	10	1/4	8	19	22	19	7	50	18	43.5	16.5	13
BBFC-10-03R	10	3/8	8	24	22	19	7	52	20	43.5	16.5	13
BBFC-12-02R	12	1/4	10	19	24	22	7	50	18	43.5	18.5	13
BBFC-12-03R	12	3/8	10	24	24	22	7	52	20	43.5	18.5	13
BBFC-15-03R	15	3/8	12	27	27	27	7.5	57	20	49.5	22.5	15
BBFC-15-04R	15	1/2	12	30	27	27	7.5	62	25	49.5	22.5	15
BBFC-16-04R	16	1/2	13	30	30	30	7.5	62	25	49.5	24.5	15
BBFC-18-04R	18	1/2	14	30	32	32	8	64	25	51.5	26.5	15
BBFC-20-06R	20	3/4	17	36	32	36	8	66	27	51.5	28.5	15
BBFC-22-06R	22	3/4	18	36	36	36	9	66	27	51.5	30.5	15
BBFC-25-08R	25	1	20	46	41	41	10	70	31	52.5	35.5	15
BBFC-28-08R	28	1	22	46	46	46	10	72	31	55	38.5	15
BBFC-30-08R	30	1	25	46	46	46	10	72	31	55.5	40.5	15
BBFC-32-10R	32	1-1/4	26	55	46	50	11	78	35	57.5	42.5	15



# BFC

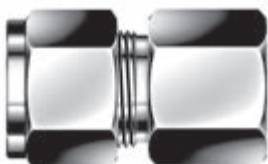
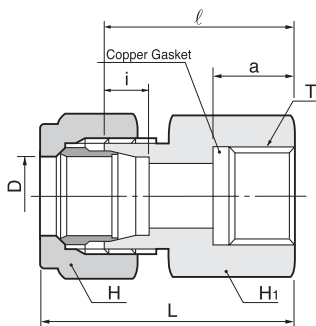
## Female Connector



Designations	Tube O.D.		(PT)	E	Width across flat		i	ℓ	Approx L
	D	T			H <sub>1</sub>	H			
BFC-06-01R	6	1/8	4	17	14	7	25	35.5	
BFC-08-02R	8	1/4	6	19	17	7	30	40.5	
BFC-10-02R	10	1/4	8	19	19	7	30	41.5	
BFC-10-03R	10	3/8	8	24	19	7	32	43.5	
BFC-12-02R	12	1/4	10	19	22	7	30	41.5	
BFC-12-03R	12	3/8	10	24	22	7	32	43.5	
BFC-15-03R	15	3/8	12	24	27	7.5	34	46.5	
BFC-15-04R	15	1/2	12	30	27	7.5	39	51.5	
BFC-16-04R	16	1/2	13	30	30	7.5	39	51.5	
BFC-18-04R	18	1/2	14	30	32	8	39	51.5	
BFC-20-06R	20	3/4	17	36	36	8	41	53.5	
BFC-22-06R	22	3/4	18	36	36	9	41	53.5	
BFC-25-06R	25	3/4	20	36	41	10	41	54.5	
BFC-25-08R	25	1	20	46	41	10	45	58.5	
BFC-28-08R	28	1	22	46	46	10	47	61	
BFC-30-08R	30	1	25	46	46	10	47	61.5	
BFC-30-10R	30	1-1/4	25	55	46	10	51	65.5	
BFC-32-10R	32	1-1/4	26	55	50	11	51	65.5	
BFC-35-10R	35	1-1/4	28	55	55	11	51	68.5	
BFC-38-12R	38	1-1/2	32	65	60	12	51	70.5	
BFC-40-12R	40	1-1/2	32	65	60	12	55	74.5	
BFC-42-12R	42	1-1/2	34	65	60	12	55	74.5	
BFC-06A-02R	1/8	10.5	1/4	8	19	19	7	30	41.5
BFC-08A-03R	1/4	13.8	3/8	11	24	24	7.5	34	46
BFC-10A-04R	3/8	17.3	1/2	14	30	32	8	39	51.5
BFC-15A-06R	1/2	21.7	3/4	18	36	36	9	41	53.5
BFC-20A-08R	3/4	27.2	1	22	46	46	10	47	61
BFC-25A-10R	1	34.0	1-1/4	28	55	55	11	51	68.5
BFC-32A-12R	1-1/4	42.7	1-1/2	34	65	65	12	55	78.5
BFC-40A-16R	1-1/2	48.6	2	40	80	75	12	60	81.5

# BGC

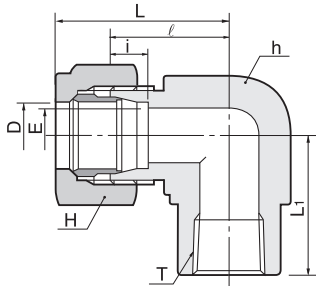
## Gauge Connector



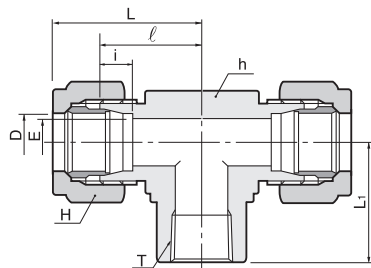
Designations	Tube O.D.		(PF)	a	Width across flat		i	ℓ	Approx L	Gasket Part No
	D	T			H <sub>1</sub>	H				
BGC-06-02G	6	1/4	14	19	14	7	32	42.5	BGG-02	
BGC-06-03G	6	3/8	15	24	14	7	34	44.5	BGG-03	
BGC-06-04G	6	1/2	16	30	14	7	36	46.5	BGG-04	
BGC-08-02G	8	1/4	14	19	17	7	32	42.5	BGG-02	
BGC-08-03G	8	3/8	15	24	17	7	34	44.5	BGG-03	
BGC-08-04G	8	1/2	16	30	17	7	36	46.5	BGG-04	
BGC-10-02G	10	1/4	14	19	19	7	32	43.5	BGG-02	
BGC-10-03G	10	3/8	15	24	19	7	34	45.5	BGG-03	
BGC-10-04G	10	1/2	16	30	19	7	36	47.5	BGG-04	
BGC-12-02G	12	1/4	14	19	22	7	32	43.5	BGG-02	
BGC-12-03G	12	3/8	15	24	22	7	34	45.5	BGG-03	
BGC-12-04G	12	1/2	16	30	22	7	36	47.5	BGG-04	

## BLF

### Female Elbow



Designations	Tube O.D.		E	Width across flat		i	ℓ	Approx	
	D	T		h	H			L <sub>1</sub>	L
BLF-08-02R	8	1/4	6	19	17	7	24	24	34.5
BLF-10-02R	10	1/4	8	19	19	7	24	24	35.5
BLF-12-02R	12	1/4	10	19	22	7	24	24	35.5
BLF-12-03R	12	3/8	10	24	22	7	29	29	40.5
BLF-15-03R	15	3/8	12	24	27	7.5	29	29	41.5
BLF-15-04R	15	1/2	12	30	27	7.5	33	33	45.5
BLF-16-04R	16	1/2	13	30	30	7.5	33	33	45.5
BLF-18-04R	18	1/2	14	30	32	8	33	33	45.5
BLF-20-06R	20	3/4	17	36	36	8	36	36	48.5
BLF-22-06R	22	3/4	18	36	36	9	36	36	48.5
BLF-25-06R	25	3/4	20	36	41	10	36	36	49.5
BLF-25-08R	25	1	20	46	41	10	36	46	59.5
BLF-28-08R	28	1	22	46	46	10	46	46	60
BLF-30-10R	30	1-1/4	25	55	46	10	46	55	69.5
BLF-32-10R	32	1-1/4	26	55	50	11	55	55	69.5
BLF-35-10R	35	1-1/4	28	55	55	11	55	55	72.5



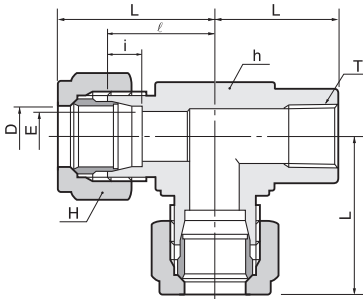
## BBTF

### Female Branch Tee

Designations	Tube O.D.		E	Width across flat		i	ℓ	Approx		
	D	T		h	H			L	L <sub>1</sub>	
BBTF-06-01R	6	1/8	4	17	14	7	23	34.5	24	
BBTF-08-02R	8	1/4	6	19	17	7	24	34.5	24	
BBTF-10-02R	10	1/4	8	19	19	7	24	35.5	24	
BBTF-12-02R	12	1/4	10	19	22	7	24	35.5	24	
BBTF-12-03R	12	3/8	10	24	22	7	29	40.5	29	
BBTF-15-03R	15	3/8	12	24	27	7.5	29	41.5	29	
BBTF-15-04R	15	1/2	12	30	27	7.5	33	45.5	33	
BBTF-16-04R	16	1/2	13	30	30	7.5	33	45.5	33	
BBTF-18-04R	18	1/2	14	30	32	8	33	45.5	33	
BBTF-20-06R	20	3/4	17	36	36	8	36	48.5	36	
BBTF-22-06R	22	3/4	18	36	36	9	36	48.5	36	
BBTF-25-06R	25	3/4	20	36	41	10	36	49.5	36	
BBTF-25-08R	25	1	20	46	41	10	46	59.5	46	
BBTF-28-08R	28	1	22	46	46	10	46	60	46	
BBTF-30-08R	30	1	25	46	46	10	46	60.5	46	
BBTF-30-10R	30	1-1/4	25	55	46	10	55	69.5	55	
BBTF-32-10R	32	1-1/4	26	55	50	11	55	69.5	55	
BBTF-35-10R	35	1-1/4	28	55	55	11	55	72.5	55	
BBTF-06A-02R	1/8	10.5	1/4	8	19	19	7	24	35.5	24
BBTF-08A-03R	1/4	13.8	3/8	11	24	24	7.5	29	41	29
BBTF-10A-04R	3/8	17.3	1/2	14	30	32	8	33	45.5	33
BBTF-15A-06R	1/2	21.7	3/4	18	36	36	9	36	48.5	36
BBTF-20A-08R	3/4	27.2	1	22	46	46	10	46	60	46
BBTF-25A-10R	1	34.0	1-1/4	28	55	55	11	55	72.5	55

# BRTF

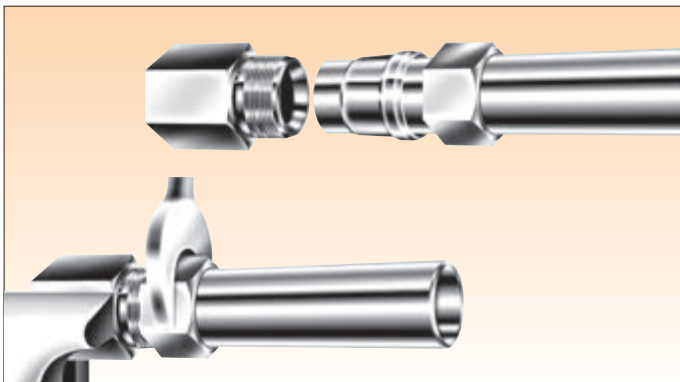
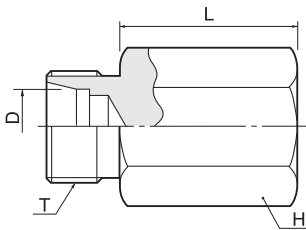
## Female Run Tee



Designations	Tube O.D.		(PT) T	E	Width across flat		i	ℓ	Approx	
	D				h	H			L	L <sub>1</sub>
BRTF-08-02R	8		1/4	6	19	17	7	24	34.5	24
BRTF-10-02R	10		1/4	8	19	19	7	24	35.5	24
BRTF-12-02R	12		1/4	10	19	22	7	24	35.5	24
BRTF-12-03R	12		3/8	10	24	22	7	29	40.5	29
BRTF-15-03R	15		3/8	12	24	27	7.5	29	41.5	29
BRTF-15-04R	15		1/2	12	30	27	7.5	33	45.5	33
BRTF-16-04R	16		1/2	13	30	30	7.5	33	45.5	33
BRTF-18-04R	18		1/2	14	30	32	8	33	45.5	33
BRTF-20-06R	20		3/4	17	36	36	8	36	48.5	36
BRTF-22-06R	22		3/4	18	36	36	9	36	48.5	36
BRTF-25-06R	25		3/4	20	36	41	10	36	49.5	36
BRTF-25-08R	25		1	20	46	41	10	46	59.5	46
BRTF-28-08R	28		1	22	46	46	10	46	60	46
BRTF-30-08R	30		1	25	46	46	10	46	60.5	46
BRTF-30-10R	30		1-1/4	25	55	46	10	55	69.5	55
BRTF-32-10R	32		1-1/4	26	55	50	11	55	69.5	55
BRTF-35-10R	35		1-1/4	28	55	55	11	55	72.5	55
BRTF-06A-02R	1/8	10.5	1/4	8	19	19	7	24	35.5	24
BRTF-08A-03R	1/4	13.8	3/8	11	24	24	7.5	29	41	29
BRTF-10A-04R	3/8	17.3	1/2	14	30	32	8	33	45.5	33
BRTF-15A-06R	1/2	21.7	3/4	18	36	36	9	36	48.5	36
BRTF-20A-08R	3/4	27.2	1	22	46	46	10	46	60	46
BRTF-25A-10R	1	34.0	1-1/4	28	55	55	11	55	72.5	55

# BJ

## Presetting Jig



When assembling Bite type fitting in close corner or in cabinet it may be advantageous to use this jig. It allows presetting sleeve on to the tube in a more open or safe area. After using this jig, follow the reassembly instruction.

Tube may occasionally stick in the jig after pull-up.

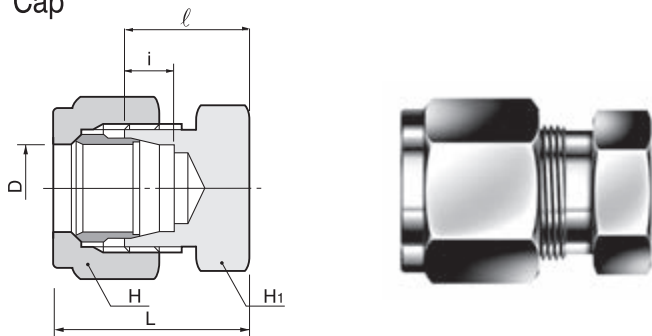
When this happens, loosen the tube by gently rocking back and forth.

Do not rock up and down or turn the tube as this may damage sealing surfaces of fitting.

Designations	Tube O.D.		L	H	T
	D				
BJ-06	6		40	17	M12 x 1.5
BJ-08	8		40	17	M14 x 1.5
BJ-10	10		40	17	M16 x 1.5
BJ-12	12		40	27	M18 x 1.5
BJ-15	15		40	27	M22 x 1.5
BJ-16	16		40	27	M24 x 1.5
BJ-18	18		40	27	M26 x 1.5
BJ-20	20		40	41	M28 x 1.5
BJ-22	22		40	41	M30 x 1.5
BJ-25	25		40	41	M35 x 1.5
BJ-28	28		40	41	M38 x 1.5
BJ-30	30		40	41	M40 x 1.5
BJ-32	32		40	55	M42 x 1.5
BJ-35	35		40	55	M45 x 1.5
BJ-38	38		50	55	M48 x 1.5
BJ-40	40		50	55	M52 x 2.0
BJ-42	42		50	55	M52 x 2.0
BJ-06A	1/8	10.5	40	17	M16 x 1.5
BJ-08A	1/4	13.8	40	27	M20 x 1.5
BJ-10A	3/8	17.3	40	27	M26 x 1.5
BJ-15A	1/2	21.7	40	41	M30 x 1.5
BJ-20A	3/4	27.2	40	41	M38 x 1.5
BJ-25A	1	34.0	40	55	M45 x 1.5
BJ-32A	1-1/4	42.7	50	65	M56 x 2.0
BJ-40A	1-1/2	48.6	50	65	M64 x 2.0

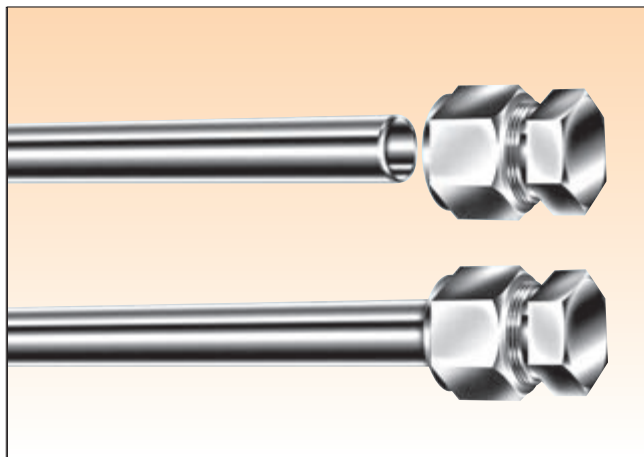
## BC

Cap



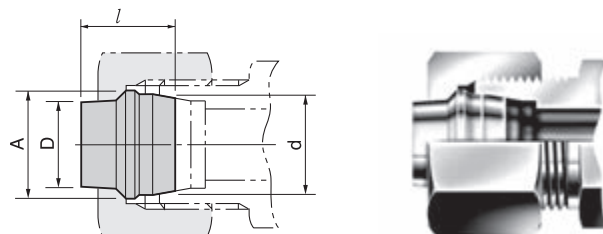
Designations	Tube O.D.	Width across flat		i	l	Approx L
	D	H <sub>1</sub>	H			
BC-06	6	14	14	7	18	28.5
BC-08	8	17	17	7	19	29.5
BC-10	10	17	19	7	20	31.5
BC-12	12	19	22	7	20	31.5
BC-15	15	24	27	7.5	22	34.5
BC-16	16	27	30	7.5	24	36.5
BC-18	18	27	32	8	24	36.5
BC-20	20	30	36	8	24	36.5
BC-22	22	32	36	9	25	37.5
BC-25	25	36	41	10	25	38.5
BC-28	28	41	46	10	28	42
BC-30	30	41	46	10	28	42.5
BC-32	32	46	50	11	30	44.5

Cap for tube end



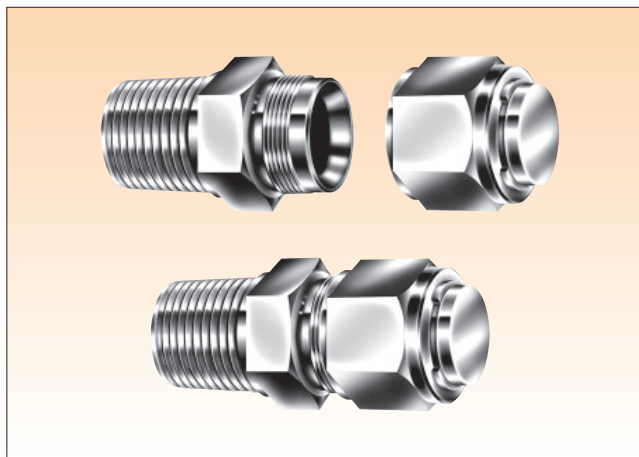
## BP

Plug



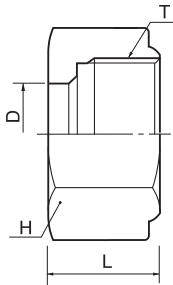
Designations	Tube O.D.	E	A	l
	D			
BP-06	6	8	9	13.5
BP-08	8	10	11	13.5
BP-10	10	12	13	14.5
BP-12	12	14	15	14.5
BP-15	15	17	18	16
BP-16	16	18	19	16
BP-18	18	20	21	17.5
BP-20	20	22	23	17.5
BP-22	22	24	25	17.5
BP-25	25	27.4	28.5	19
BP-28	28	30.4	31.5	19
BP-30	30	32.4	33.5	20
BP-32	32	34.4	35.5	20

Plug for unused Bite type fitting port



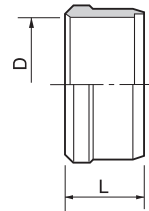
# BN

Nut



# BS

Sleeve

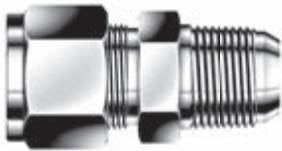
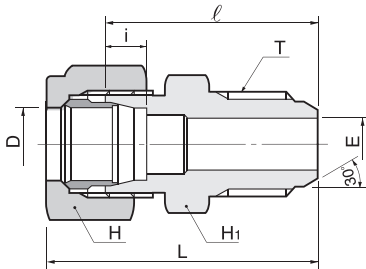


Designations	Tube O.D.		T	Width across flat		L
		D		H		
BN-06		6	M12 x 1.5	14	15	
BN-08		8	M14 x 1.5	17	15	
BN-10		10	M16 x 1.5	19	16	
BN-12		12	M18 x 1.5	22	16	
BN-15		15	M22 x 1.5	27	19	
BN-16		16	M24 x 1.5	30	19	
BN-18		18	M26 x 1.5	32	19	
BN-20		20	M28 x 1.5	36	19	
BN-22		22	M30 x 1.5	36	19	
BN-25		25	M35 x 1.5	41	20	
BN-28		28	M38 x 1.5	46	21	
BN-30		30	M40 x 1.5	46	22	
BN-32		32	M42 x 1.5	50	22	
BN-35		35	M45 x 1.5	55	25	
BN-38		38	M48 x 1.5	60	27	
BN-40		40	M52 x 2.0	60	29.5	
BN-42		42	M52 x 2.0	60	29.5	
BN-06A	1/8	10.5	M16 x 1.5	19	16	
BN-08A	1/4	13.8	M20 x 1.5	24	18	
BN-10A	3/8	17.3	M26 x 1.5	32	19	
BN-15A	1/2	21.7	M30 x 1.5	36	19	
BN-20A	3/4	27.2	M38 x 1.5	46	21	
BN-25A	1	34.0	M45 x 1.5	55	25	
BN-32A	1-1/4	42.7	M56 x 2.0	65	30.5	
BN-40A	1-1/2	48.6	M64 x 2.0	75	31.5	

Designations	Tube O.D.		L
		D	
BS-06		6	9
BS-08		8	9
BS-10		10	10
BS-12		12	10
BS-15		15	10
BS-16		16	10
BS-18		18	10
BS-20		20	10
BS-22		22	10
BS-25		25	11
BS-28		28	11
BS-30		30	11
BS-32		32	11
BS-35		35	14
BS-38		38	14
BS-40		40	14
BS-42		42	14
BS-06A	1/8	10.5	10
BS-08A	1/4	13.8	10
BS-10A	3/8	17.3	10
BS-15A	1/2	21.7	10
BS-20A	3/4	27.2	11
BS-25A	1	34.0	14
BS-32A	1-1/4	42.7	14
BS-40A	1-1/2	48.6	14

## BHUM

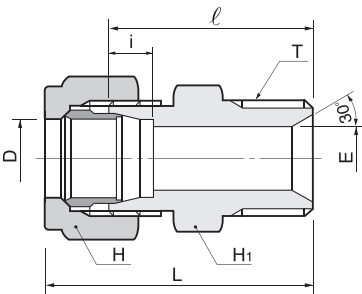
### Hose Male Union



Designations	Tube O.D.		E	Width across flat		i	ℓ	L
	D	(PF) T		H <sub>1</sub>	H			
BHUM-06-01G	6	1/8	4	14	14	7	34	44.5
BHUM-08-02G	8	1/4	6	17	17	7	35	45.5
BHUM-08-03G	8	3/8	6	19	17	7	37	47.5
BHUM-10-02G	10	1/4	6	17	19	7	35	46.5
BHUM-10-03G	10	3/8	8	19	19	7	37	48.5
BHUM-10-04G	10	1/2	8	22	19	7	40	51.5
BHUM-12-02G	12	1/4	6	19	22	7	35	46.5
BHUM-12-03G	12	3/8	9	19	22	7	37	48.5
BHUM-12-04G	12	1/2	10	22	22	7	40	51.5
BHUM-15-03G	15	3/8	9	24	27	7.5	40	52.5
BHUM-15-04G	15	1/2	12	24	27	7.5	42	54.5
BHUM-16-03G	16	3/8	9	27	30	7.5	40	52.5
BHUM-16-04G	16	1/2	12	27	30	7.5	42	54.5
BHUM-18-04G	18	1/2	12	27	32	8	42	54.5
BHUM-20-06G	20	3/4	16	30	36	8	46	58.5
BHUM-22-04G	22	1/2	12	32	36	9	44	56.5
BHUM-22-06G	22	3/4	16	32	36	9	46	58.5
BHUM-25-06G	25	3/4	16	36	41	10	47	60.5
BHUM-25-08G	25	1	20	36	41	10	49	62.5
BHUM-28-06G	28	3/4	16	41	46	10	49	63
BHUM-28-08G	28	1	22	41	46	10	51	65
BHUM-30-06G	30	3/4	16	41	46	10	49	63.5
BHUM-30-08G	30	1	22	41	46	10	51	65.5
BHUM-32-08G	32	1	22	46	50	11	52	66.5
BHUM-32-10G	32	1-1/4	28	46	50	11	56	70.5

## BHUF

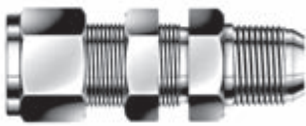
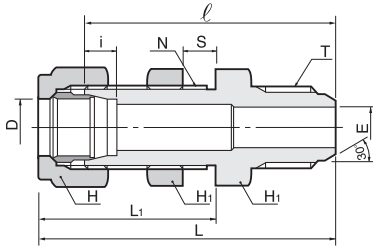
### Hose Female Union



Designations	Tube O.D.		E	Width across flat		i	ℓ	L
	D	(PF) T		H <sub>1</sub>	H			
BHUF-06-01G	6	1/8	4	14	14	7	32	43.5
BHUF-08-02G	8	1/4	6	17	17	7	33	43.5
BHUF-08-03G	8	3/8	6	19	17	7	34	44.5
BHUF-10-02G	10	1/4	6	17	19	7	33	44.5
BHUF-10-03G	10	3/8	8	19	19	7	34	45.5
BHUF-10-04G	10	1/2	8	22	19	7	38	49.5
BHUF-12-02G	12	1/4	6	19	22	7	33	44.5
BHUF-12-03G	12	3/8	9	19	22	7	34	45.5
BHUF-12-04G	12	1/2	10	22	22	7	38	49.5
BHUF-15-03G	15	3/8	9	24	27	7.5	37	49.5
BHUF-15-04G	15	1/2	12	24	27	7.5	40	52.5
BHUF-16-03G	16	3/8	9	27	30	7.5	37	49.5
BHUF-16-04G	16	1/2	12	27	30	7.5	40	52.5
BHUF-18-04G	18	1/2	12	27	32	8	40	52.5
BHUF-20-06G	20	3/4	16	30	36	8	43	55.5
BHUF-22-04G	22	1/2	12	32	36	9	42	54.5
BHUF-22-06G	22	3/4	16	32	36	9	43	55.5
BHUF-25-06G	25	3/4	16	36	41	10	44	57.5
BHUF-25-08G	25	1	20	36	41	10	46	59.5
BHUF-28-06G	28	3/4	16	41	46	10	46	60
BHUF-28-08G	28	1	22	41	46	10	48	62
BHUF-30-06G	30	3/4	16	41	46	10	46	60.5
BHUF-30-08G	30	1	22	41	46	10	48	62.5
BHUF-32-08G	32	1	22	46	50	11	49	63.5
BHUF-32-10G	32	1-1/4	28	46	50	11	55	69.5
BHUF-38-12G	38	1-1/2	32	50	60	12	57	76.5
BHUF-40-12G	40	1-1/2	32	55	60	12	62	81.5

# BHBM

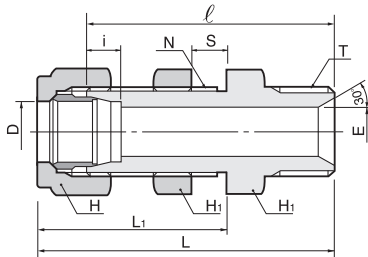
Hose Bulkhead  
Male Union



Designations	Tube O.D. (PF)		E	Width across flat		i	l	L <sub>1</sub>	L	Panel Hole Drill Size N	Max. Panel Thickness S
	D	T		H <sub>1</sub>	H						
BHBM-06-01G	6	1/8	4	17	14	7	54	42.5	63.5	12.5	13
BHBM-08-02G	8	1/4	6	19	17	7	55	42.5	65.5	14.5	13
BHBM-08-03G	8	3/8	6	19	17	7	57	42.5	67.5	14.5	13
BHBM-10-02G	10	1/4	6	22	19	7	56	43.5	67.5	16.5	13
BHBM-10-03G	10	3/8	8	22	19	7	58	43.5	69.5	16.5	13
BHBM-10-04G	10	1/2	8	22	19	7	60	43.5	71.5	16.5	13
BHBM-12-02G	12	1/4	6	24	22	7	56	43.5	67.5	18.5	13
BHBM-12-03G	12	3/8	9	24	22	7	58	43.5	69.5	18.5	13
BHBM-12-04G	12	1/2	10	24	22	7	60	43.5	71.5	18.5	13
BHBM-15-03G	15	3/8	9	27	27	7.5	63	49.5	75.5	22.5	15
BHBM-15-04G	15	1/2	12	27	27	7.5	65	49.5	77.5	22.5	15
BHBM-16-03G	16	3/8	9	30	30	7.5	65	49.5	77.5	24.5	15
BHBM-16-04G	16	1/2	12	30	30	7.5	67	49.5	79.5	24.5	15
BHBM-18-04G	18	1/2	12	32	32	8	69	51.5	81.5	26.5	15
BHBM-20-06G	20	3/4	16	32	36	8	71	51.5	83.5	28.5	15
BHBM-22-04G	22	1/2	12	36	36	9	70	51.5	82.5	30.5	15
BHBM-22-06G	22	3/4	16	36	36	9	72	51.5	84.5	30.5	15
BHBM-25-06G	25	3/4	16	41	41	10	72	52.5	87.5	35.5	15
BHBM-25-08G	25	1	20	41	41	10	74	52.5	89.5	35.5	15
BHBM-28-06G	28	3/4	16	46	46	10	75	55	89	38.5	15
BHBM-28-08G	28	1	22	46	46	10	77	55	91	38.5	15
BHBM-30-06G	30	3/4	16	46	46	10	75	55.5	89.5	40.5	15
BHBM-30-08G	30	1	22	46	46	10	77	55.5	91.5	40.5	15
BHBM-32-08G	32	1	22	50	50	11	81	57.5	95.5	42.5	15
BHBM-32-10G	32	1-1/4	28	50	50	11	85	57.5	99.5	42.5	15

# BHBF

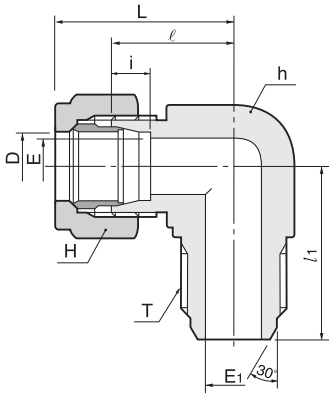
Hose Bulkhead  
Female Union



Designations	Tube O.D. (PF)		E	Width across flat		i	l	L <sub>1</sub>	L	Panel Hole Drill Size N	Max. Panel Thickness S
	D	T		H <sub>1</sub>	H						
BHBF-06-01G	6	1/8	4	17	14	7	52	42.5	62.5	12.5	13
BHBF-08-02G	8	1/4	6	19	17	7	53	42.5	63.5	14.5	13
BHBF-08-03G	8	3/8	6	19	17	7	54	42.5	64.5	14.5	13
BHBF-10-02G	10	1/4	6	22	19	7	54	43.5	65.5	16.5	13
BHBF-10-03G	10	3/8	8	22	19	7	55	43.5	66.5	16.5	13
BHBF-10-04G	10	1/2	8	22	19	7	58	43.5	69.5	16.5	13
BHBF-12-02G	12	1/4	6	24	22	7	54	43.5	65.5	18.5	13
BHBF-12-03G	12	3/8	9	24	22	7	55	43.5	66.5	18.5	13
BHBF-12-04G	12	1/2	10	24	22	7	58	43.5	69.5	18.5	13
BHBF-15-03G	15	3/8	9	27	27	7.5	60	49.5	72.5	22.5	15
BHBF-15-04G	15	1/2	12	27	27	7.5	63	49.5	75.5	22.5	15
BHBF-16-03G	16	3/8	9	30	30	7.5	62	49.5	74.5	24.5	15
BHBF-16-04G	16	1/2	12	30	30	7.5	65	49.5	77.5	24.5	15
BHBF-18-04G	18	1/2	12	32	32	8	67	51.5	79.5	26.5	15
BHBF-20-06G	20	3/4	16	32	36	8	68	51.5	80.5	28.5	15
BHBF-22-04G	22	1/2	12	36	36	9	68	51.5	80.5	30.5	15
BHBF-22-06G	22	3/4	16	36	36	9	69	51.5	81.5	30.5	15
BHBF-25-06G	25	3/4	16	41	41	10	69	52.5	82.5	35.5	15
BHBF-25-08G	25	1	20	41	41	10	71	52.5	84.5	35.5	15
BHBF-28-08G	28	1	22	46	46	10	74	55	88	38.5	15
BHBF-30-06G	30	3/4	16	46	46	10	72	55.5	86.5	40.5	15
BHBF-30-08G	30	1	22	46	46	10	74	55.5	88.5	40.5	15
BHBF-32-08G	32	1	22	50	50	11	78	57.5	92.5	42.5	15
BHBF-32-10G	32	1-1/4	28	50	50	11	84	57.5	98.5	42.5	15
BHBF-38-12G	38	1-1/2	31	55	60	12	87	64.5	106.5	48.5	15
BHBF-40-12G	40	1-1/2	32	60	60	12	94	69.5	113.5	52.5	15

## BHLM

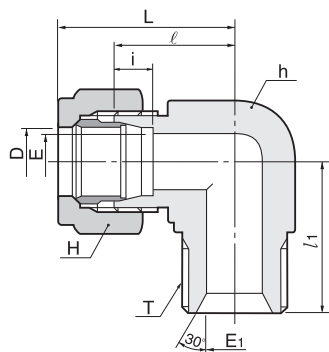
Hose Male Elbow



Designations	Tube O.D. (PF)		E	E <sub>1</sub>	Width across flat		i	ℓ	l <sub>1</sub>	L
	D	T			h	H				
BHLM-06-01G	6	1/8	4	4	14	14	7	20	25	33.5
BHLM-08-02G	8	1/4	6	6	17	17	7	23	25	33.5
BHLM-08-03G	8	3/8	6	9	19	17	7	24	28	34.5
BHLM-10-02G	10	1/4	8	6	19	19	7	24	28	35.5
BHLM-10-03G	10	3/8	8	9	19	19	7	24	28	35.5
BHLM-10-04G	10	1/2	8	12	24	19	7	29	34	40.5
BHLM-12-02G	12	1/4	10	6	19	22	7	24	28	35.5
BHLM-12-03G	12	3/8	10	9	19	22	7	24	28	35.5
BHLM-12-04G	12	1/2	10	12	24	22	7	29	34	40.5
BHLM-15-03G	15	3/8	12	9	24	27	7.5	29	33	41.5
BHLM-15-04G	15	1/2	12	12	24	27	7.5	29	34	41.5
BHLM-16-03G	16	3/8	13	9	27	30	7.5	32	36	44.5
BHLM-16-04G	16	1/2	13	12	27	30	7.5	32	38	44.5
BHLM-18-04G	18	1/2	14	12	27	32	8	32	38	44.5
BHLM-20-06G	20	3/4	17	16	30	36	8	33	41	45.5
BHLM-22-04G	22	1/2	18	12	32	36	9	34	40	46.5
BHLM-22-06G	22	3/4	18	16	32	36	9	34	42	46.5
BHLM-25-06G	25	3/4	20	16	36	41	10	36	44	49.5
BHLM-25-08G	25	1	20	20	36	41	10	36	46	49.5
BHLM-28-06G	28	3/4	22	16	41	46	10	41	47	55
BHLM-28-08G	28	1	22	22	41	46	10	41	49	55
BHLM-30-06G	30	3/4	25	16	41	46	10	41	47	55.5
BHLM-30-08G	30	1	25	22	41	46	10	41	49	55.5
BHLM-32-08G	32	1	26	22	46	50	11	46	54	60.5
BHLM-32-10G	32	1-1/4	26	28	46	50	11	46	56	60.5

## BHLF

Hose Female Elbow

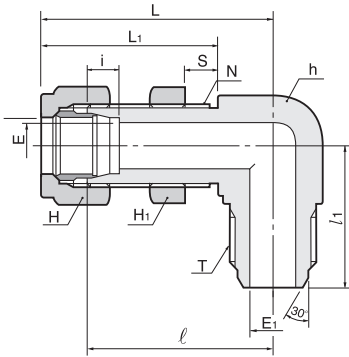


Designations	Tube O.D. (PF)		E	E <sub>1</sub>	Width across flat		i	ℓ	l <sub>1</sub>	L
	D	T			h	H				
BHLF-08-02G	8	1/4	6	6	17	17	7	23	25	33.5
BHLF-08-03G	8	3/8	6	9	19	17	7	24	27	34.5
BHLF-10-02G	10	1/4	8	6	19	19	7	24	26	35.5
BHLF-10-03G	10	3/8	8	9	19	19	7	24	27	35.5
BHLF-10-04G	10	1/2	8	12	24	19	7	29	23	40.5
BHLF-12-02G	12	1/4	10	6	19	22	7	24	26	35.5
BHLF-12-03G	12	3/8	10	9	19	22	7	24	27	35.5
BHLF-12-04G	12	1/2	10	12	24	22	7	29	33	40.5
BHLF-15-03G	15	3/8	12	9	24	27	7.5	29	30	41.5
BHLF-15-04G	15	1/2	12	12	24	27	7.5	29	33	41.5
BHLF-16-03G	16	3/8	13	9	27	30	7.5	32	33	44.5
BHLF-16-04G	16	1/2	13	12	27	30	7.5	32	36	44.5
BHLF-18-04G	18	1/2	14	12	27	32	8	32	36	44.5
BHLF-20-06G	20	3/4	17	16	30	36	8	33	38	45.5
BHLF-22-04G	22	1/2	18	12	32	36	9	34	38	46.5
BHLF-22-06G	22	3/4	18	16	32	36	9	34	39	46.5
BHLF-25-06G	25	3/4	20	16	36	41	10	36	41	49.5
BHLF-25-08G	25	1	20	20	36	41	10	36	43	49.5
BHLF-28-06G	28	3/4	22	16	41	46	10	41	44	55
BHLF-28-08G	28	1	22	22	41	46	10	41	46	55
BHLF-30-06G	30	3/4	25	16	41	46	10	41	44	55.5
BHLF-30-08G	30	1	25	22	41	46	10	41	46	55.5
BHLF-32-08G	32	1	26	22	46	50	11	46	51	60.5
BHLF-32-10G	32	1-1/4	26	28	46	50	11	46	57	60.5
BHLF-38-12G	38	1-1/2	32	34	50	60	12	50	61	69.5
BHLF-40-12G	40	1-1/2	32	34	55	60	12	55	62	74.5



# BHBLM

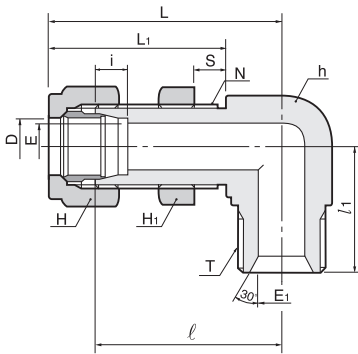
Hose Bulkhead  
Male Elbow



Designations	Tube O.D. (PF)		E	E <sub>1</sub>	Width across flat			i	ℓ	l <sub>1</sub>	L <sub>1</sub>	L	Panel Hole	Max. Panel
	D	T			h	H <sub>1</sub>	H						Drill Size	Thickness
													N	S
BHBLM-06-01G	6	1/8	4	4	17	17	14	7	45	28	42.5	56.5	14.5	13
BHBLM-08-02G	8	1/4	6	6	19	19	17	7	46	28	42.5	56.5	14.5	13
BHBLM-08-03G	8	3/8	6	9	19	19	17	7	46	30	42.5	56.5	14.5	13
BHBLM-10-02G	10	1/4	8	6	22	22	19	7	48	28	43.5	59.5	16.5	13
BHBLM-10-03G	10	3/8	8	9	22	22	19	7	48	30	43.5	59.5	16.5	13
BHBLM-10-04G	10	1/2	8	12	24	22	19	7	49	35	43.5	60.5	16.5	13
BHBLM-12-02G	12	1/4	10	6	24	24	22	7	49	31	43.5	60.5	18.5	13
BHBLM-12-03G	12	3/8	10	9	24	24	22	7	49	33	43.5	60.5	18.5	13
BHBLM-12-04G	12	1/2	10	12	24	24	22	7	49	35	43.5	60.5	18.5	13
BHBLM-15-03G	15	3/8	12	9	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLM-15-04G	15	1/2	12	12	27	27	27	7.5	57	37	49.5	69.5	22.5	15
BHBLM-16-03G	16	3/8	13	9	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLM-16-04G	16	1/2	13	12	30	30	30	7.5	59	38	49.5	71.5	24.5	15
BHBLM-18-04G	18	1/2	14	12	32	32	32	8	63	39	51.5	75.5	26.5	15
BHBLM-20-06G	20	3/4	16	16	32	32	36	8	65	40	51.5	77.5	28.5	15
BHBLM-22-04G	22	1/2	18	12	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLM-22-06G	22	3/4	18	16	36	36	38	9	65	40	51.5	77.5	30.5	15
BHBLM-25-06G	25	3/4	20	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLM-25-08G	25	1	20	20	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLM-28-06G	28	3/4	22	16	46	46	46	10	74	48	55	88	38.5	15
BHBLM-28-08G	28	1	22	22	46	46	46	10	74	48	55	88	38.5	15
BHBLM-30-06G	30	3/4	25	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLM-30-08G	30	1	25	22	46	46	46	10	74	48	55.5	88.5	40.5	15

# BHBLF

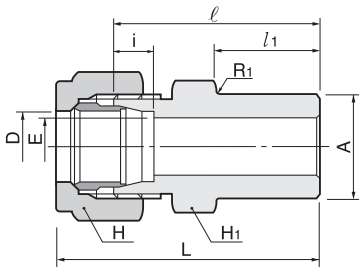
Hose Bulkhead  
Female Elbow



Designations	Tube O.D. (PF)		E	E <sub>1</sub>	Width across flat			i	ℓ	l <sub>1</sub>	L <sub>1</sub>	L	Panel Hole	Max. Panel
	D	T			h	H <sub>1</sub>	H						Drill Size	Thickness
													N	S
BHBLF-06-01G	6	1/8	4	4	17	17	14	7	45	26	42.5	56.5	14.5	13
BHBLF-08-02G	8	1/4	6	6	19	19	17	7	46	26	42.5	56.5	14.5	13
BHBLF-08-03G	8	3/8	6	9	19	19	17	7	46	27	42.5	56.5	14.5	13
BHBLF-10-02G	10	1/4	8	6	22	22	19	7	48	28	43.5	59.5	16.5	13
BHBLF-10-03G	10	3/8	8	9	22	22	19	7	48	29	43.5	59.5	16.5	13
BHBLF-10-04G	10	1/2	8	12	24	22	19	7	49	33	43.5	60.5	16.5	13
BHBLF-12-02G	12	1/4	10	6	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF-12-03G	12	3/8	10	9	24	24	22	7	49	30	43.5	60.5	18.5	13
BHBLF-12-04G	12	1/2	10	12	24	24	22	7	49	33	43.5	60.5	18.5	13
BHBLF-15-03G	15	3/8	12	9	27	27	27	7.5	57	33	49.5	69.5	22.5	15
BHBLF-15-04G	15	1/2	12	12	27	27	27	7.5	57	36	49.5	69.5	22.5	15
BHBLF-16-03G	16	3/8	13	9	30	30	30	7.5	59	34	49.5	71.5	24.5	15
BHBLF-16-04G	16	1/2	13	12	30	30	30	7.5	59	37	49.5	71.5	24.5	15
BHBLF-18-04G	18	1/2	14	12	32	32	32	8	63	37	51.5	75.5	26.5	15
BHBLF-20-06G	20	3/4	16	16	32	32	36	8	65	40	51.5	77.5	28.5	15
BHBLF-22-04G	22	1/2	18	12	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF-22-06G	22	3/4	18	16	36	36	36	9	65	40	51.5	77.5	30.5	15
BHBLF-25-06G	25	3/4	20	16	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF-25-08G	25	1	20	20	41	41	41	10	68	43	52.5	81.5	35.5	15
BHBLF-28-06G	28	3/4	22	16	46	46	46	10	74	48	55	88	38.5	15
BHBLF-28-08G	28	1	22	22	46	46	46	10	74	48	55	88	38.5	15
BHBLF-30-06G	30	3/4	25	16	46	46	46	10	74	48	55.5	88.5	40.5	15
BHBLF-30-08G	30	1	25	22	46	46	46	10	74	48	55.5	88.5	40.5	15

## BCW

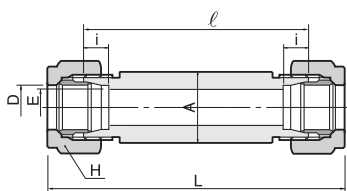
Welding Connector



Designations	Tube O.D.		A	E	Width across flat		$\ell$	i	$l_1$	L
	D				H <sub>1</sub>	H				
BCW-06	6		12	4	14	14	29	7	11	39.5
BCW-08	8		14	6	17	17	34	7	15	44.5
BCW-10	10		16	8	17	19	34	7	15	45.5
BCW-12	12		18	10	19	22	34	7	15	45.5
BCW-15	15		21	12	24	27	40	7.5	18	52.5
BCW-16	16		22	13	27	30	44	7.5	22	56.5
BCW-18	18		25	14	27	32	44	8	22	56.5
BCW-20	20		28	17	30	36	46	8	22	58.5
BCW-22	22		28	18	32	36	46	9	22	58.5
BCW-25	25		33	20	36	41	51	10	26	64.5
BCW-28	28		36	22	41	46	55	10	28	69
BCW-30	30		39	25	41	46	55	10	28	69.5
BCW-32	32		40	26	46	50	56	11	28	70.5
BCW-35	35		43	28	46	55	56	11	28	73.5
BCW-38	38		45	32	50	60	58	12	28	77.5
BCW-40	40		46	32	55	60	65	12	30	84.5
BCW-06A	1/8	10.5	16	8	17	19	34	7	15	45.5
BCW-08A	1/4	13.8	19	11	22	24	40	7.5	18	52
BCW-10A	3/8	17.3	24	14	27	32	44	8	22	56.5
BCW-15A	1/2	21.7	28	18	32	36	46	9	22	58.5
BCW-20A	3/4	27.2	33	22	41	46	52	10	25	66
BCW-25A	1	34.0	40	28	46	55	56	11	28	73.5
BCW-32A	1-1/4	42.7	47	34	60	65	65	12	28	85.5
BCW-40A	1-1/2	48.6	55	40	65	75	70	12	30	91.5

## BBUW

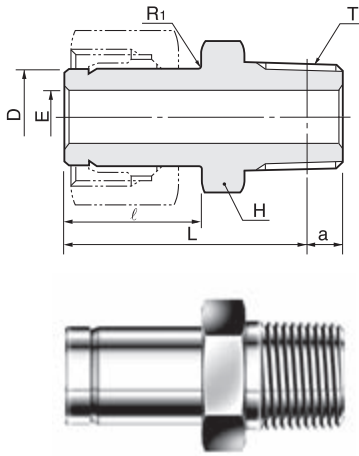
Welding Bulkhead Union



Designations	Tube O.D.		A	E	Width across flat		$\ell$	i	L
	D				H <sub>1</sub>	H			
BBUW-06	6		16	4	14	14	74	7	95
BBUW-08	8		16	6	17	17	74	7	95
BBUW-10	10		19	8	19	19	74	7	97
BBUW-12	12		20	10	22	22	74	7	97
BBUW-15	15		25	12	27	27	78	7.5	103
BBUW-16	16		28	13	30	30	78	7.5	103
BBUW-18	18		28	14	32	32	78	8	103
BBUW-20	20		32	17	36	36	78	8	103
BBUW-22	22		32	18	36	36	78	9	103
BBUW-25	25		38	20	41	41	78	10	105
BBUW-28	28		39	22	46	46	82	10	110
BBUW-30	30		46	25	46	46	82	10	111
BBUW-32	32		46	26	50	50	82	11	111
BBUW-35	35		46	28	55	55	82	11	117
BBUW-38	38		55	32	60	60	82	12	121
BBUW-40	40		55	32	60	60	90	12	129
BBUW-06A	1/8	10.5	19	8	19	19	74	7	97
BBUW-08A	1/4	13.8	22	11	24	24	78	7.5	102
BBUW-10A	3/8	17.3	28	14	32	32	78	8	103
BBUW-15A	1/2	21.7	32	18	36	36	78	9	103
BBUW-20A	3/4	27.2	39	22	46	46	82	10	110
BBUW-25A	1	34.0	46	28	55	55	82	11	117
BBUW-32A	1-1/4	42.7	58	34	65	65	90	12	131
BBUW-40A	1-1/2	48.6	65	40	75	75	90	12	133

# BA-R

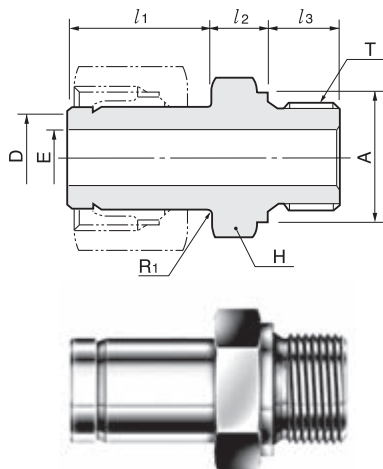
Adapter



Designations	Tube O.D.		(PT)	E	Basic Gauge length a	Width across flat		ℓ	L
	D	T				H			
BA-06-01R	6	1/8	3	3.97	12	20	32		
BA-08-02R	8	1/4	5	6.01	14	20	35		
BA-10-02R	10	1/4	6	6.01	14	21	36		
BA-10-03R	10	3/8	6	6.35	19	21	36.5		
BA-12-02R	12	1/4	7	6.01	14	22	37		
BA-12-03R	12	3/8	8	6.35	19	22	37.5		
BA-15-03R	15	3/8	8	6.35	19	24	40.5		
BA-15-04R	15	1/2	10	8.16	22	24	43		
BA-16-04R	16	1/2	11	8.16	22	24	43		
BA-18-04R	18	1/2	12	8.16	22	24	43		
BA-20-06R	20	3/4	14	9.53	27	25	46.5		
BA-22-06R	22	3/4	14	9.53	27	26	47.5		
BA-25-06R	25	3/4	16	9.53	27	28	49.5		
BA-25-08R	25	1	17	10.39	36	28	52.5		
BA-28-08R	28	1	18	10.39	36	28	52.5		
BA-30-08R	30	1	20	10.39	36	29	53.5		
BA-30-10R	30	1-1/4	20	12.70	46	29	55		
BA-32-10R	32	1-1/4	22	12.70	46	30	56		
BA-38-12R	38	1-1/2	26	12.70	50	36	64.5		
BA-40-12R	40	1-1/2	28	12.70	50	36	64		
BA-06A-02R	1/8	10.5	1/4	6	6.01	14	21	36	
BA-08A-03R	1/4	13.8	3/8	9	6.35	19	22	38.5	
BA-10A-04R	3/8	17.3	1/2	11	8.16	22	24	43	
BA-15A-06R	1/2	21.7	3/4	14	9.53	27	26	47.5	
BA-20A-08R	3/4	27.2	1	18	10.39	36	28	52.5	
BA-25A-10R	1	34.0	1-1/4	23	12.70	46	33	59	
BA-32A-12R	1-1/4	42.7	1-1/2	29	12.70	50	36	67	
BA-40A-16R	1-1/2	48.6	2	33	15.88	65	37	72	

# BA-G

Adapter  
(For Copper Gasket)

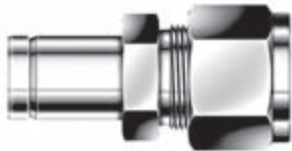
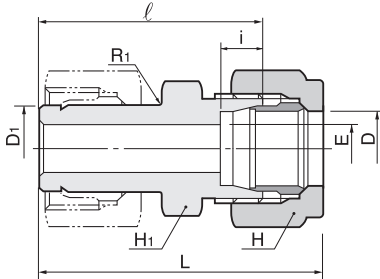


Designations	Tube O.D.		(PF)	E	Width across flat			l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
	D	T			H	A				
BA-06-01G	6	1/8	3	14	14	20	8	8		
BA-08-02G	8	1/4	5	19	18	20	9	12		
BA-10-02G	10	1/4	6	19	18	21	9	12		
BA-10-03G	10	3/8	6	22	21.5	21	10	12		
BA-12-02G	12	1/4	7	19	18	22	9	12		
BA-12-03G	12	3/8	8	22	21.5	22	10	12		
BA-15-03G	15	3/8	8	22	21.5	24	10	12		
BA-15-04G	15	1/2	10	27	25.5	24	13	14		
BA-16-04G	16	1/2	11	27	25.5	24	13	14		
BA-18-04G	18	1/2	12	27	25.5	24	13	14		
BA-20-06G	20	3/4	14	32	31.5	25	16	16		
BA-22-06G	22	3/4	14	32	31.5	26	16	16		
BA-25-06G	25	3/4	16	32	31.5	28	16	16		
BA-25-08G	25	1	17	41	38	28	18	18		
BA-28-08G	28	1	18	41	38	28	18	18		
BA-30-08G	30	1	20	41	38	29	21	18		
BA-30-10G	30	1-1/4	20	50	48.5	29	21	20		
BA-32-10G	32	1-1/4	22	50	48.5	30	21	20		
BA-38-12G	38	1-1/2	26	55	53.5	36	21	21		
BA-40-12G	40	1-1/2	28	55	53.5	36	21	21		
BA-06A-02G	1/8	10.5	1/4	6	19	18	21	9	12	
BA-08A-03G	1/4	13.8	3/8	9	22	21.5	22	10	12	
BA-10A-04G	3/8	17.3	1/2	11	27	25.5	24	13	14	
BA-15A-06G	1/2	21.7	3/4	14	32	31.5	26	16	16	
BA-20A-08G	3/4	27.2	1	18	41	38	28	18	18	
BA-25A-10G	1	34.0	1-1/4	23	50	48.5	33	21	20	
BA-32A-12G	1-1/4	42.7	1-1/2	29	55	53.5	36	23	21	
BA-40A-16G	1-1/2	48.6	2	33	70	66	37	28	24	

# Bite Type Tube Fittings - JIS B2351

## BR

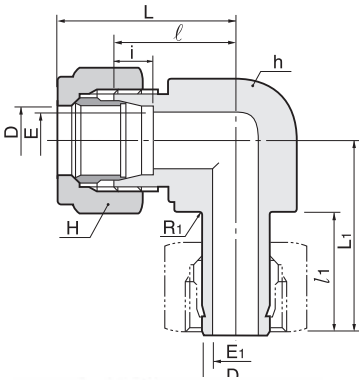
Reducer



Designations	Tube O.D.		E	Width across flat		i	ℓ	L		
	D <sub>1</sub>	D		H <sub>1</sub>	H					
BR-08-06	8	6	4	14	14	7	39	49.5		
BR-10-06	10	6	4	14	14	7	40	50.5		
BR-10-08	10	8	6	17	17	7	40	50.5		
BR-12-06	12	6	4	14	14	7	41	51.5		
BR-12-08	12	8	6	17	17	7	41	51.5		
BR-12-10	12	10	8	17	19	7	41	52.5		
BR-15-08	15	8	6	17	17	7	43	53.5		
BR-15-10	15	10	8	17	19	7	43	54.5		
BR-16-06	16	6	4	17	14	7	43	53.5		
BR-16-10	16	10	8	17	19	7	43	54.5		
BR-16-12	16	12	10	19	22	7	43	54.5		
BR-18-10	18	10	8	19	19	7	44	55.5		
BR-18-15	18	15	12	24	27	7.5	45	57.5		
BR-20-06	20	6	4	22	14	7	45	55.5		
BR-20-12	20	12	10	22	22	7	45	56.5		
BR-20-16	20	16	13	27	30	7.5	47	59.5		
BR-22-15	22	15	12	24	27	7.5	48	60.5		
BR-22-18	22	18	14	27	32	8	48	60.5		
BR-25-16	25	16	13	27	30	7.5	50	62.5		
BR-25-20	25	20	17	30	36	8	52	64.5		
BR-28-18	28	18	14	30	32	8	52	64.5		
BR-28-22	28	22	18	32	36	9	52	64.5		
BR-30-20	30	20	17	32	36	8	53	65.5		
BR-30-25	30	25	20	36	41	10	54	67.5		
BR-32-25	32	25	20	36	41	10	55	68.5		
BR-35-22	35	22	18	36	36	9	58	70.5		
BR-35-28	35	28	22	41	46	10	60	74		
BR-38-25	38	25	20	41	41	10	61	74.5		
BR-38-30	38	30	25	41	46	10	63	77.5		
BR-08A-6A	1/4	13.8	1/8	10.5	8	17	19	7	41	52.5
BR-10A-6A	3/8	17.3	1/8	10.5	8	19	19	7	44	55.5
BR-10A-8A	3/8	17.3	1/4	13.8	11	22	24	7.5	46	58
BR-15A-8A	1/2	21.7	1/4	13.8	11	24	24	7.5	48	60
BR-15A-10A	1/2	21.7	3/8	17.3	14	27	32	8	48	60.5
BR-20A-10A	3/4	27.2	3/8	17.3	14	30	32	8	52	64.5
BR-20A-15A	3/4	27.2	1/2	21.7	18	32	36	9	52	64.5
BR-25A-15A	1	34	1/2	21.7	18	36	36	9	58	70.5
BR-25A-20A	1	34	3/4	27.2	22	41	46	10	60	74

## BLA

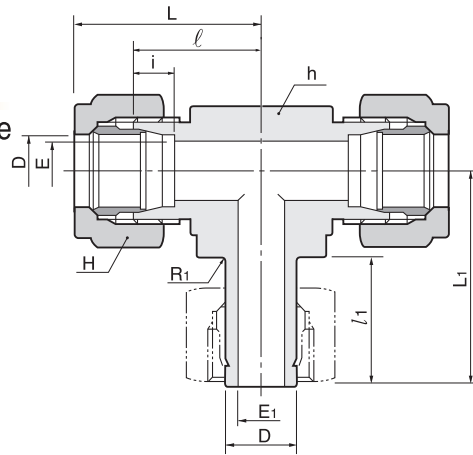
Positionable Elbow



Designations	Tube O.D.		E	E <sub>1</sub>	Width across flat		i	ℓ	l <sub>1</sub>	L	L <sub>1</sub>
	D	D			h	H					
BLA-10	10	8	6	17	19	7	23	21	34.5	35	
BLA-12	12	10	8	19	22	7	24	22	35.5	37	
BLA-15	15	12	10	24	27	7.5	29	24	44.5	40	
BLA-16	16	13	11	27	30	7.5	32	24	44.5	43	
BLA-18	18	14	12	27	32	8	32	24	44.5	43	
BLA-20	20	17	14	30	36	8	33	25	45.5	45	
BLA-22	22	18	14	32	36	9	34	26	46.5	46	
BLA-25	25	20	17	36	41	10	36	28	49.5	49	
BLA-28	28	22	18	41	46	10	41	28	55	53	
BLA-30	30	25	20	41	46	10	41	29	55.5	54	
BLA-32	32	26	22	46	50	11	50	30	64.5	66	
BLA-38	38	32	26	50	60	12	50	36	69.5	72	

## BBTA

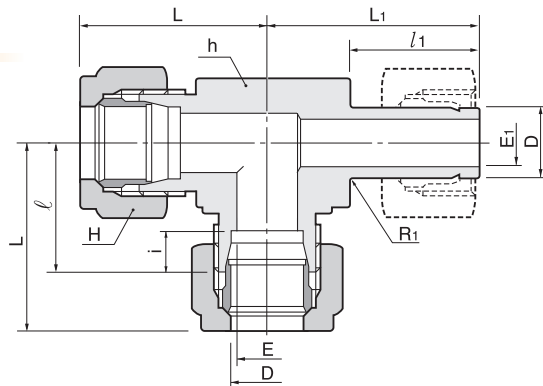
Positionable Branch Tee



Designations	Tube O.D. D	E	E <sub>1</sub>	Width across flat		i	l	l <sub>1</sub>	L	L <sub>1</sub>
				h	H					
BBTA-10	10	8	6	17	19	7	23	21	34.5	35
BBTA-12	12	10	8	19	22	7	24	22	35.5	37
BBTA-15	15	12	10	24	27	7.5	32	24	44.5	43
BBTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BBTA-18	18	14	12	27	32	8	32	24	44.5	43
BBTA-20	20	17	14	30	36	8	33	25	45.5	45
BBTA-22	22	18	14	32	36	9	34	26	46.5	46
BBTA-25	25	20	17	36	41	10	36	28	49.5	49

## BRTA

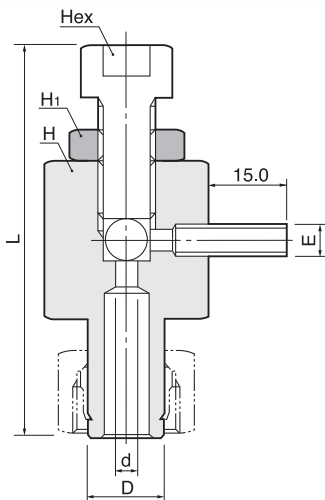
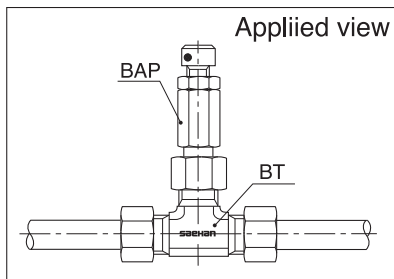
Positionable Run Tee



Designations	Tube O.D. D	E	E <sub>1</sub>	Width across flat		i	l	l <sub>1</sub>	L	L <sub>1</sub>
				h	H					
BRTA-10	10	8	6	17	19	7	23	21	34.5	35
BRTA-12	12	10	8	19	22	7	24	22	35.5	37
BRTA-15	15	12	10	24	27	7.5	32	24	44.5	43
BRTA-16	16	13	11	27	30	7.5	32	24	44.5	43
BRTA-18	18	14	12	27	32	8	32	24	44.5	43
BRTA-20	20	17	14	30	36	8	33	25	45.5	45
BRTA-22	22	18	14	32	36	9	34	26	46.5	46
BRTA-25	25	20	17	36	41	10	36	28	49.5	49

## BAP-1

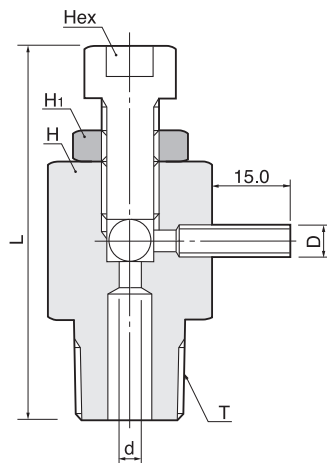
Air Purge Valve (Tube End)



Designations	D	E	d	Width across flat		L	Ball	
				H <sub>1</sub>	H			
BAP-06	6	4	3	13	14	56	7/32	
BAP-08	8	4	3	13	14	56	7/32	
BAP-10	10	4	3	13	14	57	7/32	
BAP-12	12	4	3	13	14	58	7/32	
BAP-15	15	6	4	19	27	74	5/16	
BAP-16	16	6	4	19	27	74	5/16	
BAP-18	18	6	4	19	27	74	5/16	
BAP-20	20	6	4	19	27	75	5/16	
BAP-22	22	6	4	19	27	76	5/16	
BAP-25	25	6	4	19	27	78	5/16	
BAP-28	28	6	4	19	30	78	5/16	
BAP-06A	1/8	10.5	4	3	13	57	7/32	
BAP-08A	1/4	13.8	6	4	19	72	5/16	
BAP-10A	3/8	17.3	6	4	19	74	5/16	
BAP-15A	1/2	21.7	6	4	19	76	5/16	
BAP-20A	3/4	27.2	6	4	19	30	79	5/16

## BAP-2

Air Purge Valve (Thread End)



Designations	(PT) T	E	d	Width across flat		L	Ball
				H <sub>1</sub>	H		
BAP-10R	1/8	4	3	13	14	51	7/32
BAP-02R	1/4	4	3	13	14	53	7/32
BAP-03R	3/8	6	4	13	19	54	7/32
BAP-04R	1/2	6	4	19	27	69	5/16



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