



Inches Brand Company



Metric Brand Company

SPC Company  
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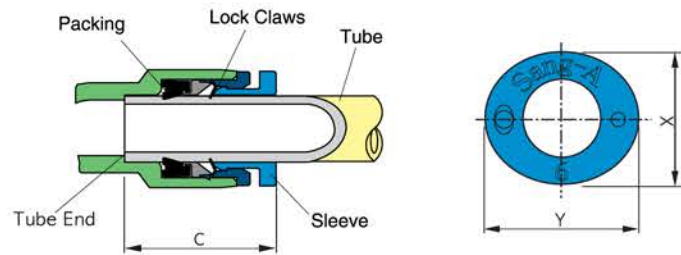
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# Basic Construction of Fitting



When installing the tube into the one-touch fitting, use the tube cutter to make a straight 90 degree cut. Tube should be pushed into the fitting completely past the packing, allowing the lock claws to fully retain the tube in place. If this is not done, leakage may occur. For removal of the tube, press the sleeve to recess the lock claws, then pull out the tube.

▶Depth of Assembling tube with Fitting

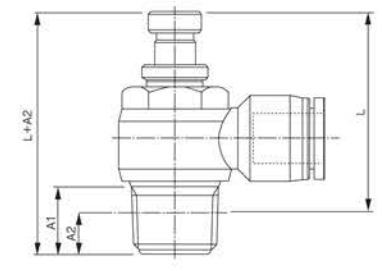
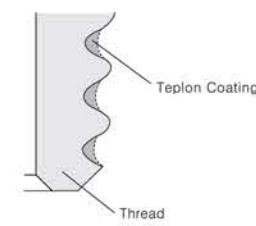
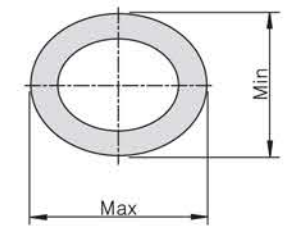
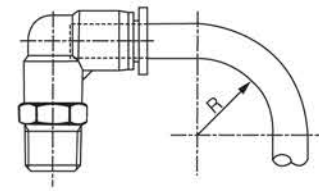
Tube Size	Standard Type						Compact Type		
	ø4	ø6	ø8	ø10	ø12	ø16	ø3	ø4	ø6
C	16.0	17.0	18.5	21.0	22.5	25	9.6	11.5	12.5

Tube Size	Standard Type						Compact Type		
	ø5/32	ø3/16	ø1/4	ø5/16	ø3/8	ø1/2	ø1/8	ø5/32	ø1/4
C	15.5	17	17.2	18.5	21	22.5	9.2	11.3	11.3

▶Depth of Assembling tube with Fitting

Tube Size	Standard Type						Compact Type		
	ø4	ø6	ø8	ø10	ø12	ø16	ø3	ø4	ø6
X	10	12	14	17	21	24	6	8	10
Y	12	14	16	19	23	27	7	10	12

Tube Size	Standard Type						Compact Type		
	ø5/32	ø3/16	ø1/4	ø5/16	ø3/8	ø1/2	ø1/8	ø5/32	ø1/4
X	10	11	12	14	17	21	6.2	8	10
Y	12	13	14	16	19	23	7.2	10	12



Tube has a tolerance of  $\pm 0.1$  mm, and ellipticity of within 0.2 mm (between Max and Min diameter) is allowed for the tube. The tube must not be bent excessively near the joint. For installation of the tube, use the recommendation below.

▶Tube Size별 곡률반경

Tube Size	Standard Type					Compact Type		
	ø4	ø6	ø8	ø10	ø12	ø3	ø4	ø6
R	20	30	50	80	150	15	20	30

Tube Size	Standard Type						Compact Type		
	ø5/32	ø3/16	ø1/4	ø5/16	ø3/8	ø1/2	ø1/8	ø5/32	ø1/4
R	20	25	30	50	80	150	15	20	30

The taper pipe thread is coated with teflon, thus requiring no additional teflon tape or sealing treatment.

Metric fittings are sealed with gaskets, thus requiring no additional sealing treatment.

For installation, use the recommended tightening torque specified below for proper sealing. Note that excessive tightening may damage the thread.

▶Recommended Torque per Thread Size

Thread Type	Thread Size	Torque (kgfcm)
Metric Thread	M3	7
	M5	15-19
	M6	20-27
Pipe Taper Thread	R1/8	70-90
	R1/4	120-140
	R3/8	220-240
	R1/2	280-300
UNF(Unified) Thread	No. 10-32 UNF	15-19
	1/16	70-90
NPT Thread	NPT1/8	70-90
	NPT1/4	120-140
	NPT3/8	220-240
	NPT1/2	280-300

After installing the equipment on the instrument, the "L" is the product of the subtraction value of thread part (A2) from the main body.

The "L" size plus "A2" makes the total length of the fitting.

▶Size of thread parts

Thread Type	Metric thread		Taper thread			
	M5	M6	R1/8	R1/4	R3/8	R1/2
A1	3.5	4.5	8.0	11.0	12.0	15.0
A2	3.5	4.5	4.0	6.0	6.5	8.0

▶Standard size of metric thread

Thread Code	Thread Size	Name of products applied
M3	M3 × 0.5	All products available
M5	M5 × 0.8	
M6	M6 × 1.0	
M6	M6 × 0.75	
M8	M8 × 0.75	Only use for "PCC" model of compact one-touch fitting





## Classification of Warning Indication



### DANGER

Risk of death or serious injury. (The most dangerous condition.)



### WARNING

Potential risk of danger, death or serious injury. (Potential danger)



### CAUTION

Potential risk of danger and of financial damage.

## Common Precautions



### DANGER

- ▶ Never use for the following:
  - ① As equipment for the purpose of the maintenance and management of human life.
  - ② As equipment for the purpose of movement of human transportation.
  - ③ As equipment requiring essential safety.



### WARNING

- ▶ Never use on the following environment:
  - ① Using for applications other than originally intended.
  - ② Place of excessive vibration, shock, rotation and curve.
  - ③ Place consisting of corrosive gas, inflammable/flammable gas, chemicals, sea water, water and vapor.
- ▶ Never disassemble or remodel the equipment; this may cause malfunction or leakage.

- ▶ When repairing or checking equipment, remove air pressure first.
- ▶ Never tamper with the sleeve of fitting when pressure is on.



### CAUTION

- ▶ Never assemble with parts from other manufacturers; this may cause leakage or damage to the equipment. Sang-A Pneumatic Co., Ltd. is not responsible for damage or injury that may occur due to interchanging of parts outside of the Sang-A Pneumatic

## Using Precautions of Fitting Series

Never fail to check the following



### WARNING

1. Never use for fluids other than air and water (Water: available in case of special order only)
2. Never use at the place of spatter to avoid fire.
3. Be sure to use with Rotary Joint to prevent damage or leakage at the place of rotation.
4. Never use with water hotter than 60 °C. This causes breakage of resin due to hydrolysis or heat.
5. Be sure to use after checking static electricity prevention requirements.
6. Avoid external impact such as bending, twisting and drawing on fittings.

## Caution on Fitting Products



**CAUTION** Be sure to meet the following conditions for the tube, otherwise it may cause leakage of air or inferiority of the application.

SIZE	POLYURETHANE TUBE	NYLON TUBE	SIZE	POLYURETHANE TUBE	NYLON TUBE
∅ 3mm	+ 0.10	+ 0.08	∅ 1/8	+ 0.10	+ 0.08
∅ 4mm	+ 0.10	+ 0.08	∅ 5/32	+ 0.10	+ 0.08
∅ 6mm	+ 0.12	+ 0.10	∅ 3/16	+ 0.12	+ 0.10
∅ 8mm	+ 0.12	+ 0.10	∅ 1/4	+ 0.12	+ 0.10
∅ 10mm	+ 0.15	+ 0.12	∅ 5/16	+ 0.15	+ 0.12
∅ 12mm	+ 0.15	+ 0.12	∅ 3/8	+ 0.15	+ 0.12
∅ 16mm	+ 0.15	+ 0.15	∅ 1/2	+ 0.15	+ 0.15

### Caution in the application of tube:

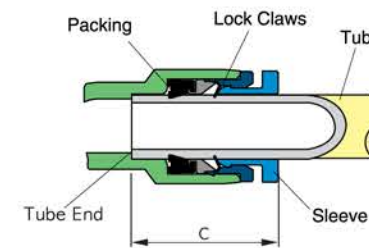
- Be sure to confirm that the section of tube is cut at a right angle. Make sure that there is no indication of damage to the outside of the tube.
- Be sure to refer to the following for application and removal of the tube. Sang-A Pneumatic equipment is made to follow a 2-step insertion of tubing into the fitting. The 1st step goes past the Lock Claws, and the 2nd step goes into the Packing. Make sure that the second step has been acquired.
- The elliptical design of the sleeve makes for a simple and easy application. (Please order the round sleeve if there are restrictions)

### The size of Sleeve

SLEEVE SIZE	∅3	∅4	∅6	∅8	∅10	∅12	∅16
General Specification (mm)		10 × 12	11 × 13	12 × 14	14 × 16	17 × 19	21 × 27
Contact Specification (mm)	7 × 6	10 × 8		12 × 10			

- Minimum insertion part of tube is as follows and be sure to use leaving as much as the following size as margin.

TUBE SIZE	∅3	∅6	∅8	∅10	∅12	∅16
General Specification (mm)	∅1/8	∅5/32, 3/16	∅1/4	∅5/16	∅3/8	∅1/2
Contact Specification (mm)	9.5	11.5	12.5		∅3/16 (N/A)	



### Caution on disconnecting tube:

- Before disconnecting tube, be sure to confirm that the pressure inside the tube is at zero.
- Before disconnecting tube, pull it out after pressing the sleeve equally on both sides. Unequal pressing strength will make scratch on tube by insufficient open of lock claws, this will cause air leakage.
- Be sure not to shake or make 360 degree rotation when disconnecting the tube. The scratch made by the misuses will cause air leakage.

### Caution on treatment of the equipment body:

- When fastening the body onto the six-angle part of the inside and outside of the fitting, choose the correct tool and size.
- When fastening the thread, please refer to the "Torque Recommended" (P5). If torque is higher than the recommended, this may cause damage or air leakage. If torque is lower than the recommended, this may cause air leakage.
- After fastening the thread, most of Sang-A equipment allows control of the direction of the pipe.



<b>PC</b> 20p  Male Straight	<b>PL</b> 21p  Male Elbow	<b>PL45</b> 22p  Male 45° Elbow	<b>PT</b> 23p  Male Branch Tee	<b>PST</b> 24p  Male Run Tee	<b>POC</b> 25p  Round Male Straight	<b>PCF</b> 26p  Female Straight
<b>PH</b> 27p  Male Banjo	<b>PH(D2)</b> 28p  Double Universal Elbow	<b>PH(D3)</b> 29p  Triple Universal Elbow	<b>PHF</b> 30p  Female Banjo	<b>PWT</b> 31p  Male Y	<b>PMF</b> 32p  Bulkhead Female Straight	<b>PCJ</b> 33p  Plug-In Male
<b>PLF</b> 34p  Female Elbow	<b>PTF</b> 35p  Female Branch Tee	<b>POL</b> 36p  Hex. Holed Banjo	<b>PLL</b> 37p  Extended Male Elbow	<b>PLLp</b> 38p  Union Straight	<b>PUC</b> 39p  Union Straight	<b>PUL</b> 39p  Union Elbow
<b>PUT</b> 40p  Union Tee	<b>PY</b> 40p  Union Y	<b>PG</b> 40p  Reducer	<b>PUG</b> 41p  Different Dia of Union Tee	<b>PW</b> 41p  Reducer Y	<b>PZA</b> 41p  Union Cross	<b>PZA22</b> 42p  Different Dia of Union Cross(2/2)
<b>PZA31</b> 42p  Different Dia of Union Cross(3/1)	<b>PMM</b> 42p  Bulkhead Union	<b>PPM</b> 43p  Bulkhead Union P	<b>PLM</b> 43p  Bulkhead Union P	<b>PCP</b> 43p  Straight Ace Coupler Plug	<b>PA</b> 44p  Dual Male Banjo	<b>PA(D2)</b> 44p  Double Branch A
<b>PA(D3)</b> 45p  Triple Branch A	<b>PAF</b> 46p  Dual Female Banjo	<b>PGJ</b> 46p  Plug-In Reducer	<b>PLJ</b> 47p  Plug-In Elbow	<b>PLJ45</b> 47p  Plug-In Extended Elbow	<b>PLLJ</b> 47p  Plug-In Extended Elbow	<b>PLLJ45</b> 48p  Plug-In Reducer Elbow
<b>PLGJ</b> 48p  Plug-In Reducer Elbow	<b>PLGJ45</b> 48p  Plug-In Reducer Elbow	<b>PIJ</b> 49p  Tube Splicer	<b>PJH</b> 49p  Plug-In Extended Elbow	<b>PIG</b> 50p  Reducer Tube Splicer	<b>PP</b> 50p  Plug	<b>PYJ</b> 50p  Plug-In Y

<b>PWJ</b> 51p  Plug-In Reducer Y	<b>PPF</b> 51p  Cap	<b>PXG</b> 51p  Reducer Double Y Union	<b>PXJ</b> 52p  Reducer Double Y	<b>PXT</b> 52p  Male Double Y	<b>PKG</b> 53p  Reducer Triple Branch Union	<b>PKJ</b> 53p  Plug-In Reducer Triple Branch
<b>PKD</b> 54p  Male Reducer Triple Branch	<b>CAS</b> 55p  Insert-Tube	<b>CASI</b> 55p  Insert-Tube Clip				

## F i t

<b>PC-G</b> 20p  Male Straight	<b>PL-G</b> 21p  Male Elbow	<b>PL45-G</b> 22p  Male 45° Elbow	<b>PT-G</b> 23p  Male Branch Tee	<b>PST-G</b> 24p  Male run Tee	<b>POC-G</b> 25p  Male run Tee	<b>PCF-G</b> 26p  Female Straight
<b>PH-G</b> 27p  Female Banjo	<b>PH-G (D2)</b> 28p  Double Universal Elbow	<b>PH-G (D3)</b> 29p  Triple Universal Elbow	<b>PHF-G</b> 30p  Female Banjo	<b>PHF-GG</b> 30p  Female Banjo	<b>PWT-G</b> 31p  Male Y	<b>PMF-G</b> 32p  Bulkhead Female Straight
<b>PLF-G</b> 34p  Female Elbow	<b>POL-G</b> 36p  Extended Male Elbow	<b>PLL-G</b> 37p  Extended Male Elbow	<b>PLLp-G</b> 38p  Extended Male Elbow	<b>PA-G (D2)</b> 44p  Double Branch A	<b>PA-G (D3)</b> 45p  Triple Branch A	<b>PAF-G</b> 46p  Dual Female Banjo
<b>PXT-G</b> 52p  Male Double Y	<b>PKD-G</b> 54p  Male Reducer Triple Branch	<b>PGL-G (D1)</b> 56p  Single Universal Elbow	<b>PGL-G (D2)</b> 56p  Double Universal Elbow	<b>PGL-G (D3)</b> 56p  Triple Universal Elbow	<b>PGT-G (D1)</b> 57p  Single Universal Elbow	<b>PGT-G (D2)</b> 57p  Double Universal Tee
<b>PGT-G (D3)</b> 57p  Triple Universal Tee	<b>PGB(D1)</b> 58p  Plug	<b>PGB(D2)</b> 58p  Plug	<b>PGB(D3)</b> 58p  Plug	<b>PGL</b> 59p  Plug	<b>PGT</b> 59p  Plug	<b>PGO</b> 59p  Plug



# Compact One -Touch Fittings



<b>PC-C</b> 62p  Male Straight	<b>PL-C</b> 63p  Male Elbow	<b>PT-C</b> 64p  Male Branch Tee	<b>POC-C</b> 65p  Round Male Straight	<b>PUC-C</b> 66p  Union Straight	<b>PUL-C</b> 66p  Union Straight	<b>PUT-C</b> 67p  Union Tee
<b>PCF-C</b> 67p  Female Straight	<b>PST-C</b> 68p  Male Run Tee	<b>PLL-C</b> 69p  Extended Male Elbow	<b>PGJ-C</b> 70p  Reducer	<b>PW-C</b> 70p  Reducer Y	<b>PWJ-C</b> 71p  Plug-In Reducer Y	<b>PLJ-C</b> 71p  Plug-In Elbow
<b>PMM-C</b> 72p  Bulkhead Union	<b>PCC-C</b> 72p  Round Male Straight	<b>PPF-C</b> 73p  Cap	<b>PZA-C</b> 73p  Union Cross	<b>PYJ-C</b> 74p  Plug -In Y	<b>PG-C</b> 74p  Reducer	<b>PY-C</b> 75p  Union Y
<b>PP-C</b> 75p  Plug	<b>PLM-C</b> 76p  Bulkhead Union P					
<b>PC-C(G)</b> 62p  Male Straight	<b>PL-C(G)</b> 63p  Male Elbow	<b>PT-C(G)</b> 64p  Male Branch Tee	<b>POC-C(G)</b> 65p  Round Male Straight	<b>PST-C(G)</b> 68p  Male Run Tee	<b>PLL-C(G)</b> 69p  Extended Male Elbow	

# Rotary Joints

<b>NRC</b> 86p  Straight	<b>NRL</b> 87p  Elbow	<b>NHRC</b> 88p  Straight	<b>NHRL</b> 89p  Elbow	<b>NHRF</b> 90p  Bush	<b>NHRS</b> 91p  Nipple
<b>NRC-G</b> 86p  Straight	<b>NRL-G</b> 87p  Elbow	<b>NHRC-G</b> 88p  Straight	<b>NHRL-G</b> 89p  Elbow	<b>NHRF-G</b> 90p  Bush	<b>NHRS-G</b> 91p  Nipple

# Stop Fittings

<b>SPC</b> 94p  Straight	<b>SPU</b> 95p  Union Straight	<b>SPUM</b> 96p  Elbow	<b>SPL</b> 97p  Elbow	<b>SPC-G</b> 94p  Straight	<b>SPL-G</b> 97p  Elbow
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# Check Valves

<b>PCVC</b> 100p  Straight	<b>PCVF</b> 101p  Bush	<b>PCVU</b> 102p  Union Straight	<b>PCVC-G</b> 100p  Straight	<b>PCVF-G</b> 101p  Bush
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# Speed Controllers

<b>NSE</b> 80p  Elbow	<b>NSE-C</b> 81p  Mini Elbow	<b>NSS</b> 82p  Straight	<b>NSF</b> 83p  Union Straight	<b>NSF-C</b> 83p  Mini Union Straight	<b>NSE(G)</b> 80p  Male Straight
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# Ball Valves



<b>BUC</b> 106p  Union	<b>BUG</b> 106p  Reducing Union	<b>BM</b> 107p  Bulkhead Union	<b>BL</b> 108p  Elbow	<b>BC</b> 109p  Straight	<b>BUL</b> 110p  Union Elbow	<b>BLG</b> 110p  Reducing Union Elbow
<b>BLM</b> 111p  Bulkhead Union Elbow	<b>BL-G</b> 108p  Elbow	<b>BC-G</b> 109p  Straight				

# Main Blocks

<b>BHF</b> 114p  Universal Quick	<b>BMF</b> 114p  Bulkhead Reducer	<b>BMR</b> 114p  Bush	<b>BHMR</b> 115p  Universal Rc Thread	<b>BHWF</b> 115p  Universal Branch	<b>BCM</b> 115p  Cap	<b>BRM</b> 116p  Bush
<b>BHM</b> 116p  Universal M Thread	<b>BMM</b> 116p  Bush	<b>BUMR</b> 116p  Socket	<b>BUMM</b> 117p  Nipple	<b>BPM</b> 117p  Plug	<b>BL</b> 117p  Elbow	

# Hand Valves / Hand Slide Valves

<b>HVSS</b> 120p  Nipple	<b>HVFS</b> 121p  Straight Fitting Thread	<b>HVFF</b> 122p  Union Straight	<b>HVSF</b> 123p  Straight Thread-Fitting	<b>HVSS-G</b> 120p  Nipple	<b>HVFS-G</b> 121p  Straight Fitting-G Thread	<b>HVSF-G</b> 123p  Straight G Thread-Fitting
<b>HSV(M)</b> 125p  Nipple Slide Type						

# Insert Fittings NEW!



<b>IC</b> 128p  Male Straight	<b>IL</b> 129p  Male Elbow	<b>IT</b> 130p  Male Branch Tee	<b>IUC</b> 130p  Union Straight	<b>IUL</b> 131p  Union Elbow	<b>IUT</b> 131p  Union Tee	<b>INUT</b> 131p  Union Tee
<b>INS</b> 131p  Union Tee						

# Two -Touch Fittings

<b>TC</b> 134p  Straight	<b>TL</b> 134p  Elbow	<b>TUT</b> 134p  Union Tee	<b>THT(D1)</b> 135p  Single Universal Tee	<b>THT(D2)</b> 135p  Double Universal Tee	<b>THT(D3)</b> 135p  Triple Universal Tee	<b>THL(D1)</b> 136p  Single Universal Elbow
<b>THL(D2)</b> 136p  Double Universal Elbow	<b>THL(D3)</b> 136p  Triple Universal Elbow					



# Silencers



# Air Guns



# Tubes



# Hose Band **NEW!**



# Ace Coupler (Steel)



## Compact Ace Coupler



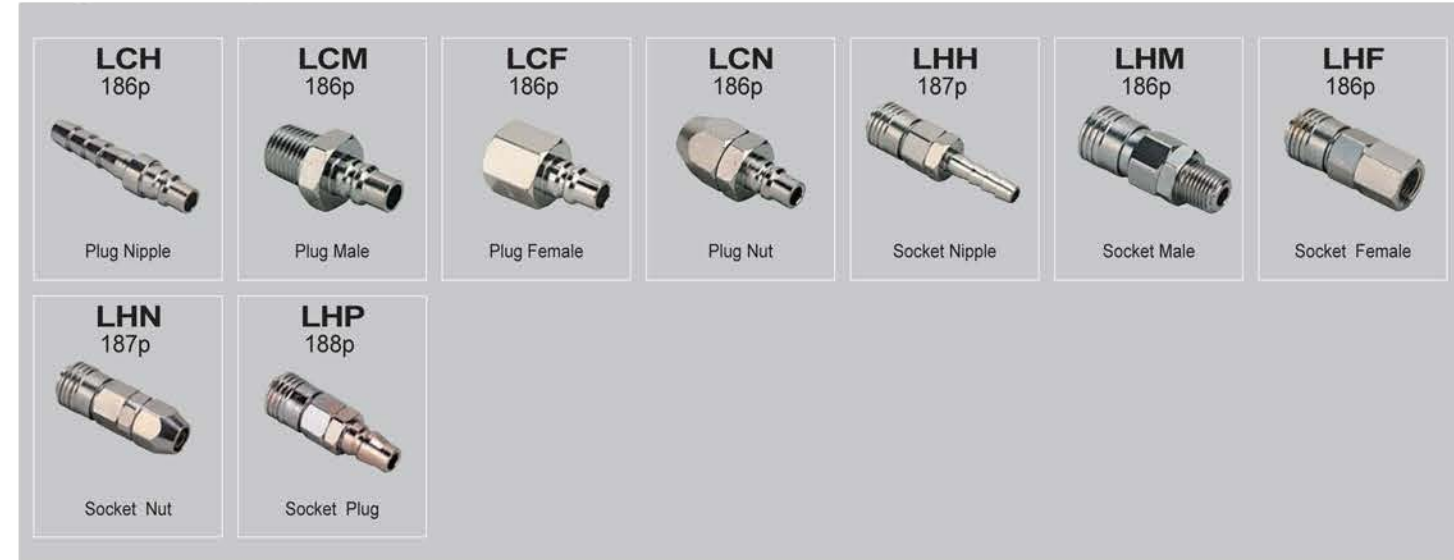
## Mold Coupler



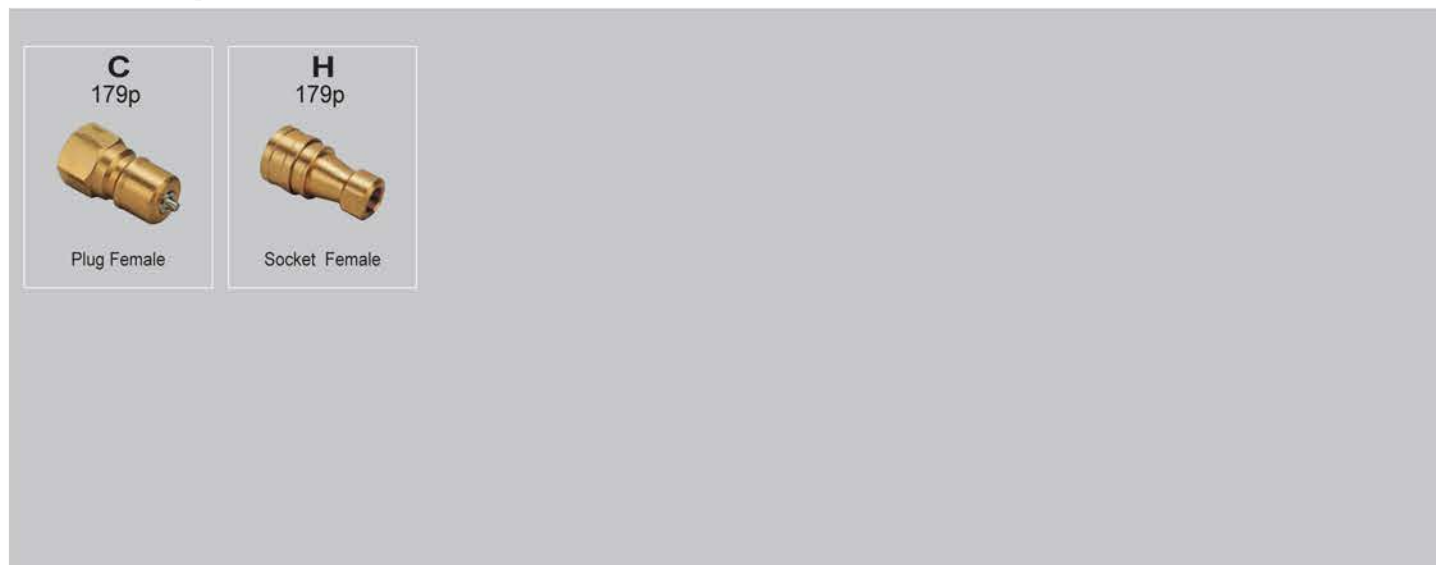
## Minor Coupler



## Light Coupler



## HP Coupler



## Cam-Lock Coupler NEW!







- 19 ONE-TOUCH FITTINGS
- 60 COMPACT ONE-TOUCH FITTINGS
- 78 SPEED CONTROLLERS
- 84 ROTARY JOINTS
- 92 STOP FITTINGS
- 98 CHECK VALVES
- 104 BALL VALVES
- 112 MAIN BLOCKS
- 118 HAND VALVES / HAND SLIDE VALVES
- 126 INSERT FITTINGS *NEW!*
- 132 TWO-TOUCH FITTINGS
- 138 SILENCERS
- 150 AIR GUN
- 154 TUBE SERIES
- 162 HOSE BAND *NEW!*
- 166 ACE COUPLER
- 170 COMPACT ACE COUPLER
- 172 MINOR COUPLER
- 178 HP COUPLER
- 180 MOLD COUPLER
- 184 LIGHT COUPLER
- 190 CAM-LOCK COUPLER *NEW!*

# ONE-TOUCH FITTINGS

## Application

- One-touch joints used in pneumatic piping.
- Used for a wide variety of models to meet all needs.

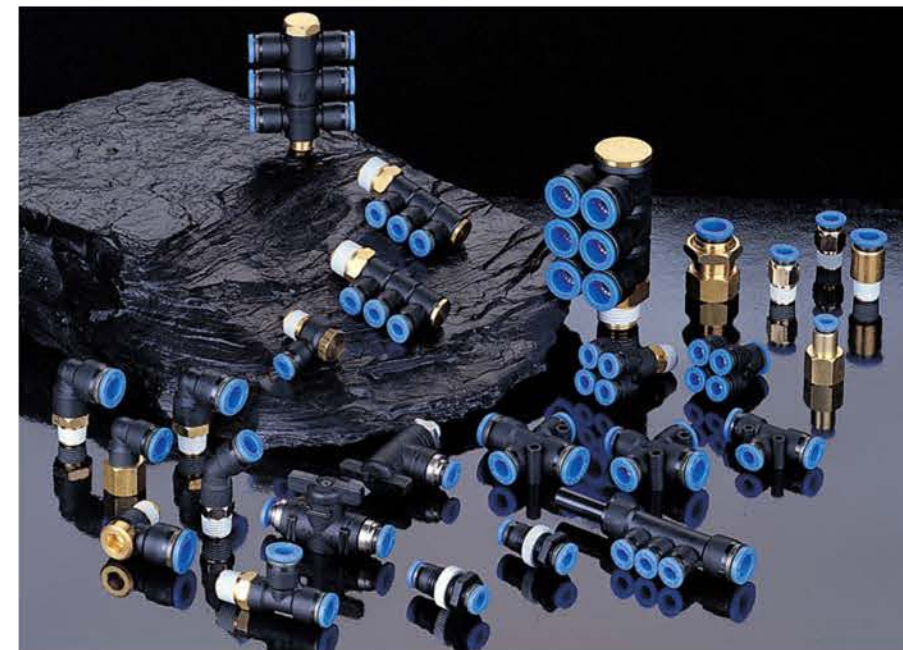
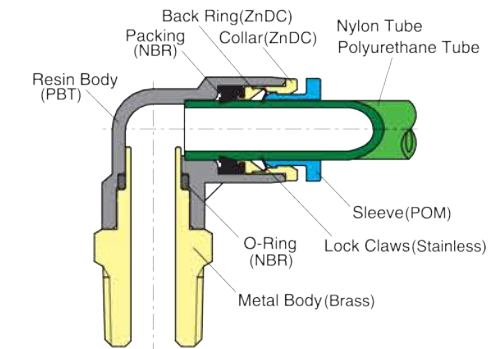
## Feature

- Easy to connect/disconnect tube by one touch.
- PC type is useful for piping in confined space, given its six-angle wrench processing inside.
- Elliptical sleeve makes it possible to apply and remove the tube easily in confined space.
- Fittings are equipped with a Gasket, O-ring and Teflon-Treatment already on the thread.

## Specification

Fluid	Air (No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm(0~900kPa)
Negative Pressure	-29.5 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	0 ~ 60 °C
Applicable Tube Material	Polyurethane and Nylon	

## Structural Diagram



## Case In Use

### ► POC Model

- The hexagonal hole of the inside body makes it possible to tighten the fitting with a hexagonal wrench.
- A hexagonal wrench must be used due to the round exterior.

### ► PL Model

- Flexible for directional tube laying given its revolving construction of body (PL and PT type)

### ► Elliptical Sleeve

- Elliptical sleeve makes it possible to apply and remove the tube easily in confined spaces.

## Product Code System

**PC 08-02**

① ② ③ ④

① Type

② Tube Dia (∅D)

	Metric Size						Inch Size					
Code	04	06	08	10	12	16	5/32	3/16	1/4	5/16	3/8	1/2
Dia	∅4	∅6	∅8	∅10	∅12	∅16	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2

③ Thread Size(T)

\* Metric Thread & R(PT) Thread

	Metric Size			Taper Pipe Thread		
Code	M5	M6	01	02	03	04
Size	M5 × 0.8	M6 × 1.0	R1/8	R1/4	R3/8	R1/2

\* Inch Thread (UNF & NPT)

	Unified Fine Thread		American Standard Taper Pipe Thread			
Code	U10U	N01U	N02U	N03U	N04U	
Size	10-32UNF	NPT1/8	NPT1/4	NPT3/8	NPT1/2	

④ U-Hexagon flat-to-flat inch specification (NPT)

## ⚠ CAUTION

- Be sure to read the "Common Precautions" and the "Using Precautions of Fitting Series" (P6) before using.
- In putting tube on the fitting, be sure to push it deeply into the inside.
- In case of incorrect installation, there is a risk of air leakage or loose tube.

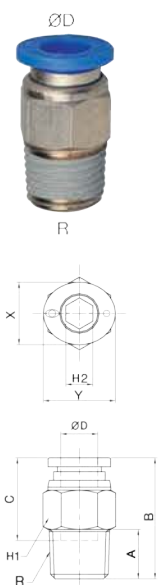
## ⚠ WARNING

- Be sure to confirm that proper conditions are met (specifications), otherwise there may be air leakage by damage on the fitting body.



### PC

Male Straight



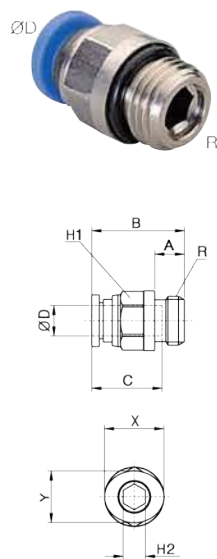
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	
PC 04-M5	4	M5	
PC 04-M6	4	M6	
PC 04-01	4	R1/8	
PC 04-02	4	R1/4	
PC 04-03	4	R3/8	
PC 06-M5	6	M5	
PC 06-M6	6	M6	
PC 06-01	6	R1/8	
PC 06-02	6	R1/4	
PC 06-03	6	R3/8	
PC 06-04	6	R1/2	
PC 08-01	8	R1/8	
PC 08-02	8	R1/4	
PC 08-03	8	R3/8	
PC 08-04	8	R1/2	
PC 10-01	10	R1/8	
PC 10-02	10	R1/4	
PC 10-03	10	R3/8	
PC 10-04	10	R1/2	
PC 12-01	12	R1/8	
PC 12-02	12	R1/4	
PC 12-03	12	R3/8	
PC 12-04	12	R1/2	
PC 16-03	16	R3/8	
PC 16-04	16	R1/2	

\*Hexagonal wrench may be used for a proper tightening.

### PC-G

Male Straight



MODEL [ØD-T]

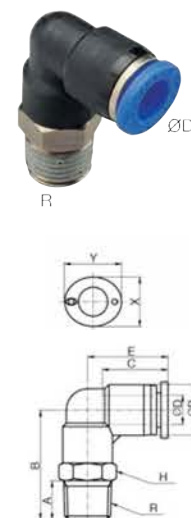
Tube (Metric) - Thread(G)			
MODEL	ØD	R	
PC 04-G01	4	G1/8	
PC 04-G02	4	G1/4	
PC 04-G03	4	G3/8	
PC 06-G01	6	G1/8	
PC 06-G02	6	G1/4	
PC 06-G03	6	G3/8	
PC 06-G04	6	G1/2	
PC 08-G01	8	G1/8	
PC 08-G02	8	G1/4	
PC 08-G03	8	G3/8	
PC 08-G04	8	G1/2	
PC 10-G01	10	G1/8	
PC 10-G02	10	G1/4	
PC 10-G03	10	G3/8	
PC 10-G04	10	G1/2	
PC 12-G01	12	G1/8	
PC 12-G02	12	G1/4	
PC 12-G03	12	G3/8	
PC 12-G04	12	G1/2	
PC 16-G03	16	G3/8	
PC 16-G04	16	G1/2	

Tube (Inch) - Thread (NPT)			
MODEL	ØD	R	
PC 5/32-01	5/32	R1/8	
PC 5/32-02	5/32	R1/4	
PC 5/32-03	5/32	R3/8	
PC 3/16-01	3/16	R1/8	
PC 3/16-02	3/16	R1/4	
PC 3/16-03	3/16	R3/8	
PC 1/4-01	1/4	R1/8	
PC 1/4-02	1/4	R1/4	
PC 1/4-03	1/4	R3/8	
PC 1/4-04	1/4	R1/2	
PC 5/16-01	5/16	R1/8	
PC 5/16-02	5/16	R1/4	
PC 5/16-03	5/16	R3/8	
PC 5/16-04	5/16	R1/2	
PC 3/8-01	3/8	R1/8	
PC 3/8-02	3/8	R1/4	
PC 3/8-03	3/8	R3/8	
PC 3/8-04	3/8	R1/2	
PC 1/2-01	1/2	R1/8	
PC 1/2-02	1/2	R1/4	
PC 1/2-03	1/2	R3/8	
PC 1/2-04	1/2	R1/2	

Tube (Inch) - Thread (NPT)			
MODEL	ØD	R	
PC 5/32-U10U	5/32	UNF10 *32	
PC 5/32-N01U	5/32	NPT1/8	
PC 5/32-N02U	5/32	NPT1/4	
PC 5/32-N03U	5/32	NPT3/8	
PC 3/16-U10U	3/16	UNF10 *32	
PC 3/16-N01U	3/16	NPT1/8	
PC 3/16-N02U	3/16	NPT1/4	
PC 3/16-N03U	3/16	NPT3/8	
PC 1/4-U10U	1/4	UNF10 *32	
PC 1/4-N01U	1/4	NPT1/8	
PC 1/4-N02U	1/4	NPT1/4	
PC 1/4-N03U	1/4	NPT3/8	
PC 1/4-N04U	1/4	NPT1/2	
PC 5/16-N01U	5/16	NPT1/8	
PC 5/16-N02U	5/16	NPT1/4	
PC 5/16-N03U	5/16	NPT3/8	
PC 5/16-N04U	5/16	NPT1/2	
PC 3/8-N01U	3/8	NPT1/8	
PC 3/8-N02U	3/8	NPT1/4	
PC 3/8-N03U	3/8	NPT3/8	
PC 3/8-N04U	3/8	NPT1/2	
PC 1/2-N01U	1/2	NPT1/8	
PC 1/2-N02U	1/2	NPT1/4	
PC 1/2-N03U	1/2	NPT3/8	
PC 1/2-N04U	1/2	NPT1/2	

### PL

Male Elbow



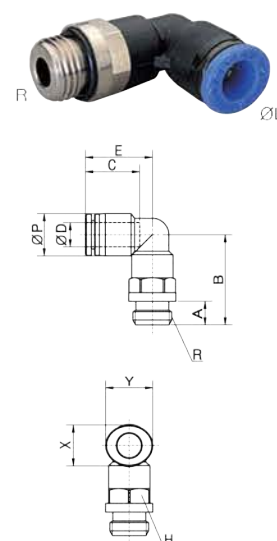
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	
PL 04-M5	4	M5	
PL 04-M6	4	M6	
PL 04-01	4	R1/8	
PL 04-02	4	R1/4	
PL 04-03	4	R3/8	
PL 06-M5	6	M5	
PL 06-M6	6	M6	
PL 06-01	6	R1/8	
PL 06-02	6	R1/4	
PL 06-03	6	R3/8	
PL 06-04	6	R1/2	
PL 08-01	8	R1/8	
PL 08-02	8	R1/4	
PL 08-03	8	R3/8	
PL 08-04	8	R1/2	
PL 10-01	10	R1/8	
PL 10-02	10	R1/4	
PL 10-03	10	R3/8	
PL 10-04	10	R1/2	
PL 12-01	12	R1/8	
PL 12-02	12	R1/4	
PL 12-03	12	R3/8	
PL 12-04	12	R1/2	
PL 16-03	16	R3/8	
PL 16-04	16	R1/2	

\*Rotating body construction after a proper installation.

### PL-G

Male Elbow



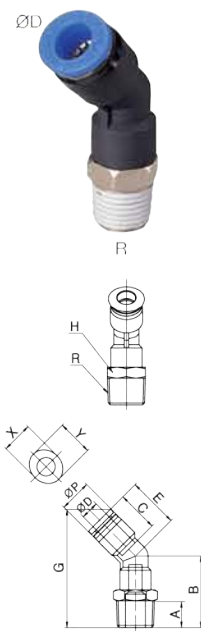
MODEL [ØD-T]

Tube (Metric) - Thread(G)			
MODEL	ØD	R	
PL 04-G01	4	G1/8	
PL 04-G02	4	G1/4	
PL 04-G03	4	G3/8	
PL 06-G01	6	G1/8	
PL 06-G02	6	G1/4	
PL 06-G03	6	G3/8	
PL 06-G04	6	G1/2	
PL 08-G01	8	G1/8	
PL 08-G02	8	G1/4	
PL 08-G03	8	G3/8	
PL 08-G04	8	G1/2	
PL 10-G01	10	G1/8	
PL 10-G02	10	G1/4	
PL 10-G03	10	G3/8	
PL 10-G04	10	G1/2	
PL 12-G01	12	G1/8	
PL 12-G02	12	G1/4	
PL 12-G03	12	G3/8	
PL 12-G04	12	G1/2	
PL 16-G03	16	G3/8	
PL 16-G04	16	G1/2	



# PL45

Male 45° Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PL45 04-M5	4	M5
PL45 04-M6	4	M6
PL45 04-01	4	R1/8
PL45 04-02	4	R1/4
PL45 04-03	4	R3/8
PL45 06-M5	6	M5
PL45 06-M6	6	M6
PL45 06-01	6	R1/8
PL45 06-02	6	R1/4
PL45 06-03	6	R3/8
PL45 06-04	6	R1/2
PL45 08-01	8	R1/8
PL45 08-02	8	R1/4
PL45 08-03	8	R3/8
PL45 08-04	8	R1/2
PL45 10-01	10	R1/8
PL45 10-02	10	R1/4
PL45 10-03	10	R3/8
PL45 10-04	10	R1/2
PL45 12-01	12	R1/8
PL45 12-02	12	R1/4
PL45 12-03	12	R3/8
PL45 12-04	12	R1/2

**Tube (Inch) - Thread(R)**

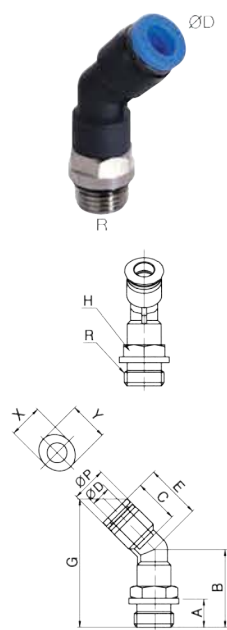
MODEL	ØD	R
PL45 5/32-R01	5/32	R1/8
PL45 5/32-R02	5/32	R1/4
PL45 5/32-R03	5/32	R3/8
PL45 3/16-R01	3/16	R1/8
PL45 3/16-R02	3/16	R1/4
PL45 3/16-R03	3/16	R3/8
PL45 1/4-R01	1/4	R1/8
PL45 1/4-R02	1/4	R1/4
PL45 1/4-R03	1/4	R3/8
PL45 1/4-R04	1/4	R1/2
PL45 5/16-R01	5/16	R1/8
PL45 5/16-R02	5/16	R1/4
PL45 5/16-R03	5/16	R3/8
PL45 5/16-R04	5/16	R1/2
PL45 3/8-R01	3/8	R1/8
PL45 3/8-R02	3/8	R1/4
PL45 3/8-R03	3/8	R3/8
PL45 3/8-R04	3/8	R1/2
PL45 1/2-R01	1/2	R1/8
PL45 1/2-R02	1/2	R1/4
PL45 1/2-R03	1/2	R3/8
PL45 1/2-R04	1/2	R1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PL45 5/32-U10U	5/32	UNF10 *32
PL45 5/32-N01U	5/32	NPT1/8
PL45 5/32-N02U	5/32	NPT1/4
PL45 5/32-N03U	5/32	NPT3/8
PL45 3/16-U10U	3/16	UNF10 *32
PL45 3/16-N01U	3/16	NPT1/8
PL45 3/16-N02U	3/16	NPT1/4
PL45 3/16-N03U	3/16	NPT3/8
PL45 1/4-U10U	1/4	UNF10 *32
PL45 1/4-N01U	1/4	NPT1/8
PL45 1/4-N02U	1/4	NPT1/4
PL45 1/4-N03U	1/4	NPT3/8
PL45 1/4-N04U	1/4	NPT1/2
PL45 5/16-N01U	5/16	NPT1/8
PL45 5/16-N02U	5/16	NPT1/4
PL45 5/16-N03U	5/16	NPT3/8
PL45 5/16-N04U	5/16	NPT1/2
PL45 3/8-N01U	3/8	NPT1/8
PL45 3/8-N02U	3/8	NPT1/4
PL45 3/8-N03U	3/8	NPT3/8
PL45 3/8-N04U	3/8	NPT1/2
PL45 1/2-N01U	1/2	NPT1/8
PL45 1/2-N02U	1/2	NPT1/4
PL45 1/2-N03U	1/2	NPT3/8
PL45 1/2-N04U	1/2	NPT1/2

# PL45-G

Male 45° Elbow



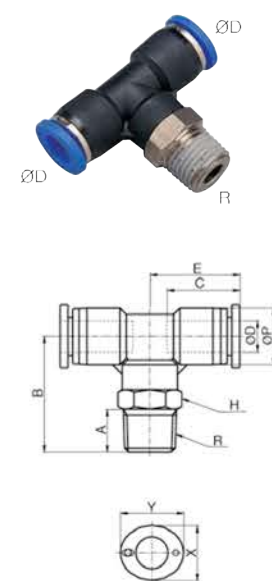
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PL45 04-G01	4	G1/8
PL45 04-G02	4	G1/4
PL45 04-G03	4	G3/8
PL45 06-G01	6	G1/8
PL45 06-G02	6	G1/4
PL45 06-G03	6	G3/8
PL45 06-G04	6	G1/2
PL45 08-G01	8	G1/8
PL45 08-G02	8	G1/4
PL45 08-G03	8	G3/8
PL45 08-G04	8	G1/2
PL45 10-G01	10	G1/8
PL45 10-G02	10	G1/4
PL45 10-G03	10	G3/8
PL45 10-G04	10	G1/2
PL45 12-G01	12	G1/8
PL45 12-G02	12	G1/4
PL45 12-G03	12	G3/8
PL45 12-G04	12	G1/2

# PT

Male Branch Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PT 04-M5	4	M5
PT 04-M6	4	M6
PT 04-01	4	R1/8
PT 04-02	4	R1/4
PT 04-03	4	R3/8
PT 06-M5	6	M5
PT 06-M6	6	M6
PT 06-01	6	R1/8
PT 06-02	6	R1/4
PT 06-03	6	R3/8
PT 06-04	6	R1/2
PT 08-01	8	R1/8
PT 08-02	8	R1/4
PT 08-03	8	R3/8
PT 08-04	8	R1/2
PT 10-01	10	R1/8
PT 10-02	10	R1/4
PT 10-03	10	R3/8
PT 10-04	10	R1/2
PT 12-01	12	R1/8
PT 12-02	12	R1/4
PT 12-03	12	R3/8
PT 12-04	12	R1/2
PT 16-03	16	R3/8
PT 16-04	16	R1/2

**Tube (Inch) - Thread(R)**

MODEL	ØD	R
PT 5/32-R01	5/32	R1/8
PT 5/32-R02	5/32	R1/4
PT 5/32-R03	5/32	R3/8
PT 1/4-R01	1/4	R1/8
PT 1/4-R02	1/4	R1/4
PT 1/4-R03	1/4	R3/8
PT 1/4-R04	1/4	R1/2
PT 5/16-R01	5/16	R1/8
PT 5/16-R02	5/16	R1/4
PT 5/16-R03	5/16	R3/8
PT 5/16-R04	5/16	R1/2
PT 3/8-R01	3/8	R1/8
PT 3/8-R02	3/8	R1/4
PT 3/8-R03	3/8	R3/8
PT 3/8-R04	3/8	R1/2
PT 1/2-R01	1/2	R1/8
PT 1/2-R02	1/2	R1/4
PT 1/2-R03	1/2	R3/8
PT 1/2-R04	1/2	R1/2

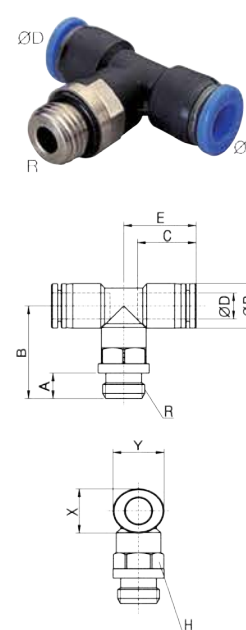
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PT 5/32-U10U	5/32	UNF10 *32
PT 5/32-N01U	5/32	NPT1/8
PT 5/32-N02U	5/32	NPT1/4
PT 5/32-N03U	5/32	NPT3/8
PT 3/16-U10U	3/16	UNF10 *32
PT 3/16-N01U	3/16	NPT1/8
PT 3/16-N02U	3/16	NPT1/4
PT 3/16-N03U	3/16	NPT3/8
PT 1/4-U10U	1/4	UNF10 *32
PT 1/4-N01U	1/4	NPT1/8
PT 1/4-N02U	1/4	NPT1/4
PT 1/4-N03U	1/4	NPT3/8
PT 1/4-N04U	1/4	NPT1/2
PT 5/16-N01U	5/16	NPT1/8
PT 5/16-N02U	5/16	NPT1/4
PT 5/16-N03U	5/16	NPT3/8
PT 5/16-N04U	5/16	NPT1/2
PT 3/8-N01U	3/8	NPT1/8
PT 3/8-N02U	3/8	NPT1/4
PT 3/8-N03U	3/8	NPT3/8
PT 3/8-N04U	3/8	NPT1/2
PT 1/2-N01U	1/2	NPT1/8
PT 1/2-N02U	1/2	NPT1/4
PT 1/2-N03U	1/2	NPT3/8
PT 1/2-N04U	1/2	NPT1/2

\*Rotating body construction after a proper installation.

# PT-G

Male Branch Tee



MODEL [ØD-T]

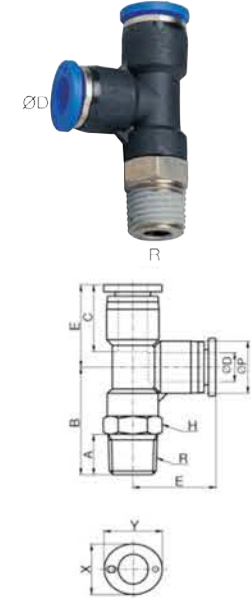
**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PT 04-G01	4	G1/8
PT 04-G02	4	G1/4
PT 04-G03	4	G3/8
PT 06-G01	6	G1/8
PT 06-G02	6	G1/4
PT 06-G03	6	G3/8
PT 06-G04	6	G1/2
PT 08-G01	8	G1/8
PT 08-G02	8	G1/4
PT 08-G03	8	G3/8
PT 08-G04	8	G1/2
PT 10-G01	10	G1/8
PT 10-G02	10	G1/4
PT 10-G03	10	G3/8
PT 10-G04	10	G1/2
PT 12-G01	12	G1/8
PT 12-G02	12	G1/4
PT 12-G03	12	G3/8
PT 12-G04	12	G1/2
PT 16-G03	16	G3/8
PT 16-G04	16	G1/2



# PST

Male Run Tee  $\varnothing D$



MODEL [ $\varnothing D$ -T]

Tube (Metric) - Thread(R)		
MODEL	$\varnothing D$	R
PST 04-M5	4	M5
PST 04-M6	4	M6
PST 04-01	4	R1/8
PST 04-02	4	R1/4
PST 04-03	4	R3/8
PST 06-M5	6	M5
PST 06-M6	6	M6
PST 06-01	6	R1/8
PST 06-02	6	R1/4
PST 06-03	6	R3/8
PST 06-04	6	R1/2
PST 08-01	8	R1/8
PST 08-02	8	R1/4
PST 08-03	8	R3/8
PST 08-04	8	R1/2
PST 10-01	10	R1/8
PST 10-02	10	R1/4
PST 10-03	10	R3/8
PST 10-04	10	R1/2
PST 12-01	12	R1/8
PST 12-02	12	R1/4
PST 12-03	12	R3/8
PST 12-04	12	R1/2

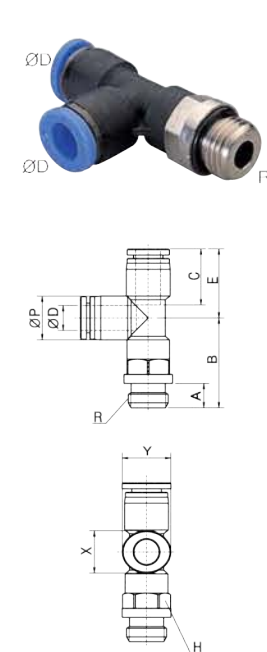
Tube (Inch) - Thread(R)		
MODEL	$\varnothing D$	R
PST 5/32-R01	5/32	R1/8
PST 5/32-R02	5/32	R1/4
PST 5/32-R03	5/32	R3/8
PST 1/4-R01	1/4	R1/8
PST 1/4-R02	1/4	R1/4
PST 1/4-R03	1/4	R3/8
PST 5/16-R01	5/16	R1/8
PST 5/16-R02	5/16	R1/4
PST 5/16-R03	5/16	R3/8
PST 5/16-R04	5/16	R1/2
PST 3/8-R01	3/8	R1/8
PST 3/8-R02	3/8	R1/4
PST 3/8-R03	3/8	R3/8
PST 3/8-R04	3/8	R1/2
PST 1/2-R02	1/2	R1/4
PST 1/2-R03	1/2	R3/8
PST 1/2-R04	1/2	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	$\varnothing D$	R
PST 5/32-U10U	5/32	UNF10 * 32
PST 5/32-N01U	5/32	NPT1/8
PST 5/32-N02U	5/32	NPT1/4
PST 3/16-U10U	3/16	UNF10 * 32
PST 3/16-N01U	3/16	NPT1/8
PST 3/16-N02U	3/16	NPT1/4
PST 3/16-N03U	3/16	NPT3/8
PST 1/4-U10U	1/4	UNF10 * 32
PST 1/4-N01U	1/4	NPT1/8
PST 1/4-N02U	1/4	NPT1/4
PST 1/4-N03U	1/4	NPT3/8
PST 5/16-N01U	5/16	NPT1/8
PST 5/16-N02U	5/16	NPT1/4
PST 5/16-N03U	5/16	NPT3/8
PST 5/16-N04U	5/16	NPT1/2
PST 3/8-N01U	3/8	NPT1/8
PST 3/8-N02U	3/8	NPT1/4
PST 3/8-N03U	3/8	NPT3/8
PST 3/8-N04U	3/8	NPT1/2
PST 1/2-N02U	1/2	NPT1/4
PST 1/2-N03U	1/2	NPT3/8
PST 1/2-N04U	1/2	NPT1/2

\*Rotating body construction after a proper installation.

# PST-G

Male run Tee

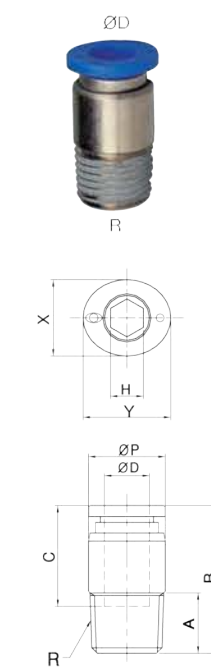


MODEL [ $\varnothing D$ -T]

Tube (Metric) - Thread(G)		
MODEL	$\varnothing D$	R
PST 04-G01	4	G1/8
PST 04-G02	4	G1/4
PST 04-G03	4	G3/8
PST 06-G01	6	G1/8
PST 06-G02	6	G1/4
PST 06-G03	6	G3/8
PST 06-G04	6	G1/2
PST 08-G01	8	G1/8
PST 08-G02	8	G1/4
PST 08-G03	8	G3/8
PST 08-G04	8	G1/2
PST 10-G01	10	G1/8
PST 10-G02	10	G1/4
PST 10-G03	10	G3/8
PST 10-G04	10	G1/2
PST 12-G01	12	G1/8
PST 12-G02	12	G1/4
PST 12-G03	12	G3/8
PST 12-G04	12	G1/2

# POC

Round Male Straight



MODEL [ $\varnothing D$ -T]

Tube (Metric) - Thread(R)		
MODEL	$\varnothing D$	R
POC 04-M5	4	M5
POC 04-M6	4	M6
POC 04-01	4	R1/8
POC 04-02	4	R1/4
POC 04-03	4	R3/8
POC 06-M5	6	M5
POC 06-M6	6	M6
POC 06-01	6	R1/8
POC 06-02	6	R1/4
POC 06-03	6	R3/8
POC 08-01	8	R1/8
POC 08-02	8	R1/4
POC 08-03	8	R3/8
POC 08-04	8	R1/2
POC 10-01	10	R1/8
POC 10-02	10	R1/4
POC 10-03	10	R3/8
POC 10-04	10	R1/2
POC 12-01	12	R1/8
POC 12-02	12	R1/4
POC 12-03	12	R3/8
POC 12-04	12	R1/2

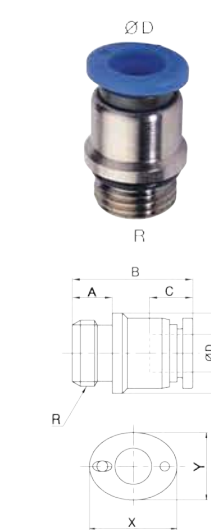
Tube (Inch) - Thread(R)		
MODEL	$\varnothing D$	R
POC 1/4-R01	1/4	R1/8
POC 1/4-R02	1/4	R1/4
POC 5/16-R01	5/16	R1/8
POC 5/16-R02	5/16	R1/4
POC 5/16-R03	5/16	R3/8
POC 3/8-R02	3/8	R1/4
POC 3/8-R03	3/8	R3/8
POC 3/8-R04	3/8	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	$\varnothing D$	R
POC 5/32-U10U	5/32	UNF10 * 32
POC 5/32-N01U	5/32	NPT1/8
POC 5/32-N02U	5/32	NPT1/4
POC 5/32-N03U	5/32	NPT3/8
POC 3/16-U10U	3/16	UNF10 * 32
POC 3/16-N01U	3/16	NPT1/8
POC 3/16-N02U	3/16	NPT1/4
POC 1/4-U10U	1/4	UNF10 * 32
POC 1/4-N01U	1/4	NPT1/8
POC 1/4-N02U	1/4	NPT1/4
POC 5/16-N01U	5/16	NPT1/8
POC 5/16-N02U	5/16	NPT1/4
POC 5/16-N03U	5/16	NPT3/8
POC 3/8-N01U	3/8	NPT1/8
POC 3/8-N02U	3/8	NPT1/4
POC 3/8-N03U	3/8	NPT3/8
POC 3/8-N04U	3/8	NPT1/2
POC 1/2-N02U	1/2	NPT1/4
POC 1/2-N03U	1/2	NPT3/8
POC 1/2-N04U	1/2	NPT1/2

\*Hexagonal wrench may be used for a proper tightening.

# POC-G

Male run Tee



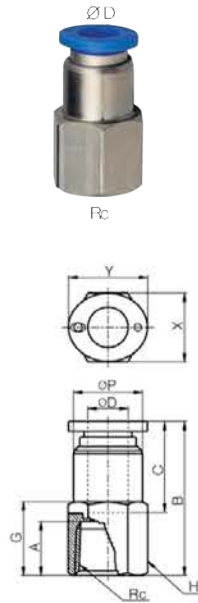
MODEL [ $\varnothing D$ -T]

Tube (Metric) - Thread(G)		
MODEL	$\varnothing D$	R
POC 04-G01	4	G1/8
POC 04-G02	4	G1/4
POC 04-G03	4	G3/8
POC 06-G01	6	G1/8
POC 06-G02	6	G1/4
POC 06-G03	6	G3/8
POC 08-G01	8	G1/8
POC 08-G02	8	G1/4
POC 08-G03	8	G3/8
POC 08-G04	8	G1/2
POC 10-G01	10	G1/8
POC 10-G02	10	G1/4
POC 10-G03	10	G3/8
POC 10-G04	10	G1/2
POC 12-G01	12	G1/8
POC 12-G02	12	G1/4
POC 12-G03	12	G3/8
POC 12-G04	12	G1/2



### PCF

Female Straight



MODEL [ØD-T]

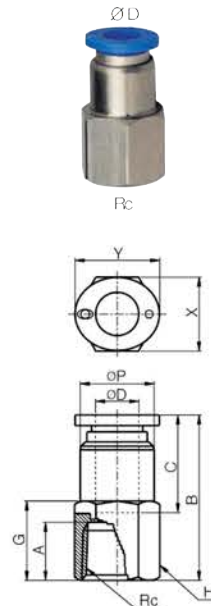
Tube (Metric) - Thread(R)		
MODEL	ØD	Rc
PCF 04-01	4	Rc1/8
PCF 04-02	4	Rc1/4
PCF 04-03	4	Rc3/8
PCF 06-01	6	Rc1/8
PCF 06-02	6	Rc1/4
PCF 06-03	6	Rc3/8
PCF 08-01	8	Rc1/8
PCF 08-02	8	Rc1/4
PCF 08-03	8	Rc3/8
PCF 08-04	8	Rc1/2
PCF 10-01	10	Rc1/8
PCF 10-02	10	Rc1/4
PCF 10-03	10	Rc3/8
PCF 10-04	10	Rc1/2
PCF 12-02	12	Rc1/4
PCF 12-03	12	Rc3/8
PCF 12-04	12	Rc1/2

Tube (Inch) - Thread(R)		
MODEL	ØD	Rc
PCF 5/32-R01	5/32	Rc1/8
PCF 5/32-R02	5/32	Rc1/4
PCF 5/32-R03	5/32	Rc3/8
PCF 3/16-R01	3/16	Rc1/8
PCF 3/16-R02	3/16	Rc1/4
PCF 1/4-R01	1/4	Rc1/8
PCF 1/4-R02	1/4	Rc1/4
PCF 1/4-R03	1/4	Rc3/8
PCF 5/16-R01	5/16	Rc1/8
PCF 5/16-R02	5/16	Rc1/4
PCF 5/16-R03	5/16	Rc3/8
PCF 5/16-R04	5/16	Rc1/2
PCF 3/8-R01	3/8	Rc1/8
PCF 3/8-R02	3/8	Rc1/4
PCF 3/8-R03	3/8	Rc3/8
PCF 3/8-R04	3/8	Rc1/2
PCF 1/2-R02	1/2	Rc1/4
PCF 1/2-R03	1/2	Rc3/8
PCF 1/2-R04	1/2	Rc1/2

Tube (Inch) - Thread (NPT)		
MODEL	ØD	Rc
PCF 5/32-N01U	5/32	NPT1/8
PCF 5/32-N02U	5/32	NPT1/4
PCF 3/16-N01U	3/16	NPT1/8
PCF 3/16-N02U	3/16	NPT1/4
PCF 1/4-N01U	1/4	NPT1/8
PCF 1/4-N02U	1/4	NPT1/4
PCF 1/4-N03U	1/4	NPT3/8
PCF 5/16-N01U	5/16	NPT1/8
PCF 5/16-N02U	5/16	NPT1/4
PCF 5/16-N03U	5/16	NPT3/8
PCF 5/16-N04U	5/16	NPT1/2
PCF 3/8-N01U	3/8	NPT1/8
PCF 3/8-N02U	3/8	NPT1/4
PCF 3/8-N03U	3/8	NPT3/8
PCF 3/8-N04U	3/8	NPT1/2
PCF 1/2-N02U	1/2	NPT1/4
PCF 1/2-N03U	1/2	NPT3/8
PCF 1/2-N04U	1/2	NPT1/2

### PCF-G

Female Straight

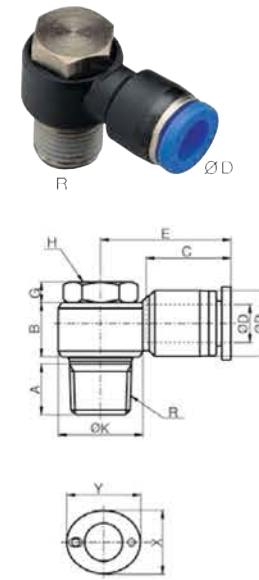


MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	Rc
PCF 04-G01	4	G1/8
PCF 04-G02	4	G1/4
PCF 04-G03	4	G3/8
PCF 06-G01	6	G1/8
PCF 06-G02	6	G1/4
PCF 06-G03	6	G3/8
PCF 08-G01	8	G1/8
PCF 08-G02	8	G1/4
PCF 08-G03	8	G3/8
PCF 08-G04	8	G1/2
PCF 10-G01	10	G1/8
PCF 10-G02	10	G1/4
PCF 10-G03	10	G3/8
PCF 10-G04	10	G1/2
PCF 12-G02	12	G1/4
PCF 12-G03	12	G3/8
PCF 12-G04	12	G1/2

### PH

Male Banjo



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
PH 04-M5	4	M5
PH 04-M6	4	M6
PH 04-01	4	R1/8
PH 04-02	4	R1/4
PH 06-M5	6	M5
PH 06-M6	6	M6
PH 06-01	6	R1/8
PH 06-02	6	R1/4
PH 06-03	6	R3/8
PH 08-01	8	R1/8
PH 08-02	8	R1/4
PH 08-03	8	R3/8
PH 08-04	8	R1/2
PH 10-02	10	R1/4
PH 10-03	10	R3/8
PH 10-04	10	R1/2
PH 12-02	12	R1/4
PH 12-03	12	R3/8
PH 12-04	12	R1/2

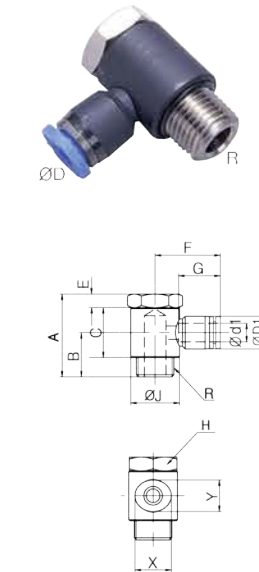
Tube (Inch) - Thread(R)		
MODEL	ØD	R
PH 5/32-M5	5/32	M5
PH 5/32-R01	5/32	R1/8
PH 1/4-M5	1/4	M5
PH 1/4-R01	1/4	R1/8
PH 1/4-R02	1/4	R1/4
PH 5/16-R01	5/16	R1/8
PH 5/16-R02	5/16	R1/4
PH 5/16-R03	5/16	R3/8
PH 3/8-R02	3/8	R1/4
PH 3/8-R03	3/8	R3/8
PH 3/8-R04	3/8	R1/2
PH 1/2-R03	1/2	R3/8
PH 1/2-R04	1/2	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	ØD	R
PH 5/32-U10U	5/32	UNF10 *32
PH 5/32-N01U	5/32	NPT1/8
PH 3/16-U10U	3/16	UNF10 *32
PH 3/16-N01U	3/16	NPT1/8
PH 3/16-N02U	3/16	NPT1/4
PH 3/16-N03U	3/16	NPT3/8
PH 1/4-U10U	1/4	UNF10 *32
PH 1/4-N01U	1/4	NPT1/8
PH 1/4-N02U	1/4	NPT1/4
PH 5/16-N01U	5/16	NPT1/8
PH 5/16-N02U	5/16	NPT1/4
PH 5/16-N03U	5/16	NPT3/8
PH 3/8-N02U	3/8	NPT1/4
PH 3/8-N03U	3/8	NPT3/8
PH 3/8-N04U	3/8	NPT1/2
PH 1/2-N03U	1/2	NPT3/8
PH 1/2-N04U	1/2	NPT1/2

\*Rotating body construction after a proper installation.

### PH-G

Female Banjo



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PH 04-G01	4	G1/8
PH 06-G01	6	G1/8
PH 06-G02	6	G1/4
PH 08-G01	8	G1/8
PH 08-G02	8	G1/4
PH 08-G03	8	G3/8
PH 10-G02	10	G1/4
PH 10-G03	10	G3/8
PH 12-G03	12	G3/8
PH 12-G04	12	G1/2



## PH(D2)

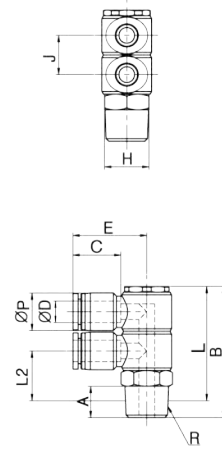
Double Universal Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PH 04-01(2)	4	R1/8
PH 04-02(2)	4	R1/4
PH 04-03(2)	4	R3/8
PH 06-01(2)	6	R1/8
PH 06-02(2)	6	R1/4
PH 06-03(2)	6	R3/8
PH 08-01(2)	8	R1/8
PH 08-02(2)	8	R1/4
PH 08-03(2)	8	R3/8
PH 08-04(2)	8	R1/2
PH 10-02(2)	10	R1/4
PH 10-03(2)	10	R3/8
PH 10-04(2)	10	R1/2
PH 12-02(2)	12	R1/4
PH 12-03(2)	12	R3/8
PH 12-04(2)	12	R1/2



\*Rotating body construction after a proper installation.

## PH(D2)-G

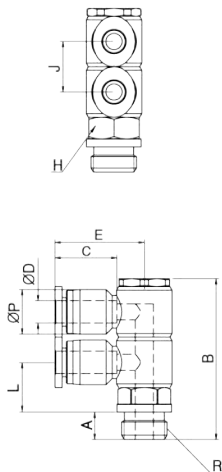
Double Universal Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PH 04-G01(2)	4	R1/8
PH 04-G02(2)	4	R1/4
PH 04-G03(2)	4	R3/8
PH 06-G01(2)	6	R1/8
PH 06-G02(2)	6	R1/4
PH 06-G03(2)	6	R3/8
PH 08-G01(2)	8	R1/8
PH 08-G02(2)	8	R1/4
PH 08-G03(2)	8	R3/8
PH 08-G04(2)	8	R1/2
PH 10-G02(2)	10	R1/4
PH 10-G03(2)	10	R3/8
PH 10-G04(2)	10	R1/2
PH 12-G02(2)	12	R1/4
PH 12-G03(2)	12	R3/8
PH 12-G04(2)	12	R1/2



## PH(D3)

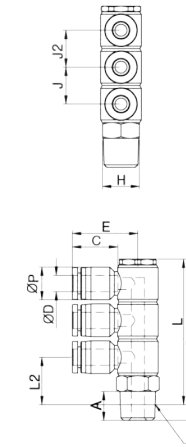
Triple Universal Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PH 04-01(3)	4	R1/8
PH 04-02(3)	4	R1/4
PH 04-03(3)	4	R3/8
PH 06-01(3)	6	R1/8
PH 06-02(3)	6	R1/4
PH 06-03(3)	6	R3/8
PH 08-01(3)	8	R1/8
PH 08-02(3)	8	R1/4
PH 08-03(3)	8	R3/8
PH 08-04(3)	8	R1/2
PH 10-02(3)	10	R1/4
PH 10-03(3)	10	R3/8
PH 10-04(3)	10	R1/2
PH 12-02(3)	12	R1/4
PH 12-03(3)	12	R3/8
PH 12-04(3)	12	R1/2



\*Rotating body construction after a proper installation.

## PH(D3)-G

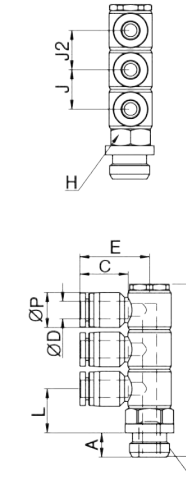
Triple Universal Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

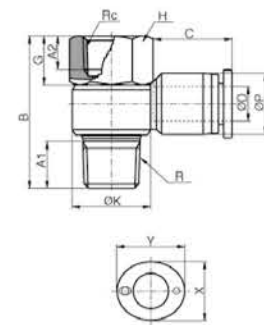
MODEL	ØD	R
PH 04-G01(3)	4	R1/8
PH 04-G02(3)	4	R1/4
PH 04-G03(3)	4	R3/8
PH 06-G01(3)	6	R1/8
PH 06-G02(3)	6	R1/4
PH 06-G03(3)	6	R3/8
PH 08-G01(3)	8	R1/8
PH 08-G02(3)	8	R1/4
PH 08-G03(3)	8	R3/8
PH 08-G04(3)	8	R1/2
PH 10-G02(3)	10	R1/4
PH 10-G03(3)	10	R3/8
PH 10-G04(3)	10	R1/2
PH 12-G02(3)	12	R1/4
PH 12-G03(3)	12	R3/8
PH 12-G04(3)	12	R1/2





### PHF

Female Banjo



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	Rc
PHF 04-M5	4	M5	
PHF 04-M6	4	M6	
PHF 04-01	4	R1/8	
PHF 04-02	4	R1/4	
PHF 06-M5	6	M5	
PHF 06-M6	6	M6	
PHF 06-01	6	R1/8	
PHF 06-02	6	R1/4	
PHF 06-03	6	R3/8	
PHF 08-01	8	R1/8	
PHF 08-02	8	R1/4	
PHF 08-03	8	R3/8	
PHF 08-04	8	R1/2	
PHF 10-02	10	R1/4	
PHF 10-03	10	R3/8	
PHF 10-04	10	R1/2	
PHF 12-02	12	R1/4	
PHF 12-03	12	R3/8	
PHF 12-04	12	R1/2	

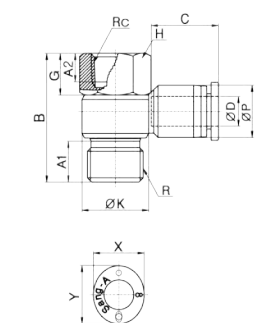
Tube (Inch) - Thread(R)			
MODEL	ØD	R	Rc
PHF 5/32-M5	5/32	M5	
PHF 5/32-R01	5/32	R1/8	
PHF 1/4-M5	1/4	M5	
PHF 1/4-R01	1/4	R1/8	
PHF 1/4-R02	1/4	R1/4	
PHF 5/16-R01	5/16	R1/8	
PHF 5/16-R02	5/16	R1/4	
PHF 5/16-R03	5/16	R3/8	
PHF 3/8-R02	3/8	R1/4	
PHF 3/8-R03	3/8	R3/8	
PHF 1/2-R03	1/2	R3/8	
PHF 1/2-R04	1/2	R1/2	

Tube (Inch) - Thread (NPT)			
MODEL	ØD	R	Rc
PHF 5/32-U10U	5/32	UNF10 * 32	
PHF 5/32-N01U	5/32	NPT1/8	
PHF 3/16-U10U	3/16	UNF10 * 32	
PHF 3/16-N01U	3/16	NPT1/8	
PHF 3/16-N02U	3/16	NPT1/4	
PHF 1/4-U10U	1/4	UNF10 * 32	
PHF 1/4-N01U	1/4	NPT1/8	
PHF 1/4-N02U	1/4	NPT1/4	
PHF 5/16-N01U	5/16	NPT1/8	
PHF 5/16-N02U	5/16	NPT1/4	
PHF 5/16-N03U	5/16	NPT3/8	
PHF 3/8-N02U	3/8	NPT1/4	
PHF 3/8-N03U	3/8	NPT3/8	
PHF 1/2-N03U	1/2	NPT3/8	
PHF 1/2-N04U	1/2	NPT1/2	

\*Rotating body construction after a proper installation.

### PHF-G

Female Banjo

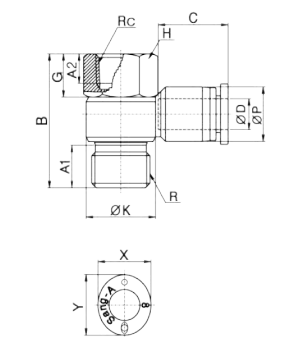


MODEL [ØD-T]

Tube (Metric) - Thread(G)			
MODEL	ØD	R	Rc
PHF 04-G01	4	R1/8	G1/8
PHF 06-G01	4	R1/8	G1/8
PHF 06-G02	4	R1/4	G1/4
PHF 08-G01	6	R1/8	G1/8
PHF 08-G02	6	R1/4	G1/4
PHF 08-G03	6	R3/8	G3/8
PHF 10-G02	8	R1/4	G1/4
PHF 10-G03	8	R3/8	G3/8
PHF 12-G03	12	R3/8	G3/8
PHF 12-G04	12	R1/2	G1/2

### PHF-GG

Female Banjo

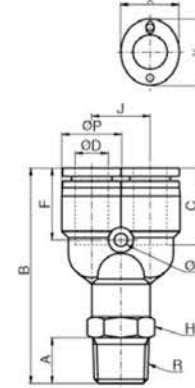


MODEL [ØD-T]

Tube (Metric) - Thread(G)			
MODEL	ØD	R	Rc
PHF 04G01-G01	4	R1/8	G1/8
PHF 06G01-G01	4	R1/8	G1/8
PHF 06G02-G02	4	R1/4	G1/4
PHF 08G01-G01	6	R1/8	G1/8
PHF 08G02-G02	6	R1/4	G1/4
PHF 08G03-G03	6	R3/8	G3/8
PHF 10G02-G02	8	R1/4	G1/4
PHF 10G03-G03	8	R3/8	G3/8
PHF 12G03-G03	12	R3/8	G3/8
PHF 12G04-G04	12	R1/2	G1/2

### PWT

Male Y



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
PWT 04-M5	4	M5
PWT 04-M6	4	M6
PWT 04-01	4	R1/8
PWT 04-02	4	R1/4
PWT 04-03	4	R3/8
PWT 06-M5	6	M5
PWT 06-M6	6	M6
PWT 06-01	6	R1/8
PWT 06-02	6	R1/4
PWT 06-03	6	R3/8
PWT 08-01	8	R1/8
PWT 08-02	8	R1/4
PWT 08-03	8	R3/8
PWT 08-04	8	R1/2
PWT 10-01	10	R1/8
PWT 10-02	10	R1/4
PWT 10-03	10	R3/8
PWT 10-04	10	R1/2
PWT 12-01	12	R1/8
PWT 12-02	12	R1/4
PWT 12-03	12	R3/8
PWT 12-04	12	R1/2

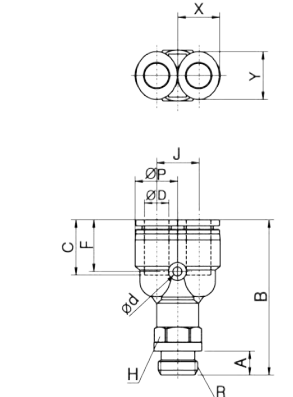
Tube (Inch) - Thread(R)		
MODEL	ØD	R
PWT 5/32-R01	5/32	R1/8
PWT 5/32-R02	5/32	R1/4
PWT 3/16-R01	3/16	R1/8
PWT 3/16-R02	3/16	R1/4
PWT 3/16-R03	3/16	R3/8
PWT 1/4-R01	1/4	R1/8
PWT 1/4-R02	1/4	R1/4
PWT 1/4-R03	1/4	R3/8
PWT 5/16-R01	5/16	R1/8
PWT 5/16-R02	5/16	R1/4
PWT 5/16-R03	5/16	R3/8
PWT 5/16-R04	5/16	R1/2
PWT 3/8-R01	3/8	R1/8
PWT 3/8-R02	3/8	R1/4
PWT 3/8-R03	3/8	R3/8
PWT 3/8-R04	3/8	R1/2
PWT 1/2-R02	1/2	R1/4
PWT 1/2-R03	1/2	R3/8
PWT 1/2-R04	1/2	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	ØD	R
PWT 5/32-U10U	5/32	UNF10 * 32
PWT 5/32-N01U	5/32	NPT1/8
PWT 5/32-N02U	5/32	NPT1/4
PWT 3/16-U10U	3/16	UNF10 * 32
PWT 3/16-N01U	3/16	NPT1/8
PWT 3/16-N02U	3/16	NPT1/4
PWT 3/16-N03U	3/16	NPT3/8
PWT 1/4-U10U	1/4	UNF10 * 32
PWT 1/4-N01U	1/4	NPT1/8
PWT 1/4-N02U	1/4	NPT1/4
PWT 1/4-N03U	1/4	NPT3/8
PWT 5/16-N01U	5/16	NPT1/8
PWT 5/16-N02U	5/16	NPT1/4
PWT 5/16-N03U	5/16	NPT3/8
PWT 5/16-N04U	5/16	NPT1/2
PWT 3/8-N01U	3/8	NPT1/8
PWT 3/8-N02U	3/8	NPT1/4
PWT 3/8-N03U	3/8	NPT3/8
PWT 3/8-N04U	3/8	NPT1/2
PWT 1/2-N02U	1/2	NPT1/4
PWT 1/2-N03U	1/2	NPT3/8
PWT 1/2-N04U	1/2	NPT1/2

\*Rotating body construction after a proper installation.

### PWT-G

Male Y



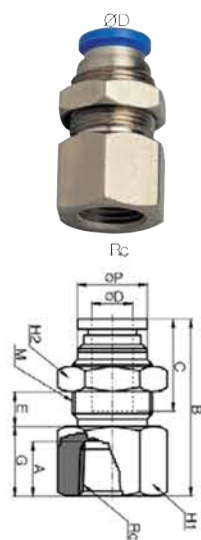
MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PWT 04-G01	4	G1/8
PWT 04-G02	4	G1/4
PWT 04-G03	4	G3/8
PWT 06-G01	6	G1/8
PWT 06-G02	6	G1/4
PWT 06-G03	6	G3/8
PWT 06-G04	6	G1/2
PWT 08-G01	8	G1/8
PWT 08-G02	8	G1/4
PWT 08-G03	8	G3/8
PWT 08-G04	8	G1/2
PWT 10-G01	10	G1/8
PWT 10-G02	10	G1/4
PWT 10-G03	10	G3/8
PWT 10-G04	10	G1/2
PWT 12-G01	12	G1/8
PWT 12-G02	12	G1/4
PWT 12-G03	12	G3/8
PWT 12-G04	12	G1/2



### PMF

Bulkhead Female Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	Rc
PMF 04-01	4	Rc1/8
PMF 04-02	4	Rc1/4
PMF 04-03	4	Rc3/8
PMF 06-01	6	Rc1/8
PMF 06-02	6	Rc1/4
PMF 06-03	6	Rc3/8
PMF 08-01	8	Rc1/8
PMF 08-02	8	Rc1/4
PMF 08-03	8	Rc3/8
PMF 08-04	8	Rc1/2
PMF 10-01	10	Rc1/8
PMF 10-02	10	Rc1/4
PMF 10-03	10	Rc3/8
PMF 10-04	10	Rc1/2
PMF 12-01	12	Rc1/8
PMF 12-02	12	Rc1/4
PMF 12-03	12	Rc3/8
PMF 12-04	12	Rc1/2

**Tube (Inch) - Thread(R)**

MODEL	ØD	Rc
PMF 5/32-R01	5/32	Rc1/8
PMF 5/32-R02	5/32	Rc1/4
PMF 5/32-R03	5/32	Rc3/8
PMF 3/16-R01	3/16	Rc1/8
PMF 3/16-R02	3/16	Rc1/4
PMF 1/4-R01	1/4	Rc1/8
PMF 1/4-R02	1/4	Rc1/4
PMF 1/4-R03	1/4	Rc3/8
PMF 5/16-R01	5/16	Rc1/8
PMF 5/16-R02	5/16	Rc1/4
PMF 5/16-R03	5/16	Rc3/8
PMF 5/16-R04	5/16	Rc1/2
PMF 3/8-R01	3/8	Rc1/8
PMF 3/8-R02	3/8	Rc1/4
PMF 3/8-R03	3/8	Rc3/8
PMF 3/8-R04	3/8	Rc1/2
PMF 1/2-R01	1/2	Rc1/8
PMF 1/2-R02	1/2	Rc1/4
PMF 1/2-R03	1/2	Rc3/8
PMF 1/2-R04	1/2	Rc1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	Rc
PMF 5/32-N01U	5/32	NPT1/8
PMF 3/16-N01U	5/32	NPT1/8
PMF 3/16-N02U	5/32	NPT1/4
PMF 1/4-N01U	1/4	NPT1/8
PMF 1/4-N02U	1/4	NPT1/4
PMF 5/16-N01U	5/16	NPT1/8
PMF 5/16-N02U	5/16	NPT1/4
PMF 5/16-N03U	5/16	NPT3/8
PMF 3/8-N02U	3/8	NPT1/4
PMF 3/8-N03U	3/8	NPT3/8
PMF 1/2-N02U	1/2	NPT1/4
PMF 1/2-N03U	1/2	NPT3/8
PMF 1/2-N04U	1/2	NPT1/2

### PCJ

Plug-In Male



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

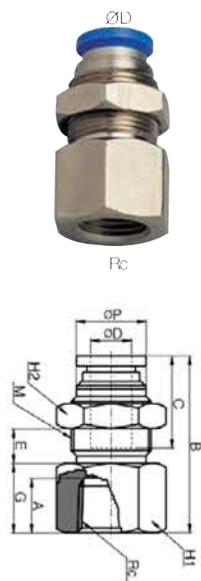
MODEL	ØD	R
PCJ 04-M5	4	M5
PCJ 04-01	4	R1/8
PCJ 04-02	4	R1/4
PCJ 06-M5	6	M5
PCJ 06-01	6	R1/8
PCJ 06-02	6	R1/4
PCJ 06-03	8	R3/8
PCJ 08-01	8	R1/8
PCJ 08-02	8	R1/4
PCJ 08-03	8	R3/8
PCJ 10-02	10	R1/4
PCJ 10-03	10	R3/8
PCJ 10-04	10	R1/2
PCJ 12-02	10	R1/4
PCJ 12-03	12	R3/8
PCJ 12-04	12	R1/2
PCJ 16-03	16	R3/8
PCJ 16-04	16	R1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PCJ 5/32-U10U	5/32	UNF10 * 32
PCJ 5/32-N01U	5/32	NPT1/8
PCJ 5/32-N02U	5/32	NPT1/4
PCJ 3/16-U10U	3/16	UNF10 * 32
PCJ 3/16-N01U	3/16	NPT1/8
PCJ 3/16-N02U	3/16	NPT1/4
PCJ 1/4-U10U	1/4	UNF10 * 32
PCJ 1/4-N01U	1/4	NPT1/8
PCJ 1/4-N02U	1/4	NPT1/4
PCJ 1/4-N03U	1/4	NPT3/8
PCJ 5/16-N02U	5/16	NPT1/4
PCJ 5/16-N03U	5/16	NPT3/8
PCJ 3/8-N02U	3/8	NPT1/4
PCJ 3/8-N03U	3/8	NPT3/8
PCJ 3/8-N04U	3/8	NPT1/2
PCJ 1/2-N02U	1/2	NPT1/4
PCJ 1/2-N03U	1/2	NPT3/8
PCJ 1/2-N04U	1/2	NPT1/2

### PMF-G

Bulkhead Female Straight



MODEL [ØD-T]

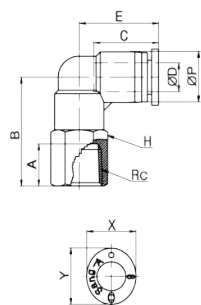
**Tube (Metric) - Thread(G)**

MODEL	ØD	Rc
PMF 04-G01	4	G1/8
PMF 04-G02	4	G1/4
PMF 04-G03	4	G3/8
PMF 06-G01	6	G1/8
PMF 06-G02	6	G1/4
PMF 06-G03	6	G3/8
PMF 08-G01	8	G1/8
PMF 08-G02	8	G1/4
PMF 08-G03	8	G3/8
PMF 08-G04	8	G1/2
PMF 10-G01	10	G1/8
PMF 10-G02	10	G1/4
PMF 10-G03	10	G3/8
PMF 10-G04	10	G1/2
PMF 12-G01	12	G1/8
PMF 12-G02	12	G1/4
PMF 12-G03	12	G3/8
PMF 12-G04	12	G1/2



# PLF

Female Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	Rc
PLF 04-M5	4	M5
PLF 04-M6	4	M6
PLF 04-01	4	Rc1/8
PLF 04-02	4	Rc1/4
PLF 06-M5	6	M5
PLF 06-M6	6	M6
PLF 06-01	6	Rc1/8
PLF 06-02	6	Rc1/4
PLF 06-03	6	Rc3/8
PLF 08-01	8	Rc1/8
PLF 08-02	8	Rc1/4
PLF 08-03	8	Rc3/8
PLF 10-02	10	Rc1/4
PLF 10-03	10	Rc3/8
PLF 10-04	10	Rc1/2

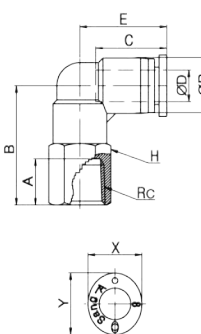
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	Rc
PLF 5/32-U10U	5/32	UNF10 *32
PLF 5/32-N01U	5/32	NPT1/8
PLF 5/32-N02U	5/32	NPT1/4
PLF 3/16-U10U	3/16	UNF10 *32
PLF 3/16-N01U	3/16	NPT1/8
PLF 3/16-N02U	3/16	NPT1/4
PLF 3/16-N03U	3/16	NPT3/8
PLF 1/4-U10U	1/4	UNF10 *32
PLF 1/4-N01U	1/4	NPT1/8
PLF 1/4-N02U	1/4	NPT1/4
PLF 1/4-N03U	1/4	NPT3/8
PLF 5/16-N01U	5/16	NPT1/8
PLF 5/16-N02U	5/16	NPT1/4
PLF 5/16-N03U	5/16	NPT3/8
PLF 3/8-N02U	3/8	NPT1/4
PLF 3/8-N03U	3/8	NPT3/8
PLF 3/8-N04U	3/8	NPT1/2

\*Rotating body construction after a proper installation.

# PLF-G

Female Elbow



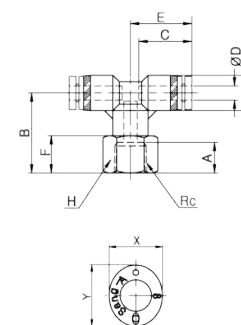
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	Rc
PLF 04-G01	4	G1/8
PLF 04-G02	4	G1/4
PLF 06-G01	6	G1/8
PLF 06-G02	6	G1/4
PLF 06-G03	6	G3/8
PLF 08-G01	8	G1/8
PLF 08-G02	8	G1/4
PLF 08-G03	8	G3/8
PLF 10-G02	10	G1/4
PLF 10-G03	10	G3/8
PLF 10-G04	10	G1/2

# PTF

Female Branch Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	Rc
PTF 04-M5	4	M5
PTF 04-M6	4	M6
PTF 04-01	4	Rc1/8
PTF 04-02	4	Rc1/4
PTF 06-M5	6	M5
PTF 06-M6	6	M6
PTF 06-01	6	Rc1/8
PTF 06-02	6	Rc1/4
PTF 06-03	6	Rc3/8
PTF 08-01	8	Rc1/8
PTF 08-02	8	Rc1/4
PTF 08-03	8	Rc3/8
PTF 10-02	10	Rc1/4
PTF 10-03	10	Rc3/8
PTF 10-04	10	Rc1/2

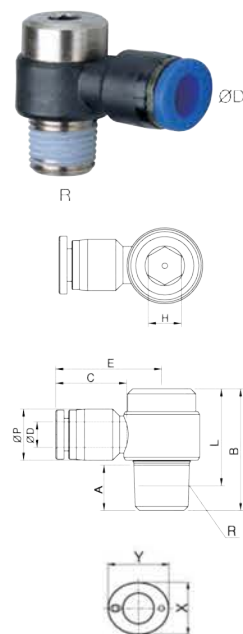
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	Rc
PTF 5/32-U10U	5/32	UNF10 *32
PTF 5/32-N01U	5/32	NPT1/8
PTF 5/32-N02U	5/32	NPT1/4
PTF 3/16-U01U	3/16	UNF10 *32
PTF 3/16-N01U	3/16	NPT1/8
PTF 3/16-N02U	3/16	NPT1/4
PTF 3/16-N03U	3/16	NPT3/8
PTF 1/4-U10U	1/4	UNF10 *32
PTF 1/4-N01U	1/4	NPT1/8
PTF 1/4-N02U	1/4	NPT1/4
PTF 1/4-N03U	1/4	NPT3/8
PTF 5/16-N01U	5/16	NPT1/8
PTF 5/16-N02U	5/16	NPT1/4
PTF 5/16-N03U	5/16	NPT3/8
PTF 3/8-N02U	3/8	NPT1/4
PTF 3/8-N03U	3/8	NPT3/8
PTF 3/8-N04U	3/8	NPT1/2



# POL

Hex. Holed Banjo



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
POL 04-M5	4	M5
POL 04-M6	4	M6
POL 04-01	4	R1/8
POL 06-M5	6	M5
POL 06-M6	6	M6
POL 06-01	6	R1/8
POL 06-02	6	R1/4
POL 06-03	6	R3/8
POL 08-01	8	R1/8
POL 08-02	8	R1/4
POL 08-03	8	R3/8
POL 08-04	8	R1/2
POL 10-02	10	R1/4
POL 10-03	10	R3/8
POL 10-04	10	R1/2
POL 12-02	12	R1/4
POL 12-03	12	R3/8
POL 12-04	12	R1/2

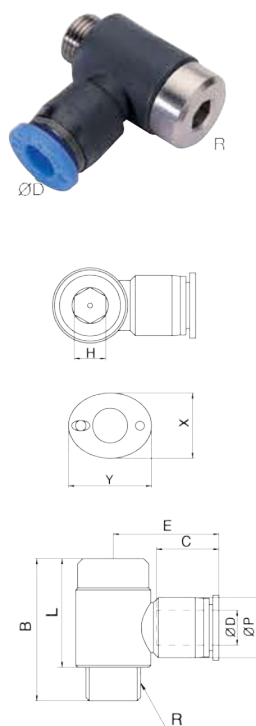
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
POL 5/32-U10U	5/32	UNF10 * 32
POL 5/32-N01U	5/32	NPT1/8
POL 3/16-U10U	3/16	UNF10 * 32
POL 3/16-N01U	3/16	NPT1/8
POL 3/16-N02U	3/16	NPT1/4
POL 3/16-N03U	3/16	NPT3/8
POL 1/4-U10U	1/4	UNF10 * 32
POL 1/4-N01U	1/4	NPT1/8
POL 1/4-N02U	1/4	NPT1/4
POL 1/4-N03U	1/4	NPT3/8
POL 5/16-N01U	5/16	NPT1/8
POL 5/16-N02U	5/16	NPT1/4
POL 5/16-N03U	5/16	NPT3/8
POL 5/16-N04U	5/16	NPT1/2
POL 3/8-N02U	3/8	NPT1/4
POL 3/8-N03U	3/8	NPT3/8
POL 3/8-N04U	3/8	NPT1/2
POL 1/2-N03U	1/2	NPT3/8
POL 1/2-N04U	1/2	NPT1/2

\*Rotating body construction after a proper installation.

# POL-G

Extended Male Elbow



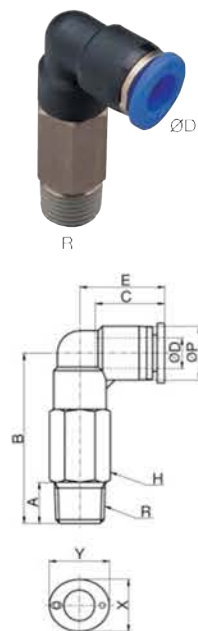
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
POL 04-G01	4	PF1/8
POL 06-G01	6	PF1/8
POL 06-G02	6	PF1/4
POL 08-G01	8	PF1/8
POL 08-G02	8	PF1/4
POL 08-G03	8	PF3/8
POL 10-G02	8	PF1/4
POL 10-G03	10	PF3/8
POL 12-G03	12	PF3/8
POL 12-G04	12	PF1/2

# PLL

Extended Male Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	Rc
PLL 04-M5	4	M5
PLL 04-M6	4	M6
PLL 04-01	4	R1/8
PLL 04-02	4	R1/4
PLL 04-03	4	R3/8
PLL 06-M5	6	M5
PLL 06-M6	6	M6
PLL 06-01	6	R1/8
PLL 06-02	6	R1/4
PLL 06-03	6	R3/8
PLL 08-01	8	R1/8
PLL 08-02	8	R1/4
PLL 08-03	8	R3/8
PLL 08-04	8	R1/2
PLL 10-01	10	R1/8
PLL 10-02	10	R1/4
PLL 10-03	10	R3/8
PLL 10-04	10	R1/2
PLL 12-01	12	R1/8
PLL 12-02	12	R1/4
PLL 12-03	12	R3/8
PLL 12-04	12	R1/2

**Tube (Inch) - Thread(R)**

MODEL	ØD	R
PLL 5/32-R01	5/32	R1/8
PLL 5/32-R02	5/32	R1/4
PLL 5/32-R03	5/32	R3/8
PLL 3/16-R01	3/16	R1/8
PLL 3/16-R02	3/16	R1/4
PLL 3/16-R03	3/16	R3/8
PLL 1/4-R01	1/4	R1/8
PLL 1/4-R02	1/4	R1/4
PLL 1/4-R03	1/4	R3/8
PLL 5/16-R01	5/16	R1/8
PLL 5/16-R02	5/16	R1/4
PLL 5/16-R03	5/16	R3/8
PLL 5/16-R04	5/16	R1/2
PLL 3/8-R01	3/8	R1/8
PLL 3/8-R02	3/8	R1/4
PLL 3/8-R03	3/8	R3/8
PLL 3/8-R04	3/8	R1/2
PLL 1/2-R01	1/2	R1/8
PLL 1/2-R02	1/2	R1/4
PLL 1/2-R03	1/2	R3/8
PLL 1/2-R04	1/2	R1/2

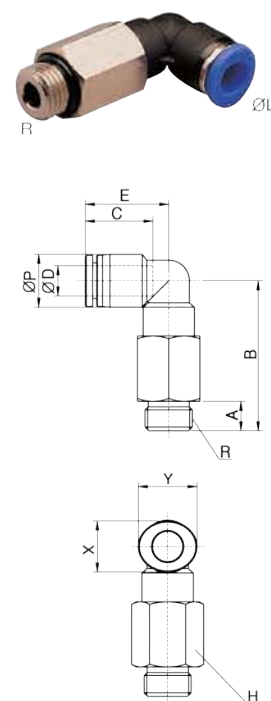
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PLL 5/32-U10U	5/32	UNF10 * 32
PLL 5/32-N01U	5/32	NPT1/8
PLL 5/32-N02U	5/32	NPT1/4
PLL 5/32-N03U	5/32	NPT3/8
PLL 3/16-N01U	3/16	NPT1/8
PLL 3/16-N02U	3/16	NPT1/4
PLL 3/16-N03U	3/16	NPT3/8
PLL 1/4-U10U	1/4	UNF10 * 32
PLL 1/4-N01U	1/4	NPT1/8
PLL 1/4-N02U	1/4	NPT1/4
PLL 1/4-N03U	1/4	NPT3/8
PLL 5/16-N01U	5/16	NPT1/8
PLL 5/16-N02U	5/16	NPT1/4
PLL 5/16-N03U	5/16	NPT3/8
PLL 3/8-N01U	3/8	NPT1/8
PLL 3/8-N02U	3/8	NPT1/4
PLL 3/8-N03U	3/8	NPT3/8
PLL 3/8-N04U	3/8	NPT1/2
PLL 1/2-N02U	1/2	NPT1/4
PLL 1/2-N03U	1/2	NPT3/8
PLL 1/2-N04U	1/2	NPT1/2

\*Hexagonal wrench may be used for a proper tightening.

# PLL-G

Extended Male Elbow



MODEL [ØD-T]

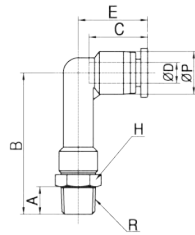
**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PLL 04-G01	4	G1/8
PLL 04-G02	4	G1/4
PLL 04-G03	4	G3/8
PLL 06-G01	6	G1/8
PLL 06-G02	6	G1/4
PLL 06-G03	6	G3/8
PLL 06-G04	6	G1/2
PLL 08-G01	8	G1/8
PLL 08-G02	8	G1/4
PLL 08-G03	8	G3/8
PLL 08-G04	8	G1/2
PLL 10-G01	10	G1/8
PLL 10-G02	10	G1/4
PLL 10-G03	10	G3/8
PLL 10-G04	10	G1/2
PLL 12-G01	12	G1/8
PLL 12-G02	12	G1/4
PLL 12-G03	12	G3/8
PLL 12-G04	12	G1/2
PLL 16-G04	16	G1/2



# PLLP

Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PLLP 04-M5	4	M5
PLLP 04-M6	4	M6
PLLP 04-01	4	PT1/8
PLLP 04-02	4	PT1/4
PLLP 04-03	4	PT3/8
PLLP 06-M5	6	M5
PLLP 06-M6	6	M6
PLLP 06-01	6	PT1/8
PLLP 06-02	6	PT1/4
PLLP 06-03	6	PT3/8
PLLP 06-04	6	PT1/2
PLLP 08-01	8	PT1/8
PLLP 08-02	8	PT1/4
PLLP 08-03	8	PT3/8
PLLP 08-04	8	PT1/2
PLLP 10-01	10	PT1/8
PLLP 10-02	10	PT1/4
PLLP 10-03	10	PT3/8
PLLP 10-04	10	PT1/2
PLLP 12-01	12	PT1/8
PLLP 12-02	12	PT1/4
PLLP 12-03	12	PT3/8
PLLP 12-04	12	PT1/2

**Tube (Inch) - Thread(R)**

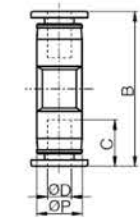
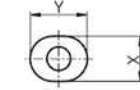
MODEL	ØD	R
PLLP 5/32-R01	5/32	PT1/8
PLLP 5/32-R02	5/32	PT1/4
PLLP 5/32-R03	5/32	PT3/8
PLLP 1/4-R01	1/4	PT1/8
PLLP 1/4-R02	1/4	PT1/4
PLLP 1/4-R03	1/4	PT3/8
PLLP 1/4-R04	1/4	PT1/2
PLLP 5/16-R01	5/16	PT1/8
PLLP 5/16-R02	5/16	PT1/4
PLLP 5/16-R03	5/16	PT3/8
PLLP 5/16-R04	5/16	PT1/2
PLLP 3/8-R01	3/8	PT1/8
PLLP 3/8-R02	3/8	PT1/4
PLLP 3/8-R03	3/8	PT3/8
PLLP 3/8-R04	3/8	PT1/2
PLLP 1/2-R01	1/2	PT1/8
PLLP 1/2-R02	1/2	PT1/4
PLLP 1/2-R03	1/2	PT3/8
PLLP 1/2-R04	1/2	PT1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PLLP 5/32-U10	5/32	U10U
PLLP 5/32-N01	5/32	NPT1/8
PLLP 5/32-N02	5/32	NPT1/4
PLLP 5/32-N03	5/32	NPT3/8
PLLP 1/4-U10	1/4	U10U
PLLP 1/4-N01	1/4	NPT1/8
PLLP 1/4-N02	1/4	NPT1/4
PLLP 1/4-N03	1/4	NPT3/8
PLLP 1/4-N04	1/4	NPT1/2
PLLP 5/16-N01	5/16	NPT1/8
PLLP 5/16-N02	5/16	NPT1/4
PLLP 5/16-N03	5/16	NPT3/8
PLLP 5/16-N04	5/16	NPT1/2
PLLP 3/8-N01	3/8	NPT1/8
PLLP 3/8-N02	3/8	NPT1/4
PLLP 3/8-N03	3/8	NPT3/8
PLLP 3/8-N04	3/8	NPT1/2
PLLP 1/2-N02	1/2	NPT1/4
PLLP 1/2-N03	1/2	NPT3/8
PLLP 1/2-N04	1/2	NPT1/2

# PUC

Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PUC 04	4
PUC 06	6
PUC 08	8
PUC 10	10
PUC 12	12
PUC 16	16

**Tube (Inch) - Thread(R)**

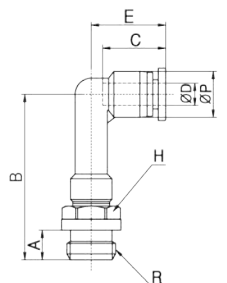
MODEL	ØD
PUC 5/32	5/32
PUC 3/16	3/16
PUC 1/4	1/4
PUC 5/16	5/16
PUC 3/8	3/8
PUC 1/2	1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PUC 5/32	5/32
PUC 3/16	3/16
PUC 1/4	1/4
PUC 5/16	5/16
PUC 3/8	3/8
PUC 1/2	1/2

# PLLP-G

Extended Male Elbow



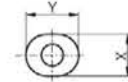
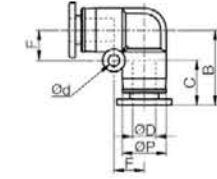
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PLLP 04-G01	4	G1/8
PLLP 04-G02	4	G1/4
PLLP 04-G03	4	G3/8
PLLP 06-G01	6	G1/8
PLLP 06-G02	6	G1/4
PLLP 06-G03	6	G3/8
PLLP 06-G04	6	G1/2
PLLP 08-G01	8	G1/8
PLLP 08-G02	8	G1/4
PLLP 08-G03	8	G3/8
PLLP 08-G04	8	G1/2
PLLP 10-G01	10	G1/8
PLLP 10-G02	10	G1/4
PLLP 10-G03	10	G3/8
PLLP 10-G04	10	G1/2
PLLP 12-G01	12	G1/8
PLLP 12-G02	12	G1/4
PLLP 12-G03	12	G3/8
PLLP 12-G04	12	G1/2

# PUL

Union Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PUL 04	4
PUL 06	6
PUL 08	8
PUL 10	10
PUL 12	12
PUL 16	16

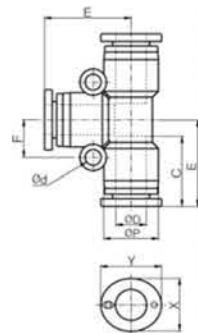
**Tube (Inch) - Thread(R)**

MODEL	ØD
PUL 5/32	5/32
PUL 3/16	3/16
PUL 1/4	1/4
PUL 5/16	5/16
PUL 3/8	3/8
PUL 1/2	1/2



## PUT

Union Tee



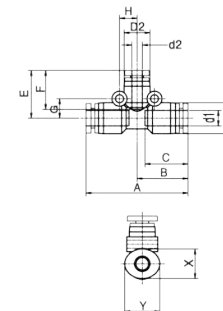
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PUT 04	4
PUT 06	6
PUT 08	8
PUT 10	10
PUT 12	12
PUT 16	16

Tube (Inch) - Thread(R)	
MODEL	ØD
PUT 5/32	5/32
PUT 3/16	3/16
PUT 1/4	1/4
PUT 5/16	5/16
PUT 3/8	3/8
PUT 1/2	1/2

## PUG

Different Dia of Union Tee



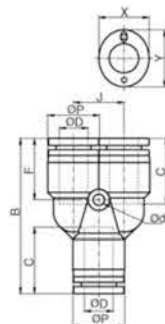
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PUG 06-04	6	4
PUG 08-04	8	4
PUG 08-06	8	6
PUG 10-06	10	6
PUG 10-08	10	8
PUG 12-08	12	8
PUG 12-10	12	10

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PUG 1/4-5/32	1/4	5/32
PUG 5/16-5/32	5/16	5/32
PUG 5/16-1/4	5/16	1/4
PUG 3/8-1/4	3/8	1/4
PUG 3/8-5/16	3/8	5/16
PUG 1/2-5/16	1/2	5/16
PUG 1/2-3/8	1/2	3/8

## PY

Union Y



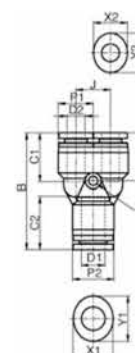
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PY 04	4
PY 06	6
PY 08	8
PY 10	10
PY 12	12

Tube (Inch) - Thread(R)	
MODEL	ØD
PY 5/32	5/32
PY 3/16	3/16
PY 1/4	1/4
PY 5/16	5/16
PY 3/8	3/8
PY 1/2	1/2

## PW

Reducer Y



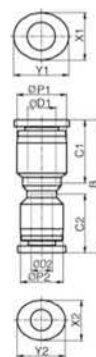
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PW 06-04	6	4
PW 08-04	8	4
PW 08-06	8	6
PW 10-06	10	6
PW 10-08	10	8
PW 12-08	12	8
PW 12-10	12	10

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PW 3/16-5/32	3/16	5/32
PW 1/4-5/32	1/4	5/32
PW 1/4-3/16	1/4	3/16
PW 5/16-5/32	5/16	5/32
PW 5/16-1/4	5/16	1/4
PW 3/8-1/4	3/8	1/4
PW 3/8-5/16	3/8	5/16
PW 1/2-5/16	1/2	5/16
PW 1/2-3/8	1/2	3/8

## PG

Reducer



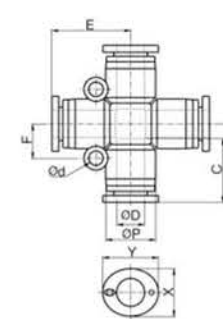
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PG 06-04	6	4
PG 08-04	8	4
PG 08-06	8	6
PG 10-06	10	6
PG 10-08	10	8
PG 12-08	12	8
PG 12-10	12	10
PG 16-12	16	12

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PG 3/16-5/32	3/16	5/32
PG 1/4-5/32	1/4	5/32
PG 1/4-3/16	1/4	3/16
PG 5/16-5/32	5/16	5/32
PG 5/16-1/4	5/16	1/4
PG 3/8-1/4	3/8	1/4
PG 3/8-5/16	3/8	5/16
PG 1/2-5/16	1/2	5/16
PG 1/2-3/8	1/2	3/8

## PZA

Union Cross



MODEL [ØD-T]

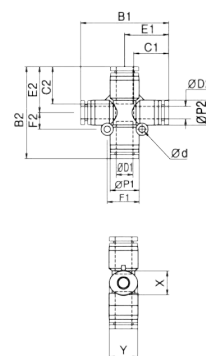
Tube (Metric) - Thread(R)	
MODEL	ØD
PZA 04	4
PZA 06	6
PZA 08	8
PZA 10	10
PZA 12	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
PZA 5/32	5/32
PZA 3/16	3/16
PZA 1/4	1/4
PZA 5/16	5/16
PZA 3/8	3/8
PZA 1/2	1/2



## PZA22

Different Dia of Union Cross(2/2)



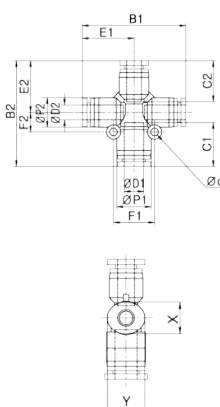
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
PZA22 08-06	8	6	
PZA22 10-08	10	8	
PZA22 12-10	12	10	

Tube (Inch) - Thread (NPT)			
MODEL	ØD1	ØD2	
PZA22 5/16-1/4	5/16	1/4	
PZA22 3/8-5/16	3/8	5/16	
PZA22 1/2-3/8	1/2	3/8	

## PZA31

Different Dia of Union Cross(3/1)



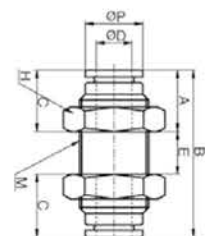
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
PZA31 08-06	8	6	
PZA31 10-08	10	8	
PZA31 12-10	12	10	

Tube (Inch) - Thread (NPT)			
MODEL	ØD1	ØD2	
PZA31 5/16-1/4	5/16	1/4	
PZA31 3/8-5/16	3/8	5/16	
PZA31 1/2-3/8	1/2	3/8	

## PMM

Bulkhead Union



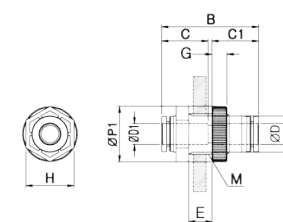
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	
PMM 04	4	
PMM 06	6	
PMM 08	8	
PMM 10	10	
PMM 12	12	

Tube (Metric) - Thread(R)		
MODEL	ØD	
PMM 5/32	5/32	
PMM 3/16	3/16	
PMM 1/4	1/4	
PMM 5/16	5/16	
PMM 3/8	3/8	
PMM 1/2	1/2	

## PPM

Bulkhead Union P



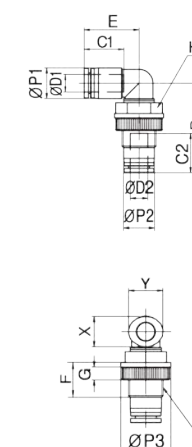
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PPM 04	4
PPM 06	6
PPM 08	8
PPM 10	10
PPM 12	12

Tube (Metric) - Thread(R)	
MODEL	ØD
PPM 3/16	3/16
PPM 1/4	1/4
PPM 3/8	3/8
PPM 1/2	1/2

## PLM

Bulkhead Union P



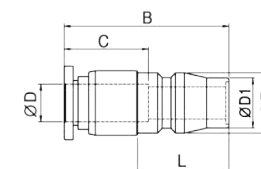
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PLM 04	4
PLM 06	6
PLM 08	8
PLM 10	10
PLM 12	12

Tube (Metric) - Thread(R)	
MODEL	ØD
PLM 3/16	3/16
PLM 1/4	1/4
PLM 3/8	3/8
PLM 1/2	1/2

## PCP

Straight Ace Coupler Plug



MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PCP 04	4
PCP 06	6
PCP 08	8
PCP 10	10
PCP 12	12
PCP 16	16



## PA

Dual Male Banjo



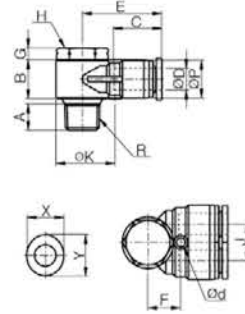
MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R	ØP
PA 04-M5	4	M5	10.4
PA 06-01	6	R1/8	12.4
PA 08-02	8	R1/4	14.4
PA 10-02	10	R1/4	17.6
PA 10-03	12	R3/8	17.6
PA 12-04	16	R1/2	21

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R	ØP
PA 5/32-U10U	5/32	UNF10 *32	10
PA 3/16-N01U	3/16	NPT1/8	12.5
PA 1/4-N01U	1/4	NPT1/8	14.4
PA 5/16-N02U	5/16	NPT1/4	18
PA 3/8-N03U	3/8	NPT3/8	21
PA 1/2-N04U	1/2	NPT1/2	21



\*Rotating body construction after a proper installation.

## PA(D2)

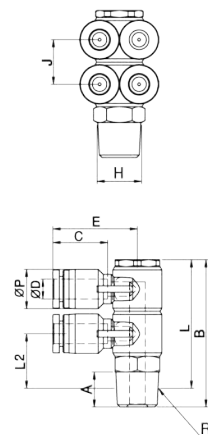
Double Branch A



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PA 04-01(2)	4	R1/8
PA 04-02(2)	4	R1/4
PA 04-03(2)	4	R3/8
PA 06-01(2)	6	R1/8
PA 06-02(2)	6	R1/4
PA 06-03(2)	6	R3/8
PA 08-01(2)	8	R1/8
PA 08-02(2)	8	R1/4
PA 08-03(2)	8	R3/8
PA 08-04(2)	8	R1/2
PA 10-02(2)	10	R1/4
PA 10-03(2)	10	R3/8
PA 10-04(2)	10	R1/2
PA 12-02(2)	10	R1/4
PA 12-03(2)	12	R3/8
PA 12-04(2)	12	R1/2



\*Rotating body construction after a proper installation.

## PA(D2)-G

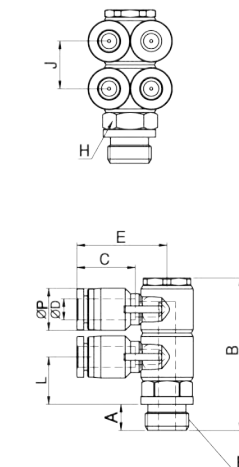
Double Branch A



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PA 04-G01(2)	4	R1/8
PA 04-G02(2)	4	R1/4
PA 04-G03(2)	4	R3/8
PA 06-G01(2)	6	R1/8
PA 06-G02(2)	6	R1/4
PA 06-G03(2)	6	R3/8
PA 08-G01(2)	8	R1/8
PA 08-G02(2)	8	R1/4
PA 08-G03(2)	8	R3/8
PA 08-G04(2)	8	R1/2
PA 10-G02(2)	10	R1/4
PA 10-G03(2)	10	R3/8
PA 10-G04(2)	10	R1/2
PA 12-G02(2)	12	R1/4
PA 12-G03(2)	12	R3/8
PA 12-G04(2)	12	R1/2



## PA(D3)

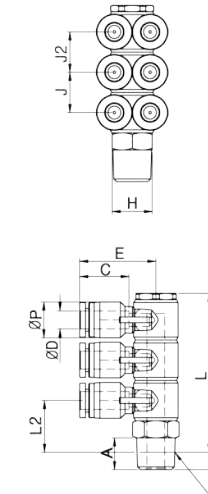
Triple Branch A



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PA 04-01(3)	4	R1/8
PA 04-02(3)	4	R1/4
PA 04-03(3)	4	R3/8
PA 06-01(3)	6	R1/8
PA 06-02(3)	6	R1/4
PA 06-03(3)	6	R3/8
PA 08-01(3)	8	R1/8
PA 08-02(3)	8	R1/4
PA 08-03(3)	8	R3/8
PA 08-04(3)	8	R1/2
PA 10-02(3)	10	R1/4
PA 10-03(3)	10	R3/8
PA 10-04(3)	10	R1/2
PA 12-02(3)	10	R1/4
PA 12-03(3)	12	R3/8
PA 12-04(3)	12	R1/2



\*Rotating body construction after a proper installation.

## PA(D3)-G

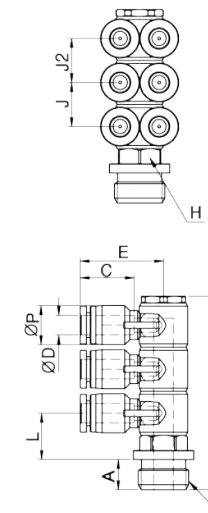
Triple Branch A



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

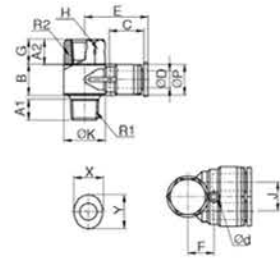
MODEL	ØD	R
PA 04-G01(3)	4	R1/8
PA 04-G02(3)	4	R1/4
PA 04-G03(3)	4	R3/8
PA 06-G01(3)	6	R1/8
PA 06-G02(3)	6	R1/4
PA 06-G03(3)	6	R3/8
PA 08-G01(3)	8	R1/8
PA 08-G02(3)	8	R1/4
PA 08-G03(3)	8	R3/8
PA 08-G04(3)	8	R1/2
PA 10-G02(3)	10	R1/4
PA 10-G03(3)	10	R3/8
PA 10-G04(3)	10	R1/2
PA 12-G02(3)	12	R1/4
PA 12-G03(3)	12	R3/8
PA 12-G04(3)	12	R1/2





### PAF

Dual Female Banjo



MODEL [ØD-T]

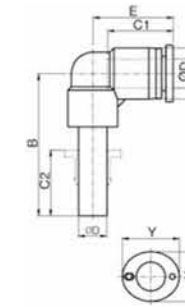
Tube (Metric) - Thread(R)				
MODEL	ØD	R	Rc	
PAF 04-M5	4	M5	M5	
PAF 06-01	6	R1/8	R1/8	
PAF 08-02	8	R1/4	R1/4	
PAF 10-03	10	R3/8	R3/8	
PAF 12-04	12	R1/2	R1/2	

\*Rotating body construction after a proper installation.

Tube (Inch) - Thread (NPT)				
MODEL	ØD	R	Rc	
PAF 5/32-U10U	5/32	UNF10 *32	UNF10 *32	
PAF 3/16-N01U	3/16	NPT1/8	NPT1/8	
PAF 1/4-N01U	1/4	NPT1/8	NPT1/8	
PAF 5/16-N02U	5/16	NPT1/4	NPT1/4	
PAF 3/8-N03U	3/8	NPT3/8	NPT3/8	
PAF 1/2-N04U	1/2	NPT1/2	NPT1/2	

### PLJ

Plug-In Elbow



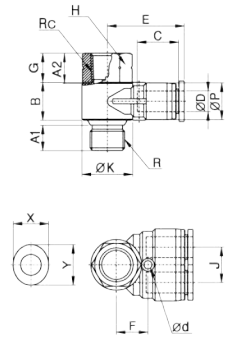
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	
PLJ 04	4	
PLJ 06	6	
PLJ 08	8	
PLJ 10	10	
PLJ 12	12	
PLJ 16	16	

Tube (Inch) - Thread (NPT)		
MODEL	ØD	
PLJ 5/32	5/32	
PLJ 3/16	3/16	
PLJ 1/4	1/4	
PLJ 5/16	5/16	
PLJ 3/8	3/8	
PLJ 1/2	1/2	

### PAF-G

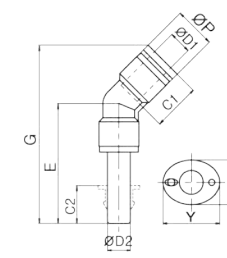
Dual Female Banjo



Tube (Metric) - Thread(G)				
MODEL	ØD	R	Rc	
PAF 06-G01	6	R1/8	G1/8	
PAF 08-G02	8	R1/4	G1/4	
PAF 10-G03	10	R3/8	G3/8	
PAF 12-G04	12	R1/2	G1/2	

### PLJ45

Plug-In Extended Elbow



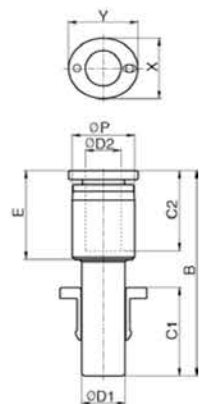
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	
PLJ45 04	4	
PLJ45 06	6	
PLJ45 08	8	
PLJ45 10	10	
PLJ45 12	12	

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	
PLJ45 5/32	5/32	
PLJ45 3/16	3/16	
PLJ45 1/4	1/4	
PLJ45 5/16	5/16	
PLJ45 3/8	3/8	
PLJ45 1/2	1/2	

### PGJ

Plug-In Reducer



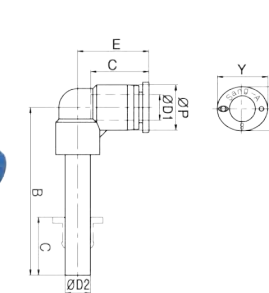
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
PGJ 06-04	6	4	
PGJ 08-04	8	4	
PGJ 08-06	8	6	
PGJ 10-06	10	6	
PGJ 10-08	10	8	
PGJ 12-06	12	6	
PGJ 12-08	12	8	
PGJ 12-10	12	10	

Tube (Inch) - Thread (NPT)			
MODEL	ØD1	ØD2	
PGJ 1/4-5/32	1/4	5/32	
PGJ 5/16-5/32	5/16	5/32	
PGJ 5/16-1/4	5/16	1/4	
PGJ 3/8-1/4	3/8	1/4	
PGJ 3/8-5/16	3/8	5/16	
PGJ 1/2-1/4	1/2	1/4	
PGJ 1/2-5/16	1/2	5/16	
PGJ 1/2-3/8	1/2	3/8	

### PLLJ

Plug-In Extended Elbow



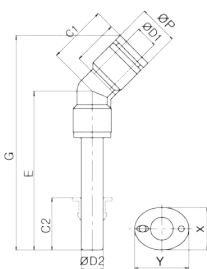
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	
PLLJ 04	4	
PLLJ 06	6	
PLLJ 08	8	
PLLJ 10	10	
PLLJ 12	12	
PLLJ 16	16	

Tube (Inch) - Thread (NPT)		
MODEL	ØD	
PLLJ 5/32	5/32	
PLLJ 3/16	3/16	
PLLJ 1/4	1/4	
PLLJ 5/16	5/16	
PLLJ 3/8	3/8	
PLLJ 1/2	1/2	

### PLLJ45

Plug-In Reducer Elbow



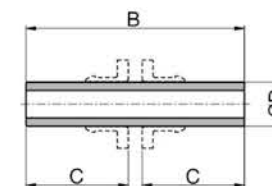
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD1
PLLJ45 04	4
PLLJ45 06	6
PLLJ45 08	8
PLLJ45 10	10
PLLJ45 12	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD1
PLLJ45 5/32	5/32
PLLJ45 3/16	3/16
PLLJ45 1/4	1/4
PLLJ45 5/16	5/16
PLLJ45 3/8	3/8
PLLJ45 1/2	1/2

### PIJ

Tube Splicer



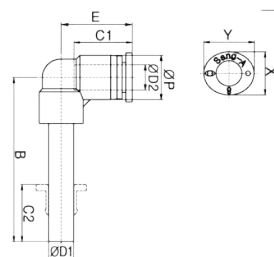
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PIJ 04	4
PIJ 06	6
PIJ 08	8
PIJ 10	10
PIJ 12	12
PIJ 16	16

Tube (Metric) - Thread(R)	
MODEL	ØD
PIJ 5/32	5/32
PIJ 3/16	3/16
PIJ 1/4	1/4
PIJ 5/16	5/16
PIJ 3/8	3/8
PIJ 1/2	1/2

### PLGJ

Plug-In Reducer Elbow



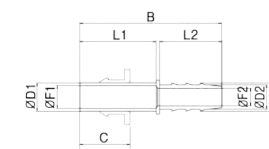
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PLGJ 06-04	6	4
PLGJ 08-06	8	6
PLGJ 10-08	10	8
PLGJ 12-10	12	10

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PLGJ 3/16-5/32	3/16	5/32
PLGJ 1/4-5/32	1/4	5/32
PLGJ 1/4-3/16	1/4	3/16
PLGJ 5/16-1/4	5/16	1/4
PLGJ 3/8-5/16	3/8	5/16
PLGJ 1/2-3/8	1/2	3/8

### PJH

Plug-In Extended Elbow

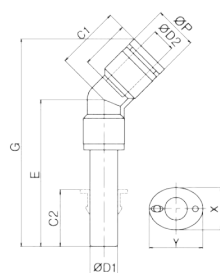


MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PJH 04-04	4	4.8
PJH 04-05	4	6
PJH 06-05	6	5.9
PJH 06-06	6	6.8
PJH 08-06	8	6.8
PJH 08-08	8	8.6
PJH 10-08	10	8.6
PJH 12-08	12	8.6
PJH 12-10	12	10.6
PJH 12-13	12	13.5
PJH 14-14	14	14.7
PJH 04-1/8	4	3.8
PJH 08-1/4	8	7.3
PJH 10-1/4	10	7.3
PJH 12-1/2	12	13.2
PJH 14-1/2	14	13.2

### PLGJ45

Plug-In Reducer Elbow



MODEL [ØD-T]

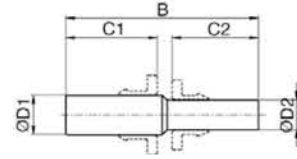
Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PLGJ45 06-04	6	4
PLGJ45 08-06	8	6
PLGJ45 10-08	10	8
PLGJ45 12-10	12	10

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PLGJ45 3/16-5/32	3/16	5/32
PLGJ45 1/4-5/32	1/4	5/32
PLGJ45 1/4-3/16	1/4	3/16
PLGJ45 5/16-1/4	5/16	1/4
PLGJ45 3/8-5/16	3/8	5/16
PLGJ45 1/2-3/8	1/2	3/8



### PIG

Reducer Tube Splicer



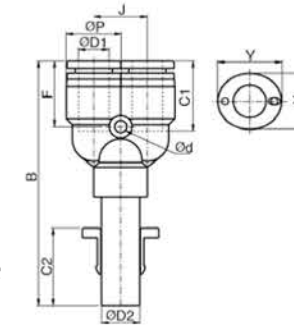
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
PIG 06-04	6	4	
PIG 08-04	8	4	
PIG 08-06	8	6	
PIG 10-06	10	6	
PIG 10-08	10	8	
PIG 12-08	12	8	
PIG 12-10	12	10	
PIG 16-12	16	12	

Tube (Metric) - Thread(R)			
MODEL	ØD	ØD2	
PIG 3/16-5/32	3/16	5/32	
PIG 1/4-3/16	1/4	3/16	
PIG 1/4-5/32	1/4	5/32	
PIG 5/16-5/32	5/16	5/32	
PIG 5/16-1/4	5/16	1/4	
PIG 3/8-1/4	3/8	1/4	
PIG 3/8-5/16	3/8	5/16	
PIG 1/2-5/16	1/2	5/16	
PIG 1/2-3/8	1/2	3/8	

### PWJ

Plug-In Reducer Y



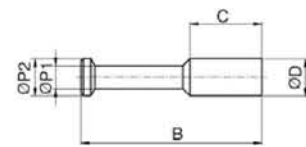
MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
PWJ 06-04	6	4	
PWJ 08-06	8	6	
PWJ 10-08	10	8	
PWJ 12-10	12	10	

Tube (Inch) - Thread (NPT)			
MODEL	ØD1	ØD2	
PWJ 1/4-5/32	1/4	5/32	
PWJ 5/16-1/4	5/16	1/4	
PWJ 3/8-5/16	3/8	5/16	
PWJ 1/2-3/8	1/2	3/8	

### PP

Plug



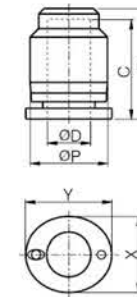
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PP 04	4
PP 06	6
PP 08	8
PP 10	10
PP 12	12
PP 16	16

Tube (Metric) - Thread(R)	
MODEL	ØD
PP 5/32	5/32
PP 3/16	3/16
PP 1/4	1/4
PP 5/16	5/16
PP 3/8	3/8
PP 1/2	1/2

### PPF

Cap



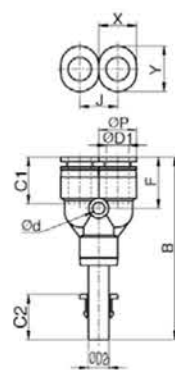
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PPF 04	4
PPF 06	6
PPF 08	8
PPF 10	10
PPF 12	12

Tube (Metric) - Thread(R)	
MODEL	ØD
PPF 5/32	5/32
PPF 3/16	3/16
PPF 1/4	1/4
PPF 5/16	5/16
PPF 3/8	3/8
PPF 1/2	1/2

### PYJ

Plug-In Y



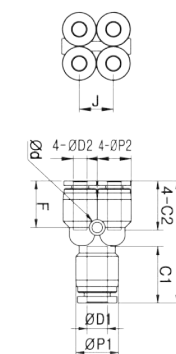
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PYJ 04	4
PYJ 06	6
PYJ 08	8
PYJ 10	10
PYJ 12	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
PYJ 5/32	5/32
PYJ 3/16	3/16
PYJ 1/4	1/4
PYJ 5/16	5/16
PYJ 3/8	3/8
PYJ 1/2	1/2

### PXG

Reducer Double Y Union



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
PXG 06-04	6	4
PXG 08-06	8	6

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
PXG 1/4-5/32	1/4	5/32
PXG 5/16-1/4	5/16	1/4

### PXJ

Reducer Double Y



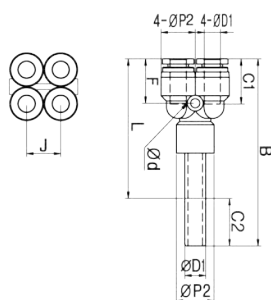
MODEL [ØD-T]

#### Tube (Metric) - Thread(R)

MODEL	ØD1	ØD2
PXJ 06-04	6	4
PXJ 08-06	8	6

#### Tube (Inch) - Thread (NPT)

MODEL	ØD1	ØD2
PXJ 1/4-5/32	1/4	5/32
PXJ 5/16-1/4	5/16	1/4



### PXT

Male Double Y



MODEL [ØD-T]

#### Tube (Metric) - Thread(R)

MODEL	ØD	R
PXT 04-01	4	R1/8
PXT 04-02	4	R1/4
PXT 06-01	6	R1/8
PXT 06-02	6	R1/4

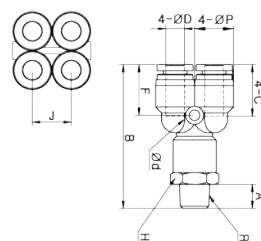
#### Tube (Inch) - Thread(R)

MODEL	ØD	R
PXT 1/4- R01	1/4	R1/8
PXT 1/4- R02	1/4	R1/4

#### Tube (Inch) - Thread (NPT)

MODEL	ØD	R
PXT 5/32-N01	5/32	NPT1/8
PXT 5/32-N02	5/32	NPT1/4
PXT 1/4-N01	1/4	NPT1/8
PXT 1/4-N02	1/4	NPT1/4

\*Rotating body construction after a proper installation.



### PXT-G

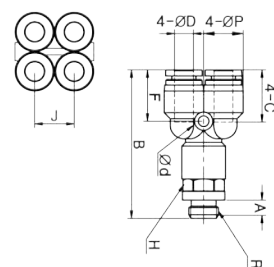
Male Double Y



MODEL [ØD-T]

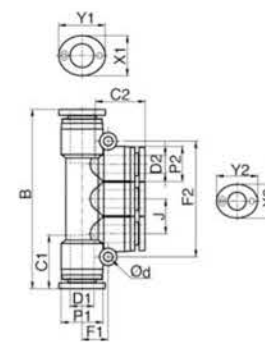
#### Tube (Metric) - Thread(G)

MODEL	ØD	R
PXT 04-G01	4	G1/8
PXT 04-G02	4	G1/4
PXT 06-G01	6	G1/8
PXT 06-G02	6	G1/4



### PKG

Reducer Triple Branch Union



MODEL [ØD-T]

#### Tube (Metric) - Thread(R)

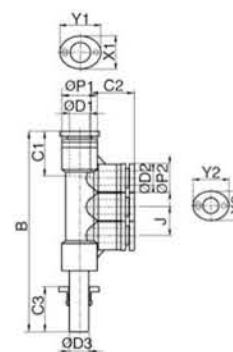
MODEL	ØD1	ØD2
PKG 06-04	6	4
PKG 08-04	8	4
PKG 08-06	8	6
PKG 10-06	10	6
PKG 10-08	10	8

#### Tube (Inch) - Thread (NPT)

MODEL	ØD1	ØD2
PKG 3/16-5/32	3/16	5/32
PKG 5/16-5/32	5/16	5/32
PKG 5/16-3/16	5/16	3/16
PKG 5/16-1/4	5/16	1/4
PKG 3/8-1/4	3/8	1/4
PKG 3/8-5/16	3/8	5/16

### PKJ

Plug-In Reducer Triple Branch



MODEL [ØD-T]

#### Tube (Metric) - Thread(R)

MODEL	ØD1	ØD2	ØD3
PKJ 06-04	6	4	6
PKJ 08-04	8	4	8
PKJ 08-06	8	6	8
PKJ 10-06	10	6	10
PKJ 10-08	10	8	10

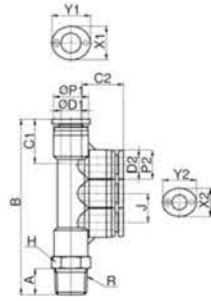
#### Tube (Inch) - Thread (NPT)

MODEL	ØD1	ØD2	ØD3
PKJ 3/16-5/32	3/16	5/32	3/16
PKJ 1/4-5/32	1/4	5/32	1/4
PKJ 5/16-5/32	5/16	5/32	5/16
PKJ 5/16-3/16	5/16	3/16	5/16
PKJ 5/16-1/4	5/16	1/4	5/16
PKJ 3/8-5/16	3/8	5/16	3/8



# PKD

Male Reducer Triple Branch



MODEL [ØD - T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	R
PKD 06-04-01	6	4	R1/8
PKD 06-04-02	6	4	R1/4
PKD 08-04-02	8	4	R1/4
PKD 08-06-02	8	6	R1/4
PKD 08-06-03	8	6	R3/8
PKD 10-08-03	10	8	R3/8

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	R
PKD 3/16-5/32-R01	3/16	5/32	R1/8
PKD 5/16-5/32-R02	5/16	5/32	R1/4
PKD 5/16-3/16-R02	5/16	3/16	R1/4
PKD 5/16-1/4-R02	5/16	1/4	R1/4
PKD 5/16-1/4-R03	5/16	1/4	R3/8
PKD 3/8-5/16-R03	3/8	5/16	R3/8

Inch (Metric) - Thread(NPT)			
MODEL	ØD1	ØD2	R
PKD 3/16-5/32-N01U	3/16	5/32	NPT1/8
PKD 1/4-5/32-N01U	1/4	5/32	NPT1/8
PKD 1/4-5/32-N02U	1/4	5/32	NPT1/4
PKD 5/16-5/32-N02U	5/16	5/32	NPT1/4
PKD 5/16-3/16-N02U	5/16	3/16	NPT1/4
PKD 5/16-1/4-N02U	5/16	1/4	NPT1/4
PKD 5/16-1/4-N03U	5/16	1/4	NPT3/8
PKD 3/8-5/16-N03U	3/8	5/16	NPT3/8

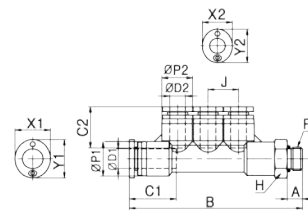
# PKD-G

Male Reducer Triple Branch



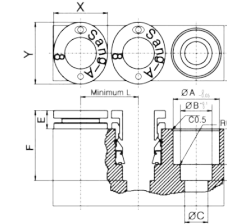
MODEL [ØD - T]

Tube (Metric) - Thread(G)			
MODEL	ØD1	ØD2	R
PKD 06-04-G01	6	4	G1/8
PKD 08-04-G02	8	4	G1/4
PKD 08-06-G02	8	6	G1/4
PKD 10-08-G03	10	8	G3/8



# CAS

Insert-Tube



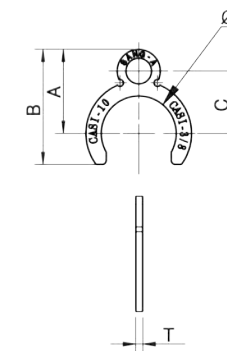
MODEL [ØD - T]

Tube (Metric) - Thread(R)						
MODEL	ØD	ØA	ØB	ØC	H	I
CAS-N04	4	8.1	4.2	2.5	7.8	3.5
CAS-N06	6	10	6.2	4	8.2	4
CAS-N08	8	12	8.2	6	9.2	4.5
CAS-N10	10	15.1	10.2	8	10.2	5
CAS-N12	12	17.7	12.2	10	12.2	5

Inch (Metric) - Thread(NPT)						
MODEL	ØD	ØA	ØB	ØC	H	I
CAS-N5/32	5/32	8	4.2	2.5	7.8	3.5
CAS-N3/16	3/16	8.5	5	4	8.2	4
CAS-N1/4	1/4	10	6.5	5	8.2	4
CAS-N5/16	5/16	12	8.2	6	9.2	4.5
CAS-N3/8	3/8	15.1	9.7	8	10.2	5
CAS-N1/2	1/2	17.7	13	10	12.2	5

# CASI

Insert-Tube Clip



MODEL [ØD - T]

Tube (Metric) - Thread(R)	
MODEL	ØD
CASI 04	4
CASI 06	6
CASI 08	8
CASI 10	10
CASI 12	12

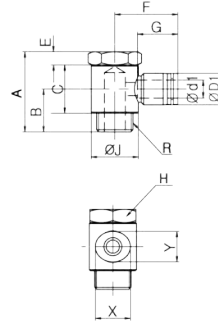
### PGL(D1)

Single Universal Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGL 04-G01(1)	4	G1/8
PGL 06-G01(1)	6	G1/8
PGL 06-G02(1)	6	G1/4
PGL 08-G01(1)	8	G1/8
PGL 08-G02(1)	8	G1/4
PGL 08-G03(1)	8	G3/8
PGL 10-G02(1)	10	G1/4
PGL 10-G03(1)	10	G3/8
PGL 12-G03(1)	12	G3/8
PGL 12-G04(1)	12	G1/2



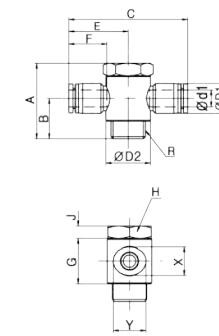
### PGT(D1)

Single Universal Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGT 04-G01(1)	4	G1/8
PGT 06-G01(1)	6	G1/8
PGT 06-G02(1)	6	G1/4
PGT 08-G01(1)	8	G1/8
PGT 08-G02(1)	8	G1/4
PGT 08-G03(1)	8	G3/8
PGT 10-G02(1)	10	G1/4
PGT 10-G03(1)	10	G3/8
PGT 12-G03(1)	12	G3/8
PGT 12-G04(1)	12	G1/2



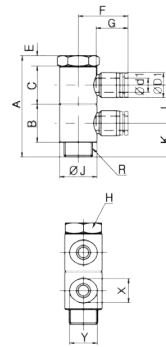
### PGL(D2)

Double Universal Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGL 04-G01(2)	4	G1/8
PGL 06-G01(2)	6	G1/8
PGL 06-G02(2)	6	G1/4
PGL 08-G01(2)	8	G1/8
PGL 08-G02(2)	8	G1/4
PGL 08-G03(2)	8	G3/8
PGL 10-G02(2)	10	G1/4
PGL 10-G03(2)	10	G3/8
PGL 12-G03(2)	12	G3/8
PGL 12-G04(2)	12	G1/2



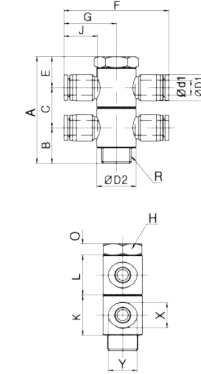
### PGT(D2)

Double Universal Tee



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGT 04-G01(2)	4	G1/8
PGT 06-G01(2)	6	G1/8
PGT 06-G02(2)	6	G1/4
PGT 08-G01(2)	8	G1/8
PGT 08-G02(2)	8	G1/4
PGT 08-G03(2)	8	G3/8
PGT 10-G02(2)	10	G1/4
PGT 10-G03(2)	10	G3/8
PGT 12-G03(2)	12	G3/8
PGT 12-G04(2)	12	G1/2



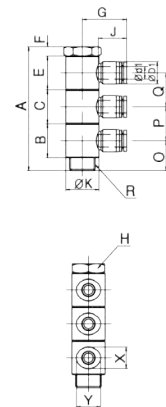
### PGL(D3)

Triple Universal Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGL 04-G01(3)	4	G1/8
PGL 06-G01(3)	6	G1/8
PGL 06-G02(3)	6	G1/4
PGL 08-G01(3)	8	G1/8
PGL 08-G02(3)	8	G1/4
PGL 08-G03(3)	8	G3/8
PGL 10-G02(3)	10	G1/4
PGL 10-G03(3)	10	G3/8
PGL 12-G03(3)	12	G3/8
PGL 12-G04(3)	12	G1/2



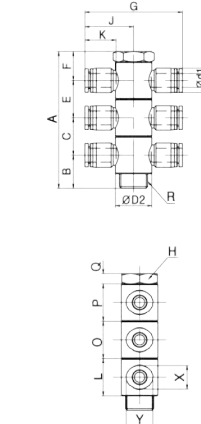
### PGT(D3)

Triple Universal Tee



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
PGT 04-G01(3)	4	G1/8
PGT 06-G01(3)	6	G1/8
PGT 06-G02(3)	6	G1/4
PGT 08-G01(3)	8	G1/8
PGT 08-G02(3)	8	G1/4
PGT 08-G03(3)	8	G3/8
PGT 10-G02(3)	10	G1/4
PGT 10-G03(3)	10	G3/8
PGT 12-G03(3)	12	G3/8
PGT 12-G04(3)	12	G1/2





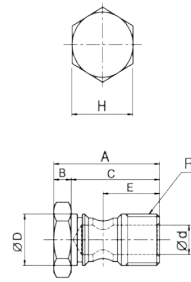
### PGB(D1)



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	R
PGB G01(1)	G1/8
PGB G02(1)	G1/4
PGB G03(1)	G3/8
PGB G04(1)	G1/2



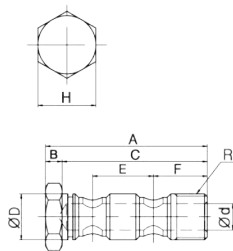
### PGB(D2)



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	R
PGB G01(2)	G1/8
PGB G02(2)	G1/4
PGB G03(2)	G3/8
PGB G04(2)	G1/2



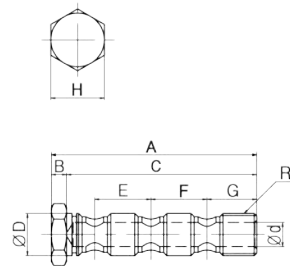
### PGB(D3)



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	R
PGB G01(3)	G1/8
PGB G02(3)	G1/4
PGB G03(3)	G3/8
PGB G04(3)	G1/2



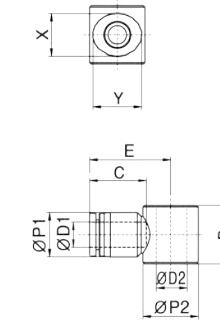
### PGL



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PGL 04-G01P	4	G1/8
PGL 06-G01P	6	G1/8
PGL 06-G02P	6	G1/4
PGL 08-G01P	8	G1/8
PGL 08-G02P	8	G1/4
PGL 08-G03P	8	G3/8
PGL 10-G02P	10	G1/4
PGL 10-G03P	10	G3/8
PGL 12-G03P	12	G3/8
PGL 12-G04P	12	G1/2



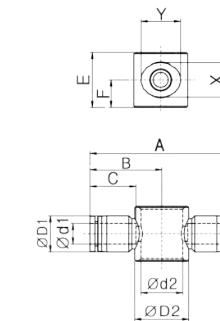
### PGT



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PGT 04-G01P	4	G1/8
PGT 06-G01P	6	G1/8
PGT 06-G02P	6	G1/4
PGT 08-G01P	8	G1/8
PGT 08-G02P	8	G1/4
PGT 08-G03P	8	G3/8
PGT 10-G02P	10	G1/4
PGT 10-G03P	10	G3/8
PGT 12-G03P	12	G3/8
PGT 12-G04P	12	G1/2



### PGO



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	R
PGO G01	G1/8
PGO G02	G1/4
PGO G03	G3/8
PGO G04	G1/2



# COMPACT ONE-TOUCH FITTINGS

## Application

- Compact type one-touch joints used in small types of pneumatic piping.
- A wide variety of models are available to meet most your needs.

## Feature

- The world's smallest quick-fitting joints feature 40% smaller volume ratio and 20% smaller O.D. ratio in comparison to the conventional type.
- The compact type joints, which are nickel plated, are excellent not only in appearance but also in rust resistance.
- The elliptical sleeve helps easy application or removal of the tube in confined space.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140° F	0~60°C
Applicable Tube Material	Polyurethane and Nylon	



## Product Code System

**PC 06-01 C**

① ② ③ ④

① Type

② Tube Dia(∅D)

	Metric Size						Inch Size					
Code	03	04	06	10	12	16	5/32	3/16	1/4	5/16	3/8	1/2
Dia	∅3	∅4	∅4	∅10	∅12	∅16	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2

③ Thread Size(T)

• Metric Thread & R(PT) Thread

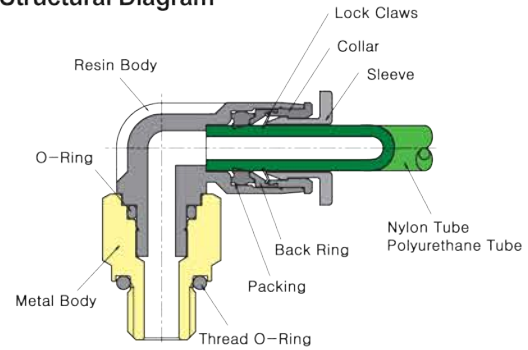
	Metric Size			
Code	M3	M5	M6	01
Size	M5×0.8	M5×0.8	M6×1.0	R1/8

• Inch Thread (UNF & NPT)

	Unified Fine Thread	American Standard Taper Pipe Thread	
Code	U10U	N00U	N01U
Size	10-32UNF	NPT1/16	NPT1/8

④ C=COMPACT

## Structural Diagram



## Case In Use

### ►POC Model/PCC Model

The hexagonal shape on the inside of the body makes it possible to tighten the fitting by use of a hexagonal wrench.

In the case of POC, PCC a hexagonal wrench must be used due to the round exterior.

### ►PLL Model/PL Model

Long brass body helps tightening with ease away from any obstacles.

## Compact One -Touch Fitting



## Fitting with G Thread (O-Ring)



### ⚠ CAUTION

- Be sure to read the "Common Precautions" and the "Using Precautions of Fitting Series" (P6) before using.
- Tube should be securely pushed into the fitting, otherwise air leakage may occur.

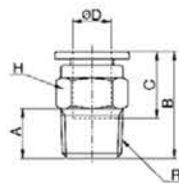
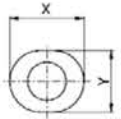
### ⚠ WARNING

- Be sure to confirm that proper conditions are met, otherwise air leakage may occur.



### PC-C

Male Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PC 03-M3C	3	M3
PC 03-M5C	3	M5
PC 03-M6C	3	M6
PC 04-M3C	4	M3
PC 04-M5C	4	M5
PC 04-M6C	4	M6
PC 04-01C	4	R1/8
PC 06-M5C	6	M5
PC 06-M6C	6	M6
PC 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

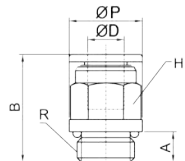
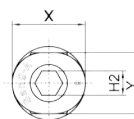
MODEL	ØD	R
PC 1/8-M3C	1/8	M3
PC 1/8-M5C	1/8	M5
PC 1/8-M6C	1/8	M6
PC 5/32-M3C	5/32	M3
PC 5/32-M5C	5/32	M5
PC 5/32-M6C	5/32	M6
PC 5/32-01C	5/32	R1/8
PC 1/4-M5C	1/4	M5
PC 1/4-M6C	1/4	M6
PC 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PC 1/8-U10UC	1/8	UNF 10 * 32
PC 1/8-N00UC	1/8	NPT1/16
PC 1/8-N01UC	1/8	NPT1/8
PC 5/32-U10UC	5/32	UNF 10 * 32
PC 5/32-N00UC	5/32	NPT1/16
PC 5/32-N01UC	5/32	NPT1/8
PC 1/4-U10UC	1/4	UNF 10 * 32
PC 1/4-N00UC	1/4	NPT1/16
PC 1/4-N01UC	1/4	NPT1/8

### PC-C(G)

Male Straight



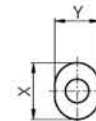
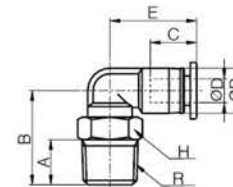
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PC 04G-01C	4	G1/8
PC 06G-01C	6	G1/8

### PL-C

Male Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PL 03-M3C	3	M3
PL 03-M5C	3	M5
PL 03-M6C	3	M6
PL 04-M3C	4	M3
PL 04-M5C	4	M5
PL 04-M6C	4	M6
PL 04-01C	4	R1/8
PL 06-M5C	6	M5
PL 06-M6C	6	M6
PL 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

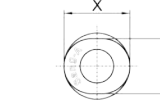
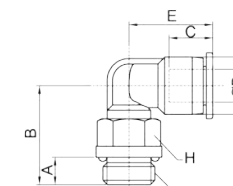
MODEL	ØD	R
PL 1/8-M3C	1/8	M3
PL 1/8-M5C	1/8	M5
PL 1/8-M6C	1/8	M6
PL 5/32-M3C	5/32	M3
PL 5/32-M5C	5/32	M5
PL 5/32-M6C	5/32	M6
PL 5/32-01C	5/32	R1/8
PL 1/4-M5C	1/4	M5
PL 1/4-M6C	1/4	M6
PL 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PL 1/8-U10UC	1/8	UNF 10 * 32
PL 1/8-N00UC	1/8	NPT1/16
PL 1/8-N01UC	1/8	NPT1/8
PL 5/32-U10UC	5/32	UNF 10 * 32
PL 5/32-N00UC	5/32	NPT1/16
PL 5/32-N01UC	5/32	NPT1/8
PL 1/4-U10UC	1/4	UNF 10 * 32
PL 1/4-N00UC	1/4	NPT1/16
PL 1/4-N01UC	1/4	NPT1/8

### PL-C(G)

Male Elbow



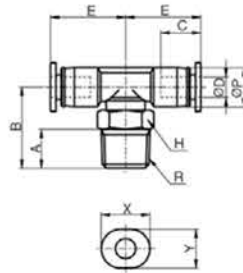
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PL 04G-01C	4	G1/8
PL 06G-01C	6	G1/8

### PT-C

Male Branch Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PT 03-M3C	3	M3
PT 03-M5C	3	M5
PT 03-M6C	3	M6
PT 04-M3C	4	M3
PT 04-M5C	4	M5
PT 04-M6C	4	M6
PT 04-01C	4	R1/8
PT 06-M5C	6	M5
PT 06-M6C	6	M6
PT 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

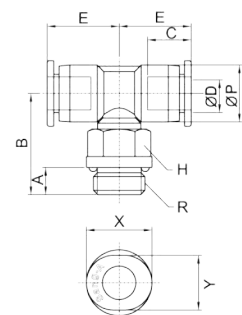
MODEL	ØD	R
PT 1/8-M3C	1/8	M3
PT 1/8-M5C	1/8	M5
PT 1/8-M6C	1/8	M6
PT 5/32-M3C	5/32	M3
PT 5/32-M5C	5/32	M5
PT 5/32-M6C	5/32	M6
PT 5/32-01C	5/32	R1/8
PT 1/4-M5C	1/4	M5
PT 1/4-M6C	1/4	M6
PT 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PT 1/8-U10UC	1/8	UNF 10 * 32
PT 1/8-N00UC	1/8	NPT1/16
PT 1/8-N01UC	1/8	NPT1/8
PT 5/32-U10UC	5/32	UNF 10 * 32
PT 5/32-N00UC	5/32	NPT1/16
PT 5/32-N01UC	5/32	NPT1/8
PT 1/4-U10UC	1/4	UNF 10 * 32
PT 1/4-N00UC	1/4	NPT1/16
PT 1/4-N01UC	1/4	NPT1/8

### PT-C(G)

Male Branch Tee



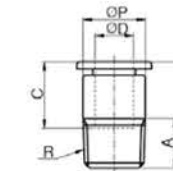
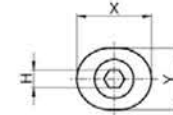
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PT 04G-01C	4	G1/8
PT 06G-01C	6	G1/8

### POC-C

Round Male Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
POC 03-M3C	3	M3
POC 03-M5C	3	M5
POC 03-M6C	3	M6
POC 04-M3C	4	M3
POC 04-M5C	4	M5
POC 04-M6C	4	M6
POC 04-01C	4	R1/8
POC 06-M5C	6	M5
POC 06-M6C	6	M6
POC 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

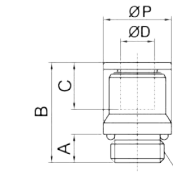
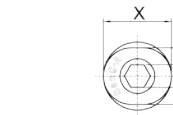
MODEL	ØD	R
POC 1/8-M3C	1/8	M3
POC 1/8-M5C	1/8	M5
POC 1/8-M6C	1/8	M6
POC 5/32-M3C	5/32	M3
POC 5/32-M5C	5/32	M5
POC 5/32-M6C	5/32	M6
POC 5/32-01C	5/32	R1/8
POC 1/4-M5C	1/4	M5
POC 1/4-M6C	1/4	M6
POC 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
POC 1/8-U10UC	1/8	UNF 10 * 32
POC 1/8-N00UC	1/8	NPT1/16
POC 1/8-N01UC	1/8	NPT1/8
POC 5/32-U10UC	5/32	UNF 10 * 32
POC 5/32-N00UC	5/32	NPT1/16
POC 5/32-N01UC	5/32	NPT1/8
POC 1/4-U10UC	1/4	UNF 10 * 32
POC 1/4-N00UC	1/4	NPT1/16
POC 1/4-N01UC	1/4	NPT1/8

### POC-C(G)

Round Male Straight



MODEL [ØD-T]

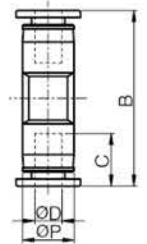
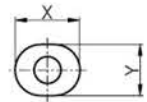
**Tube (Metric) - Thread(G)**

MODEL	ØD	R
POC 04G-01C	4	G1/8
POC 06G-01C	6	G1/8



## PUC-C

Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

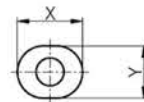
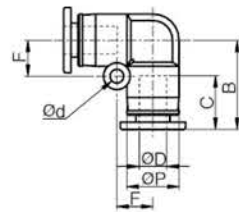
MODEL	ØD
PUC 03C	3
PUC 04C	4
PUC 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PUC 1/8C	1/8
PUC 5/32C	5/32
PUC 1/4C	1/4

## PUL-C

Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

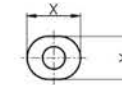
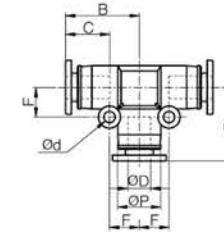
MODEL	ØD
PUL 03C	3
PUL 04C	4
PUL 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PUL 1/8C	1/8
PUL 5/32C	5/32
PUL 1/4C	1/4

## PUT-C

Union Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

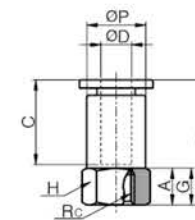
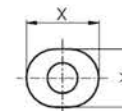
MODEL	ØD
PUT 03C	3
PUT 04C	4
PUT 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PUT 1/8C	1/8
PUT 5/32C	5/32
PUT 1/4C	1/4

## PCF-C

Female Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	Rc
PCF 03-M3C	3	M3
PCF 03-M5C	3	M5
PCF 04-M3C	4	M3
PCF 04-M5C	4	M5

**Tube (Inch) - Thread (R)**

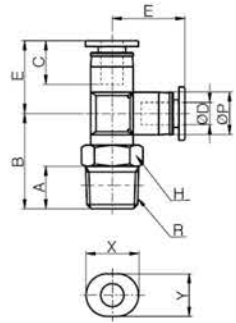
MODEL	ØD	Rc
PCF 1/8-M3C	1/8	M3
PCF 1/8-M5C	1/8	M5
PCF 5/32-M3C	5/32	M3
PCF 5/32-M5C	5/32	M5

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	Rc
PCF 1/8-U10UC	1/8	UNF 10 * 32
PCF 1/8-N00UC	1/8	NPT1/6
PCF 5/32-U10UC	5/32	UNF 10 * 32
PCF 5/32-N00UC	5/32	NPT1/6

### PST-C

Male Run Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PST 03-M3C	3	M3
PST 03-M5C	3	M5
PST 03-M6C	3	M6
PST 04-M3C	4	M3
PST 04-M5C	4	M5
PST 04-M6C	4	M6
PST 04-01C	4	R1/8
PST 06-M5C	6	M5
PST 06-M6C	6	M6
PST 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

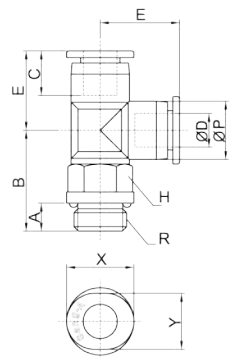
MODEL	ØD	R
PST 1/8-M3C	1/8	M3
PST 1/8-M5C	1/8	M5
PST 1/8-M6C	1/8	M6
PST 5/32-M3C	5/32	M3
PST 5/32-M5C	5/32	M5
PST 5/32-M6C	5/32	M6
PST 5/32-01C	5/32	R1/8
PST 1/4-M5C	1/4	M5
PST 1/4-M6C	1/4	M6
PST 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PST 1/8-U10UC	1/8	UNF 10 *32
PST 1/8-N00UC	1/8	NPT1/16
PST 1/8-N01UC	1/8	NPT1/8
PST 5/32-U10UC	5/32	UNF 10 *32
PST 5/32-N00UC	5/32	NPT1/16
PST 5/32-N01UC	5/32	NPT1/8
PST 1/4-U10UC	1/4	UNF 10 *32
PST 1/4-N00UC	1/4	NPT1/16
PST 1/4-N01UC	1/4	NPT1/8

### PST-C(G)

Male Run Tee



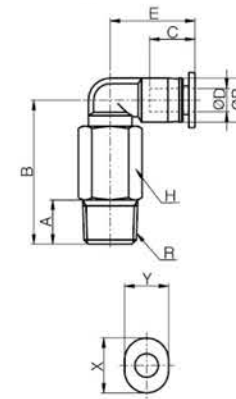
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PST 04G-01C	4	G1/8
PST 06G-01C	6	G1/8

### PLL-C

Extended Male Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
PLL 03-M3C	3	M3
PLL 03-M5C	3	M5
PLL 04-M3C	4	M3
PLL 04-M5C	4	M5
PLL 04-M6C	4	M6
PLL 04-01C	4	R1/8
PLL 06-M5C	6	M5
PLL 06-M6C	6	M6
PLL 06-01C	6	R1/8

**Tube (Inch) - Thread(R)**

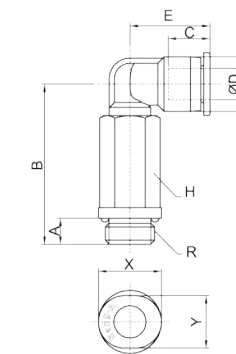
MODEL	ØD	R
PLL 1/8-M3C	1/8	M3
PLL 1/8-M5C	1/8	M5
PLL 1/8-M6C	1/8	M6
PLL 5/32-M3C	5/32	M3
PLL 5/32-M5C	5/32	M5
PLL 5/32-M6C	5/32	M6
PLL 5/32-01C	5/32	R1/8
PLL 1/4-M5C	1/4	M5
PLL 1/4-M6C	1/4	M6
PLL 1/4-01C	1/4	R1/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
PLL 1/8-U10UC	1/8	UNF 10 *32
PLL 1/8-N00UC	1/8	NPT1/16
PLL 1/8-N01UC	1/8	NPT1/8
PLL 5/32-U10UC	5/32	UNF 10 *32
PLL 5/32-N00UC	5/32	NPT1/16
PLL 5/32-N01UC	5/32	NPT1/8
PLL 1/4-U10UC	1/4	UNF 10 *32
PLL 1/4-N00UC	1/4	NPT1/16
PLL 1/4-N01UC	1/4	NPT1/8

### PLL-C(G)

Extended Male Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
PLL 04G-01C	4	G1/8
PLL 06G-01C	6	G1/8



### PGJ-C

Reducer



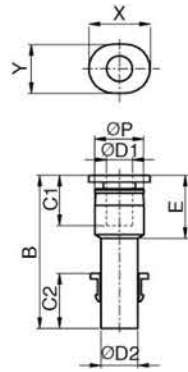
MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD1	ØD2
PGJ 04-03C	4	3
PGJ 06-04C	6	4

**Tube (Inch) - Thread (NPT)**

MODEL	ØD1	ØD2
PGJ 5/32C-1/8C	5/32	1/8
PGJ 1/4C-5/32C	1/4	5/32



### PW-C

Reducer Y



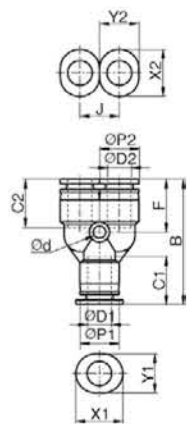
MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD1	ØD2
PW 04-03C	4	3
PW 06-04C	6	4

**Tube (Inch) - Thread (NPT)**

MODEL	ØD1	ØD2
PW 1/8C-03C	1/8	3
PW 5/32C-1/8C	5/32	1/8
PW 1/4C-5/32C	1/4	5/32



### PWJ-C

Plug-In Reducer Y



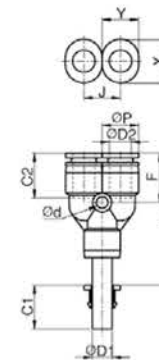
MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD1	ØD2
PWJ 04-03C	4	3
PWJ 06-04C	6	4

**Tube (Inch) - Thread (NPT)**

MODEL	ØD1	ØD2
PWJ 1/8C-03C	1/8	3
PWJ 5/32C-1/8C	5/32	1/8
PWJ 1/4C-5/32C	1/4	5/32



### PLJ-C

Plug-In Elbow



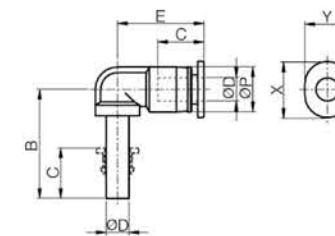
MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PLJ 03C	3
PLJ 04C	4
PLJ 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PLJ 1/8C	1/8
PLJ 5/32C	5/32
PLJ 1/4C	1/4a



## PMM-C

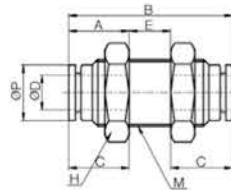
Bulkhead Union



MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PMM 03C	3
PMM 04C	4
PMM 06C	6

Tube (Inch) - Thread (NPT)	
MODEL	ØD
PMM 1/8C	1/8



## PPF-C

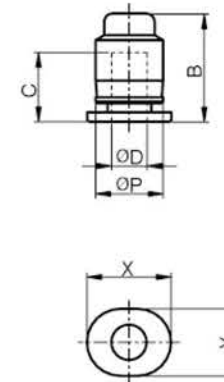
Cap



MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PPF 03C	3
PPF 04C	4
PPF 06C	6

Tube (Inch) - Thread (NPT)	
MODEL	ØD
PPF 1/8C	1/8
PPF 5/32C	5/32
PPF 1/4C	1/4



## PCC-C

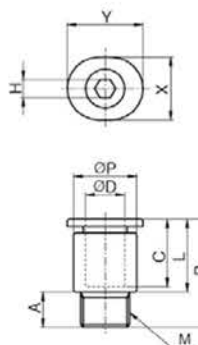
Round Male Straight



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
PCC 03-M6C	3	M6
PCC 04-M6C	4	M6
PCC 04-M8C	4	M8
PCC 06-M8C	6	M8

Tube (Inch) - Thread(R)		
MODEL	ØD	R
PCC 1/8- M6C	1/8	M6



## PZA-C

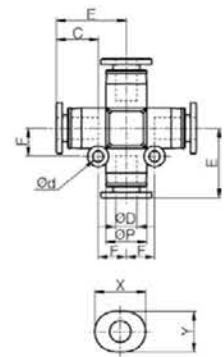
Union Cross



MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
PZA 03C	3
PZA 04C	4
PZA 06C	6

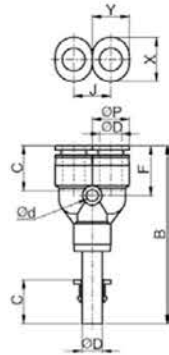
Tube (Inch) - Thread (NPT)	
MODEL	ØD
PZA 1/8C	1/8
PZA 5/32C	5/32
PZA 1/4C	1/4





## PYJ-C

Plug -In Y



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

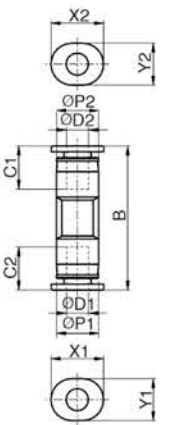
MODEL	ØD
PYJ 03C	3
PYJ 04C	4
PYJ 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PYJ 1/8C	1/8
PYJ 5/32C	5/32
PYJ 1/4C	1/8

## PG-C

Reducer



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

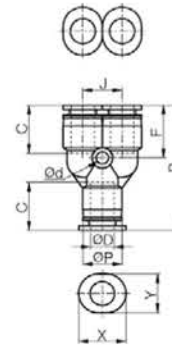
MODEL	ØD1	ØD2
PG 0403C	4	3
PG 0604C	6	4

**Tube (Inch) - Thread (NPT)**

MODEL	ØD1	ØD2
PG 5/32C-1/8C	5/32	1/8

## PY-C

Union Y



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

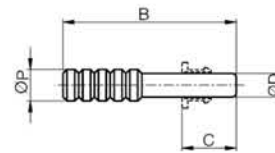
MODEL	ØD
PY 03C	3
PY 04C	4
PY 06C	6

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PY 1/8C	1/8
PY 5/32C	5/32
PY 1/4C	1/4

## PP-C

Plug



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PP 03C	3

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PP1/8C	1/8

# PLM-C

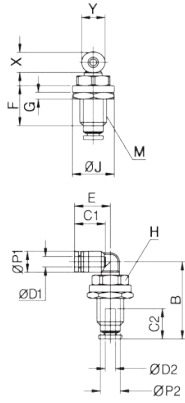
Bulkhead Union P



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PLM 03C	3
PLM 04C	4
PLM 06C	6





# SPEED CONTROLLERS

## Application

- Valve used for controlling the operation speed of a driving device.
- Used for movement of machines such as cylinder, pneumatic finger, etc.

## Feature

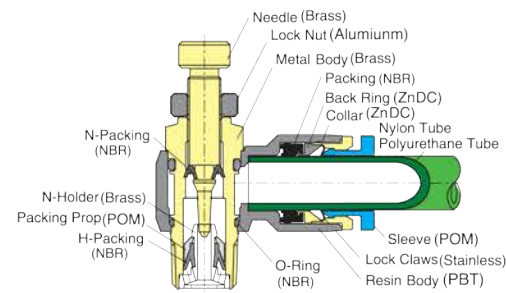
- Precisely permit the optimal rate of airflow for the smooth cylinder movement of driving devices.
- The Compact and light body permits use in confined space.
- Uni-directional airflow is available for either exhaust or inlet flow control methods.
- The compact design provides a comparable range of speed as the conventional speed controllers do.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	7.5PSI	0.5Kgf/cm <sup>2</sup> (50kPa)
Temperature Range	32~140° F	0~60° C
Applicable Tube Material	Polyurethane and Nylon	



## Structural Diagram



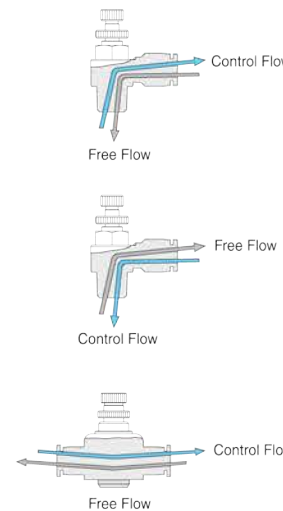
# Speed Controllers



## Fitting with G Thread (O-Ring)



## Case In Use



### ►Out-Type

- The way to control of airflow from the thread to the sleeve.
- Air passes freely from the sleeve to the thread.

### ►In-Type

- The way to control of airflow from the sleeve to the thread.
- Air passes freely from the thread to the sleeve.

### ►Flat-Type

- The way to control of Free Flow or Control Flow upon piping in accordance with the signal on the body.
- Air flows from each side of sleeve.

### ⚠ CAUTION

- Be sure to read "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Never remove the needle by force. It causes separation of the needle from the body.
- There can be a slight leakage, therefore do not use in applications requiring zero air flow rate.

### ⚠ WARNING

- Be sure to use after confirming structural diagram and control direction of each controller, otherwise fittings may result in damage.
- Never roll or turn the body by force.
- When controlling the objective machine's speed, slowly open the needle of speed controller from the closed position.

## Product Code System

**NSE O8-O2 O U**

① ② ③ ④ ⑤

### ① Type

### ② Tube Dia(∅D)

Code	Metric Size						Inch Size						
	03	04	06	10	12	16	1/8	5/32	3/16	1/4	5/16	3/8	1/2
Dia	∅3	∅4	∅6	∅8	∅10	∅12	∅1/8	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2

### ③ Thread Size(T)

#### • Metric Thread & R(PT) Thread

Code	Metric Size			Taper Pipe Thread			
	M3	M5	01	02	03	04	
Size	M3×0.5	M5×0.8	R1/8	R1/4	R3/8	R1/2	

#### • Inch Thread (UNF & NPT)

Code	Unified Fine Thread		American Standard Taper Pipe Thread		
	U10U	N01U	N02U	N03U	N04U
Size	10-32UNF	NPT1/8	NPT1/4	NPT3/8	NPT1/2

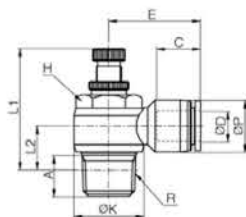
### ④ Control Method

Type	Meter out		Meter in	
	Standard Blue	Compact Black	Standard Red	Compact Red
Symbol				

⑤U : Hexagon flat-to-flat inch specification.(NPT)

## NSE

Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
NSE 04-M5	4	M5
NSE 04-01	4	R1/8
NSE 04-02	4	R1/4
NSE 06-M5	6	M5
NSE 06-01	6	R1/8
NSE 06-02	6	R1/4
NSE 06-03	6	R3/8
NSE 08-01	8	R1/8
NSE 08-02	8	R1/4
NSE 08-03	8	R3/8
NSE 08-04	8	R1/2
NSE 10-02	10	R1/4
NSE 10-03	10	R3/8
NSE 10-04	10	R1/2
NSE 12-02	10	R1/4
NSE 12-03	12	R3/8
NSE 12-04	12	R1/2

**Tube (Inch) - Thread(R)**

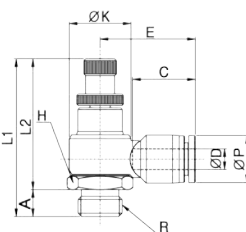
MODEL	ØD	R
NSE 1/4-M5	1/4	M5
NSE 1/4-R01	1/4	R1/8
NSE 1/4-R02	1/4	R1/4
NSE 1/4-R03	1/4	R3/8
NSE 5/16-R01	5/16	R1/8
NSE 5/16-R02	5/16	R1/4
NSE 5/16-R03	5/16	R3/8
NSE 3/8-R02	3/8	R1/4
NSE 3/8-R03	3/8	R3/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
NSE 5/32-U10U	5/32	UNF10 * 32
NSE 5/32-N01U	5/32	NPT1/8
NSE 3/16-N10U	3/16	UNF10 * 32
NSE 3/16-N01U	3/16	NPT1/8
NSE 3/16-N02U	3/16	NPT1/4
NSE 3/16-N03U	3/16	NPT3/8
NSE 1/4-U10U	1/4	UNF10 * 32
NSE 1/4-N01U	1/4	NPT1/8
NSE 1/4-N02U	1/4	NPT1/4
NSE 1/4-N03U	1/4	NPT3/8
NSE 5/16-N01U	5/16	NPT1/8
NSE 5/16-N02U	5/16	NPT1/4
NSE 5/16-N03U	5/16	NPT3/8
NSE 5/16-N04U	5/16	NPT1/2
NSE 3/8-N02U	3/8	NPT1/4
NSE 3/8-N03U	3/8	NPT3/8
NSE 3/8-N04U	3/8	NPT1/2
NSE 1/2-N03U	1/2	NPT3/8
NSE 1/2-N04U	1/2	NPT1/2

## NSE-G

Elbow G-Thread



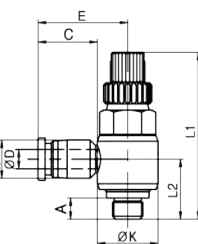
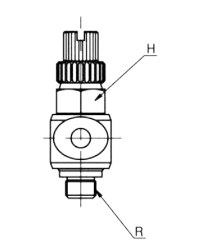
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
NSE 04-G01	4	G1/8
NSE 04-G02	4	G1/4
NSE 06-G01	6	G1/8
NSE 06-G02	6	G1/4
NSE 06-G03	6	G3/8
NSE 08-G01	8	G1/8
NSE 08-G02	8	G1/4
NSE 08-G03	8	G3/8
NSE 08-G04	8	G1/2
NSE 10-G02	10	G1/4
NSE 10-G03	10	G3/8
NSE 10-G04	10	G1/2
NSE 12-G03	12	G3/8
NSE 12-G04	12	G1/2

## NSE-C

Mini Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
NSE 03-M3C	3	M3
NSE 03-M5C	3	M5
NSE 04-M3C	4	M3
NSE 04-M5C	4	M5
NSE 04-01C	4	R1/8
NSE 06-M3C	6	M3
NSE 06-M5C	6	M5
NSE 06-01C	6	R1/8
NSE 06-02C	6	R1/4

**Tube (Inch) - Thread(R)**

MODEL	ØD	R
NSE 1/8-M3C	1/8	M3
NSE 1/8-M5C	1/8	M5
NSE 5/32-M3C	5/32	M3
NSE 5/32-M5C	5/32	M5
NSE 5/32-01C	5/32	R1/8
NSE 1/4-M5C	1/4	M5
NSE 1/4-01C	1/4	R1/8

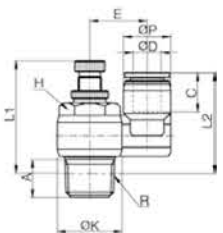
**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
NSE 1/8-U10UC	1/8	UNF 10 * 32
NSE 5/32-U10UC	5/32	UNF 10 * 32
NSE 5/32-N01C	5/32	NPT1/8
NSE 1/4-U10UC	1/4	UNF 10 * 32
NSE 1/4-N01C	1/4	NPT1/8



# NSS

Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
NSS 04-M5	4	M5
NSS 04-01	4	R1/8
NSS 04-02	4	R1/4
NSS 06-M5	6	M5
NSS 06-01	6	R1/8
NSS 06-02	6	R1/4
NSS 06-03	6	R3/8
NSS 08-01	8	R1/8
NSS 08-02	8	R1/4
NSS 08-03	8	R3/8
NSS 08-04	8	R1/2
NSS 10-02	10	R1/4
NSS 10-03	10	R3/8
NSS 10-04	10	R1/2
NSS 12-02	10	R1/4
NSS 12-03	12	R3/8
NSS 12-04	12	R1/2

**Tube (Metric) - Thread(R)**

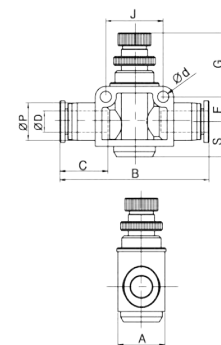
MODEL	ØD	R
NSS 1/4-M5	1/4	M5
NSS 1/4-R01	1/4	R1/8
NSS 1/4-R02	1/4	R1/4
NSS 5/16-R01	5/16	R1/8
NSS 5/16-R02	5/16	R1/4
NSS 5/16-R03	5/16	R3/8
NSS 3/8-R02	3/8	R1/4
NSS 3/8-R03	3/8	R3/8

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
NSS 5/32-U10U	5/32	UNF10 #32
NSS 5/32-N01U	5/32	NPT1/8
NSS 3/16-N10U	3/16	UNF10 #32
NSS 3/16-N01U	3/16	NPT1/8
NSS 3/16-N02U	3/16	NPT1/4
NSS 3/16-N03U	3/16	NPT3/8
NSS 1/4-U10U	1/4	UNF10 #32
NSS 1/4-N01U	1/4	NPT1/8
NSS 1/4-N02U	1/4	NPT1/4
NSS 1/4-N03U	1/4	NPT3/8
NSS 5/16-N01U	5/16	NPT1/8
NSS 5/16-N02U	5/16	NPT1/4
NSS 5/16-N03U	5/16	NPT3/8
NSS 5/16-N04U	5/16	NPT1/2
NSS 3/8-N02U	3/8	NPT1/4
NSS 3/8-N03U	3/8	NPT3/8
NSS 3/8-N04U	3/8	NPT1/2
NSS 1/2-N03U	1/2	NPT3/8
NSS 1/2-N04U	1/2	NPT1/2

# NSF

Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

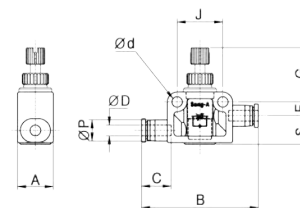
MODEL	ØD
NSF 03	3
NSF 04	4
NSF 06	6
NSF 08	8
NSF 10	10
NSF 12	12

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
NSF N5/32	5/32
NSF N3/16	3/16
NSF N1/4	1/4
NSF N5/16	5/16
NSF N3/8	3/8
NSF N1/2	1/2

# NSF-C

Mini Union Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
NSF 03C	3

# ROTARY JOINTS

## Application

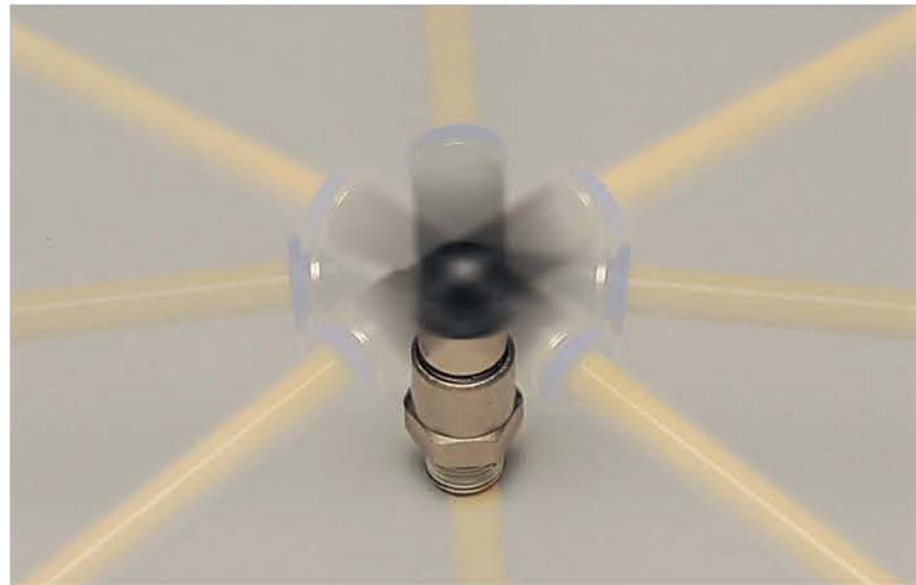
- Used for supplying compressed air at swiveling or swinging connections.
- Used for index tables and industrial robots.

## Feature

- Built in bearings, suitable for high-speed swiveling pneumatic connections..

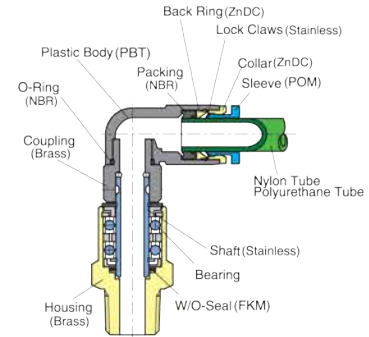
## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140° F	0~60° C
Applicable Tube Material	Polyurethane and Nylon	

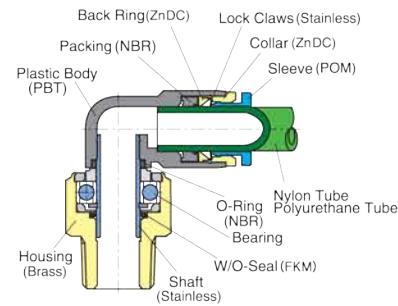


## Structural Diagram

### ▼High Rotary Joint



### ▼Rotary Joint



## Product Code System

**NHRC 06-01**

(1) (2) (3)

① Type

② Tube Dia(∅D)

Code	04	06	08	10	12
Dia	∅4	∅6	∅8	∅10	∅12

③ Thread Size(T)

	Metric Size		Taper Pipe Thread			
Code	M5	M6	01	02	03	04
Size	M5×0.8	M6×1.0	R1/8	R1/4	R3/8	R1/2

## Number of Rotations

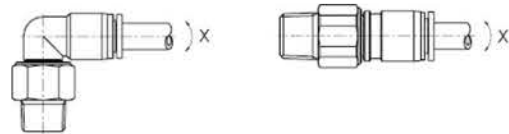
	Tube Dia	∅4	∅6	∅8	∅10	∅12	
r.p.m	Low	NRC, NRL	500	500	400	300	250
	High	NHRC, NHRL, NHRS, NHRF	1,500	1,200	1,200	1,000	1,000

### ⚠ CAUTION

-Be sure to read "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.

### ⚠ WARNING

-When using at high speed, use PU tube.  
-Nylon or other hard tube can cause overload of the rotation.



# Rotary Joints



## Fitting with G Thread (O-Ring)





# NRC

Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
NRC 04-M5	4	M5
NRC 04-M6	4	M6
NRC 04-01	4	R1/8
NRC 06-M5	6	M5
NRC 06-M6	6	M6
NRC 06-01	6	R1/8
NRC 06-02	6	R1/4
NRC 08-01	8	R1/8
NRC 08-02	8	R1/4
NRC 08-03	8	R3/8
NRC 10-03	10	R3/8
NRC 10-04	10	R1/2
NRC 12-03	10	R3/8
NRC 12-04	12	R1/2

**Tube (Inch) - Thread(R)**

MODEL	ØD	R
NRC 1/4-R01	1/4	R1/8
NRC 1/4-R02	1/4	R1/4
NRC 5/16-R01	5/16	R1/8
NRC 5/16-R02	5/16	R1/4
NRC 5/16-R03	5/16	R3/8
NRC 3/8-R03	3/8	R3/8
NRC 3/8-R04	3/8	R1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
NRC 5/32-U10U	5/32	UNF10 * 32
NRC 5/32-N01U	5/32	NPT1/8
NRC 3/16-U10U	3/16	UNF10 * 32
NRC 3/16-N01U	3/16	NPT1/8
NRC 3/16-N02U	3/16	NPT1/4
NRC 1/4-U10U	1/4	UNF10 * 32
NRC 1/4-N01U	1/4	NPT1/8
NRC 1/4-N02U	1/4	NPT1/4
NRC 5/16-N01U	5/16	NPT1/8
NRC 5/16-N02U	5/16	NPT1/4
NRC 5/16-N03U	5/16	NPT3/8
NRC 3/8-N03U	3/8	NPT3/8
NRC 3/8-N04U	3/8	NPT1/2
NRC 1/2-N03U	1/2	NPT3/8
NRC 1/2-N04U	1/2	NPT1/2

# NRC-G

Straight



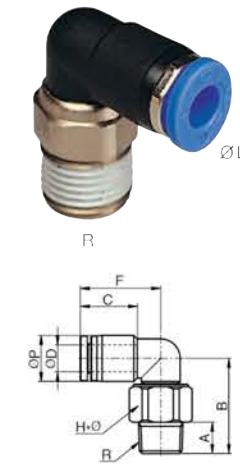
MODEL [ØD-T]

**Tube (Metric) - Thread(G)**

MODEL	ØD	R
NRC 04-G01	4	G1/8
NRC 06-G01	6	G1/8
NRC 06-G02	6	G1/4
NRC 08-G01	8	G1/8
NRC 08-G02	8	G1/4
NRC 08-G03	8	G3/8
NRC 10-G03	8	G3/8
NRC 10-G04	10	G1/2
NRC 12-G03	12	G3/8
NRC 12-G04	12	G1/2

# NRL

Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
NRL 04-M5	4	M5
NRL 04-M6	4	M6
NRL 04-01	4	R1/8
NRL 06-M5	6	M5
NRL 06-M6	6	M6
NRL 06-01	6	R1/8
NRL 06-02	6	R1/4
NRL 08-01	8	R1/8
NRL 08-02	8	R1/4
NRL 08-03	8	R3/8
NRL 10-03	10	R3/8
NRL 10-04	10	R1/2
NRL 12-03	10	R3/8
NRL 12-04	12	R1/2

**Tube (Inch) - Thread(R)**

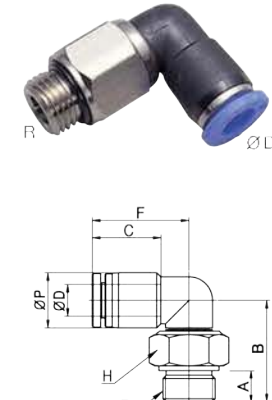
MODEL	ØD	R
NRL 1/4-R01	1/4	R1/8
NRL 1/4-R02	1/4	R1/4
NRL 5/16-R01	5/16	R1/8
NRL 5/16-R02	5/16	R1/4
NRL 5/16-R03	5/16	R3/8
NRL 3/8-R03	3/8	R3/8
NRL 3/8-R04	3/8	R1/2

**Tube (Inch) - Thread (NPT)**

MODEL	ØD	R
NRL 5/32-U10U	5/32	UNF10 * 32
NRL 5/32-N01U	5/32	NPT1/8
NRL 3/16-N01U	3/16	NPT1/8
NRL 3/16-N02U	3/16	NPT1/4
NRL 1/4-U10U	1/4	UNF10 * 32
NRL 1/4-N01U	1/4	NPT1/8
NRL 1/4-N02U	1/4	NPT1/4
NRL 5/16-N01U	5/16	NPT1/8
NRL 5/16-N02U	5/16	NPT1/4
NRL 5/16-N03U	5/16	NPT3/8
NRL 3/8-N03U	3/8	NPT3/8
NRL 3/8-N04U	3/8	NPT1/2
NRL 1/2-N03U	1/2	NPT3/8
NRL 1/2-N04U	1/2	NPT1/2

# NRL-G

Elbow



MODEL [ØD-T]

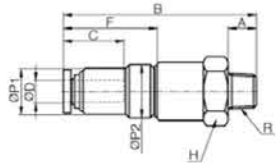
**Tube (Metric) - Thread(G)**

MODEL	ØD	R
NRL 04-G01	4	G1/8
NRL 06-G01	6	G1/8
NRL 06-G02	6	G1/4
NRL 08-G01	8	G1/8
NRL 08-G02	8	G1/4
NRL 08-G03	8	G3/8
NRL 10-G03	8	G3/8
NRL 10-G04	10	G1/2
NRL 12-G03	12	G3/8
NRL 12-G04	12	G1/2

Rotary Joints

## NHRC

Straight



MODEL [ØD-T]

### Tube (Metric) - Thread(R)

MODEL	ØD	R
NHRC 04-M5	4	M5
NHRC 04-M6	4	M6
NHRC 04-01	4	R1/8
NHRC 06-01	6	R1/8
NHRC 06-02	6	R1/4
NHRC 08-01	8	R1/8
NHRC 08-02	8	R1/4
NHRC 10-03	10	R3/8
NHRC 10-04	10	R1/2
NHRC 12-03	10	R3/8
NHRC 12-04	12	R1/2

### Tube (Inch) - Thread(R)

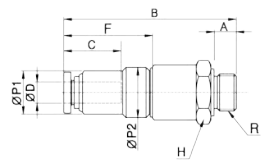
MODEL	ØD	R
NHRC 1/4-R01	1/4	R1/8
NHRC 1/4-R02	1/4	R1/4
NHRC 5/16-R01	5/16	R1/8
NHRC 5/16-R02	5/16	R1/4
NHRC 3/8-R03	3/8	R3/8
NHRC 3/8-R04	3/8	R1/2

### Tube (Inch) - Thread (NPT)

MODEL	ØD	R
NHRC 5/32-U10U	5/32	UNF10 * 32
NHRC 5/32-N01U	5/32	NPT1/8
NHRC 3/16-U10U	3/16	UNF10 * 32
NHRC 3/16-N01U	3/16	NPT1/8
NHRC 3/16-N02U	3/16	NPT1/4
NHRC 1/4-N01U	1/4	NPT1/8
NHRC 1/4-N02U	1/4	NPT1/4
NHRC 5/16-N01U	5/16	NPT1/8
NHRC 5/16-N02U	5/16	NPT1/4
NHRC 3/8-N03U	3/8	NPT3/8
NHRC 3/8-N04U	3/8	NPT1/2
NHRC 1/2-N03U	1/2	NPT3/8
NHRC 1/2-N04U	1/2	NPT1/2

## NHRC-G

Straight



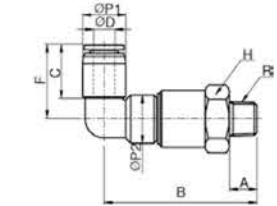
MODEL [ØD-T]

### Tube (Metric) - Thread(G)

MODEL	ØD	R
NHRC 04-G01	4	G1/8
NHRC 06-G01	6	G1/8
NHRC 06-G02	6	G1/4
NHRC 08-G01	8	G1/8
NHRC 08-G02	8	G1/4
NHRC 08-G03	8	G3/8
NHRC 10-G03	8	G3/8
NHRC 10-G04	10	G1/2
NHRC 12-G03	12	G3/8
NHRC 12-G04	12	G1/2

## NHRL

Elbow



MODEL [ØD-T]

### Tube (Metric) - Thread(R)

MODEL	ØD	R
NHRL 04-M5	4	M5
NHRL 04-M6	4	M6
NHRL 04-01	4	R1/8
NHRL 06-01	6	R1/8
NHRL 06-02	6	R1/4
NHRL 08-01	8	R1/8
NHRL 08-02	8	R1/4
NHRL 10-03	10	R3/8
NHRL 10-04	10	R1/2
NHRL 12-03	10	R3/8
NHRL 12-04	12	R1/2

### Tube (Inch) - Thread(R)

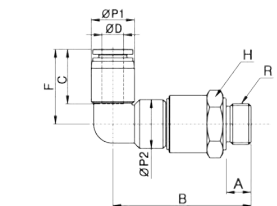
MODEL	ØD	R
NHRL 1/4-R01	1/4	R1/8
NHRL 1/4-R02	1/4	R1/4
NHRL 5/16-R01	5/16	R1/8
NHRL 5/16-R02	5/16	R1/4
NHRL 3/8-R03	3/8	R3/8
NHRL 3/8-R04	3/8	R1/2

### Tube (Inch) - Thread (NPT)

MODEL	ØD	R
NHRL 5/32-U10U	5/32	UNF10 * 32
NHRL 5/32-N01U	5/32	NPT1/8
NHRL 3/16-U10U	3/16	UNF10 * 32
NHRL 3/16-N01U	3/16	NPT1/8
NHRL 3/16-N02U	3/16	NPT1/4
NHRL 1/4-N01U	1/4	NPT1/8
NHRL 1/4-N02U	1/4	NPT1/4
NHRL 5/16-N01U	5/16	NPT1/8
NHRL 5/16-N02U	5/16	NPT1/4
NHRL 3/8-N03U	3/8	NPT3/8
NHRL 3/8-N04U	3/8	NPT1/2
NHRL 1/2-N03U	1/2	NPT3/8
NHRL 1/2-N04U	1/2	NPT1/2

## NHRL-G

Elbow



MODEL [ØD-T]

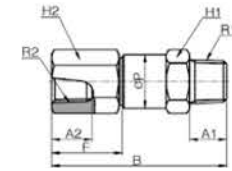
### Tube (Metric) - Thread(G)

MODEL	ØD	R
NHRL 04-G01	4	G1/8
NHRL 06-G01	6	G1/8
NHRL 06-G02	6	G1/4
NHRL 08-G01	8	G1/8
NHRL 08-G02	8	G1/4
NHRL 10-G03	10	G3/8
NHRL 10-G04	10	G1/2
NHRL 12-G03	12	G3/8
NHRL 12-G04	12	G1/2



## NHRF

Bush



MODEL [∅D-T]

### Tube (Metric) - Thread(R)

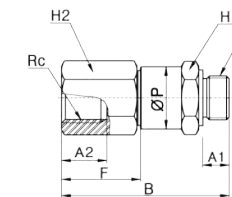
MODEL	R1	R2
NHRF 01-01	R1/8	Rc1/8
NHRF 01-02	R1/8	Rc1/4
NHRF 02-01	R1/4	Rc1/8
NHRF 02-02	R1/4	Rc1/4
NHRF 03-03	R3/8	Rc3/8
NHRF 03-04	R3/8	Rc1/2
NHRF 04-03	R1/2	Rc3/8
NHRF 04-04	R1/2	Rc1/2

### Tube (Inch) - Thread (NPT)

MODEL	R1	R2
NHRF N01-N01	NPT1/8	NPT1/8
NHRF N01-N02	NPT1/8	NPT1/4
NHRF N02-N01	NPT1/4	NPT1/8
NHRF N02-N02	NPT1/4	NPT1/4
NHRF N03-N03	NPT3/8	NPT3/8
NHRF N03-N04	NPT3/8	NPT1/2
NHRF N04-N03	NPT1/2	NPT3/8
NHRF N04-N04	NPT1/2	NPT1/2

## NHRF-G

Bush



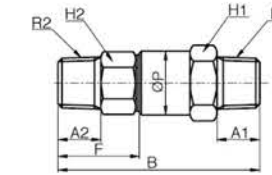
MODEL [∅D-T]

### Tube (Metric) - Thread(G)

MODEL	R	Rc
NHRF G01-G01	G1/8	G1/8
NHRF G01-G02	G1/8	G1/4
NHRF G02-G01	G1/4	G1/8
NHRF G02-G02	G1/4	G1/4
NHRF G03-G03	G3/8	G3/8
NHRF G03-G04	G3/8	G1/2
NHRF G04-G03	G1/2	G3/8
NHRF G04-G04	G1/2	G1/2

## NHRS

Nipple



MODEL [∅D-T]

### Tube (Metric) - Thread(R)

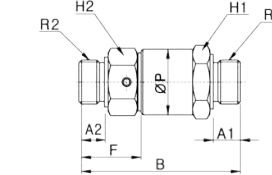
MODEL	R1	R2
NHRS 01-01	R1/8	R1/8
NHRS 01-02	R1/8	R1/4
NHRS 02-01	R1/4	R1/8
NHRS 02-02	R1/4	R1/4
NHRS 03-03	R3/8	R3/8
NHRS 03-04	R3/8	R1/2
NHRS 04-03	R1/2	R3/8
NHRS 04-04	R1/2	R1/2

### Tube (Inch) - Thread (NPT)

MODEL	R1	R2
NHRS N01-N01	NPT1/8	NPT1/8
NHRS N01-N02	NPT1/8	NPT1/4
NHRS N02-N01	NPT1/4	NPT1/8
NHRS N02-N02	NPT1/4	NPT1/4
NHRS N03-N03	NPT3/8	NPT3/8
NHRS N03-N04	NPT3/8	NPT1/2
NHRS N04-N03	NPT1/2	NPT3/8
NHRS N04-N04	NPT1/2	NPT1/2

## NHRS-G

Nipple



MODEL [∅D-T]

### Tube (Metric) - Thread(G)

MODEL	R	Rc
NHRS G01-G01	G1/8	G1/8
NHRS G01-G02	G1/8	G1/4
NHRS G02-G01	G1/4	G1/8
NHRS G02-G02	G1/4	G1/4
NHRS G03-G03	G3/8	G3/8
NHRS G03-G04	G3/8	G1/2
NHRS G04-G03	G1/2	G3/8
NHRS G04-G04	G1/2	G1/2

# STOP FITTINGS

## Application

- Installed where the pneumatic connections are changed frequently.
- Used at laboratory or for instructing pneumatic connections.

## Feature

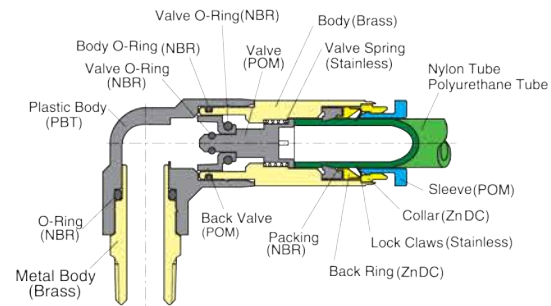
- Upon disconnecting the tube, the airflow will stop.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140° F	0~60°C
Applicable Tube Material	Polyurethane and Nylon	



## Structural Diagram



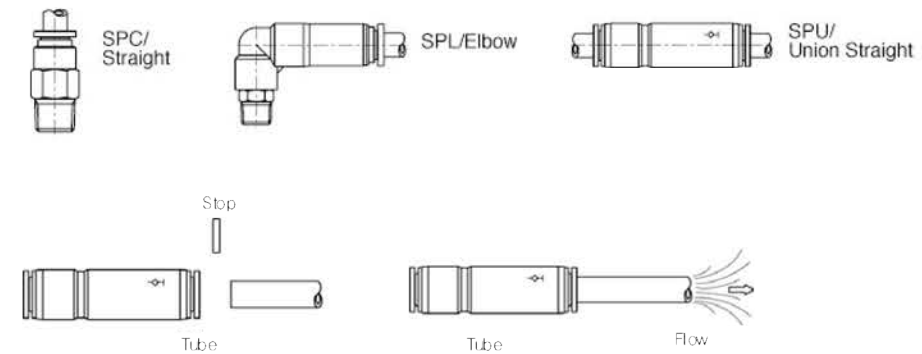
## Stop Fittings



## Fitting with G Thread (O-Ring)



## Control Method



## Product Code System

**SPC 06-01**

(1) (2) (3)

① Type

② Tube Dia(∅D)

Code	04	06	08	10	12
Dia	∅4	∅6	∅8	∅10	∅12

③ Thread Size(T)

	Metric Size		Taper Pipe Thread			
Code	M5	M6	01	02	03	04
Size	M5×0.8	M6×1.0	R1/8	R1/4	R3/8	R1/2

### CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Be sure to confirm the direction of the stop instrument.

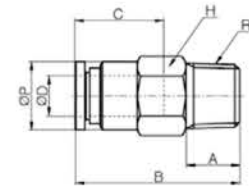
### WARNING

- Be careful of spring-up of the tube in case of disconnection when the pressure is on in the stop fitting.



## SPC

Straight



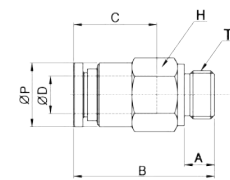
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
SPC 04-01	4	R1/8
SPC 06-01	6	R1/8
SPC 06-02	6	R1/4
SPC 08-01	8	R1/8
SPC 08-02	8	R1/4
SPC 08-03	8	R3/8
SPC 10-02	10	R1/4
SPC 10-03	10	R3/8
SPC 10-04	10	R1/2
SPC 12-03	12	R3/8
SPC 12-04	12	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	ØD	R
SPC 5/32-U10U	5/32	UNF10 * 32
SPC 5/32-N01U	5/32	NPT1/8
SPC 3/16-N01U	3/16	NPT1/8
SPC 3/16-N02U	3/16	NPT1/4
SPC 1/4-N01U	1/4	NPT1/8
SPC 1/4-N02U	1/4	NPT1/4
SPC 5/16-N02U	5/16	NPT1/4
SPC 5/16-N03U	5/16	NPT3/8
SPC 3/8-N03U	3/8	NPT3/8
SPC 3/8-N04U	3/8	NPT1/2
SPC 1/2-N03U	1/2	NPT3/8
SPC 1/2-N04U	1/2	NPT1/2

## SPC-G

Straight

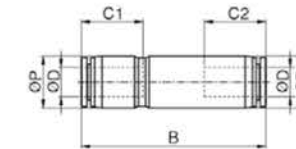


MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
SPC 04-G01	4	G1/8
SPC 06-G01	6	G1/8
SPC 06-G02	6	G1/4
SPC 08-G01	8	G1/8
SPC 08-G02	8	G1/4
SPC 08-G03	8	G3/8
SPC 10-G02	10	G1/4
SPC 10-G03	10	G3/8
SPC 10-G04	10	G1/2
SPC 12-G03	12	G3/8
SPC 12-G04	12	G1/2

## SPU

Union Straight



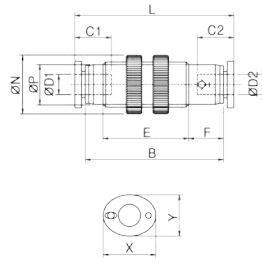
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
SPU 04	4
SPU 06	6
SPU 08	8
SPU 10	10
SPU 12	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
SPU 5/32	5/32
SPU 3/16	3/16
SPU 1/4	1/4
SPU 5/16	5/16
SPU 3/8	3/8
SPU 1/2	1/2

# SPUM

Elbow



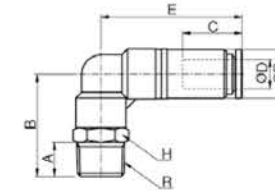
MODEL [ØD-T]

Tube (Metric) - Thread(R)	
MODEL	ØD
SPUM 04	4
SPUM 06	6
SPUM 08	8
SPUM 10	10
SPUM 12	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
SPUM 5/32	5/32
SPUM 3/16	3/16
SPUM 1/4	1/4
SPUM 5/16	5/16
SPUM 3/8	3/8
SPUM 1/2	1/2

# SPL

Elbow



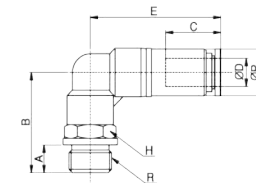
MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
SPL 04-M5	4	M5
SPL 04-M6	4	M6
SPL 04-01	4	R1/8
SPL 06-M5	6	M5
SPL 06-01	6	R1/8
SPL 06-02	6	R1/4
SPL 08-01	6	R1/8
SPL 08-02	8	R1/4
SPL 08-03	8	R3/8
SPL 10-02	8	R1/4
SPL 10-03	10	R3/8
SPL 10-04	10	R1/2
SPL 12-03	10	R3/8
SPL 12-04	12	R1/2

Tube (Inch) - Thread (NPT)		
MODEL	ØD	R
SPL 5/32-U10U	5/32	UNF10 *32
SPL 5/32-N01U	5/32	NPT1/8
SPL 3/16-N10U	3/16	UNF10 *32
SPL 3/16-N01U	3/16	NPT1/8
SPL 3/16-N02U	3/16	NPT1/4
SPL 1/4-U10U	1/4	UNF10 *32
SPL 1/4-N01U	1/4	NPT1/8
SPL 1/4-N02U	1/4	NPT1/4
SPL 5/16-N01U	5/16	NPT1/8
SPL 5/16-N02U	5/16	NPT1/4
SPL 5/16-N03U	5/16	NPT3/8
SPL 3/8-N02U	3/8	NPT1/4
SPL 3/8-N03U	3/8	NPT3/8
SPL 3/8-N04U	3/8	NPT1/2
SPL 1/2-N03U	1/2	NPT3/8
SPL 1/2-N04U	1/2	NPT1/2

# SPL-G

Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
SPL 04-G01	4	G1/8
SPL 06-G01	6	G1/8
SPL 06-G02	6	G1/4
SPL 08-G01	8	G1/8
SPL 08-G02	8	G1/4
SPL 08-G03	8	G3/8
SPL 10-G02	10	G1/4
SPL 10-G03	10	G3/8
SPL 10-G04	10	G1/2
SPL 12-G03	12	G3/8
SPL 12-G04	12	G1/2



# CHECK VALVES

## Application

- Check Valves permit airflow in one direction.
- Used for maintaining the output pressure at a constant level.

## Feature

- The check valves permit the airflow in one direction but stops in the reverse direction.
- The check valve works at the pressure of 0.1kgf/cm<sup>2</sup>, keeps 1.42 PSI in vacuum and connects at a low pressure.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 ° F	0~60 ° C
Applicable Tube Material	Polyurethane and Nylon	

## Product Code System

**PCVC 06-01 A**

(1) (2) (3) (4) (5)

(1) Type

(2) Tube Dia(∅D)

Code	04	06	08	10	12
Dia	∅4	∅6	∅8	∅10	∅12

(3) Thread Size(T)

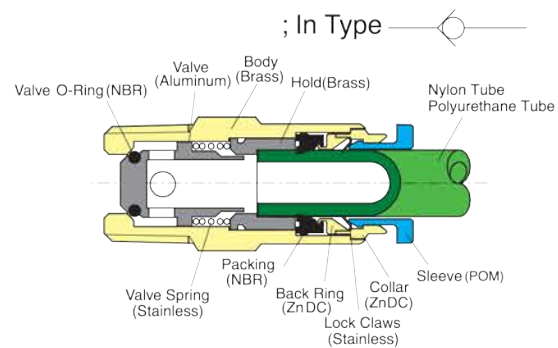
Code	Metric Size		Taper Pipe Thread			
	M5	M6	01	02	03	04
Size	M5 × 0.8	M6 × 1.0	R1/8	R1/4	R3/8	R1/2

(4) Control Method

Type	Meter IN	Meter OUT
Air Flow	Thread to Tube	Tube to Thread
PCVC		
PCVF		
PCVU		In case of PCVU model, you should pipe according to signal of the body.

(5) U : Hexagon flat-to-flat inch specification.(NPT)

## Structural Diagram



## Check Valves



## Fitting with G Thread (O-Ring)



### CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series" (P6) before using.
- Be sure to confirm the direction of the stop instrument. Reverse direction will not allow airflow.

### WARNING

- Be careful of a scald by the heat generation on the body for the high frequency of stop circulation effect.

# PCVC



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	
PCVC 04-M5	4	M5	
PCVC 04-M6	4	M6	
PCVC 04-01	4	R1/8	
PCVC 06-01	6	R1/8	
PCVC 06-02	6	R1/4	
PCVC 08-01	8	R1/8	
PCVC 08-02	8	R1/4	
PCVC 10-03	10	R3/8	
PCVC 10-04	10	R1/2	
PCVC 12-03	12	R3/8	
PCVC 12-04	12	R1/2	

Tube (Inch) - Thread (NPT)			
MODEL	ØD	R	
PCVC 5/32-U10U	5/32	UNF10 * 32	
PCVC 5/32-N01U	5/32	NPT1/8	
PCVC 3/16-U10U	3/16	UNF10 * 32	
PCVC 3/16-N01U	3/16	NPT1/8	
PCVC 3/16-N02U	3/16	NPT1/4	
PCVC 1/4-N01U	1/4	NPT1/8	
PCVC 1/4-N02U	1/4	NPT1/4	
PCVC 5/16-N01U	5/16	NPT1/8	
PCVC 5/16-N02U	5/16	NPT1/4	
PCVC 3/8-N03U	3/8	NPT3/8	
PCVC 3/8-N04U	3/8	NPT1/2	
PCVC 1/2-N03U	1/2	NPT3/8	
PCVC 1/2-N04U	1/2	NPT1/2	

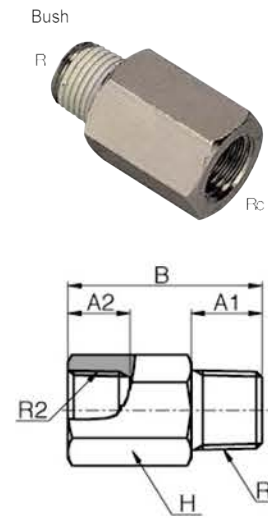
# PCVC-G



MODEL [ØD-T]

Tube (Metric) - Thread(G)			
MODEL	ØD	R	
PCVC 04-G01	4	G1/8	
PCVC 06-G01	6	G1/8	
PCVC 06-G02	6	G1/4	
PCVC 08-G01	8	G1/8	
PCVC 08-G02	8	G1/4	
PCVC 10-G03	10	G3/8	
PCVC 10-G04	10	G1/2	
PCVC 12-G03	12	G3/8	
PCVC 12-G04	12	G1/2	

# PCVF



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	R	Rc	
PCVF 01-01	R1/8	Rc1/8	
PCVF 02-02	R1/4	Rc1/4	
PCVF 03-03	R3/8	Rc3/8	
PCVF 04-04	R1/2	Rc1/2	

Tube (Inch) - Thread (NPT)			
MODEL	R	Rc	
PCVF N01-N01U	NPT1/8	NPT1/8	
PCVF N02-N02U	NPT1/4	NPT1/4	
PCVF N03-N03U	NPT3/8	NPT3/8	
PCVF N04-N04U	NPT1/2	NPT1/2	

# PCVF-G



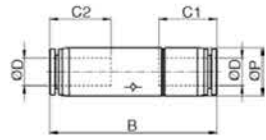
MODEL [ØD-T]

Tube (Metric) - Thread(G)			
MODEL	R	Rc	
PCVF G01-G01	G1/8	G1/8	
PCVF G02-G02	G1/4	G1/4	
PCVF G03-G03	G3/8	G3/8	
PCVF G04-G04	G1/2	G1/2	



# PCVU

Union Straight



MODEL[ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
PCVU 04	4
PCVU 06	6
PCVU 08	8
PCVU 10	10
PCVU 12	12

**Tube (Inch) - Thread (NPT)**

MODEL	ØD
PCVU 5/32	5/32
PCVU 3/16	3/16
PCVU 1/4	1/4
PCVU 5/16	5/16
PCVU 3/8	3/8
PCVU 1/2	1/2

# BALL VALVES

## Application

- Used for controlling air supply in the opened and closed positions.

## Feature

- Available for water as well as air with PPS resin body.
- The sectional dimension of the compact body optimizes as much flow as the tube capacity in proportion.

## Specification

Fluid	Air & Water	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	0~60 °C
Applicable Tube Material	Polyurethane and Nylon	



## Product Code System

**BC 20 - 08 02**

① ② ③ ④

- ① Type  
② Effective Sectional Area

	Metric Size	
Code	20	60
Size	20 mm	60 mm

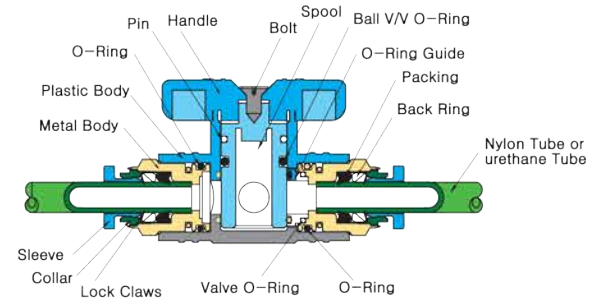
- ③ Tube Dia(∅D)

	06	08	10	12
Code				
Dia	∅6	∅8	∅10	∅12

- ④ Thread Size(T)

	Taper Pipe Thread			
Code	01	02	03	04
Size	R1/8	R1/4	R3/8	R1/2

## Structural Diagram



## Ball Valves



## Fitting with G Thread (O-Ring)



### CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Be sure to turn at a right angle(90°) when operating handle, otherwise it may cause the shortage of fluid.

### WARNING

- When using with water, the pressure must not exceed 0~3kgf/cm<sup>2</sup>. Be sure not to use in a place of vibration, bending, or shocking.
- Be sure to confirm that the Lock Pin is applied correctly. Without the Lock Pin, the body can be disassembled.



# BUC

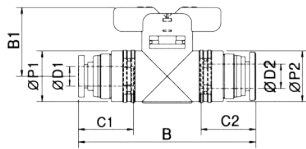
Union



MODEL [ØD-T]

Tube (Metric) - Thread (R)	
MODEL	ØD
BUC 20-0606	6
BUC 20-0808	8
BUC 60-1010	10
BUC 60-1212	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
BUC 20 1/4-1/4	1/4
BUC 20 5/16-5/16	5/16
BUC 60 3/8-3/8	3/8
BUC 60 1/2-1/2	1/2



# BM

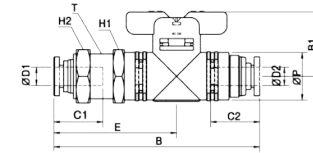
Bulkhead Union



MODEL [ØD-T]

Tube (Metric) - Thread (R)	
MODEL	ØD
BM 20-0606	6
BM 20-0806	8
BM 20-0808	8
BM 60-1010	10
BM 60-1210	12
BM 60-1212	12

Tube (Inch) - Thread (NPT)	
MODEL	ØD
BM 20 1/4-1/4	1/4
BM 20 5/16-1/4	5/16
BM 20 5/16-5/16	5/16
BM 60 3/8-3/8	3/8
BM 60 1/2-3/8	1/2
BM 60 1/2-1/2	1/2



# BUG

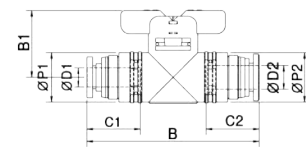
Reducing Union



MODEL [ØD1-T]

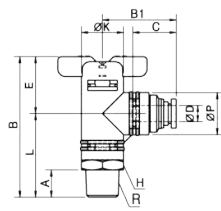
Tube (Metric) - Thread (R)		
MODEL	ØD1	ØD2
BUG 20-0806	8	6
BUG 60-1210	12	10

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	ØD2
BUG 20 5/16-1/4	5/16	1/4
BUG 60 1/2-3/8	1/2	3/8



# BL

Elbow



MODEL [ØD-T]

### Tube (Metric) - Thread(R)

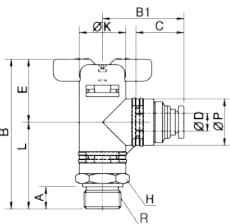
MODEL	ØD	R
BL 20-06-01	6	R1/8
BL 20-06-02	6	R1/4
BL 20-06-03	6	R3/8
BL 20-08-01	8	R1/8
BL 20-08-02	8	R1/4
BL 20-08-03	8	R3/8
BL 60-10-02	10	R1/4
BL 60-10-03	10	R3/8
BL 60-10-04	10	R1/2
BL 60-12-02	12	R1/4
BL 60-12-03	12	R3/8
BL 60-12-04	12	R1/2

### Tube (Inch) - Thread (NPT)

MODEL	ØD	R
BL 20 1/4-N1/8	1/4	NPT1/8
BL 20 1/4-N1/4	1/4	NPT1/4
BL 20 1/4-N3/8	1/4	NPT3/8
BL 20 5/16-N1/8	5/16	NPT1/8
BL 20 5/16-N1/4	5/16	NPT1/4
BL 20 5/16-N3/8	5/16	NPT3/8
BL 60 3/8-N1/4	3/8	NPT1/4
BL 60 3/8-N3/8	3/8	NPT3/8
BL 60 3/8-N1/2	3/8	NPT1/2
BL 60 1/2-N1/4	1/2	NPT1/4
BL 60 1/2-N3/8	1/2	NPT3/8
BL 60 1/2-N1/2	1/2	NPT1/2

# BL-G

Elbow



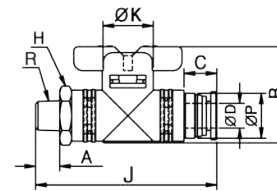
MODEL [ØD-T]

### Tube (Metric) - Thread(G)

MODEL	ØD	R
BL 20-06G01	6	G1/8
BL 20-06G02	6	G1/4
BL 20-06G03	6	G3/8
BL 20-08G01	8	G1/8
BL 20-08G02	8	G1/4
BL 20-08G03	8	G3/8
BL 60-10G02	10	G1/4
BL 60-10G03	10	G3/8
BL 60-10G04	10	G1/2
BL 60-12G02	12	G1/4
BL 60-12G03	12	G3/8
BL 60-12G04	12	G1/2

# BC

Straight



MODEL [ØD-T]

### Tube (Metric) - Thread(R)

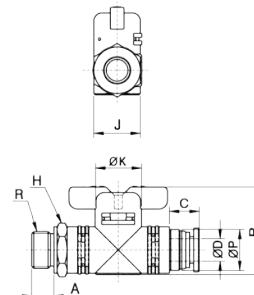
MODEL	ØD	R
BC 20-06-01	6	R1/8
BC 20-06-02	6	R1/4
BC 20-06-03	6	R3/8
BC 20-08-01	8	R1/8
BC 20-08-02	8	R1/4
BC 20-08-03	8	R3/8
BC 60-10-02	10	R1/4
BC 60-10-03	10	R3/8
BC 60-10-04	10	R1/2
BC 60-12-02	12	R1/4
BC 60-12-03	12	R3/8
BC 60-12-04	12	R1/2

### Tube (Inch) - Thread (NPT)

MODEL	ØD	R
BC 20 1/4-N1/8	1/4	NPT1/8
BC 20 1/4-N1/4	1/4	NPT1/4
BC 20 1/4-N3/8	1/4	NPT3/8
BC 20 5/16-N1/8	5/16	NPT1/8
BC 20 5/16-N1/4	5/16	NPT1/4
BC 20 5/16-N3/8	5/16	NPT3/8
BC 60 3/8-N1/4	3/8	NPT1/4
BC 60 3/8-N3/8	3/8	NPT3/8
BC 60 3/8-N1/2	3/8	NPT1/2
BC 60 1/2-N1/4	1/2	NPT1/4
BC 60 1/2-N3/8	1/2	NPT3/8
BC 60 1/2-N1/2	1/2	NPT1/2

# BC-G

Straight



MODEL [ØD-T]

### Tube (Metric) - Thread(G)

MODEL	ØD	R
BC 20-06G01	6	G1/8
BC 20-06G02	6	G1/4
BC 20-06G03	6	G3/8
BC 20-08G01	8	G1/8
BC 20-08G02	8	G1/4
BC 20-08G03	8	G3/8
BC 60-10G02	10	G1/4
BC 60-10G03	10	G3/8
BC 60-10G04	10	G1/2
BC 60-12G02	12	G1/4
BC 60-12G03	12	G3/8
BC 60-12G04	12	G1/2



# BUL

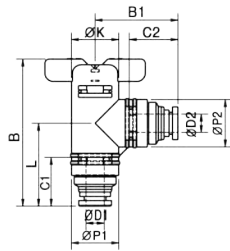
Union Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	
BUL 20-0606	6	
BUL 20-0808	8	
BUL 60-1010	10	
BUL 60-1212	12	

Tube (Inch) - Thread (NPT)		
MODEL	ØD	
BUL 20 1/4-1/4	1/4	
BUL 20 5/16-5/16	5/16	
BUL 60 3/8-3/8	3/8	
BUL 60 1/2-1/2	1/2	



# BLM

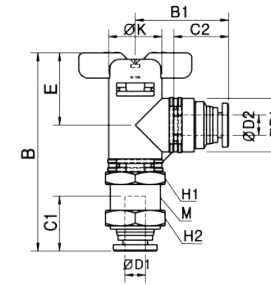
Bulkhead Union Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	
BLM 20-0606	6	
BLM 20-0806	8	
BLM 20-0808	8	
BLM 60-1010	10	
BLM 60-1210	12	
BLM 60-1212	12	

Tube (Inch) - Thread (NPT)		
MODEL	ØD1	
BLM 20 1/4-1/4	1/4	
BLM 20 5/16-1/4	5/16	
BLM 20 5/16-5/16	5/16	
BLM 60 3/8-3/8	3/8	
BLM 60 1/2-3/8	1/2	
BLM 60 1/2-1/2	1/2	



# BLG

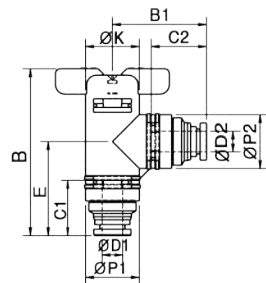
Reducing Union Elbow



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD1	ØD2	
BLG 20-0608	6	8	
BLG 20-0806	8	6	
BLG 60-1012	10	12	
BLG 60-1210	12	10	

Tube (Inch) - Thread (NPT)			
MODEL	ØD1	ØD2	
BLG 20 1/4-5/16	1/4	5/16	
BLG 20 5/16-1/4	5/16	1/4	
BLG 60 3/8-1/2	3/8	1/2	
BLG 60 1/2-3/8	1/2	3/8	



# MAIN BLOCKS

## Application

- Used for assembling a variety of manifold blocks for concentrated branching.
- Main Blocks provide comparable flow rates to steel piping.

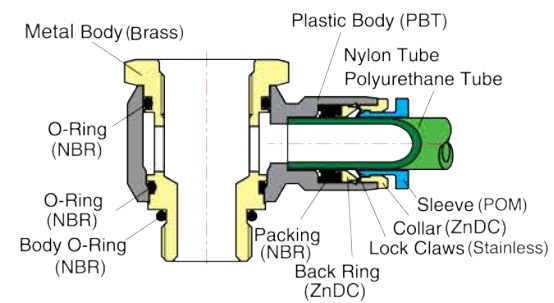
## Feature

- 14 types of different shapes can be combined freely depending on the user's application.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	0~60 °C
Applicable Tube Material	Polyurethane and Nylon	

## Structural Diagram



## Main Blocks



## Case In Use



- ▶ Using Items
- BHF
  - BMF
  - BUMR
  - BBA



- ▶ Using Items
- BHMR
  - BMR
  - BMM
  - BPM



- ▶ Using Items
- BHF
  - BHMR
  - BL
  - BPM



- ▶ Using Items
- BHWF
  - BHF
  - BHMR
  - BMR



## ▶ Method of Assembly

The above pictures show that the metric threads can connect to each different Main Block with the same thread size.

Generally, BHF, BHM, and BHMR decide the shape of complete assembly and BMR, BI, BRM, BUMR, BMF used for outlet of air at the end.

BPM or BCM is used for blocking the outlet.

For the connection of different thread sizes of Main Block, use BMM.

BUMM is for connecting with female Main Block and BBA is for bracketing the assembly.

## Product Code System

**BHF 14 - 08**

①      ②      ③

- ① Type  
② Thread Size(T)

		Metric Size			
Code	08	12	14	18	
Size	M8 × 1.0	M12 × 1.0	M14 × 1.0	M18 × 1.0	

		Thread Size					
Code	M5	M6	O1	O2	O3	O4	
Size	M 5 × 0.8	M 6 × 1.0	R1/8	R1/4	R3/8	R1/2	

- ③ Tube Dia(∅D)

		Taper Pipe Thread				
Code	04	06	08	10	12	
Dia	∅04	∅06	∅08	∅10	∅12	

## ! CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Use a wrench to assemble or disassemble the Main Block.

## ! WARNING

- When installing multiple connections, be sure to fix it with bracket BBA. Failure to do so may cause damage or transformation of the blocks.



# BHF

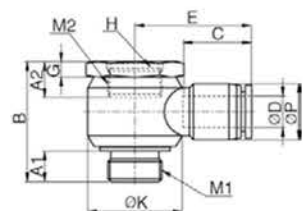
Universal Quick



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	M
BHF 0408	4	M8
BHF 0608	6	M8
BHF 0612	6	M12
BHF 0812	8	M12
BHF 0814	8	M14
BHF 1014	10	M14
BHF 1214	12	M14
BHF 1218	12	M18



# BMF

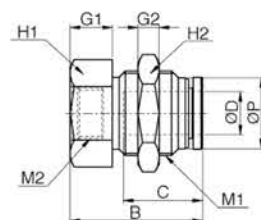
Bulkhead Reducer



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	M
BMF 04M8	4	M8
BMF 06M8	6	M8
BMF 06M12	6	M12
BMF 08M12	8	M12
BMF 08M14	8	M14
BMF 10M12	10	M12
BMF 10M14	10	M14
BMF 12M14	12	M14
BMF 12M18	12	M18



# BMR

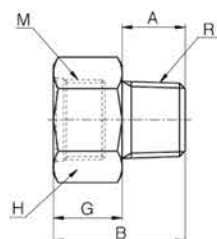
Bush



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	M	R
BMR 0801	M8	R1/8
BMR 1201	M12	R1/8
BMR 1202	M12	R1/4
BMR 1203	M12	R3/8
BMR 1402	M14	R1/4
BMR 1403	M14	R3/8
BMR 1404	M14	R1/2
BMR 1803	M18	R3/8
BMR 1804	M18	R1/2



# BHMR

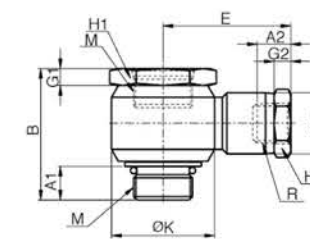
Universal Rc Thread



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	M	R
BHMR 08M5	M8	M5
BHMR 08M6	M8	M6
BHMR 0801	M8	R1/8
BHMR 12M6	M12	M6
BHMR 1201	M12	R1/8
BHMR 1401	M14	R1/8
BHMR 1402	M14	R1/4
BHMR 1802	M18	R1/4



# BHWF

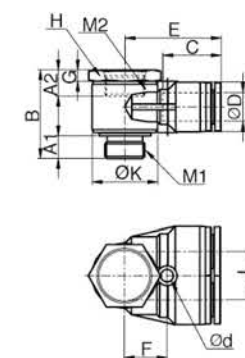
Universal Branch



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	M
BHWF 1014	10	M14
BHWF 1218	12	M18



# BCM

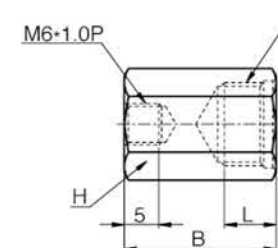
Cap



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	M
BCM 08	M8
BCM 12	M12
BCM 14	M14
BCM 18	M18

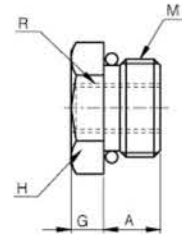


# BRM



MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	M	Rc
BRM 08M5	M8	M5
BRM 12M6	M12	M6
BRM 1401	M14	R1/8
BRM 1802	M18	R1/4

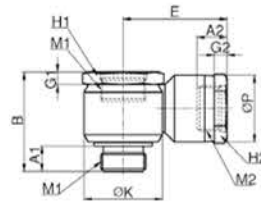


# BHM



MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	M1	M2
BHM 1208	M12	M8
BHM 1212	M12	M12
BHM 1412	M14	M12
BHM 1414	M14	M14
BHM 1814	M18	M14

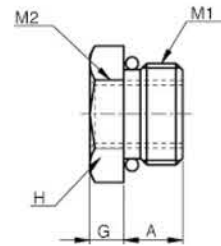


# BMM



MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	M1	M2
BMM 1208	M12	M8
BMM 1412	M14	M12
BMM 1814	M18	M14

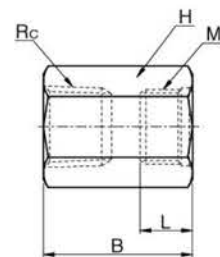


# BUMR



MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	Rc	M
BUMR 0801	Rc1/8	M8
BUMR 1202	Rc1/4	M12
BUMR 1403	Rc3/8	M14
BUMR 1804	Rc1/2	M18

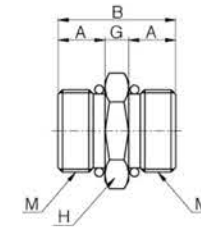


# BUMM



MODEL [∅D-T]

Tube (Metric) - Thread(R)	
MODEL	M
BUMM 0808	M8
BUMM 1212	M12
BUMM 1414	M14
BUMM 1818	M18

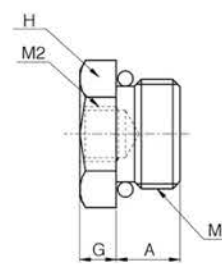


# BPM

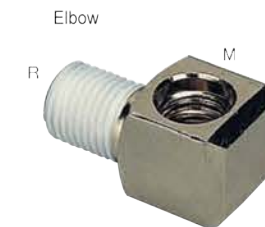


MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	M1	M2
BPM 08	M8	M6
BPM 12	M12	M6
BPM 14	M14	M6
BPM 18	M18	M6

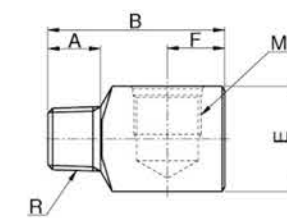


# BL



MODEL [∅D-T]

Tube (Metric) - Thread(R)		
MODEL	R	M
BL 0801	R1/8	M8
BL 1201	R1/8	M12
BL 1202	R1/4	M12
BL 1402	R1/4	M14
BL 1403	R3/8	M14
BL 1404	R1/2	M14
BL 1803	R3/8	M18
BL 1804	R1/2	M18





# HAND VALVES

## Application

- Used for turning air pressure on and off for pneumatic devices.

## Feature

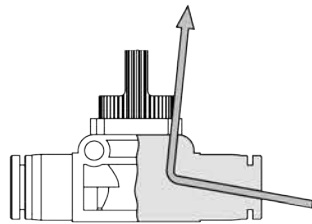
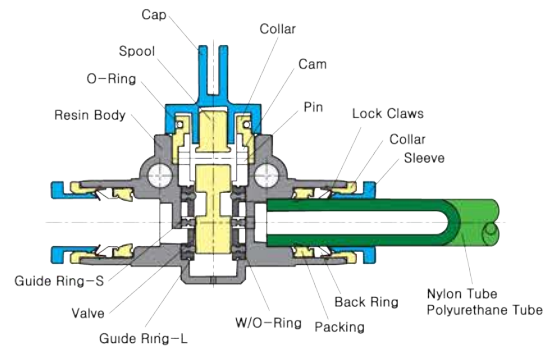
- When off, the three-way direction control valve discharges the residual pressure and blocks air flow-in.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	0~60 °C
Applicable Tube Material	Polyurethane and Nylon	



## Structural Diagram



### ▶ 3 Way Direction, 2 Way Direction

- The three-way direction control valve, when the air is stopped, discharges residual pressure to the outlet, which assures safety in repairing or adjusting connected devices.
- The two-way direction control valve does not discharge residual pressure, and is suitable for a reservoir tank or other device that does not require a discharging residual pressure.
- The two-way direction control valve is also suitable for the system where a vacuum pipe is used.

### ⚠ CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- When operating handle, turn at a right angle(90°), otherwise it may cause a shortage of fluid.

## Product Code System

**HVFS 06 - 01**

① ② ③

① Type

② Tube Dia(∅D)

Code	06	08	10	12
Dia	∅6	∅8	∅10	∅12

③ Thread Size(T)

	Taper Pipe Thread			
Code	01	02	03	04
Size	R1/8	R1/4	R3/8	R1/2

# Hand Valves



## Fitting with G Thread (O-Ring)

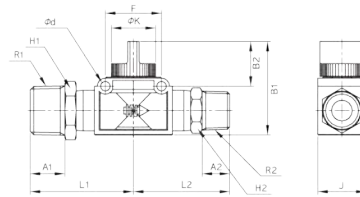


# HVSS



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	R1	R2
HVSS 01-01	R1/8	R1/8
HVSS 02-01	R1/4	R1/8
HVSS 02-02	R1/4	R1/4
HVSS 03-02	R3/8	R1/4
HVSS 03-03	R3/8	R3/8
HVSS 04-03	R1/2	R3/8
HVSS 04-04	R1/2	R1/2

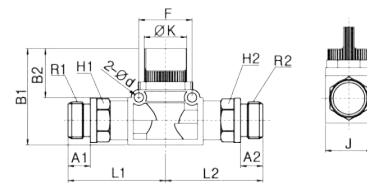


# HVSS-G



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	R1	R2
HVSS G01-G01	G1/8	G1/8
HVSS G02-G01	G1/4	G1/8
HVSS G02-G02	G1/4	G1/4
HVSS G03-G02	G3/8	G1/4
HVSS G03-G03	G3/8	G3/8
HVSS G04-G03	G1/2	G3/8
HVSS G04-G04	G1/2	G1/2

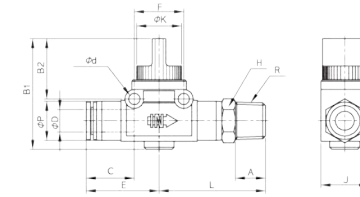


# HVFS



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
HVFS 06-01	6	R1/8
HVFS 06-02	6	R1/4
HVFS 06-03	6	R3/8
HVFS 08-01	8	R1/8
HVFS 08-02	8	R1/4
HVFS 08-03	8	R3/8
HVFS 10-02	10	R1/4
HVFS 10-03	10	R3/8
HVFS 10-04	10	R1/2
HVFS 12-02	12	R1/4
HVFS 12-03	12	R3/8
HVFS 12-04	12	R1/2

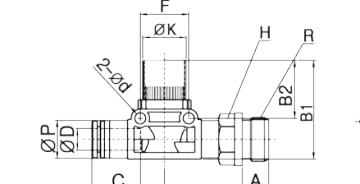


# HVFS-G



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
HVFS 06-G01	6	G1/8
HVFS 06-G02	6	G1/4
HVFS 06-G03	6	G3/8
HVFS 08-G01	8	G1/8
HVFS 08-G02	8	G1/4
HVFS 08-G03	8	G3/8
HVFS 10-G02	10	G1/4
HVFS 10-G03	10	G3/8
HVFS 10-G04	10	G1/2
HVFS 12-G02	12	G1/4
HVFS 12-G03	12	G3/8
HVFS 12-G04	12	G1/2





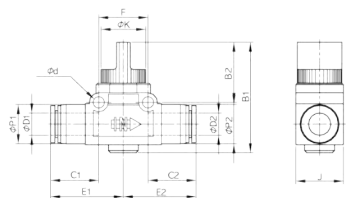
# HVFF

Union Straight



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD1	ØD2
HVFF 06-06	6	6
HVFF 08-06	8	6
HVFF 08-08	8	8
HVFF 10-10	10	10
HVFF 12-10	12	10
HVFF 12-12	12	12



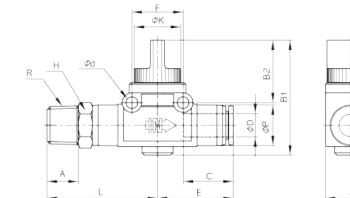
# HVSF

Straight Thread-Fitting



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	ØP
HVSF 06-01	6	R1/8
HVSF 06-02	6	R1/4
HVSF 06-03	6	R3/8
HVSF 08-01	8	R1/8
HVSF 08-02	8	R1/4
HVSF 08-03	8	R3/8
HVSF 10-02	10	R1/4
HVSF 10-03	10	R3/8
HVSF 10-04	10	R1/2
HVSF 12-02	12	R1/4
HVSF 12-03	12	R3/8
HVSF 12-04	12	R1/2



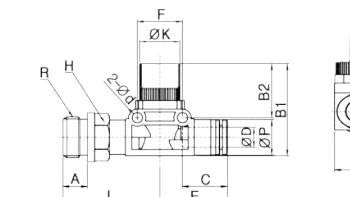
# HVSF-G

Straight G Thread-Fitting



MODEL [ØD-T]

Tube (Metric) - Thread(G)		
MODEL	ØD	R
HVSF 06-G01	6	G1/8
HVSF 06-G02	6	G1/4
HVSF 06-G03	6	G3/8
HVSF 08-G01	8	G1/8
HVSF 08-G02	8	G1/4
HVSF 08-G03	8	G3/8
HVSF 10-G02	10	G1/4
HVSF 10-G03	10	G3/8
HVSF 10-G04	10	G1/2
HVSF 12-G02	12	G1/4
HVSF 12-G03	12	G3/8
HVSF 12-G04	12	G1/2



# HAND SLIDE VALVES

## Application

- Used for turning air pressure on and off for pneumatic devices.

## Feature

- Made of brass or aluminum for a long life-span.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	0~60 °C
Applicable Tube Material	Polyurethane and Nylon	



## Product Code System

### HSV M - 01

①      ②      ③

① Type

② Connection size

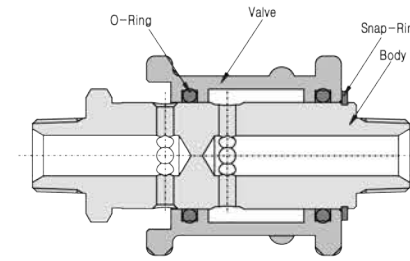
Code	M	H			P
		H20	H30	H40	
Dia	③접조	Ø9	Ø11	Ø15	Ace Coupler의 접속용 Plug

③ Thread Size(T)

Code	M5	M6	01	02	03	04	06
Size	M5×0.8	M6×1.0	R1/8	R1/4	R3/8	R1/2	R3/4

## Hand Slide Valves

### Structural Diagram



### Case In Use



### CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting series"(P6) before using.
- If valve is not open enough, it causes a shortage of air or fluid.

### WARNING

- Use after confirming the direction of air flow. When use in the wrong air flow direction, it may cause damage.
- When repairing or checking the machine, be sure to turn the electricity or air off, and secure to check that residual pressure is at zero.

## Hand Slide Valves

### HSV(M)

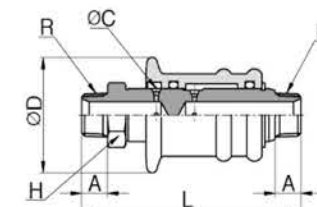
Nipple Slide Type



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	R
HSV M-M5	20	M5
HSV M-01	24	R1/8
HSV M-02	35	R1/4
HSV M-03	45	R3/8
HSV M-04	45	R1/2
HSV M-06	50	R3/4





# INSERT FITTING

## Application

- Lock nut fittings for multi-purpose pipe connection.

## Feature

- Lock nut structure provides the semipermanent application.
- Effective use at the place of vibration & negative pressure.
- Excellent application for high temperature place.

## Specification

Fluid	Air, Water, Oil		
Working Pressure Range	Equal to Tube working pressure		
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)	
Temperature Range	-40~176 °F	-40~80 °C	Air, Oil
	32~158 °F	-0~70 °C	Water
Applicable Tube Material	PU, PA Tube		



## Product Code System

**IC 04 - 02 - 01**

①      ②      ③

① Type

② Tube Dia(∅D)

Code	04	06	08	10	12	16
Dia	∅4	∅6	∅8	∅10	∅12	∅16

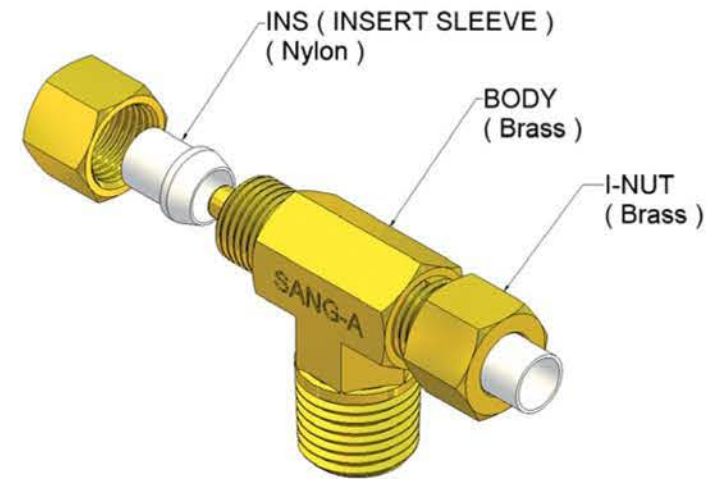
③ Thread Size(T)

		Thread Size			
Code	01	02	03	04	
Size	R1/8	R1/4	R3/8	R1/2	

## INSERT Fitting **NEW!**



## Structural Diagram



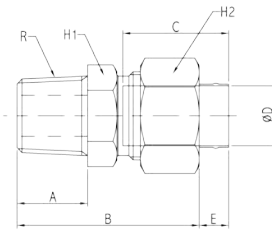
### ⚠ CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series" (P6) before using.
- Failure of fitting connection causes air leakage or tube disconnection.

### ⚠ WARNING

- Be sure to check the fluid specification.

# IC



MODEL [ØD-T]

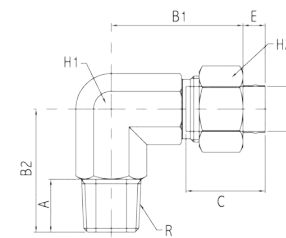
**Tube (Metric) - Thread(R)**

MODEL	TUBE	R
IC 04-02-01	4×2	R1/8
IC 04-02-02	4×2	R1/4
IC 06-04-01	6×2	R1/8
IC 06-04-01	6×2	R1/4
IC 06-04-03	6×2	R3/8
IC 08-05-01	8×5	R1/8
IC 08-05-02	8×5	R1/4
IC 08-05-03	8×5	R3/8
IC 08-06-01	8×6	R1/8
IC 08-06-02	8×6	R1/4
IC 08-06-03	8×6	R3/8
IC 10-6.5-02	10×6.5	R1/4
IC 10-6.5-03	10×6.5	R3/8
IC 10-6.5-04	10×6.5	R1/2
IC 10-08-02	10×8	R1/4
IC 10-08-03	10×8	R3/8
IC 10-08-04	10×8	R1/2
IC 12-08-02	12×8	R1/4
IC 12-08-03	12×8	R3/8
IC 12-08-04	12×8	R1/2
IC 12-09-02	12×9	R1/4
IC 12-09-03	12×9	R3/8
IC 12-09-04	12×9	R1/2
IC 16-12-03	16×12	R3/8
IC 16-12-04	16×12	R1/2
IC 16-13-03	16×13	R3/8
IC 16-13-04	16×13	R1/2

**Tube (Inch) - Thread(R)**

MODEL	TUBE	Rc
IC 1/4 - 01	1/4	R 1/8
IC 1/4 - 02	1/4	R 1/4
IC 1/4 - 03	1/4	R 3/8
IC 5/16 - 01	5/16	R 1/8
IC 5/16 - 02	5/16	R 1/4
IC 5/16 - 03	5/16	R 3/8
IC 3/8 - 01	3/8	R 1/8
IC 3/8 - 02	3/8	R 1/4
IC 3/8 - 03	3/8	R 3/8
IC 3/8 - 04	3/8	R 1/2
IC 1/2 - 02	1/2	R 1/4
IC 1/2 - 03	1/2	R 3/8
IC 1/2 - 04	1/2	R 1/2

# IL



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

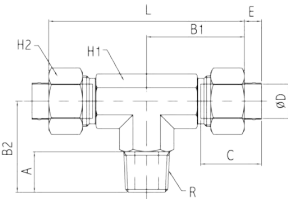
MODEL	TUBE	R
IL 04-02-01	4×2	R1/8
IL 04-02-02	4×2	R1/4
IL 06-04-01	6×2	R1/8
IL 06-04-01	6×2	R1/4
IL 06-04-03	6×2	R3/8
IL 08-05-01	8×5	R1/8
IL 08-05-02	8×5	R1/4
IL 08-05-03	8×5	R3/8
IL 08-06-01	8×6	R1/8
IL 08-06-02	8×6	R1/4
IL 08-06-03	8×6	R3/8
IL 10-6.5-02	10×6.5	R1/4
IL 10-6.5-03	10×6.5	R3/8
IL 10-6.5-04	10×6.5	R1/2
IL 10-08-02	10×8	R1/4
IL 10-08-03	10×8	R3/8
IL 10-08-04	10×8	R1/2
IL 12-08-02	12×8	R1/4
IL 12-08-03	12×8	R3/8
IL 12-08-04	12×8	R1/2
IL 12-09-02	12×9	R1/4
IL 12-09-03	12×9	R3/8
IL 12-09-04	12×9	R1/2
IL 16-12-03	16×12	R3/8
IL 16-12-04	16×12	R1/2
IL 16-13-03	16×13	R3/8
IL 16-13-04	16×13	R1/2

**Tube (Inch) - Thread(R)**

MODEL	TUBE	Rc
IL 1/4 - 01	1/4	R 1/8
IL 1/4 - 02	1/4	R 1/4
IL 1/4 - 03	1/4	R 3/8
IL 5/16 - 01	5/16	R 1/8
IL 5/16 - 02	5/16	R 1/4
IL 5/16 - 03	5/16	R 3/8
IL 3/8 - 01	3/8	R 1/8
IL 3/8 - 02	3/8	R 1/4
IL 3/8 - 03	3/8	R 3/8
IL 3/8 - 04	3/8	R 1/2
IL 1/2 - 02	1/2	R 1/4
IL 1/2 - 03	1/2	R 3/8
IL 1/2 - 04	1/2	R 1/2



# IT



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	TUBE	R
IT 04-02-01	4×2	R1/8
IT 04-02-02	4×2	R1/4
IT 06-04-01	6×2	R1/8
IT 06-04-01	6×2	R1/4
IT 06-04-03	6×2	R3/8
IT 08-05-01	8×5	R1/8
IT 08-05-02	8×5	R1/4
IT 08-05-03	8×5	R3/8
IT 08-06-01	8×6	R1/8
IT 08-06-02	8×6	R1/4
IT 08-06-03	8×6	R3/8
IT 10-6.5-02	10×6.5	R1/4
IT 10-6.5-03	10×6.5	R3/8
IT 10-6.5-04	10×6.5	R1/2
IT 10-08-02	10×8	R1/4
IT 10-08-03	10×8	R3/8
IT 10-08-04	10×8	R1/2
IT 12-08-02	12×8	R1/4
IT 12-08-03	12×8	R3/8
IT 12-08-04	12×8	R1/2
IT 12-09-02	12×9	R1/4
IT 12-09-03	12×9	R3/8
IT 12-09-04	12×9	R1/2

Tube (Inch) - Thread(R)		
MODEL	TUBE	Rc
IT 1/4 - 01	1/4	R 1/8
IT 1/4 - 02	1/4	R 1/4
IT 1/4 - 03	1/4	R 3/8
IT 5/16 - 01	5/16	R 1/8
IT 5/16 - 02	5/16	R 1/4
IT 5/16 - 03	5/16	R 3/8
IT 3/8 - 01	3/8	R 1/8
IT 3/8 - 02	3/8	R 1/4
IT 3/8 - 03	3/8	R 3/8
IT 3/8 - 04	3/8	R 1/2
IT 1/2 - 02	1/2	R 1/4
IT 1/2 - 03	1/2	R 3/8
IT 1/2 - 04	1/2	R 1/2

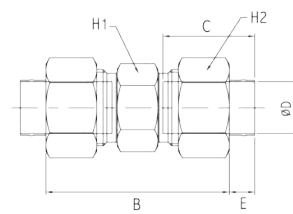
# IUC



MODEL [ØD-T]

Tube (Metric)	
MODEL	TUBE
IUC 04-02	4×2
IUC 06-04	6×4
IUC 08-05	8×5
IUC 08-06	8×6
IUC 10-6.5	10×6.5
IUC 10-08	10×8
IUC 12-08	12×8
IUC 12-09	12×9

Tube (Inch)	
MODEL	TUBE
IUC 1/4	1/4
IUC 5/16	5/16
IUC 3/8	3/8
IUC 1/2	1/2



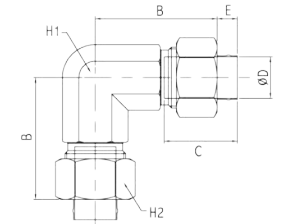
# IUL



MODEL [ØD-T]

Tube (Metric)	
MODEL	TUBE
IUL 04-02	4×2
IUL 06-04	6×4
IUL 08-05	8×5
IUL 08-06	8×6
IUL 10-6.5	10×6.5
IUL 10-08	10×8
IUL 12-08	12×8
IUL 12-09	12×9

Tube (Inch)	
MODEL	TUBE
IUL 1/4	1/4
IUL 5/16	5/16
IUL 3/8	3/8
IUL 1/2	1/2



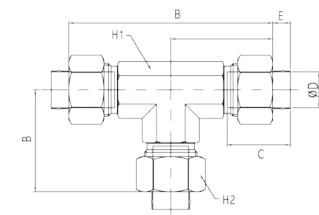
# IUT



MODEL [ØD-T]

Tube (Metric)	
MODEL	TUBE
IUT 04-02	4×2
IUT 06-04	6×4
IUT 08-05	8×5
IUT 08-06	8×6
IUT 10-6.5	10×6.5
IUT 10-08	10×8
IUT 12-08	12×8
IUT 12-09	12×9

Tube (Inch)	
MODEL	TUBE
IUT 1/4	1/4
IUT 5/16	5/16
IUT 3/8	3/8
IUT 1/2	1/2



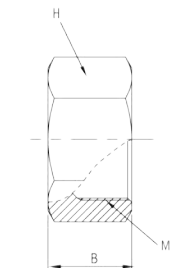
# INUT



MODEL [ØD-T]

Tube (Metric)	
MODEL	TUBE
INUT 04	04
INUT 06	06
INUT 08	08
INUT 10	10
INUT 12	12
INUT 16	16

Tube (Inch)	
MODEL	TUBE
INS 1/4	1/4
INS 3/8	3/8
INS 5/16	5/16
INS 1/2	1/2



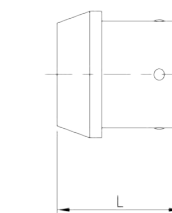
# INS



MODEL [ØD-T]

Tube (Metric)	
MODEL	TUBE
INS 04	04
INS 06	06
INS 08	08
INS 10	10
INS 12	12
INS 16	16

Tube (Inch)	
MODEL	TUBE
INS 1/4	1/4
INS 5/16	5/16
INS 3/8	3/8
INS 1/2	1/2



# TWO-TOUCH FITTING

## Application

- Nut-tightened air connector used for pneumatic piping.

## Feature

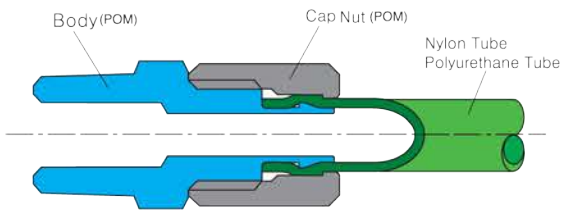
- Effective use at the place of vibration or rocking.
- Long life-span made of plastic.
- Excellent in anti-corrosion and anti-chemicals.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 ° F	0~60 ° C
Applicable Tube Material	Polyurethane and Nylon	



## Structural Diagram



## Two -Touch Fitting



## Product Code System

**TC 04 - 01**

①      ②      ③

### ① Type

Code	Metric Size				
	TC	TL	TUT	THT	THL
Type	STRAIGHT	ELBOW	UNION	TEE	ELBOW
				ROTATION	

### ② Tube Dia (∅D)

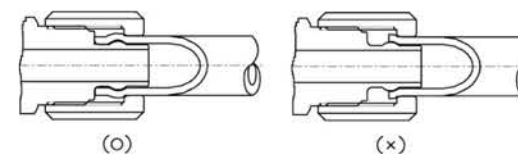
Code	04	06	08	10	12
Dia	∅4 × ∅2.5	∅6 × ∅4	∅8 × ∅5.5	∅10 × ∅6.5	∅12 × ∅8

### ③ Thread Size(T)

Code	Thread Size		
	01	02	03
Size	R1/8	R1/4	R3/8
			R1/2

## CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series" (P6) before using.
- Fastening the cap by force will cause damage on thread or body.
- Push the tube fully into the end when connecting.
- Cut the used part of tube after using once.
- Seal with teflon, failure to do so will cause air leakage.





Two - Touch Fittings

### TC

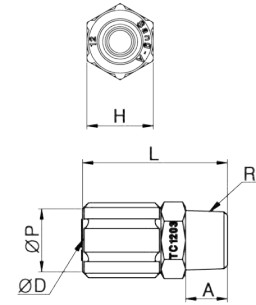
Straight



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
TC 04-01	4	R1/8
TC 04-02	4	R1/4
TC 06-01	6	R1/8
TC 06-02	6	R1/4
TC 08-01	8	R1/8
TC 08-02	8	R1/4
TC 08-03	8	R3/8
TC 10-02	10	R1/4
TC 10-03	10	R3/8
TC 12-03	12	R3/8
TC 12-04	12	R1/2



### TL

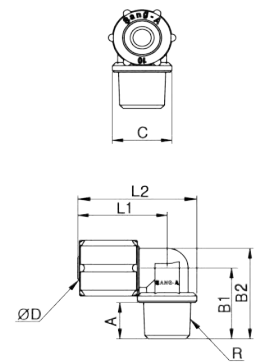
Elbow



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
TL 04-01	4	R1/8
TL 04-02	4	R1/4
TL 06-01	6	R1/8
TL 06-02	6	R1/4
TL 08-01	8	R1/8
TL 08-02	8	R1/4
TL 08-03	8	R3/8
TL 10-02	10	R1/4
TL 10-03	10	R3/8
TL 12-03	12	R3/8
TL 12-04	12	R1/2



### TUT

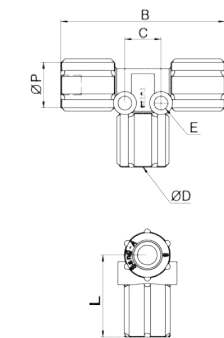
Union Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD
TUT 04	4
TUT 06	6
TUT 08	8
TUT 10	10
TUT 12	12



### THT(D1)

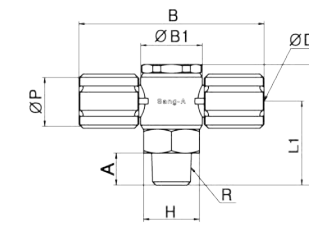
Single Universal Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
THT 0401-D1	4	R1/8
THT 0402-D1	4	R1/4
THT 0601-D1	6	R1/8
THT 0602-D1	6	R1/4
THT 0801-D1	8	R1/8
THT 0802-D1	8	R1/4
THT 0803-D1	8	R3/8
THT 1002-D1	10	R1/4
THT 1003-D1	10	R3/8
THT 1004-D1	10	R1/2
THT 1202-D1	12	R1/4
THT 1203-D1	12	R3/8
THT 1204-D1	12	R1/2



### THT(D2)

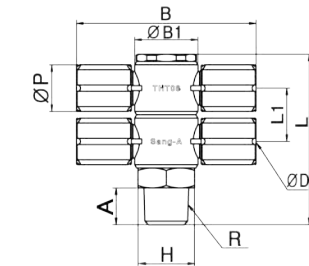
Double Universal Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
THT 0401-D2	4	R1/8
THT 0402-D2	4	R1/4
THT 0601-D2	6	R1/8
THT 0602-D2	6	R1/4
THT 0801-D2	8	R1/8
THT 0802-D2	8	R1/4
THT 0803-D2	8	R3/8
THT 1002-D2	10	R1/4
THT 1003-D2	10	R3/8
THT 1004-D2	10	R1/2
THT 1202-D2	12	R1/4
THT 1203-D2	12	R3/8
THT 1204-D2	12	R1/2



### THT(D3)

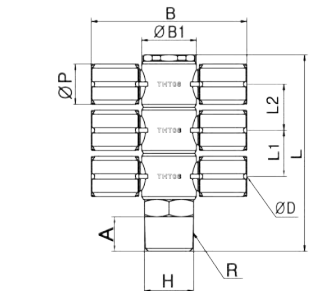
Triple Universal Tee



MODEL [ØD-T]

**Tube (Metric) - Thread(R)**

MODEL	ØD	R
THT 0401-D3	4	R1/8
THT 0402-D3	4	R1/4
THT 0601-D3	6	R1/8
THT 0602-D3	6	R1/4
THT 0801-D3	8	R1/8
THT 0802-D3	8	R1/4
THT 0803-D3	8	R3/8
THT 1002-D3	10	R1/4
THT 1003-D3	10	R3/8
THT 1004-D3	10	R1/2
THT 1202-D3	12	R1/4
THT 1203-D3	12	R3/8
THT 1204-D3	12	R1/2



### THL(D1)

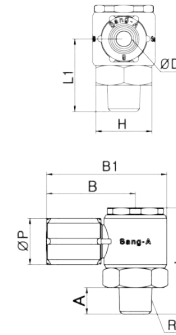
Single Universal Elbow



MODEL[ $\varnothing$ D-T]

**Tube (Metric) - Thread(R)**

MODEL	$\varnothing$ D	R
THL 0401-D1	4	R1/8
THL 0402-D1	4	R1/4
THL 0601-D1	6	R1/8
THL 0602-D1	6	R1/4
THL 0801-D1	8	R1/8
THL 0802-D1	8	R1/4
THL 0803-D1	8	R3/8
THL 1002-D1	10	R1/4
THL 1003-D1	10	R3/8
THL 1004-D1	10	R1/2
THL 1202-D1	12	R1/4
THL 1203-D1	12	R3/8
THL 1204-D1	12	R1/2



### THL(D2)

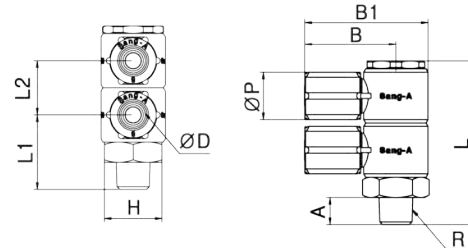
Double Universal Elbow



MODEL[ $\varnothing$ D-T]

**Tube (Metric) - Thread(R)**

MODEL	$\varnothing$ D	R
THL 0401-D2	4	R1/8
THL 0402-D2	4	R1/4
THL 0601-D2	6	R1/8
THL 0602-D2	6	R1/4
THL 0801-D2	8	R1/8
THL 0802-D2	8	R1/4
THL 0803-D2	8	R3/8
THL 1002-D2	10	R1/4
THL 1003-D2	10	R3/8
THL 1004-D2	10	R1/2
THL 1202-D2	12	R1/4
THL 1203-D2	12	R3/8
THL 1204-D2	12	R1/2



### THL(D3)

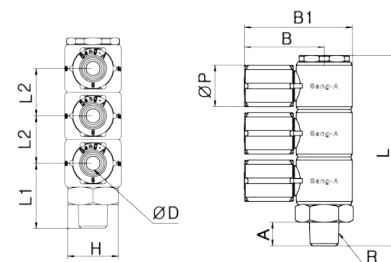
Triple Universal Elbow



MODEL[ $\varnothing$ D-T]

**Tube (Metric) - Thread(R)**

MODEL	$\varnothing$ D	R
THL 0401-D3	4	R1/8
THL 0402-D3	4	R1/4
THL 0601-D3	6	R1/8
THL 0602-D3	6	R1/4
THL 0801-D3	8	R1/8
THL 0802-D3	8	R1/4
THL 0803-D3	8	R3/8
THL 1002-D3	10	R1/4
THL 1003-D3	10	R3/8
THL 1004-D3	10	R1/2
THL 1202-D3	12	R1/4
THL 1203-D3	12	R3/8
THL 1204-D3	12	R1/2





# SILENCERS

### Application

- Used for suppressing the noise of air release, applied to exhausted port of machine.

### Feature

- Excellent noise suppression effect.
- Several options of materials (Brass, Stainless Steel, Plastic, Al)
- High durability and wide applications.
- Compact design is suitable for installing in confined space.



### Product Code System

**SL 01**

① ②

① Type

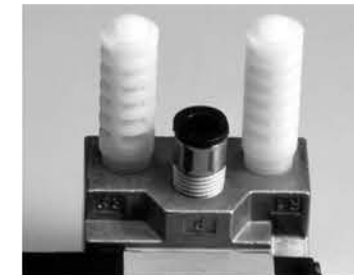
② Thread Size

Thread Size	Metric Thread	Tape Pipe Thread									
Code	M5	01	02	03	04	06	08	10	12	16	
Size	M5	R1/8	R1/4	R3/8	R1/2	R3/4	R1	R1 1/4	R1 1/2	R2	

Thread Size	Tape Paralle Thread					
Code	G01	G02	G03	G04	G06	G08
Size	G1/8	G1/4	G3/8	G1/2	G3/4	G1

### Case In Use

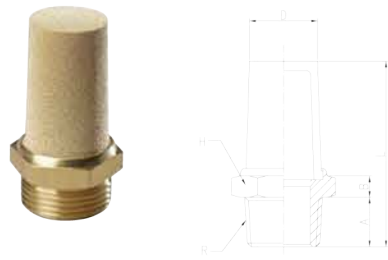
- Applied to exhausted port of machine.
- Sintering Silencer for anti-corrosion & high temperature place and ST Silencer for superior silence & contaminated place.



### CAUTION

- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Replace silencer after moderate use.
- Seal with Teflon, failure to do so will cause air leakage.
- Clean regularly to maintain good air release efficiency.
- Fastening the thread by force will cause damage on the body.

## SL

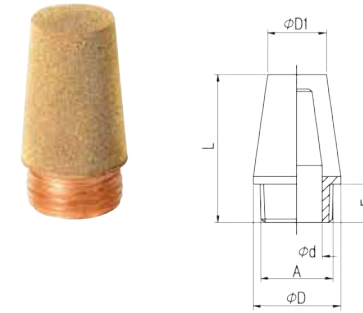


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure.

MODEL [ØD-T]

Tube (Metric) - Thread(R)							
MODEL	R	A	B	L	D	H	
SL M5	M5	4	3	20.7	4	9	
SL 01	R 1/8	7	3.5	24.5	8	12	
SL 02	R 1/4	9.5	4	31.5	10	15	
SL 03	R 3/8	10.5	5	39.9	12	19	
SL 04	R 1/2	12	6	47.3	15	22	
SL 06	R 3/4	12	6.5	55.8	19	27	
SL 08	R 1	14.5	7	70.5	32	36	
SL 10	R 1 1/4	15	7.5	75.8	32	46	
SL 12	R 1 1/2	15	8	81.8	38	52	
SL 16	R 2	16.5	9	105.3	50	64	

## SCL

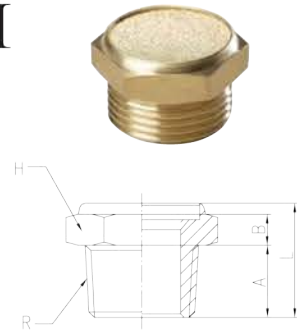


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Steel, Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Silencer with steel is excellent in anti-corrosion. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)							
MODEL	A	ØD	ØD1	Ød	F	L	
SCL M5	M5	6.5	5.5	3	5	16	
SCL 01	R 1/8	12	8	6.5	7	22	
SCL 02	R 1/4	15	11	9	9.5	27.5	
SCL 03	R 3/8	19	14	11.5	10.5	38.5	
SCL 04	R 1/2	23	18	15.5	12	45	
SCL 06	R 3/4	30	25	22	12	57	
SCL 08	R 1	37	30	28	14.5	66.5	

## SM

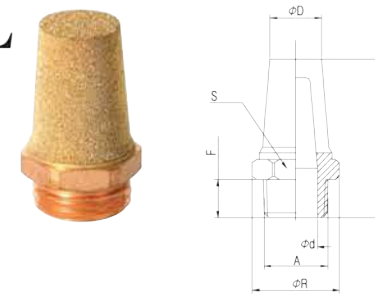


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Easy to install it in the defined space, due to compact height.

MODEL [ØD-T]

Tube (Metric) - Thread(R)						
MODEL	R	A	B	L	H	
SM M5	M5	4	3	8.5	8	
SM 01	R 1/8	7	3.5	11.5	12	
SM 02	R 1/4	9.5	4	15	15	
SM 03	R 3/8	10.5	5	17	19	
SM 04	R 1/2	12	6	20	22	
SM 06	R 3/4	12	6.5	20.5	27	
SM 08	R 1	14.5	7	24.5	36	

## SCEL

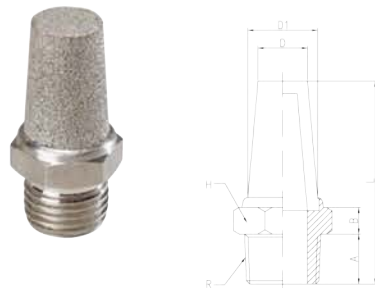


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Steel, Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Silencer with steel is excellent in anti-corrosion. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)							
MODEL	A	R	ØD	Ød	F	S	L
SCEL M5	M5	7.8	5	2.5	4	7	17.5
SCEL 01	R 1/8	13.2	8.5	7	7	12	23.5
SCEL 02	R 1/4	16.2	11	9.5	9.5	15	30.5
SCEL 03	R 3/8	20.5	14	12.5	10.5	19	38.5
SCEL 04	R 1/2	25.6	17	15.5	12	23	44.5
SCEL 06	R 3/4	33.4	21	20.5	12	30	54.5
SCEL 08	R 1	40	26.5	26	14.5	36	69.5

## SSL

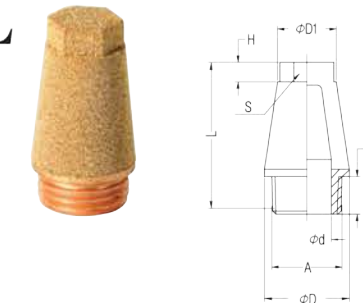


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Stainless Steel
- ▶ **Feature** : Silencer with stainless steel is strong in heat and high pressure. It is excellent in anti-corrosion and anti-chemicals.

MODEL [ØD-T]

Tube (Metric) - Thread(R)							
MODEL	R	A	B	L	D	D1	H
SSL 01	R 1/8	7	4.5	29	8.2	9	12
SSL 02	R 1/4	9.5	4.5	33.5	10.5	12.5	15
SSL 03	R 3/8	10.5	5	40.5	12.5	15	19
SSL 04	R 1/2	12	6.5	50.5	16	18	23
SSL 06	R 3/4	12	7	59	22	25	30
SSL 08	R 1	15	8	71	27.5	30	36

## SCTL



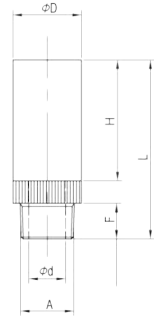
- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Steel, Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Silencer with steel is excellent in anti-corrosion. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)								
MODEL	A	ØD	ØD1	Ød	F	H	S	L
SCTL 01	R 1/8	12	10	6.5	7	3	8	24
SCTL 02	R 1/4	15	11.5	9	9.5	4	10	31.5
SCTL 03	R 3/8	19	15.5	11.5	10.5	5	13	39.5
SCTL 04	R 1/2	23	17.8	15.5	12	6	15	47.5
SCTL 06	R 3/4	30	25	22	12	6	19	59
SCTL 08	R 1	37	31	28	14.5	7	24	72



## SCB

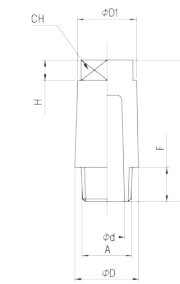


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Steel, Red Copper
- ▶ **Feature** : It is strong in heat and high pressure. Strong thread with red cooper. It is excellent in anti-corrosion and anti-chemicals. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)							(mm)
MODEL	A	φD	φd	F	H	L	
SCB M5	R M5	8	3	4.5	11	18	
SCB 6S	R 1/8	11	6.5	7	14	23.5	
SCB 6L	R 1/8	13	7	8	25	38	

## STL

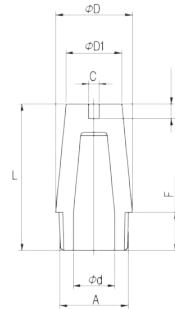


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)									(mm)
MODEL	A	φD	φD1	φd	F	H	CH	L	
STL 01	R 1/8	12	8.5	5	7	4.5	7	23.5	
STL 02	R 1/4	14	11.5	6.2	9.5	4.5	9	29.5	
STL 03	R 3/8	18	15.5	9	10.5	6	13	36.5	
STL 04	R 1/2	24	20.5	13	12	7	17	45	

## SDL

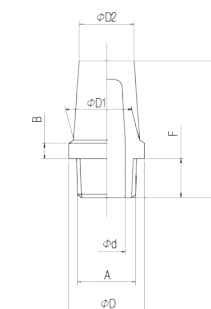


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Excellent noise suppression effect. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)									(mm)
MODEL	A	φD	φD1	φd	F	C	t	L	
SDL 01	R 1/8	11	8	6	7	1.5	2	22.5	
SDL 02	R 1/4	14	10	8.5	9.5	1.5	2	28	
SDL 03	R 3/8	18	15	11	11	2	2	36	
SDL 04	R 1/2	24	19	15	12	2	3	45	
SDL 06	R 3/4	29.5	20	20	12	2.5	3	65	
SDL 08	R 1	35.5	26.5	25	15	4	4	75	

## SBL

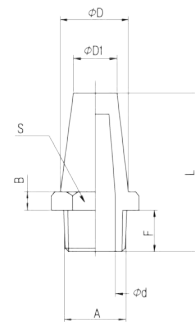


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)									(mm)
MODEL	A	φD	φD1	φD2	φd	F	H	L	
SBL 01	R 1/8	12.5	10.8	9	6	7	2.5	23	
SBL 02	R 1/4	16	13.2	11	7.5	9.5	3	29.5	
SBL 03	R 3/8	20	16.5	14.5	10	10.5	3.5	37.5	
SBL 04	R 1/2	26	20.5	18	12	12	4	45	

## SEL

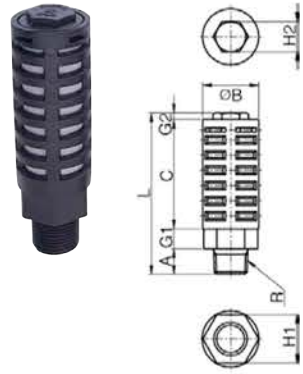


- ▶ **Application** : Hydraulic & Pneumatic equipment, Water Purifier, Automobile parts, Water Ionizer, Water Heater, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering which is not burn is strong in heat and high pressure. Superior mechanical strength.

MODEL [ØD-T]

Tube (Metric) - Thread(R)									(mm)
MODEL	A	φD	φD1	φd	F	B	S	L	
SEL 01	R 1/8	10	8	4	7	4	13	29	
SEL 02	R 1/4	14	12	6	9.5	4	17	35.5	
SEL 03	R 3/8	16.5	15	9	10.5	5	22	36.5	
SEL 04	R 1/2	20.5	19	12	12	7	27	44	
SEL 06	R 3/4	24	22	16	14	10	32	65	
SEL 08	R1	31	28	22	16	10	41	75	

## ST



- ▶ **Application** : Used for suppressing the noise of air release, applied to exhausted port of machine.
- ▶ **Material** : PBT, PE
- ▶ **Feature** : Small size used for in low noisy applications.  
Made of plastic, very light and strong.  
Compact design is suitable for installing in confined space.

MODEL [ØD-T]

Tube (Metric) - Thread(R, G)										(mm)
MODEL	R	φB	L	C	A	H1	H2	G1	G2	
ST M5	M5	7.5	18	-	5	-	-	-	-	
ST 01	R 1/8	10.6	36.1	25.7	8	-	5.5	-	2.4	
ST 02	R 1/4	22	63.7	43	10	19	12	8	2.7	
ST 03	R 3/8	25	84.5	58	13.5	22	14	10	3.0	
ST 04	R 1/2	30	93.5	64	15.5	27	19	10.5	3.5	
ST G01	G 1/8	16	41	25	7	14	8	7	2	
ST G02	G 1/4	21	64	42.5	10	18	12	10	2.5	
ST G03	G 3/8	25	85	59.5	13	21.5	14.5	10	2.5	
ST G04	G 1/2	30	94	67	14	26	19	10	3	

\* The color of ST M5, ST G is gray.

## ST(M)

Silencers(Manifold)



- ▶ **Application** : Used for suppressing the noise of air release, applied to exhausted port of machine.
- ▶ **Material** : PBT, PE
- ▶ **Feature** : Excellent noise suppression effect  
Made of plastic, very light and strong.  
Compact design is suitable for installing in confined space.

MODEL [ØD-T]

Tube (Metric) - Thread(R)								(mm)
MODEL	R	φB	L	C	A	H	G	
ST M02	R 1/4	15	46.5	36	8	10	2.5	
ST M03	R 3/8	22	57.7	45	10	12	2.7	

## STP



- ▶ **Application** : Used for suppressing the noise of air release, applied to exhausted port of machine.
- ▶ **Material** : Nylon, PE
- ▶ **Feature** : Small size used for in low noisy applications.  
Made of plastic, very light and strong.  
Compact design is suitable for installing in confined space.

MODEL [ØD-T]

Tube (Metric) - Thread(G)							(mm)
MODEL	A	φD	d	F	S	L	
STP G01	G 1/8	15	3	7	13	20.5	
STP G02	G 1/4	18	5	8.7	15	29.2	
STP G03	G 3/8	24	8	10	20	38.4	

## SMT

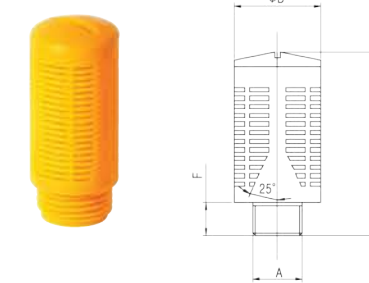


- ▶ **Application** : Used for suppressing the noise of air release, applied to exhausted port of machine.
- ▶ **Material** : PE
- ▶ **Feature** : Used for high flow and pressure applications.  
Made of plastic, very light and strong.  
Excellent noise suppression effect.

MODEL [ØD-T]

Tube (Metric) - Thread(G)					(mm)
MODEL	A	F	φD	L	
SMT M5	M5	4	7	23	
SMT G01	G 1/8	6.3	12.5	30	
SMT G02	G 1/4	7.4	17	34.5	
SMT G03	G 3/8	10.5	25	65	
SMT G04	G 1/2	10.6	25	67	
SMT G06	G 3/4	16	37	138	
SMT G08	G 1	20	48	150	

## SLT



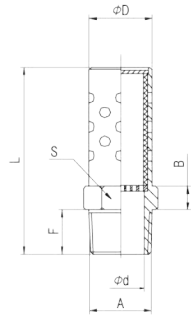
- ▶ **Application** : Used for suppressing the noise of air release, applied to exhausted port of machine.
- ▶ **Material** : PE
- ▶ **Feature** : Used for high flow and pressure applications.  
Made of plastic, very light and strong.  
Excellent noise suppression effect.

MODEL [ØD-T]

Tube (Metric) - Thread(G)					(mm)
MODEL	A	φD	L	F	
SLT G01	G 1/8	16	32	6.5	
SLT G02	G 1/4	20	42	8	
SLT G03	G 3/8	24	56	10	
SLT G04	G 1/2	24	56	10	
SLT G06	G 3/4	48	114	18.5	
SLT G08	G 1	48	114	18.5	



## SB

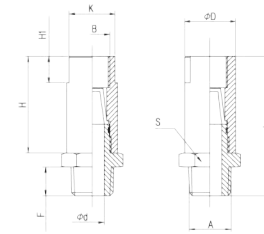


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : Steel
- ▶ **Feature** : Used for high exhaust flow and unifying force applications.  
Excellent noise suppression effect.

MODEL [ØD-T]

Tube (Metric) - Thread(R)								(mm)
MODEL	A	F	$\phi D$	$\phi d$	L	B	S	
SB 01	R 1/8	7	10.4	6	35	3.5	11.1	
SB 02	R 1/4	11	13.4	8.5	45	4	14.29	
SB 03	R 3/8	12.8	16.5	12	53	4.5	17.4	
SB 04	R 1/2	15.8	21.5	15	70	5	22.2	
SB 06	R 3/4	17.7	26.5	20	80	6	27	
SB 08	R1	22.5	32.3	26	98	7	33.3	
SB 10	R 1/4	23	42.3	32	114	7.5	43	
SB 12	R 1/2	25.5	50.3	40	127	8.5	51	
SB 16	R2	26	59.3	50	140	9	60	

## SAM

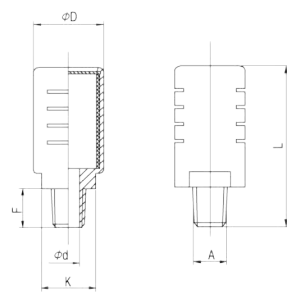


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : AL, Brass
- ▶ **Feature** : Designed for exhausting water or remnants.  
AL material strong in corrosion and poor environment.

MODEL [ØD-T]

Tube (Metric) - Thread(R)											(mm)
MODEL	A	B	$\phi D$	K	$\phi d$	F	H	H1	S	L	
SAM 01	R 1/8	R 1/8	16	14	5.5	7	34	7	16	49	
SAM 02	R 1/4	R 1/4	18.5	17	8	9.5	39	10	19	55	
SAM 03	R 3/8	R 3/8	22	20	10	12.5	44	10	22	61	
SAM 04	R 1/2	R 1/2	28	26	14.5	16.5	55	10	28.7	77	
SAM 06	R 3/4	R 3/4	37.5	35	21	19	62	17.5	38	88	

## SLM

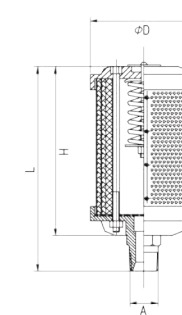


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : AL
- ▶ **Feature** : Used for high exhaust flow and unifying force applications.  
AL material strong in corrosion and poor environment.  
Excellent noise suppression effect.  
Used for large equipment with high exhaust flow.

MODEL [ØD-T]

Tube (Metric) - Thread(R,G)							(mm)
MODEL	A	F	$\phi D$	$\phi d$	K	L	
SLM 01	R 1/8	7	10.4	6	16	35	
SLM 02	R 1/4	11	13.4	8.5	16	45	
SLM 03	R 3/8	12.8	16.5	12	25	53	
SLM 04	R 1/2	15.8	21.5	15	25	70	
SLM 06	R 3/4	17.7	26.5	20	41	80	
SLM 08	R1	22.5	32.3	26	41	98	
SLM G01	G 1/8	7	10.4	6	16	35	
SLM G02	G 1/4	11	13.4	8.5	16	45	
SLM G03	G 3/8	12.8	16.5	12	25	53	
SLM G04	G 1/2	15.8	21.5	15	25	70	
SLM G06	G 3/4	17.7	26.5	20	41	80	
SLM G08	G1	22.5	32.3	26	41	98	

## SAL

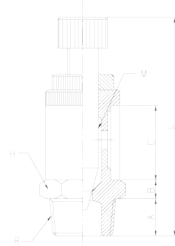


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : AL
- ▶ **Feature** : Used for large equipment with high exhaust flow and noise.  
AL material strong in corrosion and poor environment.  
High silence effect with high density and exhaust flow.

MODEL [ØD-T]

Tube (Metric) - Thread(R)					(mm)
MODEL	A	$\phi D$	H	L	
SAL 04	R 1/2	80	125	159	
SAL 06	R 3/4	87	156	180	
SAL 08	R1	99	183	218	
SAL 10	R1 1/4	99	183	218	
SAL 12	R1 1/2	133	297	340	
SAL 16	R2	133	432	470	

## SBC

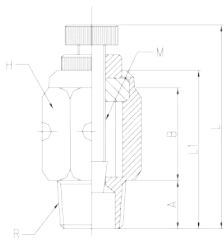


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering has the flow controller which controls the speed of cylinder.

MODEL [ØD-T]

Tube (Metric) - Thread(R)								(mm)
MODEL	R	A	B	C	L	H	M	
SBC 01	R 1/8	7	3	10	34	12	M4×0.5	
SBC 02	R 1/4	9.5	4	10.5	37	14	M5×0.5	
SBC 03	R 3/8	10.5	4	15	48	17	M7×0.75	
SBC 04	R 1/2	12	5	22	58.5	24	M9×0.75	
SBC 06	R 3/4	12	7	24	66	27	M10×1	
SBC 08	R 1	14.5	8	34	80.5	34	M10×1	

## SCC

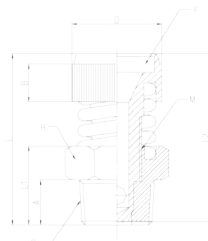


- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering has the flow controller which controls the speed of cylinder. The brass cover around filter provides strong body.

MODEL [ØD-T]

Tube (Metric) - Thread(R)								(mm)
MODEL	R	A	B	L1	L	H	M	
SCC 01	R 1/8	7	13.5	22.9	34.2	13	M4×0.5	
SCC 02	R 1/4	9.5	15.5	27.5	38.5	14	M5×0.5	
SCC 03	R 3/8	10.5	17.5	30.5	44	17	M7×0.75	
SCC 04	R 1/2	12	20	34	48.5	22	M9×0.75	
SCC 06	R 3/4	14.5	24	41.5	60	27	M10×1	
SCC 08	R 1	16	31	50	70	34	M10×1	

## SDC



- ▶ **Application** : Hydraulic & Pneumatic equipment, Automobile parts, Tooling, etc.
- ▶ **Material** : Brass
- ▶ **Feature** : Silencer with Brass Sintering has the flow controller which controls the speed of cylinder. Easy to install it in the defined space, due to compact height.

MODEL [ØD-T]

Tube (Metric) - Thread(R)											(mm)
MODEL	R	A	B	D	L1	L2	H	L	M	F	
SDC 01	R 1/8	7	5	12	11.5	21.8	12	24	M6×0.75	10×2	
SDC 02	R 1/4	9.5	6.5	14	15	25.8	15	29.5	M8×0.5	12×2	
SDC 03	R 3/8	10.5	8.5	17	16.5	31	19	33.5	M10×1	14×2	
SDC 04	R 1/2	12	8.5	18	20	33.5	22	37	M12×1	16×2	
SDC 06	R 3/4	12	11	23	21	46	27	48	M14×1	20×3	
SDC 08	R 1	15	15.5	28	25	55.5	34	57	M16×1.5	25×3	



# AIR GUN

## Application

- Used for installation on machines for cleaning debris and particles, best in confined space.

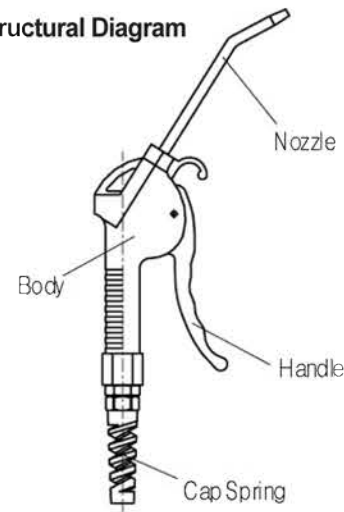
## Feature

- Various size of nozzle makes it easy to clean the machines and the equipment.  
- Easy control of airflow volume.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	15~150PSI	1~9.9Kg/cm <sup>2</sup> (0~990kPa)
Temperature Range	32~140 ° F	0~60 ° C

## Structural Diagram



## Product Code System

**AG - 08 - 02 - S - B**

① ② ③ ④ ⑤

① Type

② Tube Dia(∅D)

Metric Size		
Code	08	10
Dia	∅8	∅10

③ Thread Size (Ft)

Metric Size		
Code	02	03
Dia	Rc1/4	Rc3/8

④ Nozzle Size

Type	Metric Size			Nozzle-Coupler		
	Nozzle			SP	MP	LP
Size	Short	Medium	Long	Short	Medium	Long

⑤ Color

B	R	BU
Black	Red	Blue

# Air Gun



## Case In Use

Convenient to clean dangerous parts and to remove foreign substances from the machine(CNC LATHE, AUTOMATIC LATHE, CATAPLUT and PRESS)



- Be sure to read the "Common Precautions" and "Using Precautions of Fitting Series"(P6) before using.
- Be sure to clean the machine after stopping its operation.
- Avoid excessive impact or shock on the body, otherwise it may cause air leakage from the damage.

# TUBE CUTTER

## Application

- Safe, efficient, accurate tool for cutting tubing.

## Specification

Available Tube	Polyurethane and Nylon
Cutting Outer Dia	∅3.0 ~ ∅12.0
Material	Polyacetal, Stainless steel
Standard Color	Blue

## Product Code System

**TC (TUBE CUTTER)**

MODEL	W.G.(g)	Q'ty/In-Box
Tube Cutter	30.5	24



### AG-S

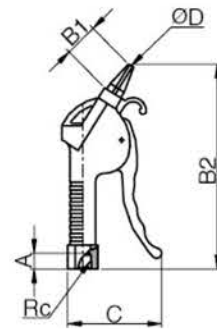
Short



Rc

MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 0802S	2.5	25	Rc1/4	
AIR GUN 1002S	2.5	25	Rc1/4	
AIR GUN 1003S	2.5	25	Rc3/8	



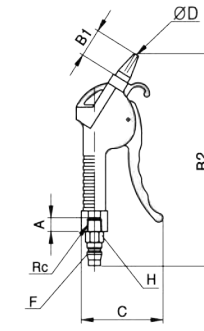
### AG-SP

Short



MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 02SP	2.5	25	Rc1/4	



### AG-M

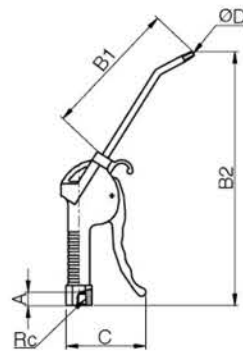
Medium



Rc

MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 0802M	2.5	105	Rc1/4	
AIR GUN 1002M	2.5	105	Rc1/4	
AIR GUN 1003M	2.5	105	Rc3/8	



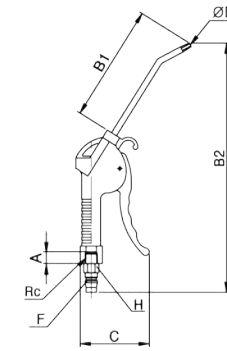
### AG-MP

Medium



MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 02MP	2.5	105	Rc1/4	



### AG-L

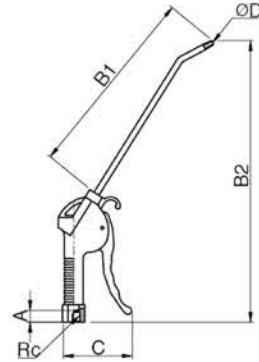
Long



Rc

MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 0802L	2.5	221	Rc1/4	
AIR GUN 1002L	2.5	221	Rc1/4	
AIR GUN 1003L	2.5	221	Rc3/8	



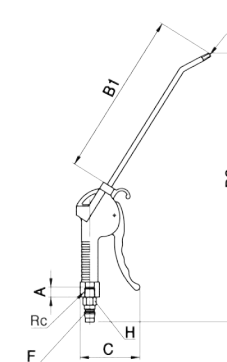
### AG-LP

Long



MODEL [ØD-T]

Tube (Metric) - Thread(R)				
MODEL	ØD	B1	Fc	
AIR GUN 02LP	2.5	221	Rc1/4	





# PDR Coil Tube

## Application

- Used for industrial robots and pneumatic piping.
- Use for various applications by functions.

## Feature

- Reasonable price
- Suitable for low temperature
- Higher flexibility

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~100PSI	0~7Kgf/cm <sup>2</sup> (0~700kPa)
Negative Pressure	-29.5 in Hg	-750mm Hg(10Torr)
Temperature Range	32~140 °F	0~60 °C

## Product Code System

**RC - 08 - 05 - 50 - Y**

**ARC - 08 - 05 - 50 - Y**

① ② ③ ④ ⑤      ① ② ③ ④ ⑤

### ① Type

### ②③ Tube Dia(∅D)

Code	Metric Size		
	0805	1065	1208
Outer Dia	∅8	∅10	∅12
Inner Dia	∅5	∅6.5	∅8

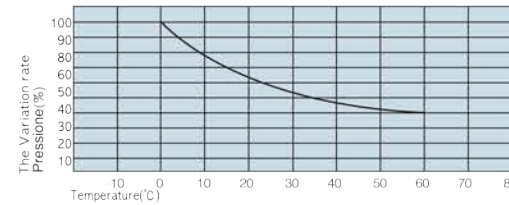
### ④ Length(m)

### ⑤ Color

Color	Y						Remarks
	C	BK	R	Bu	G	W	
Color	Clear	Black	Red	Blue	Green	White	Customizing

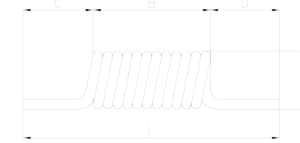
## Working Pressure

- Temperature limits of tube : 0°C ~ 60°C
- Normal Pressure : Control normal pressure within 1/3 of tube burst pressure.



# PDR Coil Tube

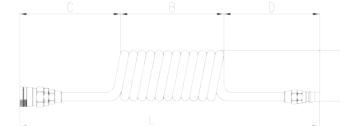
**New RC**



## MODEL[OUT-IN]

Metric Size			
MODEL	O D(mm)	I D(mm)	Length(m)
RC 0805-50	8	5	5
RC 0805-75	8	5	7.5
RC 0805-100	8	5	10
RC 1065-50	10	6.5	5
RC 1065-75	10	6.5	7.5
RC 1065-100	10	6.5	10
RC 1208-50	12	8	5
RC 1208-75	12	8	7.5
RC 1208-100	12	8	10

**New ARC**



## MODEL[OUT-IN]

Metric Size			
MODEL	O D(mm)	I D(mm)	Length(m)
ARC 0805-50	8	5	5
ARC 0805-75	8	5	7.5
ARC 0805-100	8	5	10
ARC 1065-50	10	6.5	5
ARC 1065-75	10	6.5	7.5
ARC 1065-100	10	6.5	10
ARC 1208-50	12	8	5
ARC 1208-75	12	8	7.5
ARC 1208-100	12	8	10

## Common Precautions of Tube Series

Never fail to check the following

### ⚠ WARNING

1. Never use for applications other than air.  
Using for applications other than air, it causes water leakage by breakage or crack of tube from chemical reaction.
2. Installing the tube near heater, it causes exposition of tube from heat.
3. Scarring the tube with a gimlet or a pin, it causes breakage of tube.
4. Twisting, screwing or bending the tube, it causes breakage or leakage of air.
5. Never use tube in a place of rising spatter.

### ⚠ CAUTION

1. Be sure to keep the radius of curvature of tube per size.
2. Be sure to leave a margin for unexpected additional length of tube when piping.
3. Be sure to check that the section of tube is at a right angle(90) or tube is oval, not round.



# POLYURETHANE TUBE

## Application

- Used for industrial robots and pneumatic piping.
- Used for various applications by functions.

## Feature

- Higher flexibility than nylon(PA) helps working achievement.
- Higher flexibility in low temperature.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	32~140 °F	-15~60 °C

## Product Code System

**U - 08 - 50 - B**      **UC - 08 - 50 - 05-Y**

①    ②    ③    ④                      ①    ②    ③    ④    ⑤    ⑥

### ① Type

### ②③ Tube Dia(∅D)

	Metric Size									
Code	0320	0420	0425	0640	0850	0855	1065	1280	1290	1611
Outer Dia	∅3	∅4	∅4	∅6	∅8	∅8	∅10	∅12	∅12	∅16
Inner Dia	∅2	∅2	∅2.5	∅4	∅5	∅5.5	∅6.5	∅8	∅9	∅11

	Inch Size							
Code	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8
Outer Dia	∅1/8	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2	∅5/8

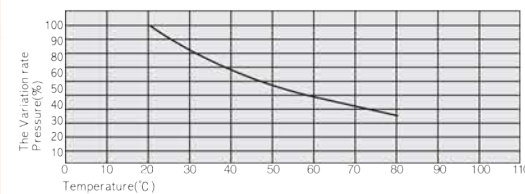
### ④ Color

	C	BK	R	Bu	Y	G	W	O
Color	Clear	Black	Red	Blue	Yellow	Green	White	Orange

### ⑤ Length(m)

## Working Pressure

- Temperature limits of tube : -40°C ~80°C
- Normal Pressure : Control normal pressure within 1/3 of tube burst pressure.



# Polyurethane Tube

## New AC



### MODEL [OUT-IN]

MODEL	∅ D(mm)	I D(mm)	Length(m)
AC 0805-50	8	5	5
AC 0805-75	8	5	7.5
AC 0805-100	8	5	10
AC 1065-50	10	6.5	5
AC 1065-75	10	6.5	7.5
AC 1065-100	10	6.5	10
AC 1208-50	12	8	5
AC 1208-75	12	8	7.5
AC 1208-100	12	8	10



## U



### MODEL [OUT-IN]

MODEL	∅ D(mm)	I D(mm)
U-03020	3	2
U-04020	4	2
U-04025	4	2.5
U-06040	6	4
U-08050	8	5
U-08055	8	5.5
U-08060	8	6
U-10065	10	6.5
U-10070	10	7
U-10075	10	7.5
U-12080	12	8
U-12090	12	9
U-14095	14	9.5
U-16110	16	11
U-16120	16	12

### Inch Size

MODEL	∅ D(mm)	I D(mm)
U 1/8-1.6	3.17	1.6
U 1/8-2.0	3.17	2
U 5/32-2.0	3.97	2
U 5/32-2.5	3.97	2.5
U 3/16-3.2	4.76	3.2
U 1/4-4.2	6.35	4.2
U 5/16-5.0	7.94	5
U 3/8-6.4	9.52	6.4
U 1/2-8.5	12.7	8.5

## UC

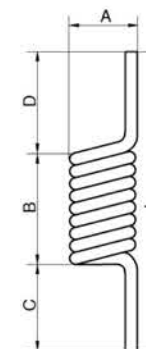


### MODEL [OUT-Length]

MODEL	∅ D(mm)	I D(mm)	Length(m)
UC-0402-15	4	2	1.5
UC-0402-30	4	2	3
UC-0402-45	4	2	4.5
UC-0604-15	6	4	1.5
UC-0604-30	6	4	3
UC-0604-45	6	4	4.5
UC-0805-35	8	5	3.5
UC-0805-50	8	5	5
UC-0805-75	8	5	7.5
UC-0805-100	8	5	10
UC-1065-35	10	6.5	3.5
UC-1065-50	10	6.5	5
UC-1065-75	10	6.5	7.5
UC-1065-100	10	6.5	10
UC-1208-35	12	8	3.5
UC-1208-50	12	8	5
UC-1208-75	12	8	7.5
UC-1208-100	12	8	10

### Inch Size

MODEL	∅ D(mm)	I D(mm)	Length(m)
UC1/8-2.0-1	3.17	2	1
UC1/8-2.0-2	3.17	2	2
UC1/8-2.0-5	3.17	2	5
UC5/32-2.5-2	3.97	2	2
UC5/32-2.5-5	3.97	2	5
UC5/32-2.5-10	3.97	2	10
UC5/32-2.5-15	3.97	2	15
UC5/32-2.5-20	3.97	2	20
UC3/16-3.2-2	4.76	3.2	2
UC3/16-3.2-5	4.76	3.2	5
UC3/16-3.2-10	4.76	3.2	10
UC3/16-3.2-15	4.76	3.2	15
UC3/16-3.2-20	4.76	3.2	20
UC1/4-4.2-2	6.35	4.2	2
UC1/4-4.2-5	6.35	4.2	5
UC1/4-4.2-10	6.35	4.2	10
UC1/4-4.2-15	6.35	4.2	15
UC1/4-4.2-20	6.35	4.2	20
UC5/16-5.0-5	7.94	5	5
UC5/16-5.0-10	7.94	5	10
UC5/16-5.0-15	7.94	5	15
UC5/16-5.0-20	7.94	5	20
UC3/8-6.4-5	9.52	6.4	5
UC3/8-6.4-10	9.52	6.4	10
UC3/8-6.4-15	9.52	6.4	15
UC3/8-6.4-20	9.52	6.4	20
UC1/2-8.5-5	12.7	8.5	5
UC1/2-8.5-10	12.7	8.5	10
UC1/2-8.5-15	12.7	8.5	15
UC1/2-8.5-20	12.7	8.5	20



## Common Precautions of Tube Series

Never fail to check the following

### ⚠ WARNING

1. Never use for applications other than air. Using for applications other than air, it causes water leakage by breakage or crack of tube from chemical reaction.
2. Installing the tube near heater, it causes exposition of tube from heat.
3. Scarring the tube with a gimlet or a pin, it causes breakage of tube.
4. Twisting, screwing or bending the tube, it causes breakage or leakage of air.
5. Never use tube in a place of rising spatter.

### ⚠ CAUTION

1. Be sure to keep the radius of curvature of tube per size.
2. Be sure to leave a margin for unexpected additional length of tube when piping.
3. Be sure to check that the section of tube is at a right angle(90) or tube is oval, not round.





# POLYETHYLENE TUBE

## Application

- Used for water cleaning system or food industry.
- Used for experimental machine, chemical piping or fluid piping.

## Feature

- Lightweight, flexible & durable
- Low cost alternative
- FDA approved grade (Optional)

## Specification

Fluid	Air(No other gases or liquids), Water	
Working Pressure Range	0~100PSI	0~7Kgf/cm(0~700kPa)
Negative Pressure	-29.50 in Hg	-750mmHg(10Torr)
Temperature Range	5~140 °F	-15~60 °C

## Product Code System

**PE - 08 - 60 - O**

① ② ③ ④

### ① Type

### ②③ Tube Dia(∅D)

Code	Metric Size					
	0420	0535	0640	0860	1070	1290
Outer Dia	∅4	∅5	∅6	∅8	∅10	∅12
Inner Dia	∅2	∅3.5	∅4	∅6	∅7	∅9

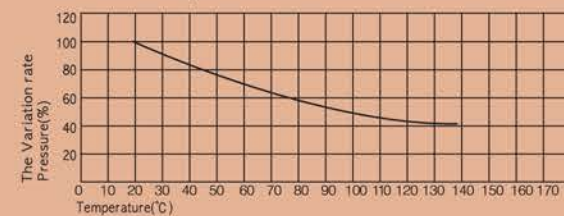
Code	Inch Size						
	1/8	5/32	3/16	1/4	5/16	3/8	1/2
Outer Dia	∅1/8	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2

### ④ Color

	C	BK	R	Bu	Y	G	W
Color	Clear	Black	Red	Blue	Yellow	Green	White

## Working Pressure

- Temperature limits of tube : -15°C ~ 60°C
- Normal Pressure : Control normal pressure within 1/3 of tube burst pressure.



# Polyethylene Tube



## PE

### MODEL[OUT-IN]

Metric Size		
MODEL	∅ D(mm)	I D(mm)
PE 04020	4	2
PE 05035	5	3.5
PE 06040	6	4
PE 08060	8	6
PE 10070	10	7
PE 12090	12	9

Inch Size		
MODEL	∅ D(mm)	I D(mm)
PE 5/32-2.4	3.97	2.4
PE 3/16-3.2	4.76	3.2
PE 1/4-4.3	6.35	4.3
PE 5/16-4.8	7.94	4.8
PE 3/8-6.4	9.52	6.4
PE 1/2-9.5	12.7	9.5

## Common Precautions of Tube Series

Never fail to check the following

### ⚠ WARNING

1. Never use for applications other than air.  
Using for applications other than air, it causes water leakage by breakage or crack of tube from chemical reaction.
2. Installing the tube near heater, it causes exposition of tube from heat.
3. Scarring the tube with a gimlet or a pin, it causes breakage of tube.
4. Twisting, screwing or bending the tube, it causes breakage or leakage of air.
5. Never use tube in a place of rising spatter.

### ⚠ CAUTION

1. Be sure to keep the radius of curvature of tube per size.
2. Be sure to leave a margin for unexpected additional length of tube when piping.
3. Be sure to check that the section of tube is at a right angle(90) or tube is oval, not round.

# NYLON TUBE

## Application

- Used for hydraulic and pneumatic connections.
- Used for chemical plant, pneumatic connection, medical instrument and food industry.

## Feature

- Long Life-span with durability, anti-weather, anti-flexibility. Anti-pressure, anti-vibration, anti-corrosion, heat-proof.
- Lightweight & flexible.
- Used for medical instrument and food industry.

## Specification

Fluid	Air(No other gases or liquids)	
Working Pressure Range	0~150PSI	0~9Kgf/cm <sup>2</sup> (0~900kPa)
Negative Pressure	-29.5 in Hg	-750mm Hg(10Torr)
Temperature Range	5~140 °F	-15~60 °C

## Product Code System

**N - 08 - 60 - O**

① ② ③ ④

### ① Type

### ②③ Tube Dia(∅D)

Code	Metric Size							
	0320	0420	0425	0640	0860	1080	1290	1613
Outer Dia	∅3	∅4	∅4	∅6	∅8	∅10	∅12	∅16
Inner Dia	∅2	∅2	∅2.5	∅4	∅6	∅8	∅9	∅13

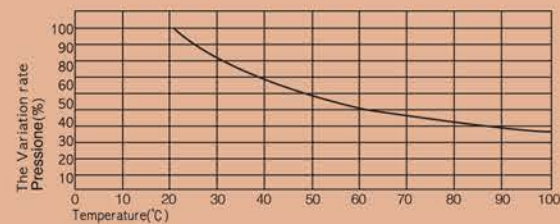
Code	Inch Size							
	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8
Outer Dia	∅1/8	∅5/32	∅3/16	∅1/4	∅5/16	∅3/8	∅1/2	∅5/8

### ④ Color

	C	BK	R	Bu	Y	G	W
Color	Clear	Black	Red	Blue	Yellow	Green	White

## Working Pressure

- Control working pressure within 1/3 of tube burst pressure at working temperature(20 °C)
- Working pressure = Burst pressure(kg/cm<sup>2</sup>) x Vibration (%) x 1/3  
Ex) N8 X 6 Tube
- In case of working temperature 50 °C.  
Burst pressure 60kg/cm<sup>2</sup> x vibration rate 60%
- ∴ Control working pressure below 12kg/cm<sup>2</sup>.



# Nylon Tube

N



## MODEL [OUT-IN]

Metric Size		
MODEL	∅ D(mm)	L (mm)
N-03020	3	2
N-04020	4	2
N-04025	4	2.5
N-06040	6	4
N-08060	8	6
N-10080	10	8
N-12090	12	9
N-14110	14	11
N-14120	14	12
N-16130	16	13

Inch Size		
MODEL	∅ D(mm)	L (mm)
N 1/8 - 1.6	3.17	1.6
N 1/8 - 2.0	3.17	2
N 5/32 - 2.0	3.97	2
N 5/32 - 2.5	3.97	2.5
N 3/16 - 3.5	4.76	3.5
N 1/4 - 4.6	6.35	4.6
N 5/16 - 6.0	7.94	6
N 3/8 - 6.9	9.52	6.9
N 1/2 - 9.5	12.7	9.5

## Common Precautions of Tube Series

Never fail to check the following

### ⚠ WARNING

1. Never use for applications other than air.  
Using for applications other than air, it causes water leakage by breakage or crack of tube from chemical reaction.
2. Installing the tube near heater, it causes exposition of tube from heat.
3. Scarring the tube with a gimlet or a pin, it causes breakage of tube.
4. Twisting, screwing or bending the tube, it causes breakage or leakage of air.
5. Never use tube in a place of rising spatter.

### ⚠ CAUTION

1. Be sure to keep the radius of curvature of tube per size.
2. Be sure to leave a margin for unexpected additional length of tube when piping.
3. Be sure to check that the section of tube is at a right angle(90°) or tube is oval, not round.



# HOSE BAND

## Application

- Used for the hose connection and leakage tightness.
- Applied for wide range of hose equipment.

## Feature

- Durable and anti-corrosive with Stainless Steel(SUS304)
- Smooth surface for hose protection
- Excellent at the high temperature and pressure from high tensile strength
- High Torque from the high quality material
- Precise and safe products produced in the precise equipment

## Specification

Material	SUS 304
Working Torque	Under 80kg/cm



## Product Code System

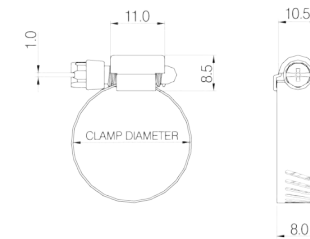
**HBS 03**

① ② ③

- ① MODEL : HOSE BAND
- ② TYPE : S = Small, L = Large
- ③ SIZE : 03 = 3/8"

Hose Band **NEW!**

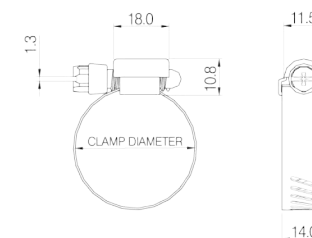
## HBS



## MINI HOSE BAND

MODEL	SIZE (Inch)	Dia (Min)	Dia (Max)
HBS 03	Mini 3/8 (소)	6	16
HBS 04	Mini 1/2 (중)	8	18
HBS 05	Mini 5/8 (대)	8	22
HBS 08	Mini 1"	11	25
HBS 10	Mini 1-1/4"	20	32

## HBL



## HOSE BAND

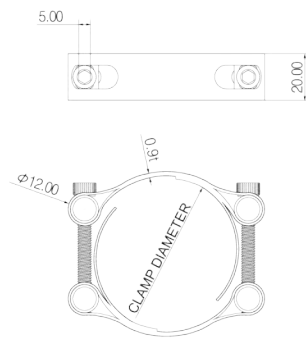
MODEL	SIZE (Inch)	Dia (Min)	Dia (Max)
HBL 06	3/4"	10	22
HBL 08	1"	15	25
HBL 10	1 1/4"	20	32
HBL 12	1 1/2"	25	42
HBL 14	1 3/4"	30	45
HBL 16	2"	35	50
HBL 18	2 1/4"	40	56
HBL 20	2 1/2"	45	64
HBL 24	3"	50	75
HBL 28	3 1/2"	75	92
HBL 32	4"	80	100
HBL 36	4 1/2"	90	117
HBL 40	5"	100	125
HBL 48	6"	130	150
HBL 56	7"	150	175
HBL 64	8"	150	200
HBL 72	9"	175	200
HBL 80	10"	225	250
HBL 88	11"	250	275
HBL 96	12"	275	300

# HIGH PRESSURE HOSE BAND

## High Pressure Hose Band **NEW!**

### HDT

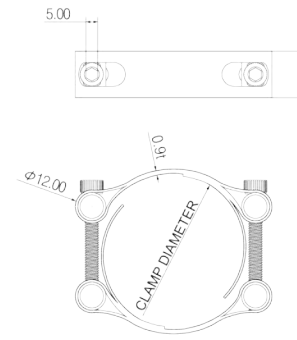
### DOUBLE BAND(STEEL)



MODEL	Size (mm)	Dia (Min)	Dia (Max)
HDT 50	50	35	50
HDT 55	55	40	55
HDT 60	60	45	60
HDT 65	65	50	65
HDT 70	70	55	70
HDT 75	75	60	75
HDT 80	80	65	80
HDT 85	85	70	85
HBL 90	90	75	90
HBL 95	95	80	95
HBL 100	100	85	100
HBL 105	105	90	105
HBL 110	110	95	110
HBL 115	115	100	115
HBL 120	120	105	120
HBL 130	130	115	130
HBL 140	140	125	140
HBL 150	150	135	150
HBL 160	160	145	160
HBL 170	170	155	170
HBL 180	180	165	180
HBL 190	190	175	190
HBL 200	200	185	200
HBL 210	210	195	210
HBL 220	220	205	220

### HDS

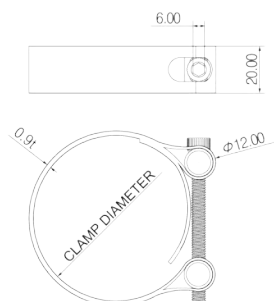
### DOUBLE BAND(SUS)



MODEL	Size (mm)	Dia (Min)	Dia (Max)
HDS 50	50	35	50
HDS 55	55	40	55
HDS 60	60	45	60
HDS 65	65	50	65
HDS 70	70	55	70
HDS 75	75	60	75
HDS 80	80	65	80
HDS 85	85	70	85
HDS 90	90	75	90
HDS 95	95	80	95
HDS 100	100	85	100
HDS 105	105	90	105
HDS 110	110	95	110
HDS 115	115	100	115
HDS 120	120	105	120
HDS 130	130	115	130
HDS 140	140	125	140
HDS 150	150	135	150
HDS 160	160	145	160
HDS 170	170	155	170
HDS 180	180	165	180
HDS 190	190	175	190
HDS 200	200	185	200
HDS 210	210	195	210
HDS 220	220	205	220

### HST

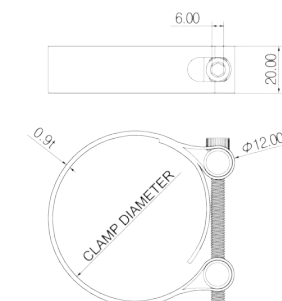
### SINGLE BAND(STEEL)



MODEL	Size (mm)	Dia (Min)	Dia (Max)
HST 40	40	33	40
HST 45	45	38	45
HST 50	50	43	50
HST 55	55	48	55
HST 60	60	53	60
HST 65	65	58	65
HST 70	70	63	70

### HSS

### SINGLE BAND(SUS)



MODEL	Size (mm)	Dia (Min)	Dia (Max)
HSS 40	40	33	40
HSS 45	45	38	45
HSS 50	50	43	50
HSS 55	55	48	55
HSS 60	60	53	60
HSS 65	65	58	65
HSS 70	70	63	70



# ACE COUPLER

## Application

- Used for piping of compressed air connections.
- Used for air tool equipped with drive and impact.

## Feature

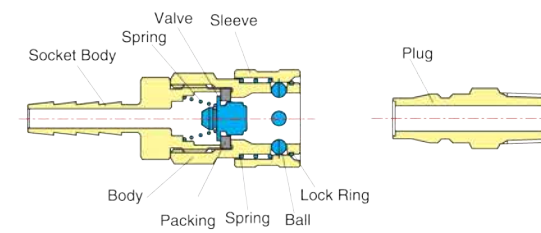
- Uni-directional shut-off coupler with an automatic shut-off valve built in the socket.
- Recommended for piping of compressed air.

## Specification

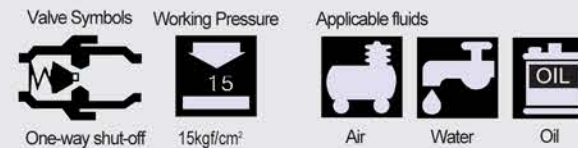
Fluid	Air, Water, Oil		
Material	Brass(chrome~plated)	Steel(chrome~plated)	Stainless steel
Working Pressure Range	10kgf/cm <sup>2</sup> (1000kPa)	10kgf/cm <sup>2</sup> (1000kPa)	15kgf/cm <sup>2</sup> (1500kPa)
Maximum Pressure	15kgf/cm <sup>2</sup> (1500kPa)	20kgf/cm <sup>2</sup> (2000kPa)	20kgf/cm <sup>2</sup> (2000kPa)



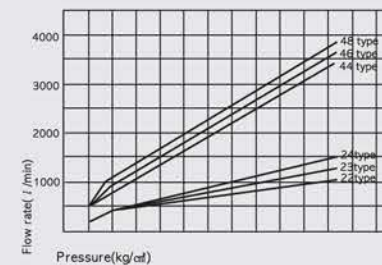
## Structural Diagram



## Ace Coupler (Steel)



## Flow Rate



### Measuring Conditions

- Fluid type : Air
- Temperature : Room temperature(20 °C)

### How to check table

This diagram shows the flow quantity of input condition in flowing air.

### Example

For 24 type, in case using pressure is 5 kg/cm<sup>2</sup>, find out flowing rate of vertical part according to the interchange of 24 type's round line and indicated arrow's pressure.

## Product Code System

**C H 22**

① ② ③

### ① Model

C	Plug
H	Socket

### ② Type

H	Hose Stem
M	Male Thread
F	Female Thread
N	Hose Nut Type

### ③ Thread Size(T)

Size	22	23	24	44	46	48
H	9.0	11.0	15.0	15.0	21.0	27.0
M	R1/4	R 3/8	R1/2	R1/2	R3/4	R1
F	Rc1/4	Rc 3/8	Rc1/2	Rc1/2	Rc3/4	Rc1

Size	21	22	23	24	25	26
N	8 × 5	9 × 6	10 × 6.5	12 × 8	12.5 × 8.5	16 × 11

### ▶ Minimum Sectional Area (mm<sup>2</sup>)

22 Type		23 Type		24 Type		44 Type		46 Type		48 Type	
H	M	F	H	M	F	H	M	F	H	M	F
19	32	32	32	32	32	63	80	80	80	80	80

## Common Using Precautions of Coupler Series

Never fail to check the following

### ⚠ WARNING

1. Avoid applying or removing when pressure is on. It causes the danger of jumping of plug body.
2. Never touch the equipment under pressure in the state of putting plug and socket on the body. It causes "opening" by touch.
3. Never use coupler in place of rotary joint or other revolving joint.
4. Secure to flow the fluid from socket to plug.
5. Avoid the instrument or machine giving strong bending weight, excessive vibration or shock.
6. To use the coupler on a vibration tool such as jet chisel, be sure to connect with 30cm rubber tube between tool and coupler.

### ⚠ CAUTION

1. When putting plug into socket, secure to push it until it stops. Otherwise it may cause leakage. In addition, be sure to check whether it will come out or not by pulling it out.
2. Be careful of plug body jumping by compressed air discharging when disconnecting.
3. Be sure not only to have dust or contamination with intended fluid but also to have flaws on body. It may cause leakage.
4. When pushing tube into the socket body, fix it with hose-band after wearing silicon.
5. Never fasten the thread over maximum limit of torque. It may cause breakage.



# Ace Coupler (Steel)



# Ace Coupler (Steel)



Ace Coupler

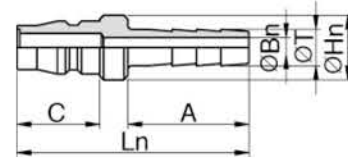
## CH

Plug Nipple



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	C	ØT
CH22	20.5	9
CH23	20.5	11
CH24	20.5	15
CH44	23.4	15
CH46	23.4	21
CH48	23.4	27



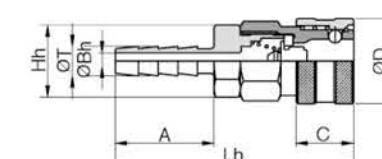
## HH

Socket Nipple



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	ØT
HH22	26	9
HH23	26	11
HH24	26	15
HH44	34	15
HH46	34	21
HH48	34	27



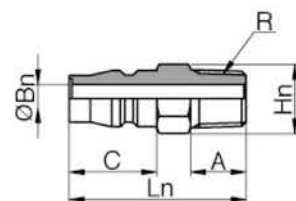
## CM

Plug Male



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	C	R
CM21	20.5	R1/8
CM22	20.5	R1/4
CM23	20.5	R3/8
CM24	20.5	R1/2
CM44	23.4	R1/2
CM46	23.4	R3/4
CM48	23.4	R1



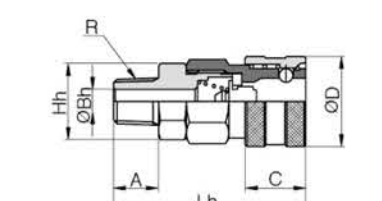
## HM

Socket Male



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	R
HM22	26	R1/4
HM23	26	R3/8
HM24	26	R1/2
HM44	34	R1/2
HM46	34	R3/4
HM48	34	R1



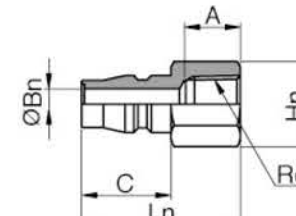
## CF

Plug Female



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	C	Rc
CF22	20.5	Rc1/4
CF23	20.5	Rc3/8
CF24	20.5	Rc1/2
CF44	23	Rc1/2
CF46	23	Rc3/4
CF48	23	Rc1



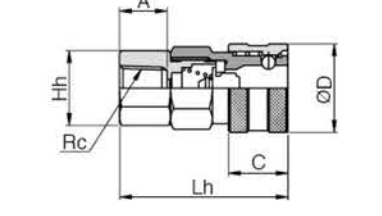
## HF

Socket Female



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	Rc
HF22	26	Rc1/4
HF23	26	Rc3/8
HF24	26	Rc1/2
HF44	34	Rc1/2
HF46	34	Rc3/4
HF48	34	Rc1



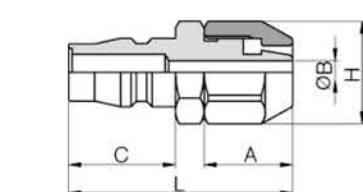
## CN

Plug Nut



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	C	Tube
CN21(8×5)	20.5	(8×5)
CN22(9×6)	20.5	(9×6)
CN23(10×6.5)	20.5	(10×6.5)
CN24(12×8)	20.5	(12×8)
CN25(12.5×8.5)	20.5	(12.5×8.5)
CN26(16×11)	20.5	(16×11)



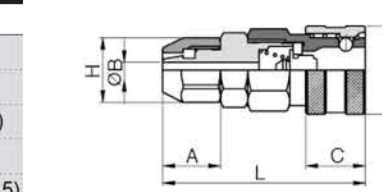
## HN

Socket Nut



MODEL [ØD-T]

Tube (Metric) - Thread(R)		
MODEL	ØD	Tube
HN21(8×5)	26	(8×5)
HN22(9×6)	26	(9×6)
HN23(10×6.5)	26	(10×6.5)
HN24(12×8)	26	(12×8)
HN25(12.5×8.5)	26	(12.5×8.5)
HN26(16×11)	26	(16×11)





# COMPACT ACE COUPLER

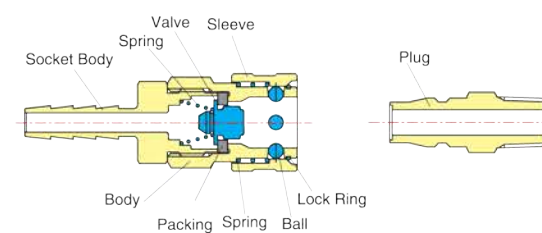
## Application

- Used for piping of compressed air connections.
- Used for air tool equipped with drive and impact.

## Feature

- Uni-directional shut-off coupler with an automatic shut-off valve built in the socket.
- Recommended for piping of compressed air.

## Structural Diagram



## Specification

Fluid	Air, Water, Oil		
Material	Brass(chrome~plated)	Steel(chrome~plated)	Stainless steel
Working Pressure Range	10kgf/cm <sup>2</sup> (1000kPa)	10kgf/cm <sup>2</sup> (1000kPa)	15kgf/cm <sup>2</sup> (1500kPa)
Maximum Pressure	15kgf/cm <sup>2</sup> (1500kPa)	20kgf/cm <sup>2</sup> (2000kPa)	20kgf/cm <sup>2</sup> (2000kPa)



## Product Code System

**H S H 22**

① SMALL ② ③

① Model	② Type	
H: Socket	H	Hose Stem
	M	Male Thread
	F	Female Thread
	N	Hose Nut Type

③ Thread Size(T)			
Size	22	23	24
H	9.0	11.0	15.0
M	R1/4	R 3/8	R1/2
F	Rc1/4	Rc 3/8	Rc1/2

Size	21	23	24
N	8 × 5	10 × 6.5	12 × 8

▶ Minimum Sectional Area (mm <sup>2</sup> )					
22 Type		23 Type		24 Type	
H	M F	H	M F	H	M F
19	32	32	32	32	32

## Compact Ace Coupler (Steel)

### HSH

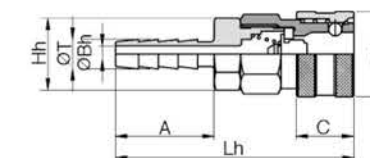
Socket Nipple



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	ØT
HSH22	23.6	9
HSH23	23.6	11
HSH24	23.6	15



### HSM

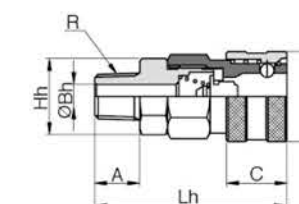
Socket Male



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	R
HSM22	23.6	R1/4
HSM23	23.6	R3/8
HSM24	23.6	R1/2



### HSF

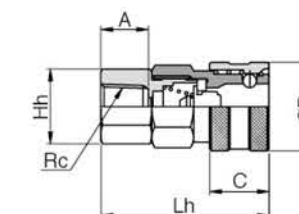
Socket Female



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	Rc
HSF22	23.6	Rc1/4
HSF23	23.6	Rc3/8
HSF24	23.6	Rc1/2



### HSN

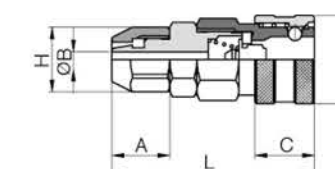
Socket Nut



MODEL [ØD-T]

Tube (Metric) - Thread(R)

MODEL	ØD	Tube
HN21(8 × 5)	23.6	(8 × 5)
HN23(10 × 6.5)	23.6	(10 × 6.5)
HN24(12 × 8)	23.6	(12 × 8)





# MINOR COUPLER

## Application

- Used for piping of compressed air connections.
- Used for air tool equipped with drive and impact.

## Feature

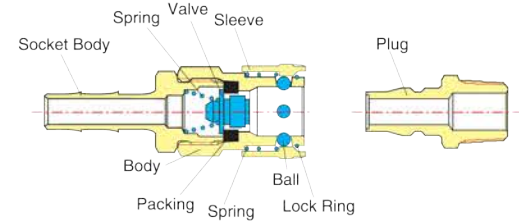
- Light and easy to use for it's made of ZnDc.

## Specification

Fluid	Air
Material	ZnDc(chrome~plated)
Working Pressure Range	10kgf/cm <sup>2</sup> (1000kPa)
Maximum Pressure	15kgf/cm <sup>2</sup> (1500kPa)



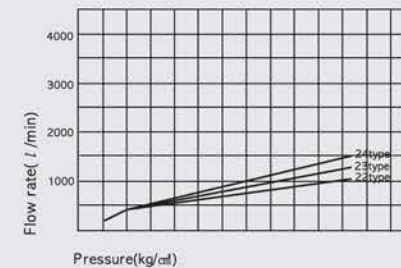
## Structural Diagram



# Minor Coupler



## Flow Rate



## Measuring Conditions

- Fluid type : Air
- Temperature : Room temperature(20 °C)

## How to check table

This diagram shows the flow quantity of input condition in flowing air.

## Example

For 24 type, in case using pressure is 5 kg/cm<sup>2</sup>, find out flowing rate of vertical part according to the interchange of 24 type's round line and indicated arrow's pressure.

## Product Code System

**MC H 22**

① ② ③

### ① Model

MC	Plug
MH	Socket

### ② Type

H	Hose Stem
M	Male Thread
F	Female Thread
N	Hose Nut Type

### ③ Thread Size(T)

Size	22	23	24
H	9.0	11.0	15.0
M	R1/4	R 3/8	R1/2
F	Rc1/4	Rc 3/8	Rc1/2

Size	21	22	23
N	8 × 5	10 × 6.5	12 × 8

### ▶ Minimum Sectional Area (mm<sup>2</sup>)

22 Type		23 Type		24 Type	
H	M · F	H	M · F	H	M · F
19	32	32	32	32	32

## Common Using Precautions of Coupler Series

Never fail to check the following

### ⚠ WARNING

1. Avoid applying or removing when pressure is on. It causes the danger of jumping of plug body.
2. Never touch the equipment under pressure in the state of putting plug and socket on the body. It causes "opening" by touch.
3. Never use coupler in place of rotary joint or other revolving joint.
4. Secure to flow the fluid from socket to plug.
5. Avoid the instrument or machine giving strong bending weight, excessive vibration or shock.
6. To use the coupler on a vibration tool such as jet chisel, be sure to connect with 30<sub>cm</sub> rubber tube between tool and coupler.

### ⚠ CAUTION

1. When putting plug into socket, secure to push it until it stops. Otherwise it may cause leakage. In addition, be sure to check whether it will come out or not by pulling it out.
  2. Be careful of plug body jumping by compressed air discharging when disconnecting.
  3. Be sure not only to have dust or contamination with intended fluid but also to have flaws on body. It may cause leakage.
  4. When pushing tube into the socket body, fix it with hose-band after wearing silicon.
- Never fasten the thread over maximum limit of torque, as it is made of ZINC. It may cause breakage.



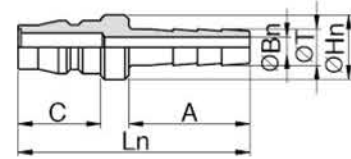
### MCH

Plug Nipple



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	C	ØT	
MCH22-S ZNDC	20.5	9	
MCH23-S ZNDC	20.5	9.6	
MCH24-S ZNDC	20.5	15	



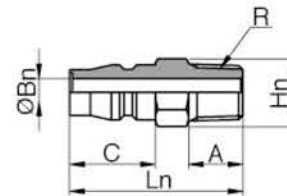
### MCM

Plug Male



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	C	R	
MCM22-S ZNDC	20.5	R1/4	
MCM23-S ZNDC	20.5	R3/8	
MCM24-S ZNDC	20.5	R1/2	



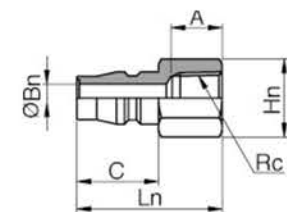
### MCF

Plug Female



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	C	Rc	
MCF22-S ZNDC	20.5	Rc1/4	
MCF23-S ZNDC	20.5	Rc3/8	
MCF24-S ZNDC	20.5	Rc1/2	



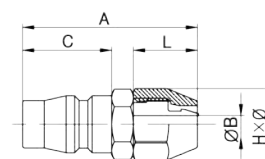
### MCN

Plug Nut



MODEL [ØD]

Tube (Metric) - Thread(R)			
MODEL	C	Tube	
MCN21-S ZNDC	20.5	8 × 5	
MCN23-S ZNDC	20.5	10 × 6.5	
MCN24-S ZNDC	20.5	12 × 8	



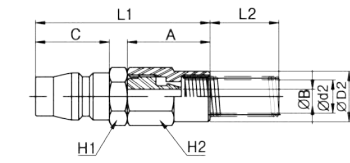
### MCN-S

Plug Nut - Spring



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	C	Tube	
MCN-S21S ZNDC	20.5	8 × 5	
MCN-S23S ZNDC	20.5	10 × 6.5	
MCN-S24S ZNDC	20.5	12 × 8	



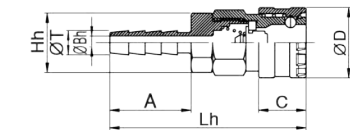
### MHH

Socket Nipple



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	ØD	ØT	
MHH22-S ZNDC	26	9	
MHH23-S ZNDC	26	11	
MHH24-S ZNDC	26	15	



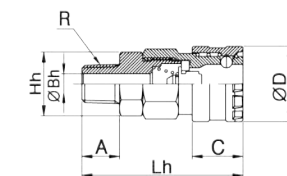
### MHM

Socket Male



MODEL [T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	
MHM22-S ZNDC	26	R1/4	
MHM23-S ZNDC	26	R3/8	
MHM24-S ZNDC	26	R1/2	



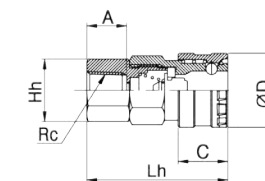
### MHF

Socket Female



MODEL [ØD]

Tube (Metric) - Thread(R)			
MODEL	ØD	Rc	
MHF22-S ZNDC	26	Rc1/4	
MHF23-S ZNDC	26	Rc3/8	
MHF24-S ZNDC	26	Rc1/2	



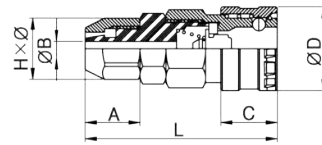
### MHN

Socket Nut



MODEL[ $\varnothing$ D]

Tube (Metric) - Thread(R)			
MODEL	$\varnothing$ D	Tube	
MHN21-S ZNDC	26	8×5	
MHN23-S ZNDC	26	10×6.5	
MHN24-S ZNDC	26	12×8	



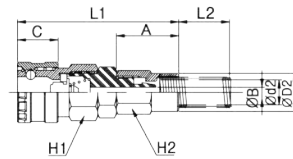
### MHN-S

Socket Nut Spring



MODEL[ $\varnothing$ D]

Tube (Metric) - Thread(R)			
MODEL	$\varnothing$ D	Tube	
MHN-S21S ZNDC	26	8×5	
MHN-S23S ZNDC	26	10×6.5	
MHN-S24S ZNDC	26	12×8	



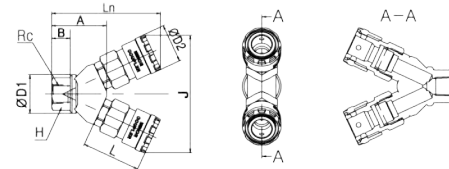
### MLY

Branch Y



MODEL[T]

Tube (Metric) - Thread(R)		
MODEL	Rc	$\varnothing$ D
MLY 22	Rc1/4	26



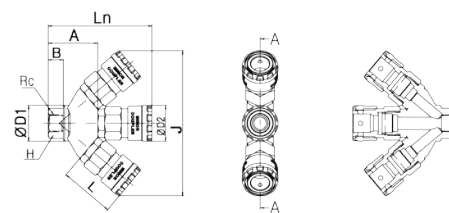
### MLW

Branch Triple



MODEL[T]

Tube (Metric) - Thread(R)		
MODEL	Rc	$\varnothing$ D
MLW 22	Rc1/4	26



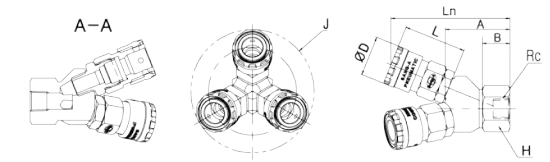
### MLR

Branch R



MODEL[T]

Tube (Metric) - Thread(R)		
MODEL	Rc	$\varnothing$ D
MLR 22	Rc1/4	26
MLR 23	Rc3/8	26





# HP COUPLER

## Application

- Used for plant piping of chemicals, steam and oil.

## Feature

- Bi-directional shut-off coupler with an automatic shut-off valve incorporated on the both sides of CORK and HOLE.  
- Excellent airtight effect, designed with high precision processing technology.

## Specification

Fluid	Air, Water, Oil, Steam, Medicines, Gasolin (Another way air for Special Order)
Material	Brass
Working Pressure Range	0~70kgf/cm <sup>2</sup> (7000kpa)
Temperature Range	-20~80 °C

## Product Code System

**8 H**

① ②

### ① Thread Size(T)

Code	Thread Size								
	1	2	3	4	6	8	10	12	16
Size	Rc1/8"	Rc1/4"	Rc3/8"	Rc1/2"	Rc3/4"	Rc1"	Rc1 1/4"	Rc1 1/2"	Rc2"

### ② Model

C	Plug
H	Socket

### Valve Symbols



Two-way shut-off

### Working Pressure



70kgf/cm<sup>2</sup>

### Applicable fluids



Water Oil Gasoline

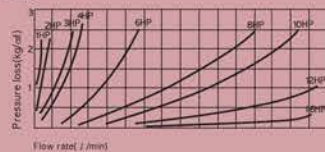


Steam Chemicals Air

## ► Minimum Sectional Area

Products Code	1HP	2HP	3HP	4HP	6HP	8HP	10HP	12HP	16HP
Minimum Sectional Area(cm <sup>2</sup> )	11	23	46	89	199	315	580	870	1240
Inflow air volume(ml)	0.52	1.02	2.40	3.20	10.50	17.00	27.20	29.80	60.00

## ► Flow Rate



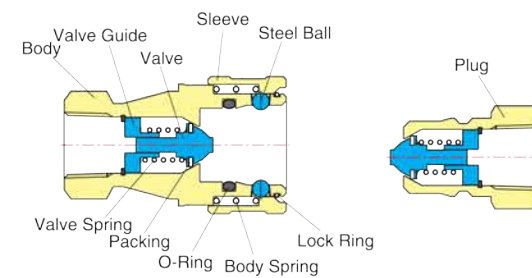
## ► Measuring Conditions

Fluid type : Water  
Temperature : 30 °C ± 5 °C  
Motional viscosity : 50cm-Strokes  
Specific gravity : 0.8727 × 10-3kg/cm<sup>3</sup>

## ► How to check table

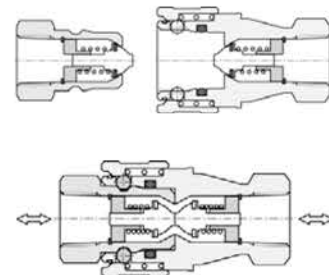
For example, when flowing 100l/min of fluid at 6HP, the intersection of the horizontal axis flow at 100l/min, makes a pressure loss of 2kg/cm<sup>2</sup>.

## Structural Diagram



## ► Automatic air flow control

When disconnecting, the valves in the socket and plug instantly seal the air flow to prevent leakage. On the contrary, when connected, the valves in the socket and plug are opened and permit free flow of fluid through the couplings.



# HP Coupler

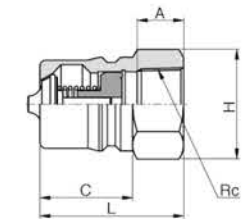
## C

Plug Female



## MODEL [T]

MODEL	L	C	Rc
HP 1C(BRASS)	29	19	Rc1/8
HP 2C(BRASS)	36	22	Rc1/4
HP 3C(BRASS)	40	25	Rc3/8
HP 4C(BRASS)	44	28.4	Rc1/2
HP 6C(BRASS)	52	36	Rc3/4
HP 8C(BRASS)	62	40	Rc1"
HP 10C(BRASS)	70	45	Rc1 1/4
HP 12C(BRASS)	75	49	Rc1 1/2
HP 16C(BRASS)	80	52	Rc2"



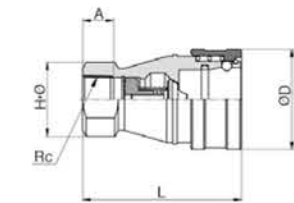
## H

Socket Female



## MODEL [T]

MODEL	L	ØD	Rc
HP 1H(BRASS)	48	23.6	Rc1/8
HP 2H(BRASS)	58	27.5	Rc1/4
HP 3H(BRASS)	65	34.5	Rc3/8
HP 4H(BRASS)	72	44.5	Rc1/2
HP 6H(BRASS)	88	54.5	Rc3/4
HP 8H(BRASS)	102	64.5	Rc1"
HP 10H(BRASS)	115	77.5	Rc 1 1/4
HP 12H(BRASS)	124	87.8	Rc 1 1/2
HP 16H(BRASS)	132	109	Rc2"



## Common Using Precautions of Coupler Series

Never fail to check the following

### ⚠ WARNING

1. Avoid applying or removing when pressure is on. It causes the danger of jumping of plug body.
2. Never touch the equipment under pressure in the state of putting plug and socket on the body. It causes "opening" by touch.
3. Never use coupler in place of rotary joint or other revolving joint.
4. Secure to flow the fluid from socket to plug.
5. Avoid the instrument or machine giving strong bending weight, excessive vibration or shock.
6. To use the coupler on a vibration tool such as jet chisel, be sure to connect with 30cm rubber tube between tool and coupler.

### ⚠ CAUTION

1. When putting plug into socket, secure to push it until it stops. Otherwise it may cause leakage. In addition, be sure to check whether it will come out or not by pulling it out.
2. Be careful of plug body jumping by compressed air discharging when disconnecting.
3. Be sure not only to have dust or contamination with intended fluid but also to have flaws on body. It may cause leakage.
4. When pushing tube into the socket body, fix it with hose-band after wearing silicon.
5. Never fasten the thread over maximum limit of torque. It may cause breakage.



# MOLD COUPLER

## Application

- Used for piping of supplying cooling water on moulds.

## Feature

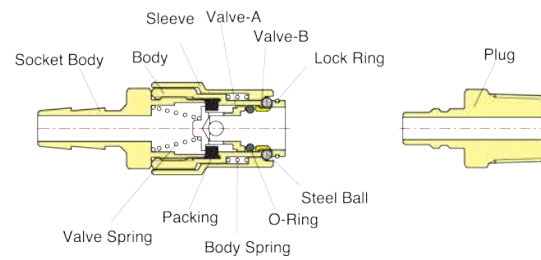
- Quick assembly by one touch system.
- Uni-directional shut-off coupler with an automatic shut-off valve built in the socket.
- Useful in narrow space with O.D.(18.5mm).
- Easy to connect or disconnect between cork and hole with long sleeve construction.

## Specification

Fluid	Water, Oil
Material	Brass
Working Pressure Range	10kgf/cm <sup>2</sup> (1000kPa)
Maximum Pressure	15kgf/cm <sup>2</sup> (1500kPa)



## Structural Diagram



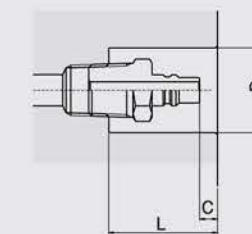
# Mold Coupler



Valve Symbols Working Pressure Applicable fluids



## ►Gland Dimensions for Embedding



Model	D	C	L
KCM21	20~	0~3	28
KCM22	20~	0~3	29
KCM23	20~	0~3	30

- The size exceeding 3mm causes interference with socket, making connection and disconnection impossible.
- The size "D" is the smallest recommended diameter. Therefore, process the hole in optimal size.

## Product Code System

**KC H 22**

① ② ③

### ① Model

KC	Plug
KH	Socket

### ② Type

H	Hose Stem
M	Male Thread
F	Female Thread

### ③ Thread Size(T)

Size	21	22	23
H	1/8"	1/4"	3/8"
M	R1/8	R 1/4	R3/8
F	Rc1/8	Rc 1/4	Rc3/8

## Common Using Precautions of Coupler Series

Never fail to check the following

### ⚠ WARNING

1. Avoid applying or removing when pressure is on. It causes the danger of jumping of plug body.
2. Never touch the equipment under pressure in the state of putting plug and socket on the body. It causes "opening" by touch.
3. Never use coupler in place of rotary joint or other revolving joint.
4. Secure to flow the fluid from socket to plug.
5. Avoid the instrument or machine giving strong bending weight, excessive vibration or shock.
6. To use the coupler on a vibration tool such as jet chisel, be sure to connect with 30<sub>cm</sub> rubber tube between tool and coupler.

### ⚠ CAUTION

1. When putting plug into socket, secure to push it until it stops. Otherwise it may cause leakage. In addition, be sure to check whether it will come out or not by pulling it out.
2. Be careful of plug body jumping by compressed air discharging when disconnecting.
3. Be sure not only to have dust or contamination with intended fluid but also to have flaws on body. It may cause leakage.
4. When pushing tube into the socket body, fix it with hose-band after wearing silicon.
5. Never fasten the thread over maximum limit of torque. It may cause breakage.



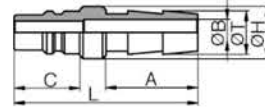
# KCH

Plug Nipple



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	C	ØT	
KCH21 BRASS	15	8	
KCH22 BRASS	15	10	
KCH23 BRASS	15	12	



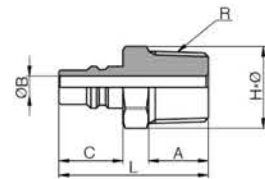
# KCM

Plug Male



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	C	R	
KCM21 BRASS	15	R1/8	
KCM22 BRASS	15	R1/4	
KCM23 BRASS	15	R3/8	



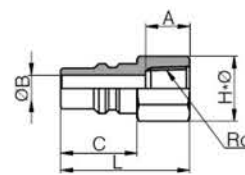
# KCF

Plug Female



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	C	Rc	
KCF21 BRASS	15	Rc1/8	
KCF22 BRASS	15	Rc1/4	
KCF23 BRASS	15	Rc3/8	



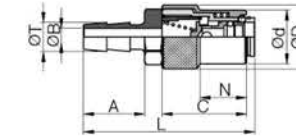
# KHH

Socket Nipple



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	ØT	
KHH21 BRASS	22	6.5	
KHH22 BRASS	22	10	
KHH23 BRASS	22	12	
KHH24 BRASS	22	16	



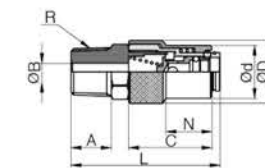
# KHM

Socket Male



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	R	
KHM21 BRASS	22	R1/8	
KHM22 BRASS	22	R1/4	
KHM23 BRASS	22	R3/8	



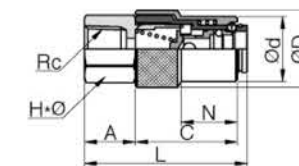
# KHF

Socket Female



MODEL [ØD-T]

Tube (Metric) - Thread(R)			
MODEL	ØD	Rc	
KHF21 BRASS	22	Rc1/8	
KHF22 BRASS	22	Rc1/4	



# LIGHT COUPLER

## Application

- Used for piping of compressed air connections.
- Used for air tool equipped with drive and impact.

## Feature

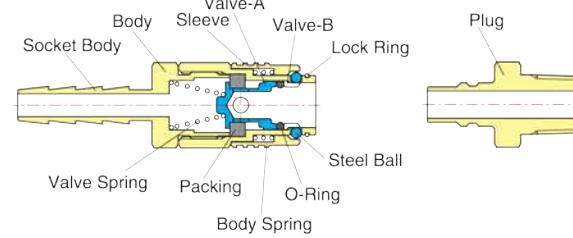
- Compact and lightweight coupler for air piping.
- Easy to assemble on the connection of plug.
- Uni-directional shut-off coupler with an automatic shut-off valve built in the socket.

## Specification

Fluid	Air, Oil
Material	Steel
Working Pressure Range	10kgf/cm <sup>2</sup> (1500kPa)
Maximum Pressure	15kgf/cm <sup>2</sup> (2000kPa)



## Structural Diagram



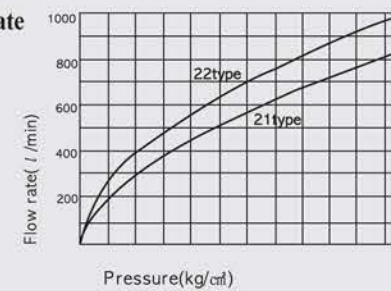
# Light Coupler



## ► Minimum Sectional Area (mm<sup>2</sup>)

Model	21 Type	22 Type
Minimum Sectional Area	19	19

## ► Flow Rate



## ► Measuring Condition

Fluid type : Air  
Temperature : Room temperature

## ► How to check the table

This table indicates flow rate at each amount of pressure when flowing air.

## Product Code System

**LC H 21**

① ② ③

### ① Model

LC	Plug
LH	Socket

### ② Type

H	Hose Stem
M	Male Thread
F	Female Thread
N	Hose Nut Type

### ③ Thread Size(T)

Size	21	22	23
H	1/8"	1/4"	3/8"
M	Rc1/8	Rc 1/4	Rc3/8
F	Rc1/8	Rc 1/4	Rc3/8
N	8×5	9×6	10×6.5

## Common Using Precautions of Coupler Series

Never fail to check the following

### ⚠ WARNING

1. Avoid applying or removing when pressure is on. It causes the danger of jumping of plug body.
2. Never touch the equipment under pressure in the state of putting plug and socket on the body. It causes "opening" by touch.
3. Never use coupler in place of rotary joint or other revolving joint.
4. Secure to flow the fluid from socket to plug.
5. Avoid the instrument or machine giving strong bending weight, excessive vibration or shock.
6. To use the coupler on a vibration tool such as jet chisel, be sure to connect with 30<sub>cm</sub> rubber tube between tool and coupler.

### ⚠ CAUTION

1. When putting plug into socket, secure to push it until it stops. Otherwise it may cause leakage. In addition, be sure to check whether it will come out or not by pulling it out.
  2. Be careful of plug body jumping by compressed air discharging when disconnecting.
  3. Be sure not only to have dust or contamination with intended fluid but also to have flaws on body. It may cause leakage.
  4. When pushing tube into the socket body, fix it with hose-band after wearing silicon.
  5. Never fasten the thread over maximum limit of torque. It may cause breakage.
- Never use couplers in the place or machine of vibration or shock.



### LCH

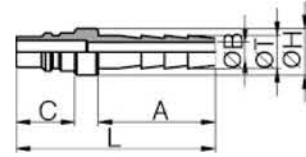
Plug Nipple



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	C	∅T
LCH22 STEEL	15	8.5



### LHH

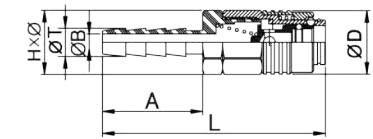
Socket Nipple



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	∅D	∅T
LHH22 STEEL	19	8.5



### LCM

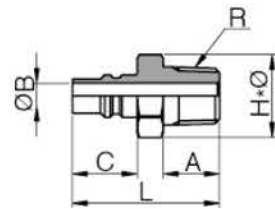
Plug Male



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	C	R
LCM21 STEEL	15	R1/8
LCM22 STEEL	15	R1/4



### LHM

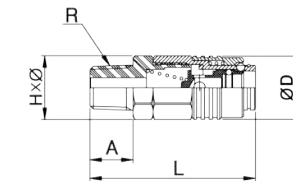
Socket Male



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	∅D	R
LHM22 STEEL	19	1/4



### LCF

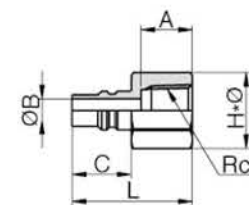
Plug Female



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	C	Fc
LCF22 STEEL	15	Rc1/4



### LHF

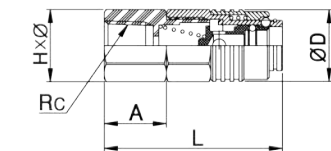
Socket Female



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	∅D	Fc
LHF22 STEEL	19	Rc1/4



### LCN

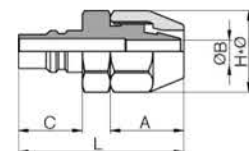
Plug Nut



MODEL [∅D]

Tube (Metric) - Thread(R)

MODEL	C	Tube
LCN21 STEEL	15	8×5
LCN23 STEEL	15	10×6.5



### LHN

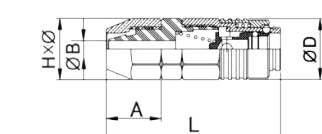
Socket Nut



MODEL [∅D]

Tube (Metric) - Thread(R)

MODEL	∅D	Tube
LHN21 STEEL	19	8×5
LHN23 STEEL	19	10×6.5



## LHP

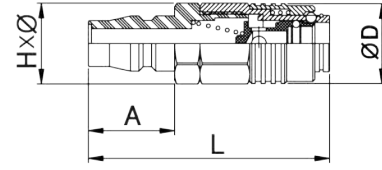
Socket Plug



MODEL [T]

Tube (Metric) - Thread(R)

MODEL	ØD	H×Ø
LHP22 STEEL	19.0	17×19.2





# CAM-LOCK COUPLER

## Application

- Without the skilled & hand tools, Cam Lock Couplings are easy to connect to pipe, hose or tube tank lorry by hands.

## Feature

- Safe transfer for liquid, vapor, gas, air without expose.
- Wide selections of body & gasket for each fluid (Acid, Base, Foods, High and low temperature)
- Cam-Lock Couplings in Aluminum, Stainless Steel are classified usage as processes: Die casting, Gravity casting, Shell mold casting, Investment casting.
- All of the products are precisely machined and assembled.
- In addition they are available in use, with most of all leading companies' products in the world.

## Specification

Material	Aluminum, Stainless Steel
Fluid	Air, Gas, Liquid
Temperature Range	-20 °c ~ 80 °c
Working Pressure Range	1/2" ~ 2" : 15kgf/cm <sup>2</sup> 2 1/2" ~ 4" : 10kgf/cm <sup>2</sup> 5" ~ 8" : 5kgf/cm <sup>2</sup>



## Product Code System

**CA 1/2"**

① ② ③

① Model : Cam-Lock Coupling

② Type

A	Female Thread Adater	E	Hose Shank Coupler
B	Male Thread Coupler	F	Male Thread Coupler
C	Hose Shank Coupler	DC	Dust Cap
D	Female Thread Coupler	DP	Dust Plug

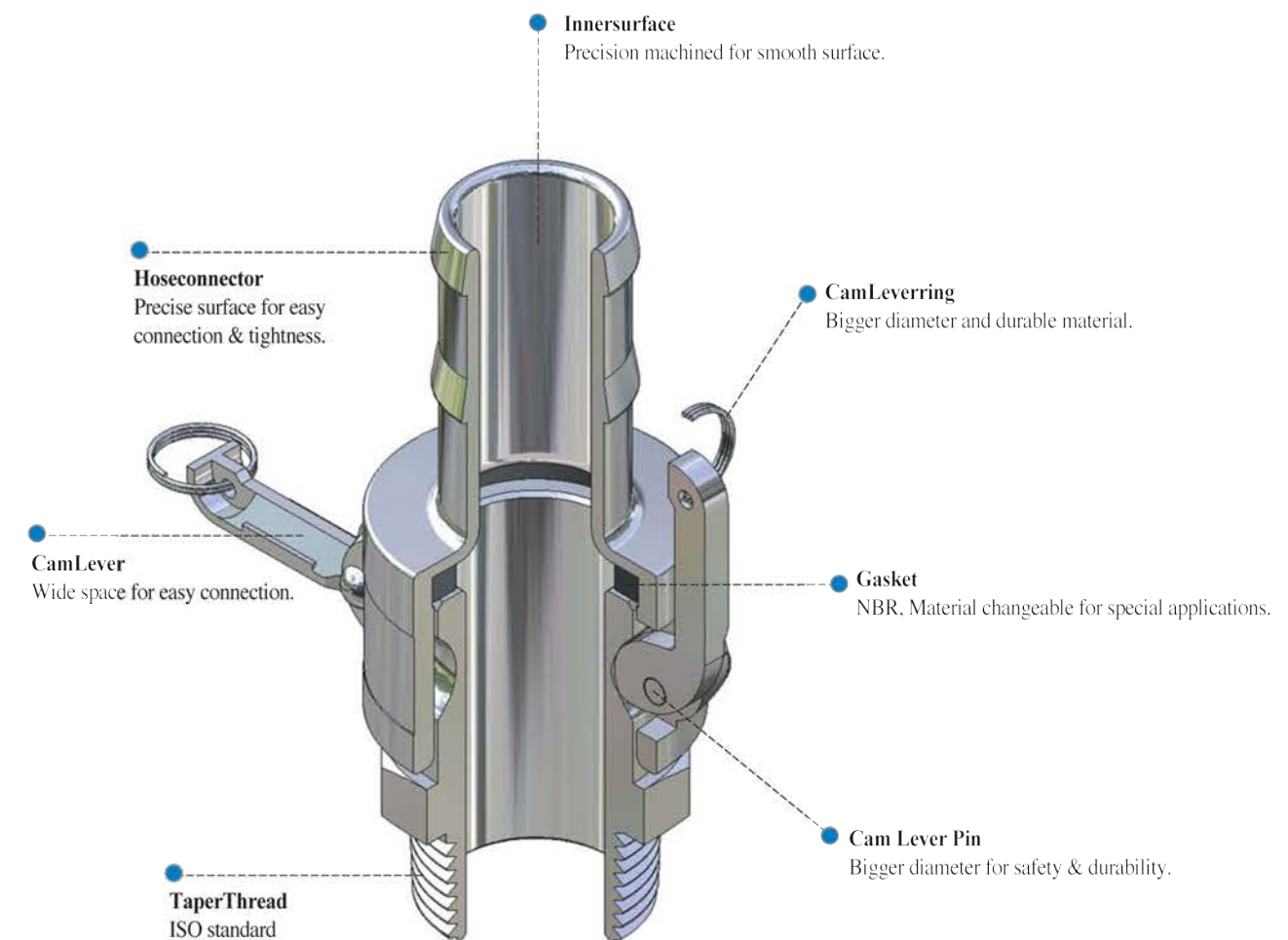
③ Thread Size(T)

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
mm	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"

## Cam-Lock Coupler **NEW!**



## Structural Diagram

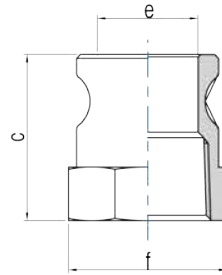


## CA

Female thread Adater



MODEL	규격 (mm)	C
CA 1/2"	1/2"	27
CA 3/4"	3/4"	27
CA 1"	1"	35
CA 1 1/4"	1 1/4"	37
CA 1 1/2"	1 1/2"	40
CA 2"	2"	45
CA 2 1/2"	2 1/2"	51
CA 3"	3"	52
CA 4"	4"	54
CA 5"	5"	60
CA 6"	6"	63
-	8"	70

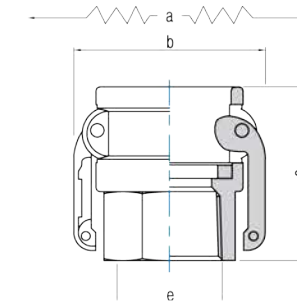


## CD

Female thread Coupler



MODEL	규격 (mm)	C
CD 1/2"	1/2"	55
CD 3/4"	3/4"	55
CD 1"	1"	64
CD 1 1/4"	1 1/4"	72
CD 1 1/2"	1 1/2"	74
CD 2"	2"	82
CD 2 1/2"	2 1/2"	82
CD 3"	3"	89
CD 4"	4"	96
CD 5"	5"	101
CD 6"	6"	113
-	8"	114

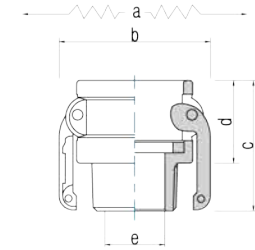


## CB

Male thread Coupler



MODEL	규격 (mm)	C
CB 1/2"	1/2"	55
CB 3/4"	3/4"	55
CB 1"	1"	68
CB 1 1/4"	1 1/4"	72
CB 1 1/2"	1 1/2"	73
CB 2"	2"	81
CB 2 1/2"	2 1/2"	85
CB 3"	3"	92
CB 4"	4"	93
CB 5"	5"	112
CB 6"	6"	110
-	8"	113

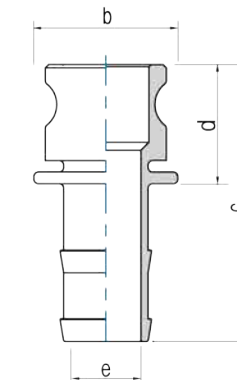


## CE

Hose Shank Adapter



MODEL	규격 (mm)	C
CE 3/4"	3/4"	83
CE 1"	1"	107
CE 1 1/4"	1 1/4"	120
CE 1 1/2"	1 1/2"	123
CE 2"	2"	129
CE 2 1/2"	2 1/2"	144
CE 3"	3"	144
CE 4"	4"	154
CE 5"	5"	200
CE 6"	6"	248
CE 8"	8"	228

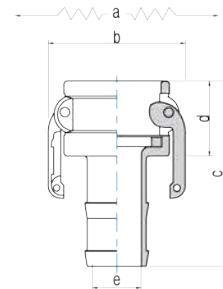


## CC

Hose Shank Coupler



MODEL	규격 (mm)	C
CC 3/4"	3/4"	90
CC 1"	1"	103
CC 1 1/4"	1 1/4"	116
CC 1 1/2"	1 1/2"	116
CC 2"	2"	126
CC 2 1/2"	2 1/2"	143
CC 3"	3"	143
CC 4"	4"	147
CC 5"	5"	191
CC 6"	6"	235
CC 8"	8"	225

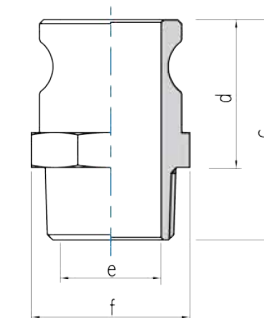


## CF

Male thread Adater



MODEL	규격 (mm)	C
CF 1/2"	1/2"	48
CF 3/4"	3/4"	48
CF 1"	1"	69
CF 1 1/4"	1 1/4"	78
CF 1 1/2"	1 1/2"	81
CF 2"	2"	88
CF 2 1/2"	2 1/2"	93
CF 3"	3"	103
CF 4"	4"	120
CF 5"	5"	131
CF 6"	6"	141
-	8"	123



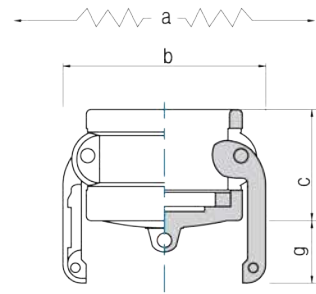


## CDC

Dust Cap



규격		
MODEL	(mm)	C
CDC 3/4"	3/4"	55
CDC 1"	1"	64
CDC 1 1/4"	1 1/4"	74
CDC 1 1/2"	1 1/2"	79
CDC 2"	2"	92
CDC 2 1/2"	2 1/2"	105
CDC 3"	3"	123
CDC 4"	4"	159
CDC 5"	5"	194
CDC 6"	6"	230
-	8"	288

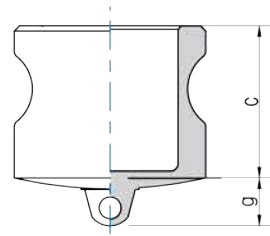


## CDP

Dust Plug



규격		
MODEL	(mm)	C
CDP 3/4"	3/4"	28
CDP 1"	1"	34
CDP 1 1/4"	1 1/4"	39
CDP 1 1/2"	1 1/2"	42
CDP 2"	2"	46
CDP 2 1/2"	2 1/2"	46
CDP 3"	3"	50
CDP 4"	4"	54
CDP 5"	5"	71
CDP 6"	6"	69
-	8"	73



# Material Using Range According To Anti-Chemicals

Refer to the following statement.

## ★ANTI-CHEMICALS LIST(Reference)

Name of Chemicals (Density of weight %, Temperature °C)	Tube Type				Fitting						Seal Quality		
	Urethane	Nylon	Polyolefin	Fluorine	Brass	SUS304	SUS316	POM	PBT	PP	NBR	EPDM	FKM
Caustic soda (10% 20°C)	×	○	○	○	△	△	○	○	△	○	○	○	○
Caustic soda (30% 20°C)	×	○	○	○	-	-	-	○	×	○	-	-	-
Caustic soda (30% 70°C)	×	×	△	○	-	-	-	○	×	△	-	-	-
Gasoline	○	○	△	○	○	○	○	○	○	△	○	×	○
Air	○	○	○	○	○	○	○	○	○	○	○	○	○
Sodium perborate	-	○	○	○	×	-	○	○	○	○	○	○	○
Sodium peroxide	-	×	○	○	×	-	○	-	-	○	○	○	○
Hydrogen peroxide (5% 20°C)	○	○	○	○	×	○	○	○	○	○	-	-	-
Hydrogen peroxide (5% 20°C)	△	△	○	○	×	○	○	△	○	○	-	-	-
Hydrogen peroxide (30% 20°C)	×	×	○	○	×	○	○	×	○	○	-	-	-
Perchloric acid	×	×	○	○	×	×	×	×	○	○	-	○	○
Grease	○	○	△	○	○	○	○	○	△	○	○	×	○
Sodium silicate	○	○	○	○	△	-	○	○	○	○	○	○	○
Glycerin	○	○	○	○	○	○	○	○	○	○	○	○	○
Naphtha	△	○	△	○	△	○	○	○	△	△	×	×	○
Naphthalene	△	○	△	○	△	-	△	○	○	○	×	×	○
Nitropropane	-	-	○	○	-	-	-	○	-	○	-	-	-
Kerosene	○	○	△	○	○	○	○	○	△	○	×	○	○
Dichloro benzene	×	△	×	○	△	-	-	△	△	△	-	-	-
Linoleic acid	-	△	△	○	-	-	-	○	-	△	○	×	○
Maleic acid	△	○	○	○	-	△	△	-	-	○	-	△	○
Cottonseed oil	○	○	○	○	△	○	○	○	-	○	○	○	○
Methane	○	○	○	○	○	-	△	○	○	○	○	×	○
Methyl alcohol(Methanol)	△	○	○	○	○	△	○	○	○	○	○	○	△
Methyl ethyl ketone(MEK)	×	○	○	○	○	△	○	○	○	○	×	○	×
Methyl isobutyl ketone(MBK)	×	○	○	○	△	-	△	○	○	○	×	△	×
Monoethanolamine	-	○	△	○	-	-	△	○	-	○	×	○	×
Monochlorobenzene	×	×	×	○	-	-	-	○	-	×	×	×	○
Chloroacetic acid	×	×	×	○	-	-	-	△	△	×	-	-	-
Hydrofluoric acid Anhydride	×	×	×	○	×	-	×	×	-	×	-	○	-
Acetic Anhydride	×	×	△	○	×	○	○	×	-	△	△	○	×
Water (24°C)	○	○	○	○	○	○	○	○	○	○	○	○	○
Water (100°C)	△	△	△	○	×	○	○	△	×	△	-	-	-
Sea Water	○	○	○	○	△	○	○	○	○	○	-	-	-
Bunker oil	-	○	○	-	△	-	○	-	-	○	○	-	○
Benzene(Benzol)	×	○	×	○	×	△	△	○	△	×	×	×	○
Butane	-	○	△	○	○	○	○	○	○	○	○	×	○
Fluorine	×	-	×	×	×	×	△	×	-	×	-	△	○
Borax	○	○	○	○	×	-	○	-	-	○	○	○	○
Boric acid	○	○	○	○	○	○	○	○	○	○	○	○	○
Amyl borate	-	-	△	○	-	-	-	○	-	△	○	×	○
Bromine	×	×	×	○	×	-	×	×	×	△	-	-	○
Arsenic acid	-	△	○	○	△	○	○	-	-	○	-	-	-
Carbon tetrachloride	×	△	×	○	△	△	△	○	○	△	△	×	○
Oxygen	○	○	○	○	○	○	○	○	○	○	○	○	○

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- Although the result(using environment, using condition, using period) proves to be "good", it may not be suitable in some cases.
- Secure the conditions below before using.

Name of Chemicals (Density of weight %, Temperature °C)	Tube Type				Fitting						Seal Quality		
	Urethane	Nylon	Polyolefin	Fluorine	Brass	SUS304	SUS316	POM	PBT	PP	NBR	EPDM	FKM
Petroleum	○	○	×	○	-	-	-	○	○	×	○	×	○
Salt Water	-	○	○	○	×	△	△	○	○	○	-	-	-
Soda water	○	○	○	○	-	-	-	○	○	○	-	-	-
Soda ash--Sodium carbonate	○	○	○	○	○	△	△	○	○	○	○	○	○
Pine oil	-	×	○	○	△	△	○	-	○	○	○	×	○
Oxalic acid	△	○	○	○	△	△	△	×	○	○	○	○	○
Ethyl oxalate	×	○	×	○	-	-	-	○	○	×	×	○	○
Magnesium hydroxide	△	○	○	○	△	-	△	○	×	○	○	○	○
Barium hydroxide	-	○	○	○	×	-	○	○	△	○	○	○	○
Ammonium hydroxide	△	○	○	○	×	△	○	○	×	○	×	○	○
Potassium hydroxide	△	△	○	○	△	△	△	○	×	○	○	○	○
Calcium hydroxide	△	○	○	○	△	△	△	○	×	○	○	○	○
Hydrogen	○	○	○	○	△	○	○	○	○	○	○	○	○
Mercury	-	○	○	○	×	-	△	-	-	○	○	○	○
Steam (150°C over)	×	×	×	○	○	-	○	△	△	×	×	○	×
Steam (150°C below)	×	×	×	○	-	-	-	×	×	△	×	○	×
Vegetable oil	-	○	○	○	-	-	-	○	○	○	○	○	○
Salt water	○	○	○	○	△	△	△	○	○	○	-	-	-
Silicone greases	-	○	△	○	-	-	-	○	○	△	○	○	○
Silicone oil	-	○	△	○	-	-	-	○	○	△	○	○	○
Glue	-	○	○	○	△	-	△	-	-	○	-	-	-
Aniline	×	×	×	○	×	△	△	○	○	△	×	○	△
Amyl naphthalene	-	-	△	○	-	-	-	○	○	△	×	×	○
Amyl alcohol	○	○	○	○	○	△	△	○	○	○	○	○	○
Acetone	×	○	△	○	○	△	○	○	○	△	×	○	×
Acetamide	-	-	△	○	-	-	-	○	○	△	○	○	○
Acetaldehyde	○	○	△	○	○	○	○	○	○	○	×	○	×
Acetylene	○	○	○	○	×	○	○	○	○	○	○	○	○
Sulfurous acid	×	×	○	○	×	△	△	×	○	○	○	○	○
Sulfurous acid gas	×	×	△	○	-	-	○	△	○	○	○	○	○
Sodium sulfite	-	△	○	○	○	○	○	○	○	○	-	-	-
Ammonia	-	○	○	○	△	○	○	○	△	○	○	○	×
Ammonia gas	×	△	△	○	×	○	○	○	△	△	○	○	×
Ammonia gas	×	×	×	○	×	○	○	○	×	×	○	○	×
Liquid Ammonia	-	○	○	○	○	○	○	○	△	○	-	-	-
Chlorine Liquide	×	×	×	○	-	-	-	×	○	×	-	-	-
Liquefied petroleum gas(LPG)	-	○	△	○	○	○	○	○	○	△	○	×	○
Ethanolamine	-	△	△	○	-	-	-	○	△	△	○	○	×
Ethylene glycol	○	○	○	○	△	△	△	○	○	○	○	○	○
Ethylcellulose	-	-	○	○	-	-	△	○	○	○	-	○	×
Ethylalcohol(Ethanol)	△	○	○	○	○	○	○	○	○	○	○	○	○
Lye solution	-	○	○	○	-	-	-	○	○	○	○	○	○
Hydrochloric acid(10%, 20°C)	△	○	○	○	×	×	×	×	○	○	-	-	-
Hydrochloric acid(20%, 20°C)	×	×	○	○	×	×	×	×	△	○	-	-	-
Hydrochloric acid(20%, 80°C)	×	×	×	○	×	×	×	×	×	×	×	△	○



# Material Using Range According To Anti-Chemicals

Refer to the following statement.

## ★ANTI-CHEMICALS LIST(Reference)

Name of Chemicals (Density of weight %, Temperature °C)	Tube Type				Fitting						Seal Quality		
	Urethane	Nylon	Polyolefin	Fluorine	Brass	SUS304	SUS316	POM	PBT	PP	NBR	EPDM	FKM
Hydrochloric acid (38%, 20°C)	×	×	○	○	×	×	×	×	△	○	○	○	○
Magnesium chloride	○	○	○	○	△	△	○	○	○	○	○	○	○
Methyl chloride	×	△	×	○	○	○	○	○	-	×	×	△	○
Barium chloride	○	○	○	○	×	-	○	-	○	○	○	○	○
Zinc chloride	○	○	○	○	×	△	○	×	○	○	○	○	○
Acetyl chloride	×	×	×	-	-	-	△	×	-	×	-	-	○
Aluminium chloride	-	△	○	○	×	×	×	-	○	○	○	○	○
Ammonium chloride	○	○	○	○	×	△	△	○	○	○	○	○	○
Ethyl chloride	×	○	×	-	○	○	○	-	×	○	○	○	○
Sulfur chloride	-	-	△	○	×	-	△	-	-	△	×	×	○
Potassium chloride	○	○	○	○	△	△	○	○	○	○	○	○	○
Calcium chloride	○	○	○	○	○	△	△	○	○	○	○	○	○
Ozone	△	○	△	○	○	○	○	△	○	△	○	○	○
Oleic acid	△	○	△	○	△	△	△	△	○	△	○	○	○
Olive oil	○	○	○	○	△	○	○	○	○	○	○	○	○
Uric acid	×	○	-	○	-	-	-	○	○	-	-	-	-
Aqua acid	×	×	×	○	-	-	-	×	-	△	-	△	○
Lactic acid	-	○	○	○	×	△	△	○	○	○	○	○	○
Sulfur	△	○	○	○	×	○	○	○	-	○	×	○	○
Lubricating oil(Petroleum base)	○	○	×	○	○	○	○	○	○	×	○	×	○
Lubricating oil(Easter base)	×	○	×	○	○	○	○	○	○	×	-	-	-
Isooctane	△	○	×	○	○	○	○	○	○	×	○	×	○
Isopropyl alcohol	-	△	○	○	○	○	○	○	○	○	○	○	○
Isopropyl ether	-	△	△	○	○	○	○	○	○	○	×	×	○
Carbon disulfide	×	○	×	○	○	○	○	○	-	×	△	×	○
Phenyl disulfide	△	○	-	○	-	-	-	-	-	-	-	-	-
Carbon monoxide	○	○	○	○	○	○	○	○	○	○	○	○	○
Gelatin	○	○	○	○	○	○	○	○	○	○	○	○	○
Heavy water	○	○	○	○	-	-	-	○	○	○	-	-	-
Soap solutions	○	○	△	○	○	○	○	○	○	○	○	○	○
Sodium nitrate	○	○	○	○	○	○	○	○	○	○	○	○	-
Aluminium nitric	△	○	○	○	-	-	△	○	○	○	○	○	-
Ammonium nitric	○	○	○	○	×	○	○	○	○	○	○	○	-
Potassium nitric	○	○	○	○	△	△	△	○	○	○	○	○	○
Calcium nitric	-	○	○	○	-	-	-	○	○	○	○	○	○
Nitrogen	○	○	○	○	○	○	○	○	○	○	○	○	○
Natural gas	-	○	○	○	○	○	○	○	○	○	○	×	○
Acetic acid (10%, 20°C)	×	△	○	○	×	○	○	△	○	○	○	○	○
Acetic acid (50%, 20°C)	×	×	○	○	×	○	○	×	○	○	-	-	-
Acetic acid (50%, 70°C)	×	×	×	○	×	○	○	×	△	×	-	-	-
Acetic acid (100%, 20°C)	×	×	×	○	×	△	△	×	△	×	-	-	-
Lead acetate	-	○	○	○	-	△	-	-	○	○	○	○	-
Nickel acetate	-	○	○	○	-	-	△	-	○	○	○	○	×
Zinc acetate	-	○	○	○	-	-	-	○	○	○	○	○	×
Aluminium acetate	-	○	○	○	-	-	-	○	○	○	○	○	-

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Name of Chemicals (Density of weight %, Temperature °C)	Tube Type				Fitting						Seal Quality		
	Urethane	Nylon	Polyolefin	Fluorine	Brass	SUS304	SUS316	POM	PBT	PP	NBR	EPDM	FKM
Calcium acetate	○	○	○	○	△	-	△	○	○	○	○	○	×
Cresol	×	×	△	○	○	△	○	△	○	○	△	×	○
Chlorosulfonic acid	-	×	×	○	△	×	×	×	○	×	×	×	△
Chloroacetone	-	-	×	-	-	-	-	-	-	×	×	○	×
Chlorotoluene	-	×	×	○	-	-	-	○	○	×	×	×	○
Chloroform	×	○	×	○	○	○	○	△	△	×	×	×	○
Soybean oil	-	○	○	○	△	○	○	○	○	○	○	△	○
Tannic acid	△	○	○	○	×	△	△	○	-	○	○	○	○
Tar	○	○	○	○	△	○	○	-	-	○	○	×	○
Carbonic acid	△	○	○	○	○	△	△	-	-	○	○	○	○
Carbon dioxide	○	○	○	○	○	○	○	○	○	○	-	-	-
Sodium carbonate	○	○	○	○	○	△	△	○	○	○	-	-	-
Ammonium carbonate	-	○	○	○	-	△	△	○	○	○	×	○	-
Toluene	△	○	△	○	○	○	○	○	△	△	×	×	○
Triacetin	-	-	○	-	-	-	-	-	-	○	○	○	×
Phenol	×	×	○	○	○	○	○	×	○	○	-	○	○
Glucose	○	○	○	○	○	○	○	○	○	○	○	○	○
Freon1 1	-	○	-	○	○	○	○	○	○	-	○	×	○
Freon1 2	-	○	-	○	○	○	○	○	○	-	○	○	○
Freon2 1	-	○	-	○	○	○	○	○	○	-	×	×	×
Freon2 2	-	○	-	○	○	○	○	○	○	-	×	○	×
Freon1 13	-	○	-	○	○	○	○	○	○	-	○	×	○
Freon1 14	-	○	-	○	○	○	○	○	○	-	○	○	○
Propane	○	○	○	○	○	○	○	○	○	○	○	×	○
Propylene	-	○	-	○	○	○	○	○	○	-	×	×	○
Castor oil	△	○	○	○	○	○	○	○	○	○	○	○	○
Hexane	○	○	×	○	○	○	○	○	△	○	×	×	○
Sulfuric acid(10%, 20°C)	×	○	○	○	×	×	×	×	○	○	×	○	○
Sulfuric acid (10%, 70°C)	×	×	△	○	×	×	×	×	×	△	-	-	-
Sulfuric acid (30%, 20°C)	×	×	○	○	×	×	×	×	△	○	-	-	-
Sulfuric acid (30%, 70°C)	×	×	△	○	×	×	×	×	×	△	-	-	-
Sulfuric acid (98%, 20°C)	×	×	×	○	×	×	×	×	×	×	-	-	-
Sulfuric acid (70°C)	×	×	×	○	×	×	×	×	×	×	-	-	-
Sodium sulfate	○	○	○	○	○	△	○	○	○	○	○	○	○
Nickel sulfate	-	○	○	○	-	△	○	-	○	○	○	○	○
Copper sulfate	○	○	○	○	○	△	○	○	○	○	○	○	○
Magnesium sulfate	○	○	○	○	○	○	○	-	○	○	○	○	○
Methylsulfate	×	△	×	○	-	-	-	-	○	×	-	-	-
Barium sulfate	-	○	○	○	△	○	○	-	○	○	○	○	○
Aluminium sulfate	-	○	○	○	×	○	○	○	○	○	○	○	○
Ammonium sulfate	○	○	○	○	△	△	△	○	○	○	○	○	-
Lead sulfate	○	○	○	○	△	-	△	-	○	○	-	-	-
Sodium sulfide	○	○	○	○	×	△	△	○	○	○	○	○	○
Barium sulfide	-	○	○	○	-	-	○	○	○	○	○	○	○
Zinc sulfide	△	×	○	○	△	○	○	○	○	○	-	-	-
Calcium sulfide	-	○	○	○	-	-	△	○	○	○	○	○	○

