

## One-touch Fittings & Tubes with 1.8mm OD

● **First time in the industry!!**

OD 1.8mm one-touch fittings for the first time in the pneumatic industry.

● **Only 4mm of bending radius!!**

Min. bending radius is only 4mm, thus establishing a very compact piping.



● **A Variety of tube colors!!**

10 colors are available in standard.

● **A Variety of body shapes!!**

11 types to suit a variety of piping needs.



**PC**  
Straight

**PL**  
Elbow



**POC**  
Straight  
with hex hole



**PU**  
Straight Union



**PG**  
Different Dia.  
Straight union



**PV**  
Union Elbow



**PE**  
Union Tee



**PB**  
Tee



**PD**  
Branch Tee



**PGJ**  
Reducer

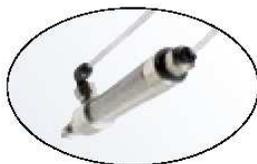


**PP**  
Plug

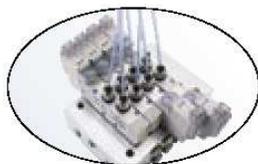
● **Very Compact!!**

About 80% of volumetric size of the conventional PISCO 4mm OD mini fittings.

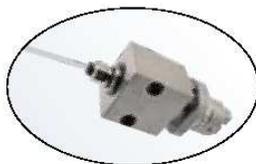
● **Applications**



Small Cylinder



Small Solenoid valve



Miniature Gripper

- Small workpieces-handling machine. (e.g. semi-conductors.)
- Applications where reduction in cost is necessary by energy-savings.

## ● Specification

### One-touch Fittings

Fluid admitted	Air
Max. Operating pressure	145 psi ( 1MPa)
Applicable vacuum level	-30in.Hg ( -100kPa)
Operating temp. range	32~140deg.F ( 0~60deg.C)

### Tube

Fluid admitted	Air
Max. Operating pressure at 20 deg. C	102 psi ( 0.7MPa)
Applicable vacuum level	-30in.Hg ( -100kPa)
Operating temperature range	5~140deg.F ( -15~60deg.C) without freezing

## ● Model Designation of Fittings



⑤ M : Mini-type

④ Tube Size (øD2) / Thread size (M)

**M3** : M3 x 0.5 (for PC, POC, PL, PB, PD types only)

**M5** : M5 x 0.8 (for PC, PL, PB, PD types only)

**180** : 1.8mm OD (for PU, PV, PE, PG, PGJ types only)

**No Code** : (for PP type only)

③ Tube size (øD1)

**180** : 1.8mm OD

**3** : 3mm OD (for PG type only)

**4** : 4mm OD (for PG, PGJ types only)

② Model Type

**C** : Straight

**OC** : Straight with hex hole

**L** : Elbow

**U** : Straight

**V** : Straight with hex hole

**E** : Elbow

**G** : Different Dia. Union Straight

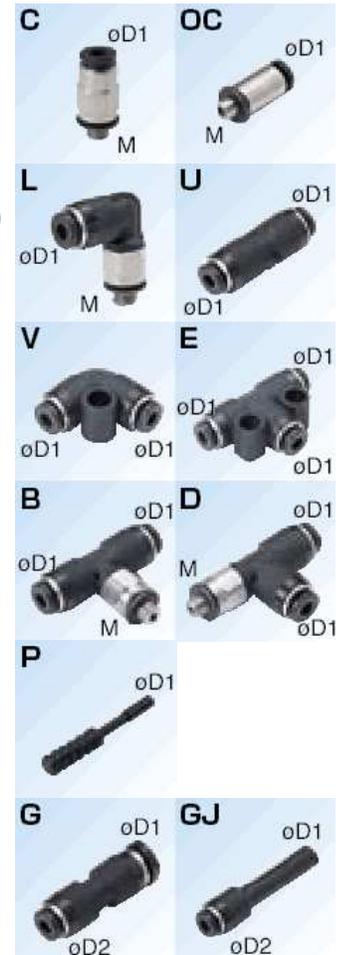
**B** : Tee

**D** : Branch Tee

**P** : Plug

**GJ** : Reducer

① Tube Fittings



## ● Model Designation of Tube



④ Tube Color

CODE	B	R	O	YB	Y	G	Bu	CB	C	W
COLOR	Black	Red	Orange	Ocher	Yellow	Green	Blue	Clear Blue	Clear	Milk White

③ Tube Length (m)

**20** : 20 meters roll

② Tube Size

**0180** : 1.8mm OD x 1.0mm ID

① Polyurethane Tube

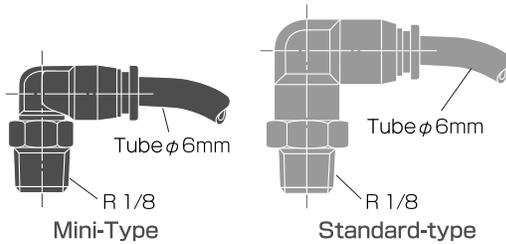
\* Contact PISCO for more details.

# Ultra-small Quick-fitting Joint for Pneumatic Piping Tube Fitting Mini-Type

## Package 10 pcs. in a bag

- This ultra-small quick-fitting joint is used in pneumatic piping.
- This quick-fitting joint is 40% smaller than the standard type fitting.
- The elliptical, ultra-small release ring facilitates connecting and disconnecting the tube.

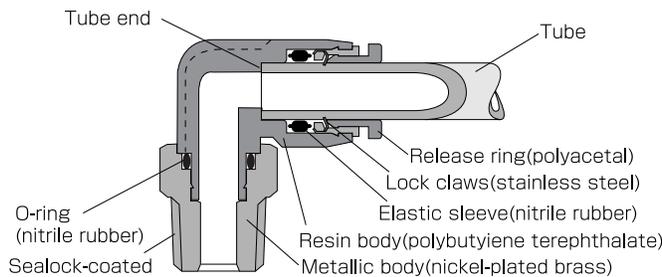
Comparison with Standard Type.



## Specifications

Fluid admitted	Air	
Service pressure range	0~150psi	0~0.9MPa(0~9.18kg/cm <sup>2</sup> )
Working vacuum	-29.5in.Hg	-750mmHg
Service temperature range	32~140°F	0~60°C

## Construction



## Model Designation(Example)



①Type

②Tube Dia.(φD)

	mm size			in. size	
Code	3	4	6	5/32	1/8
Dia.	φ3	φ4	φ6	φ5/32	φ1/8

③Thread size(R)

	Metric thread			Taper thread		Cartridge type	
Code	M3	M5	M5	01	02	M6	M8
Size	M3×0.5	M5×0.8	M6×1.0	R1/8	R1/4	M6×0.75	M8×0.75
	Unified fine thread				American standard taper pipe thread		
Code	U10U			N0		N1	
Size	10-32UNF			NPT1/16		NPT1/8	

④Mini-type(Code:M)

※Be sure to specify "M":otherwise, the standard will be delivered.

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

No code:Hexagon flat-to-flat metric spec.

X and Y dimension of release ring

Tube size	Φ3Φ1/8	Φ4	Φ6
X	7	10	12
Y	8	8	10

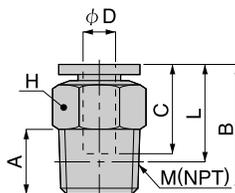
※Some of the 3mm release rings come with:X=10mm, Y=8mm

## Detailed Safety Instructions

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 3 and "Common Safety Instructions for Quick-Fitting Joint" on pages 4 and 5



Straight



Unit : inch

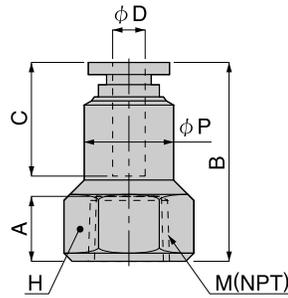
Model	Tube dia. φD(mm)	M	A	B	L	C	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PC 3-M3M	3	M3	0.12	0.51	0.39	0.37	0.22	0.04	1.20	0.70	0.04
PC 3-M5M	3	M5	0.14	0.61	0.47	0.43	0.31	0.14	2.00	3.00	0.16
PC 3-M6M	3	M6	0.18	0.65	0.47	0.43	0.31	0.14	2.00	3.00	0.16
PC 4-M3M	4	M3	0.12	0.59	0.47	0.43	0.31	0.07	1.20	0.90	0.05
PC 4-M5M	4	M5	0.14	0.63	0.47	0.43	0.31	0.12	2.40	3.80	0.21
PC 4-M6M	4	M6	0.18	0.65	0.47	0.43	0.31	0.12	2.50	6.30	0.34
PC 4-01M	4	R1/8	0.31	0.63	0.47	0.43	0.39	0.21	2.50	6.40	0.35
PC 6-M5M	6	M5	0.14	0.67	0.53	0.45	0.39	0.18	2.40	3.60	0.20
PC 6-M6M	6	M6	0.18	0.71	0.53	0.45	0.39	0.16	3.00	6.30	0.34
PC 6-01M	6	R1/8	0.31	0.71	0.55	0.45	0.39	0.21	4.60	15.90	0.86
PC 1/8-M3M	1/8	M3	0.12	0.59	0.47	0.43	0.31	0.07	1.20	0.90	0.05
PC 1/8-M5M	1/8	M5	0.14	0.63	0.47	0.43	0.31	0.12	2.40	2.60	0.14
PC 1/8-M6M	1/8	M6	0.18	0.65	0.47	0.43	0.31	0.12	2.50	2.90	0.16
PC 1/8-01M	1/8	R1/8	0.31	0.63	0.47	0.43	0.39	0.23	3.00	2.70	0.15

Unit : inch

Model	Tube dia. φD	NPT	A	B	L	C	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PC 1/8-U10MU	1/8	10-32UNF	0.14	0.63	0.49	0.43	5/16	0.11	2.40	2.60	0.14
PC 1/8-N0MU	1/8	1/16-27NPT	0.31	0.71	0.55	0.43	7/16	0.26	2.50	2.70	0.15
PC 1/8-N1MU	1/8	1/8-27NPT	0.31	0.63	0.47	0.43	7/16	0.26	2.50	2.70	0.15
PC 5/32-U10MU	5/32	10-32UNF	0.14	0.63	0.49	0.43	5/16	0.11	2.40	3.80	0.21
PC 5/32-N0MU	5/32	1/16-27NPT	0.31	0.71	0.55	0.43	7/16	0.25	2.50	6.40	0.35
PC 5/32-N1MU	5/32	1/8-27NPT	0.31	0.63	0.47	0.43	7/16	0.26	2.50	6.40	0.35

**PCF**  
MINI TYPE

Female Straight



Unit : inch

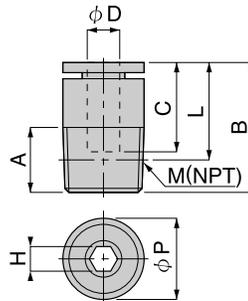
Model	Tube dia. $\phi D$ (mm)	M	A	B	$\phi P$	C	H	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm <sup>2</sup>	CV
PCF 3-M3M	3	M3	0.12	0.51	0.22	0.37	0.22	0.05	3.00	1.40	0.08
PCF 3-M5M	3	M5	0.20	0.59	0.31	0.37	0.31	0.14	2.00	2.80	0.15
PCF 4-M3M	4	M3	0.12	0.55	0.31	0.43	0.31	0.11	3.00	3.50	0.19
PCF 4-M5M	4	M5	0.20	0.67	0.31	0.43	0.31	0.14	2.00	2.60	0.14
PCF 1/8-M3M	1/8	M3	0.12	0.55	0.31	0.43	0.31	0.11	3.00	3.50	0.19
PCF 1/8-M5M	1/8	M5	0.20	0.67	0.31	0.43	0.31	0.14	2.00	2.60	0.14

Unit : inch

Model	Tube dia. $\phi D$	NPT	A	B	$\phi P$	C	H	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm <sup>2</sup>	CV
PCF 1/8-U10MU	1/8	10-32UNF	0.14	0.69	0.31	0.43	5/16	0.15	2.00	2.60	0.14
PCF 5/32-U10MU	5/32	10-32UNF	0.14	0.69	0.31	0.43	5/16	0.14	2.00	2.60	0.14

**POC**  
MINI TYPE

Hex. Holed Straight



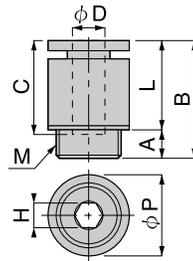
Unit : inch

Model	Tube dia. $\phi D$ (mm)	M	A	B	L	$\phi P$	C	H	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm <sup>2</sup>	CV
POC 3-M3M	3	M3	0.12	0.61	0.49	0.31	0.43	0.06	0.11	1.50	1.90	0.10
POC 3-M5M	3	M5	0.14	0.61	0.47	0.31	0.43	0.08	0.11	2.20	2.80	0.15
POC 4-M3M	4	M3	0.12	0.61	0.51	0.31	0.43	0.06	0.11	1.50	1.80	0.10
POC 4-M5M	4	M5	0.14	0.63	0.49	0.31	0.43	0.10	0.14	2.60	5.10	0.28
POC 4-M6M	4	M6	0.18	0.65	0.49	0.31	0.43	0.12	0.14	3.10	7.00	0.38
POC 4-01M	4	R1/8	0.31	0.61	0.45	0.39	0.45	0.12	0.21	3.10	7.40	0.40
POC 6-M5M	6	M5	0.14	0.69	0.55	0.39	0.45	0.10	0.18	2.60	5.20	0.28
POC 6-M6M	6	M6	0.18	0.71	0.53	0.39	0.45	0.12	0.18	3.10	7.10	0.38
POC 6-01M	6	R1/8	0.31	0.69	0.53	0.39	0.47	0.16	0.21	4.20	13.00	0.70
POC 1/8-M3M	1/8	M3	0.12	0.61	0.49	0.31	0.43	0.06	0.11	1.50	1.80	0.10
POC 1/8-M5M	1/8	M5	0.14	0.63	0.47	0.31	0.43	0.10	0.14	2.60	3.30	0.18
POC 1/8-M6M	1/8	M6	0.18	0.65	0.49	0.31	0.43	0.12	0.14	3.10	3.10	0.17

Unit : inch

Model	Tube dia. $\phi D$	NPT	A	B	L	$\phi P$	C	H	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm <sup>2</sup>	CV
POC1/8-U10MU	1/8	10-32UNF	0.14	0.63	0.49	0.31	0.43	3/32	0.11	2.50	3.20	0.17
POC5/32-U10MU	5/32	10-32UNF	0.14	0.63	0.49	0.31	0.43	3/32	0.11	2.50	4.80	0.26
POC5/32-N1MU	5/32	1/8	0.31	0.63	0.47	0.39	0.43	3/32	0.23	2.50	4.70	0.25

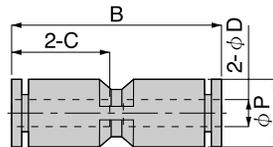
**PCC**  
MINI TYPE Cartridge



Unit : inch

Model	Tube dia. φD(mm)	M	A	B	L	φP	C	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PCC 3-M6M	3	M6×0.75	0.14	0.55	0.41	0.31	0.43	0.08	0.11	2.20	2.90	0.16
PCC 4-M6M	4	M6×0.75	0.14	0.55	0.41	0.31	0.43	0.10	0.11	2.60	5.10	0.28
PCC 4-M8M	4	M8×0.75	0.16	0.55	0.39	0.39	0.43	0.12	0.11	3.10	7.30	0.40
PCC 6-M8M	6	M8×0.75	0.16	0.57	0.41	0.39	0.45	0.16	0.14	4.20	12.80	0.69
PCC 1/8-M6M	1/8	M6×0.75	0.14	0.55	0.41	0.31	0.43	0.08	0.11	2.60	3.00	0.16

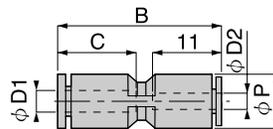
**PU**  
MINI TYPE Union Straight



Unit : inch

Model	Tube dia. φD(mm)	B	φP	C	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PU 3M	3	0.77	0.24	0.37	0.05	2.00	2.70	0.15
PU 4M	4	0.89	0.31	0.43	0.07	3.00	5.40	0.29
PU 6M	6	0.96	0.41	0.45	0.14	4.00	11.00	0.60
PU 1/8M	1/8	0.89	0.31	0.43	0.07	3.00	2.60	0.14
PU 5/32M	5/32	0.93	0.31	0.43	0.07	2.50	5.40	0.29

**PG**  
MINI TYPE Different Diam. Union Straight

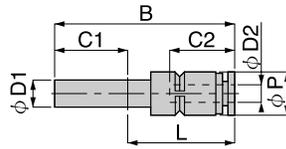


Unit : inch

Model	Tube dia. φD1 (mm)	Tube dia. φD2 (mm)	B	φP	C1	C2	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PG 4-3M	4	3	0.89	0.31	0.43	0.43	0.11	2.00	2.40	0.13
PG 6-4M	6	4	0.94	0.41	0.45	0.43	0.14	3.00	5.60	0.30
PG 4-1/8M	4	1/8	0.89	0.31	0.43	0.43	0.11	2.50	2.40	0.13
PG 6-1/8M	6	1/8	0.94	0.41	0.45	0.43	0.11	3.00	2.60	0.14
PG 5/32-1/8M	5/32	1/8	0.93	0.31	0.43	0.43	0.07	2.50	2.40	0.13

**PGJ**  
MINI TYPE

Reducer

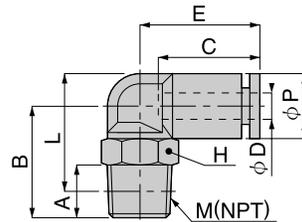


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	B	φP	C1	C2	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PGJ 4-3M	4	3	1.32	0.31	0.43	0.37	0.05	2.50	3.70	0.20
PGJ 6-3M	6	3	1.50	0.37	0.45	0.43	0.09	2.50	3.10	0.17
PGJ 6-4M	6	4	1.50	0.37	0.45	0.43	0.12	3.00	5.40	0.29
PGJ 6-1/8M	6	1/8	1.50	0.39	0.45	0.43	0.09	3.00	2.50	0.14

**PL**  
MINI TYPE

Elbow



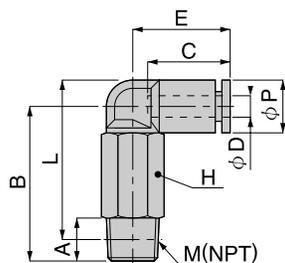
Unit : inch

Model	Tube dia. φD(mm)	M	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PL 3-M3M	3	M3	0.12	0.47	0.35	0.26	0.37	0.43	0.22	0.05	1.20	0.50	0.03
PL 3-M5M	3	M5	0.14	0.53	0.39	0.26	0.37	0.43	0.31	0.11	1.20	0.90	0.05
PL 3-M6M	3	M6	0.18	0.57	0.39	0.26	0.37	0.43	0.31	0.11	1.20	0.90	0.05
PL 4-M3M	4	M3	0.12	0.55	0.43	0.33	0.43	0.59	0.31	0.11	1.30	1.30	0.07
PL 4-M5M	4	M5	0.14	0.53	0.39	0.33	0.43	0.59	0.31	0.11	2.40	2.20	0.12
PL 4-M6M	4	M6	0.18	0.57	0.39	0.33	0.43	0.59	0.31	0.14	2.50	3.90	0.21
PL 4-01M	4	R1/8	0.31	0.63	0.47	0.33	0.43	0.61	0.39	0.21	3.00	4.80	0.26
PL 6-M5M	6	M5	0.14	0.57	0.43	0.43	0.45	0.63	0.31	0.14	2.40	3.50	0.19
PL 6-M6M	6	M6	0.18	0.61	0.43	0.43	0.45	0.63	0.31	0.14	2.50	3.60	0.20
PL 6-01M	6	R1/8	0.31	0.67	0.51	0.43	0.45	0.63	0.39	0.25	4.00	8.50	0.46
PL 1/8-M3M	1/8	M3	0.12	0.55	0.43	0.33	0.43	0.59	0.31	0.11	1.30	0.90	0.05
PL 1/8-M5M	1/8	M5	0.14	0.53	0.39	0.33	0.43	0.59	0.31	0.11	2.40	2.70	0.15
PL 1/8-M6M	1/8	M6	0.18	0.57	0.39	0.33	0.43	0.59	0.31	0.14	2.50	2.50	0.14
PL 1/8-01M	1/8	R1/8	0.31	0.63	0.47	0.33	0.43	0.61	0.39	0.21	3.00	2.00	0.11

Unit : inch

Model	Tube dia. φD	NPT	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PL 1/8-U10MU	1/8	10-32UNF	0.14	0.53	0.39	0.31	0.43	0.61	5/16	0.12	2.40	2.70	0.15
PL 1/8-N0MU	1/8	1/16-27	0.31	0.73	0.57	0.31	0.43	0.63	7/16	0.26	2.50	2.00	0.11
PL 1/8-N1MU	1/8	1/8	0.31	0.63	0.47	0.31	0.43	0.63	7/16	0.25	2.50	2.00	0.11
PL 5/32-U10MU	5/32	10-32UNF	0.14	0.53	0.39	0.31	0.43	0.61	5/16	0.12	2.40	2.20	0.12
PL 5/32-N0MU	5/32	1/16-27	0.31	0.73	0.57	0.31	0.43	0.63	7/16	0.26	2.50	4.80	0.26
PL 5/32-N1MU	5/32	1/8	0.31	0.63	0.47	0.31	0.43	0.63	7/16	0.25	2.50	4.80	0.26

**PLL**  
MINI TYPE Long Elbow



Unit : inch

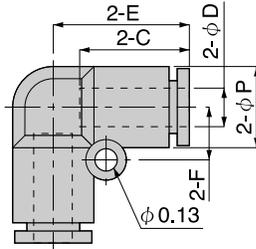
Model	Tube dia. φD(mm)	M	A	B	L	ΦP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PLL 3-M3M	3	M3	0.12	0.75	0.63	0.24	0.37	0.43	0.22	0.09	1.20	0.60	0.03
PLL 4-M3M	4	M3	0.12	0.91	0.79	0.33	0.43	0.59	0.31	0.25	1.20	0.90	0.05
PLL 4-M5M	4	M5	0.14	0.98	0.85	0.33	0.43	0.59	0.31	0.30	2.40	3.00	0.16
PLL 4-M6M	4	M6	0.18	1.02	0.85	0.33	0.43	0.59	0.31	0.30	2.50	3.70	0.20
PLL 4-01M	4	R1/8	0.31	1.12	0.87	0.33	0.43	0.59	0.39	0.46	4.00	4.20	0.23
PLL 6-M5M	6	M5	0.14	1.02	0.89	0.43	0.45	0.63	0.31	0.32	2.40	3.30	0.18
PLL 6-M6M	6	M6	0.18	1.06	0.89	0.43	0.45	0.63	0.31	0.32	2.50	3.70	0.20
PLL 6-01M	6	R1/8	0.31	1.16	1.00	0.43	0.45	0.63	0.39	0.49	4.00	7.60	0.41
PLL 1/8-M3M	1/8	M3	0.12	0.91	0.79	0.33	0.43	0.59	0.31	0.25	1.20	0.90	0.05
PLL 1/8-M5M	1/8	M5	0.14	0.98	0.85	0.33	0.43	0.59	0.31	0.30	2.40	2.50	0.14

Unit : inch

Model	Tube dia. φD	NPT	A	B	L	ΦP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PLL 1/8-U10MU	1/8	10-32UNF	0.14	0.98	0.85	0.31	0.43	0.61	5/16	0.28	2.40	2.50	0.14
PLL 1/8-N1MU	1/8	1/8	0.31	1.12	0.96	0.31	0.43	0.61	7/16	0.56	2.50	4.20	0.23
PLL 5/32-U10MU	5/32	10-32UNF	0.14	0.98	0.85	0.31	0.43	0.61	5/16	0.28	2.50	3.00	0.16
PLL 5/32-N1MU	5/32	1/8	0.31	1.12	0.96	0.31	0.43	0.61	7/16	0.56	2.50	4.20	0.23

**PV**  
MINI TYPE

Union Elbow

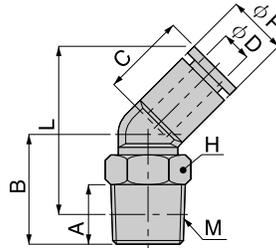


Unit : inch

Model	Tube dia. φD(mm)	φP	C	E	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PV 3M	3	0.24	0.37	0.43	0.18	0.05	2.00	2.30	0.12
PV 4M	4	0.31	0.43	0.51	0.22	0.07	3.00	4.80	0.26
PV 6M	6	0.41	0.45	0.59	0.26	0.14	4.00	9.00	0.49
PV 1/8M	1/8	0.31	0.43	0.51	0.22	0.07	3.00	2.10	0.11
PV 5/32M	5/32	0.31	0.43	0.53	0.22	0.08	2.50	4.80	0.26

**PLH**  
MINI TYPE

45-degree Elbow

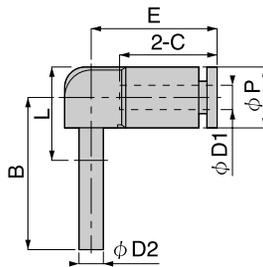


Unit : inch

Model	Tube dia. φD(mm)	M	A	B	L	φP	C	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PLH 4-M5M	4	M5	0.14	0.49	0.35	0.31	0.43	0.31	0.11	2.40	2.90	0.16
PLH 4-M6M	4	M6	0.18	0.53	0.35	0.31	0.43	0.31	0.12	2.50	4.00	0.22
PLH 4-01M	4	R1/8	0.31	0.59	0.43	0.31	0.43	0.39	0.21	3.00	5.00	0.27
PLH 6-M5M	6	M5	0.14	0.55	0.41	0.41	0.45	0.31	0.14	2.40	3.60	0.20
PLH 6-M6M	6	M6	0.18	0.59	0.41	0.41	0.45	0.31	0.14	2.50	3.80	0.21
PLH 6-01M	6	R1/8	0.31	0.65	0.49	0.41	0.45	0.39	0.23	4.00	8.70	0.47

**PLJ**  
MINI TYPE

Socket Elbow



Unit : inch

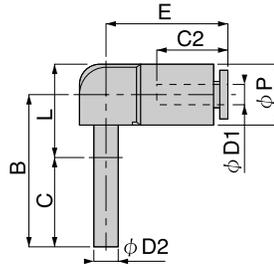
Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	B	φP	C1	C2	E	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PLJ 3M	3	3	0.83	0.28	0.37	0.37	0.51	0.04	1.50	1.20	0.07
PLJ 4M	4	4	0.98	0.31	0.43	0.43	0.59	0.07	2.50	3.20	0.17
PLJ 6M	6	6	1.16	0.41	0.45	0.45	0.65	0.11	3.00	5.10	0.28

Unit : inch

Model	Tube dia. φD1	Tube dia. φD2	B	φP	C1	C2	E	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PLJ 1/8M	1/8	1/8	0.59	0.31	0.43	0.43	0.98	0.06	1.50	3.20	0.17
PLJ 5/32M	5/32	5/32	0.59	0.31	0.43	0.43	0.98	0.06	2.50	3.20	0.17

**PLGJ**  
MINI TYPE

Different Diam. Socket Elbow

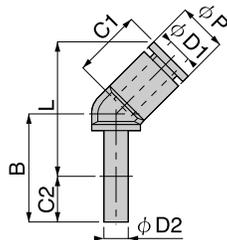


Unit : inch

Model	Tube dia. $\phi$ D1 (mm)	Tube dia. $\phi$ D2 (mm)	B	$\phi$ P	C1	C2	E	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm2	CV
PLGJ 4-3M	3	4	0.98	0.33	0.43	0.43	0.59	0.07	2.50	2.30	0.12
PLGJ 6-3M	3	6	1.16	0.41	0.43	0.45	0.63	0.11	2.50	2.40	0.13
PLGJ 6-4M	4	6	1.16	0.41	0.43	0.45	0.63	0.11	3.00	4.20	0.23
PLGJ 4-1/8M	1/8	4	0.98	0.33	0.43	0.43	0.59	0.07	2.50	2.30	0.12
PLGJ 6-1/8M	1/8	6	1.16	0.41	0.43	0.45	0.63	0.11	3.00	4.20	0.23
PLGJ 5/32-1/8M	5/32	1/8	0.59	0.33	0.43	0.43	0.98	0.06	2.50	2.30	0.12

**PLHJ**  
MINI TYPE

45-degree Socket Elbow

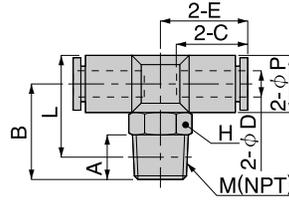


Unit : inch

Model	Tube dia. $\phi$ D1 (mm)	Tube dia. $\phi$ D2 (mm)	B	$\phi$ P	C1	C2	Weight (OZ)	Orifice $\phi$ MM	Eff.a. mm2	CV
PLHJ 4M	4	4	1.00	0.31	0.43	0.43	0.07	2.50	3.20	0.17
PLHJ 6M	6	6	1.14	0.41	0.45	0.45	0.11	4.00	5.10	0.28

**PB**  
MINI TYPE

Tee



Unit : inch

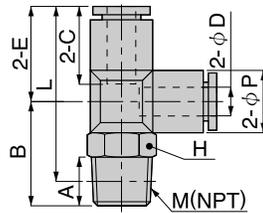
Model	Tube dia. φD(mm)	M	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PB 3-M3M	3	M3	0.12	0.47	0.35	0.26	0.37	0.43	0.22	0.07	1.20	0.70	0.04
PB 3-M5M	3	M5	0.14	0.53	0.39	0.26	0.37	0.43	0.31	0.16	1.20	2.20	0.12
PB 3-M6M	3	M6	0.18	0.57	0.39	0.26	0.37	0.43	0.31	0.16	1.20	2.00	0.11
PB 4-M3M	4	M3	0.12	0.59	0.47	0.33	0.43	0.53	0.31	0.14	1.20	0.90	0.05
PB 4-M5M	4	M5	0.14	0.57	0.43	0.33	0.43	0.51	0.31	0.18	2.40	2.10	0.11
PB 4-M6M	4	M6	0.18	0.61	0.43	0.33	0.43	0.51	0.31	0.18	2.50	2.20	0.12
PB 4-01M	4	R1/8	0.31	0.67	0.51	0.33	0.43	0.51	0.39	0.25	3.00	4.50	0.24
PB 6-M5M	6	M5	0.14	0.61	0.47	0.43	0.45	0.59	0.31	0.21	2.40	2.20	0.12
PB 6-M6M	6	M6	0.18	0.65	0.47	0.43	0.45	0.59	0.31	0.21	2.50	3.30	0.18
PB 6-01M	6	R1/8	0.31	0.71	0.55	0.43	0.45	0.59	0.39	0.30	3.00	8.90	0.48
PB 1/8-M3M	1/8	M3	0.12	0.59	0.47	0.33	0.43	0.53	0.31	0.14	1.20	0.90	0.05
PB 1/8-M5M	1/8	M5	0.14	0.57	0.43	0.33	0.43	0.51	0.31	0.18	2.40	2.40	0.13
PB 1/8-M6M	1/8	M6	0.18	0.61	0.43	0.33	0.43	0.51	0.31	0.18	2.50	2.00	0.11
PB 1/8-01M	1/8	R1/8	0.31	0.67	0.51	0.33	0.43	0.51	0.39	0.26	3.00	2.50	0.14

Unit : inch

Model	Tube dia. φD	NPT	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PB 1/8-U10MU	1/8	10-32UNF	0.14	0.57	0.43	0.31	0.43	0.53	5/16	0.15	2.40	2.10	0.11
PB 1/8-N1MU	1/8	1/8	0.31	0.67	0.51	0.31	0.43	0.53	7/16	0.29	2.50	2.30	0.12
PB 5/32-U10MU	5/32	10-32UNF	0.14	0.57	0.43	0.31	0.43	0.53	5/16	0.15	2.40	3.70	0.20
PB 5/32-N1MU	5/32	1/8	0.31	0.67	0.51	0.31	0.43	0.53	7/16	0.28	2.50	4.60	0.25

**PD**  
MINI TYPE

Branch Tee



Unit : inch

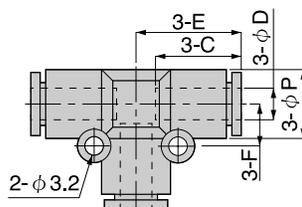
Model	Tube dia. φD(mm)	M	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PD 3-M3M	3	M3	0.12	0.47	0.35	0.26	0.37	0.43	0.22	0.02	1.20	0.70	0.04
PD 3-M5M	3	M5	0.14	0.53	0.39	0.26	0.37	0.43	0.31	0.02	1.20	2.20	0.12
PD 3-M6M	3	M6	0.18	0.57	0.39	0.26	0.37	0.43	0.31	0.02	1.20	2.00	0.11
PD 4-M3M	4	M3	0.12	0.59	0.47	0.33	0.43	0.53	0.31	0.02	1.20	0.90	0.05
PD 4-M5M	4	M5	0.14	0.57	0.43	0.33	0.43	0.51	0.31	0.02	2.40	2.10	0.11
PD 4-M6M	4	M6	0.18	0.61	0.43	0.33	0.43	0.51	0.31	0.02	2.50	2.20	0.12
PD 4-01M	4	R1/8	0.31	0.67	0.51	0.33	0.43	0.51	0.39	0.02	3.00	4.50	0.24
PD 6-M5M	6	M5	0.14	0.61	0.47	0.43	0.45	0.59	0.31	0.02	2.40	2.20	0.12
PD 6-M6M	6	M6	0.18	0.65	0.47	0.43	0.45	0.59	0.31	0.02	2.50	3.30	0.18
PD 6-01M	6	R1/8	0.31	0.71	0.55	0.43	0.45	0.59	0.39	0.02	3.00	8.90	0.48
PD 1/8-M3M	1/8	M3	0.12	0.59	0.47	0.33	0.43	0.53	0.31	0.02	1.20	0.90	0.05
PD 1/8-M5M	1/8	M5	0.14	0.57	0.43	0.33	0.43	0.51	0.31	0.02	2.40	2.40	0.13
PD 1/8-M6M	1/8	M6	0.18	0.61	0.43	0.33	0.43	0.51	0.31	0.02	2.50	2.00	0.11
PD 1/8-01M	1/8	R1/8	0.31	0.67	0.51	0.33	0.43	0.51	0.39	0.02	3.00	2.50	0.14

Unit : inch

Model	Tube dia. φD	NPT	A	B	L	φP	C	E	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PD 1/8-U10MU	1/8	10-32UNF	0.14	0.57	0.43	0.31	0.43	0.51	5/16	0.15	2.40	2.40	0.13
PD 1/8-N1MU	1/8	1/8	0.31	0.67	0.51	0.31	0.43	0.51	7/16	0.29	2.50	2.50	0.14
PD 5/32-U10MU	5/32	10-32UNF	0.14	0.57	0.43	0.31	0.43	0.51	5/16	0.15	2.40	2.10	0.11
PD 5/32-N1MU	5/32	1/8	0.31	0.67	0.51	0.31	0.43	0.51	7/16	0.28	2.50	4.50	0.24

**PE**  
MINI TYPE

Union Tee

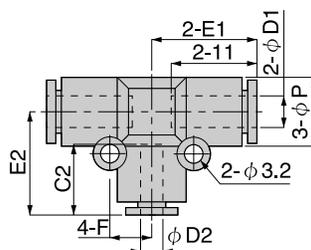


Unit : inch

Model	Tube dia. φD(mm)	φP	C	E	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PE 3M	3	0.24	0.37	0.43	0.18	0.07	2.00	1.90	0.10
PE 4M	4	0.31	0.43	0.51	0.22	0.07	3.00	4.60	0.25
PE 6M	6	0.41	0.45	0.59	0.26	0.14	4.00	8.90	0.48
PE1/8M	1/8	0.31	0.43	0.51	0.22	0.07	3.00	2.10	0.11
PE 5/32M	5/32	0.31	0.43	0.53	0.22	0.12	2.50	4.60	0.25

**PEG**  
MINI TYPE

Different Diam. Union Tee

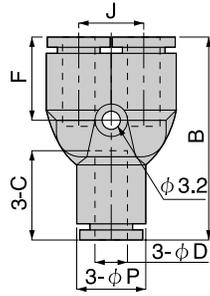


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	φP	C1	C2	E1	E2	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PEG 4-3M	4	3	0.31	0.43	0.43	0.51	0.51	0.22	0.12	2.50	2.40	0.13
PEG 6-4M	6	4	0.41	0.45	0.43	0.59	0.57	0.26	0.14	3.00	5.30	0.29
PEG 4-1/8M	4	1/8	0.31	0.43	0.43	0.51	0.51	0.22	0.12	2.50	2.30	0.12
PEG 5/32-1/8M	5/32	1/8	0.31	0.43	0.43	0.51	0.51	0.11	0.12	2.50	2.30	0.12

**PY**  
MINI TYPE

Union Y

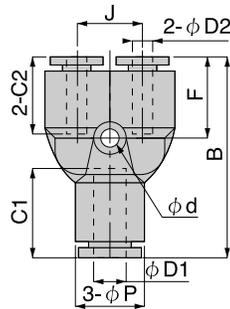


Unit : inch

Model	Tube dia. φD(mm)	B	φP	C	J	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PY 3M	3	1.10	0.31	0.37	0.31	0.51	0.11	2.00	2.00	0.11
PY 4M	4	1.08	0.31	0.43	0.31	0.49	0.11	2.00	2.30	0.12
PY 6M	6	1.22	0.41	0.45	0.41	0.55	0.19	3.00	6.80	0.37
PY1/8M	1/8	1.08	0.31	0.43	0.31	0.49	0.11	2.50	1.10	0.06
PY 5/32M	5/32	1.14	0.31	0.43	0.31	0.51	0.12	3.00	2.30	0.12

**PW**  
MINI TYPE

Different Diam. Union Y

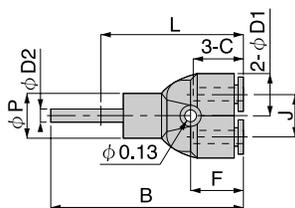


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	B	φP	C1	C2	J	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PW 4-3M	4	3	1.08	0.31	0.43	0.37	0.31	0.49	0.11	1.50	2.10	0.11
PW 6-3M	6	3	1.20	0.41	0.45	0.43	0.41	0.53	0.19	2.50	2.50	0.14
PW 6-4M	6	4	1.20	0.41	0.45	0.43	0.41	0.53	0.18	3.00	6.20	0.34
PW 1/8-3M	1/8	3	1.08	0.31	0.43	0.37	0.31	0.49	0.11	1.50	1.70	0.09
PW 4-1/8M	4	1/8	1.08	0.31	0.43	0.43	0.31	0.49	0.11	2.50	1.80	0.10
PW 6-1/8M	6	1/8	1.20	0.41	0.45	0.43	0.41	0.53	0.18	3.00	2.40	0.13
PW 5/32-1/8M	5/32	1/8	1.14	0.31	0.43	0.43	0.31	0.51	0.12	3.00	1.80	0.10

**PYJ**  
MINI TYPE

Branch Union Y

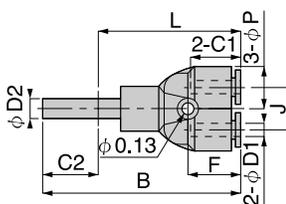


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	B	φP	C1	C2	J	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PYJ 3M	3	3	1.71	0.31	0.37	0.37	0.31	0.51	0.11	1.50	0.80	0.04
PYJ 3M	4	4	1.77	0.31	0.43	0.43	0.31	0.49	0.12	2.00	2.20	0.12
PYJ 4M	6	6	1.99	0.41	0.45	0.45	0.41	0.55	0.19	3.00	5.60	0.30
PYJ 5/32M	5/32	5/32	1.77	0.31	0.43	0.43	0.31	0.51	0.11	2.50	2.20	0.12

**PWJ**  
MINI TYPE

Different Diam.Branch Union Y

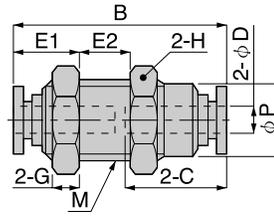


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	B	φP	C1	C2	J	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PWJ 4-3M	4	3	1.73	0.31	0.43	0.37	0.31	0.49	0.11	2.50	2.60	0.14
PWJ 6-3M	6	3	1.97	0.41	0.45	0.43	0.41	0.53	0.18	2.50	4.50	0.24
PWJ 6-4M	6	4	1.97	0.41	0.45	0.43	0.41	0.53	0.18	3.00	5.30	0.29
PWJ 4-1/8M	4	1/8	1.73	0.31	0.43	0.43	0.31	0.49	0.11	2.50	1.70	0.09
PWJ 6-1/8M	6	1/8	1.97	0.41	0.45	0.43	0.41	0.53	0.18	3.00	2.30	0.12

**PM**  
MINI TYPE

Bulkhead Union



Unit : inch

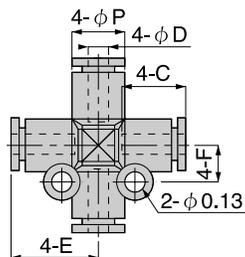
Model	Tube dia. φD(mm)	M	B	φP	C	E1	E2	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PM 3M	3	M8	0.75	0.28	0.37	0.28	0.30	0.39	0.11	2.00	2.40	0.13
PM 4M	4	M10	0.91	0.35	0.43	0.35	0.30	0.47	0.21	3.00	3.70	0.20
PM 6M	6	M12	0.96	0.43	0.45	0.41	0.24	0.55	0.32	4.00	10.50	0.57

Unit : inch

Model	Tube dia. φD	UNF	B	φP	C1	E1	E2	H	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PM 1/8MU	1/8	7/16-20	0.91	0.35	0.43	0.35	0.30	1/2	0.23	3.00	3.70	0.20
PM 5/32MU	5/32	7/16-20	0.91	0.35	0.43	0.35	0.30	1/2	0.23	3.00	3.70	0.20

**PZA**  
MINI TYPE

Cross A

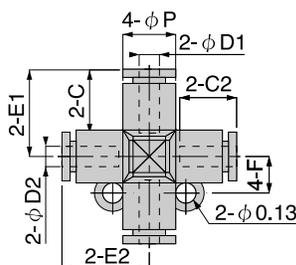


Unit : inch

Model	Tube dia. φD(mm)	φP	C	E	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PZA 3M	3	0.31	0.43	0.51	0.14	2.00	2.20	0.12
PZA 4M	4	0.31	0.43	0.53	0.14	3.00	4.80	0.26
PZA 6M	6	0.41	0.45	0.59	0.18	4.00	8.80	0.48
PZA1/8M	1/8	0.31	0.43	0.51	0.14	3.00	4.80	0.26
PZA 5/32M	5/32	0.31	0.43	0.53	0.15	3.00	4.80	0.26

**PZB**  
MINI TYPE

Cross B

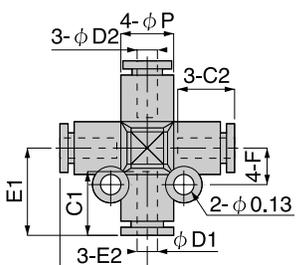


Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	φP	C1	C2	E1	E2	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PZB 4-3M	4	3	0.31	0.43	0.43	0.51	0.51	0.22	0.14	2.00	2.20	0.12
PZB 6-4M	6	4	0.41	0.45	0.43	0.59	0.57	0.26	0.23	3.00	5.30	0.29
PZB 1/8-3M	1/8	3	0.31	0.43	0.43	0.51	0.51	0.22	0.16	2.00	2.20	0.12
PZB 4-1/8M	4	1/8	0.31	0.43	0.43	0.51	0.51	0.22	0.14	3.00	4.80	0.26
PZB 6-1/8M	6	1/8	0.41	0.45	0.43	0.59	0.57	0.26	0.23	3.00	5.30	0.29

**PZC**  
MINI TYPE

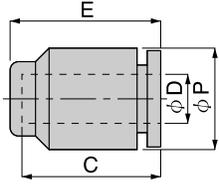
Cross C



Unit : inch

Model	Tube dia. φD1(mm)	Tube dia. φD2(mm)	φP	C1	C2	E1	E2	F	Weight (OZ)	Orifice φMM	Eff.a. mm2	CV
PZC 4-3M	4	3	0.31	0.43	0.43	0.51	0.51	0.22	0.14	2.00	2.00	0.11
PZC 6-4M	6	4	0.41	0.45	0.43	0.59	0.57	0.26	0.23	3.00	4.90	0.27
PZC 1/8-3M	1/8	3	0.31	0.43	0.43	0.51	0.51	0.22	0.16	2.00	1.90	0.10
PZC 4-1/8M	4	1/8	0.31	0.43	0.43	0.51	0.51	0.22	0.16	3.00	2.40	0.13
PZC 6-1/8M	6	1/8	0.41	0.45	0.43	0.59	0.57	0.26	0.23	3.00	2.40	0.13

**PPF**  
MINI TYPE Cap

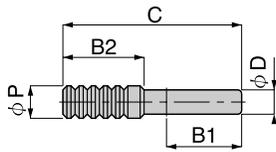


Unit : inch

Model	Tube dia. φD(mm)	φP	C	E	Weight (OZ)
PPF 3M	3	0.41	0.24	0.37	0.02



**PP**  
MINI TYPE Plug



Unit : Inch

Model	Tube dia. φD(mm)	B1	B2	φP	C	Weight (OZ)
PP 3M	3	0.37	0.39	0.16	0.87	0.02



Unit : inch

Model	Tube dia. φD	B1	B2	φP	C	Weight (OZ)
PP 1/8M	0.12	0.37	0.39	0.16	0.87	0.01