

# Ultra Small Push-In Fitting Type for Pneumatic Piping Tube Fitting Mini Series

- Ultra Small Push-In Fitting for General Pneumatic Piping.
  - 40% Miniaturized compared to Standard Type.



- Easy Tube Release with Oval Release-Ring.
- Ø 1.8 Tube Size. The Industry's First Smallest Push-In Fitting. Suitable for Small Actuator Piping



Miniature cylinder



Miniature Gripper

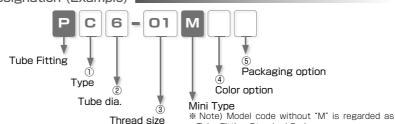


Miniature Solenoid Valve

Optional Selection of Body Color (light-gray) and Clean-Room Package.

Fluorine-based grease is used on O-ring for clean-room package. Products are packed in a clean room equivalent to ISO class 6.

# ■ Model Designation (Example)



# Type

Code	Туре	Code	Туре	Code	Туре	Code	Туре
С	Straight	ОС	Inner Hex. Straight	CC	Cartridge	L	Elbow
LL	Long Elbow	LH	45° Elbow	В	Branch Tee	D	Run Tee
OL	Hex. Holed Banjo	OLL	Hex. Holed Long Banjo	U	Union Straight	G	Unequal Union Straight
V	Union Elbow	E	Union Tee	EG	Unequal Union Tee	Υ	Union Y
W	Unequal Union Y	М	Bulkhead Union	ZA	Cross A	ZB	Cross B
ZC	Cross C	GJ	Unequal Plug-in Straight	LJ	Plug-in Elbow	LGJ	Unequal Plug-in Elbow
LHJ	45° Plug-in Elbow	۲J	Plug-in Y	WJ	Unequal Plug-in Y	CF	Female Straight
F	Extension Screw Adaptor	IJ	Union Stem	PF	Cap	Р	Plug

Tube Fitting Standard Series.

# ② Tube dia. (\* In case that ② indicates thread size, select thread size from table ③)

Tube dia.		mm	size			inch	size	
Code	180	3	4	6	1/8	5/32	3/16	1/4
Size (mm)	ø1.8	ø3	ø4	ø6	ø3.2	ø3.97	ø4.76	ø6.35

### 3 Thread size (\* In case that 3 indicates tube dia., select tube dia. from table 2)

Thread size	Met	tric thread (r	thread (mm)		per pipe thre	Cartridge size (mm)		
Code	МЗ	M5	M6	01	02	03	M6	M8
Size	M3 × 0.5	M5 × 0.8	M6 × 1	R1/8	R1/4	R3/8	M6 × 0.75	M8 × 0.75

Thread size	UNF thread (mm)	NPT thread
Code	U10U	N1U
Size	10-32UNF	NPT1/8

<sup>\*</sup> The unit of wrench size is inch (the code suffix is "U").

# 4 Color option 5 Packaging option

	4 : Colo	r option	⑤: Packaging option			
Code	No code	W	No code	С		
Specification	Standard spec.	Light-gray spec.	Standard package	Clean-room package		
Release-ring color	Black	Light-gray	④ : Selected color	Light-blue ( * 1)		
Resin body color	Black	Light-gray	④ : Selected color	Light-blue		

<sup>\* 1.</sup> When "W" is selected on 4 Color option, body color is light-gray.





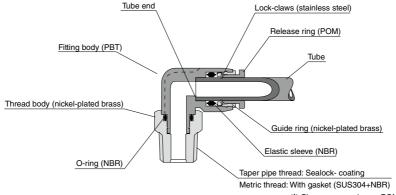


<sup>\* 2.</sup> Release-ring color is white for inch-size products.

Specifications

Fluid medium	Air
Max. operating pressure	1.0MPa
Max. vacuum	-100kPa
Operating temp. range	0 ~ 60°C (No freezing)

# ■ Construction (Elbow: PL)



※ Clean-room package: POM gasket

\* M3 Thread: Thread body is nickel-plated free-cutting steel. ø1.8 fitting: Thread body is special stainless steel equivalent to SUS303.

# ⚠ Detailed Safety Instructions

Before using PISCO products, be sure to read "Safety Instructions" and "Safety Instruction Manual" on page 23 to 27 and "Common Safety Instructions for Fittings" on page 33 to 35.

# Caution (Clean-room package)

1.As for Push-In Fitting, the functional part where tube is inserted may slightly slide due to an internal pressure change and this may generate dusts. Avoid using the fitting in the clean room of ISO class from 1 to 5. Under the vibrating condition, check the amount of dust generated from the fitting and tubes by using actual facilities.

# ■ Standard Size List

# Connection: Thread ⇔ Tube

Time	Dogo	Thunsd size			Τι	ibe O	.D.			Time	Do a
Type	rage	Thread size	1.8	3	4	6	1/8	5/32	1/4	Туре	Pag
PC Straight	P.90	M3 × 0.5	•	•	•		•	•		45° Elbow	P.9
		M5 × 0.8	•	•	•	•	•	•			
		M6 × 1		•	•	•	•	•			
		R1/8		•	•	•	•	•			
		R1/4			•	•		•			
		R3/8				•				PB Branch Tee	P.9
POC Inner Hex. Straight		M3 × 0.5	•	•	•		•	•			
		M5 × 0.8		•	•	•	•	•			
		M6 × 1		•	•	•	•				
		R1/8			•	•		•			
<b>PCC</b> Cartridge	P.91	M6 × 0.75		•	•		•				
		M8 × 0.75			•	•				PD Run Tee	P.10
PL Elbow		M3 × 0.5	•	•	•		•	•			
		M5 × 0.8	•	•	•	•	•	•			
		M6 × 1		•	•	•	•	•	•		
		R1/8		•	•	•	•	•	•		
		R1/4			•	•		•			
		R3/8				•				POL Hex. Holed Banjo	
PLL Long Elbow		M3 × 0.5	•	•	•		•	•		POLL Hex. Holed Long Banjo	
		M5 × 0.8	•	•	•	•	•	•	•	PCF Female Straight	P.9
		M6 × 1		•	•	•	•	•	•		
		R1/8			•				•		

-	_				Tu	be O	D.		
Type	Page	Thread size	1.8	3	4	6	1/8	5/32	1/4
PLH 45° Elbow	P.95	M3 × 0.5		•	•				
		M5 × 0.8		•	•	•			
		M6 × 1			•	•			
		R1/8			•	•			
		R1/4				•			
PB Branch Tee	P.99	$M3 \times 0.5$	•	•	•		•	•	
		M5 × 0.8	•	•	•	•	•	•	•
		M6 × 1		•	•	•	•	•	•
		R1/8		•	•	•	•	•	•
		R1/4			•	•		•	
		R3/8				•			
PD Run Tee	P.100	$M3 \times 0.5$	•	•	•		•	•	
		M5 × 0.8	•	•	•	•	•	•	•
		M6 × 1		•	•	•	•	•	•
		R1/8		•	•	•	•	•	•
		R1/4			•	•		•	
		R3/8				•			
POL Hex. Holed Banjo		$M5 \times 0.8$		•	•	•	•	•	
POLL Hex. Holed Long Banjo		M5 × 0.8		•	•	•	•	•	
PCF Female Straight	P.92	$M3 \times 0.5$		•	•		•	•	
		M5 × 0.8		•			•	•	

# Connection: Tube ⇔ Tube (Equal dia.)

T	D			Tube O.D		
Type	Page	1.8	3	4	6	1/8
PU Union Straight	P.92	•	•	•	•	•
PV Union Elbow	P.95	•	•	•	•	•
PE Union Tee	P.101	•	•	•	•	•

Type	Dogo			Tube O.D		
туре	Page	1.8	3	4	6	1/8
PY Union Y	P.102		•	•	•	•
PM Bulkhead Union	P.105		•	•	•	•
PZA Cross A	P.104		•	•	•	•

# Connection: Tube ⇔ Tube (Unequal dia.)

Type	Paga	Tube O.D.1	Tube O.D.2						
туре	raye	(mm)	1.8	3	4	6	5/32	1/8	1/4
PG Unequal Union Straight	P.92	3	•						
		4	•	•				•	
		6		•	•			•	
		1/4						•	
PEG Unequal Union Tee	P.101	3	•		•				
		4		•		•		•	
		6			•				
		1/8					•		
		5/32							•

Time	Dogo	Tube O.D.1			
Type	Page	(mm)	3	4	1/8
PW Unequal Union Y	P.102	4	•		•
		6		•	•
		1/8	•		
		1/4			•
PZE Cross B	P.104	4	•		•
		6		•	•
		1/8	•		
PZC Cross C	P.105	4	•		•
		6		•	•
		1/8	•		

# Connection: Tube ⇔ Fitting

Type	Page	Tube dia.				Tube	O.D			
		(mm)	1.8	3	4	6	1/8	5/32	3/16	1/4
PGJ Unequal Plug-in Straight	P.98	3					•			
		4								
		6		•			•			•
		1/8								i
		5/32					•			
		3/16		•			•	•		•
		1/4				•	•			
PLJ Plug-in Elbow	P.97	3		•						
		4								
		6								
		1/8					•			
		5/32						•		
		3/16								
		1/4								

Time	Dogo	Tube dia.				Tube	O.D			
Type	Page	(mm)	1.8	3	4	6	1/8	5/32	3/16	1/4
PLGJ Unequal Plug-in Elbow	P.97	3				•	•			
		4					•			
		6					•			
		1/8								
		5/32			•		•			•
		3/16					•			
		1/4				•	•			
PLHJ 45° Plug-in Elbow	P.98	4			•					
		6				•				
PYJ Plug-in Y	P.103	3		•						
		4								
		6				•				
		1/8					•			
PWJ Unequal Plug-in Y	P.103	4					•			
		6					•			

07

Standard Series Mini Series

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Block and

Coupling

Connection: Thread ⇔ Thread

Time	Dogo	Thungal sized	Thread size 2(Inner thread)
Type	rage	Thread size1	M3 × 0.5
PE Extension Screw Adaptor	P.106	$M5 \times 0.8$	•
		R1/8	•

		Plug	
_		Tube O.E	D.(mm)
Type	Page	1.8	3
PPF Cap	P.107		•
PP Plug	P.107	•	•

# Connection: Fitting ⇔ Fitting

T	D		
lype	Page	3	1/8
PIJ Union Stem	P.106	•	•

# How to insert and disconnect

### 1. How to insert and disconnect tubes

### ① Tube insertion

Insert a tube into Push-In Fitting up to the tube end. Lock-claws bite the tube and fix it automatically, then the elastic sleeve seals around the tube.

Refer to "2. Instructions for Tube Insertion" under "Common Safety Instructions for Fittings".



### 2 Tube disconnection

The tube is disconnected by pushing release-ring to release Lock-claws. Make sure to stop air supply before the tube disconnection.



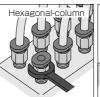
### 2. How to tighten thread

### ① Tightening thread

There are two ways to tighten a thread. Use a spanner or an impact wrench for a hexagonal-column. A hex key is for an inner hexagonal socket. Inner hexagonal type can save spaces.

Refer to "Table 2: Recommended tightening torque / Sealock color / Gasket materials" under "4. Instructions for Installing a fitting" in "Common Safety Instructions for Fittings".

Note) The recommended torque force of the model code "POC180-M3M" is 0.3N·m





# ■ Release-ring dimension

The release-ring shape of Tube Fitting Mini Series is oval as the right picture shows in order to push it easily when removing tubes.

Check the dimension of release-ring in the catalog.

The release-ring of tube size Ø1.8 is a round shape.



# Applicable Tube and Related Products

Polyurethane Tube .......... P.596

Nylon Tube ......P.608

Fluororesin Tube with clean-room package ------P.638

Polyurethane Tune with clean-room package .........P.642



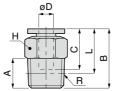


OP. SP CAD













Metric thread type

øD: 3, 4, 6,1/8, 5/32 øD: 1.8

Unit: mm

											,	J
Model code	Tube O.D. øD	R	А	В	L	Tube end C	Hex. H	X (øX)	Υ	Effective area (mm²)	Weight (g)	CAD file name
PC180-M3M 4 5	4.0	M3×0.5	2.5 [2.2]	12.1	9.6 [9.9]	0.4	5			0.7	1	PC180-M3M(#5)
PC180-M5M 4 5	1.8	M5×0.8	3 [3.2]	11.8	8.8 [8.6]	8.4	7	4.8	_	0.8	2.3	PC180-M5M(±5)
PC3-M3M45		M3×0.5	2.5 [2.2]	13.1	10.6 [10.9]	9.4	5.5	7	6	0.7	1.1	PC3-M3M(%5)
PC3-M5M46	3	M5×0.8	3 [3.2]	15.6	12.6 [12.4]		8			3	3.4	PC3-M5M(¥5)
PC3-M6M 4 5	3	M6 × 1	3.9	16.6	12.7	10.9	0	9.8	7.8	3	3.7	PC3-M6M
PC3-01M 4 5		R1/8	8	15.6	11.6		10			2.9	6.7	PC3-01M
PC4-M3M 4 5		M3×0.5	2.5 [2.2]	15.1	12.6 [12.9]					0.9	2.4	PC4-M3M(¥5)
PC4-M5M 4 5		$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]		8			3.8	3.2	PC4-M5M(%5)
PC4-M6M 4 5	4	$M6 \times 1$	3.9	16.6	12.7	10.9		9.8	7.8	6.3	3.6	PC4-M6M
PC4-01M 4 5		R1/8	8	15.6	11.6		10			6.4	6.6	PC4-01M
PC4-02M 4 5		R1/4	11	17.3	11.3		14			6.1	14	PC4-02M
PC6-M5M45		M5×0.8	3 [3.2]	17	14 [13.8]					3.6	4.5	PC6-M5M(%5)
PC6-M6M45		M6 × 1	3.9	18	14.1		10			6.3	4.8	PC6-M6M
PC6-01M 4 5	6	R1/8	8	17.6	13.6	11.7		11.8	9.8	0.5	6	PC6-01M
PC6-02M45		R1/4	11	17.0	11.6		14			10.6	13	PC6-02M
PC6-03M 4 5		R3/8	12	19.6	13.3		17			10.0	26	PC6-03M
PC1/8-M3M 4 5		M3×0.5	2.5 [2.2]	15.1	12.6 [12.9]					0.9	2.5	PC1'8-M3M(%5)
PC1/8-M5M 4 5	1/8	$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]	10.9	8	9.8	7.8	2.6	3.5	PC1'8-M5M(**5)
PC1/8-M6M 4 5	1/0	M6 × 1	3.9	16.6	12.7	10.5		3.0	7.0	2.9	3.6	PC1'8-M6M
PC1/8-01M 4 5		R1/8	8	15.6	11.6		10			2.7	6.6	PC1'8-01M
PC5/32-M3M 4 5		M3×0.5	2.5 [2.2]	15.1	12.6 [12.9]					0.9	2.4	PC5'32-M3M(%5)
PC5/32-M5M 4 5		$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]		8			3.8	3.2	PC5'32-M5M(%5)
PC5/32-M6M 4 5	5/32	M6 × 1	3.9	16.6	12.7	10.9		9.8	7.8	3.9	3.6	PC5'32-M6M
PC5/32-01M 4 5		R1/8	8	15.6	11.6		10			4.3	6.6	PC5'32-01M
PC5/32-02M 4 5		R1/4	11	17.3	11.3		14			6.1	15	PC5'32-02M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. "L" is a reference value for height dimension after tightening taper thread.
- \* 4. Dimensions in [] are for clean-room package products
- \* 5. Visit PISCO website for CAD data of clean-room package products.

Mini Series

# POC Inner Hex. Straight of

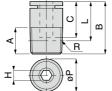




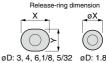
CAD











Unit: mm

Model code	Tube O.D. øD	R	А	В	L	Tube end C	Hex. H	øΡ	X (øX)	Υ	Effective area (mm²)	Weight (g)	CAD file name
POC180-M3M 4 5	1.8	M3×0.5	2.5 [2.2]	12.1	9.6 [9.9]	8.4	1.3	5	4.8	-	0.7	0.9	POC180-M3M(#5)
POC3-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	15.1	12.6 [12.9]	10.9	1.5				1.9	2.3	POC3-M3M(**5)
POC3-M5M 4 5	3	M5×0.8	3 [3.2]	15.6	12.6 [12.4]	10.9	2	8	9.8	7.8	2.8	3.2	POC3-M5M(**5)
POC3-M6M 4 5		$M6 \times 1$	3.9	18.2	14.3	12.5	۷				3	3.5	POC3-M6M
POC4-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	15.1	12.6 [12.9]		1.5				1.8	2.2	POC4-M3M(**5)
POC4-M5M 4 5	4	$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]	10.9	2.5	8	9.8	7.8	5.1	3	POC4-M5M( ** 5)
POC4-M6M 4 5	4	$M6 \times 1$	3.9	16.6	12.7	10.9	3		9.0	7.0	7	3.3	POC4-M6M
POC4-01M 4 5		R1/8	8	15.8	11.8		3	10			7.4	6.2	POC4-01M
POC6-M5M 4 5		M5×0.8	3 [3.2]	17.5	14.5 [14.3]		2.5	9.8			5.2	4.4	POC6-M5M(**5)
POC6-M6M 4 5	6	$M6 \times 1$	3.9	18	14.1	11.7	3	9.0	11.8	9.8	7.1	4.7	POC6-M6M
POC6-01M 4 5		R1/8	8	17.9	13.9		4	10			13	5.6	POC6-01M
POC1/8-M3M 4 5		$M3\!\times\!0.5$	2.5 [2.2]	15.1	12.6 [12.9]		1.5				1.8	2.3	POC1'8-M3M(#5)
POC1/8-M5M 4 5	1/8	$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]	10.9	2	8	9.8	7.8	3.3	3	POC1'8-M5M(#5)
POC1/8-M6M 4 5		$M6 \times 1$	3.9	16.6	12.7						3.1	3.6	POC1'8-M6M
POC5/32-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	15.1	12.6 [12.9]		1.5				1.8	2.2	POC5'32-M3M(%5)
POC5/32-M5M 4 5	5/32	$M5 \times 0.8$	3 [3.2]	15.6	12.6 [12.4]	10.9	2.5	8	9.8	7.8	5.1	3	POC5'32-M5M(%5)
POC5/32-M6M 4 5	3/32	$M6 \times 1$	3.9	16.6	12.7	10.5	3		3.0	7.0	7	3.3	POC5'32-M6M
POC5/32-01M 4 5		R1/8	8	15.8	11.8		3	10			7.4	6.2	POC5'32-01M
POC1/4-M5M 4 5	1/4	$M5 \times 0.8$	3 [3.2]	17.1	14.1 [13.9]	11.4	2.5	9.8	11.8	9.8	4.8	3.8	POC1'4-M5M(#5)
POC1/4-M6M (4)(5)	1/4	$M6 \times 1$	4	17.7	13.7	11.4	3	5.0	11.0	5.0	7.3	4.1	POC1'4-M6M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \*2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. "L" is a reference value for height dimension after tightening taper thread.
- \* 4. Dimensions in [] are for clean-room package products
- ※ 5. Visit PISCO website for CAD data of clean-room package products.















Unit: mm

М	odel code	Tube O.D. øD	R				Tube end C	Hex. H				Effective area (mm²)	Weight (g)	CAD file name
PC	C3-M6M 4 5	3	M6 × 0.75	3	14	11	10.9	2	8	9.8	7.8	2.9	2.7	PCC3-M6M
PC	C4-M6M 4 5		M6 × 0.75	3	1.4	11	10.9	2.5	8	0.0	70	5.1	2.6	PCC4-M6M
PC	C4-M8M 4 5	1	M8 × 0.75	3.4	14	10.6	10.9	3	10	9.8	7.8	7.3	4.9	PCC4-M8M
PC	C6-M8M 4 5	6	$\rm M8 \times 0.75$	3.4	14.8	11.4	11.7	4	10	11.8	9.8	12.8	3.6	PCC6-M8M
PCC	C1/8-M6M 4 5	1/8	M6 × 0.75	3	14	11	10.9	2	8	9.8	7.8	3	2.7	PCC1'8-M6M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package









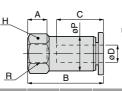
3.9

PG1'4-5'32M











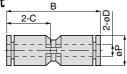


Unit: mm

Model code	Tube O.D. øD	R			øΡ	Tube end C	Hex. H	Х		Effective area (mm²)		CAD file name
PCF3-M3M 4 5	3	$M3 \times 0.5$	(4.35)	13.75	5.5	9.4	5.5	. 7	6	1.4	1.5	PCF3-M3M
PCF3-M5M 4 5	3	$M5 \times 0.8$	4.5	15.4	8	9.4	8	_ ′	0	2.8	4.2	PCF3-M5M
PCF4-M3M 4 5	4	$M3 \times 0.5$	(4.5)	15.4	8	10.9	8	9.8	7.8	3.5	3.6	PCF4-M3M
PCF4-M5M 4 5	4	M5×0.8	4.5	17.6	0	10.9	0	9.0	7.0	2.6	4.3	PCF4-M5M
PCF1/8-M3M 4 5	1/8	$M3 \times 0.5$	(4.5)	15.4	8	10.9	8	9.8	7.8	3.5	3.7	PCF1'8-M3M
PCF1/8-M5M 4 5	1/0	$M5 \times 0.8$	4.5	17.6	0	10.9	0	9.0	7.0	2.6	4.4	PCF1'8-M5M
PCF5/32-M3M 4 5	E/00	M3×0.5	4.5	15.4	0	10.0	0	0.0	70	3.5	3.6	PCF5'32-M3M
PCF5/32-M5M 4 5	- 5/30 ⊢	$M5 \times 0.8$	4.0	17.6	8	10.9	8	9.8	7.8	2.6	4.3	PCF5'32-M5M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package









Release-ring dimension



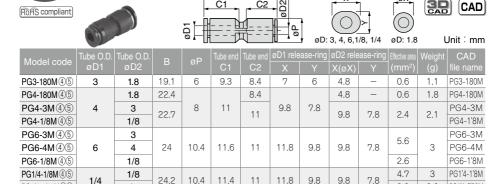


Model code	Tube O.D. øD		øΡ	Tube end C	X (øX)	Y	Effective area (mm²)	Weight (g)	CAD file name
PU180M 4 5	1.8	18.5	6	8.4	4.8	_	0.6	1.1	PU180M
PU3M 4 5	3	19.6	6	9.3	7	6	2.7	1.1	PU3M
PU4M 4 5	4	22.7	8	11	9.8	7.8	5.4	2	PU4M
PU6M 4 5	6	24.4	10.4	11.6	11.8	9.8	11	3.1	PU6M
PU1/8M 4 5	1/8	22.7	8	11	9.8	7.8	2.6	2.1	PU1'8M
PU1/4M 4 5	1/4	24.8	10.4	11.4	11.8	9.8	11.5	3.1	PU1'4M

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

Unequal Union Straight

\*2. 5 in Model code / Replaced with "C" for Clean-room package



- 5/32 \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- $\ensuremath{\,\%\,} 2.$  § in Model code / Replaced with "C" for Clean-room package

PG1/4-5/32M (4)(5)

1/4

10.4

11.4

11

11.8

9.8

9.8

7.8

3.8

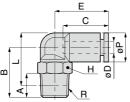
Series

















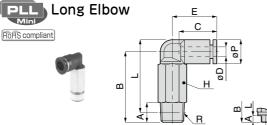
													ι	Jnit∶mm
Model code	Tube O.D.	R	Α	В	L	øΡ	Tube end	Е	Hex.			Effective area	Weight	CAD
Widdel dodd	øD					~.	С		Н	(øX)		(mm²)	(g)	file name
PL180-M3M 4 5	1.8	$M3 \times 0.5$		12	12.5 [12.8]	6	8.4	10.3	5.5	4.8	_	0.5	1.4	PL180-M3M(%5)
PL180-M5M 4 5	1.0	$M5 \times 0.8$	3 [3.2]	13.5	13.5 [13.3]	0	0.4	10.5	8	4.0		0.7	2.8	PL180-M5M(**5)
PL3-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	12	12.5 [12.8]				5.5			0.5	1.4	PL3-M3M(%5)
PL3-M5M 4 5	3	M5×0.8	3 [3.2]	13.5	13.5 [13.3]	6	9.3	10.8	8	7	6	1.8	2.8	PL3-M5M(%5)
PL3-M6M 4 5	3	$M6 \times 1$	3.9	14.5	13.6				0			1.0	3.1	PL3-M6M
PL3-01M 4 5		R1/8	8	16	16	8	11	15.1	10	9.8	7.8	2.4	6.3	PL3-01M
PL4-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	14	15.5 [15.8]							1.3	3	PL4-M3M(%5)
PL4-M5M 4 5		$M5 \times 0.8$	3 [3.2]	13.5	14.5 [14.3]				8			2.2	3.4	PL4-M5M(%5)
PL4-M6M 4 5	4	$M6 \times 1$	3.9	14.5	14.6	8	11	15.1		9.8	7.8	3.9	3.7	PL4-M6M
PL4-01M 4 5		R1/8	8	16	16				10			4.8	6.2	PL4-01M
PL4-02M 4 5		R1/4	11	21	19				14			4.9	13	PL4-02M
PL6-M5M 4 5		M5×0.8	3 [3.2]	14.5	16.8 [16.6]				8			3.5	4.1	PL6-M5M(%5)
PL6-M6M 4 5		$M6 \times 1$	3.9	15.5	16.9				0			3.6	4.4	PL6-M6M
PL6-01M 4 5	6	R1/8	8	17	18.3	10.5	11.6	16	10	11.8	9.8	8.5	6	PL6-01M
PL6-02M 4 5		R1/4	11	22.3	21.5				14			8.4	13	PL6-02M
PL6-03M 4 5		R3/8	12	23.3	22.2				17			8.6	21	PL6-03M
PL1/8-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	14	15.5 [15.8]							0.9	3.1	PL1'8-M3M(#5)
PL1/8-M5M 4 5	1/8	$M5 \times 0.8$	3 [3.2]	13.5	14.5 [14.3]	8	11	15.1	8	9.8	7.8	2.7	3.5	PL1'8-M5M(#5)
PL1/8-M6M 4 5	1/0	$M6 \times 1$	3.9	14.5	14.6	0	' '	15.1		9.0	7.0	2.5	3.8	PL1'8-M6M
PL1/8-01M 4 5		R1/8	8	16	16				10			2	6.3	PL1'8-01M
PL5/32-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	14	15.5 [15.8]							1.3	3	PL5'32-M3M(**5)
PL5/32-M5M 4 5		$M5 \times 0.8$	3 [3.2]	13.5	14.5 [14.3]				8			2.8	3.4	PL5'32-M5M(#5)
PL5/32-M6M 4 5	5/32	$M6 \times 1$	3.9	14.5	14.6	8	11	15.1		9.8	7.8	3	3.7	PL5'32-M6M
PL5/32-01M 4 5		R1/8	8	16	16				10			3.2	6.2	PL5'32-01M
PL5/32-02M 4 5		R1/4	11	21	19				14			4.9	13	PL5'32-02M
PL1/4-M5M 4 5		M5×0.8	3 [3.2]	14.5	16.8 [16.6]				8			3	4.1	PL1'4-M5M(**5)
PL1/4-M6M 4 5	1/4	$M6 \times 1$	3.9	15.5	16.9	10.5	11.4	16.2		11.8	9.8	3.7	4.2	PL1'4-M6M
PL1/4-01M 4 5		R1/8	8	17	18.3				10			8.4	6.8	PL1'4-01M

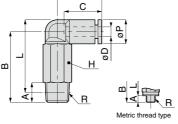
- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※2. ⑤ in Model code / Replaced with "C" for Clean-room package
- ※ 3. "L" is a reference value for height dimension after tightening taper thread.
- $\ensuremath{\,\%\,}$  4. Dimensions in [ ] are for clean-room package products
- % 5. Visit PISCO website for CAD data of clean-room package products.













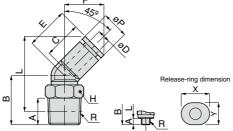
tric thread type	øD: 3, 4, 6,1/8, 5/32, 1/4	Ø
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		Metric thread type												
Model code	Tube O.D. øD	R	А	В	L	øΡ	Tube end C	Е	Hex. H	X (øX)	Υ	Effective area (mm²)	Weight (g)	CAD file name
PLL180-M3M 4 5	1.8	$M3 \times 0.5$	2.5 [2.2]	19	19.5 [19.8]	6	8.4	10.3	5.5	4.8	_	0.8	2.7	PLL180-M3M( * 5)
PLL180-M5M 4 5	1.0	$M5 \times 0.8$	3 [3.2]	25	25 [24.8]	0	0.4	10.5	8	4.0		0.0	7.6	PLL180-M5M( * 5)
$PLL3\text{-}M3M \P  \textcircled{5}$		$M3 \times 0.5$	2.5 [2.2]	19	19.5 [19.8]				5.5			0.6	2.8	PLL3-M3M(¥5)
PLL3-M5M 4 5	3	$M5 \times 0.8$	3 [3.2]	25	25 [24.8]	6	9.3	10.8	8	7	6	1.8	7.7	PLL3-M5M(¥5)
PLL3-M6M 4 5	3	$M6 \times 1$	3.9	26	25.1				0			2.1	7.7	PLL3-M6M
PLL3-01M 4 5		R1/8	8	28.5	28.5	8	11	15.1	10	9.8	7.8	2.3	13	PLL3-01M
PLL4-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	23	24.5 [24.8]							0.9	6.8	PLL4-M3M(₩5)
PLL4-M5M 4 5	4	$M5 \times 0.8$	3 [3.2]	25	26 [25.8]	8	11	15.1	8	9.8	7.8	3	8.3	PLL4-M5M(₩5)
PLL4-M6M 4 5	4	$M6 \times 1$	3.9	26	26.1	0	11	15.1		9.0	7.0	3.7	8.4	PLL4-M6M
PLL4-01M 4 5		R1/8	8	28.5	28.5				10			4.2	14	PLL4-01M
PLL6-M5M 4 5		$M5 \times 0.8$	3 [3.2]	26	28.3 [28.1]				8			3.3	9	PLL6-M5M(%5)
PLL6-M6M 4 5	6	$M6 \times 1$	3.9	27	28.4	10.5	11.6	16	0	11.8	9.8	3.7	9	PLL6-M6M
PLL6-01M 4 5		R1/8	8	29.5	30.8				10			7.6	14	PLL6-01M
PLL1/8-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	23	24.5 [24.8]							0.9	6.8	PLL1'8-M3M(₩5)
PLL1/8-M5M 4 5	1/8	$M5 \times 0.8$	3 [3.2]	25	26 [25.8]	8	11	15.1	8	9.8	7.8	2.5	8.4	PLL1'8-M5M(₩5)
PLL1/8-M6M 4 5	1/0	$M6 \times 1$	3.9	26	26.1	0	11	15.1		9.0	7.0	2.1	0.4	PLL1'8-M6M
PLL1/8-01M 4 5		R1/8	8	28.5	28.5				10			2.3	13	PLL1'8-01M
PLL5/32-M3M 4 5		M3×0.5	2.5 [2.2]	23	24.5 [24.8]							0.9	6.8	PLL5'32-M3M(#5)
PLL5/32-M5M 4 5	5/32	$M5 \times 0.8$	3 [3.2]	25	26 [25.8]	0	11	15.1	8	9.8	7.8	3	8.3	PLL5'32-M5M(#5)
PLL5/32-M6M 4 5	5/32	$M6 \times 1$	3.9	26	26.1	-1 8	11	15.1		9.0	7.0	3.7	8.4	PLL5'32-M6M
PLL5/32-01M 4 5		R1/8	8	28.5	28.5				10			4.2	14	PLL5'32-01M
PLL1/4-M5M 4 5		M5×0.8	3 [3.2]	26	28.3 [28.1]				8			3.5	8.8	PLL1'4-M5M(%5)
PLL1/4-M6M 4 5	1/4	$M6 \times 1$	3.9	27	28.4	10.5	11.4	16.2	0	11.8	9.8	3.6	8.8	PLL1'4-M6M
PLL1/4-01M 4 5		R1/8	8	29.5	30.8				10	_		8.4	14	PLL1'4-01M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. "L" is a reference value for height dimension after tightening taper thread.
- \* 4. Dimensions in [] are for clean-room package products
- \* 5. Visit PISCO website for CAD data of clean-room package products.

# 45° Elbow





Unit: mm

Model code	Tube O.D. øD	R	А	В	L	øΡ	Tube end C	Е	F	Hex. H	Х	Υ	Effective area (mm²)	Weight (g)	CAD file name
PLH3-M3M 4 5	3	$M3 \times 0.5$	2.5 [2.2]	12.8	22.3 [22.6]	8	11	12.2	12	8	9.8	7.8	8.0	2.9	PLH3-M3M(**5)
PLH3-M5M 4 5	3	$M5 \times 0.8$	3 [3.2]	12.3	21.3 [21.1]	0	11	12.2	12	0	9.0	7.0	1.9	3.3	PLH3-M5M(**5)
PLH4-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	12.8	22.3 [22.6]								1	2.8	PLH4-M3M(**5)
PLH4-M5M 4 5	4	M5×0.8	3 [3.2]	12.3	21.3 [21.1]	8	11	12.2	12	8	9.8	7.8	2.9	3.3	PLH4-M5M(±5)
PLH4-M6M 4 5	4	$M6 \times 1$	3.9	13.3	21.4				12		9.0	7.0	4	3.6	PLH4-M6M
PLH4-01M 4 5		R1/8	8	14.8	22.8					10			5	6.1	PLH4-01M
PLH6-M5M 4 5		$M5 \times 0.8$	3 [3.2]	14.1	23.9 [23.7]					8			3.6	3.9	PLH6-M5M(±5)
PLH6-M6M 4 5	6	$M6 \times 1$	3.9	15.1	24	10.5	116	122	12.8	0	11.8	9.8	3.8	4.2	PLH6-M6M
PLH6-01M 4 5	6	R1/8	8	16.6	25.4	10.5	11.0	1.6 12.3	12.0	10	11.0	9.0	8.7	6.8	PLH6-01M
PLH6-02M 4 5		R1/4	11	21.6	28.4					14			8.7	18	PLH6-02M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package
- \* 3. "L" is a reference value for height dimension after tightening taper thread.
- \* 4. Dimensions in [] are for clean-room package products
- \* 5. Visit PISCO website for CAD data of clean-room package products.

# Union Elbow



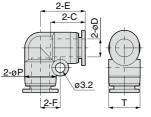






Mini Series







Unit: mm

Model code	Tube O.D. øD	øΡ	Tube end C	Е	F	Т	X (øX)	Υ	Effective area (mm²)	Weight (g)	CAD file name
PV180M 4 5	1.8	6	8.4	10.3	4.5	6	4.8	_	0.6	1.2	PV180M
PV3M 4 5	3	6	9.3	10.8	4.5	6	7	6	2.3	1.2	PV3M
PV4M 4 5	4	8	11	13.1	5.6	8	9.8	7.8	4.8	2.3	PV4M
PV6M 4 5	6	10.5	11.6	15	6.6	10.5	11.8	9.8	9	3.6	PV6M
PV1/8M 4 5	1/8	8	11	13.1	5.6	8	9.8	7.8	2.1	2.4	PV1'8M
PV1/4M 4 5	1/4	10.5	11.4	15.2	6.6	10.5	11.8	9.8	10.7	3.4	PV1'4M

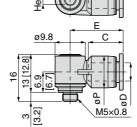
- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package

CAD

Pol Hex. Holed Banjo









Unit: mm

Model code	Tube O.D. øD	øΡ	Tube end C				Effective area (mm²)	Weight (g)	CAD file name(%4)
POL3-M5M 4 5	3	8	11	15.4	9.8	7.8	2.1	5	POL3-M5M
POL4-M5M 4 5	4	8	11	15.4	9.8	7.8	2.1	5	POL4-M5M
POL6-M5M 4 5	6	10.5	11.6	17.5	11.8	9.8	2.1	6	POL6-M5M
POL1/8-M5M 4 5	1/8	8	11	15.4	9.8	7.8	1.7	5	POL1'8-M5M
POL5/32-M5M 4 5	5/32	8	11	15.4	9.8	7.8	2.1	5	POL5'32-M5M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. Dimensions in [] are for clean-room package products
- \* 4. Visit PISCO website for CAD data of clean-room package products.

# Hex. Holed Long Banjo

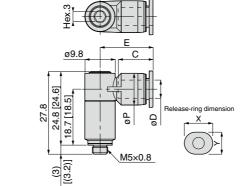








RoHS compliant



U	nit	:	mm

Model code	Tube O.D. øD	øΡ	Tube end C	Е	Х	Y	Effective area (mm²)	Weight (g)	CAD file name(%4)
POLL3-M5M 4 5	3	8	11	15.4	9.8	7.8	2.1	11	POLL3-M5M
POLL4-M5M 4 5	4	8	11	15.4	9.8	7.8	2.1	11	POLL4-M5M
POLL6-M5M 4 5	6	10.5	11.6	17.5	11.8	9.8	2.1	13	POLL6-M5M
POLL1/8-M5M 4 5	1/8	8	11	15.4	9.8	7.8	1.7	11	POLL1/8-M5M
POLL5/32-M5M 4 5	5/32	8	11	15.4	9.8	7.8	2.1	11	POLL5/32-M5M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. Dimensions in [ ] are for clean-room package products
- \* 4. Visit PISCO website for CAD data of clean-room package products.

# Plug-in Elbow



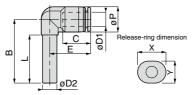
RoHS compliant

97

Mini

Series











Unit: mm

Model code	Tube O.D. øD1	Tube dia. øD2	В	øΡ	Tube end C	Е	L	Х	Υ	Effective area (mm²)		CAD file name
PLJ3M 4 5	3	3	24	9	11	14.1	17	9.8	7.8	1.2	1.1	PLJ3M
PLJ4M 4 5	4	4	25	9	11	14.1	18	9.8	7.8	3.2	1.8	PLJ4M
PLJ6M 45	6	6	26.5	10.5	11.6	17	20	11.8	9.8	5.1	3.1	PLJ6M
PLJ1/8M 4 5	1/8	1/8	24	9	11	14.1	17	9.8	7.8	1.2	1.7	PLJ1'8M
PLJ5/32M 4 5	5/32	5/32	25	9	11	14.1	18	9.8	7.8	2.9	1.7	PLJ5'32M
PLJ3/16M 4 5	3/16	3/16	27.5	10.5	11.7	17.1	20.5	11.8	9.8	4.8	2.5	PLJ3'16M
PLJ1/4M 4 5	1/4	1/4	29	10.5	11.4	17.2	22.5	11.8	9.8	8.2	2.4	PLJ1'4M

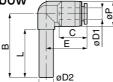
\* 1. 4 in Model code / Replaced with "W" for Light-gray color

\* 2. 5 in Model code / Replaced with "C" for Clean-room package

PLGJ Unequal Plug-in Elbow

















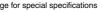


PLGJ3-180M (4)(5) 6 8.4 10.3 4.8 0.9 0.7 PLGJ3-180M 1.8 24 PLGJ3-4M (4)(5) 4 9 11 14.1 9.8 7.8 1.6 PLGJ3-4M 17 3 24.5 10.5 11.6 17 11.8 9.8 1.2 2.2 PLGJ3-6M PLGJ3-6M (4)(5) 6 PLGJ3-1/8M (4)(5) 1/8 24 9 11 14.1 9.8 7.8 1.7 PLGJ3-1'8M PLGJ4-180M (4)(5) 1.8 24 6 8.4 10.3 4.8 0.9 0.8 PLGJ4-180M PLGJ4-3M (4)(5) 25 9 11 14.1 9.8 7.8 2.3 1.8 PLGJ4-3M 3 4 PLGJ4-6M (4)(5) 25.5 10.5 11.6 17 18 11.8 9.8 3.3 2.2 PLGJ4-6M 6 PLGJ4-1/8M(4)(5) 1/8 25 9 11 14.1 9.8 7.8 2.3 1.9 PI GJ4-1'8M PLGJ6-3M(4)(5) 3 2.4 PLGJ6-3M PLGJ6-4M(4)(5) 26 9 11 14.1 9.8 7.8 4.2 2.9 PLGJ6-4M 4 20 6 PLGJ6-1/8M(4)(5) 1/8 42 PLGJ6-1'8M PLGJ6-1/4M (4)(5) 1/4 26.5 10.5 11.4 17.2 11.8 9.8 8.2 2.3 PLGJ6-1'4M PLGJ1/8-3M (4)(5) 3 1.7 PLGJ1'8-3M 24 9 11 14.1 9.8 7.8 17 PLGJ1/8-5/32M 4 5 5/32 1/8 1.2 1.6 PLGJ1'8-5'32M 1/4 24.5 10.5 11.4 17.2 11.8 9.8 2.1 PLGJ1'8-1'4M PLGJ1/8-1/4M(4)(5) PLGJ5/32-1/8M(4)(5) 1/8 25 9 11 14.1 9.8 7.8 2.3 1.7 PLGJ5'32-1'8M 18 5/32 PLGJ5/32-1/4M(4)(5) 1/4 25.5 10.5 11.4 17.2 11.8 9.8 3.3 2.1 PLGJ5'32-1'4M PLGJ3/16-1/8M(4)(5) 1/8 2.3 1.8 PLGJ3'16-1'8M 27 9 11 14.1 9.8 7.8 29 PLGJ3/16-5/32M (4)(5) 5/32 3/16 20.5 1.7 PLGJ3'16-5'32M PLGJ3/16-1/4M (4)(5) 1/4 27.5 10.5 11.4 17.2 11.8 9.8 4.8 2.2 PLGJ3'16-1'4M PI G.I1/4-1/8M (4)(5) 1/8 2.4 6 PLGJ1'4-1'8M 28.5 9 9.8 7.8 11 14.1 PLGJ1/4-5/32M (4)(5) 5/32 1/4 22.5 2.9 1.9 PLGJ1'4-5'32M 10.5 11.8 9.8 8.2 2.5 PLGJ1'4-6M PLGJ1/4-6M (4)(5) 6

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package







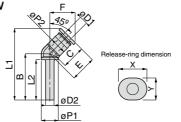


PLHJ 45º Plug-in Elbow



RoHS compliant









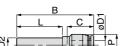


Unit: mm

Model code	Tube O.D. øD1	Tube dia. øD2		øP1	øP2	Tube end C		L2					Effective area (mm²)	Weight (g)	CAD file name
PLHJ4M 4 5	4	4	21.8	8	8	11	33.8	18.5	12.2	12	9.8	7.8	3	1.3	PLHJ4M
PLHJ6M 46	6	6	24.5	8	10.5	11.6	37.4	19.5	12.3	12.8	11.8	9.8	5.9	2.1	PLHJ6M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package

# Unequal Plug-in Straight





	1:-	•	100 100
u	Init		mm

Model code	Tube O.D.	Tube dia.	В	L	øΡ	Tube end	X		Effective area	Weight	CAD
	øD1	øD2				С	(øX)		(mm²)	(g)	file name
PGJ3-180M 4 5	1.8		26.3	15	6	8.4	4.8	_	1.1	0.6	PGJ3-180M
PGJ3-4M465	4	3	31		9	11	9.8	7.8		1.3	PGJ3-4M
PGJ3-6M 4 5	6	3	31.4	17	10.5	11.6	11.8	9.8	1.2	1.8	PGJ3-6M
PGJ3-1/8M 4 5	1/8		31		9	11	9.8	7.8		1.4	PGJ3-1'8M
PGJ4-180M 4 5	1.8		26.3	17	6	8.4	4.8	_	0.6	0.7	PGJ4-180M
PGJ4-3M45	3	4	26.8	17	0	9.3	7	6	2.4	0.8	PGJ4-3M
PGJ4-6M 4 5	6	4	32.4	18	10.5	11.6	11.8	9.8	3.7	1.8	PGJ4-6M
PGJ4-1/8M 4 5	1/8		32	10	9	11	9.8	7.8	2.5	1.5	PGJ4-1'8M
PGJ6-3M465	3								3.1		PGJ6-3M
PGJ6-4M 4 5	4	6	32	19	9	11	9.8	7.8	5.4	2.4	PGJ6-4M
PGJ6-1/8M 4 5	1/8	0		19					2.5		PGJ6-1'8M
PGJ6-1/4M 4 5	1/4		32.6		10.5	11.4	11.8	9.8	9.2	1.9	PGJ6-1'4M
PGJ1/8-5/32M 4 5	5/32	1/8	31	17	9	11	9.8	7.8	1.2	1.3	PGJ1'8-5'32M
PGJ1/8-1/4M 4 5	1/4	1/0	31.6	17	10.5	11.4	11.8	9.8	1.2	1.7	PGJ1'8-1'4M
PGJ5/32-1/8M 4 5	1/8	5/32	32	18	9	11	9.8	7.8	2.5	1.5	PGJ5'32-1'8M
PGJ5/32-1/4M 4 5	1/4	3/32	32.6	10	10.5	11.4	11.8	9.8	3.7	1.7	PGJ5'32-1'4M
PGJ3/16-1/8M 4 5	1/8		34	21	9	11	9.8	7.8	2.5	1.6	PGJ3'16-1'8M
PGJ3/16-5/32M 4 5	5/32	3/16	54	20.5	9	11	3.0	7.0	3.4	1.5	PGJ3'16-5'32M
PGJ3/16-1/4M 4 5	1/4		34.6	20.5	10.5	11.4	11.8	9.8	5	1.9	PGJ3'16-1'4M
PGJ1/4-1/8M 4 5	1/8		35.5		9	11	9.8	7.8	2.5	1.8	PGJ1'4-1'8M
PGJ1/4-5/32M 4 5	5/32	1/4	55.5	22.5		11	5.0	7.0	3.4	1.7	PGJ1'4-5'32M
PGJ1/4-6M 4 5	6		35.9		10.5	11.6	11.8	9.8	10.9	2.1	PGJ1'4-6M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package

Series

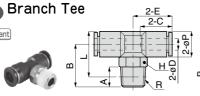
















Unit: mm

													,	JIIIL - 1111111
Model code	Tube O.D.	R	А	В		øΡ	Tube end	Е	Нех.			Effective area	Weight	CAD
Woder code	øD			ь			С	_	Н	(øX)		(mm²)	(g)	file name
PB180-M3M 4 5	1.8	$M3 \times 0.5$	2.5 [2.2]	12	12.5 [12.8]	6	8.4	10.25	5.5	4.8	_	0.6	1.9	PB180-M3M( <b>%</b> 5)
PB180-M5M 4 5	1.0	M5×0.8	3 [3.2]	13.5	13.5 [13.3]	0	0.4	10.25	8	4.0		0.7	3.2	PB180-M5M( <b>%</b> 5)
PB3-M3M 4 5		M3×0.5	2.5 [2.2]	12	12.5 [12.8]				5.5			0.7	1.9	PB3-M3M(*5)
PB3-M5M 4 5	3	M5×0.8	3 [3.2]	13.5	13.5 [13.3]	6	9.3	10.8	8	7	6	2	3.3	PB3-M5M(*5)
PB3-M6M 4 5	3	M6 × 1	3.9	14.5	13.6				0			1.9	3.6	PB3-M6M
PB3-01M 4 5		R1/8	8	17	17	8	11	12.5	10	9.8	7.8	2.3	7.3	PB3-01M
PB4-M3M 4 5		M3×0.5	2.5 [2.2]	15	16.5 [16.8]							1.4	3.9	PB4-M3M(*5)
PB4-M5M 4 5		M5×0.8	3 [3.2]	14.5	15.5 [15.3]				8			3.7	4.3	PB4-M5M(**5)
PB4-M6M 4 5	4	M6 × 1	3.9	15.5	15.6	8	11	12.5		9.8	7.8	2.8	4.6	PB4-M6M
PB4-01M 4 5		R1/8	8	17	17				10			4.6	7.2	PB4-01M
PB4-02M 4 5		R1/4	11	22	20				14			4.4	13	PB4-02M
PB6-M5M 4 5		M5×0.8	3 [3.2]	15.5	17.8 [17.6]				8			3.5	5.6	PB6-M5M(*5)
PB6-M6M 4 5	6	M6 × 1	3.9	16.5	17.9		5 11.6	13.9	0			3.6	5.9	PB6-M6M
PB6-01M 4 5		R1/8	8	18	19.3	10.5			10	11.8	9.8	8.5	8.4	PB6-01M
PB6-02M 4 5		R1/4	11	23.3	22.5			14.05	14			8.1	15	PB6-02M
PB6-03M 4 5		R3/8	12	24.3	23.2			14.00	17			8.5	22	PB6-03M
PB1/8-M3M 4 5		$M3 \times 0.5$	2.5 [2.2]	15	16.5 [16.8]							0.9	4.1	PB1'8-M3M( <b>%</b> 5)
PB1/8-M5M 4 5	1/8	$M5 \times 0.8$	3 [3.2]	14.5	15.5 [15.3]	8	11	12.5	8	9.8	7.8	2.1	4.4	PB1'8-M5M( <b>%</b> 5)
PB1/8-M6M 4 5	1/0	M6 × 1	3.9	15.5	15.6	0	11	12.5		9.0	7.0	2.2	4.7	PB1'8-M6M
PB1/8-01M45		R1/8	8	17	17				10			2.3	7.3	PB1'8-01M
PB5/32-M3M 4 5		M3×0.5	2.5 [2.2]	15	16.5 [16.8]							1.4	3.9	PB5'32-M3M( <b>%</b> 5)
PB5/32-M5M 4 5		M5×0.8	3 [3.2]	14.5	15.5 [15.3]				8			2.8	4.3	PB5'32-M5M( <b>%</b> 5)
PB5/32-M6M 4 5	5/32	M6 × 1	3.9	15.5	15.6	8	11	12.5		9.8	7.8	2.9	4.6	PB5'32-M6M
PB5/32-01M 4 5	3/02	R1/8	8	17	17				10			3.3	7.2	PB5'32-01M
PB5/32-02M 4 5		R1/4	11	22	20				14			4.4	13	PB5'32-02M
PB1/4-M5M 4 5		M5×0.8	3 [3.2]	15.5	17.8 [17.6]				8			3.3	5.3	PB1'4-M5M( ** 5)
PB1/4-M6M 4 5	1/4	M6 × 1	3.9	16.5	17.9	10.5	11.4	14.1	U	11.8	9.8	3.6	5.6	PB1'4-M6M
PB1/4-01M 4 5		R1/8	8	18	19.3				10			8	8.1	PB1'4-01M

<sup>\* 1. 4</sup> in Model code / Replaced with "W" for Light-gray color



 $<sup>\</sup>ensuremath{\,\%\,} 2.$   $\ensuremath{\,\mathbb{(}}$  in Model code / Replaced with "C" for Clean-room package

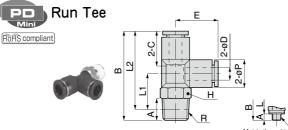
<sup>\* 3. &</sup>quot;L" is a reference value for height dimension after tightening taper thread.

<sup>\* 4.</sup> Dimensions in [] are for clean-room package products

 $<sup>\</sup>frak{\%}$  5. Visit PISCO website for CAD data of clean-room package products.

CAD





Release-ring dimension øD: 3, 4, 6,1/8, 5/32, 1/4

Unit: mm

Model code	Tube O.D. øD	R				L2	øΡ	Tube end		Hex. H	X (øX)		Effective area (mm²)	Weight (g)	CAD file name
PD180-M3M 4 5		M3×0.5	2.5 [2.2]	22.3	9.5 [9.8]	19.8 (20.1)		0.4	400	5.5	4.0		0.6	1.9	PD180-M3M(#5)
PD180-M5M 4 5	1.8	M5×0.8	3 [3.2]	23.8	10.5 [10.3]	20.8 [20.6]	6	8.4	10.3	8	4.8	_	0.8	3.2	PD180-M5M(¥5)
PD3-M3M45		M3×0.5	2.5 [2.2]	22.8	9.5 [9.8]	20.3 [20.6]				5.5			0.7	1.9	PD3-M3M(¥5)
PD3-M5M45	3	M5×0.8	3 [3.2]	24.3	10.5 [10.3]	21.3 [21.1]	6	9.3	10.8	8	7	6	2.2	3.2	PD3-M5M(%5)
PD3-M6M 4 5	3	M6 × 1	3.9	25.3	10.6	21.4				0			2	3.6	PD3-M6M
PD3-01M 4 5 *		R1/8	8	30.1	13	26.1	8	11	13.1	10	9.8	7.8	2.2	7.3	PD3-01M
PD4-M3M45		M3×0.5	2.5 [2.2]	28.1	12.5 [12.8]	25.6 [25.9]							0.9	4	PD4-M3M(#5)
PD4-M5M 4 5		M5×0.8	3 [3.2]	27.6	11.5 [11.3]	24.6 [24.4]				8			2.1	4.4	PD4-M5M(**5)
PD4-M6M 4 5	4	M6 × 1	3.9	28.6	11.6	24.7	8	11	13.1		9.8	7.8	2.2	4.7	PD4-M6M
PD4-01M 4 5		R1/8	8	30.1	13	26.1				10			4.6	7.3	PD4-01M
PD4-02M 4 5		R1/4	11	35.1	16	29				14			3.3	14	PD4-02M
PD6-M5M45		$M5 \times 0.8$	3 [3.2]	30.5	12.5 [12.3]	27.5 [27.3]				8			2.2	5.6	PD6-M5M(%5)
PD6-M6M 4 5		M6 × 1	3.9	31.5	12.6	27.6							3.3	5.9	PD6-M6M
PD6-01M 4 5	6	R1/8	8	33	14	29	10.5	11.6	15	10	11.8	9.8	8.5	8.4	PD6-01M
PD6-02M 4 5		R1/4	11	38	17	31.9				14			6.6	15	PD6-02M
PD6-03M 4 5		R3/8	12	39	17.7	32.6				17			8.9	23	PD6-03M
PD1/8-M3M 4 5		M3×0.5	2.5 [2.2]	28.1	12.5 [12.8]								0.9	4.1	PD1'8-M3M(**5)
PD1/8-M5M 4 5	1/8	$M5 \times 0.8$		27.6	11.5 [11.3]	24.6 [24.4]	8	11	13.1	8	9.8	7.8	2.4	4.5	PD1'8-M5M(%5)
PD1/8-M6M 4 5	1/0	M6 × 1	3.9	28.6	11.6	24.7		' '	10.1		0.0	7.0	2	4.8	PD1'8-M6M
PD1/8-01M 4 5		R1/8	8	30.1	13	26.1				10			2.5	7.4	PD1'8-01M
PD5/32-M3M 4 5		M3×0.5		28.1	12.5 [12.8]	25.6 [25.9]							0.9	4	PD5'32-M3M(#5)
PD5/32-M5M 4 5		M5×0.8	3 [3.2]	27.6	11.5 [11.3]	24.6 [24.4]				8				4.4	PD5'32-M5M(%5)
PD5/32-M6M 4 5	5/32	M6 × 1	3.9	28.6	11.6	24.7	8	11	13.1		9.8	7.8	3.1	4.7	PD5'32-M6M
PD5/32-01M 4 5		R1/8	8	30.1	13	26.1				10				7.3	PD5'32-01M
PD5/32-02M 4 5		R1/4	11	35.1	16	29				14			3.3	14	PD5'32-02M
PD1/4-M5M 4 5		M5×0.8		30.7	12.5 [12.3]	27.7 [27.5]				8			3.6	5.4	PD1'4-M5M(%5)
PD1/4-M6M 4 5	1/4	M6 × 1	3.9	31.7	12.6	27.8	10.5	11.4	15.2		11.8	9.8	3.7	5.6	PD1'4-M6M
PD1/4-01M 4 5		R1/8	8	33.2	14	29.2				10			8.5	8.2	PD1'4-01M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package
- \* 3. "L1" and "L2" are reference values for height dimensions after tightening taper thread.
- % 4. Dimensions in [] are for clean-room package products
- $\ensuremath{\%}$  5. Visit PISCO website for CAD data of clean-room package products.

# Tube Fitting Mini Series

Union Tee



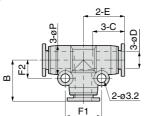


øD: 1.8



RoHS compliant







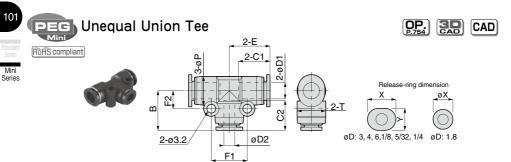


Unit: mm

Model code	Tube O.D. øD		øΡ	Tube end C			F2		X (øX)		Effective area (mm²)		CAD file name
PE180M 4 5	1.8	10.3	6	8.4	10.25	9	4.5	6	4.8	_	0.6	1.7	PE180M
PE3M 4 5	3	10.8	6	9.3	10.8	9	4.5	6	7	6	1.9	1.7	PE3M
PE4M 4 5	4	13.1	8	11	13.05	11.2	5.6	8	9.8	7.8	4.6	3.3	PE4M
PE6M 4 5	6	15	10.5	11.6	14.95	13.2	6.6	10.5	11.8	9.8	8.9	5.3	PE6M
PE1/8M 4 5	1/8	13.1	8	11	13.05	11.2	5.6	8	9.8	7.8	2.1	3.4	PE1'8M
PE1/4M 4 5	1/4	15.2	10.5	11.4	15.15	13.2	6.6	10.5	11.8	9.8	11.4	5	PE1'4M

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package



Unit: mm

Model code	Tube O.D.	Tube O.D.	В	øΡ	Tube end	Tube end		F1	F2				D2 relea	ase-ring	Effective area	Weight	CAD
woder code	øD1	øD2		ØF	C1	C2			Γ2		Χ	Υ	X(øX)	Υ	(mm²)	(g)	file name
PEG3-180M 4 5	3	1.8	10.3	6	9.3	8.4	10.8	9	4.5	6	7	6	4.8	_	1	1.7	PEG3-180M
PEG3-4M45	3	4	13.1	8	11	11	13.05	11.2	5.6	8	9.8	7.8	9.8	7.8	1.7	3.4	PEG3-4M
PEG4-3M 4 5		3	13.1	8		11	13.05	11.2	5.6	8			9.8	7.8	2.4	3.3	PEG4-3M
PEG4-6M 4 5	4	6	15	10.5	11	11.6	14.55	13.2	6.6	10.5	9.8	7.8	11.8	9.8	3.7	4.9	PEG4-6M
PEG4-1/8M 4 5		1/8	13.1	8		11	13.05	11.2	5.6	8			9.8	7.8	2.3	3.3	PEG4-1'8M
PEG6-4M@5	6	4	14.6	10.5	11.6	11	14.95	13.2	6.6	10.5	11.8	9.8	9.8	7.8	5.3	5.1	PEG6-4M
PEG1/8-5/32M 4 5	1/8	5/32	13.1	8	11	11	13.05	11.2	5.6	8	9.8	7.8	9.8	7.8	1.7	3.4	PEG1'8-5'32M
PEG5/32-1/4M 4 5	5/32	1/4	15.2	10.5	11	11.4	14.55	13.2	6.6	10.5	9.8	7.8	11.8	9.8	3.7	4.8	PEG5'32-1'4M
PEG1/4-5/32M 4 5	1/4	5/32	14.6	10.5	11.4	11	15.15	13.2	6.6	10.5	11.8	9.8	9.8	7.8	3.6	5.9	PEG1'4-5'32M

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package

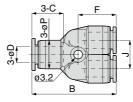
Mini

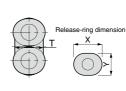










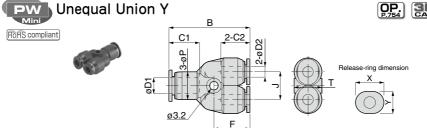


Unit: mm

CAD

Model code	Tube O.D. ØD			Tube end C						Effective area (mm²)	Weight (g)	CAD file name
PY3M 4 5	3	28	8	9.3	8	12.8	8	7	6	2	2.7	PY3M
PY4M 4 5	4	27.6	8	11	8	12.6	8	9.8	7.8	2.3	3.4	PY4M
PY6M 4 5	6	31	10.5	11.6	10.5	14	10.5	11.8	9.8	6.8	5.5	PY6M
PY1/8M 4 5 *	1/8	27.6	8	11	8	12.6	8	9.8	7.8	1.1	3.6	PY1'8M
PY1/4M 4 5 *	1/4	31.4	10.5	11.4	10.5	14.2	10.5	11.8	9.8	9.6	5.3	PY1'4M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package



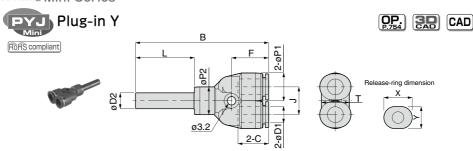
Unit: mm

CAD

Model code			В	øΡ						D1側期	カリング	D2側開	カリング	Effective area	Weight	CAD
Model Code	øD1	øD2			C1	C2								(mm²)	(g)	file name
PW4-3M45	4	3	27.8	8	1.1	9.3	8	12.8	8	9.8	7.8	7	6	2.1	3	PW4-3M
PW4-1/8M 4 5 *	4	1/8	27.6	0	11	11	0	12.6	0	9.0	7.0	9.8	7.8	1.8	3.5	PW4-1'8M
PW6-3M46		3												2.5	5.3	PW6-3M
PW6-4M46	6	4	30.6	10.5	11.6	11	10.5	13.6	10.5	11.8	9.8	9.8	7.8	4.2	5.5	PW6-4M
PW6-1/8M 4 5 *		1/8												2.4	5.4	PW6-1'8M
PW1/8-3M 4 5 *	1/8	3	27.6	8	11	11	8	12.6	8	9.8	7.8	9.8	7.8	1.7	3	PW1'8-3M
PW1/4-1/8M 4 5 *	1/4	1/8	30.8	10.5	11.4	11	10.5	13.6	10.5	11.8	9.8	9.8	7.8	5.2	2.5	PW1'4-1'8M
PW1/4-5/32M 4 5 *	1/4	5/32	30.0	10.5	11.4	11	10.5	13.0	10.5	11.0	9.0	9.0	7.0	3.6	6.9	PW1'4-5'32M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- $\ensuremath{\,\%\,} 2.$   $\ensuremath{\,\mathbb{G}}$  in Model code / Replaced with "C" for Clean-room package

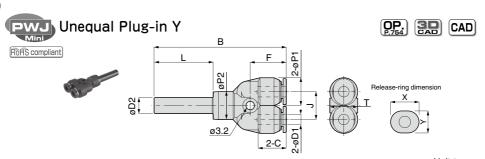
# Tube Fitting Mini Series



Unit: mm

Model code	Tube O.D. øD1	Tube dia. øD2	В	øP1	øP2	Tube end C		F	J	Т	Х	Υ	Effective area (mm²)	Weight (g)	CAD file name
PYJ3M 4 5	3	3	42.8	8	8	9.3	17.4	12.8	8	8	7	6	0.8	2.6	PYJ3M
PYJ4M 4 5	4	4	45	8	8	11	19	12.6	8	8	9.8	7.8	2.2	3.2	PYJ4M
PYJ6M 4 5	6	6	50.3	10.5	10.5	11.6	22	14	10.5	10.5	11.8	9.8	5.6	5.4	PYJ6M
PYJ1/8M 4 5	1/8	1/8	42.6	8	8	11	16.6	12.6	8	8	9.8	7.8	1.1	3.2	PYJ1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package



Unit: mm

Model code	Tube O.D. øD1	Tube dia. øD2		øP1	øP2	Tube end C							Effective area (mm²)	Weight (g)	CAD file name
PWJ4-3M 4 5	3	4	44.8	8	8	9.3	19	12.8	8	8	7	6	2.6	2.8	PWJ4-3M
PWJ4-1/8M 4 5	1/8	4	44.6	0	0	11	19	12.6	0	0	9.8	7.8	1.7	3.3	PWJ4-1'8M
PWJ6-3M 4 5	3												4.5	5.2	PWJ6-3M
PWJ6-4M 4 5	4	6	49.9	10.5	10.5	11	22	13.6	10.5	10.5	9.8	7.8	5.3	5.1	PWJ6-4M
PWJ6-1/8M 4 5	1/8												5.3	5.2	PWJ6-1'8M
PWJ5/32-1/8M 4 5	1/8	5/32	44.6	8	8	11	19	12.6	8	8	9.8	7.8	1.7	3.3	PWJ5'32-1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※ 2. ⑤ in Model code / Replaced with "C" for Clean-room package

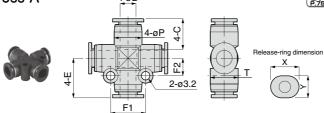
103

Mini Series

CAD



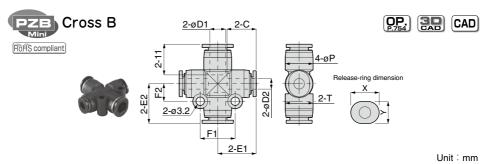
RoHS compliant



Unit: mm

Model code	Tube O.D. øD			Tube end C		F2				Effective area (mm²)		CAD file name
PZA3M 4 5	3	13.05	8	11	11.2	5.6	8	9.8	7.8	2.2	4.6	PZA3M
PZA4M 4 5	4	13.05	8	11	11.2	5.6	8	9.8	7.8	4.8	4.3	PZA4M
PZA6M 45	6	14.95	10.5	11.6	13.2	6.6	10.5	11.8	9.8	8.8	6.7	PZA6M
PZA1/8M 4 5	1/8	13.05	8	11	11.2	5.6	8	9.8	7.8	4.8	4.5	PZA1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- $\ensuremath{\,\%\,} 2.$   $\ensuremath{\,\mathbb{G}}$  in Model code / Replaced with "C" for Clean-room package

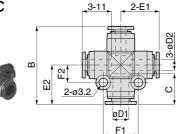


Model code	Tube O.D.	Tube O.D.	E1	E2	øΡ	Tube end	F1	F2	т	D1 relea	ase-ring	D2 rele	ase-ring	Effective area	Weight	CAD
Model Code	øD1	øD2		LZ		С								(mm²)	(g)	file name
PZB4-3M46	4	3	13.05	13.05	8	11	11.2	5.6	8	9.8	7.8	9.8	7.8	2.2	4.4	PZB4-3M
PZB4-1/8M 4 5	4	1/8	13.05	13.03	0	' '	11.2	5.0	0	9.0	7.0	9.0	7.0	4.8	4.4	PZB4-1'8M
PZB6-4M465	6	4	14.55	14.95	10.5	11.6	13.2	6.6	10.5	11.8	9.8	9.8	7.8	5.3	6.5	PZB6-4M
PZB6-1/8M  4  5	0	1/8	14.55	14.90	10.5	11.0	13.2	0.0	10.5	11.0	9.0	9.0	7.0	5.5	0.5	PZB6-1'8M
PZB1/8-3M 4 5	1/8	3	13.05	13.05	8	11	11.2	5.6	8	9.8	7.8	9.8	7.8	2.2	4.5	PZB1'8-3M
PZB5/32-1/8M 4 5	5/32	1/8	13.05	13.05	8	11	11.2	5.6	8	9.8	7.8	9.8	7.8	2.2	4.4	PZB5'32-1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- $\ensuremath{\,\%\,} 2.$   $\ensuremath{\,\mathbb{G}}$  in Model code / Replaced with "C" for Clean-room package

# Tube Fitting Mini Series







Release-ring dimension

4-øP

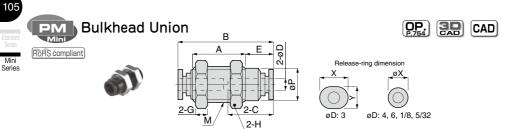






Model code	Tube O.D.	Tube O.D.	В	E1	E2	øΡ	Tube end	F1	F2	Т		ase-ring	D2 relea		Effective area		CAD
	øD1	øD2					С				Х		X		(mm <sup>2</sup> )	(g)	file name
PZC4-3M 4 5	4	3	26.1	13.05	13.05	8	11	11 2	5.6	8	9.8	7.8	9.8	7.8	2.2	4.4	PZC4-3M
PZC4-1/8M 4 5	4	1/8	20.1	13.00	13.00	0	11	11.2	5.0	0	9.0	7.0	9.0	7.0	2.4	4.4	PZC4-1'8M
PZC6-4M 4 5	0	4	29.5	1155	1/105	10.5	11.6	13.2	6.6	105	11.8	9.8	9.8	7.8	4.9	6.3	PZC6-4M
PZC6-1/8M 4 5	6	1/8	29.5	14.00	14.90	10.5	11.0	13.2	0.0	10.5	11.0	9.0	9.0	7.0	2.4	6.5	PZC6-1'8M
PZC1/8-3M 4 5	1/8	3	26.1	13.05	13.05	8	11	11.2	5.6	8	9.8	7.8	9.8	7.8	1.9	4.5	PZC1'8-3M
PZC5/32-1/8M 4 5	5/32	1/8	26.1	13.05	13.05	8	11	11.2	5.6	8	9.8	7.8	9.8	7.8	2.2	4.4	PZC5'32-1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※2. ⑤ in Model code / Replaced with "C" for Clean-room package



Unit: mm

Model code	Tube O.D. øD	М					Tube end C	Hex. H	G	X (øX)		Effective area (mm²)	Weight (g)	CAD file name
PM3M 4 5	3	M8×0.75	19.5	4.8	12.4	7	9.4	10	2	7	6	2.4	3.1	РМЗМ
PM4M 4 5	4	M10×1	23.2	5.8	14.1	8.9	10.9	12	3	7.8	_	3.7	6	PM4M
PM6M 4 5	6	M12×1	25	6.6	14.8	10.8	11.7	14	4	9.8	_	10.5	9	PM6M
PM1/8M 4 5	1/8	M10×1	23.2	5.8	14.1	8.9	10.9	12	3	7.8	_	2.1	6.1	PM1'8M
PM5/32M 4 5	5/32	M10×1	23.2	5.8	14.1	8.9	10.9	12	3	7.8	_	3.7	6	PM5'32M
PM1/4M 4 5	1/4	M12×1	24.6	6.4	14.8	10.8	11.4	14	4	9.8	_	11.2	8.8	PM1'4M

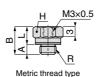
- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- ※2. ⑤ in Model code / Replaced with "C" for Clean-room package

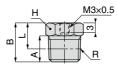
Mini

# **Extension Screw Adaptor**







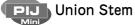


Taper pipe thread type

Unit: mm

Model code	R				Hex. H	Effective area (mm²)	Weight (g)	CAD file name
PFM5-M3M ®	M5 × 0.8	3 [3.2]	8.5	5.5 (5.3)	8	4.5	2.4	PFM5-M3M(*4)
PF01-M3M ⑤	R1/8	8	12	8	10	4.5	6.8	PF01-M3M
•								

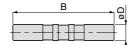
- \* 1. 5 in Model code / Replaced with "C" for Clean-room package
- $\frak{\%}$  2. "L" is a reference value for height dimension after tightening taper thread.
- \* 3. Dimensions in [] are for clean-room package products
- \* 4. Visit PISCO website for CAD data of clean-room package products.



RoHS compliant







Unit: mm

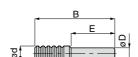
Model code	Tube dia. øD	В	Effective area (mm²)	Weight (g)	CAD file name
PIJ3M 4 5	3	27.1	2.5	0.2	PIJ3M
PIJ1/8M 4 5	1/8	27.1	2.5	0.2	PIJ1'8M

- \* 1. 4 in Model code / Replaced with "W" for Light-gray color
- \* 2. 5 in Model code / Replaced with "C" for Clean-room package



# Tube Fitting Mini Series











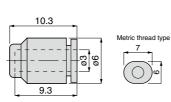
Unit: mm

Model code	øD	ød	В	E	Weight (g)	CAD file name
PP180M 4 5	1.8	3	20	9.8	0.1	PP180M
PP3M 4 5	3	4	22	11.8	0.2	PP3M

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

\*2. 5 in Model code / Replaced with "C" for Clean-room package













Unit: mm

Model code	Weight (g)	CAD file name
PPF3M 4 5	0.6	PPF3M

\* 1. 4 in Model code / Replaced with "W" for Light-gray color

※2. ⑤ in Model code / Replaced with "C" for Clean-room package

# **⚠ SAFETY Instructions**

This safety instructions aim to prevent personal injury and damage to properties by requiring proper use of PISCO products.

Be certain to follow ISO 4414 and JIS B 8370

ISO 4414: Pneumatic fluid power...Recomendations for the application of equipment to transmission and control systems.

JIS B 8370: General rules and safety requirements for systems and their components.

This safety instructions is classified into "Danger", "Warning" and "Caution" depending on the degree of danger or damages caused by improper use of PISCO products.



Danger Hazardous conditions. It can cause death or serious personal injury.



Warning Hazardous conditions depending on usages. Improper use of PISCO products can cause death or serious personal injury.



Products can cause personal injury or damages to properties.

# ↑ Warning I

- 1. Selection of pneumatic products
  - ① A user who is a pneumatic system designer or has sufficient experience and technical expertise should select PISCO products.
  - 2 Due to wide variety of operating conditions and applications for PISCO products, carry out the analysis and evaluation on PISCO products. The pneumatic system designer is solely responsible for assuring that the user's requirements are met and that the application presents no health or safety hazards. All designers are required to fully understand the specifications of PISCO products and constitute all systems based on the latest catalog or information, considering any malfunctions.
- 2. Handle the pneumatic equipment with enough knowledge and experience
  - ① Improper use of compressed air is dangerous. Assembly, operation and maintenance of machines using pneumatic equipment should be conducted by a person with enough knowledge and experience.
- 3. Do not operate machine / equipment or remove pneumatic equipment until safety is confirmed.
  - ① Make sure that preventive measures against falling work-pieces or sudden movements of machine are completed before inspection or maintenance of these machine.
  - ② Make sure the above preventive measures are completed. A compressed air supply and the power supply to the machine must be off, and also the compressed air in the systems must be exhausted.
  - ③ Restart the machines with care after ensuring to take all preventive measures against sudden movements.



# Disclaimer

- PISCO does not take any responsibility for any incidental or indirect loss, such as production line stop, interruption of business, loss of benefits, personal injury, etc., caused by any failure on use or application of PISCO products.
- PISCO does not take any responsibility for any loss caused by natural disasters, fires not related to PISCO products, acts by third parties, and intentional or accidental damages of PISCO products due to incorrect usage.
- 3. PISCO does not take any responsibility for any loss caused by improper usage of PISCO products such as exceeding the specification limit or not following the usage the published instructions and catalog allow.
- PISCO does not take any responsibility for any loss caused by remodeling of PISCO products, or by combinational use with non-PISCO products and other software systems.
- 5. The damages caused by the defect of Pisco products shall be covered but limited to the full amount of the PISCO products paid by the customer.

# **⚠** SAFETY INSTRUCTION MANUAL

PISCO products are designed and manufactured for use in general industrial machines. Be sure to read and follow the instructions below.

# 

- 1. Do not use PISCO products for the following applications.
  - ① Equipment used for maintaining / handling human life and body.
  - 2 Equipment used for moving / transporting human.
  - 3 Equipment specifically used for safety purposes.

# 

- 1. Do not use PISCO products under the following conditions.
  - ① Beyond the specifications or conditions stated in the catalog, or the instructions.
  - ② Under the direct sunlight or outdoors.
  - ③ Excessive vibrations and impacts.
  - 4 Exposure / adhere to corrosive gas, inflammable gas, chemicals, seawater, water and vapor. \*
    - \* Some products can be used under the condition above(4), refer to the details of specification and condition of each product.
- 2. Do not disassemble or modify PISCO products, which affect the performance, function, and basic structure of the product.
- 3. Turn off the power supply, stop the air supply to PISCO products, and make sure there is no residual air pressure in the pipes before maintenance and inspection.
- 4. Do not touch the release-ring of push-in fitting when there is a working pressure. The lock may be released by the physical contact, and tube may fly out or slip out.
- 5. Frequent switchover of compressed air may generate heat, and there is a risk of causing burn injury.
- 6. Avoid any load on PISCO products, such as a tensile strength, twisting and bending. Otherwise, there is a risk of causing damage to the products.
- 7. As for applications where threads or tubes swing / rotate, use Rotary Joints, High Rotary Joints or Multi-Circuit Rotary Block only. The other PISCO products can be damaged in these applications.
- 8. Use only Die Temperature Control Fitting Series, Tube Fitting Stainless SUS316 Series, Tube Fitting Stainless SUS316 Compression Fitting Series or Tube Fitting Brass Series under the condition of over 60°C (140° F) water or thermal oil. Other PISCO products can be damaged by heat and hydrolysis under the condition above.
- 9. As for the condition required to dissipate static electricity or provide an antistatic performance, use EG series fitting and antistatic products only, and do not use other PISCO products. There is a risk that static electricity can cause system defects or failures.
- 10. Use only Fittings with a characteristic of spatter-proof such as Antispatter or Brass series in a place where flame and weld spatter is produced. There is a risk of causing fire by sparks.
- 11. Turn off the power supply to PISCO products, and make sure there is no residual air pressure in the pipes and equipment before maintenance. Follow the instructions below in order to ensure safety.
  - $\ \, \bigcirc$  Make sure the safety of all systems related to PISCO products before maintenance.
  - ② Restart of operation after maintenance shall be proceeded with care after ensuring safety of the system by preventive measures against unexpected movements of machines and devices where pneumatic equipment is used.
  - ③ Keep enough space for maintenance when designing a circuit.
- 12. Take safety measures such as providing a protection cover if there is a risk of causing damages or fires on machine / facilities by a fluid leakage.

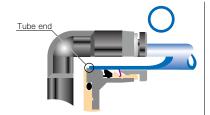


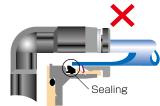
# 

- 1. Remove dusts or drain before piping. They may get into the peripheral machine / facilities and cause malfunction.
- 2. When inserting an ultra-soft tube into push-in fitting, make sure to place an Insert Ring into the tube edge. There is a risk of causing the escape of tube and a fluid leakage without using an Insert Ring.
- 3. The product incorporating NBR as seal rubber material has a risk of malfunction caused by ozone crack. Ozone exists in high concentrations in static elimination air, clean-room, and near the high-voltage motors, etc. As a countermeasure, material change from NBR to HNBR or FKM is necessary. Consult with PISCO for more information.
- 4. Special option "Oil-free" products may cause a very small amount of a fluid leakage. When a fluid medium is liquid or the products are required to be used in harsh environments, contact us for further information.
- 5. In case of using non-PISCO brand tubes, make sure the tolerance of the outer tube diameter is within the limits of Table 1.
  - Table 1. Tube O.D. Tolerance

mm size	Nylon tube	Polyurethane tube	inch size	Nylon tube	Polyurethane tube
Ø1.8mm	_	± 0.05mm	Ø1/8	$\pm$ 0.1mm	± 0.15mm
Ø3mm	_	± 0.15mm	Ø5/32	$\pm$ 0.1mm	± 0.15mm
Ø4mm	$\pm$ 0.1mm	± 0.15mm	Ø3/16	$\pm$ 0.1mm	± 0.15mm
Ø6mm	± 0.1mm	± 0.15mm	Ø1/4	$\pm$ 0.1mm	± 0.15mm
Ø8mm	$\pm$ 0.1mm	± 0.15mm	Ø5/16	$\pm$ 0.1mm	± 0.15mm
Ø10mm	± 0.1mm	± 0.15mm	Ø3/8	$\pm$ 0.1mm	± 0.15mm
Ø12mm	± 0.1mm	± 0.15mm	Ø1/2	$\pm$ 0.1mm	± 0.15mm
Ø16mm	± 0.1mm	± 0.15mm	Ø5/8	$\pm$ 0.1mm	± 0.15mm

- 6. Instructions for Tube Insertion
  - ① Make sure that the cut end surface of the tube is at right angle without a scratch on the surface and deformations
  - ② When inserting a tube, the tube needs to be inserted fully into the pushin fitting until the tubing edge touches the tube end of the fitting as shown in the figure below. Otherwise, there is a risk of leakage.





Tube is not fully inserted up to tube end.

- ③ After inserting the tube, make sure it is inserted properly and not to be disconnected by pulling it moderately.
- \*\*. When inserting tubes, Lock-claws may be hardly visible in the hole, observed from the front face of the release-ring. But it does not mean the tube will surely escape. Major causes of the tube escape are the followings;
  - (1) Shear drop of the lock-claws edge
  - ②The problem of tube diameter (usually small)

Therefore, follow the above instructions from 1 to 3, even lock-claws is hardly visible.

- 7. Instructions for Tube Disconnection
  - ① Make sure there is no air pressure inside of the tube, before disconnecting it.
  - ② Push the release-ring of the push-in fitting evenly and deeply enough to pull out the tube toward oneself. By insufficient pushing of the releasering, the tube may not be pulled out or damaged by scratch, and tube shavings may remain inside of the fitting, which may cause the leakage later.
- 8. Instructions for Installing a fitting
  - ① When installing a fitting, use proper tools to tighten a hexagonal-column or an inner hexagonal socket. When inserting a hex key into the inner hexagonal socket of the fitting, be careful so that the tool does not touch lock-claws. The deformation of lock-claws may result in a poor performance of systems or an escape of the tube.
  - ② Refer to Table 2 which shows the recommended tightening torque. Do not exceed these limits to tighten a thread. Excessive tightening may break the thread part or deform the gasket and cause a fluid leakage. Tightening thread with tightening torque lower than these limits may cause a loosened thread or a fluid leakage.
  - ③ Adjust the tube direction while tightening thread within these limits, since some PISCO products are not rotatable after the installation.
  - Table 2: Recommended tightening torque / Sealock color / Gasket materials

Thread type	Thread size	Tightening torque	Sealock color	Gasket materials	
	M3 × 0.5	0.7N·m		SUS304 NBR	
	M5 × 0.8	1.0 ~ 1.5N·m			
	M6 × 1	2 ~ 2.7N·m			
Metric thread	M3 × 0.5	0.5 ~ 0.6N·m	_		
	M5 × 0.8	1 ~ 1.5N·m		DOM	
	M6 × 0.75	0.8 ~ 1N·m		POM	
	M8 × 0.75	1 ~ 2N·m			
	R1/8	7 ~ 9N·m			
Tanar pipe thread	R1/4	12 ~ 14N·m	White	_	
Taper pipe thread	R3/8	22 ~ 24N·m	vvnite		
	R1/2	28 ~ 30N·m			
Unified thread	No.10-32UNF	1.0 ~ 1.5N·m	_	SUS304、NBR	
	1/16-27NPT	7 ~ 9N·m			
National pipe thread taper	1/8-27NPT	7 ~ 9N·m			
	1/4-18NPT	12 ~ 14N·m	White	_	
	3/8-18NPT	22 ~ 24N·m			
	1/2-14NPT	28 ~ 30N·m			

- \* These values may differ for some products. Refer to each specification as well.
- 9. Instructions for removing a fitting
  - ① When removing a fitting, use proper tools to loosen a hexagonal-column or an inner hex bolt.
  - ② Remove the sealant stuck on the mating equipment. The remained sealant may get into the peripheral equipment and cause malfunctions.
- 10. Arrange piping avoiding any load on fittings and tubes such as twist, tensile, moment load, shaking and physical impact. These may cause damages to fittings, tube deformations, bursting and the escape of tubes.

# ⚠ Common Safety Instructions for Fittings

Before selecting or using PISCO products, read the following instructions. Read the detailed instructions for individual series as well as the instructions below.

# 

- Do not use fittings with fluid medium other than air or water. (Water can be used with some series.) Contact us for using other kind of fluid medium except air and water.
- 2. Do not use fittings except Anti-spatter, Brass and Brass Compression Fitting series in a place where the flame and weld spatter is produced. There is a risk of causing fire by sparks.
- 3. As for applications where threads or tubes swing / rotate, use Rotary Joints, High Rotary Joints or Multi-Circuit Rotary Block only. The other PISCO products can be damaged in these applications.
- 4. Use only Die Temperature Control Fitting Series, Tube Fitting Stainless SUS316 Series, Tube Fitting Stainless SUS316 Compression Fitting Series or Tube Fitting Brass Series under the condition of over 60°C (140° F) water or thermal oil. Other PISCO products can be damaged by heat and hydrolysis under the condition above.
- 5. As for the condition required to dissipate static electricity or provide an antistatic performance, use EG Series fitting and antistatic products only, and do not use other PISCO products. There is a risk that static electricity can cause system defects or failures.
- 6. Avoid any load on PISCO products, such as a tensile strength, twisting and bending. Otherwise, there is a risk of causing damage to the products.

# 

1.In case of using non-PISCO brand tubes, make sure the tolerance of the outer tube diameter is within the following limits of Table 1.

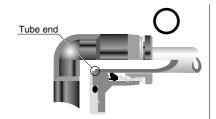
### ■ Table 1. Tube O.D. Tolerance

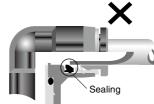
mm size	Nylon tube	Urethane tube
Ø1.8mm	_	$\pm$ 0.05mm
Ø3mm	_	$\pm$ 0.15mm
Ø4mm	$\pm$ 0.1mm	$\pm$ 0.15mm
Ø6mm	$\pm$ 0.1mm	$\pm$ 0.15mm
Ø8mm	± 0.1mm	$\pm$ 0.15mm
Ø10mm	± 0.1mm	$\pm$ 0.15mm
Ø12mm	± 0.1mm	$\pm$ 0.15mm
Ø16mm	+ 0.1mm	+ 0.15mm

inch size	Nylon tube	Urethane tube
Ø1/8	$\pm$ 0.1mm	$\pm$ 0.15mm
Ø5/32	$\pm$ 0.1mm	± 0.15mm
Ø3/16	$\pm$ 0.1mm	± 0.15mm
Ø1/4	$\pm$ 0.1mm	± 0.15mm
Ø5/16	$\pm$ 0.1mm	± 0.15mm
Ø3/8	$\pm$ 0.1mm	± 0.15mm
Ø1/2	$\pm$ 0.1mm	± 0.15mm
Ø5/8	$\pm$ 0.1mm	± 0.15mm

### 2 Instructions for Tube Insertion.

- ① Make sure that the cut end surface of the tube is at right angle without a scratch on the tube surface and deformations.
- ② When inserting a tube, the tube needs to be inserted fully into the push-in fitting until the tubing edge touches the tube end of the fitting as shown in the figure below. Otherwise, there is a risk of leakage.





Tube is not fully inserted up to tube end.

- ③ After inserting the tube, make sure it is inserted properly and not to be disconnected by pulling it moderately.
- 3. Instructions for Tube Disconnection
  - ① Make sure there is no air pressure inside of the tube, before disconnecting it.
  - ② Push the release-ring of the push-in fitting evenly and deeply enough to pull out the tube toward oneself. By insufficient pushing of the release-ring, the tube may not be pulled out or damaged by scratch, and tube shavings may remain inside of the fitting, which may cause the leakage later.

# 4. Instructions for Installing a fitting

- ① When installing a fitting, use proper tools to tighten a hexagonal-column or an inner hexagonal socket. When inserting a hex key into the inner hexagonal socket of the fitting, be careful so that the tool does not touch lock-claws. The deformation of lock-claws may result in a poor performance of systems or an escape of the tube.
- ② Refer to Table 2 which shows the recommended tightening torque. Do not exceed these limits to tighten a thread. Excessive tightening may break the thread part or deform the gasket and cause a fluid leakage. Tightening thread with tightening torque lower than these limits may cause a loosened thread or a fluid leakage.
- ③ Adjust the tube direction while tightening thread within these limits, since some PISCO products are not rotatable the installation.

● Table 2: Recommended tightening torque / Sealock color / Gasket materials

Thread type	Thread size	Tightening torque	Sealock color	Gasket materials	
	$M3 \times 0.5$	0.7N·m		SUS304	
	$M5 \times 0.8$	1.0 ~ 1.5N·m		NBR	
	$M6 \times 1$	2 ~ 2.7N·m		INDIT	
Metric thread	$M3 \times 0.5$	0.5 ~0.6N·m	_		
	$M5 \times 0.8$	1 ~1.5N·m		POM	
	$M6 \times 0.75$	0.8 ~ 1N·m		POM	
	$M8 \times 0.75$	1 ~ 2N·m			
	R1/8	7 ~ 9N·m			
Tanar pina throad	R1/4	12 ~ 14N·m	White	_	
Taper pipe thread	R3/8	22 ~ 24N·m	vviille		
	R1/2	28 ~ 30N·m			
Unified thread	No.10-32UNF	1.0 ~ 1.5N·m	_	SUS304、NBR	
	1/16-28NPT	7 ~ 9N·m			
National pipe thread taper	1/8-27NPT	7 ~ 9N·m			
	1/4-18NPT	12 ~ 14N·m	White	_	
	3/8-18NPT	22 ~ 24N·m			
	1/2-14NPT	28 ~ 30N·m			

<sup>\*.</sup> These values may differ for some products. Refer to each specification as well

# 5.Instructions for removng a fitting

- When removing a fitting, use proper tools to loosen a hexagonal-column or an inner hexagonal socket.
- ② Remove the sealant stuck on the mating equipment. The remained sealant may get into the peripheral equipment and cause malfunctions.
- 6. Arrange piping avoiding any load on fittings and tubes such as twist, tensile, moment load, shaking and physical impact. These may cause damages to fittings, tube deformations, bursting and the escape of tubes.



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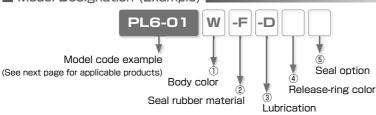
# -to-order iproducts

PISCO offers make-to-order products to support customer's various requirements such as special specifications, and special appearances.

# **Special Options**

- Characteristics
  - Color option
     Light-gray color option for resin body and release-ring.
  - Seal rubber material option
     Seal Rubber Selection: FKM or EPDM.
  - Oil-free option
     Suitable for Oil-free Environment.
  - Release-ring color option
     Changeable to Red Color
  - ●Non-purple option Suppress CU ion and F ion.
    - \*\* Note: With this option, Check Valve and Stop Fitting, etc. do not have marking on the brass parts. Be careful when piping.





# 1 Body color

Code	W	No code
Body color	Light-gray	Standard color

\* . W: Release-ring color is light-gray

### 2 Seal rubber material

Code	-F	-E	No code
Material	FKM	EPDM (Oil-free)	Standard seal rubber

- \* 1. FKM: Release-ring color is brown. Non-purple option is not available with FKM option.
- \* 2. EPDM: All oil-free. Release-ring color is yellow.
- \* 3. EPDM: Not available for Thread size M3, M6 and Fittings with Inch sized Tube dia.

# 3 Lubrication

Code	-D	No code
Option	Oil-free	Standard lubrication

- ¾ 1. Oil-free: Release-ring color is yellow.
- ※ 2. The products with oil-free option are assembled without intentional use of lubrication through its production process. It may cause problems such as degradation of airtightness and increase of friction.

# 4 Release-ring color

Code	-R	No code
Color	Red	Standard color

# 5 Seal option (Taper pipe thread only)

Code	-P	No code	
Option	Non-purple	Standard	

- \* 1. Non-purple option is not available with seal rubber FKM
- \* . See next page for "Reference Chart of Special Option" .
- \*. Contact the nearest sales office for the price.

# ■ Reference Chart of Special Option

○ : Available、× : Not available

O . Available X . Not available													
	St	andard	specif	ication			Special specification						
			Release-									(5)	
Series	Body Color and Packaging	Body	ring	rubber			Body color	Seal rubbe		Lubrication		Seal option	
	Option					option	W*1	- <b>F</b> *2	-E*3	-D*4	-R	-P*2	
							Light-gray	FKM	EPDM	Oil-free	Red	Non-purple	
Tube Fitting Standard Series	_	Black	Black		Turbin oil		_	○*5	0	0	0	0	
	Light-gray	Light-gray	Light-gray	NBR	Turbiii oii	- With sealock coat	Std. option	0	0	0	×	0	
	Clean-room pkg	Light-gray	Light-blue	, TOIT	Fluorochemical	THE SOURCE WAS	_	0	○*6	○*6	×	×	
	Light-gray + Clean-room pkg	Light-gray	Light-gray		grease		Std. option	0	0	0	×	×	
Tube Fitting Mini Series	_	Black	Black		Turbin oil		_	○*5	0	0	0	0	
	Light-gray	Light-gray	Light-gray	NBR	Turbiii oii	- With sealock coat	Std. option	0	0	0	×	0	
	Clean-room pkg	Light-gray	Light-blue	INDIT	Fluorochemical	HIEL SCOUCK WIGH	_	0	○*6	○*6	×	×	
	Light-gray + Clean-room pkg	Light-gray	Light-gray		grease		Std. option	0	0	0	×	×	
Tube Fitting Stainless SUS304 Series	_	Black	Dark-blue	FKM	Turbin oil	With sealock coat	×	Std. spec.	×	O*7	×	×	
Tube Fitting Stainless SUS303 Equivalent Corrosivity Series	_	Black	Dark-blue	HNBR	Turbin oil	With sealock coat	0	0	○*7	O*7	×	0	
Tube Fitting EG Series	_	Black	Black	NBR	Turbin oil	With sealock coat	×	0	○*8	×	×	0	
Tube Fitting Brass Series	_	_	_	HNBR/FKM/NBR	Turbin oil	With sealock coat	×	Std. option	0	0	×	0	
Tube Fitting Long Type	_	_	Black	NBR	Turbin oil	With sealock coat	×	○*5	0	0	0	0	
Speed Controller Series	_	Black	Black		Turbin oil		_	○*5	×	×	0	0	
	Light-gray	Light-gray	Light-gray	NBR	TUIDIII OII	- With sealock coat	Std. option	0	×	×	×	0	
	Clean-room pkg	Light-gray	Light-blue	INDI	Fluorochemical	WILL SEAUCY COR	_	0	×	×	×	×	
	Light-gray + Clean-room pkg	Light-gray	Light-gray		grease		Std. option	0	×	×	×	×	
Speed Controller SUS303 Equivalent Corrosivity	_	Black	Dark-blue	HNBR	Turbin oil	With sealock coat	0	0	×	×	×	0	
Throttle (Needle) Valve Standard Series	_	Black	Black		Turbin oil		_	○*5	×	×	0	0	
	Light-gray	Light-gray	Light-gray	NBR	TUIDIII OII	- With sealock coat	Std. option	0	×	×	×	0	
	Clean-room pkg	Light-gray	Light-blue	INDI	Fluorochemical	WILL SEAUCY COR	_	0	×	×	×	×	
	Light-gray + Clean-room pkg	Light-gray	Light-gray		grease		Std. option	0	×	×	×	×	
Fixed Orifice Joint Series	_	Black	Black	NBR	Turbin oil	With sealock coat	0	0	0	0	○*9	0	
Regulator Series (RVC, RVS, RVU, RVCM, RVUM)	_	Black	Black	NBR	Turbin oil	With sealock coat	0	×	×	×	○*9	0	
Check Valve Series	_	Black	Black	NBR	Turbin oil	With sealock coat	○*10	×	×	×	○*9	0	
Check Valve Series (Resin Type)	-	Light-gray	Light-gray	NBR	Turbin oil	With sealook coat	Std. option	×	×	×	×	0	
W 1 W/ Dalassa vina sale	u in limba munu												

- \* 1. W: Release-ring color is light-gray
- \*2. Seal option non-purple is not available with seal rubber material FKM
- \* 3. EPDM: All oil-free. Release-ring color is yellow. Thread size M3, M6 and Fitting with inch sized Tube dia are not available.
- \* 4. Release-ring color: Yellow.
- \* 5. Release-ring color: Brown.
- % 6. Release-ring color: Light-blue.
- $\ensuremath{\%}$  7. Release-ring color: Dark-blue.
- $\ensuremath{\%}$  8. Release-ring color: Black
- # 9. Release-ring Red is not selectable with body color Light-gray.
- \* 10. Not available for CVU4-4, CVU6-6 and CVU8-8.

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# ■ Reference chart of Apperance Color Combination (For Fitting)

	Resin color			Seal rubbe	er material	Lubrication	Release-ring color
Series		Tub		-F	-E	-D	-R
				FKM	EPDM		
	_	mm size					
		inch size					
	Light-gray	mm size	0)		0		
Tube Fitting Standard Series Tube Fitting Mini Series	Light-gray	inch size			0		
	Clean-room pkg	mm size					
		inch size	0		0	0	
	Light-gray +	mm size	0)				
	Clean-room pkg	inch size	0		0	0	
Tube Fitting Stainless SUS304 Series	-	mm size		Std. spec.			
The Care, Stainings SI/SM Emiralent Formskink Corino	_	mm size					
Tabe Filting Statinless SUSSIO Equivalent Corrosivity Series	Light-gray	mm size	0	0)		0	

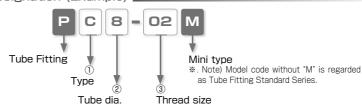
# ■ Reference chart of Apperance Color Combination (For Controller)

				-	
0:				Seal rubber material	Release-ring color
Series				FKM	<b>-R</b> レッド
		mm size			
	_	inch size			
	Light-gray	mm size	0)	0)	
Speed Controller Series	Light-gray	inch size		0	
Throttle (Needle) Valve Standard Series	Clean-room pkg	mm size			
	Glean-toon pkg	inch size		0	
	Light-gray +	mm size			
	+ Clean-room pkg	inch size		0	

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# **Space-Saving Options**

- Characteristics
  - Suitable for Installing in Limited Spaces.
- Model Designation (Example)



# ① Type

Code	Туре	Code	Туре	Code	Type	
L	Elbow	В	Branch Tee	D	Run Tee	

<sup>2</sup> Tube dia.

Code	8	10
Size (mm)	Ø8	Ø10

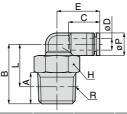
# 3 Thread size

Thread size	Taper pipe thread								
Code	01 02 03								
Size	R1/8	R1/4	R3/8						

TUBE







Unit: mm

Model code	Tube O.D. øD	R	А	В	Tube end C	L	Hex. H	Е	øΡ	Weight (g)
PL8-01M		R1/8	8	22.5		18.5	12			11.9
PL8-02M	8	R1/4	11	25.5	18.1	19.5	14	21.9	15	17.5
PL8-03M		R3/8	12	26.5		20.2	17			27.9
PL10-02M	10	R1/4	11	27	20.2	21	14	24.4	18	20.9
PL10-03M		R3/8	12	28	20.2	21.7	17	24.4		28.8

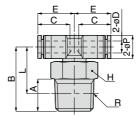
\*. "L" is a reference value for height dimension after tightening thread.

MAKE-TO-ORDER PRODUCTS



# Branch Tee





Unit: mm

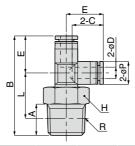
Model code	Tube O.D. øD	R	А	В	Tube end C	L	Hex. H	Е	øΡ	Weight (g)
PB8-01M		R1/8	8	22.5		18.5	12			12.8
PB8-02M	8	R1/4	11	25.5	18.1	19.5	14	21.9	15	18.2
PB8-03M		R3/8	12	26.5		20.2 17	17			26.1
PB10-02M	10	R1/4	11	27	20.2	21	14	24.4	18	22.3
PB10-03M		R3/8	12	28		21.7	17			30.4

 $\ensuremath{\text{\%}}$  . "L" is a reference value for height dimension after tightening thread.

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Unit: mm

Model code	Tube O.D. øD	R			Tube end C		Hex. H		øΡ	Weight (g)
PD8-01M		R1/8	8	44.2		18.5	12			11.9
PD8-02M	8	R1/4	11	47.2	18.1	19.5	14	21.7	15	17.5
PD8-03M		R3/8	12	48.2		20.2	17			25.3
PD10-02M	10	R1/4	11	52.3	20.2	21	14	25.3	18	21
PD10-03M	10	R3/8	12	53.3	20.2	21.7	17	20.3	10	28.8

<sup>\* .</sup>L" is a reference value for height dimension after tightening thread.