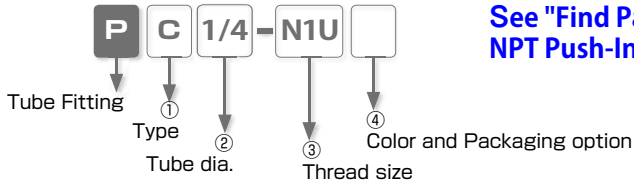


Model Designation (Example)



See "Find Part #" for Inch NPT Push-In fitting models

① Type

Code	Type	Code	Type	Code	Type	Code	Type
C	Straight	OC	Inner Hex. Straight	L	Elbow	LL	Long Elbow
LH	45° Elbow	H	Single Banjo	OL	Hex. Holed Banjo	B	Branch Tee
D	Run Tee	X	Branch Y	VX	Tripod Elbow	AX	Branch Elbow
A	Twin Banjo	RX	Double Branch Y	HW	Double Banjo	HT	Triple Banjo
AW	Double Twin Banjo	AT	Triple Twin Banjo	CF	Female Straight	MF	Bulkhead Female Straight
LF	Female Elbow	KD	Triple Run Tee	KVD	Twin Triple Run Tee	AF	Link-up Twin Banjo
HF	Link-up Banjo	U	Union Straight	E	Union Tee	V	Union Elbow
Y	Union Y	M	Bulkhead Union	MP	Bulkhead Union P	ML	Bulkhead Union Elbow
VU	Tripod Union	AU	Branch Union Elbow	ZA	Union Cross	G	Unequal Union Straight
EG	Unequal Union Tee	RG	Unequal Double Y	W	Unequal Union Y	KG	Unequal Triple Tee
KVG	Unequal Twin Triple Tee	ZB	Unequal Cross	ZC	Reducing Cross	GJ	Unequal Plug-in Straight
LJ	Plug-in Elbow	LGJ	Unequal Plug-in Elbow	LLGJ	Unequal Plug-in Long Elbow	LHJ	45° Plug-in Elbow
LLJ	Long Plug-in Elbow	YJ	Plug-in Y	WJ	Unequal Plug-in Y	KJ	Plug-in Triple Tee
RJ	Plug-in Double Y	F	Extension Screw Adaptor	FF	Unequal Screw Union	IJ	Union Stem
IG	Unequal Union Stem	TJ	PT Jack	PF	Cap	P	Plug

※ [] parts are redesigned models.

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

Tube dia.	inch size							mm size					
	Code	5/32	3/16	1/4	5/16	3/8	1/2	5/8	4	6	8	10	12
Size (mm)	ø3.97	ø4.76	ø6.35	ø7.94	ø9.53	ø12.7	ø15.88	ø4	ø6	ø8	ø10	ø12	ø16
O.D. (inch)	5/32	3/16	1/4	5/16	3/8	1/2	5/8						

※ Visit MINI fittings for 1/8" O.D. or 3mm, 2mm, 1.8mm O.D. and 1/4", 5/32", 4mm, 6mm O.D. with smaller body fitting.

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

Thread	UNF thread	National pipe taper thread				
	Code	U10U	N0U	N1U	N2U	N3U
Size	10-32UNF	NPT1/16	NPT1/8	NPT1/4	NPT3/8	NPT1/2

※ The unit of wrench size is inch (the code suffix is "U").

Thread	Metric thread (mm)		British pipe taper thread			
	Code	M5	M6	01	02	03
Size	M5 × 0.8	M6 × 1	R1/8	R1/4	R3/8	R1/2

※ R thread is same as BSPT

④ Color and Packaging option

Code	Color and Package classification	Color Combination		Remark
		Release ring (※)	Fitting body	
No code	Std.	Black, White	Black	
-C	Clean-room package	Light-blue, White	Light-gray, Black	Optional selection
W	Light-gray	Light-gray	Light-gray	Optional selection
W-C	Light-gray + Clean-room pkg.	Light-gray	Light-gray	Optional selection
-UC	Clean-wash and Clean-room pkg.	Light-blue	Light-gray	Optional selection

※ . Release-ring color is white for inch-size products.

※ . Imperial sizes - Clean-room Package comes with black body. Ask us for the options W, W-C, -UC

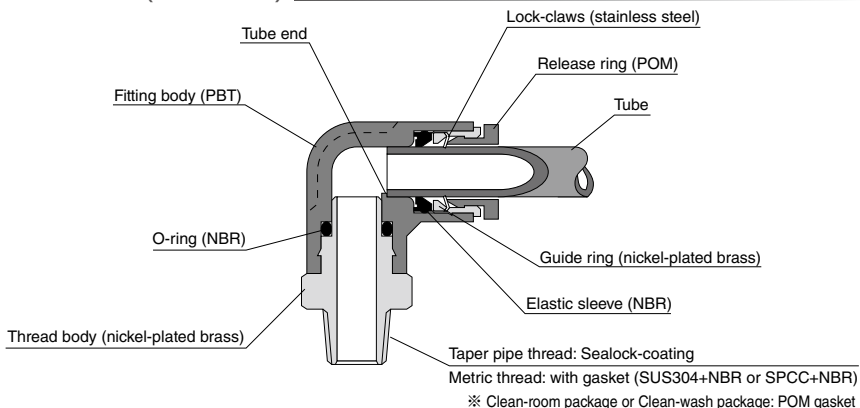
Specifications

Fluid medium	Air / Water (※)
Max. operating pressure	150psi (1.0MPa)
Max. vacuum	-29.5in. Hg (-100kPa)
Operating temp. range	32 ~ 140°F (0 ~ 60°C) (no freezing)

△ Warning

- ※ . Make sure to follow the instructions below when the fluid medium is water.
1. Surge pressure must be controlled lower than max. operating pressure.
 2. Tap water can be used. Consult with PISCO for using other kind of water.
 3. Be sure to place Insert Ring into the tube edge when using water as a fluid medium.

Construction (Elbow: PL)



△ Detailed Safety Instructions

Before using PISCO products, be sure to read "Safety Instructions" and "Common Safety Instructions for Products Listed in This Catalog" and "Common Safety Instructions for Fittings"

Warning

1. When the fluid medium is water, do not use Tube Fitting Standard Series unless the operating environment meets all the described specifications in the catalog. Otherwise, it may cause damage to the products, the escape of tubes and a fluid leakage.

Caution

1. To adjust the direction of the elbow fitting after fixing PML (Bulkhead Union Elbow) type, turn it in the clock-wise (right) direction.
2. Attach a rubber washer to the aluminum nut side when installing PML (Bulkhead Union Elbow) type. The bulkhead parts may be loosened or the rubber washer may deform if attaching it to the hexagonal side.

Caution (Clean-room package, clean-wash package)

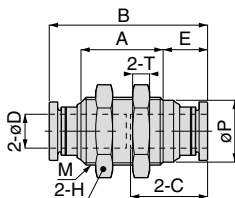
1. As for Push-In Fitting, the functional part where tube is inserted may slightly slide due to an internal pressure change and this may generate dusts. Avoid using the fitting in the clean room of ISO class from 1 to 5. Under the vibrating condition, check the amount of dust generated from the fitting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

Caution (Clean-wash package)

1. Tube insertion into the push-in fitting with clean-wash spec. is tighter than that of standard spec. due to its oil-free specification. Make sure to insert tube up to tube end.

PM Bulkhead Union

RoHS compliant



❖ Unified thread bulkhead

unit: inch

Model	Tube O.D. φD	M	B	E	A	φP	C	Hex.	T	Orifice (φ mm)	Weight (g)
PM5/32U	5/32	1/2-20UNF	1.21	0.37	0.58	0.44	0.59	9/16	0.20	3	12
PM3/16U	3/16	9/16-18UNF	1.41	0.39	0.75	0.49	0.69	11/16	0.22	4	21
PM1/4U	1/4	9/16-18UNF	1.37	0.37	0.75	0.49	0.67	11/16	0.22	5.3	20
PM5/16U	5/16	5/8-18UNF	1.47	0.41	0.76	0.56	0.72	3/4	0.22	7	23
PM3/8U	3/8	7/8-14UNF	1.67	0.47	0.85	0.80	0.81	1	0.28	8.5	48
PM1/2U	1/2	7/8-14UNF	1.86	0.51	0.95	0.80	0.91	1	0.28	11.7	49

❖ Metric thread bulkhead

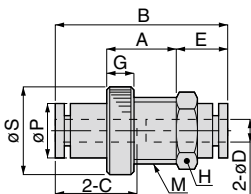
Unit : mm

Model code	Tube O.D. φD	M	B	E	A	φP	Tube end C	Hex. H	T	Orifice bore (φmm)	Weight (g)	CAD file name
PM5/32④	5/32"	M12×1	30.8	9.5	14.8	10.8	14.9	14	4	3	10	PM5_32_
PM3/16④	3/16"	M14×1	35.7	9.9	19	12.5	17.4	17	4	4	16	PM3_16_
PM1/4④	1/4"	M14×1	34.9	9.5	19	12.5	17	17	4	5.3	16	PM1_4_
PM5/16④	5/16"	M16×1	37.4	10.5	19.4	14.6	18.2	19	4	7	19	PM5_16_
PM3/8④	3/8"	M20×1	42.4	11.9	21.6	18.5	20.7	24	5	8.5	36	PM3_8_
PM1/2④	1/2"	M22×1	47.2	13	24.2	20.4	23.1	27	6	11.7	51	PM1_2_
PM4④	4	M12×1	30.8	9.5	14.8	10.8	14.9	14	4	3	11	PM4_
PM6④	6	M14×1	34.9	9.5	19	12.5	17	17	4	5	16	PM6_
PM8④	8	M16×1	37.4	10.5	19.4	14.6	18.2	19	4	7	19	PM8_
PM10④	10	M20×1	42.4	11.9	21.6	18.5	20.7	24	5	9	35	PM10_
PM12④	12	M22×1	47.6	13.2	24.2	20.4	23.3	27	6	11	52	PM12_
PM16④	16	M28×1.5	50.6	13.2	27.2	25.5	24.8	32	6	15	73	PM16_

Ask us for PM5/8 - 5/8" O.D. same dimensions as PM16

PMP Bulkhead Union P

RoHS compliant



Unit : mm

Model code	Tube O.D. φD	M	B	E	A	φP	φS	Tube end C	Hex. H	G	Orifice bore (φmm)	Weight (g)	CAD file name
PMP5/32④	5/32"	M12×1.5	31.4	9.2	12	10	16	14.9	14	5	3	6.8	PMP5_32
PMP1/4④	1/4"	M14×1.5	35.5	9.8	15	12.3	19	17	17	5	5	9.5	PMP1_4
PMP5/16④	5/16"	M16×1.5	38.4	10.7	15.5	14.2	22	18.1	19	6	7	14	PMP5_16
PMP3/8④	3/8"	M20×2	43	13	18.5	17.5	27.5	20.7	24	6	8	24	PMP3_8
PMP1/2④	1/2"	M24×2	49	13.5	20.5	21	31	23.7	27	6	11.7	31	PMP1_2
PMP4④	4	M12×1.5	31.4	9.2	12	10	16	14.9	14	5	3	6.8	PMP4
PMP6④	6	M14×1.5	35.5	9.8	15	12.3	19	17	17	5	4.9	9.6	PMP6
PMP8④	8	M16×1.5	38.4	10.7	15.5	14.2	22	18.1	19	6	7	14	PMP8
PMP10④	10	M20×2	43	13	18.5	17.5	27.5	20.7	24	6	8	23	PMP10
PMP12④	12	M24×2	48.4	13.2	20.5	21	31	23.4	27	6	11	32	PMP12

Common caution in this page

- ※ 1. ④ in Model code / Replaced with "W" for Light-gray color, "-C" for Clean-room package, "-W-C" for Light-gray color and Clean-room package, "-UC" for Clean-wash and Clean-room package
- ※ 2. Orifice bore is the smallest passage converted in terms of the diameter.



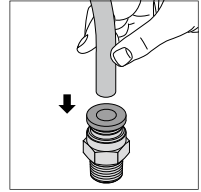
How to insert and disconnect

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.

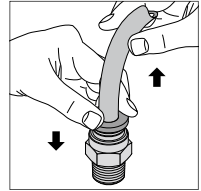
Refer to "6. Instructions for Tube Insertion" under "Common Safety Instructions for Products Listed in This Catalog".



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.

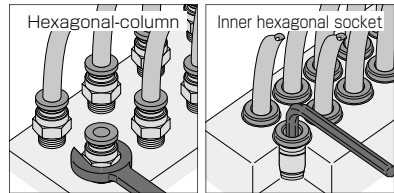


2. How to tighten thread

① Tightening thread

There are two ways to tighten 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: Tightening torque / Sealock color / Gasket materials" under "8. Instructions for Installing a fitting" in "Common Safety Instructions for Products Listed in This Catalog".



**See "Find Part # " for Inch NPT
and Metric Push-In fittings**

Common Safety Instructions for Fittings

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

Warning

1. Use PISCO products within the range of the specifications for each series. Consult with PISCO for use outside the specifications.

Caution









1. A panel mounting nut of Bulkhead Union (PM), Bulkhead Union P (PMP), and Bulkhead Union Elbow (PML) should be tightened within the specified tightening torque range.

● Bulkhead nut tightening torque

Series	Tube size	Tightening torque	
		Bulkhead Union (PM)	Bulkhead Union P (PMP), Bulkhead Union Elbow (PML)
Tube Fitting	4	12.0 ~ 14.0N·m	0.4 ~ 0.6N·m
	6	18.0 ~ 21.0N·m	0.9 ~ 1.1N·m
	8	18.0 ~ 21.0N·m	1.1 ~ 1.3N·m
	10	19.0 ~ 21.0N·m	2.3 ~ 2.7N·m
	12	19.0 ~ 21.0N·m	2.7 ~ 3.3N·m
	16	42.0 ~ 54.0N·m	—
Tube Fitting Mini	1.8	0.8 ~ 1.0N·m	—
	2	0.8 ~ 1.0N·m	
	3	2.5 ~ 3.5N·m	
	4	5.0 ~ 7.0N·m	
	6	12.0 ~ 14.0N·m	

2. If an object between the bulkhead nut and fitting body is deformable or has oil on its surface, the nut may loosen after tightening.
3. PISCO pneumatic fittings are designed for use with tube inserted. Air supply without tube insertion such as air flushing may cause an elastic sleeve to fly out of the fitting.

Identification of fittings

Tube Fitting Standard	Tube Fitting Standard Clean-room Package
 <p>Fitting body : Black</p> <p>Release ring : Black</p>	 <p>Fitting body : Light-gray</p> <p>Release ring : Light-blue</p>
Tube Fitting Mini	Tube Fitting Mini Clean-room Package
 <p>Fitting body : Black</p> <p>Release ring : Black</p>	 <p>Fitting body : Light-gray</p> <p>Release ring : Light-blue</p>
Tube Fitting Stainless SUS303 Equivalent Corrosivity	Tube Fitting Stainless SUS304
 <p>Guide ring : Without V groove</p> <p>Fitting body : Black</p> <p>Release ring : Dark blue</p> <p>Thread body : Without Flat groove on the hexagonal column</p>	 <p>Guide ring : With V groove</p> <p>Fitting body : Black</p> <p>Release ring : Dark blue</p> <p>Thread body : With Flat groove on the hexagonal column</p>
Tube Fitting PP (Thread material : PP)	Tube Fitting PP (Thread material : SUS304)
 <p>Fitting body : Translucent</p> <p>Release ring : Translucent</p> <p>Thread body : Resin thread</p>	 <p>Fitting body : Translucent</p> <p>Release ring : Translucent</p> <p>Thread body : Metal thread</p>