

Tube Fitting Series

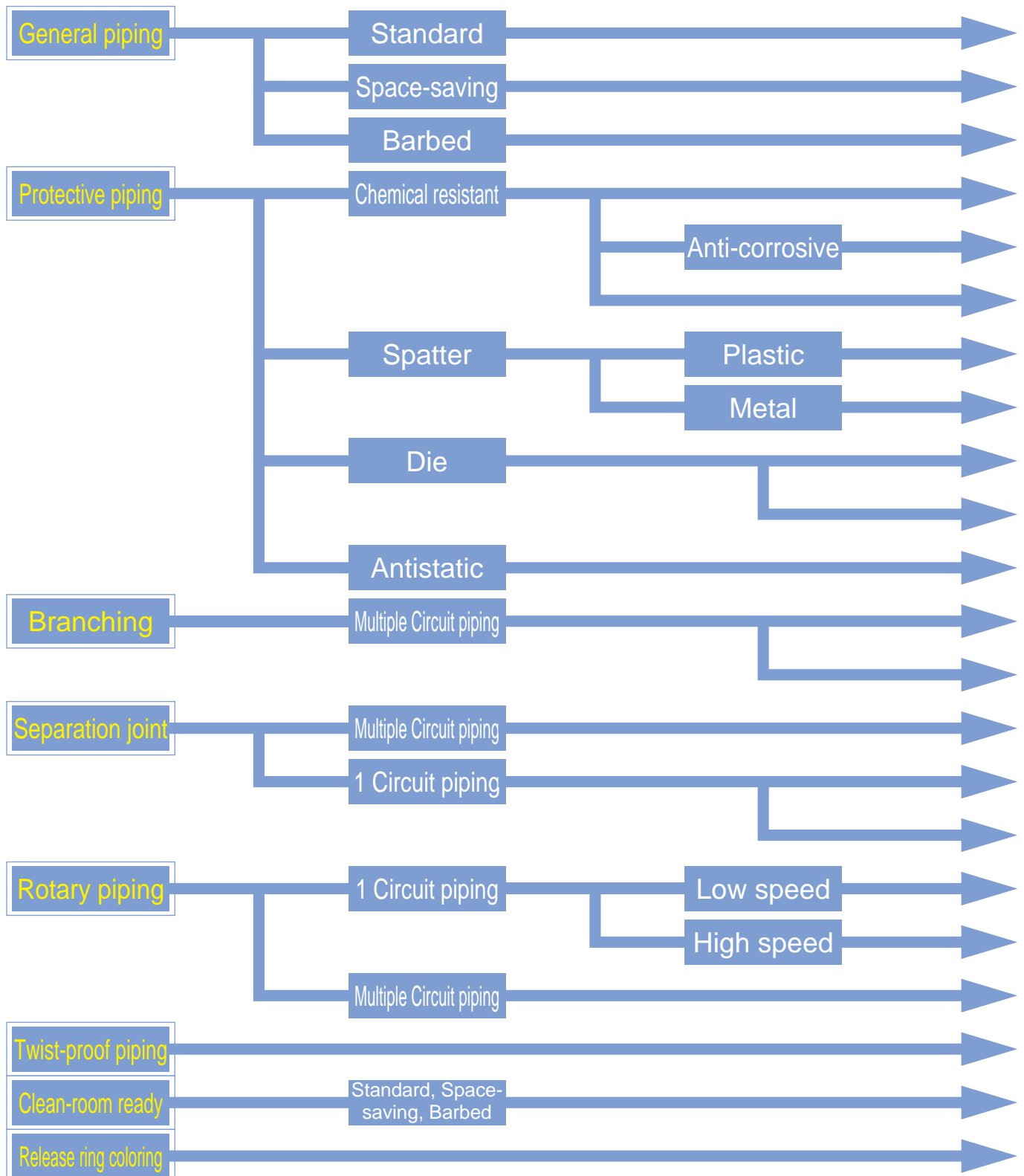


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Tube Fitting Series

Coming in a wide variety in tube and thread sizes, PISCO supplies tube fittings to all applications of pneumatic piping.

Classified Index



Product name	Fluid admitted	Service pressure range	Negative pressure range	Service temperature range	Page
Tube Fitting	Air, Water(Conditional)	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	32
Tube Fitting Mini Series	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	54
Tube Fitting Minimal	Air	0~72psi (0-0.5MPa) for NC Tube:0~43psi (0-0.3MPa)	-27.6 in.Hg (-93kPa)	32~122°F (0~50°C)	64
Tube Fitting Stainless SUS316 Series	Air, Water, etc	Gas:0~145psi (0-1.0MPa) Fluid:0~43.5psi (0-0.3MPa)	-29.5 in.Hg (-100kPa)	5~248°F (-15~120°C)	68
Tube Fitting Stainless Anti-Corrosive equiv. to SUS303	Air	0~150 psi (0-0.9MPa)	-27.6 in.Hg (-93kPa)	32~140°F (0~60°C)	72
Tube Fitting Stainless SUS304 Series	Air, Chemical(Conditional)	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	80
Tube Fitting Spatter	Air, Water(Conditional)	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	88
Tube Fitting Brass	Air, Water(Conditional)	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F(0~60°C) 32~248°F(0~120°C)	92
Die Temperature Control Fitting	Air, Water(Conditional) Heat Medium Oil	Air:0~150psi (0-0.9MPa) Water, Heat Medium Oil:0~43psi (0-0.3MPa)	-	Air:32~140°F(0~60°C) Water:32~210°F(0~99°C) Heat-Medium Oil:32~248°F(0~120°C)	96
Tube Fitting Long Type	Air, Water(Conditional)	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	106
Tube Fitting EG	Air	0~87 psi (0-0.6MPa)	-29.5 in.Hg (-100kPa)	32~104°F (0~40°C)	108
Main Block	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	112
2-Circuit Junction	Air, Water(Conditional)	0~150 psi (0-0.9MPa)	-	32~140°F (0~60°C)	120
Connector	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	124
Light Coupling	Air, Water (Conditional, only E3, E7)	0~150 psi (0-0.9MPa)	-	32~140°F (0~60°C)	126
Stop Fitting	Air	0~150 psi (0-0.9MPa)	-	32~140°F (0~60°C)	132
Rotary Joint	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	134
High Rotary Joint	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	136
Multi-Circuit Rotary Block	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	140
Coiling Tube With Twist-Proof Joint	Air	0~150 psi (0-0.9MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	142
Tube Fitting Clean Room Ready	Air	Standard, Mini:0~150psi (0-0.9MPa) Minimal:0~72 psi (0-0.5MPa)	-29.5 in.Hg (-100kPa)	32~140°F (0~60°C)	144
Color Cap	-	-	-	-	162

Common Safety Instructions for Quick-Fitting Joint

Be sure to read the following instructions before selecting and using the PISCO devices. Also read the detailed instructions for individual series.

Warning

1. Never Use the Quick-Fitting Joint with fluids other than air or water (usable with some models). For applications with fluids other than air or water, contact PISCO for instructions.
2. Never use joint other than Spatter Joint or Brass Joint where they are exposed to spatter. Otherwise spatter can cause file.
3. For applications in which the threaded side or the tube connection side is subject to vibration or rotation, use Rotaly Joint, High Rotaly Joints or Multi-Circuit Rotary Blocks only. Swinging or rotation may damage the joint body.
4. For Applications with hot water of 60°C or above or thermal oil, use no other joints than Die Temperature Control Fittings. Heat or hydrolysis may damage the joint body.
5. For applications in which the scattering of static electricity or charging must be prevented, use no other joint than EG Joints. Static electricity may cause system malfunction or trouble.
6. Do not allow tension, twist or bending forces to act on the joints. Undue forces may damage the joint body.

Caution

1. When you use tubes of brands other than ours, be sure to confirm that the outside diameter of the tubes satisfies the tolerance specified in Table 1.

Table 1 Tube O. D. Tolerance

mm size	Nylon Tube	Urethane Tube
φ3mm	-	±0.15
φ4mm	±0.1	±0.15
φ6mm	±0.1	±0.15
φ8mm	±0.1	±0.15
φ10mm	±0.1	±0.15
φ12mm	±0.1	±0.15
φ16mm	±0.1	±0.15

Inch size	Nylon Tube	Urethane Tube
φ1/8	±0.0039in.	±0.0059in.
φ5/32	+0.0039in. - 0.002in.	+0.0059in. - 0.0039in.
φ3/16	±0.0039in.	±0.0059in.
φ1/4	±0.0039in.	±0.0059in.
φ5/16	+0.0059in. 0	+0.0079in. - 0.002in.
φ3/8	±0.0039in.	±0.0059in.
φ1/2	±0.0039in.	±0.0059in.
φ5/8	+0.0039in. 0	+0.0079in. - 0.002in.

2. Cautions on the fitting of tube

- (1) Make certain that the end of the tube is cut at right angles, the tube surface is free from flaws, and the tube is not deformed into an ellipse.
- (2) When fitting a tube, refer to the dimensional specification of Table 2. To prevent leaks, insert the tube end (C) completely.

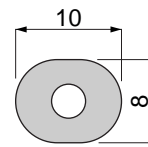
● Table 2

Standard type

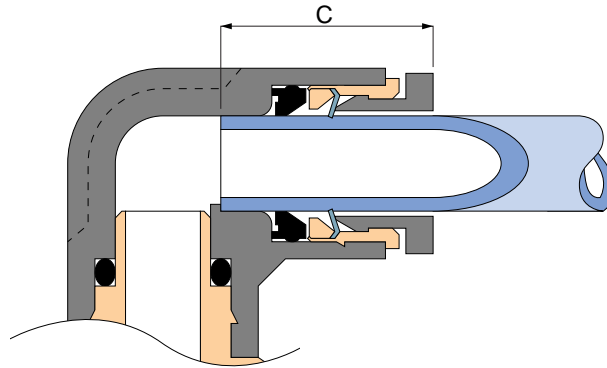
Tube dia.	φ4 φ5/32	φ6 φ3/16, φ1/4	φ8 φ5/16	φ10 φ3/8	φ12 φ1/2	φ16 φ5/8
C(mm)	15	17	18.5	20.5	23.5	24.5

Mini type

Tube dia.	φ3 (Caution)	φ4 φ1/8	φ6
C(mm)	9	11	11.5



(Caution)
Even with the tube of 3mm diameter, C=11mm for the release ring of the dimensions shown left.



- (3) On completion of fitting, make certain that the tube does not come out at your pulling.

3. Cautions on the release of tube

- (1) Before releasing the tube, make certain that the pressure inside the tube is zero.
- (2) Push the release ring fully inside and pull out the tube. Unless you push it completely in, the tube may not come out and scrapings of tube may be left inside the joint.

4. Cautions on the installation of joint body.

- (1) When installing the joint body, tighten it with a proper tool, using the outside or inside hexagon.
- (2) In tightening the screw, use the tightening torque recommended in Table 3.
 - Use of a torque higher than the recommended level may damage thread or deform gasket, thus causing leaks.
 - Use of a torque lower than the recommended level may cause loose screw and leakage.
- (3) With the joint whose piping direction will not change after tightening, make adjustment within the recommended range of tightening torques.

Table 3 Tightening Torque, Sealock Color and Gasket Material

Thread type	Thread size	Tightening torque	Sealock Color	Gasket Material
Metric thread	M3×0.5	0.7N·m(0.52lbf·ft)	—	SUS304
	M5×0.8	1~1.5N·m(0.74~1.11lbf·ft)		NBR
	M6×1	1.8~2.3N·m(1.33~1.70lbf·ft)		POM (polyacetal)
	M6×0.75	0.8~1N·m(0.59~0.74lbf·ft)		
	M8×0.75	1~2N·m(0.74~1.48lbf·ft)		
	M5×0.8	1~1.5N·m(0.74~1.11lbf·ft)		
Taper pipe thread	R1/8 R1/4 R3/8 R1/2	7~9N·m(5.16~6.64lbf·ft) 12~14N·m(8.85~10.33lbf·ft) 22~24N·m(16.23~17.70lbf·ft) 28~30N·m(20.65~22.13lbf·ft)	White	—
Unified thread	No.10-32 UNF	1~1.5N·m (0.74~1.11lbf·ft)	—	SUS304, NBR
Pipe thread general purpose (INCH)	1/16-28NPT 1/8-27NPT 1/4-18NPT 3/8-18NPT 1/2-14NPT	7~9N·m(5.16~6.64lbf·ft) 7~9N·m(5.16~6.64lbf·ft) 12~14N·m(8.85~10.33lbf·ft) 22~24N·m(16.23~17.70lbf·ft) 28~30N·m(20.65~22.13lbf·ft)	*Blue/Gray	—

*The color of sealock will be renewed from blue to gray as running change.

5. Cautions on the removal of joint body

- (1) When removing the joint body, loosen it with a proper tool, using the outside or inside hexagon.
- (2) Remove sealant sticking to the thread on the mating equipment. The sealant left sticking may enter the peripheral equipment and cause trouble.