



## Ultra-small barb fitting for anti-corrosion SUS303 Equivalent Corrosivity Minimal Series

Copper alloy  
free material

- *Suitable for small device and space-saving.*
- *Best suited for use under corrosion resistant environment or in chemical atmosphere.*
- *Max. 15% (approx.) smaller than conventional minimal fitting.*

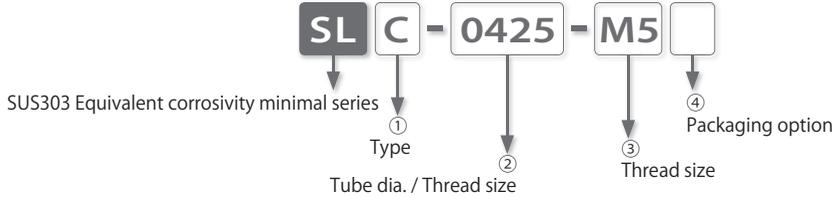
※ Applies to Female screw banjo **SLH**, and Female screw branch tee **SLB**



- *Optional selection of Clean-room package.*  
Clean-room package : Washed by clean air and packed in clean-room (Equiv. to ISO class 6).

## SUS303 Equivalent corrosivity minimal fitting series

### Model Designation (Example)



#### ①.Type

See dimensional drawings.

#### ②.Tube dia. / Thread size

##### ●Tube dia.

Code	0320	0425	0640
O.D. (mm)	ø3	ø4	ø6
I.D. (mm)	ø2	ø2.5	ø4

##### ●Thread size ( For SLN( Male screw union) only)

Code	M3	M5
Size (mm)	M3×0.5	M5×0.8

##### ●Thread size ( Female scerw)

Code	FM5
Size (mm)	M5×0.8

#### ③.Thread size

Thread size	Metric thread(mm)		
Code	M3	M5	M6
Size	M3×0.5	M5×0.8	M6×1

#### ④.Packaging option

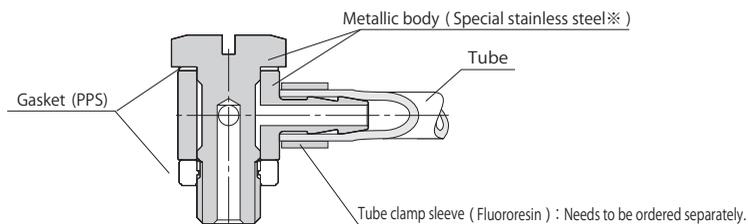
No code : Standard package

-C : Clean-room package

### Specifications

Fluid medium	Air
Max. operating pressure	0.5MPa With vacuum tube (UD) : 0.4MPa
Max. vacuum	-100kPa
Operating temp. range	0~60°C ( No freezing )

## ■ Construction ( Barb Single Banjo : SLH )



※ : Austenite or ferritic stainless steel with SUS303 equivalent corrosivity.

## △ Detailed Safety Instructions

Before using PISCO products, be sure to read "Safety Instructions" and Safety Instructions for Listed Products in This Catalog" on page 23 to 28 and "Common Safety Instructions for Fittings" on page 33 to 34.

### Caution

- 1.PPS resin has a characteristic of color change by being exposed to sunlight, fluorescent light, mercury lamp, high temperatures and etc. for a long term. There is not problem on the product performance for the color change.
- 2.Make sure to insert the barb into a tube up to the barb end. Inadequate insertion may result in the escape of the tube and a fluid leakage.
- 3.Be sure to place Tube Clamp Sleeve (LS) on the edge of outer tube when using Vacuum Tube (UD) with this product. There is a possibility to cause the escape of tube and a fluid leakage without Tube Clamp Sleeve.

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## ■ Standard Size List

### Connection: Thread⇔Tube ( P.204 ~ P.205 )

Type	Page	Thread size	Tube O.D. × I.D. (mm)		
			3×2	4×2.5	6×4
SLC Barb Straight	P.204	M3×0.5	●	●	●
		M5×0.8	●	●	●
		M6×1	●	●	●

Type	Page	Thread size	Tube O.D. × I.D. (mm)		
			3×2	4×2.5	6×4
SLH Barb Single Banjo	P.204	M3×0.5	●	●	●
SLB Barb Branch Tee	P.205	M5×0.8	●	●	●
		M3×0.5	●	●	●
		M5×0.8	●	●	●

### Connection: Tube ⇔ Tube ( P.205 )

Type	Page	Tube O.D. × I.D. 1 (mm)	Tube O.D. × I.D. 2 (mm)	
			3×2	4×2.5
SLG Unequal Barb Straight	P.205	4×2.5 6×4	●	●

### Tube Clamp Sleeve ( P.205 )

Type	Page	Tube O.D. (mm)	
		4	6
LS Tube Clamp Sleeve	P.205	●	●

### Connection: Thread⇔Thread ( P.206 ~ P.207 )

Type	Page	Thread size	Thread size (Female screw)	
			M5×0.8	
SLH Female Screw Banjo	P.206	M5×0.8	●	
SLB Female Screw Banjo Tee	P.206	M5×0.8	●	

Type	Page	Thread size (Female screw)	Thread size (Female screw)	
			M5×0.8	
SLL Female Screw Elbow	P.206	M5×0.8	●	
SLE Female Screw Tee	P.207	M5×0.8	●	

Type	Page	Thread size	Thread size (Male screw)	
			M3×0.5	M5×0.8
SLN Male Screw Union	P.207	M3×0.5 M5×0.8	●	●

### Plug ( P.207 )

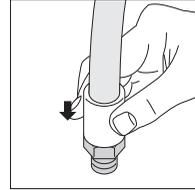
Type	Page	Thread size	
		M3×0.5	M5×0.8
SLP Plug	P.207	●	●

How to insert and disconnect

1. How to insert and disconnect tubes

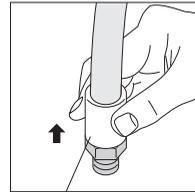
①. Tube insertion

Insert the barb into a tube up to the barb end. The outer shape of barb seals inside of the tube. The stability of tube insertion may vary by materials and the hardness of tubes. If necessary, use Tube Clamp Sleeve to avoid the escape of tubes.



②. Tube disconnection

Remove Tube Clamp Sleeve first, and pull the tube out.



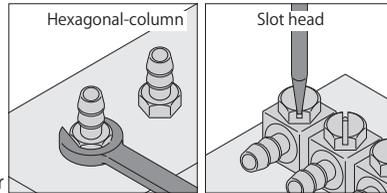
Tube Clamp Sleeve

2. How to tighten thread

①. Tightening thread

There are two ways to tighten thread. Use a spanner for a hexagonal-column or use a flathead screwdriver to tighten the slot head.

Refer to "Table 2: Recommended tightening torque / Sealock color / Gasket materials" under "8. Instructions for Installing a fitting" in "Common Safety Instructions for Products Listed in This Catalog".



Applicable Tube and Related Products

Vacuum Tube

Tube with Clean-room Package

Tube Fitting Standard Series with Clean-room Package

Tube Fitting Mini Series with Clean-room Package

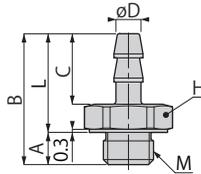
Speed Controller with Clean-room Package

Needle Valve with Clean-room Package

■ Connection: Thread↔ Tube

**SLC** Barb straight

RoHS Compliant



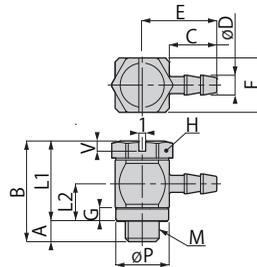
CAD  
2D & 3D

Unit : mm

Model code	Tube I.D. øD	M	A	B	L	C	Hex. H	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name	
SLC-0320-M3 □	2	M3×0.5	2.7	11	8.3	6	5.5	0.9	0.6	SLC-0320-M3_	
SLC-0320-M5 □		M5×0.8	3.2	11.5			8		1.4	SLC-0320-M5_	
SLC-0425-M3 □	2.5	M3×0.5	2.7	12	9.3	7	5.5	1.6	0.7	SLC-0425-M3_	
SLC-0425-M5 □		M5×0.8	3.2	13	9.8		8		1.6	1.6	SLC-0425-M5_
SLC-0425-M6 □		M6×1	4.2	14			8		1.9	1.9	SLC-0425-M6_
SLC-0640-M3 □	4	M3×0.5	2.7	12	9.3	7	5.5	3.8	1.1	SLC-0640-M3_	
SLC-0640-M5 □		M5×0.8	3.2	13	9.8		8		1.8	1.8	SLC-0640-M5_
SLC-0640-M6 □		M6×1	4.2	14			8		2.1	2.1	SLC-0640-M6_

**SLH** Barb Single Banjo

RoHS Compliant



CAD  
2D & 3D

Unit : mm

Model code	Tube I.D. øD	R	A	B	L1	L2	C	E	G	V	Hex. H	F	øP	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name	
SLH-0320-M3 □	2	M3×0.5	2.1	10	7.9	3.8	6	9	1.5	0.8	5.5	6	5	0.35	1.7	SLH-0320-M3_	
SLH-0320-M5 □		M5×0.8	3	14.8	11.8	5.5		10	2	1.5	8	8	7.8	7.8	0.7	4.5	SLH-0320-M5_
SLH-0425-M3 □	2.5	M3×0.5	2.1	10	7.9	3.8	7	10	1.5	0.8	5.5	6	5	0.35	1.7	SLH-0425-M3_	
SLH-0425-M5 □		M5×0.8	3	14.8	11.8	5.5		11	2	1.5	8	8	7.8	7.8	1.1	4.5	SLH-0425-M5_
SLH-0640-M5 □		M5×0.8	3	14.8	11.8	5.5		7	11	2	1.5	8	8	7.8	1.4	4.9	SLH-0640-M5_

Common instructions for this page

※1. □ in Model code / Replaced with "C" for Clean-room package.

※2. Be sure to place Tube Clamp Sleeve (LS) on the edge of outer tube in order to avoid the escape of tubes.

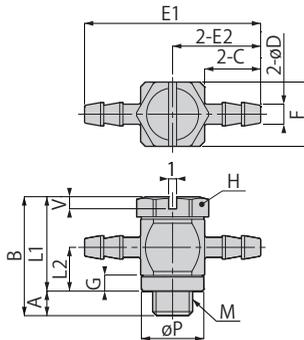
# Fitting Series

SUS303 Equivalent corrosivity minimal fitting series

■ Connection: Thread⇔Tube

## SLB Barb Branch Tee

RoHS Compliant



CAD  
2D & 3D

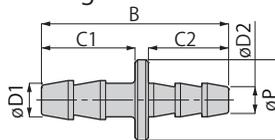
Unit : mm

Model code	Tube I.D. øD	R	A	B	L1	L2	C	E1	E2	G	V	Hex. H	F	øP	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name
SLB-0320-M3 <input type="checkbox"/>	2	M3×0.5	2.1	10	7.9	3.8	6	18	9	1.5	0.8	5.5	6	5	0.35	1.8	SLB-0320-M3_
SLB-0320-M5 <input type="checkbox"/>		M5×0.8	3	14.8	11.8	5.5		20	10	2	1.5	8	8	7.8	0.7	4.6	SLB-0320-M5_
SLB-0425-M3 <input type="checkbox"/>	2.5	M3×0.5	2.1	10	7.9	3.8	7	20	10	1.5	0.8	5.5	6	5	0.35	1.9	SLB-0425-M3_
SLB-0425-M5 <input type="checkbox"/>		M5×0.8	3	14.8	11.8	5.5		22	11	2	1.5	8	8	7.8	1.1	4.7	SLB-0425-M5_
SLB-0640-M5 <input type="checkbox"/>	4	M5×0.8	3	14.8	11.8	5.5	7	22	11	2	1.5	8	8	7.8	1.4	5.4	SLB-0640-M5_

■ Connection: Tube⇔Tube

## SLG Unequal Barb Union Straight

RoHS Compliant



CAD  
2D & 3D

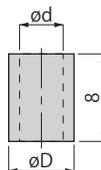
Unit : mm

Model code	Tube I.D. øD1	Tube I.D. øD2	B	øP	C1	C2	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name
SLG-0425-0320 <input type="checkbox"/>	2.5	2	14	6	7	6	0.9	0.6	SLG-0425-0320_
SLG-0640-0425 <input type="checkbox"/>	4	2.5	15.6	8	7	7	1.7	1.3	SLG-0640-0425_

■ Tube Clamp Sleeve

## LS Tube Clamp Sleeve

RoHS Compliant



CAD  
2D & 3D

Unit : mm

Model code	Tube O.D.	øD	ød	Weight (g)	CAD File name
LS-0425 <input type="checkbox"/>	4	6	4	0.3	LS-0425_
LS-0640 <input type="checkbox"/>	6	8	6	0.4	LS-0640_

Common instructions for this page

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

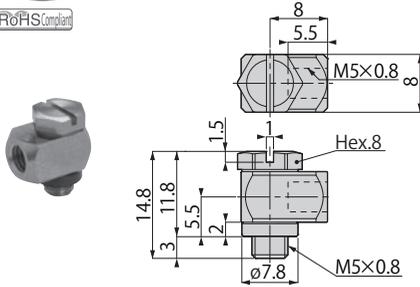
※2. Be sure to place Tube Clamp Sleeve on the edge of outer tube in order to avoid the escape of tubes.

■ Connection: Thread↔ Thread

**SLH** Female Screw Banjo



RoHS Compliant

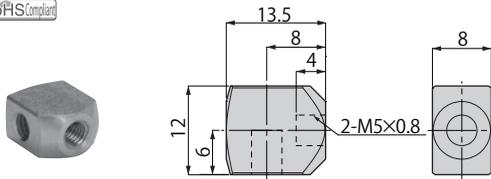


Model code	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name
SLH-FM5-M5 <input type="checkbox"/>	1.4	5.3	SLH-FM5-M5_

**SLL** Female Screw Elbow



RoHS Compliant

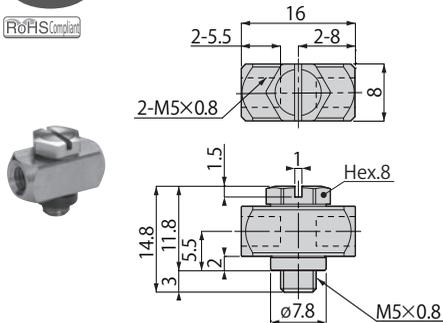


Model code	Weight (g)	CAD File name
SLL-FM5 <input type="checkbox"/>	7.4	SLL-FM5_

**SLB** Female Screw Banjo Tee



RoHS Compliant



Model code	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name
SLB-FM5-M5 <input type="checkbox"/>	1.4	6.3	SLB-FM5-M5_

Common instructions for this page

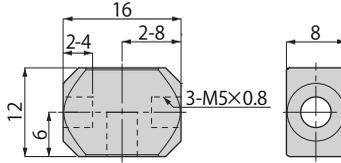
※:  in Model code / Replaced with "-C" for Clean-room package

■ Connection: Thread↔Thread

**SLE** Female Screw Tee



RoHS Compliant

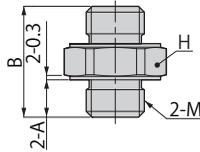


Model code	Weight (g)	CAD File name
SLE-FM5 <input type="checkbox"/>	8.2	SLE-FM5_

**SLN** Male Screw Union



RoHS Compliant



Unit : mm

Model code	R	A	B	Hex. H	Effective area (mm <sup>2</sup> )	Weight (g)	CAD File name
SLN-M3-M3 <input type="checkbox"/>	M3×0.5	2.7	8	5.5	0.9	0.6	SLN-M3-M3_
SLN-M5-M5 <input type="checkbox"/>	M5×0.8	3.2	9.5	8	4	1.5	SLN-M5-M5_

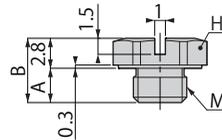
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■ Plug

**SLP** Plug



RoHS Compliant



Unit : mm

Model code	R	A	B	Hex. H	Weight (g)	CAD File name
SLP-M3 <input type="checkbox"/>	M3×0.5	2.7	5.5	5.5	0.6	SLP-M3_
SLP-M5 <input type="checkbox"/>	M5×0.8	3.2	6	8	1.4	SLP-M5_

Common instructions for this page

※:  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...General rules and safety requirements for system and their components.

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

This Safety instructions are 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 case death or serious personal injury.

 **Caution** Hazardous conditions depending on usages. Improper use of PISCO products can cause personal injury or damages to properties.

## Warning

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 malfunction.
2. The pneumatic equipments shall be handled by a person having enough knowledge and experiences.
  - 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.

## Warranty

1. When the product produces a trouble, which is caused by our responsibility, we will carry out either one of the following measures immediately.
  - ① Free-of-charge replacement of same product
  - ② Free-of-charge repair of the product at our factory

## Disclaimer

When a cause of the trouble/malfunction applies to any of the following items, it is excluded from the coverage of the above warranty.

- ①. A case by a natural disaster, a fire except our responsibility, the act by the third person/party, the intention or fault of the customer.
- ②. A case when a product is used out of the specific range or in a method listed in the product catalog or the instruction manual.
- ③. A case by the remodeling of the product or by a change of structure, performance, or specifications which PISCO is not involved in.
- ④. A case by the event that is unpredictable by the evaluations and the measures at the time on or before the initial delivery.
- ⑤. A case caused by the phenomenon that is able to be evaded if your machine or equipment has functions or structures that are comprised in a common sense when this product is incorporated in your machine or equipment.

Additionally, the above warranty is limited simply to the product itself. The damage induced by the trouble of the product will not be compensated.



## Common Safety Instructions for Products Listed in This Catalog

PISCO products are designed and manufactured for use in general industrial machines.

### **Danger**

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.

### **Warning**

1. Do not use PISCO products under the following conditions.
  - ① Beyond the specifications or conditions stated in the catalog, or the instructions.
  - ② Use at outdoors.
  - ③ Excessive vibrations and impacts.
  - ④ Exposure / adhere to corrosive gas, flammable gas, chemicals, seawater, water and vapor.
    - \* Some products can be used under the condition above(④). Refer to the details of specifications and conditions of each product.
2. Do not disassemble or modify PISCO products, which affect the performance, function, and basic structure of the product.
3. Do not touch the release-ring of a 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.
4. Frequent switchover of compressed air may generate heat, and there is a risk of causing burn injury.
5. Avoid any load on PISCO products, such as, a tensile strength, twisting and bending.
6. 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.
7. 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 heat medium oil. Other PISCO products can be damaged by heat and hydrolysis under the condition above.
8. 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.

9. Use only Fittings with a characteristic of spatter-proof such as Anti-spatter or Brass series in a place where flame and weld spatter is produced. There is a risk of causing fire by sparks.
10. 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. Follow the instructions below in order to ensure the safety.
  - ① 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 the 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.
11. Take safety measures such as providing a protection cover if there is a risk of causing damages or fire on machine / facilities by a fluid leakage.

### ⚠ Caution

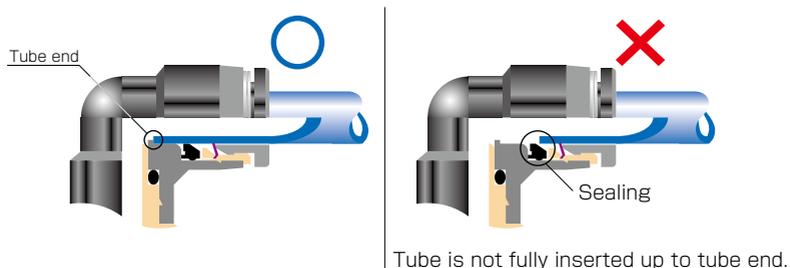
1. Remove dusts or drain before piping. They may get into the peripheral machine / facilities and cause malfunction.
2. When inserting an ultra-soft tube into a push-in fitting, make sure to place an Insert Ring into the tube edge. There is a risk of causing the escape of the tube and a fluid leakage 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.
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 and tube hardness are within the limits of Table 1.

● Table 1. Tube O.D. Tolerance

mm size	Nylon tube (SHORE D63)	Polyurethane tube (SHORE A98)	inch size	Nylon tube (SHORE D63)	Polyurethane tube (SHORE A98)
ø1.8mm	—	± 0.05mm	ø1/8	± 0.1mm	± 0.15mm
ø2mm	—	± 0.05mm	ø5/32	± 0.1mm	± 0.15mm
ø3mm	—	± 0.15mm	ø3/16	± 0.1mm	± 0.15mm
ø4mm	± 0.1mm	± 0.15mm	ø1/4	± 0.1mm	± 0.15mm
ø6mm	± 0.1mm	± 0.15mm	ø5/16	± 0.1mm	± 0.15mm
ø8mm	± 0.1mm	± 0.15mm	ø3/8	± 0.1mm	± 0.15mm
ø10mm	± 0.1mm	± 0.15mm	ø1/2	± 0.1mm	± 0.15mm
ø12mm	± 0.1mm	± 0.15mm	ø5/8	± 0.1mm	± 0.15mm
ø16mm	± 0.1mm	± 0.15mm			

## 6. Instructions for Tube Insertion

- ① Make sure that the cut end surface of the tube is at a right angle without a scratch on the tube surface or 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.



- 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 ② The 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 deep 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.

## 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 tightening torque. Do not exceed these limits to tighten a thread. Excessive tightening may break the thread part or deform the gasket to 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: Tightening torque / Sealock color / Gasket materials

Thread type	Thread size	Tightening torque	Sealock color	Gasket material
Metric thread	M3 × 0.5	0.7N·m	—	SPCC+NBR SUS304+NBR
	M5 × 0.8	1 ~ 1.5N·m		
	M6 × 1	2 ~ 2.7N·m		
	M3 × 0.5	0.7N·m		POM
	M5 × 0.8	1 ~ 1.5N·m		
	M6 × 0.75	0.8 ~ 1N·m		
	M8 × 0.75	1 ~ 2N·m		
Taper pipe thread	R1/8	4.5 ~ 6.5N·m	White	—
	R1/4	7 ~ 9N·m		
	R3/8	12.5 ~ 14.5N·m		
	R1/2	20 ~ 22N·m		
Unified thread	No.10-32UNF	1 ~ 1.5N·m	—	SPCC+NBR, SUS304+NBR
National Pipe Thread Taper (American standard)	1/16-27NPT	4.5 ~ 6.5N·m	White	—
	1/8-27NPT	4.5 ~ 6.5N·m		
	1/4-18NPT	7 ~ 9N·m		
	3/8-18NPT	12.5 ~ 14.5N·m		
	1/2-14NPT	20 ~ 22N·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 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 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.

#### 11. Instructions for handling a fitting

- ① Impact caused by dropping or the like may lead to damage to the product and a fluid leakage.

# ⚠ 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 bulkhead 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

FITTING

CONTROLLER

VALVE

TUBE

MAKE-TO-ORDER PRODUCTS

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Standard Series

Mini Series

Stainless Series

Chemical Series

PP Series

EG Series

Anti-static & P-sses Series

Oil Temperature Control

Minimal Series

Stop Fitting Series

Rotary Series

Twist-Proof Fitting

Block and Connector

Coupling

Color Cap

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>