

Throttle (Needle) Valve

Push-in fitting type needle valve

⚠ Safety instructions for this product

Safety instructions, Common safety instructions for each product category and Detailed safety instructions for each product are in the end of this catalog and our website.

Model Designation (Example)



(1) Throttle (Needle) Valve

(2) Type

Code	C	S	MU
Type	Elbow	Free	Small Union Straight

(3) Tube dia. (øD)

Code	mm size (mm)					inch size (inch)					
	4	6	8	10	12	5/32	3/16	1/4	5/16	3/8	1/2
Tube O.D.	ø4	ø6	ø8	ø10	ø12	ø5/32	ø3/16	ø1/4	ø5/16	ø3/8	ø1/2

(4) Thread size (R) (No entry for Small Union Straight type)

Code	Metric thread	Taper pipe thread				Unified fine thread	National pipe thread tapered			
	M5	01	02	03	04	U10	N1	N2	N3	N4
Thread size	M5×0.8	R1/8	R1/4	R3/8	R1/2	10-32UNF	NPT1/8	NPT1/4	NPT3/8	NPT1/2

(5) Body color + Packaging option (Optional)

Code	No code	-C	W	W-C
Specifications	Standard	Clean-room package	Light-gray	Light-gray & Clean-room
Appearance spec.				
Release-ring color ^{*2}	Black	Light-blue	Light-gray	Light-gray
Resin body color	Black	Light-gray		

*1. Release-ring color is white for all spec. of inch-size products.

*2. There is no option "W-C" for inch-size product since it is the same product as "-C".

Code : No code (inch)



Code : -C, W (inch)



(6) Wrench size specification

Code	No code	U
Wrench size spec.	mm spec.	inch spec.

Characteristics

- Controls the operation speed of a pneumatic device and the transmission of air pressure signals.

The flow rate can be adjusted while the air is flowing.

● Clean-room package (optional)

- Best suitable for piping in clean environment.

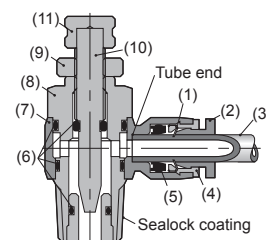
Fluorine-based grease is applied. Washed by clean air and packed in ISO class 6 equivalent clean-room.

Specifications

Type	Elbow, Free	Small Union Straight
Fluid medium	Air	
Max. operating pressure	0.9 MPa	1.0 MPa
Max. vacuum	-100 kPa	
Operating temp. range	0 to 60°C (No freezing)	

Sectional drawing

Elbow type : JNC



No.	Parts	Material
(1)	Lock claws	Stainless steel
(2)	Release-ring	POM
(3)	Tube	Polyurethane, Nylon, etc
(4)	Guide ring	Nickel-plated brass
(5)	Elastic sleeve	NBR
(6)	O-ring	NBR
(7)	Resin body	PBT
(8)	Metallic body	Nickel-plated brass
(9)	Lock nut	Aluminum
(10)	Needle	Nickel-plated brass
(11)	Knob	Nickel-plated brass

*The gasket of M or UNF thread is made of SUS304 + NBR or SPCC + NBR, but it is made of POM if the needle valve is clean-room package specification.

RoHS2 (2011/65/EU+EU2015/863) compliant

Type	Model code JNC ϕ D-R $\overline{5}$ (U)	Type	Model code JNS ϕ D-R $\overline{5}$ (U)	Type	Model code JNMU ϕ D $\overline{5}$
Elbow JNC	JNC4-M $\overline{5}$ $\overline{5}$ JNC4-O1 $\overline{5}$ JNC6-M $\overline{5}$ $\overline{5}$ JNC6-O1 $\overline{5}$ JNC6-O2 $\overline{5}$ JNC8-O1 $\overline{5}$ JNC8-O2 $\overline{5}$ JNC8-O3 $\overline{5}$ JNC10-O2 $\overline{5}$ JNC10-O3 $\overline{5}$ JNC12-O3 $\overline{5}$ JNC12-O4 $\overline{5}$ JNC $\frac{1}{4}$ -M $\overline{5}$ $\overline{5}$ JNC $\frac{1}{4}$ -O1 $\overline{5}$ JNC $\frac{1}{4}$ -O2 $\overline{5}$ JNC $\frac{5}{16}$ -O1 $\overline{5}$ JNC $\frac{5}{16}$ -O2 $\overline{5}$ JNC $\frac{5}{16}$ -O3 $\overline{5}$ JNC $\frac{3}{8}$ -O2 $\overline{5}$ JNC $\frac{3}{8}$ -O3 $\overline{5}$ JNC $\frac{1}{8}$ -U10U JNC $\frac{5}{32}$ -U10U JNC $\frac{5}{32}$ -N1U JNC $\frac{3}{16}$ -U10U JNC $\frac{3}{16}$ -N1U JNC $\frac{3}{16}$ -N2U JNC $\frac{1}{4}$ -U10U JNC $\frac{1}{4}$ -N1U JNC $\frac{1}{4}$ -N2U JNC $\frac{1}{4}$ -N3U JNC $\frac{5}{16}$ -N1U JNC $\frac{5}{16}$ -N2U JNC $\frac{5}{16}$ -N3U JNC $\frac{3}{8}$ -N2U JNC $\frac{3}{8}$ -N3U JNC $\frac{1}{2}$ -N3U JNC $\frac{1}{2}$ -N4U	Free JNS	JNS4-M $\overline{5}$ $\overline{5}$ JNS4-O1 $\overline{5}$ JNS6-M $\overline{5}$ $\overline{5}$ JNS6-O1 $\overline{5}$ JNS6-O2 $\overline{5}$ JNS8-O1 $\overline{5}$ JNS8-O2 $\overline{5}$ JNS8-O3 $\overline{5}$ JNS10-O2 $\overline{5}$ JNS10-O3 $\overline{5}$ JNS12-O3 $\overline{5}$ JNS12-O4 $\overline{5}$ JNS $\frac{1}{4}$ -M $\overline{5}$ $\overline{5}$ JNS $\frac{1}{4}$ -O1 $\overline{5}$ JNS $\frac{1}{4}$ -O2 $\overline{5}$ JNS $\frac{5}{16}$ -O1 $\overline{5}$ JNS $\frac{5}{16}$ -O2 $\overline{5}$ JNS $\frac{5}{16}$ -O3 $\overline{5}$ JNS $\frac{3}{8}$ -O2 $\overline{5}$ JNS $\frac{3}{8}$ -O3 $\overline{5}$ JNS $\frac{5}{32}$ -U10U JNS $\frac{5}{32}$ -N1U JNS $\frac{3}{16}$ -U10U JNS $\frac{3}{16}$ -N1U JNS $\frac{3}{16}$ -N2U JNS $\frac{1}{4}$ -U10U JNS $\frac{1}{4}$ -N1U JNS $\frac{1}{4}$ -N2U JNS $\frac{5}{16}$ -N1U JNS $\frac{5}{16}$ -N2U JNS $\frac{5}{16}$ -N3U JNS $\frac{3}{8}$ -N2U JNS $\frac{3}{8}$ -N3U JNS $\frac{1}{2}$ -N3U JNS $\frac{1}{2}$ -N4U	Small Union Straight JNMU	JNMU4 $\overline{5}$ JNMU6 $\overline{5}$ JNMU8 $\overline{5}$ JNMU10 $\overline{5}$ JNMU12 $\overline{5}$ JNMU $\frac{5}{32}$ $\overline{5}$ JNMU $\frac{1}{4}$ $\overline{5}$ JNMU $\frac{5}{16}$ $\overline{5}$ JNMU $\frac{3}{8}$ $\overline{5}$ JNMU $\frac{1}{2}$ $\overline{5}$

CAD data is available
at PISCO website.Packaging specifications
1 pc. /bag

Options

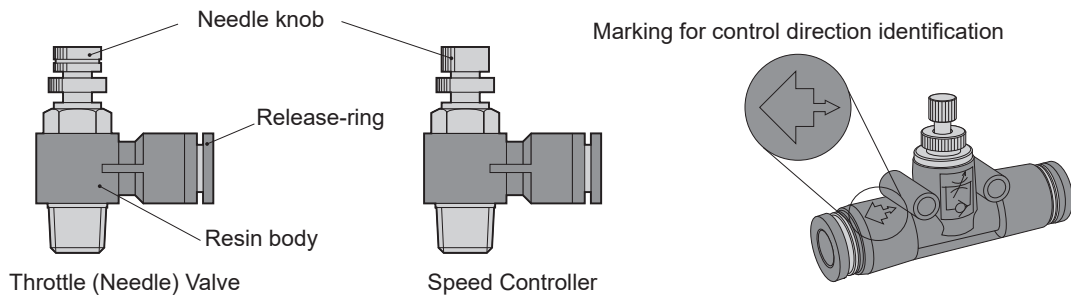
Code	$\overline{5}$: -C	$\overline{5}$: W	$\overline{5}$: W-C
Specifications	Clean-room package	Light-gray	Light-gray & Clean-room package



Non-standard options (Refer to page 893 for details)

- Seal rubber options (FKM, EPDM, HNBR)
- Copper free spec.
- Release ring color change (Red)
- ▶ Contact us for the price.

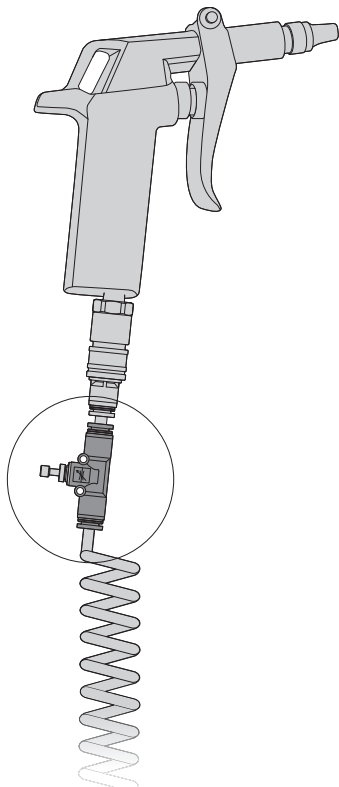
■ How to identify similar products



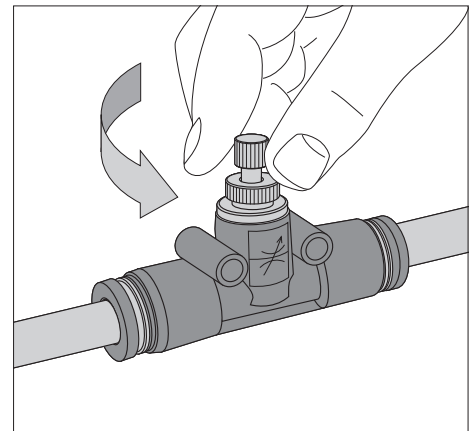
Type	Release-ring	Resin body	Needle knob	Marking for control direction identification
Throttle (Needle) Valve	Black	Black	With flat groove (*)	Without marking
Throttle (Needle) Valve Clean-room pkg.	Light blue	Light gray		
Speed Controller	Black	Black	Without flat groove	With marking

*Small Union Straight type does not have a flat groove.

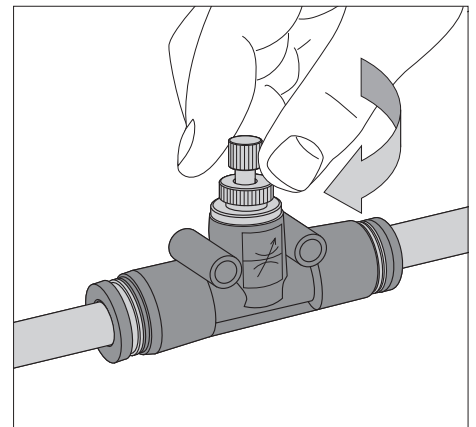
■ How to adjust flow rate



- (1) Increasing flow rate
When the needle knob of Throttle (Needle) Valve is turned counterclockwise from the fully closed position, the fluid flow rate will increase. Make sure to tighten the lock nut at the desired flow rate so that the flow rate setting cannot be changed.



- (2) Reducing flow rate
If the needle knob of Throttle (Needle) Valve is turned too far (if the flow rate is too large), turn it clockwise to reduce the fluid flow rate. Make sure to tighten the lock nut at the desired flow rate so that the flow rate setting cannot be changed.





Make to Order Production

Order Production Index

Based on the standard products, "Special specification option" on parts for matching operating environment or "Special appearance option" for matching a color for operating environment can be selected and ordered by just adding prearranged extension code of options.

*PISCO welcomes an inquiry of custom-made product, which is not listed in this catalog.
Please feel free to contact nearest PISCO office.

PISCO flexibly corresponds to non standard products that meet the needs of our customers.



Visit PISCO web site for video about Non-standard products.
<https://www.pisco.co.jp/en/product/special/>



Tube penetration type
Tube Fitting



Tube Fitting unequal
port combinations



Multiple Coupling



Bulk Packaging (Tube Fitting,
Control, Vacuum Pad)

G thread spec.



Fittings with mm size tube diameter and parallel pipe thread are available.
Contact us for inquiry.

● Applicable model

Fitting Tube Fitting, Tube Fitting Mini



Inch NPT spec.



● Applicable model

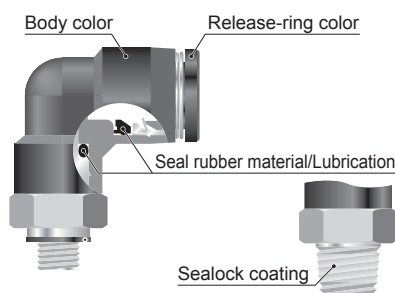
Fitting Tube Fitting, Tube Fitting Mini, Die Temperature Control Fitting, Rotary Joint, High Rotary Joint, Connector, Light Coupling

Control Speed Controller, Speed Controller Large-flow type, Orifice Flow Speed Controller, Throttle (Needle) Valve, Quick Exhaust Valve, Orifice Fitting, Pressure Regulator Push-lock type, Pressure Controller, Check Valve, Pressure Gauge

Valve Change Valve, Hand Valve, Ball Valve, Mechanical Valve



Special options



▶ Color option

Light-gray color option for resin body and release-ring.

▶ Seal rubber material option

Seal Rubber Selection: FKM, EPDM or HNBR.

▶ Oil-free option

Assembled without intentional use of oil, oil contamination into fluid medium can be prevented.

▶ ~~Non-purple option~~

~~Restraining generation of Cu ion or Fe ion from the product.~~

~~With this option, Check Valve and Stop Fitting should not have marking on the brass parts. Be careful when piping.~~

▶ Release-ring color option

Changeable to Red Color

Non-purple spec. option will no longer be available after March 31, 2025. Please see "Discontinuation notice of Non-purple spec. option" on the last page.

Model Designation (Example)

PL6-01 (1) **W** (2) **-F** (3) **-D** (4) (5)

(1) **Model code** (See the next page for available products.)

(2) **Body color** (Resin body color)

Code	W	No code
Color	Light gray	Standard

*When light-gray (W) is selected for body color, the metric (mm) size release-ring color is light-gray even for combination with any other options (except when red release-ring is specified). The color of release-ring of inch tube dia. is always white.

(3) **Seal rubber material**

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

*1. For FKM (-F) specification, the color of metric (mm) size release-ring is brown, while inch tube dia. is white. FKM (-F) specification is not available with non-purple (-P) specification.

*2. For EPDM (-E) specification, the product is assembled as oil-free specification. The color of metric (mm) release-ring is yellow.

*3. EPDM (-E) specification can not be selected for the products with M3 or M6 threads or with inch tube dia.

(4) **Lubrication**

Code	-D	-P	No code
Option	Oil-free	Non-purple	Standard

*1. The metric (mm) size release-ring color of oil-free (-D) specification is yellow, while inch tube dia. is white.

*2. The product with oil-free (-D) specification is assembled without intentional use of lubrication in standard process. Therefore the problem of reducing airtightness or increasing frictions of rubber parts may be resulted.

~~*3. Non-purple (-P) option is not available with seal rubber material FKM. No Seallock coating for Non-purple option.~~

Non-purple spec. option will no longer be available after March 31, 2025. Please see "Discontinuation notice of Non-purple spec. option" on the last page.

(5) **Release-ring color**

Code	-RR	No code
Color	Red	Standard

Reference Chart of Special Options

○: Available, ×: Not available

Product series	Standard specification						Special specification							
	Body color and Packaging/ Cleaning option	Resin body color	Release-ring color	Seal rubber material	Lubrication	Thread sealing	(1)	(2)			(3)		(4)	
							Body color	Seal rubber material			Lubrication		Release-ring color	
							Light gray	FKM	EPDM	HNBR	Oil-free option	Non-purple	Red	
							W ^{*1}	-F ^{*2}	-E ^{*3}	-HN	-D ^{*4}	-F ^{*2}	-RR	
Tube fitting	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○ ^{*5}	○	○	○	○	○	
	Light gray	Light gray	Light gray				Standard spec.	○	○ ^{*6}		○	×		○
	Clean-room pkg.	Light gray	Light blue				×	○	○ ^{*6}		○	×		×
	Light gray + Clean-room pkg.	Light gray	Light gray				Standard spec.	○	○		○	×		×
	Clean wash + Clean-room pkg.	Light gray	Light blue				×	×	○ ^{*6}		Standard spec.	○		○
Tube fitting Mini	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○ ^{*5,*10}	○ ^{*10}	○ ^{*10}	○	○	○	
	Light gray	Light gray	Light gray				Standard spec.	○ ^{*10}	○ ^{*6,*10}		○ ^{*6}	×		○
	Clean-room pkg.	Light gray	Light blue				×	○ ^{*10}	○ ^{*6,*10}		○	×		×
	Light gray + Clean-room pkg.	Light gray	Light gray				Standard spec.	○ ^{*10}	○		○	×		×
Tube Fitting SUS304	Standard	Black	Dark blue	FKM	Turbin oil	Sealock coating	×	Standard spec.	○ ^{*7}	○	○ ^{*7}	×	△ ^{*17}	
Tube Fitting Stainless SUS303 equivalent corrosivity	Standard	Black	Dark blue	HNBR	Turbin oil	Sealock coating	○	○	○ ^{*7,*15}	Standard spec.	○ ^{*7}	○	○	
	Clean wash + Clean-room pkg.	Black	Dark blue				Oil-free option	×			×	Standard spec.		×
Tube Fitting Anti-static	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○	○ ^{*8}	○	○ ^{*8}	○	△ ^{*17}	
Tube fitting Brass	Standard	—	—	HNBR FKM	Turbin oil	Sealock coating	×	— Standard spec.	×	Standard spec. —	○	○	×	
Tube fitting Long	Standard	—	Black	NBR			Turbin oil	Sealock coating	×	○ ^{*5}	○	○	○	○
Main block	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○ ^{*5}	○	○	△ ^{*17}	×	○	
	Light gray	Light gray	Light gray				Standard spec.	○	○	○	○	○	○	
Connector	Standard	Black	Black	NBR	Turbin oil	—	×	○ ^{*5}	○	○	○	×	○	
Speed controller ^{*14}	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○ ^{*13}	○ ^{*10}	○	△ ^{*17}	○	○	
	Light gray	Light gray	Light gray				Standard spec.	○	○ ^{*6,*10}			○ ^{*10,*11}	×	○
	Clean-room pkg.	Light gray	Light blue				×	^{*10,*11,*12}	○ ^{*6,*10}			○ ^{*10}	×	×
	Light gray + Clean-room pkg.	Light gray	Light gray				Standard spec.	○ ^{*10}	○			○	×	×
Speed controller SUS303 equivalent corrosivity	Standard	Black	Dark blue	HNBR	Turbin oil	Sealock coating	○	○ ^{*11,*12}	○ ^{*7}	Standard spec.	△ ^{*17}	○	○	
Needle valve	Standard	Black	Black	NBR	Turbin oil	Sealock coating	×	○ ^{*5,*12}	○	○	△ ^{*17}	○	○	
	Light gray	Light gray	Light gray				Standard spec.	○	○ ^{*6}			×	○	
	Clean-room pkg.	Light gray	Light blue				×	○ ^{*12}	○			×	×	
	Light gray + Clean-room pkg.	Light gray	Light gray				Standard spec.	○	○			○	×	×
Orifice fitting	Standard	Black	Black	NBR	Turbin oil	Sealock coating	○	○	○	○	○	○ ^{*16}	○ ^{*9}	
Check valve (Metal type)	Standard	—	Black	NBR	Turbin oil	Sealock coating	×	○	×	×	△ ^{*17}	○	○	
Check valve (Resin type)		Light gray	Light gray				Standard spec.	○	×	×		○	○	
Check Valve for Low Operating Pressure	Standard	Light gray	Light gray	HNBR (Elastic sleeve)	Turbin oil	—	Standard spec.	○ (Elastic sleeve)	○ (Elastic sleeve)	Standard spec.	○	×	○	
				FKM (Valve packing)			Standard spec.	○ (Valve packing)	×	×				○

*1. When light-gray (-W) is selected for body color, the release-ring color of metric (mm) tube dia. is light-gray even for combination with any other options, except when Red color (-RR) is selected. The color of release-ring of inch tube dia. is always white.

*2. Non-purple spec. option is not available with seal rubber material FKM.

*3. For EPDM (-E) specification of sealing material, the product is assembled as oil-free specification. The color of release-ring of metric (mm) tube size is yellow, except the combination with light-gray specification, which has light-gray release-ring. EPDM (-E) specification is not available for the products with M3 or M6 threads or inch tube dia.

*4. Release-ring color: Yellow (When with light-gray specification, the release-ring color is light-gray.)

*5. Release-ring color: Brown

*6. Release-ring color: Light-blue

*7. Release-ring color: Dark-blue

*8. Release-ring color: Black

*9. Release-ring color: Red is not available with body color Light-gray.

*10. Not available for Tube dia. ø1.8 mm and ø2 mm.

*11. Not available for Low cracking pressure type.

*12. Not available for the products with M3 thread.

*13. See *5, *10, *11 and *12.

*14. Applicable types: JSC, JSS and JSM for Standard series, JSC-H for High Flow series, JSC-L and JSS-L for Low Flow series, JKC and JKL for Constant Flow series.

*15. Gasket material for Metric thread : PPS

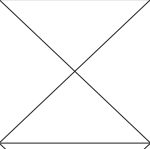
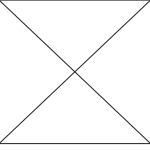
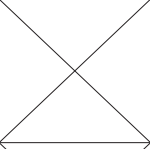
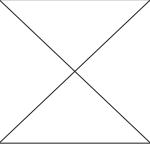
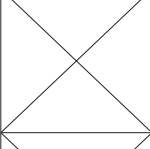
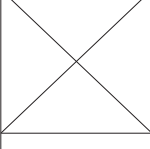
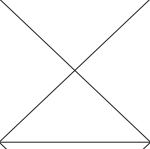
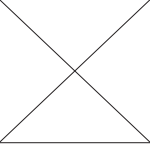
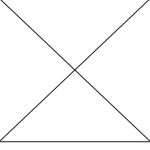
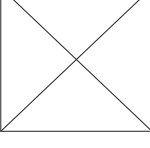
*16. Orifice bore 0.1 mm and 0.2 mm is not available.

*17. Contact us for inquiry.

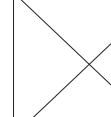
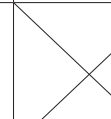
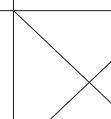
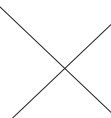
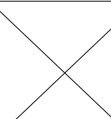
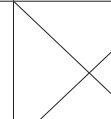
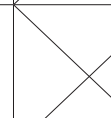
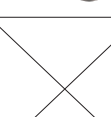
Non-purple spec. option will no longer be available after March 31, 2025. Please see "Discontinuation notice of Non-purple spec. option" on the last page.

*Consult PISCO for any inquiry of special-made product, which is not listed in this catalog.

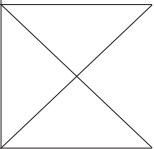
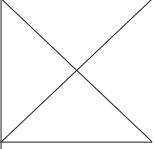
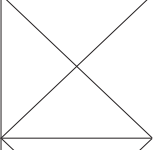
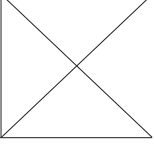
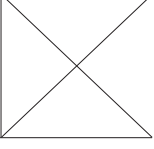
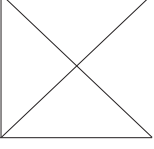
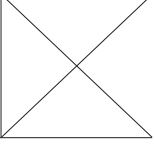
Reference Chart of Appearance Color Combination with Special Options (Fitting with Metal body)

Product series	Resin color or Option	Tube dia. size		Seal rubber material		Lubrication	Release-ring color
				-F	-E	-D	-RR
				FKM	EPDM	Oil-free option	Red
Tube fitting Tube fitting Mini	—	mm size					
		inch size					
	Light gray	mm size					
	Clean-room pkg.	mm size					
		inch size					
	Light gray + Clean-room pkg.	mm size					
Tube fitting	Clean wash + Clean-room pkg.	mm size				Standard specification	
		inch size				Standard specification	
Tube Fitting SUS304	—	mm size		Standard specification			
Tube Fitting Stainless SUS303 equivalent corrosivity	—	mm size					
	Light gray	mm size					
	Clean wash + Clean-room pkg.	mm size				Standard specification	

Reference Chart of Appearance Color Combination with Special Options (Fitting with Resin body)

Product series	Resin color or Option	Tube dia. size		Seal rubber material		Lubrication	Release-ring color	
				-F	-E	-D	-RR	
				FKM	EPDM	Oil-free option	Red	
Tube fitting Tube fitting Mini	—	mm size						
		inch size						
	Light gray	mm size						
		inch size						
	Clean-room pkg.	mm size						
		inch size						
	Light gray + Clean-room pkg.	mm size						
	Tube fitting	Clean wash + Clean-room pkg.	mm size				Standard specification	
			inch size				Standard specification	
	Tube Fitting SUS304	—	mm size		Standard specification			
Tube Fitting Stainless SUS303 equivalent corrosivity	—	mm size						
	Light gray	mm size						
	Clean wash + Clean-room pkg.	mm size				Standard specification		

Reference Chart of Appearance Color Combination with Special Options (Controllers)

Product series	Resin color or Option	Tube dia. size		Seal rubber material		Release-ring color
				-F	-E	-RR
				FKM	EPDM	Red
Speed controller Throttle (needle) valve	—	mm size				
		inch size				
	Light gray	mm size				
		inch size				
	Clean-room pkg.	mm size				
		inch size				
	Light gray + Clean-room pkg.	mm size				
		mm size				
	Light gray + Clean-room pkg.	mm size				
		mm size				

To: PISCO Distributors
 Attn: To Whom It May Concern
 Date: September 2024

Discontinuation notice of Non-purple spec. option

We would like to express our sincere gratitude for your continued patronage.
 We would like to inform you that the Non-purple spec., which was available as Special specification option, is discontinued, and its manufacturing and sales will be terminated as of the end of March, 2025.
 Thank you for your understanding.

Details

1. Discontinued option Make-to-order option, Special specification: Non-purple spec.
 Model code (Ex.): PL6-01-**P**
 *"-P" at the end of the model code

 Non-purple spec: For the Non-purple spec., fluorine ions and copper ions, which were undesirable in the manufacturing line of cathode ray tube televisions, are suppressed by not applying Sealock (fluorine-based thread sealant) to the products. Thus, Non-purple spec. is equivalent to No-Sealock spec.
2. Reason To update and expand applicable products by reviewing specifications to match the current situation.
3. Discontinuation Date **March 31, 2025**
4. Replacement Make-to-order option, Special specification: No-Sealock spec.
 Model code (Ex.): PL6-01-**NS**
 *"-NS" at the end of the model code
 *The list price remains the same.

		Thread sealant (Sealock)	Rubber material (Std. NBR)	Gasket material (Std. NBR)	Lubrication (Std. Turbine oil)	Marking	Applicable products
Discontinued	-P: Non-purple	Not applied	Fluorine materials are not selectable.			Not available	Some models of Tube Fitting
Replacement	-NS: No-Sealock	Not applied	Fluorine materials are selectable			Available	Tube Fitting, Speed Controller, Needle Valve, Check Valve, etc.

Please make inquiries to the following sales office.

Overseas Sales Department
 TEL: +81-265-76-7751 FAX: +81-265-76-3305
 E-mail: intl@pisco.co.jp URL: <https://pisco.co.jp/en/>