



In-Line Back flow Preventing Valve Low Cracking Pressure **PP** Polypropylene Check Valve

Copper alloy
free material

Non-
grease

Clean-room
packaging
option

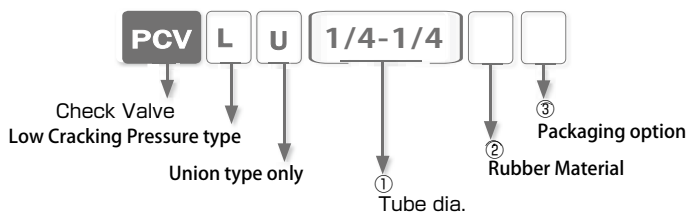


- Service pressure range from -29.5inHg to 145psi with min. opening differential pressure of 1.45psi (3inHg).
- Opening pressure : 0.73psi (5kPa)
- Resign body is made of **Polypropylene + SUS304** metal
 - Can be used with water
 - Fluid can be seen through the translucent body
 - Low noise construction
Due to no spring being used
 - Oil-Free.



In-Line Straight Low Cracking Pressure PP

(Polypropylene body + SUS304 metal parts for clean environment)



① Tube dia.

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

② Rubber material

Code	No Code	-F	-N
Material	EPDM	FKM	NBR

*The material of the diaphragm is FKM

③ Packaging option

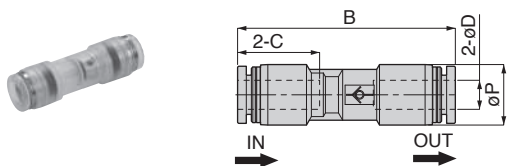
Code	No Code	-C
Material	Standard package	Clean-room package

In-Line Tube to Tube Connection



In-Line Straight Low Cracking Pressure - Polypropylene body+SUS304

RoHS対応



Model code	Tube O.D. øD	B	øP	Tube end C	Effective area (mm ²)	Weight (g)	CAD file name
PCVLU5/32-5/32	5/32	39.3	10	15	2	5	—
PCVLU1/4-1/4	1/4	45.5	12.5	17.1	4.3	7.6	—
PCVLU5/16-5/16	5/16	50.9	15	18.1	6.4	12	—
PCVLU3/8-3/8	3/8	59.3	18.5	20.4	12.3	23	—
PCVLU1/2-1/2	1/2	68.2	21.7	23.9	16.9	33	—
PCVLU4-4	4	39.3	10	15	2	5	PCVLU4-4
PCVLU6-6	6	45.5	12.5	17.1	4.3	7.4	PCVLU6-6
PCVLU8-8	8	50.9	15	18.1	6.4	12	PCVLU8-8
PCVLU10-10	10	59.3	18.5	20.4	12.3	21.7	PCVLU10-10
PCVLU12-12	12	67.6	21.7	23.6	16.9	33.4	PCVLU12-12

Specifications

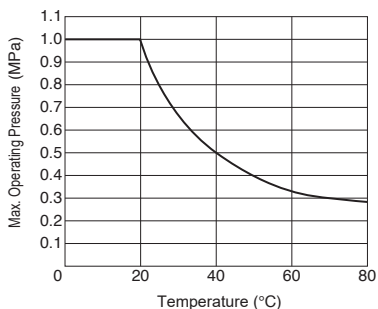
Fluid medium	Air, Water, Other chemical (conditional)
Max. operating pressure	145psi at 58 °F (1.0MPa (at 0~20°C)) ※2
Max. vacuum	-29.5in. Hg (-100kPa)
Opening pressure	0.725psi at 58 °F (5kPa (at 25°C))
Operating temp. range	32~176°F (0~80°C) (in case of NBR : 32~140 °F (0~60 °C)) (no freezing)
Min. opening differential pressure	1.45psi (0.01MPa)

※ Opening pressure is the initial pressure on the secondary side when the pressure is applied from free flow side.

Warning

- ❖ When the fluid medium is water or other chemicals, surge pressure must be controlled lower than max operating pressure. Also, make sure to use Insert Ring together with.
- ❖ Depending on the kind of chemicals, solvents, or mixed gases used as fluid medium, this specification above may not be applied. Contact us when necessary.
- ❖ Entering of foreign substances in the product may cause leakage at check valve. Please make sure to place a filter at upstream side.
- ❖ When the fluid is water, water stain may adhere to the product inside and cause leakage at check valve depending on water quality, usage environment, usage frequency and other conditions. Ultrasonic washing can improve leakage to some extent in some cases, but when leakage continues even after ultrasonic washing, replacement of the products will be necessary.
- ❖ Min. opening differential pressure refers to the minimum pressure differential needed between the upstream and the downstream where the air starts flowing.
- ❖ There could be air leakage within the volume allowed as a check valve. Do not use the products where the perfect sealing is needed.

Temperature - Max. operating Pressure Diagram

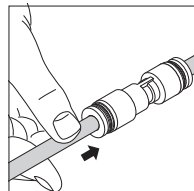


How to connect and disconnect

1. How to connect and disconnect tubes

① Tube insertion

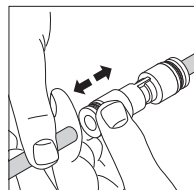
Push in a tubing up to the very end. Lock-claws bite the tubing and hold it automatically while the elastic sleeve seals around the tubing. Refer to "2. Instructions for Tube Insertion" under "Common Safety Instructions for Fittings" .



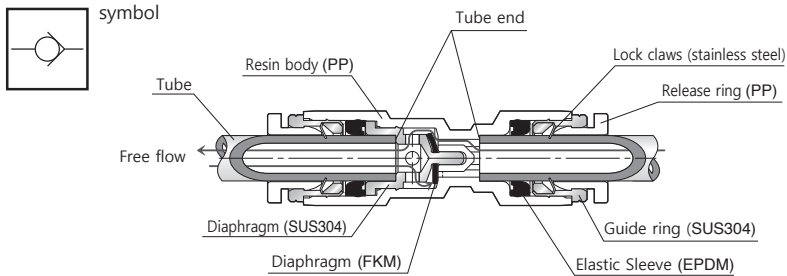
② Tube disconnection

The tubing is pulled out by pushing the release-ring which opens the Lock-claws.

Make sure turning off the air supply before the tubing disconnection.



■ Construction (PCVLU)



⚠ Detailed Safety Instructions

Before using PISCO products, be sure to read "Safety Instructions" and "Safety Instruction Manual" and "Common Safety Instructions for Controllers".

⚠ Warning

1. Frequent switching may generate heat and cause a danger of getting burnt. Contact us in case of using Check Valve with frequent switching.
2. When the fluid medium is liquid, make sure to use Insert Ring together with. There is a risk of tube coming-off or leakage without Insert Ring.
3. When the fluid medium is chemicals or mixed gases, please check chemical resistance before actual use. Some conditions can cause damage of Push-in fitting, tube coming off or leakage.
4. Do not use this series under the condition with vibration or physical impact. These may cause damage to the products, the escape of tubes and a fluid leakage.
5. Resin can be deteriorated by being exposed to direct sunlight or ultraviolet rays.
6. Max. operating pressure for this product differs according to operating temperature range. Please make sure to check the chart "Relation of Operating Temp. & Max. Operating Pressure" and use the product within the specification range.

⚠ Caution

1. In case the pressure difference between the primary pressure and the secondary pressure is extremely large, it may cause damage to the diaphragm during operation. The fragment of broken diaphragm may flow into the secondary side in the worse case.
2. The seal rubber material EPDM is not suitable for general air piping, due to its inferior durability against mineral oil.
3. If there is a possibility of fire by a fluid leakage, implement specific counter measures such as using a protective cover in order to protect machines/facilities from damages or fire.
4. Tube insertion into the check valve PP series is tighter due to its oil-free specification. Make sure to insert tube up to the very end. When inserting a tube, put a liquid like water on the tube, which will improve the smoothness of tube insertion.
5. For Low Operating Pressure Type, min. checking differential pressure should be above 10kPa. Use with checking differential pressure under 10kPa may cause leakage.
6. When pressure is applied consecutively in the checking direction on Low Operating Pressure Type, opening pressure may be higher than the catalog specification depending on ambient temperature, pressure applying time an other conditions.
7. Corrosiveness and dusting characteristics differs depending on environment. When negative effect is expected on machines or apparatus, please conduct evaluation considering the environment before actual use at user's side.

Common Safety Instructions for Controllers

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

Warning

1. Some products have an air direction to control. Make sure to distinguish the direction by marking on the products. Installing the product with the wrong direction may cause personal injury or property damage.
2. Avoid any load on PISCO products such as a tensile strength, twisting, bending, dropping and excessive impacts. These may cause damage to the products.
3. Locknut needs to be tightened by hand. Do not use any tool. Using tools to tighten the locknut may cause damage to the products. Also, inadequate tightening may loosen the locknut and the initial setting can be changed.
4. Use clean air to supply. Dusts and sludge may result in the change of the initial setting.