

For Inert Gas and Vacuum

PCV PIPE CUPLA

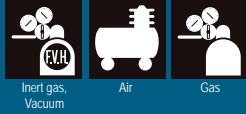
For connection to copper pipes

Working pressure

4.5
4.5 MPa
(46 kgf/cm²)

Valveless

Applicable fluids



Clamps directly on straight copper pipes !
Double seal construction withstands a vacuum of up to 1.3×10^{-1} Pa.

- Clamps directly on to straight copper pipes eliminating unnecessary welding or flaring.
- Withstands a vacuum of up to 1.3×10^{-1} Pa (when connected) making it possible to be used in leak testing, vacuum suction and refrigerant charge.
- Select from three standard types of seal materials to be used with fluids for air conditioner and refrigerator production lines. Many models to suit various pipe sizes.
- One lever operation simultaneously clamps and seals pipe. Double seal construction for tight fit on end and outside surface of pipe ensures excellent sealing and vacuum resistance.



Wide variations of end configurations; 1/4", 3/8" and blind plug

Standard seal materials fluoro rubber (FKM), hydrogenated nitrile rubber (HNBR) and chloroprene rubber (CR) to suit air conditioner and refrigerator production lines

Double seal design for tight fit on both end and outside of pipe

Many models to cover various pipe sizes

One lever operation simultaneously clamps and seals pipe

For exclusive use on straight copper pipes

Specifications

Model	PCV400	PCV470	PCV500	PCV600	PCV630	PCV800	PCV950	PCV1000	PCV1270	PCV1590
Copper pipe OD mm	ø4.0	ø4.76 (3/16")	ø5.0	ø6.0	ø6.35 (1/4")	ø8.0 (5/16")	ø9.52 (3/8")	ø10.0	ø12.7 (1/2")	ø15.88 (5/8")
Body material	Brass									
Pressure unit	MPa		kgf/cm ²		bar		PSI			
Working pressure	4.5		46		45		653			
Seal material	Seal material		Mark		Working temperature range		Remarks			
	Chloroprene rubber		CR		-20°C to +80°C		Standard material			
	Fluoro rubber		FKM		-20°C to +180°C		Standard material			
Working temperature range *1		Hydrogenated nitrile rubber		HNBR *2		-20°C to +120°C		Standard material		

*1: The operable temperature range depends on the operating conditions.

*2: Hydrogenated nitrile rubber (HNBR) is colored in blue for easy recognition.

*2: HNBR which can be used for refrigeration oil and refrigerant applications such as HFC-134a is adopted.

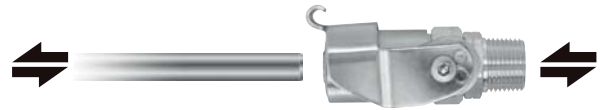
Maximum Tightening Torque

Nm {kgf·cm}

Size (Thread)	1/4"	3/8"
Torque	9 (92)	12 (122)

Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.



Minimum Cross-Sectional Area

(mm²)

Model	PCV400	PCV470	PCV500	PCV600	PCV630	PCV800
Min. cross-sectional area	3.8	3.8	3.8	9.1	9.1	16.6
Model	PCV950	PCV1000	PCV1270-2	PCV1270-3	PCV1590-2	PCV1590-3
Min. cross-sectional area	16.6	16.6	50.3	73.9	50.3	78.5

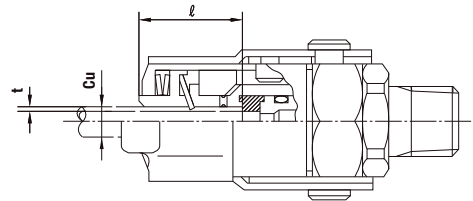
Suitability for Vacuum

1.3×10^{-1} Pa (1×10^{-3} mmHg)

CUPLA only	When connected to a pipe
-	Operational

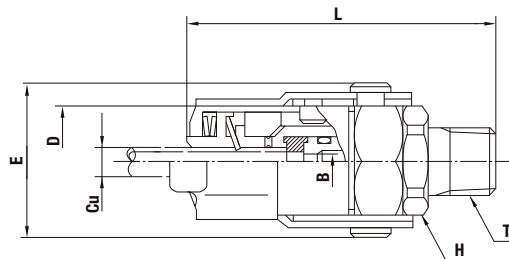
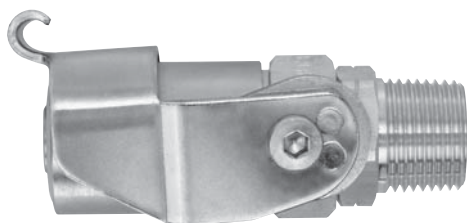
Pipe Outside Diameter, Minimum Pipe Length Required for Insertion, and Minimum Thickness of Pipe Wall

(mm)



Items with asterisk (*) are made-to-order products.

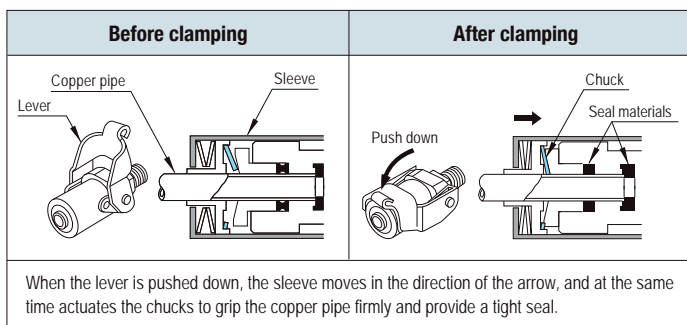
Product Group	Pipe OD (Cu)	Minimum Pipe Length Required for Insertion (l)	Minimum Thickness of Pipe Wall (t)
PCV400*	ø4.0	21	0.8 or more
PCV470	ø4.76 (3/16")		
PCV500*	ø5.0		
PCV600	ø6.0		
PCV630	ø6.35 (1/4")		
PCV800	ø8.0 (5/16")	22.5	1.0 or more
PCV950	ø9.52 (3/8")		
PCV1000*	ø10.0		
PCV1270	ø12.7 (1/2")	32.5	1.0 or more
PCV1590	ø15.88 (5/8")		



Product Group	Copper pipe OD mm	Model	Application (Thread)	Mass (g)	Dimensions (mm)					
					L	øD	H(WAF)	øB	E	T
PCV400 *	ø4.0	PCV400-2	Rc 1/4	155	(59)	22.2	Hex.17	2.2	(32.5)	R 1/4
		PCV400-3	Rc 3/8	155	(60)		Hex.19			R 3/8
PCV470	ø4.76 (3/16)	PCV470-2	Rc 1/4	155	(60)	22.2	Hex.17	2.2	(32.5)	R 1/4
		PCV470-3	Rc 3/8	160	(61)		Hex.19			R 3/8
		PCV470-0	Blind plug	160	(47)	-	-	-		
PCV500 *	ø5.0	PCV500-2	Rc 1/4	155	(59)	22.2	Hex.17	2.2	(32.5)	R 1/4
		PCV500-3	Rc 3/8	155	(60)		Hex.19			R 3/8
PCV600	ø6.0	PCV600-2	Rc 1/4	150	(60)	22.2	Hex.17	3.4	(32.5)	R 1/4
		PCV600-3	Rc 3/8	155	(61)		Hex.19			R 3/8
		PCV600-0	Blind plug	155	(47)	-	-	-		
PCV630	ø6.35 (1/4)	PCV630-2	Rc 1/4	145	(60)	22.2	Hex.17	3.4	(32.5)	R 1/4
		PCV630-3	Rc 3/8	150	(61)		Hex.19			R 3/8
		PCV630-0	Blind plug	150	(47)	-	-	-		
PCV800	ø8.0 (5/16)	PCV800-2	Rc 1/4	175	(62)	24.8	Hex.17	4.6	(35.5)	R 1/4
		PCV800-3	Rc 3/8	180	(63)		Hex.19			R 3/8
		PCV800-0	Blind plug	185	(50)	-	-	-		
PCV950	ø9.52 (3/8)	PCV950-2	Rc 1/4	175	(62)	24.8	Hex.17	4.6	(35.5)	R 1/4
		PCV950-3	Rc 3/8	180	(63)		Hex.19			R 3/8
		PCV950-0	Blind plug	180	(50)	-	-	-		
PCV1000 *	ø10.0	PCV1000-2	Rc 1/4	155	(62)	24.8	Hex.17	4.6	(35.5)	R 1/4
		PCV1000-3	Rc 3/8	155	(63)		Hex.19			R 3/8
PCV1270	ø12.7 (1/2)	PCV1270-2	Rc 1/4	470	(80)	34.8	Hex.24	8.0	(45.0)	R 1/4
		PCV1270-3	Rc 3/8	465	(81)		Hex.24			R 3/8
		PCV1270-0	Blind plug	475	(68)	-	-	-		
PCV1590	ø15.88 (5/8)	PCV1590-2	Rc 1/4	424	(80)	34.8	Hex.24	8.0	(45.0)	R 1/4
		PCV1590-3	Rc 3/8	435	(81)		Hex.24			R 3/8
		PCV1590-0	Blind plug	445	(68)	-	-	-		

* For mass with a plug, add (brass body) 2P-V : 39 g, 3P-V : 67 g, (stainless steel body) 2P-V : 34 g, or 3P-V : 59 g
 * Available on request

Clamping Mechanism



Application Example

