For Inert Gas and Vacuum

PCV Pipe Cupla

For connection to copper pipes

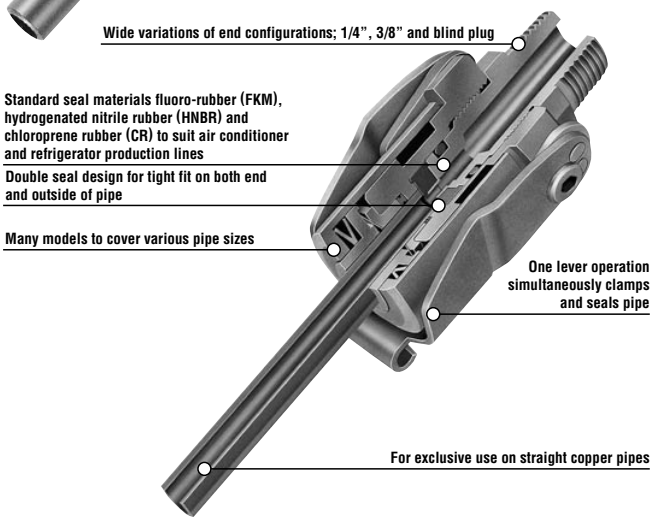
Working pressure
4.5
4.5 MPa {46 kgf/cm²}

Valveless

Applicable fluids
Inert gas, Vacuum
Air
Gas

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

- Clamps direct on to a straight copper pipe eliminating unnecessary welding or flaring.
- Withstands a vacuum of up to 1.3 x 10^{-1}Pa (when connected) making it possible to be used in leak testing, evacuation and refrigerant gas 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.



Specifications

Model	PCV400	PCV470	PCV500	PCV600	PCV630	PCV800	PCV950	PCV1000	PCV1270	PCV1590
Copper pipe OD	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									
Working pressure MPa (kgf/cm²)	4.5 {46}									
Pressure resistance MPa (kgf/cm²)	5.0 {51}									

Seal material Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Chloroprene rubber	CR (C308)	-20°C~+80°C	Standard material
	Fluoro rubber	FKM (X-100)	-20°C~+180°C	Standard material
	Hydrogenated nitrile rubber	HNBR (H708)	-20°C~+120°C	Standard material

Max. Tightening Torque N·m {kgf·cm}

Size	1/4"	3/8"
Torque	9 {92}	12 {122}

Flow Direction

Fluid may flow in either direction from plug or from socket side when coupled.

Interchangeability

If the pipe size is the same, connection to the pipe is possible even if the end configurations are different.

Min. Cross-Sectional Area (mm²)

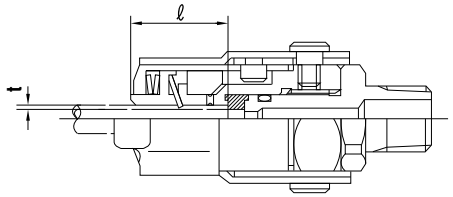
Model	PCV400	PCV470	PCV500	PCV600	PCV630	PCV800
Min. cross-sectional area	3.8	3.8	3.8	9.1	9.1	16.6

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 x 10^{-1}Pa {1 x 10^{-3}mmHg}

Only when connected to a pipe
Operational

Insert Length of Pipe into Coupling and Essential Thickness of Pipe Wall (mm)

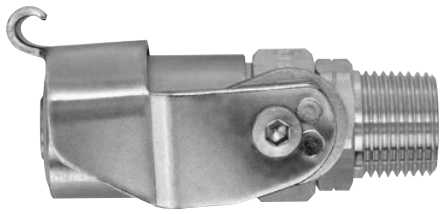


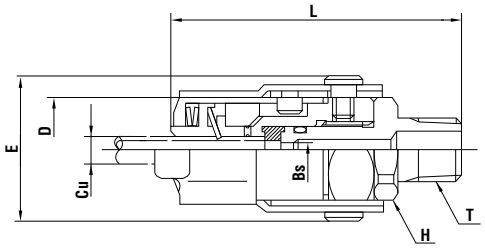
Items with asterisk (*) are made-to-order products.

Model	Insert length of pipe into coupling (ℓ)	Essential thickness of pipe wall (t)
PCV400*	19	Minimum 0.8
PCV470		
PCV500*		
PCV600		
PCV630		
PCV800	20.5	
PCV950		
PCV1000*		
PCV1270	30	Minimum 1.0
PCV1590		

Models and Dimensions

WAF : WAF stands for width across flat.

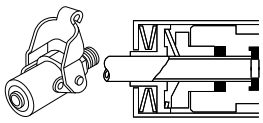
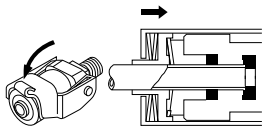




Model	Pipe OD (Cu)	Model	Size (T)	Mass (g)	Dimensions (mm)				
					L	H(WAF)	øBs	øD	E
PCV400*	ø4.0	**PCV400-2**	R 1/4	155	(59)	Hex.17	2.2	22.2	(32.5)
		PCV400-3	R 3/8	155	(60)	Hex.19			
PCV470	ø4.76 (3/16")	**PCV470-2**	R 1/4	155	(60)	Hex.17	2.2	22.2	(32.5)
		PCV470-3	R 3/8	160	(61)	Hex.19			
		PCV470-0	Blind plug	160	(47)	–	–		
PCV500*	ø5.0	**PCV500-2**	R 1/4	155	(59)	Hex.17	2.2	22.2	(32.5)
		PCV500-3	R 3/8	155	(60)	Hex.19			
PCV600	ø6.0	**PCV600-2**	R 1/4	150	(60)	Hex.17	3.4	22.2	(32.5)
		PCV600-3	R 3/8	155	(61)	Hex.19			
		PCV600-0	Blind plug	155	(47)	–	–		
PCV630	ø6.35 (1/4")	**PCV630-2**	R 1/4	145	(60)	Hex.17	3.4	22.2	(32.5)
		PCV630-3	R 3/8	150	(61)	Hex.19			
		PCV630-0	Blind plug	150	(47)	–	–		
PCV800	ø8.0 (5/16")	**PCV800-2**	R 1/4	175	(62)	Hex.17	4.6	24.8	(35.5)
		PCV800-3	R 3/8	180	(63)	Hex.19			
		PCV800-0	Blind plug	185	(50)	–	–		
PCV950	ø9.52 (3/8")	**PCV950-2**	R 1/4	175	(62)	Hex.17	4.6	24.8	(35.5)
		PCV950-3	R 3/8	180	(63)	Hex.19			
		PCV950-0	Blind plug	180	(50)	–	–		
PCV1000*	ø10.0	**PCV1000-2**	R 1/4	155	(62)	Hex.17	4.6	24.8	(35.5)
		PCV1000-3	R 3/8	155	(63)	Hex.19			
PCV1270	ø12.7 (1/2")	**PCV1270-3**	R 3/8	465	(81)	Hex.24	9.7	34.8	(45.0)
		PCV1270-2	R 1/4	470	(80)	Hex.24	8.0		
		PCV1270-0	Blind plug	475	(68)	–	–		
PCV1590	ø15.88 (5/8")	**PCV1590-3**	R 3/8	435	(81)	Hex.24	10.0	34.8	(45.0)
		PCV1590-2	R 1/4	424	(80)	Hex.24	8.0		
		PCV1590-0	Blind plug	445	(68)	–	–		

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

Clamping Mechanism

Before clamping	Clamped
	

When the lever is pushed down, the sleeve moves in the direction of the arrow, and at the same time actuates the Chucks to grip the copper pipe firmly and provide a tight seal.

Application Example

Compressor pressure test