

For Low Pressure (Air)

PURGE HI CUPLA

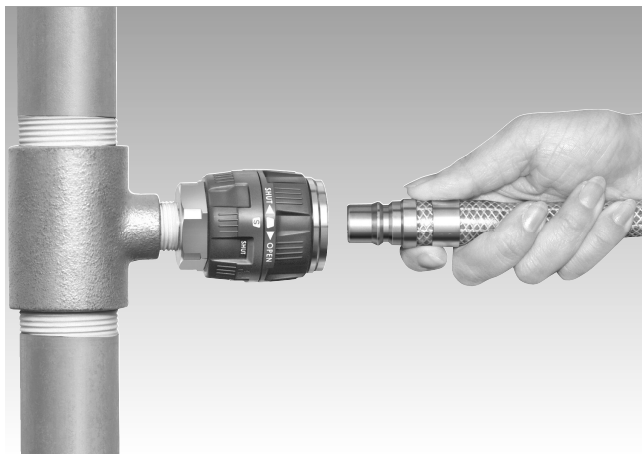
PVR Type

Air line coupling with built-in residual air pressure release function

Working pressure 1.5 MPa {15 kgf/cm ² }	Valve structure One-way shut-off	Applicable fluid Air
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Connection can be made smoothly regardless of the existing pressure inside the socket.

- Push-to-connect operation. Easy one-hand operation.
- Built-in sleeve lock mechanism prevents accidental disconnection of CUPLA, ensuring safe operation.
- Upon completion of sleeve locking the valve will open to supply air.
- When the sleeve is turned back to its original position, the valve is closed and purges residual air pressure in the plug without unpleasant popping noise and hose whip motion on disconnection.
- Even after connection, valve opening/closing control is possible.
- Flow rate increases by approximately 20% over that of HI CUPLA Model 400SM.
- Can be connected with plugs for HI CUPLA Models 400, 600 and 800.



Specifications

Body material		Zinc alloy (part Brass and others)			
Size	Thread	1/2", 3/4", 1"			
	Hose barb	1/2", 3/4", 1" hose			
Pressure unit	MPa	kgf/cm ²	bar	PSI	
Working pressure	1.5	15	15	218	
Seal material	Seal material	Mark	Working temperature range	Remarks	
Working temperature range	Nitrile rubber Hydrogenated nitrile rubber	NBR (SG)	-20°C to +60°C	Standard material	

Maximum Tightening Torque

Nm {kg · cm}

Size (Thread)	1/2"	3/4"	1"
Torque	30 {306}	50 {510}	65 {663}

Flow Direction

Fluid must run from socket to plug.



Interchangeability

Can be connected with plugs of HI CUPLA models 400, 600 and 800. Please see page 19 for "HI CUPLA Series Interchangeability".

Minimum Cross-Sectional Area

(mm²)

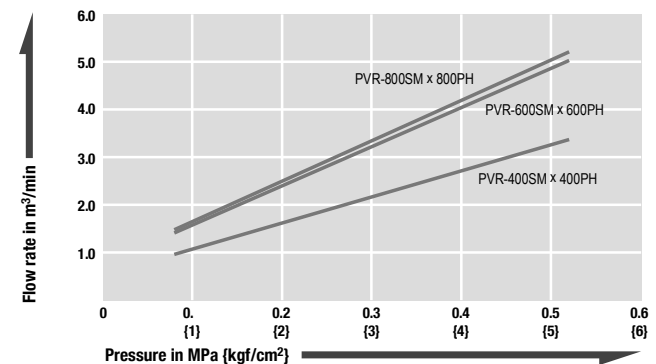
Model	400PH	600PH	800PH	400PM	600PM	800PM	400PF	600PF	800PF
PVR-400SH	64	71	71	71	71	71	71	71	71
PVR-600SH	64	116	116	116	116	116	116	116	116
PVR-800SH	64	116	116	116	116	116	116	116	116
PVR-400SM	64	116	116	116	116	116	116	116	116
PVR-600SM	64	116	116	116	116	116	116	116	116
PVR-800SM	64	116	116	116	116	116	116	116	116
PVR-400SF	64	116	116	116	116	116	116	116	116
PVR-600SF	64	116	116	116	116	116	116	116	116
PVR-800SF	64	116	116	116	116	116	116	116	116

Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Rated Characteristics

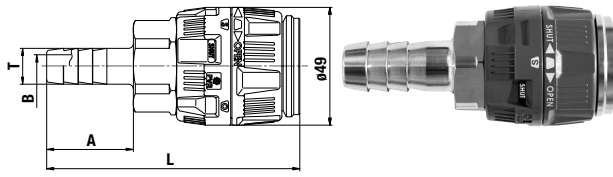
[Test conditions] • Fluid : Air • Temperature : Room temperature



Models and Dimensions

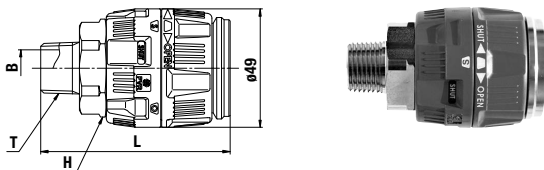
WAF : WAF stands for width across flats.

Socket SH type (Hose barb)



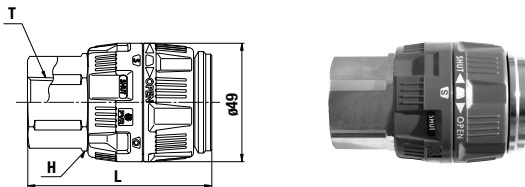
Model	Application (Hose)	Mass (g)	Dimensions (mm)			
			L	A	øT	øB
PVR-400SH	1/2"	380	(105)	36	15	9.5
PVR-600SH	3/4"	361	(109)	45	21	14
PVR-800SH	1"	440	(118)	55	27	16

Socket SM type (Male thread)



Model	Application (Thread)	Mass (g)	Dimensions (mm)			
			L	H(WAF)	T	øB
PVR-400SM	Rc 1/2	327	(78)	Hex.35	R 1/2	14
PVR-600SM	Rc 3/4	345	(82)	Hex.35	R 3/4	18
PVR-800SM	Rc 1	374	(84)	Hex.35	R 1	24

Socket SF type (Female thread)

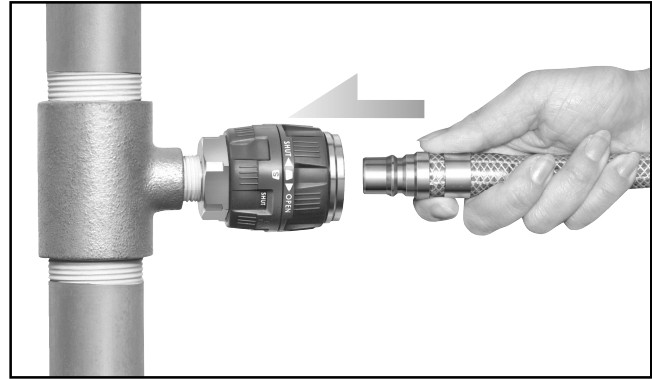


Model	Application (Thread)	Mass (g)	Dimensions (mm)		
			L	H(WAF)	T
PVR-400SF	R 1/2	394	(76)	Hex.35	Rc 1/2
PVR-600SF	R 3/4	370	(77)	Hex.35	Rc 3/4
PVR-800SF	R 1	440	(82)	Hex.41	Rc 1

Function of PURGE HI CUPLA PVR Type

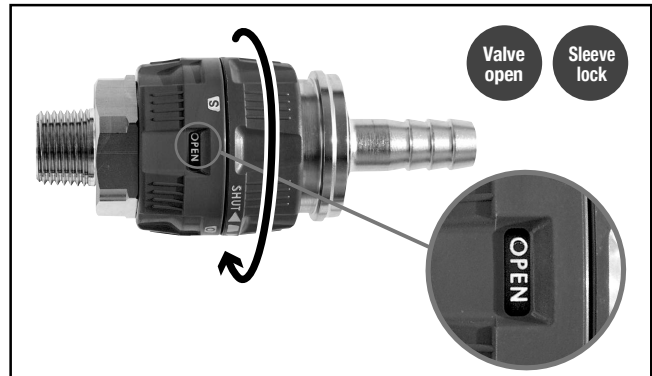
1. Connection

Valve opening/closing operation and plug connection to socket can be made independently. Push-to-connect operation is achieved regardless of existing pressure inside the pipe.



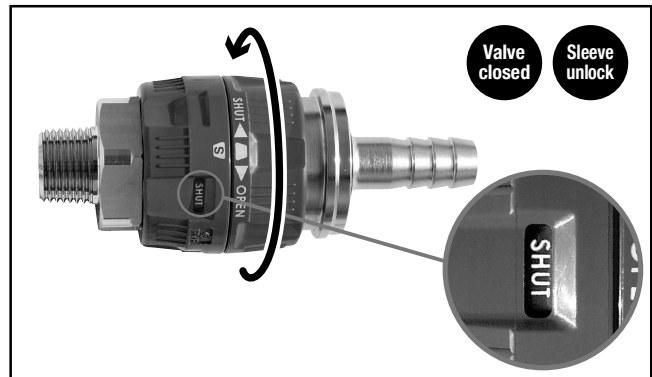
2. Open the valve and lock the sleeve.

Turning the operation ring will open the valve in the socket to supply air and lock the sleeve to prevent accidental disconnection.



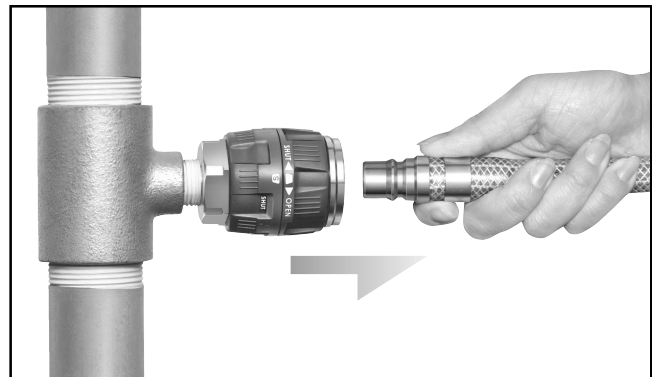
3. Close the valve and unlock the sleeve

Turning the operation ring back to its original position will close the valve and stop air flow, release the residual air pressure in the plug, and unlock the sleeve.



4. Disconnection

Disconnection can be made without unpleasant popping noise and hose whip motion due to no residual air pressure inside the plug.



For Low Pressure (Air)

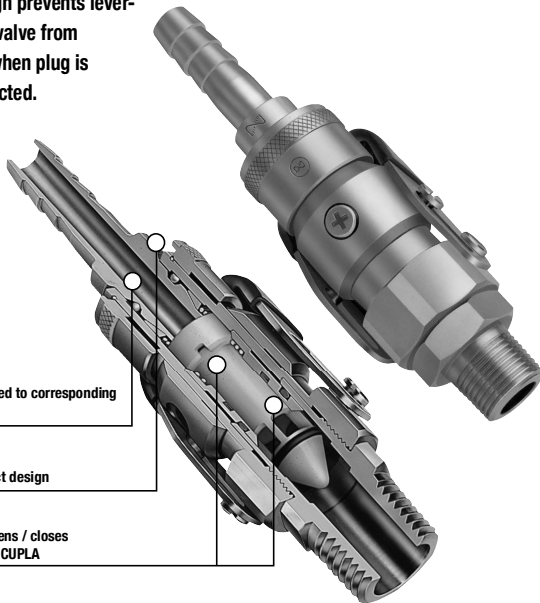
PURGE HI CUPLA

Air line coupling with residual pressure release function

Working pressure 1.0 1.0 MPa {10 kgf/cm ² }	Valve structure One-way shut-off	Applicable fluid Air
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Push-to-connect operation even with existing internal pressure! Eliminates unpleasant popping noise and hose whip motion on disconnection.

- Just push in the plug for connection regardless of internal pressure in socket.
- Even after connection, lever operation gives perfect control over valve opening/closing.
- In disconnection, lever action releases residual air pressure in the plug without unpleasant popping noise and hose whip motion.
- Safe design prevents lever-operated valve from opening when plug is not connected.



Can be connected to corresponding HI CUPLA plugs

Push-to-connect design

Lever action opens / closes the valve in the CUPLA

How to Operate

1 	Just push the plug into socket. (In this stage the valve of the socket is not open.)
2 	Turning down the lever opens the valve and allows the fluid flow. (The turned-down lever works as a sleeve stopper and prevents disconnection.)
3 	When the lever is pulled up, residual air pressure in the plug is purged without unpleasant popping noise and hose whip motion on disconnection. In this stage, the socket valve is still closed.

Specifications

Body material	Brass (Chrome plated)			
Size (Thread)	1/4", 3/8", 1/2", 3/4"			
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	1.0	10	10	145
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR (SG)	-20°C to +60°C	Standard material

Maximum Tightening Torque

Nm {kg · cm}

Model	PV-20SM	PV-30SM	PV-40SM	PV-400SM	PV-600SM
Torque	9 (92)	11 (112)	30 (306)	30 (306)	50 (510)

Flow Direction

Fluid must run from socket to plug.



Interchangeability

Models 20, 30 and 40 can be connected to plugs of HI CUPLA Models 10, 17, 20, 30 and 40. Interchangeable with each models of NUT CUPLA series and HI CUPLA series.
Models 400 and 600 can be connected with plugs of HI CUPLA models 400, 600 and 800. Please see page 19 for "HI CUPLA Series Interchangeability".

Minimum Cross-Sectional Area

(mm²)

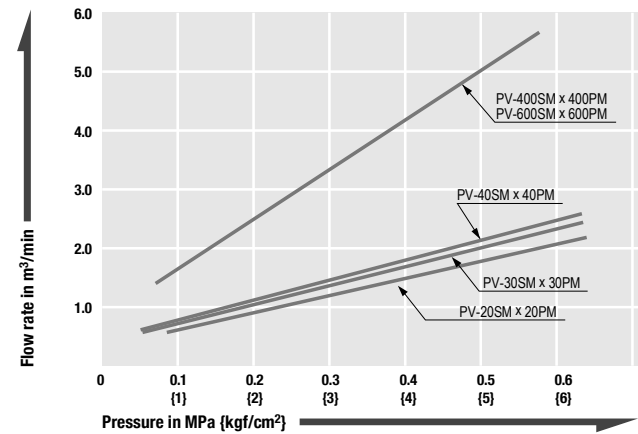
Model	PV-20SM	PV-30SM	PV-40SM	PV-400SM	PV-600SM
Min. cross-sectional area	38	41	41	94	94

Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Characteristics

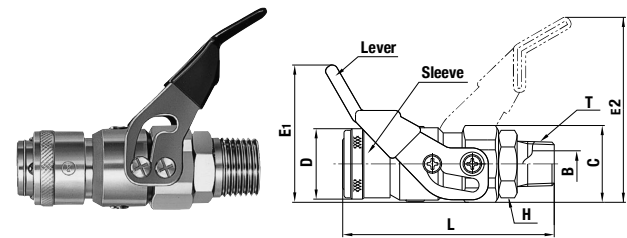
[Test conditions] • Fluid : Air • Temperature : Room temperature



Models and Dimensions

WAF : WAF stands for width across flats.

Socket



Model	Application (Thread)	Mass (g)	Dimensions (mm)							
			L	øD	E ₁	E ₂	H(WAF)	øC	T	øB
PV-20SM	Rc 1/4	225	(79)	26.5	(50.5)	(70)	Hex.22	29	R 1/4	7
PV-30SM	Rc 3/8	229	(80)	26.5	(50.5)	(70)	Hex.22	29	R 3/8	10
PV-40SM	Rc 1/2	235	(82)	26.5	(50.5)	(70)	Hex.22	29	R 1/2	14
PV-400SM	Rc 1/2	411	(94)	35	(61.5)	(82)	Hex.30	37.5	R 1/2	13
PV-600SM	Rc 3/4	424	(97)	35	(61.5)	(82)	Hex.30	37.5	R 3/4	18

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

For Low Pressure (Air)

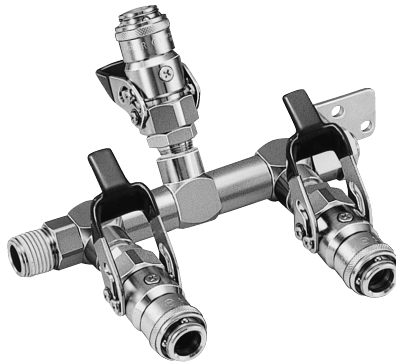
PURGE LINE CUPLA

Simple air line coupling manifold with residual pressure release function

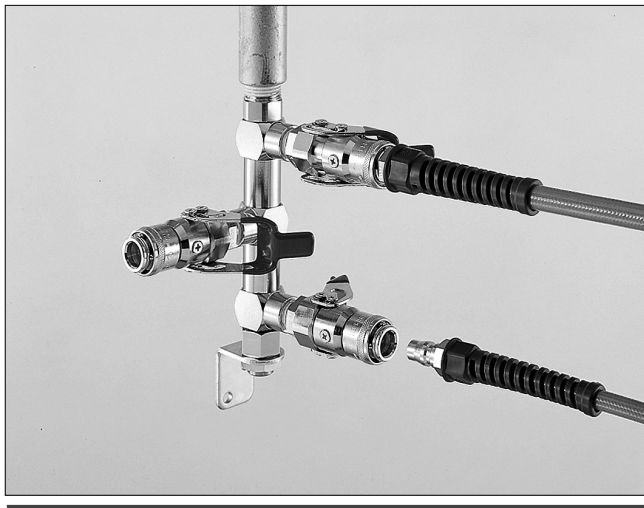
Working pressure 1.0 1.0 MPa {10 kgf/cm ² }	Valve structure One-way shut-off	Applicable fluid Air
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Residual pressure can be released by a mere lever turn. Very smooth connection/disconnection!

- Single action, just push in the plug to connect regardless of internal pressure in socket.
- No unpleasant noise of air pressure discharge and no hose whip motion on disconnection for safety operation.
- Safe design – socket valve will not open or close unless plug is connected.
- Even after connection, a lever turn will open/close valve with perfect control of air flow or line shut-off.
- Enables simultaneous air supply to three outlets from a single air line.
(A single outlet PURGE HI CUPLA is also available – see the pages of PURGE HI CUPLA for details.)



Application Example



Specifications

Body material	Brass (Chrome plated)			
Size	Inlet	R 1/2		
	Outlet	Socket (PV-30SM)		
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	1.0	10	10	145
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR (SG)	-20°C to +60°C	Standard material

Maximum Tightening Torque

Nm {kgf·cm}

Size (Thread)	1/2"
Torque	30 {306}

Flow Direction

Fluid must run from the intake port to the outlet ports. Please refer to the flow directions (arrows) on the "Models and Dimensions."

Interchangeability

Interchangeable with plugs of HI CUPLA models 10, 17, 20, 30 and 40.
Interchangeable with each models of NUT CUPLA series and HI CUPLA series.
Please see page 19 for "HI CUPLA Series Interchangeability".

Minimum Cross-Sectional Area

(mm²)

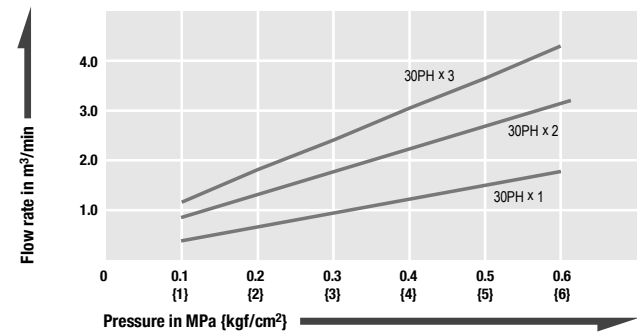
Min. cross-sectional area	41
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Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature



Models and Dimensions

WAF : WAF stands for width across flats.

Socket RE-PV-30 type (For three outlets)

Mass : 1,090 g

- Fluid must run in the direction of the arrow.

