

Block valve

FPV Series

● Port size: (Rc or R)1/4 to 1/2

JIS symbol



Features

- Compact valve ideal for preventing dropping and for cylinder braking.
- Compact and lightweight
The body has been greatly downsized compared to CKD conventional parts, with an average volume of 75% and average mass of 50%.
- Wide range of choices
Series variations from M5 to R1/2 bore sizes enable direct cylinder installation.

Specifications

Descriptions	FPV-M5	FPV-6A			FPV-8A			FPV-10A			FPV-15A		
Port size	M5	R1/8			R1/4			R3/8			R1/2		
Main side applicable tube O.D.	ø6	ø6	ø8	Rc1/8	ø6	ø8	Rc1/4	ø8	ø10	Rc3/8	ø10	ø12	Rc1/2
Pilot side applicable tube O.D.		ø4		M5	ø4		M5	ø4		Rc1/8	ø4		Rc1/8
Working fluid	Compressed air												
Max. working pressure MPa	1.0												
Min. working pressure MPa	0												
Withstanding pressure MPa	1.5												
Pilot air pressure MPa	* Refer to a separate table on page 927.												
Fluid temperature °C	5 to 60												
Ambient temperature °C	0 to 60 (no freezing)												
Product weight g	28	26	36	50	51	68	90	93	120	143	145	192	
Effective sectional area mm ²	1.3	5			10			17			27		

How to order

FPV - 6A - 06

A Port size

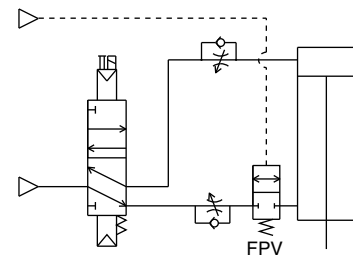
B Applicable tube outer diameter

A Port size		B Applicable tube outer diameter					
		A Port size					
		M5	6A	8A	10A	15A	
M5	M5	●	●	●			
6A	R1/8		●	●	●		
8A	R1/4			●	●		
10A	R3/8				●	●	
15A	R1/2					●	

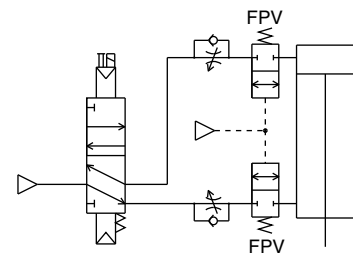
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Applications

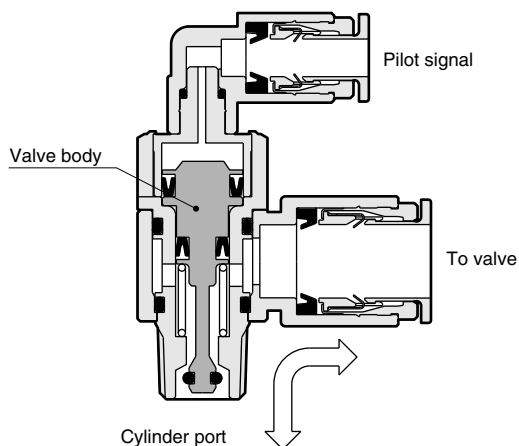
- Used for cylinder position locking circuit



- Used for cylinder braking circuit



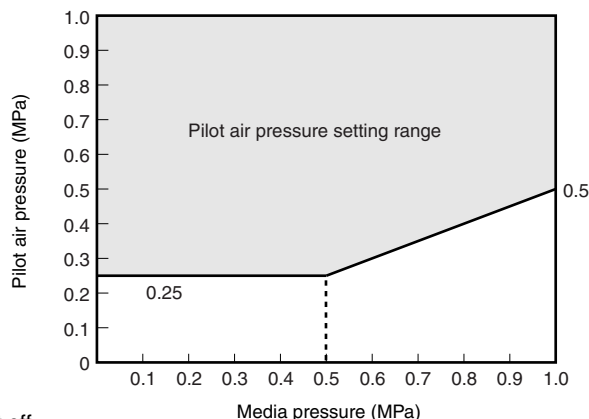
Operational principle



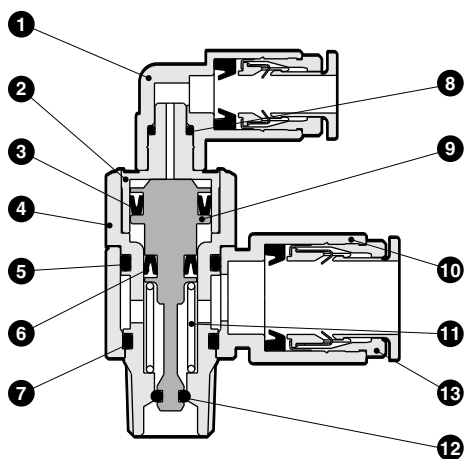
The valve opens if there is a pilot signal, but closes if the pilot signal is cut off.

Pilot air pressure

Set pilot air pressure within the specified range.



Internal structure and parts list



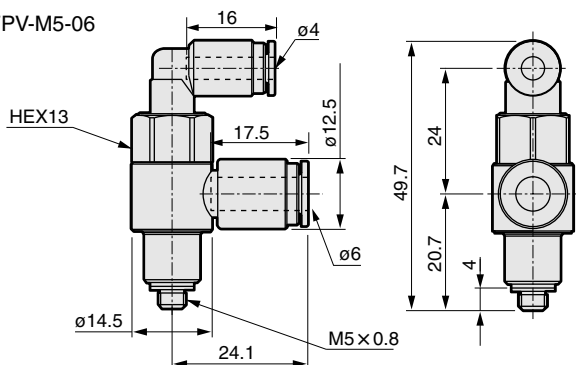
No.	Parts name	Material
1	Joint body	PBT (flame resistance resin)
2	Rotary shaft A	Brass (electroless nickeling)
3	Packing seal	Nitrile rubber
4	Rotary shaft B	Brass (electroless nickeling)
5	O ring	Nitrile rubber
6	Packing seal	Nitrile rubber
7	O ring	Nitrile rubber
8	O ring	Nitrile rubber
9	Valve body	Brass (electroless nickeling)
10	Body	PBT (flame resistance resin) Note 1
11	Spring	Stainless steel
12	O ring	Nitrile rubber
13	Push-in joint	

Note 1: Zinc alloy die-casting is applied for female thread type.

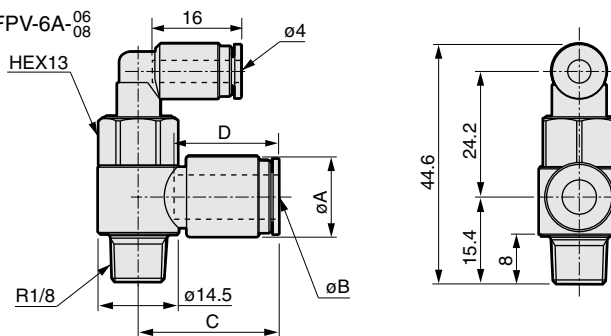
Dimensions



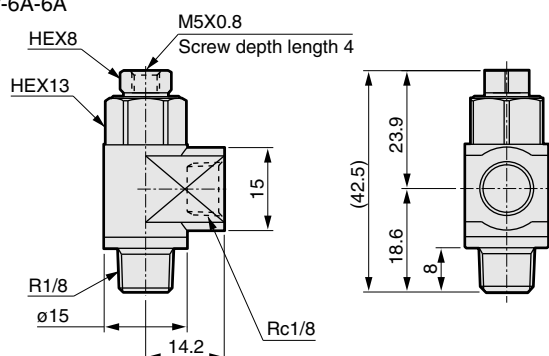
● FPV-M5-06



● FPV-6A⁰⁶/₀₈



● FPV-6A-6A



Model no.	A	B	C	D
FPV-6A-06	ø12.5	ø6	24.1	17.5
FPV-6A-08	ø14.5	ø8	25.3	19.0

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

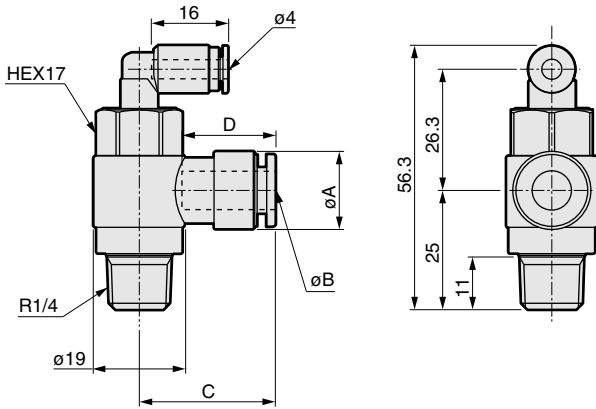
Block valve
Auxiliary valve

Dimensions

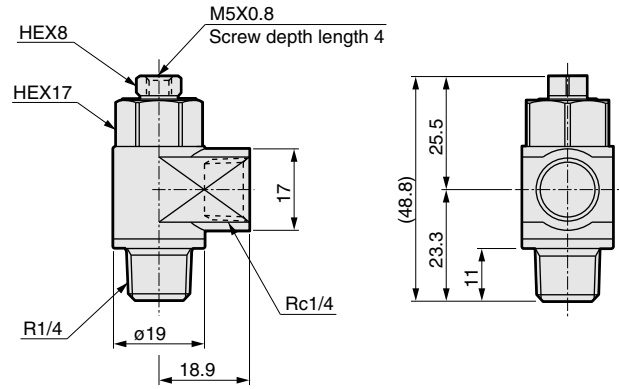


Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
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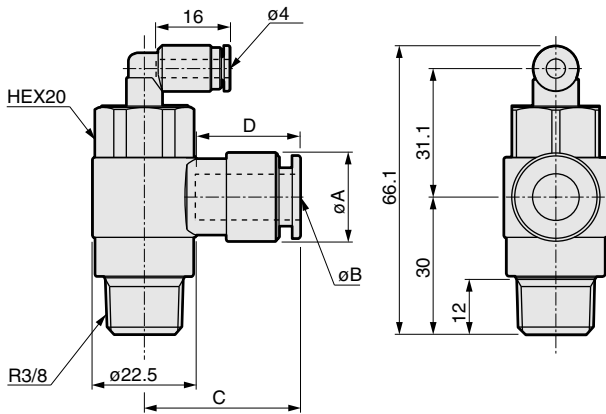
● FPV-8A-06



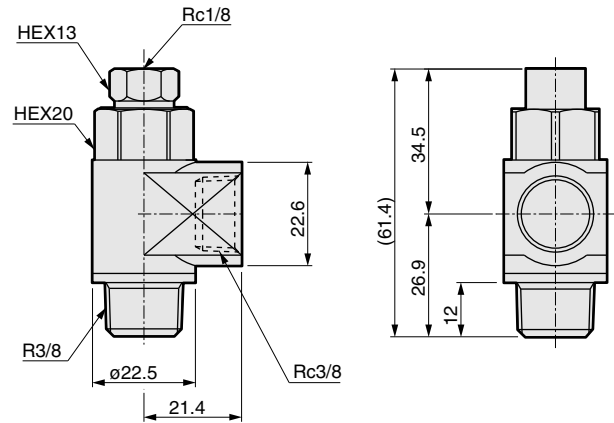
● FPV-8A-8A



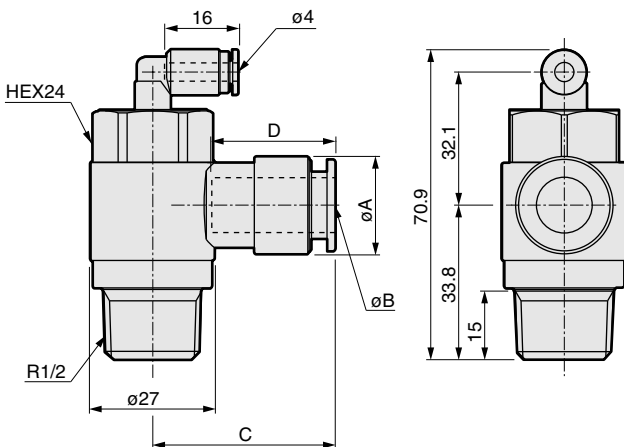
● FPV-10A-08



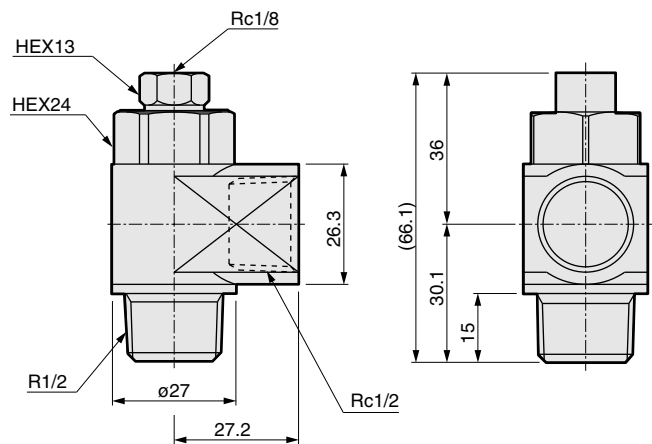
● FPV-10A-10A



● FPV-15A-10



● FPV-15A-15A



Model no.	A	B	C	D
FPV-8A-06	ø13.8	ø6	26.7	18.0
FPV-8A-08	ø16.3	ø8	28.5	19.0
FPV-10A-08	ø16.3	ø8	30	19.5
FPV-10A-10	ø19.3	ø10	34	23
FPV-15A-10	ø19.3	ø10	36.4	23
FPV-15A-12	ø21.3	ø12	39.9	27

Safety Precautions

■ Design & Selection

- Confirm that PTFE can be used.
 - The sealant contains PTFE (polytetrafluoroethylene resin) powder. Check that this poses no problem during use.

■ Installation & Adjustment

(Piping)

- When supplying compressed air after connecting pipes, check for air leaks at all piping connections and actuator sections.
 - Cases may occur when position locking or braking do not function correctly.
- Set pilot and main pressure within the specified pressure.
 - If actuator load is high, main pressure increases and cannot be maintained.

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