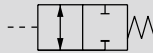


# Block valve FPV Series

- Port size: (Rc or R) 1/4 to 1/2

JIS symbol



## Features

- Compact valve ideal for position locking and for cylinder braking.
- Compact and lightweight  
75% smaller and 50% lighter on average compared with our conventional models.
- Variety of bore sizes available  
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 compatible tube O.D.	φ6	φ6	φ8	Rc1/8	φ6	φ8	Rc1/4	φ8	φ10	Rc3/8	φ10	φ12	Rc1/2
Pilot side compatible tube O.D.		φ4		M5	φ4		M5	φ4		Rc1/8	φ4		Rc1/8
Working fluid	Compressed air												
Max. working pressure MPa	1.0 (≈150 psi, 10 bar)												
Min. working pressure MPa	0 (≈0 psi, 0 bar)												
Proof pressure MPa	1.5 (≈220 psi, 15 bar)												
Pilot pressure MPa	* Refer to page 715.												
Fluid temperature °C	5 (41°F) to 60 (140°F)												
Ambient temperature °C	0 (32°F) to 60 (140°F) (no freezing)												
Weight g	28	26	36	50	51	68	90	93	120	143	145	192	
Effective cross-sectional area mm <sup>2</sup>	1.3	5			10			17			27		

## How to order

**FPV - 6A - 06**

● Port size

● Compatible tube O.D.

A Port size	
M5	M5
6A	R1/8
8A	R1/4
10A	R3/8
15A	R1/2

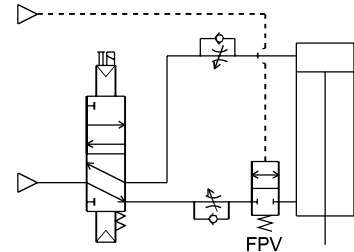
  

B Compatible tube O.D.		A Piping port size				
		M5	6A	8A	10A	15A
06	φ6	●	●	●		
08	φ8		●	●	●	
10	φ10				●	●
12	φ12					●
6A	Rc1/8		●			
8A	Rc1/4			●		
10A	Rc3/8				●	
15A	Rc1/2					●

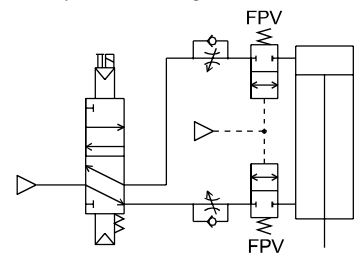
Not available

## Applications

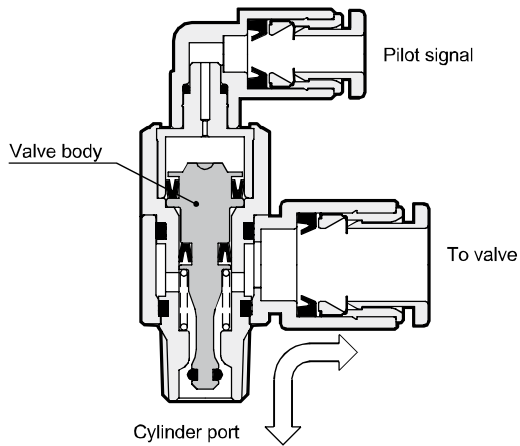
- Used for cylinder position locking circuit



- Used for cylinder braking circuit



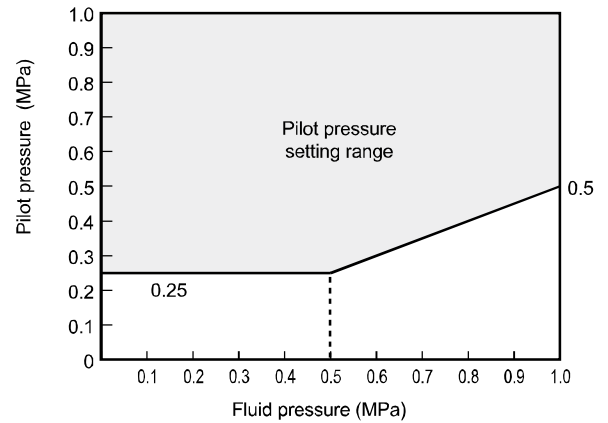
### Operational principle



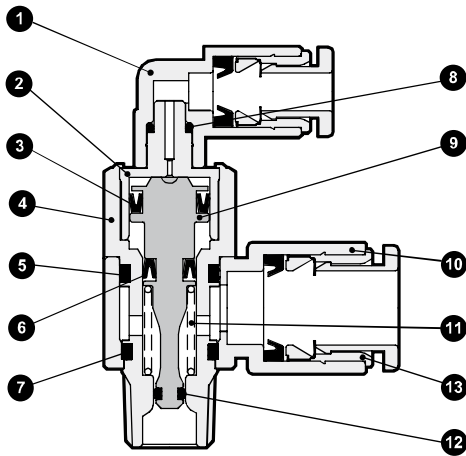
The valve opens if there is a pilot signal, but closes if the pilot signal is cut off.

### Pilot pressure

Set pilot air pressure within the specified range.



### Internal structure and parts list



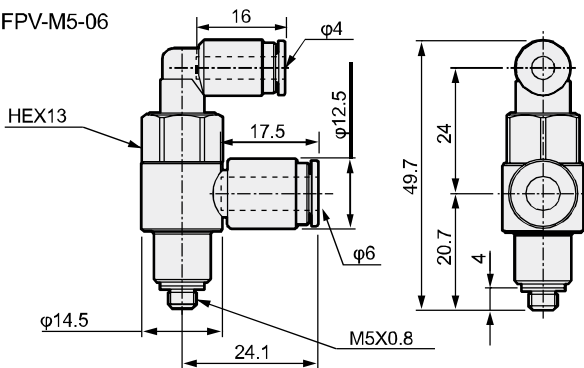
No.	Part name	Material
1	Fitting body	Polybutylene terephthalate (flame-resistant resin)
2	Rotary shaft A	Copper alloy (electroless nickeling)
3	Packing	Nitrile rubber
4	Rotary shaft B	Copper alloy (electroless nickeling)
5	O-ring	Nitrile rubber
6	Packing	Nitrile rubber
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber
9	Valve body	Copper alloy (electroless nickeling)
10	Body	Polybutylene terephthalate (flame-resistant resin) *1
11	Spring	Stainless steel
12	O-ring	Nitrile rubber
13	Push-in fitting	

\*1: Zinc alloy die-casting is applied for female thread.

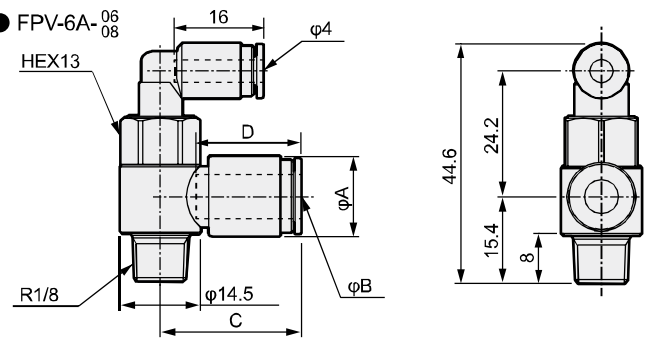
### Dimensions



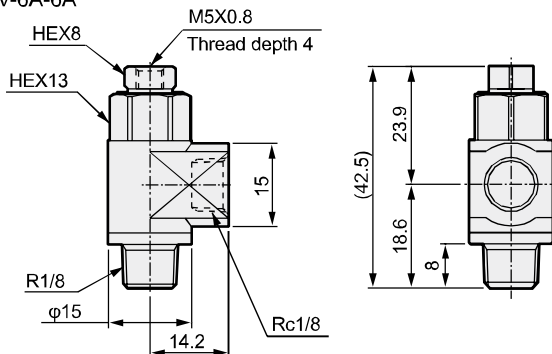
#### ● FPV-M5-06



#### ● FPV-6A-<sup>06</sup>/<sub>08</sub>



#### ● FPV-6A-6A



Model No.	A	B	C	D
FPV-6A-06	φ12.5	φ6	24.1	17.5
FPV-6A-08	φ14.5	φ8	25.3	19.0

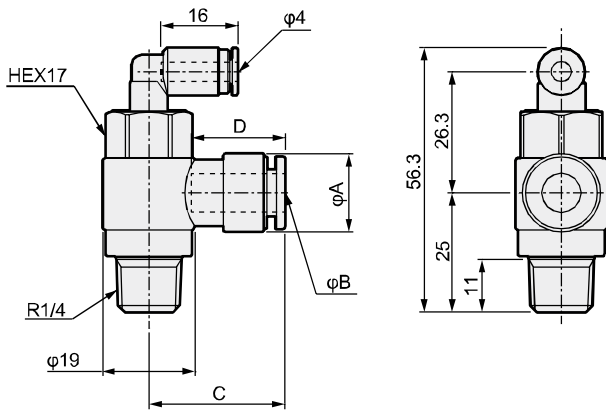
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PresCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterPtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending



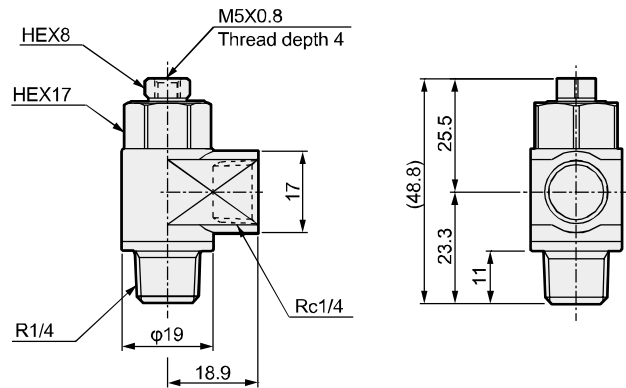
## Dimensions

- F.R.L
- F (Filtr)
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- PresSW
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PTFE FRL
- Outdrs FR
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(Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr**
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

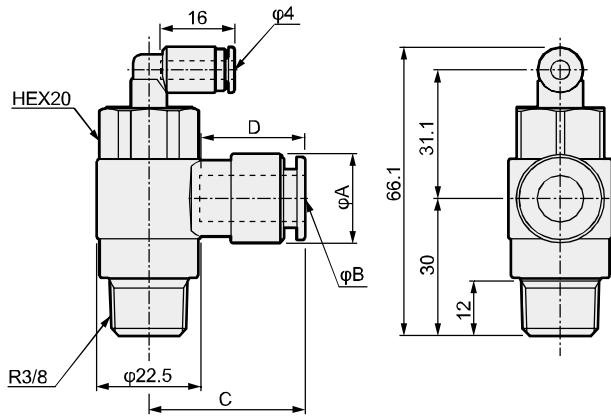
● FPV-8A-08



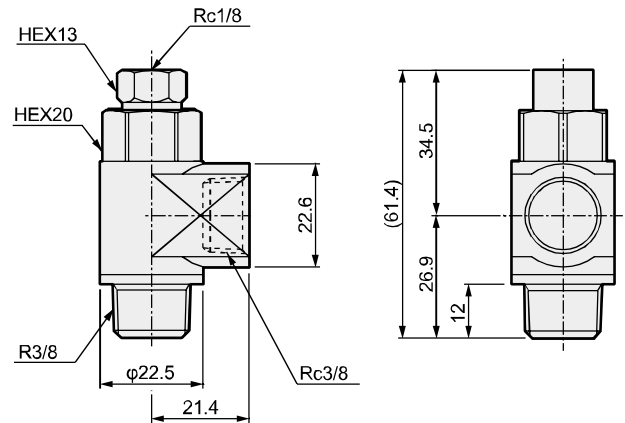
● FPV-8A-8A



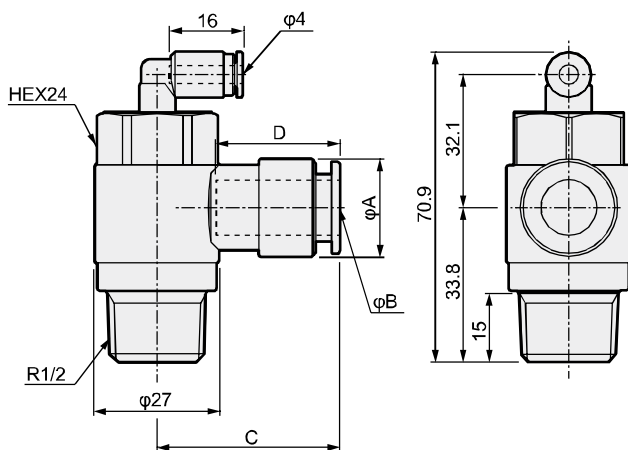
● FPV-10A-08



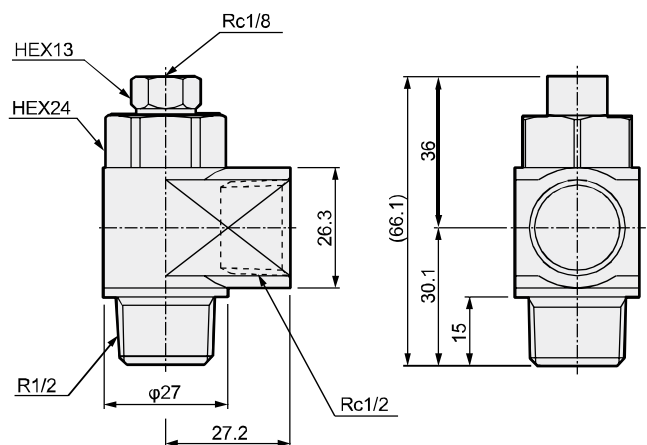
● FPV-10A-10A



● FPV-15A-10



● FPV-15A-15A



Model No.	A	B	C	D
FPV-8A-06	φ13.8	φ6	26.7	17.5
FPV-8A-08	φ16.3	φ8	27.7	19
FPV-10A-08	φ16.3	φ8	29.4	19
FPV-10A-10	φ19.3	φ10	32.2	21.5
FPV-15A-10	φ19.3	φ10	34.5	21.5
FPV-15A-12	φ21.3	φ12	37.7	23

### Safety precautions

#### ■ Design/selection

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

#### ■ Mounting, installation and adjustment

[Piping]

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

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FmResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdirs FR
F.R.L (Related)
CompFRL
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