

Block valve

FPV Series

● Port size: M5, R1/8 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

Item	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.	ø6	ø6	ø8	Rc1/8	ø6	ø8	Rc1/4	ø8	ø10	Rc3/8	ø10	ø12	Rc1/2
Pilot side compatible tube O.D.	ø4			M5	ø4		M5	ø4		Rc1/8	ø4		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 803.												
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 ²	1.3	5			10			17			27		

How to order

FPV - 6A - 06

● Port size

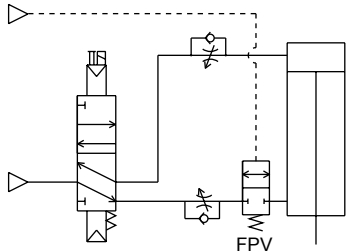
● Compatible tube O.D.

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	ø6	●	●	●			
08	ø8		●	●	●		
10	ø10				●	●	
12	ø12					●	
6A	Rc1/8		●				
8A	Rc1/4			●			
10A	Rc3/8				●		
15A	Rc1/2					●	

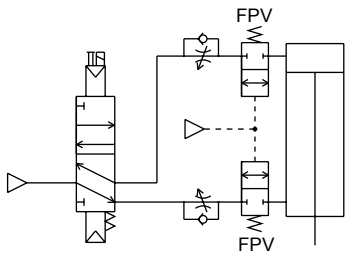
Not available

Applications

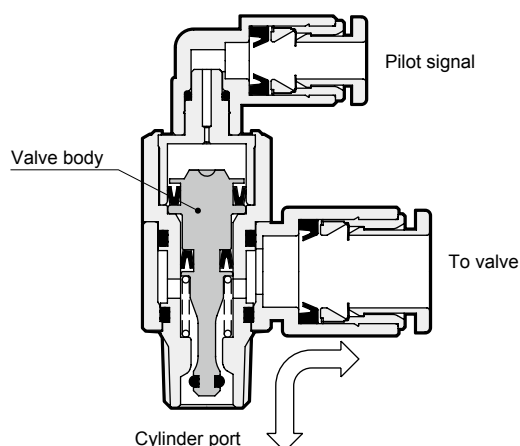
- Used for cylinder position locking circuit



- Used for cylinder braking circuit



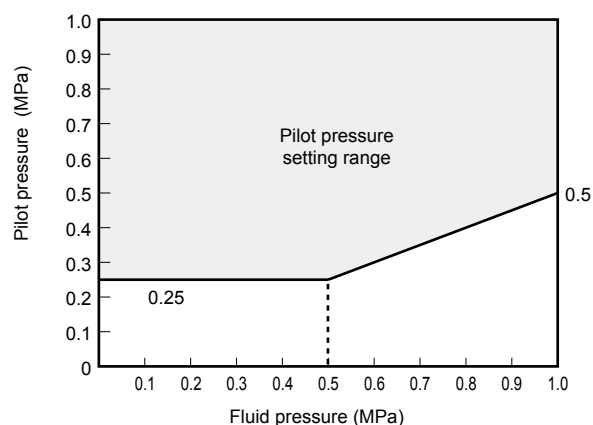
Operational principle



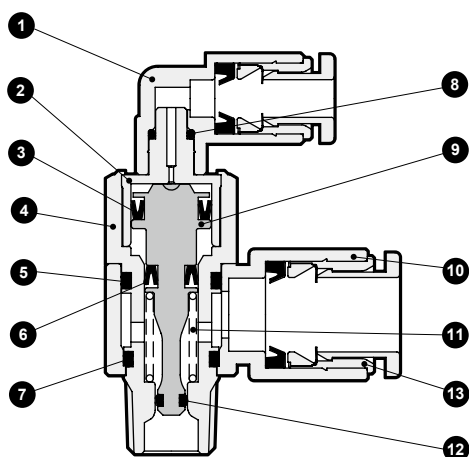
The valve opens if there is a pilot signal, but closes if the pilot signal is cut off.

Pilot pressure

Set pilot air pressure within the specified range.



Internal structure and parts list



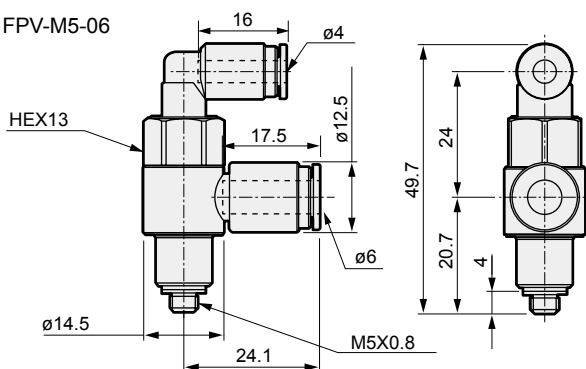
No.	Part name	Material
1	Fitting body	Polybutylene terephthalate (flame-resistant resin)
2	Rotary shaft A	Copper alloy (electroless nickel)
3	Packing	Nitrile rubber
4	Rotary shaft B	Copper alloy (electroless nickel)
5	O-ring	Nitrile rubber
6	Packing	Nitrile rubber
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber
9	Valve body	Copper alloy (electroless nickel)
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.

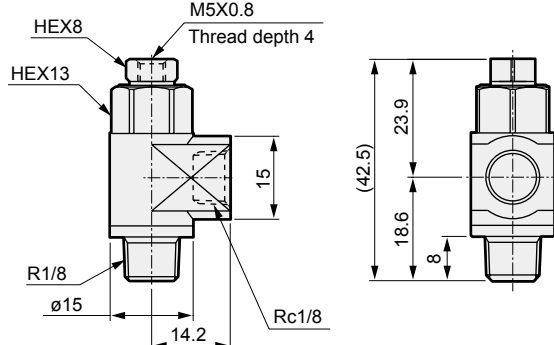
Dimensions



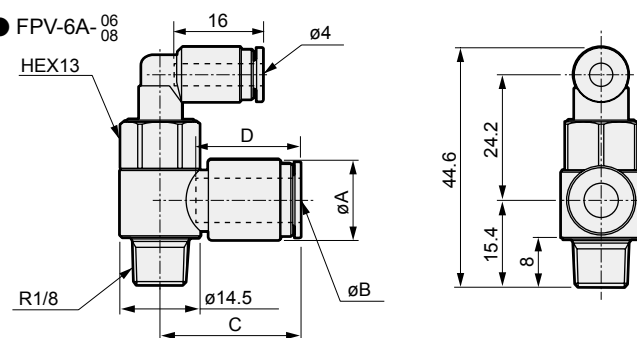
● FPV-M5-06



● FPV-6A-6A



● FPV-6A-06

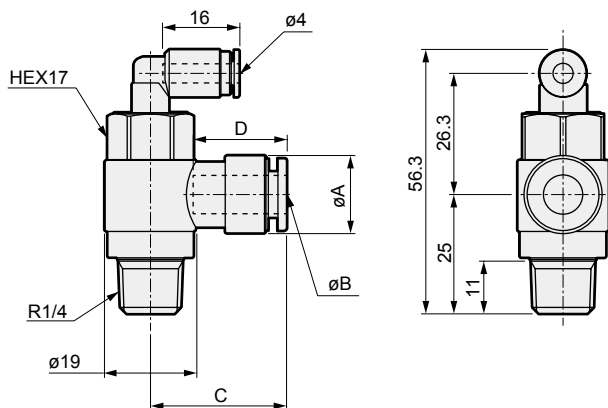


Model No.	A	B	C	D
FPV-6A-06	ø12.5	ø6	24.1	17.5
FPV-6A-08	ø14.5	ø8	25.3	19.0

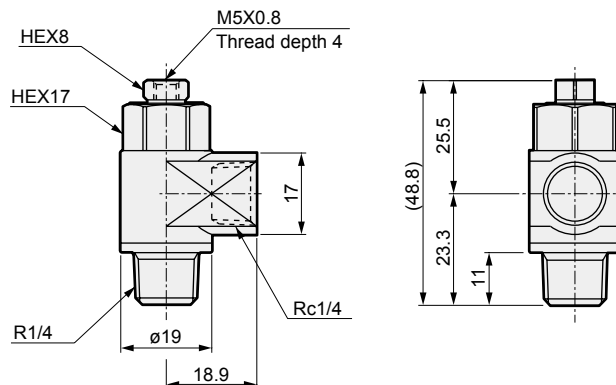


Dimensions

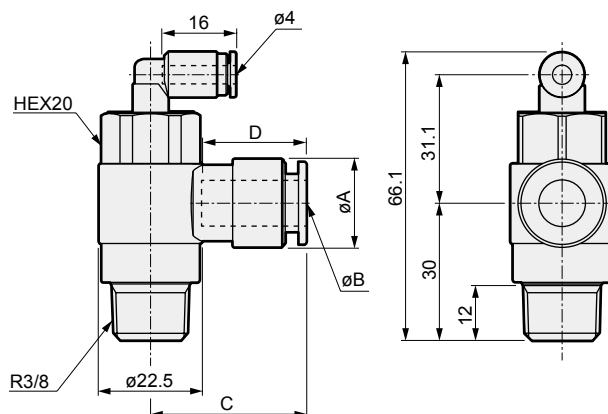
● FPV-8A-06



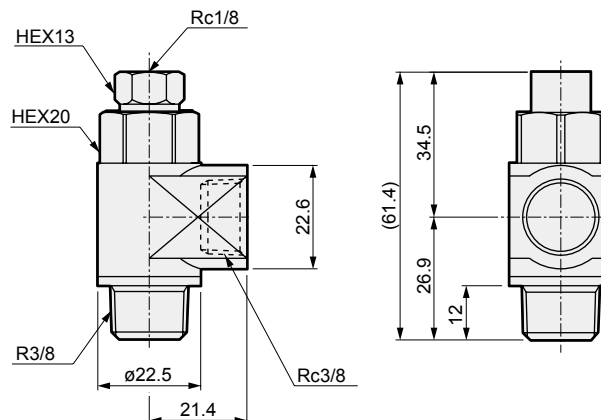
● FPV-8A-8A



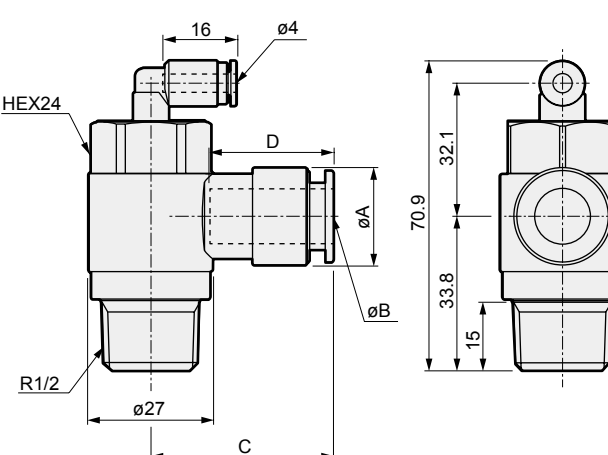
● FPV-10A-08



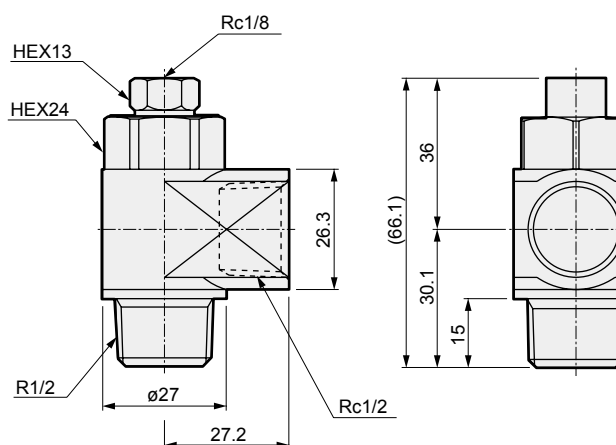
● FPV-10A-10A



● FPV-15A-10



● FPV-15A-15A



Model No.	A	B	C	D
FPV-8A-06	$\phi 13.8$	$\phi 6$	26.7	17.5
FPV-8A-08	$\phi 16.3$	$\phi 8$	27.7	19
FPV-10A-08	$\phi 16.3$	$\phi 8$	29.4	19
FPV-10A-10	$\phi 19.3$	$\phi 10$	32.2	21.5
FPV-15A-10	$\phi 19.3$	$\phi 10$	34.5	21.5
FPV-15A-12	$\phi 21.3$	$\phi 12$	37.7	23