



## Compendium of Manual, mechanical and other valve

P125	Product feature	Photo	127	Product feature	Photo
4H Series Hand lever valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Manual operation</li> <li>● Panel-mounting</li> <li>● 5/2way □ 5/3 way</li> </ul>		3L Series Push-pull valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Manual operation</li> <li>● Panel-mounting</li> <li>● 3/2 way</li> </ul>	
P128	Product feature	Photo	P129	Product feature	Photo
4L Series Push-pull valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Manual operation</li> <li>● Panel-mounting</li> <li>● 5/2 way</li> </ul>		HSV Series Hand slide valve	<ul style="list-style-type: none"> <li>● There are several ways of internal and external thread connection</li> <li>● Hand slide operation</li> <li>● 3/2 way</li> </ul>	
P130	Product feature	Photo	P132	Product feature	Photo
4HV Series Hand lever valve	<ul style="list-style-type: none"> <li>● Body installation and Panel installation</li> <li>● Manual operation</li> <li>● With lock and without lock are optional</li> <li>● 4/2 way □ 4/3 way</li> </ul>		S3 Series Control valve	<ul style="list-style-type: none"> <li>● Shut-off structure</li> <li>● Manual control or mechanical control</li> <li>● Several control set are optional</li> <li>● Multi-mounting</li> <li>● 3/2 way</li> </ul>	
P135	Product feature	Photo	P138	Product feature	Photo
M3 Series Control valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Manual control or mechanical control</li> <li>● Several control set are optional</li> <li>● Multi-mounting</li> <li>● 3/2 way</li> </ul>		M5 Series Control valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Manual control or mechanical control</li> <li>● Several control set are optional</li> <li>● Multi-mounting</li> <li>● 5/2 way</li> </ul>	
P141	Product feature	Photo	P146	Product feature	Photo
CM3 Series Control valve	<ul style="list-style-type: none"> <li>● Shut-off structure</li> <li>● Manual control or mechanical control</li> <li>● Several control set are optional</li> <li>● Multi-mounting</li> <li>● 3/2 way、5/3 way</li> </ul>		ZM3 Series Control valve	<ul style="list-style-type: none"> <li>● Sliding column structure</li> <li>● Mechanical control</li> <li>● Several control set are optional</li> <li>● Multi-mounting</li> <li>● 3/2 way</li> </ul>	
P148	Product feature	Photo	P150	Product feature	Photo
3F Series 3FM Series 4F Series Foot pedal valve	<ul style="list-style-type: none"> <li>● 3F,3FM: Direct acting (NC)</li> <li>● 4F: Direct acting</li> <li>● Foot pedal control</li> <li>● With lock and without lock are optional</li> <li>● 3F □ 3FM: 3/2 way</li> <li>● 4F: 5/2way</li> </ul>		ASC Series Flow control valve	<ul style="list-style-type: none"> <li>● Allows air to exhaust and cut off air flow</li> <li>● Multi-mounting</li> <li>● 100 □ 200 □ 300 Series</li> </ul>	
P151	Product feature	Photo	P152	Product feature	Photo
NRV Series Non-return valve	<ul style="list-style-type: none"> <li>● Large valid area of section</li> <li>● Compact structure</li> <li>● Excellence hermetical capability</li> </ul>		PCV Series Pilot non-return valve	<ul style="list-style-type: none"> <li>● Fitting joint and thread are optional for pilot port</li> </ul>	

## Installation and Application



1. Before installing, be sure the valve hasn't been damaged via transportation.
2. It's suggested to use the medium lubricated by 40 μ m filter element. Be aware of the flow direction and port size.
3. Please notice whether the installation condition accords with technical requirements (such as "working pressure" and "scope of application temperature"), then the equipment can be installed and used.
4. Take measure to avoid vibration and frozen.
5. Before using the fittings and tubes make sure they are clean. When connecting to fittings, be sure the PTFE Thread seal tape is used correctly.
6. To keep the dust away, Never forget to install dirt-proof boot in air intake and outlet during dismounting.

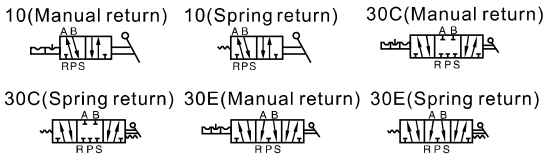


# Hand lever valve (5/2 way, 5/3 way)

## 4H Series



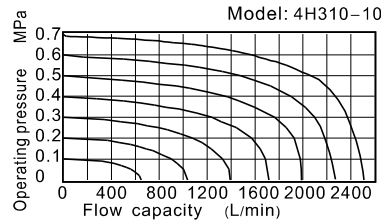
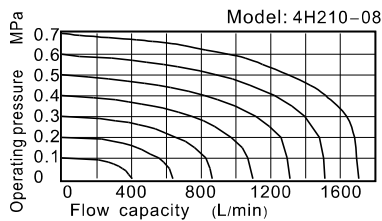
### Symbol



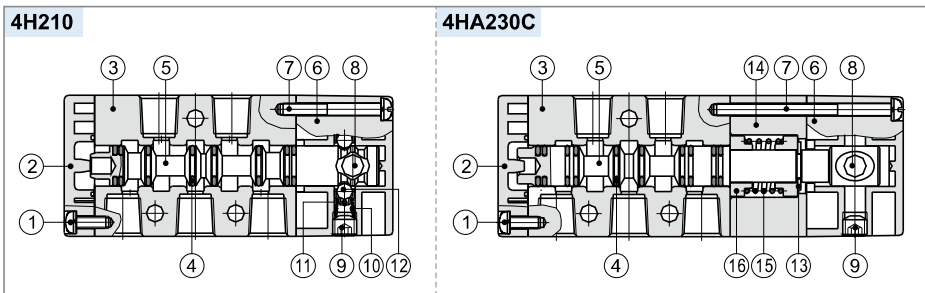
### Product feature

1. Manual operation, smooth actuation, and exact and reliable orientation.
2. Sliding column structure has good tightness and light weight and is easy to install and dismount.
3. Internal hole adopts special processing technology which has little attrition friction, long service life.
4. No need to add oil for lubrication.
5. Panel-mounting makes it convenient to install and apply.

### Flow chart



### Inner structure



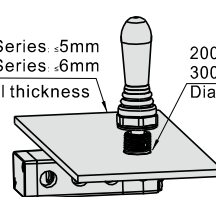
No.	Item	No.	Item
1	Round head screw	9	Stop screw
2	Bottom cover	10	Spring
3	Body	11	Steel ball jacket
4	O-ring	12	Steel ball
5	Spool	13	E clip
6	Top cover	14	Side cover
7	Round head cover	15	Spring
8	Axle	16	Spring holder

### Installation

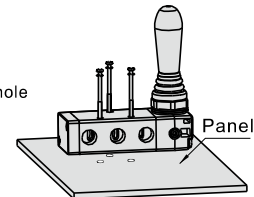
1. 5/3 way manual return hand lever valve is positioned by steel ball, which is convenient to switch. Please apply the proper force to avoid the position mismatch and misoperation.
2. When installed by panel, disassemble the gasket according to the practical requirement.
3. Below is the installation method for reference.  
Note: Please give your attention on the panel thickness and hole dimension when installed by panel.

200 Series .5mm  
300 Series .6mm  
Panel thickness

200 Series .16  
300 Series .20  
Dia. of Installation hole



Panel Installation



Body Installation

### Specification

Model	210-06	230-06	210-08	230-08	310-08	330-08	310-10	330-10
Fluid	Air (to be filtered by 40 μm filter element)							
Operating	Manual control direct acting type							
Port size[Note1]	In=Out =Exhaust=1/8"		In=Out=1/4"; Exhaust=1/8"		In=Out =Exhaust=1/4"		In=Out=3/8"; Exhaust=1/4"	
Orifice size	14.0mm <sup>2</sup> (Cv=0.78)	12.0mm <sup>2</sup> (Cv=0.67)	16.0mm <sup>2</sup> (Cv=0.89)	12.0mm <sup>2</sup> (Cv=0.67)	25.0mm <sup>2</sup> (Cv=1.39)	18.0mm <sup>2</sup> (Cv=1.00)	30.0mm <sup>2</sup> (Cv=1.67)	18.0mm <sup>2</sup> (Cv=1.00)
Valve type	5/2 way	5/3 way	5/2 way	5/3 way	5/2 way	5/3 way	5/2 way	5/3 way
Lubrication [Note2]	Not required							
Pressure range	0~1.0MPa(0~145psi)							
Proof pressure	1.5MPa(215psi)							
Temperature	-20~70°C							
Material body	Aluminum alloy							
Operating angle	±15°	±8.5°	±15°	±8.5°	±15°	±18°	±10°	±10°

[Note1] PT thread, G thread and NPT thread are available;

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

### Ordering code

**4H 2 30C 08** □

① ② ③ ④ ⑤

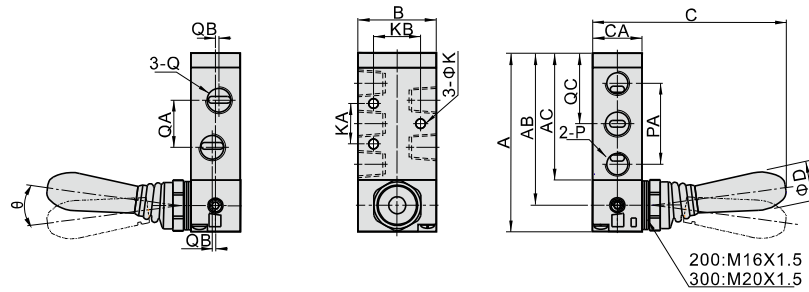
① Model	② Code	③ Valve type	④ Port size	⑤ Thread type
4H: Manual return 4HA: Spring return	2: 200 Series 3: 300 Series	10: 5/2 Way 30C: 5/3 Way closed center 30E: 5/3 Way exhaust center	06: 1/8" 08: 1/4" 10: 3/8"	Blank: PT G: G T: NPT

# Hand lever valve (5/2 way, 5/3 way)

## 4H Series

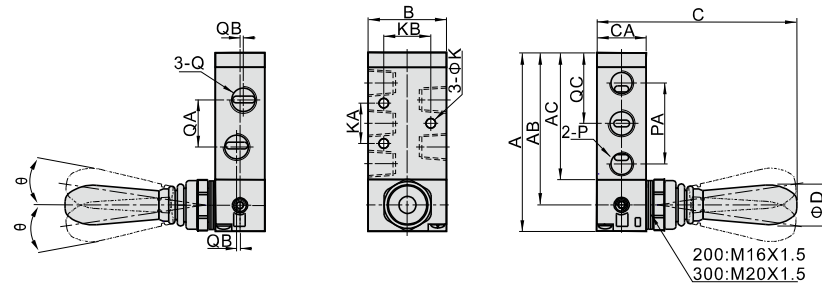
### Dimensions

#### 4H210\310 □ 4HA210\310



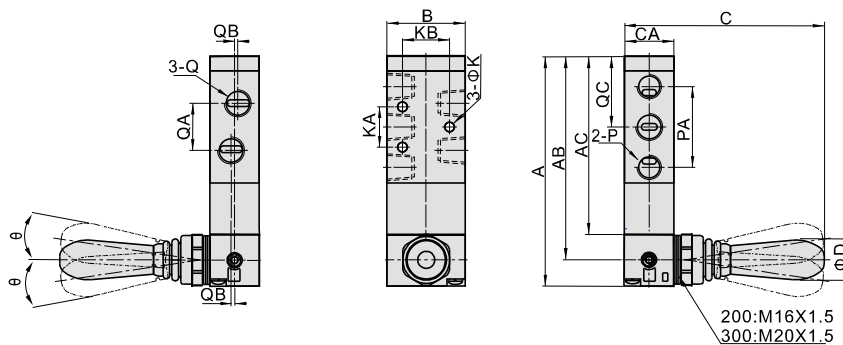
Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Ø
4H210-06 4HA210-06	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	15
4H210-08 4HA210-08	81.5	69.5	57.5	35	90	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	15
4H310-08 4HA310-08	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	18
4H310-10 4HA310-10	101	87	73	40	93.5	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	18

#### 4H230 □ 4H330



Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Ø
4H230C-06 4H230E-06	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4H230C-08 4H230E-08	81.5	69.5	57.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4H330C-08 4H330E-08	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4H330C-10 4H330E-10	101	87	73	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10

#### 4HA230 □ 4HA330



Model\Item	A	AB	AC	B	C	CA	D	K	KA	KB	P	PA	Q	QA	QB	QC	Ø
4HA230C-06 4HA230E-06	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/8"	18	-	32.5	8.5
4HA230C-08 4HA230E-08	100.5	88.5	76.5	35	90.5	22	18	4.3	20	23.5	1/8"	36	1/4"	21	1.5	32.5	8.5
4HA330C-08 4HA330E-08	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	1/4"	22	-	40.5	10
4HA330C-10 4HA330E-10	120	106	92	40	94	27	18	4.3	24	27.5	1/4"	45	3/8"	24	2	40.5	10

# Push-pull valve(3/2way)

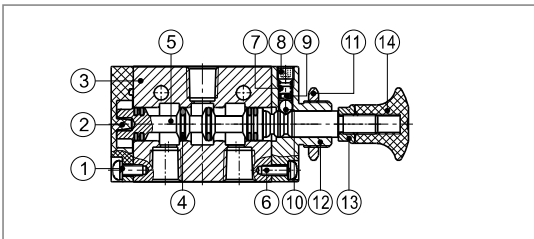
## 3L Series



### Symbol



### Inner structure



No.	Item	No.	Item	No.	Item
1	Round head screw	6	Round head screw	11	Hexagon nut
2	Bottom cover	7	Spring	12	Top cover
3	Body	8	Stop screw	13	Safety nut
4	O-ring	9	Spring base	14	Hand grip
5	Spool	10	Steel ball		

### Specification

Model	3L110-06	3L210-06	3L210-08	3L310-08	3L310-10
Fluid	Air (to be filtered by 40 μm filter element)				
Operating	Manual control direct acting type				
Port size[Note1]	1/8"		1/4"		3/8"
Orifice size	12.0mm <sup>2</sup> (Cv=0.67)	14.0mm <sup>2</sup> (Cv=0.78)	16.0mm <sup>2</sup> (Cv=0.89)	25.0mm <sup>2</sup> (Cv=1.39)	30.0mm <sup>2</sup> (Cv=1.67)
Valve type	3/2 Way				
Lubrication [Note2]	Not required				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70°C				
Material body	Aluminum alloy				

[Note1] PT thread, G thread and NPT thread are available;

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

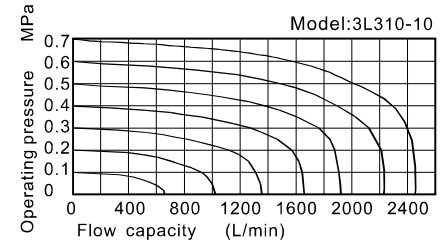
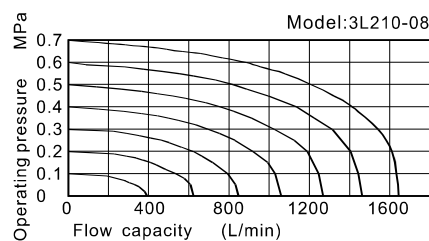
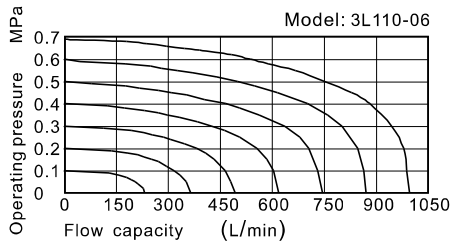
### Ordering code

**3L 2 10 08** □

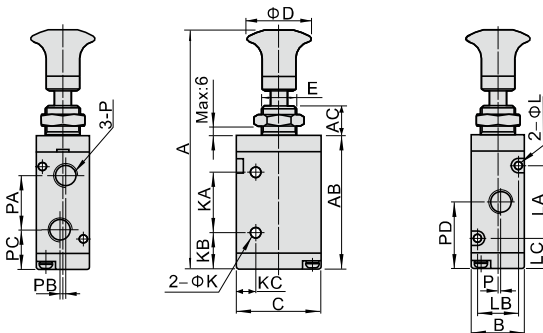
① ② ③ ④ ⑤

① Model	② Code	③ Valve type	④ Port size	⑤ Thread type
3L: 3 port 2 position push-pull valve	1: 100 Series	10: 2 position	06: 1/8"	Blank: PT G: G T: NPT
	2: 200 Series		06: 1/8" 08: 1/4"	
	3: 300 Series		08: 1/4" 10: 3/8"	

### Flow chart



### Dimensions



Item\Model	3L11006	3L21006	3L21008	3L31008	3L31010
A	87	98	98	106.5	106.5
AB	47.8	57.8	57.8	66.5	66.5
AC	10	10	10	10	10
B	18	22	22	27	27
C	27	35	35	40	40
D	25	25	25	25	25
E	M12×0.75	M14×1.0	M14×1.0	M16×1.0	M16×1.0
K	3.1	4.3	4.3	4.3	4.3
KA	21	25	25	30	30
KB	13	16	16	18	18
KC	7.7	8	8	10	10
L	3.3	3.3	3.3	4.3	4.3
LA	19	30	30	35	35
LB	13	17	17	20	20
LC	14	13.5	13.5	15.5	15.5
P	1/8"	1/8"	1/4"	1/4"	3/8"
PA	16	22.5	22.5	24	24
PB	2	0	0	0	0
PC	15.5	17.5	17.5	21	21
PD	24.5	28.5	28.5	33	33
PE	1	0	1.5	0	2

# Push-pull valve(5/2way)

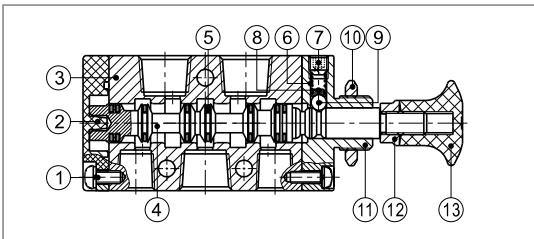
## 4L Series



### Symbol



### Inner structure



No.	Item	No.	Item	No.	Item
1	Round head screw	6	Spring	11	Top cover
2	Bottom cover	7	Stop screw	12	Safety nut
3	Body	8	Spring base	13	Hand grip
4	Spool	9	Steel ball		
5	O-ring	10	Hexagon nut		

### Specification

Model	4L110-06	4L210-06	4L210-08	4L310-08	4L310-10
Fluid	Air (to be filtered by 40 μm filter element)				
Operating	Manual control direct acting type				
Port size[Note1]	1/8"		1/4"		3/8"
Orifice size	12.0mm <sup>2</sup> (Cv=0.67)	14.0mm <sup>2</sup> (Cv=0.78)	16.0mm <sup>2</sup> (Cv=0.89)	25.0mm <sup>2</sup> (Cv=1.39)	30.0mm <sup>2</sup> (Cv=1.67)
Valve type	5/2 Way				
Lubrication [Note2]	Not required				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70°C				
Material body	Aluminum alloy				

[Note1] PT thread, G thread and NPT thread are available;

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

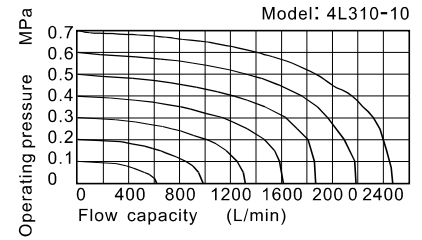
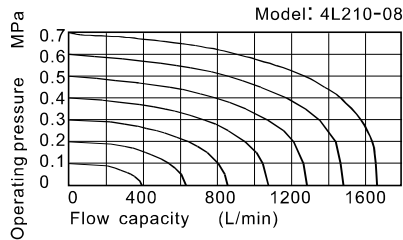
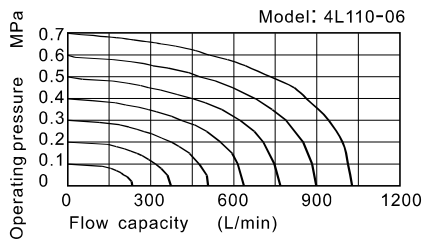
### Ordering code

4L 2 10 08 □

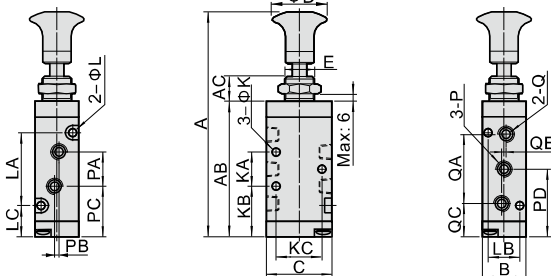
① ② ③ ④ ⑤

① Model	② Code	③ Valve type	④ Port size	⑤ Thread type
4L: 5 port 2 position push-pull valve	1: 100 Series	10: 2 position	06: 1/8"	Blank: PT G: G T: NPT
	2: 200 Series		06: 1/8"	
	3: 300 Series		08: 1/4"	
		08: 1/4"	10: 3/8"	

### Flow chart



### Dimensions



Item\Model	4L11006	4L21006	4L21008	4L31008	4L31010
A	98	106	106	121.5	121.5
AB	58.8	65.8	65.8	81	81
AC	10	10	10	10	10
B	18	22	22	27	27
C	27	35	35	40	40
D	25	25	25	25	25
E	M12×0.75	M14×1.0	M14×1.0	M16×1.0	M16×1.0
K	3.3	4.3	4.3	4.3	4.3
KA	14	20	20	24	24
KB	22	22.5	22.5	28.5	28.5
KC	19	23.5	23.5	27.5	27.5
L	3.3	3.3	3.3	4.3	4.3
LA	30	38	38	50	50
LB	13	17	17	20	20
LC	14	13.5	13.5	15.5	15.5
P	1/8"	1/8"	1/4"	1/4"	1/4"
PA	16	18	21	22	24
PB	3	0	3	0	4
PC	21	23.5	22	29.5	28.5
PD	29	32.5	32.5	40.5	40.5
Q	1/8"	1/8"	1/8"	1/4"	3/8"
QA	28	36	36	45	45
QB	2	0	0	0	0
QC	15	14.5	14.5	18	18

# Hand slide valve(3/2 way)

## HSV Series



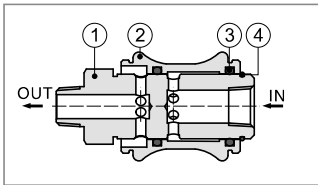
### Symbol



### Product feature

1. There are several ways of internal and external thread connection, suitable for the application in different pipeline systems.
2. The direction-change slides smoothly and has good hand feeling.
3. There is large effective circulating area.
4. The valve spool surface is treated with acid washing passivation, and the surface of valve body is oxidized to keep the color for a long time.

### Inner structure



No.	Item
1	Valve plug
2	Body
3	O-ring
4	Clip

### Specification

Model	HSV06	HSV08	HSV10	HSV15	HSV20	HSV25
Fluid	Air (to be filtered by 40 μm filter element)					
Operating	Manual control direct acting type					
Port size [Note1]	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Orifice size	23.0mm <sup>2</sup> (Cv=1.28)	40.0mm <sup>2</sup> (Cv=2.20)	62.0mm <sup>2</sup> (Cv=3.50)	140.0mm <sup>2</sup> (Cv=7.80)	250.0mm <sup>2</sup> (Cv=13.80)	392.0mm <sup>2</sup> (Cv=21.78)
Valve type	3/2 Way					
Lubrication	Not required					
Pressure range	0~1.0MPa(0~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature	-20~70℃					
Material body	Aluminum alloy					

[Note1] PT thread, G thread and NPT thread are available.

### Ordering code

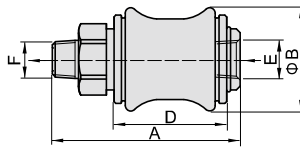
**HSV 08 SS □**

① ② ③ ④

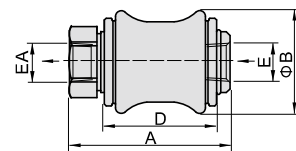
① Model	② Port size	③ Dovt thread	④ Thread type
HSV: Hand slide valve	06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2" 20: 3/4" 25: 1"	Blank: Standard SS: Double male thread FF: Double female thread SF: Male and female thread	Blank: PT G: G T: NPT

### Dimensions

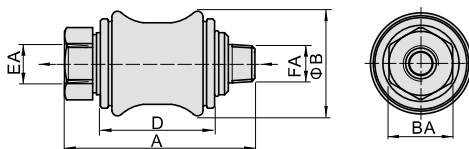
#### Standard



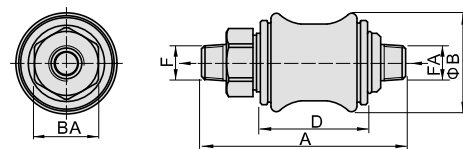
#### Double female thread(FF)



#### Male and female thread(SF)



#### Double male thread(SS)



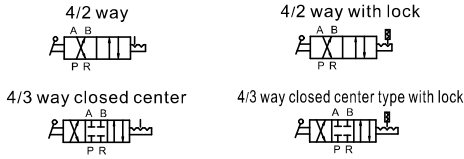
Model\Item	A				B	BA	D	E	EA	F	FA
	Standard	Doublefemalethread	Maleandfemalethread	Doublemalethread							
HSV06	50	43	50	57	27.5	17	30	1/8"	1/8"	1/8"	1/8"
HSV08	58	47	58	69	30	19	32.5	1/4"	1/4"	1/4"	1/4"
HSV10	68.5	55.5	68.5	81.5	35.5	22	39	3/8"	3/8"	3/8"	3/8"
HSV15	85.5	70.5	85.5	100.5	44	30	50	1/2"	1/2"	1/2"	1/2"
HSV20	96.5	79.5	96.5	113.5	53.5	36	58	3/4"	3/4"	3/4"	3/4"
HSV25	114.5	96.5	114.5	132.5	65.5	44	70	1"	1"	1"	1"

# Hand lever valve (4/2 way, 4/3 way)

4HV, 4HVL Series



## Symbol



## Specification

Model	4HV2□□ -06(L)	4HV2□□ -08(L)	4HV3□□ -08(L)	4HV3□□ -10(L)	4HV4□□ -15(L)	4HV4□□ -20(L)
Fluid	Air (to be filtered by 40 μm filter element)					
Operating	Manual control direct acting type					
Port size [Note1]	1/8"	1/4"	1/4"	3/8"	1/2"	3/4"
Orifice size	14.0mm <sup>2</sup> (Cv=0.78)	16.0mm <sup>2</sup> (Cv=0.89)	30.0mm <sup>2</sup> (Cv=1.67)	33.0mm <sup>2</sup> (Cv=1.83)	88.0mm <sup>2</sup> (Cv=4.89)	95.0mm <sup>2</sup> (Cv=5.27)
Valve type	4/2 Way、4/3 Way					
Lubrication	Not required					
Pressure range	0~1.0MPa(0~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature	-20~70℃					
Operating angle	90°(4/3 Way: 45°)					

[Note1] PT thread, G thread and NPT thread are available.

## Product feature

1. The direction-change turns lightly with good hand feeling and exact orientation.
2. Large effective circulating area leads to little pressure loss.
3. Panel and body installation are optional. The panel installation can be attached with installing nut.

## Ordering code

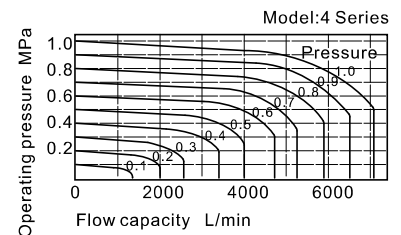
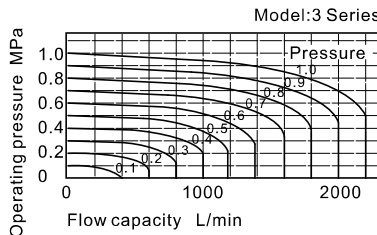
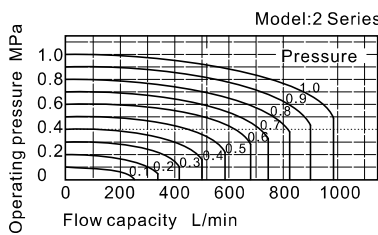
4HV 2 30 06 S L □



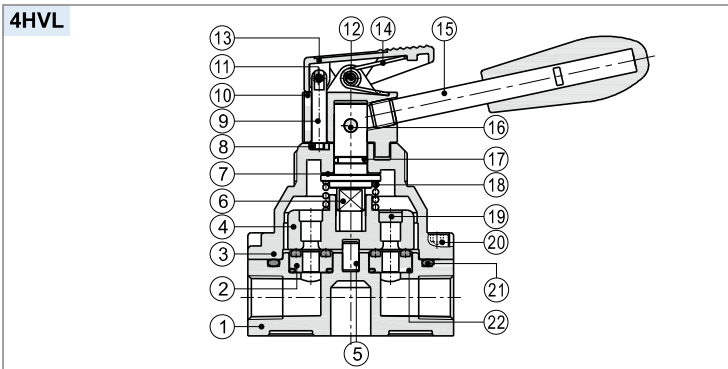
① Model	② Code	③ Valve type	④ Port size	⑤ Installation	⑥ Note	⑦ Thread type
4HV: Hand lever valve	2: 2 Series	10: 4 port 2 position 30: 4 port 3 position [Note1]	06: 1/8" 08: 1/4"	Blank: Body installation S: Panel installation [Note2]	Blank: Without lock L: With lock	Blank: PT G: G T: NPT
	3: 3 Series		08: 1/4" 10: 3/8"			
	4: 4 Series		15: 1/2" 20: 3/4"			

[Note1] 4 port 3 position only has closed center type. [Note2] The panel installation can be attached with installing nut.

## Flow chart



## Inner structure



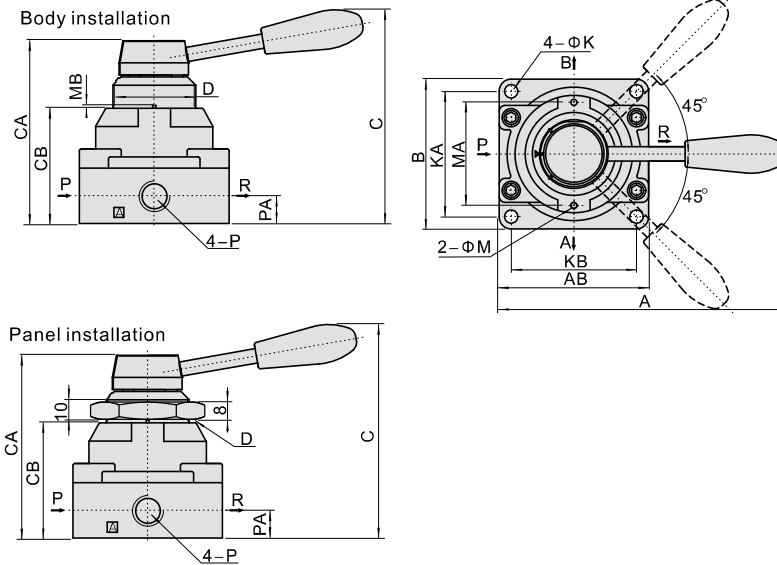
No.	Item	No.	Item
1	Body	12	Pin one
2	Seal base	13	Front cover
3	Valve cover	14	Spring
4	Valve plug	15	Handle
5	Column pin	16	Pin two
6	Shaft	17	Shaft O-ring
7	Washer	18	Spring
8	Fixing plate	19	Iron plate
9	Lock pin	20	Fixing screw
10	Valve cap	21	Body O-ring
11	Spring pin	22	Seal base O-ring

# Hand lever valve (4/2 way, 4/3 way)

## 4HV, 4HVL Series

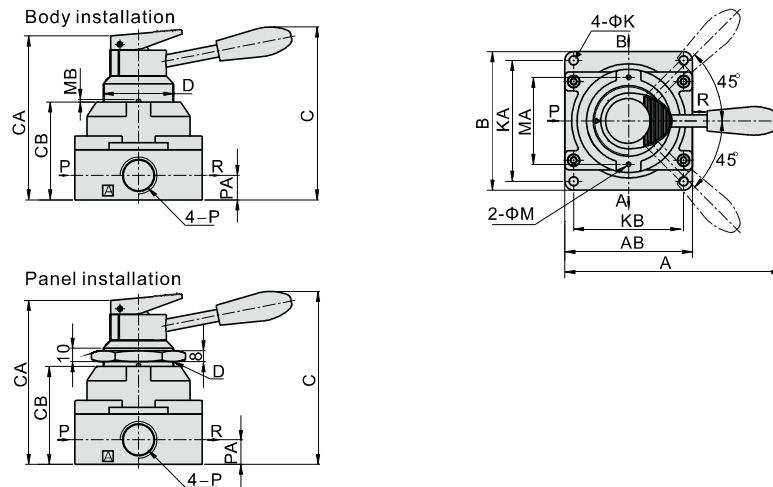
### Dimensions

#### 4HV



Model\Item	A	AB	B	C	CA	CB	D	K	KA	KB	M	MA	MB	P	PA
4HV2□□-06	120	62	62	92.5	73	45	M34×1.5	5.5	49	49	3	40	1.5	1/8"	11.5
4HV2□□-08	120	62	62	92.5	73	45	M34×1.5	5.5	49	49	3	40	1.5	1/4"	11.5
4HV3□□-08	140	74	74	104	88.5	56	M40×1.5	6.5	62	62	3	51	1.5	1/4"	13.5
4HV3□□-10	140	74	74	104	88.5	56	M40×1.5	6.5	62	62	3	51	1.5	3/8"	13.5
4HV4□□-15	160	94	102	128	110	72	M52×1.5	6.5	89	81	3	64	2	1/2"	18
4HV4□□-20	160	94	102	128	110	72	M52×1.5	6.5	89	81	3	64	2	3/4"	18

#### 4HVL



Model\Item	A	AB	B	C	CA	CB	D	K	KA	KB	M	MA	MB	P	PA
4HV2□□-06L	120	62	62	92.5	84	45	M34×1.5	5.5	49	49	3	40	1.5	1/8"	11.5
4HV2□□-08L	120	62	62	92.5	84	45	M34×1.5	5.5	49	49	3	40	1.5	1/4"	11.5
4HV3□□-08L	140	74	74	104	99	56	M40×1.5	6.5	62	62	3	51	1.5	1/4"	13.5
4HV3□□-10L	140	74	74	104	99	56	M40×1.5	6.5	62	62	3	51	1.5	3/8"	13.5
4HV4□□-15L	160	94	102	128	121	72	M52×1.5	6.5	89	81	3	64	2	1/2"	18
4HV4□□-20L	160	94	102	128	121	72	M52×1.5	6.5	89	81	3	64	2	3/4"	18



## S3 Series



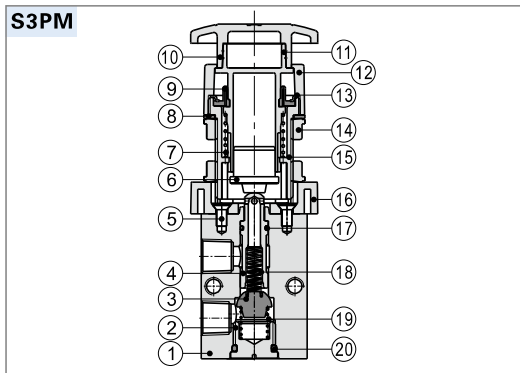
### Symbol



### Product feature

1. The external force required by changing the direction of the series of S3B, S3R, S3L and S3V is provided by external mechanism, which can be used for position test or limit switch.
2. The series of S3PF, S3PM, S3PP, S3PL, S3Y, S3HS, S3C and S3D are operated manually, owning control joints with several structure forms and suitable for application under different conditions.
3. Shut-off structure has good tightness and is sensitive in direction changing and lubricant is not necessary.
4. Multi-mounting makes it convenient to install and apply.
5. The control joints of series of S3C, S3D, S3Y, S3R and S3L are made of metal which has long service life and more reliable and steady performance.

### Inner structure



No.	Item	No.	Item	No.	Item
1	Body	8	Clamping gasket	15	Button body
2	Bottom cover	9	Dust cover	16	Connector
3	Stopper plug	10	Button cap	17	O-ring
4	Valve core	11	Main body of button	18	Spring
5	Screw	12	Top cover	19	Spring
6	Button pressing buckle	13	Button ring	20	O-ring
7	Spring	14	Clamping nut		

### Specification

Model	S3B	S3C	S3D	S3V	S3R	S3L	S3Y	S3PM	S3PP	S3PF	S3PL	S3HS
Fluid	Air (to be filtered by 40 μm filter element)											
Operating	External control direct acting type											
Port size [Note1]	05:M5 06:1/8" 08:1/4"											
Orifice size	05:2.5 mm <sup>2</sup> (Cv=0.14)			06:8.0mm <sup>2</sup> (Cv=0.45)			08:12.0mm <sup>2</sup> (Cv=0.67)					
Valve type	3/2 Way											
Lubrication [Note2]	Not required											
Pressure range	0~1.0MPa(0~145psi)											
Proof pressure	1.5MPa(215psi)											
Temperature °C	-20~70											
Material body	Aluminum alloy											

[Note1] PT thread, G thread and NPT thread are available.

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

### Reversal stroke

Unit: mm

Type	Spool stroke	Button stroke	Type	Spool stroke	Roller(handle) stroke
S3B	2.4~4.0	-	S3R	2.4~3.4	5.5~7.8
S3PF	2.4~4.0	3.8~5.4	S3L	2.4~3.4	6.0~8.6
S3PP	2.4~4.0	3.8~5.4	S3V	2.4~3.8	3.4~4.8
S3PM	2.4~4.0	3.8~5.4	S3C	2.4~3.8	14.4~18.4
S3PL	2.4~4.0	5.9~7.5	S3D	2.4~3.8	7.4~9.4
S3HS	2.4~4.0	5.1~6.7			

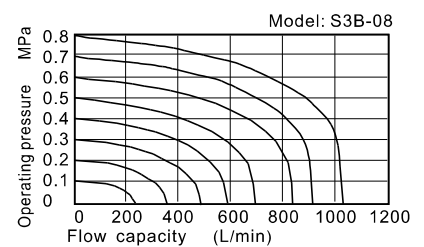
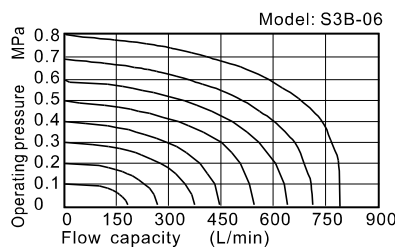
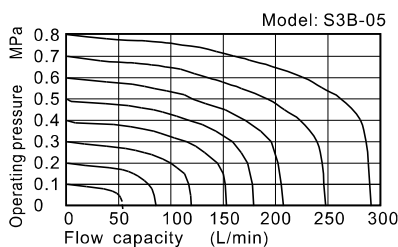
### Ordering code

**S3 PM 06 R □**

① ② ③ ④ ⑤

① Valve's type	② Model	③ Port size	④ Button color	⑤ Thread type
S3: S type 3/2 Way	B: Basic type	05: M5 06: 1/8" 08: 1/4"	No this code	M5
	C: Long handle type			1/8" 1/4"
	D: Short handle type			No this code
	Y: Lever type			
	R: Roller type			
	L: Roller with free return type			
	V: Vertical type			
	PL: Latching type			
	PP: Protruding type			
	PF: Flat type			
PM: Mushroom type	R: Red			
HS: Selector type	R: Red G: Green B: Black			
				Blank: PT G: G T: NPT

### Flow chart

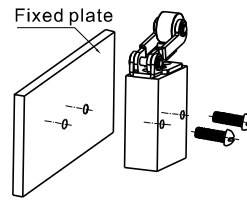


## S3 Series

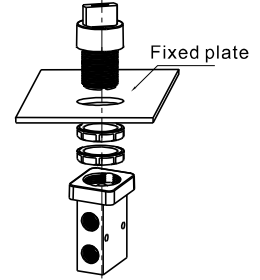
### Installation and Application

- 1) The control set is made of engineering plastic which only allows manual operation and switching valves through metal impact is forbidden.
- 2) The series of S3B, S3C, S3D, S3PM, S3PF and S3PP get the function of automatic restoration. The hand valves of S3Y, S3HS and S3PL are in the type of manual restoration. S3PL will be restored by turning the revolve button after being pressed into orientation.
- 3) Pay attention to the reversing stroke. The reversing stroke can not surpass its stroke stipulated in stroke control table when the direction-change of the valve is forced by any external forces, otherwise it will cause the damage of the valve.
- 4) The S3L can only switch the valve in single direction (impact from right to left). The impact from the other direction is invalid (from left to right).
- 5) Control joint combination can be ordered individually. Please refer to the table on the right for order details.

Fixation way of body

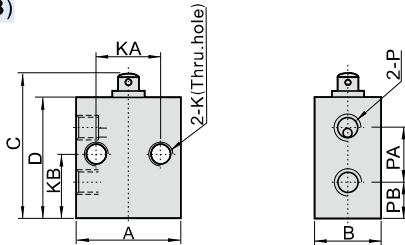


Fixation way of panel



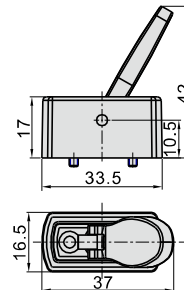
### Dimension

#### Body(S3B)



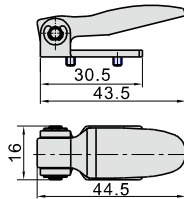
Model\Item	A	B	C	D	K	KA	KB	P	PA	PB
05	26	16.5	36	30	M5x0.8	16	15	M5x0.8	13	9
06	30	16.5	47	41	M5x0.8	23	20.5	1/8"	17.5	11.5
08	34	17.5	52	46	M5x0.8	24	22.5	1/4"	21	12

#### Lever type(Y)



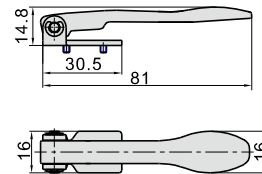
Model	Lever type(Y)
How to order	Ordering code
	Type
Applicable products	

#### Short handle type(D)



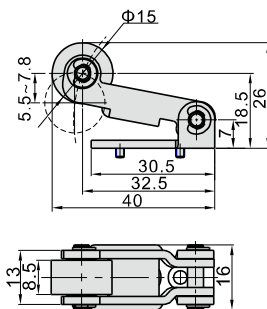
Model	Short handle type(D)
How to order	Ordering code
	Type
Applicable products	

#### Long handle type(C)



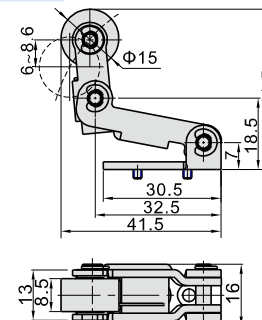
Model	Long handle type(C)
How to order	Ordering code
	Type
Applicable products	

#### Roller type(R)



Model	Roller type(R)
How to order	Ordering code
	Type
Applicable products	

#### Roller with free return type(L)

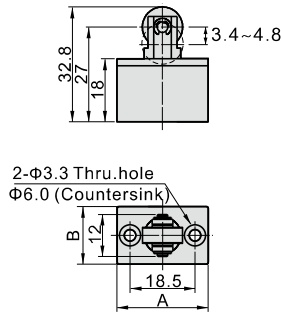


Model	Roller with free return type(L)
How to order	Ordering code
	Type
Applicable products	

# Control valve(3/2way)

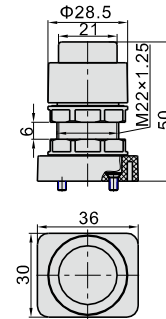
## S3 Series

### Vertical type(V)



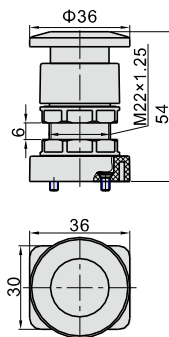
Model		Vertical type ( V )	
How to order	Ordering code	S3V05(06/08)-P14A	
	Type	S3V05(06. 08) Vertical type control set	
Applicable products		S3V05,S3V06,S3V08	
Model\Item	A	B	
05	26	16.5	
06	30	16.5	
08	34	17.5	

### Protruding type(PP)



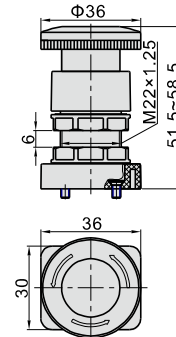
Model		Protruding type(PP)	
How to order	Ordering code	S3PP05-P11A	
	Type	S3PP protruding type control set (Green)	
How to order	Ordering code	S3PP05-P12A	
	Type	S3PP protruding type control set (Red)	
How to order	Ordering code	S3PP05-P13A	
	Type	S3PP protruding type control set (Black)	
Applicable products		S3PP05,S3PP06,S3PP08	

### Mushroom type(PM)



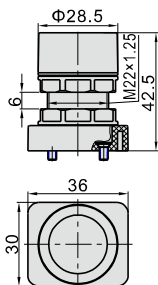
Model		Mushroom type(PM)	
How to order	Ordering code	S3PM05-P11A	
	Type	S3PM mushroom type control set (Green)	
How to order	Ordering code	S3PM05-P12A	
	Type	S3PM mushroom type control set (Red)	
How to order	Ordering code	S3PM05-P13A	
	Type	S3PM mushroom type control set (Black)	
Applicable products		S3PM05,S3PM06,S3PM08	

### Latching type(PL)



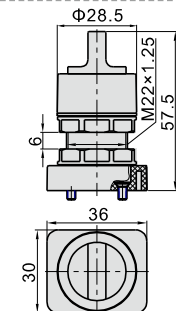
Model		Latching type (only red)(PL)	
How to order	Ordering code	S3PL05-P12A	
	Type	S3PL Latching type control set (Red)	
Applicable products		S3PL05,S3PL06,S3PL08	

### Flat type(PF)



Model		Flat type(PF)	
How to order	Ordering code	S3PF05-P11A	
	Type	S3PF flat type control set (Green)	
How to order	Ordering code	S3PF05-P12A	
	Type	S3PF flat type control set (Red)	
How to order	Ordering code	S3PF05-P13A	
	Type	S3PF flat type control set (Black)	
Applicable products		S3PF05,S3PF06,S3PF08	

### Selector type(HS)



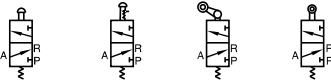
Model		Selector type(HS)	
How to order	Ordering code	S3HS05-P11A	
	Type	S3HS selector type control set (Green)	
How to order	Ordering code	S3HS05-P12A	
	Type	S3HS selector type control set (Red)	
How to order	Ordering code	S3HS05-P13A	
	Type	S3HS selector type control set (Black)	
Applicable products		S3HS05,S3HS06,S3HS08	

# Control valve(3/2way)

## M3 Series



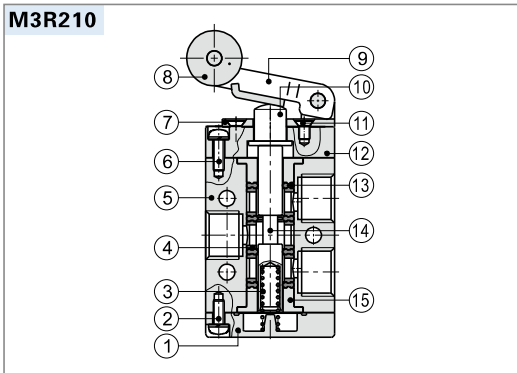
### Symbol



### Product feature

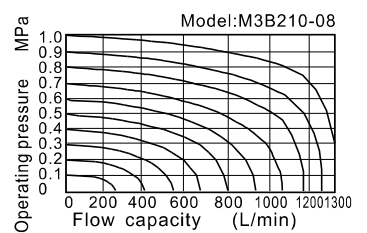
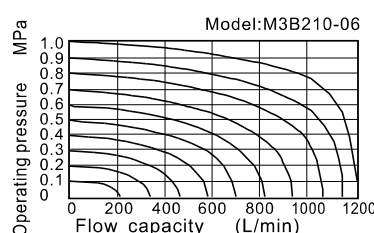
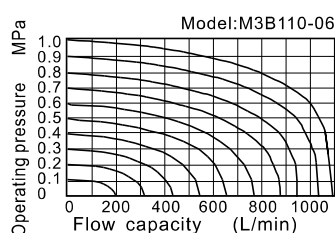
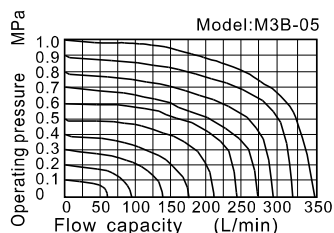
1. Exhaust outlet locates over the (body), which is convenient to install muffler to decrease noise and pollution.
2. The external force required by direction-change of series of M3B, M3R and M3L is provided by external mechanism, which can be used for position test or stroke switch] limit switch.
3. M3C, M3D, M3Y, M3PF, M3PM, M3PP, M3PL and M3HS are operated manually, owning control joints with several structure forms and suitable for application under different conditions.
4. It is in sliding column structure that the control force is not influenced by working pressure (that is, there is no back pressure effect); internal circle is sealed with good tightness and the direction-change is sensitive.
5. No need to add oil for lubrication.
6. Multi-mounting makes it convenient to install and apply;
7. The control joints of series of M3C, M3D, M3Y, M3R, and M3L are made of metal which has long service life and more reliable and steady performance.

### Inner structure



No.	Item	No.	Item	No.	Item
1	Bottom cover	6	Screw	11	Screw
2	Screw	7	Roller holder	12	Fore cover
3	Spring	8	Roller	13	Piston O-ring
4	Spacer	9	Rotating block	14	Spool
5	Body	10	Axle	15	Positioning block

### Flow chart



### Specification

Model	M3B	M3C	M3D	M3R	M3L	M3Y	M3PM	M3PP	M3PF	M3PL	M3HS
Fluid	Air (to be filtered by 40 μm filter element)										
Operating	External control direct acting type										
Port size [Note1]	05: M5 06: 1/8" 08: 1/4"										
Orifice size	Mini type		05: 2.5mm <sup>2</sup> (Cv=0.14)								
	110		06: 8.0mm <sup>2</sup> (Cv=0.45)								
	210		06: 9.0mm <sup>2</sup> (Cv=0.50) 08: 12.0mm <sup>2</sup> (Cv=0.67)								
Valve type	3/2 Way										
Lubrication [Note2]	Not required										
Pressure range	0~1.0MPa(0~145psi)										
Proof pressure	1.5MPa(215psi)										
Temperature °C	-20~70										
Material body	Aluminum alloy										

[Note1] PT thread, G thread and NPT thread are available.

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

### Reversal stroke

Common type									Mini type		
Type	Spool stroke	Button stroke	Type	Spool stroke	Roller(handle) stroke	Type	Spool stroke	Roller stroke			
M3B	2.0~3.3	-	M3R	2.0~3.0	4.6~6.8	M3B05	2.0~3.3	-			
M3PF	2.0~3.3	3.8~5.1	M3L	2.0~3.0	5.0~7.8	M3R05	2.0~3.0	6.0~8.5			
M3PP	2.0~3.3	3.8~5.1	M3C	2.0~3.0	11.0~16.0	M3L05	2.0~3.0	7.0~10.0			
M3PM	2.0~3.3	3.8~5.1	M3D	2.0~3.0	5.5~8.0						
M3PL	2.0~3.3	5.9~7.2									
M3HS	2.0~3.3	5.1~6.4									

### Ordering code

**Common type**      **M3 PM 210 06 R**     

① ② ③ ④ ⑤ ⑥

① Valve's type	② Model	③ Code	④ Port size	⑤ Button color	⑥ Thread type
M3: M type 3/2 Way	B: Basic type	110: 100 Series single control	06: 1/8"	No this code	Blank: PT G: G T: NPT
	C: Long handle type				
	D: Short handle type				
	Y: Lever type				
	R: Roller type	210: 200 Series single control	06: 1/8" 08: 1/4"	R: Red	
	L: Roller with free return type			R: Red G: Green B: Black	
	PL: Latching type				
	PP: Protruding type				
	PF: Flat type				
	PM: Mushroom type				
HS: Selector type					

### Mini type

**M3 R 05**

① ② ③

① Valve's type	② Model	③ Port size
M3: M type 3/2 Way	B: Basic type R: Roller type L: Roller with free return type	05: M5

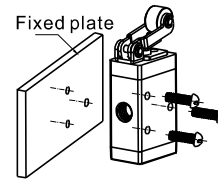


## M3 Series

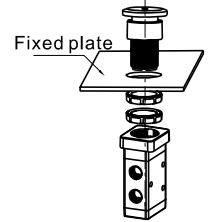
### Installation and Application

- 1) Body and panel installation (picture at right) :
- 2) The control set is made of engineering plastic which only allows manual operation and switching valves through metal impact is forbidden.
- 3) The series of M3B, M3C, M3D, M3PM, M3PF and M3PP get the function of automatic restoration. The hand valves of M3Y, M3HS and M3PL are in the type of manual restoration. M3PL will be restored by turning the revolve button after being pressed into orientation.
- 4) Pay attention to the reversing stroke. The reversing stroke can not surpass its stroke stipulated in stroke control table when the direction-change of the valve is forced by any external forces, otherwise it will cause the damage of the valve.
- 5) The M3L can only switch the valve in single direction (impact from right to left). The impact from the other direction is invalid (from left to right).
- 6) Control joint combination can be ordered individually. Please refer to the table on the right for order details.

Fixation way of body

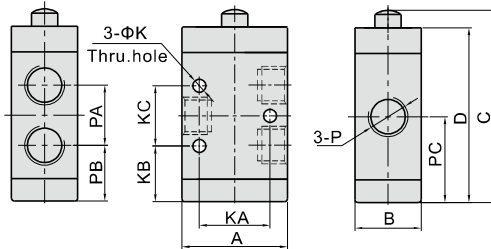


Fixation way of panel



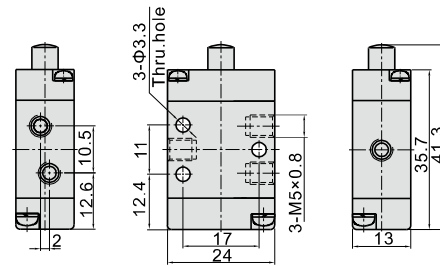
### Dimensions

#### Common type



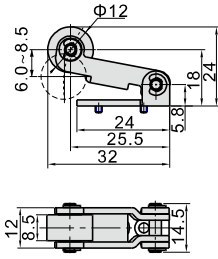
Model\Item	A	B	C	D	K	KA	KB	KC	P	PA	PB	PC
M3B11006	27	18	52	46.5	3.3	18	15.5	16	1/8"	16	15.5	23.5
M3B21006	35	22	64	58	4.3	23.5	18.5	20	1/8"	20	18.5	28.5
M3B21008									1/4"			

#### Mini type

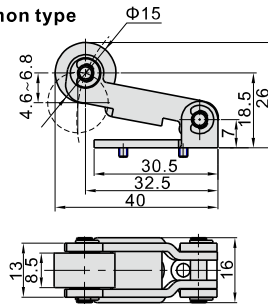


#### Roller type(R)

##### Mini type



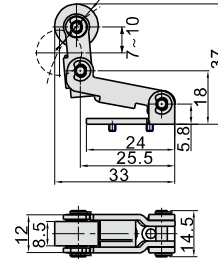
##### Common type



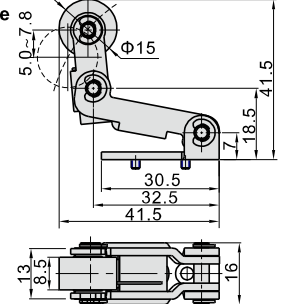
Model	Roller type(R)	
How to order	Ordering code M3R05-P14A	M3R210-P14A
Type	M3R05 Roller type control set	M3R210 Roller type control set
Applicable products	M3R05 M3R110, M3R210	

#### Roller with free return type(L)

##### Mini type

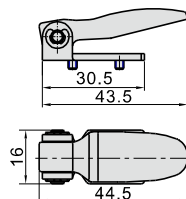


##### Common type



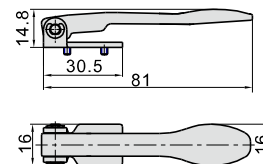
Model	Roller with free return type(L)	
How to order	Ordering code M3L05-P14A	M3L210-P14A
Type	M3L05 Roller with free return type control set	M3L210 Roller with free return type control set
Applicable products	M3L05 M3L110, M3L210	

#### Short handle type(D)



Model	Short handle type(D)	
How to order	Ordering code M3D210-P13A	
Type	M3D210 Short handle type control set	
Applicable products	M3D110, M3D210	

#### Long handle type(C)

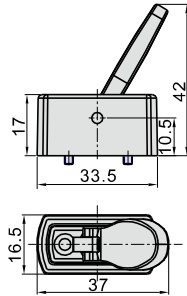


Model	Long handle type(C)	
How to order	Ordering code M3C210-P13A	
Type	M3C210 Long handle type control set	
Applicable products	M3C110, M3C210	

# Control valve(3/2way)

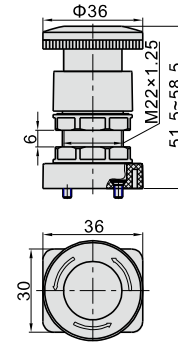
## M3 Series

### Lever type(Y)



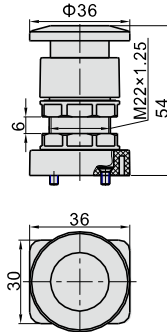
Model		Lever type(Y)
How to order	Ordering code	M3Y210-P13A
	Type	M3Y210 Lever type control set
Applicable products		M3Y110, M3Y210

### Latching type(PL)



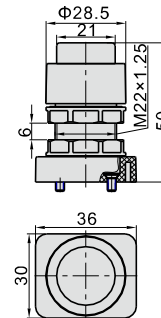
Model		Latching type (only red)(PL)
How to order	Ordering code	S3PL05-P12A
	Type	S3PL Latching type control set (Red)
Applicable products		M3PL110, M3PL210

### Mushroom type(PM)



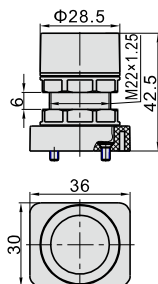
Model		Mushroom type(PM)
How to order	Ordering code	S3PM05-P11A
	Type	S3PM mushroom type control set (Green)
	Ordering code	S3PM05-P12A
	Type	S3PM mushroom type control set (Red)
	Ordering code	S3PM05-P13A
	Type	S3PM mushroom type control set (Black)
Applicable products		M3PM110, M3PM210

### Protruding type(PP)



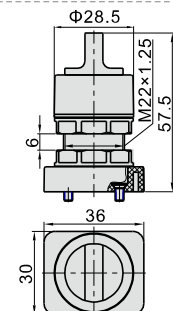
Model		Protruding type(PP)
How to order	Ordering code	S3PP05-P11A
	Type	S3PP protruding type control set (Green)
	Ordering code	S3PP05-P12A
	Type	S3PP protruding type control set (Red)
	Ordering code	S3PP05-P13A
	Type	S3PP protruding type control set (Black)
Applicable products		M3PP110, M3PP210

### Flat type(PF)



Model		Flat type(PF)
How to order	Ordering code	S3PF05-P11A
	Type	S3PF flat type control set (Green)
	Ordering code	S3PF05-P12A
	Type	S3PF flat type control set (Red)
	Ordering code	S3PF05-P13A
	Type	S3PF flat type control set (Black)
Applicable products		M3PF110, M3PF210

### Selector type(HS)



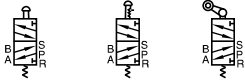
Model		Selector type(HS)
How to order	Ordering code	S3HS05-P11A
	Type	S3HS selector type control set (Green)
	Ordering code	S3HS05-P12A
	Type	S3HS selector type control set (Red)
	Ordering code	S3HS05-P13A
	Type	S3HS selector type control set (Black)
Applicable products		M3HS110, M3HS210

# Control valve(5/2way)

## M5 Series



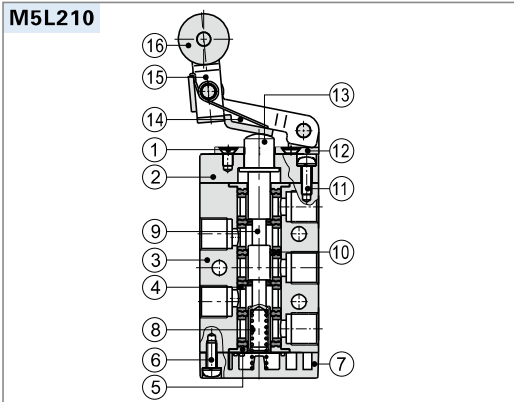
### Symbol



### Product feature

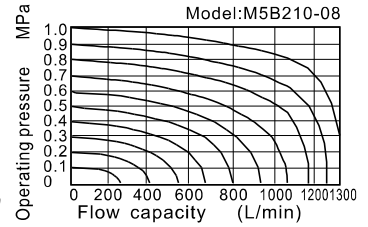
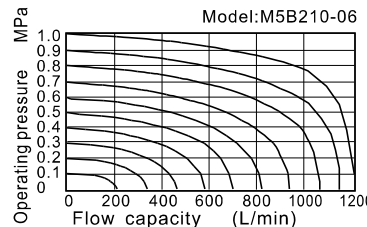
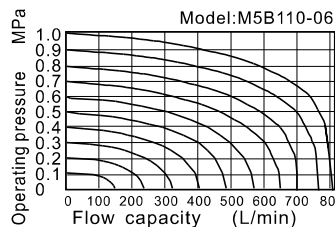
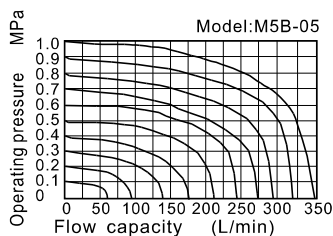
- Exhaust outlet locates over the body, which is convenient to install muffler to decrease noise and pollution.
- The external force required by direction-change of series of M5B, M5R and M5L is provided by external mechanism, which can be used for position test or [stroke switch] limit switch.
- M5C, M5D, M5Y, M5PF, M5PM, M5PP, M5PL and M5HS are operated manually, owning control joints with several structure forms and suitable for application under different conditions.
- It is in sliding column structure that the control force is not influenced by working pressure (that is, there is no back pressure effect); internal circle is sealed with good tightness and the direction-change is sensitive.
- Lubricant is not necessary.
- Multi-mounting makes it convenient to install and apply.
- The control joints of series of M5C, M5D, M5Y, M5R and M5L are made of metal which has longer service life and more reliable and steady performance.

### Inner structure



No.	Item	No.	Item	No.	Item
1	Screw	7	Bottom cover	13	Axle
2	Fore cover	8	Spring	14	Rotating block
3	Body	9	Spool	15	Rocker
4	Spacer	10	Piston O-ring	16	Roller
5	Positioning block	11	Screw		
6	Screw	12	Roller holder		

### Flow chart



### Specification

Model	M5B	M5C	M5D	M5R	M5L	M5Y	M5PM	M5PP	M5PF	M5PL	M5HS
Fluid	Air (to be filtered by 40 μm filter element)										
Operating	External control direct acting type										
Port size [Note1]	05: M5 06: 1/8" 08: 1/4"										
Orifice size	Mini type		05: 2.5mm <sup>2</sup> (Cv=0.14)								
	110		06: 8.0mm <sup>2</sup> (Cv=0.45)								
	210		06: 9.0mm <sup>2</sup> (Cv=0.50) 08: 12.0mm <sup>2</sup> (Cv=0.67)								
Valve type	5/2 Way										
Lubrication [Note2]	Not required										
Pressure range	0~1.0MPa(0~145psi)										
Proof pressure	1.5MPa(215psi)										
Temperature °C	-20~70										
Material body	Aluminum alloy										

[Note1] PT thread, G thread and NPT thread are available.

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

### Reversal stroke

Common type						Mini type		
Type	Spool stroke	Button stroke	Type	Spool stroke	Roller(handle) stroke	Type	Spool stroke	Roller stroke
M5B	2.0~3.3	-	M5R	2.0~3.0	4.6~6.8	M5B05	2.0~3.3	-
M5PF	2.0~3.3	3.8~5.1	M5L	2.0~3.0	5.0~7.8	M5R05	2.0~3.0	6.0~8.5
M5PP	2.0~3.3	3.8~5.1	M5C	2.0~3.0	11.0~16.0	M5L05	2.0~3.0	7.0~10.0
M5PM	2.0~3.3	3.8~5.1	M5D	2.0~3.0	5.5~8.0			
M5PL	2.0~3.3	5.9~7.2						
M5HS	2.0~3.3	5.1~6.4						

### Ordering code

**Common type**      M5 PM 210 06 R □

① ② ③ ④ ⑤ ⑥

① Valve's type	② Model	③ Code	④ Port size	⑤ Button color	⑥ Thread type
M5: M type 5/2 Way	B: Basic type	110: 100 Series single control	06: 1/8"	No this code	Blank: PT G: G T: NPT
	C: Long handle type				
	D: Short handle type				
	Y: Lever typer				
	R: Roller type	210: 200 Series single control	06: 1/8"	R: Red	
	L: Roller with free return type			08: 1/4"	
	PL: Latching type		B: Black		
	PP: Protruding type				
	PF: Flat type				
	PM: Mushroom type				
HS: Selector type					

### Mini type

M5 R 05

① ② ③

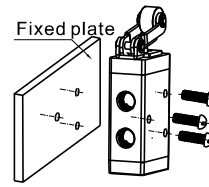
① Valve's type	② Model	③ Port size
M5: M type 5/2 Way	B: Basic type R: Roller type L: Roller with free return type	05: M5

## M5 Series

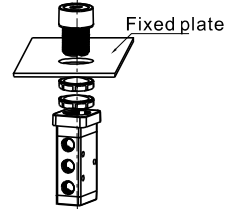
### Installation and Application

- 1) Body and panel installation (picture at right) :
- 2) The control set is made of engineering plastic which only allows manual operation and switching valves through metal impact is forbidden.
- 3) The series of M5B, M5C, M5D, M5PM, M5PF and M5PP get the function of automatic restoration. The hand valves of M5Y, M5HS and M5PL are in the type of manual restoration. M5PL will be restored by turning the revolve button after being pressed into orientation.
- 4) Pay attention to the reversing stroke. The reversing stroke can not surpass its stroke stipulated in stroke control table when the direction-change of the valve is forced by any external forces, otherwise it will cause the damage of the valve.
- 5) The M5L can only switch the valve in single direction (impact from right to left). The impact from the other direction is invalid (from left to right).
- 6) Control joint combination can be ordered individually. Please refer to the table on the right for order details.

Fixation way of body

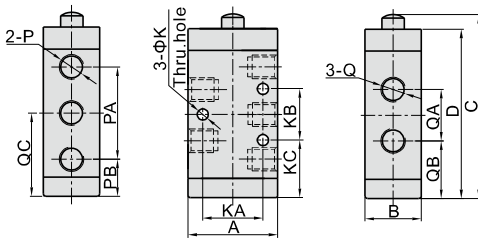


Fixation way of panel



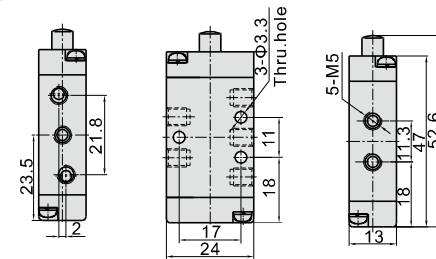
### Dimensions

#### Common type



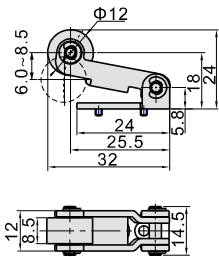
Model/Item	A	B	C	D	K	KA	KB	KC	P	PA	PB	Q	QA	QB	QC
M5B11006	27	18	63	57.5	3.3	18	14	22	1/8"	28	15	1/8"	16	21	29
M5B21006	35	22	72	66	4.3	23.5	20	22.5	1/8"	36	14.5	1/8"	20	22.5	32.5
M5B21008									1/8"			1/4"			

#### Mini type

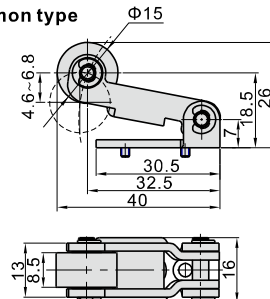


#### Roller type(R)

##### Mini type



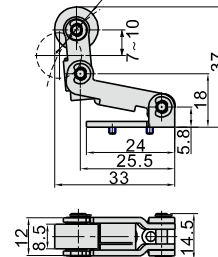
##### Common type



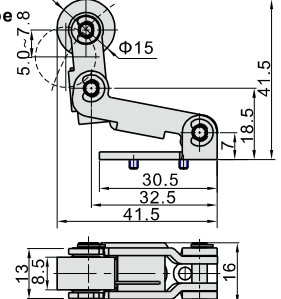
Model	Roller type(R)	
How to order	Ordering code	M3R05-P14A      M3R210-P14A
	Type	M3R05 Roller type control set      M3R210 Roller type control set
Applicable products		M5R05      M5R110, M5R210

#### Roller with free return type(L)

##### Mini type

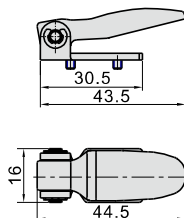


##### Common type



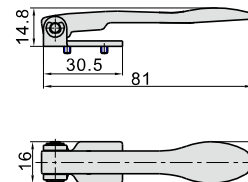
Model	Roller with free return type(L)	
How to order	Ordering code	M3L05-P14A      M3L210-P14A
	Type	M3L05 Roller with free return type control set      M3L210 Roller with free return type control set
Applicable products		M5L05      M5L110, M5L210

#### Short handle type(D)



Model	Short handle type(D)	
How to order	Ordering code	M3D210-P13A
	Type	M3D210 Short handle type control set
Applicable products		M5D110, M5D210

#### Long handle type(C)



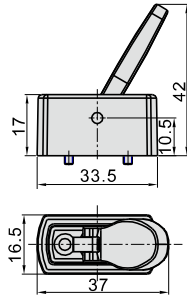
Model	Long handle type(C)	
How to order	Ordering code	M3C210-P13A
	Type	M3C210 Long handle type control set
Applicable products		M5C110, M5C210



# Control valve(5/2way)

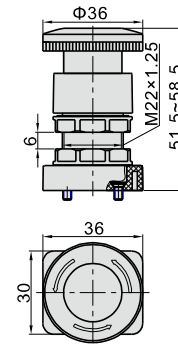
## M5 Series

### Lever type(Y)



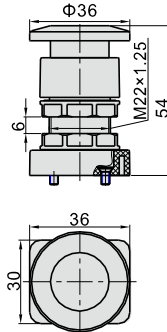
Model		Lever type(Y)
How to order	Ordering code	M3Y210-P13A
	Type	M3Y210 Lever type control set
Applicable products		M5Y110, M5Y210

### Latching type(PL)



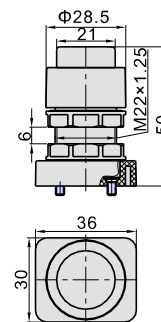
Model		Latching type (only red)(PL)
How to order	Ordering code	S3PL05-P12A
	Type	S3PL Latching type control set (Red)
Applicable products		M5PL110, M5PL210

### Mushroom type(PM)



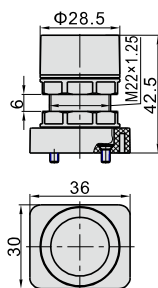
Model		Mushroom type(PM)
How to order	Ordering code	S3PM05-P11A
	Type	S3PM mushroom type control set (Green)
	Ordering code	S3PM05-P12A
	Type	S3PM mushroom type control set (Red)
	Ordering code	S3PM05-P13A
Applicable products		M5PM110, M5PM210

### Protruding type(PP)



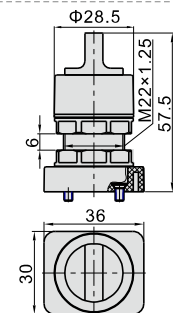
Model		Protruding type(PP)
How to order	Ordering code	S3PP05-P11A
	Type	S3PP protruding type control set (Green)
	Ordering code	S3PP05-P12A
	Type	S3PP protruding type control set (Red)
	Ordering code	S3PP05-P13A
Applicable products		M5PP110, M5PP210

### Flat type(PF)



Model		Flat type(PF)
How to order	Ordering code	S3PF05-P11A
	Type	S3PF flat type control set (Green)
	Ordering code	S3PF05-P12A
	Type	S3PF flat type control set (Red)
	Ordering code	S3PF05-P13A
Applicable products		M5PF110, M5PF210

### Selector type(HS)



Model		Selector type(HS)
How to order	Ordering code	S3HS05-P11A
	Type	S3HS selector type control set (Green)
	Ordering code	S3HS05-P12A
	Type	S3HS selector type control set (Red)
	Ordering code	S3HS05-P13A
Applicable products		M5HS110, M5HS210

# Control valve(3/2 way, 5/3 way)

## CM3 Series



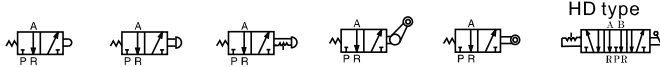
### Specification

Model	CM3□-05	CM3□-06	CM3□-08
Operating	External control		
Fluid	Air (to be filtered by 40 μm filter element)		
Pressure range	0~1.0MPa(0~10bar)(0~145psi)		
Proof pressure	1.5MPa(15bar)(215psi)		
Temperature	-20~70℃		
Valve type [Note1]	3 port 2 position		
Orifice size	2.0mm <sup>2</sup>	2.5mm <sup>2</sup>	15.0mm <sup>2</sup>
Cv	0.11	0.14	0.84
Port size [Note2]	M5×0.8	1/8"	1/4"
Material of body	Aluminum alloy		

[Note1] HD series are 5/3 way.

[Note2] PT thread, G thread and NPT thread are available.

### Symbol



### Product feature

- The external force required by changing the direction of the series of CM3B, CM3V, CM3L and CM3R is provided by external mechanism, which can be used for position test or limit switch.
- The series of CM3PF, CM3PM, CM3PMS, CM3PMX, CM3PL, CM3PP, CM3HS, CM3HD and CM3Y are operated manually, owning control joints with several structure forms and suitable for application under different conditions.
- Shut-off structure has good tightness and is sensitive in direction changing and lubricant is not necessary.
- Multi-mounting makes it convenient to install and apply.
- The control joints of series of CM3L, CM3V, CM3R and CM3Y are made of metal which has long service life and more reliable and steady performance.
- CM3PMS, CM3PMX Series have metallic guard, it can protect the push cup, to avoid misact due to outside force touching the push cup. So they can be used more reliably.

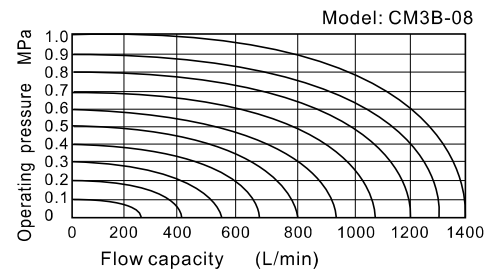
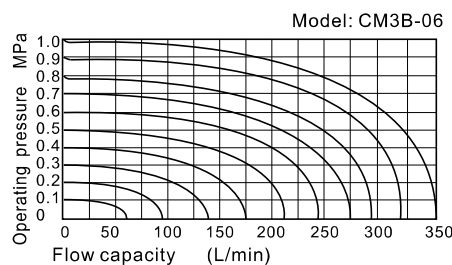
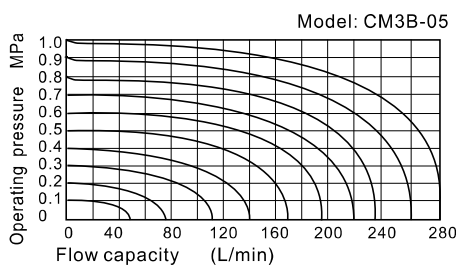
### Ordering code

CM3 PP 06 B □



① Valve's type	② Model	③ Port size	④ Button color	⑤ Thread type	
CM3: CM type 3/2 5/3 way	B: Basic type	05: M5 06: 1/8" 08: 1/4"	No this code	M5	1/8" 1/4"
	R: Roller type				
	L: Roller with free return type				
	V: Vertical type				
	Y: Lever typer				
	PL: Latching type				
	PP: Protruding type				
	PF: Flat type				
	PM: Mushroom type				
	PMS: Mushroom type(with guard)				
PMX: Big mushroom type(with guard)					
HS: Selector type	No this code	Blank: PT G: G T: NPT			
HD: Double-selector type					

### Flow chart

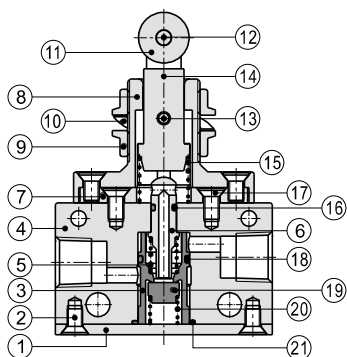


# Control valve(3/2 way, 5/3 way)

## CM3 Series

### Inner structure

CM3V



No.	Item	No.	Item	No.	Item
1	Fixing plate	8	Connecting holder	15	Spring
2	Screw	9	Clamping nut	16	O-ring
3	Spacer	10	Spring gasket	17	Screw
4	Body	11	Roller	18	O-ring
5	Spring	12	Shaft	19	Bottom cover gasket
6	Spool	13	Lock pin	20	Spring
7	Connerting gasket	14	Roller bracket	21	O-ring

### Installation and operation

1. Mounting way: by body, by panel I, by panel II, latching type, mushroom type. Please refer to the following picture:

Fixation way of body	Fixation way of panel I	Fixation way of panel II	Big mushroom type(With guard)	Mushroom type(With guard)
<p>Fixed plate</p>	<p>Fixed plate Thickness≤6 Fix holeΦ30.5</p>	<p>Fixed plate Thickness≤6 Fix holeΦ14.5</p>	<p>Push cap Guard Fixed plate Thickness≤6 Fix holeΦ30.5</p>	<p>Push cap Guard Fixed plate Thickness≤6 Fix holeΦ30.5</p>
<p><b>Latching type</b></p> <p>Fixed plate Thickness≤6 Fix holeΦ30.5</p> <p>Disassembly: Remove the screw, then to draw the button. Assembly: Install the button, then to tighten the screw.</p>		<p><b>Mushroom type</b></p> <p>Fixed plate Thickness≤6 Fix holeΦ30.5</p> <p>The button can be drew upward, or be pressed downward.</p>		
			<p>Disassembly: Remove the push cap, then remove the guard. Assembly: Install the guard, then to tighten the push cap.</p>	<p>Disassembly: Untighten the guard first, then remove the push cap with the guard. Assembly: Install the guard, then to tighten the push cap.</p>

2. The control set is made of engineering plastic which only allows manual operation and switching valves through metal impact is forbidden.

3. The series of CM3B, CM3L, CM3V, CM3R, CM3PM, CM3PMS, CM3PMX, CM3PF, CM3PP get the function of automatic restoration. The hand valves of CM3Y, CM3HS, CM3HD, CM3PL are in type of manual restoration. CM3PL will be restored by turning the revolve button after being pressed into orientation.

4. Pay attention to the reversing stroke. The reversing stroke can not surpass its stroke stipulated in stroke control table when the direction-change of the valve is forced by any external forces, otherwise it will cause the damage of the valve.

Model	Spool stroke	Button(Roller\Handle) stroke	Model	Spool stroke	Button(Roller\Handle) stroke
CM3B05(06)	1.5~3.0	-	CM3B08	2.4~4.0	-
CM3R05(06)	1.5~2.5	3.0~4.8	CM3R08	2.4~3.2	6.8~9.0
CM3L05(06)	1.5~2.3	3.0~4.8	CM3L08	2.4~3.2	7.2~9.7
CM3V05(06)	1.5~3.0	2.7~4.2	CM3V08	2.4~4.0	2.6~4.2
CM3Y05(06)	1.5~2.5	3.0~4.8	CM3Y08	2.4~3.2	6.8~9.0
CM3PL05(06)	1.5~2.5	4.0~5.0	CM3PL08	2.4~3.5	4.0~5.0
CM3PP05(06)	1.5~3.0	4.0~5.5	CM3PP08	2.4~4.0	4.0~5.5
CM3PF05(06)	1.5~3.0	4.0~5.5	CM3PF08	2.4~4.0	4.0~5.5
CM3HS05(06)	1.5~3.0	4.0~5.5	CM3HS08	2.4~4.0	4.0~5.5
CM3HD05(06)	1.5~3.0	4.0~5.5	CM3HD08	2.4~4.0	4.0~5.5
CM3PM05(06)	1.5~3.0	4.0~5.5	CM3PM08	2.4~4.0	4.0~5.5
CM3PMS05(06)	1.5~3.0	4.0~5.5	CM3PMX08	2.4~4.0	4.0~5.5
CM3PMX05(06)	1.5~3.0	4.0~5.5	CM3PMX08	2.4~4.0	4.0~5.5

5. The CM3L can only switch the valve in single direction(impact from left to right). The impact from the other direction (from right to left) is invalid.

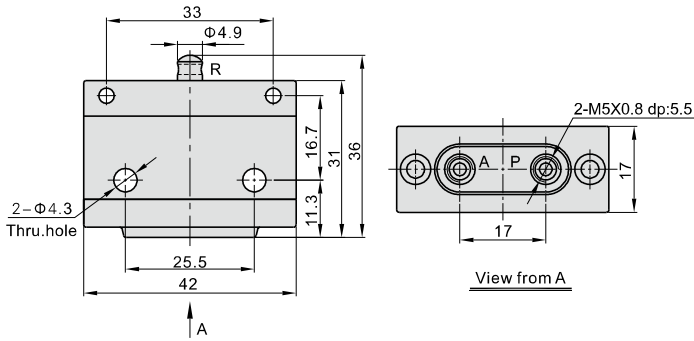
6. Control joint combination can be ordered individually. Please refer to external specification.

# Control valve(3/2 way, 5/3 way)

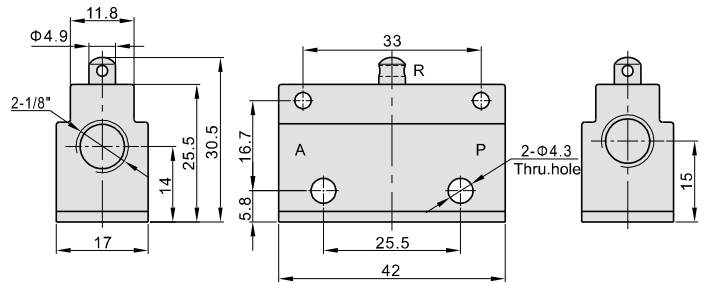
## CM3 Series

### Dimension (Basic type)

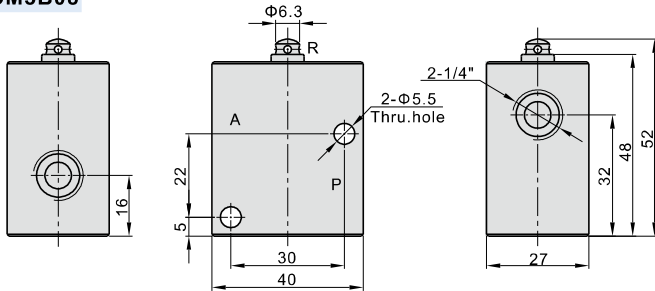
CM3B05



CM3B06



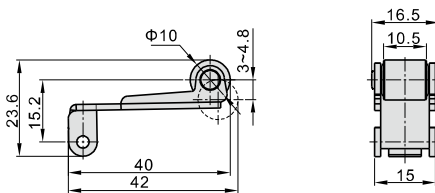
CM3B08



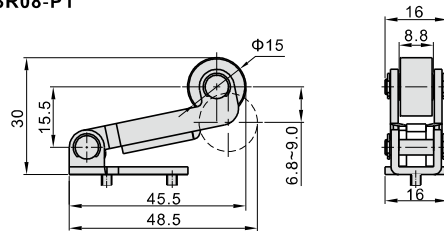
### Control set dimension

#### Roller type(R)

CM3R06-P1



CM3R08-P1

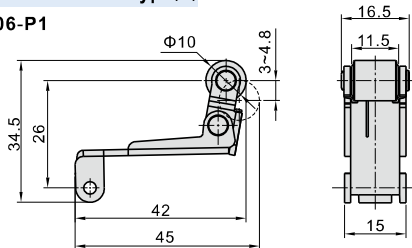


Note: CM3R06 control joint, which used in CM3R05 and CM3R06, can not be ordered individually. It should be matched with basic type.

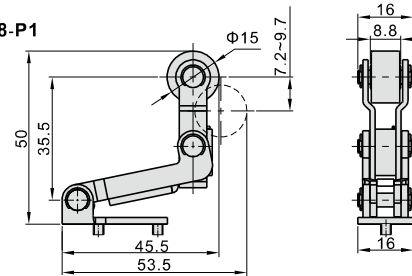
Model	Roller type(R)
How to order	Ordering code
Type	CM3R08-P1
Applicable products	CM3R08 roller type control set
	CM3R08

#### Roller with free return type(L)

CM3L06-P1



CM3L08-P1



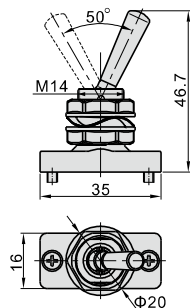
Note: CM3L06 control joint, which used in CM3L05 and CM3L06, can not be ordered individually. It should be matched with basic type.

Model	Roller with free return type(L)
How to order	Ordering code
Type	CM3L08-P1
Applicable products	CM3L08Roller with free return type control set
	CM3L08

# Control valve(3/2 way, 5/3 way)

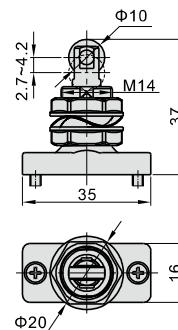
## CM3 Series

### Lever type(Y)



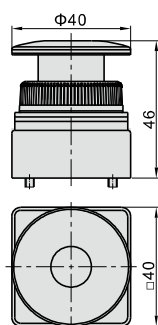
Model		Lever type(Y)
How to order	Ordering code	CM3Y06-P1
	Type	CM3Y lever type control set
Applicable products		CM3Y05 CM3Y06 CM3Y08

### Vertical type(V)



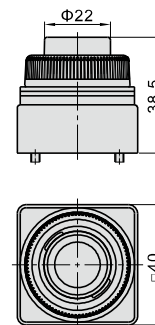
Model		Vertical type ( V )
How to order	Ordering code	CM3V06-P1
	Type	CM3V vertical type control set
Applicable products		CM3V05 CM3V06 CM3V08

### Mushroom type(PM)



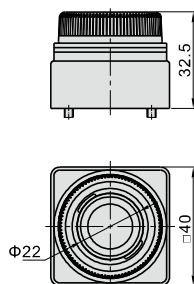
Model		Mushroom type ( PM )
How to order	Ordering code	CM3PM06-P1
	Type	CM3PM mushroom type control set(green)
	Ordering code	CM3PM06-P2
	Type	CM3PM mushroom type control set(red)
	Ordering code	CM3PM06-P3
	Type	CM3PM mushroom type control set(black)
	Ordering code	CM3PM06-P4
	Type	CM3PM mushroom type control set(yellow)
Applicable products		CM3PM05 CM3PM06 CM3PM08

### Protruding type(PP)



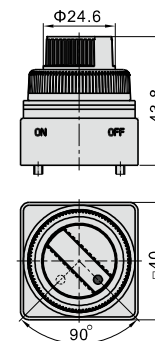
Model		Protruding type ( PP )
How to order	Ordering code	CM3PP06-P1
	Type	CM3PP protruding type control set(green)
	Ordering code	CM3PP06-P2
	Type	CM3PP protruding type control set(red)
	Ordering code	CM3PP06-P3
	Type	CM3PP protruding type control set(black)
	Ordering code	CM3PP06-P4
	Type	CM3PP protruding type control set(yellow)
Applicable products		CM3PP05 CM3PP06 CM3PP08

### Flat type(PF)



Model		Flat type ( PF )
How to order	Ordering code	CM3PF06-P1
	Type	CM3PF flat type control set(green)
	Ordering code	CM3PF06-P2
	Type	CM3PF flat type control set(red)
	Ordering code	CM3PF06-P3
	Type	CM3PF flat type control set(black)
	Ordering code	CM3PF06-P4
	Type	CM3PF flat type control set(yellow)
Applicable products		CM3PF05 CM3PF06 CM3PF08

### Selector type(HS)

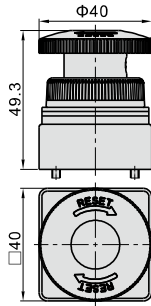


Model		Selector type ( HS )
How to order	Ordering code	CM3HS06-P1
	Type	CM3HS selector type control set(green)
	Ordering code	CM3HS06-P2
	Type	CM3HS selector type control set(red)
	Ordering code	CM3HS06-P3
	Type	CM3HS selector type control set(black)
	Ordering code	CM3HS06-P4
	Type	CM3HS selector type control set(yellow)
Applicable products		CM3HS05 CM3HS06 CM3HS08

# Control valve(3/2 way, 5/3 way)

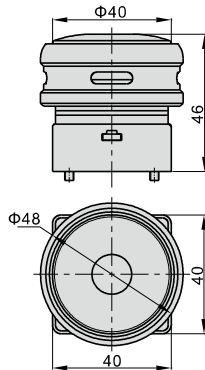
## CM3 Series

### Latching type(PL)



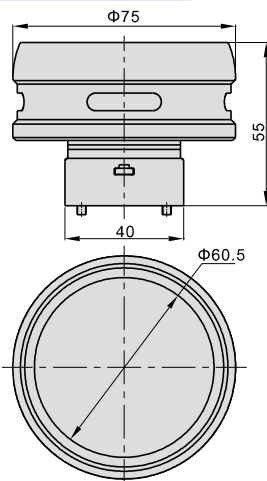
Model		Latching type(PL)
How to order	Ordering code	CM3PL06-P2
	Type	CM3PL latching type control set(red)
Applicable products		CM3PL05 CM3PL06 CM3PL08

### Mushroom type(with guard)(PMS)



Model		Mushroom type(with guard) ( PMS )
How to order	Ordering code	CM3PMS06-P1
	Type	CM3PMS mushroom type control set(green with guard)
	Ordering code	CM3PMS06-P2
	Type	CM3PMS mushroom type control set(red with guard)
	Ordering code	CM3PMS06-P3
	Type	CM3PMS mushroom type control set(black with guard)
Applicable products	Ordering code	CM3PMS06-P4
	Type	CM3PMS mushroom type control set(yellow with guard)
Applicable products		CM3PMS05 CM3PMS06 CM3PMS08

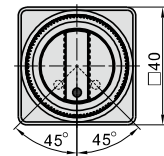
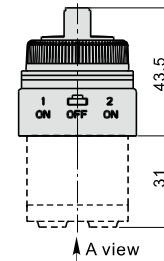
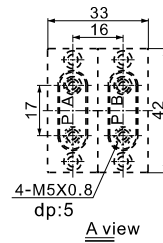
### Big mushroom type(with guard)(PMX)



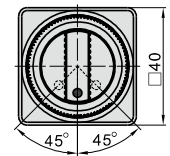
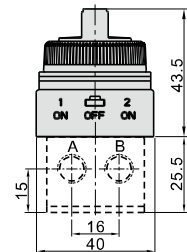
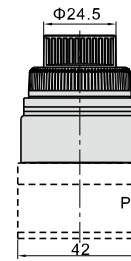
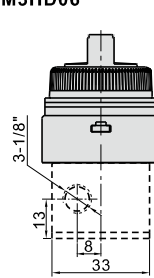
Model		Big mushroom type(with guard)(PMX)
How to order	Ordering code	CM3PMX06-P1
	Type	CM3PMX big mushroom type control set(green with guard)
	Ordering code	CM3PMX06-P2
	Type	CM3PMX big mushroom type control set(red with guard)
	Ordering code	CM3PMX06-P3
	Type	CM3PMX big mushroom type control set(black with guard)
Applicable products	Ordering code	CM3PMX06-P4
	Type	CM3PMX big mushroom type control set(yellow with guard)
Applicable products		CM3PMX05 CM3PMX06 CM3PMX08

### Double-selector type(HD)

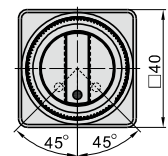
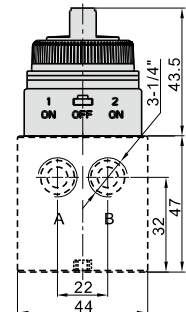
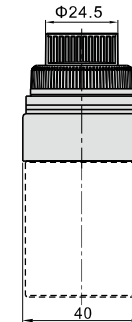
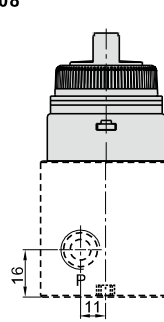
#### CM3HD05



#### CM3HD06



#### CM3HD08



Model		Double-selector type ( HD )
How to order	Ordering code	CM3HD06-P1
	Type	CM3HD double-selector type control set(green)
	Ordering code	CM3HD06-P2
	Type	CM3HD double-selector type control set(red)
	Ordering code	CM3HD06-P3
	Type	CM3HD double-selector type control set(black)
Applicable products	Ordering code	CM3HD06-P4
	Type	CM3HD double-selector type control set(yellow)
Applicable products		CM3HD05 CM3HD06 CM3HD08

Note: CM3HD control joint can be ordered individually, but should be matched with the body of CM3HD.

# Control valve(3/2 way)

## ZM3 Series

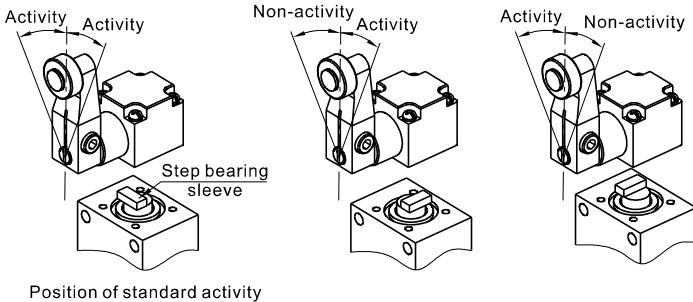


### Symbol

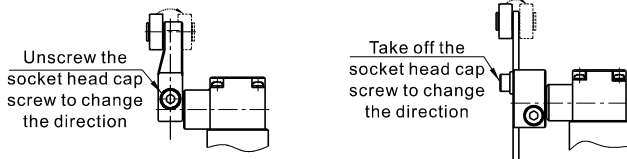


### Product feature

1. The activity direction could be changed(Only adapt to standard type, large angle type unavailable)



2. The rolling wheel could be installed at the inside of leverage



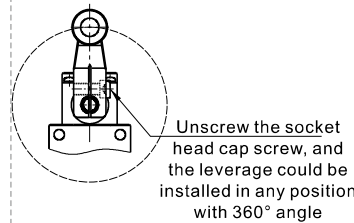
### Specification

Model	ZM3R	ZM3J	ZM3P
Operating	External control direct acting type		
Fluid	Air (to be filtered by 40 μm filter element)		
Pressure range	-0.1~1.0MPa(-1~10bar)(-15~145psi)		
Proof pressure	1.5MPa(15bar)(215psi)		
Temperature	-20~70℃		
Valve type	3/2 Way		
Orifice size	6.0mm <sup>2</sup> (Cv=0.34)		
Port size [Note1]	1/8"		
Lubrication [Note2]	Not required		
Material body	Aluminum alloy		

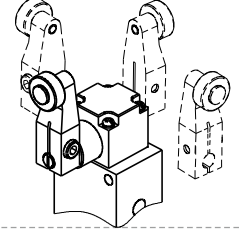
[Note1] PT thread, G thread and NPT thread are available.

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

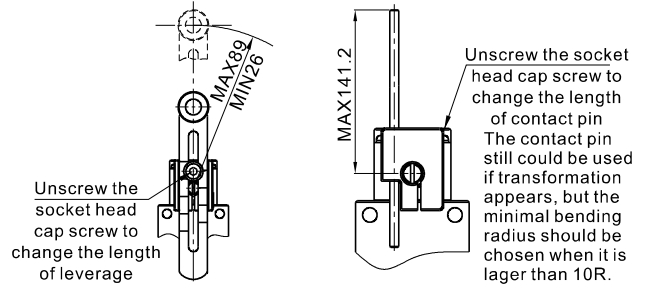
3. Installation position of leverage could be changed



4. Direction of head part could be changed



5. Length of contact pin could be changed

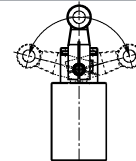


### Ordering code

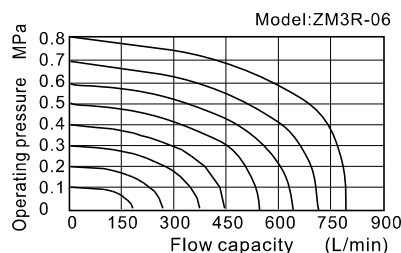
ZM3 R 06 W □

① ② ③ ④ ⑤

① Valve's type	② Model	③ Port size	④ Extreme angle of opening and closing of control head	⑤ Thread type
ZM3: ZM type 3/2 Way	R: Roller type J: Adjustable roller type P: Contact pin adjustable roller type	06: 1/8"	Blank: Standard type W: Large angle type	Blank: PT G: G T: NPT



### Flow chart

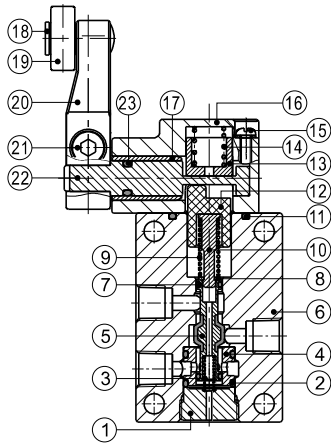


# Control valve(3/2 way)

## ZM3 Series

### Inner structure

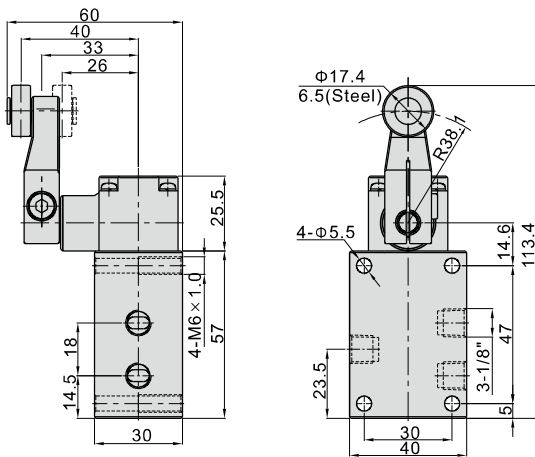
#### ZM3R



No.	Item	No.	Item
1	Bottom cover	13	Spring holder
2	O-ring	14	Spring
3	Spring	15	Screw
4	Spacer	16	Front cover
5	Spool	17	Bushing
6	Body	18	Shaft
7	O-ring	19	Roller
8	Spring washer	20	Rocker arm
9	Spring	21	Screw
10	Man drill	22	Rotation axis
11	O-ring	23	O-ring
12	Bushing		

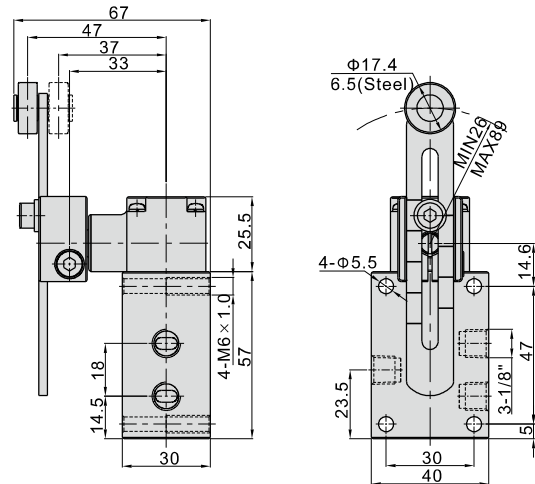
### Dimensions

#### ZM3R



Model\Item	F.O.F	P.T.	O.T.	T.T.
ZM3R06	20N	20°	30°	50°
ZM3R06-W	20N	25°	50°	75°

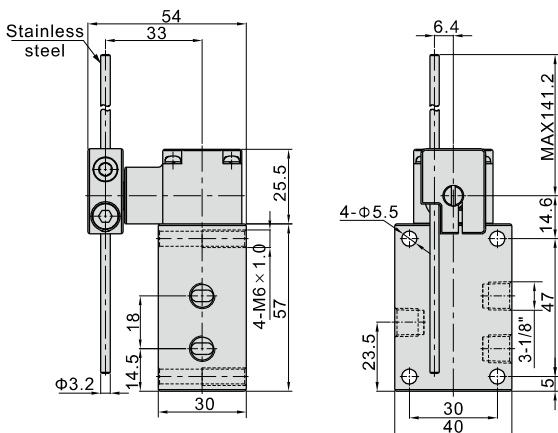
#### ZM3J



Model\Item	F.O.F [Note1]	P.T.	O.T.	T.T.
ZM3J06	20N	20°	30°	50°
ZM3J06-W	20N	25°	50°	75°

[Note1] When the length of leverage is 38.1mm

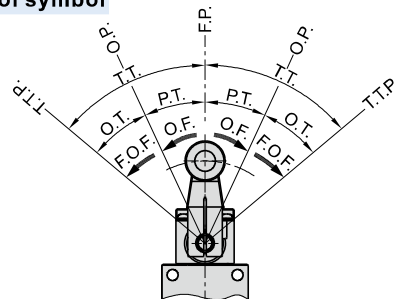
#### ZM3P



Model\Item	F.O.F [Note1]	P.T.	O.T.	T.T.
ZM3P06	2.3N	20°	30°	50°
ZM3P06-W	2.3N	25°	50°	75°

[Note1] When the length of leverage is 141.2mm

### Description of symbol



- F.P. Free position: the position of control head when no external force applied;
- O.P. Activity position: the position when the control head is applied with external force and the valve is switched;
- T.T.P. Extreme position of actuation: position of control head when it is pushed until end position;
- O.F. Actuation power: when driving from free position to actuation position, the operation power applied on control head;
- F.O.F. Extreme actuation power: when driving from free position to extreme actuation position, the operation power applied on control head;
- P.T. Free route: movement distance or rotation angle from free position of control head to actuation position;
- O.T. Actuation route: movement distance or rotation angle from actuation position of control head to extreme actuation position;
- T.T. Total route: movement distance or rotation angle from free position of control head to extreme actuation position;



# Foot pedal valve(3/2way)

3F, 3FM Series



## Symbol

Without lock



With lock



## Product feature

1. Direct acting and normally closed type.
2. The 3F series has aluminum foot pedal and 3FM series has plastic foot pedal, in direct acting type, horizontal and compact structure.
3. If the duration of direction-change is long, the valves with lock may be selected.
4. The clamping framework is steady and reliable that it is easy and quick to unlock. However, with the limitation of the dimension of structure, it can not bear frequent strong impact.

## Specification

Model	3FM210-M5	3F210-06	3FM210-06	3F210-08	3FM210-08
Fluid	Air (to be filtered by 40 μm filter element)				
Operating	Acting type controlled by foot normally closed				
Port size[Note1]	M5	1/8"	1/8"	1/4"	1/4"
Valve type	3/2 Way				
Pressure range	0~1.0MPa(0~145psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70℃				
Material body	3FM:Plastic; 3F:Aluminum alloy				
Lubrication	Not required				

[Note1] PT thread, G thread and NPT thread are available.

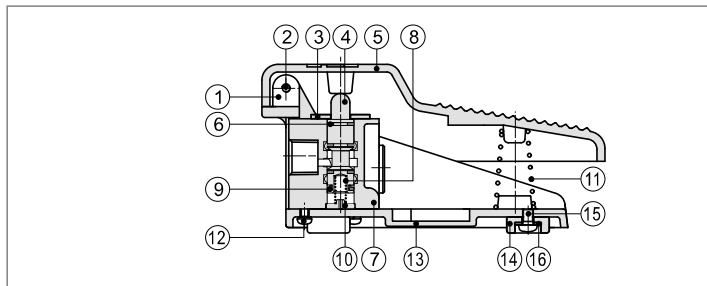
## Ordering code

3F210 08 L □

① ② ③ ④

① Model	② Port size	③ Note	④ Thread type	
3FM210: 3/2 way foot pedal valve (mini type)	M5: M5 06: 1/8" 08: 1/4"	No this code	M5	1/8" 1/4"
3F210: 3/2 way foot pedal valve	06: 1/8" 08: 1/4"	Blank: Without lock L: With lock	No this code	Blank: PT G: G T: NPT

## Inner structure

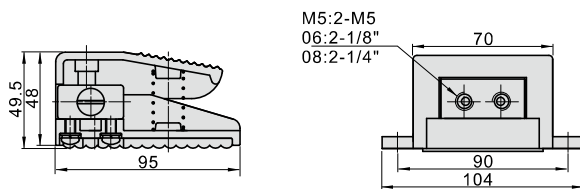


No.	Item	No.	Item	No.	Item
1	Bushing	7	Body	13	Base
2	Fixed screw	8	Spring	14	Base pad
3	Fixed plate	9	E clip	15	Fixed screw
4	Spool	10	Spring bolder	16	Clip
5	Pedal	11	Override spring		
6	O-ring	12	Fixed screw		

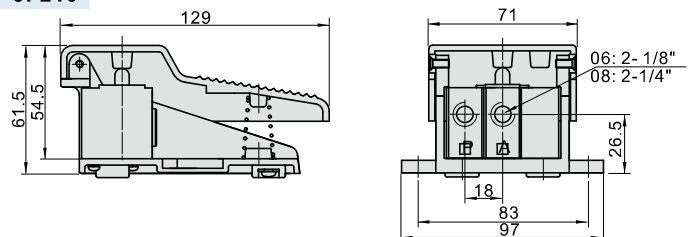
**Note** ⚠ Lockable type should be added grease periodically to ensure the machine can work regularly

## Dimensions

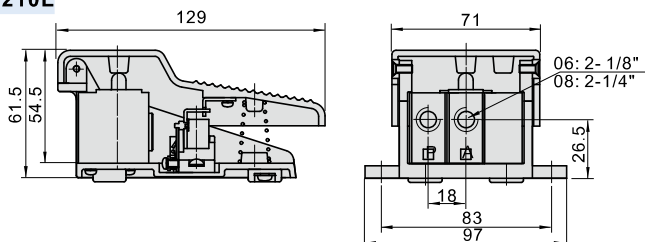
### 3FM210



### 3F210



### 3F210L

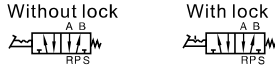


# Foot pedal valve(5/2way)

## 4F Series



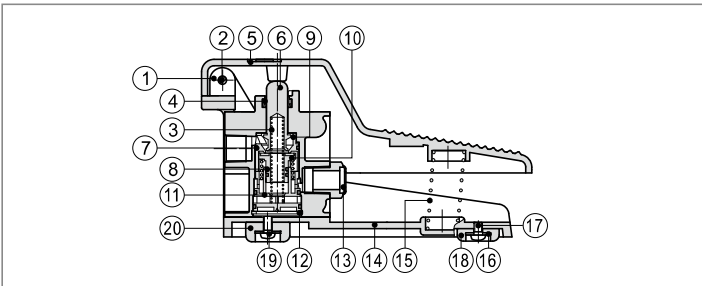
### Symbol



### Product feature

1. The aluminum foot pedal is designed with direct acting, which is steady and reliable.
2. If the duration of direction-change is long, the valves with lock may be selected.
3. The clamping framework is steady and reliable that it is easy and quick to unlock. However, with the limitation of the dimension of structure, it can not bear frequent strong impact.
4. Plastic guard with high strength may be selected.

### Inner structure



### Specification

Model	4F210-08	4F210-08L	4F210-08F	4F210-08LF
Fluid	Air (to be filtered by 40 μm filter element)			
Operating	Acting type controlled by foot			
Port size [Note1]	1/4"			
Valve type	5/2 Way			
Pressure range	0~1.0MPa(0~145psi)			
Proof pressure	1.5MPa(215psi)			
Temperature	-20~70°C			
Material body	Aluminum alloy			
Lubrication	Not required			

[Note1] PT thread, G thread and NPT thread are available.

### Ordering code

**4F210 08 L □**

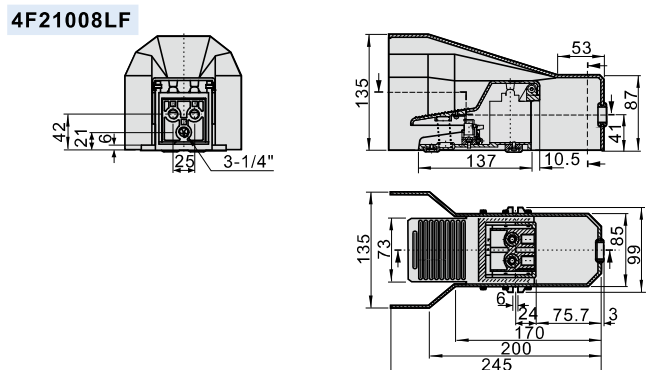
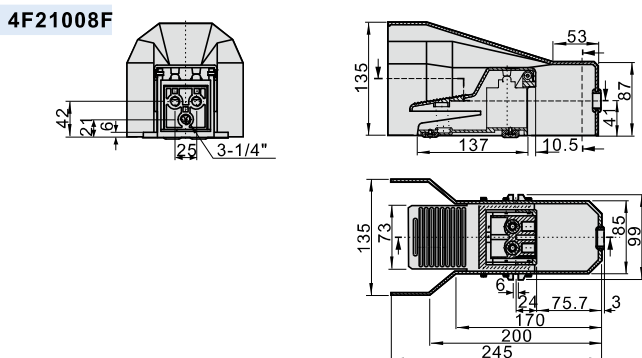
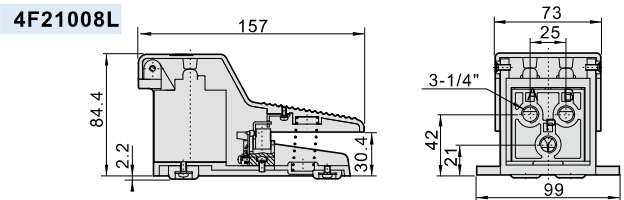
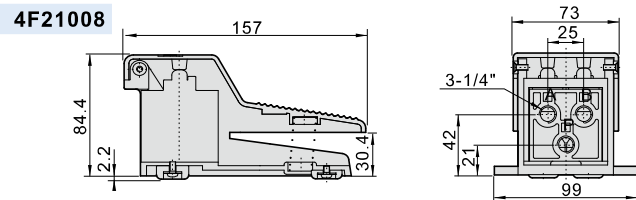
①    ②    ③    ④

① Model	② Port size	③ Note	④ Thread type
4F210: 5/2 way foot pedal valve	08: 1/4"	Blank: Without lock L: With lock F: With guard LF: With lock and guard	Blank: PT G: G T: NPT

No.	Item	No.	Item	No.	Item	No.	Item
1	Pin	6	Spool	11	Bottom cover	16	Washer
2	Screw	7	O-ring	12	C clip	17	Screw
3	Spring	8	O-ring	13	Silencer	18	Base pad
4	E clip	9	Front cover	14	Base	19	Screw
5	Pedal	10	Piston	15	Pedal spring	20	Base pad

**Note** ⚠ Lockable type should be added grease periodically to ensure the machine can work regularly.

### Dimensions



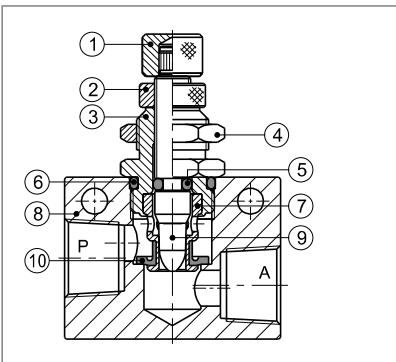
## ASC Series



### Symbol



### Inner structure



No.	Item
1	Adjustment cap
2	Clamping cap
3	Throttle body
4	Hexagon nut
5	O-ring
6	O-ring
7	Throttle sheath
8	Body
9	Throttle column
10	Spool O-ring

### Specification

Model	ASC100-06	ASC200-08	ASC300-10	ASC300-15	
Fluid	Air (to be filtered by 40 μm filter element)				
Port size [Note1]	1/8"	1/4"	3/8"	1/2"	
Pressure range	0.05~0.95MPa(7~135psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70°C				
Material body	Aluminum alloy				
Flow (L/min)	Control flow	200	450	1250	1650
	Free flow	400	800	1500	2500

[Note1] PT thread, G thread and NPT thread are available.

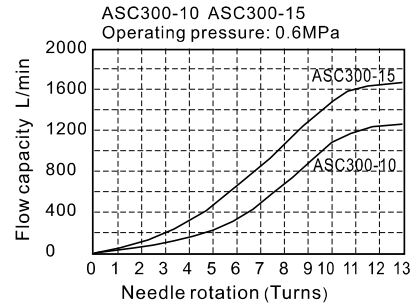
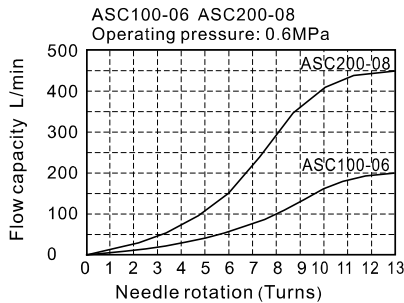
### Product feature

1. Small and compact structure.
2. Allows air to exhaust and cut off air flow. The adjustment screw is both sensitive and precise.
3. Can be mounted in various position to facilitate installation and application.

### Ordering code

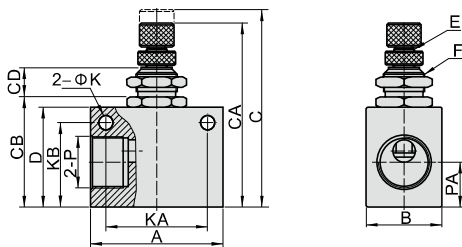
ASC 300 10 □			
① Model	② Code	③ Port size	④ Thread type
ASC: Flow control valve	100: 100 series	06: 1/8"	Blank: PT G: G T: NPT
	200: 200 series	08: 1/4"	
	300: 300 series	10: 3/8" 15: 1/2"	

### Flow chart

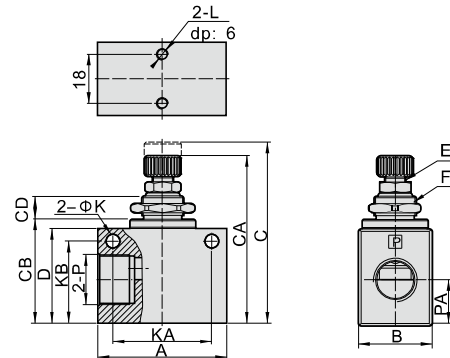


### Dimensions

#### ASC100\ASC200



#### ASC300



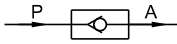
Model\Item	A	B	C	CA	CB	CD	D	E	F	K	KA	KB	L	P	PA
ASC10006	32	18	52.5	47	26	8.6	23	M6×0.5	M12×0.75	4.3	22	18	M4×0.7	1/8"	10
ASC20008	36	18	56.5	51	30	8.6	27	M6×0.5	M12×0.75	4.3	26	23	M4×0.7	1/4"	13.5
ASC30010	50	28	74	65	40.5	10	37	M8×0.75	M16×1.0	5.3	35	32	M4×0.7	3/8"	17.5
ASC30015	50	28	74	65	40.5	10	37	M8×0.75	M16×1.0	5.3	35	32	M4×0.7	1/2"	17.5

# Non-return valve

## NRV Series

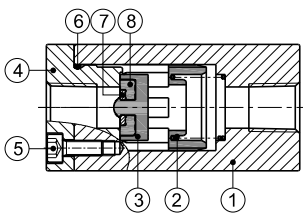


### Symbol



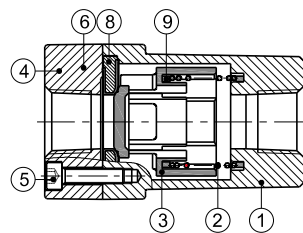
### Inner structure

NRV06\NRV08



No.	Item
1	Body
2	Spring
3	Spool
4	End cover
5	Screw
6	O-ring
7	Washer
8	Gasket washer
9	Bumper

NRV10~25



### Specification

Model	NRV06	NRV08	NRV10	NRV15	NRV20	NRV25
Fluid	Air (to be filtered by 40 μm filter element)					
Port size [Note1]	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Orifice size mm <sup>2</sup> (Cv valve)	18(1.0)	27(1.5)	60(3.33)	73(4.06)	230(12.78)	260(14.44)
Pressure range	0.02~1.0MPa(2.9~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature	-20~70°C					
Material of body	Aluminum alloy					

[Note1] PT thread, G thread and NPT thread are available.

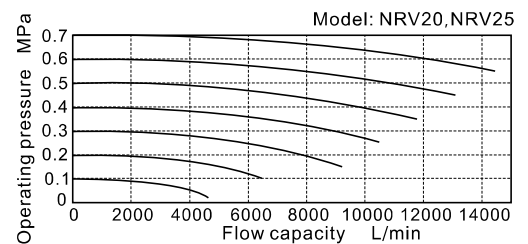
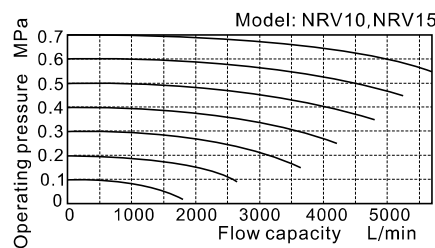
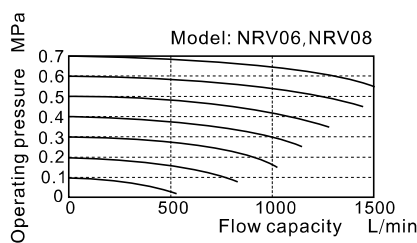
### Product feature

1. There are many port sizes: 1/8", 1/4", 3/8", 1/2", 3/4", 1".
2. It allows the fluid to flow in one direction **ONLY**.
3. It is prevent backflow due to sudden drop in pressure or decrease in air consumption .
4. There is large valid area of section.
5. The spool is made of POM, valve's core sealed with rubber, and it has a compact structure.

### Ordering code

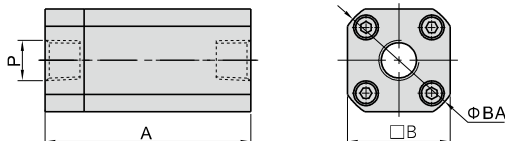
NRV 08 □		
① Model	② Port size	③ Thread type
NRV: Non-return valve	06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2" 20: 3/4" 25: 1"	Blank: PT G: G T: NPT

### Flow chart



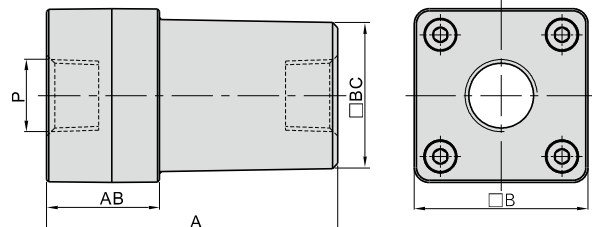
### Dimensions

NRV06\NRV08



Model\Item	A	AB	B	BA	BC	P
NRV06	50	-	25	30	-	1/8"
NRV08	50	-	25	30	-	1/4"
NRV10	67	26	40	-	33.6	3/8"
NRV15	67	26	40	-	33.6	1/2"
NRV20	95	31.5	52	-	46.7	3/4"
NRV25	95	31.5	52	-	46.7	1"

NRV10~25



# Pilot no-return valve

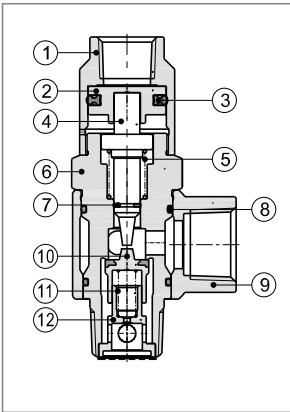
## PCV series



### Symbol



### Inner structure



No.	Item	Material
1	Pilot body	Aluminum alloy or Brass
2	Piston	Brass
3	Gasket	NBR
4	Spool	Brass
5	Spring	SUS304
6	Body	Brass
7	Spool O-ring	NBR
8	O-ring	NBR
9	Conversion fitting	Aluminum alloy or Brass
10	Plunger	Brass+NBR
11	Spring	SUS304
12	Pedestal	Brass

### Specification

Model	PCV06	PCV08	PCV10	PCV15	PCV06F	PCV08F	PCV10F	PCV15F	
Fluid	Air (to be filtered by 40μm filter element)								
Operating pressure range	0.15~1.0MPa								
Proof pressure	1.5MPa								
Temperature	-20~70(°C)								
Operating frequency	6(Cycle/minute)	40(Cycle/minute)	60(Cycle/minute)	40(Cycle/minute)	60(Cycle/minute)	40(Cycle/minute)	40(Cycle/minute)	40(Cycle/minute)	
Port size [Note1]	1/8"	1/4"	3/8"	1/2"	1/8"	1/4"	3/8"	1/2"	
Pilot port size	M5X0.8	1/8"	1/4"	1/4"	Φ6	Φ6	Φ8	Φ8	
Weight (g)	PT thread	53.2	94.8	142.8	189.6	53	90	142.2	188.1
	G thread	54.6	94.8	145	189	54.2	90.6	143.4	187.6

[Note1] PT thread, G thread are available.

### Product feature

1. Can be used for safety loop of pressure holding.
2. Can make cylinder momentary stop, accurate orientation.
3. Can be used special loop.
4. Fitting joint type is used for pilot port, which saved space and improve efficiency of installation.

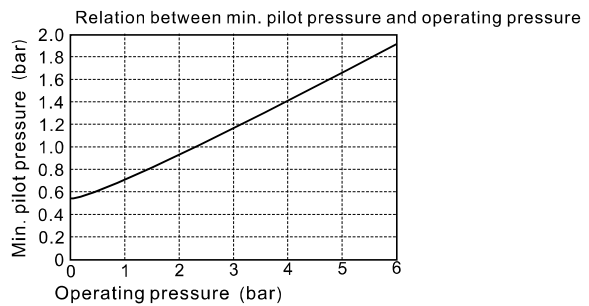
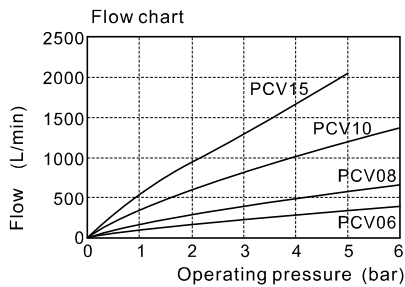
### Ordering code

**PCV 06**

①    ②    ③    ④

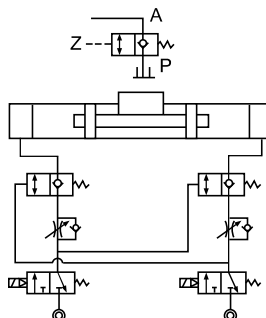
① Model	② Port size	③ Pilot port type			④ Thread type
		Pilot port type	Pilot port size	Inlet/outlet port size	
PCV: Pilot no-return valve	06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Female thread	M5X0.8	1/8"	Blank: PT G: G
			1/8"	1/4"	
			1/4"	3/8", 1/2"	
		F: Fitting	Φ6	1/8", 1/4"	
			Φ8	3/8", 1/2"	

### Flow chart, Relation between min. pilot pressure and operating pressure



### Typical application

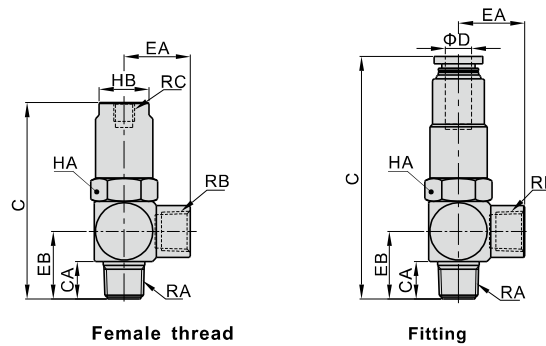
#### Accurate orientation



## PCV series

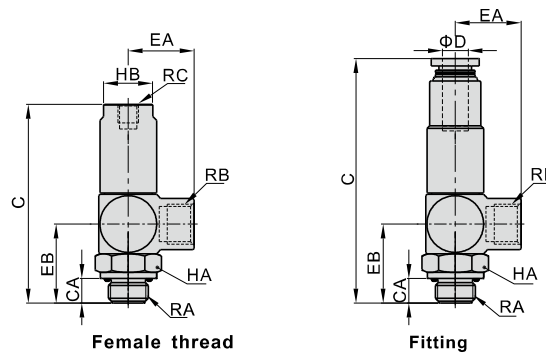
### Dimensions

#### PT Thread



Model/Item	C	CA	D	EA	EB	HA	HB	RA	RB	RC
PCV06	48.5	7.5	-	16	16.5	14	12	1/8"	1/8"	M5X0.8
PCV08	59	10	-	20.3	21	17	14	1/4"	1/4"	1/8"
PCV10	74.5	11	-	25	26	22	17	3/8"	3/8"	1/4"
PCV15	79.5	14	-	28	29.5	24	19	1/2"	1/2"	1/4"
PCV06F	58.5	7.5	6	16	16.5	14	-	1/8"	1/8"	-
PCV08F	67	10	6	20.3	21	17	-	1/4"	1/4"	-
PCV10F	82	11	8	25	26	22	-	3/8"	3/8"	-
PCV15F	87	14	8	28	29.5	24	-	1/2"	1/2"	-

#### G Thread



Model/Item	C	CA	D	EA	EB	HA	HB	RA	RB	RC
PCV06G	48.5	5.5	-	16	19	14	12	G1/8	G1/8	M5X0.8
PCV08G	59	6.5	-	20.3	24	17	14	G1/4	G1/4	G1/8
PCV10G	74.5	7.5	-	25	30.5	22	17	G3/8	G3/8	G1/4
PCV15G	79.5	9	-	28	34.5	24	19	G1/2	G1/2	G1/4
PCV06FG	58.5	5.5	6	16	19	14	-	G1/8	G1/8	-
PCV08FG	67	6.5	6	20.3	24	17	-	G1/4	G1/4	-
PCV10FG	82	7.5	8	25	30.5	22	-	G3/8	G3/8	-
PCV15FG	87	9	8	28	34.5	24	-	G1/2	G1/2	-