

# Control valve(3/2way)



## S3 Series



### 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 size①	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											
Lubrication②	Not required											
Pressure range	0~0.8MPa(0~114psi)											
Proof pressure	1.5MPa(215psi)											
Temperature	-20~70 °C											
Material body	Aluminum alloy											

① PT thread, NPT thread and G thread are available.

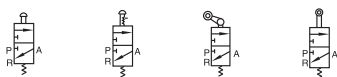
② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

### Ordering code

**S3 PM 06 R P**

<b>Valve's type</b>	S3: S type 3/2 Way												
<b>Thread type</b>	<table border="1"> <tr> <th>Port size</th> <th>Thread type</th> </tr> <tr> <td>M5</td> <td>Not code</td> </tr> <tr> <td>1/8"</td> <td>P: PT</td> </tr> <tr> <td>1/4"</td> <td>T: NPT</td> </tr> <tr> <td></td> <td>G: G</td> </tr> </table>	Port size	Thread type	M5	Not code	1/8"	P: PT	1/4"	T: NPT		G: G		
Port size	Thread type												
M5	Not code												
1/8"	P: PT												
1/4"	T: NPT												
	G: G												
<b>Model</b>	<table border="1"> <tr><td>B: Basic type</td></tr> <tr><td>C: Long handle type</td></tr> <tr><td>D: Short handle type</td></tr> <tr><td>Y: Lever type</td></tr> <tr><td>R: Roller type</td></tr> <tr><td>L: Roller with free return type</td></tr> <tr><td>V: Vertical type</td></tr> <tr><td>PL: Latching type</td></tr> <tr><td>PP: Protruding type</td></tr> <tr><td>PF: Flat type</td></tr> <tr><td>PM: Mushroom type</td></tr> <tr><td>HS: Selector type</td></tr> </table>	B: Basic type	C: Long handle type	D: Short handle type	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	HS: Selector type
B: Basic type													
C: Long handle type													
D: Short handle type													
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													
HS: Selector type													
<b>Button color</b>	<table border="1"> <tr> <th>Model</th> <th>Button color</th> </tr> <tr> <td>PL</td> <td>R: Red</td> </tr> <tr> <td>PP, PF</td> <td>R: Red</td> </tr> <tr> <td>PM, HS</td> <td>G: Green</td> </tr> <tr> <td>Others</td> <td>B: Black</td> </tr> <tr> <td></td> <td>Not code</td> </tr> </table>	Model	Button color	PL	R: Red	PP, PF	R: Red	PM, HS	G: Green	Others	B: Black		Not code
Model	Button color												
PL	R: Red												
PP, PF	R: Red												
PM, HS	G: Green												
Others	B: Black												
	Not code												
<b>Port size</b>	<table border="1"> <tr><td>05: M5</td></tr> <tr><td>06: 1/8"</td></tr> <tr><td>08: 1/4"</td></tr> </table>	05: M5	06: 1/8"	08: 1/4"									
05: M5													
06: 1/8"													
08: 1/4"													

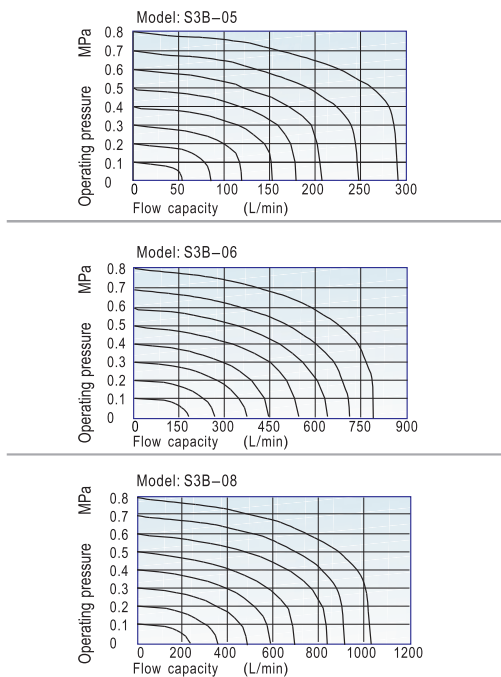
### Symbol



### Product feature

- 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.
- 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.
- 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 S3C, S3D, S3Y, S3R and S3L are made of metal which has long service life and more reliable and steady performance.

### Flow chart



### Inner structure

S3PM type

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

### 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			

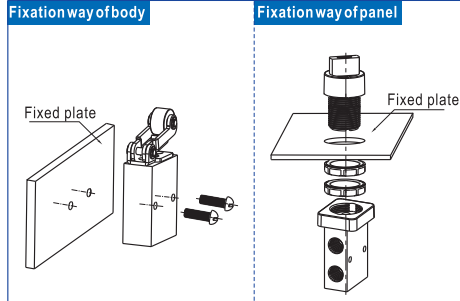


# Control valve(3/2way)



## S3 Series

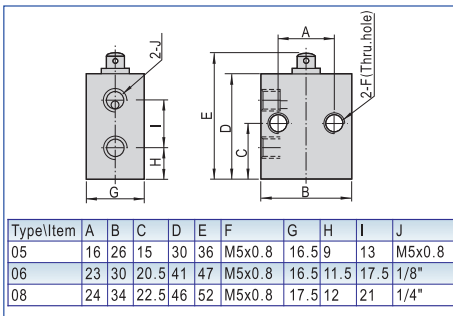
### Assemble chart



### Attentions

- 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.

### Dimensions of body(S3B)



### Dimension

Model	C Long handle type		D Short handle type		Y Lever type	
	Ordering code	Type	Ordering code	Type	Ordering code	Type
How to order	M3C210-P13A	M3C210 Long handle type control set	M3D210-P13A	M3D210 Short handle type control set	M3Y210-P13A	M3Y210 Lever type control set
Applicable products	S3C05, S3C06, S3C08		S3D05, S3D06, S3D08		S3Y05, S3Y06, S3Y08	
Dimensions						
	16, 14.8, 30.5, 80.7		16, 44.3, 30.5, 43.4		16.5, 36.7, 42.2, 17, 10.5, 33.5	

Model	R Roller type		L Roller with free return type		V Vertical type	
	Ordering code	Type	Ordering code	Type	Ordering code	Type
How to order	M3R210-P14A	M3R210 Roller type control set	M3L210-P14A	M3L210 Roller with free return type control set	S3V05(06, 08)-P14	S3V05(06, 08) Vertical type control set
Applicable products	S3R05, S3R06, S3R08		S3L05, S3L06, S3L08		S3V05, S3V06, S3V08	
Dimensions						
	3, 16, 18.5, 26, 30.5, 32.6, 40		13, 16, 18.5, 26, 30.5, 32.6, 41.5		2-Φ3.3 Thru-hole, Φ6.0, 12, 18.5, 3.4-4.8, 32.8, 18	

Model	PP Protruding type		PM Mushroom type		PL Latching type (only red)	
	Ordering code	Type	Ordering code	Type	Ordering code	Type
How to order	S3PP05-P11A	S3PP protruding type control set (Green)	S3PM05-P11A	S3PM mushroom type control set (Green)	S3PL05-P12A	S3PL Latching type control set (Red)
Applicable products	S3PP05, S3PP06, S3PP08		S3PM05, S3PM06, S3PM08		S3PL05, S3PL06, S3PL08	
Dimensions						
	36, 30, Φ28.5, 21, M22 x 1.25, 49.7		36, 30, Φ36, M22 x 1.25, 53.7		36, 30, Φ36, M22 x 1.25, 51.5-58.5	

Model	PF Flat type		HS Selector type	
	Ordering code	Type	Ordering code	Type
How to order	S3PF05-P11A	S3PF flat type control set (Green)	S3HS05-P11A	S3HS selector type control set (Green)
Applicable products	S3PF05, S3PF06, S3PF08		S3HS05, S3HS06, S3HS08	
Dimensions				
	36, 30, Φ28.5, M22 x 1.25, 42.3		36, 30, Φ28.5, M22 x 1.25, 57.3	