

# Control valve(5/2way)

## M5 Series



### Symbol

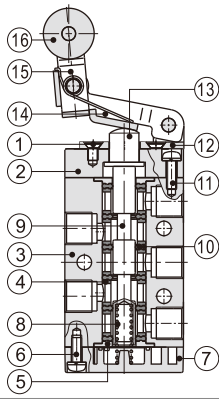


### Product feature

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 M5B, M5R and M5L is provided by external mechanism, which can be used for position test or [stroke switch] limit switch.
3. 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.
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. Lubricant is not necessary.
6. Multi-mounting makes it convenient to install and apply.
7. 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.

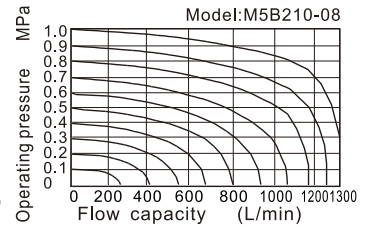
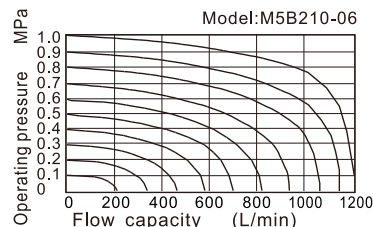
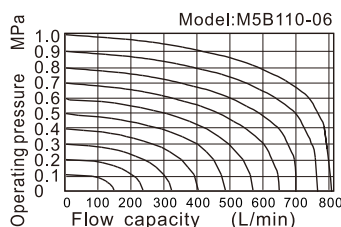
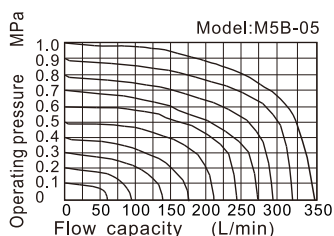
### Inner structure

M5L210



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 of 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								
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 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				
	L: Roller with free return type	210: 200 Series single control	06: 1/8" 08: 1/4"	Blank: Red R: Red G: Green B: Black	
	PL: Latching type				
	PP: Protruding type				
	PF: Flat type				
	PM: Mushroom type				
HS: Selector type					

### Mini type

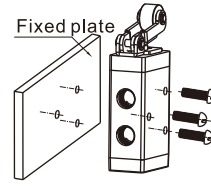
Mini type		
M5 R 05		
① Valve's type	② Model	③ Port size
M5: M type 5/2 Way	B: Basic type R: Roller type L: Roller with free return type	05: M5

## M5 Series

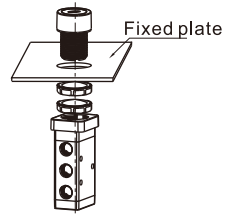
### Installation and Application

- 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 following tables for order details.

Fixation way of body

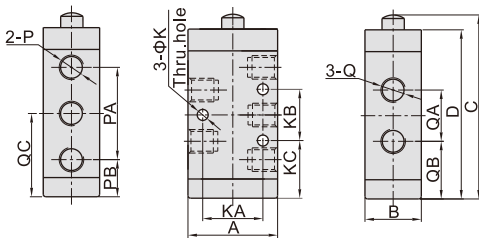


Fixation way of panel



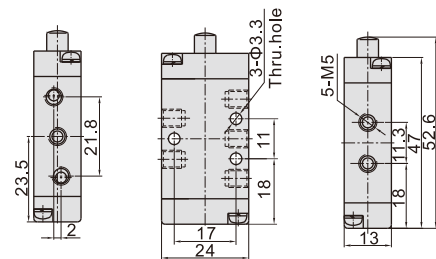
### Dimensions

#### Common type



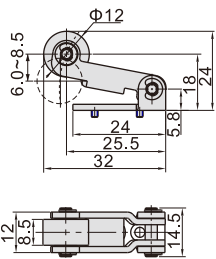
Model\Item	A	B	C	D	K	KA	KB	KC	P	PA	PB	Q	QA	QB	QC
M5B11006	27	18	63	57.5	3.3	18	14	22	1/8"	28	15	1/8"	16	21	29
M5B21006	35	22	72	66	4.3	23.5	20	22.5	1/8"	36	14.5	1/8"	20	22.5	32.5
M5B21008									1/8"			1/4"			

#### Mini type

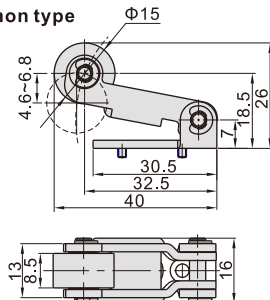


#### Roller type(R)

##### Mini type



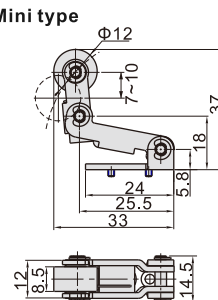
##### Common type



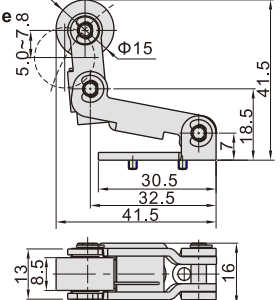
Model	Roller type(R)	
How to order	Ordering code	M3R05-P14A M3R210-P14A
	Type	M3R05 Roller type control set M3R210 Roller type control set
Applicable products		M5R05 M5R110, M5R210

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

##### Mini type

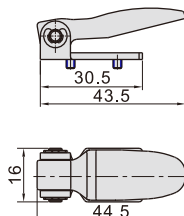


##### Common type



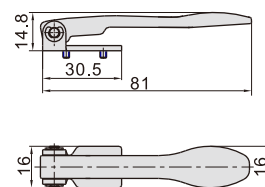
Model	Roller with free return type(L)	
How to order	Ordering code	M3L05-P14A M3L210-P14A
	Type	M3L05 Roller with free return type control set M3L210 Roller with free return type control set
Applicable products		M5L05 M5L110, M5L210

#### 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)

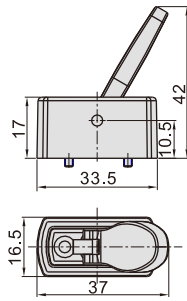


Model	Long handle type(C)	
How to order	Ordering code	M3C210-P13A
	Type	M3C210 Long handle type control set
Applicable products		M5C110, M5C210

# Control valve(5/2way)

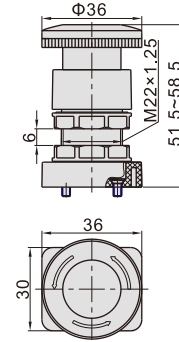
## M5 Series

### Lever type(Y)



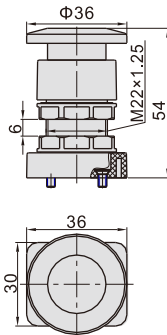
Model		Lever type(Y)
How to order	Ordering code	M3Y210-P13A
	Type	M3Y210 Lever type control set
Applicable products		M5Y110, M5Y210

### Latching type(PL)



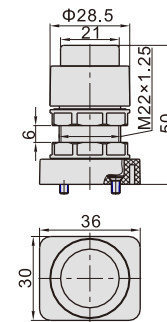
Model		Latching type (only red)(PL)
How to order	Ordering code	S3PL05-P12A
	Type	S3PL Latching type control set (Red)
Applicable products		M5PL110, M5PL210

### Mushroom type(PM)



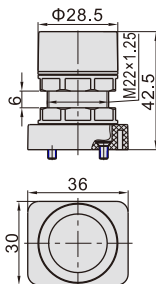
Model		Mushroom type(PM)
How to order	Ordering code	S3PM05-P11A
	Type	S3PM mushroom type control set (Green)
	Ordering code	S3PM05-P12A
	Type	S3PM mushroom type control set (Red)
Applicable products	Ordering code	S3PM05-P13A
	Type	S3PM mushroom type control set (Black)
Applicable products		M5PM110, M5PM210

### Protruding type(PP)



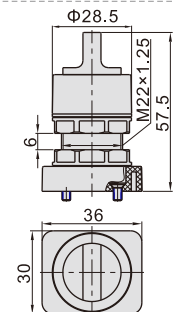
Model		Protruding type(PP)
How to order	Ordering code	S3PP05-P11A
	Type	S3PP protruding type control set (Green)
	Ordering code	S3PP05-P12A
	Type	S3PP protruding type control set (Red)
Applicable products	Ordering code	S3PP05-P13A
	Type	S3PP protruding type control set (Black)
Applicable products		M5PP110, 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)
Applicable products	Ordering code	S3PF05-P13A
	Type	S3PF flat type control set (Black)
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)
Applicable products	Ordering code	S3HS05-P13A
	Type	S3HS selector type control set (Black)
Applicable products		M5HS110, M5HS210