

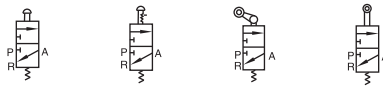
Control valve(3/2way)

AIRTAC

S3 Series



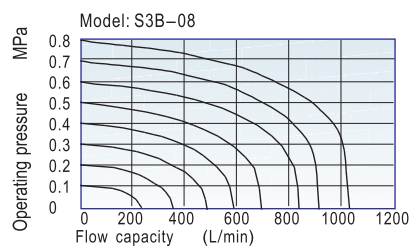
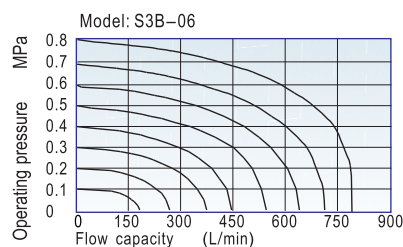
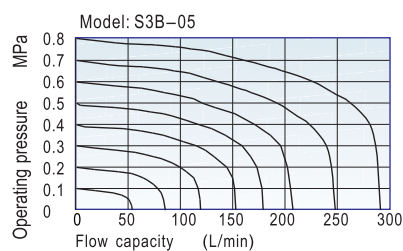
Symbol



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.

Flow chart



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 ^①	05:M5; 06:1/8"; 08:1/4"											
Orifice size	05:2.5 mm ² (Cv=0.14); 06:8.0mm ² (Cv=0.45); 08:12.0mm ² (Cv=0.67)											
Valve type	3/2 Way											
Lubrication ^②	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

Valve's type
S3: S type 3/2 Way

Thread type

Port size	Thread type
M5	Not code
1/8"	P: PT
1/4"	T: NPT
	G: G

Model

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

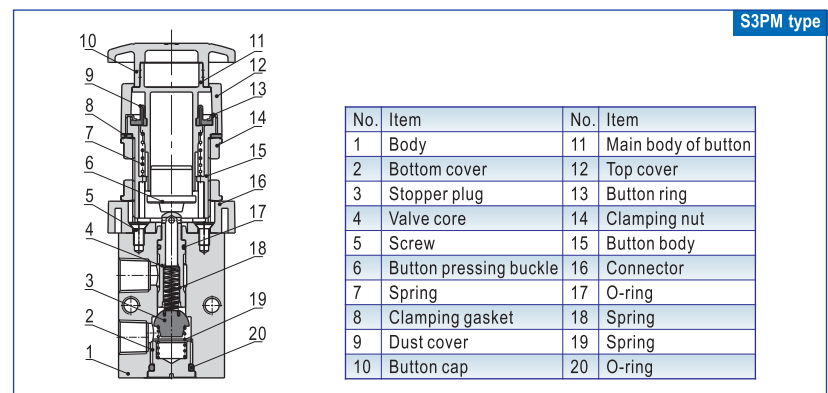
Button color

Model	Button color
PL	R: Red
PP, PF	R: Red
PM, HS	G: Green
	B: Black
Others	Not code

Port size

05: M5
06: 1/8"
08: 1/4"

Inner structure



Reversal stroke

Unit: mm

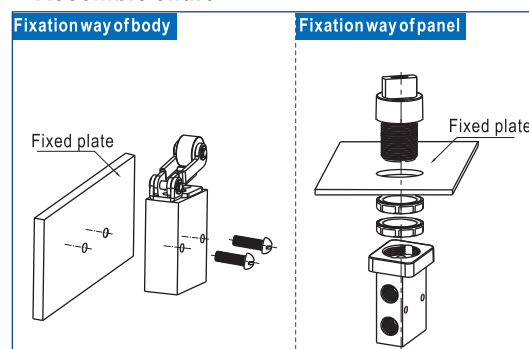
Type	Spool stroke	Button stroke	Type	Spool stroke	Roller(handle) stroke
S3B	2.4~4.0	—	S3R	2.4~3.4	5.5~7.8
S3PF	2.4~4.0	3.8~5.4	S3L	2.4~3.4	6.0~8.6
S3PP	2.4~4.0	3.8~5.4	S3V	2.4~3.8	3.4~4.8
S3PM	2.4~4.0	3.8~5.4	S3C	2.4~3.8	14.4~18.4
S3PL	2.4~4.0	5.9~7.5	S3D	2.4~3.8	7.4~9.4
S3HS	2.4~4.0	5.1~6.7			

Control valve(3/2way)

AIRTAC

S3 Series

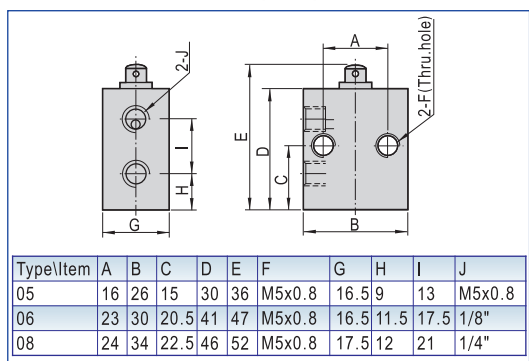
■ Assemble chart



⚠️ 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	
How to order	Ordering code	Type	Ordering code	Type	Ordering code	Type
	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						

Model	R Roller type		L Roller with free return type		V Vertical type	
How to order	Ordering code	Type	Ordering code	Type	Ordering code	Type
	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						

Model	PP Protruding type		PM Mushroom type		PL Latching type (only red)	
How to order	Ordering code	Type	Ordering code	Type	Ordering code	Type
	S3PP05-P11A	S3PP protruding type control set (Green)	S3PM05-P11A	S3PM mushroom type control set (Green)	S3PL05-P12A	S3PL Latching type control set (Red)
	S3PP05-P12A	S3PP protruding type control set (Red)	S3PM05-P12A	S3PM mushroom type control set (Red)		
	S3PP05-P13A	S3PP protruding type control set (Black)	S3PM05-P13A	S3PM mushroom type control set (Black)		
Applicable products	S3PP05, S3PP06, S3PP08		S3PM05, S3PM06, S3PM08		S3PL05, S3PL06, S3PL08	
Dimensions						

Model	PF Flat type		HS Selector type	
How to order	Ordering code	Type	Ordering code	Type
	S3PF05-P11A	S3PF flat type control set (Green)	S3HS05-P11A	S3HS selector type control set (Green)
	S3PF05-P12A	S3PF flat type control set (Red)	S3HS05-P12A	S3HS selector type control set (Red)
	S3PF05-P13A	S3PF flat type control set (Black)	S3HS05-P13A	S3HS selector type control set (Black)
Applicable products	S3PF05, S3PF06, S3PF08		S3HS05, S3HS06, S3HS08	
Dimensions				

Control valve(3/2way)

AIRTAC

M3 Series



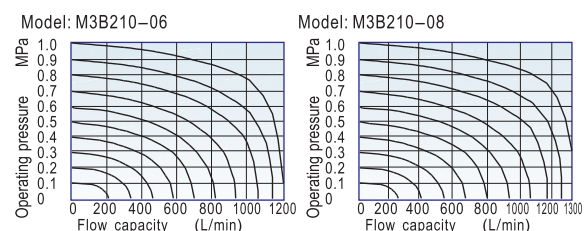
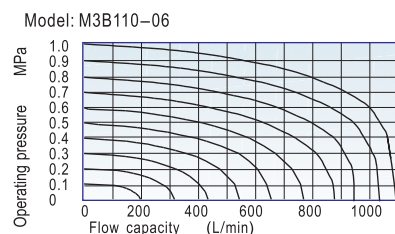
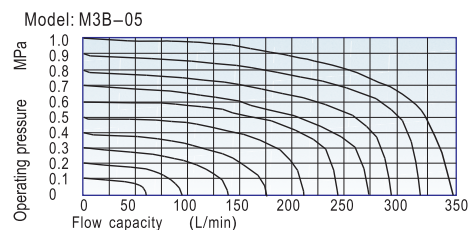
Symbol



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.

Flow chart



Specification

Model	S3B	S3C	S3D	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	Mini type										
	110										
	210										
Valve type	3/2 Way										
Lubrication②	Not required										
Pressure range	0~1.0MPa(0~145psi)										
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

Common type:

M3 PM 210 06 R P

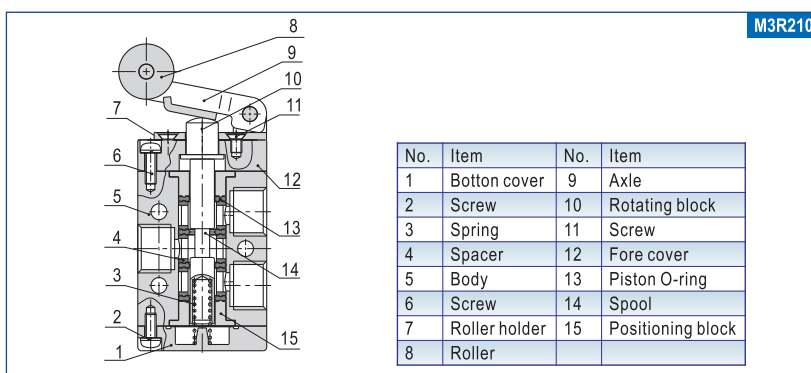
Valve's type	M3: M type 3/2 Way								
Model	B: Basic type C: Long handle type D: Short handle type Y: Lever typer R: Roller type L: Roller with free return type PL: Latching type PP: Protruding type PF: Flat type PM: Mushroom type HS: Selector type								
Thread type	P: PT T: NPT G: G								
Button color	Model Button color PL R: Red PP, PF R: Red PM, HS G: Green Others B: Black Others Not code								
Port size	<table border="1"> <tr> <th>Code</th><th>Port size</th></tr> <tr> <td>100 Series</td><td>06: 1/8"</td></tr> <tr> <td>200 Series</td><td>06: 1/8"</td></tr> <tr> <td></td><td>08: 1/4"</td></tr> </table>	Code	Port size	100 Series	06: 1/8"	200 Series	06: 1/8"		08: 1/4"
Code	Port size								
100 Series	06: 1/8"								
200 Series	06: 1/8"								
	08: 1/4"								
Code	110: 100 Series single control 210: 200 Series single control								

Mini type:

M3 R 05

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

Inner structure



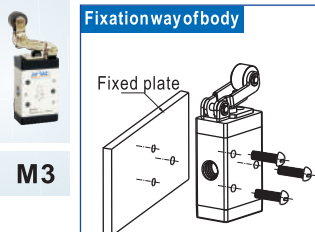
Reversal stroke

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						

Unit:mm

AirTAC

▣ Assemble chart

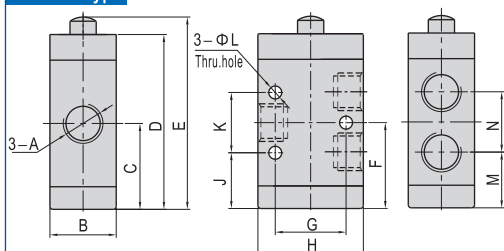


Attentions

- 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 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.
- 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 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).
- 5) Control joint combination can be ordered individually. Please refer to the table on the right for order details.

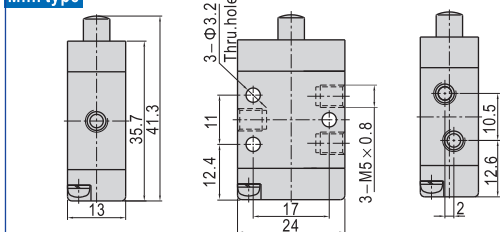
■ Dimensions

Common type

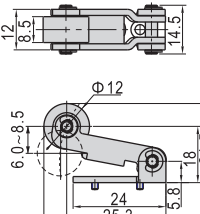
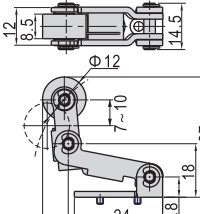


Item\Type	M3B110	M3B210	Item\Type	M3B110	M3B210
A	06:1/8"	06:1/8" 08:1/4"	G	18	23.5
B	18	22	H	27	35
C	23.5	28.5	J	15.5	18.5
D	46.5	58	K	16	20
E	52	63.8	L	3.2	4.3
F	23.5	28.5	M	15.5	18.5
			N	16	20

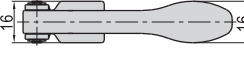

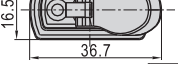
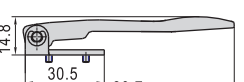
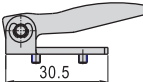
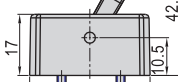
Mini type



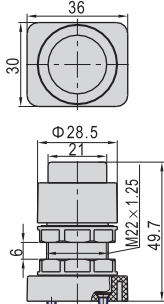
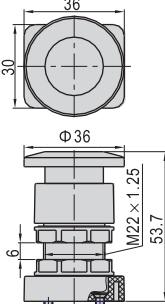
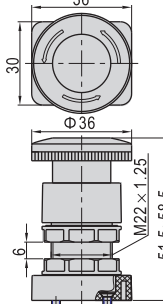
- Mini control set dimensions

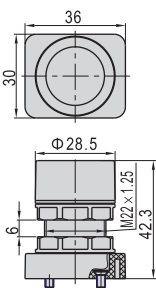
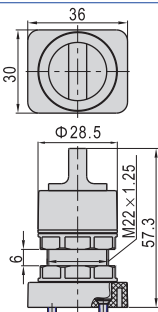
Model	M3R05 Model	M3L05 Model
How to order	Ordering code Type M3R05 - P14A M3R05 Roller type control set	Ordering code Type M3L05 - P14A M3L05 Roller with free return type control set
Applicable products	M3R05	M3L05
Dimensions	 <p>Technical drawing of the M3R05 roller showing top and side views. The top view shows a width of 12, a mounting hole diameter of 8.5, and a distance of 14.5 from the center to the edge. The side view shows a roller diameter of 12, a mounting hole diameter of 8.5, a distance of 6.0 to 8.5 from the roller center to the mounting hole, a distance of 24 from the roller center to the base, a base width of 25.3, a total width of 31.8, a distance of 5.8 from the roller center to the base edge, and a distance of 18 from the roller center to the top edge. A dimension of 24.5 is also indicated.</p>	 <p>Technical drawing of the M3L05 roller showing top and side views. The top view shows a width of 12, a mounting hole diameter of 8.5, and a distance of 14.5 from the center to the edge. The side view shows a roller diameter of 12, a mounting hole diameter of 8.5, a distance of 6.0 to 8.5 from the roller center to the mounting hole, a distance of 24 from the roller center to the base, a base width of 25.3, a total width of 33, a distance of 5.8 from the roller center to the base edge, and a distance of 18 from the roller center to the top edge. A dimension of 24.5 is also indicated. A distance of 7 to 10 is shown between the roller center and the base edge.</p>

- Control set dimensions

Model	C Long handle type		D Short handle type		Y Lever type	
How to order	Ordering code	Type	Ordering code	Type	Ordering code	Type
	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	M3C110, M3C210		M3D110, M3D210		M3Y110, M3Y210	
Dimensions						
						

Model	R Roller type		L Roller with free return type	
How to order	Ordering code	Type	Ordering code	Type
	M3R210 - P14A	M3R210 Roller type control set	M3L210 - P14A	M3L210 Roller with free return type control set
Applicable products	M3R110, M3R210		M3L110, M3L210	
Dimensions				

Model	PP Protruding type		PM Mushroom type		PL Latching type (only red)	
How to order	Ordering code	Type	Ordering code	Type	Ordering code	Type
	S3PP05-P11A	S3PP protruding type control set (Green)	S3PM05-P11A	S3PM mushroom type control set (Green)	S3PL05-P12A	S3PL Latching type control set (Red)
	S3PP05-P12A	S3PP protruding type control set (Red)	S3PM05-P12A	S3PM mushroom type control set (Red)		
	S3PP05-P13A	S3PP protruding type control set (Black)	S3PM05-P13A	S3PM mushroom type control set (Black)		
Applicable products	M3PP110, M3PP210		M3PM110, M3PM210		M3PL110, M3PL210	
Dimensions						

Model	PF Flat type	HS Selector type
How to order	Ordering code Type	Ordering code Type
	S3PF05-P11A S3PF flat type control set (Green)	S3HS05-P11A S3HS selector type control set (Green)
	S3PF05-P12A S3PF flat type control set (Red)	S3HS05-P12A S3HS selector type control set (Red)
	S3PF05-P13A S3PF flat type control set (Black)	S3HS05-P13A S3HS selector type control set (Black)
Applicable products	M3PF110, M3PF210	M3HS110, M3HS210
Dimensions		

AirTAC

Specification



M5

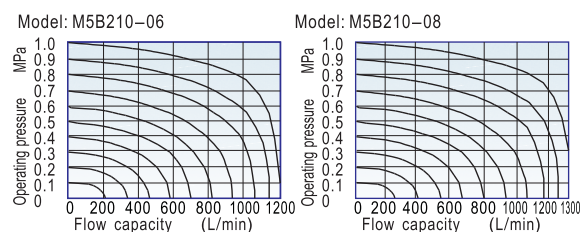
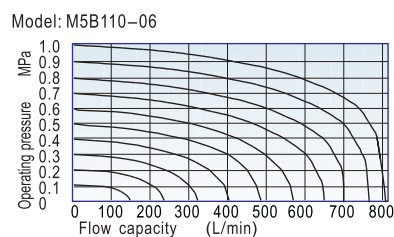
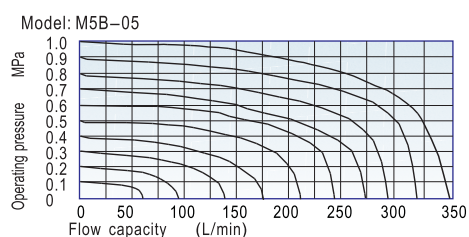
Symbol



- 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.

 Flow chart



Model	S5B	S5C	S5D	S5R	S5L	S5Y	S5PM	S5PP	S5PF	S5PL	S5HS
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	Mini type	05:2.5mm ² (Cv=0.14)									
	110	06:8.0mm ² (Cv=0.45)									
	210	06:9.0mm ² (Cv=0.50); 08:12.0mm ² (Cv=0.67)									
Valve type	5/2 Way										
Lubrication②	Not required										
Pressure range	0~1.0MPa(0~145psi)										
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

Common type:

M5 PM 210 06 R P

```

graph TD
    Root[Valve's type] --> Model[Model]
    Root --> Thread[Thread type]
    Model --> Basic[B: Basic type]
    Model --> Long[C: Long handle type]
    Model --> Short[D: Short handle type]
    Model --> Lever[Y: Lever type]
    Model --> Roller[R: Roller type]
    Model --> RollerFree[L: Roller with free return type]
    Model --> Latching[PL: Latching type]
    Model --> Protruding[PP: Protruding type]
    Model --> Flat[PF: Flat type]
    Model --> Mushroom[PM: Mushroom type]
    Model --> Selector[HS: Selector type]
    Thread --> PT[P: PT]
    Thread --> NPT[T: NPT]
    Thread --> G[G: G]
    Basic --> Code[Code]
    Basic --> Button[Button color]
    Basic --> Port[Port size]
    Code --> 110[110: 100 Series single control]
    Code --> 210[210: 200 Series single control]
    Button --> ButtonModel[Model]
    Button --> ButtonColor[Button color]
    Port --> PortCode[Code]
    Port --> PortSize[Port size]
  
```

Valve's type

- Model**
 - B: Basic type
 - Code**
 - 110: 100 Series single control
 - 210: 200 Series single control
 - Button color**
 - Model
 - PL
 - R: Red
 - PP, PF
 - R: Red
 - G: Green
 - B: Black
 - PM, HS
 - R: Red
 - G: Green
 - B: Black
 - Others
 - Not code
 - Button color
 - R: Red
 - G: Green
 - B: Black
 - Others
 - Not code
 - C: Long handle type
 - D: Short handle type
 - Y: Lever type
 - R: Roller type
 - L: Roller with free return type
 - PL: Latching type
 - PP: Protruding type
 - PF: Flat type
 - PM: Mushroom type
 - HS: Selector type
 - Thread type**
 - P: PT
 - T: NPT
 - G: G

Port size

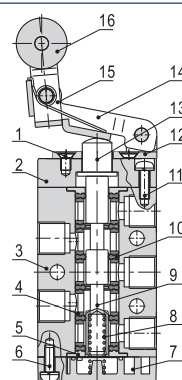
Code	Port size
100 Series	06: 1/8"
200 Series	06: 1/8"
	08: 1/4"

Mini type:

M5 R 05

- Valve's type
 - M5: M type 5/2 Way
- Port size
 - O5: M5
- Model
 - B: Basic type
 - R: Roller type
 - L: Roller with free return type

Inner structure



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

- Reversal stroke

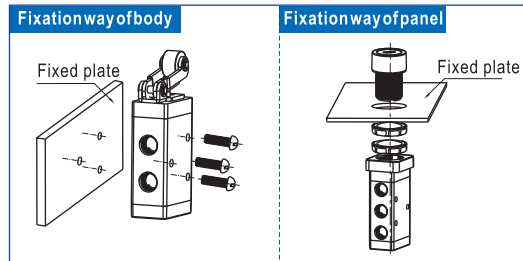
Common type						Mini type		
Type	Spool stroke	Button stroke	Type	Spool stroke	Roller(handle) stroke	Type	Spool stroke	Roller stroke
M5B	2.0~3.3	—	M5R	2.0~3.0	4.6~6.8	M5B05	2.0~3.3	—
M5PF	2.0~3.3	3.8~5.1	M5L	2.0~3.0	5.0~7.8	M5R05	2.0~3.0	6.0~8.5
M5PP	2.0~3.3	3.8~5.1	M5C	2.0~3.0	11.0~16.0	M5L05	2.0~3.0	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						

Control valve(5/2way)

AIRTAC

M5 Series

■ Assemble chart



Attentions

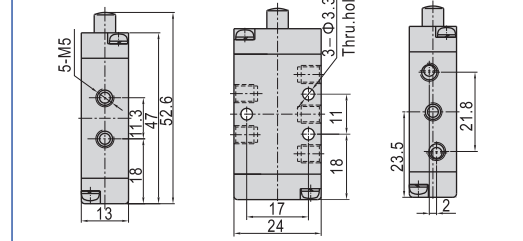
- 1) The control set is made of engineering plastic which only allows manual operation and switching valves through metal impact is forbidden.
- 2) The series of M5B, M5C, M5D, M5PM, M5PF and M5PP get the function of automatic restoration. The hand valves of M5Y, M5HS and M5PL are in the type of manual restoration. M5PL will be restored by turning the revolve button after being pressed into orientation.
- 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 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).
- 5) Control joint combination can be ordered individually. Please refer to the table on the right for order details.

■ Dimensions

Common type

Item\Type	M5B110	M5B210	Item\Type	M5B110	M5B210
A	06:1/8"	06:1/8"	G	18	23.5
		08:1/4"	H	27	35
A1	06:1/8"	06:1/8"	J	22	22.5
		06:1/8"	K	14	20
B	18	22	L	3.2	4.3
C	15	14.5	M	21	22.5
D	57.5	66	N	16	20
E	63	71.8	P	14	18
F	29	32.5	Q	14	18

Mini type



■ Mini control set dimensions

Model	M3R05 Model	M3L05 Model
Ordering code	M3R05-P14A	M3L05-P14A
Type	M3R05 Roller type control set	M3L05 Roller with free return type control set
Applicable products	M5R05	M5L05
Dimensions		

■ Control set Dimensions

Model	C Long handle type	D Short handle type	Y Lever type
Ordering code	M3C210-P13A	M3D210-P13A	M3Y210-P13A
Type	M3C210 Long handle type control set	M3D210 Short handle type control set	M3Y210 Lever type control set
Applicable products	M5C110, M5C210	M5D110, M5D210	M5Y110, M5Y210
Dimensions			

Model	R Roller type	L Roller with free return type
Ordering code	M3R210-P14A	M3L210-P14A
Type	M3R210 Roller type control set	M3L210 Roller with free return type control set
Applicable products	M5R110, M5R210	M5L110, M5L210
Dimensions		

Model	PP Protruding type	PM Mushroom type	PL Latching type (only red)
Ordering code	S3PP05-P11A	S3PM05-P11A	S3PL05-P12A
Type	S3PP protruding type control set (Green)	S3PM mushroom type control set (Green)	S3PL Latching type control set (Red)
Ordering code	S3PP05-P12A	S3PM05-P12A	
Type	S3PP protruding type control set (Red)	S3PM mushroom type control set (Red)	
Ordering code	S3PP05-P13A	S3PM05-P13A	
Type	S3PP protruding type control set (Black)	S3PM mushroom type control set (Black)	
Applicable products	M5PP110, M5PP210	M5PM110, M5PM210	M5PL110, M5PL210
Dimensions			

Model	PF Flat type	HS Selector type
Ordering code	S3PF05-P11A	S3HS05-P11A
Type	S3PF flat type control set (Green)	S3HS selector type control set (Green)
Ordering code	S3PF05-P12A	S3HS05-P12A
Type	S3PF flat type control set (Red)	S3HS selector type control set (Red)
Ordering code	S3PF05-P13A	S3HS05-P13A
Type	S3PF flat type control set (Black)	S3HS selector type control set (Black)
Applicable products	M5PF110, M5PF210	M5HS110, M5HS210
Dimensions		