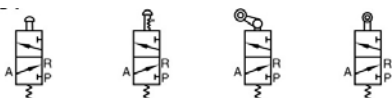


The MM3-Series In-line 3/2 Mechanically operated valves provide an extensive range of control options, that may be easily interchanged. The range may be used Lubrication free and have M5, G1/8 or G1/4 ports.



Symbols

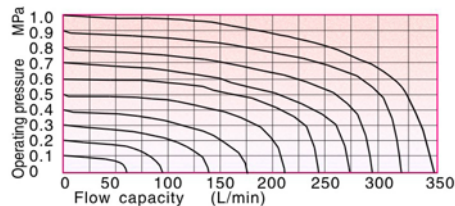


Product Features

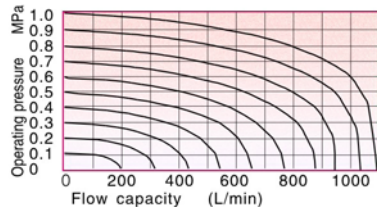
- Balanced spool construction is not influenced by pressure changes.
- Low leakage and low friction action.
- Spring return
- Special manufacturing techniques ensure low start pressure and long service life.
- Maybe used lubrication free.
- Compact 13mm, 18mm and 22 valve widths.

Flow Charts

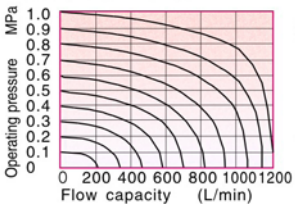
Model: M3B-05



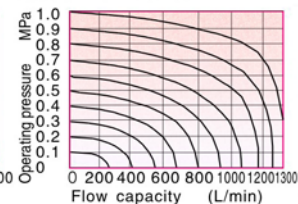
Model: M3B110-06



Model: M3B210-06



Model: M3B210-08

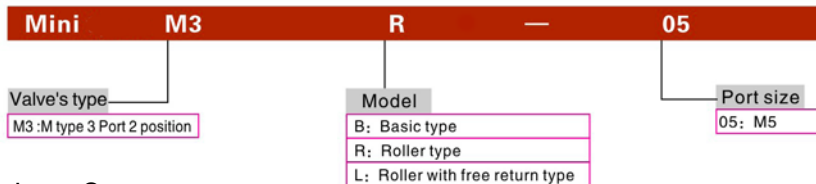
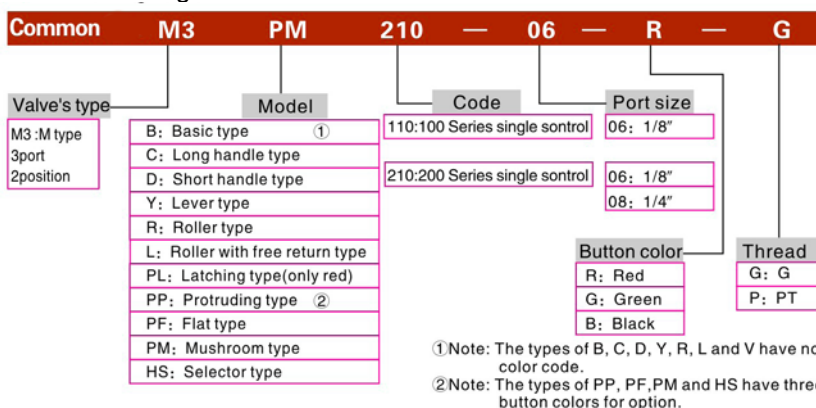


Specification

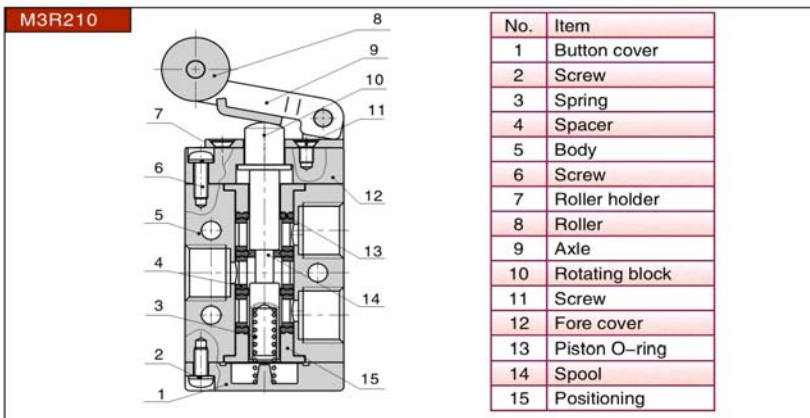
Model	M3B	M3C	M3D	M3R	M3L	M3Y	M3PM	M3PP	M3PF	M3PL	M3HS
Fluid	Air (to be filtered by 40µm filter element)										
Operating	External control direct acting type										
Port size ①	05: M5; 06: 1/8" ; 08: 1/4"										
Orifice size mm²	Mini type										
	05: 2.5mm² (Cv=0.14) ;										
	06: 8.0mm² (Cv=0.45)										
06: 9.0mm² (Cv=0.50); 08: 12.0mm² (CV=0.67)											
Valve type	3 port 2 position										
Lubrication ②	Not required										
Pressure range	0 - 1.0MPa(0-145Psi)										
Proof pressure	1.5 MPa(215Psi)										
Temperature °C	-20-70										
Material of body	Aluminum alloy										

- G (BSP) and M5 threads are standard (NPT threads are available as an option on request)
- If lubrication is preferred, lubricants similar to ISO VG32 or equivalent are recommended.

Model/Ordering Codes



Inner Structure



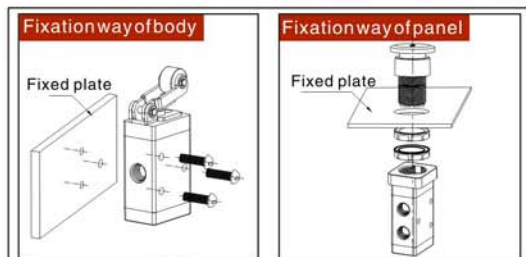
Operator Stroke

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



Assembly Details



General Information

1. Where engineering plastics are used, the operator is designed for hand use only. Avoid mechanical impacts to prevent damage.
2. Control operators may be ordered separately. Please refer to the Model/Ordering Codes for the operator type letter.
3. Operator codes B, C, D, PF, PM and PP have automatic spring return.
4. Operator codes Y, HS and PL require a reversing action to change the valve state.
5. Do not over-stroke the valves and refer to the Operator Stroke chart for the permitted range for each model.
6. Operator code L is a one-way roller trip mechanism and will operate the valve when the cam is moved from right to left for the picture illustration (see right).

Dimensions

Model	C Long handle type		D Short handle type		Y Lever type	
	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	
	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				

Dimensions

common type

Type/Item	M3B110	M3B210	Type/Item	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

Type/Item	M3B110	M3B210	Type/Item	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 control set dimensions

Model	M3R05 Model	M3L05 Model
How to order	Ordering code Type	Ordering code Type
	M3R05-P14A M3R05 Roller type Control set	M3L05-P14A M3L05 Roller with free return type control set
Applicable products	M3R05	
Dimensions		

Model	PP Protruding type		PM Mushroom type		PL Latching type (only red)	
	Type	Ordering code	Type	Ordering code	Type	Ordering code
	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	
	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				

