

Control valve(5/2way)

M5 Series



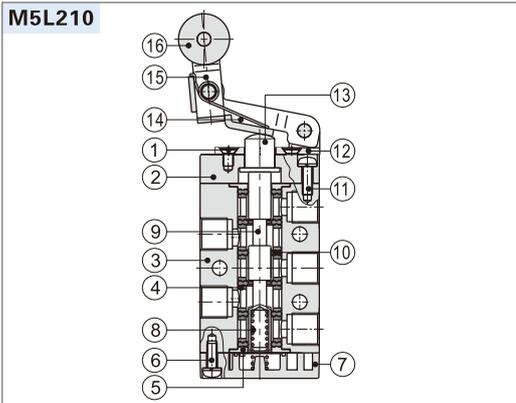
Symbol



Product feature

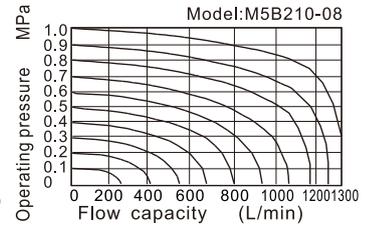
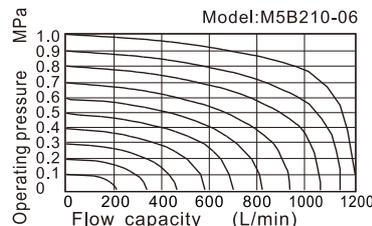
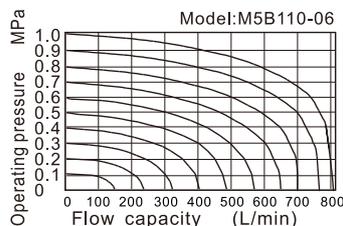
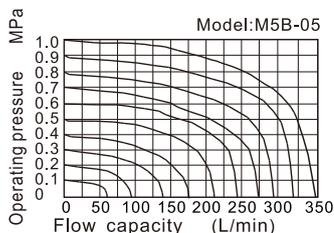
- Exhaust outlet locates over the body, which is convenient to install muffler to decrease noise and pollution.
- The external force required by direction-change of series of M5B, M5R and M5L is provided by external mechanism, which can be used for position test or [stroke switch] limit switch.
- M5C, 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 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 | | | | | | | | | | |
| 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] G thread is 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 G | | | | | | | |
| | | 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 | | G: G Thread |
| | 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 | | |
| | PL: Latching type | | | | R: Red | | |
| | PP: Protruding type | | | | G: Green | | |
| | PF: Flat type | | | | B: Black | | |
| | 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 | | |



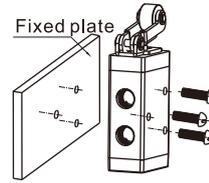
Control valve(5/2way)

M5 Series

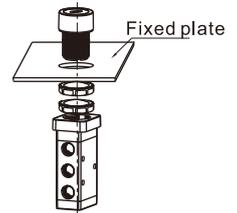
Installation and Application

- 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

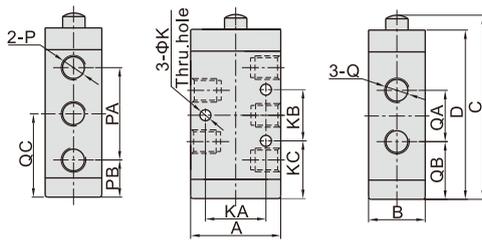


Fixation way of panel



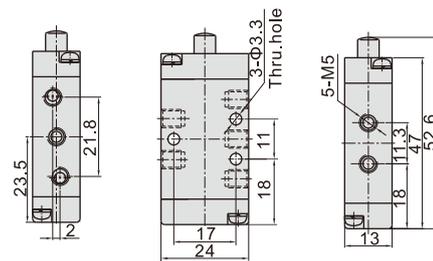
Dimensions

Common type



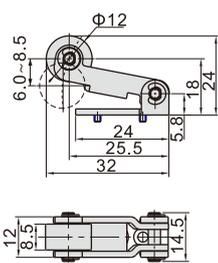
| Model\Item | A | B | C | D | K | KA | KB | KC | P | PA | PB | Q | QA | QB | QC |
|------------|----|----|----|------|-----|------|----|------|------|----|------|------|----|------|------|
| M5B11006 | 27 | 18 | 63 | 57.5 | 3.3 | 18 | 14 | 22 | 1/8" | 28 | 15 | 1/8" | 16 | 21 | 29 |
| M5B21006 | 35 | 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

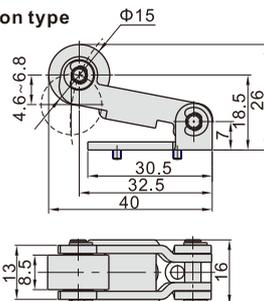


Roller type(R)

Mini type



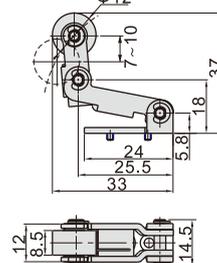
Common type



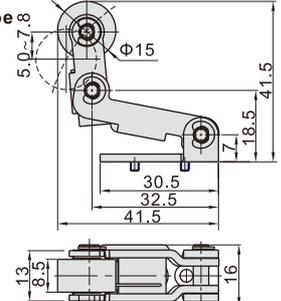
| Model | Roller type(R) | |
|---------------------|----------------|--------------------------------------------------------------|
| How to order | Ordering code | M3R05-P14A M3R210-P14A |
| | Type | M3R05 Roller type control set M3R210 Roller type control set |
| Applicable products | | M5R05 M5R110,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

Roller with free return type(L)

Mini type

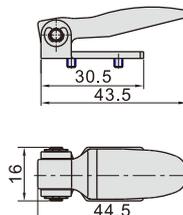


Common type



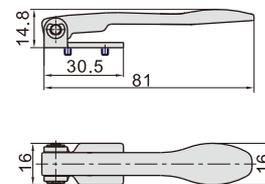
| Model | Roller with free return type(L) | |
|---------------------|---------------------------------|------------------------------------------------------------------------------------------------|
| How to order | Ordering code | M3L05-P14A M3L210-P14A |
| | Type | M3L05 Roller with free return type 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)

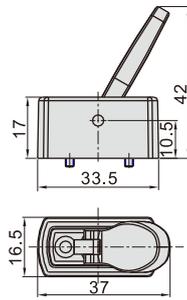


| Model | Long handle type(C) | |
|---------------------|---------------------|-------------------------------------|
| How to order | Ordering code | M3C210-P13A |
| | Type | M3C210 Long handle type control set |
| Applicable products | | M5C110, M5C210 |

Control valve(5/2way)

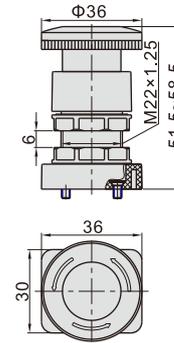
M5 Series

Lever type(Y)



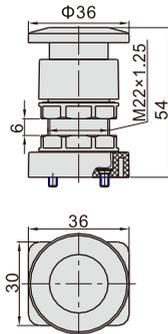
| Model | | Lever type(Y) |
|---------------------|---------------|-------------------------------|
| How to order | Ordering code | M3Y210-P13A |
| | Type | M3Y210 Lever type control set |
| Applicable products | | M5Y110, M5Y210 |

Latching type(PL)



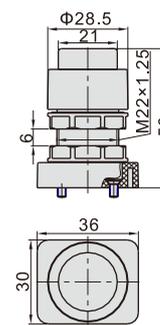
| Model | | Latching type (only red)(PL) |
|---------------------|---------------|--------------------------------------|
| How to order | Ordering code | S3PL05-P12A |
| | Type | S3PL Latching type control set (Red) |
| Applicable products | | M5PL110, M5PL210 |

Mushroom type(PM)



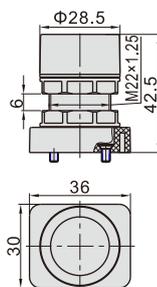
| Model | | Mushroom type(PM) |
|---------------------|---------------|----------------------------------------|
| How to order | Ordering code | S3PM05-P11A |
| | Type | S3PM mushroom type control set (Green) |
| | Ordering code | S3PM05-P12A |
| | Type | S3PM mushroom type control set (Red) |
| Applicable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

Protruding type(PP)



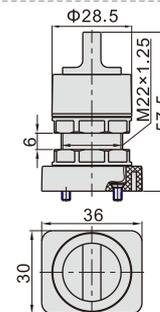
| Model | | Protruding type(PP) |
|---------------------|---------------|------------------------------------------|
| How to order | Ordering code | S3PP05-P11A |
| | Type | S3PP protruding type control set (Green) |
| | Ordering code | S3PP05-P12A |
| | Type | S3PP protruding type control set (Red) |
| 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 |