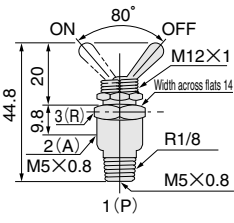


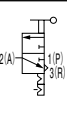
## Manual Valves (Lever Type Valves)

### Dimensions (mm)

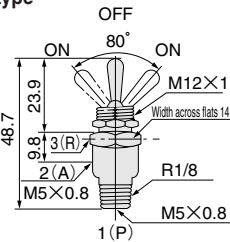
Model  
**3V**  
3-port  
Pinned lever holding type



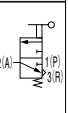
Symbol



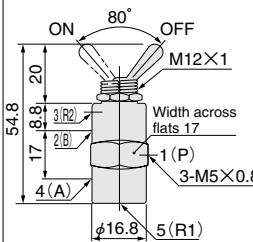
Model  
**3VR**  
3-port  
Pinned lever spring return type



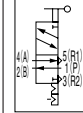
Symbol



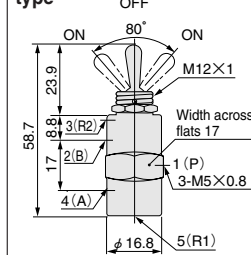
Model  
**4V**  
5-port  
Pinned lever holding type



Symbol



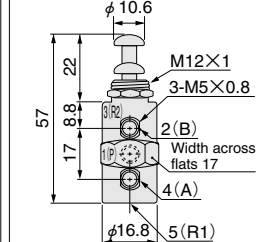
Model  
**4VR**  
5-port  
Pinned lever spring return type



Symbol



Model  
**4PPX**  
5-port  
Push-pull button holding type

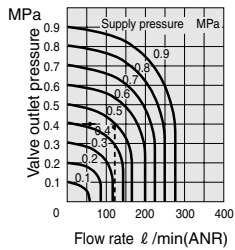


Symbol

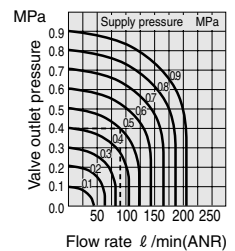


### Flow rate

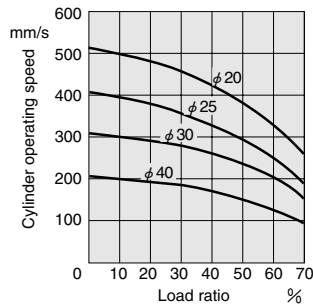
#### 3-port



#### 5-port

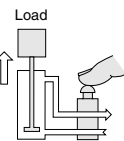


### Cylinder operating speed



#### Conditions

1. Applies load from above (vertical direction).
2. Operates using a supply pressure of 0.5MPa [73psi].
3. Uses a tube with an inner diameter of 4mm [0.16in.], and a piping length of 50cm [19.7in.].



#### How to read the graph

When the supply pressure is 0.5MPa [73psi.] and the flow rate is 85 ℓ /min [3.0ft<sup>3</sup>/min.] (ANR), the valve outlet pressure becomes 0.4MPa [58psi.].

1MPa=145psi., 1 ℓ /min=0.0353ft<sup>3</sup>/min., 1mm/s=0.0394in./sec.

### Specifications

| Item   | Model                             | 3V  | 3VR                    | 4V           | 4VR                | 4PPX             |
|--|-----------------------------------|---|------------------------|--------------|--------------------|------------------|
| Operation type                                     |                                   | Pinned lever  |                        |              |                    | Push-pull button |
|  |                                   | Holding type  | Spring return type     | Holding type | Spring return type | holding type     |
| Number of ports                                    |                                   | 3   | 3<br>(Normally closed) | 5            |                    |                  |
| Port size  |                                   | M5×0.8  |                        |              |                    |                  |
| Media  |                                   | Air   |                        |              |                    |                  |
| Operating pressure range                           | MPa [kgf/cm <sup>2</sup> ] [psi.] | 0~0.9 {0~9.2} [0~131]   |                        |              |                    |                  |
| Proof pressure                                     | MPa [kgf/cm <sup>2</sup> ] [psi.] | 1.35 {13.8} [196]   |                        |              |                    |                  |
| Operating temperature range (atmosphere and media) | °C [°F]                           | 0~60 [32~140]   |                        |              |                    |                  |
| Effective area                                     | mm <sup>2</sup>                   | 1.8   |                        | 2.5          |                    |                  |
| Flow coefficient                                   | Cv                                | 0.08  |                        | 0.12         |                    |                  |
| Mounting direction                                 |                                   | Any   |                        |              |                    |                  |
| Valve stroke                                       | mm [in.]                          | 2.4<br>(Pre-stroke 0.8 [0.031]<br>Main stroke 0.8 [0.031]<br>Over stroke 0.8 [0.031]) |                        |              |                    |                  |
| Lubrication  |                                   | Required (Turbine Oil Class 1 [ISO VG32] or equivalent)                               |                        |              |                    |                  |
| Mass   | g [oz.]                           | 30 [1.06]   |                        | 66 [2.33]    |                    | 68 [2.40]        |
| Standard accessories                               |                                   | Lock nut (110-21A)<br>Lock washer (100-35)  |                        | 1 pc. each   |                    |                  |