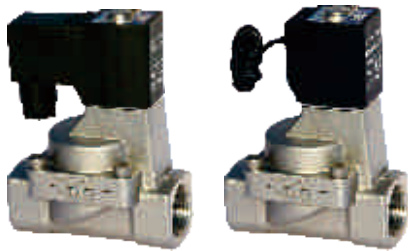


# Fluid control valve(2/2 way)

## 2L Series (Internally piloted and normally closed)



### Symbol

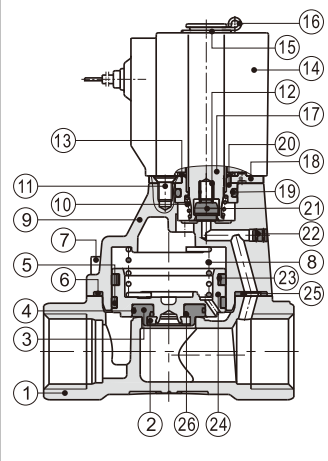


### Product feature

1. Indirect acting (Internal pilot) and normally closed type 2/2 way solenoid valve. Its high sensibility allows it to change direction quickly.
2. It is compact, small size and light weight. It is easy to install and dismantle.
3. The valve body is made of SUS304. Its coil has a Heat resistance classification of Class H. The standard seal material is PTFE (Teflon) which is suitable for a variety of working medium such as water with high temperature and vapour.
4. The protection class of the coil is IP65 and there is a choice for grommet or terminal electrical entry.

### Inner structure

#### 2L150 (Grommet)



| No. | Item          |
|-----|---------------|
| 1   | Body          |
| 2   | Fixed ring    |
| 3   | Airtight bush |
| 4   | O-ring        |
| 5   | Wear ring     |
| 6   | Gasket        |
| 7   | Screw         |
| 8   | Spring        |
| 9   | Cover         |
| 10  | Spring        |
| 11  | Screw         |
| 12  | Spring        |
| 13  | Bead flange   |
| 14  | Coil assembly |
| 15  | Washer        |
| 16  | E Clip        |
| 17  | Movable core  |
| 18  | Fixed plate   |
| 19  | O-ring        |
| 20  | Fixed cap     |
| 21  | Airtight ring |
| 22  | Plug          |
| 23  | Spring        |
| 24  | Piston        |
| 25  | Bushing       |
| 26  | O-ring        |

### Ordering code

#### Ordering code of valves

2L 150 15 A □ □  
1 2 3 4 5 6

| ① Model                                             | ② Orifice size | ③ Port size | ④ Voltage                                                  | ⑤ Electrical entry            | ⑥ Thread type               |
|-----------------------------------------------------|----------------|-------------|------------------------------------------------------------|-------------------------------|-----------------------------|
| 2L □ 2/2 way internally piloted and normally closed | 150: Φ15mm     | 15: 1/2"    | A: AC220V<br>B: DC24V<br>C: AC110V<br>E: AC24V<br>F: DC12V | Blank: Terminal<br>I: Grommet | Blank: PT<br>G: G<br>T: NPT |
|                                                     | 200: Φ20mm     | 20: 3/4"    |                                                            |                               |                             |
|                                                     | 250: Φ25mm     | 25: 1"      |                                                            |                               |                             |
|                                                     | 320: Φ35mm     | 32: 1 1/4"  |                                                            |                               |                             |
|                                                     | 400: Φ40mm     | 40: 1 1/2"  |                                                            |                               |                             |
|                                                     | 500: Φ50mm     | 50: 2"      |                                                            |                               |                             |

#### Ordering code of accessories

Ordering code of accessories is the same as 2S series valve's, please refer to P150 for details of ordering code.

[Note] 320\400\500 series valves do not have mounting accessories.

### Specification

| Model\Item | Port size<br>[Note1] | Orifice size<br>(Φmm) | Cv    | Valid area or<br>section (mm <sup>2</sup> ) | Weight<br>[Note2](g) | Operating pressure differential |                     | Proof pressure |     |
|------------|----------------------|-----------------------|-------|---------------------------------------------|----------------------|---------------------------------|---------------------|----------------|-----|
|            |                      |                       |       |                                             |                      | MPa                             | psi                 | MPa            | psi |
| 2L150-15   | 1/2"                 | 15.0                  | 5.50  | 100.0                                       | 675                  | Max: 1.0<br>Min: 0.05           | Max: 150<br>Min: 10 | 1.5            | 220 |
| 2L200-20   | 3/4"                 | 20.0                  | 9.50  | 170.0                                       | 875                  |                                 |                     |                |     |
| 2L250-25   | 1"                   | 25.0                  | 12.50 | 220.0                                       | 1120                 |                                 |                     |                |     |
| 2L320-32   | 1 1/4"               | 35.0                  | 23.00 | 420.0                                       | 2700                 |                                 |                     |                |     |
| 2L400-40   | 1 1/2"               | 40.0                  | 31.00 | 560.0                                       | 3250                 |                                 |                     |                |     |
| 2L500-50   | 2"                   | 50.0                  | 49.00 | 880.0                                       | 4300                 |                                 |                     |                |     |

[Note1] PT thread, G thread and NPT thread are available.

[Note2] The weight in the table is the terminal valve's weight, 2L150~250series grommet valve's weight is 10g less than terminal's. 2L320~500series grommet valve's weight is 20g less than terminal's.

### Specification of coil

| Valve type | Coil type        | Power type | Frequency (Hz) | Voltage range | Electrical entry | Power Consumption (VA/W) | Insulation | Temp. rise(°C) |  |
|------------|------------------|------------|----------------|---------------|------------------|--------------------------|------------|----------------|--|
| 2L150      | CDA116           | AC         | 50             | ± 15%         | Terminal (CDA)   | 10.0VA                   | Class H    | 35             |  |
| 2L200      | CLA116           | DC         | 60             |               |                  | 8.0VA                    |            | 30             |  |
| 2L250      |                  |            | —              | ± 10%         |                  | 6.5W                     |            | 30             |  |
| 2L320      | CDA170<br>CLA170 | AC         | 50             | ± 15%         | Grommet (CLA)    | 25.0VA                   |            | 60             |  |
| 2L400      |                  |            | 60             |               |                  | 22.0VA                   |            | 55             |  |
| 2L500      |                  | DC         | —              | ± 10%         |                  | 10.5W                    |            | 40             |  |
|            |                  |            |                |               |                  |                          |            |                |  |

### Valve's specification

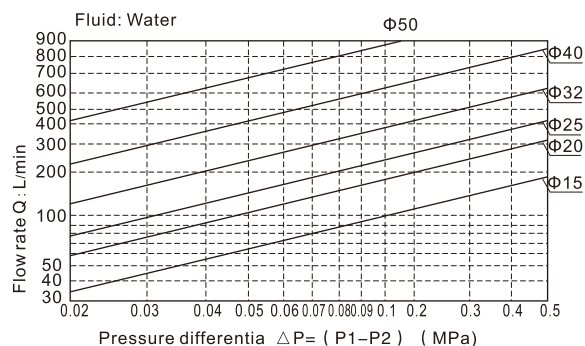
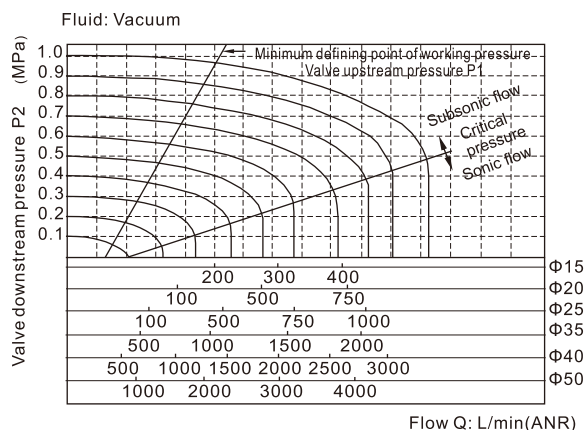
| Acting                             | Internally piloted                 |             |       |       |         |
|------------------------------------|------------------------------------|-------------|-------|-------|---------|
|                                    | Normally closed                    |             |       |       |         |
| Initial state                      | Normally closed                    |             |       |       |         |
| Adaptable fluid                    | Steam, High temperature Water, Oil |             |       |       |         |
| Viscosity limit                    | Under 20cSt                        |             |       |       |         |
| Ambient and fluid temperature (°C) |                                    | Oil         | Water | Steam | Ambient |
|                                    | Max.                               | 150         | 150   | 183   | 100     |
|                                    | Min.                               | -10 [Note1] | 1     | —     | -20     |

[Note1] 50cSt or less.

# Fluid control valve(2/2 way)

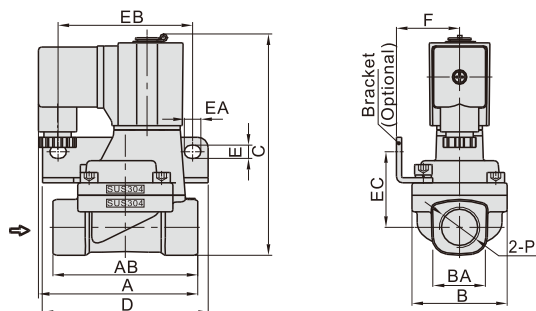
## 2L Series (Internally piloted and normally closed)

### Flow chart

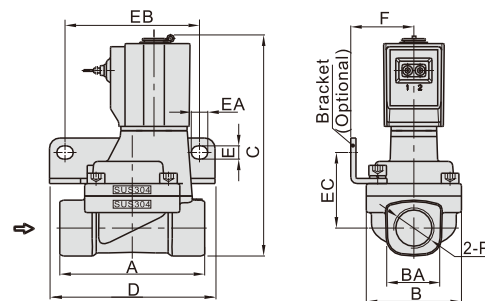


### Dimensions

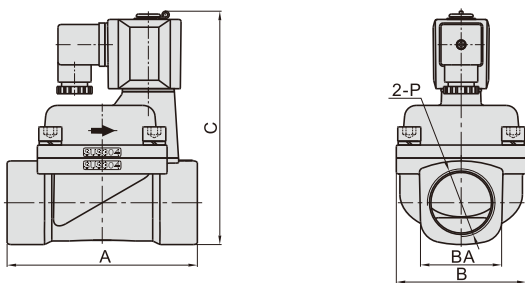
#### 2L150~250(Terminal)



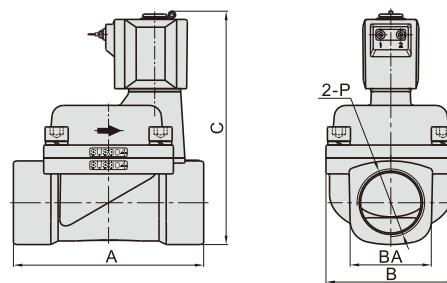
#### 2L150~250(Grommet)



#### 2L320~500(Terminal)



#### 2L320~500(Grommet)



| Model\Item | A    | AB | B   | BA   | C     | D  | E   | EA | EB | EC   | F    | P      |
|------------|------|----|-----|------|-------|----|-----|----|----|------|------|--------|
| 2L150-15   | 77   | 70 | 46  | 27.5 | 107   | 80 | 6.4 | 8  | 65 | 36.5 | 30.5 | 1/2"   |
| 2L200-20   | 78.5 | 82 | 53  | 33.5 | 115.5 | 90 | 6.4 | 8  | 75 | 40   | 34   | 3/4"   |
| 2L250-25   | 81   | 92 | 59  | 40.5 | 124   | 95 | 6.4 | 8  | 80 | 44.5 | 36   | 1"     |
| 2L320-32   | 125  | -  | 80  | 52   | 154.5 | -  | -   | -  | -  | -    | -    | 1 1/4" |
| 2L400-40   | 132  | -  | 90  | 58   | 162   | -  | -   | -  | -  | -    | -    | 1 1/2" |
| 2L500-50   | 150  | -  | 100 | 70   | 177   | -  | -   | -  | -  | -    | -    | 2"     |

| Model\Item | A   | B   | BA   | C     | D  | E   | EA | EB | EC   | F    | P      |
|------------|-----|-----|------|-------|----|-----|----|----|------|------|--------|
| 2L150-15   | 70  | 46  | 27.5 | 107   | 80 | 6.4 | 8  | 65 | 36.5 | 30.5 | 1/2"   |
| 2L200-20   | 82  | 53  | 33.5 | 115.5 | 90 | 6.4 | 8  | 75 | 40   | 34   | 3/4"   |
| 2L250-25   | 92  | 59  | 40.5 | 124   | 95 | 6.4 | 8  | 80 | 44.5 | 36   | 1"     |
| 2L320-32   | 125 | 80  | 52   | 154.5 | -  | -   | -  | -  | -    | -    | 1 1/4" |
| 2L400-40   | 132 | 90  | 58   | 162   | -  | -   | -  | -  | -    | -    | 1 1/2" |
| 2L500-50   | 150 | 100 | 70   | 177   | -  | -   | -  | -  | -    | -    | 2"     |