

# Solenoid valve(3/2 way)

## 3V300 Series



## Specification

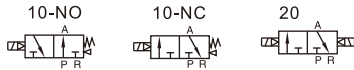
| Model                   | 3V310-08  | 3V320-08 | 3V310-10    | 3V320-10 |
|-------------------------|---|----------|-------------|----------|
| Fluid                   | Air(to be filtered by 40μm filter element)      |          |             |          |
| Acting                  | Internal pilot or external pilot                |          |             |          |
| Port size [Note 1]      | In=Out=1/4"                                     |          | In=Out=3/8" |          |
| Orifice size(Cv)[Note3] | 3V310-10,3V320-10:28.0mm <sup>2</sup> (Cv=1.65) |          |             |          |
| Valve type              | 3 port 2 position                               |          |             |          |
| Lubrication [Note2]     | Not required                                    |          |             |          |
| Operating pressure      | 0.15~0.8MPa(21~114psi)                          |          |             |          |
| Proof pressure          | 1.2MPa(175psi)                                  |          |             |          |
| Temperature             | -20~70°C  |          |             |          |
| Material of body        | Aluminum alloy                                  |          |             |          |

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

[Note2] Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

[Note3] Equivalent orifice S and Cv are all calculated from the flow rate data.

## Symbol



## Product feature

1. Pilot-oriented model: Internal pilot or external pilot.
2. Structure in sliding column mode: good tightness and sensitive reaction.
3. Double control solenoid valves have memory function.
4. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
5. No need to add oil for lubrication.
6. Affiliated manual devices are equipped to facilitate installation and debugging.
7. Several standard voltage grades are optional.
8. Integrate with the manifold to save installation space.

## Coil specification

| Item                       | Specification      |        |       |       |       |
|----------------------------|--------------------|--------|-------|-------|-------|
| Standard voltage           | AC220V             | AC110V | AC24V | DC24V | DC12V |
| Scope of voltage           | AC: ±15% DC: ±10%  |        |       |       |       |
| Power consumption          | 4.5VA              | 4.5VA  | 5.0VA | 3.0W  | 2.5W  |
| Protection                 | IP65(DIN40050)     |        |       |       |       |
| Temperature classification | B Class            |        |       |       |       |
| Electrical entry           | Terminal, Grommet  |        |       |       |       |
| Activating time            | 0.05 sec and below |        |       |       |       |
| Max. frequency [Note1]     | 5 cycle/sec        |        |       |       |       |

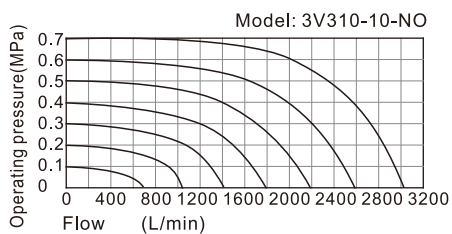
[Note1] The maximum actuation frequency is in the no-load state.

## Ordering code

| 3V 3 10 10 NO A □ □          |               |                     |                      |  |  |                                     |                             |
|------------------------------|---------------|---------------------|----------------------|--|--|-------------------------------------|-----------------------------|
| ① Model                      | ② Code        | ③ Valve type        | ④ Port size          | ⑤ Acting type                              | ⑥ Standard voltage   | ⑦ Electrical entry                  | ⑧ Thread type               |
| 3V: Solenoid valve (3/2 way) | 3: 300 Series | 10: Single solenoid | 08: 1/4"<br>10: 3/8" | NC: Normally closed<br>NO: Normally opened | A: AC220V<br>B: DC24V<br>C: AC110V<br>E: AC24V<br>F: DC12V | Blank: Terminal<br>I: Grommet[Note] | Blank: PT<br>G: G<br>T: NPT |
|                              |               | 20: Double solenoid |                      | No this code                               |  |                                     |                             |

[Note] The wire length is 0.5m. Please refer to 87 for manifold specification and the order way.

## Flow chart

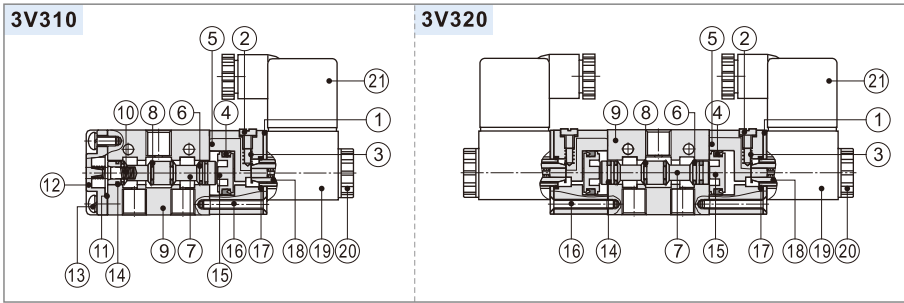


The data in flow rate chart are obtained from AirTAC lab.

# Solenoid valve(3/2 way)

## 3V300 Series

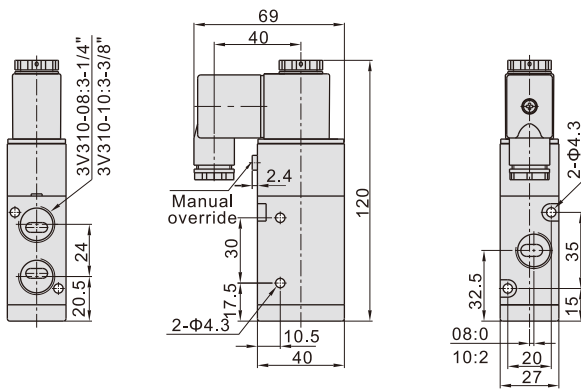
### Inner structure



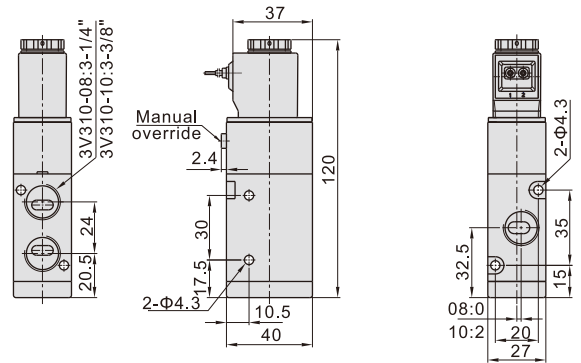
| No. | Item            | No. | Item                | No. | Item        |
|-----|-----------------|-----|---------------------|-----|-------------|
| 1   | Fixed plate     | 8   | O-ring              | 15  | Piston      |
| 2   | Manual override | 9   | Body                | 16  | Pilot screw |
| 3   | Override spring | 10  | Spool spring        | 17  | O-ring      |
| 4   | Piston O-ring   | 11  | Bottom cover gasket | 18  | Armature    |
| 5   | Pilot body      | 12  | Bottom cover        | 19  | Coil        |
| 6   | Spool packing   | 13  | Screw               | 20  | Coil nut    |
| 7   | Spool           | 14  | Wear ring           | 21  | Connector   |

### Dimensions

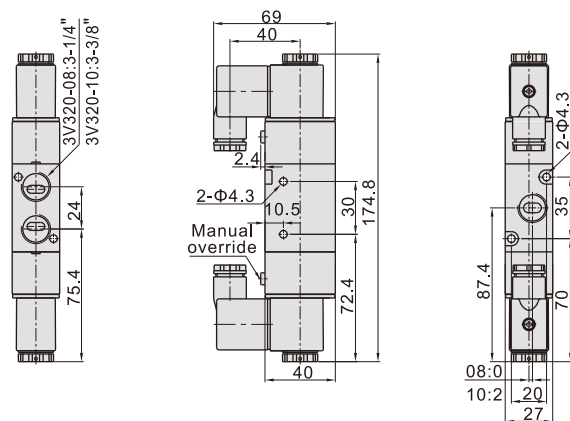
#### 3V310(Terminal)



#### 3V310(Grommet)



#### 3V320(Terminal)



#### 3V320(Grommet)

