



# 6V Series solenoid valve (5/2 way, 5/3 way)

## Compendium of 6V Series

### Multi-port types are optional

Threaded type and quick connector type are optional, and can integrate manifold to form valve group to save space.

### Inner exhaust structure

Pilot airflow exhaust intensively from R, S port.

### Terminal

Special design for terminal, horizontal and vertical insertion can freely switch.



### Multi-series and type

6V0500, 6V100, 6V200, 6V300 series are optional.

### Die-cast molding with aluminum alloy for body

Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.

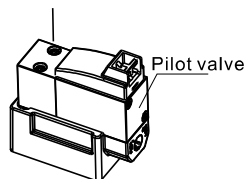
## Installation and Application

1. Don't throw or drop the solenoid valve when take it, to avoid breaking valve;
2. Because solenoid pilot valve is sophisticated component, can't crash pilot valve by outside force, otherwise solenoid valve break possibly;
3. Don't dismantle solenoid valve freely, if the screw(M1.6X14) becomes loose, please tighten it by torque 0.1~0.12N.m;
4. About manual operation:

4.1. Ensure no danger, prior to activating manual override;

4.2. For push button option:

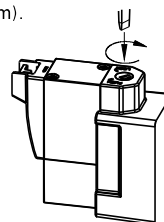
Activate by push the button in the direction shown



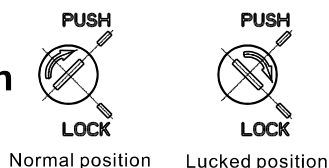
4.3. For slotted option:

Activate by push the button in the direction shown.

With correct size screw driver: please turn to lock gently(Torque: 0.1N.m).



### Attention



Normal position

Lucked position

4.4. Wiring instruction: Vertical plug type and parallel plug type are the same as plug, please insert wire line as up drawing by practicality.



Vertical plug wire



Parallel plug wire

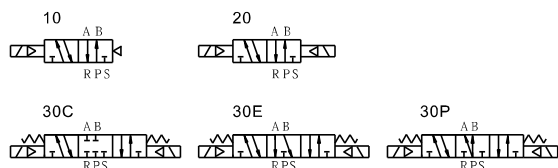


# Solenoid valve (5/2 way, 5/3 way)

## 6V Series



### Symbol



### Specification

| Model                      | 6V0510                                                      | 6V0520 | 6V0530      | 6V110                                                   | 6V120 | 6V130       |
|----------------------------|-------------------------------------------------------------|--------|-------------|---------------------------------------------------------|-------|-------------|
| Port size                  | In=Out=Exh=M5                                               |        |             | In=Out=Exh=M5(or=1/8")                                  |       |             |
| Thread type                | A port=B port=Φ4                                            |        |             | A port=B port=Φ4 (or=Φ6) (or=Φ8)                        |       |             |
| Tube type                  | M5:5.5mm <sup>2</sup> (0.3)                                 |        |             | 06:10.0mm <sup>2</sup> (0.58) 8.5mm <sup>2</sup> (0.51) |       |             |
| Orifice size(Cv)           | 5.0mm <sup>2</sup> (0.28)                                   |        |             | 4.5mm <sup>2</sup> (0.25)                               |       |             |
| Weight                     | 35g                                                         | 50g    | 65g         | 60g                                                     | 75g   | 90g         |
| Model                      | 6V210                                                       | 6V220  | 6V230       | 6V310                                                   | 6V320 | 6V330       |
| Port size                  | In=Out=1/8"(or=1/4")Exh=1/8"                                |        |             | In=Out=3/8" Exh=1/4"                                    |       |             |
| Thread type                | A port=B port=Φ6(or=Φ8) (or=Φ10)                            |        |             | -                                                       |       |             |
| Tube type                  | 06:14.0mm <sup>2</sup> (0.78) 08:18.0mm <sup>2</sup> (1.06) |        |             | 14.0mm <sup>2</sup> (0.82)                              |       |             |
| Orifice size(Cv)           | 36.0mm <sup>2</sup> (2.00)                                  |        |             | 21.6mm <sup>2</sup> (1.20)                              |       |             |
| Weight                     | 100g                                                        | 115g   | 130g        | 230g                                                    | 265g  | 305g        |
| Fluid                      | Air(to be filtered by 40 μm filter element)                 |        |             |                                                         |       |             |
| Acting                     | Internal pilot                                              |        |             |                                                         |       |             |
| Operating pressure         | 5/3 way 0.2~0.8MPa(29~114psi)                               |        |             |                                                         |       |             |
|                            | 5/2 way 0.15~0.8MPa(21~114psi)                              |        |             |                                                         |       |             |
| Proof pressure             | 1.2MPa(175psi)                                              |        |             |                                                         |       |             |
| Temperature                | -20~70℃                                                     |        |             |                                                         |       |             |
| Material of body           | Aluminum alloy                                              |        |             |                                                         |       |             |
| Lubrication [Note3]        | Not required                                                |        |             |                                                         |       |             |
| Pilot valve's Exhaust type | Centralized exhaust type                                    |        |             |                                                         |       |             |
| Max.frequency [Note2]      | 5 cycle/sec                                                 |        | 3 cycle/sec | 5 cycle/sec                                             |       | 3 cycle/sec |

[Note1] G thread is available.

[Note2] The maximum actuation frequency is in the no-load state.

[Note3] Once lubricated air is used, continue with same medium to optimize valve life span. Lubricants like ISO VG32 or equivalent are recommended.

### Product feature

1. Electrical entry is terminal, horizontal and vertical insertion can freely switch.
2. Inner exhaust structure to collect pilot airflow, and then exhaust intensively from R, S port.
3. Internal hole adopts special processing technology which has little attrition friction, low start pressure and long service life.
4. Threaded type and quick connector type are optional, and can integrate manifold to form valve group to save space.

### Coil specification

| Item                       | Specification      |        |          |       |
|----------------------------|--------------------|--------|----------|-------|
| Standard voltage           | AC220V             | AC110V | DC24V    | DC12V |
| Scope of voltage           | AC: +15% ~-10%     |        | DC: ±10% |       |
| Power consumption          | 1.1VA              |        | 0.9W     |       |
| Protection                 | Dustproof          |        |          |       |
| Temperature classification | F Class            |        |          |       |
| Electrical entry           | Terminal           |        |          |       |
| Activating time            | 0.05 sec and below |        |          |       |

### Ordering code

6V 2 10 J 08 B 050 G

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

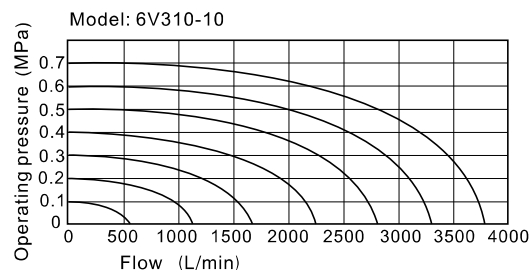
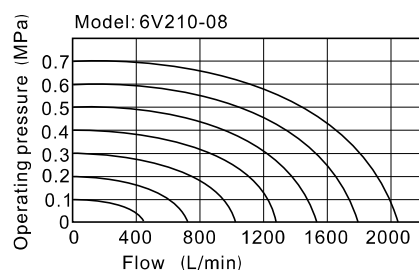
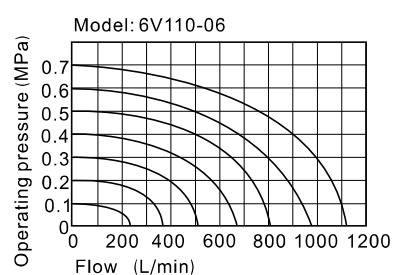
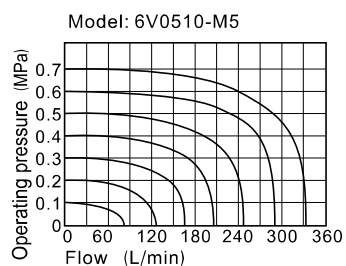
|                       |        |                                              |                            |                                             |               |          |               |
|-----------------------|--------|----------------------------------------------|----------------------------|---------------------------------------------|---------------|----------|---------------|
| ① Model               |        | 6V: Solenoid valve (5/2, 5/3 way)            |                            |                                             |               |          |               |
| ② Code                |        | 05: 0500 Series                              | 1: 100 Series              |                                             | 2: 200 Series |          | 3: 300 Series |
| ③ Valve type          |        | 10: Single solenoid 5/2 way                  |                            | 20: Double solenoid 5/2 way                 |               |          |               |
|                       |        | 30C: Double solenoid 5/3 way closed center   |                            | 30E: Double solenoid 5/3 way exhaust center |               |          |               |
|                       |        | 30P: Double solenoid 5/3 way pressure center |                            |                                             |               |          |               |
| ④ Port type           |        | Blank: Thread type                           |                            | J: Tube type                                |               |          |               |
| ⑤ Port                | Thread | M5: M5                                       | M5: M5                     | 06: 1/8"                                    | 06: 1/8"      | 08: 1/4" | 10: 3/8"      |
| Size                  | Tube   | 04: Φ4mm                                     | 04: Φ4mm/06: Φ6mm/08: Φ8mm | 06: Φ6mm/08: Φ8mm/10: Φ10mm                 |               |          | -             |
| ⑥ Voltage             |        | A: AC220V                                    |                            | B: DC24V                                    | C: AC110V     | F: DC12V |               |
| ⑦ Line length         |        |                                              |                            | 050: 0.5m                                   | 200: 2.0m     |          |               |
| ⑧ Thread type [Note1] |        | -                                            |                            | G: G Thread                                 |               |          |               |

[Note1]: The base of the tube type solenoid valve is only used with the base.

# Solenoid valve (5/2 way, 5/3 way)

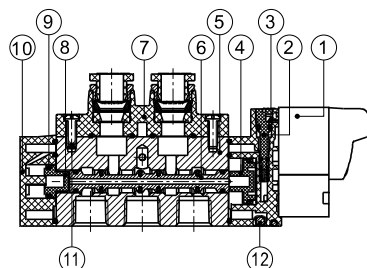
## 6V Series

### Flow chart

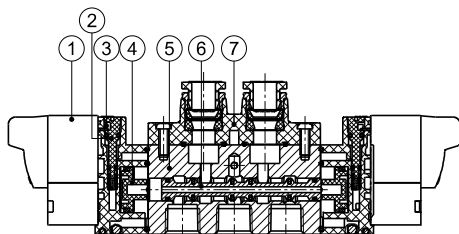


### Inner structure

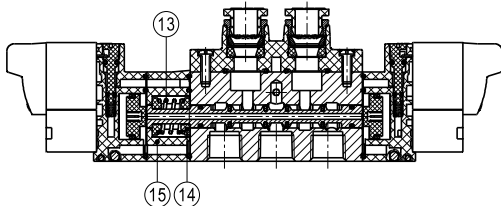
#### 6V110



#### 6V120



#### 6V130C

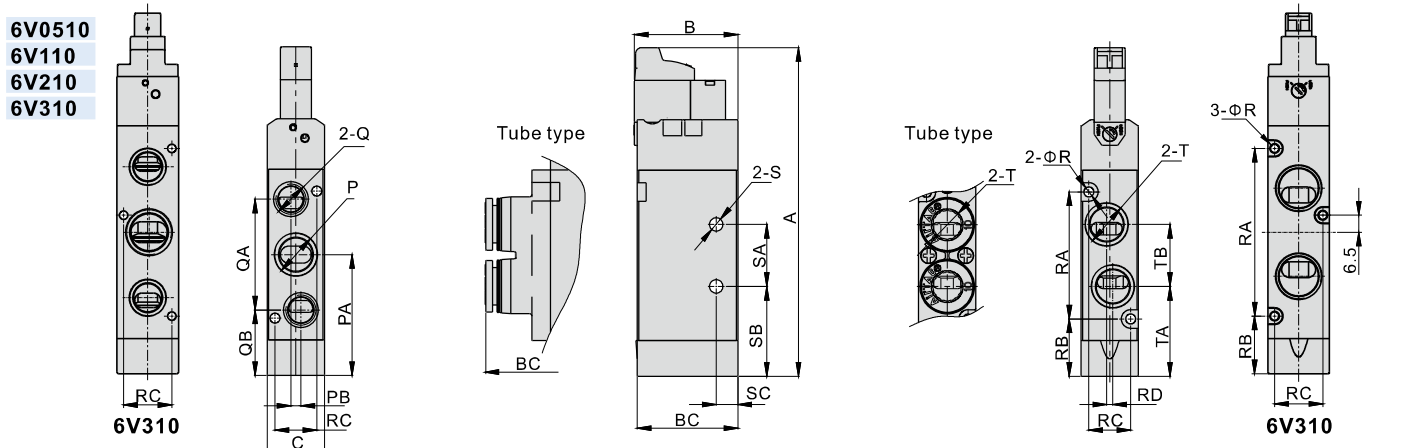


| No. | Item            | No. | Item             | No. | Item          |
|-----|-----------------|-----|------------------|-----|---------------|
| 1   | Pilot valve     | 6   | Spool            | 11  | Bolt          |
| 2   | Manual override | 7   | Connecting block | 12  | Steel ball    |
| 3   | Pilot kit       | 8   | Little piston    | 13  | Spring        |
| 4   | Big piston      | 9   | Gasket           | 14  | Return holder |
| 5   | Body            | 10  | Bottom cover     | 15  | Side cover    |

# Solenoid valve (5/2 way, 5/3 way)

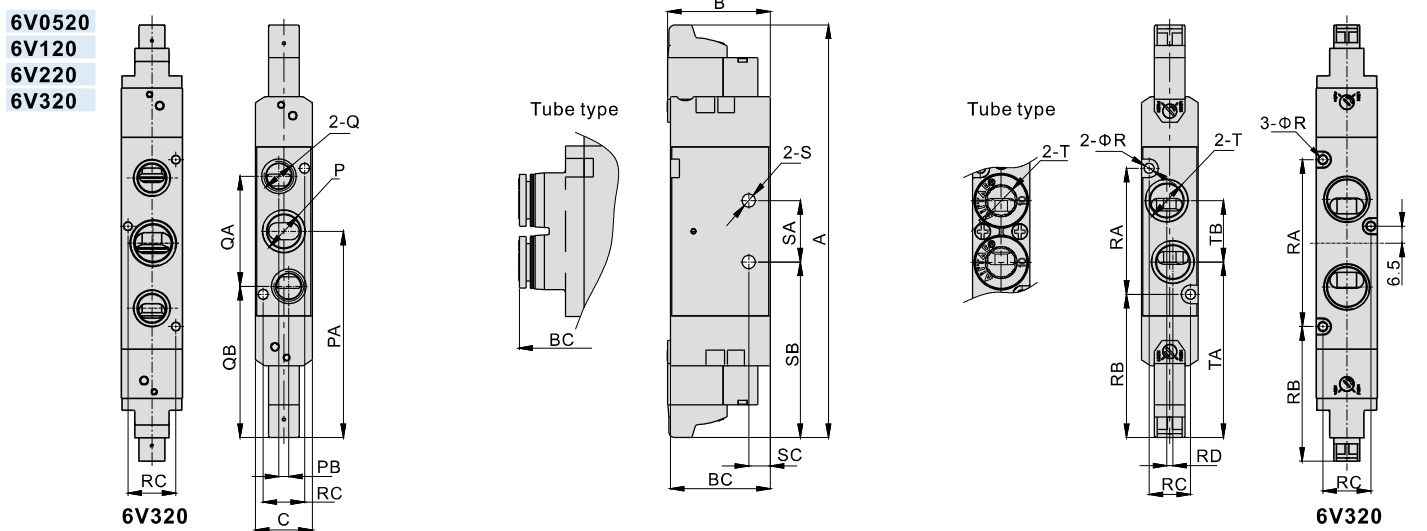
## 6V Series

### Dimensions



| Model\Item | A     | B    | BC   | C    | P      | PA   | PB  | Q      | QA   | QB | T         | TA   | TB   | R   | RA   | RB   | RC   | RD | S    | SA | SB   | SC |
|------------|-------|------|------|------|--------|------|-----|--------|------|----|-----------|------|------|-----|------|------|------|----|------|----|------|----|
| 6V0510M5   | 73    | 31   | 21   | 10.6 | M5X0.8 | 22.5 | 1   | M5X0.8 | 19   | 13 | M5X0.8    | 17.5 | 10   | 2.1 | 22.5 | 11   | 7.5  | 0  | Φ2.6 | 10 | 17.5 | 4  |
| 6V0510J04  |       |      | 32.5 |      | M5X0.8 |      | -   | M5X0.8 | 29.8 | 18 | Φ4(Tube)  | 25.2 | 15.4 |     |      |      |      | -  | -    | -  | -    | -  |
| 6V110M5    |       |      | 24   |      | M5X0.8 |      |     | M5X0.8 | 29.8 | 18 | M5X0.8    | 25.2 | 15.4 |     |      |      |      | -  | Φ3.2 | 14 | 26   | 4  |
| 6V11006    |       |      |      |      |        |      |     |        |      |    | 1/8"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V110J04   | 93.5  | 32   | 39.5 | 15.5 | 1/8"   | 33   | 2.6 | 1/8"   | 28   | 19 | Φ4(Tube)  | 24.5 | 16.5 | 2.6 | 34   | 16   | 11   | 0  | -    | -  | -    | -  |
| 6V110J06   |       |      | 41   |      |        |      |     |        |      |    | Φ6(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V110J08   |       |      | 42.5 |      |        |      |     |        |      |    | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V21006    |       |      | 32.5 |      | 1/8"   |      |     |        |      |    | 1/8"      | 30   | 18   |     |      |      |      | -  | Φ4.3 | 20 | 29   | 7  |
| 6V21008    |       |      |      |      |        |      |     |        |      |    | 1/4"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V210J06   | 106   | 33.5 | 50.6 | 18.5 | 1/4"   | 39   | 3.2 | 1/8"   | 36   | 21 | Φ6(Tube)  | 29   | 20   | 3.2 | 41   | 18.5 | 13.5 | 2  | -    | -  | -    | -  |
| 6V210J08   |       |      |      |      |        |      |     |        |      |    | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V210J10   |       |      | 53.5 |      |        |      |     |        |      |    | Φ10(Tube) |      |      |     |      |      |      |    |      |    |      |    |
| 6V31010    | 137.5 | 46   | 46   | 23.5 | 3/8"   | 54   | 0.5 | 1/4"   | 50   | 29 | 3/8"      | 37   | 33.5 | 3.2 | 64   | 22   | 18.4 | 0  | Φ4.3 | 25 | 41.5 | 8  |

[Note]: The base of the tube type solenoid valve is only used with the base. No through hole "S" on the side.



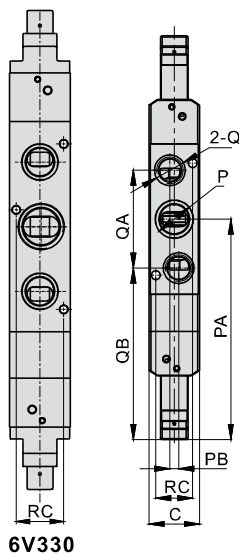
| Model\Item | A     | B    | BC   | C    | P      | PA   | PB  | Q      | QA   | QB   | T         | TA   | TB   | R   | RA   | RB   | RC   | RD | S    | SA | SB   | SC |
|------------|-------|------|------|------|--------|------|-----|--------|------|------|-----------|------|------|-----|------|------|------|----|------|----|------|----|
| 6V0520M5   | 101.5 | 31   | 21   | 10.6 | M5X0.8 | 51   | 1   | M5X0.8 | 19   | 41   | M5X0.8    | 45.5 | 10   | 2.1 | 22.5 | 39.5 | 7.5  | 0  | Φ2.6 | 10 | 45.5 | 4  |
| 6V0520J04  |       |      | 32.5 |      | M5X0.8 |      | -   | M5X0.8 | 29.8 | 46   | Φ4(Tube)  | 53.7 | 15.4 |     |      |      |      | -  | -    | -  | -    | -  |
| 6V120M5    |       |      | 24   |      | M5X0.8 |      |     | M5X0.8 | 29.8 | 46   | M5X0.8    | 53.7 | 15.4 |     |      |      |      | -  | Φ3.2 | 14 | 54   | 4  |
| 6V12006    |       |      |      |      |        |      |     |        |      |      | 1/8"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V120J04   | 121.5 | 32   | 39.5 | 15.5 | 1/8"   | 61   | 2.6 | 1/8"   | 28   | 47   | Φ4(Tube)  | 52.5 | 16.5 | 2.6 | 34   | 44   | 11   | 0  | -    | -  | -    | -  |
| 6V120J06   |       |      | 41   |      |        |      |     |        |      |      | Φ6(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V120J08   |       |      | 42.5 |      |        |      |     |        |      |      | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V22006    |       |      | 32.5 |      | 1/8"   |      |     |        |      |      | 1/8"      | 58   | 18   |     |      |      |      | -  | Φ4.3 | 20 | 57   | 7  |
| 6V22008    |       |      |      |      |        |      |     |        |      |      | 1/4"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V220J06   | 134   | 33.5 | 50.6 | 18.5 | 1/4"   | 67   | 3.2 | 1/8"   | 36   | 49   | Φ6(Tube)  | 57   | 20   | 3.2 | 41   | 46.5 | 13.5 | 2  | -    | -  | -    | -  |
| 6V220J08   |       |      |      |      |        |      |     |        |      |      | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V220J10   |       |      | 53.5 |      |        |      |     |        |      |      | Φ10(Tube) |      |      |     |      |      |      |    |      |    |      |    |
| 6V32010    | 167   | 46   | 46   | 23.5 | 3/8"   | 83.5 | 0.5 | 1/4"   | 50   | 58.5 | 3/8"      | 67   | 33.5 | 3.2 | 64   | 51.5 | 18.4 | 0  | Φ4.3 | 25 | 71   | 8  |

[Note]: The base of the tube type solenoid valve is only used with the base. No through hole "S" on the side.

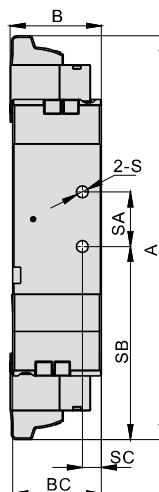
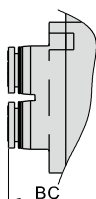
# Solenoid valve (5/2 way, 5/3 way)

## 6V Series

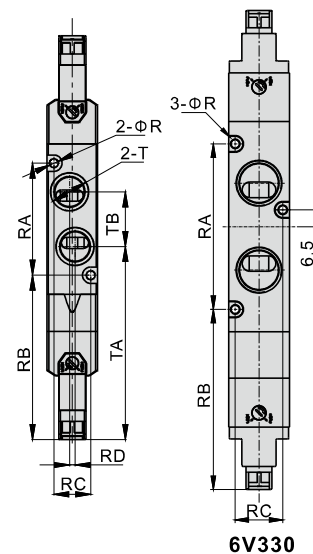
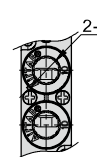
6V0530  
6V130  
6V230  
6V330



Tube type



Tube type



| Model\Item | A   | B    | BC   | C    | P      | PA    | PB  | Q      | QA   | QB   | T         | TA   | TB   | R   | RA   | RB   | RC   | RD | S    | SA | SB   | SC |
|------------|-----|------|------|------|--------|-------|-----|--------|------|------|-----------|------|------|-----|------|------|------|----|------|----|------|----|
| 6V0530M5   | 110 | 31   | 21   | 10.6 | M5X0.8 | 59    | 1   | M5X0.8 | 19   | 50   | M5X0.8    | 54   | 10   | 2.1 | 22.5 | 48   | 7.5  | 0  | Φ2.6 | 10 | 54   | 4  |
| 6V0530J04  |     |      | 32.5 |      | M5X0.8 |       | -   | M5X0.8 | 29.8 | 58   | Φ4(Tube)  | 64.7 | 15.4 |     |      |      |      | -  | -    | -  | -    | -  |
| 6V130M5    |     |      | 24   |      | M5X0.8 |       |     | M5X0.8 | 29.8 | 58   | M5X0.8    | 64.7 | 15.4 |     |      |      |      | -  | Φ3.2 | 14 | 65.5 | 4  |
| 6V13006    |     |      |      |      |        |       |     |        |      |      | 1/8"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V130J04   | 133 | 32   | 39.5 | 15.5 | 1/8"   | 72.5  | 2.6 | 1/8"   | 28   | 59   | Φ4(Tube)  | 64   | 16.5 | 2.6 | 34   | 55.5 | 11   | 0  | -    | -  | -    | -  |
| 6V130J06   |     |      | 41   |      |        |       |     |        |      |      | Φ6(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V130J08   |     |      | 42.5 |      |        |       |     |        |      |      | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V23006    |     |      |      |      | 1/8"   |       |     |        |      |      | 1/8"      | 72   | 18   |     |      |      |      | -  | Φ4.3 | 20 | 70.7 | 7  |
| 6V23008    |     |      | 32.5 |      |        |       |     |        |      |      | 1/4"      |      |      |     |      |      |      |    |      |    |      |    |
| 6V230J06   | 148 | 33.5 | 50.6 | 18.5 | 1/4"   | 81    | 3.2 | 1/8"   | 36   | 63   | Φ6(Tube)  | 71   | 20   | 3.2 | 41   | 60.2 | 13.5 | 2  | -    | -  | -    | -  |
| 6V230J08   |     |      |      |      |        |       |     |        |      |      | Φ8(Tube)  |      |      |     |      |      |      |    |      |    |      |    |
| 6V230J10   |     |      | 53.5 |      |        |       |     |        |      |      | Φ10(Tube) |      |      |     |      |      |      |    |      |    |      |    |
| 6V33010    | 185 | 46   | 46   | 23.5 | 3/8"   | 101.5 | 0.5 | 1/4"   | 50   | 76.5 | 3/8"      | 85   | 33.5 | 3.2 | 64   | 69.5 | 18.4 | 0  | Φ4.3 | 25 | 89   | 8  |

[Note]: The base of the tube type solenoid valve is only used with the base. No through hole "S" on the side.