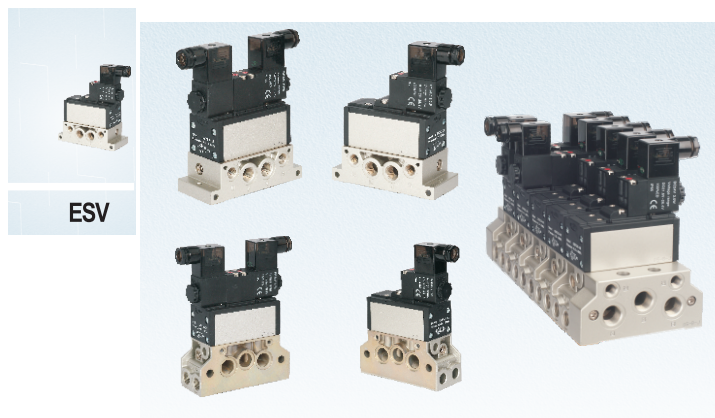


ISO Standard solenoid valve(5/2 way, 5/3 way)

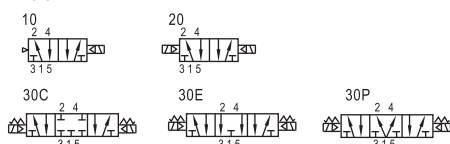
AirTAC

ESV200, 300, 400, 600 Series



ESV

Symbol



Product feature

1. Succinct appearance and compact conformation.
2. The installation size conforms to ISO 5599/1 standard.
3. Because of the special seals, the feature are large flow rate and long lifetime.
4. For 200\300\400 series you can adjust the installation direction of the gasket to change the acting type: internal pilot, external pilot, or air control.
5. You need install the valve together with the sub-base. There are individual and parallel type for manifold sub-base.
6. There are various connection and installation method for manifold. It is easy to use.
7. The manifold of 200\300\400 series have the function of exhaust throttling, so no need to connect another throttle valve.

Ordering code of valve

ESV 2 10 A ☐ ☐

- Model**
ESV: ISO standard solenoid valve
- Code**
2: 200 Series
3: 300 Series
4: 400 Series
6: 600 Series
- Pilot type** ①
Blank: Internal pilot
W: External pilot
- Electrical entry**
Blank: Terminal
I: Grommet
- Voltage**
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V
- Valve type**
10: Single solenoid 5/2 way
20: Double solenoid 5/2 way
30C: Double solenoid 5/2 way closed center
30E: Double solenoid 5/2 way exhaust center
30P: Double solenoid 5/2 way pressure center

① Note: Internal pilot can be changed to external pilot mode(except 600 series), please adjust the installation method of the gasket referring to article 1 or 2 in the installation manual.

Specification

Item		Specification			
Model		200Series	300 Series	400 Series	600 Series
Fluid		Air(to be filtered by 40 μ m filter element)			
Acting		Internal pilot or external pilot			
Lubrication ①		Not required			
Operating Pressure	Internal pilot	0.2~1.0Mpa(29~145psi)			
	External pilot	0~1.0Mpa(0~145psi)			
Control pressure(External pilot)		0.2~1.0Mpa(29~145psi)			
Proof pressure		1.5Mpa(215psi)			
Temperature		-20~70 ℃			
Port size(manifold) ②		1/4"	3/8"	1/2"	3/4"
Port size(end plate)		3/8"	1/2"	3/4:	1
Voltage range		AC:±15%		DC:±10%	
Power consumption		AC:3.5VA		DC:3.0W	
Activating time (0.5MPa) Open/close	10\20 Series	33\41ms	42\55ms	50\68ms	55\85ms
	30 C\E\P Series	38\50ms	52\62ms	52\68ms	55\85ms
Insulation		Class B			
Protection		IP65			
Installation size		ISO5599-1 standard			

① Note: Once lubricated air is used, continue with same medium to optimise valve life span. Lubricants like ISO VG32 or equivalent are recommended.

② Note: PT thread and G thread are available.

Ordering code of manifold

ESV 20 1M ☐ ☐ ☐

- Model**
ESV: ISO standard solenoid valve
- Code**
2: 200 Series
3: 300 Series
4: 400 Series
6: 600 Series
- Manifold type**
1M: Individual sub-base
2M: Manifold sub-base
3M: End plate kit
4M: Connecting black
- Port position type**
1M: Blank: Side port
B: Bottom port
2M: Blank: Left side port
R: Right side port
B: Bottom port
4M: Blank: Left side port
R: Right side port
- External pilot port type**
1M: Blank: Individual pilot port
2M: Blank: Individual pilot port
W: Centralized pilot port
- Thread type**
Blank: PT
G: G

- Note: 1. For the same model, the port size of the end-plate is bigger than the sub-base (For example ESV202M, the port size of sub-base is 1/4", and the port size of end plate is 3/8").
2. Only individual pilot port is available for individual sub-base.
3. The manifold sub-base must be used with end plate kit, individual pilot port and centralized pilot port can be mixed.
4. 600 series individual sub-base only has side port, 600 series manifold sub-base only has individual pilot port and bottom port.
5. Only 600 series have connecting black.

Ordering code of accessories

P-ESV200M R2

- Accessories code**
P: Unit accessories
- Accessories type**
R2: Blank plate for manifold
- Code**
ESV200M: 200 Series manifold
ESV300M: 300 Series manifold
ESV400M: 400 Series manifold
ESV600M: 600 Series manifold

ISO Standard solenoid valve(5/2 way, 5/3 way)

AirTAC

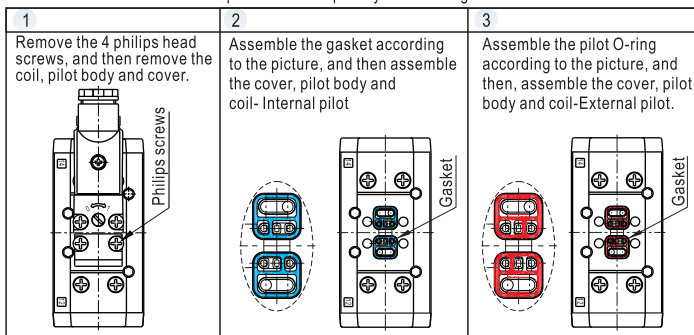
ESV200, 300, 400, 600 Series

■ Installation and operation(For 200, 300, 400 series)

1. The classification and selection for the pilot type of valve

1.1. According to the source of pilot air, we can divide the valve into two types: the internal pilot and external pilot. The standard type is internal pilot.

1.2. You can convert from internal pilot to external pilot by the following methods.



2. The classification and selection for the parallel manifold sub-base

2.1. According to the direction of pilot air supply, we can divide the manifold sub-base into two types: the individual pilot and centralized pilot.

2.2. If you select the individual pilot, the fitting must be connected to the individual pilot ports.

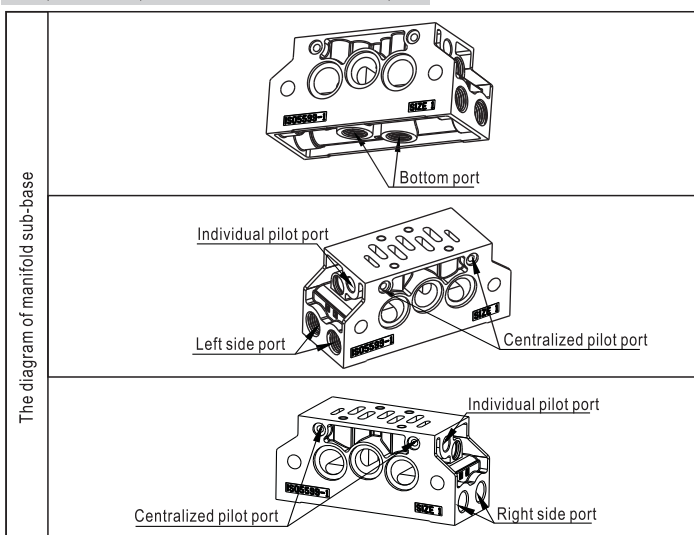
If you select the centralized pilot type, the fitting must be connected to the centralized pilot ports.

2.3. If you use parallel manifold, all of the manifold must be used the same pilot type: such as, all of them are the individual pilot type, or all of them are the centralized pilot type.

* Note: Only when you use the external pilot type, you can select the individual pilot or centralized pilot.

When you use the internal pilot type, the pilot ports on the manifold are ineffective.

3. The position and specification of the manifold sub-base ports



Port status of manifold sub-base

Port working condition	Port name	Left side port	Right side port	Bottom port	Centralized pilot port	Individual pilot port
Ordering code						
ESV202MG	Use	Unused	Unused	Unused	Unused	Use
ESV202MGR	Unused	Use	Unused	Unused	Unused	Use
ESV202MGB	Unused	Unused	Use	Unused	Unused	Use
ESV202MGW	Use	Unused	Unused	Use	Use	Unused
ESV202MGWR	Unused	Use	Unused	Use	Use	Unused
ESV202MGWB	Unused	Unused	Use	Use	Use	Unused

Note: Please seal the bottom port by plug, when it is unused.

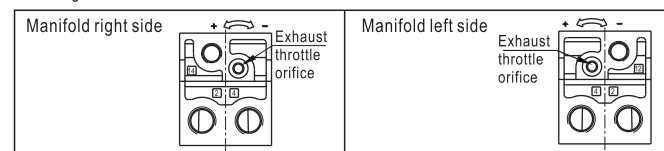
The above list is an example of 200M series' ordering code, the other series is follow the same pattern, only need to change the series code.

4. Exhaust throttle function

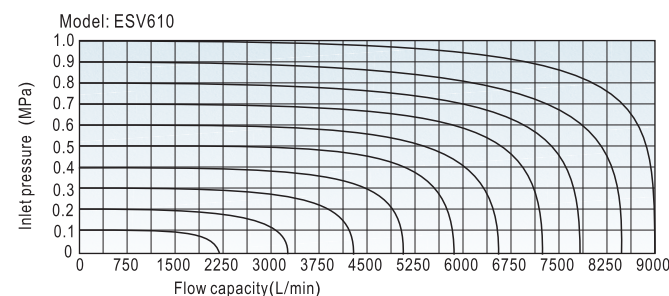
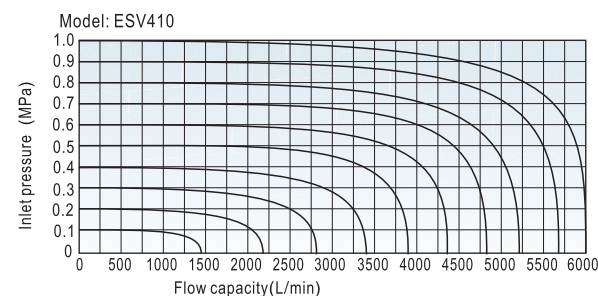
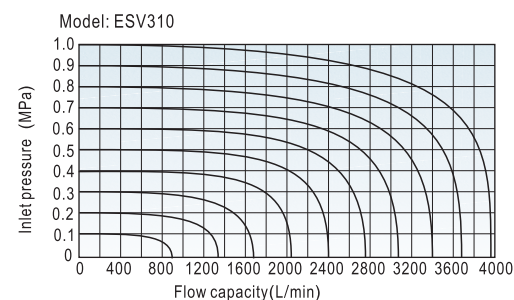
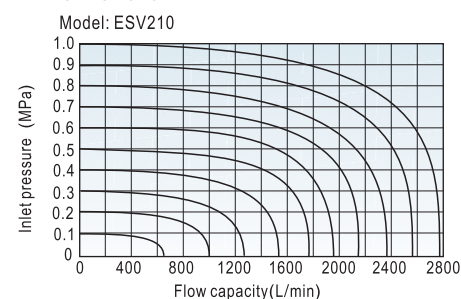
4.1. The manifold has exhaust throttle function, the below picture shows the position of the exhaust throttle orifices on each side.

4.2. Use allen key to adjust the screw.

4.3. Rotate the screw clockwise to reduce the exhaust orifice, rotate the screw counter-clockwise to enlarge the exhaust orifice.



■ Flow chart



ESV



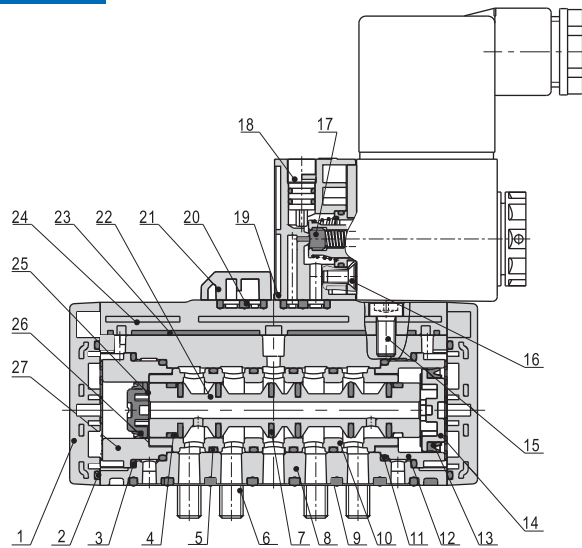
ISO Standard solenoid valve(5/2 way, 5/3 way)

AirTAC

ESV200, 300, 400, 600 Series

Inner structure

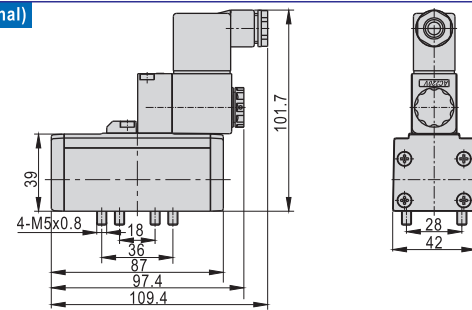
ESV210 (Terminal)



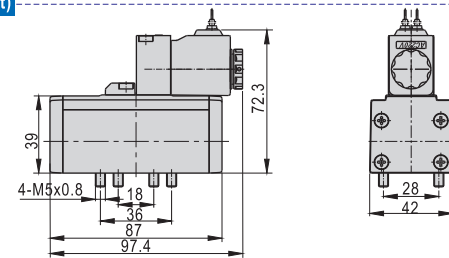
NO.	Item	NO.	Item	NO.	Item
1	Bottom cover	10	Spacer	19	Pilot kit
2	O-ring	11	O-ring	20	Gasket
3	O-ring	12	Big piston sheath	21	Cover plate
4	Wear ring	13	Big piston O-ring	22	Spool
5	O-ring	14	Big piston	23	Upper cover gasket
6	Screw	15	Screw	24	Upper cover
7	O-ring	16	Screw	25	Small piston
8	Body	17	Gasket	26	Small piston O-ring
9	Gasket	18	Manual override	27	Small piston sheath

Dimensions(ESV200 Series)

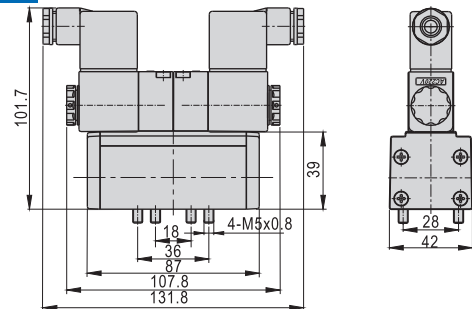
ESV210 (Terminal)



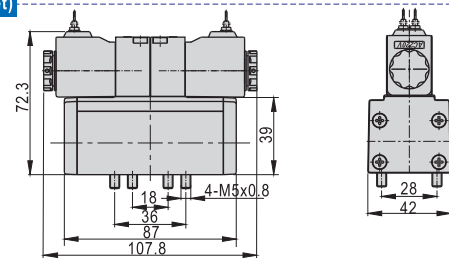
ESV210 (Grommet)



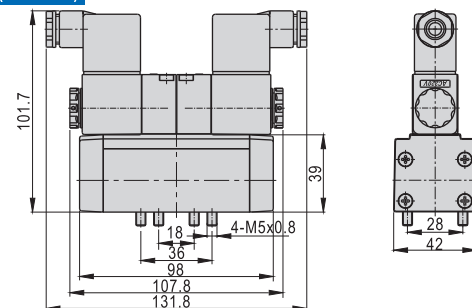
ESV220 (Terminal)



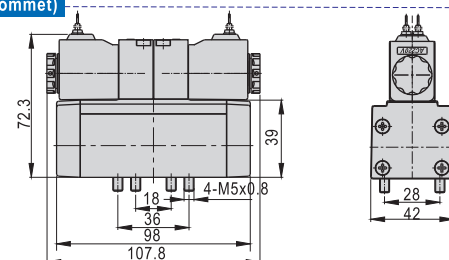
ESV220 (Grommet)



ESV230C(E/P) (Terminal)



ESV230C(E/P) (Grommet)



AirTAC

Technical drawing of a 4-way 1/2" NPT female manifold with 1/2" NPT female ports. The drawing includes four views: top, front, side, and bottom. Key dimensions include a total width of 110mm, a total height of 48mm, and a central port diameter of 1/2 inch. The manifold features four 1/2 inch NPT female ports and four 1/2 inch NPT female ports. The drawing also shows the ISO 5199-1 standard and the size 1/2 inch.

Technical drawing of a mechanical part, showing front, top, and side views with dimensions and feature callouts.

Front View (Top):

- Overall width: 111
- Overall height: 22
- Distance from left edge to center of first hole: 28
- Distance between centers of first two holes: 58
- Distance from center of last hole to right edge: 28
- Distance from top edge to center of first hole: 11
- Feature callouts: 2- $\Phi 11$ dp:7, 2- $\Phi 6.5$ Thru.hole

Front View (Bottom):

- Overall width: 88
- Overall height: 52.5
- Distance from left edge to center of first hole: 24.5
- Distance from center of first hole to center of second hole: 55
- Distance from center of second hole to center of third hole: 58
- Distance from center of third hole to center of fourth hole: 55
- Distance from center of fourth hole to right edge: 24.5
- Distance from top edge to center of first hole: 8.5
- Distance from top edge to center of second hole: 13
- Feature callouts: 2- $\Phi 8.8$ dp:6, 2- $\Phi 5.5$ Thru.hole

Side View (Left):

- Overall width: 111
- Overall height: 22
- Distance from left edge to center of first hole: 28
- Distance from center of first hole to center of second hole: 58
- Distance from center of last hole to right edge: 28
- Distance from top edge to center of first hole: 11
- Feature callouts: 2- $\Phi 11$ dp:7, 2- $\Phi 6.5$ Thru.hole

Side View (Right):

- Overall width: 88
- Overall height: 52.5
- Distance from left edge to center of first hole: 24.5
- Distance from center of first hole to center of second hole: 55
- Distance from center of second hole to center of third hole: 58
- Distance from center of third hole to center of fourth hole: 55
- Distance from center of fourth hole to right edge: 24.5
- Distance from top edge to center of first hole: 8.5
- Distance from top edge to center of second hole: 13
- Feature callouts: 2- $\frac{1}{8}$ " 3-3/8", 2- $\Phi 8.8$ dp:6, 2- $\Phi 5.5$ Thru.hole

ESV210+ESV201M

2-Φ5.5 Thru.hole

98

120.9

136.7

3-1/4"

19

17

44

42

48

2-1/4"

2-1/8"

2-Φ5.5 Thru.hole

Φ0.9393

22

60

86.8

98

110

6

12

18

24

35

SIZE 7 L

Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

Technical drawing of the ESV220+ESV201M valve, showing three views: top, front, and side. The drawing includes dimensions for mounting and connection points.

Top View Dimensions:

- Width: 98
- Thru-hole: 2-Φ5.5

Front View Dimensions:

- Height: 136.7
- Base Width: 48
- Mounting Hole Spacing: 42

Side View Dimensions:

- Base Width: 44
- Height: 17

Additional Dimensions and Features:

- Top View: 131.8 (Overall Width)
- Front View: 2-1/4" (Mounting Hole Spacing), 2-1/8" (Mounting Hole Diameter), 2-Φ5.5 Thru-hole (Mounting Hole Diameter), 110 (Overall Width), 98 (Overall Width), 86.8 (Overall Width), 60 (Overall Width), 22 (Overall Width), 35 (Overall Height), 24 (Overall Height), 18 (Overall Height), 12 (Overall Height).
- Side View: 3-1/4" (Mounting Hole Spacing), 19 (Mounting Hole Diameter), 17 (Mounting Hole Diameter).

Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

Technical drawing of the ESV230+ESV201M valve, showing three views: top, front, and side. The drawing includes the following dimensions:

- Top View:**
 - Overall width: 98
 - Overall height: 136.7
 - Port diameter: 2-Φ5.5 Thru.hole
 - Port spacing: 22, 60, 86.8, 98, 110
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
- Front View:**
 - Overall width: 131.8
 - Overall height: 136.7
 - Port diameter: 2-Φ5.5 Thru.hole
 - Port spacing: 22, 60, 86.8, 98, 110
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
- Side View:**
 - Overall width: 48
 - Overall height: 136.7
 - Port diameter: 2-Φ5.5 Thru.hole
 - Port spacing: 22, 60, 86.8, 98, 110
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"
 - Port diameter: 2-1/4"
 - Port diameter: 2-1/8"

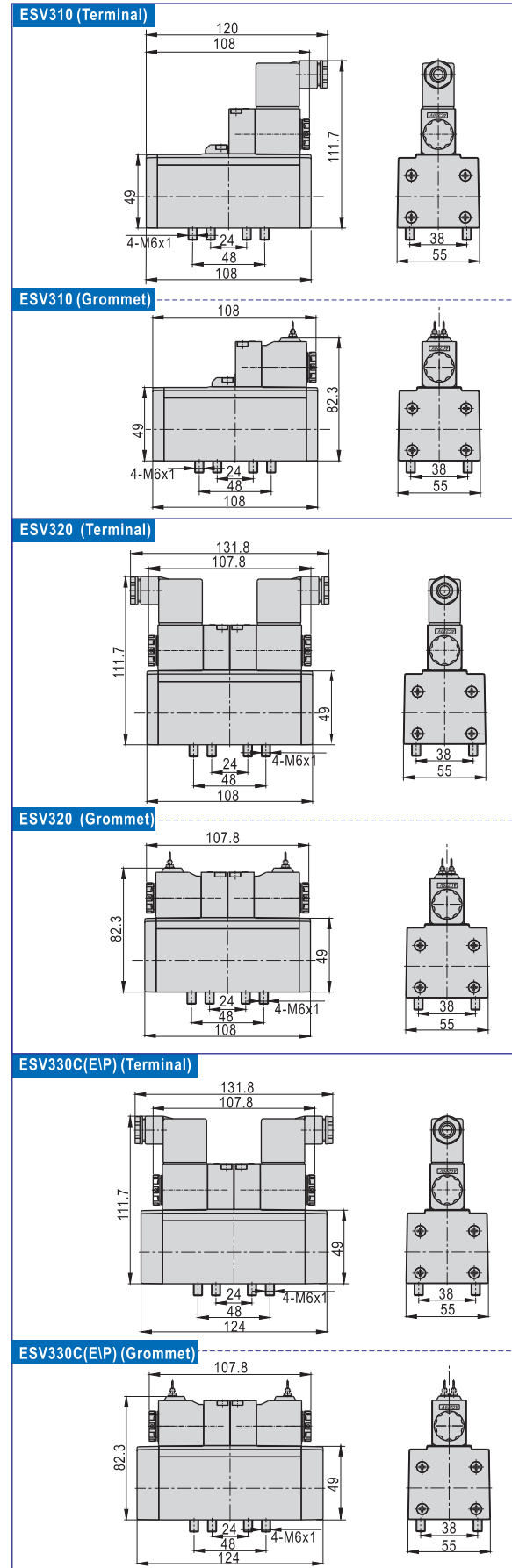
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

ISO Standard solenoid valve(5/2 way, 5/3 way)

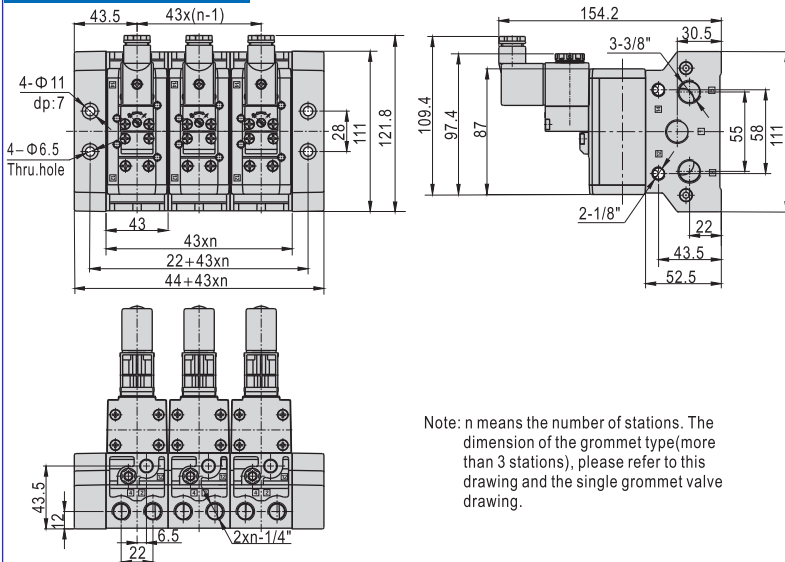
AIRTAC

ESV200, 300, 400, 600 Series

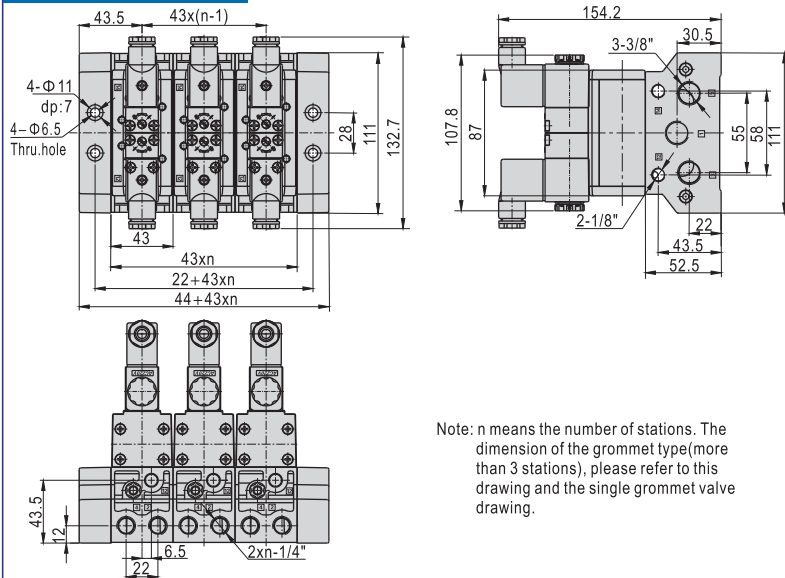
■ Dimensions(ESV300 Series)



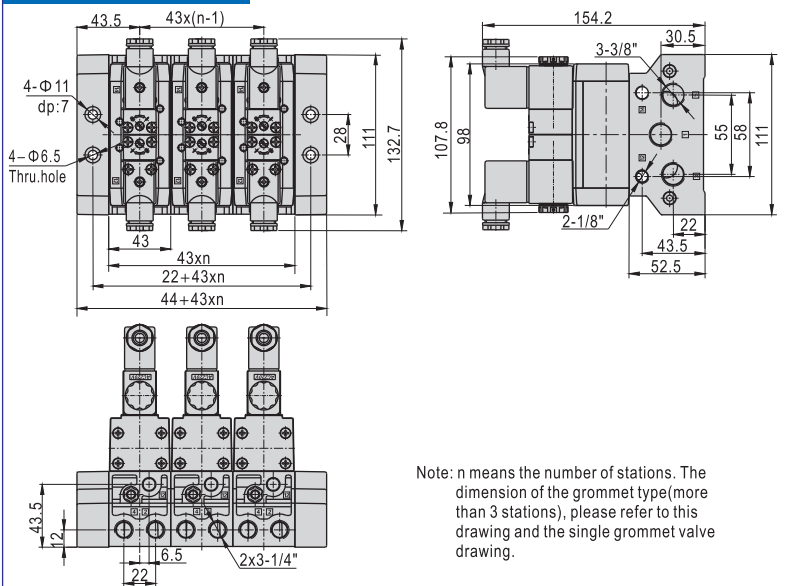
ESV210+ESV202M+ESV203M



ESV220+ESV202M+ESV203M



ESV230+ESV202M+ESV203M



ESV

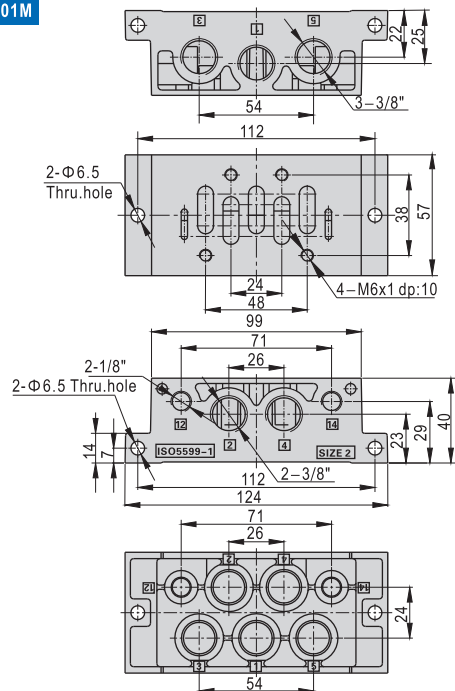


ISO Standard solenoid valve(5/2 way, 5/3 way)

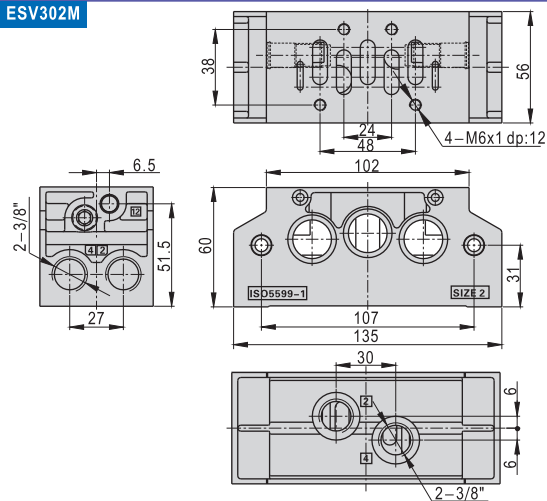
AirTAC

ESV200, 300, 400, 600 Series

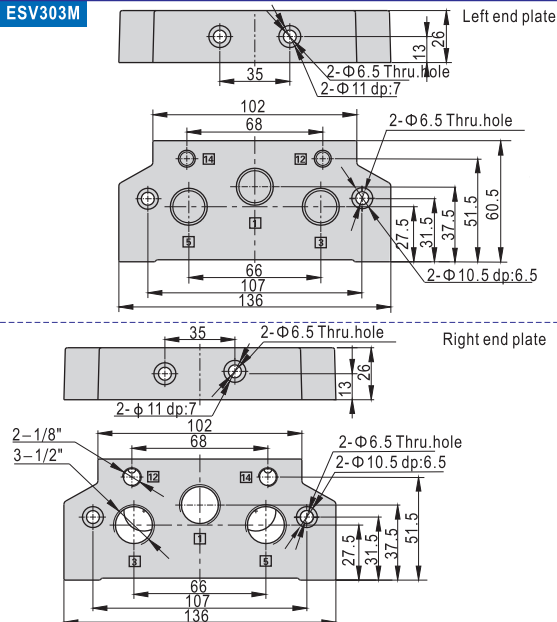
ESV301M



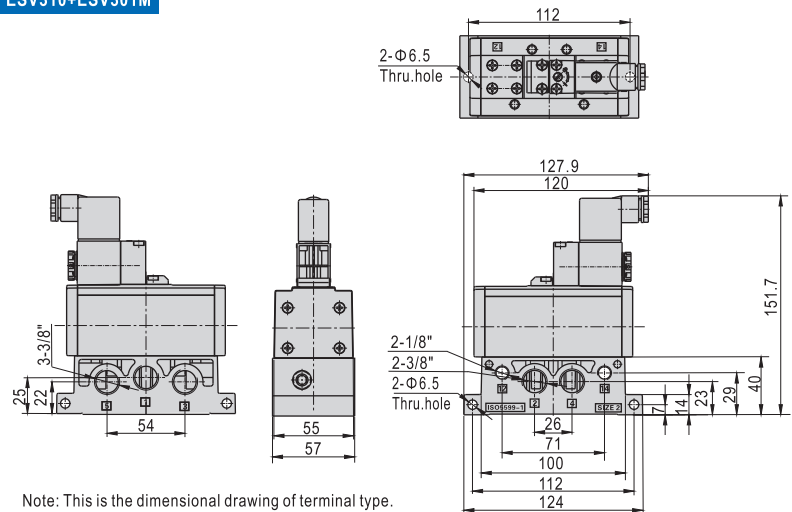
ESV302M



ESV303M

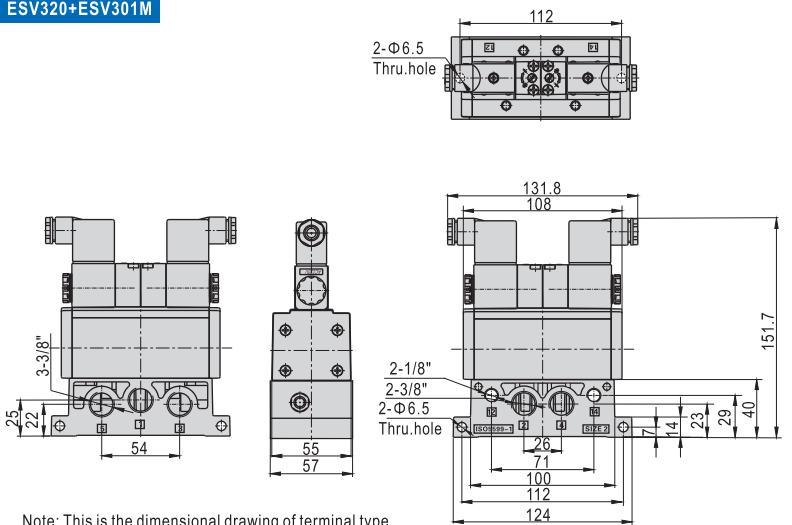


ESV310+ESV301M



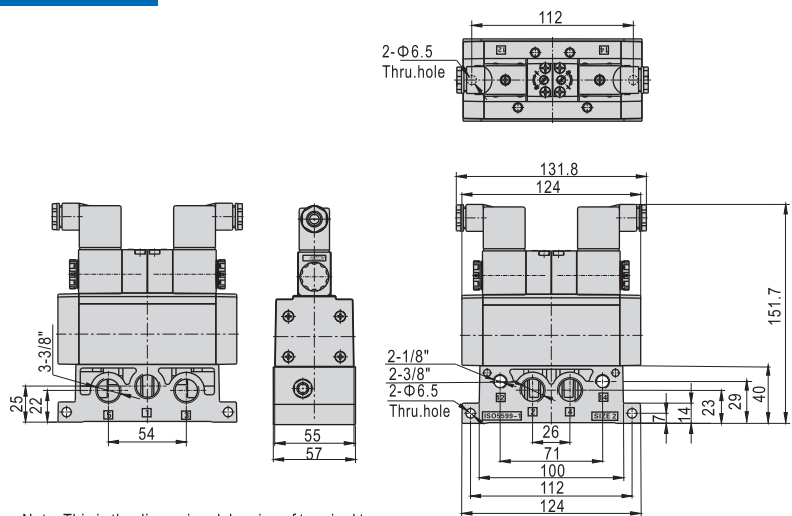
Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV320+ESV301M



Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV330+ESV301M



Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV



ISO Standard solenoid valve(5/2 way, 5/3 way)

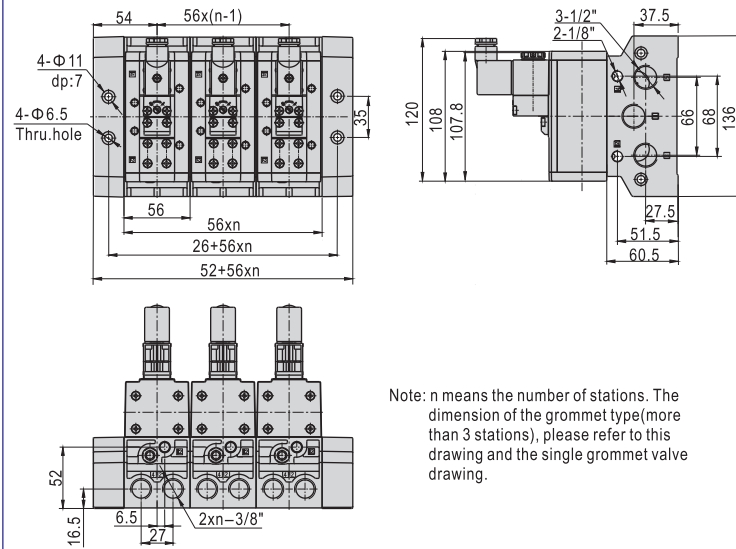
AirTAC

ESV200, 300, 400, 600 Series

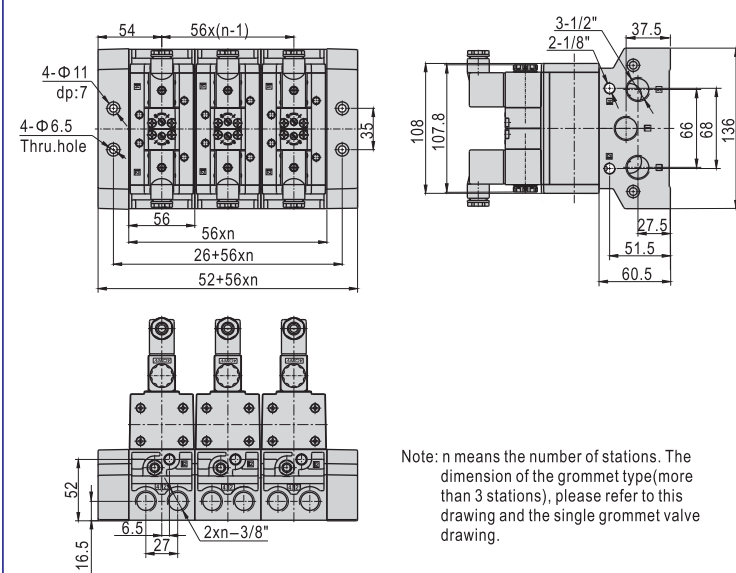


ESV

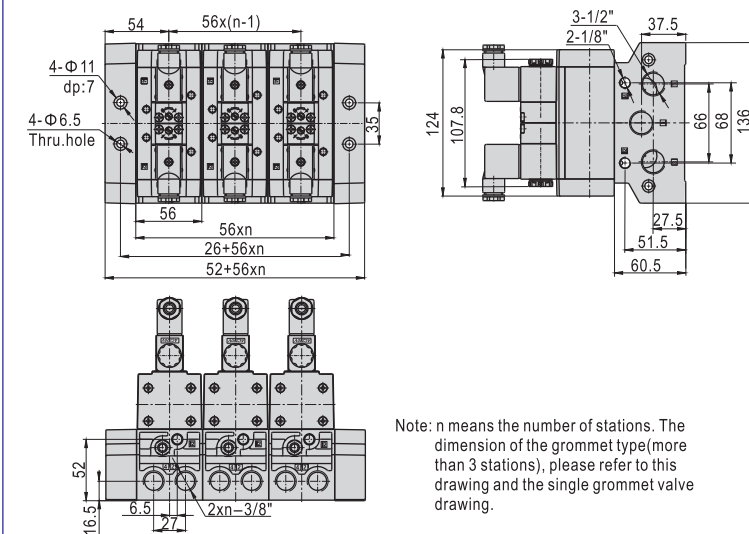
ESV310+ESV302M+ESV303M



ESV320+ESV302M+ESV303M

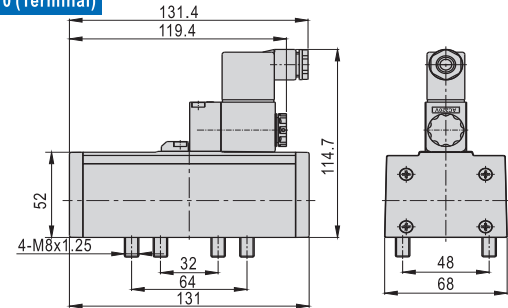


ESV330+ESV302M+ESV303M

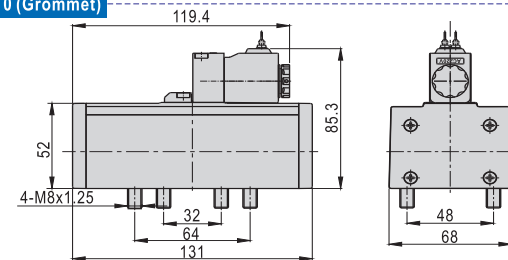


■ Dimensions(ESV400 Series)

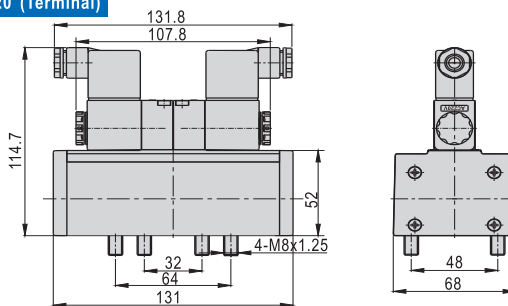
ESV410 (Terminal)



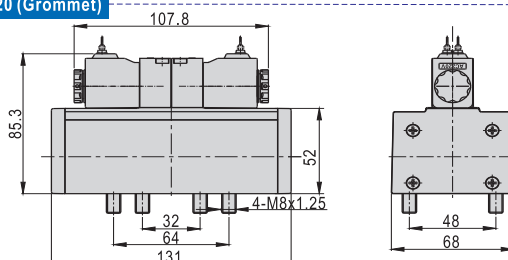
ESV410 (Grommet)



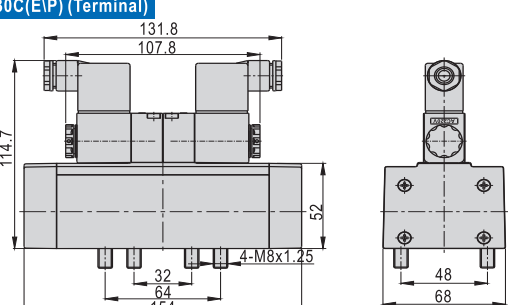
ESV420 (Terminal)



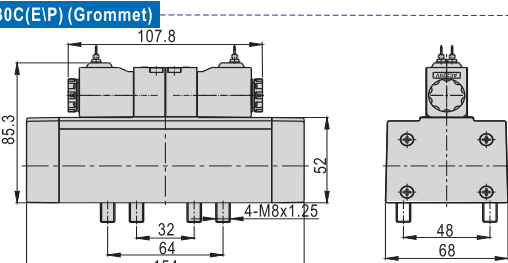
ESV420 (Grommet)



ESV430C(E/P) (Terminal)



ESV430C(E/P) (Grommet)

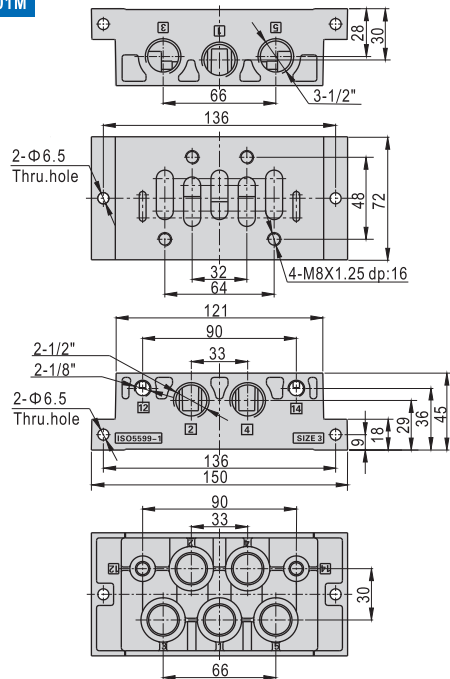


ISO Standard solenoid valve(5/2 way, 5/3 way)

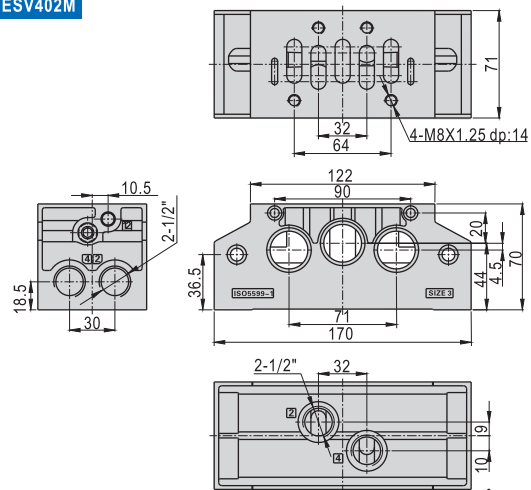
AirTAC

ESV200, 300, 400, 600 Series

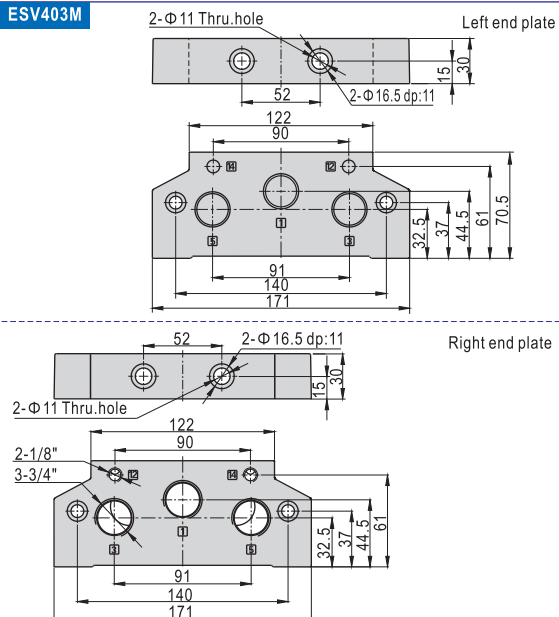
ESV401M



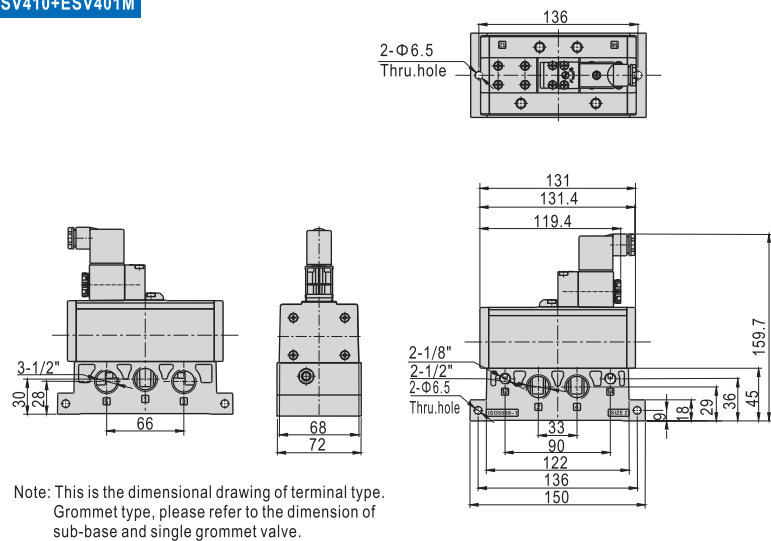
ESV402M



ESV403M

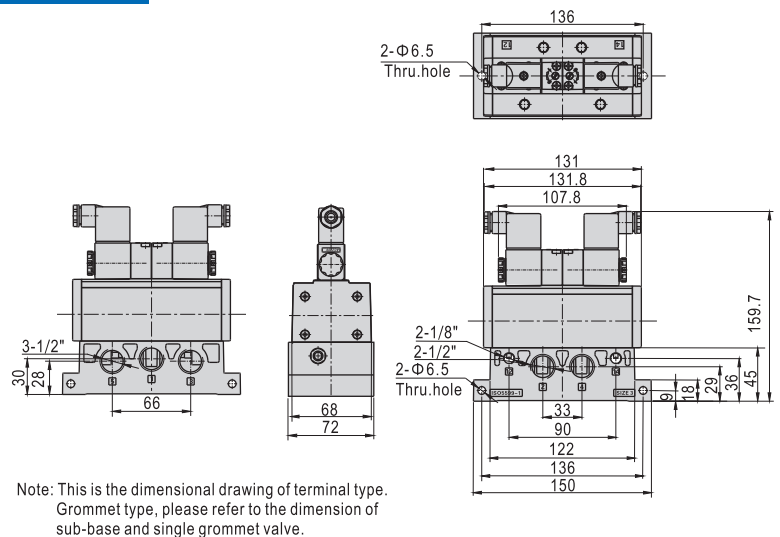


ESV410+ESV401M



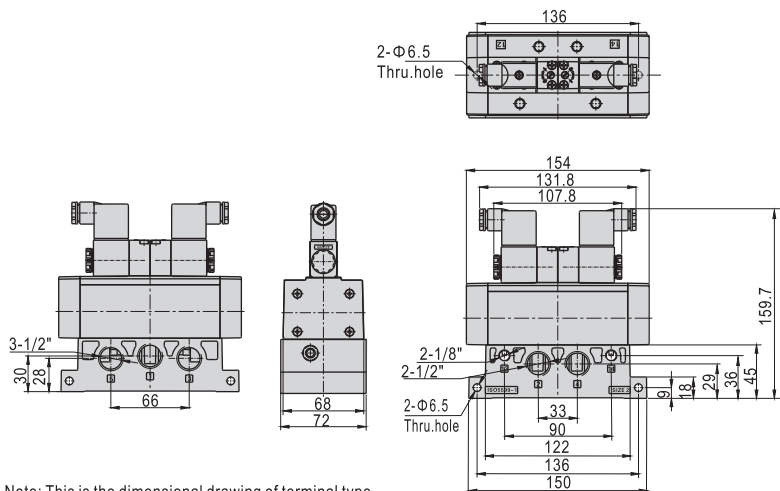
Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV420+ESV401M



Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.

ESV430+ESV401M



Note: This is the dimensional drawing of terminal type.
Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV



ISO Standard solenoid valve(5/2 way, 5/3 way)

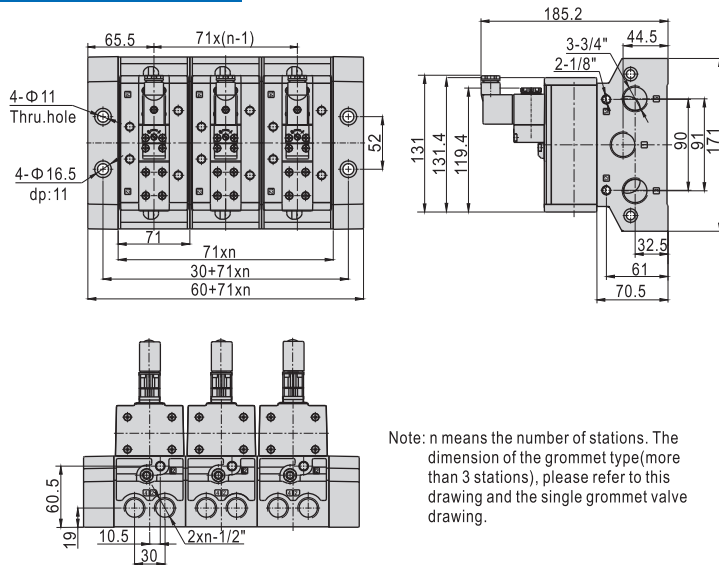
AirTAC

ESV200, 300, 400, 600 Series

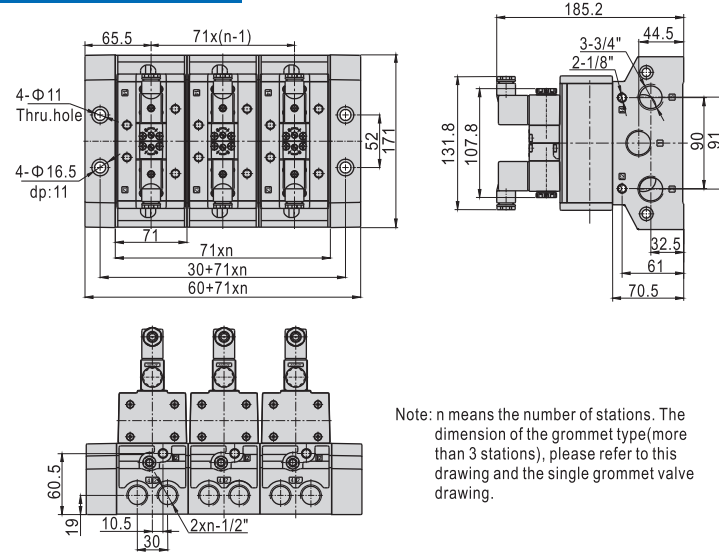


ESV

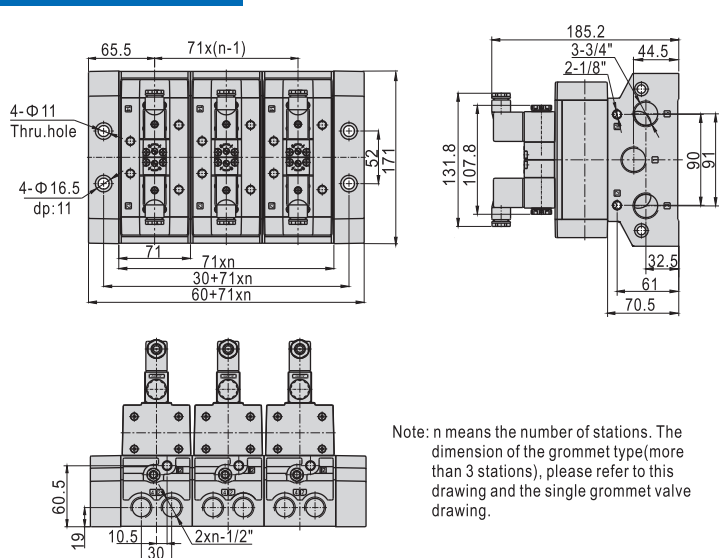
ESV410+ESV402M+ESV403M



ESV420+ESV402M+ESV403M

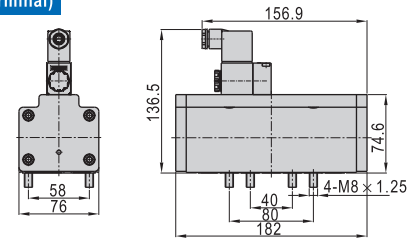


ESV430+ESV402M+ESV403M

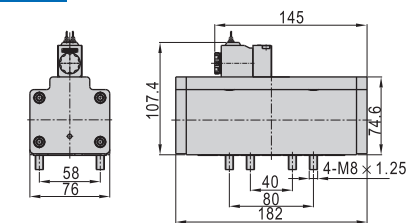


■ Dimensions (ESV600 Series)

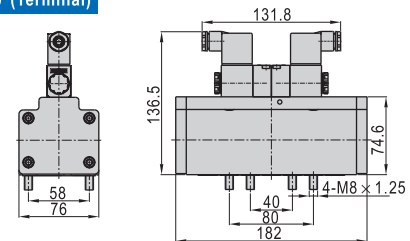
ESV610 (Terminal)



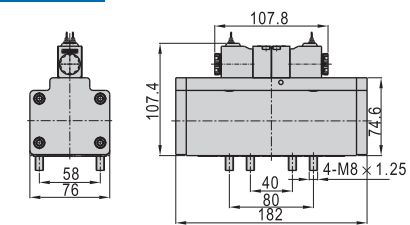
ESV610 (Grommet)



ESV620/630 (Terminal)



ESV620/630 (Grommet)

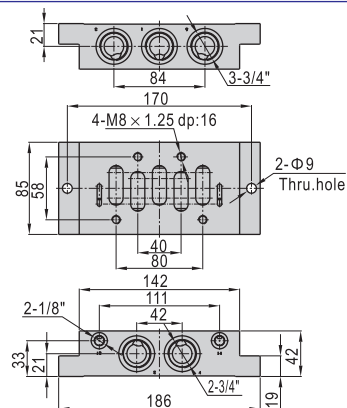


ISO Standard solenoid valve(5/2 way, 5/3 way)

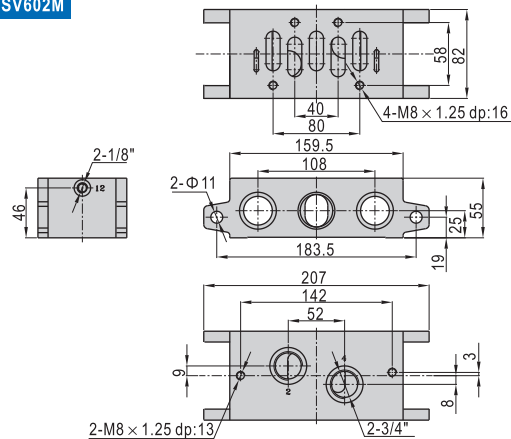
AirTAC

ESV200, 300, 400, 600 Series

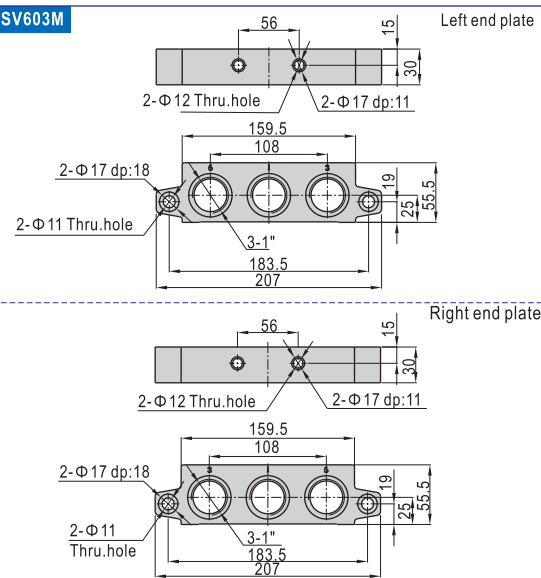
ESV601M



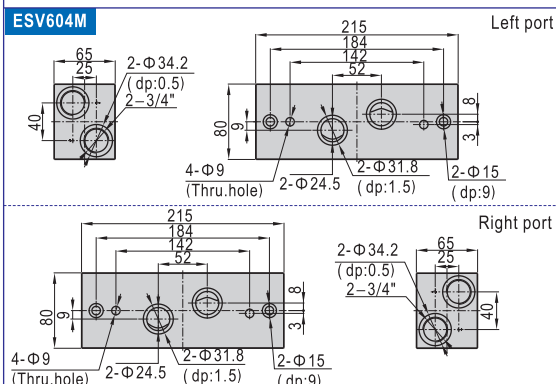
ESV602M



ESV603M

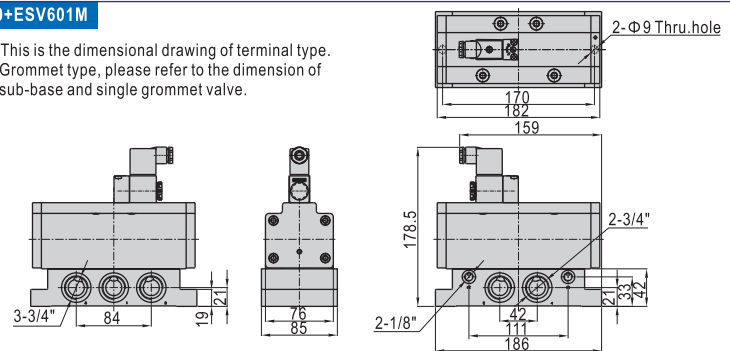


ESV604M



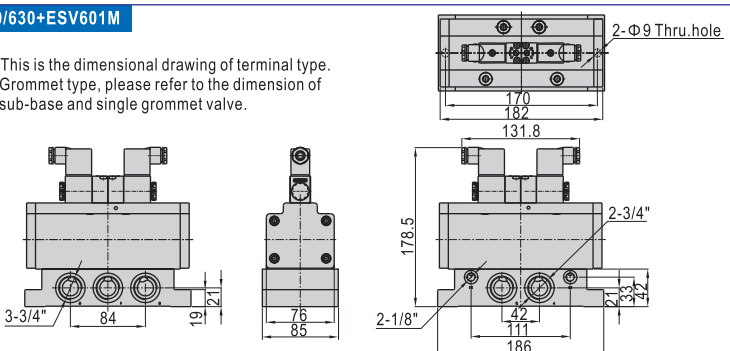
ESV610+ESV601M

Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.

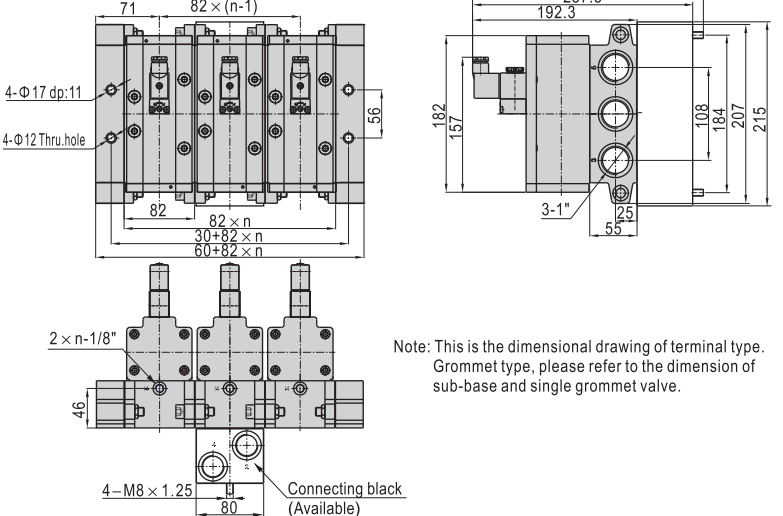


ESV620/630+ESV601M

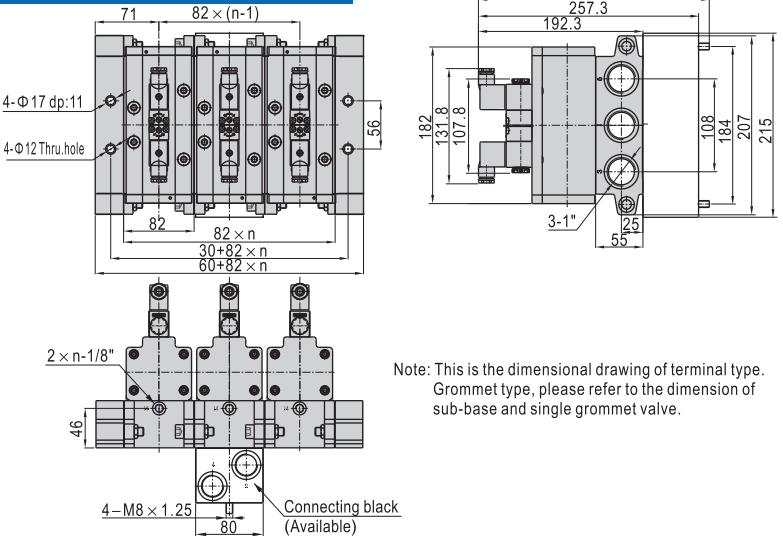
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of sub-base and single grommet valve.



ESV610+ESV602M+ESV603M+ESV604M



ESV620/630+ESV602M+ESV603M+ESV604M



ESV



Coil

080, 092 Series



Coil

Ordering code

CD A080 A

Coil type

CD: Terminal
CL: Grommet

Voltage

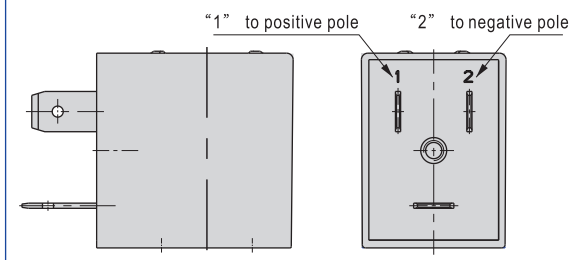
A: AC220V
B: DC24V
C: AC110V
E: AC24V
F: DC12V

Coil's bore

A080: The first product of $\Phi 8.0\text{mm}$ bore)
A092: The first product of $\Phi 9.0\text{mm}$ bore)

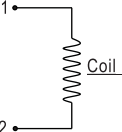
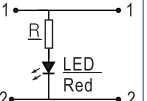
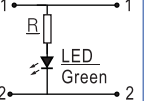
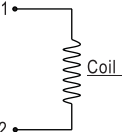
Attentions for block wiring

Coil terminal with DC specification has polar indicator lights, thus when wiring, notice positive and negative poles, "1" shall be connected to positive pole, "2" to negative pole. If the poles are connected inversely, the indicator lights will not shine but valve still actuates.

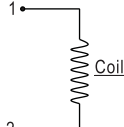
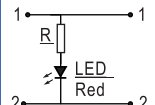
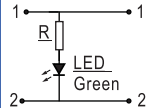


The coils and internal wiring drawing in connector and corresponding table of fitted products are provided for hd convenience of your selection.

080 Series

Production series	Coil type	Voltage	Coil inside connection diagram	Connector type	Connector inside connection diagram	Memo
3V100 Series 4V100 Series 4M100 Series	CDA080 Terminal	AC		PL1515T-P1	-	Applied to CDA080 AC、DC type coil
				PL1515T-P2		Applied to CDA080 AC type coil
	CDA080 Terminal	DC		PL1515T-P3		Applied to CDA080 DC type coil
	CLA080 Grommet	AC		-	-	-
	CLA080 Grommet	DC		-	-	-

092 Series

Production series	Coil type	Voltage	Coil inside connection diagram	Connector type	Connector inside connection diagram	Memo
3V1 Series 3V200 Series 3V300 Series 4V200 Series 4V300 Series 4V400 Series 4M200 Series 4M300 Series ESV200 Series ESV300 Series ESV400 Series ESV600 Series	CDA092 Terminal	AC		4V210-005-P1	-	Applied to CDA092 AC、DC type coil
	CDA092 Terminal	DC		4V210-005-P2		Applied to CDA092 AC type coil
				4V210-005-P3		Applied to CDA092 DC type coil
				-	-	-
				-	-	-