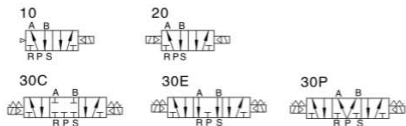


The ESV-Series ISO Solenoid actuated valves, conforming to ISO 5599-1, are surface mounted valves providing high flow rates. The valve may be mounted on a single manifold base or customised surface, or may be stacked for multi-function use. Exhaust throttles to control an actuator speed are standard for all manifold models. The range may be used Lubrication free.



Symbol



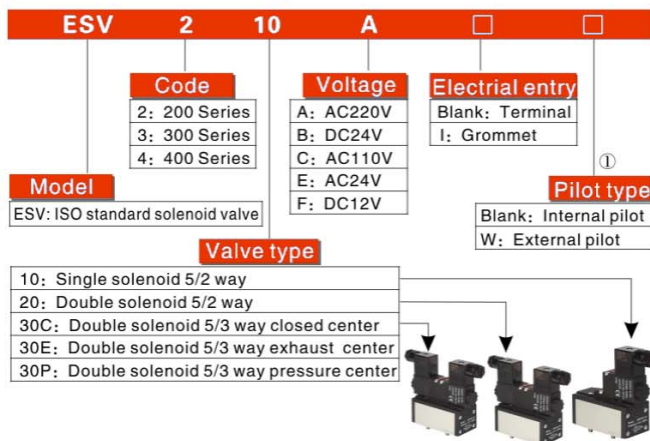
Specification

Item	Specification
Fluid	Air (to be filtered by 40µm filter element)
Acting	Internal pilot or external pilot
Lubrication	Not required
Pressure	Internal pilot: 0.2-1.0MPa(2-10.0bar)(29-145psi) External pilot: 0-1.0MPa(0-10.0bar)(0-145psi)
Control pressure (external pilot)	0.2-1.0MPa(2-10.0bar)(29-145psi)
Proof pressure	1.5MPa(15.0bar)(215psi)
Temperature	-20-70°C
Port size (manifold)	200 Series:1/4" ;300 Series:3/8" ;400 Series:1/2"
Port size (subassembly of plate)	200 Series:3/8" ;300 Series:1/2" ;400 Series:3/4"
Voltage range	AC: ± 15% DC: ± 10%
Power consumption	AC: 3.5VA DC: 3.0W
Activating time (0.5Mpa)	ESV200 Series 210、220 Series:33\41ms; 230 Series:38\50ms ESV300 Series 310、320 Series:42\55ms; 330 Series:50\62ms
Open/close	ESV400 Series 50\68ms
Insulation	Class B
Protection	IP65
Service life	30 million times above (normal use)
Installation size	ISO5599-1 standard

Product feature

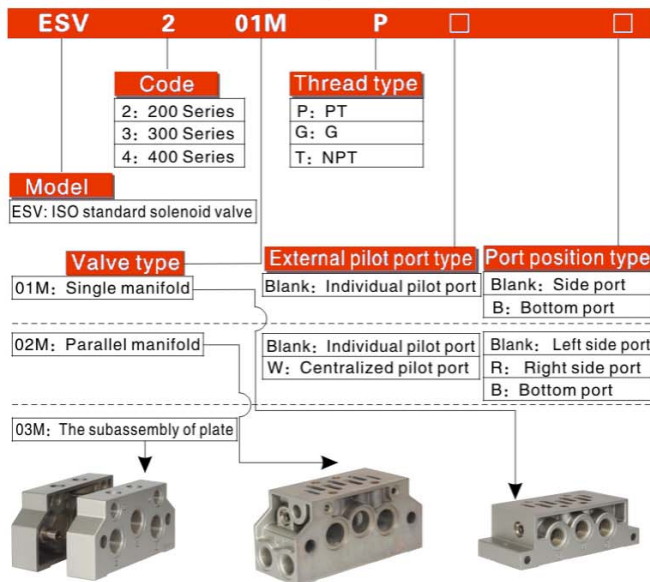
1. Special internal seal allow for high flow rate and long service life.
2. Compact and easy to install design
3. Exhaust flow restrictors included in the manifold bases.
4. Internal and external pilots are simply selected by seal position.
5. May be used without lubrication.

Ordering code of valve



Note: Internal guided mode can be interchanged with external guided mode, please adjust the installation method of the O-ring referring to article 1 or 2 in the installation manual.

Ordering code of manifold



Note: 1. For the same model, the port size of plate is bigger than the manifold's (For example ESV202M, the port size of manifold is 1/4", and the subassembly of plate is 3/8").
2. The external pilot port for Single manifold is individual pilot port.
3. The subassembly of plate is applied with Parallel manifold, both for individual pilot type and centralized pilot type.

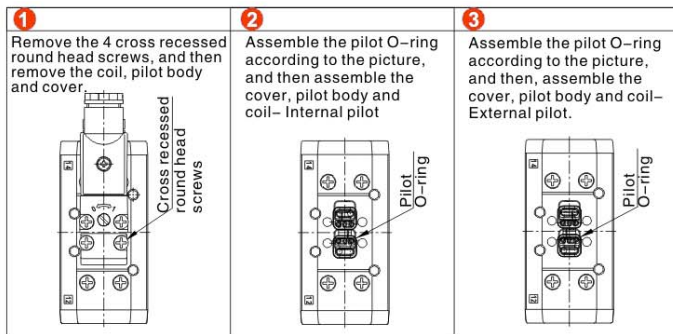
Ordering code of blanking plate



Installation and operation

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

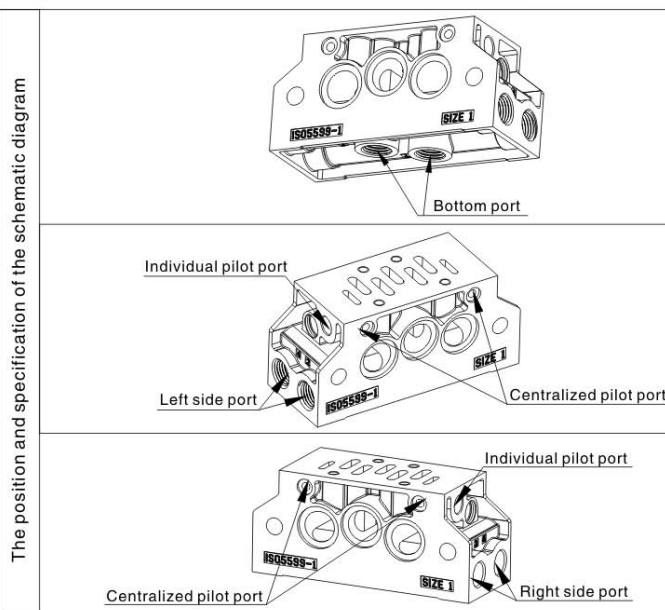
- 1.1 Internal and external pilot pressure options available
- 1.2 Conversion from internal to external pilot pressure is illustrated below



2. The classification and selection for the parallel manifolds

- 2.1 Multi-station manifold may have common pilot feed pressure or each station can have an individual external pilot pressure.
- 2.2 If external pilot pressure is required a suitable fitting is to be installed in the Individual Pilot Port shown in the illustrations below and likewise in the Centralized Pilot Port if a common pilot pressure is the preferred option.
- 2.3 Mixed external and common pilot pressure cannot be used at the same time on a manifold stack.

3. The position and specification of the parallel manifolds ports



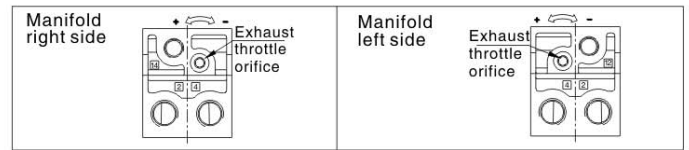
Corresponding tables the ordering code of the parallel manifolds

Port working condition	Port name				
	Left side port	Right side port	Bottom port	Centralized pilot port	Individual pilot port
Ordering code					
ESV202M	Use	Unused	Unused	Unused	Use
ESV202MR	Unused	Use	Unused	Unused	Use
ESV202MB	Unused	Unused	Use	Unused	Use
ESV202MW	Use	Unused	Unused	Use	Unused
ESV202MWR	Unused	Use	Unused	Use	Unused
ESV202MWB	Unused	Unused	Use	Use	Unused

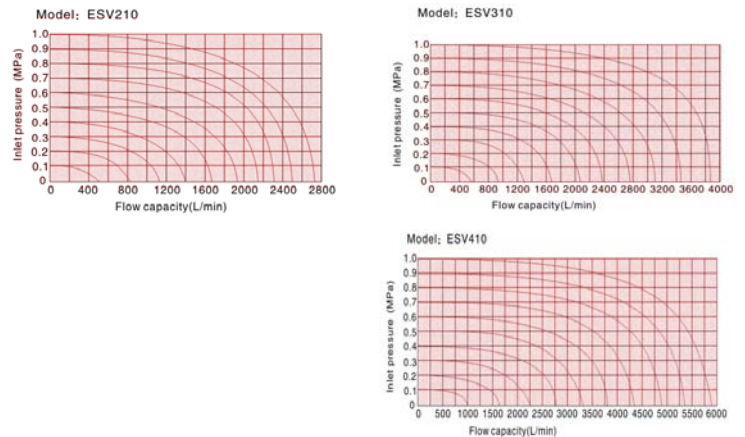
Note:
Plug the bottom ports is they are not used.
The above list is for the 200M series, but also applies to the other series 300M and 400M

4. Exhaust throttle function

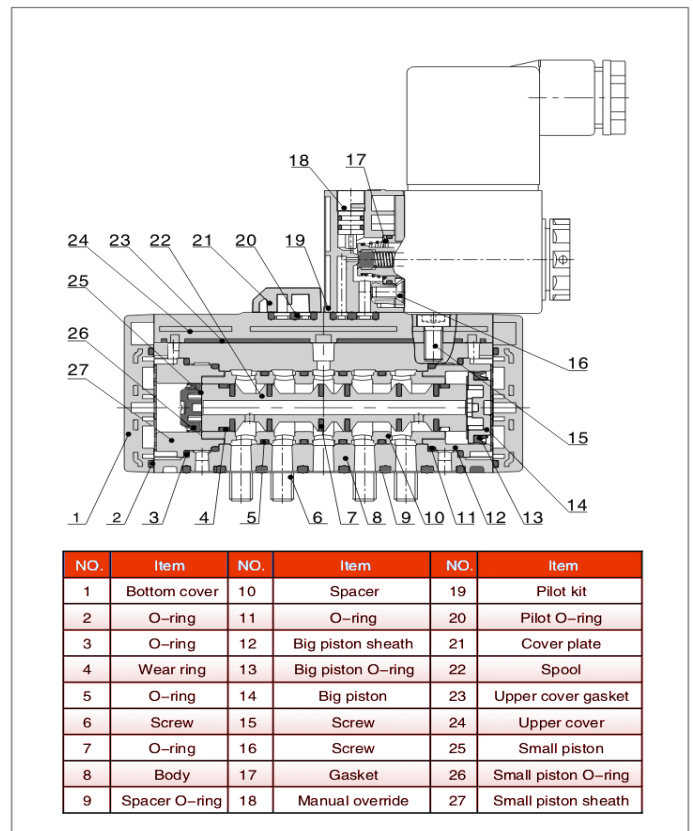
- 4.1 An exhaust port throttle restrictor is standard on each manifold station and is located in the illustration below.
- 4.2 Adjustment of the throttle screws is by a hexagon key.
- 4.3 Turn the screw CW to decrease the exhaust flow rate (to slow the controlled actuator) and CCW to increase the flow rate.



Flow chart

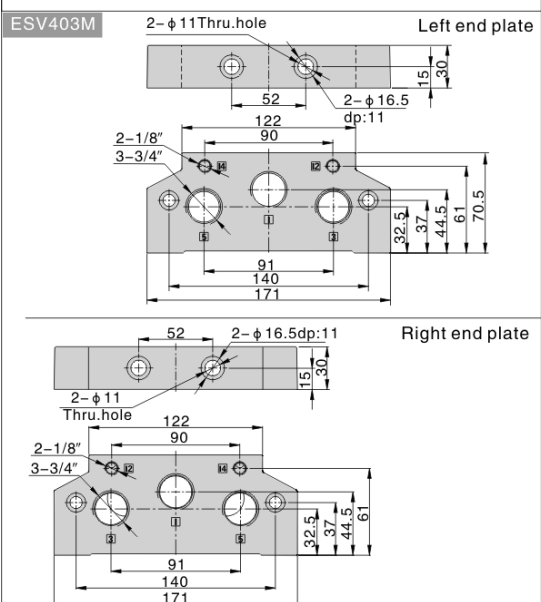
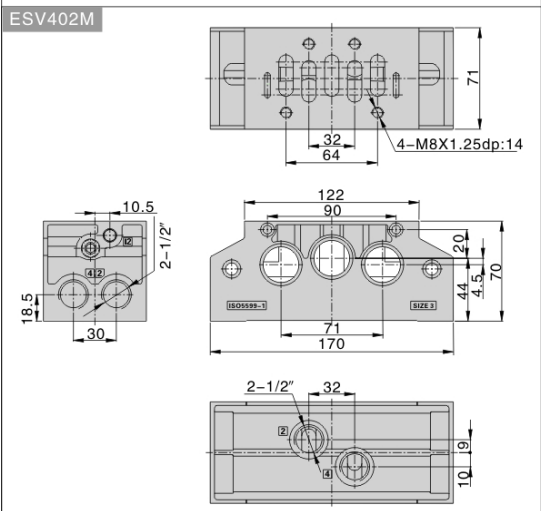
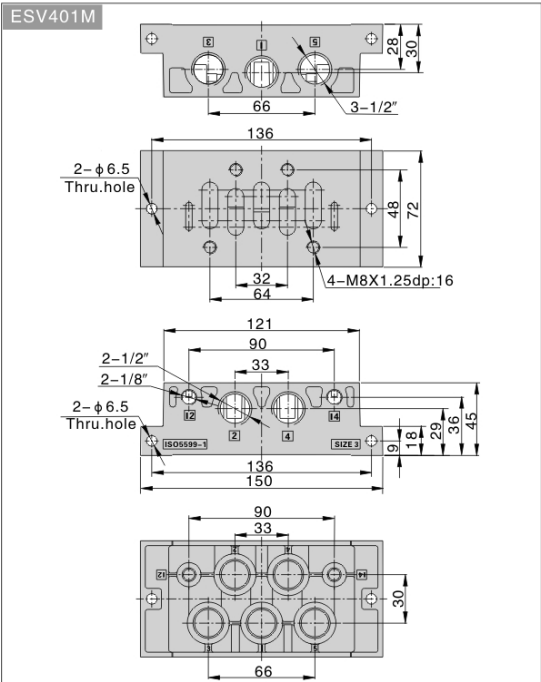
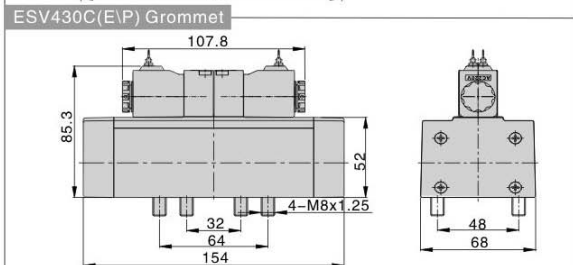
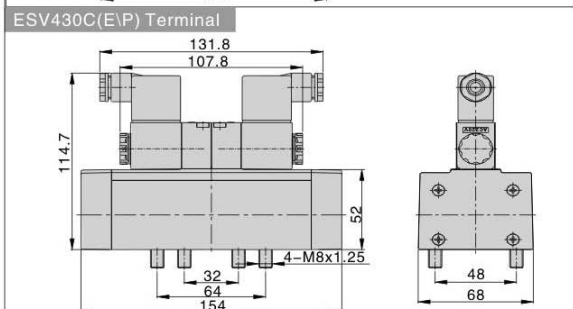
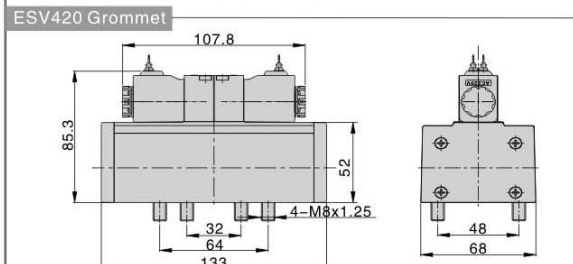
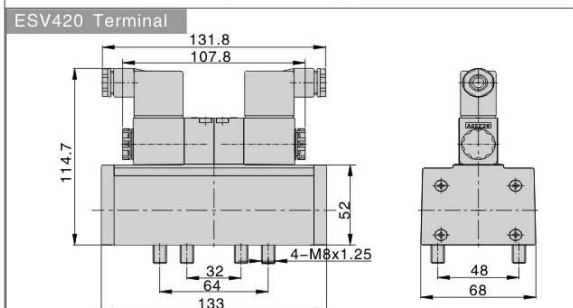
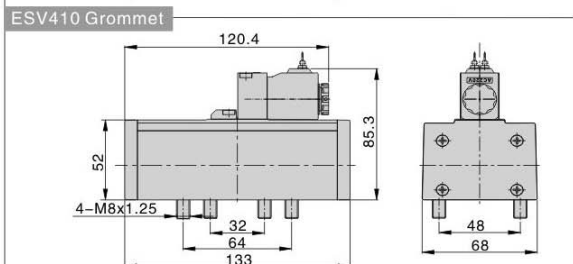
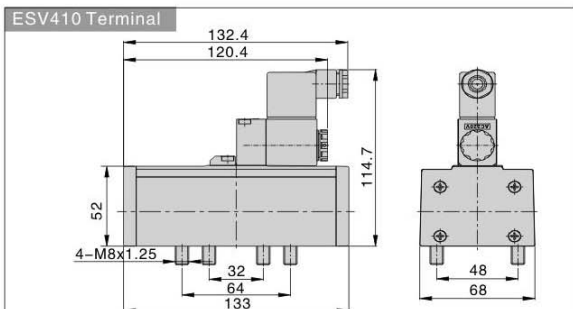


Inner structure

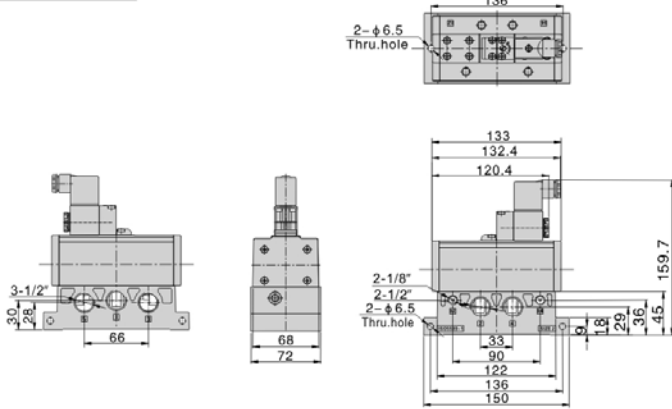


NO.	Item	NO.	Item	NO.	Item
1	Bottom cover	10	Spacer	19	Pilot kit
2	O-ring	11	O-ring	20	Pilot O-ring
3	O-ring	12	Big piston sheath	21	Cover plate
4	Wear ring	13	Big piston O-ring	22	Spool
5	O-ring	14	Big piston	23	Upper cover gasket
6	Screw	15	Screw	24	Upper cover
7	O-ring	16	Screw	25	Small piston
8	Body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

Dimensions(ESV400 Series)

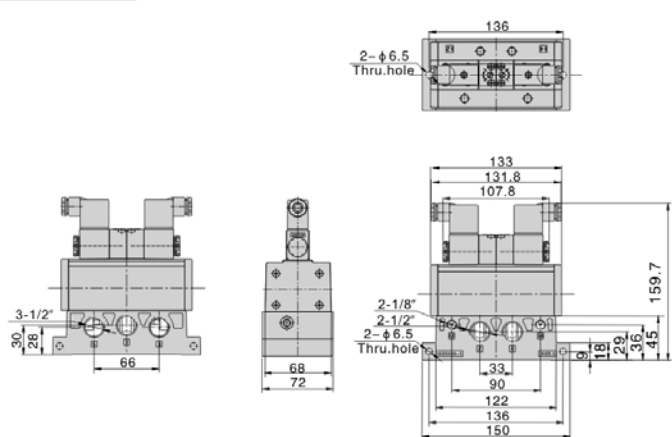


ESV410+ESV401M



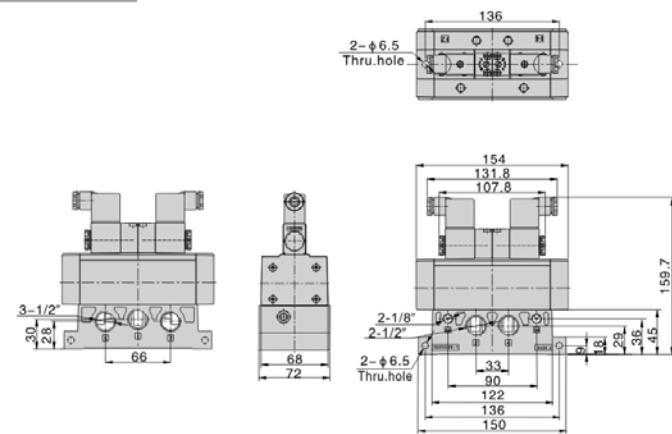
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of manifold and single grommet valve.

ESV420+ESV401M



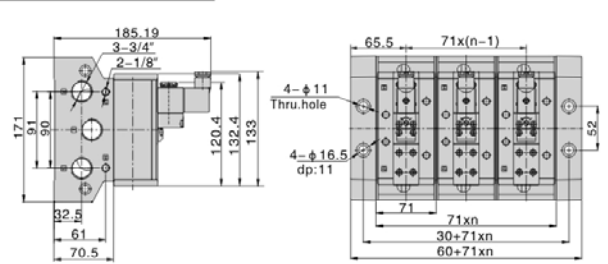
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of manifold and single grommet valve.

ESV430+ESV401M



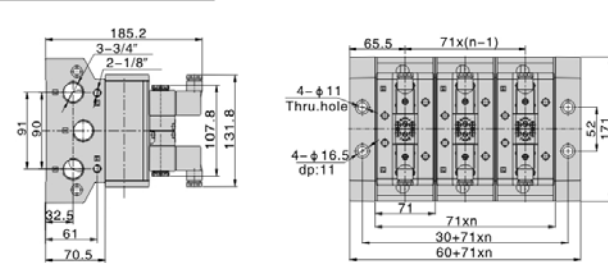
Note: This is the dimensional drawing of terminal type. Grommet type, please refer to the dimension of manifold and single grommet valve.

ESV410+ESV402M+ESV403M



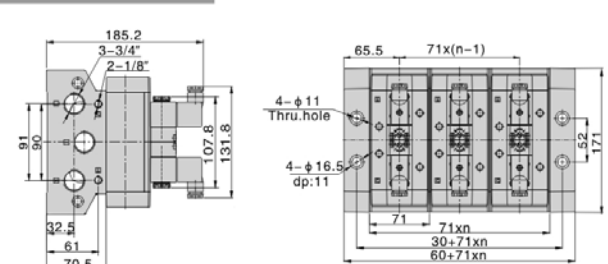
Note: n means the number of stations. The dimension of the grommet type (more than 3 stations), please refer to this drawing and the single grommet valve drawing.

ESV420+ESV402M+ESV403M



Note: n means the number of stations. The dimension of the grommet type (more than 3 stations), please refer to this drawing and the single grommet valve drawing.

ESV430+ESV402M+ESV403M



Note: n means the number of stations. The dimension of the grommet type (more than 3 stations), please refer to this drawing and the single grommet valve drawing.