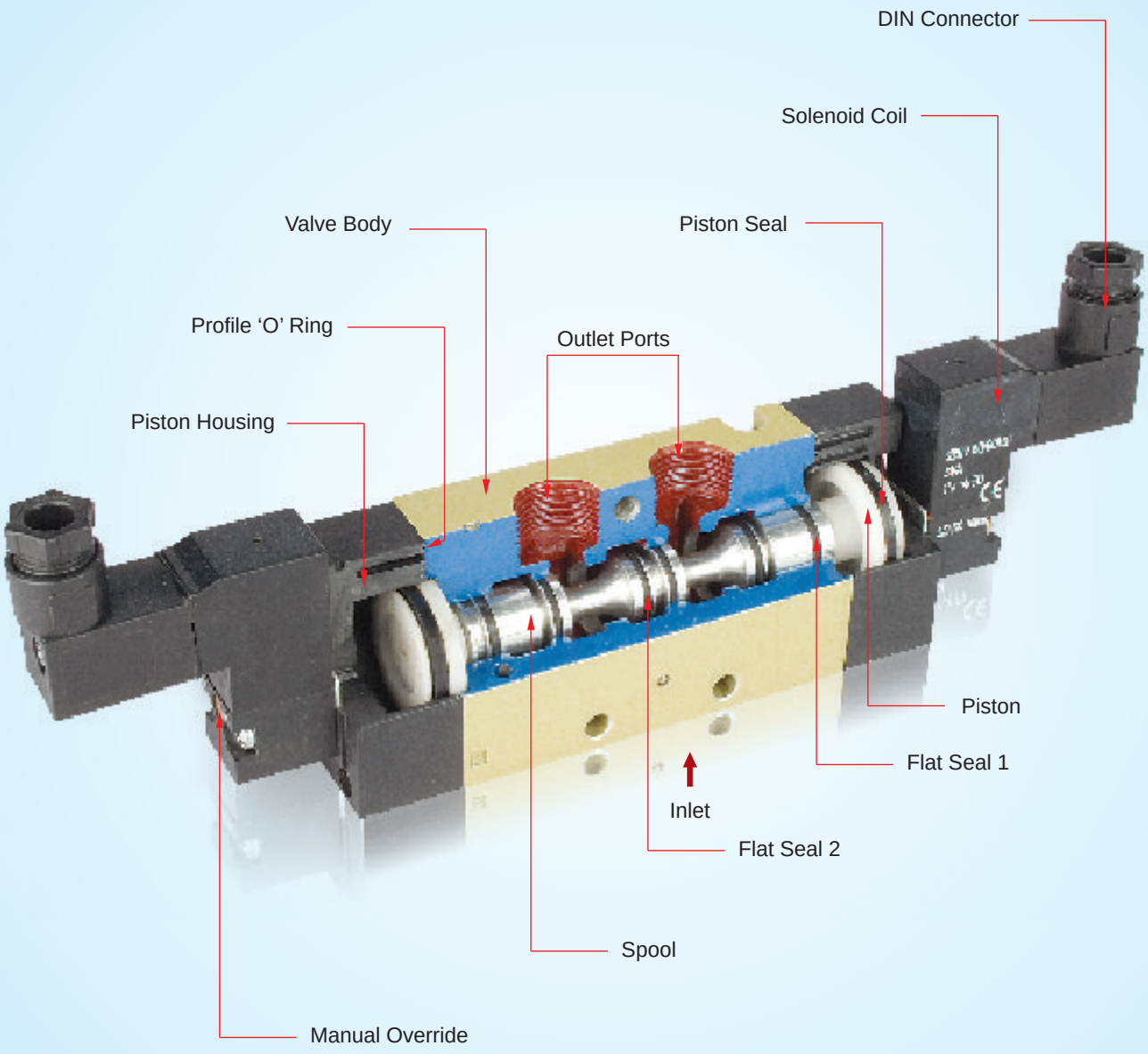
VELJAN

5 Port, 2 Position Double Solenoid Inline Valve (Series 524)



Directional control valves are designed to direct the air flow to and from the cylinders in a pneumatic system where it will perform the work.

Most valves have nominal ports of 1/8" to 1/2" BSP, the smaller sizes being used for piloting and sequencing purposes as well as for the control of small cylinders.

These valves can be used to provide a number of different functions. They can:

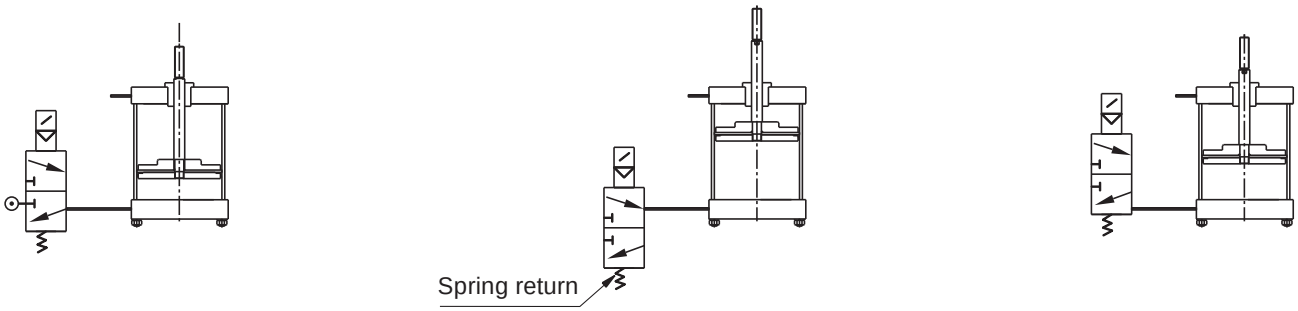
- Control the direction of cylinder movement;
- Select the path that air takes through the system;
- Perform logic control functions;
- Stop and start air flow (on-off valves);
- Sense cylinder positions (limit valves):

Directional control valves are classified according to a number of design characteristics:

The internal valve mechanism (i.e. 'poppet' or 'sliding spool')
The number of switching positions (usually 2 or 3)
The number of connecting ports (i.e. 3 or 5 port)
The method of valve actuation (Manual, Mechanical, Solenoid or Air pilot operated)

The valve mechanism directs the compressed air supply, through the valve body to the selected output ports or stops the air from passing through the valve. The valve mechanism can be moved by the direct mechanical action, a spring, an electrical solenoid or by pneumatic air (pilot operated).

Three port valves are used as selector valves to route air to create a pilot signal, to control single acting cylinders or to make logic functions.



Circuit at rest

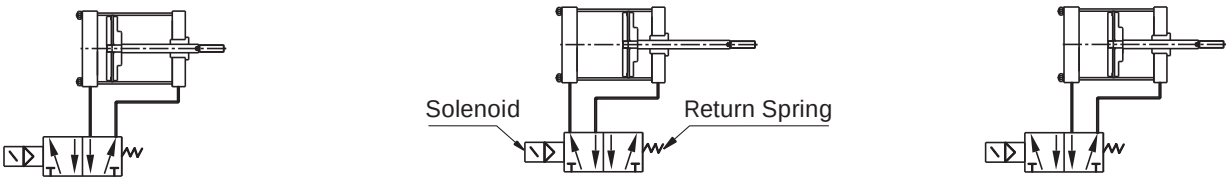
Solenoid energized
Cylinder Extending

Solenoid De-energized
Cylinder Retracting

3 WAY, 2 POSITION DIRECTIONAL CONTROL VALVES OPERATING A CYLINDER

In 2 position valve, spring holds the non-actuated valve in one position until an actuating force great enough to compress the spring shifts the valve. When the actuating force is removed, the spring returns the valve to its original position.

Five port valves are used to control double acting cylinders.



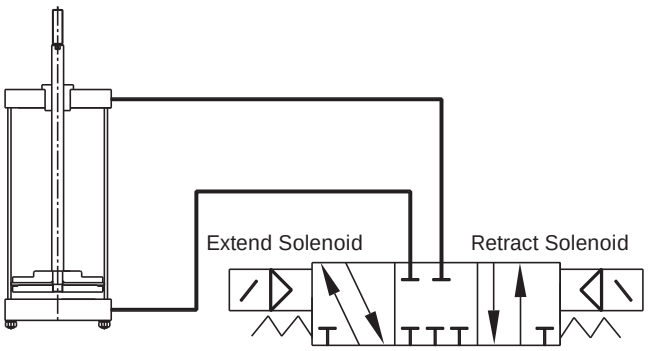
Circuit at rest

Solenoid energized
Cylinder Extending

Solenoid De-energized
Cylinder Retracting

5 PORT 2 POSITION DIRECTIONAL CONTROL VALVES OPERATING A CYLINDER

5-port 3 position double solenoid operated close centre direction control valve operating a cylinder as shown below



Double Acting Inching Circuit

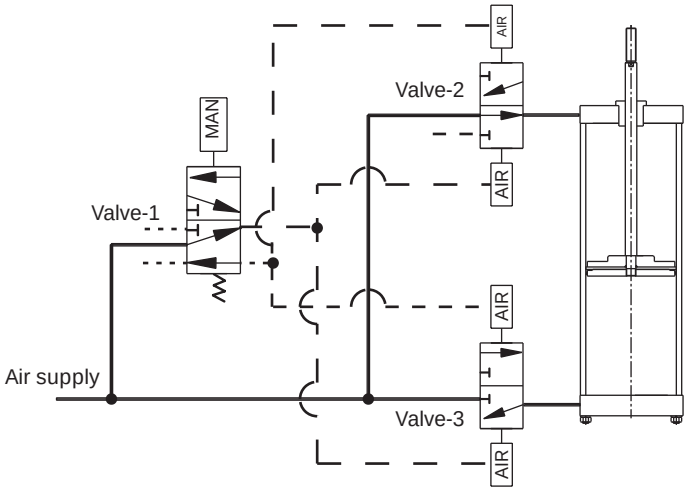
In this position at rest condition the air flow to all the ports are blocked, and there by it holds the actuator to remain at the particular position it attained earlier. By energizing the extend solenoid the air flows to the cylinder cap end and enables the forward moment. By energizing the retract solenoid the air flows to the cylinder head end side & makes it to retract.

SPOOL VALVES

The most common sliding action valve is the spool type valve; In this air is routed to or from the work ports as the spool slides between passages to open and close flow paths, depending on spool position. Sealing is usually accomplished through mating of rubber seals with the very closely machined and honed valve body. Spool valves readily adapt to many different spool-shifting schemes, which broaden their use over a wide variety of applications.

USAGE OF DIRECTION CONTROL VALVE:

Directional air valves are basically used in two types of circuits: Power circuits and control circuits.



A power circuit is a circuit in which the valve feeds air to the cylinder or power dev ice. (Valves 2 and 3)

A control circuit is a circuit in which the air going through the valve causes a second valve in the power circuit to shift or change the direction of flow. (Valve 1)

Notice that the air flow from valve 1 does not go to the cylinder but rather, to valves 2 and 3 as pilot signal. Valve 1 is therefore a control valve because it controls the operation of valves 2 and 3.

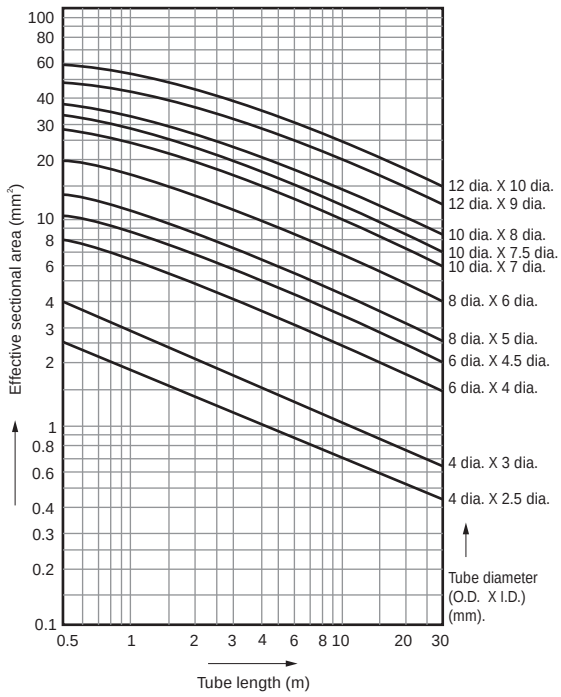
Valves 2 and 3 go directly to the cylinder to provide the pressure (or power) to either port on the cylinder. These valves cause the cylinder to move. However, they cannot do their own positioning. They depend on valve 1 to position them to allow proper operation of the cylinder. Valves 2 and 3 are power valves in a power circuit.

SELECTION OF VALVE FOR PNEUMATIC SYSTEM

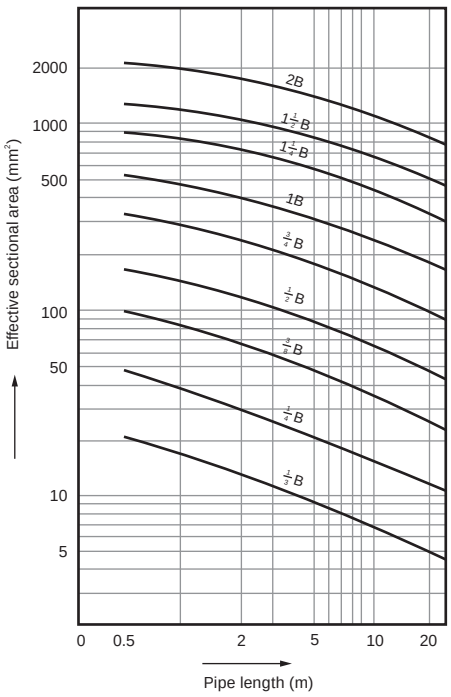
Inline mounted valve								
S. No.	Port Size	Valve Model No		Bore Size	Approximate Reference speed	Flow (l/min)	Total Effective Sectional Area required (mm^2)	Pipe Size
1.	M5	SSO	ILV5241013G	Ø20	250	29	0.5	Ø6 / Ø4 Nylon tube
		DSO	ILV5241023G	Ø32	250	73	1.3	Ø6 / Ø4 Nylon tube
		SPO	ILV5241030	Ø40	250	180	2.6	Ø8 / Ø5.7 Nylon tube
		DPO	ILV5241040					
2.	1/8" BSP	SSO	ILV5242013G	Ø40	500	230	3.3	Ø8 / Ø5.7 Nylon tube
		DSO	ILV5242023G	Ø50	500	350	5.2	Ø10 / Ø7.2 Nylon tube
		SPO	ILV5242030		250	280	4.1	Ø8 / Ø5.7 Nylon tube
		DPO	ILV5242040	Ø63	500	560	8.2	Ø10 / Ø7.2 Nylon tube
3.	1/4" BSP	SSO	ILV5243013G	Ø63	750	840	12.3	Ø15 / Ø11.5 Nylon tube or Rc 3/8" steel pipe
		DSO	ILV5243023G	Ø80	500	800	11.6	Ø15/ Ø11.5 Nylon tube or Rc 3/8" steel pipe
		SPO	ILV5243030	Ø100	250	710	10.3	Ø15/ Ø11.5 Nylon tube or Rc 3/8" steel pipe
		DPO	ILV5243040					
4.	3/8" BSP	SSO	ILV5244013G	Ø125	500	2200	32.2	Rc 1/2" steel pipe
		DSO	ILV5244023G					
		SPO	ILV5244030	Ø160	500	3600	52.6	Rc 3/4" steel pipe
		DPO	ILV5244040					
5.	1/2" BSP	SSO	ILV5245013G	Ø160	500	3600	52.6	Rc 3/4" steel pipe
		DSO	ILV5245023G	Ø200	250	3700	54.4	Rc 3/4" steel pipe
		SPO	ILV5245030					
		DPO	ILV5245040	Ø250	250	4400	64.3	Rc 3/4" steel pipe

Inline mounted valve								
S. No.	Port Size	Valve Model No		Bore Size	Approximate Reference speed	Flow (l/min)	Total Effective Sectional Area required (mm^2)	Pipe Size
1.	1/4 " BSP	SSO	S5443013G	Ø40	750	340	5.0	Ø10 / Ø7.2 Nylon tube
		DSO	S5443023G	Ø50	750	530	7.7	Ø10 / Ø7.2 Nylon tube
		SPO	S5443030	Ø63	500	560	8.2	Ø10 / Ø7.2 Nylon tube
		DPO	S5443040					
2.	3/8" BSP	SSO	S5444013G	Ø80	250	400	5.8	Ø10 / Ø7.2 Nylon tube
		DSO	S5444023G					
		SPO	S5444030	Ø100	250	710	10.3	Ø15 / Ø11.5 Nylon tube or Rc 3/8" steel pipe
		DPO	S5444040					

PIPING TECHNICAL DETAILS

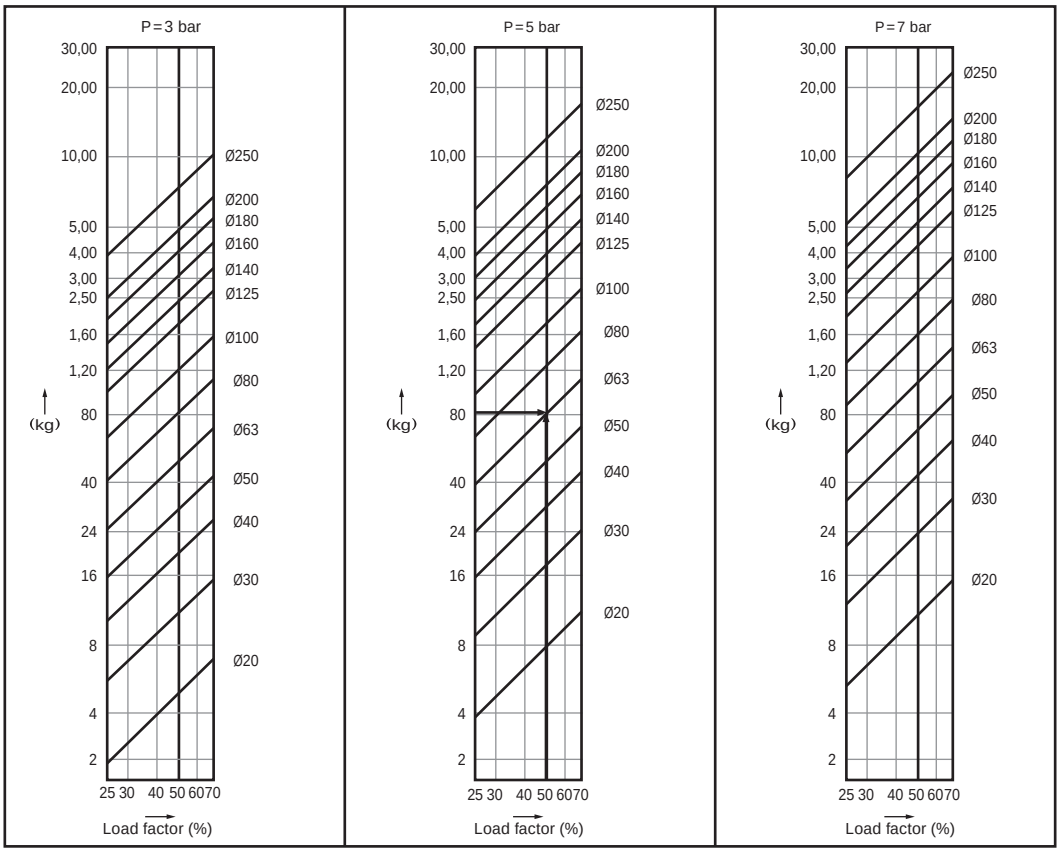


Nylon tube effective sectional area



Steel pipe effective sectional area

SELECTION FOR FINALISATION OF CYLINDER BORE



THEORETICAL REFERENCE SPEED

Theoretical Reference speed (Vo) is the cylinder average speed obtained from the combination of the Valve & the Piping System and is expressed as for the fallowing Formula :

$$Vo = 1920 \times \frac{S}{A}$$

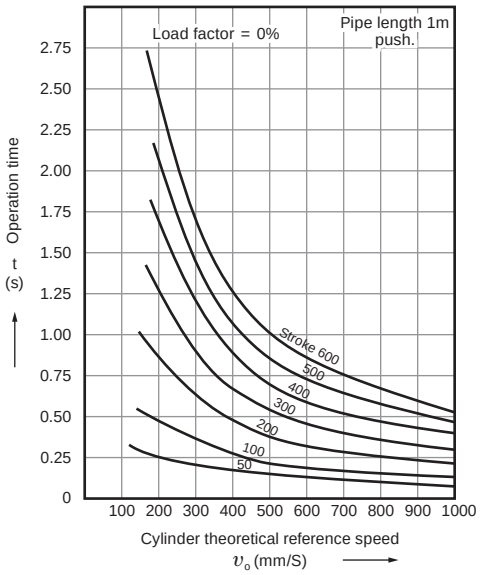
Vo = Theoretical Reference Speed (mm/s)

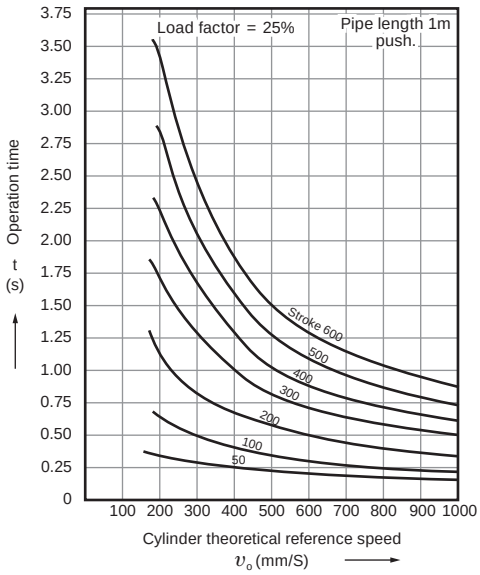
A = Cylinder Cross sectional Area (Cm^2)

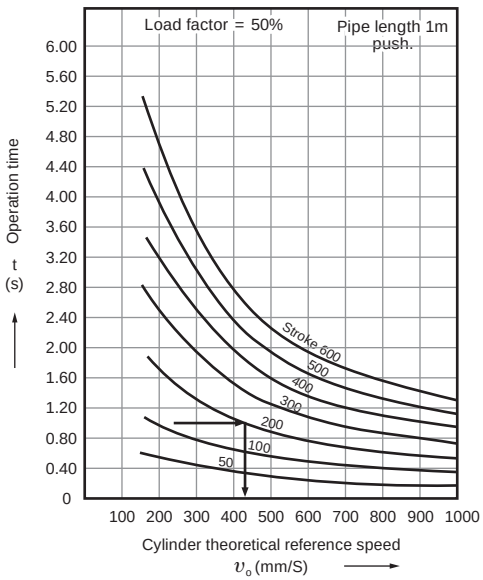
S = Composite effective sectional area of Circuit (exhaust side) (mm^2)

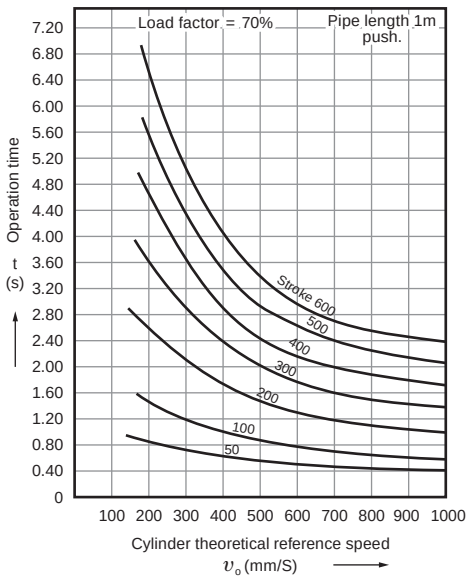
D = Cylinder Bore size (Cm)

METHOD FOR FINDING THEORETICAL REFERENCE SPEED









SAFETY INSTRUCTIONS:

1. Always use dry and clean compressed air that does not contain oil, tar, carbon etc., in order to prevent operational faults. Also install an air filter just before the pneumatic circuit to ensure efficient working.
2. Do not remove the solenoid valve's packaging or the port dust caps till the time it is connected to the air line.
3. Flush the valve before connecting to the air line in order to remove any foreign matter that has entered during piping to prevent troubles such as air leak.
4. Before piping, make sure that all debris, cutting oil, dust etc., are removed from the piping.
5. When installing piping into a port, ensure that sealant material does not clog up the pressure port which may cause the tape to enter the solenoid valve and lead to malfunctioning. To avoid this type of problem wrap the sealing tape in the opposite thread direction leaving the first 1.5 to 2 threads.
6. Connect the pipes to the valve with appropriate torque to prevent air leakage and at the same time safe guard the threaded screw.
7. Make sure that the personnel who are engaged in assembly and disassembly have enough knowledge and experience.
8. For easy maintenance, provide enough space all-around the pneumatic valve.
9. At the time of servicing the product, switch off the power, stop the compressor air supply and check that there is no residual pressure for ensuring safety.
10. Protect solenoid valve's power supply cord from any damages which may cause electric shock or circuit error.
11. Do not throw the pneumatic valve product into fire. In some cases it may explode or generate toxic gases which are harmful.
12. Do not use the valves in the dusty working conditions. If it is unavoidable to use, place a protective cover over the control unit and place the noise muffler at the exhaust ports.
13. Allowable range of voltage variation should be within 10% of the recommended voltage for proper operation of the valves. Any voltage exceeding more than 10% of the recommended voltage will result in the coil damage and the malfunctioning of the valves.

SERIES - 524

ORDERING CODE

ILV | 524 | 2 | 02 | 3 | D

INLINE VALVE

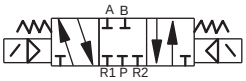
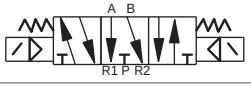
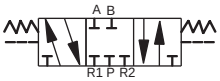
MODEL No.
524

SIZE	CODE	
	BSP	NPT
M5	1	1N
1/8"	2	2N
1/4"	3	3N
3/8"	4	4N
1/2"	5	5N

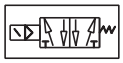
Example : ILV / 524 / 2 / 02 / 3 / D

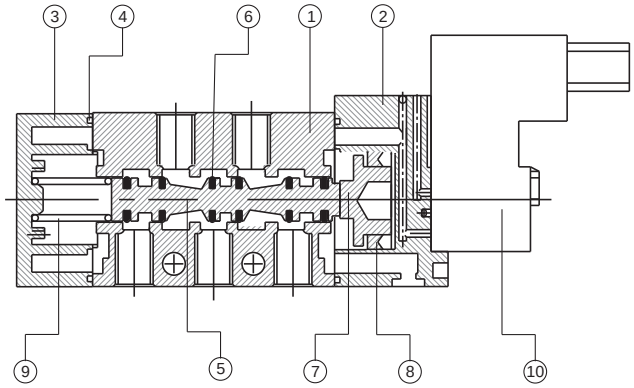
D	With Connecter
G	Grommet (Lead wire 300mm Length)

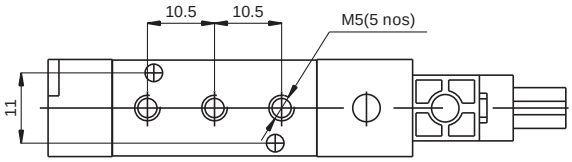
ELECTRICALS	
0	NO SOLENOIDS
1	230 V AC/DC
2	110 V AC/DC
3	24 V DC

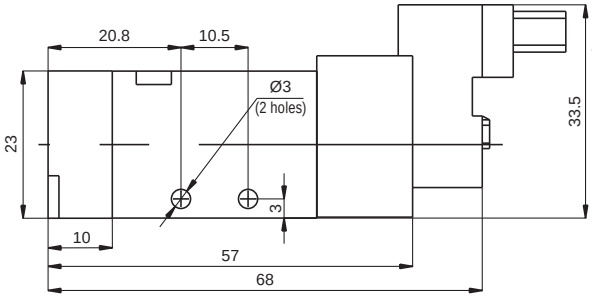
2 Position (Solenoid type)		
Function	Function symbol	Code
Single solenoid		01
Double solenoid		02
2 Position (Air Pilot type)		
Single Pilot		03
Double Pilot		04
3 Position (Solenoid type)		
Closed center		11
Exhaust center		12
Pressure center		13
3 Position (Air Pilot type)		
Closed center		14
Exhaust center		15
Pressure center		16

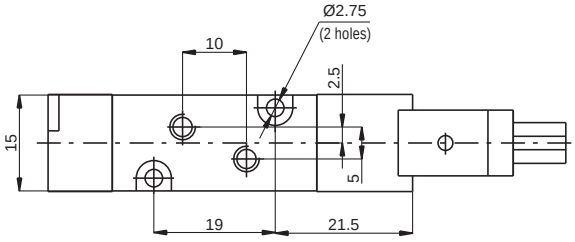
5 PORT 2 POSITION IN LINE SINGLE SOLENOID VALVE : M5







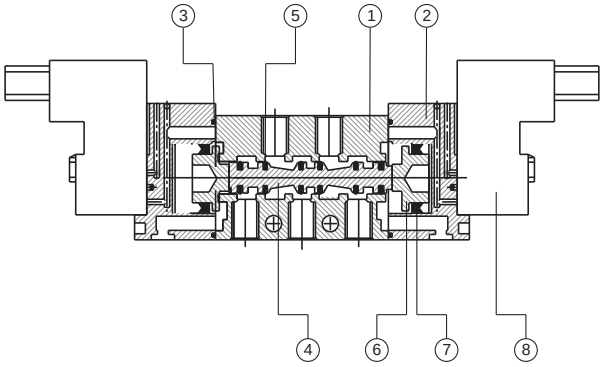


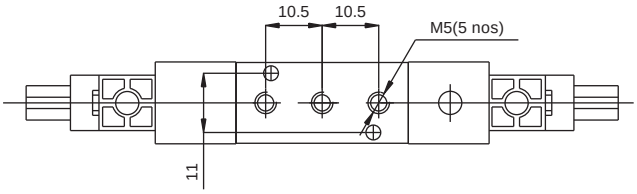


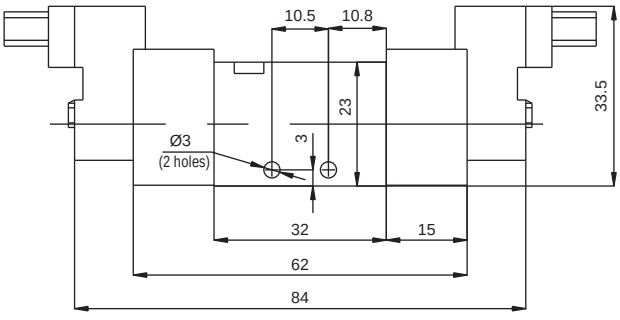
SPECIFICATIONS :	
Series	ILV-524
Port Size	M5
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	3 mm^2
Applicable Cylinder Bore Size	Ø 20 to Ø 40
Max Cylinder Speed	400 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Dc: 24v, 12v
Power Consumption	1.0 w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60 m/s^2 or Less/320 m/s^2 or Less
Weight	40 gms

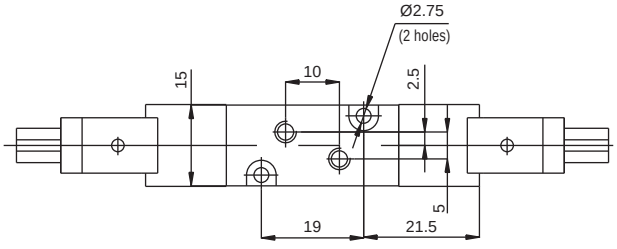
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	End Cover	P.P.S (Plastic)
4	Profile 'O' Ring	Nitrile Rubber
5	Spool	Aluminum
6	Flat Seal	Nitrile Rubber
7	Piston	Acetar Resin
8	Piston 'O' Ring	Nitrile Rubber
9	Spring	Spring Steel
10	Solenoid Coil	Std.

5 PORT 2 POSITION IN LINE DOUBLE SOLENOID VALVE : M5





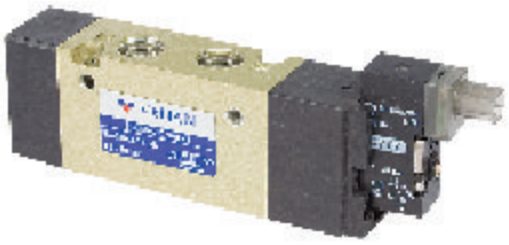


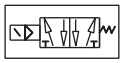


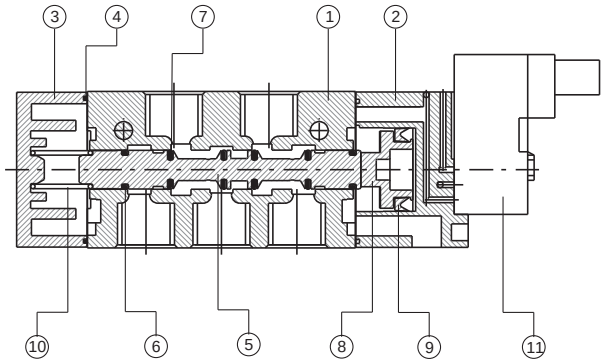
SPECIFICATIONS :	
Series	ILV-524
Port Size	M5
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	3 mm^2
Applicable Cylinder Bore Size	Ø 20 to Ø 40
Max Cylinder Speed	400 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Dc: 24v, 12v
Power Consumption	1.0 w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	55 gms

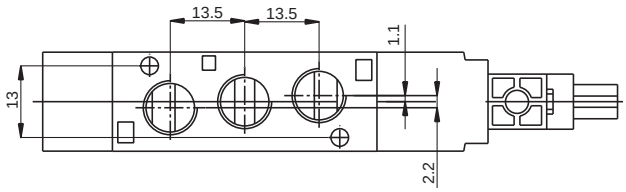
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	Profile 'O' Ring	Nitrile Rubber
4	Spool	Aluminum
5	Flat Seal	Nitrile Rubber
6	Piston	Acetar Resin
7	Piston 'O' Ring	Nitrile Rubber
8	Solenoid Coil	Std.

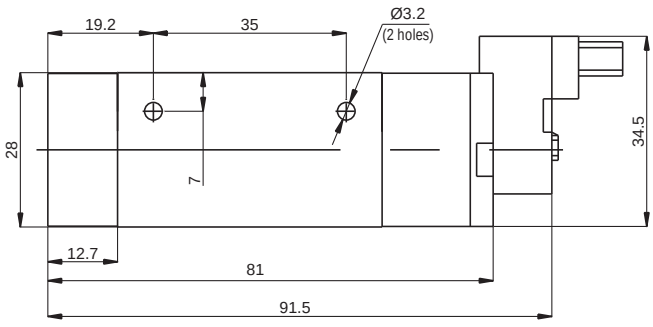
5 PORT 2 POSITION IN LINE SINGLE SOLENOID VALVE : 1/8” BSP

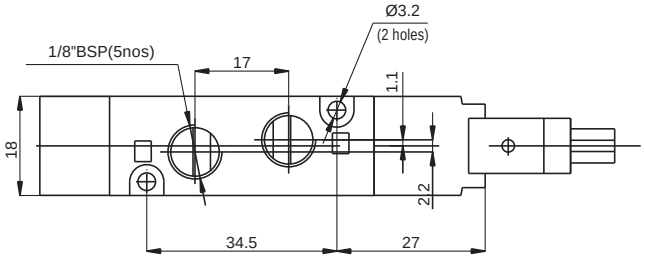








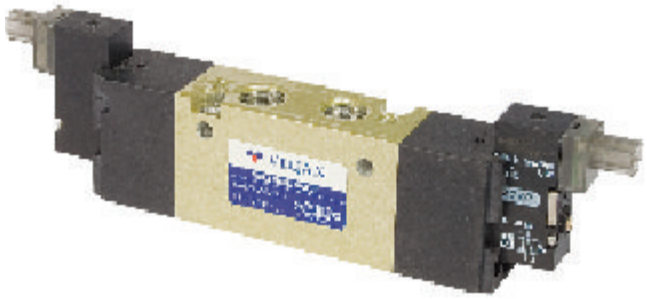


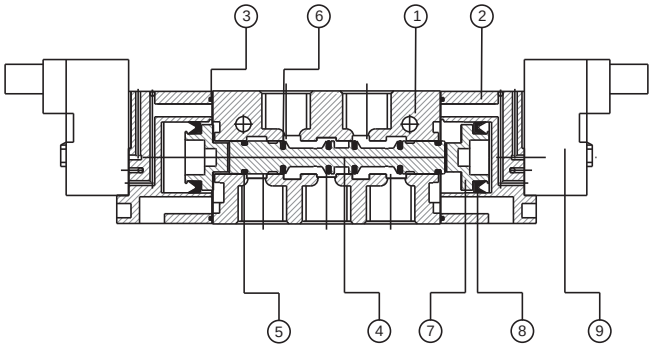


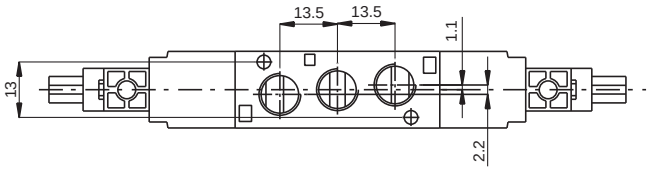
SPECIFICATIONS :	
Series	ILV-524
Port Size	1/8” BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	12.5 mm^2
Applicable Cylinder Bore Size	Ø 40 to Ø 80
Max Cylinder Speed	750 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Dc: 24v, 12v
Power Consumption	1.0 w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	85 gms

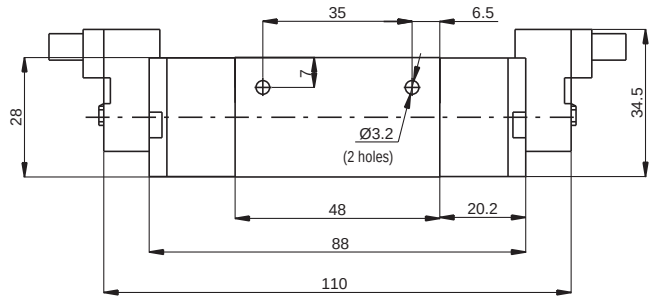
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	End Cover	P.P.S (Plastic)
4	Profile 'O' Ring	Nitrile Rubber
5	Spool	Aluminum
6	Flat Seal - 1	Nitrile Rubber
7	Flat Seal - 2	Nitrile Rubber
8	Piston	Acetar Resin
9	Piston 'O' Ring	Nitrile Rubber
10	Spring	Spring Steel
11	Solenoid Coil	Std.

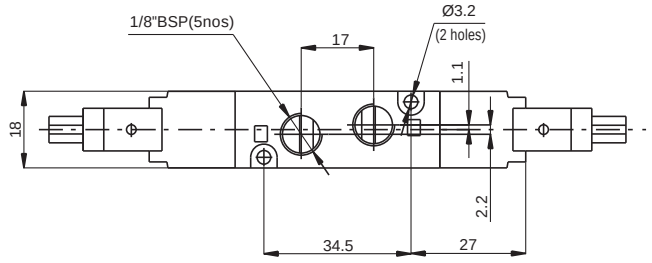
5 PORT 2 POSITION IN LINE DOUBLE SOLENOID VALVE : 1/8" BSP







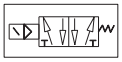


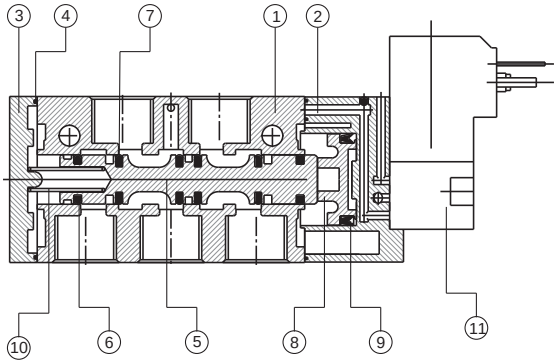


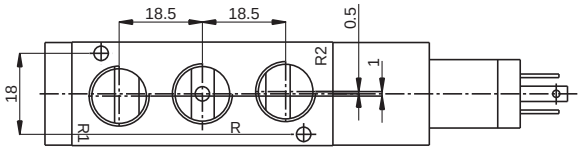
SPECIFICATIONS :	
Series	ILV-524
Port Size	1/8" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	12.5 mm^2
Applicable Cylinder Bore Size	Ø 40 to Ø 80
Max Cylinder Speed	750 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Dc: 24v, 12v
Power Consumption	1.0 w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	100 gms

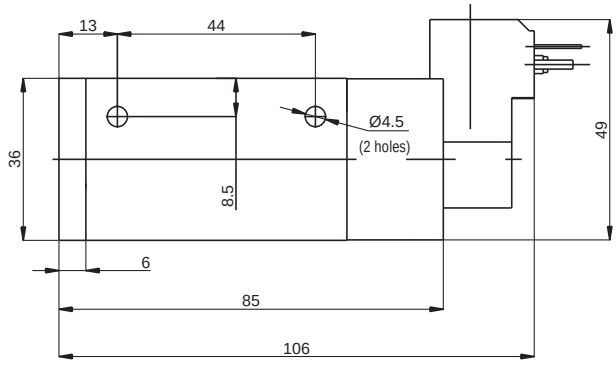
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	Profile 'O' Ring	Nitrile Rubber
4	Spool	Aluminum
5	Flat Seal - 1	Nitrile Rubber
6	Flat Seal - 2	Nitrile Rubber
7	Piston	Acetar Resin
8	Piston 'O' Ring	Nitrile Rubber
9	Solenoid Coil	Std.

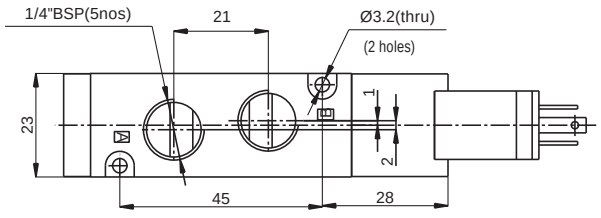
5 PORT 2 POSITION IN LINE SINGLE SOLENOID VALVE : 1/4" BSP







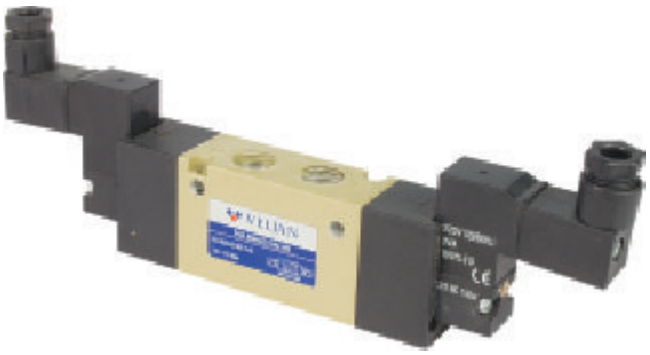


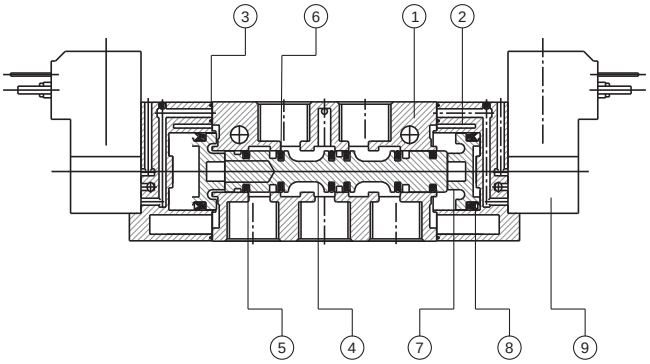


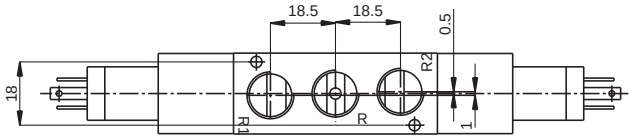
SPECIFICATIONS :	
Series	ILV-524
Port Size	1/4" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	25 mm^2
Applicable Cylinder Bore Size	Ø 63 to Ø 100
Max Cylinder Speed	900 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	175 gms

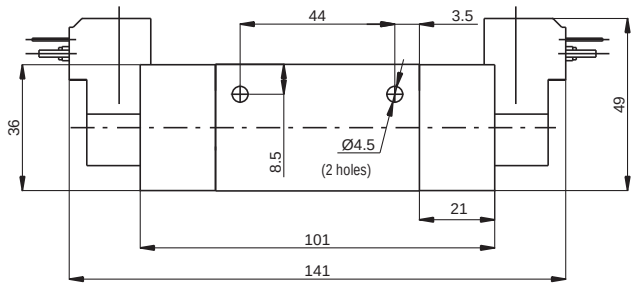
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	End Cover	P.P.S (Plastic)
4	Profile 'O' Ring	Nitrile Rubber
5	Spool	Aluminum
6	Flat Seal - 1	Nitrile Rubber
7	Flat Seal - 2	Nitrile Rubber
8	Piston	Acetar Resin
9	Piston 'O' Ring	Nitrile Rubber
10	Spring	Spring Steel
11	Solenoid Coil	Std.

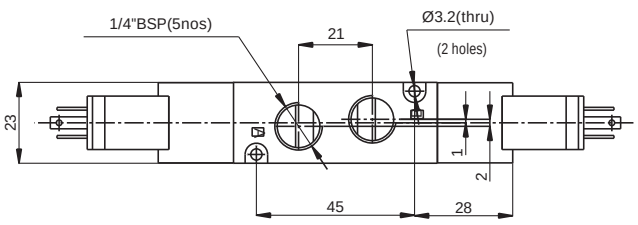
5 PORT 2 POSITION IN LINE DOUBLE SOLENOID VALVE : 1/4" BSP







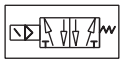


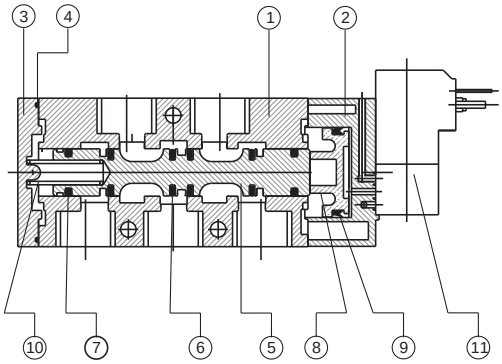


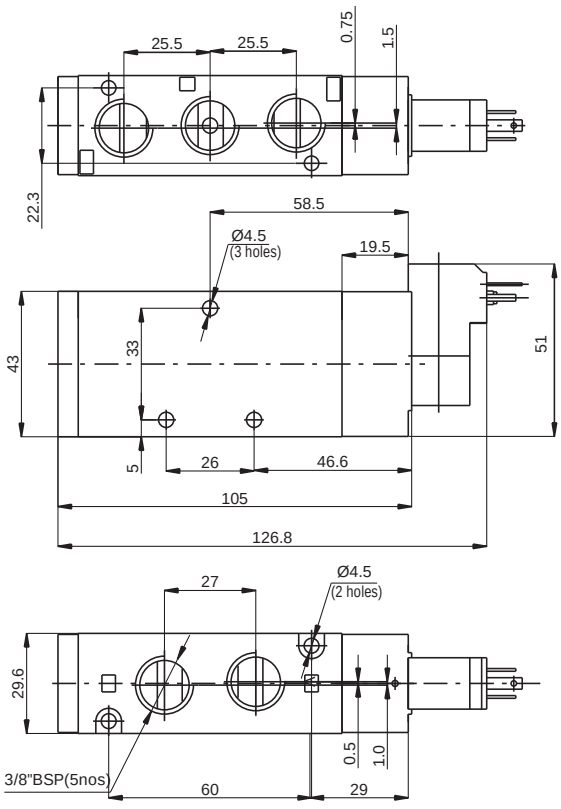
SPECIFICATIONS :	
Series	ILV-524
Port Size	1/4” BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	25 mm^2
Applicable Cylinder Bore Size	63 to 100 Dia
Max Cylinder Speed	900 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	230 gms

MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	Profile 'O' Ring	Nitrile Rubber
4	Spool	Aluminum
5	Flat Seal - 1	Nitrile Rubber
6	Flat Seal - 2	Nitrile Rubber
7	Piston	Acetar Resin
8	Piston 'O' Ring	Nitrile Rubber
9	Solenoid Coil	Std.

5 PORT 2 POSITION IN LINE SINGLE SOLENOID VALVE : 3/8" BSP







SPECIFICATIONS :	
Series	ILV-524
Port Size	3/8" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	50 mm
Applicable Cylinder Bore Size	Ø125 to Ø160
Max Cylinder Speed	750 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	280 gms.

MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	End Cover	P.P.S (Plastic)
4	Profile 'O' Ring	Nitrile Rubber
5	Spool	Aluminum
6	Flat Seal - 1	Nitrile Rubber
7	Flat Seal - 2	Nitrile Rubber
8	Piston	Acetar Resin
9	Piston 'O' Ring	Nitrile Rubber
10	Spring	Spring Steel
11	Solenoid Coil	Std.

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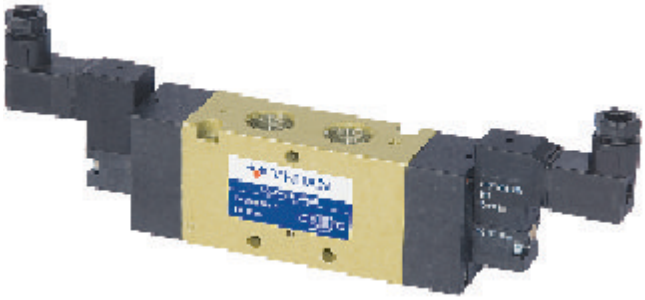
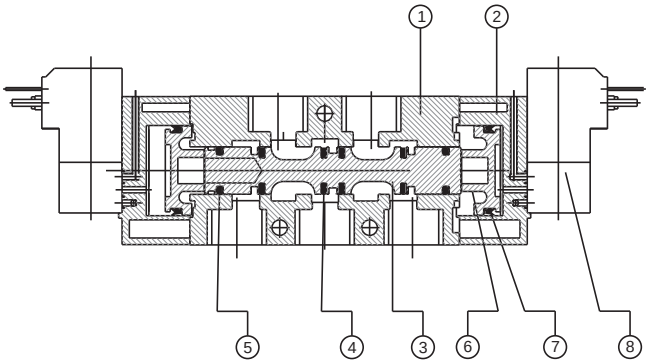
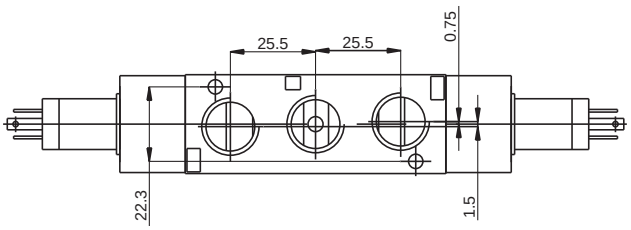
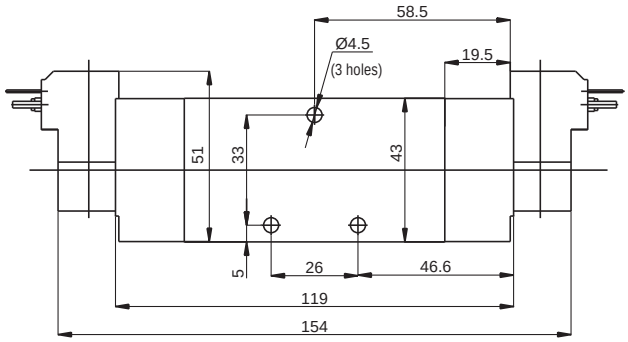
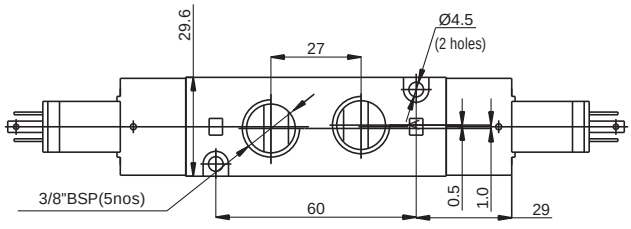
5 PORT 2 POSITION IN LINE DOUBLE SOLENOID VALVE : 3/8" BSP







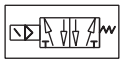


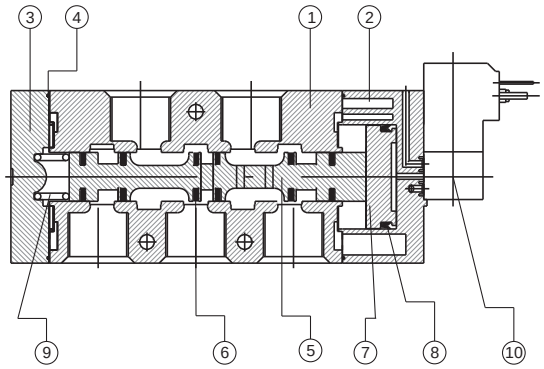


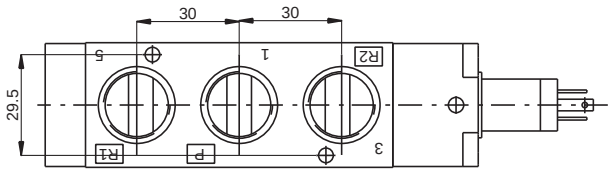
SPECIFICATIONS :	
Series	ILV-524
Port Size	3/8" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	50 mm
Applicable Cylinder Bore Size	Ø125 to Ø160
Max Cylinder Speed	750 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	350 gms.

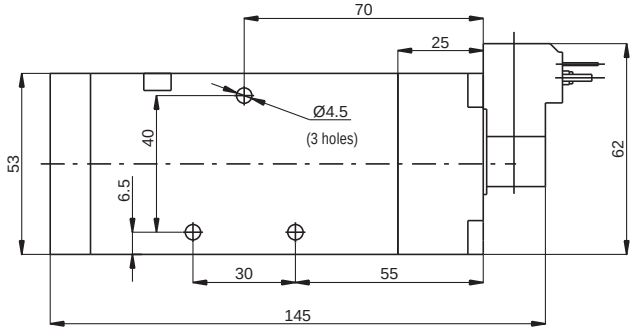
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	Spool	Aluminum
4	Flat Seal - 1	Nitrile Rubber
5	Flat Seal - 2	Nitrile Rubber
6	Piston	Acetar Resin
7	Piston 'O' Ring	Nitrile Rubber
8	Solenoid Coil	Std.

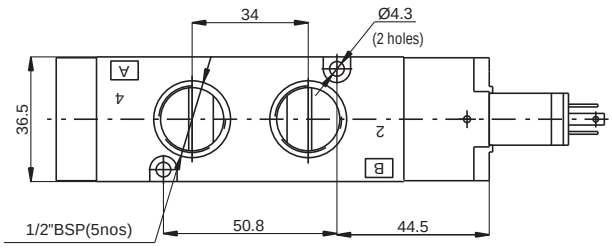
5 PORT 2 POSITION IN LINE SINGLE SOLENOID VALVE : 1/2" BSP







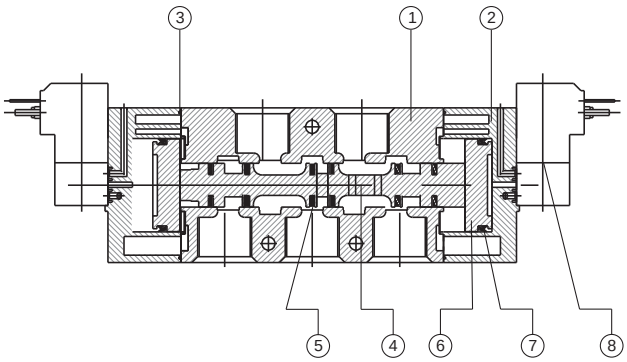


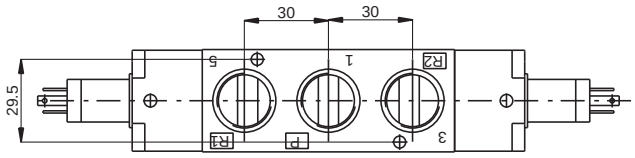


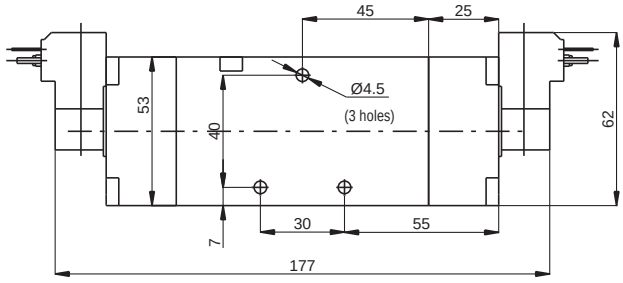
SPECIFICATIONS :	
Series	ILV-524
Port Size	1/2" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	65 mm
Applicable Cylinder Bore Size	Ø160 to Ø250
Max Cylinder Speed	500 mm/sec
Max Working Pressure	10 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	590 gms

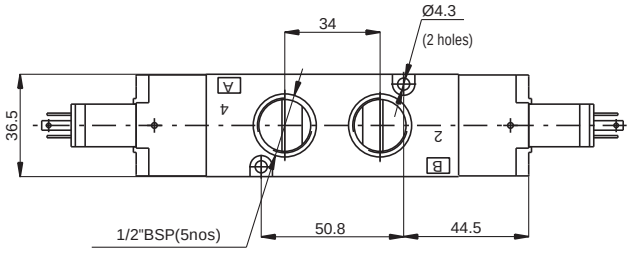
MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	End Cover	P.P.S (Plastic)
4	Profile 'O' Ring	Nitrile Rubber
5	Spool	Aluminum
6	Flat Seal - 1	Nitrile Rubber
7	Piston	Acetar Resin
8	Piston 'O' Ring	Nitrile Rubber
9	Spring	Spring Steel
10	Solenoid Coil	Std.

5 PORT 2 POSITION IN LINE DOUBLE SOLENOID VALVE : 1/2" BSP





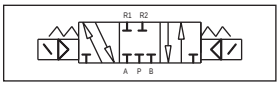




SPECIFICATIONS :	
Series	ILV-524
Port Size	1/2" BSP
Operation	Spool Type, Solenoid Operated.
Function	5/2 (5 Port 2 Position)
Medium	Compressed, Filtered Air
Min Working Pressure	1.5 bar
Response Time	35 ms or Less
Effective Sectional Area	65 mm
Applicable Cylinder Bore Size	Ø160 to Ø250 Dia
Max Cylinder Speed	500 mm/sec
Max Working Pressure	8 bar
Operating Temp.	5 to 60°c
Lubrication	Not Required
Manual Override	Push Button (In Built Coil)
Coil Insulation	Class - F
Voltage	Ac : 220v or 110v / Dc: 24v
Power Consumption	Ac : 3VA / DC : 2.5w
Permissible Voltage Variation	±10 % of Rated Voltage
Protection Structure	Dust Proof
Mounting	Top / Side
Vibration / Impact	60m/s^2 or Less / 320m/s^2 or Less
Weight	720 gms.

MATERIAL IDENTIFICATION:		
S.NO.	DESCRIPTION	MATERIAL
1	Valve Body	Aluminum
2	Piston Housing	P.P.S (Plastic)
3	Profile 'O' Ring	Nitrile Rubber
4	Spool	Aluminum
5	Flat Seal - 1	Nitrile Rubber
6	Piston	Acetar Resin
7	Piston 'O' Ring	Nitrile Rubber
8	Solenoid Coil	Std.

3 POSITION SOLENOID TYPE :



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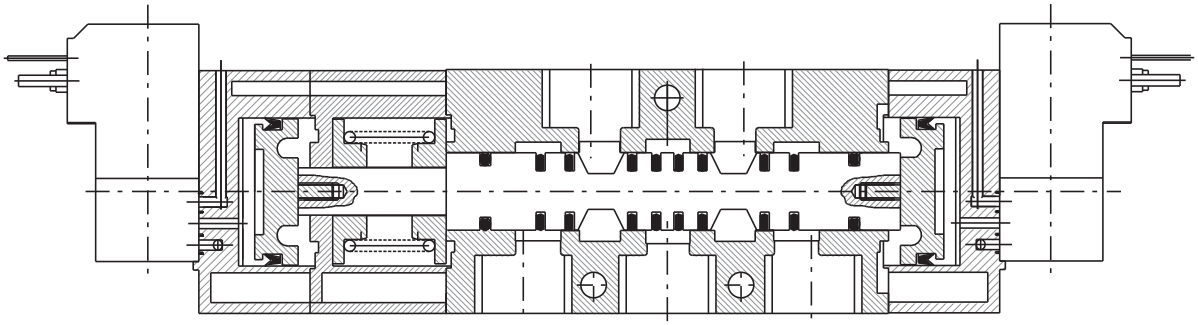

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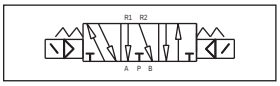
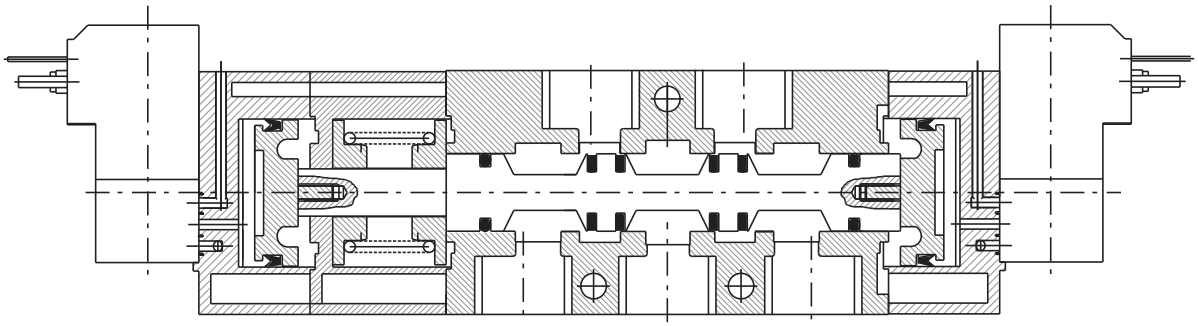
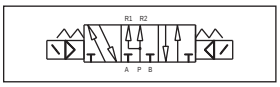
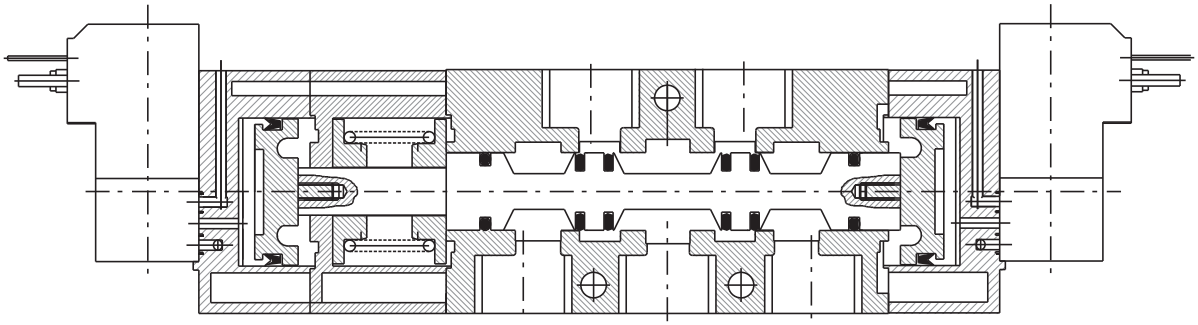


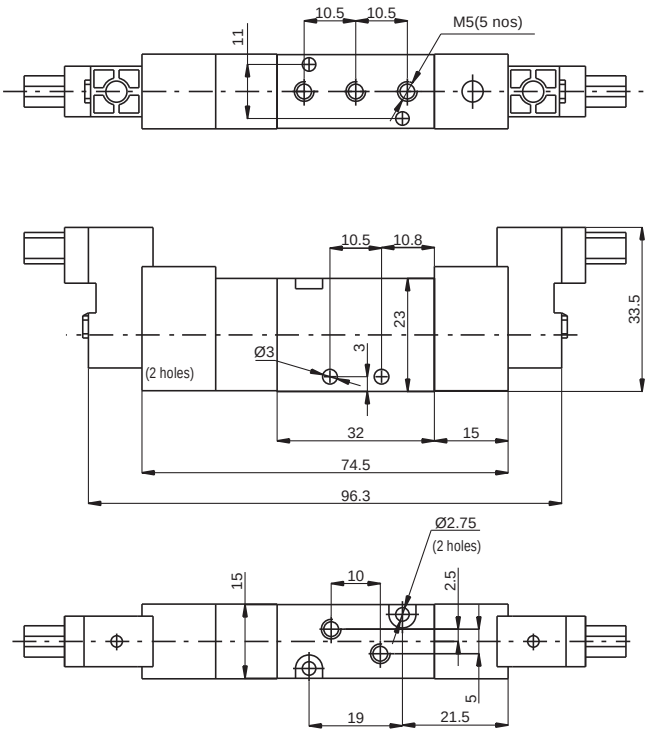


3. PRESSURE CENTER.

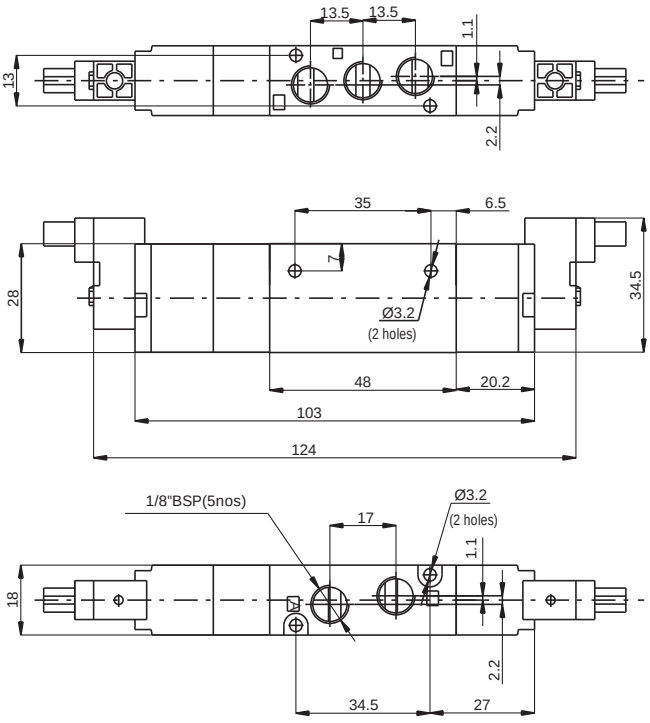




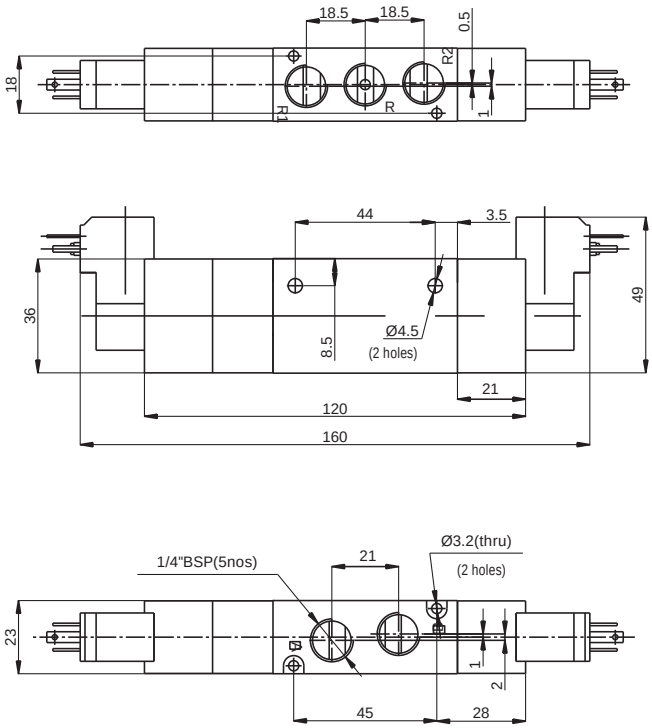
5 PORT 3 POSITION IN LINE DOUBLE SOLENOID VALVE : M5



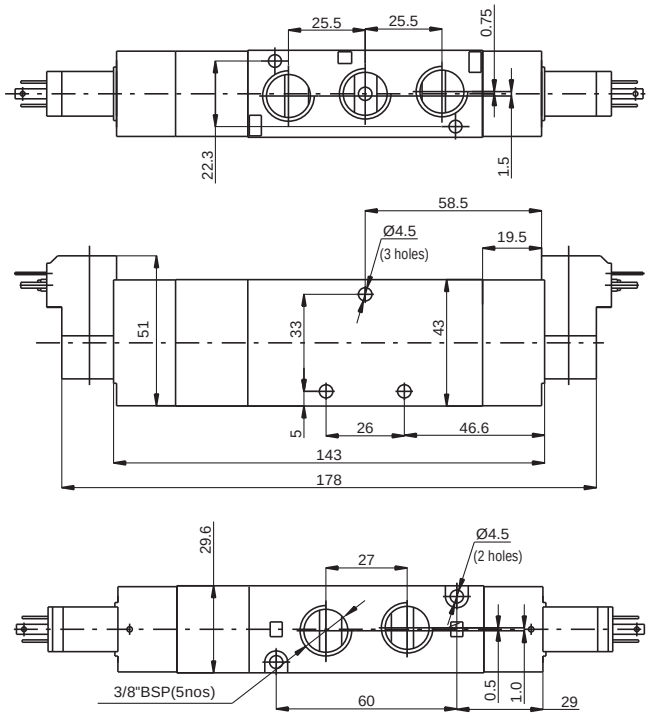
5 PORT 3 POSITION IN LINE DOUBLE SOLENOID VALVE : 1/8” BSP



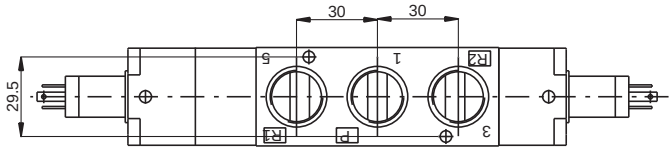
5 PORT 3 POSITION IN LINE DOUBLE SOLENOID VALVE : 1/4” BSP

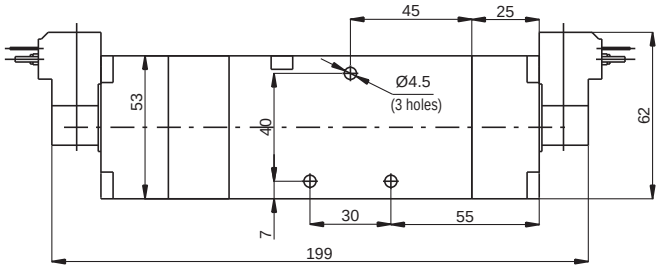


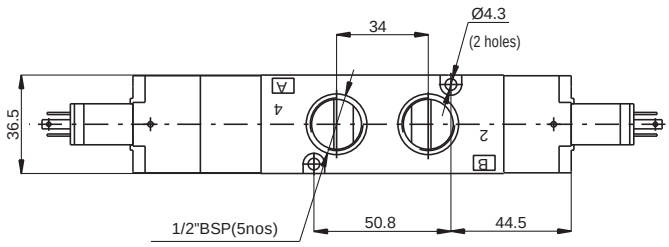
5 PORT 3 POSITION IN LINE DOUBLE SOLENOID VALVE : 3/8” BSP



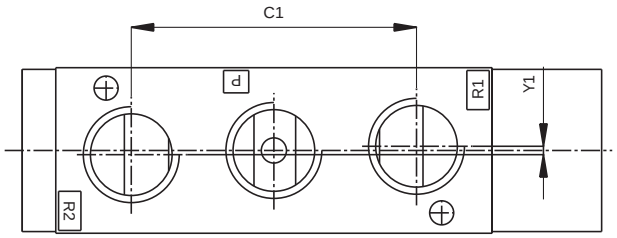
5 PORT 3 POSITION IN LINE DOUBLE SOLENOID VALVE : ½" BSP

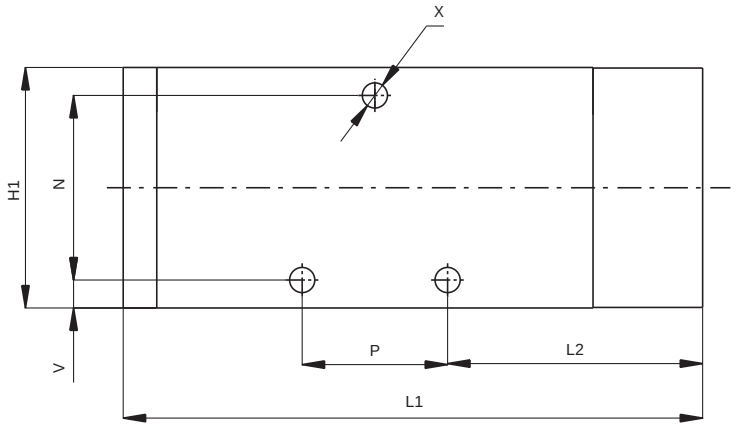


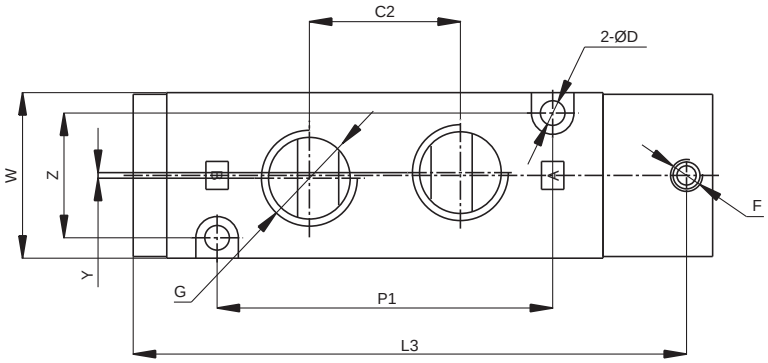




5 PORT 2 POSITION IN LINE SINGLE AIR PILOT VALVE

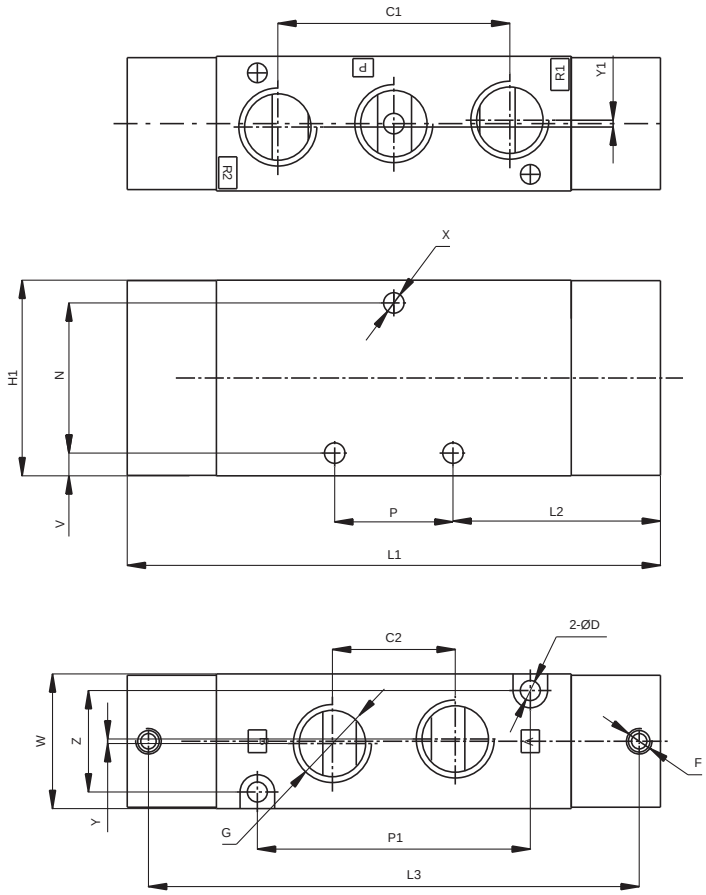




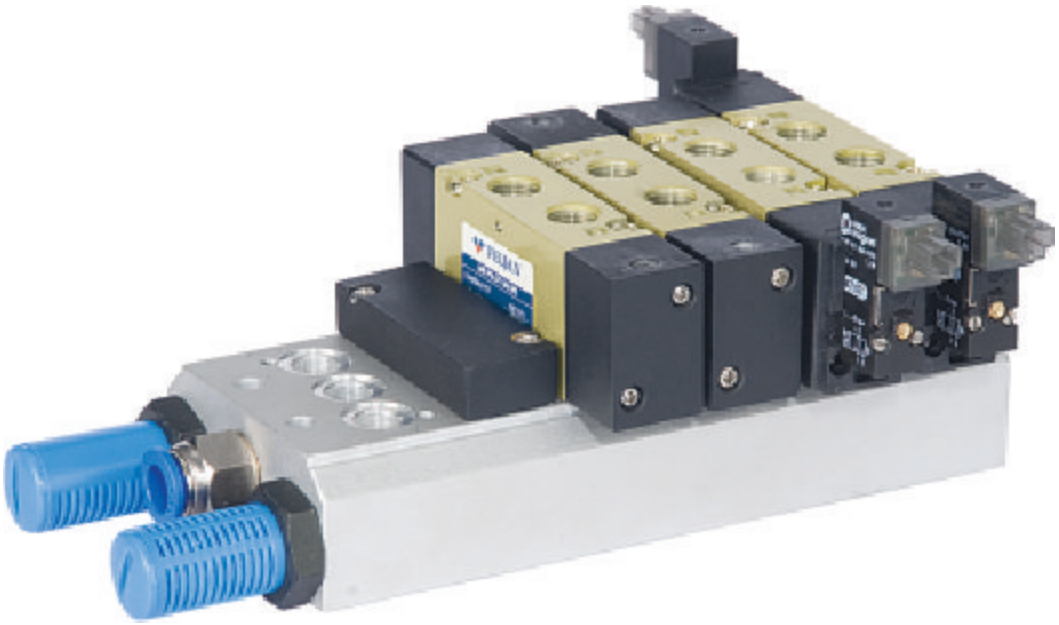


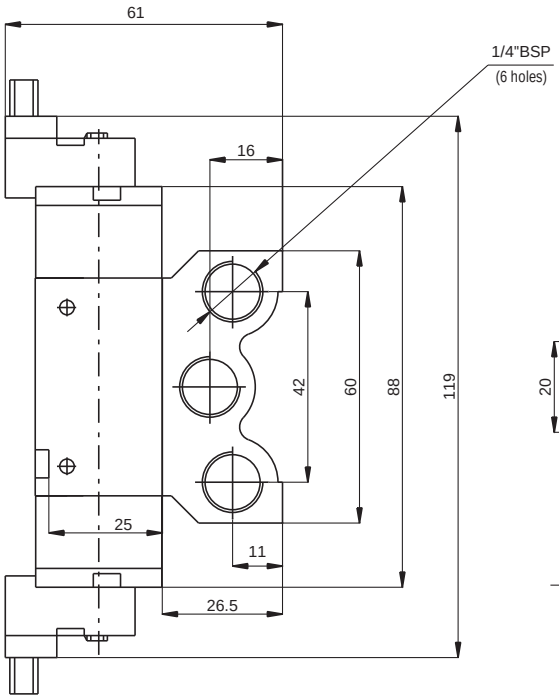
PORT SIZE BSP	C1	C2	Ø D	F	G	H1	L1	L2	L3	N	P	P1	V	W	X	Y	Y1	Z
M5	21	10	2.75	M5	M5-5nos	23	57	25.7	53.5	–	10.5	19	3	15	Ø3 2nos	5	–	11
1/8"	27	17	3.2	M5	1/8"BSP-5nos	28	77	22.85	72.5	–	35	34.5	21	18	Ø3.2 2nos	2.2	2.2	13
1/4"	37	21	3.2	M5	1/4"BSP-5nos	36	88	31	81	–	44	45	27.5	23	Ø4.5 2nos	2	1	18
3/8"	51	27	4.5	M5	3/8"BSP-5nos	43	111	53	104	33	26	60	5	29.6	Ø4.5 3nos	1	1.5	22.3
1/2"	60	34	4.5	1/8" BSP	1/2"BSP-5nos	53	133.3	61.5	125.8	40	30	50.8	6.5	36.5	Ø4.5 3nos	–	–	29.5

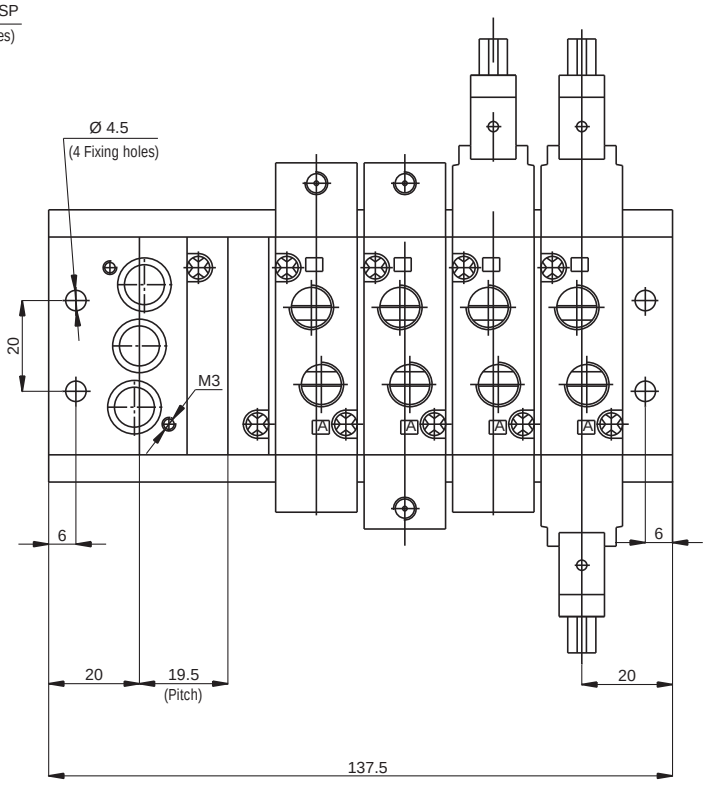
5 PORT 2 POSITION IN LINE DOUBLE AIR PILOT VALVE

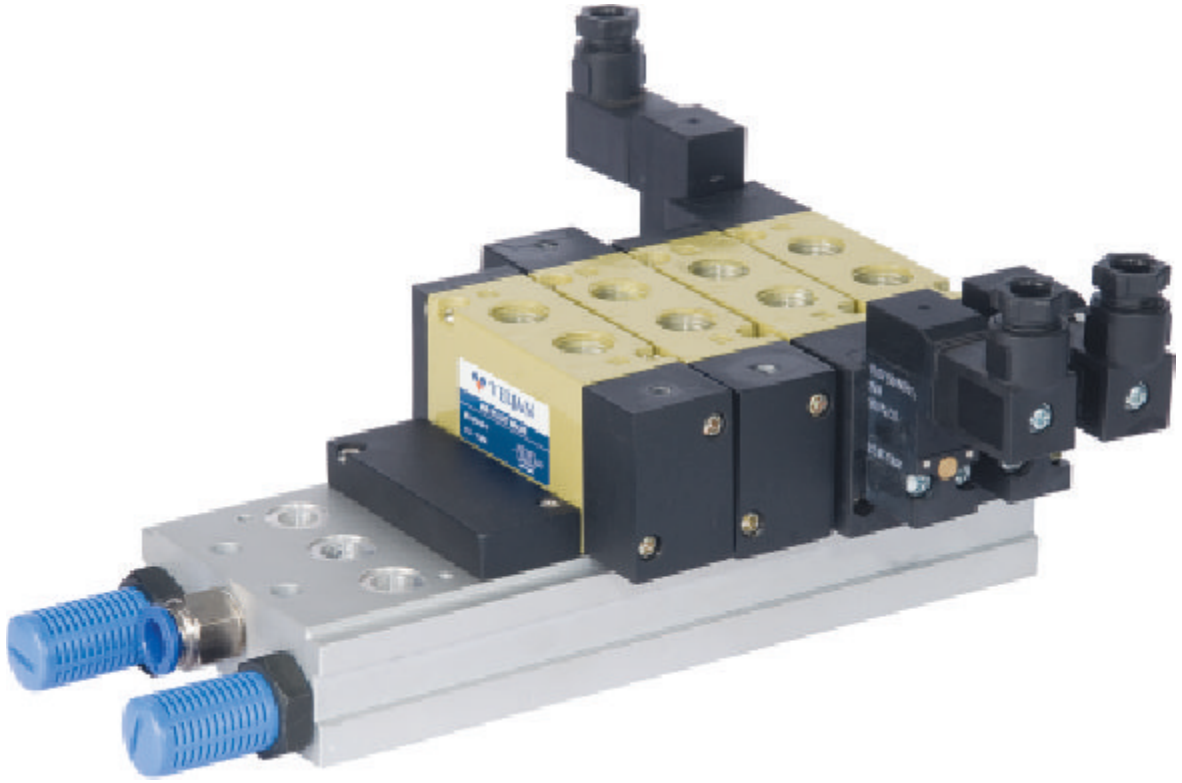


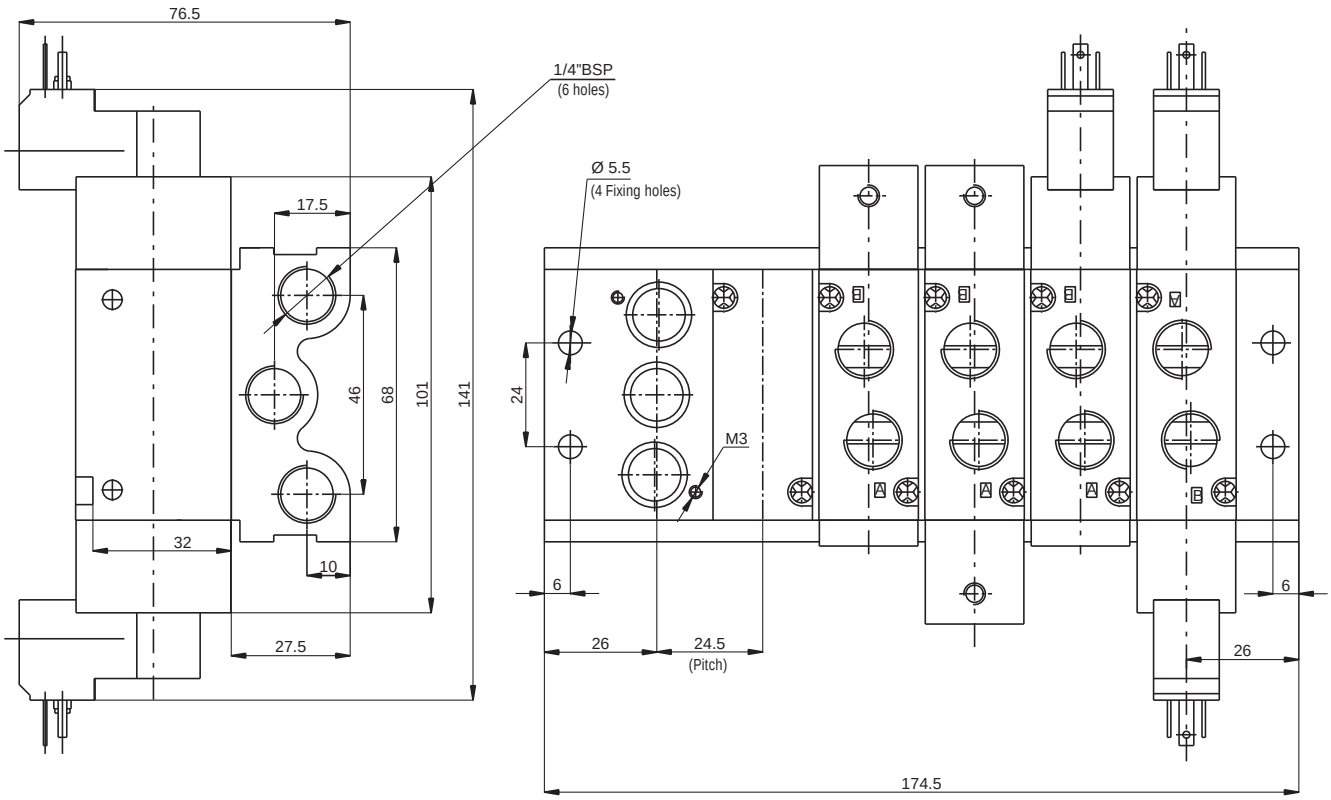
PORT SIZE BSP	C1	C2	ØD	F	G	H1	L1		L2	L3		N	P	P1	V	W	X	Y	Y1	Z
							2posi	3posi		2posi	3posi									
M5	21	10	2.75	M5	M5-5nos	23	62	74.5	25.7	55	67.5	–	10.5	19	3	15	Ø3 2nos	5	–	11
1/8"	27	17	3.2	M5	1/8"BSP-5nos	28	81	95	22.85	72	86	–	35	34.5	21	18	Ø3.2 2nos	2.2	2.2	13
1/4"	37	21	3.2	M5	1/4"BSP-5nos	36	106	125	31	92	111	–	44	45	27.5	23	Ø4.5 2nos	2	1	18
3/8"	51	27	4.5	M5	3/8"BSP-5nos	43	132	156	53	118	142	33	26	60	5	29.6	Ø4.5 3nos	1	1.5	22.3
1/2"	60	34	4.5	1/8" BSP	1/2"BSP-5nos	53	153	175.5	61.5	138	160.5	40	30	50.8	6.5	36.5	Ø4.5 3nos	–	–	29.5




61
1/4"BSP
(6 holes)
16
42
60
88
119
25
11
26.5


Ø 4.5
(4 Fixing holes)
20
M3
6
6
20
19.5
(Pitch)
20
137.5




76.5
1/4"BSP
(6 holes)
Ø 5.5
(4 Fixing holes)
17.5
46
68
101
141
24
M3
32
10
27.5
6
26
24.5
(Pitch)
6
26
174.5