



Directional control valves

Series Viking

P2L-A, G1/8

P2L-B, G1/4

P2L-D, G1/2

Catalogue 9127007722GB-ul



Summary

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Important !

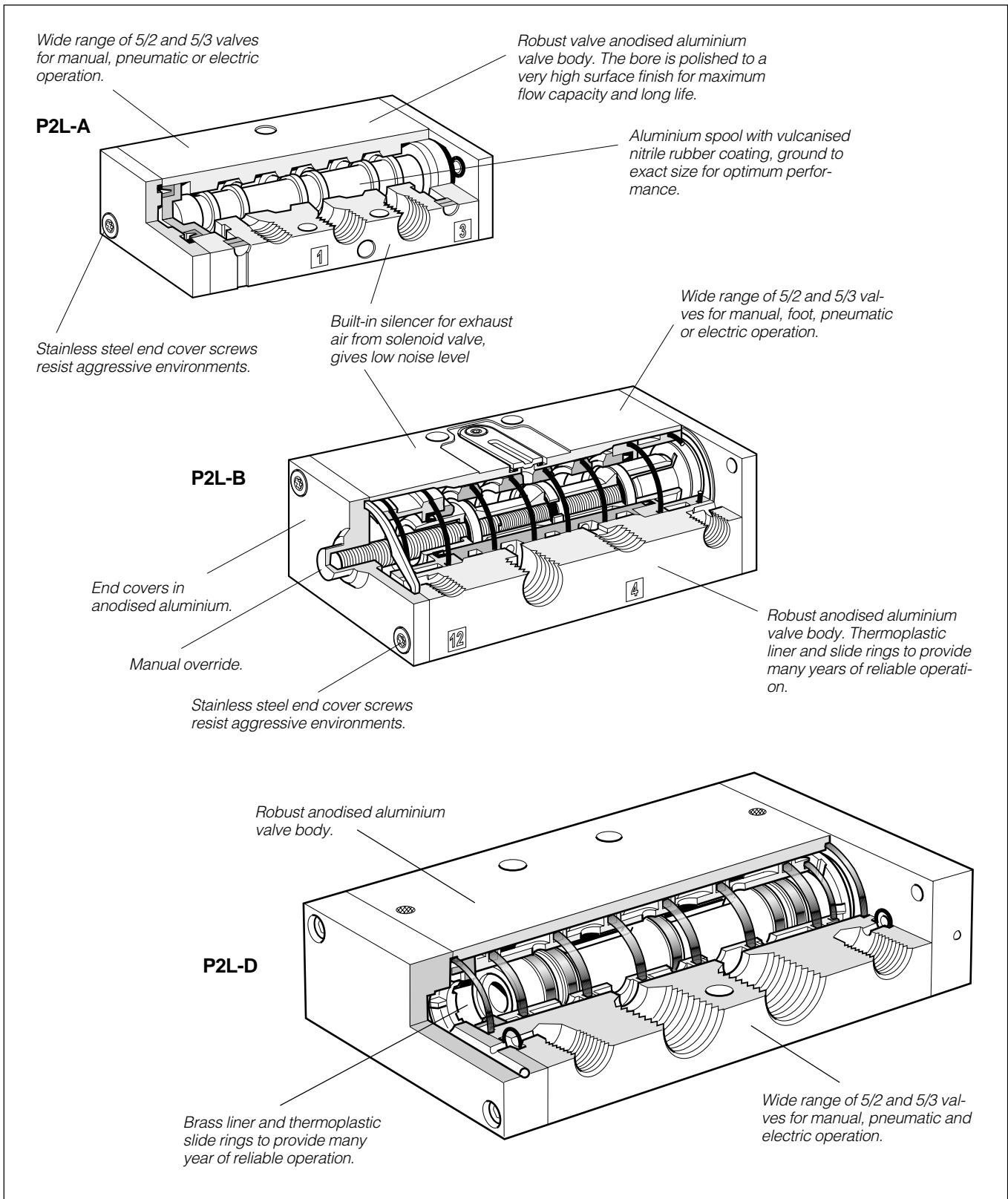
Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.



NB !

All technical data in this catalogue is typical only.

The air quality is decisive for the valve life: see ISO 8573.



Viking valve range

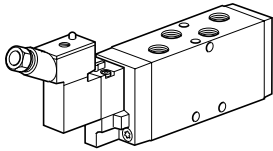
P2L-A, dimension G1/8, P2L-B, dimension G1/4, P2L-D, dimension G1/2

The Viking valve range is robust, versatile and combines high performance with compact installation dimensions. Large flow capacity, short change-over times and low change-over pressure are important characteristics of this valve range.

The P2L-A, P2L-B and P2L-D have a wide range of hand, foot, pneumatic and electrically operated valves in both 5/2 and 5/3 configurations.

The Viking range is available in both standard and low temperature variants.

Compact installation dimensions - flexible installation

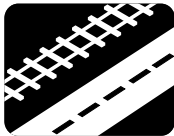


Compact external dimensions, direct body porting and integral mounting holes are all features of the Viking range. In addition to simple single installation, the Viking range may be installed in very compact blocks.

Rust and corrosion resistant designs.

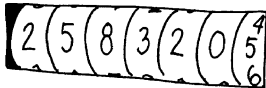
Viking valves are made entirely of anodized aluminium, for good corrosion resistance. The smooth design, with no dirt-collecting pockets, makes the valve suitable for most environments, including applications with stringent hygiene requirements. The valve has stainless steel fixing screws for the end covers, to withstand aggressive environments.

Mobile applications



A robust anodised aluminium valve housing, standard and low-temperature variants, hand lever with built-in catch for reliable retention in position, variants designed for a special NO (normally open) mobile solenoid valve, and several varieties of special mobile (NC) solenoid valves make the valve an excellent choice in applications for mobile use.

High reliability



Valves easily comply with the requirements for component reliability in accordance with the EU Machinery Directive standards EN292-2 and N983.

In the P2L-A: few moving parts combined with short spool movement give a valve with high reliability and long service life. It is designed for use with, or without supplementary lubrication.

In the P2L-B and P2L-D: high molecular weight plastics with self-lubricating properties make it suitable for use with, or without supplementary lubrication. The design principles also guarantee many years of reliable operation.

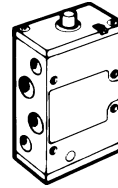
Simple maintenance

All Viking valves have reliable function and long service life.

Size A and B have a low price, there is no reason to repair them, so spare parts = new valve.

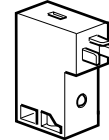
For size D repair sets are available, see page 51.

Manual change-over - indication on the P2L-B



Commission and service is facilitated by the generously sized, ergonomically designed buttons for manual operation on the P2L-B valve range, which are a standard feature. These make it very easy to see the valve slide position during fault finding.

A wide range of solenoid valves

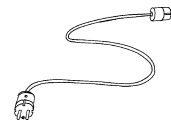


A number of different variants of our solenoid valves P2E with 15 mm wide and DIN 43650 form C cable head are available to suit just about any application. The valve has small installation dimensions, low energy consumption, large flow diameter, large flow capacity, a robust valve body, high reliability and long service life. With or without manual change-over, with long or short arm, spring biased or indexing. Read more in the P2E chapter on page 44.

Low noise level

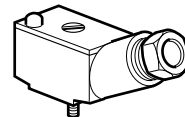
The exhaust air from the pilot valves is exhausted through a silencer located in the end cover or body, to give the lowest possible noise level. This is particularly important for industries where low noise levels are required. The silencers make it possible for the valves to comply with the EU Machinery Directive, Noise 1.5.8.

High electrical encapsulation class



The solenoid valves are protection class IP65 with the standard cable plug. The cable plug with reinforced protection raises the protection standard to IP67.

Several types of cable plugs



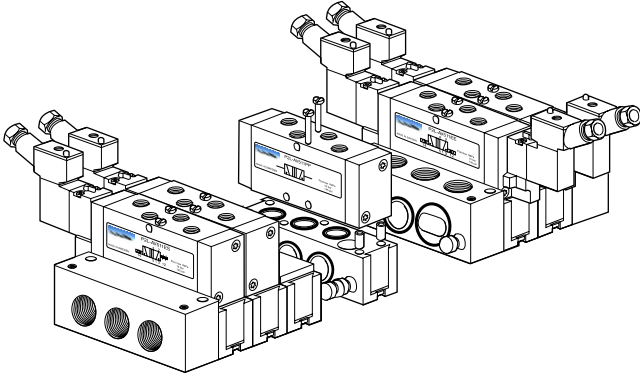
With or without suppression, LED and rectifier. For connection to your own cables or with moulded cable. A large selection allows you to choose cables to meet your requirements.

Insensitive to dirty air



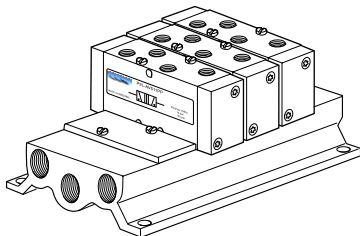
Thanks to large flow passage areas and the large flow diameter of 1.0 in the pilot valves, the P2L-A, P2L-B and P2L-D can be used in normal industrial or mobile environments without any problems of blocking. However the service life of the valve depends on the cleanliness of the air. Please refer to ISO 8573.

Flexible multiple installation



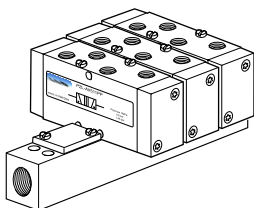
There is a system of multiple installation plates, intermediate blocks and several variants of connectors for the P2L-A. Several variants of connectors are available, which permit connection from above, beneath, straight from the side or in the middle of a valve block. Using the type L manifold, valve blocks may be constructed for supplying several different pressures.

Manifold bar installation



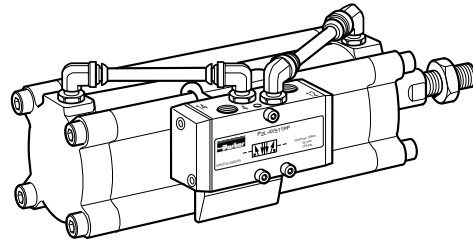
A manifold bar, with common ducts for ports 1, 3 and 5 gives simple, time saving and easily serviced installation. Manifold bars are available in several different sizes, with space for between 2 and 14 valves. They are designed for simple handling and are entirely serviced from the front. For P2L-D the valves are mounted from the rear.

Pressure bar installation



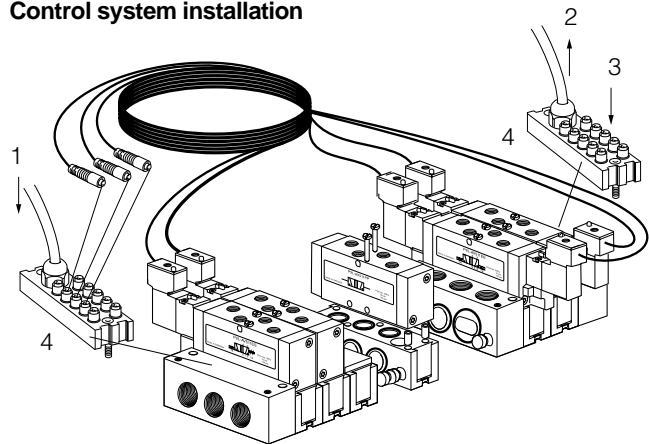
A pressure bar for common primary air supply gives a simple, robust, time saving and easily serviced installation. When pressure bars are used, restrictor-silencers can be installed in the exhaust ports of each valve, for individual adjustment of cylinder/air motor speed. Pressure bars are available in a number of different sizes, with space ranging from 2 to 10 valves.

Cylinder installation



Ready-made attachments for the Viking valve range are available for installation on the profile tube in the P1K and P1C cylinder ranges. This permits quick and simple installation, with valve location in the best possible position, using the shortest possible pipe lengths between the valve and the cylinder ports. The cylinders are also sold with Viking valves already installed as standard. Please check the appropriate cylinder catalogue for further information.






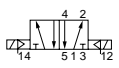
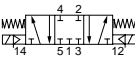
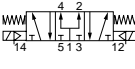
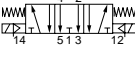






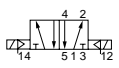
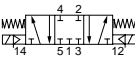
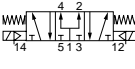
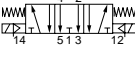






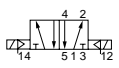
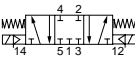
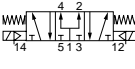
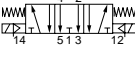

Control system installation



- 1 Output signals from the control system
- 2 Input signals to the control system
- 3 Sensor signals to Valvetronic
- 4 Valvetronic 110

P2L-A, P2L-B and P2L-D products in combination with Valvetronic products offer easily understood and simple electrical installation, with a high protection class. See Valvetronic products on page 49.

Order key

P 2 L -	A	V	5	1 1	E E	6	C	Q																																																	
<table border="1"> <tr><th colspan="2">Valve family</th></tr> <tr><td>P2L</td><td>Inline valves</td></tr> </table>		Valve family		P2L	Inline valves	<table border="1"> <tr><th colspan="2">Size</th></tr> <tr><td>A</td><td>1/8</td></tr> <tr><td>B</td><td>1/4</td></tr> <tr><td>D</td><td>1/2</td></tr> </table>		Size		A	1/8	B	1/4	D	1/2	<table border="1"> <tr><th colspan="2">Port thread</th></tr> <tr><td>11</td><td>G1/8</td></tr> <tr><td>12</td><td>G1/4</td></tr> <tr><td>14</td><td>G1/2</td></tr> </table>		Port thread		11	G1/8	12	G1/4	14	G1/2	<table border="1"> <tr><th colspan="2">Type of current</th></tr> <tr><td></td><td>No solenoid valve</td></tr> <tr><td>6</td><td>AC/DC</td></tr> </table>		Type of current			No solenoid valve	6	AC/DC	<table border="1"> <tr><th colspan="2">Voltage</th></tr> <tr><td></td><td>No solenoid valve</td></tr> <tr><td>C</td><td>24 V</td></tr> </table>		Voltage			No solenoid valve	C	24 V																
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<p>Possible combinations See pages 12 to 37</p>																																																									

Flow characteristics

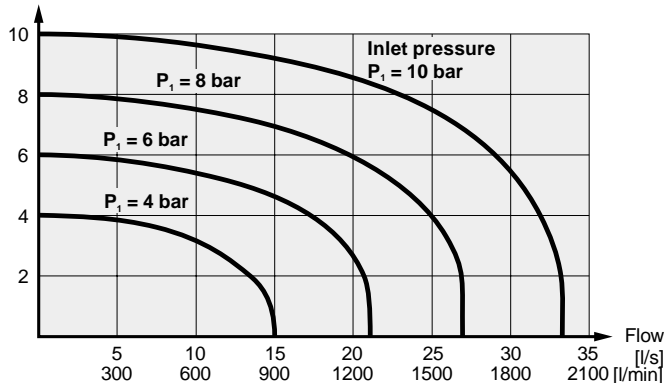
Flow capacities in accordance with ISO6358.

All pressures = effective pressure

The curves in the diagram below are typical only.

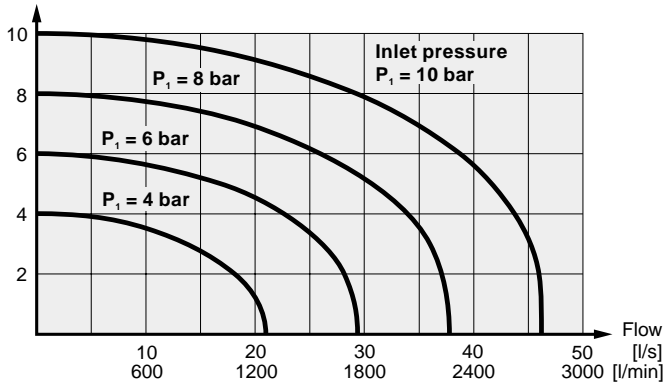
P2L-A

Outlet pressure P_2 [bar]



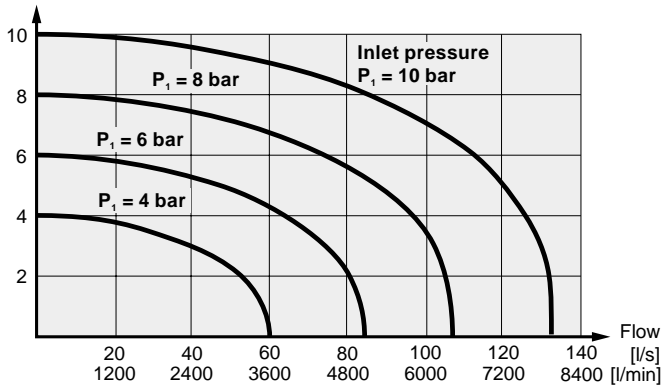
P2L-B

Outlet pressure P_2 [bar]



P2L-D

Outlet pressure P_2 [bar]



Technical data

P2L-A

Dimension

G1/8

Operating pressure, max

10 bar * Also see the frame "Operating pressure" in the bottom of page .

Operating temperature range for directional control valves

standard temp. version -20 to +70 °C

low temp. version -40 to +30 °C

Operating temperature range for P2E solenoid valves

standard and food version -15 to +60 °C

mobile version -40 to +70 °C

Flow (acc. to ISO 6358)

$C=3,0 \text{ NI/s} \times \text{bar}$

$b=0,3$

$Q_n=12,7 \text{ l/s}$

$Q_{max}=21,0 \text{ l/s}$

$C_v=0,76$

P2L-B

Dimension

G1/4

Operating pressure, max

10 bar* Also see the frame "Operating pressure" in the bottom of page.

Operating temperature range for directional control valves

standard temp. version -20 to +70 °C

low temp. version -40 to +30 °C

Operating temperature range for P2E solenoid valves

standard and food version -15 to +60 °C

mobile version -40 to +70 °C

Flow (acc. to ISO 6358)

$C=4,2 \text{ NI/s} \times \text{bar}$

$b=0,2$

$Q_n=17,0 \text{ l/s}$

$Q_{max}=29,4 \text{ l/s}$

$C_v=1,0$

P2L-D

Dimension

G1/2

Operating pressure, max

10 bar* Also see the frame "Operating pressure" in the bottom of page .

Operating temperature range for directional control valves

standard temp. version 0 to +70 °C

low temp. version -30 to +30 °C

Operating temperature range for P2E solenoid valves

standard and food version -15 to +60 °C

mobile version -40 to +70 °C

Flow (acc. to ISO 6358)

$C=12 \text{ NI/s} \times \text{bar}$

$b=0,2$

$Q_n=48,0 \text{ l/s}$

$Q_{max}=84,0 \text{ l/s}$

$C_v=2,9$

* Operating pressure

From vacuum up to 10 bar connectable in all ports

This is valid with following exceptions:

Electrically actuated valves

- If supply pressure is connected to any other port than port 1 [port 1 also provides supply pressure to solenoid(s)] or if the air supply pressure is lower than minimum signal pressure it is necessary to use valves with external air supply to solenoid(s)

All valves with Air-spring return

- The supply pressure has to be connected to port 1 (port 1 also provides supply pressure for the Air-spring) and it has to be at least 5,0 bar to get a reliable function.

Material specification

P2L-A

Valve

Valve body	Anodised aluminium
End covers	Anodised aluminium or Reinforced thermoplastic
Lever housing	Acetal plastic
Spool	Aluminium + nitrile rubber
Piston	Acetal plastic/ Anodised aluminium
U-rings, O-rings	Nitrile rubber
End cover sealings	Nitrile rubber
End cover screws	Stainless steel
Springs	Dacromet® - processed steel, Stainless steel
Lever	Reinforced polyamid plastic
Panel mounting nut	Polycarbonate plastic
Gaiter	Chloroprene rubber
Mounting screws for solenoid	Stainless steel

Accessories

Manifold bar	Anodised aluminium
Pressure bar	Anodised aluminium
Multiple manifolds	Anodised aluminium
End and intermediate blocks	Anodised aluminium

P2L-B

Valve

Valve body	Anodised aluminium
Spool	Acetal plastic/ Anodised aluminium
Piston	Acetal plastic /Anodised aluminium
Lining	Reinforced thermoplastic
End covers	Anodised aluminium
Sliding seals	Thermoplastic
U-rings, O-rings	Nitrile rubber
End cover sealings	Nitrile rubber
Push button for manual changeover	Acetal plastic
End cover screws	Stainless steel
Springs	Stainless steel
Lever	Zinc-plated steel
Catch for lever	Stainless steel
Knob	Phenolic plastic/Anodised aluminium
Gaiter	Chloroprene rubber
Foot pedal	Aluminium
Mounting screws for solenoid	Zinc-plated steel

Accessories

Manifold bar	Anodised aluminium
Pressure bar	Anodised aluminium

P2L-D

Valve

Valve body	Anodised aluminium
Spool	Anodised aluminium
Piston	Brass
Lining	Brass
End covers	Anodised aluminium
Sliding seals	Thermoplastic
U-rings, O-rings	Nitrile rubber
End cover sealings	Nitrile rubber
End cover screws	Stainless steel
Springs	Stainless steel
Lever	Stainless steel
Catch for lever	Zinc-plated steel
Knob	Thermoplastic
Gaiter	Nitrile rubber
Distance ring	Thermoplastic
Mounting screws for solenoid	Zinc-plated steel

Accessories

Manifold bar	Anodised aluminium
Pressure bar	Anodised aluminium

Guide for selecting suitable tubing

The selection of the correct size of piping is often based on experience, with no great thought to optimizing energy efficiency and cylinder velocity. This is usually acceptable, but making a rough calculation can result in worthwhile economic gains.

The following is the basic principle:

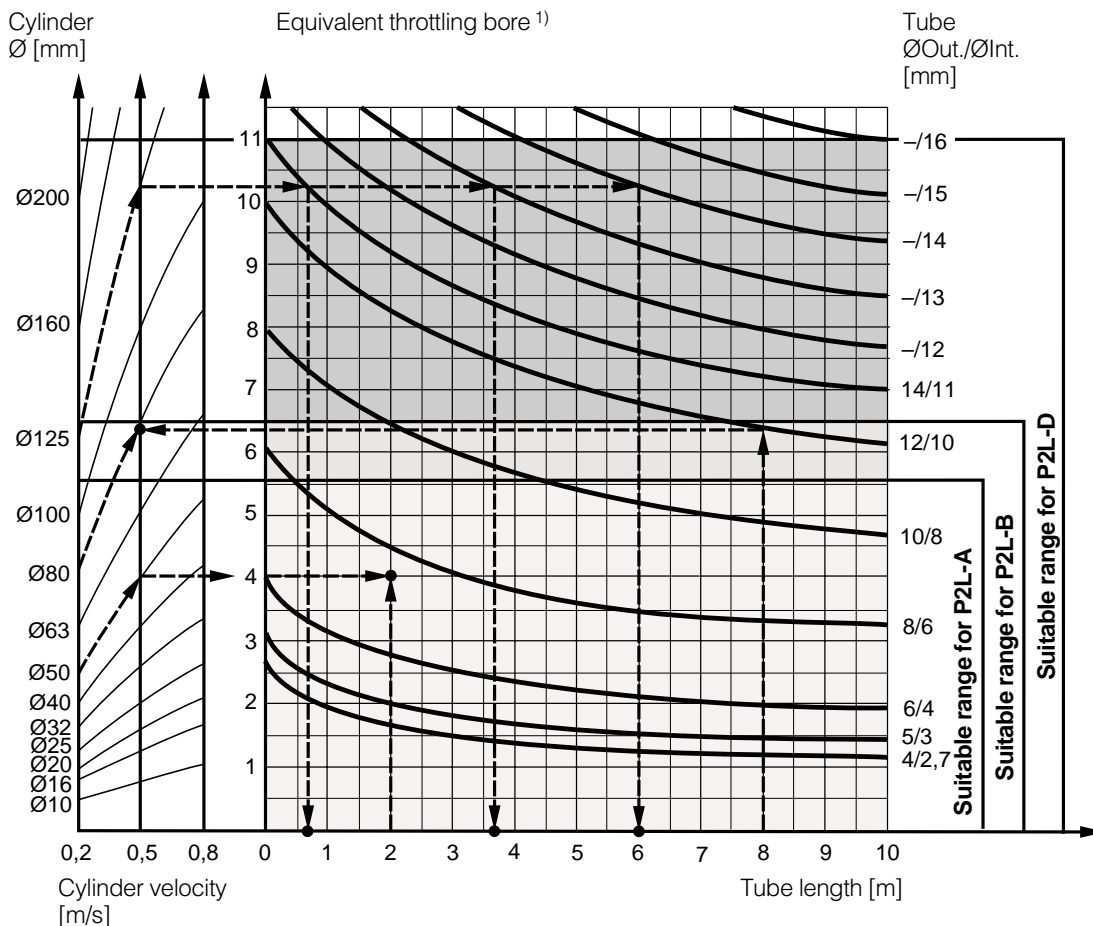
1. The primary line to the working valve could be over sized (this does not cause any extra air consumption and consequently does not create any extra costs in operation).
2. The pipes between the valve and the cylinder should, however, be optimized according to the principle that an insufficient bore throttles the flow and thus limits the cylinder speed, while an oversized pipe creates a dead volume which increases the air consumption and filling time.

The chart below is intended to help when selecting the correct size of pipe to use between the P2L-A valve and the cylinder.

The following prerequisites apply:

The *cylinder load* should be about 50% of the theoretical force (= normal load). A lower load gives a higher velocity and vice versa. The pipe size is selected as a function of the *cylinder bore*, the desired *cylinder velocity* and the *tube length* between the valve and the cylinder.

In the cases where you want to utilize the high flow capacity of the P2L-A valve to the maximum, you should select the tubing so that it at least corresponds to a restriction of 5.6 mm. This means a short tube should have a bore of at least 5.6 mm, which gives 8/6 tubing. For a longer tube you should select 10/8 or 12/9 tubing as shown in the diagram below (can be suitably mounted via a reduction in an 8 mm fitting). You should select straight push-in fittings to give the highest flow (a banjo fitting can cause a certain throttling). In the P2L-B, the corresponding value for the equivalent restriction is $\varnothing 6.5$. Short pipes should be made from 10/8 tubing and longer pipes should be made from 14/11 tubing.



1) The "equivalent throttling bore" is a long throttle (for example a tube) or a series of throttles (for example, through a valve) converted to a short throttle which gives a corresponding flow rate. This should not be confused with the "orifice" which is sometimes specified for valves. The value for the orifice does not normally take account of the fact that the valve contains a number of throttles.

Example 1 : Which pipe diameter should be used?

A 50 mm bore cylinder is to be operated at 0.5 m/s. The tube length between the valve and cylinder is 2 m. In the diagram we follow the line from 50 mm bore to 0.5 m/s and get an "equivalent throttling bore" of approximately 4 mm. We continue out to the right in the chart and intersect the line for a 2 m tube between the curves for 4 mm (6/4 tube) and 6 mm(8/6 tube). This means that a 6/4 tube throttles the velocity somewhat, while an 8/6 tube is a little too large. We select the 8/6 tube to obtain full cylinder velocity.

Example 2: What cylinder velocity will be obtained?

A Ø80 cylinder will be used, connected by 8 m 12/10 pipe to a P2L-B valve. What cylinder velocity will we get? We refer to the diagram and follow the line from 8 mm pipe length up to the curve for 12/10 pipe. From there, we go horizontally to the curve for the Ø80 cylinder. We find that the velocity will be about 0.5 m/s.

Example 3: What is the minimum inner diameter and maximum length of tube?

For an application a cylinder Ø125 will be used. Maximum velocity of piston rod is 0.5 m/s. Cylinder will be controlled by a P2L-D valve. What diameter of tube can be used and what is maximum length of tube.

We refer to the diagram. We start at the left side of the diagram cylinder Ø125. We follow the line until the intersection with the velocity line of 0.5 m/s. From here we draw a horizontal line in the diagram. This line shows us we need an equivalent throttling bore of approximately 10 mm. Following this line horizontally we cross a few intersections. These intersections show us the minimum inner diameter (rightside diagram) in combination with the maximum length of tube (bottomside diagram).



















For example:

Intersection one: When a tube (14/11) will be used, the maximum length of tube is 0.7 meter.

Intersection two: When a tube (—/13) will be used, the maximum length of tube is 3.7 meter.

Intersection three: When a tube (—/14) will be used, the maximum length of tube is 6 meter.

Main data directional control valves

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code	
5/2 valves, standard temperature								
		G1/8	Air signal	Air signal	1,5/1,5	6/6	0,14	P2L-AV511PP
		G1/4			1,5/1,5	10/10	0,30	P2L-BV512PP
		G1/2			1,5/1,5	12/12	0,70	P2L-DV514PP
		G1/8	Air signal	Spring	3,2/-	8/18	0,15	P2L-AV511PS
		G1/4			3,5/-	15/25	0,32	P2L-BV512PS
		G1/2			3,5/-	10/15	0,70	P2L-DV514PS
		G1/8	Air signal	Air spring	3,2/-	8/15	0,15	P2L-AV511PD
		G1/2	Air signal Low pressure	Air signal	1,0/1,5	9/15	0,85	P2L-DV514QP
		G1/2	Air signal Low pressure	Spring	2,0/-	8/25	0,85	P2L-DV514QS
5/3 valves, standard temperature								
		G1/8	Air signal	Air signal	3,8/-	10/20	0,15	P2L-AV611PP
		G1/4	Closed centre	Self	3,5/-	15/25	0,33	P2L-BV612PP
		G1/2	position	centring	3,8/-	20/30	1,00	P2L-DV614PP
		G1/8	Air signal	Air signal	3,8/-	10/20	0,15	P2L-AV811PP
		G1/4	Vented centre	Self	3,5/-	15/25	0,33	P2L-BV812PP
		G1/2	position	centring	3,8/-	20/30	1,00	P2L-DV814PP
		G1/8	Air signal	Air signal	3,8/-	10/20	0,15	P2L-AV711PP
		G1/4	Pressurised	Self	3,5/-	15/25	0,33	P2L-BV712PP
		G1/2	centre position	centring	3,8/-	20/30	1,00	P2L-DV714PP
		G1/4	Air signal Press./Closed centre position	Air signal Self centring	3,8/- 3,5/-	15/25	0,33	P2L-BVE12PP

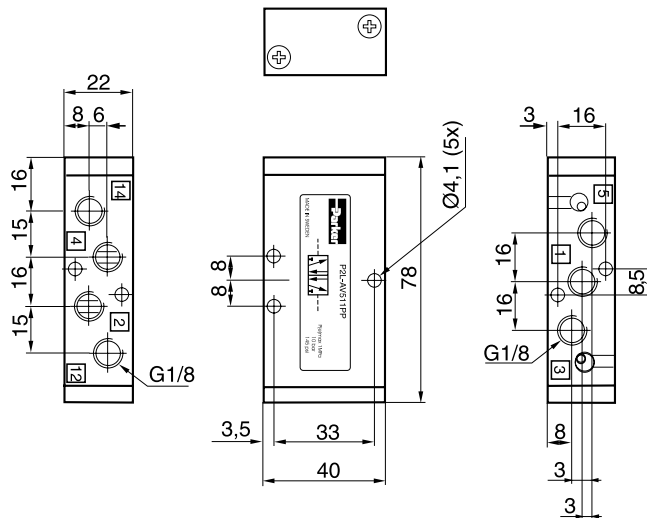
Accessories

See pages 38 to 43

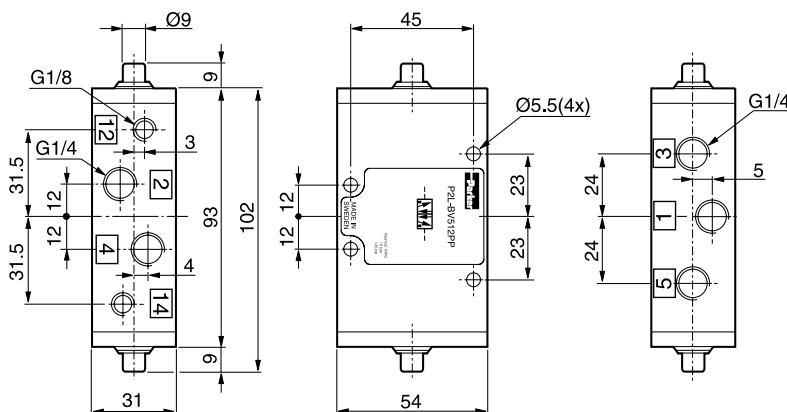
Dimensions

P2L-D dimensions see page 15

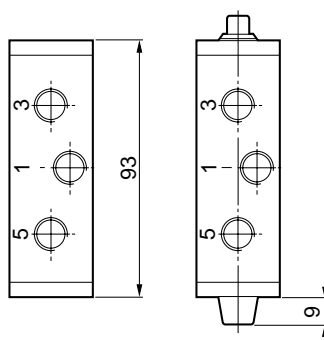
P2L-A... all
5/2 and 5/3 valves



P2L-BV512PP
P2L-BL512PP


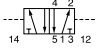



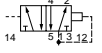

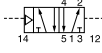

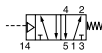



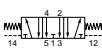



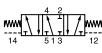


P2L-B... all 5/3 valves



P2L-BV512PS/PD
P2L-BL512PS/PD

Main data directional control valves

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code	
5/2 valves, low temperature								
		G1/8 G1/4 G1/2	Air signal Air signal Low temp.	Air signal Low temp.	1,5/1,5 1,5/1,5 1,5/1,5	6/6 10/10 12/12	0,14 0,30 0,70	P2L-AL511PP P2L-BL512PP P2L-DL514PP
		G1/8 G1/4 G1/2	Air signal Low temp.	Spring Low temp.	3,2/- 3,5/- 3,5/-	8/18 15/25 10/15	0,15 0,32 0,70	P2L-AL511PS P2L-BL512PS P2L-DL514PS
		G1/8	Air signal	Air spring Low temp.	3,2/-	8/15	0,15	P2L-AL511PD
		G1/2	Air signal Low pressure	Air signal Low temp.	1,0/1,5		0,85	P2L-DL514QP
		G1/2	Air signal Low pressure	Spring Low temp.	2,0/-		0,85	P2L-DL514QS
5/3 valves, low temperature								
		G1/4	Air signal Closed centre position	Air signal Self centring Low temp.	3,5/-	15/25	0,33	P2L-BL612PP
		G1/4	Air signal Vented centre position	Air signal Self centring Low temp.	3,5/-	15/25	0,33	P2L-BL812PP
		G1/4	Air signal Pressurised centre position	Air signal Self centring Low temp.	3,5/-	15/25	0,33	P2L-BL712PP
		G1/4	Air signal Press./Closed centre position	Air signal Self centring Low temp.	3,5/-	15/25	0,33	P2L-BLE12PP

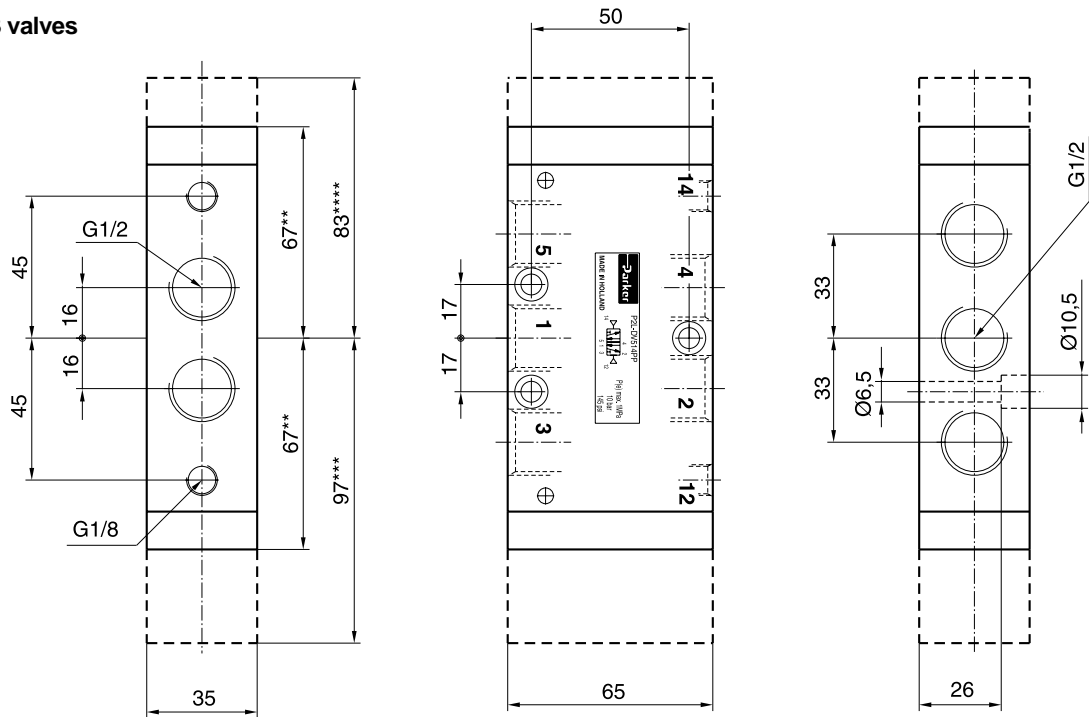
Accessories

See pages 38 to 43

Dimensions

P2L-A and P2L-B dimensions see page 13











P2L-D... all
5/2 and 5/3 valves



- * for P2L-D•514●●
- ** for P2L-D•514P● + all 5/3 valves
- *** for all 5/3 valves
- **** for P2L-D•514Q●

















Main data electrically actuated directional control valves for 24 V AC/DC

Complete with basic valve, solenoid(s) **P2E-KV32C1** and cable plug(s) **P8C-H36C**, LED+VDR+REC
Internal supply to solenoid valve(s) via port 1

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code	
5/2 valves, internal air, standard temperature								
		G1/8	Electric signal	Electric signal	1,5/1,5	10/10	0,27	P2L-AV511EE6CQ
		G1/4			1,5/1,5	22/22	0,42	P2L-BV512EE6CQ
		G1/2			1,5/1,5	40/40	0,81	P2L-DV514EE6CQ
		G1/8	Electric signal	Spring	3,2/-	12/30	0,22	P2L-AV511ES6CQ
		G1/4			3,5/-	15/25	0,38	P2L-BV512ES6CQ
		G1/2			3,7/-	25/65	0,76	P2L-DV514ES6CQ
5/3 valves, internal air, standard temperature								
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,28	P2L-AV611EE6CQ
		G1/4	Closed centre	Self	3,5/-	25/30	0,44	P2L-BV612EE6CQ
		G1/2	position	centring	4,0/-	90/90	1,11	P2L-DV614EE6CQ
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,28	P2L-AV811EE6CQ
		G1/4	Vented centre	Self	3,5/-	25/30	0,44	P2L-BV812EE6CQ
		G1/2	position	centring	4,0/-	90/90	1,11	P2L-DV814EE6CQ
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,28	P2L-AV711EE6CQ
		G1/4	Pressurised	Self	3,5/-	25/30	0,44	P2L-BV712EE6CQ
		G1/2	centre position	centring	4,0/-	90/90	1,11	P2L-DV714EE6CQ

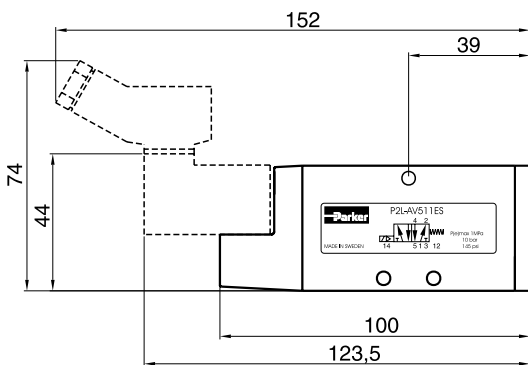
Main data electrically actuated directional control valves (supplied without solenoid valves)

Internal supply to solenoid valve(s) via port 1

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code	
5/2 valves, internal air, standard temperature								
		G1/8	Electric signal	Electric signal	1,5/1,5	10/10	0,16	P2L-AV511EE
		G1/4			1,5/1,5	22/22	0,31	P2L-BV512EE
		G1/2			1,5/1,5	40/40	0,70	P2L-DV514EE
		G1/8	Electric signal	Spring	3,2/-	12/30	0,16	P2L-AV511ES
		G1/4			3,5/-	15/25	0,32	P2L-BV512ES
		G1/2			3,7/-	25/65	0,70	P2L-DV514ES
		G1/8	Electric signal	Air signal	1,5/1,5	10/6	0,16	P2L-AV511EP
		G1/4			1,5/1,5	22/10	0,32	P2L-BV512EP
		G1/2			1,5/1,5	25/40	0,70	P2L-DV514EP
		G1/8	Electric signal	Air spring	3,2/-	15/25	0,16	P2L-AV511ED
5/3 valves, internal air, standard temperature								
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AV611EE
		G1/4	Closed centre	Self	3,5/-	25/30	0,33	P2L-BV612EE
		G1/2	position	centring	4,0/-	90/90	1,00	P2L-DV614EE
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AV811EE
		G1/4	Vented centre	Self	3,5/-	25/30	0,33	P2L-BV812EE
		G1/2	position	centring	4,0/-	90/90	1,00	P2L-DV814EE
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AV711EE
		G1/4	Pressurised	Self	3,5/-	25/30	0,33	P2L-BV712EE
		G1/2	centre position	centring	4,0/-	90/90	1,00	P2L-DV714EE
		G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BVE12EE
			Press./Closed centre position	Self centring				

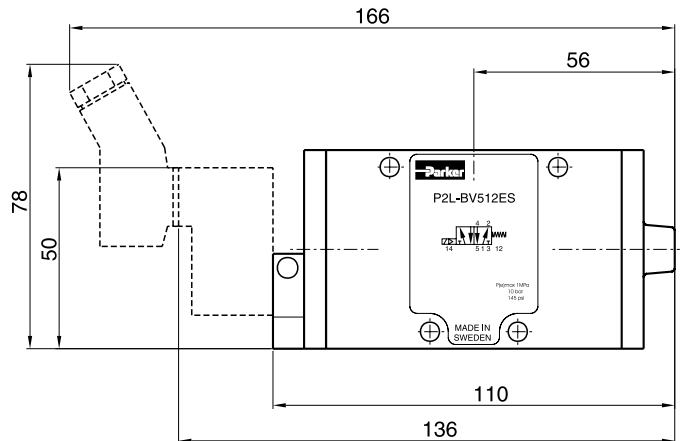
Dimensions

P2L-A...

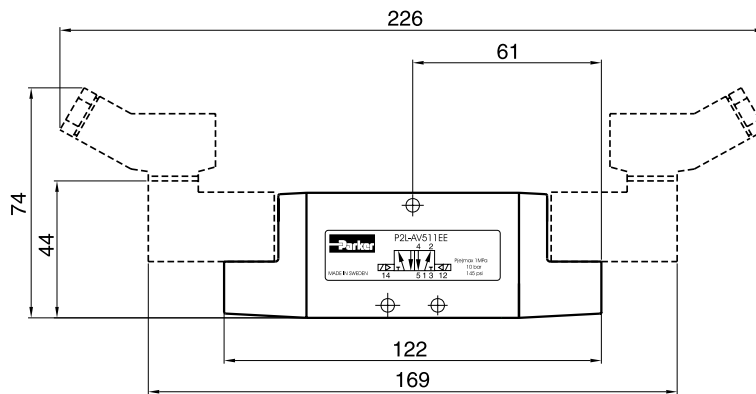


P2L-D dimensions see page 19

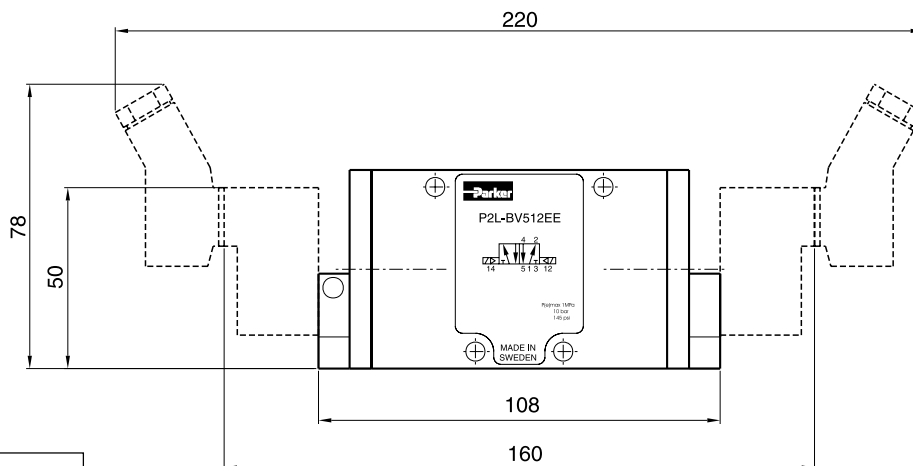
P2L-B...



P2L-A...



P2L-B...



Complete valves

See page 16

Accessories

See pages 38 to 43

Solenoids

See pages 44 to 48

Valvetronic

See pages 49 to 50

Solenoid valves

Solenoid valves and cable plugs must be ordered separately. Use P2E-•V3 as pilot valves in the above valves. One pilot valve is required for each E in the valve order code.

Main data electrically actuated directional control valves (supplied without solenoid valves)

Internal supply to solenoid valve(s) via port 1

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code
5/2 valves, internal air, low temperature							
	G1/8	Electric signal	Electric signal	1,5/1,5	10/10	0,16	P2L-AL511EE
	G1/4		Low temp.	1,5/1,5	22/22	0,31	P2L-BL512EE
	G1/2			1,5/1,5	40/40	0,70	P2L-DL514EE
	G1/8	Electric signal	Spring	3,2/-	12/30	0,16	P2L-AL511ES
	G1/4		Low temp.	3,5/-	15/25	0,32	P2L-BL512ES
	G1/2			3,7/-	25/65	0,70	P2L-DL514ES
	G1/8	Electric signal	Air signal	1,5/1,5	12/25	0,16	P2L-AL511EP
	G1/4		Low temp.	1,5/1,5	15/22	0,32	P2L-BL512EP
	G1/2			1,5/1,5	25/40	0,70	P2L-DL514EP
	G1/8	Electric signal	Air spring Low temp.	3,2/-	15/25	0,16	P2L-AL511ED
5/3 valves, internal air, low temperature							
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BL612EE
		Closed centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BL812EE
		Vented centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BL712EE
		Pressurised centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BLE12EE
		Press./Closed centre position	Self centring Low temp.				

Complete valves

See page 16

Accessories

See pages 38 to 43

Solenoids

See pages 44 to 48

Valvetronic

See pages 49 to 50

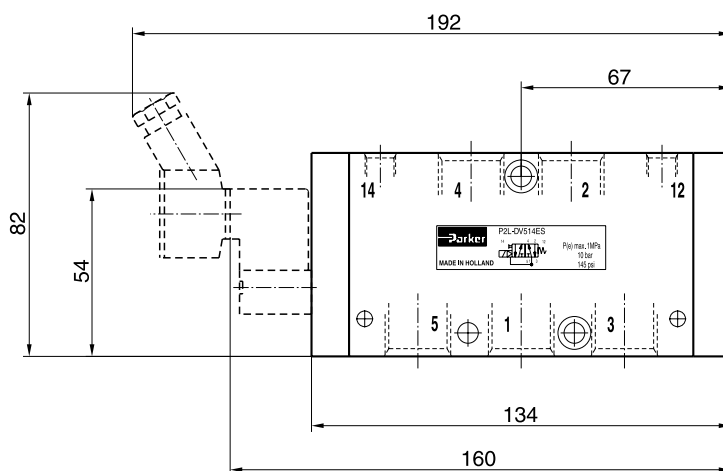
Solenoid valves

Solenoid valves and cable plugs must be ordered separately.
Use P2E-•V3 as pilot valves in the above valves. One pilot valve is required for each E in the valve order code.

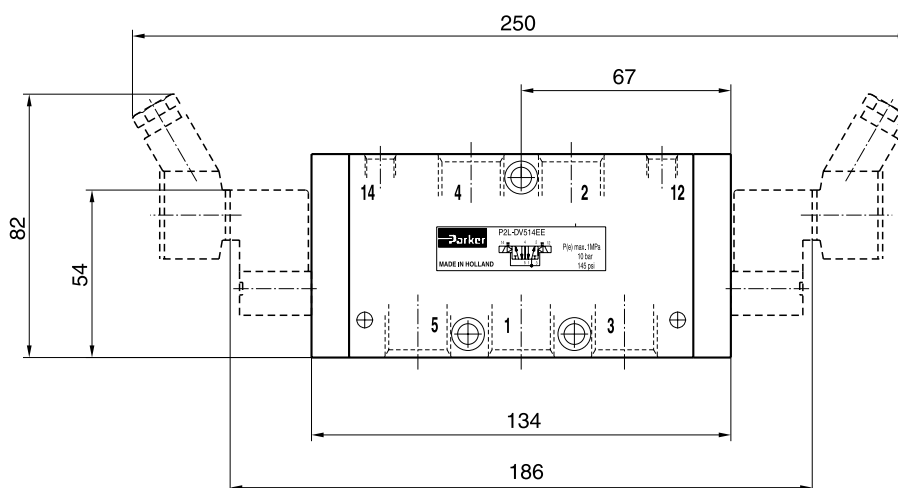
Dimensions

P2L-A and P2L-B dimensions see page 17

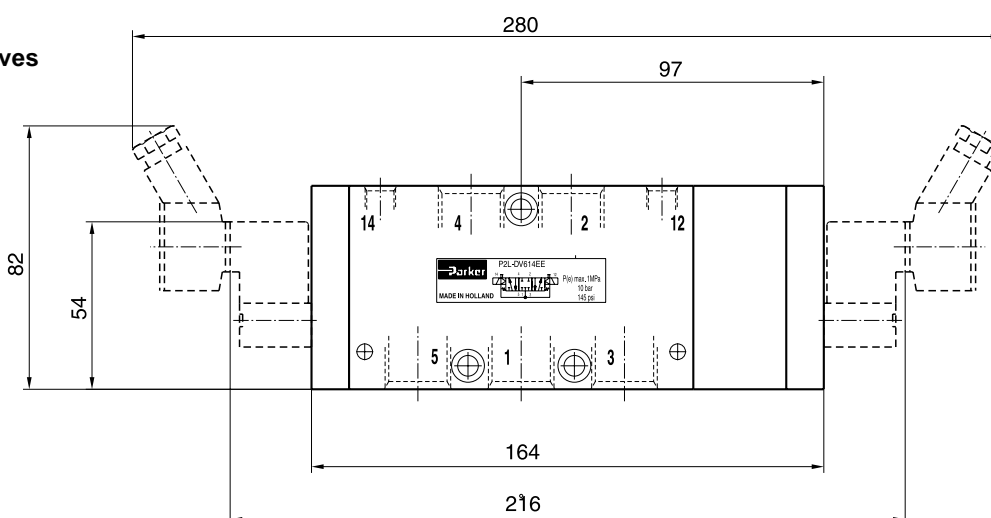
P2L-D•514 ES
P2L-D•514 EP



P2L-D•514EE



















P2L-D all 5/3 valves



Main data electrically actuated directional control valves (supplied without solenoid valves)

External supply to solenoid valve(s) via port 12 and 14 for P2L-A and P2L-D, and via M5 port for P2L-B

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code	
5/2 valves, external air, standard temperature								
		G1/8	Electric signal	Electric signal	1,5/1,5	10/10	0,16	P2L-AVN11EE
		G1/4			1,5/1,5	22/22	0,31	P2L-BVN12EE
		G1/2			1,5/1,5	40/40	0,70	P2L-DVN14EE
		G1/8	Electric signal	Spring	3,2/-	12/30	0,16	P2L-AVN11ES
		G1/4			3,5/-	15/25	0,32	P2L-BVN12ES
		G1/2			3,7/-	25/65	0,70	P2L-DVN14ES
		G1/8	Electric signal	Air signal	1,5/-1,5	10/6	0,16	P2L-AVN11EP
		G1/4			1,5/-1,5	22/10	0,32	P2L-BVN12EP
		G1/2			1,5/1,5	25/40	0,70	P2L-DVN14EP
		G1/8	Electric signal	Air spring	3,2/-	15/25	0,16	P2L-AVN11ED
5/3 valves, external air, standard temperature								
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AVP11EE
		G1/4	Closed centre	Self	3,5/-	25/30	0,33	P2L-BVP12EE
		G1/2	position	centring	4,0/-	90/90	1,00	P2L-DVP14EE
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AVR11EE
		G1/4	Vented centre	Self	3,5/-	25/30	0,33	P2L-BVR12EE
		G1/2	position	centring	4,0/-	90/90	1,00	P2L-DVR14EE
		G1/8	Electric signal	Electric signal	3,8/-	16/34	0,17	P2L-AVQ11EE
		G1/4	Pressurised	Self	3,5/-	25/30	0,33	P2L-BVQ12EE
		G1/2	centre position	centring	4,0/-	90/90	1,00	P2L-DVQ14EE
		G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BVZ12EE
			Press./Closed	Self				
			centre position	centring				

Accessories

See pages 38 to 43

Solenoids

See pages 44 to 48

Valvetronic

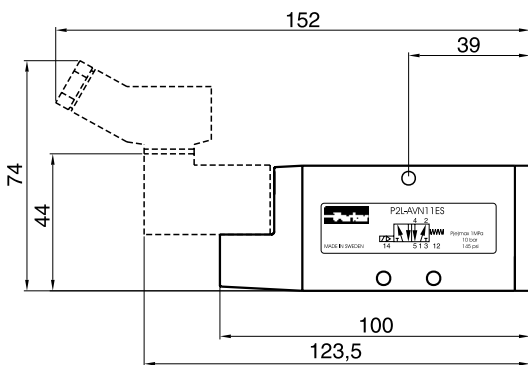
See pages 49 to 50

Solenoid valves

Solenoid valves and cable plugs must be ordered separately.
Use P2E-•V3 as pilot valves in the above valves. One pilot valve is required for each E in the valve order code.

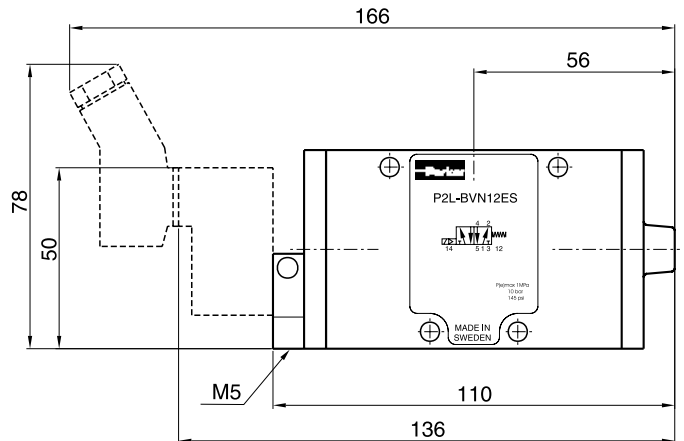
Dimensions

P2L-A...

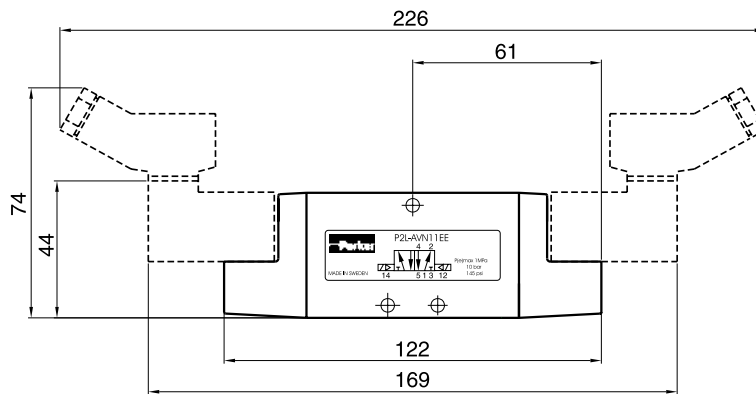


P2L-D dimensions see page 23

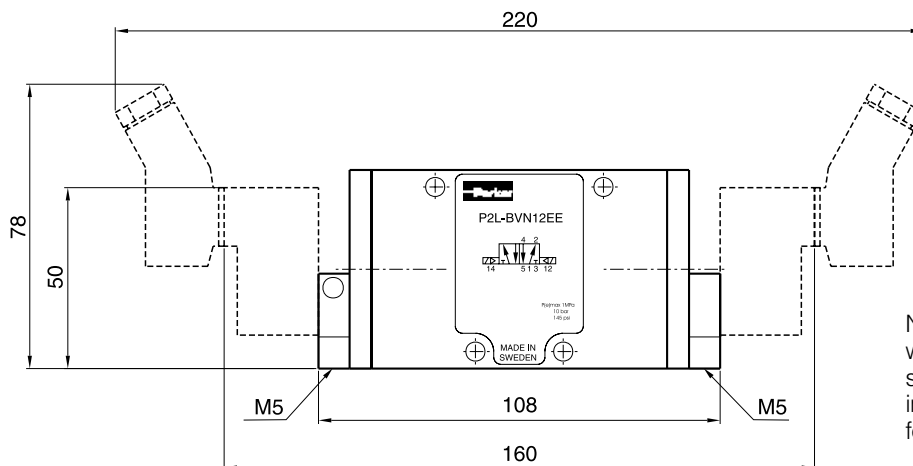
P2L-B...



P2L-A...



P2L-B...



Note! Valve range P2L-B with external air supply to solenoid valves can not be installed on the Multiple rail for P2L-B, page 41.

Note! Valve range P2L-B with external air supply to solenoid valves can not be installed on the Multiple rail for P2L-B, page 41.

Note: M5 ports are only found on valves with external air supply to solenoid valves.

Main data electrically actuated directional control valves (supplied without solenoid valves)

External supply to solenoid valve(s) via port 12 and 14 for P2L-A and P2L-D, and via M5 port for P2L-B

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code
5/2 valves, external air, low temperature							
	G1/8	Electric signal	Electric signal	1,5/1,5	10/10	0,16	P2L-ALN11EE
	G1/4		Low temp.	1,5/1,5	22/22	0,31	P2L-BLN12EE
	G1/2			1,5/1,5	40/40	0,70	P2L-DLN14EE
	G1/8	Electric signal	Spring	3,2/-	12/30	0,16	P2L-ALN11ES
	G1/4		Low temp.	3,5/-	15/25	0,32	P2L-BLN12ES
	G1/2			3,7/-	25/65	0,70	P2L-DLN14ES
	G1/8	Electric signal	Air signal	1,5/1,5	12/25	0,16	P2L-ALN11EP
	G1/4		Low temp.	1,5/1,5	15/22	0,32	P2L-BLN12EP
	G1/2			1,5/1,5	25/40	0,70	P2L-DLN14EP
	G1/8	Electric signal	Air spring Low temp.	3,2/-	15/25	0,16	P2L-ALN11ED
5/3 valves, external air, low temperature							
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BLP12EE
		Closed centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BLR12EE
		Vented centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BLQ12EE
		Pressurised centre position	Self centring Low temp.				
	G1/4	Electric signal	Electric signal	3,5/-	25/30	0,33	P2L-BLZ12EE
		Press./Closed centre position	Self centring Low temp.				

Accessories

See pages 38 to 43

Solenoids

See pages 44 to 48

Valvetronic

See pages 49 to 50

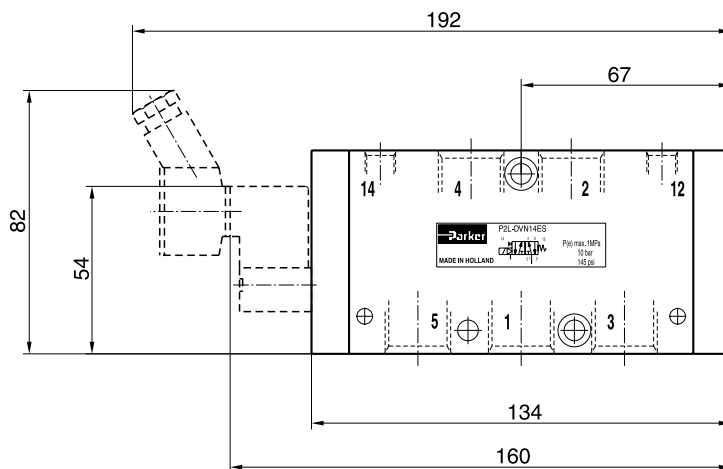
Solenoid valves

Solenoid valves and cable plugs must be ordered separately.
Use P2E-•V3 as pilot valves in the above valves. One pilot valve is required for each E in the valve order code.

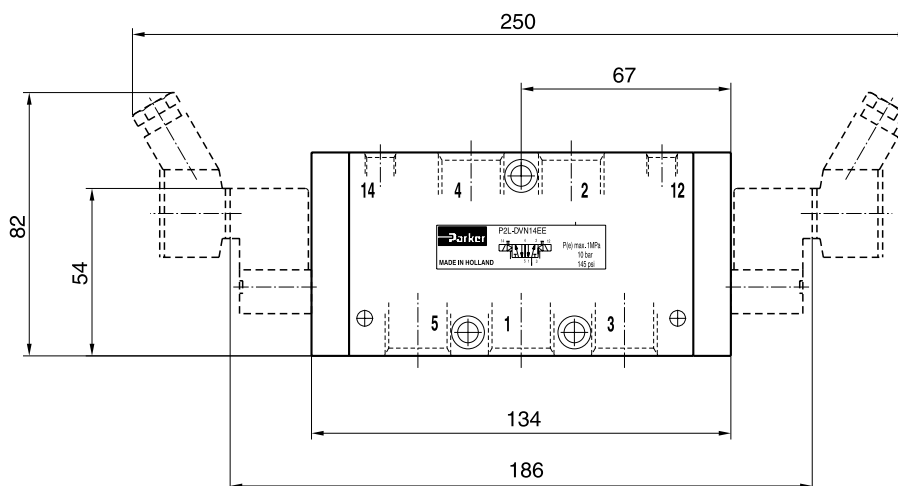
Dimensions

P2L-A and P2L-B dimensions see page 21

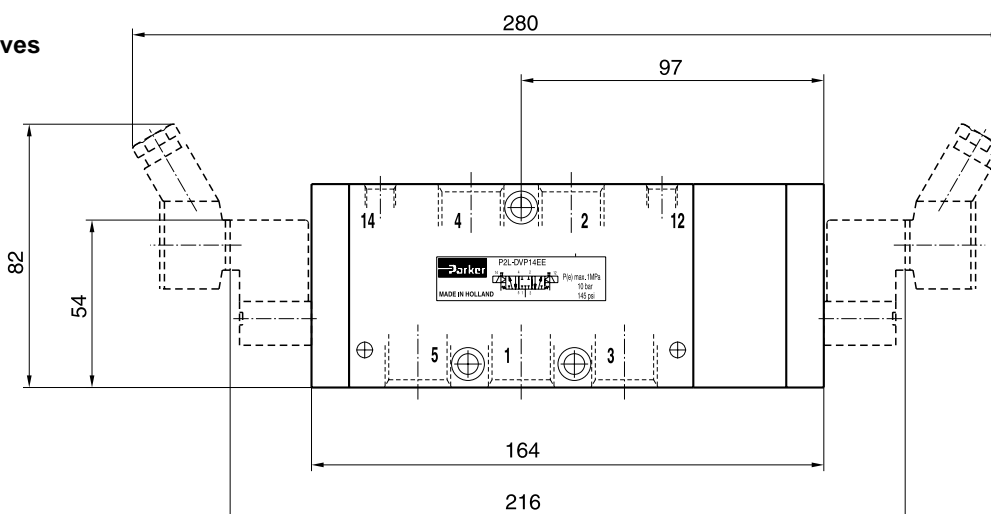
P2L-D•N14 ES
P2L-D•N14 EP



P2L-D•N14 EE









P2L-D all 5/3-valves



Main data electrically actuated directional control valves for normally open solenoids (NO)

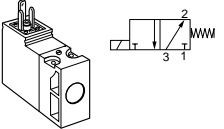
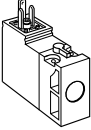
(supplied without solenoid valves)

Internal supply to solenoid valve(s) via port 1

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight Kg	Order code
5/2 valves, standard temperature							
	G1/8	Electric signal	Spring	3,2/-	12/30	0,16	P2L-AV511BS
	G1/8	Electric signal	Air signal	1,5/-1,5	10/6	0,16	P2L-AV511BP
	G1/8	Electric signal	Air spring	3,2/-	15/25	0,16	P2L-AV511BD
5/2 valves, low temperature							
	G1/8	Electric signal	Spring Low temp.	3,2/-	12/30	0,16	P2L-AL511BS
	G1/8	Electric signal	Air signal Low temp.	1,5/-1,5	10/6	0,16	P2L-AL511BP
	G1/8	Electric signal	Air spring Low temp.	3,2/-	15/25	0,16	P2L-AL511BD

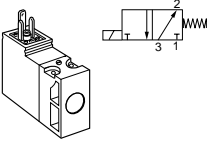
Solenoids 15 mm NO, standard flow

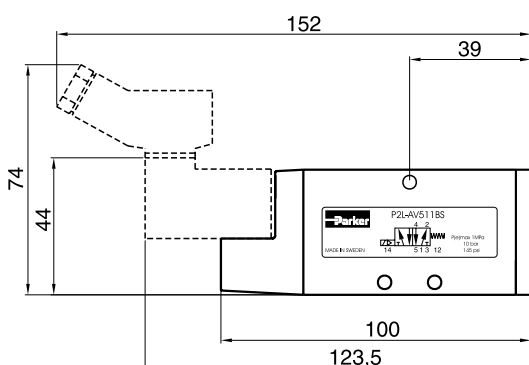
(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code Without manual override	Weight Kg	Order code Override, blue, non locking flush	Weight Kg	Order code Override, yellow, locking flush	
							
	24 VAC 50Hz	0,038	P2E-KV11C0	0,038	P2E-KV11C1	0,038	P2E-KV11C2
	48 VAC 50/60Hz	0,038	P2E-KV14D0	0,038	P2E-KV14D1	0,038	P2E-KV14D2
	115 VAC 50Hz/	0,038	P2E-KV11F0	0,038	P2E-KV11F1	0,038	P2E-KV11F2
	120 VAC 60Hz						
Voltage							
			Weight Kg	Order code Override extended, blue, non locking	Weight Kg	Order code Override extended, yellow, locking	
	24 VDC		0,038	P2E-KV12C3	0,038	P2E-KV12C4	
	24 VAC 50Hz		0,038	P2E-KV11C3	0,038	P2E-KV11C4	

Solenoids 15 mm NO, mobile

(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code Without manual override	Weight Kg	Order code Override, blue, non locking flush
	12 VDC	0,038	0,038	P2E-MV15B1
	24 VDC	0,038	0,038	P2E-MV15C1
	37,5 VDC	0,038	0,038	P2E-MV15W1
	48 VDC	0,038	0,038	P2E-MV15D1
	72 VDC	0,038	0,038	P2E-MV15T1
	78 VDC	0,038	0,038	P2E-MV15Y1
	96 VDC	0,038	0,038	P2E-MV15V1
	110 VDC	0,038	0,038	P2E-MV15E1

Dimensions**P2L-A•511B•****Solenoid valves**

General description of solenoid valves, see page 44
 Technical data, see page 45
 Cable plugs, see page 47
 Dimensions, see page 48

Solenoid valves

Solenoid valves and cable plugs must be ordered separately.
 Use P2E-•V1 as pilot valves in the above valves. One pilot valve (NO) is required for each B in the valve order code.



In accordance with the EU Machine Directive, EN 983, solenoid valves with manual changeover should have spring-return operating arms for safety.

Accessories

See pages 38 to 43

Valvetronic

See pages 49 to 50

Main data directional control valves

Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code	
5/2 valves, standard temperature, lever 90° to ports								
	G1/8	Lever	Lever	28°	Std.	0,18	P2L-AV511VV	
	G1/4			19°	Std.	0,46	P2L-BV512VV	
	G1/2			18°	Std.	0,95	P2L-DV514VV	
	G1/8	Lever	Spring	28°	Std.	0,18	P2L-AV511VS	
	G1/4			19°	Std.	0,47	P2L-BV512VS	
	G1/2			18°	Std.	0,95	P2L-DV514VS	
5/3 valves, standard temperature, lever 90° to ports								
	G1/8	Lever	Lever	±14°	Std.	0,18	P2L-AV61122	
	G1/4	Closed centre position		±12°	Std.	0,49	P2L-BV61222	
	G1/2	Held in three positions		±18°	Std.	0,95	P2L-DV61422	
	G1/8	Lever	Lever	±14°	Std.	0,18	P2L-AV81122	
	G1/4	Vented centre position		±12°	Std.	0,49	P2L-BV81222	
	G1/2	Held in three positions		±18°	Std.	0,95	P2L-DV81422	
	G1/8	Lever	Lever	±14°	Std.	0,18	P2L-AV71122	
	G1/4	Pressurised centre position		±12°	Std.	0,49	P2L-BV71222	
	G1/2	Held in three positions		±18°	Std.	0,95	P2L-DV71422	
	G1/4	Lever Press./Closed centre position Held in three positions	Lever	±12°	Std.	0,49	P2L-BVE1222	
		G1/8	Lever	Lever	±14°	Std.	0,18	P2L-AV61111
		G1/4	Closed centre position	Self centring	±12°	Std.	0,52	P2L-BV61211
G1/2				±18°	Std.	1,15	P2L-DV61411	
	G1/8	Lever	Lever	±14°	Std.	0,18	P2L-AV81111	
	G1/4	Vented centre position	Self centring	±12°	Std.	0,52	P2L-BV81211	
	G1/2			±18°	Std.	1,15	P2L-DV81411	
	G1/8	Lever	Lever	±14°	Std.	0,52	P2L-AV71111	
	G1/4	Pressurised centre position	Self centring	±12°	Std.	0,52	P2L-BV71211	
	G1/2			±18°	Std.	1,15	P2L-DV71411	
	G1/4	Lever Press./Closed centre position	Lever Self centring	±12°	Std.	0,52	P2L-BVE1211	

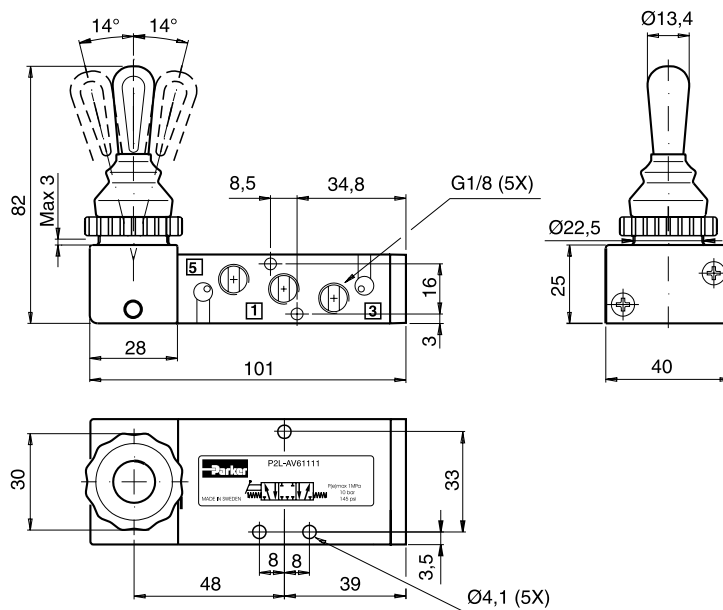
Accessories

See pages 38 to 43

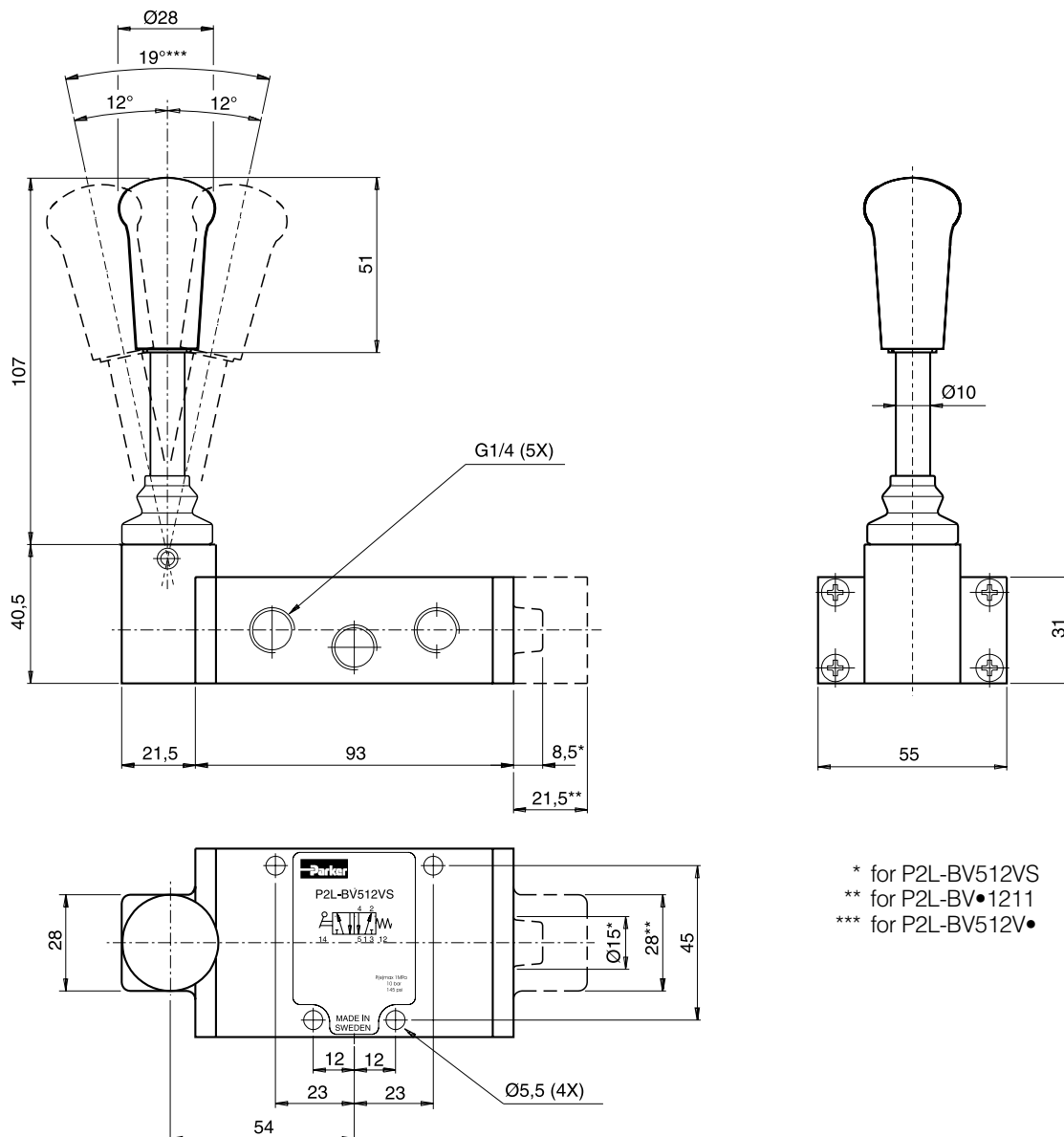
Dimensions

P2L-D dimensions see page 29

P2L-A...



P2L-B...



- * for P2L-BV512VS
- ** for P2L-BV•1211
- *** for P2L-BV512V•

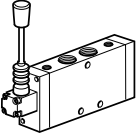


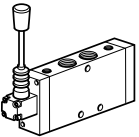






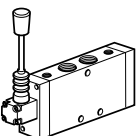


Main data directional control valves

Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code
5/2 valves, low temperature, lever 90° to ports							
	G1/8 G1/4 G1/2	Lever	Lever	28°	Low temp.	0,18	P2L-AL511VV
				19°		0,46	P2L-BL512VV
				18°		0,95	P2L-DL514VV
	G1/8 G1/4 G1/2	Lever	Spring	28°	Low temp.	0,18	P2L-AL511VS
				19°		0,47	P2L-BL512VS
				18°		0,95	P2L-DL514VS
5/3 valves, low temperature, lever 90° to ports							
	G1/4	Lever	Lever	±12°	Low temp.	0,49	P2L-BL61222
			Closed centre position Held in three positions				
			Lever	±12°	Low temp.	0,49	P2L-BL81222
			Vented centre position Held in three positions				
			Lever	±12°	Low temp.	0,49	P2L-BL71222
			Pressurised centre position Held in three positions				
			Lever	±12°	Low temp.	0,49	P2L-BLE1222
			Press./Closed centre position Held in three positions				
G1/4	Lever	Lever	±12°	Low temp.	0,52	P2L-BL61211	
		Closed centre position	Lever Self centring				
		Lever	±12°	Low temp.	0,52	P2L-BL81211	
		Vented centre position	Lever Self centring				
		Lever	±12°	Low temp.	0,52	P2L-BL71211	
		Pressurised centre position	Lever Self centring				
		Lever	±12°	Low temp.	0,52	P2L-BLE1211	
		Press./Closed centre position	Lever Self centring				

Accessories

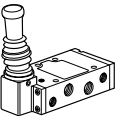


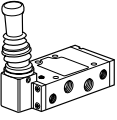








See pages 38 to 43

Main data directional control valves

Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code
5/2 valves, standard temperature, lever in line with ports							
		G1/2	Lever	Lever	18°	Std.	0,95 P2L-DV514ZZ
		G1/2	Lever	Spring	18°	Std.	0,95 P2L-DV514ZS
5/3 valves, standard temperature, lever in line with ports							
		G1/2	Lever Closed centre position Held in three positions	Lever	±18°	Std.	0,95 P2L-DV61466
		G1/2	Lever Vented centre position Held in three positions	Lever	±18°	Std.	0,95 P2L-DV81466
		G1/2	Lever Pressurised centre position Held in three positions	Lever	±18°	Std.	0,95 P2L-DV71466
		G1/2	Lever Closed centre position	Lever Self centring	±18°	Std.	1,15 P2L-DV61455
		G1/2	Lever Vented centre position	Lever Self centring	±18°	Std.	1,15 P2L-DV81455
		G1/2	Lever Pressurised centre position	Lever Self centring	±18°	Std.	1,15 P2L-DV71455
5/2 valves, low temperature, lever in line with ports							
		G1/2	Lever	Lever	18°	Low temp.	0,95 P2L-DL514ZZ
		G1/2	Lever	Spring	18°	Low temp.	0,95 P2L-DL514ZS

Accessories
See page 43

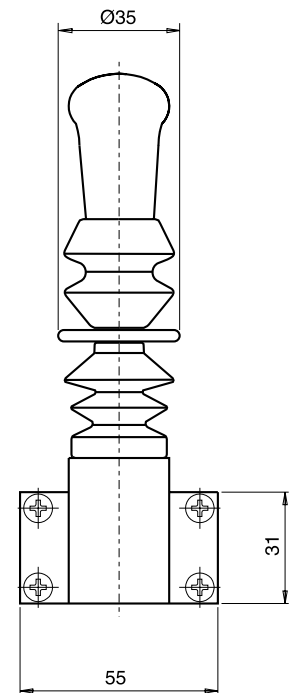
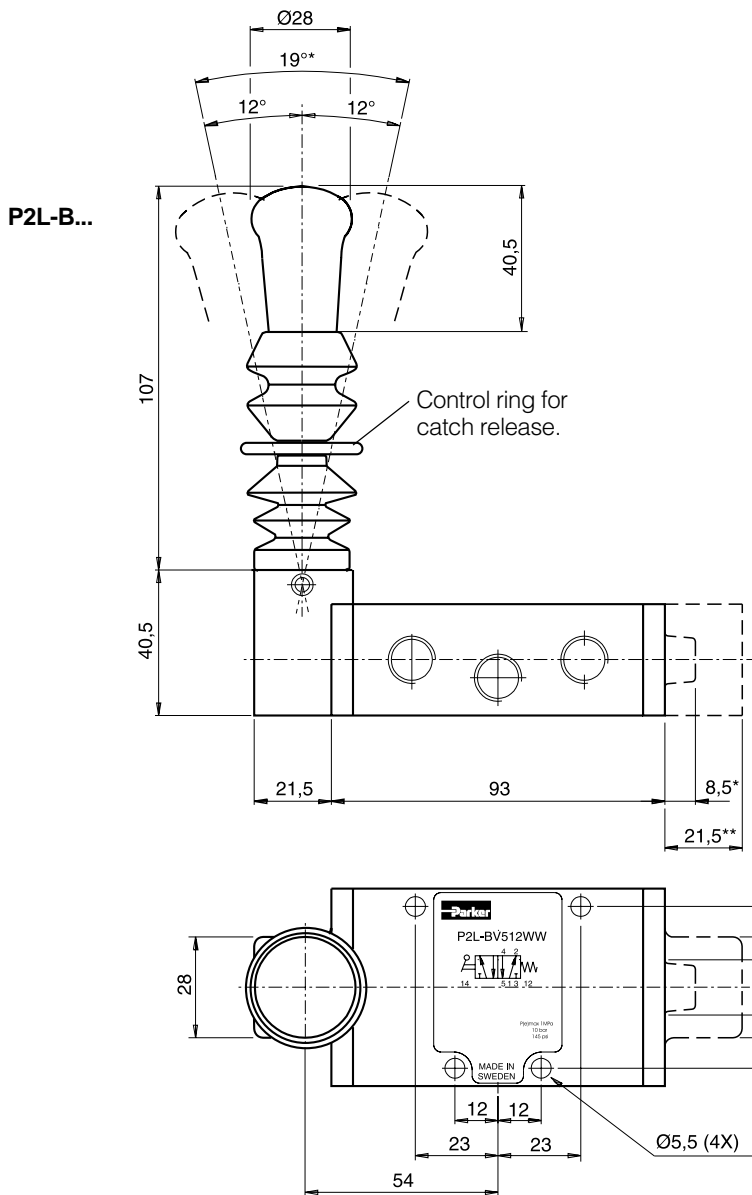
Main data directional control valves, hand operated, manual locking

Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code
5/2 valves, standard temperature, lever 90° to ports							
		G1/4	Lever	Lever Locked with air in port 2	19°	Std.	0,46 P2L-BV512WW
		G1/4	Lever	Lever Locked with air in port 4	19°	Std.	0,46 P2L-BV512YY
5/3 valves, standard temperature, lever 90° to ports							
		G1/4	Lever Closed centre position	Lever Self centring Locked with air in port 2	±12°	Std.	0,52 P2L-BV61233
		G1/4	Lever Closed centre position	Lever Self centring Locked with air in port 4	±12°	Std.	0,52 P2L-BV61244
		G1/4	Lever Vented centre position	Lever Self centring Locked with air in port 2	±12°	Std.	0,52 P2L-BV81233
		G1/4	Lever Vented centre position	Lever Self centring Locked with air in port 4	±12°	Std.	0,52 P2L-BV81244
		G1/4	Lever Pressurised centre position	Lever Self centring Locked with air in port 2	±12°	Std.	0,52 P2L-BV71233
		G1/4	Lever Pressurised centre position	Lever Self centring Locked with air in port 4	±12°	Std.	0,52 P2L-BV71244
		G1/4	Lever Press./Closed centre position	Lever Self centring Locked with air in port 2	±12°	Std.	0,52 P2L-BVE1233
		G1/4	Lever Press./Closed centre position	Lever Self centring Locked with air in port 4	±12°	Std.	0,52 P2L-BVE1244

Accessories

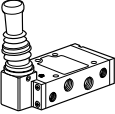


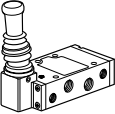








See pages 38 to 43

Dimensions



* for P2L-B•512WW and P2L-B•512YY
 ** for P2L-B••1233 and P2L-B••1244

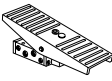

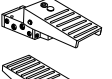

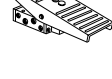















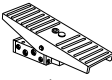

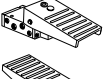

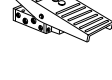















Main data directional control valves, hand operated, manual locking

Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code
5/2 valves, low temperature, lever 90° to ports							
		G1/4	Lever	Lever Locked with air in port 2	19°	Low temp.	0,46 P2L-BL512WW
		G1/4	Lever	Lever Locked with air in port 4	19°	Low temp.	0,46 P2L-BL512YY
5/3 valves, low temperature, lever 90° to ports							
		G1/4	Lever Closed centre position	Lever Self centring Locked with air in port 2	±12°	Low temp.	0,52 P2L-BL61233
		G1/4	Lever Closed centre position	Lever Self centring Locked with air in port 4	±12°	Low temp.	0,52 P2L-BL61244
		G1/4	Lever Vented centre position	Lever Self centring Locked with air in port 2	±12°	Low temp.	0,52 P2L-BL81233
		G1/4	Lever Vented centre position	Lever Self centring Locked with air in port 4	±12°	Low temp.	0,52 P2L-BL81244
		G1/4	Lever Pressurised centre position	Lever Self centring Locked with air in port 2	±12°	Low temp.	0,52 P2L-BL71233
		G1/4	Lever Pressurised centre position	Lever Self centring Locked with air in port 4	±12°	Low temp.	0,52 P2L-BL71244
		G1/4	Lever Press./Closed centre position	Lever Self centring Locked with air in port 2	±12°	Low temp.	0,52 P2L-BLE1233
		G1/4	Lever Press./Closed centre position	Lever Self centring Locked with air in port 4	±12°	Low temp.	0,52 P2L-BLE1244

Accessories

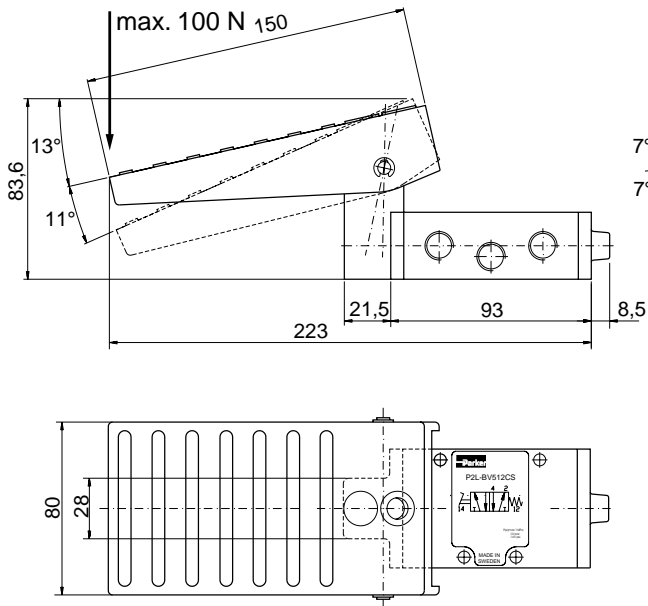
See pages 38 to 43

Main data directional control valves

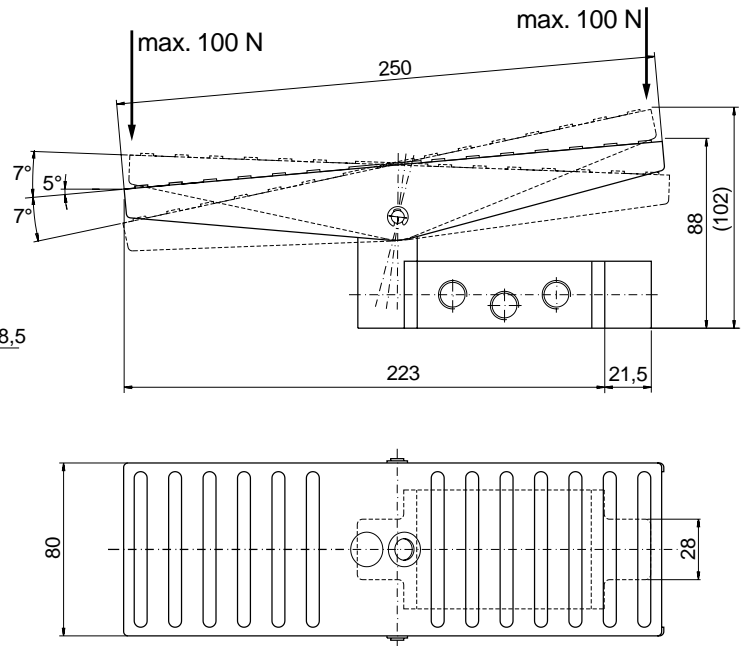
Symbol	Size	Actuation	Return	Changeover angle	Type	Weight Kg	Order code
5/2 and 5/3 valves, standard temperature							
 	G1/4	Foot pedal	Foot pedal	11°	Std.	0,85	P2L-BV512CC
 	G1/4	Foot pedal	Spring	11°	Std.	0,75	P2L-BV512CS
 	G1/4	Foot pedal Closed centre position Held in three positions	Foot pedal	±7°	Std.	0,89	P2L-BV612TT
 	G1/4	Foot pedal Vented centre position Held in three positions	Foot pedal	±7°	Std.	0,89	P2L-BV812TT
 	G1/4	Foot pedal Pressurised centre position Held in three positions	Foot pedal	±7°	Std.	0,91	P2L-BV712TT
 	G1/4	Foot pedal Press./Closed position Held in three positions	Foot pedal	±7°	Std.	0,91	P2L-BVE12TT
 	G1/4	Foot pedal Closed centre position	Foot pedal Self centring	±7°	Std.	0,91	P2L-BV612RR
 	G1/4	Foot pedal Vented centre position	Foot pedal Self centring	±7°	Std.	0,91	P2L-BV812RR
 	G1/4	Foot pedal Pressurised centre position	Foot pedal Self centring	±7°	Std.	0,93	P2L-BV712RR
 	G1/4	Foot pedal Press./Closed centre position	Foot pedal Self centring	±7°	Std.	0,93	P2L-BVE12RR
5/2 and 5/3 valves, low temperature							
 	G1/4	Foot pedal	Foot pedal	11°	Low temp.	0,85	P2L-BL512CC
 	G1/4	Foot pedal	Spring	11°	Low temp.	0,75	P2L-BL512CS
 	G1/4	Foot pedal Closed centre position Held in three positions	Foot pedal	±7°	Low temp.	0,89	P2L-BL612TT
 	G1/4	Foot pedal Vented centre position Held in three positions	Foot pedal	±7°	Low temp.	0,89	P2L-BL812TT
 	G1/4	Foot pedal Pressurised centre position Held in three positions	Foot pedal	±7°	Low temp.	0,91	P2L-BL712TT
 	G1/4	Foot pedal Press./Closed centre position Held in three positions	Foot pedal	±7°	Low temp.	0,91	P2L-BLE12TT
 	G1/4	Foot pedal Closed centre position	Foot pedal Self centring	±7°	Low temp.	0,91	P2L-BL612RR
 	G1/4	Foot pedal Vented centre position	Foot pedal Self centring	±7°	Low temp.	0,91	P2L-BL812RR
 	G1/4	Foot pedal Pressurised centre position	Foot pedal Self centring	±7°	Low temp.	0,93	P2L-BL712RR
 	G1/4	Foot pedal Press./Closed centre position	Foot pedal Self centring	±7°	Low temp.	0,93	P2L-BLE12RR

Dimensions

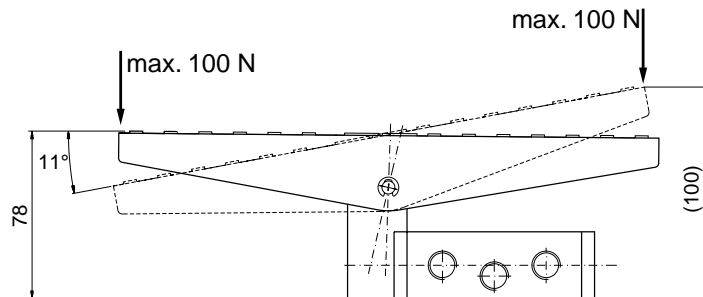
P2L-B•512CS



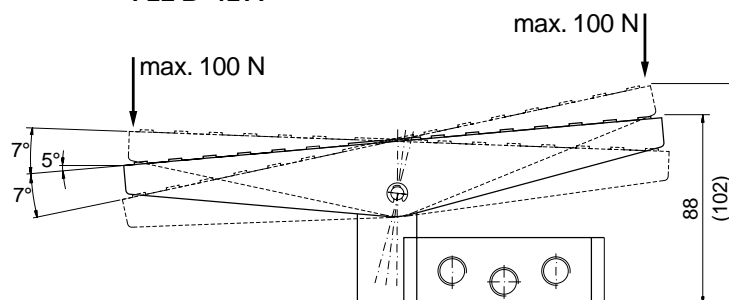
P2L-B••12RR



P2L-B•512CC

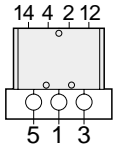


P2L-B••12TT



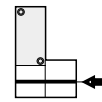
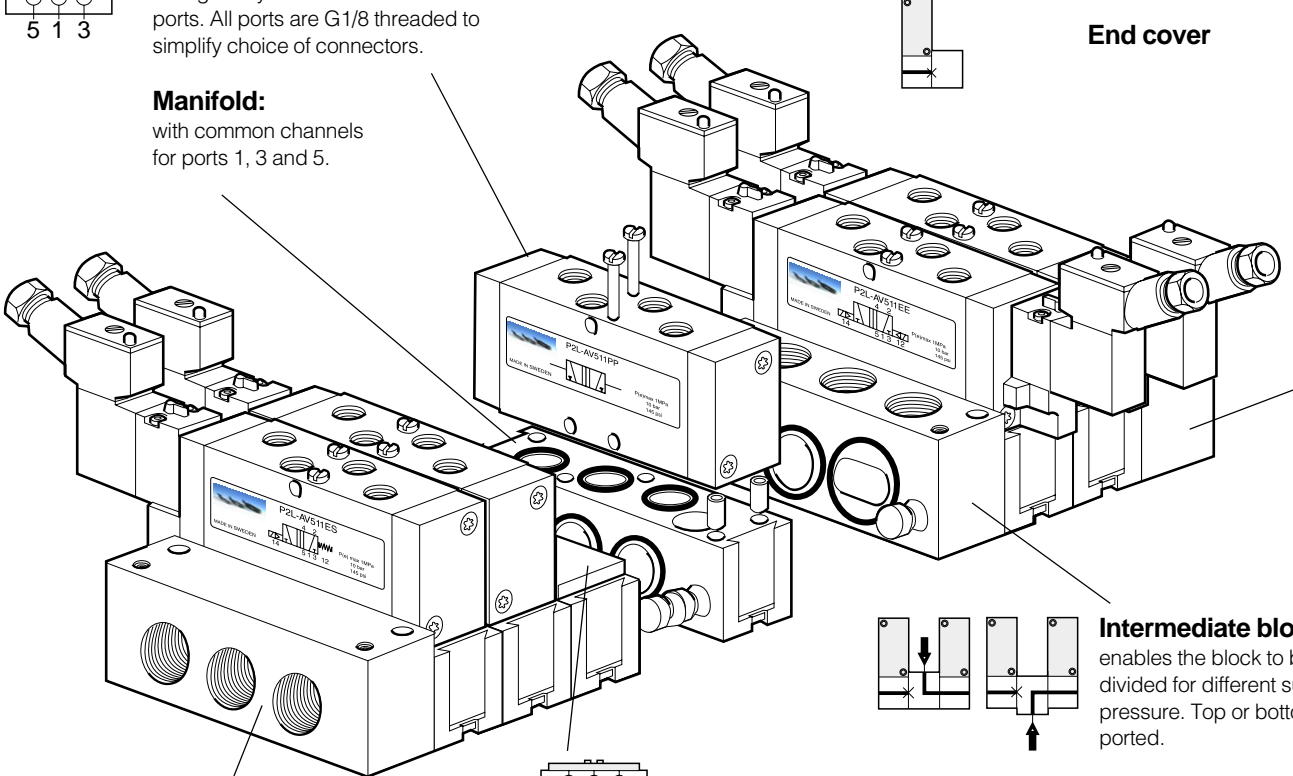
P2L-A, flexible manifold assembly

A practical system solution with the aid of connection pieces. The manifolds can easily be assembled from the top to form a compact and stable block. The block can then be installed in cabinets or directly on the machine frame as shown in the example in the bottom of this page.

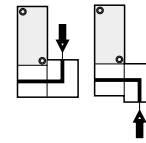


Valve:
with cylinder ports 2 and 4 and signal ports 12 and 14 facing upwards, enabling easily access to connection ports. All ports are G1/8 threaded to simplify choice of connectors.

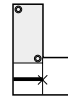
Manifold:
with common channels for ports 1, 3 and 5.



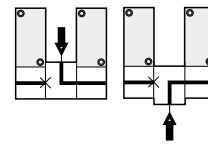
Connection block S:
straight connection block with a side ports for common air supply and exhaust.



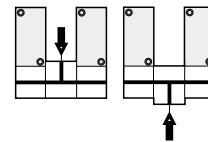
Connection block L:
angled connection block for top or bottom ported.



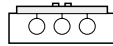
End cover



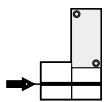
Intermediate block L:
enables the block to be divided for different supply pressure. Top or bottom ported.



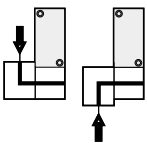
Intermediate block T:
permits the connection of air between two manifolds. Top or bottom ports.



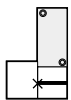
Blanking plate:
To incorporate spare positions.



Connection block S:
straight connection block with a side ports for common air supply and exhaust.



Connection block L:
angled connection block for top or bottom ported.



End cover

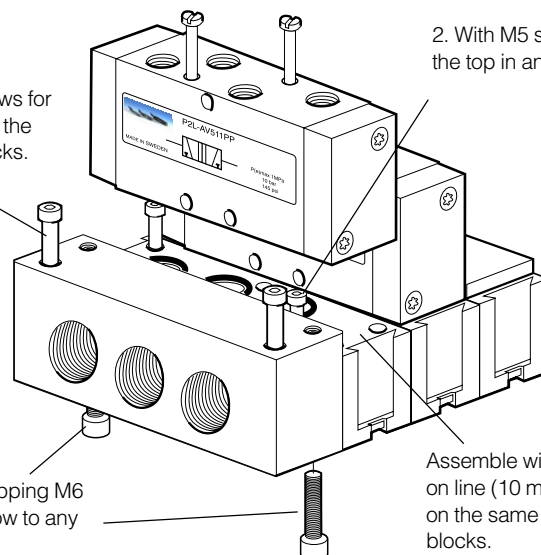
Various mounting options

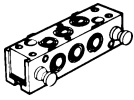
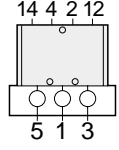
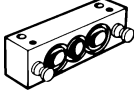
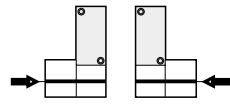
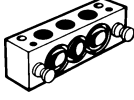
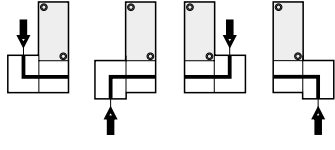
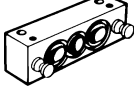
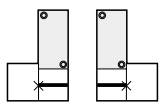
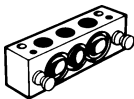
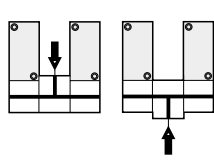
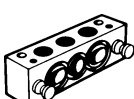
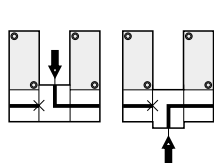
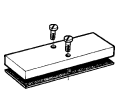
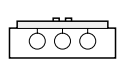
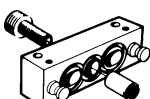
1. With M6 screws for installation from the connection blocks.

2. With M5 screws from the top in any manifold.

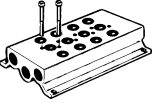

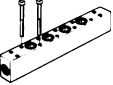



3. With a self-tapping M6 screw from below to any manifold.

Assemble with the indication line (10 mm long line) on the same side on all blocks.



Accessories P2L-A	Connection alternatives	Type	Weight kg	Order code
		Multiple manifold including seals, mounting screws, and guiding pins.	0,11	9121658060
		Connection block S including seals, mounting screws, and guiding pins. G1/4	0,15	9121658064
		Connection block L including seals, mounting screws, and guiding pins. G1/4	0,15	9121658061
		End cover including seals, mounting screws, and guiding pins.	0,16	9121658066
		Intermediate block T including seals, mounting screws, and guiding pins. G1/4	0,17	9121658062
		Intermediate block L including seals, mounting screws, and guiding pins. G1/4	0,17	9121658065
		Blanking plate including seals, mounting screws.	0,05	9121658063
		Adapter plate for assembly with P2L-A/P2L-B manifold including seals and mounting screws.	0,18	9121658067

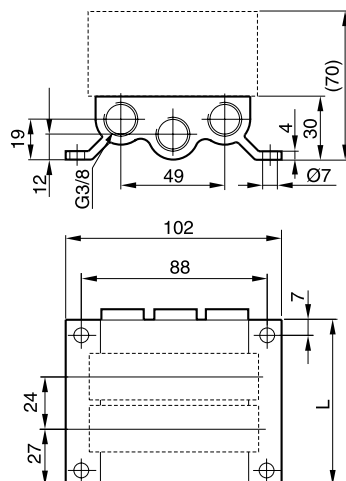
Mounting screws in stainless steel for valve and blanking plate, see page 41.

Accessories P2L-A	Type	Weight kg	Order code
	Manifold bar, P2L-A including seals, mounting screws. G3/8		
	For 4 valves	0,48	9121658075
	For 6 valves	0,63	9121658076
	For 8 valves	0,80	9121658077
	For 10 valves	0,98	9121658078
	For 12 valves	1,10	9121658079
	For 14 valves	1,23	9121658099
	Blanking plate, P2L-A for Manifold bar	0,05	9121658063
	Pressure bar, P2L-A for common air supply incl. O-rings and mounting screws. G1/4		
	For 2 valves	0,13	9121658070
	For 4 valves	0,20	9121658071
	For 6 valves	0,26	9121658072
	For 8 valves	0,33	9121658073
	Blanking plate, P2L-A for Pressure bar	0,05	9121658074
	Assembly screws, P2L-A in stainless steel for valve	0,02	9121658043
	Assembly screws, P2L-A in stainless steel for blanking plate	0,01	9121658044
	O-ring kit, P2L-A O-rings between valve and manifold bar/Pressure bar	0,01	9121658046

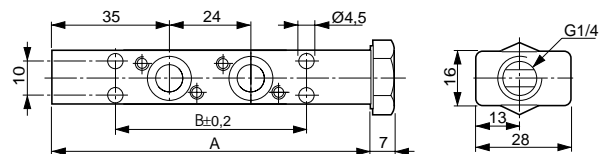
Dimensions

Manifold bar, P2L-A

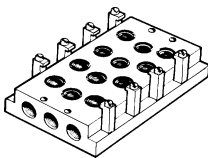

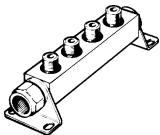

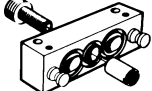
No. of valves	L mm
4	126
6	174
8	222
10	270
12	318
14	366



Pressure bar, P2L-A

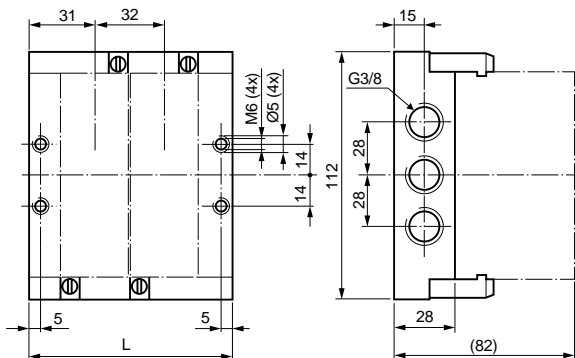


No. of valves	A mm	B mm
2	94	56
4	164	142
6	190	152
8	238	200

Accessories P2L-B	Type	Weight kg	Order code
	Manifold bar, P2L-B, (not for P2L-B with external air supply to solenoid valves) incl. fasteners and O-ring. G3/8		
	For 2 valves	0,69	9121594805
	For 4 valves	1,13	9121594806
	For 6 valves	1,56	9121594807
	For 8 valves	2,00	9121594808
	For 10 valves	2,45	9121594812
	Blanking plate, P2L-B for Manifold bar	0,10	9121594809
	Pressure bar, P2L-B for common air supply incl. O-rings and banjo-bolts. G3/8		
	For 2 valves	0,38	9127113301
	For 4 valves	0,53	9127113302
	For 6 valves	0,68	9127113303
	For 8 valves	0,83	9127113304
	For 10 valves	0,99	9127113305
	Blanking plug, P2L-B for Pressure bar. G1/4	0,02	9127113350
	Adapter plate between P2L-A and P2L-B including seals and mounting screws.	0,18	9121658067

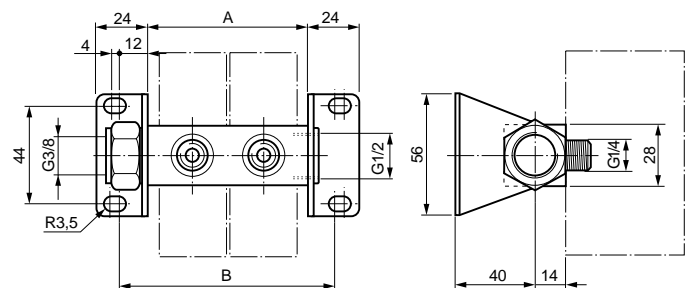
Dimensions

Manifold bar, P2L-B



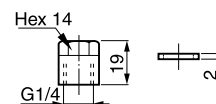
No. of valves	L mm
2	94
4	158
6	222
8	286
10	350

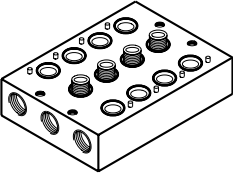
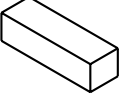
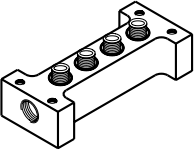

Pressure bar, P2L-B



No. of valves	A mm	B mm
2	72	96
4	136	160
6	200	224
8	264	288
10	328	352

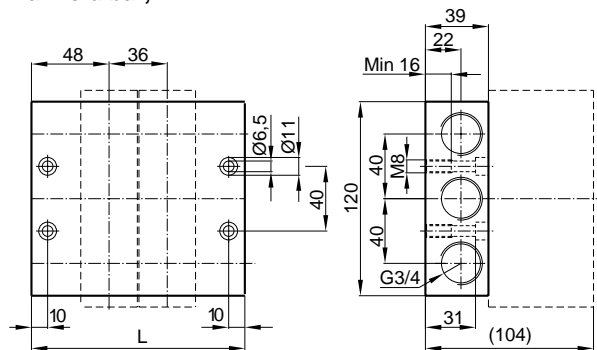
Blanking plug, P2L-B



Accessories P2L-D	Type	Weight kg	Order code
	Manifold bar, P2L-D, incl. o-rings and banjo-bolts. G3/4		
	For 2 valves	1,68	2149952
	For 4 valves	2,60	2149954
	For 6 valves	3,52	2149956
	For 8 valves	4,44	2149958
	For 10 valves	5,36	2149960
	Blanking plate, P2L-D for Manifold bar	0,22	4139565
	Pressure bar, P2L-D for common air supply incl. O-rings and banjo-bolts. G3/4		
	For 2 valves	0,66	2149972
	For 4 valves	0,93	2149974
	For 6 valves	1,20	2149976
	For 8 valves	1,47	2149978
	For 10 valves	1,74	2149980
	Blanking plug, P2L-D for Pressure bar, G1/2	0,05	4139567

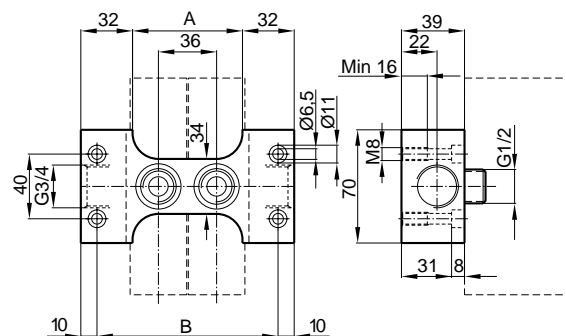
Dimensions

Manifold bar, P2L-D



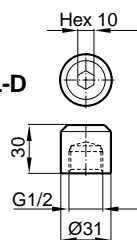
No. of valves	L mm
2	132
4	204
6	276
8	348
10	420

Pressure bar, P2L-D

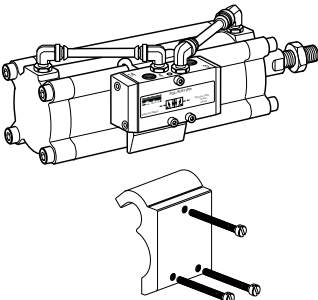


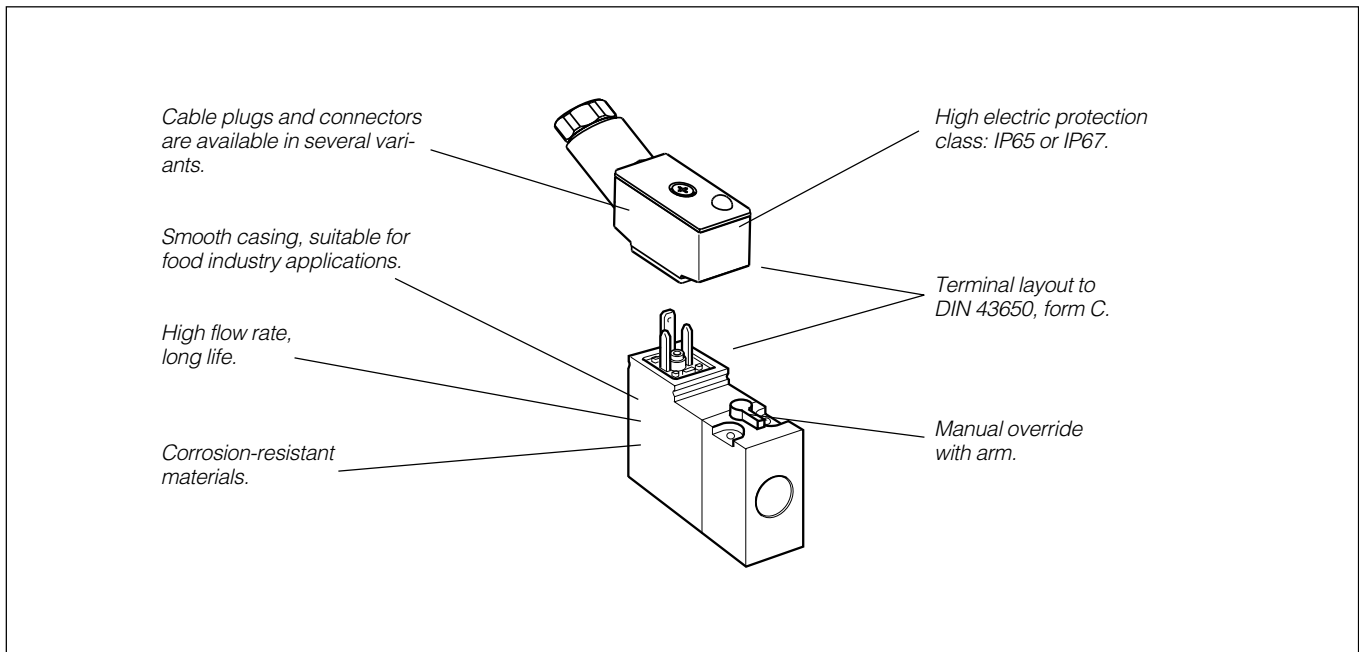
No. of valves	A mm	B mm
2	68	112
4	140	184
6	212	256
8	284	328
10	356	400

Blanking plug, P2L-D



Cylinder with fitted valve

Accessories	Description	Weight kg	Order code
P2L-A, P2L-B and P2L-D			
	Mounting plate for cylinder incl. assembly screws for valve		
	For P2L-A to cylinder P1K and P1C bore 32 or 40	0,05	9122520050
	For P2L-A to cylinder P1K and P1C bore 50 or 63	0,06	9122520051
	For P2L-A to cylinder P1K bore 80	0,07	9122520052
	For P2L-A to cylinder P1C bore 80 or 100	0,07	9122520052
	For P2L-B to cylinder P1C bore 50 or 63	0,06	9122520053
	For P2L-B to cylinder P1C bore 80 or 100	0,07	9122520054
	For P2L-D to cylinder P1C bore 80 or 100	0,07	9122520055



The P2E-•V solenoid valve range

The P2E-•V range of valves are normally closed (NC) 3/2 solenoid valves, with exceedingly compact dimensions in relation to their capacity.

International standard

The port connection pattern complies with a new French CNOMO standard (in process of drafting), with cable plug connections in accordance with DIN 43650, Form C.

Compact design

Overall dimensions of the P2E-•V valve are substantially less than those of earlier generations of solenoid valves.

High flow capacity

High flow capacity relative to the electrical operating power as a result of optimised internal flow paths.

Corrosion-resistant design

The valve is made of thermoplastic material and stainless steel, with Viton™ and nitrile rubber seals for excellent corrosion resistance.

Clean lines suitable for food industry applications, P2E-QV

The valve has been designed in conjunction with several machine manufacturers and organisations in the food processing industry, with corrosion-resistant materials and smooth lines being important starting points. The valve and its accessories have been designed so that there are no gaps or crevices in which dirt could collect.

High reliability

Few moving parts result in high reliability, rapid changeover and very long life.

Low power demand

The standard valves NC have a power demand of 1.2 W at 24 V DC and 1.6 VA at 24 V AC, 115 V AC and 230 V AC.

High protection class

The protection class is IP 67 when connected using the cable plug with a moulded cable. When using the standard cable plug for fitting by the user, the protection class is IP65, the bare valve, with Fast-on connectors, has an encapsulation class of IP 20.

Insensitive to dirty air

The use of generously sized flow paths (1.0 mm diameter) means that the valve can be used in normal industrial environments without problems of blocking.

Manual override as option

The valves can be supplied with or without manual override. The manual override device is available as a screwdriver groove or with a control arm, and is either spring return (blue) or lockable (yellow).

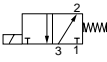
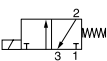
Order key, solenoid valves

P	2	E	-	K	V	3	2	C	1
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Valve family
P2E Solenoid valves

Subfamily
Solenoid valve, 15 mm wide Electric connection acc. to DIN 43650, form C EI/supply connection on opposite side
K Standard version
M Mobile version
Q Food industry version

Type of current
1 AC 50 Hz
2 DC
4 AC 50/60 Hz
5 Mobile and wide band only

Valvetype/Function
1  3/2 valve, normally open (NO)
3  3/2 valve, normally closed (NC)


Voltage
B 12 V
C 24 V
D 48 V
F 115 V*
J 230 V*
W 37,5 V**
T 72 V**
Y 78 V**
V 96 V**
E 110 V**

Overrides
0 Without
1 Non locking (blue)
2 Locking (yellow)
3 Extended non locking (blue)
4 Extended locking (yellow)

Possible combinations
See page 24 and 46

* For standard and food type only
** For mobile "M" version only

Technical data

	NC, Standard	NO, Standard	NC, Food¹⁾	NC, Mobile²⁾	NO, Mobile²⁾
Working pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	1 to 10 bar	0 to 10 bar
Working temperature	-15 °C to +60 °C	-15 °C to +50 °C	-15 °C to +60 °C	-40 °C to +70 °C	-40 °C to +70 °C
Orifice	1,0 mm	1,1 mm	1,0 mm	1,0 mm	1,1 mm
Flow Qmax	33 NI/min	33 NI/min	33 NI/min	22 NI/min	22 NI/min
Power, hold	DC 1,2 W / AC 1,6 VA	DC 1,8 W / AC 2,4 VA	DC 1,2 W / AC 1,6 VA	DC 1,4 W	DC 1,4 W
Power, surge	DC 1,2 W / AC 3,5 VA	DC 1,8 W / AC 5,5 VA	DC 1,2 W / AC 3,5 VA	DC 1,4 W	DC 1,4 W
Connection time	100%	100%	100%	100%	100%
Voltage tolerance	+10%/-15%	+10%/-15%	+10%/-15%	+25%/-30%	+25%/-30%
Electric connection:	DIN 43650 form C				
Port pattern:	To future CNOMO standard				
Protection:	IP 65 - IP 67, depending on type of cable plug				
Approval:	Some valves are UL-approved and marked with the following symbol 				
Working media:	All neutral media, such as compressed air, water, hydraulic oil and many gases.				
1) Design:	Completely smooth exterior, suitable for food industry.				
2) Mobile standard	According to European standard EN 50 155.				

Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavourable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All cable plugs with a yellow LED also incorporate such protection.

Service life

With compressed air at 6 bar, 20 °C and complying with the requirements for compressed air quality as set out in ISO8573-1 norm (class 4 for dry and class 5 for filtered), the valves should have a life of at least 50 million operations.

Materials

Valve

Body, coil casing
Internal metal parts
Screws
Bottom plug
Sealing materials

Thermoplastic
Steel
Stainless steel
Thermoplastic
FPM (Viton™) and nitrile rubber






















Cable head

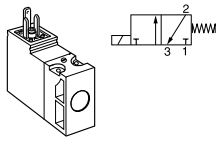
Sheath
Retaining screw




Thermoplastic
Stainless steel, zinc-plated steel

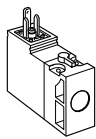
Solenoids 15 mm NC, standard

(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code Without manual override	Weight Kg	Order code Override, blue, non locking flush	Weight Kg	Order code Override, yellow, locking flush
12 VDC	0,038	P2E-KV32B0 	0,038	P2E-KV32B1 	0,038	P2E-KV32B2 
24 VDC	0,038	P2E-KV32C0 	0,038	P2E-KV32C1 	0,038	P2E-KV32C2 
48 VDC	0,038	P2E-KV32D0 	0,038	P2E-KV32D1 	0,038	P2E-KV32D2 
24 VAC 50Hz	0,038	P2E-KV31C0 	0,038	P2E-KV31C1 	0,038	P2E-KV31C2 
48 VAC 50/60Hz	0,038	P2E-KV34D0 	0,038	P2E-KV34D1 	0,038	P2E-KV34D2 
115 VAC 50Hz/	0,038	P2E-KV31F0 	0,038	P2E-KV31F1 	0,038	P2E-KV31F2 
120 VAC 60Hz						
230 VAC 50Hz/	0,038	P2E-KV31J0 	0,038	P2E-KV31J1 	0,038	P2E-KV31J2 
240 VAC 60Hz						



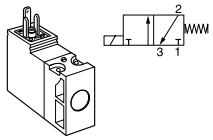
Voltage	Weight Kg	Order code Override extended, blue, non locking flush	Weight Kg	Order code Override extended, yellow, locking flush
24 VDC	0,038	P2E-KV32C3 	0,038	P2E-KV32C4 
24 VAC 50Hz	0,038	P2E-KV31C3 	0,038	P2E-KV31C4 



Solenoids 15 mm NC, mobile



















(Note! Mounting screws included in basic valve P2L-A/B/D...)

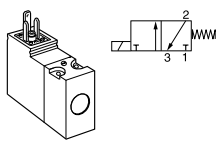
Voltage	Weight Kg	Order code Without manual override	Weight Kg	Order code Override, blue, non locking flush
12 VDC	0,038	P2E-MV35B0	0,038	P2E-MV35B1
24 VDC	0,038	P2E-MV35C0	0,038	P2E-MV35C1
37,5 VDC	0,038	P2E-MV35W0	0,038	P2E-MV35W1
48 VDC	0,038	P2E-MV35D0	0,038	P2E-MV35D1
72 VDC	0,038	P2E-MV35T0	0,038	P2E-MV35T1
78 VDC	0,038	P2E-MV35Y0	0,038	P2E-MV35Y1
96 VDC	0,038	P2E-MV35V0	0,038	P2E-MV35V1
110 VDC	0,038	P2E-MV35E0	0,038	P2E-MV35E1











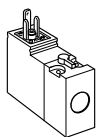
Solenoids 15 mm NC, food industry version

(Note! Mounting screws included in basic valve P2L-A/B/D...)


Voltage	Weight Kg	Order code Without manual override	Weight Kg	Order code Override, blue, non locking flush	Weight Kg	Order code Override, yellow, locking flush
24 VDC	0,038	P2E-QV32C0 	0,038	P2E-QV32C1 	0,038	P2E-QV32C2 
48 VDC	0,038	P2E-QV32D0 	0,038	P2E-QV32D1 	0,038	P2E-QV32D2 
24 VAC 50Hz	0,038	P2E-QV31C0 	0,038	P2E-QV31C1 	0,038	P2E-QV31C2 
48 VAC 50/60Hz	0,038	P2E-QV34D0 	0,038	P2E-QV34D1 	0,038	P2E-QV34D2 
115 V 50Hz/	0,038	P2E-QV31F0 	0,038	P2E-QV31F1 	0,038	P2E-QV31F2 
120 V 60Hz						
230 VAC 50Hz/	0,038	P2E-QV31J0 	0,038	P2E-QV31J1 	0,038	P2E-QV31J2 
240 VAC 60Hz						



Voltage	Weight Kg	Order code Override extended, blue, non locking flush	Weight Kg	Order code Override extended, yellow, locking flush
24 VDC	0,038	P2E-QV32C3 	0,038	P2E-QV32C4 
24 VAC 50Hz	0,038	P2E-QV31C3 	0,038	P2E-QV31C4 
115 VAC 50 Hz	0,038	P2E-QV31F3 	0,038	P2E-QV31F4 
230 VAC 50 Hz	0,038	P2E-QV31J3 	0,038	P2E-QV31J4 

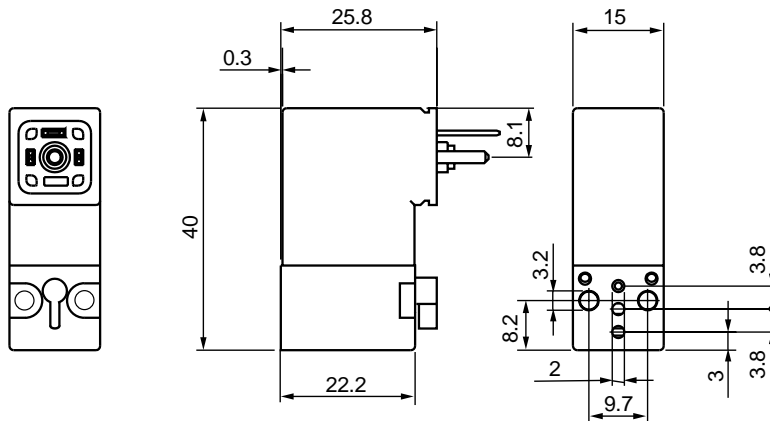


In accordance with the EU Machine Directive, EN 983, solenoid valves with manual override should have spring-return operating arms for safety.

 = UL-approved

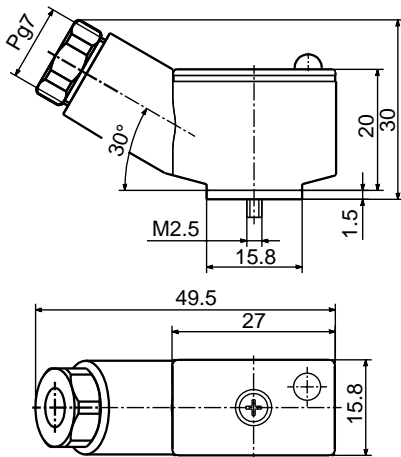
Dimensions

Solenoid valves P2E-V...



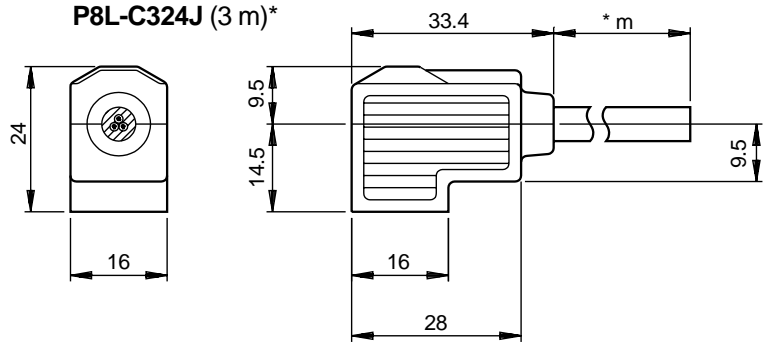
Cable plugs

- P8C-H
- P8C-H36C
- P8C-H26C
- P8C-H21E
- P8C-H21G



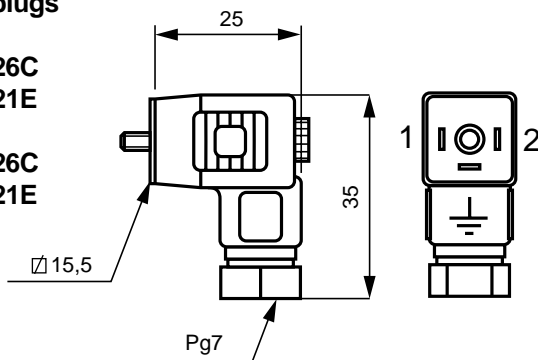
Cable plugs

- P8L-H236C (2 m)*
- P8L-H536C (5 m)*
- P8L-HA36C (10 m)*
- P8L-C324J (3 m)*



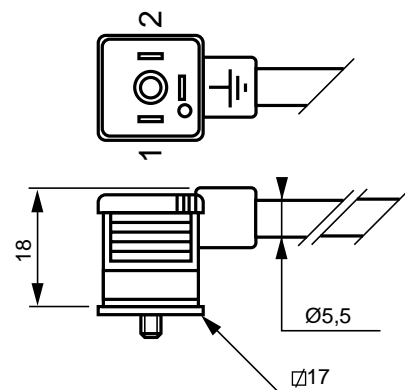
Cable plugs

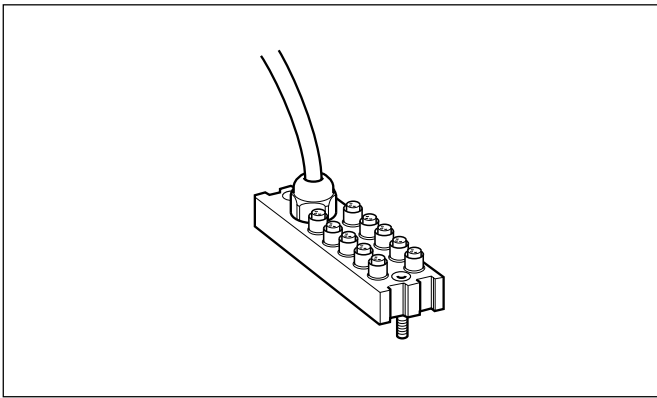
- P8C-C
- P8C-C26C
- P8C-C21E
- P8C-D
- P8C-D26C
- P8C-D21E



Cable plugs

- P8L-C2
- P8LC5
- P8L-C226C
- P8L-C526C
- P8L-CA26C
- P8L-C221E
- P8L-C521E





Technical data, Valvetronic 110

Connections:

Ten 3-pole numbered 8 mm round snap-in female contacts
Input block



Pin 1 Common, +24 VDC
Pin 2 Input signal
Pin 3 Common, 0V

Note!
When using reed contacts, a special adapter cable has to be used. Order code 9121717030.



Output block
Pin 1 Common, GND
Pin 2 Output signal
Pin 3 Common, 0V

Mechanical data

Enclosure blanking plugs. IP 67, DIN 40050 with fitted contacts and/or
Temperature -20 to +70 °C

Material

Body PA 6,6 VD according to UL 94
Contact holder PBTP
Snap-in ring LDPE
Moulding mass Epoxy
Seal NBR
Screws Plated steel

Cable:

Length 3 m or 10 m
Type of cable LifYY11Y
Conductor 12
Area 0.34 mm²
Colour marking According to DIN 47 100

Electrical data:

Voltage 24 VDC (max. 60 V AC/75 V DC)
Insulation group according to DIN 0110 class C
Load max. 1 A per connection
total max. 3 A

The Valvetronic 110 connection block

The Valvetronic 110 is a connection block that can be used for collecting signals from sensors at various points on a machine and connecting them to the control system via a multicore cable. It can also be used as a central point for connecting a multicore cable to the outputs of a control system, to provide a common point from where the output signals can be connected. The block has ten 8 mm snap-in round contacts and a 3 or 10 m multicore cable. The connections on the block are numbered from 1 to 10. Blanking plugs are available for unused connections, as labels for marking the connections of each block.

Valvetronic 110

Type	Weight kg	Order code
Valvetronic 110 with 3 m cable	0,32	9121719001
Valvetronic 110 with 10 m cable	0,95	9121719002
Blanking plugs (pack of 10)	0,02	9121719003
Labels (pack of 10)	0,02	9121719004

Industrial durability

Good chemical and oil resistance. Tests should be performed in aggressive environments.



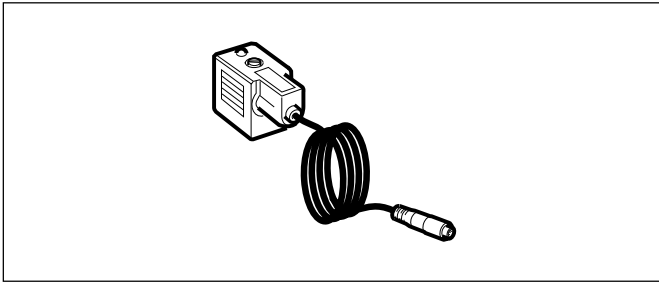
Use **blanking plugs** to close unused connections.



Use **White labels** to insert in grooves on the side of the connection

Dimensions and wiring diagrams

Conductor	Colour	Input	Output
1	Pink	Signal 1	Signal 1
2	Grey	Signal 2	Signal 2
3	Yellow	Signal 3	Signal 3
4	Green	Signal 4	Signal 4
5	White	Signal 5	Signal 5
6	Red	Signal 6	Signal 6
7	Black	Signal 7	Signal 7
8	Violet	Signal 8	Signal 8
9	Grey-Pink	Signal 9	Signal 9
10	Red-Blue	Signal 10	Signal 10
A	Blue	0 V	0 V
B	Brown	+24 V	PE



Technical data

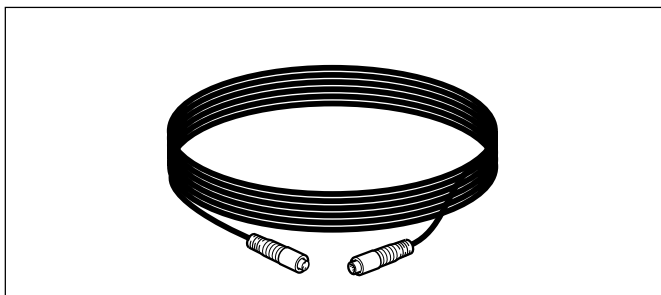
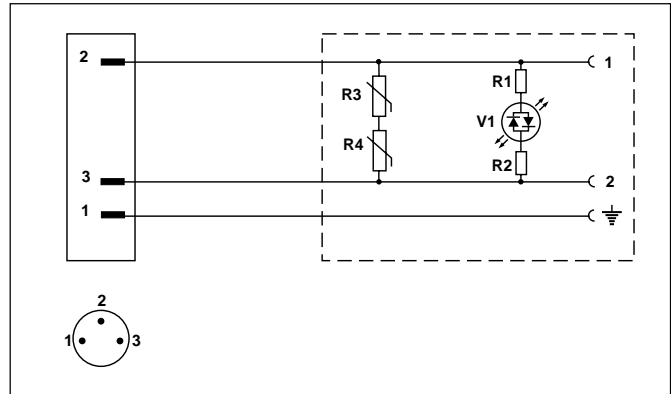
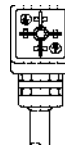
Voltage	24 VDC
Indication	LED, yellow
Transient protection	VDR
Load, max.	4 A
Enclosure	IP65

Pre-wired solenoid connector

Cable plug with a moulded cable and 8 mm snap-in round contact for connection of conventional solenoid valves to the Valvetronic system. The cable head incorporates an LED for status indication and a surge suppressor. When need for longer cables arise, use the extension cables below.

Cable plug according to DIN 43650 form C

Type	Weight kg	Order code
Length of cable 0,3 m	0,07	9121719035
Length of cable 0,6 m	0,09	9121719036



Technical data

Contacts

Moulded 8 mm snap-in male/female connectors.
Encapsulation IP67

Cable

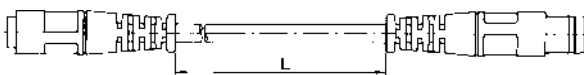
Conductor 3x0,25 mm² (32x0,10 mm²)
Sheath PVC/PUR
Colour Black

Ready-to-use cables

Cables with moulded 8 mm snap-in round connectors at both ends, The cables are available in two types, one with straight male and female connectors, and one with a straight 3-pole male connector in one end and an angled 3-pole female connector at the other end.

Cables with moulded 8 mm snap-in round contacts at both ends, straight male and female connectors respectively.

Cables with a straight 3-pole male connector at one end and an angled 3-pole female connector at the other end.



Type	Weight kg	Order code
Cable with straight connectors, 0,2 m	0,02	9121717014
Cable with straight connectors, 0,3 m	0,02	9121717015
Cable with straight connectors, 0,5 m	0,03	9121717016
Cable with straight connectors, 1,0 m	0,03	9121717017
Cable with straight connectors, 2,0 m	0,05	9121717018
Cable with straight connectors, 3,0 m	0,07	9121717019
Cable with straight connectors, 5,0 m	0,12	9121717020
Cable with straight connectors, 10 m	0,23	9121717021

Type	Weight kg	Order code
Cable with: straight and angled connectors, 0,2 m	0,02	9121717022
straight and angled connectors, 0,3 m	0,02	9121717023
straight and angled connectors, 0,5 m	0,03	9121717024
straight and angled connectors, 1,0 m	0,03	9121717025
straight and angled connectors, 2,0 m	0,05	9121717026
straight and angled connectors, 3,0 m	0,07	9121717027
straight and angled connectors, 5,0 m	0,12	9121717028
straight and angled connectors, 10 m	0,23	9121717029

