



## High Performance Pneumatic Valves Viking Xtreme Series

G1/8- G1/2 body ported

Catalogue PDE2569TCUK - September 2015

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
**pneumatics**  
process control  
sealing & shielding



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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.

**WARNING**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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# Extreme Environments

## Demand The Viking Xtreme



The Viking Xtreme 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 1/8 & 1/4 sizes are designed to operate with pressures up to 16 bar and the 3/8 & 1/2 sizes up to 12 bar, in ambient temperatures -40°C to + 60°C when fitted with suitable solenoid operators.

### Viking Xtreme range

**P2LAX, dimension G1/8**

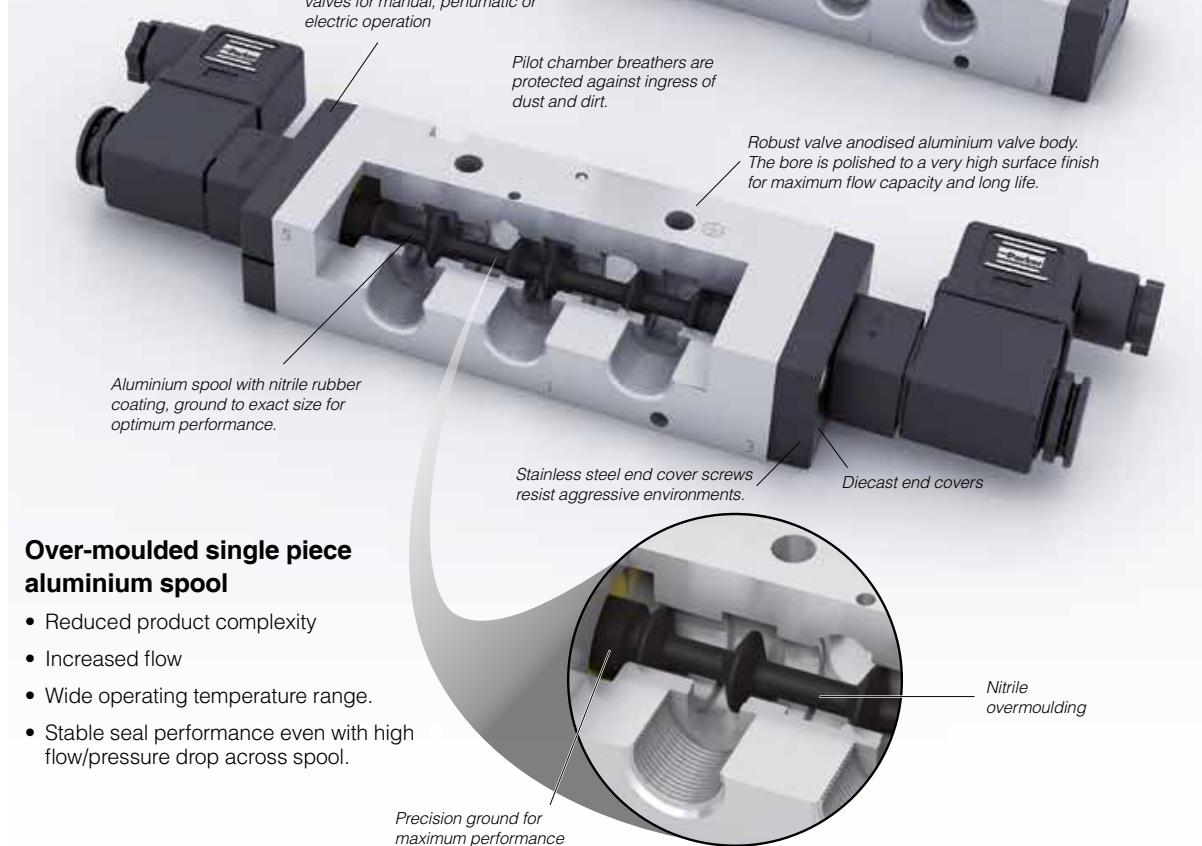
**P2LBX, dimension G1/4**

**P2LCX, dimension G3/8**

**P2LDX, dimension G1/2**

### Manually operated range

The complete range includes lever operated versions. They feature a rugged hand lever specifically designed for gloved hands and are available in 3/2, 5/2 and 5/3 functions



### Over-moulded single piece aluminium spool

- Reduced product complexity
- Increased flow
- Wide operating temperature range.
- Stable seal performance even with high flow/pressure drop across spool.

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**Directional control valves****Viking Xtreme**

# Whatever the environment, Push it to the Xtreme

**Compact installation dimensions - flexible installation**

Compact dimensions direct body porting and integral mounting holes are all features of the Viking Xtreme range. In addition to single valve installation, the Viking valve may be installed on manifolds so that the valves have a common supply and manifolded exhausts.

**Mobile applications**

The Viking Xtreme valves have a robust body which is machined out of solid aluminium bar and then anodised. Valves have passed aggressive salt spray, and demanding vibration tests and will operate in ambient temperatures of  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ . Solenoids are available having wide voltage tolerance for mobile applications.

**Maintenance**

The Viking Xtreme valve range has been developed from the very successful VGD15 and P2L-A product ranges which have a history of reliable and long service life in demanding and difficult applications. Spares kits are available for the valve and solenoid operators.

**Manually operated versions**

The range has now been extended to include lever operated versions. The rugged lever actuator has been specifically designed for gloved hands to suit mobile applications in the most arduous of environments.

Available in 3/2, 5/2 and 5/3 functions with either spring return or detented lever and with a choice of mid position function in the 5/3 versions. The lever actuated versions are available across the entire range of port sizes G1/8, G1/4, G3/8 and G1/2.

**High reliability**

Valves easily comply with the requirements for the component reliability in accordance with EU Machinery Directive standards EN292-2 and EN983. The valves have passed shocks & vibrations test IEC6173: 1999 cat 1 class B

The Viking Xtreme valves have few moving parts combined with short spool movement, these features combine to give valves having high reliability and long service life. The valves are designed for use with or without supplementary lubrication.

**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.

**Insensitive to dirty air**

Thanks to large flow passage areas and the large flow diameter of 1.0 in the pilot valves, the P2LA and P2LB 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. Valves having ATEX approval

ATEX approved options are available for use in explosive atmospheres. Consult our Technical Sales Department for further information.

**Complete range**

Manual, pneumatic, electric, 3/2, 5/2 & 5/3; the viking Xtreme valve range is suitable for a multiple application. For mobile or industrial applications, all functions are available from G1/8 to G1/2 using the same design and technology



Road



Industrial



Oil &amp; Gas

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## Directional control valves

## Viking Xtreme



### Flexible multiple installation

There is a system of multiple installation plates, intermediate blocks and several variants of connectors for the P2LA. 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.

### 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.



Rail



Agri-Food



Forestry

**Working medium, air quality**

Working medium: Dry, filtered compressed air to ISO 8573-1 class 3.4.3.

**Recommended air quality for valves**

For best possible service life and trouble free operation, ISO 8573-1 quality class 3.4.3 should be used. This means 5µm filter (standard filter) dew point +3°C for indoor operation (a lower dew point should be selected for outdoor operation) and oil concentration 1.0 mg oil/m<sup>3</sup>, which is what a standard compressor with a standard filter gives.

**ISO 8573-1 quality classes**

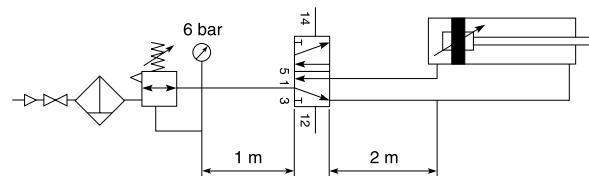
Quality class	Particle size (µm)	Pollution max. concentration (mg/m <sup>3</sup> )	Water max. press. dew point (°C)	Oil max. concentration (mg/m <sup>3</sup> )
<b>1</b>	0,1	0,1	-70	0,01
<b>2</b>	1	1	-40	0,1
<b>3</b>	5	5	-20	1,0
<b>4</b>	15	8	+3	5,0
<b>5</b>	40	10	+7	25
<b>6</b>	-	-	+10	-

**Typical cylinders speeds which can be achieved with Viking valves and different tube sizes.**

In the chart below you can find the suitable valves, tubes etc. for each cylinder size. If you have a tube length over 2 m, choose one tube size larger than in the chart.

Following data is valid:

Supply pressure : min 7,0 bar  
 Regulator pressure setting : 6,0 bar  
 Pipe length between air treatment unit and valve : max 1 m  
 Pipe length between valve and cylinder : max 2 m



Cylinder bore	<20	20-32	40-50	63	80	100	125	160	200
<b>Cylinder port</b>	M5	G1/8	G1/4	G3/8	G3/8	G1/2	G1/2	G3/4	G3/4
<b>Tubing Ext/Int</b>	4/2.7	6/4	8/6	10/8	10/8	12/9	14/11	18/15	20/18
			6/4	8/6	12/9	14/11			
<b>P2LAX</b>	G1/8	G1/8	G1/8	G1/8	G1/8				
<b>P2LBX</b>	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4			
<b>P2LCX</b>			G3/8	G3/8	G3/8	G3/8	G3/8		
<b>P2LDX</b>				G1/2	G1/2	G1/2	G1/2	G1/2	G1/2

 Cylinder speed < 0,5 m/s       Cylinder speed < 1 m/s

 Oversized       Cylinder speed > 1 m/s

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**Directional control valves****Viking Xtreme****Material specification****P2LAX****Valve**

Valve body	Anodised aluminium
End covers	Anodised aluminium
Lever housing	Acetal plastic
Spool	Aluminium + nitrile rubber
Piston	Acetal plastic/ Anodised aluminium
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

**P2LBX****Valve**

Valve body	Anodised aluminium
End covers	Anodised aluminium
Lever housing	Anodised aluminium
Spool	Aluminium + nitrile rubber
Piston	Acetal plastic/ Anodised aluminium
End cover sealings	Nitrile rubber
End cover screws	Stainless steel
Springs	Dacromet® - processed steel, Stainless steel
Lever	Steel Zinc Plated
Gaiter	Chloroprene rubber
Mounting screws for solenoid	Stainless steel
Panel Washer	Nitrile
Twist Bush	Acetal
Helix Bush	Brass
Pin	Plated Steel
Twist Housing	Anodised Aluminium
Twist Knob	Polyamide 6
Panel mounting ring	Acetal
Lever Housings	Anodised Aluminium
Lever selector	Zinc Diecast

**Accessories**

Manifold bar	Anodised aluminium
Pressure bar	Anodised aluminium

**P2LCX****Valve**

Valve body	Anodised aluminium
End covers	Anodised aluminium
Spool	Aluminium + nitrile rubber
Piston	Acetal plastic/ Anodised aluminium
End cover sealings	Nitrile rubber
End cover screws	Stainless steel
Springs	Dacromet® - processed steel, Stainless steel
Lever	Steel Zinc Plated
Gaiter	Chloroprene rubber
Mounting screws for solenoid	Stainless steel

**P2LDX****Valve**

Valve body	Anodised aluminium
End covers	Anodised aluminium
Spool	Aluminium + nitrile rubber
Piston	Acetal plastic/ Anodised aluminium
End cover sealings	Nitrile rubber
End cover screws	Stainless steel
Springs	Dacromet® - processed steel, Stainless steel
Lever	Steel Zinc Plated
Gaiter	Chloroprene rubber
Mounting screws for solenoid	Stainless steel



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## Directional control valves

**Viking Xtreme**

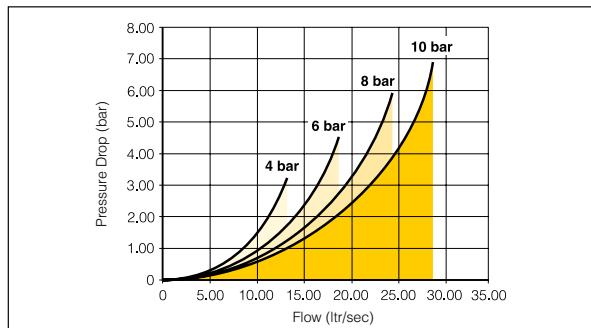
### Flow characteristics

Flow capacities in accordance with ISO6358

All pressures = effective pressure

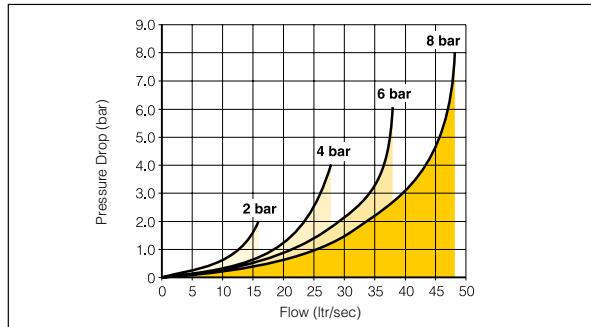
The curves in the diagram below are typical only

### Technical Data P2LAX



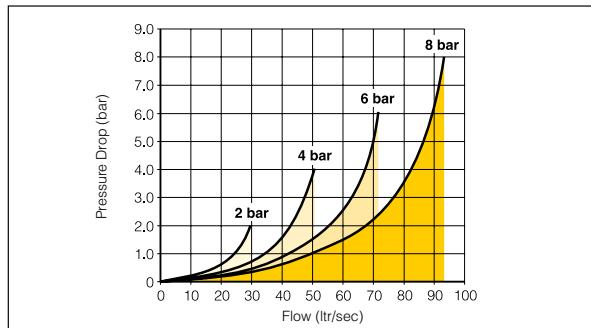
Port size	G1/8
Max operating pressure.	16 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 3,0 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,2
	Qn = 11,0 l/s
	Qmax = 19,0 l/s
	Cv = 0,65

### Technical Data P2LBX



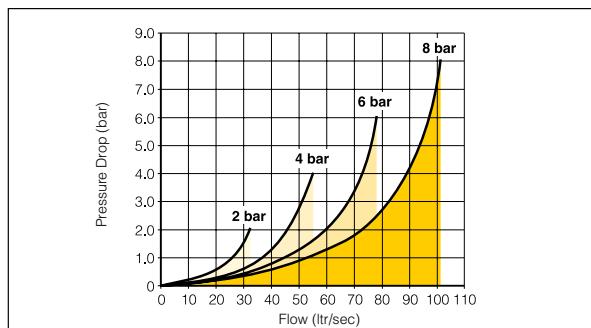
Port size	G1/4
Max operating pressure.	16 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 5,4 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,2
	Qn = 21,5 l/s
	Qmax = 38,0 l/s
	Cv = 1,33

### Technical Data P2LCX



Port size	G3/8
Max operating pressure.	12 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 10,3 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,22
	Qn = 41,0 l/s
	Qmax = 72,0 l/s
	Cv = 2,5

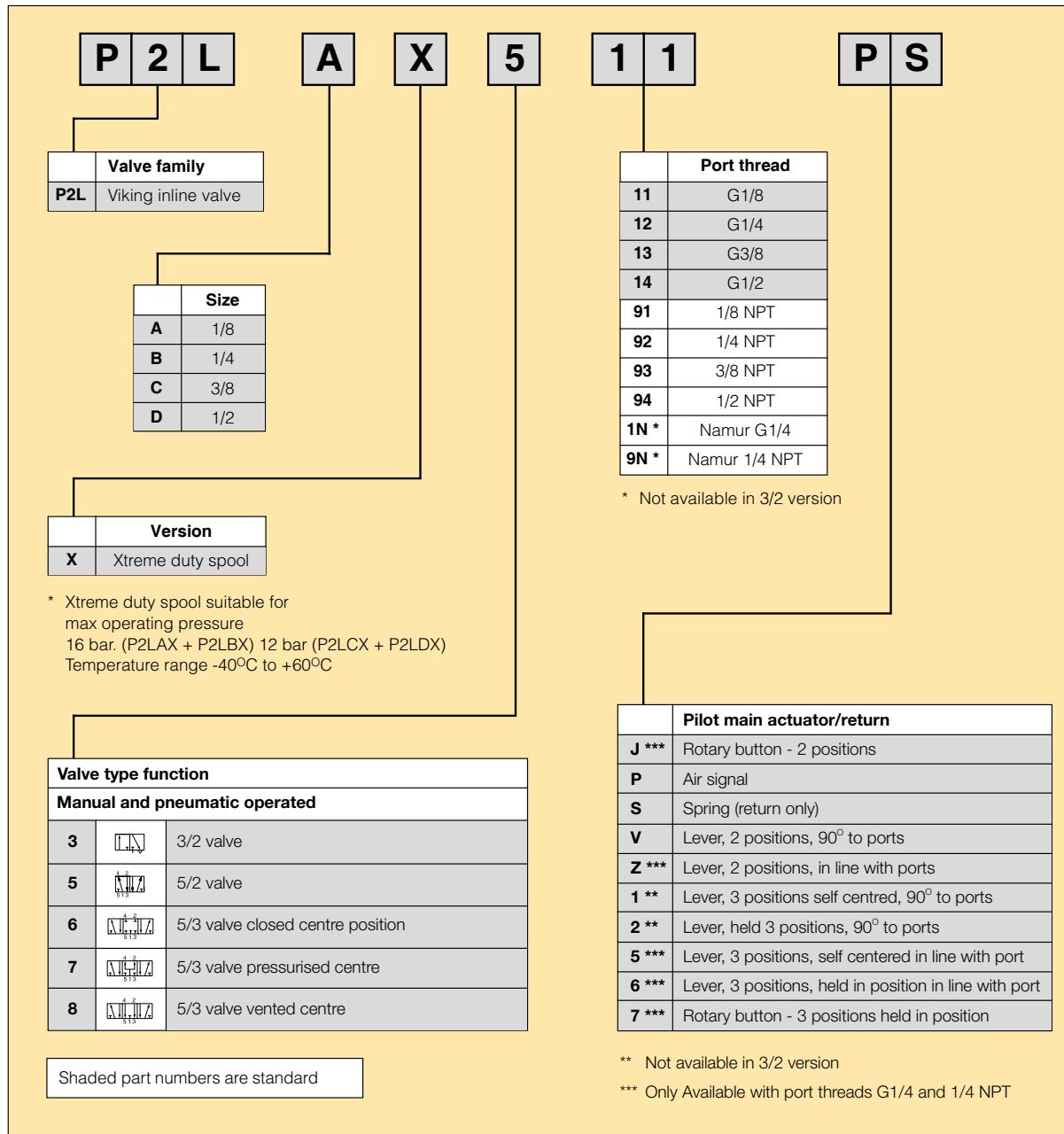
### Technical Data P2LDX



Port size	G1/2
Max operating pressure.	12 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 11,3 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,3
	Qn = 44,3 l/s
	Qmax = 78 l/s
	Cv = 2,71


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## Order chart - Viking Xtreme air pilot &amp; manual valves - Xtreme operating pressure / temperature



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**Directional control valves****Viking Xtreme****Pneumatic pilot operated valves - Xtreme operating pressure / temperature**

Max operating pressure 16 bar (A &amp; B) 12 bar (C &amp; D). temp range -40°C to +60°C

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, temperature -40°C to +60°C</b>							
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	1,5	5/5	0,30	<b>P2LAX311PP</b>
	G1/8 G1/4 G3/8 G1/2	Air signal	Spring	3,2 3,5 3,5 3,5	8/15 10/20 10/30 10/30	0,30 0,30 0,45 0,45	<b>P2LBX312PP</b> <b>P2LCX313PP</b> <b>P2LDX314PP</b>
<b>5/2 valves, temperature -40°C to +60°C</b>							
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	1,5	5/5	0,14	<b>P2LAX511PP</b>
	G1/8 G1/4 G3/8 G1/2	Air signal	Spring	3,2 3,5 3,5 3,5	8/15 10/20 10/30 10/30	0,15 0,32 0,45 0,45	<b>P2LBX512PP</b> <b>P2LCX513PP</b> <b>P2LDX514PP</b>
<b>5/3 valves, temperature -40°C to +60°C</b>							
	G1/8 G1/4 G3/8 G1/2	Air signal Closed centre position	Air signal Self centring	3,5 3,5 3,5 3,5	10/20 12/22 15/35 15/35	0,15 0,33 0,50 0,50	<b>P2LAX611PP</b> <b>P2LBX612PP</b> <b>P2LCX613PP</b> <b>P2LDX614PP</b>
	G1/8 G1/4 G3/8 G1/2	Air signal Vented centre position	Air signal Self centring	3,5 3,5 3,5 3,5	10/20 12/22 15/35 15/35	0,15 0,33 0,50 0,50	<b>P2LAX811PP</b> <b>P2LBX812PP</b> <b>P2LCX813PP</b> <b>P2LDX814PP</b>
	G1/8 G1/4 G3/8 G1/2	Air signal Pressurised centre position	Air signal Self centring	3,5 3,5 3,5 3,5	10/20 12/22 15/35 15/35	0,15 0,33 0,50 0,50	<b>P2LAX711PP</b> <b>P2LBX712PP</b> <b>P2LCX713PP</b> <b>P2LDX714PP</b>

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## Directional control valves

Viking Xtreme



### Pneumatic twist operated valves - Xtreme operating pressure / temperature

Max operating pressure 16 bar. Temp range -40°C to +60°C

Symbol	Size	Actuation	Return	Changeover Angle	Weight Kg	Order code
<b>3/2 valves, temperature -40°C to +60°C</b>						
	G1/4	Twist	Twist	45	0.34	P2LBX312JJ
<b>5/2 valves, temperature -40°C to +60°C</b>						
	G1/4	Twist	Twist	45	0.37	P2LBX512JJ
<b>5/3 valves, temperature -40°C to +60°C</b>						
	G1/4	Twist	Twist	54	0.41	P2LBX71277
	G1/4	Twist	Twist	54	0.41	P2LBX61277
	G1/4	Twist	Twist	54	0.41	P2LBX81277

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**Directional control valves****Viking Xtreme****Lever operated directional control valves, lever 90° to ports**

Max operating pressure 16 bar (A &amp; B) 12 bar (C &amp; D). temp range -40°C to +60°C

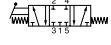
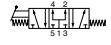
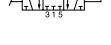
Symbol	Size	Actuation	Return	Changeover angle	Changeover Force	Type	Weight Kg	Order code
<b>3/2 valves, standard temperature / Low temperature, lever 90° to ports</b>								
	G1/8	Lever	Lever	20°	9 N	Std.	0,33	P2LAX311VV
	G1/4	Lever	Lever	20°	9 N	Std.	0,33	P2LBX312VV
	G3/8	Lever	Lever	32°	25 N	Std.	0,40	P2LCX313VV
	G1/2	Lever	Lever	32°	25 N	Std.	0,60	P2LDX314VV
	G1/8	Lever	Spring	20°	10N	Std.	0,33	P2LAX311VS
	G1/4	Lever	Spring	20°	10N	Std.	0,33	P2LBX312VS
	G3/8	Lever	Spring	32°	15 N	Std.	0,40	P2LCX313VS
	G1/2	Lever	Spring	32°	15 N	Std.	0,60	P2LDX314VS
<b>5/2 valves, standard temperature / Low temperature, lever 90° to ports</b>								
	G1/8	Lever	Lever	28°	9 N	Std.	0,18	P2LAX511VV
	G1/4	Lever	Lever	20°	9 N	Std.	0,33	P2LBX512VV
	G3/8	Lever	Lever	32°	25 N	Std.	0,40	P2LCX513VV
	G1/2	Lever	Lever	32°	25 N	Std.	0,60	P2LDX514VV
	G1/8	Lever	Spring	28°	10N	Std.	0,18	P2LAX511VS
	G1/4	Lever	Spring	20°	10N	Std.	0,33	P2LBX512VS
	G3/8	Lever	Spring	32°	15 N	Std.	0,40	P2LCX513VS
	G1/2	Lever	Spring	32°	15 N	Std.	0,60	P2LDX514VS
<b>5/3 valves, low temperature, lever 90° to ports</b>								
	G1/8	Lever	Lever	±14°	15 N	Std.	0,18	P2LAX61122
	G1/4	Closed centre position held in three positions		±12°	15 N	Std.	0,33	P2LBX61222
	G3/8	Closed centre position held in three positions		±16°	17 N	Std.	0,71	P2LCX61322
	G1/2	Closed centre position held in three positions		±16°	17 N	Std.	0,73	P2LDX61422
	G1/8	Lever	Lever	±14°	15 N	Std.	0,18	P2LAX81122
	G1/4	Exhausted centre position held in three positions		±12°	15 N	Std.	0,33	P2LBX81222
	G3/8	Exhausted centre position held in three positions		±16°	17 N	Std.	0,71	P2LCX81322
	G1/2	Exhausted centre position held in three positions		±16°	17 N	Std.	0,73	P2LDX81422
	G1/8	Lever	Lever	±14°	15 N	Std.	0,18	P2LAX71122
	G1/4	Pressure applied centre position held in three positions		±12°	15 N	Std.	0,33	P2LBX71222
	G3/8	Pressure applied centre position held in three positions		±16°	17 N	Std.	0,71	P2LCX71322
	G1/2	Pressure applied centre position held in three positions		±16°	17 N	Std.	0,73	P2LDX71422
	G1/8	Lever	Lever	±14°	16 N	Std.	0,18	P2LAX61111
	G1/4	Closed centre position		±12°	16 N	Std.	0,33	P2LBX61211
	G3/8	Closed centre position		±16°	30 N	Std.	0,71	P2LCX61311
	G1/2	Closed centre position		±16°	30 N	Std.	0,73	P2LDX61411
	G1/8	Lever	Lever	±14°	16 N	Std.	0,18	P2LAX81111
	G1/4	Exhausted centre position		±12°	16 N	Std.	0,33	P2LBX81211
	G3/8	Exhausted centre position		±16°	30 N	Std.	0,71	P2LCX81311
	G1/2	Exhausted centre position		±16°	30 N	Std.	0,73	P2LDX81411
	G1/8	Lever	Lever	±14°	16 N	Std.	0,18	P2LAX71111
	G1/4	Exhausted centre position		±12°	16 N	Std.	0,33	P2LBX71211
	G3/8	Exhausted centre position		±16°	30 N	Std.	0,71	P2LCX71311
	G1/2	Exhausted centre position		±16°	30 N	Std.	0,73	P2LDX71411



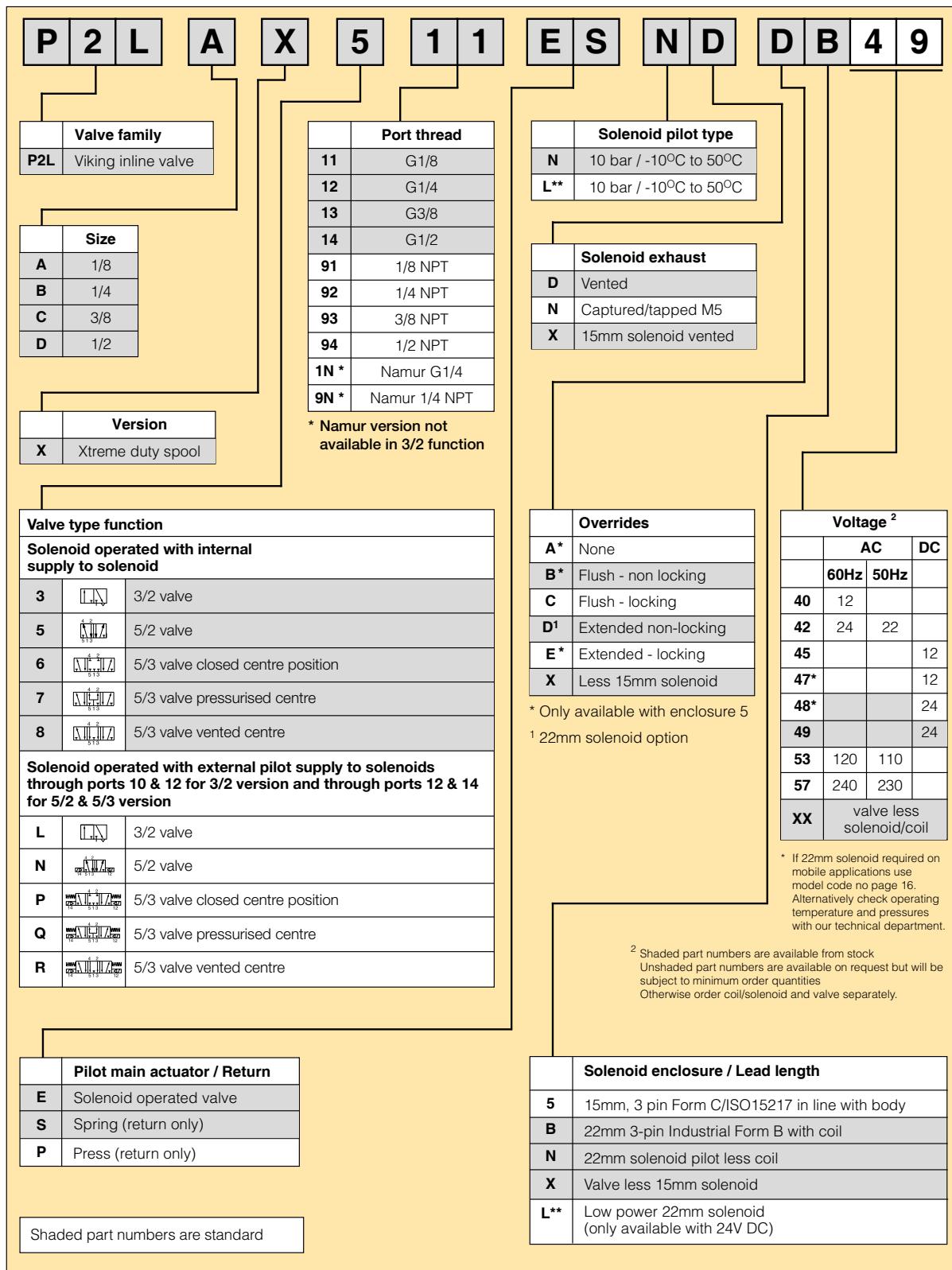
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**Lever operated directional control valves, lever in line with ports**

Max operating pressure 16 bar. Temp range -40°C to +60°C

Symbol	Size	Actuation	Return	Changeover angle	Changeover Force	Type	Weight Kg	Order code
<b>3/2 valves, temperature -40°C to +60°C, Lever In Line with ports</b>								
	G1/4	Lever	Lever	26°	18 N	Std.	0,42	P2LBX312ZZ
	G1/4	Lever	Spring	26°	18 N	Std.	0,42	P2LBX312ZS
<b>5/2 valves, temperature -40°C to +60°C, Lever In Line with ports</b>								
	G1/4	Lever	Lever	26°	18 N	Std.	0,45	P2LBX512ZZ
	G1/4	Lever	Spring	26°	18 N	Std.	0,45	P2LBX512ZS
<b>5/3 valves, temperature -40°C to +60°C, Lever In Line with ports</b>								
	G1/4	Lever	Lever	15° / 15°	24 N	Std.	0,51	P2LBX61255
	G1/4	Lever	Lever	15° / 15°	24 N	Std.	0,51	P2LBX71255
	G1/4	Lever	Lever	15° / 15°	24 N	Std.	0,51	P2LBX81255
	G1/4	Lever	Lever	15° / 15°	18 N	Std.	0,48	P2LBX61266
	G1/4	Lever	Lever	15° / 15°	18 N	Std.	0,48	P2LBX71266
	G1/4	Lever	Lever	15° / 15°	18 N	Std.	0,48	P2LBX81266

## Order chart - Viking Xtreme Normal Operating Pressure / Temperature



PDE2569TCUK

**Directional control valves****Viking Xtreme****Solenoid operated directional control valves fitted with 15mm solenoid(s) 24V DC**

Solenoid plug/connector to ordered separately.

Internal supply to solenoid valve(s) via port 1. Max operating pressure 10 bar, temp range -10°C to +50°C

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,42	P2LAX311EENXB549
	G1/4			1,5	10/12	0,42	P2LBX312EENXB549
	G3/8			1,5	17/17	0,53	P2LCX313EENXB549
	G1/2			1,5	17/17	0,53	P2LDX314EENXB549
	G1/8	Electric signal	Spring	3,2	18/40	0,38	P2LAX311ESNXB549
	G1/4			3,5	18/45	0,38	P2LBX312ESNXB549
	G3/8			3,5	25/75	0,50	P2LCX313ESNXB549
	G1/2			3,5	25/75	0,50	P2LDX314ESNXB549
<b>5/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,27	P2LAX511EENXB549
	G1/4			1,5	12/12	0,42	P2LBX512EENXB549
	G3/8			1,5	17/17	0,53	P2LCX513EENXB549
	G1/2			1,5	17/17	0,53	P2LDX514EENXB549
	G1/8	Electric signal	Spring	3,2	15/35	0,22	P2LAX511ESNXB549
	G1/4			3,5	18/45	0,38	P2LBX512ESNXB549
	G3/8			3,5	25/75	0,50	P2LCX513ESNXB549
	G1/2			3,5	25/75	0,50	P2LDX514ESNXB549
<b>5/3 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX611EENXB549
	G1/4	Closed centre position	Self centring	3,5	22/55	0,44	P2LBX612EENXB549
	G3/8			3,5	30/90	0,55	P2LCX613EENXB549
	G1/2			3,5	30/95	0,55	P2LDX614EENXB549
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX811EENXB549
	G1/4	Vented centre position	Self centring	3,5	22/55	0,44	P2LBX812EENXB549
	G3/8			3,5	30/90	0,55	P2LCX813EENXB549
	G1/2			3,5	30/95	0,55	P2LDX814EENXB549
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX711EENXB549
	G1/4	Pressurised centre position	Self centring	3,5	22/55	0,44	P2LBX712EENXB549
	G3/8			3,5	30/90	0,55	P2LCX713EENXB549
	G1/2			3,5	30/95	0,55	P2LDX714EENXB549

PDE2569TCUK

**Directional control valves****Viking Xtreme****Solenoid operated directional control valves fitted with adapter to accept 15mm solenoid(s)**

Solenoid operator(s) and connector/plug(s) should be ordered separately.

**Internal supply to solenoid valve(s) via port 1. Max operating pressure 10 bar, temp range -10°C to +50°C**

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,38	P2LAX311EENXXX
	G1/4			1,5	10/12	0,38	P2LBX312EENXXX
	G3/8			1,5	17/17	0,45	P2LCX313EENXXX
	G1/2			1,5	17/17	0,45	P2LDX314EENXXX
	G1/8	Electric signal	Spring	3,2	18/40	0,38	P2LAX311ESNXXX
	G1/4			3,5	18/45	0,38	P2LBX312ESNXXX
	G3/8			3,5	25/75	0,42	P2LCX313ESNXXX
	G1/2			3,5	25/75	0,42	P2LDX314ESNXXX
<b>5/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,27	P2LAX511EENXXX
	G1/4			1,5	12/12	0,42	P2LBX512EENXXX
	G3/8			1,5	17/17	0,45	P2LCX513EENXXX
	G1/2			1,5	17/17	0,45	P2LDX514EENXXX
	G1/8	Electric signal	Spring	3,2	15/35	0,22	P2LAX511ESNXXX
	G1/4			3,5	18/45	0,38	P2LBX512ESNXXX
	G3/8			3,5	25/75	0,42	P2LCX513ESNXXX
	G1/2			3,5	25/75	0,42	P2LDX514ESNXXX
<b>5/3 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX611EENXXX
	G1/4	Closed centre	Self	3,5	22/55	0,44	P2LBX612EENXXX
	G3/8	position	centring	3,5	30/90	0,55	P2LCX613EENXXX
	G1/2			3,5	30/95	0,55	P2LDX614EENXXX
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX811EENXXX
	G1/4	Vented centre	Self	3,5	22/55	0,44	P2LBX812EENXXX
	G3/8	position	centring	3,5	30/90	0,55	P2LCX813EENXXX
	G1/2			3,5	30/95	0,55	P2LDX814EENXXX
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX711EENXXX
	G1/4	Pressurised	Self	3,5	22/55	0,44	P2LBX712EENXXX
	G3/8	centre	centring	3,5	30/90	0,55	P2LCX713EENXXX
	G1/2	position		3,5	30/95	0,55	P2LDX714EENXXX

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**Directional control valves****Viking Xtreme****Solenoid operated directional control valves fitted with adapter to accept 15mm solenoid(s)**

Solenoid operator(s) and connector/plug(s) should be ordered separately.

External supply to solenoid valve(s) via ports 10 &amp; 12 for 3/2 version and via port 12 &amp; 14 for 5/2 and 5/3 version.

Max operating pressure 10 bar, temp range -10°C to +50°C

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,34	P2LAXL11EENXXX
	G1/4			1,5	10/12	0,34	P2LBXL12EENXXX
	G3/8			1,5	17/17	0,45	P2LCXL13EENXXX
	G1/2			1,5	17/17	0,45	P2LDXL14EENXXX
	G1/8	Electric signal	Spring	3,2	18/40	0,34	P2LAXL11ESNXXX
	G1/4			3,5	18/45	0,34	P2LBXL12ESNXXX
	G3/8			3,5	25/75	0,42	P2LCXL13ESNXXX
	G1/2			3,5	25/75	0,42	P2LDXL14ESNXXX
<b>5/2 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,19	P2LAXN11EENXXX
	G1/4			1,5	12/12	0,34	P2LBXN12EENXXX
	G3/8			1,5	17/17	0,45	P2LCXN13EENXXX
	G1/2			1,5	17/17	0,45	P2LDXN14EENXXX
	G1/8	Electric signal	Spring	3,2	15/35	0,18	P2LAXN11ESNXXX
	G1/4			3,5	18/45	0,34	P2LBXN12ESNXXX
	G3/8			3,5	25/75	0,42	P2LCXN13ESNXXX
	G1/2			3,5	25/75	0,42	P2LDXN14ESNXXX
<b>5/3 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/40	0,20	P2LAXP11EENXXX
	G1/4	Closed centre position	Self centring	3,5	22/55	0,36	P2LBXP12EENXXX
	G3/8			3,5	30/90	0,55	P2LCXP13EENXXX
	G1/2			3,5	30/95	0,55	P2LDXP14EENXXX
	G1/8	Electric signal	Electric signal	3,5	18/40	0,20	P2LAXR11EENXXX
	G1/4	Vented centre position	Self centring	3,5	22/55	0,36	P2LBXR12EENXXX
	G3/8			3,5	30/90	0,55	P2LCXR13EENXXX
	G1/2			3,5	30/95	0,55	P2LDXR14EENXXX
	G1/8	Electric signal	Electric signal	3,5	18/40	0,20	P2LAXQ11EENXXX
	G1/4	Pressurised centre position	Self centring	3,5	22/55	0,36	P2LBXQ12EENXXX
	G3/8			3,5	30/90	0,55	P2LCXQ13EENXXX
	G1/2			3,5	30/95	0,55	P2LDXQ14EENXXX


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PDE2569TCUK

**Directional control valves****Viking Xtreme****Solenoid operated directional control valves fitted with 22mm solenoid(s) 24V DC**

Solenoid plug/connector to be ordered separately.

Internal supply to solenoid valve(s) via port 1. Max operating pressure 10 bar, Temperature range -10°C to +50°C

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changecover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,42	P2LAX311EENDB49
	G1/4			1,5	10/12	0,42	P2LBX312EENDB49
	G3/8			1,5	17/17	0,81	P2LCX313EENDB49
	G1/2			1,5	17/17	0,81	P2LDX314EENDB49
	G1/8	Electric signal	Spring	3,2	18/40	0,38	P2LAX311ESNDB49
	G1/4			3,5	18/45	0,38	P2LBX312ESNDB49
	G3/8			3,5	25/75	0,76	P2LCX313ESNDB49
	G1/2			3,5	25/75	0,76	P2LDX314ESNDB49
<b>5/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,27	P2LAX511EENDB49
	G1/4			1,5	12/12	0,42	P2LBX512EENDB49
	G3/8			1,5	17/17	0,81	P2LCX513EENDB49
	G1/2			1,5	17/17	0,81	P2LDX514EENDB49
	G1/8	Electric signal	Spring	3,2	15/35	0,22	P2LAX511ESNDB49
	G1/4			3,5	18/45	0,38	P2LBX512ESNDB49
	G3/8			3,5	27/75	0,76	P2LCX513ESNDB49
	G1/2			3,5	25/75	0,76	P2LDX514ESNDB49
<b>5/3 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX611EENDB49
	G1/4	Closed centre	Self	3,5	22/55	0,44	P2LBX612EENDB49
	G3/8	position	centring	3,5	30/90	1,11	P2LCX613EENDB49
	G1/2			3,5	30/90	1,11	P2LDX614EENDB49
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX811EENDB49
	G1/4	Vented centre	Self	3,5	22/45	0,44	P2LBX812EENDB49
	G3/8	position	centring	3,5	30/90	1,11	P2LCX813EENDB49
	G1/2			3,5	30/90	1,11	P2LDX814EENDB49
	G1/8	Electric signal	Electric signal	3,5	18/40	0,28	P2LAX711EENDB49
	G1/4	Pressurised	Self	3,5	22/45	0,44	P2LBX712EENDB49
	G3/8	centre	centring	3,5	30/90	1,11	P2LCX713EENDB49
	G1/2	position		3,5	30/90	1,11	P2LDX714EENDB49



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**Solenoid operated directional control valves  
(supplied with 22mm solenoid operator less coil)**

Solenoid plug/connector to be ordered separately.

**Internal supply to solenoid valve(s) via port 1.**

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,31	P2LAX311EENDDN
	G1/4			1,5	10/12	0,31	P2LBX312EENDDN
	G3/8			1,5	17/17	0,41	P2LCX313EENDDN
	G1/2			1,5	17/17	0,41	P2LDX314EENDDN
	G1/8	Electric signal	Spring	3,2	18/40	0,31	P2LAX311ESNDDN
	G1/4			3,5	18/45	0,31	P2LBX312ESNDDN
	G3/8			3,5	25/75	0,40	P2LCX313ESNDDN
	G1/2			3,5	25/75	0,40	P2LDX314ESNDDN
<b>5/2 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	9/9	0,16	P2LAX511EENDDN
	G1/4			1,5	10/10	0,31	P2LBX512EENDDN
	G3/8			1,5	13/13	0,41	P2LCX513EENDDN
	G1/2			1,5	13/13	0,41	P2LDX514EENDDN
	G1/8	Electric signal	Spring	3,2	12/38	0,16	P2LAX511ESNDDN
	G1/4			3,5	14/42	0,31	P2LBX512ESNDDN
	G3/8			3,5	16/60	0,40	P2LCX513ESNDDN
	G1/2			3,5	16/60	0,40	P2LDX514ESNDDN
<b>5/3 valves, internal air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAX611EENDDN
	G1/4	Closed centre position	Self centring	3,5	18/50	0,33	P2LBX612EENDDN
	G3/8			3,5	20/65	1,00	P2LCX613EENDDN
	G1/2			3,5	20/70	1,00	P2LDX614EENDDN
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAX811EENDDN
	G1/4	Vented centre position	Self centring	3,5	18/50	0,33	P2LBX812EENDDN
	G3/8			3,5	20/65	1,00	P2LCX813EENDDN
	G1/2			3,5	20/70	1,00	P2LDX814EENDDN
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAX711EENDDN
	G1/4	Pressurised centre position	Self centring	3,5	18/50	0,33	P2LBX712EENDDN
	G3/8			3,5	20/65	1,00	P2LCX713EENDDN
	G1/2			3,5	20/70	1,00	P2LDX714EENDDN

PDE2569TCUK

**Directional control valves****Viking Xtreme****Solenoid operated directional control valves (supplied with 22mm solenoid less coil)**

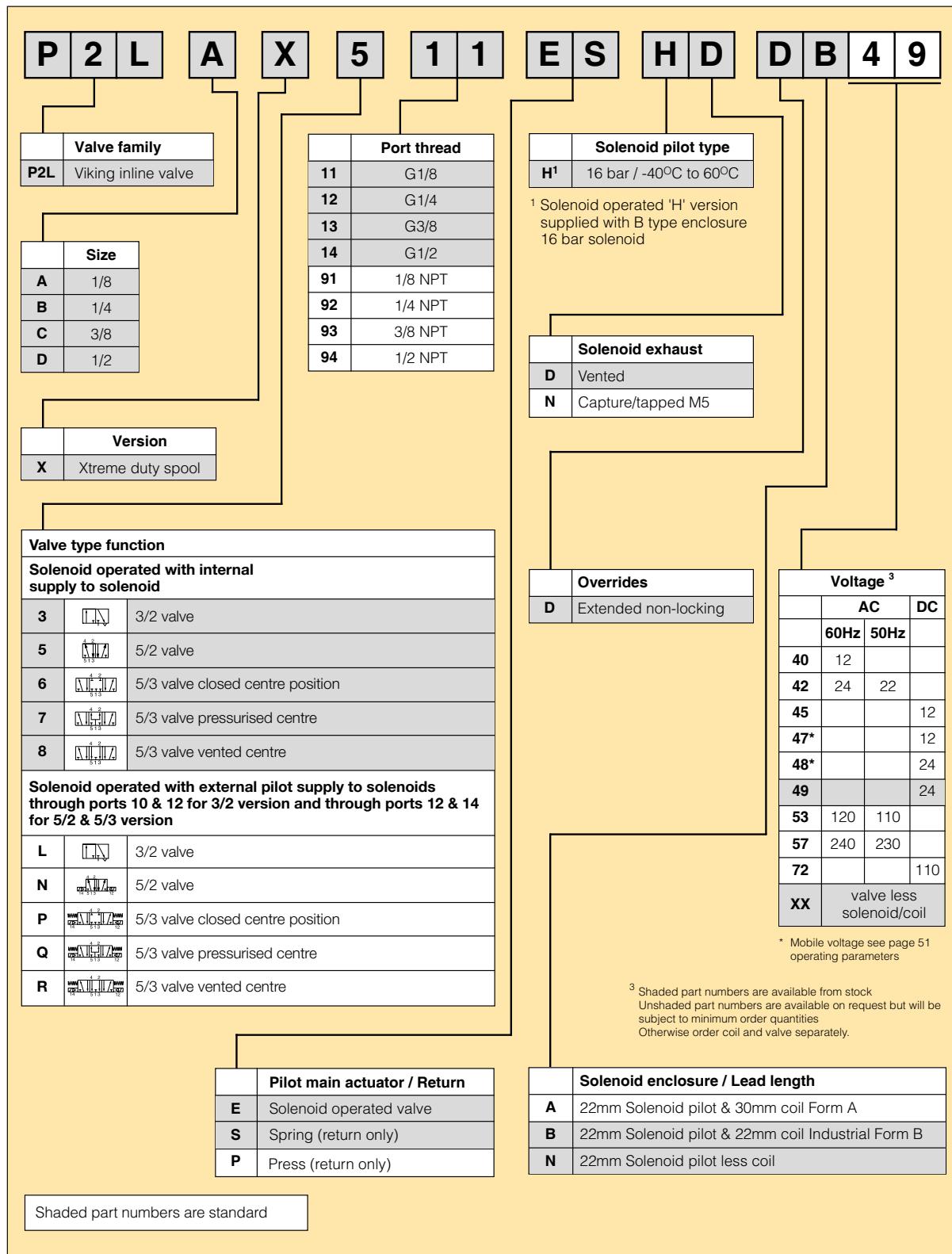
Solenoid plug/connector to be ordered separately.

External supply to solenoid valve(s) via ports 10 &amp; 12 for 3/2 version and via port 12 &amp; 14 for 5/2 and 5/3 version

Standard temp range -10°C to +50°C. Max operating pressure 10 bar

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,31	P2LAXL11EENDDN
	G1/4			1,5	10/12	0,31	P2LBXL12EENDDN
	G3/8			1,5	17/17	0,70	P2LCXL13EENDDN
	G1/2			1,5	17/17	0,70	P2LDXL14EENDDN
	G1/8	Electric signal	Spring	3,2	18/40	0,30	P2LAXL11ESNDDN
	G1/4			3,5	18/45	0,30	P2LBXL12ESNDDN
	G3/8			3,5	25/75	0,70	P2LCXL13ESNDDN
	G1/2			3,5	25/75	0,70	P2LDXL14ESNDDN
<b>5/2 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	9/9	0,16	P2LAXN11EENDDN
	G1/4			1,5	10/10	0,31	P2LBXN12EENDDN
	G3/8			1,5	13/13	0,70	P2LCXN13EENDDN
	G1/2			1,5	13/13	0,70	P2LDXN14EENDDN
	G1/8	Electric signal	Spring	3,2	12/38	0,16	P2LAXN11ESNDDN
	G1/4			3,5	14/42	0,30	P2LBXN12ESNDDN
	G3/8			3,5	16/60	0,70	P2LCXN13ESNDDN
	G1/2			3,5	16/60	0,70	P2LDXN14ESNDDN
<b>5/3 valves, external air, standard temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAXP11EENDDN
	G1/4	Closed centre position	Self centring	3,5	18/50	0,33	P2LBXP12EENDDN
	G3/8			3,5	20/65	1,00	P2LCXP13EENDDN
	G1/2			3,5	20/70	1,00	P2LDXP14EENDDN
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAXR11EENDDN
	G1/4	Vented centre position	Self centring	3,5	18/50	0,33	P2LBXR12EENDDN
	G3/8			3,5	20/65	1,00	P2LCXR13EENDDN
	G1/2			3,5	20/70	1,00	P2LDXR14EENDDN
	G1/8	Electric signal	Electric signal	3,5	15/40	0,17	P2LAXQ11EENDDN
	G1/4	Pressurised centre	Self centring	3,5	18/50	0,33	P2LBXQ12EENDDN
	G3/8			3,5	20/65	1,00	P2LCXQ13EENDDN
	G1/2			3,5	20/70	1,00	P2LDXQ14EENDDN

## Order chart - Viking Xtreme Valves - Xtreme operating pressure / temperature



PDE2569TCUK

**Directional control valves****Viking Xtreme****Solenoid operated directional control valves - Xtreme duty -40°C to +60°C****P2LAX/P2LBX - 16 bar, P2LCX/P2LDX - 12 bar**

Complete with 22mm solenoid and 24V DC coil.

Internal supply to solenoid valve(s) via port 1. Connector/cable plugs to be ordered separately.

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	11/11	0,42	P2LAX311EEHDB49
	G1/4		Low temp.	1,5	13/13	0,42	P2LBX312EEHDB49
	G3/8			1,5	18/18	0,48	P2LCX313EEHDB49
	G1/2			1,5	18/18	0,48	P2LDX314EEHDB49
	G1/8	Electric signal	Spring	3,2	15/45	0,38	P2LAX311ESHDB49
	G1/4		Low temp.	3,5	25/65	0,38	P2LBX312ESHDB49
	G3/8			3,5	25/85	0,46	P2LCX313ESHDB49
	G1/2			3,5	25/85	0,46	P2LDX314ESHDB49
<b>5/2 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	11/11	0,27	P2LAX511EEHDB49
	G1/4		Low temp.	1,5	13/13	0,42	P2LBX512EEHDB49
	G3/8			1,5	18/18	0,48	P2LCX513EEHDB49
	G1/2			1,5	18/18	0,48	P2LDX514EEHDB49
	G1/8	Electric signal	Spring	3,2	15/45	0,22	P2LAX511ESHDB49
	G1/4		Low temp.	3,2	20/55	0,38	P2LBX512ESHDB49
	G3/8			3,2	25/85	0,46	P2LCX513ESHDB49
	G1/2			3,2	25/85	0,46	P2LDX514ESHDB49
<b>5/3 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAX611EEHDB49
	G1/4	Closed centre	Self	3,5	25/65	0,45	P2LBX612EEHDB49
	G3/8	position	centring	3,5	30/90	0,55	P2LCX613EEHDB49
	G1/2		Low temp.	3,5	30/95	0,55	P2LDX614EEHDB49
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAX811EEHDB49
	G1/4	Vented centre	Self	3,5	25/65	0,45	P2LBX812EEHDB49
	G3/8	position	centring	3,5	30/90	0,55	P2LCX813EEHDB49
	G1/2		Low temp.	3,5	30/95	0,55	P2LDX814EEHDB49
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAX711EEHDB49
	G1/4	Pressurised	Self	3,5	25/65	0,45	P2LBX712EEHDB49
	G3/8	centre	centring	3,5	30/90	0,55	P2LCX713EEHDB49
	G1/2	position	Low temp.	3,5	30/95	0,55	P2LDX714EEHDB49



**Solenoid operated directional control valves - Xtreme duty -40°C to +60°C****P2LAX/P2LBX - 16 bar, P2LCX/P2LDX - 12 bar**

Valves fitted with 22mm solenoid operator(s) less coil(s). Order coils and plug/connectors separately  
**Internal supply to solenoid valve(s) via port 1. Connector/cable plugs to be ordered separately.**

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	11/11	0,31	<b>P2LAX311EEHDDN</b>
	G1/4			1,5	13/13	0,31	<b>P2LBX312EEHDDN</b>
	G3/8			1,5	18/18	0,41	<b>P2LCX313EEHDDN</b>
	G1/2			1,5	18/18	0,41	<b>P2LDX314EEHDDN</b>
	G1/8	Electric signal	Spring	3,2	15/45	0,31	<b>P2LAX311ESHDDN</b>
	G1/4			3,5	25/65	0,31	<b>P2LBX312ESHDDN</b>
	G3/8			3,5	25/85	0,40	<b>P2LCX313ESHDDN</b>
	G1/2			3,5	25/85	0,40	<b>P2LDX314ESHDDN</b>
<b>5/2 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	11/11	0,16	<b>P2LAX511EEHDDN</b>
	G1/4			1,5	13/13	0,31	<b>P2LBX512EEHDDN</b>
	G3/8			1,5	18/18	0,41	<b>P2LCX513EEHDDN</b>
	G1/2			1,5	18/18	0,41	<b>P2LDX514EEHDDN</b>
	G1/8	Electric signal	Spring	3,2	15/45	0,16	<b>P2LAX511ESHDDN</b>
	G1/4			3,2	20/55	0,31	<b>P2LBX512ESHDDN</b>
	G3/8			3,2	25/85	0,40	<b>P2LCX513ESHDDN</b>
	G1/2			3,2	25/85	0,40	<b>P2LDX514ESHDDN</b>
<b>5/3 valves, internal air, low temperature</b>							
	G1/8	Electric signal	Electric signal	3,5	18/50	0,17	<b>P2LAX611EEHDDN</b>
	G1/4	Closed centre position	Self centring	3,5	25/65	0,33	<b>P2LBX612EEHDDN</b>
	G3/8			3,5	30/90	0,42	<b>P2LCX613EEHDDN</b>
	G1/2			3,5	30/95	0,42	<b>P2LDX614EEHDDN</b>
	G1/8	Electric signal	Electric signal	3,5	18/50	0,17	<b>P2LAX811EEHDDN</b>
	G1/4	Vented centre position	Self centring	3,5	25/65	0,33	<b>P2LBX812EEHDDN</b>
	G3/8			3,5	30/90	0,42	<b>P2LCX813EEHDDN</b>
	G1/2			3,5	30/95	0,42	<b>P2LDX814EEHDDN</b>
	G1/8	Electric signal	Electric signal	3,5	18/50	0,17	<b>P2LAX711EEHDDN</b>
	G1/4	Pressurised centre position	Self centring	3,5	25/65	0,33	<b>P2LBX712EEHDDN</b>
	G3/8			3,5	30/90	0,42	<b>P2LCX713EEHDDN</b>
	G1/2			3,5	30/95	0,42	<b>P2LDX714EEHDDN</b>

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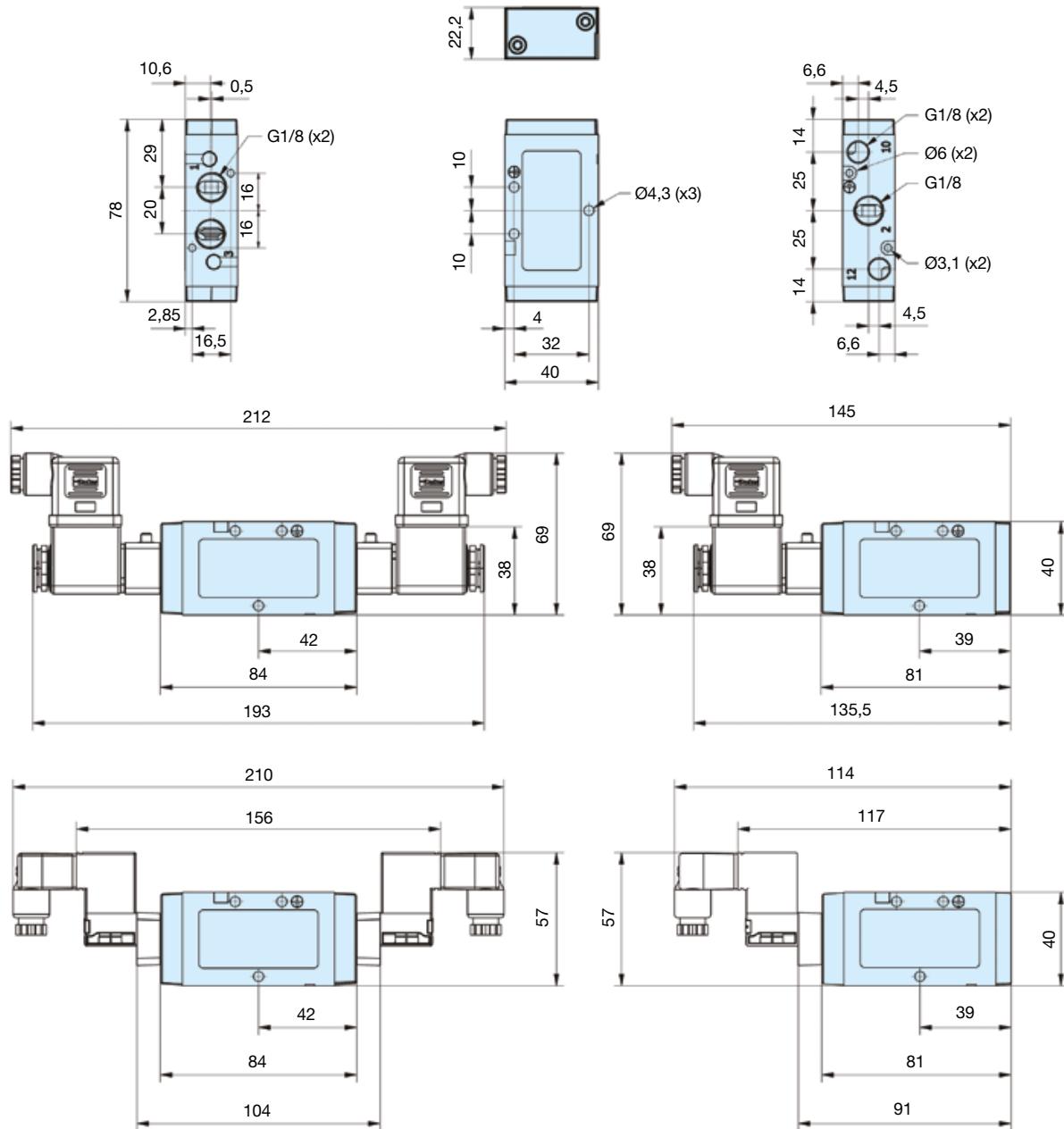
**Directional control valves****Viking Xtreme****Solenoid operated directional control valves - Xtreme duty -40°C to + 60°C****P2LAX/P2LBX - 16 bar, P2LCX/P2LDX - 12 bar**

Valves fitted with 22mm solenoid operator(s) less coil(s). Order coils and plug/connectors separately  
**External supply to solenoid valve(s) via ports 10 & 12 for 3/2 version and via port 12 & 14 for 5/2 and 5/3 version**

Symbol	Size	Actuation	Return	Min Operating Pressure (bar)	Changeover time (ms) at 6 bar @20°C actua./return	Weight Kg	Order code
<b>3/2 valves, external air standard temperature</b>							
	G1/8	Electric signal	Electric signal	1,5	10/10	0,42	P2LAXL11EEHDDN
	G1/4			1,5	10/12	0,42	P2LBXL12EEHDDN
	G3/8			1,5	17/17	0,81	P2LCXL13EEHDDN
	G1/2			1,5	17/17	0,81	P2LDXL14EEHDDN
	G1/8	Electric signal	Spring	3,2	18/40	0,42	P2LAXL11ESHDDN
	G1/4			3,5	18/45	0,42	P2LBXL12ESHDDN
	G3/8			3,5	25/75	0,76	P2LCXL13ESHDDN
	G1/2			3,5	25/75	0,76	P2LDXL14ESHDDN
<b>5/2 valves, external air to pilot operators</b>							
	G1/8	Electric signal	Electric signal	1,5	11/11	0,27	P2LAXN11EEHDDN
	G1/4			1,5	13/13	0,42	P2LBXN12EEHDDN
	G3/8			1,5	18/18	0,81	P2LCXN13EEHDDN
	G1/2			1,5	18/18	0,81	P2LDXN14EEHDDN
	G1/8	Electric signal	Spring	3,2	15/45	0,22	P2LAXN11ESHDDN
	G1/4			3,2	20/55	0,38	P2LBXN12ESHDDN
	G3/8			3,2	25/85	0,76	P2LCXN13ESHDDN
	G1/2			3,2	25/85	0,76	P2LDXN14ESHDDN
<b>5/3 valves, external air to pilot operators</b>							
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAXP11EEHDDN
	G1/4	Closed centre	Self	3,5	25/65	0,44	P2LBXP12EEHDDN
	G3/8	position	centring	3,5	30/90	1,11	P2LCXP13EEHDDN
	G1/2			3,5	30/95	1,11	P2LDXP14EEHDDN
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAXR11EEHDDN
	G1/4	Vented centre	Self	3,5	25/65	0,44	P2LBXR12EEHDDN
	G3/8	position	centring	3,5	30/90	1,11	P2LCXR13EEHDDN
	G1/2			3,5	30/95	1,11	P2LDXR14EEHDDN
	G1/8	Electric signal	Electric signal	3,5	18/50	0,28	P2LAXQ11EEHDDN
	G1/4	Pressurised	Self	3,5	25/65	0,44	P2LBXQ12EEHDDN
	G3/8	centre	centring	3,5	30/90	1,11	P2LCXQ13EEHDDN
	G1/2	position		3,5	30/95	1,11	P2LDXQ14EEHDDN


 Parker Hannifin Corporation  
 Pneumatic Division - Europe

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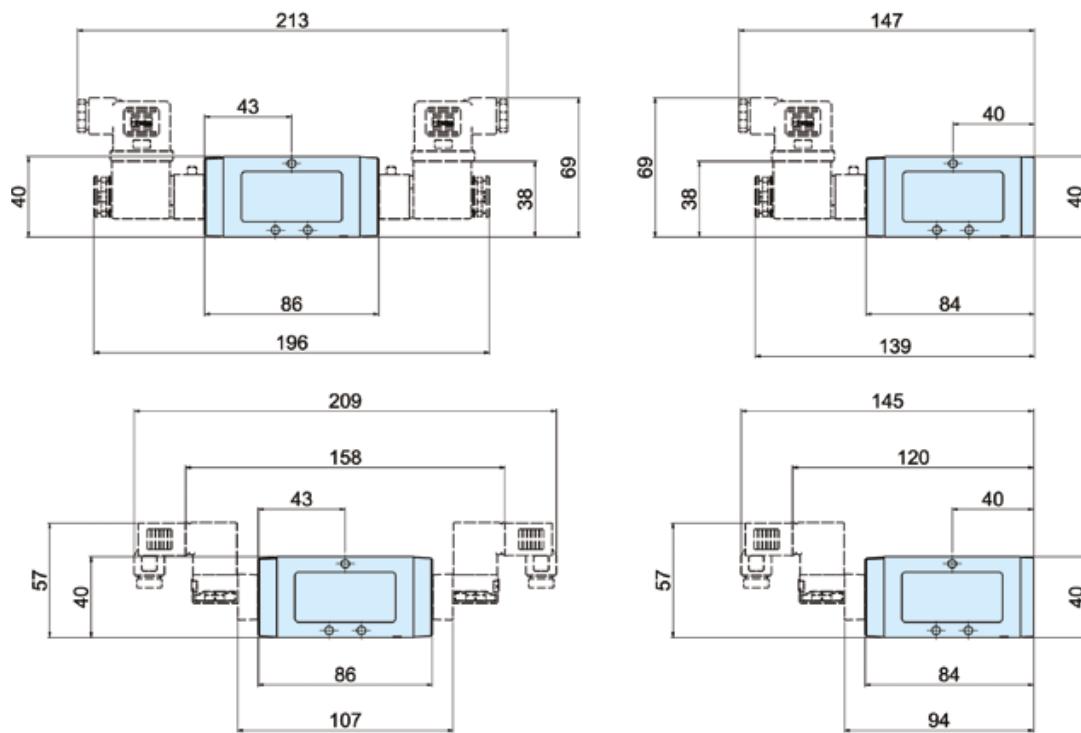
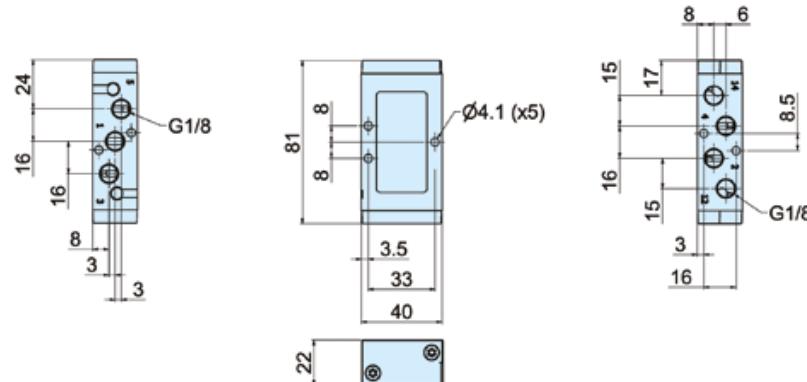
**Directional control valves****Viking Xtreme****Dimensions**P2LAX... all  
3/2 valves**Solenoid valves**

Cable plugs must be ordered separately.  
One pilot valve is required for each E in the valve order code.

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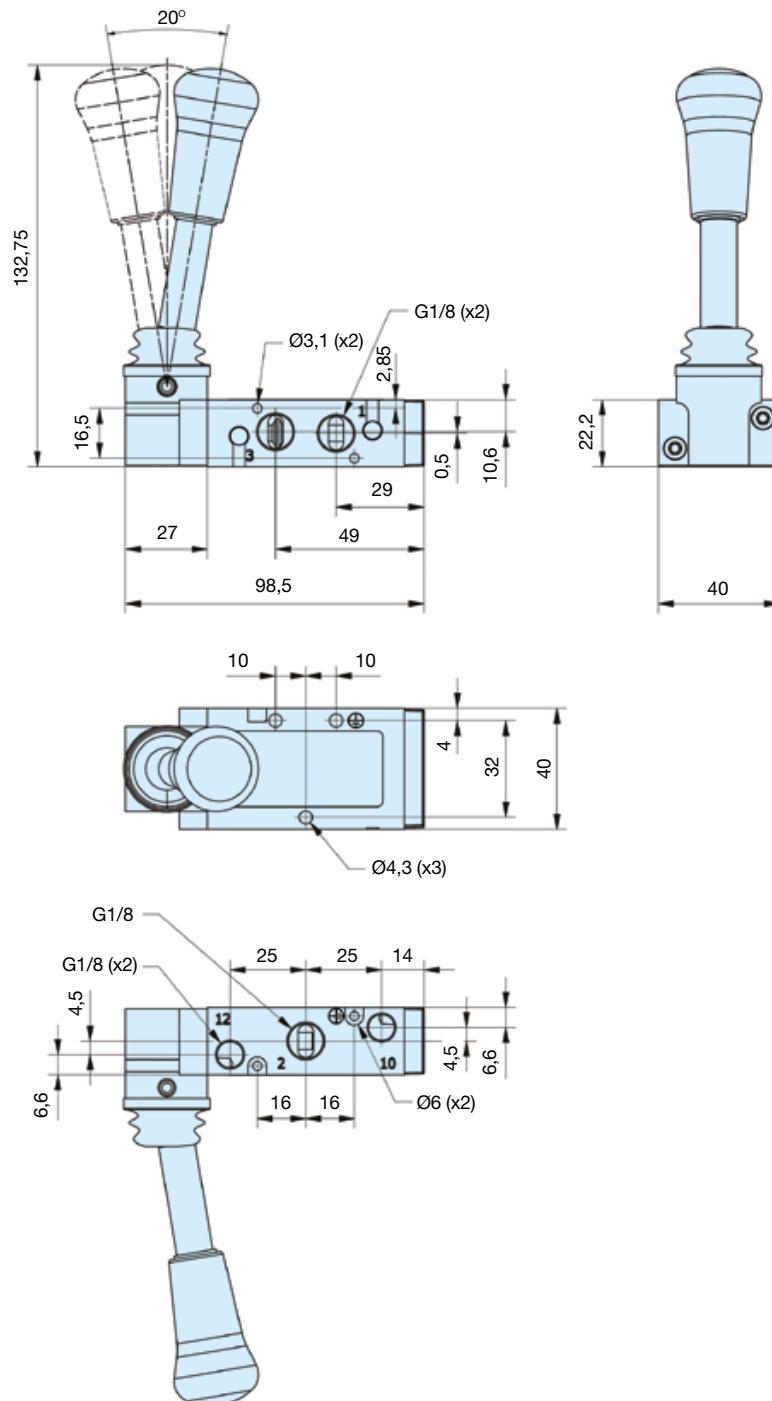
**Directional control valves****Viking Xtreme****Dimensions**

P2LAX... all  
5/2 and 5/3 valves

**Solenoid valves**

Cable plugs must be ordered separately.  
One pilot valve is required for each E in the valve order code.

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**Directional control valves****Viking Xtreme****Dimensions****P2LAX - 3/2 Lever operated directional control valves**

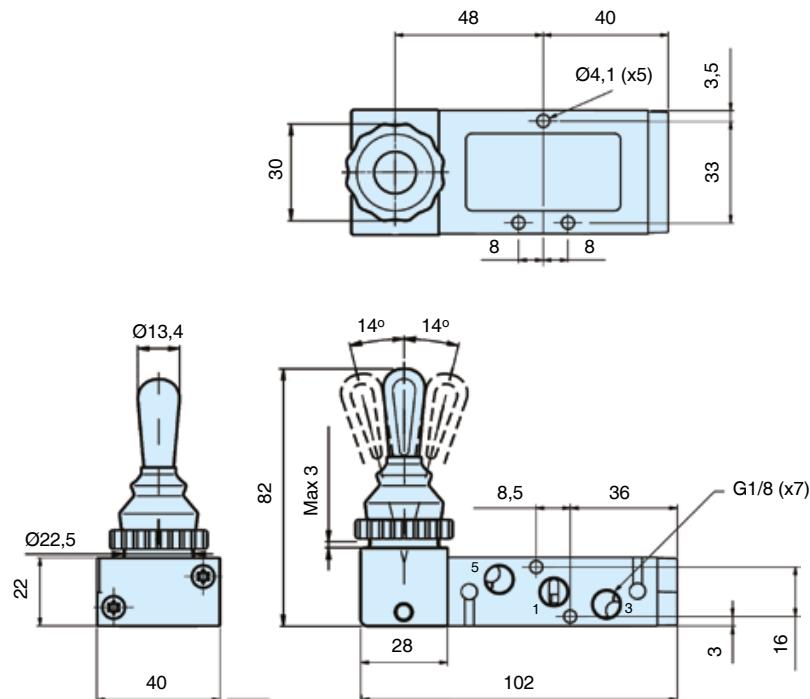
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## Directional control valves

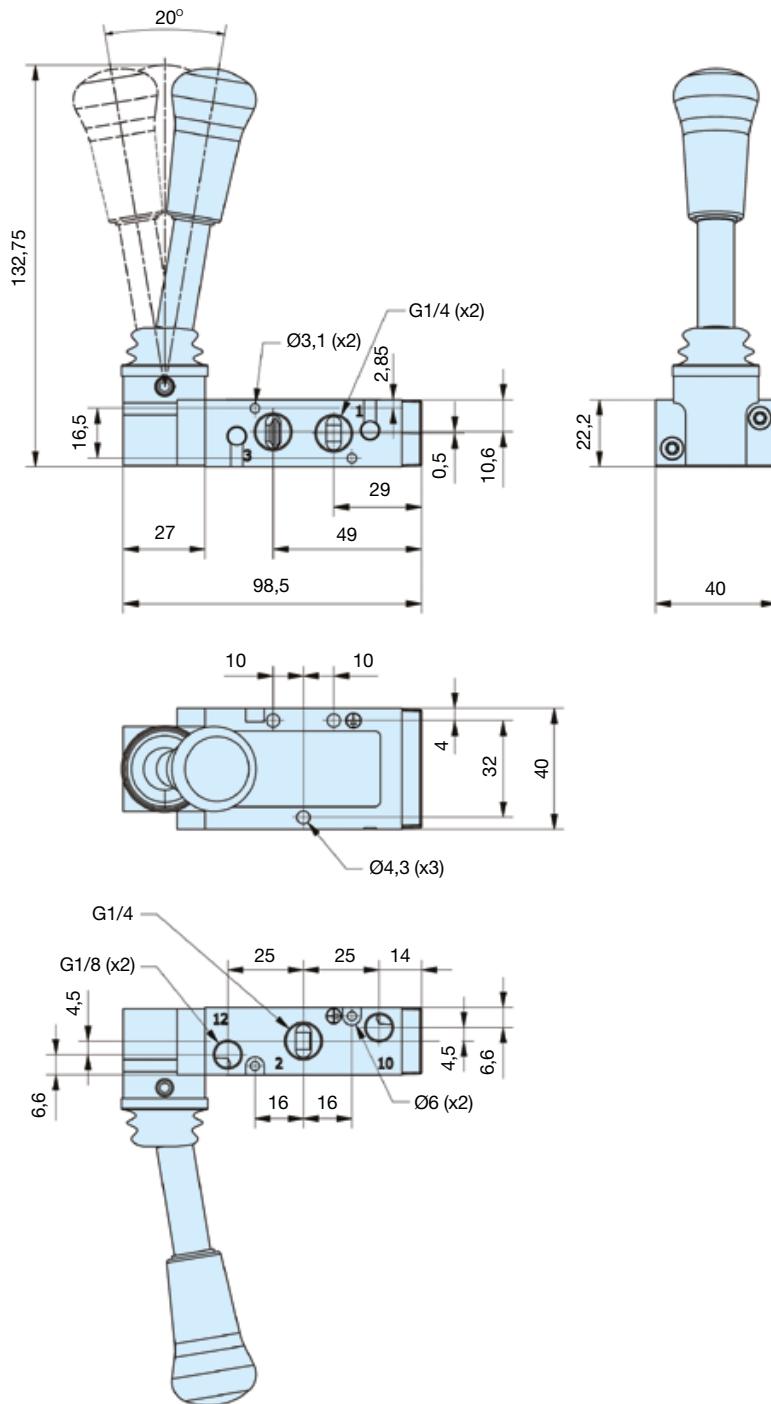
Viking Xtreme

### Dimensions

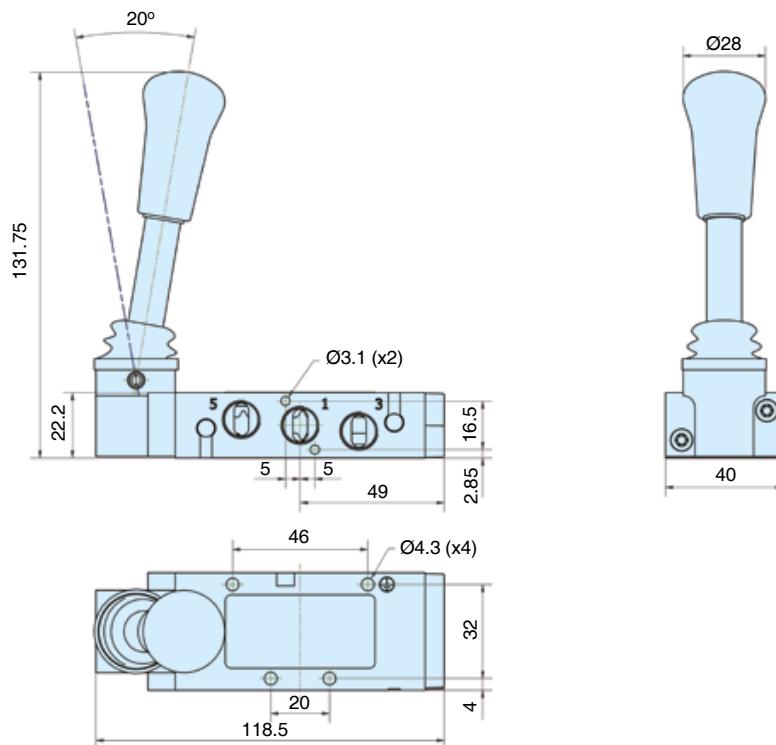
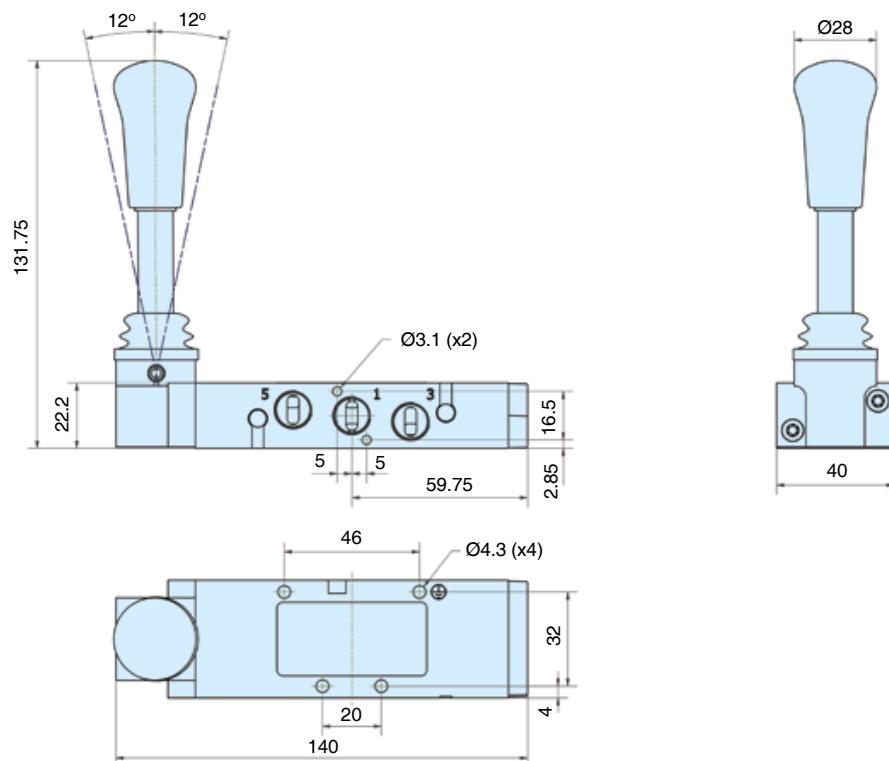
P2LAX - 5/2 & 5/3 Lever operated directional control valves



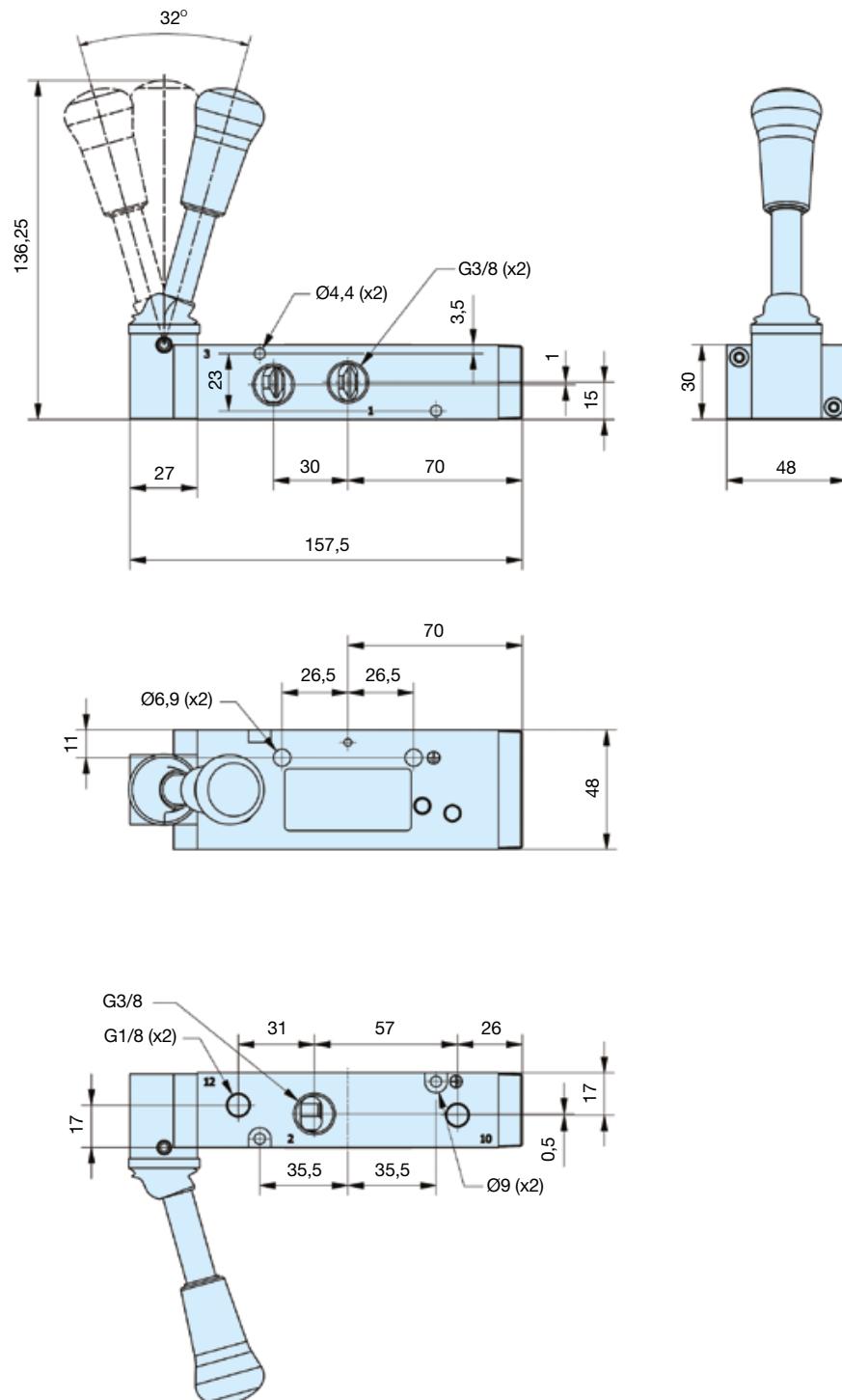
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**Directional control valves****Viking Xtreme****Dimensions****P2LBX - 3/2 Lever operated directional control valves**

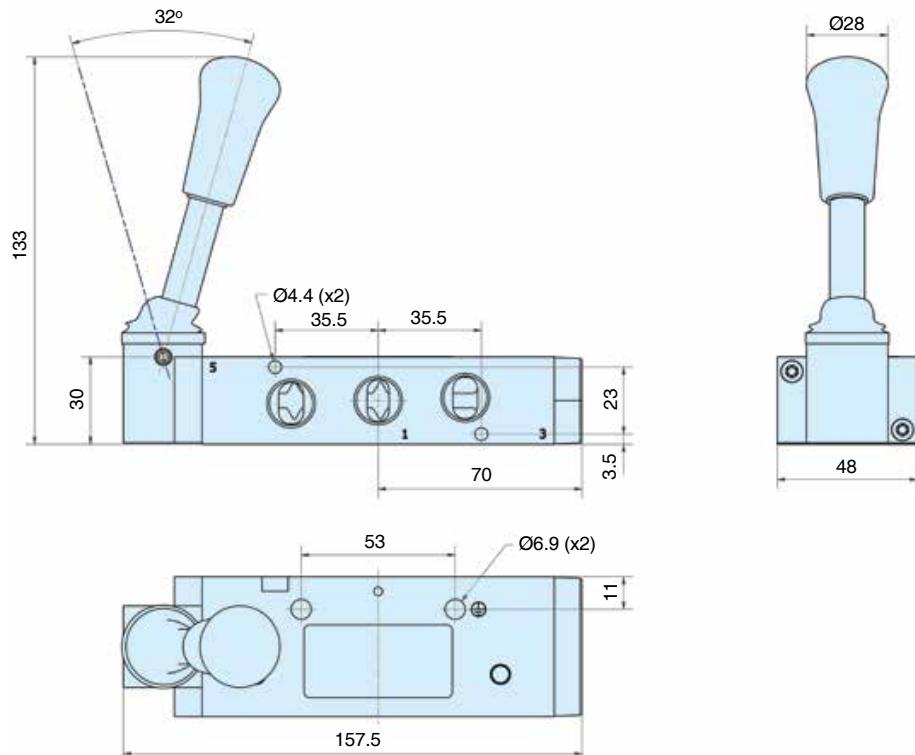
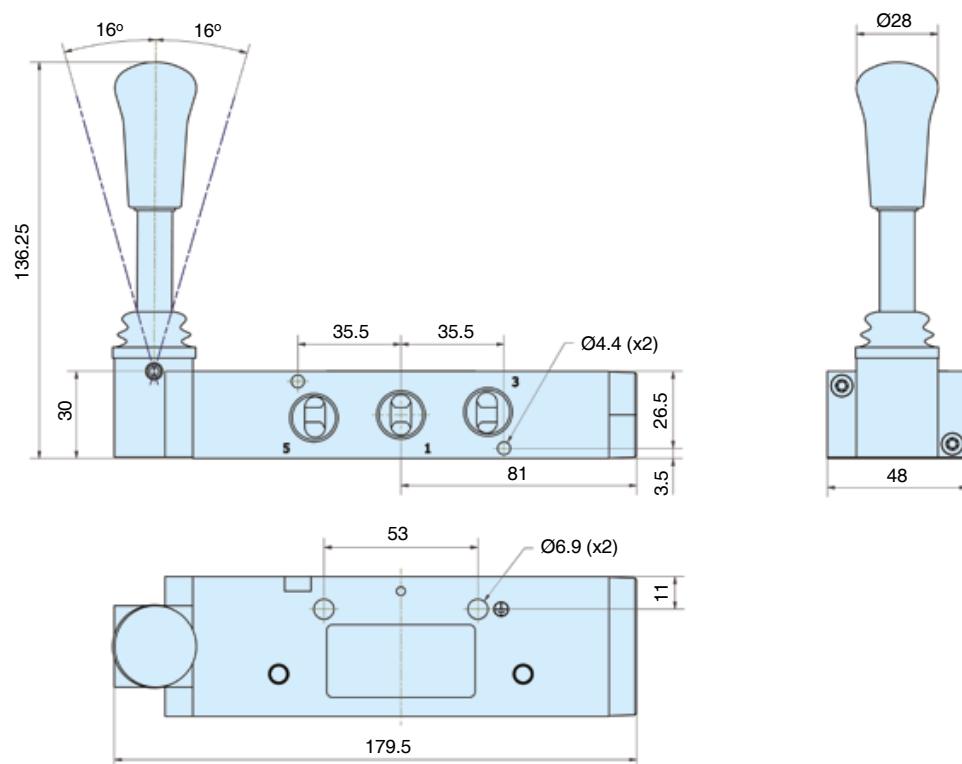
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**Directional control valves****Viking Xtreme****Dimensions****P2LBX - 5/2 Lever operated directional control valves****P2LBX - 5/3 Lever operated directional control valves**

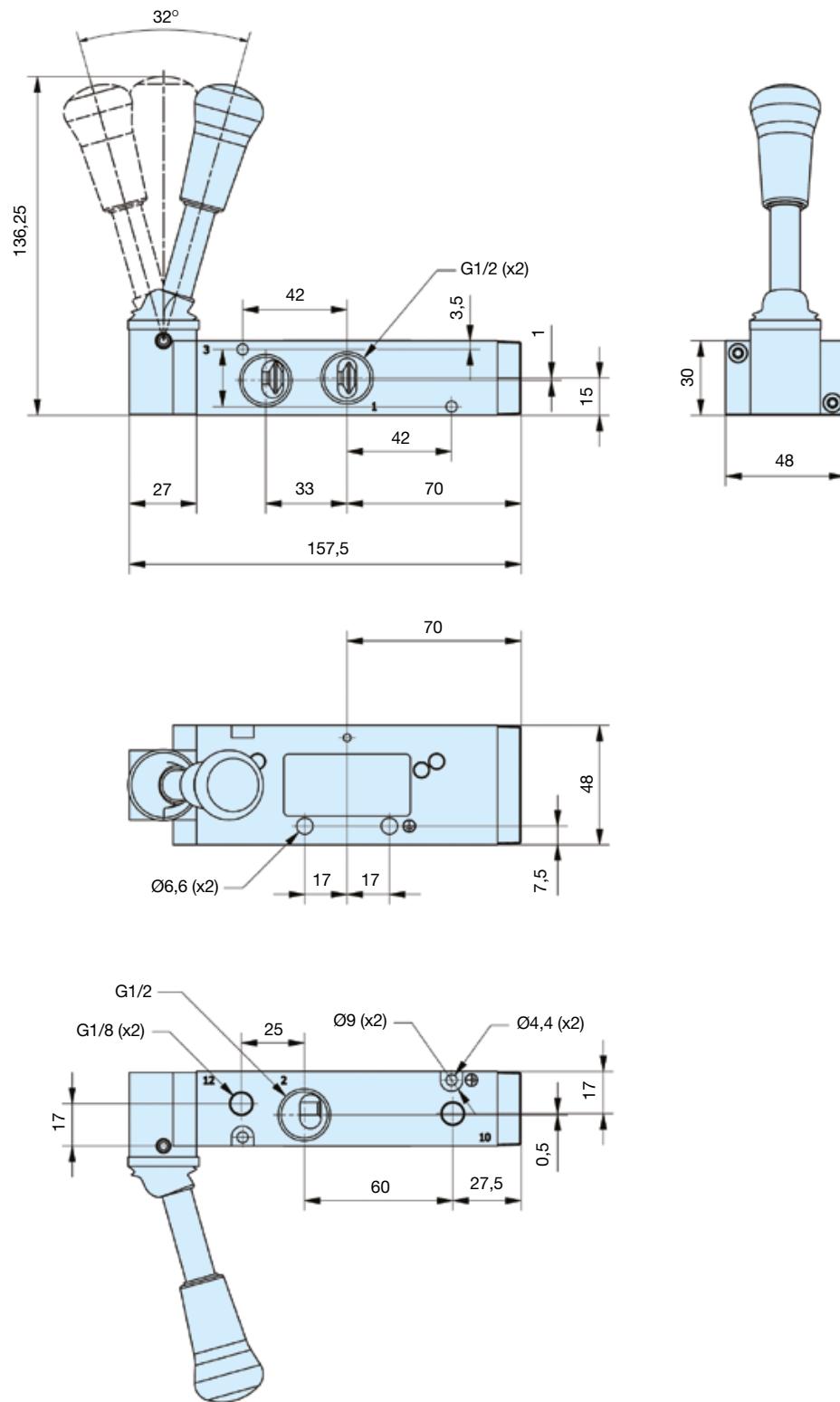
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**Directional control valves****Viking Xtreme****Dimensions****P2LCX - 3/2 Lever operated directional control valves**

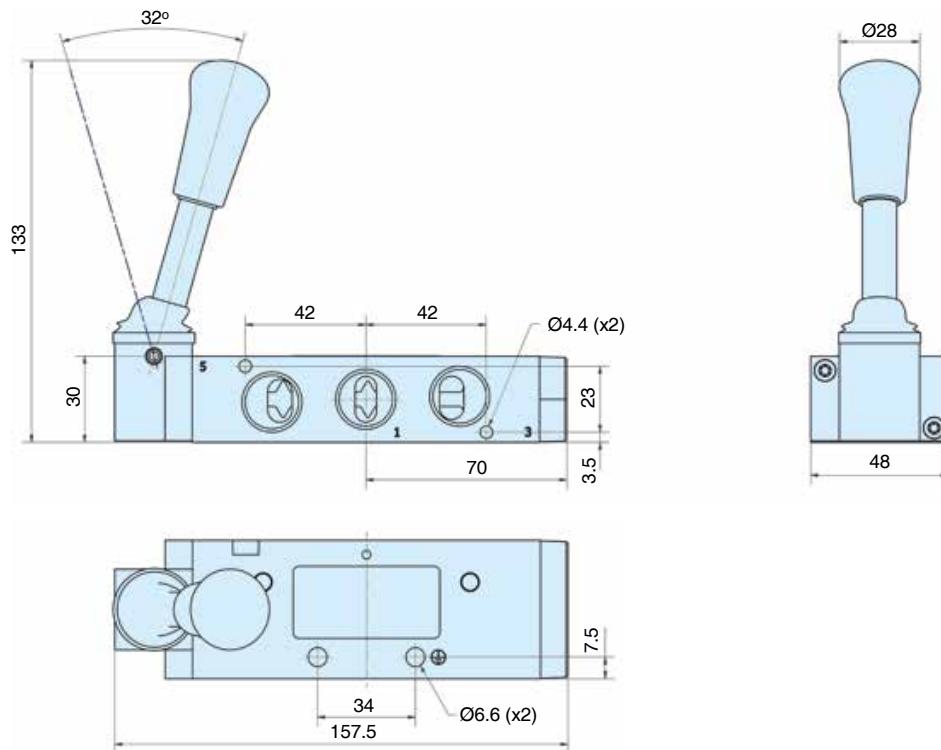
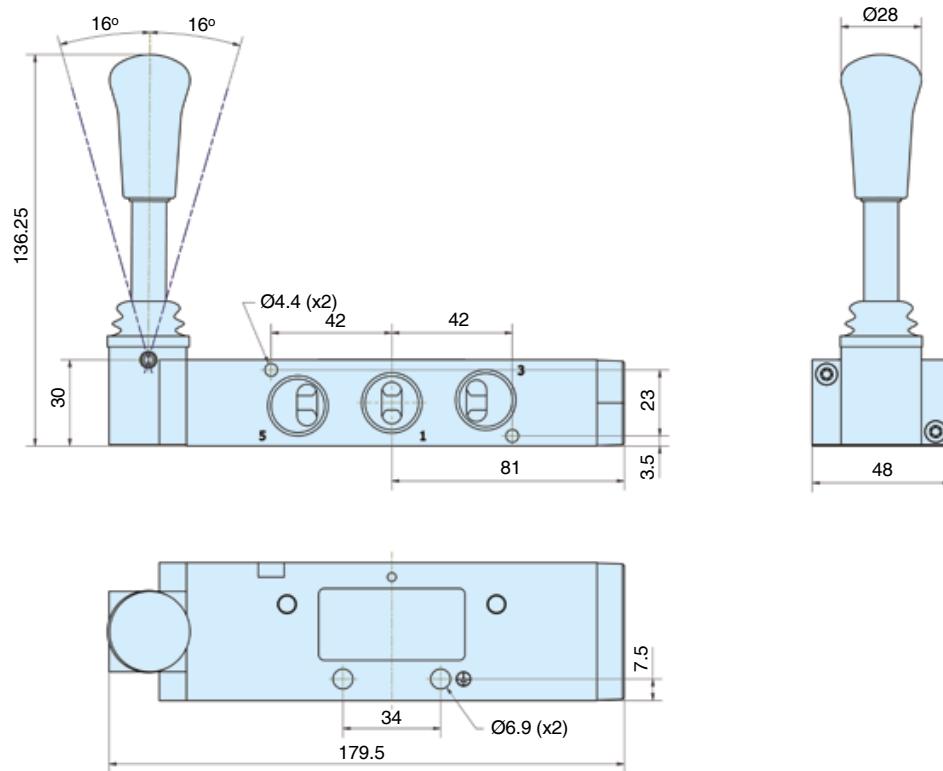
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**Directional control valves****Viking Xtreme****Dimensions****P2LCX - 5/2 Lever operated directional control valves****P2LCX - 5/3 Lever operated directional control valves**

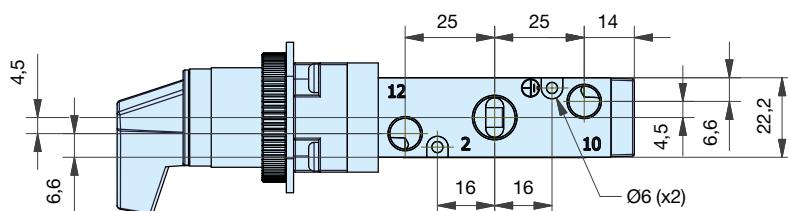
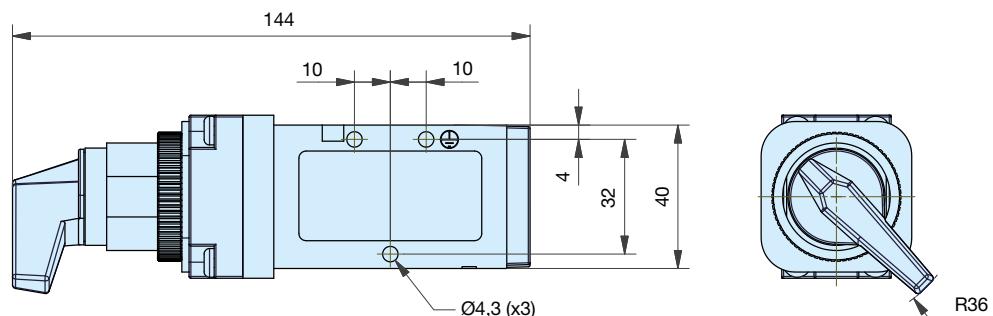
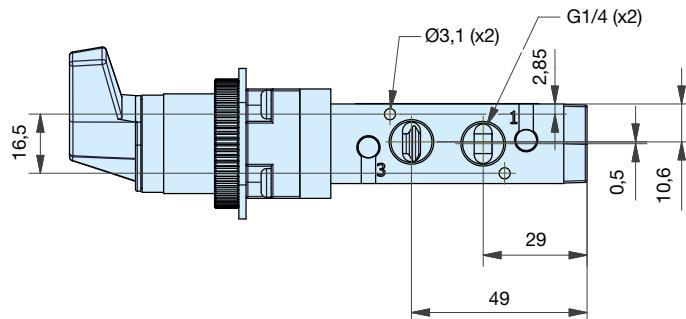
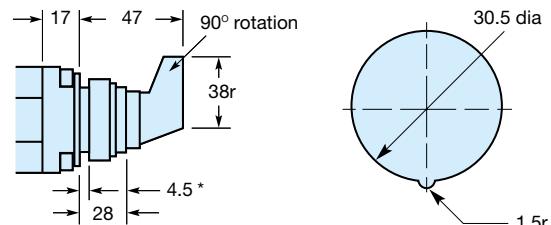
PDE2569TCUK

**Directional control valves****Viking Xtreme****Dimensions****P2LDX - 3/2 Lever operated directional control valves**

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**Directional control valves****Viking Xtreme****Dimensions****P2LDX - 5/2 Lever operated directional control valves****P2LDX - 5/3 Lever operated directional control valves**

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**Directional control valves****Viking Xtreme****Dimensions****P2LBX - 3/2 Twist operated directional control valves****Panel cut-out details**

\* Max panel thickness

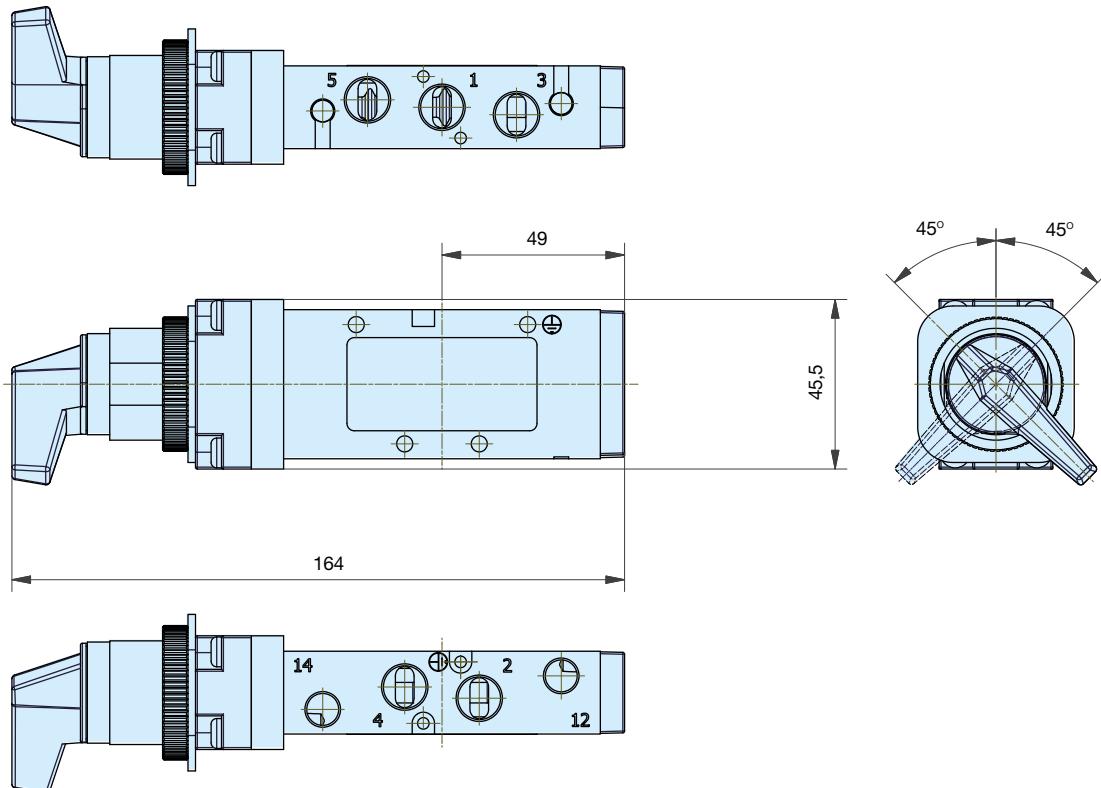
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## Directional control valves

Viking Xtreme

### Dimensions

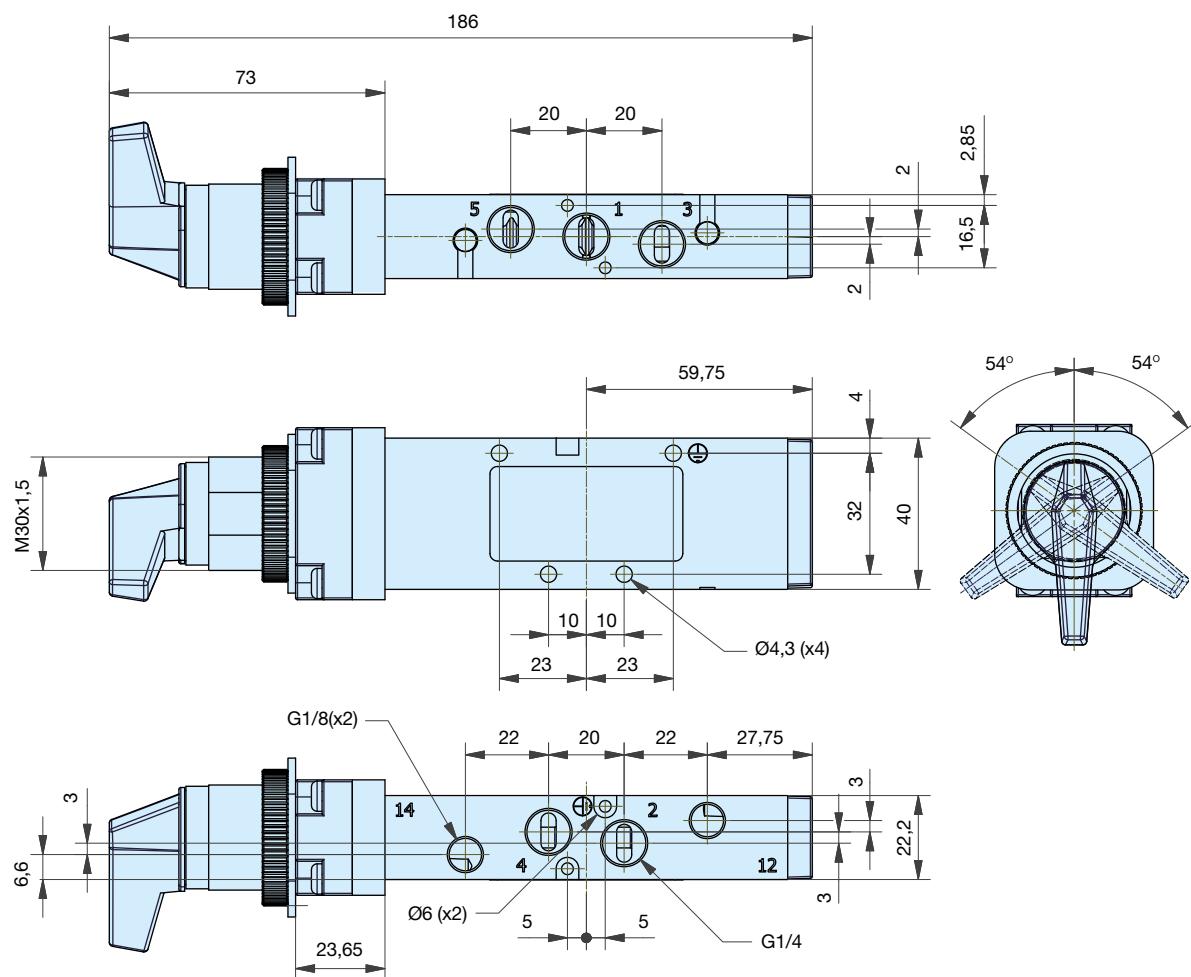
P2LBX - 5/2 Twist operated directional control valves



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**Directional control valves****Viking Xtreme****Dimensions**

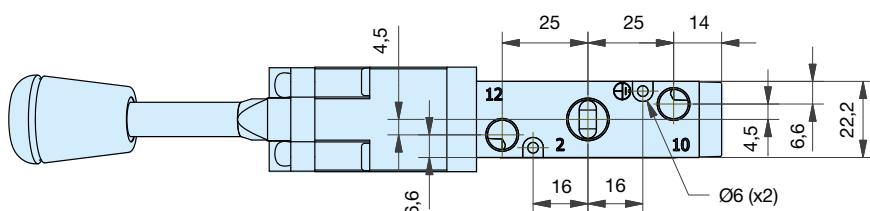
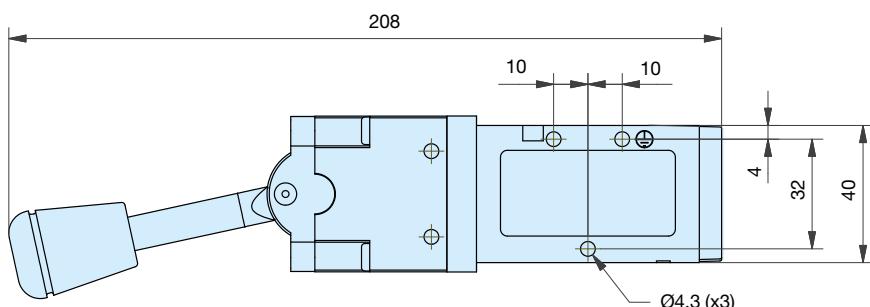
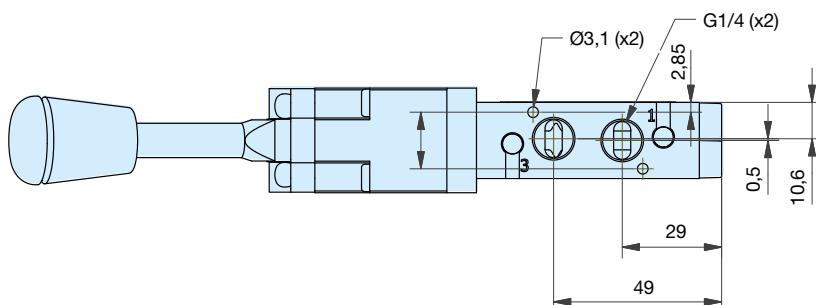
P2LBX - 5/3 Twist operated directional control valves



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**Directional control valves****Viking Xtreme****Dimensions**

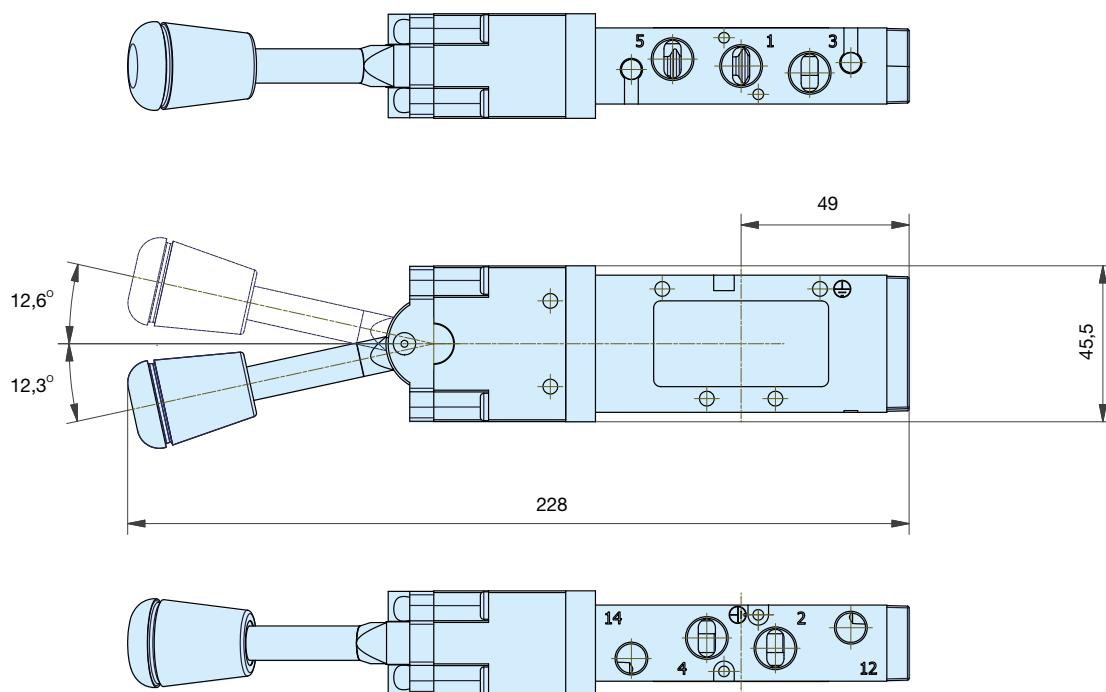
P2LBX - 3/2 Lever



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**Directional control valves****Viking Xtreme****Dimensions**

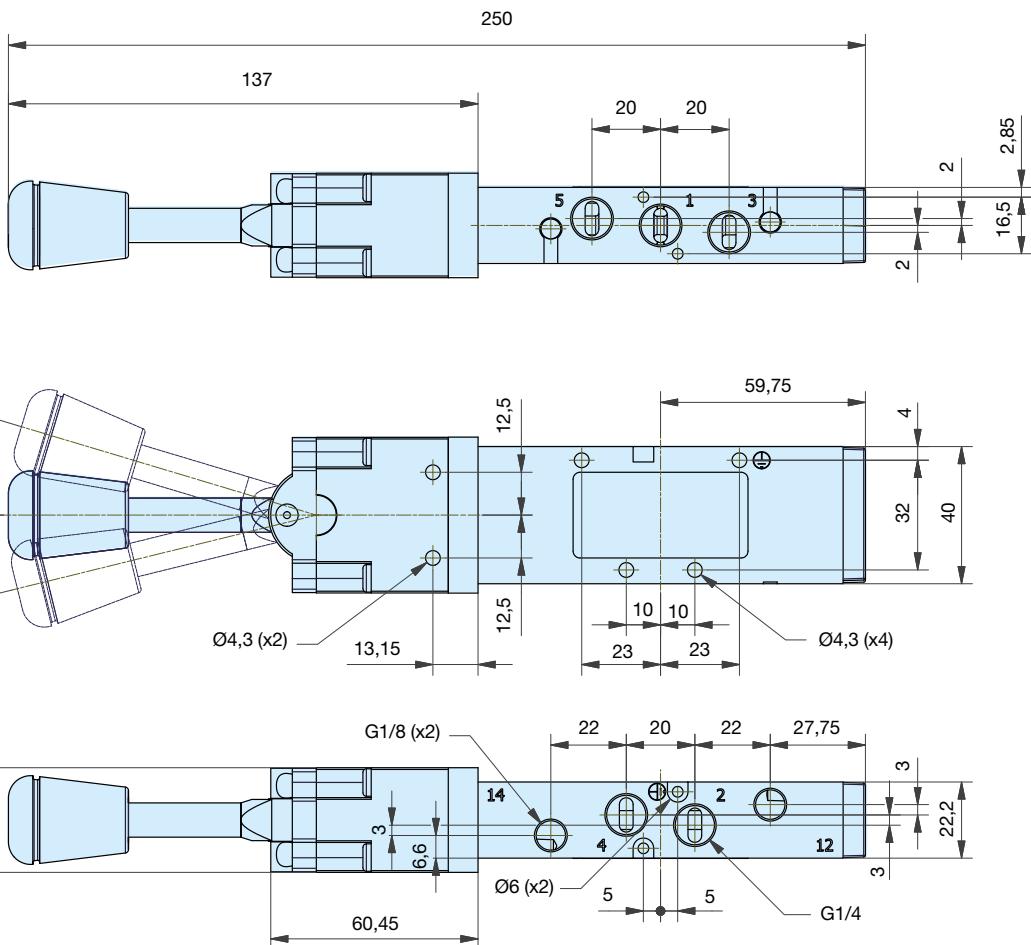
P2LBX - 5/2 Lever



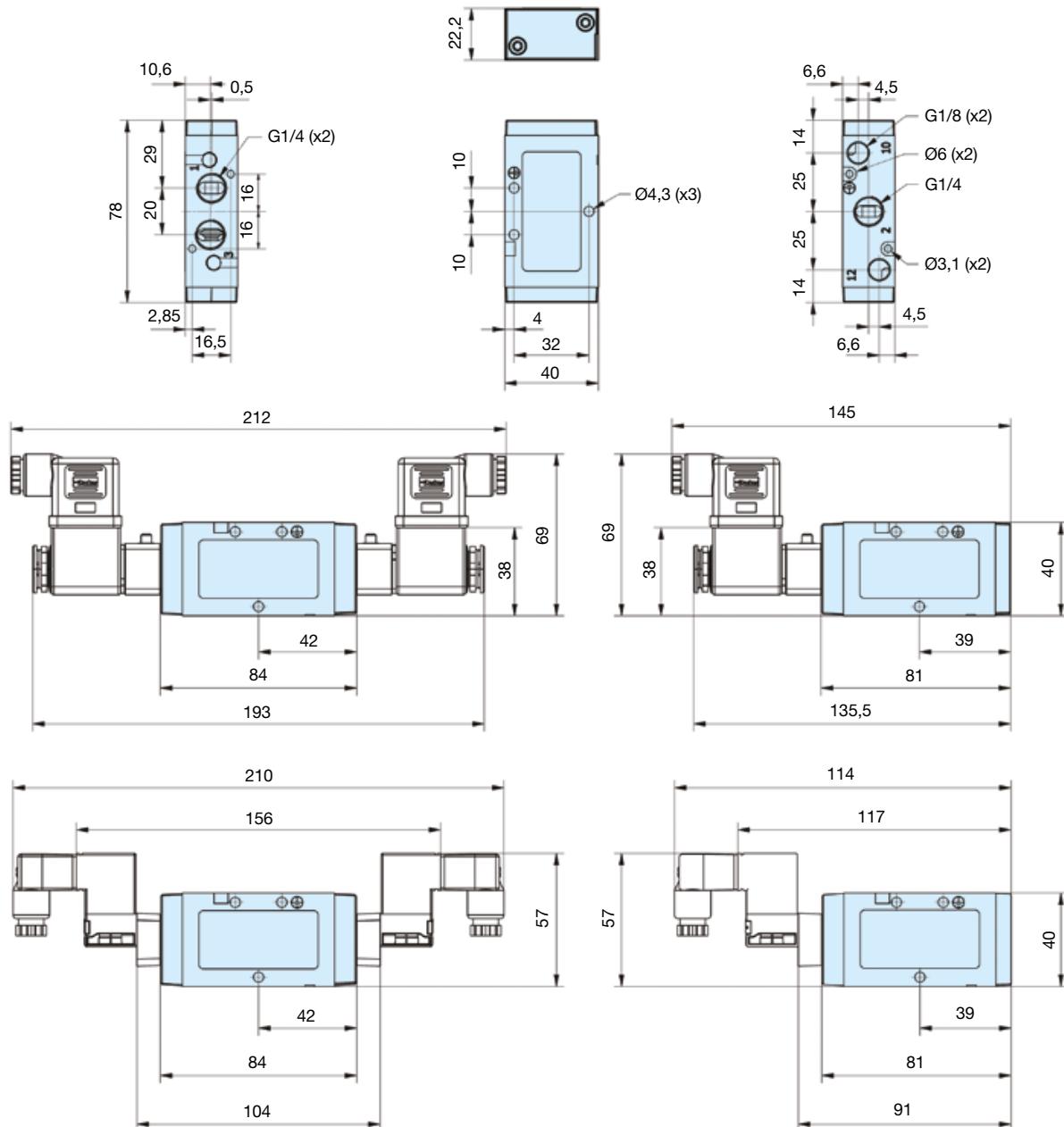
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**Directional control valves****Viking Xtreme****Dimensions**

P2LBX - 5/3 Lever



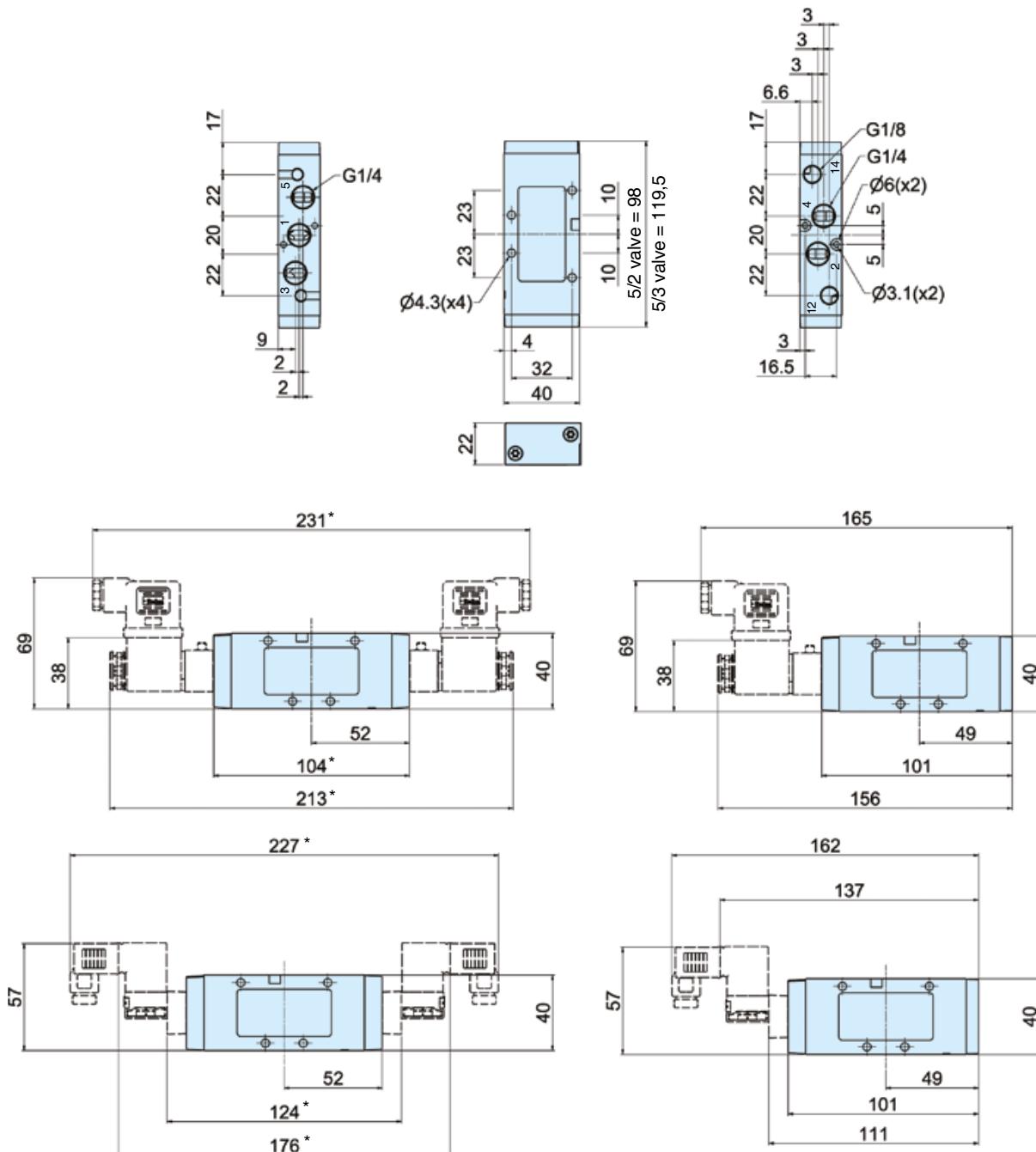
PDE2569TCUK

**Directional control valves****Viking Xtreme****Dimensions**P2LBX... all  
3/2 valves

PDE2569TCUK

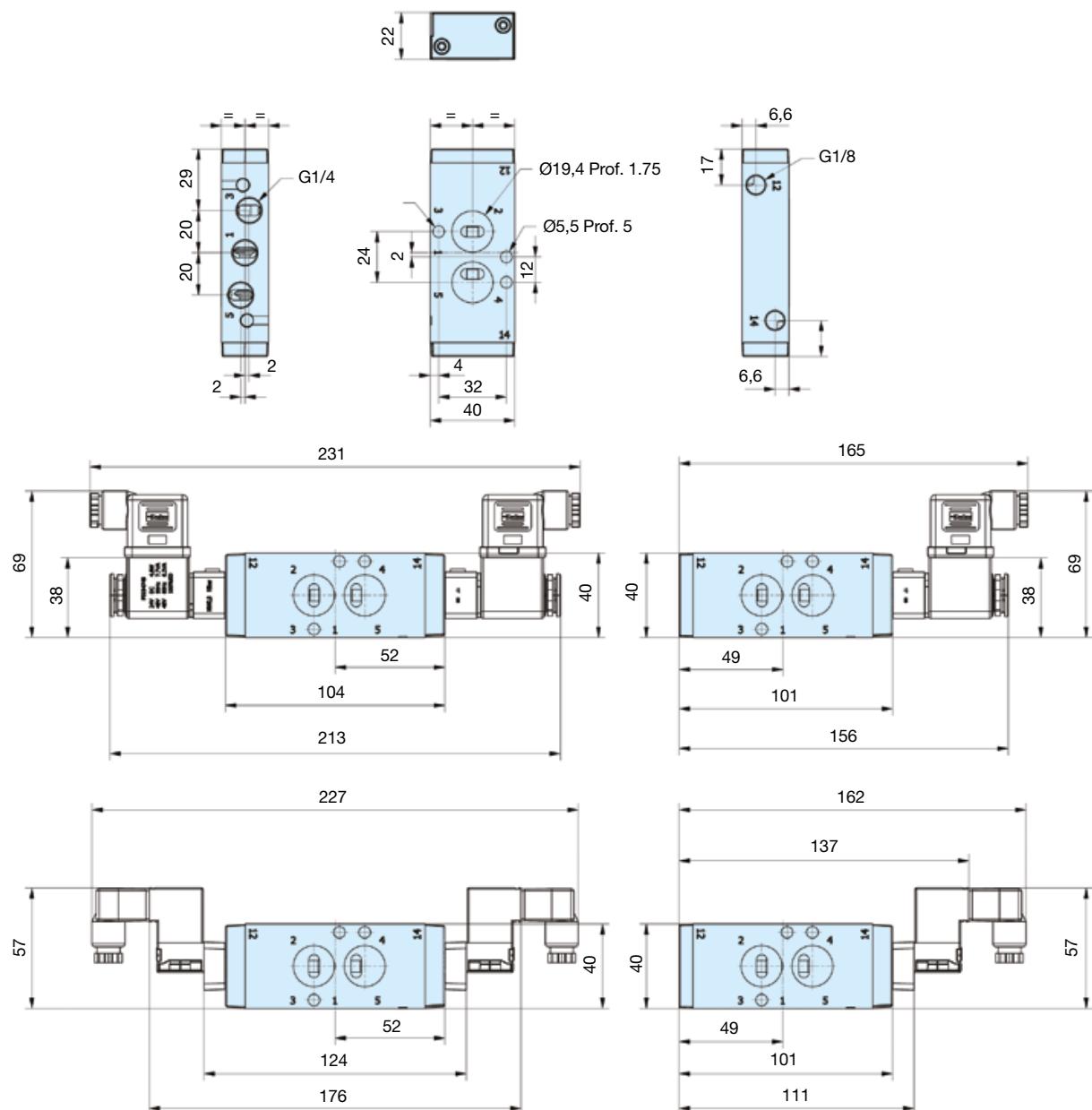
**Directional control valves****Viking Xtreme****Dimensions**

P2LBX... all  
5/2 and 5/3 valves

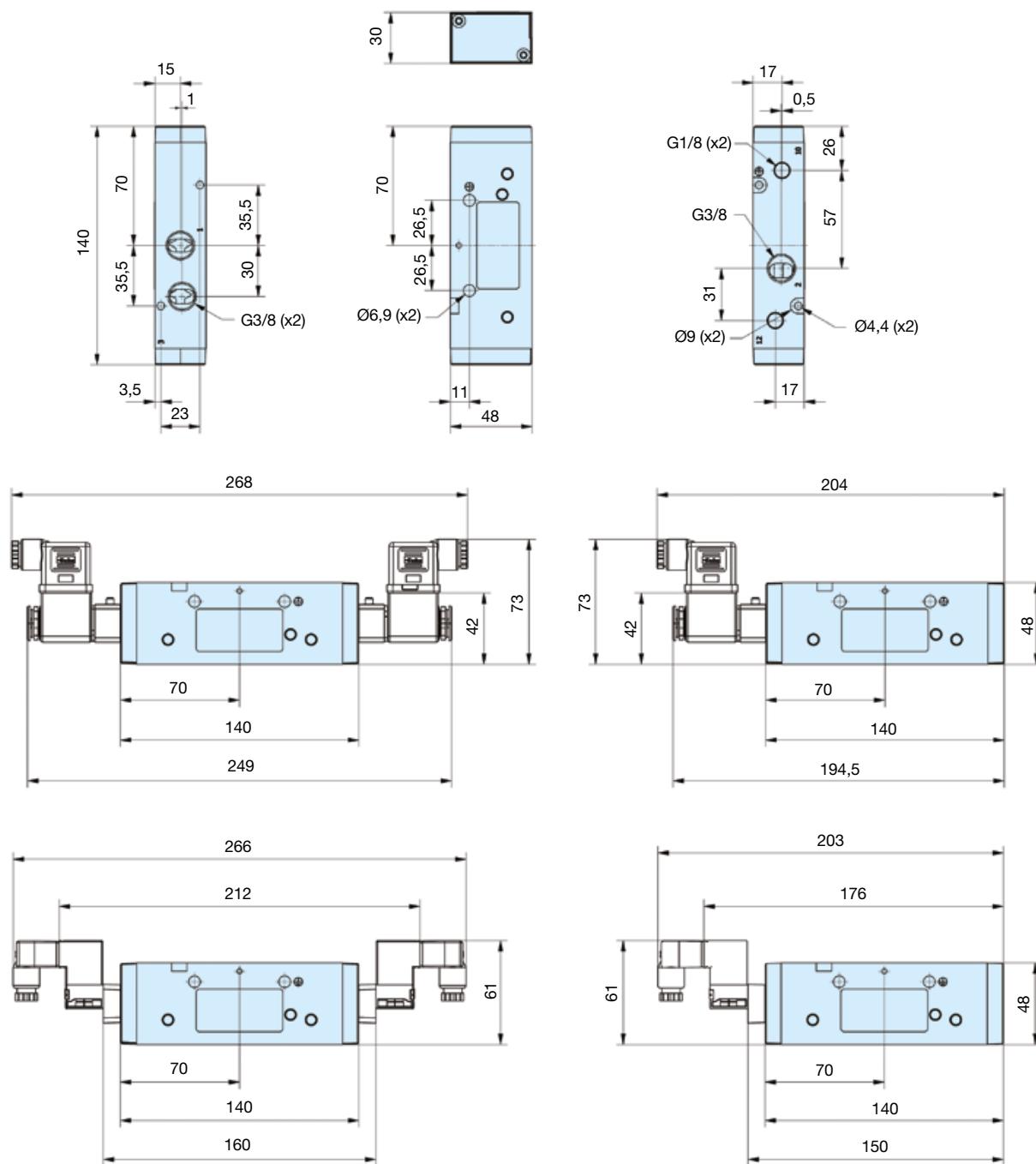


\* Note: 5/3 valves - add 21.5mm

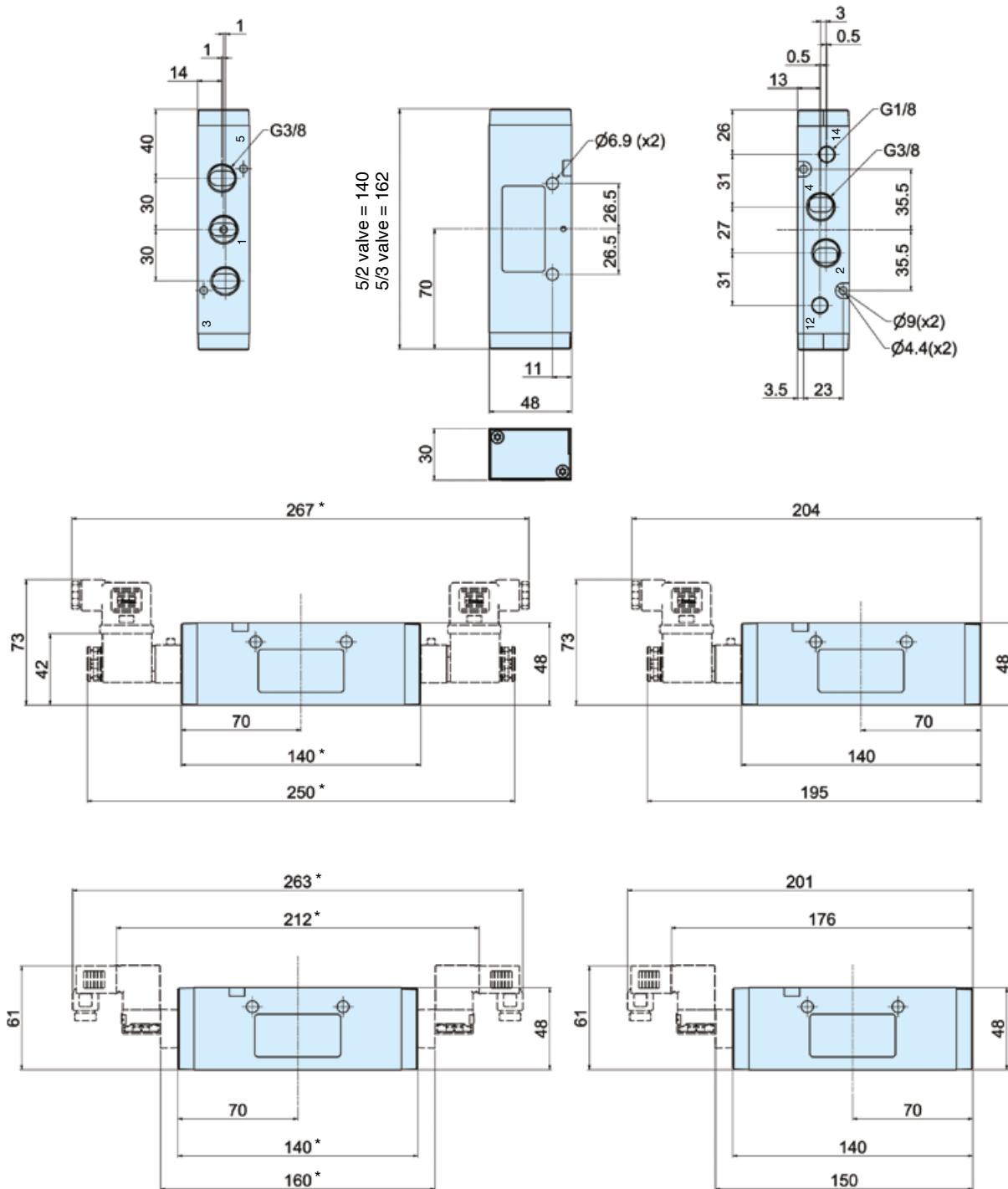
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**Directional control valves****Viking Xtreme****Dimensions**
**NAMUR**  
**5/2 valves**


PDE2569TCUK

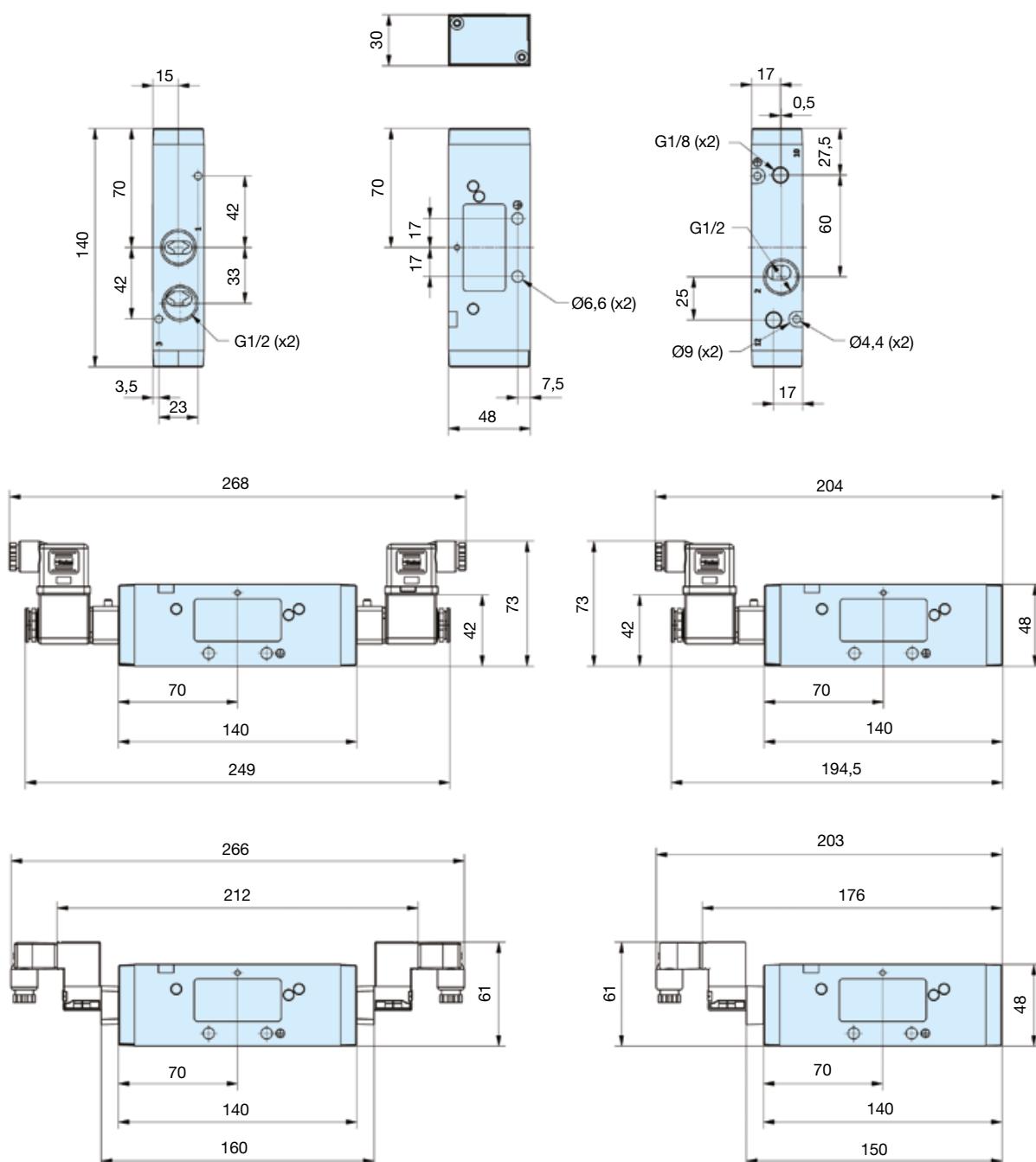
**Directional control valves****Viking Xtreme****Dimensions**P2LCX... all  
3/2 valves

PDE2569TCUK

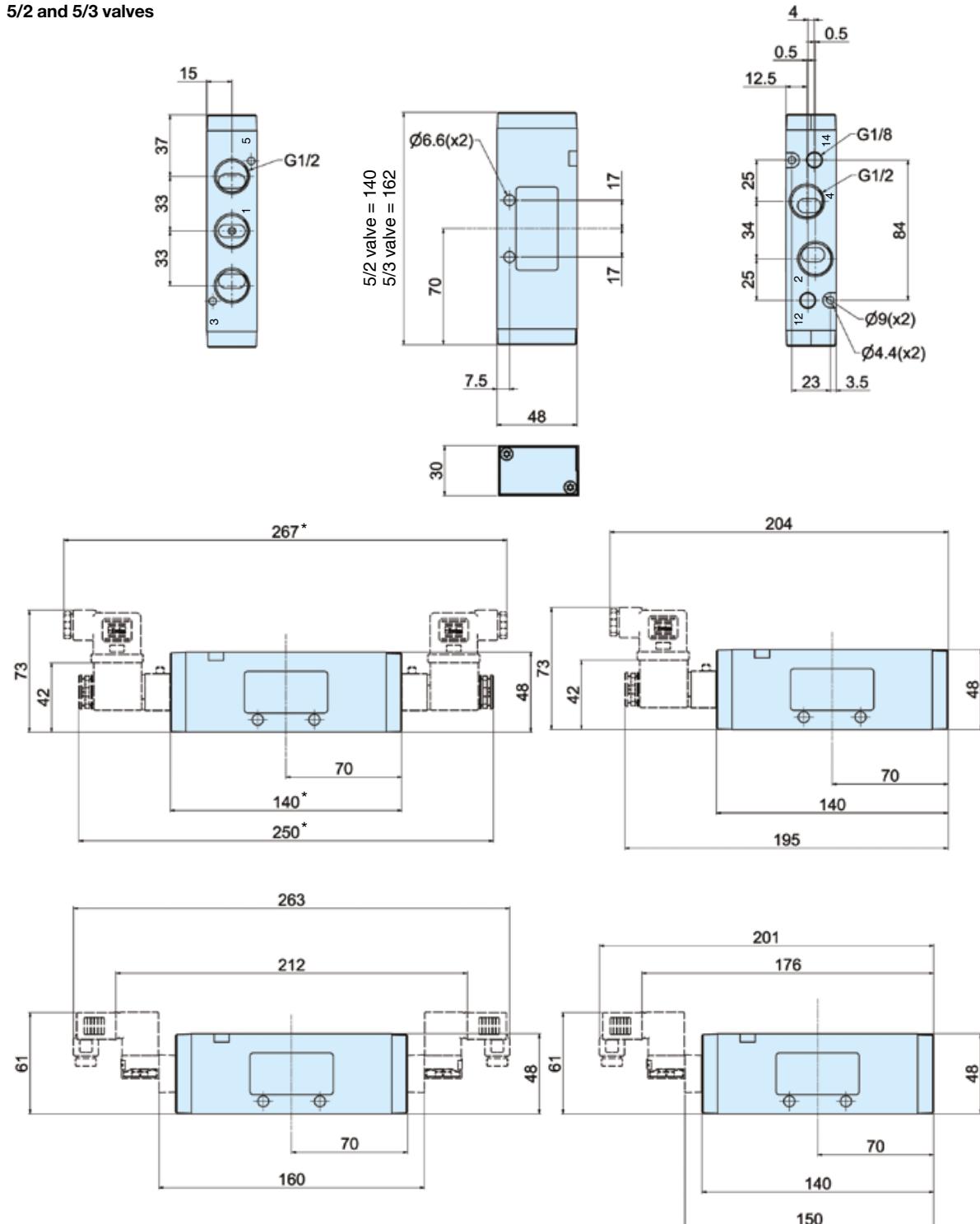
**Directional control valves****Viking Xtreme****Dimensions**
**P2LCX... all**  
**5/2 and 5/3 valves**


\* Note: 5/3 valves - add 22.0mm

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**Directional control valves****Viking Xtreme****Dimensions**P2LDX... all  
3/2 valves

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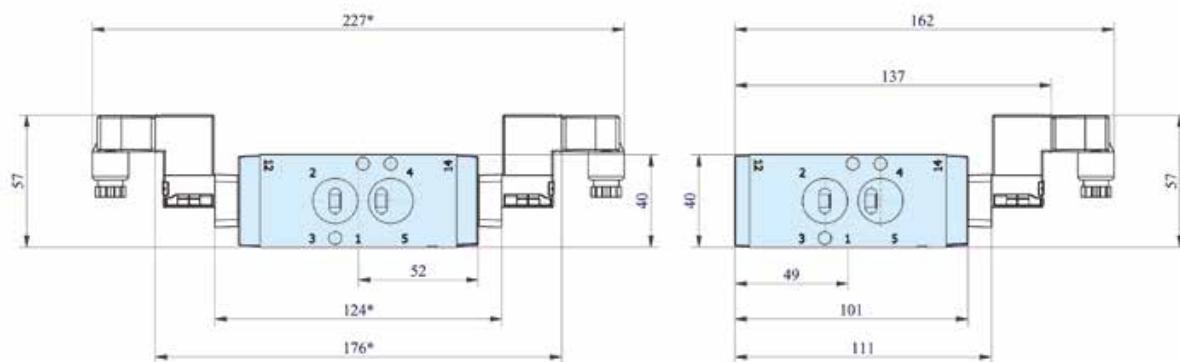
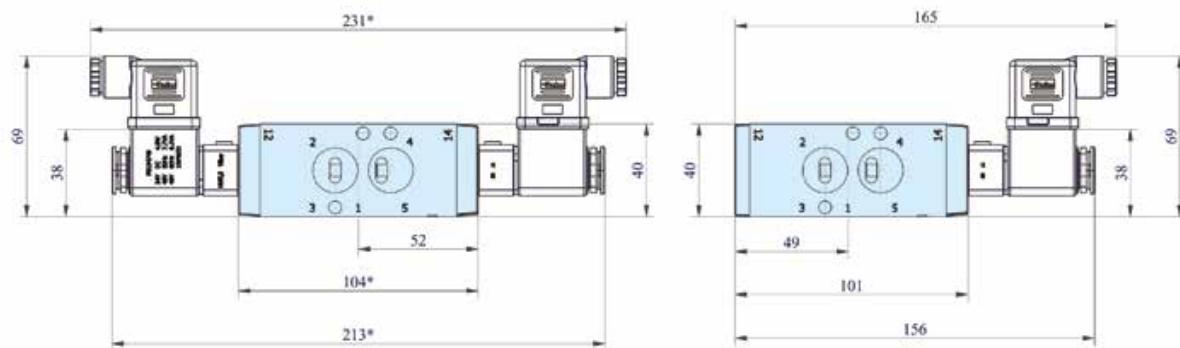
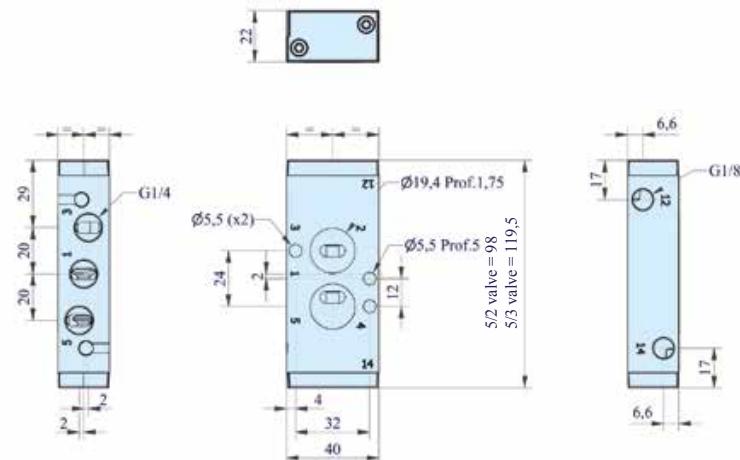
**Directional control valves****Viking Xtreme****Dimensions**
**P2LDX... all**  
**5/2 and 5/3 valves**


\* Note: 5/3 valves - add 22.0mm

PDE2569TCUK

**Directional control valves****Viking Xtreme****Dimensions****NAMUR**

5/2 and 5/3 valves

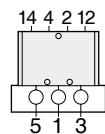


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## Directional control valves

### P2LAX, 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.

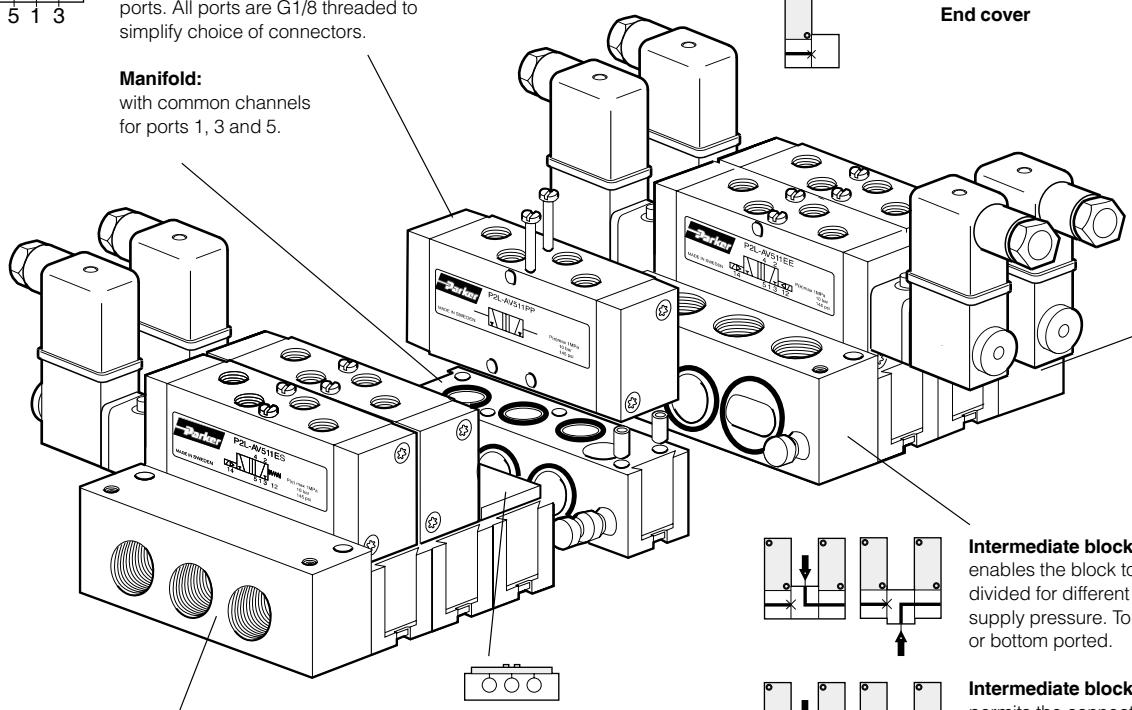


#### Valve:

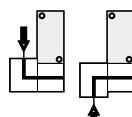
with cylinder ports 2 and 4 and signal ports 12 and 14 facing upwards, enabling easy access to connection ports. All ports are G1/8 threaded to simplify choice of connectors.

#### Manifold:

with common channels for ports 1, 3 and 5.



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



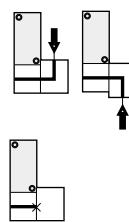
**Connection block L:**  
angled connection block for top or bottom ported.



**End cover**



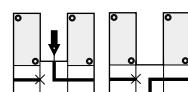
**Connection block S:**  
straight connection block with a side port for common air supply and exhaust.



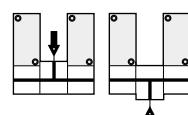
**Connection block L:**  
angled connection block for top or bottom ported.



**End cover**



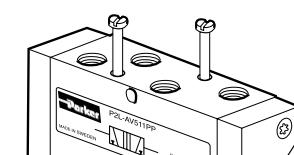
**Intermediate block L:**  
enables the block to be divided for different supply pressure. Top or bottom ported.



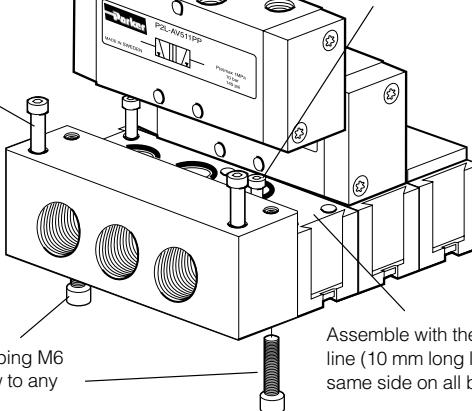
**Intermediate block T:**  
permits the connection of air between two manifolds. Top or bottom ports.

### Various mounting options

- With M6 screws for installation from the connection blocks.



- With M5 screws from the top in any manifold

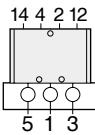
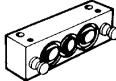
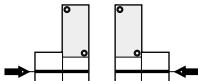
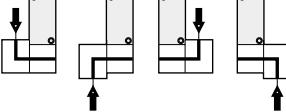
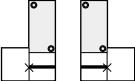
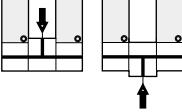
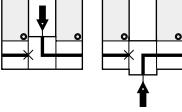


- With a self-tapping M6 screw from below to any manifold.

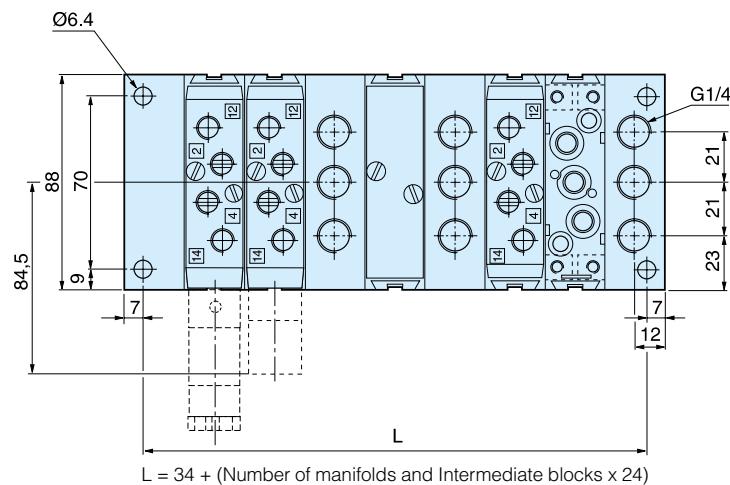
Assemble with the indication line (10 mm long line) on the same side on all blocks.

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**Directional control valves****Accessories P2LAX - 5/2 and 5/3**

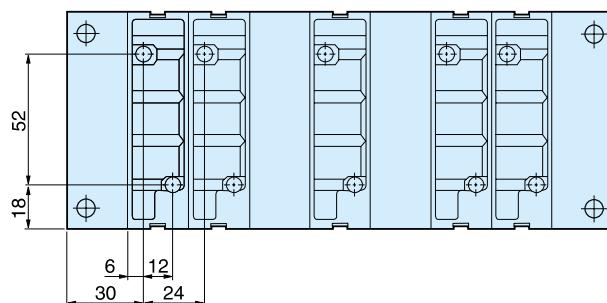
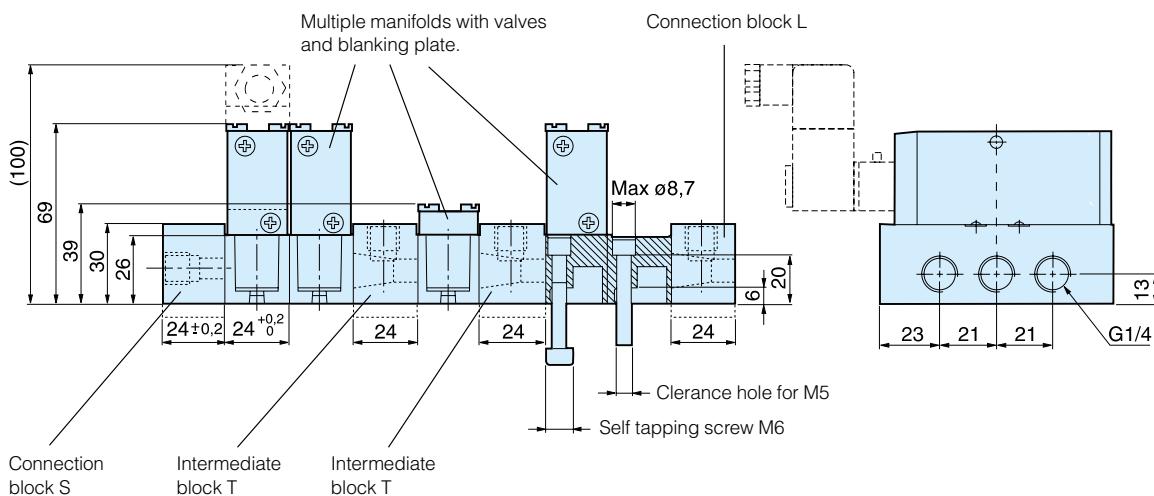
Accessories P2LA	Connection alternatives	Type	Weight kg	Order code
		<b>Multiple manifold</b> including seals, mounting screws, and guiding pins.	0,11	<b>9121658060</b>
		<b>Connection block S</b> including seals, mounting screws, and guiding pins. G1/4	0,15	<b>9121658064</b>
		<b>Connection block L</b> including seals, mounting screws, and guiding pins. G1/4	0,15	<b>9121658061</b>
		<b>End cover</b> including seals, mounting screws, and guiding pins.	0,16	<b>9121658066</b>
		<b>Intermediate block T</b> including seals, mounting screws, and guiding pins. G1/4	0,17	<b>9121658062</b>
		<b>Intermediate block L</b> including seals, mounting screws, and guiding pins. G1/4	0,17	<b>9121658065</b>
		<b>Blanking plate</b> including seals, mounting screws.	0,05	<b>9121658063</b>

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**Directional control valves****Accessories P2LAX - 5/2 and 5/3****Dimensions**

Connection block L and intermediate blocks L and T can be turned so that connection can be made from above or below.

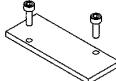
Multiple manifolds must be fitted with the top indication line (a 10 mm long line) facing the same side on all manifolds.



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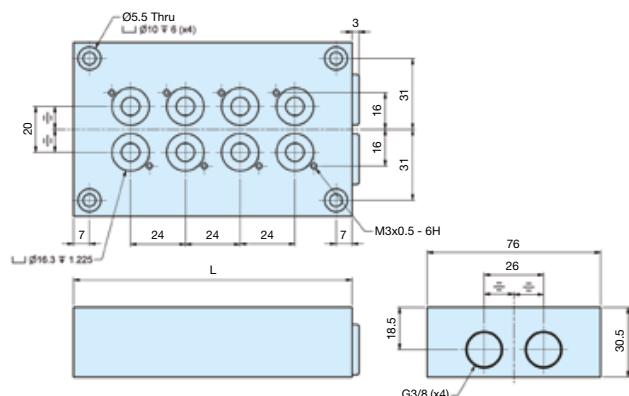
## Directional control valves

## Accessories P2LAX / P2LBX - 3/2

Accessories	Type P2LA / P2LB 3/2 valves	Weight kg	Order code
<b>Manifold bar, P2LA/P2LB (not for P2LB with external air supply to solenoid valves)</b> incl. fasteners and O-ring. G3/8			
For 2 valves	0,69	91213202SXZ	
For 4 valves	1,13	91213204SXZ	
For 6 valves	1,56	91213206SXZ	
For 8 valves	2,00	91213208SXZ	
For 10 valves	2,45	91213210SXZ	
	<b>Blanking plate</b> for Manifold bar	0,10	912132BPSXZ

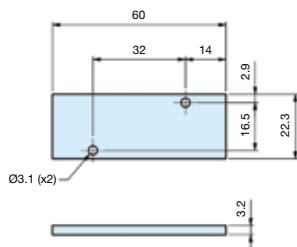
## Dimensions

### Manifold bar



No. of valves	L mm
2	74
4	122
6	170
8	218
10	266

**Blanking plate  
for manifold bar,  
P2LB**



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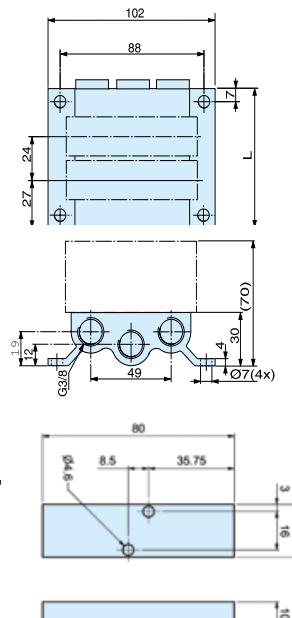
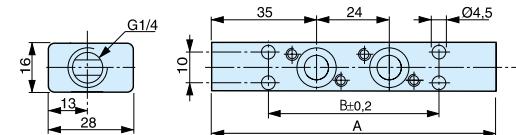
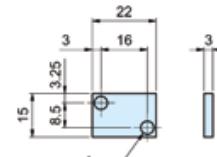
PDE2569TCUK

**Directional control valves****Accessories P2LAX - 5/2 and 5/3**

Accessories P2LA	Type	Weight kg	Order code
	<b>Manifold bar, P2LA</b> including seals, mounting screws. G3/8 For 4 valves For 6 valves For 8 valves For 10 valves For 12 valves For 14 valves	0,48 0,63 0,80 0,98 1,10 1,23	9121658075 9121658076 9121658077 9121658078 9121658079 9121658099
	<b>Blanking plate, P2LA</b> for Manifold bar	0,05	9121658063
	<b>Pressure bar, P2LA</b> for common air supply incl. O-rings and mounting screws. G1/4 For 2 valves For 4 valves For 6 valves For 8 valves	0,13 0,20 0,26 0,33	9121658070 9121658071 9121658072 9121658073
	<b>Blanking plate, P2LA</b> for Pressure bar	0,05	9121658074
	<b>Assembly screws, P2LA</b> in stainless steel for valve	0,02	9121658043
	<b>Assembly screws, P2LA</b> in stainless steel for blanking plate	0,01	9121658044
	<b>O-ring kit, P2LA</b> O-rings between valve and manifold bar/Pressure bar	0,01	9121658046

**Dimensions****Manifold bar, P2LA**

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

**Blanking plate  
for manifold bar,  
P2LA****Pressure bar, P2LA****Blanking plate for  
pressure bar, P2LA**

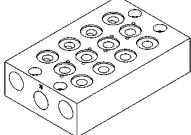
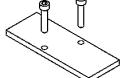
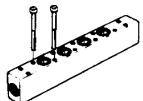
No. of valves	A mm	B mm
2	94	56
4	142	104
6	190	152
8	238	200

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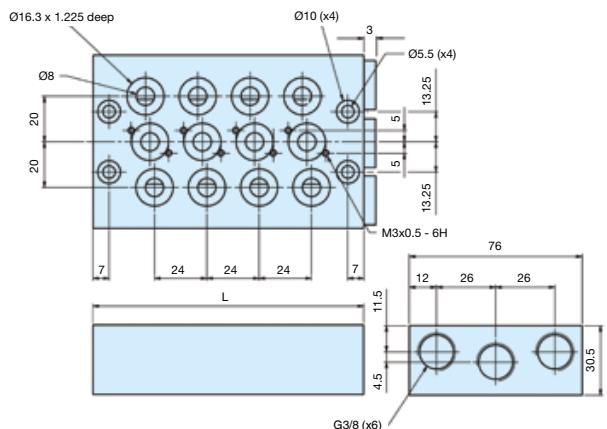
## Directional control valves

## Accessories P2LBX - 5/2 and 5/3

Accessories P2LB	Type	Weight kg	Order code
	<b>Manifold bar, P2LB, (not for P2LB with external air supply to solenoid valves)</b> incl. fasteners and O-ring. G3/8 For 2 valves For 4 valves For 6 valves For 8 valves For 10 valves	0,69 1,13 1,56 2,00 2,45	9121594805X 9121594806X 9121594807X 9121594808X 9121594812X
	<b>Blanking plate, P2LBX</b> for Manifold bar	0,10	9121594809X
	<b>Pressure bar, P2LBX</b> for common air supply incl. O-rings and mounting screws. G3/8 For 2 valves For 4 valves For 6 valves For 8 valves For 10 valves	0,38 0,53 0,68 0,83 0,99	9127113301X 9127113302X 9127113303X 9127113304X 9127113305X
	<b>Blanking plate P2LBX</b> for Pressure bar. G1/4	0,02	9127113306X
	<b>Manifold Spares Kit P2LB</b> Manifold O-rings, Manifold and Blanking Plate Screws	0,04	P2LB/MAN-KIT

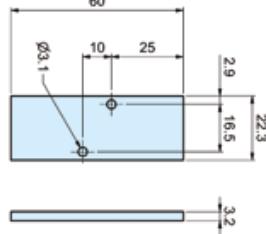
## Dimensions

### Manifold bar, P2LB

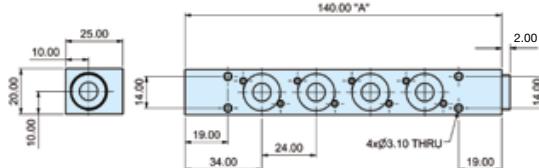


No. of valves	L mm
2	74
4	122
6	170
8	218
10	266

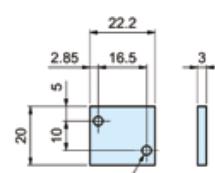
**Blanking plate for manifold bar, P2LB**



### Pressure bar, P2LB



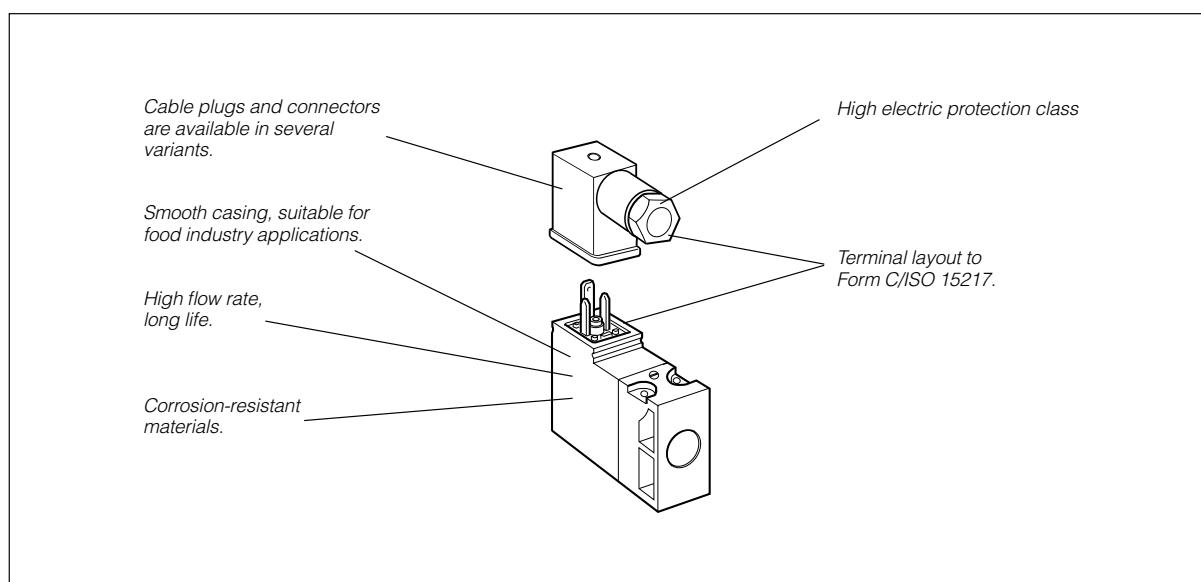
### Blanking plate for pressure bar, P2LB



No. of valves	A mm
2	92
4	140
6	188
8	236
10	284



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### **The P2E-•V solenoid operator range**

The P2E-•V range of operators 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 Form C/ISO15217.

#### **Compact design**

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

#### **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 solenoids 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 65 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.

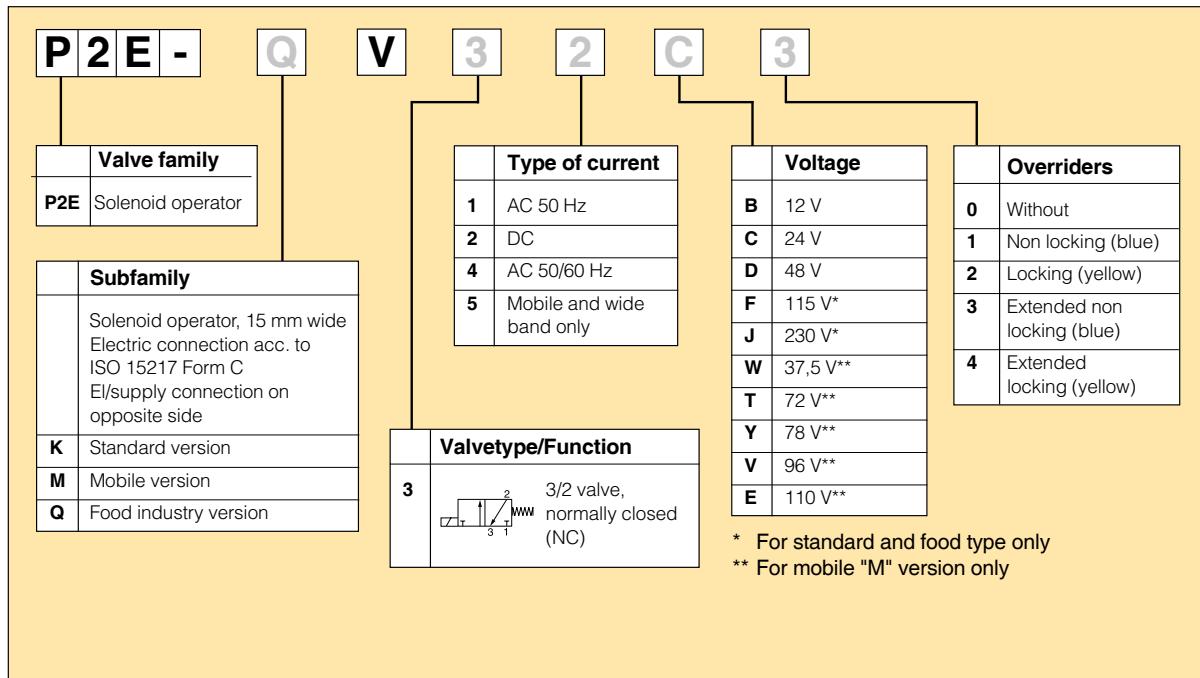
#### **Insensitive to dirty air**

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 operators 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 operators (15mm)



## Technical data

	<b>NC, Standard</b>	<b>NC, Food<sup>1)</sup></b>	<b>NC, Mobile<sup>2)</sup></b>
Working pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar
Working temperature	-15 °C to +60 °C	-15 °C to +60 °C	-40 °C to +70 °C
Orifice	1,0 mm	1,0 mm	1,0 mm
Flow Qmax	33 NL/min	33 NL/min	22 NL/min
Power, hold	DC 1,2 W / AC 1,6 VA *	DC 1,2 W / AC 1,6 VA *	DC 1,4 W
Power, surge	DC 1,2 W / AC 3,5 VA *	DC 1,2 W / AC 3,5 VA *	DC 1,4 W
Connection time	100%	100%	100%
Voltage tolerance	+10%/-15%	+10%/-15%	+25%/-30%
Electric connection:	Form C/ISO15217		
Port pattern:	To future CNOMO standard		
Protection:	IP 65		
Approval:	Some valves are UL 429 recognised 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.		

\* Power , hold for 230VAC 2.4VA  
Power, surge for 230VAC 5.5VA

## 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 air), the valves should have a life of at least 50 million cycles.

## Materials

## Operator

Body, coil casing	Thermoplastic
Internal metal parts	Steel
Screws	Stainless steel
Bottom plug	Thermoplastic
Sealing materials	FPM (Viton™) and nitrile rubber

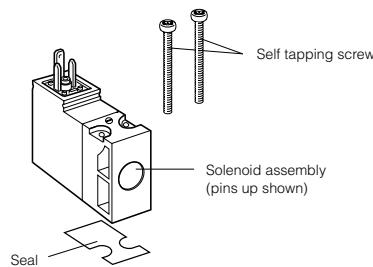
## Cable head

Sheath	Thermoplastic
Retaining screw	Stainless steel, zinc-plated steel

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**Directional control valves****Solenoid operators - 15mm****15mm Solenoid Operators**

Electrical connection EN175301-803 C/ISO15217 (Ex DIN 43650C)

**Solenoids 15 mm NC, standard**

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/ 120 VAC 60Hz	0,038	P2E-KV31F0	0,038	P2E-KV31F1	0,038	P2E-KV31F2
230 VAC 50Hz/ 240 VAC 60Hz	0,038	P2E-KV31J0	0,038	P2E-KV31J1	0,038	P2E-KV31J2

Voltage	Weight Kg	Order code Override extended, non locking flush	Weight Kg	Order code Override extended, 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)

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)

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/ 120 V 60Hz	0,038	P2E-QV31F0	0,038	P2E-QV31F1	0,038	P2E-QV31F2
230 VAC 50Hz/ 240 VAC 60Hz	0,038	P2E-QV31J0	0,038	P2E-QV31J1	0,038	P2E-QV31J2

Voltage	Weight Kg	Order code Override extended, non locking flush	Weight Kg	Order code Override extended, 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.


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## Directional control valves

## Solenoid operators - 22mm



### 22mm Solenoid pilot options

The P2F P13\*4\* (NC) 3/2 solenoid pilot operators are designed for piloting pneumatic control valves with compressed air or other inert gases.

The P2F P operator is available for Normal operating pressures up to 10 bar having an outlet orifice 1.3mm and exhaust orifice 1.5 mm. An alternative operator is also available having an outlet orifice of 0.8mm and exhaust orifice of 1.0mm for Xtreme maximum operating pressure of 16 bar and wide band voltage tollerances required for mobile applications.

### Corrosion resistant design

The pilot operator body is manufactured in thermoplastic PA 6 material and the core tube brass/stainless steel. The plunger/core is made from stainless steel and the valve seats from FKM.

### Solenoid Pilot Exhaust

These operators all exhaust out of the top of the core tube which is tapped M5. The standard solenoid nut fitted to the core tube is the Diffuser nut which allows the exhaust to escape to atmosphere. This nut also minimises ingress of dirt into the valve through this port. The alternative plastic knurled nut can be specified (refer to part number system) if the exhaust air needs to be captured and piped away using the M5 tapped port.

### Coils

Coils are wound with enameled copper wire, having temperature index 180°C with class F insulation (155°C) and are encapsulated in Thermoplastic resin. When fitted with suitable connector and correct gasket they give protection to IP65.

For hard environment, a metal operator (anodised aluminium) with brass manual override is available with a 1.2 mm outlet orifice and 1.3mm exhaust orifice. Different temperature range is covering inside, outside application.

### Mobile Applications

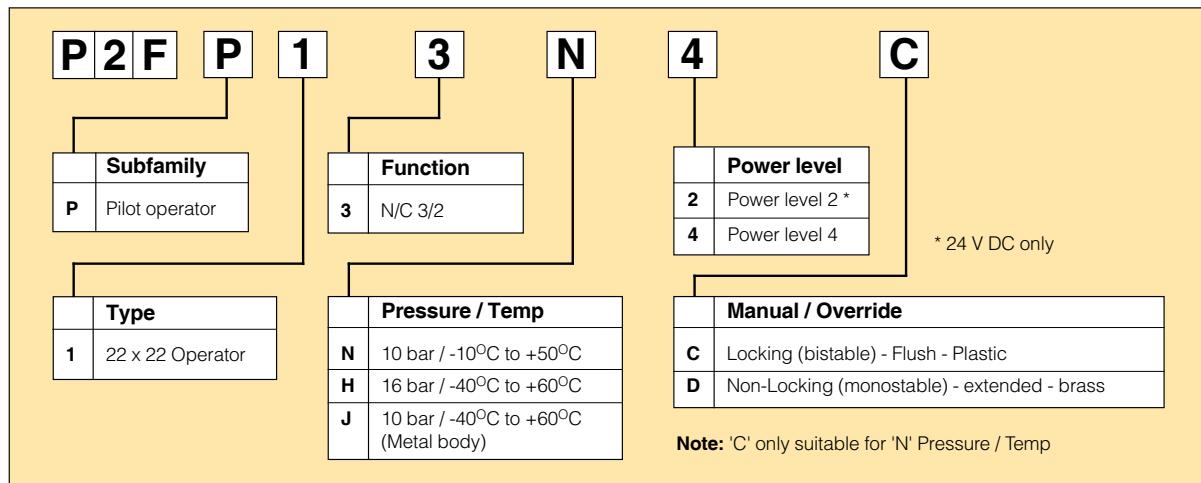
Viking Xtreme valves are tested to +5g shock and vibration. Solenoid operated valves are designed to operate with wide voltage tolerance bands within the ambient temperature ranges stated in the technical section.

### Manual Override options

The pilot operators can be supplied with or without manual override. The standard manual override is the monostable (spring return) extended brass override. Alternatively the bistable (locking) override can be specified as an alternative for the Normal duty 10bar option.

### Spares

Solenoid operators are available as spares complete with mounting screws and seals. Coils and connectors should be ordered separately.

**Order key, solenoid operators (22mm)****Technical data**

	NC Normal	NC Xtreme	NC 22mm Xtreme (Mobile)	NC 30mm Xtreme (Mobile)	NC 30 mm Metal (Mobile)
Working pressure	0 to 10 bar	0 to 16 bar	0 to 10 bar	0 to 16 bar	0 to 10 bar
Ambient temperature	-10 °C to +50 °C	-40 °C to +60 °C	-40 °C to +60 °C	-40 °C to +60 °C	-40 °C to +60 °C
Orifice	1.3/1.5mm	0.8/1.0mm	0.8/1.0mm	0.8/1.0mm	1.2 mm / 1.3mm
Flow Qn @ 6 bar input					
1 bar press drop. 1-2 l/m	55	20	20	20	60
Flow Qn @ 6 bar input					
1 bar press drop. 2-3 l/m	70	30	30	30	70
Power (DC)	4.8W (2W Low power)	4.8W	6.0W	6.8W	6.8W
Power (AC)	8.5VA	8.5VA			
Voltage tolerance (Standard)	+/- 10%	+/- 10%			
Voltage tolerance (Mobile)			-10 to +30%	+/- 30%	+/- 30%
Duty cycle	100%	100%	100%	100%	100%
Insulation class	F	F	F	F	F
Electric connection	Ind Form B	Ind Form B	Ind Form B	Form A	Form A
Protection	IP65	IP65	IP65	IP65	IP65
Shock & Vibration	-	0 to +5g	0 to +5g	0 to +5g	0 to +5g
Approval	UL coil version available on request				
Working media	All neutral media such as compressed air and inert gases.				

**Mobile applications**

Solenoid operated Viking Xtreme duty valves for Mobile applications are fitted with the P2FP13H4D solenoid pilot operator. It has a 22mm footprint with 0.8/1.0mm orifice and will accept 22mm or 30mm coil options. The choice of coil option will depend on the voltage tolerance, operating ambient temperature range and maximum operating pressure. Use the technical data in the table above before selecting the coil type required, or contact our technical department.

**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 connectors/cable plugs with LED's listed on page 54 include this type of circuit protection.

**Materials****Pilot Valve**

Body:	Polyamide
Body:	Anodised aluminium for J type
Armature tube:	Brass (Normal) Stainless Steel 16 bar mobile
Plunger & core:	Corrosion resistant Cr-Ni steel
Seals:	FKM (Viton™)
Screws:	Stainless steel

**Coil**

Encapsulation material:	Thermoplastic
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PDE2569TCUK

**Directional control valves****Solenoid operators - 22mm****22mm solenoid operator part numbers and spares****Solenoids coil standard 22mm**

Voltage	Voltage tolerance	Temperature	Order code Form B	Power	Weight (Kg)	Use with Operator type
12V 50Hz	+/- 10%	-10°C / 50°C	<b>P2FCB440</b>	8,5VA	0.053	P2FP13N4
24V 50/60Hz	+/- 10%	-10°C / 50°C	<b>P2FCB442</b>	8,5VA	0.053	P2FP13N4
48V 50/60Hz	+/- 10%	-10°C / 50°C	<b>P2FCB449</b>	8,5VA	0.053	P2FP13N4
120V/50Hz, 120V/60Hz	+/- 10%	-10°C / 50°C	<b>P2FCB453</b>	8,5VA	0.053	P2FP13N4
230V/50Hz, 230V/60Hz	+/- 10%	-10°C / 50°C	<b>P2FCB457</b>	8,5VA	0.053	P2FP13N4
12V DC	+/- 10%	-10°C / 50°C	<b>P2FCB445</b>	4,8W	0.053	P2FP13N4
24V DC	+/- 10%	-10°C / 50°C	<b>P2FCB449</b>	4,8W	0.053	P2FP13N4
48V DC	+/- 10%	-10°C / 50°C	<b>P2FCB451</b>	4,8W	0.053	P2FP13N4

For pressure 0 to 10 bar

**Solenoids coil low power 22mm**

Voltage	Order code Form B	Power	Weight (Kg)	Use with Operator type
24V DC Low power	<b>P2FCB249</b>	2W	0.093	P2FP13N2

For pressure 0 to 10 bar

**Solenoids coil 22mm Xtreme**

Voltage	Voltage tolerance	Temperature	Order code Form B	Power	Weight (Kg)	Use with Operator type
12V 50Hz	+/- 10%	-40°C / 60°C	<b>P2FCB440</b>	8,5VA	0.053	P2FP13NH4D
24V 50/60Hz	+/- 10%	-40°C / 60°C	<b>P2FCB442</b>	8,5VA	0.053	P2FP13NH4D
48V 50/60Hz	+/- 10%	-40°C / 60°C	<b>P2FCB449</b>	8,5VA	0.053	P2FP13NH4D
120V/50Hz, 120V/60Hz	+/- 10%	-40°C / 60°C	<b>P2FCB453</b>	8,5VA	0.053	P2FP13NH4D
230V/50Hz, 230V/60Hz	+/- 10%	-40°C / 60°C	<b>P2FCB457</b>	8,5VA	0.053	P2FP13NH4D
12V DC	+/- 10%	-40°C / 60°C	<b>P2FCB445</b>	4,8W	0.053	P2FP13NH4D
24V DC	+/- 10%	-40°C / 60°C	<b>P2FCB449</b>	4,8W	0.053	P2FP13NH4D
48V DC	+/- 10%	-40°C / 60°C	<b>P2FCB451</b>	4,8W	0.053	P2FP13NH4D

For pressure 0 to 16 bar for A+B &amp; 12 bar for C+D

**Solenoids coil mobile voltage 22mm**

Voltage	Voltage tolerance	Temperature	Order code Form B	Power	Weight (Kg)	Use with Operator type
12V DC	-10% / +30%	-40°C / + 60°C	<b>P2FCB447</b>	6W	0.053	P2FP13H4D
24V DC	-10% / +30%	-40°C / + 60°C	<b>P2FCB448</b>	6W	0.053	P2FP13H4D

For pressure 0 to 16 bar for A+B &amp; 12 bar for C+D

**Solenoids coil Mobile voltage 30mm**

Voltage	Voltage tolerance	Temperature	Order code Form A	Power	Weight (Kg)	Use with Operator type
12V DC	+/- 30%	-40°C / +60°C	<b>P2FCA447</b>	6,8W	0.09	P2FP13H4D
24V DC	+/- 30%	-40°C / +60°C	<b>P2FCA448</b>	6,8W	0.09	P2FP13H4D
48V DC	+/- 30%	-40°C / +60°C	<b>P2FCA474</b>	6,8W	0.09	P2FP13H4D
72V DC	+/- 30%	-40°C / +60°C	<b>P2FCA470</b>	6,8W	0.09	P2FP13H4D
96V DC	+/- 30%	-40°C / +60°C	<b>P2FCA471</b>	6,8W	0.09	P2FP13H4D
110V DC	+/- 30%	-40°C / +60°C	<b>P2FCA472</b>	6,8W	0.09	P2FP13H4D

For pressure 0 to 16 bar for A+B &amp; 12 bar for C+D

**Solenoids coil Mobile voltage 30mm**

Voltage	Voltage tolerance	Temperature	Order code Form A	Power	Weight (Kg)	Use with Operator type
12V DC	+/- 30%	-40°C / +60°C	<b>P2FCA447</b>	6,8W	0.09	P2FP13J4
24V DC	+/- 30%	-40°C / +60°C	<b>P2FCA448</b>	6,8W	0.09	P2FP13J4
48V DC	+/- 30%	-40°C / +60°C	<b>P2FCA474</b>	6,8W	0.09	P2FP13J4
72V DC	+/- 30%	-40°C / +60°C	<b>P2FCA470</b>	6,8W	0.09	P2FP13J4
96V DC	+/- 30%	-40°C / +60°C	<b>P2FCA471</b>	6,8W	0.09	P2FP13J4
110V DC	+/- 30%	-40°C / +60°C	<b>P2FCA472</b>	6,8W	0.09	P2FP13J4

For pressure 0 to 10 bar



Parker Hannifin Corporation  
Pneumatic Division - Europe

PDE2569TCUK

## Directional control valves

## Viking Xtreme

### Spare Solenoid Nuts

**Valves requiring captured exhaust should be fitted with plastic knurled nut**

Order code	Order Code
<b>P2FNP</b>	<b>P2FND</b>

### Spare Solenoid Operators

**Solenoid pilot operator 22mm NC, Normal duty  
(Max Operating pressure 10bar, Temp -10°C to +50°C)**

Order code (with locking bi-stable m/o)	weight Kg	Order code (with Non-locking monostable m/o)	weight Kg
<b>P2FP13N4C</b>	0.05kg	<b>P2FP13N4D</b>	0.05kg

**Solenoid pilot operator 22mm NC, Xtreme duty  
(Max Operating pressure 16bar, Temp -40°C to +60°C)**

Order code (with Non-locking monostable m/o)	weight Kg
<b>P2FP13H4D</b>	0.05kg

**Low power pilot operator NC, Normal duty  
(Max Operating pressure 10bar, Temp -10°C to +50°C)**

Order code (with locking bi-stable m/o)	weight Kg	Order code (with Non-locking monostable m/o)	weight Kg
<b>P2FP13N2C</b>	0.05kg	<b>P2FP13N2D</b>	0.05kg

**Solenoid pilot operator 22mm NC Mobile metal  
(Max Operating pressure 10bar, Temp -40°C to +60°C)**

Order code (with brass non locking m/o)	weight Kg	Order code (with brass locking m/o)	weight Kg	Order code No manual override	weight Kg
<b>P2FP13J4B</b>	0.04kg	<b>P2FP13J4C</b>	0.04kg	<b>P2FP13J4A</b>	0.04kg

#### Note.

Solenoid pilot operators are fitted to the Viking valve range. Order the above part numbers for spares. The operators are supplied with mounting screws and interface 'O' rings.

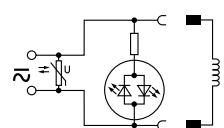
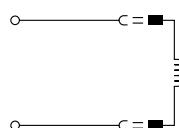
**Coils and connectors must be ordered separately.**



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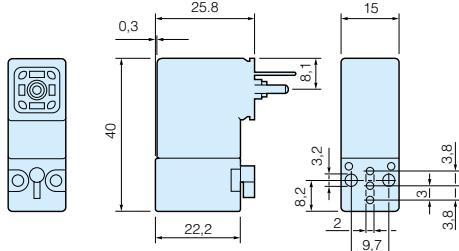
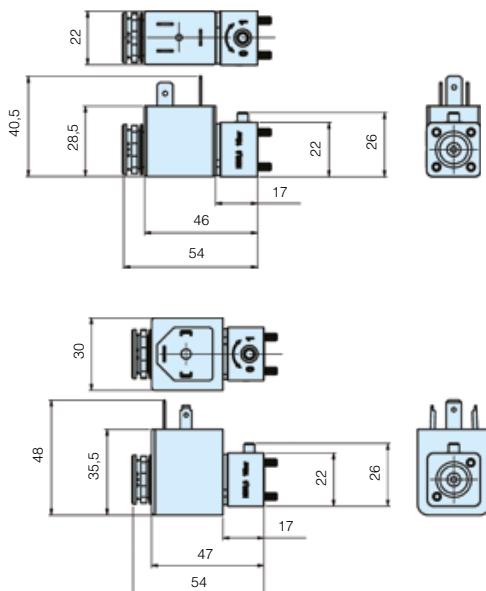
**Directional control valves****Solenoid operators****Solenoid Connectors / Cable Plugs EN175301-803**

	Description	Order code 15mm Form C/ISO15217	Order code 22mm Industrial Form B	Order code 30mm Form A/ISO4400
With large headed screw suitable for mounting in inaccessible or recess position	Standard IP65	<b>P8C-C</b>		
	24V DC LED and protection IP65	<b>P8C-C26C</b>		
	110V AC LED and protection IP65	<b>P8C-C21E</b>		
With standard screw	Standard IP65 without flying lead	<b>P8C-D</b>	<b>3EV10V10</b>	<b>3EV290V10</b>
	With LED and protection 24V AC/DC	<b>P8C-D26C</b>	<b>3EV10V20-24</b>	<b>3EV290V20-24</b>
	With LED and protection 110V AC/DC	<b>P8C-D21E</b>	<b>3EV10V20-110</b>	<b>3EV290V20-110</b>
	With LED and protection 230V AC		<b>3EV10V20-230</b>	
With cable	Standard with 2m cable IP65	<b>P8L-C2</b>		
	Standard with 5m cable IP65	<b>P8L-C5</b>		
	24V AC/DC, 2m cable LED and protection IP65	<b>P8L-C226C</b>		
	24V AC/DC, 5m cable LED and protection IP65	<b>P8L-C526C</b>	<b>3EV10V20-24L5</b>	<b>3EV290V20-24L5</b>
	24V AC/DC, 10m cable LED and protection IP65	<b>P8L-CA26C</b>		
	110V AC/DC, 2m cable LED and protection IP65	<b>P8L-C221E</b>		
	110V AC/DC, 5m cable LED and protection IP65	<b>P8L-C521E</b>	<b>3EV10V20-110L5</b>	
	230V AC, 5m cable LED and protection IP65		<b>3EV10V20-230L5</b>	

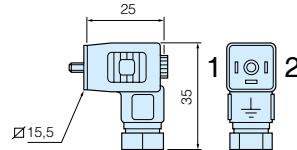


<b>P8C-C</b>	<b>P8C-D26C</b>	<b>P8L-C226C</b>
<b>P8C-D</b>	<b>P8C-D21E</b>	<b>P8L-C526C</b>
<b>P8L-C2</b>	<b>P8C-C26C</b>	<b>P8L-CA26C</b>
<b>P8L-C5</b>	<b>P8C-C21E</b>	<b>P8L-C221E</b>
<b>3EV10V10</b>	<b>P8L-C521E</b>	
<b>3EV290V10</b>	<b>3EV10V20-24</b>	<b>3EV10V20-24L5</b>
	<b>3EV10V20-110</b>	<b>3EV10V20-110L5</b>
	<b>3EV10V20-230</b>	<b>3EV10V20-230L5</b>

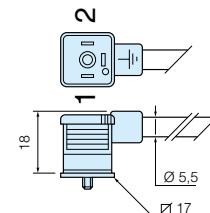
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**Directional control valves****Viking Xtreme****Cable Plug Dimensions (mm)****Solenoid operators P2E-•V...****Solenoid operators P2FP...****Cable plugs**

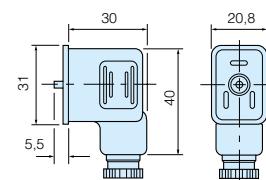
- P8C-C  
P8C-C26C  
P8C-C21E  
P8C-D  
P8C-D26C  
P8C-D21E

**Cable plugs with cables**

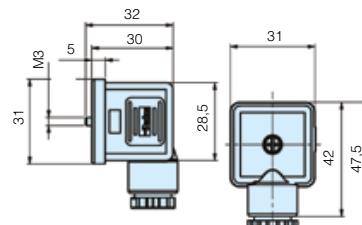
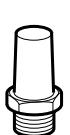
- P8L-C2  
P8LC5  
P8L-C226C  
P8L-C526C  
P8L-C26C  
P8L-C221E  
P8L-C521E

**Cable plugs Form B**

- 3EV10V10  
3EV10V20-24  
3EV10V20-110  
3EV10V20-230  
3EV10V20-24L5  
3EV10V20-110L5  
3EV10V20-230L5

**Cable plugs Form A**

- 3EV290V10  
3EV290V20-24  
3EV290V20-24L5

**Accessories****Sintered bronze series**

Port	Order code	Pack Qty
M5	9721900005	1
G1/8	9090050700	1
G1/4	P6M-BAA2	1
G3/8	9090050900	1
G1/2	9090051000	1

**Male straight connectors - Parallel thread**

Tube Ø1	Thread B	Order code	Box Qty
4	1/8	F4PMB4-1/8	20
6	1/8	F4PMB6-1/8	30
6	1/4	F4PMB6-1/4	30
8	1/8	F4PB8-1/8	40
8	1/4	F4PB8-1/4	30
8	3/8	F4PB8-3/8	20
10	1/4	F4PB10-1/4	20
10	3/8	F4PB10-3/8	20
10	1/2	F4PB10-1/2	10
12	1/4	F4PB12-1/4	10
12	3/8	F4PB12-3/8	10
12	1/2	F4PB12-1/2	10
14	3/8	F4PB14-3/8	10
14	1/2	F4PB14-1/2	10



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