



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



ENGINEERING YOUR SUCCESS.

 **pneumatyka**
Automatyka

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

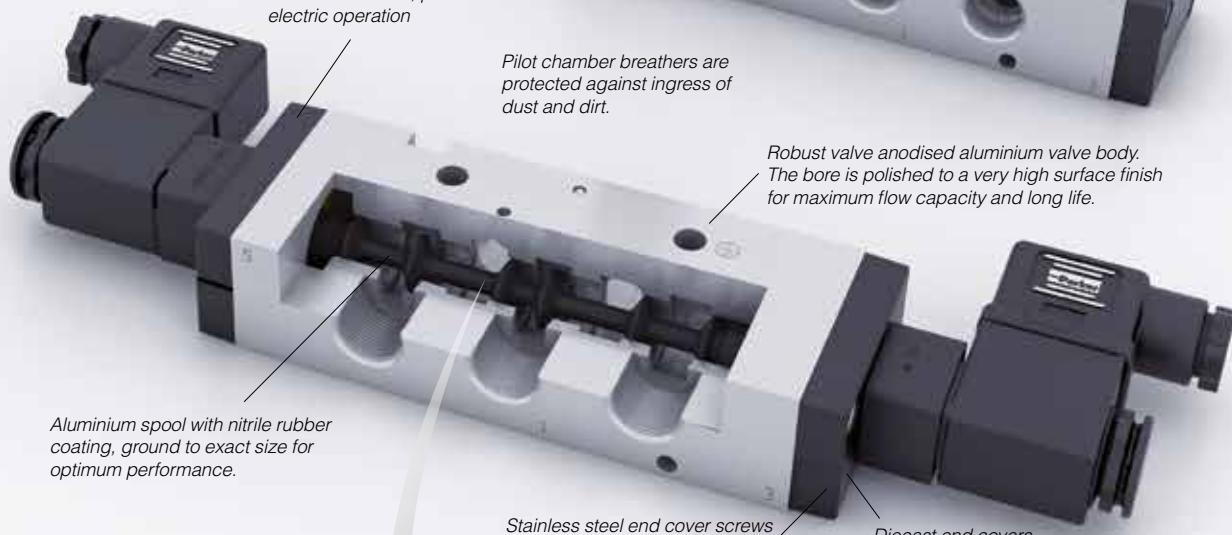
P2LAX, dimension G1/8

P2LBX, dimension G1/4

P2LCX, dimension G3/8

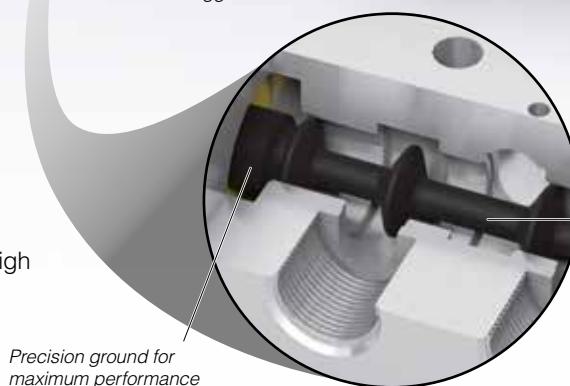
P2LDX, dimension G1/2

Wide range of 3/2, 5/2 and 5/3 valves for manual, pneumatic or electric operation



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.



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°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

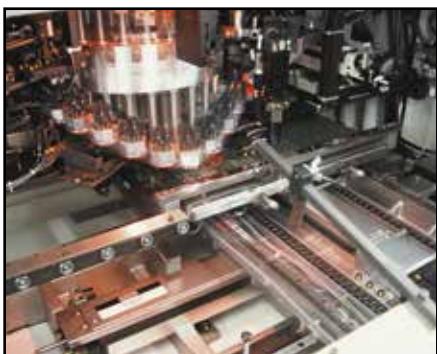
Thanks to large flow passage areas and the large flow diameter of 1.0 in the pilot valves, the P2LA and P2LB can be used in normal industrial or mobile environments without any problems of blocking. However the service life of the valve depends on the cleanliness of the air. Please refer to ISO 8573. 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 & Gas



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/m³, which is what a standard compressor with a standard filter gives.

ISO 8573-1 quality classes

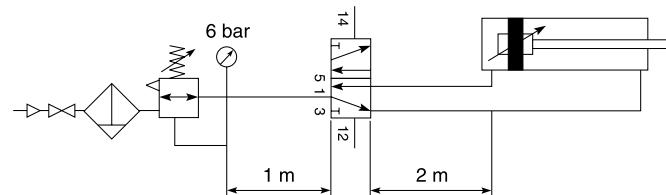
Quality class	pollution particle size (µm)	max. concentration (mg/m ³)	Water max. press. dew point (°C)	Oil max. concentration (mg/m ³)
1	0,1	0,1	-70	0,01
2	1	1	-40	0,1
3	5	5	-20	1,0
4	15	8	+3	5,0
5	40	10	+7	25
6	-	-	+10	-

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
Cylinder port	M5	G1/8	G1/4	G3/8	G3/8	G1/2	G1/2	G3/4	G3/4
Tubing Ext/Int	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			
P2LAX	G1/8	G1/8	G1/8	G1/8	G1/8				
P2LBX	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4			
P2LCX			G3/8	G3/8	G3/8	G3/8	G3/8		
P2LDX				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

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

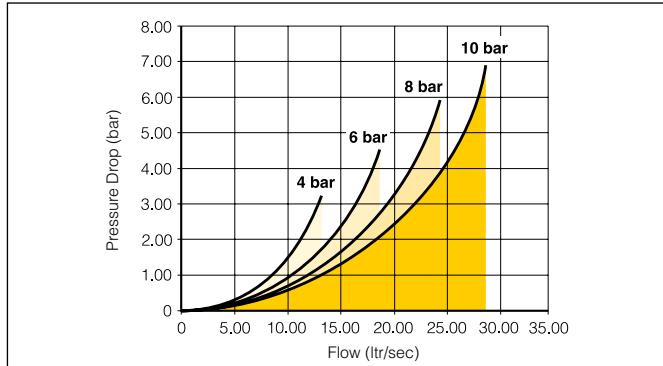
Flow characteristics

Flow capacities in accordance with ISO6358

All pressures = effective pressure

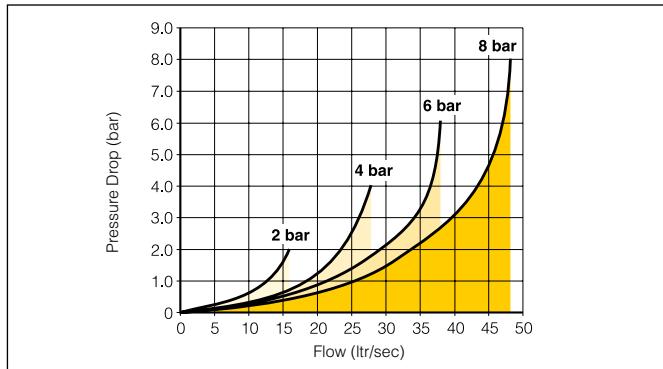
The curves in the diagram below are typical only

Technical Data P2LAX



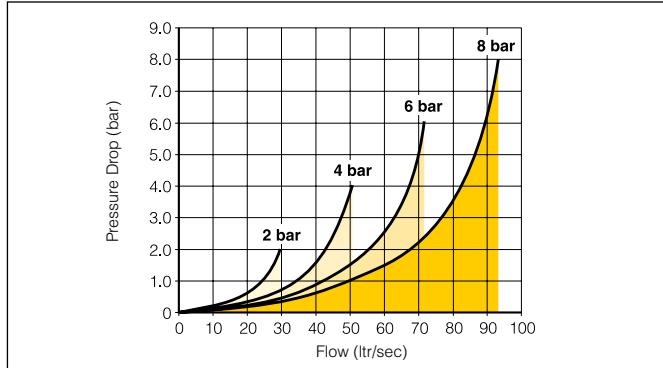
Port size	G1/8
Max operating pressure.	16 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 3,0 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,2
	Qn = 11,0 l/s
	Qmax = 19,0 l/s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

Technical Data P2LBX



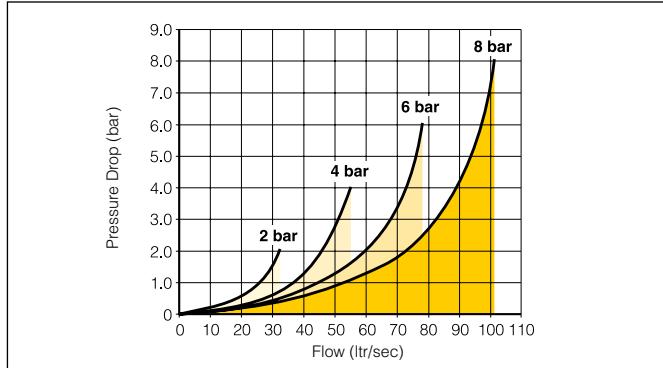
Port size	G1/4
Max operating pressure.	16 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 5,4 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,2
	Qn = 21,5 l/s
	Qmax = 38,0 l/s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

Technical Data P2LCX



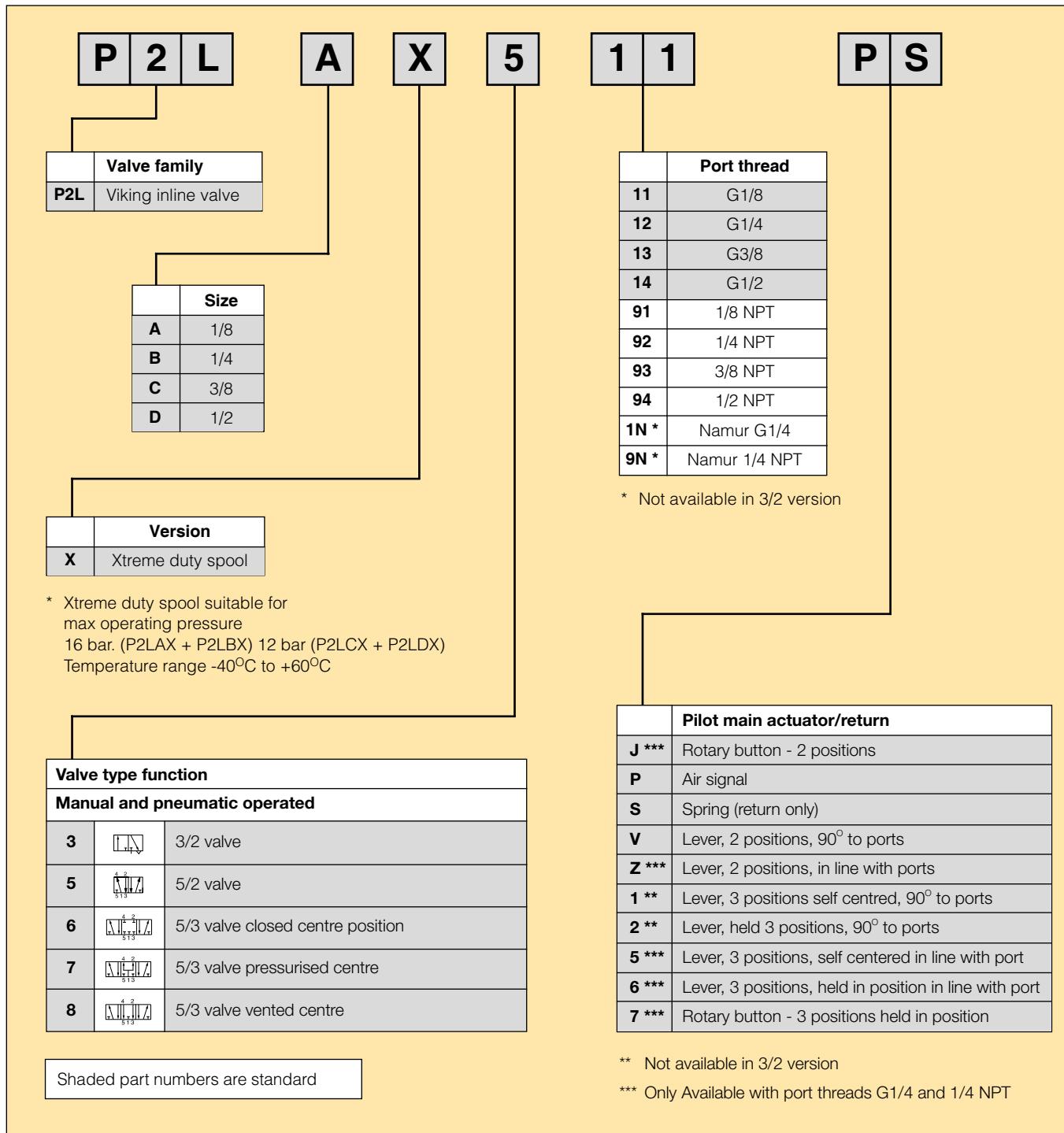
Port size	G3/8
Max operating pressure.	12 bar
Working temperature.	-40°C to + 60°C
Air pilot lever solenoid.	-10°C to + 50°C
Air pilot solenoid.	-40°C to + 60°C
Standard and food version.	-40°C to + 60°C
Mobile version.	c = 10,3 NI/s x bar
Flow (acc. to ISO 6358)	b = 0,22
	Qn = 41,0 l/s
	Qmax = 72,0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

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



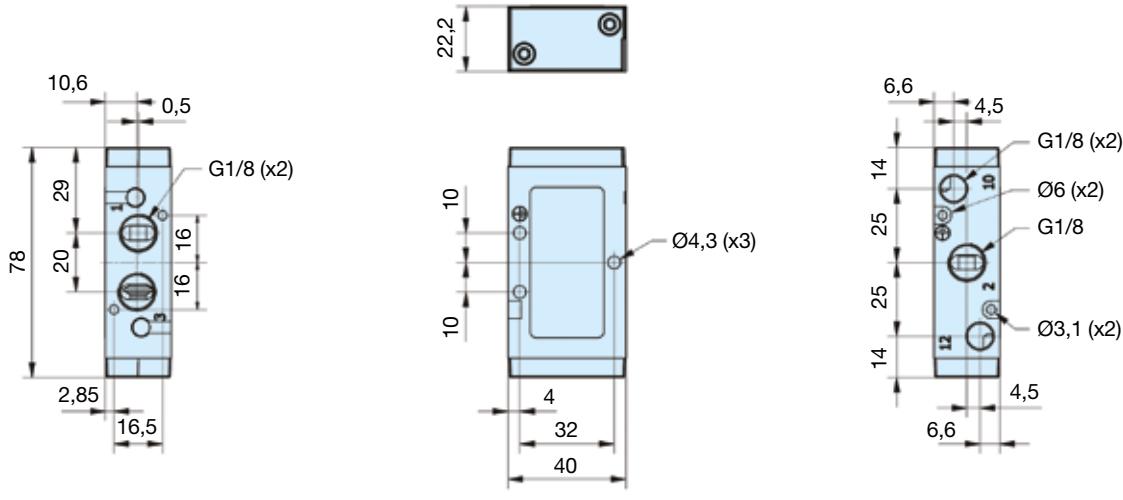
Pneumatic pilot operated valves - Xtreme operating pressure / temperature

Max operating pressure 16 bar (A & B) 12 bar (C & 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
3/2 valves, temperature -40°C to +60°C							
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	1,5	5/5	0,30	P2LAX311PP
				1,5	5/5	0,30	P2LBX312PP
				1,5	8/8	0,45	P2LCX313PP
				1,5	9/9	0,45	P2LDX314PP
	G1/8 G1/4 G3/8 G1/2	Air signal	Spring	3,2	8/15	0,30	P2LAX311PS
				3,5	10/20	0,30	P2LBX312PS
				3,5	10/30	0,45	P2LCX313PS
				3,5	10/30	0,45	P2LDX314PS
5/2 valves, temperature -40°C to +60°C							
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	1,5	5/5	0,14	P2LAX511PP
				1,5	6/6	0,30	P2LBX512PP
				1,5	8/8	0,45	P2LCX513PP
				1,5	9/9	0,45	P2LDX514PP
	G1/8 G1/4 G3/8 G1/2	Air signal	Spring	3,2	8/15	0,15	P2LAX511PS
				3,5	10/20	0,32	P2LBX512PS
				3,5	10/30	0,45	P2LCX513PS
				3,5	10/30	0,45	P2LDX514PS
5/3 valves, temperature -40°C to +60°C							
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	3,5	10/20	0,15	P2LAX611PP
		Closed centre position	Self centring	3,5	12/22	0,33	P2LBX612PP
				3,5	15/35	0,50	P2LCX613PP
				3,5	15/35	0,50	P2LDX614PP
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	3,5	10/20	0,15	P2LAX811PP
		Vented centre position	Self centring	3,5	12/22	0,33	P2LBX812PP
				3,5	15/35	0,50	P2LCX813PP
				3,5	15/35	0,50	P2LDX814PP
	G1/8 G1/4 G3/8 G1/2	Air signal	Air signal	3,5	10/20	0,15	P2LAX711PP
		Pressurised centre position	Self centring	3,5	12/22	0,33	P2LBX712PP
				3,5	15/35	0,50	P2LCX713PP
				3,5	15/35	0,50	P2LDX714PP

Dimensions

P2LAX... all
3/2 valves

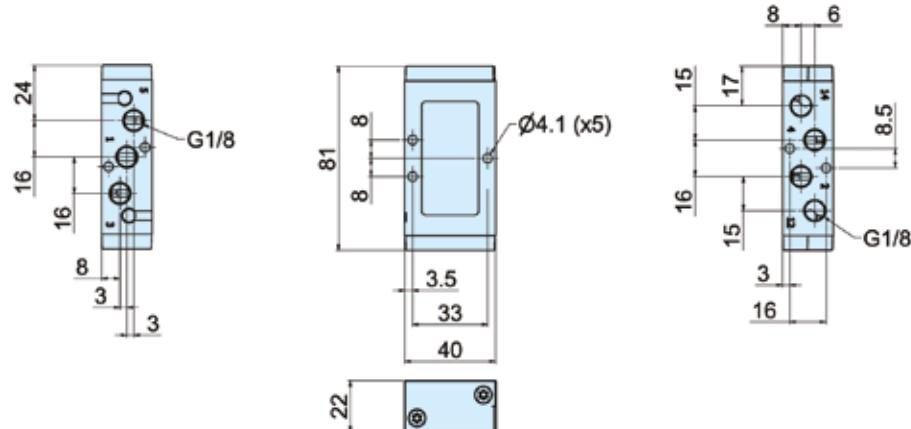


Solenoid valves

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

Dimensions

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



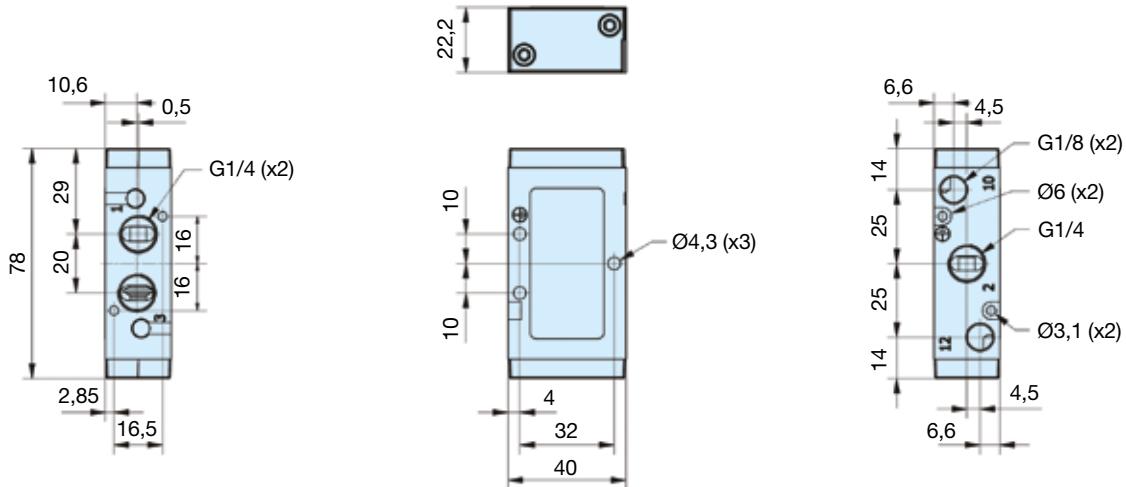
Solenoid valves

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

 **pneumatyka**
Automatyka

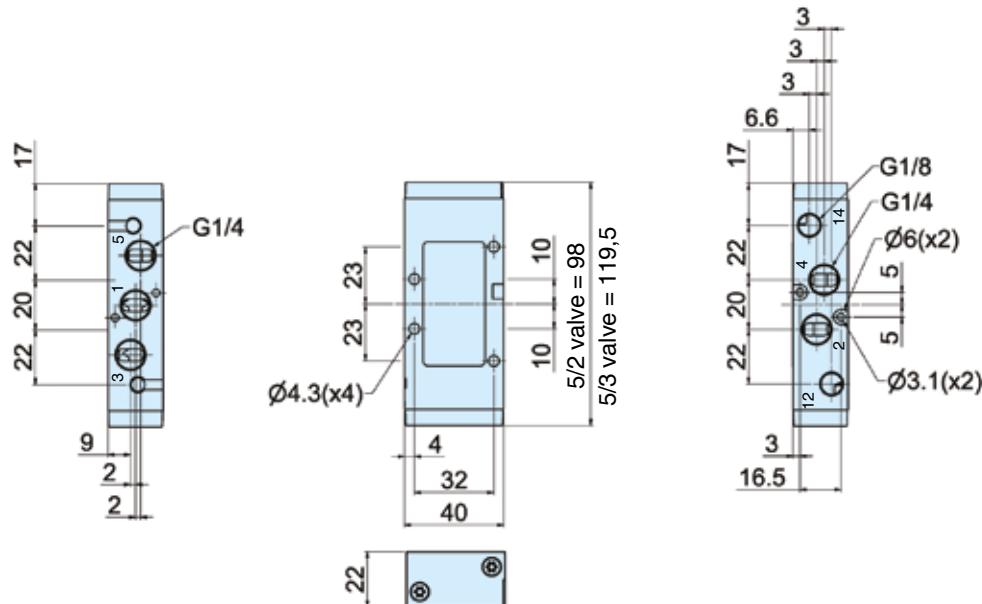
Dimensions

P2LBX... all
3/2 valves



Dimensions

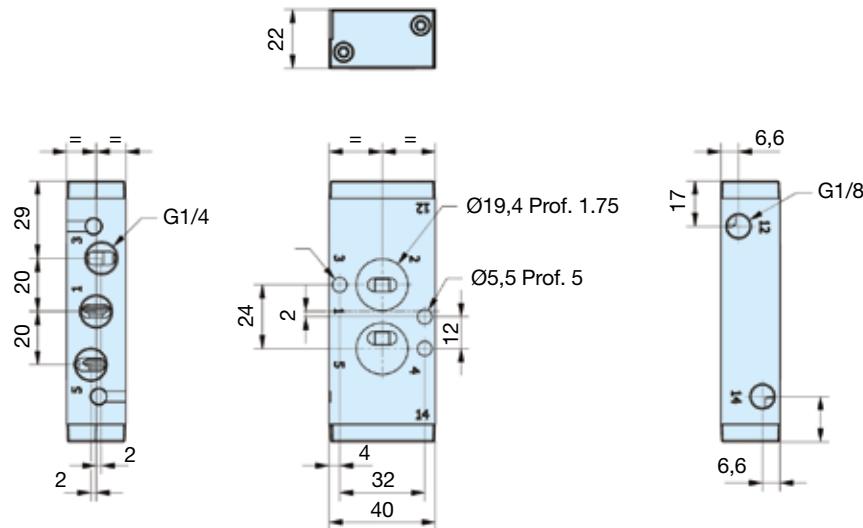
P2LBX... all
5/2 and 5/3 valves



* Note: 5/3 valves - add 21.5mm

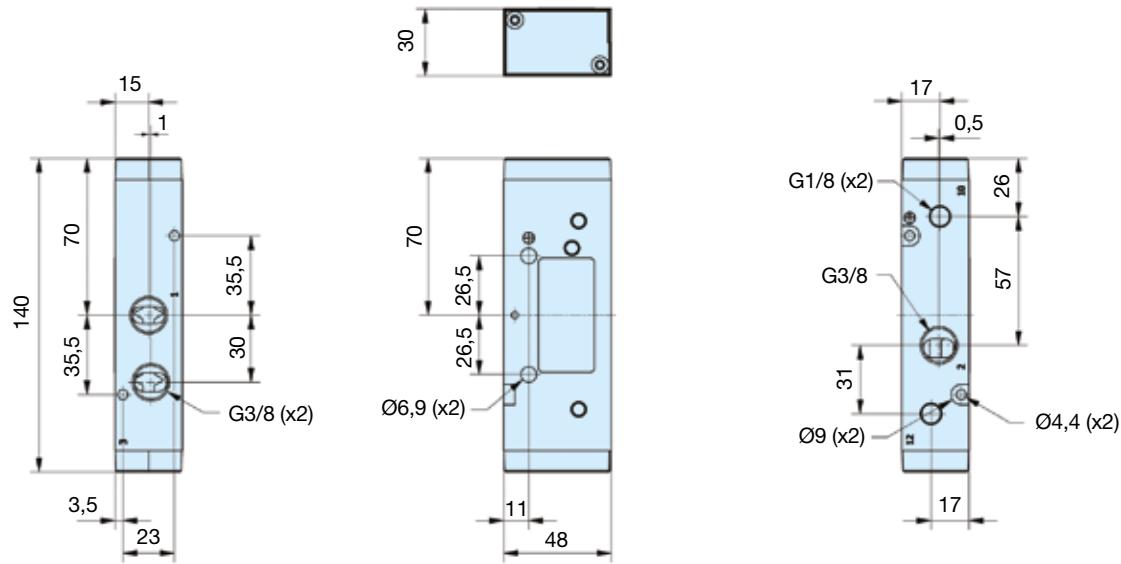
Dimensions

NAMUR
5/2 valves



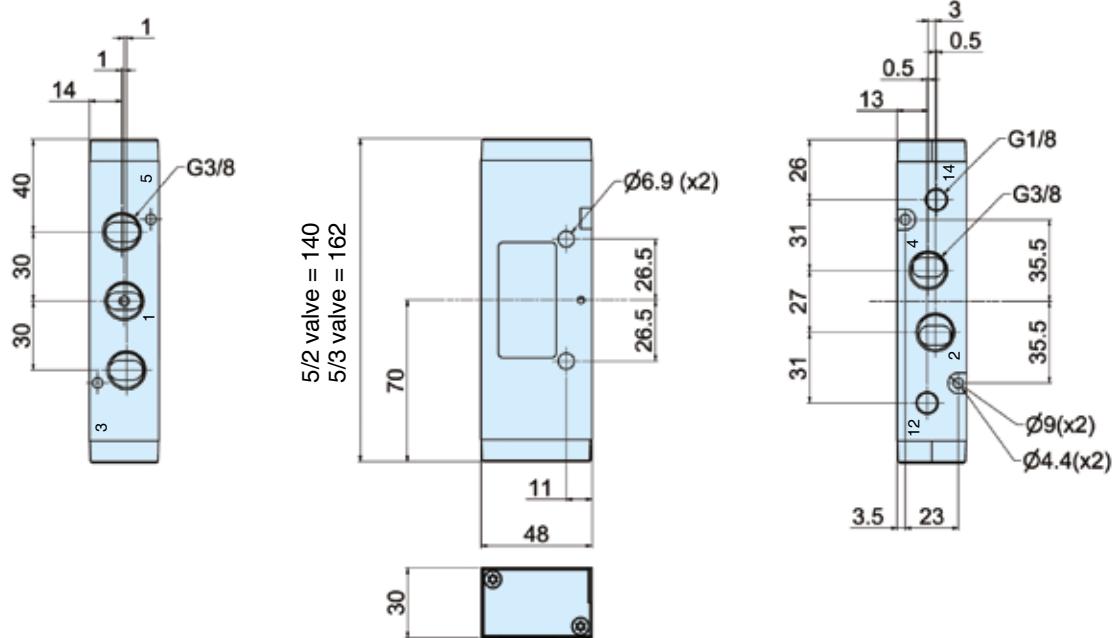
Dimensions

P2LCX... all
3/2 valves



Dimensions

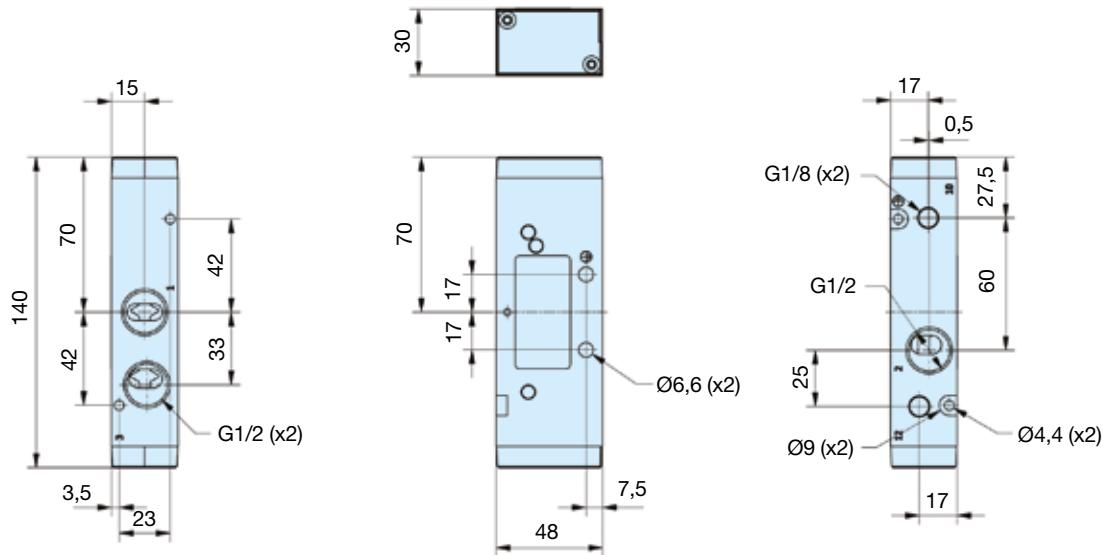
P2LCX... all
5/2 and 5/3 valves



* Note: 5/3 valves - add 22.0mm

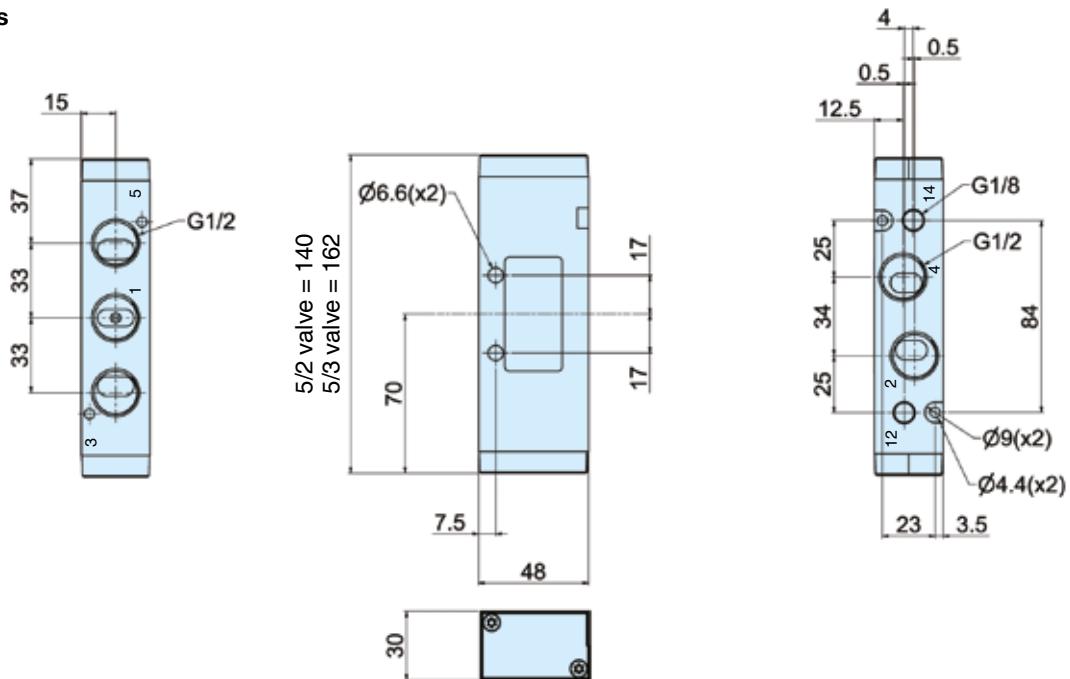
Dimensions

P2LDX... all
3/2 valves



Dimensions

P2LDX... all
5/2 and 5/3 valves



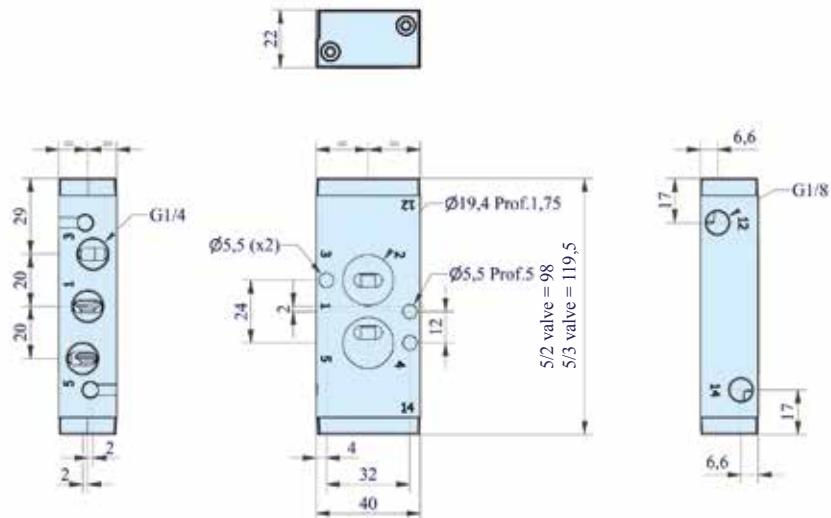
* Note: 5/3 valves - add 22.0mm

 pneumatyka
Automatyka

Dimensions

NAMUR

5/2 and 5/3 valves



Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates,

Dubai

Tel: +971 4 8127100

parker.me@parker.com

AT – Austria, Wiener Neustadt

Tel: +43 (0)2622 23501-0

parker.austria@parker.com

AT – Eastern Europe, Wiener

Neustadt

Tel: +43 (0)2622 23501 900

parker.easternurope@parker.com

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458

parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900

parker.belgium@parker.com

BG – Bulgaria, Sofia

Tel: +359 2 980 1344

parker.bulgaria@parker.com

BY – Belarus, Minsk

Tel: +375 17 209 9399

parker.belarus@parker.com

CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00

parker.switzerland@parker.com

CZ – Czech Republic, Klecany

Tel: +420 284 083 111

parker.czechrepublic@parker.com

DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0

parker.germany@parker.com

DK – Denmark, Ballerup

Tel: +45 43 56 04 00

parker.denmark@parker.com

ES – Spain, Madrid

Tel: +34 902 330 001

parker.spain@parker.com

FI – Finland, Vantaa

Tel: +358 (0)20 753 2500

parker.finland@parker.com

FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25

parker.france@parker.com

GR – Greece, Athens

Tel: +30 210 933 6450

parker.greece@parker.com

HU – Hungary, Budaörs

Tel: +36 23 885 470

parker.hungary@parker.com

IE – Ireland, Dublin

Tel: +353 (0)1 466 6370

parker.ireland@parker.com

IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21

parker.italy@parker.com

KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000

parker.easternurope@parker.com

NL – The Netherlands, Oldenzaal

Tel: +31 (0)541 585 000

parker.nl@parker.com

NO – Norway, Asker

Tel: +47 66 75 34 00

parker.norway@parker.com

PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00

parker.poland@parker.com

PT – Portugal, Leca da Palmeira

Tel: +351 22 999 7360

parker.portugal@parker.com

RO – Romania, Bucharest

Tel: +40 21 252 1382

parker.romania@parker.com

RU – Russia, Moscow

Tel: +7 495 645-2156

parker.russia@parker.com

SE – Sweden, Spånga

Tel: +46 (0)8 59 79 50 00

parker.sweden@parker.com

SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650

parker.slovenia@parker.com

TR – Turkey, Istanbul

Tel: +90 216 4997081

parker.turkey@parker.com

UA – Ukraine, Kiev

Tel: +380 44 494 2731

parker.poland@parker.com

UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878

parker.uk@parker.com

ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700

parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

US – USA, Cleveland

Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

CN – China, Shanghai

Tel: +86 21 2899 5000

HK – Hong Kong

Tel: +852 2428 8008

IN – India, Mumbai

Tel: +91 22 6513 7081-85

JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul

Tel: +82 2 559 0400

MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

SG – Singapore

Tel: +65 6887 6300

TH – Thailand, Bangkok

Tel: +662 186 7000

TW – Taiwan, Taipei

Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

BR – Brazil, São José dos Campos

Tel: +55 12 4009 3500

CL – Chile, Santiago

Tel: +562 2303 9640

MX – Mexico, Toluca

Tel: +52 72 2275 4200

European Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI,
FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU,
SE, SK, UK, ZA)

