



Bladder Accumulators Oil & Gas

480 & 517 bar range

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



ENGINEERING YOUR SUCCESS.

Design Features and Benefits

1 Shell

Seamless shell, designed and manufactured to PED 97/23/EEC and CE marked. Material - Chromium-molybdenum steel. Working pressure 480 bar and 517 bar.

2 Label

With assembly specification and installation details.

3 Material Certification

Available on request for all major pressure loaded parts to EN 10204 3.1

4 Finish

One coat primer paint as standard. Special paints available.

5 Bladder

Totally enclosed construction with an extensive range of elastomers available. See page 5 for Bladder details.

6 Fluid Port Assembly

Integral port and poppet valve assembly with an anti-extrusion ring. For options see page 4.

7 Safety

All gas-loaded accumulators are pressurised vessels and it is recommended that safety consideration be given to the application in which they are used. A relief valve should always be fitted to the hydraulic system with the option of a burst disc to protect the accumulator. See Installation and Servicing data sheet for information regarding installation of accumulators.

8 Pressure Testing

A hydro static pressure test is carried out on all our accumulator shells during the manufacturing process. We can carry out additional pressure testing witnessed by a specified Inspection Authority and/or customer as an optional extra if required.

We can also carry out a hydro-pneumatic pressure test on the complete assembly as an optional extra if required. Again this can be witnessed by a specified inspection authority and/or customer.

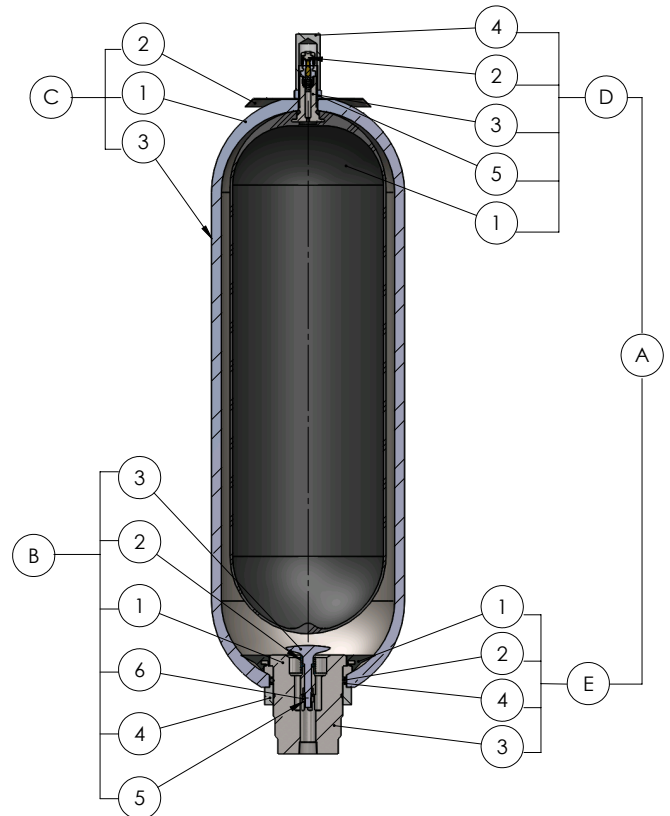
9 Accessories

A complete range of accumulator accessories are available from Parker Olaer.

10 Spare Parts

Available on request.

Please Note: The information in this datasheet is subject to change without prior notice.



A	Bladder Kit comprising:
D	Bladder assembly
D1	Bladder
D2	Gas valve assembly
D3	Locknut
D4	Protective cap
D5	'O' ring stem
E	Anti extrusion ring assembly
E1	Anti extrusion ring
E2	'O' ring fluid port*
E3	Bonded seal
E4	Back-up ring
B	Fluid port assembly comprising
B1	Fluid port body
B2	Spring
B3	Poppet valve
B4	Collett
B5	Piston
B6	Flanged washer
C	Shell assembly comprising:
C1	Shell
C2	Label
C3	Label warning

Capacities and Dimensions

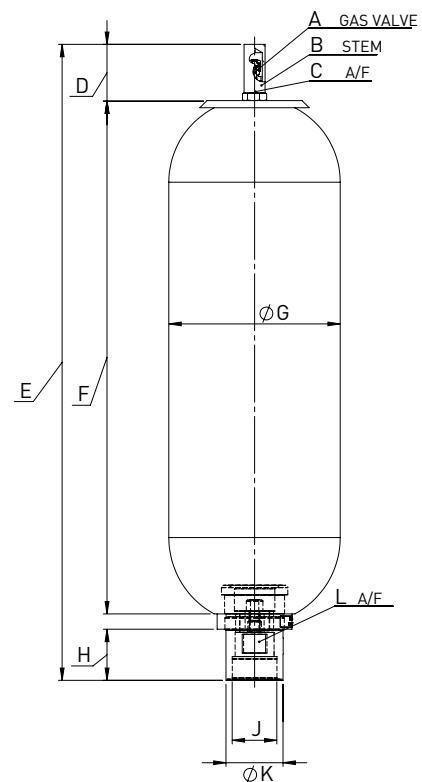
Nominal Capacity Litres	Effective Gas vol. Litres	Work press. bar	Max Flow Rate lt/min	Weight Dry Kilo	Dimensions in mm unless stated otherwise and subject to manufacturer's tolerances										
					A Inches	B Inches	C	D	E	F	G	H	J Inches	K	L
10	9.4	480	215	34	¼ BSP	7/8 UNF	33	78	575	407	229	70	see table	76	69
10	9.4	517	215	54	¼ BSP	7/8 UNF	33	78	575	407	243	70		76	69
20	18.8	480	215	54	¼ BSP	7/8 UNF	33	78	886	718	229	70		76	69
20	18.8	517	215	100	¼ BSP	7/8 UNF	33	78	886	718	243	70		76	69
37	35.2	480	215	86	¼ BSP	7/8 UNF	33	78	1407	1239	229	70		76	69
37	35.2	517	215	152	¼ BSP	7/8 UNF	33	78	1407	1239	243	70		76	69
54	49.2	480	215	119	¼ BSP	M50x 1.5P	69	66	1922	1766	229	70		76	69
57	54.5	517	215	220	¼ BSP	M50x 1.5P	69	66	1980	1824	243	70	76	69	

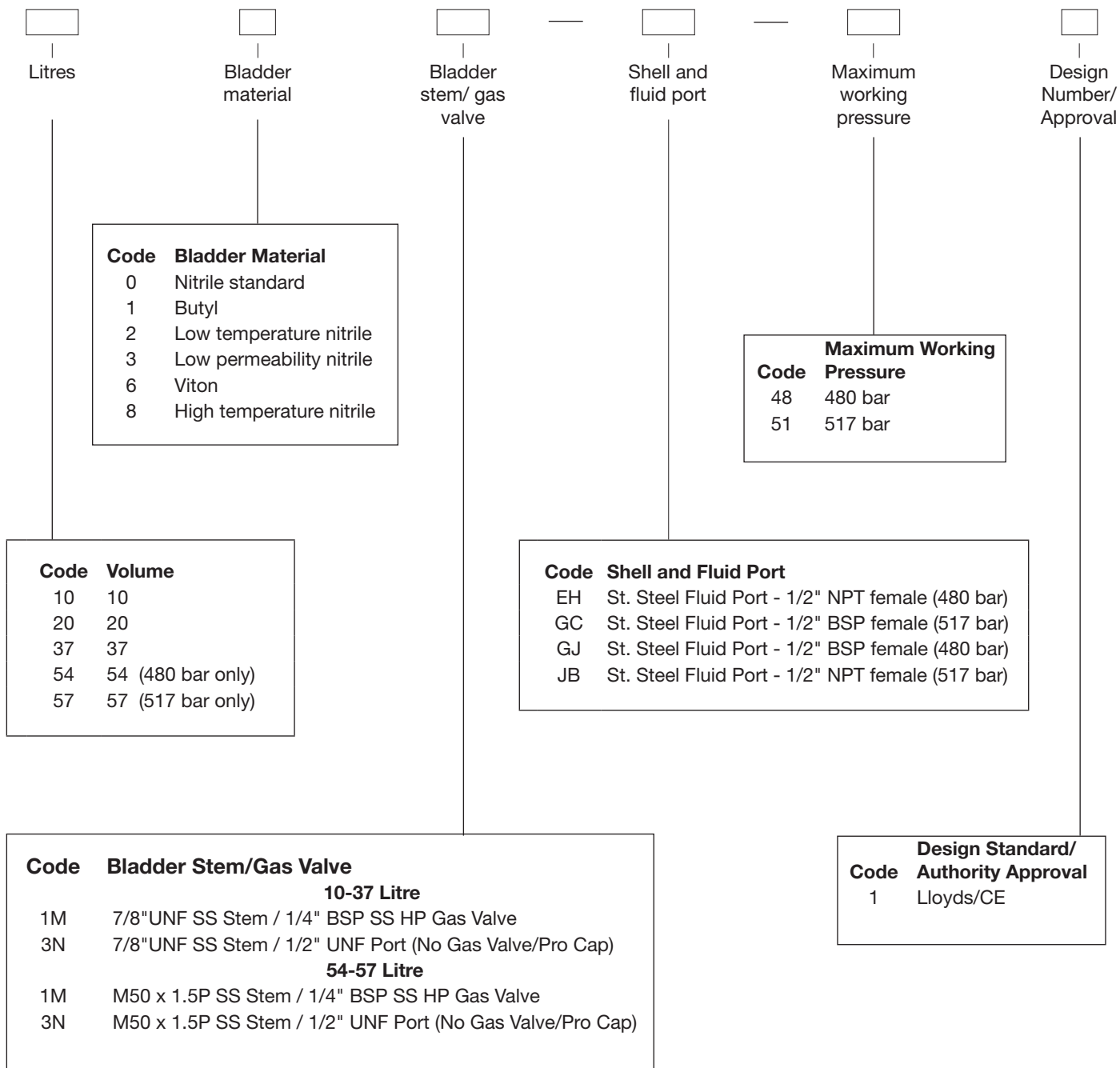
Note: Dimensions are based on current stock and are subject to change without prior notice.

Dimension J

Code	Shell and Fluid Port
EH	Stainless Steel - 1/2" NPT female (480 bar)
GC	Stainless Steel - 1/2" BSP female (517 bar)
GJ	Stainless Steel - 1/2" BSP female (480 bar)
JB	Stainless Steel - 1/2" NPT female (517 bar)

Other available on request.





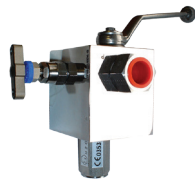
Example: 1001M-EH-481

Litres:	10
Bladder Material:	Nitrile Standard
Bladder Stem/ Gas Valve:	7/8" UNF SS Stem / 1/4" BSP SS HP Gas Valve
Shell & Fluid Port:	Stainless Steel - 1/2" NPT female (480 bar)
Maximum working pressure:	480 bar
Design Number/Approval:	Lloyds/CE

Accessories

Safety Blocks

Stainless Steel Safety Block (345 bar & 690 bar)



Materials: 316 Stainless steel. All blocks are fully tested.
Seals: Nitrile fitted as standard. Viton and other options also available.

Connections:

- Pressure gauge connection (M port).
- Wide range of adaptors for accumulator connection.
- All G threads (BSP) to BS2779 1986.
- For 760 bar only - All NPT to ANSI/ASME B.1.20.1 1983
- Performance data available.

Other:

- Pressure relief valve for the protection of accumulator.
- Manual dump to tank valve as standard.

Burst Discs and Permanent Charging Heads

Parker Olaer burst disc assemblies and/or permanent charging heads are available for most accumulators. For the Oil & Gas range of accumulators, we use a specially designed stainless steel adaptor which can be filled with gas volume, burst disc and pressure gauge in numerous combinations.



Burst discs are a safety device which releases the gas pressure independent of the pressure being caused by a fire or a failure of other safety equipment in the system. This is a secondary safety device, and it should be set higher than the normal hydraulic safety devices in the system.

Bladder Details

Bladder Kit

Comprises of:

- Bladder assembly (bladder, integral stem, gas valve, protective cap*, stem 'O' seal)
- Anti-extrusion ring
- 'O' fluid port ring
- Back-up ring
- Seal and bleed plug* *4 Litres capacity and above

Always quote full part number e.g. 5410A-00 54L, capacity, Butyl Rubber, 1/4" BSP.

Material According to Temperature Range

Material Code	Bladder Material	Temperature Range (°C)			
		Static		Dynamic	
0	Nitrile	-20	100	-15	100
1	Butyl	-15	120	-15	120
2	Low Temp Nitrile	-40	70	-25	70
3	Low Permeability Nitrile	0	105		
6	Fluorocarbon (Viton)	-20	130		
7	High Aromatic Nitrile	0	105		
8	High Temp Nitrile	0	150		
9	EPI - Chlorohydin 100	-20	120		
A	Ethylene Propylene (EP)	-20	120		
B	EPI - Chlorohydin 200	-40	120		
K	Special Low Temp Nitrile	-79	100	-59	100
L	Peroxide Cured EPDM	Please contact us for details			
M	High Temperature Fluorocarbon	-10	200		
N	Low Temp Nitrile	-45	70		

Note: Models 1/54 litres detailed above. Models 0.6 litres have Gas Valve assembly integral with bladder stem without protective cap fitted. * Not fitted on all models

Bladder Capacity / Overall Dimensions

Accumulator Capacity (L) Nominal	Dimension			5/8" (16mm)	7/8" (22mm)	2" (50mm)
	H	D				
0.16	154	41	•			
0.6	132	73	•			
1.15 (1.25)	147	91	•	•		
3	335	100	•	•		
4	203	142		•		
5	680	100		•		
6	305	142		•		
9 (10)	570	142		•		
12.5	655	142		•		
10	283	198			•	•
12	406	198				•
20	610	198			•	•
24.5	719	198				•
28	880	198			•	
37	1128	198			•	•
42	1280	198			•	
54	1603	198			•	•



Note: Dimensions are based on current stock and are subject to change without prior notice.

Charging Sets

A charging set is an indispensable instrument for the verification, pressurization and nitrogen bleeding of most of the hydraulic accumulators available on the market. To use this unit, it is screwed on the gas charging valve of the accumulator and connected via a high pressure hose to the nitrogen source, equipped with a pressure regulator. If only the nitrogen pressure is to be controlled or reduced, this hose is not necessary.

Charging Sets (no case)

Specification

Part Number

10503 Composing:

- Carbon steel body
- Hose including fixed nitrogen adaptor (5/8" BSP Male)
- Bleed valve
- Pressure gauge
- Connection: 1/4" BSP male coned to suit hose assembly



Charging Hose: 11774
Maximum Working Pressure: 345 Bar
End Termination: 5/8" BSP male bullnose
Length: 2.5 metres



For assembly WITHOUT hose, part numbers become 10500-02, 10500-03 etc.

Part No	Pressure Range (bar)	Charging Set Contents		
		Pressure Gauge(s)		Charging Hose
		Pressure (bar)	Part No	
10500-02	0-25	0-25	45053-099	n/a
10500-03	0-60	0-60	45084-099	n/a
10500-04	0-160	0-160	45085-099	n/a
10500-05	0-250	0-250	45086-099	n/a
10500-07	0-400	0-400	45087-099	n/a
10503-02	0-25	0-25	45053-099	11774
10503-03	0-60	0-60	45084-099	11774
10503-04	0-160	0-160	45085-099	11774
10503-05	0-250	0-250	45086-099	11774
10503-07	0-400	0-400	45087-099	11774
10520-10	0-690	0-1000	45140-099	n/a
10523-10	0-690	0-1000	45140-099	55354-099

Optional Extras

Country	Part No.	Description
UK	50094-099	Nitrogen Cylinder Adaptor 1/4" BSP (M) x 5/8" BSP (M)
	50096-099	Charging Hose 1/4" BSP (F) 345 bar x 2.5m long 1/4" both ends
	50097-099	Extension Adaptor for Charging Hose 345 bar
	55354-099	Charging Hose 1/4" BSP (F) 690B x 2.5m long
Accessories	50032-V10	Charging Hose Adaptor 1/4" BSP (M) x 1/4" NPT (F)
	43183	Charging Set Carrier Box
	10127	Charging Block Elbow 1/4" BSP (M)
	10128	Charging Block Elbow .302" x 32 TPI (M)
	11015	Tool Kit

Charging Kits (with case)

Specification

Universal Charging Set:

10691-XX Composing:

- Charging set body
- Pressure Gauge (refer to table below)
- 1 x Charging Hose (refer to table below)



Charging Hose: 50096-099
Maximum Working Pressure: 345 Bar
End Termination: 1/4" BSP female swivel
Length: 2.5 metres



Charging Hose: 54248-099
Maximum Working Pressure: 690 Bar
End Termination: 1/4" BSP female swivel
Length: 2.5 metres



Part No	Pressure Range (bar)	Set/ Kit Contents			
		Pressure Gauge(s)		Charging Hose	Case
		Pressure (bar)	Part No		
10690-02	0-25	0-25	45053-099	50096-099	43183
10690-03	0-60	0-60	45084-099	50096-099	43183
10690-04	0-160	0-160	45085-099	50096-099	43183
10690-05	0-250	0-250	45086-099	50096-099	43183
10690-07	0-400	0-400	45087-099	50096-099	43183

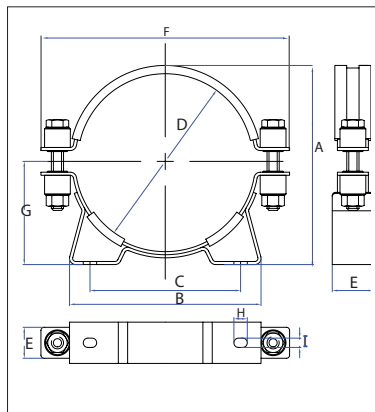
10691-02	0-25	0-25	45053-099	11774	43183
10691-03	0-60	0-60	45084-099	11774	43183
10691-04	0-160	0-160	45085-099	11774	43183
10691-05	0-250	0-250	45086-099	11774	43183
10691-07	0-400	0-400	45087-099	11774	43183

10520-10	0-690	0-1000	45140-099	n/a	n/a
10693-10	0-690	0-1000	45140-099	54248-099	n/a
10694-10	0-690	0-1000	45140-099	n/a	43183
10692-10	0-690	0-1000	45140-099	54248-099	43183

Clamps

Part Number	Diagram	Accumulator Capacity (Litres)	Dimensions in mm									Mounting Bolts	Mass kg
			A	B	C	D	E	F	G (ref)	H	I		
10983	B	10 - 54	250	267	211	218 - 228	40	306	129	21	15	M12 x 80	1.50

Diagram B

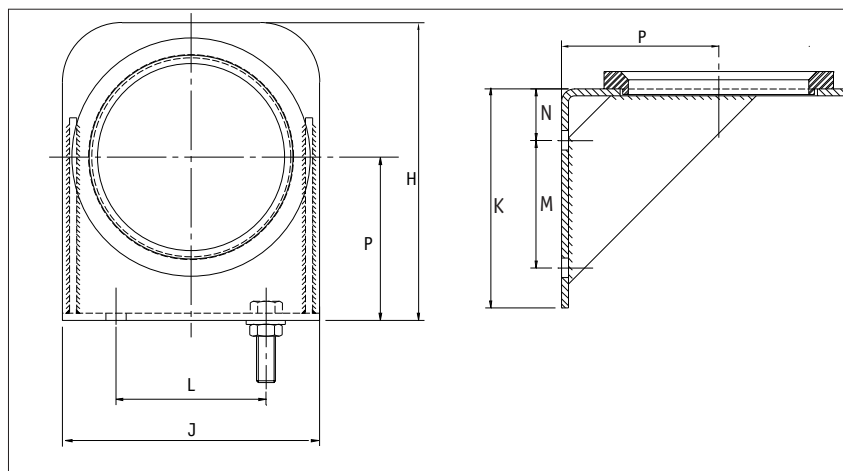


Brackets

Brackets are manufactured from carbon steel

Support bracket assembly (c/w cushion ring)
Mounting bolts - M16 X 70

Spare cushion rings:
10 to 54L part number: 48473-A00



Model Number	Accumulator Capacity (L)	Dimensions							Mass (kg)
		H	J	K	L	M	N	P	
10961	10 - 54	250	216	191	108	111	45	130	6

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.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 22 33 458
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, Budaoers
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.easteurope@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

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@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.ukraine@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
(industrial)
Tel: +1 216 896 3000

US – USA, Elk Grove Village
(mobile)
Tel: +1 847 258 6200

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

ID – Indonesia, Tangerang
Tel: +62 21 7588 1906

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Fujisawa
Tel: +81 (0)4 6635 3050

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: +662 717 8140

TW – Taiwan, New Taipei City
Tel: +886 2 2298 8987

VN – Vietnam, Ho Chi Minh City
Tel: +84 8 3999 1600

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Cachoeirinha RS
Tel: +55 51 3470 9144

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Toluca
Tel: +52 72 2275 4200

EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,
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US Product Information Centre

Toll-free number: 1-800-27 27 537

www.parker.com

