

221G Series

Anti-corrosive solenoid valve,
the most resistant solution for fluid control
in even the harshest environment



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| arapneumatik.pl

PARKER STORE WROCLAW
armatura@arapneumatik.pl
TEL. 71 364 72 85

PARKER STORE KATOWICE
katowice@arapneumatik.pl
TEL. 32 779 76 40



Introduction

The 221G range offers unrivalled resistance to corrosion and aggressive chemicals, and with its ATEX certification, is suited for use in explosive environments.

With a durable high-grade 316L stainless steel construction plus fluoroelastomer (FKM) or Ethylene-Propylene (EPDM) sealings to provide fluid and chemical resistance, the 221G series combines long life and reduced maintenance requirements in even the harshest operating environments.

Typical applications include those found in oil & gas, petrochemical and food processing installations.

The modular design of the valves allows assembly to a large range of coils including many with ATEX, IP67, UL/VDE approvals. This makes them ideal for use in applications where cleaning agents are present such as in car wash installations, industrial washing machines or food processing. The 221G series in stainless steel is available in a two-way, normally closed format with port sizes ranging from 3/8" to 1" inch.



Benefits

This stainless steel solenoid valves is the most resistant to corrosion and aggressive chemicals with the largest number of possible electrical connections. It delivers high performance and reliability.

- Longest lifetime (+30% in average vs. technical equivalents)
- Coil modularity
- Compatible with explosive environment (ATEX certified)

Applications

- Industrial Equipment
- Life Sciences
- Process industries
- Water treatment
- Food & Beverage processing
- Control of water, air, steam, neutral gases and liquids and compatible fuel oils
- Aggressive liquids & environments

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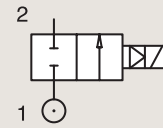
PARKER STORE WROCŁAW
armatura@arapneumatik.pl
TEL. 71 364 72 85

PARKER STORE KATOWICE
katowice@arapneumatik.pl
TEL. 32 779 76 40



Technical data

316L STAINLESS STEEL - SILVER SHADING RING PIPE MOUNTING

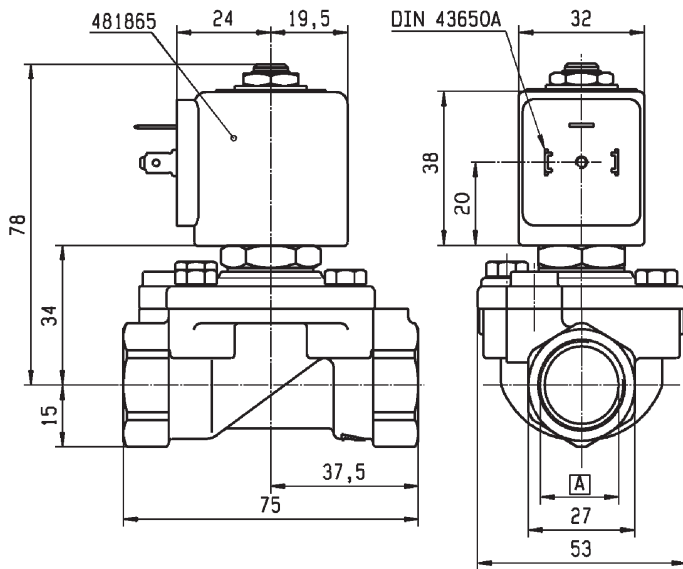


NORMALLY CLOSED

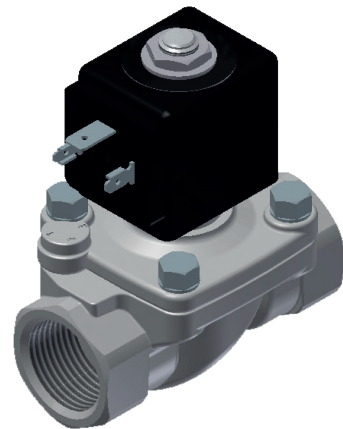
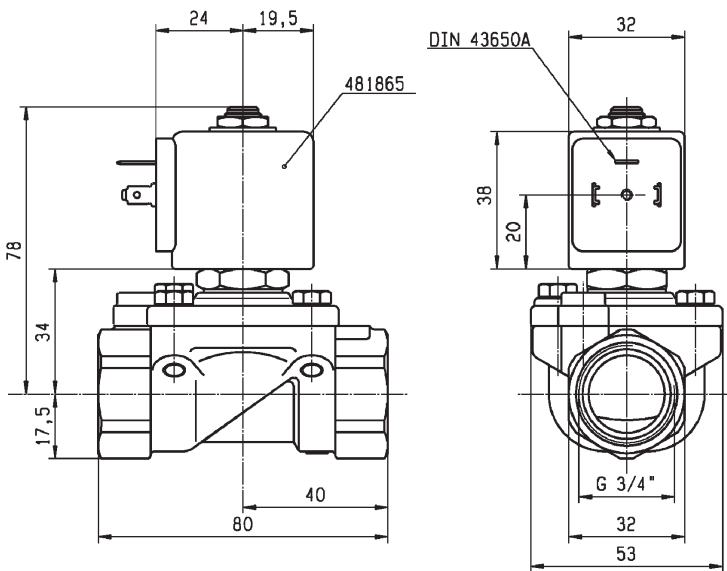
| Port Size | Orifice [mm] | Flow Factors | | Operating pressure differential Max (MOPD) | | | Fluid Temperature | | Seal | Valve | Housing | Coil | Power | | Coil group | Dwg N° |
|-----------|--------------|--------------|-----------|---|----------|----------|-------------------|----------|------|-----------------------|---------|--------|--------|--------|------------|--------|
| | | KV [l/min] | KV [m3/h] | Min [bar] | AC [bar] | DC [bar] | Min [°C] | Max [°C] | | | | | AC [W] | DC [W] | | |
| 3/8" | 15 | 65 | 3.9 | 0 | - | 10 | -10 | 100 | FKM | 221G6336 ₁ | 2995 | 481865 | - | 8 | 2.0 | 1 |
| | 15 | 65 | 3.9 | 0 | 16 | - | -10 | 100 | FKM | 221G6306 | 2995 | 481865 | 8 | - | 2.0 | 1 |
| | 15 | 65 | 3.9 | 0 | 20 | 7 | -10 | 120 | FKM | 221G6306 | 4270 | 486265 | 14 | 14 | 2.0 | 1 |
| | 15 | 65 | 3.9 | 0 | 10 | - | -10 | 100 | EPDM | 221G6307 | 2995 | 481865 | 8 | - | 2.0 | 1 |
| | 15 | 65 | 3.9 | 0 | 10 | 7 | -10 | 140 | EPDM | 221G6307 ₂ | 4270 | 486265 | 14 | 14 | 2.0 | 1 |
| 1/2" | 15 | 80 | 4.8 | 0 | - | 10 | -10 | 100 | FKM | 221G6536 ₁ | 2995 | 481865 | - | 8 | 2.0 | 1 |
| | 15 | 80 | 4.8 | 0 | 16 | - | -10 | 100 | FKM | 221G6506 | 2995 | 481865 | 8 | - | 2.0 | 1 |
| | 15 | 80 | 4.8 | 0 | 20 | 7 | -10 | 120 | FKM | 221G6506 | 4270 | 486265 | 14 | 14 | 2.0 | 1 |
| | 15 | 80 | 4.8 | 0 | 10 | - | -10 | 100 | EPDM | 221G6507 | 2995 | 481865 | 8 | - | 2.0 | 1 |
| | 15 | 80 | 4.8 | 0 | 10 | 7 | -10 | 140 | EPDM | 221G6507 ₂ | 4270 | 486265 | 14 | 14 | 2.0 | 1 |
| 3/4" | 15 | 80 | 4.8 | 0 | - | 10 | -10 | 100 | FKM | 221G6636 ₁ | 2995 | 481865 | - | 8 | 2.0 | 2 |
| | 15 | 80 | 4.8 | 0 | 16 | - | -10 | 100 | FKM | 221G6606 | 2995 | 481865 | 8 | - | 2.0 | 2 |
| | 15 | 80 | 4.8 | 0 | 20 | 7 | -10 | 120 | FKM | 221G6606 | 4270 | 486265 | 14 | 14 | 2.0 | 2 |
| | 15 | 80 | 4.8 | 0 | 10 | - | -10 | 100 | EPDM | 221G6607 | 2995 | 481865 | 8 | - | 2.0 | 2 |
| | 15 | 80 | 4.8 | 0 | 10 | 7 | -10 | 140 | EPDM | 221G6607 ₂ | 4270 | 486265 | 14 | 14 | 2.0 | 2 |
| 1" | 25 | 160 | 9.6 | 0 | - | 10 | -10 | 100 | FKM | 221G6136 ₁ | 2995 | 481865 | - | 8 | 2.0 | 3 |
| | 25 | 160 | 9.6 | 0 | 16 | - | -10 | 100 | FKM | 221G6106 | 2995 | 481865 | 8 | - | 2.0 | 3 |
| | 25 | 160 | 9.6 | 0 | 16 | 6 | -10 | 120 | FKM | 221G6106 | 4270 | 486265 | 14 | 14 | 2.0 | 3 |
| | 25 | 160 | 9.6 | 0 | 10 | - | -10 | 100 | EPDM | 221G6107 | 2995 | 481865 | 8 | - | 2.0 | 3 |
| | 25 | 160 | 9.6 | 0 | 10 | 10 | -10 | 140 | EPDM | 221G6107 ₂ | 4270 | 486265 | 14 | 14 | 2.0 | 3 |

1. Without shading ring

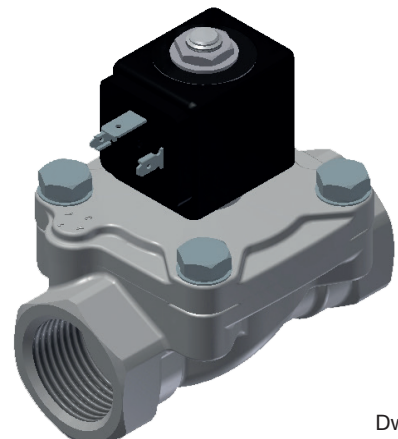
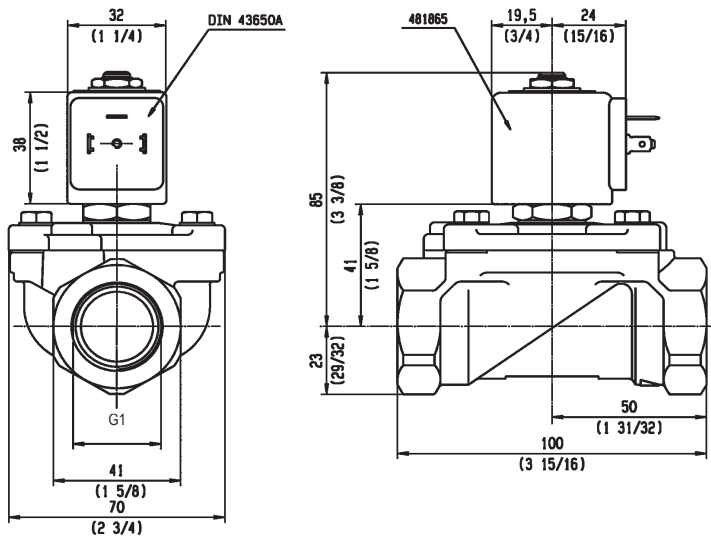
2. Maximum pressure for steam: 4 bar (140°C)



Dwg 1



Dwg 2



Dwg 3

2.0/2.1

COILS FOR DIN PLUG CONNECTION



COILS 32 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



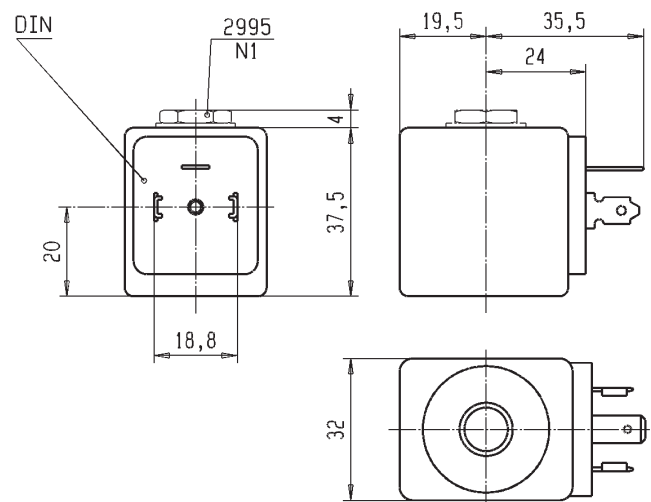
| Specification | | Standard | | | Double frequency | | |
|------------------------|----|--|-------------|-----|------------------|--------------------|------|
| Reference | | 481865 | | | 483510 | | |
| Coil Group | | 2.0 / 2.1 | | | | | |
| Degree of protection | | IP65 according to IEC / EN 60529 standards (with DIN plug). | | | | | |
| Class of insulation | | F 155°C | | | | | |
| Electrical connection | | The coil is connected with a 2 P + E plug according to EN 175301-803 type A | | | | | |
| Ambient temperature | | -40°C to +50°C The application is limited also by the temperature range of the valve. | | | | | |
| Elect. Power | DC | Pn (hot) | 9 W | | - | | |
| | | P (cold) 20°C | 12 W | | - | | |
| | AC | Pn (holding) | 8 W | | 9 W | | |
| | | Attraction cold | 26 VA (9 W) | | 32 VA (10 W) | | |
| Weight | | 130 g (without plug) | | | | | |
| Voltages "Un" | | VAC/Hz | Code | VDC | Code | VAC/Hz | Code |
| -10% to +10% of the Un | | 24/50 | A2 | 24 | C2 | 24/50, 24/60 | P0 |
| | | 48/50 | A4 | 48 | C4 | 48/50, 48/60 | S4 |
| | | 110/50 | A5 | 110 | C5 | 110-115/50, 120/60 | S5 |
| | | 220-230/50 | 3D | | | 220-240/50, 240/60 | S6 |

To Order a Coil choose Coil Ref + Voltage Code, example: **481865** for **24 VDC = 481865C2**
More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

Please use the coil assembly kit **Ref. 2995**.

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COIL GROUP

2.0/2.1
2.2

COILS WITH
SCREW TERMINALS



HIGH TEMPERATURE COILS 40 mm

These coils can be mounted with every Parker Solenoid Valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

They can be mounted with all metal housings.

The coil winding is completely encapsulated in synthetic material.

Easy mounting in confined spaces. Electrical connection with screw terminals for wire up to 1.5 mm².

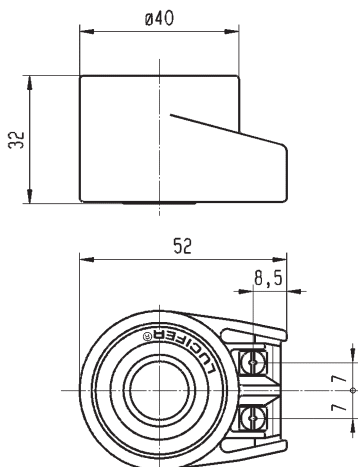
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



| Specification | | High Temperature & High Power | | | |
|------------------------|----|--|--------------|-----|------|
| Reference | | 486265 | | | |
| Coil Group | | 2.0 / 2.2 | | | |
| Class of insulation | | H 180°C | | | |
| Ambient temperature | | -40°C to +50°C The application is limited also by the temperature range of the valve. | | | |
| Elect. Power | DC | P _n (hot) | 14 W | | |
| | | P (cold) 20°C | 21 W | | |
| AC | | P _n (holding) | 14 W | | |
| | | Attraction cold | 56 VA (20 W) | | |
| Weight | | 140 g | | | |
| Voltages "Un" | | VAC/Hz | Code | VDC | Code |
| -10% to +10% of the Un | | 24/50 | A2 | 12 | C1 |
| | | 110/50 | A5 | 24 | C2 |
| | | 220/50 | A7 | 48 | C4 |
| | | 230/50 | F4 | | |

To Order a Coil choose Coil Ref + Voltage Code, example:486265 for 24VAC/50Hz = 486265
More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see examples below:



Ref. 4270 - Protection IP 44 according to IEC / EN 60529 standard (with cable gland)



Ref. 8520 - Protection IP 67 according to IEC / EN 60529 standard

2.0/2.1

FLAME PROOF ENCAPSULATED ELECTRICAL PARTS "db mb"



495905 - ELECTRICAL PARTS 37 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 is required.

Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

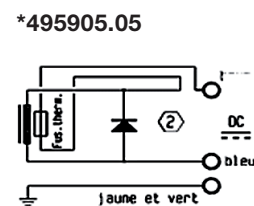
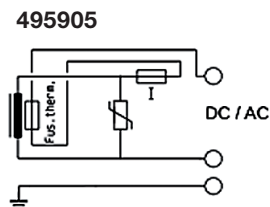
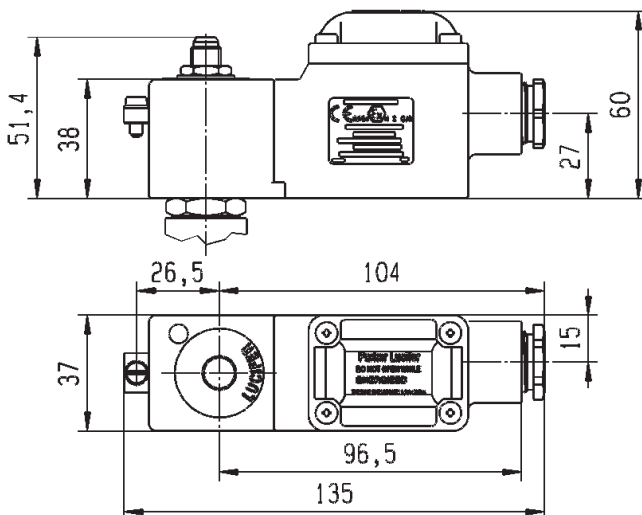
The plastic housing is delivered with M20 x 1.5 cable gland certified for use "db" protection. Small size for ease of mounting in confined space.



| Reference | | 495905 | 495905.05* | | |
|---------------------------|------|--|------------|-----|------|
| Certificate | | LCIE 03 ATEX 6451 X - IECEx LCI 06.0004 X | | | |
| Coil Group | | 2.0 / 2.1 | | | |
| Type of protection | Gas | II 2 G - Ex db mb IIC T4 | | | |
| | Dust | II 2 D - Ex tb III C - 130°C | | | |
| Degree of protection | | IP67 according to IEC/EN 60529 Standards | | | |
| Ambient temperature | | -40°C to +80°C The application is limited also by the temperature range of the valve. | | | |
| Class of insulation | | H (180 °) | | | |
| Electrical connection | | Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 5 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland. | | | |
| Elect. Power | DC | Pn (hot) | 8 W | | |
| | | P (cold) 20°C | 9 W | | |
| | AC | Pn (holding) | 8 W | | |
| | | Attraction cold | 9 W | | |
| Voltages "Un" | | VAC/Hz | Code | VDC | Code |
| -10% to +10% of Un for AC | | 24/50 | A2 | 24 | C2 |
| -10% to +10% for Un DC | | 48/50 | A4 | 48 | C4 |
| | | 115/50 | E5 | 110 | C5 |
| | | 230/50 | F4 | | |

To Order a Coil choose Coil Ref + Voltage Code, example: 495905 for 24 VDC = 495905C2

* 495905.05 available only in C4



Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates,
Dubai

Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, St. Florian

Tel: +43 (0)7224 66201
parker.austria@parker.com

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/NL/LU – Benelux,

Hendrik Ido Ambacht
Tel: +31 (0)541 585 000
parker.nl@parker.com

BG – Bulgaria, Sofia

Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00
parker.poland@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, Piraeus

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

IL – Israel

Tel: +39 02 45 19 21
parker.israel@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

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

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, Borås

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: +48 (0)22 573 24 00
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, Sao Jose dos Campos

Tel: +55 800 727 5374

CL – Chile, Santiago

Tel: +56 2 623 1216

MX – Mexico, Toluca

Tel: +52 72 2275 4200

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EMEA 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)

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



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PARKER STORE WROCŁAW
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