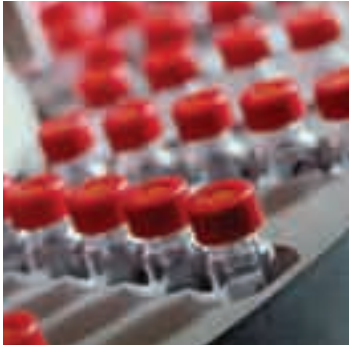




aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Pneumatic cylinders


Series P1G
Cartridge Cylinders




ENGINEERING YOUR SUCCESS.

Features	Air cylinder	Hydraulic cylinder	Electro mechanical actuators
Overload safe	***	***	*
Easy to limit force	***	***	*
Easy to vary speed	***	***	*
Speed	***	**	**
Reliability	***	***	***
Robustness	***	***	*
Installation cost	***	*	**
Ease of service	***	**	*
Safety in damp environments	***	***	*
Safety in explosive atmospheres	***	***	*
Safety risk with electrical installations	***	***	*
Risk of oil leak	***	*	***
Clean, hygienic	***	**	*
Standardised measurements	***	***	*
Service life	***	***	*
Hydraulic system required	***	*	***
Weight	***	**	**
Purchase price	***	**	*
Power density	**	***	*
Noise level during operation	**	***	**
High force for size	**	***	*
Positioning possibilities	*	***	***
Total energy consumption	*	**	***
Service interval	*	**	***
Compressor capacity required	*	***	***


* = good, **=average, ***=excellent



Important
 Before attempting any external or internal work on the cylinder or any connected components, make sure the cylinder is vented and disconnect the air supply in order to ensure isolation of the air supply.



Note
 All technical data in this catalogue are typical data only.
 Air quality is essential for maximum cylinder service life (see ISO 8573).



WARNING

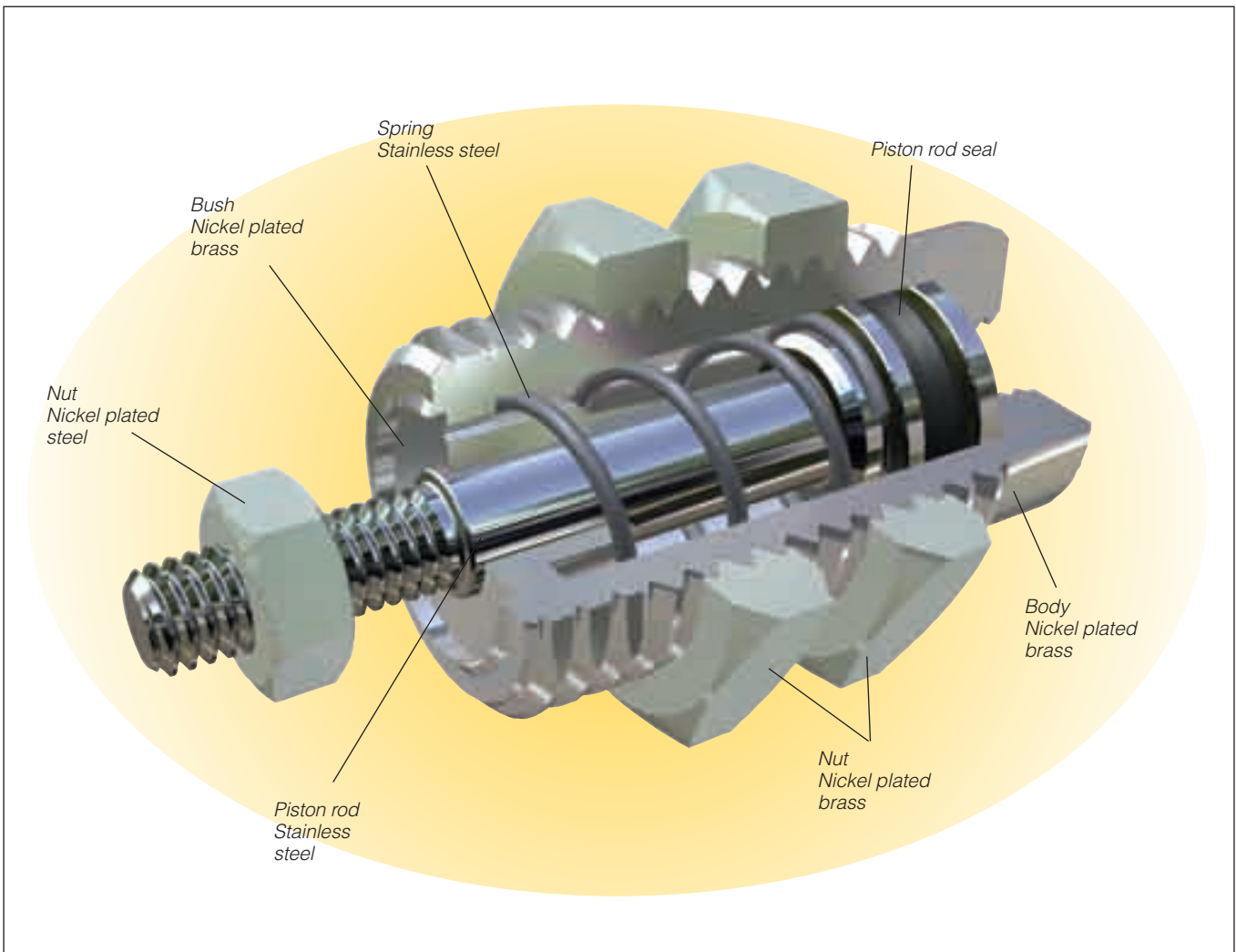
FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

SALE CONDITIONS

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Contents	Page
Cartridge cylinder P1G.....	4
Cylinder forces	5
Working medium, air quality	5
Material specification	5
Additional data	5
Order key.....	6
Single-acting spring return.....	6
Dimensions.....	7



Cartridge cylinder P1G

P1G cartridge cylinders are the perfect solution for compact installation requirements. The cylinders are fully threaded on the outside, allowing them to be screwed into bores in tools, machine stands, etc. This means they require no additional space—instead they virtually disappear into the machine/equipment. They are designed for a long service life, and for non-lube

operation. P1G cylinders are made of a material that allows them to be used in applications requiring a high level of corrosion resistance. They are all single acting, and are available with 6, 10 and 16 mm bore sizes. Each of the P1G cylinders is available with a choice of stroke length: 5, 10 or 15 mm. P1G cylinders are supplied complete with one piston rod nut and two lock nuts for easy installation.

Cylinder forces

Indicated cylinder forces are theoretical and should be reduced according to the working conditions.

Order code	Theoretical piston force at 6 bar		Spring retraction	
	Nmax	Nmin	Nmax	Nmin
Single acting, spring return				
P1G-S006SS-0005	15,0	12,9	3,7	1,6
P1G-S006SS-0010	14,9	12,7	3,9	1,7
P1G-S006SS-0015	15,0	12,7	3,9	1,6
P1G-S010SS-0005	38,8	34,6	11,6	7,4
P1G-S010SS-0010	40,2	34,2	12,0	6,0
P1G-S010SS-0015	39,4	33,4	12,8	6,8
P1G-S016SS-0005	109,6	108,8	9,6	8,8
P1G-S016SS-0010	104,4	100,3	18,1	14,0
P1G-S016SS-0015	104,4	100,3	18,1	14,0

Material specification

Cylinder housing	Stainless steel
Piston rod bearing/	
Front end cover	Nickel plated brass
Cylinderhus	Nickel plated brass
Piston seal, Ø6	Nitrilgummi NBR
Piston seal, Ø10 and 16	Polyurethane
Return spring	Stainless steel
Piston rod nut	Nickel plated steel
Mounting nut	Nickel plated brass

Spare part = new cylinder

Working medium, air quality

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

Recommended air quality for cylinders

For best possible service life and trouble-free operation, ISO 8573-1 quality class 3.4.3 should be used. This means 5 µm 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		Water max. press. dew point (°C)	Oil max concentration (mg/m ³)
	particle size (µm)	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	-

Additional data

Working pressure	max	7 bar
	min	2 bar
Working temperature	max	+80 °C
	min	-20 °C

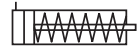
Prelubricated, further lubrication is not normally necessary. If additional lubrication is introduced it must be continued.

Order key

P1G	-	S	016	S	S	-	0005															
Cylinder bore mm			Cylinder type / function		Sealing material		Sealing material															
<table border="1"> <tr><td>006</td></tr> <tr><td>010</td></tr> <tr><td>016</td></tr> </table>			006	010	016	<table border="1"> <tr> <td>S</td> <td></td> <td>Single-acting, spring return for retract stroke</td> </tr> </table>		S		Single-acting, spring return for retract stroke	<table border="1"> <tr> <td>S</td> <td>Standard, -20 °C to +80 °C</td> </tr> </table>		S	Standard, -20 °C to +80 °C	<table border="1"> <tr> <td>0005</td> <td>5</td> </tr> <tr> <td>0010</td> <td>10</td> </tr> <tr> <td>0015</td> <td>15</td> </tr> </table>		0005	5	0010	10	0015	15
006																						
010																						
016																						
S		Single-acting, spring return for retract stroke																				
S	Standard, -20 °C to +80 °C																					
0005	5																					
0010	10																					
0015	15																					



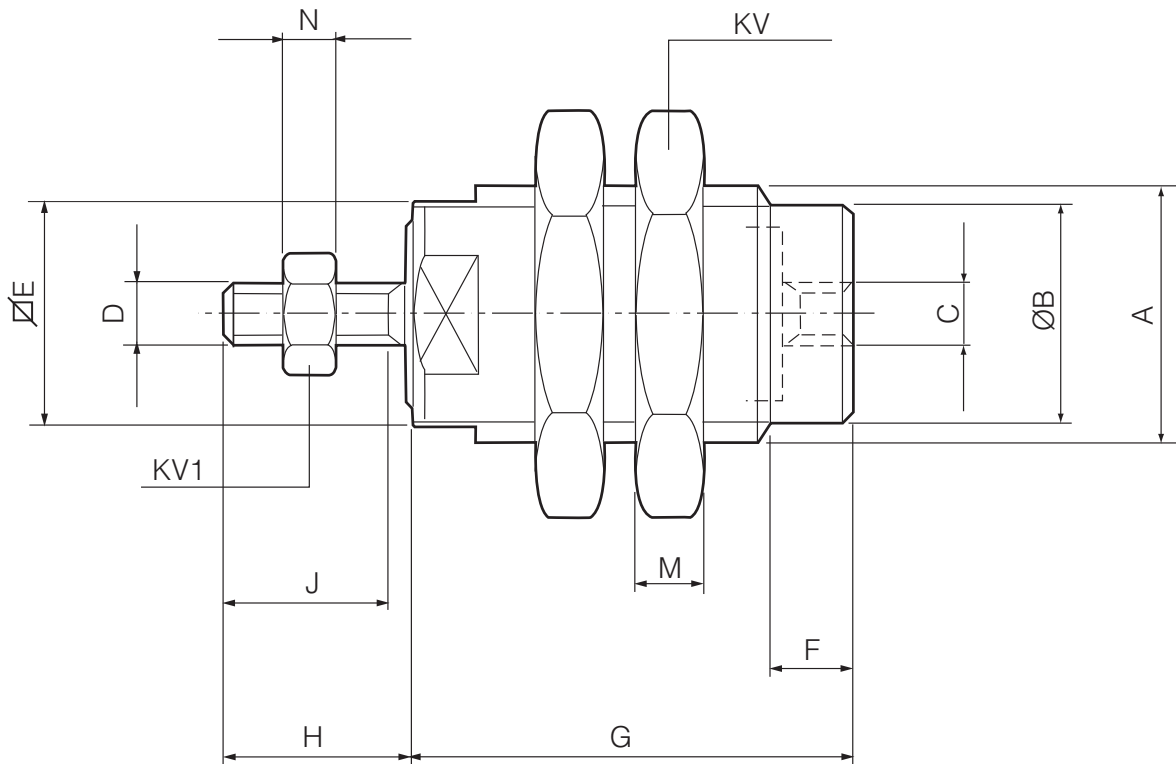
Single-acting spring return



Cyl.bore mm	Stroke mm	Weight g	Order code
6 Conn. M5	5	10	P1G-S006SS-0005
	10	13	P1G-S006SS-0010
	15	15	P1G-S006SS-0015
10 Conn. M5	5	27	P1G-S010SS-0005
	10	32	P1G-S010SS-0010
	15	36	P1G-S010SS-0015
16 Conn. M5	5	70	P1G-S016SS-0005
	10	78	P1G-S016SS-0010
	15	87	P1G-S016SS-0015

Cylinders are supplied complete with two mounting nuts and one piston rod nut.

Dimensions



Cylinder bore	A	ØB	C	D	E	F	G			H	J	KV	KV1	M	N
							5 ¹⁾	10 ¹⁾	15 ¹⁾						
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
6	M10x1	8,5	M5	M3x0,5	9	5	18,5	25,5	32,5	9	9	14	5,5	3	2,4
10	M15x1,5	13	M5	M4x0,7	14	5	20,5	27	34	11,5	11	19	7	4	3,2
16	M22x1,5	19	M5	M5x0,8	20	6	23,5	29,5	36	14	12	27	8	5	4

1) Stroke length in mm



Caution

Avoid side loads on the piston rod
 Avoid loading the piston rod during retraction
 Do not operate the cylinders with excessive inertia.

Parker Worldwide

AE – UAE, Dubai
Tel: +971 4 8875600
parker.me@parker.com

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

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 970
parker.easteurope@parker.com

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LX – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

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

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

CH – Switzerland, Etoy
Tel: +41 (0) 21 821 02 30
parker.switzerland@parker.com

CN – China, Shanghai
Tel: +86 21 5031 2525

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 33 00 01
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

HK – Hong Kong
Tel: +852 2428 8008

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

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

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

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

KR – South Korea, Seoul
Tel: +82 2 559 0400

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

LV – Latvia, Riga
Tel: +371 6 745 2601
parker.latvia@parker.com

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

MY – Malaysia, Subang Jaya
Tel: +60 3 5638 1476

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Ski
Tel: +47 64 91 10 00
parker.norway@parker.com

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

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

SG – Singapore
Tel: +65 6887 6300

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

TH – Thailand, Bangkok
Tel: +662 717 8140

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

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

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

US – USA, Cleveland
Tel: +1 216 896 3000

VE – Venezuela, Caracas
Tel: +58 212 238 5422

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

European Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, EI, ES, FI, FR, IT, NL, NO, PL, RU, SE, SK, UK, ZA)

