



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



Hydrochecks

Self contained hydraulic checking units

2117GB-ca March 2013



ENGINEERING YOUR SUCCESS.



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

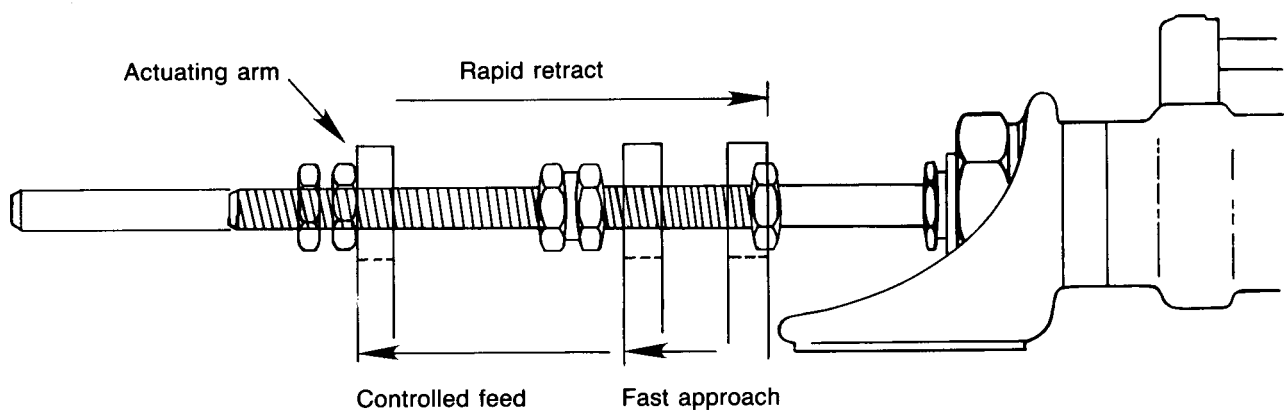
The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Hydrochecks are precision built self contained hydraulic control units designed to smooth out pneumatic cylinder-movements over any distance within their own stroke length, up to 450mm.

Basic single acting models provide adjustable speed control over the full outward or inward stroke, and fast return, with the facility for rapid approach to the controlled stroke, by the adjustment of the piston rod engaging nuts.

By the incorporation of 'skip' or 'stop' valves virtually any combination of fast - slow, start - stop motions can be obtained. Similar functions can also be provided on the inward and outward strokes of double acting models.

Fig 1.



Flow schematic

The Hydrocheck is basically a self contained hydraulic damping cylinder with adjustable flow. (Fig 2). The piston speed is controlled on the checking stroke by pushing oil from one side of the piston (A) to the other via a transfer tube (B) and needle valve (C) which adjusts checking rate. A high flow plate valve in the piston lifts to permit a rapid return stroke. The balance cylinder assembly (D) automatically compensates for the volumetric displacement of the piston rod; the three annular grooves on the indicator rod (E) of the balance cylinder piston show the oil content. Inward checking models, in which the piston assembly and flow direction are reversed, carry the balance cylinder on the front head.

The exterior length of the piston rod is threaded and carries adjustable lock nuts for setting the point at which checking is required to start, the permanently locked back nut is used to reset the rod (Fig 1).

Where fast traverse is required within the checking stroke a 'skip' valve (F) is incorporated. Maintained air pressure is normally applied to the skip valve and relieved by remote control for fast traverse. Design characteristics of double acting units mounted inline with air motors do not permit mechanical fast approach which, on these units, is obtained by use of a skip valve.

The stop valve (G) facilitates a 'dwell' period during any part of the Hydrocheck stroke and operates by applied air pressure which closes the hydraulic circuit ahead of the needle valve (C). On Standard Duty models the skip valve must also be closed when the stop valve is applied. Both valves should be operated by the same pressure as the main actuating air cylinder feed.

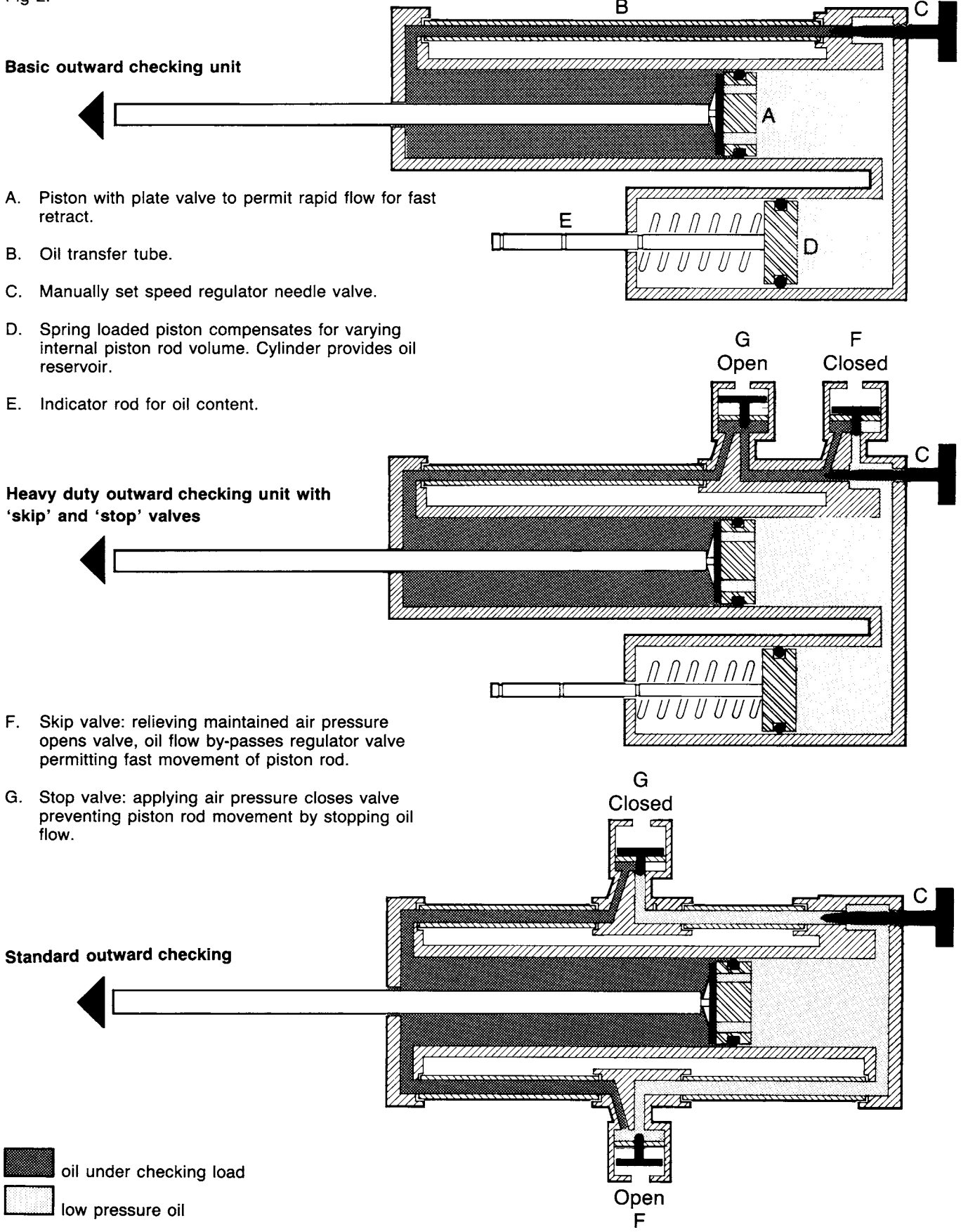
Note:

Thrust loads must not exceed 5337N (1200 lb f) for Standard Units

Hydrochecks

Schematic diagrams showing oil Flow and working principles of Hydrochecks.

Fig 2.



Standard duty series



How to order

B181 - XX11 - XXX

Direction		Control		Stroke mm
1	Outward check	1	Standard	050
2	Inward check	2	STD + Skip	075
		3	STD + Stop	100
		4	STD + Skip/Stop	150
				225
				300
				375
				450

e.g. B181-1311-150 = Standard Duty Outward Checking Model with Stop Valve x 150mm stroke.

Note:

Minimum stroke available with skip or stop facility is 100mm.

Repair kit

Part no.	B732-504
----------	----------

Hydrocheck mounting kit

For New Generation I.S.O. Cylinders



How to order

Part Nos.

Bore size	Kit part no.
50	50-2800H
63	63-2800H
80	80-2800H*

Note:

The hydrocheck mounting kit is suitable for 50mm, 63mm and 80mm bore sizes only.

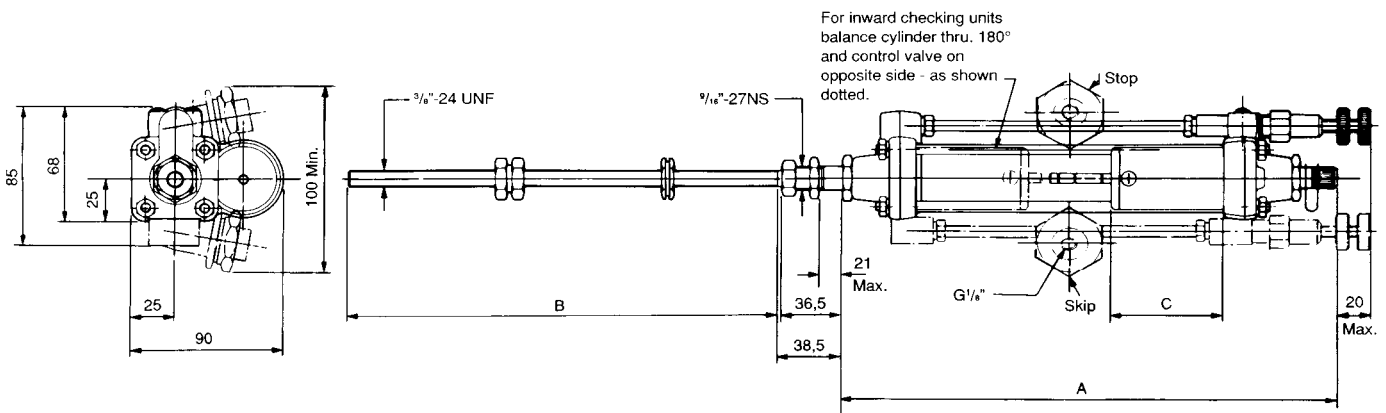
The kit contains: 1 mounting plate
1 actuator arm
1 spacer
4 mounting bolts.

Hydrochecks

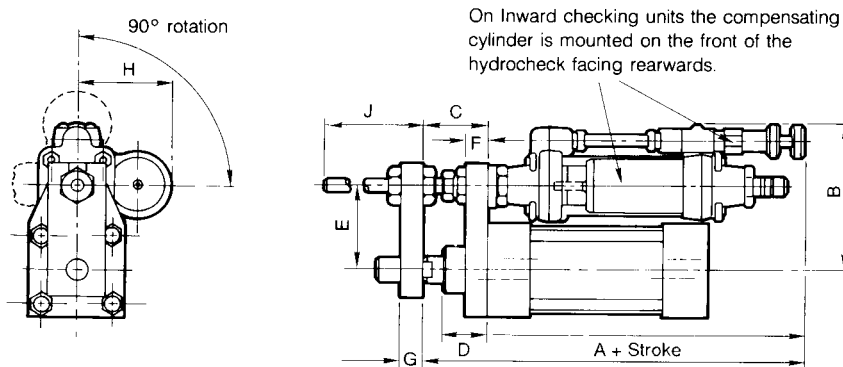
Dimensions (mm)

Standard duty

Part number	A	B Thread	C
B181-xxxx-050	200	254	67
B181-xxxx-075	226		
B181-xxxx-100	251		
B181-xxxx-150	302		
B181-xxxx-225	378		
B181-xxxx-300	454	305	168
B181-xxxx-375	530	381	
B181-xxxx-450	606	457	



Hydrocheck mounting kits



Dimensions (mm)

Cyl. Ø	A + stroke	B	C	D	E	F	G	H
50	213,5	105	37	29	60	16	16	65
63	213,5	110	37	29	65	16	16	65
80	232,5	123	46	35	78	16	16	65

Strokes	J
50-225	240
300	291
375	367
450	443

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 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900
parker.belgium@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, Budapest

Tel: +36 1 220 4155
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 7272 505 800
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

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 7000-99

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, Apodaca

Tel: +52 81 8156 6000

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)

Parker Hannifin Ltd.

Tachbrook Park Drive
Tachbrook Park,
Warwick, CV34 6TU
United Kingdom
Tel.: +44 (0) 1926 317 878
Fax: +44 (0) 1926 317 855
parker.uk@parker.com
www.parker.com

