



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



# VB Hydraulic Clamp

Catalogue PDE2636TCUK May 2012



ENGINEERING YOUR SUCCESS.



**Important !**

Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.



**NB !**

All technical data in this catalogue is typical only. The air quality is decisive for the valve 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.

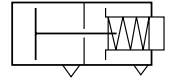
This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information 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).*

# VB Hydraulic Clamp

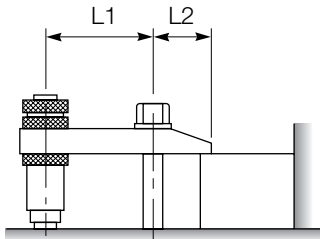
Clamp cylinders are single acting pneumatic cylinders with built-in oleo-pneumatic intensifiers. They can be used to solve most clamping, tightening etc problems.



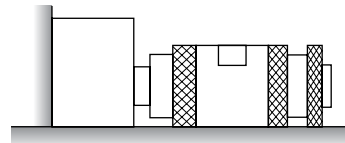
- Compact size for large forces (up to 2100 daN depending on the model and air pressure).
- Operated using a compressed air supply (no special installation required)
- Easy adjustment thanks to a fully threaded body
- Simple and rapid installation.



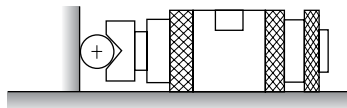
## Clamping examples



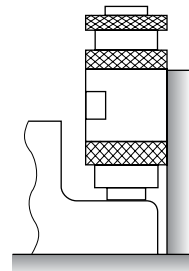
Clamping with intensified force  
 $L1/L2 < 2$



Horizontal clamping



Clamping of cylindrical component using V groove clamp end



Vertical clamping

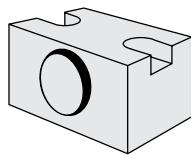
## VB Hydraulic Clamp

### Ordering references

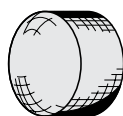
Order code	Max stroke (mm)	Ø external	Weight - g (lbs)
<b>VB363C</b>	3	36	570 (1.3)
<b>VB366C</b>	6	36	640 (1.4)
<b>VB369C</b>	9	36	890 (2.0)
<b>VB483C</b>	3	48	1050 (2.3)
<b>VB486C</b>	6	48	1350 (3.0)
<b>VB489C</b>	9	48	1152 (2.5)
<b>VB4812C</b>	12	48	1840 (4.0)
<b>VBH483C</b>	3	48	1240 (2.7)
<b>VB606C</b>	6	60	2360 (5.2)
<b>VB609C</b>	9	60	3120 (6.9)
<b>VB6012C</b>	12	60	3810 (8.4)
<b>VBH603C</b>	3	60	2360 (5.2)
<b>VBH606C</b>	6	60	3700 (8.1)

### Mounting accessories

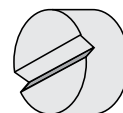
Mounting block



Rounded clamp piston end



V groove clamp piston end



Mounting for VB	Mounting block	Rounded end	V groove end
Ø 36	<b>FVA36-1</b>	<b>BVA36-16</b>	<b>BVA36-17</b>
Ø 48	<b>FVA48-1</b>	<b>BVA48-16</b>	<b>BVA48-17</b>
Ø 60	<b>FVA60-1</b>	<b>BVA60-16</b>	<b>BVA60-17</b>
Seal kit for	VB Ø 36	VBH Ø 48	VB Ø 60
Order code	<b>JJVB36</b>	<b>JJVB48</b>	<b>JJVB60</b>
		<b>JJVBH48</b>	<b>JJVBH60</b>

Oil container suitable for all types of cylinder (250 ml capacity)

Model No.: **BH680VB**

### Technical data

#### Material specification

Body	Nickel plated steel
Piston rod	Hardened steel
Locking rings	Zinc plated steel
End cap	Zinc plated steel
Seals	Nitrile

#### Operation

Temperature range	+5°C to +50°C (41°F to 122°F)
Storage temperature	-20°C to +60°C (-4°F to 140°F)
Pressure range	1 to 9 bar (15 to 130 psi) (except <b>VBH603</b> and <b>VBH606</b> : 7 bar (101psi max.))
Air condition	Filtered air 40µ lubricated or non lubricated

### Maintenance

For all operations see our maintenance instructions  
All safety requirements must be observed.

**Technical data****Cylinder force**

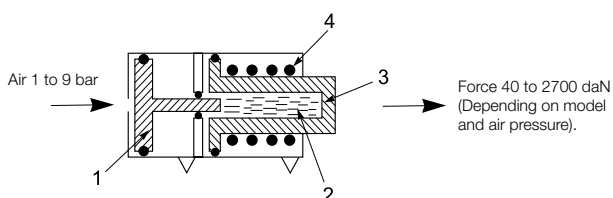
**Note:** The clamping time is given from the moment the clamp cylinder is pressurised to the time at when 90% of the clamping force is obtained, the cylinder completing a full stroke.

The release time is given from the moment the clamp cylinder starts to exhaust until the rod is fully retracted.

When the cylinder remains pressurised for more than 10 min. add 0,20 sec. to the release time.

These average times are given for information only. They will vary depending on the application and the cylinder inlet and exhaust circuits.

Order code	Max. stroke (mm)	Force at 6 bar daN (lbs)	Clamping time (s)	Release time (s)
<b>VB363C</b>	3	240 (540)	0,10	1,00
<b>VB366C</b>	6	240 (540)	0,15	1,30
<b>VB369C</b>	9	240 (540)	0,20	1,50
<b>VB483C</b>	3	530 (1190)	0,30	1,30
<b>VB486C</b>	6	530 (1190)	0,40	1,60
<b>VB489C</b>	9	530 (1190)	0,50	1,90
<b>VB4812C</b>	12	530 (1190)	0,60	2,20
<b>VBH483C</b>	3	1060 (2380)	0,50	0,70
<b>VB606C</b>	6	1140 (2560)	0,50	1,90
<b>VB609C</b>	9	1140 (2560)	0,60	2,30
<b>VB6012C</b>	12	1140 (2560)	0,70	2,50
<b>VBH603C</b>	3	1800 (4000)	0,50	0,70
<b>VBH606C</b>	6	1800 (4000)	0,60	1,05

**Principle of operation**

Air pressure applied to the pneumatic piston (1) causes the plunger to displace the enclosed oil in the hydraulic section of the cylinder (2). A high-pressure stroke results at the hydraulic piston (3) due to the differential areas of the two pistons.

The return of pistons (1) and (3) is caused by a return spring (4) when the air pressure is removed.

# VB Hydraulic Clamp

## Technical data

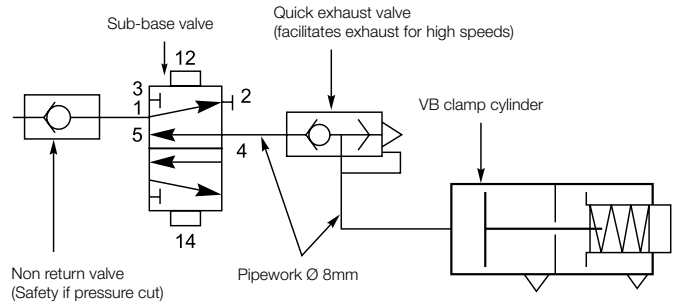
### Working conditions

Clamp cylinders must be installed so that the force is directed along the axis. (Take care that the exhaust ports are not blocked and that they are protected from swarf, cutting oil, dust, etc.)

Do not operate the cylinder at no-load. The clamp cylinder must always be operated in conjunction with a clamping fixture (clamp or block) to limit the stroke to within the maximum length specified in the ordering reference table.

We recommend an effective stroke equal to the max. length minus 1mm.

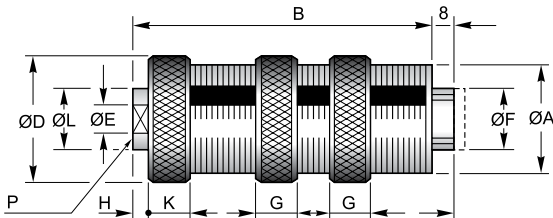
Please contact us for applications requiring force during part of the stroke (marking, crimping, punching, etc.) and high speeds.



### Pneumatic Circuit

For correct use of clamp cylinders, we recommend applications of the circuit diagram opposite:

### Dimensions (mm)



Order code	ØA	B	ØD	ØE	ØF	G	H	K	ØL	P
<b>VB363C</b>	M36 x 1,5	98,0	42	G1/8	22	12	4	13	22	17
<b>VB366C</b>	M36 x 1,5	127,5	42	G1/8	22	12	4	13	22	17
<b>VB369C</b>	M36 x 1,5	185,0	42	G1/8	22	12	4	13	22	17
<b>VB483C</b>	M48 x 1,5	111,0	56	G1/8	32	12	4	13	22	17
<b>VBH483C</b>	M48 x 1,5	148,0	56	G1/8	32	12	4	13	22	17
<b>VB486C</b>	M48 x 1,5	148,0	56	G1/8	32	12	4	13	22	17
<b>VB489C</b>	M48 x 1,5	188,0	56	G1/8	32	12	4	13	22	17
<b>VB4812C</b>	M48 x 1,5	234,0	56	G1/8	32	12	4	13	22	17
<b>VBH603C</b>	M60 x 2	175,0	70	G1/4	40	14	5	17	25	22
<b>VB606C</b>	M60 x 2	175,0	70	G1/4	40	14	5	17	25	22
<b>VBH606C</b>	M60 x 2	290,0	70	G1/4	40	14	5	17	25	22
<b>VB609C</b>	M60 x 2	249,0	70	G1/4	40	14	5	17	25	22
<b>VB6012C</b>	M60 x 2	314,0	70	G1/4	40	14	5	17	25	22

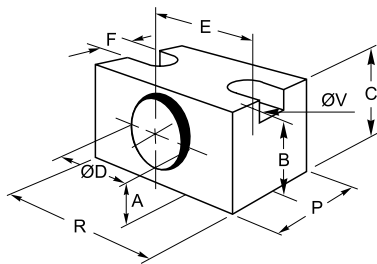
# VB Hydraulic Clamp

## Dimensions (mm)

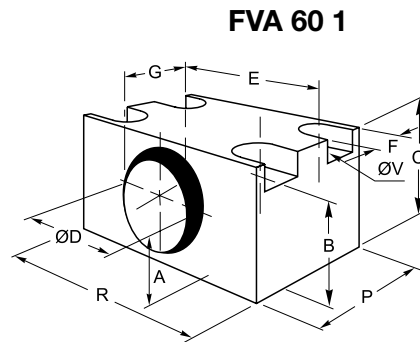
### Mounting accessories

#### Mounting block

For VB	Order code	A	B	C	ØD	E	F	G	P	R	ØV
Ø 36	<b>FVA36-1</b>	24,0	38,0	50,0	36,2	54,0	18,0	-	40,0	70,0	11,0
Ø 48	<b>FVA48-1</b>	30,0	47,0	60,0	48,2	70,0	20,0	-	50,0	90,0	13,5
Ø 60	<b>FVA60-1</b>	36,0	57,0	70,0	60,2	90,0	20,0	36,0	60,0	110,0	13,5

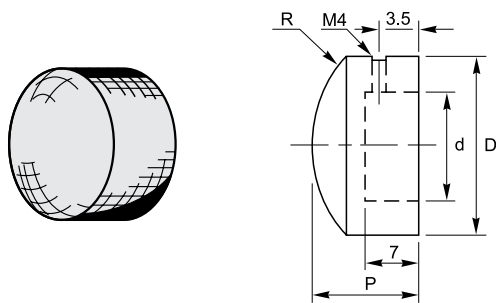


**FVA 36 1**  
**FVA 48 1**



**FVA 60 1**

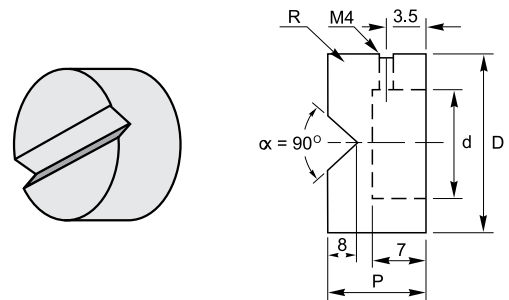
### Rounded clamp piston end



#### Dimensions (mm)

For VB	Order code	d	R	P	D
Ø 36	<b>BVA36-16</b>	22	25	15	30
Ø 48	<b>BVA48-16</b>	32	40	15	40
Ø 60	<b>BVA60-16</b>	40	50	18	50

### V groove clamp piston end



#### Dimensions (mm)

For VB	Order code	d	e	P	D
Ø 36	<b>BVA36-17</b>	22	5	15	30
Ø 48	<b>BVA48-17</b>	32	5	15	40
Ø 60	<b>BVA60-17</b>	40	8	18	50

# 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

**hefel**  **technik**  
s e h e n & b e w e g e n

Hefel Technik GmbH

+43 5572 29696

Hatlerstrasse 72

info@hefel-technik.com

6850 Dornbirn / Austria

www.hefel-technik.com