

# High Pressure Full Flow Bi-Directional Filter



450 bar, 6225 psi Operating Pressure  
300 lpm, 79 gpm Max Flow Rate  
Bi-Directional Full Flow Filtration

## APPLICATIONS

PFB high pressure filter assemblies are designed for applications where flow direction changes and fluid must be filtered full flow in both directions.

- Large cylinders remotely located from valve manifold. Protect both components and clean fluid that typically does not return to the reservoir.
- Steel mills, Board plants, Scrap yards, concrete mixers.
- Any line where flow can reverse direction.
- Hydrostatic loop circuit applications.

## PRODUCT FEATURES

DFE rated elements (Dynamic Filter Efficiency)	G7 Dualglass media filter elements are DFE rated to assure performance even when exposed to the toughest hydraulic systems (See DFE literature for details)
Circumferential o-ring bowl seal	Circumferential seal on the bowl eliminates leaking and weeping.
Low housing pressure drop	Unique internal flow paths provide low resistance to flow. (Low pressure drop)
Coreless elements	PFH419 housings (with bypass valve) can be ordered with Hy-Pro coreless filter element for easy disposal (crush or incinerate).
Differential indicator	Available with visual, electrical, or electrical with LED (visual signal) differential indicators.

## PRODUCT SPECIFICATIONS

Materials	
Head	Cast steel
Bowl	Extruded steel
Seals	Buna or Viton
Media options	G7 Dualglass, Stainless mesh
Interior coating	Phosphate coating
Exterior coating	Power paint coated
ISO standards	
ISO 2941	Collapse and burst resistance
ISO 2942	Fabrication and integrity test
ISO 2943	Material compatibility with fluids
ISO 3724	Flow fatigue test
ISO 3968	Pressure drop vs flow rate
ISO 16889	Multi-pass filter performance
DIN 24550	Nominal pressure rating
Temperature rating	Buna -40f(-40c) to 225f(107c) Viton -15f(-26c) to 275f(135c)
Fluid compatibility	Biodegradable and mineral based fluids. For high water based or specified synthetics consult factory

**HIGH PERFORMANCE FILTER ELEMENTS — THE HEART OF A FILTER**

**Dynamic Filter Efficiency (DFE) Testing**

Revolutionary test methods assure that DFE rated elements perform true to rating even under demanding variable flow and vibration conditions. Today’s industrial and mobile hydraulic circuits require elements that deliver specified cleanliness under ALL circumstances. Wire mesh supports the media to ensure against cyclical flow fatigue, temperature, and chemical resistance failures possible in filter elements with synthetic support mesh. Contact your distributor or Hy-Pro for more information and published articles on DFE testing.

**Media Options**

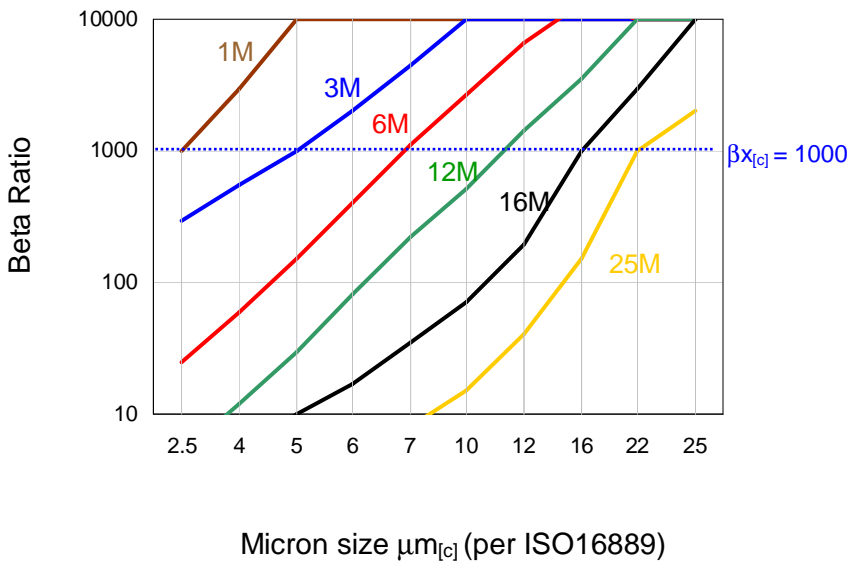
Through extensive testing we have developed media choices to handle any application. Options include G7 Dualglass, Dynafuzz (stainless fiber), and Wire mesh (stainless).

**Fluid Compatibility**

Petroleum based fluids, water glycol, polyol ester, phosphate ester, high water based fluids and many other synthetics. Contact us for seal material selection assistance.

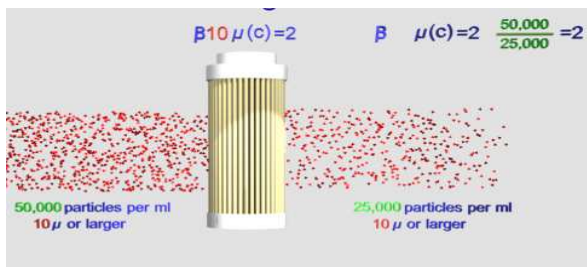
**FILTER MEDIA SPECIFICATIONS**

Glass Media Code Filtration Efficiency (Beta Ratio) vs Micron

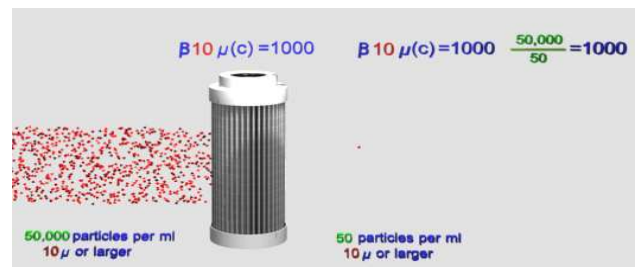


media code	media description
A	G7 Dualglass high performance media combined with water removal scrim. $\beta_{x[c]} = 1000$ ( $\beta_x = 200$ )
M	G7 Dualglass our latest generation of DFE rated, high performance glass media for all hydraulic & lubrication fluids. $\beta_{x[c]} = 1000$ ( $\beta_x = 200$ )
W	Stainless steel wire mesh media $\beta_{x[c]} = 2$ ( $\beta_x = 2$ ) nominally rated

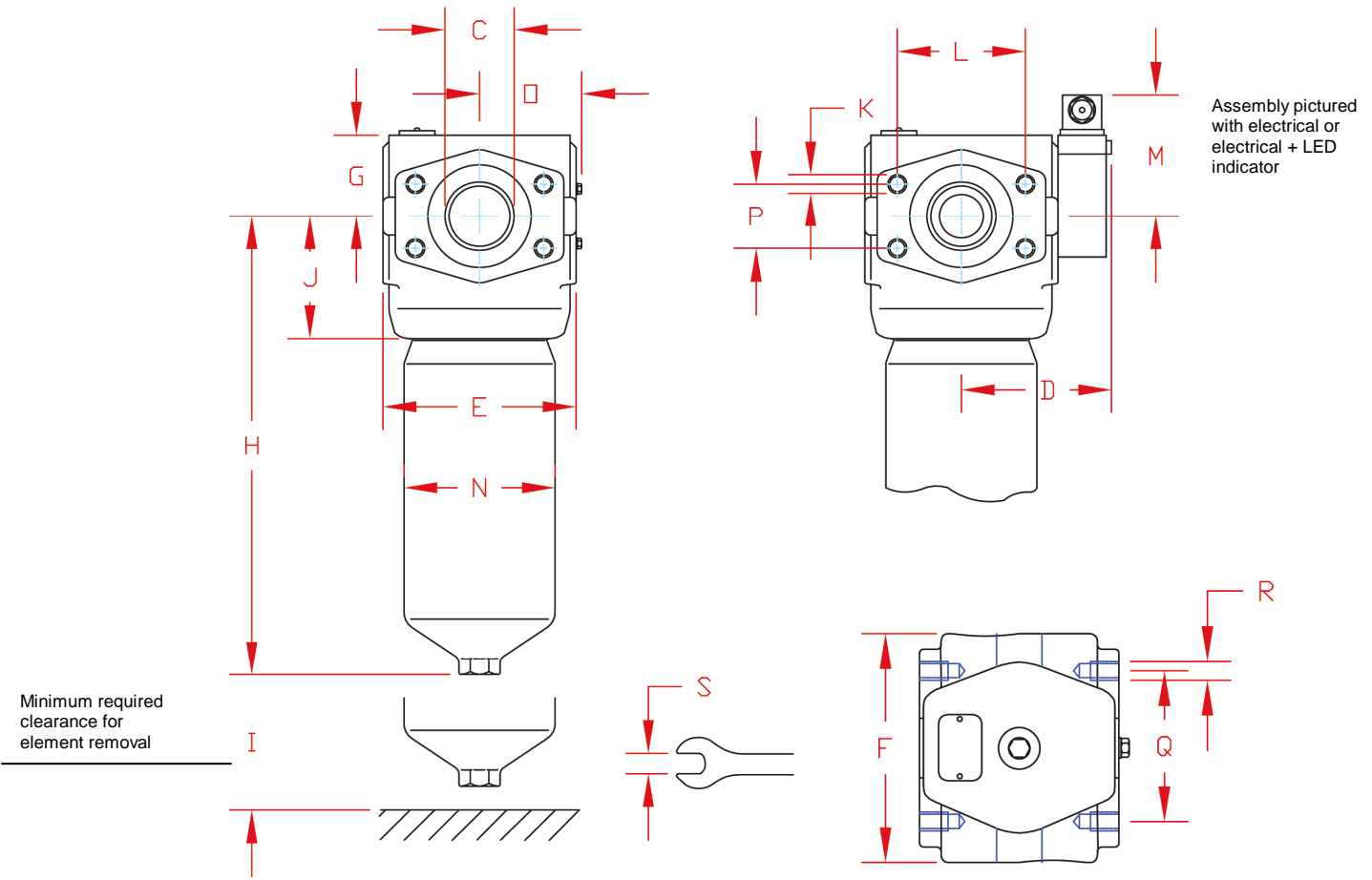
Typical cellulose media performance



Hy-Pro G7 Dualglass media performance



**PFHB INSTALLATION DRAWING AND SPARE PARTS LIST**



	PFHB*8 IN (mm)	PFHB*13 IN (mm)
<b>A/B</b>	SAE-20, SAE-24 code 62 flange	SAE-20, SAE-24 code 62 flange
<b>C</b>	1.24 (31,49)	1.24 (31,49)
<b>D</b>	4.02 (102,10)	4.02 (102,10)
<b>E</b>	5.44 (138,17)	5.44 (138,17)
<b>F</b>	6.15 (156,21)	6.15 (156,21)
<b>G</b>	2.29 (58,16)	2.29 (58,16)
<b>H</b>	12.92 (328,17)	16.86 (428,24)
<b>I</b>	3.15 (80,01)	3.15 (80,01)
<b>J</b>	3.45 (87,63)	3.45 (87,63)
<b>K</b>	F1: M14 x 22mm depth F2: M16 x 24mm depth	F1: M14 x 22mm depth F2: M16 x 24mm depth
<b>L</b>	F1 port: 2.63 (66,80) F2 port: 3.12 (79,25)	F1 port: 2.63 (66,80) F2 port: 3.12 (79,25)
<b>M</b>	Optical 2.96 (75,18) Electrical 3.43 (87,12)	Optical 2.96 (75,18) Electrical 3.43 (87,12)
<b>N</b>	4.26 (108,2)	4.26 (108,2)
<b>O</b>	2.88 (73,15)	2.88 (73,15)
<b>P</b>	F1 port: 1.25 (31,75) F2 port: 1.44 (36,57)	F1 port: 1.25 (31,75) F2 port: 1.44 (36,57)
<b>Q</b>	3.94 (100,07)	3.94 (100,07)
<b>R</b>	M12 x 0.71(18,0) depth	M12 x 0.71(18,0) depth
<b>S</b>	1.26 (32,00)	1.26 (32,00)

	PFHB*8 lbs (kg)	PFHB*13 lbs (kg)
<b>Weight</b>	45 (19,98)	50 (22,70)

<b>1</b>	<b>Element</b>	<b>See element p/n guide</b>
<b>2</b>	<b>Bowl Seal kit</b> Nitrile NBR Fluorocarbon	PFHB419SKB PFHB419SKV
<b>3</b>	<b>Bowl</b> Single length Single length w/drain port Double length Double length w/drain port Triple length Triple length w/drain port	PFB4191 PFB4191D PFB4192 PFB4192D PFB4193 PFB4193D
<b>4</b>	<b>Indicator</b> Visual indicator, Buna seal Visual, Viton seal Electrical, Buna seal Electrical, Viton seal Electrical + LED, Nitrile seal Electrical + LED, Fluoro seal	PFH840IVB PFH840IVV PFH840IEB PFH840IEV PFH840ILB PFH840ILV