

# HPK04 Highlights

**Working Pressures to:** 6000 *psi*  
41,400 kPa  
413.8 bar

**Rated Static Burst to:** 12000 *psi*  
82800 kPa  
827.6 bar

**Flow Range to:** 120 *gpm*  
454 *l/min*



## Features

The HPK04 high pressure filter series is made of ductile iron for strength and durability. Machined bypass valves are case-hardened at critical points to provide maximum strength and reliability. Reverse flow bypass valve allows bi-directional flow through the filter head, and filter changeout is simplified with standard bowl drain plug. Meets HF3 specification.

Take advantage of our Mix 'n Match system of in-stock heads, housings & cartridges—so you can get exactly what you need! Likewise, choose the media type and configuration that's best for your application. Filter cartridges for HPK04 contain Synteq®, Donaldson's exclusive synthetic fiber media formulated specially for liquid filtration.

### Beta Rating

- Performance to  $\beta_{6(c)}=1000$

### T-Type Porting Sizes

- SAE-20 O-Ring
- 1¼" & 1½" SAE 4-Bolt Flange (codes 61, 62)

### Assembly Weight

- 8" Assembly: 26 lbs / 12 kg
- 16" Assembly: 39.5 lbs / 18 kg

### Replacement Filter Lengths

- 8" / 203mm
- 16" / 406mm

### Standard Bypass Ratings

- 60 *psi* / 414 kPa / 4.1 bar
- 90 *psi* / 621 kPa / 6.2 bar with reverse-flow check valve
- No Bypass

### Operating Temperatures

- -20°F to 250°F / -27°C to 121°C

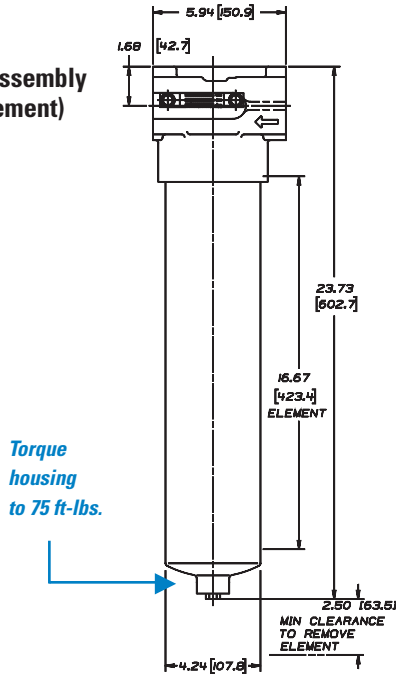
### Element Collapse Ratings

- 200 *psi* / 1380 kPa / 13.8 bar (standard)
- 3000 *psi* / 20,700 kPa / 206.9 bar (high collapse)

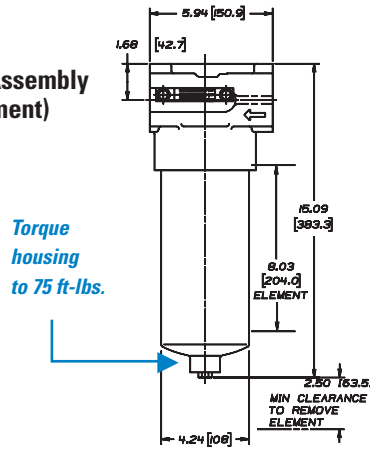
**Assembly - Side View**

*for:* High Pressure Circuits  
Hydrostatic Transmissions  
Servo Valve Circuits  
Meets HF3 Specifications

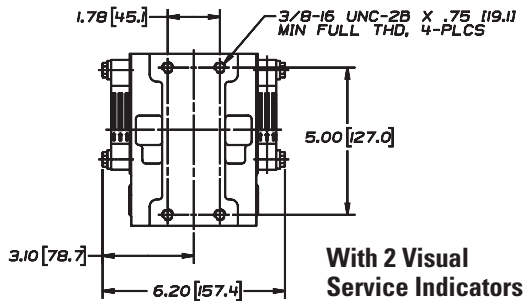
**Long Assembly  
(16" element)**



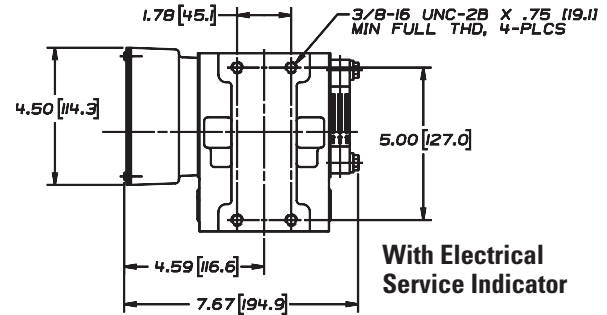
**Short Assembly  
(8" element)**



**Head - Top View**

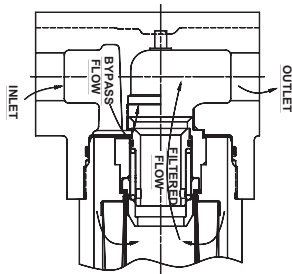


**With 2 Visual  
Service Indicators**

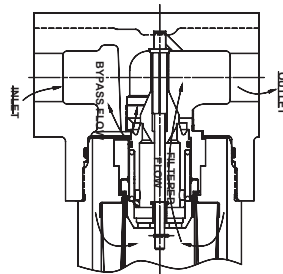


**With Electrical  
Service Indicator**

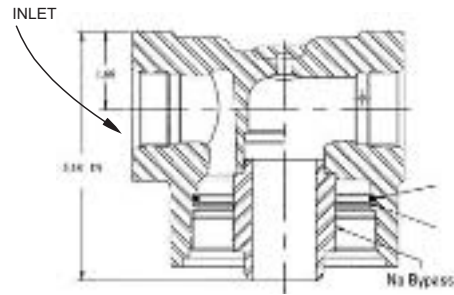
**Bypass Valve Alternatives**



**60 psi / 414 kPa  
Bypass Valve**



**90 psi / 621 kPa  
Bypass Valve with  
Reverse Flow Check Valve**



**No Bypass**

*All dimensions above are shown in inches [millimeters]*

# HPK04 Components

## Element Choices

Media Number	B <sub>μ(c)</sub> = 1000 Rating	Length (in./mm)	Part No.	Comments
1	6μm	8/203	P167842	
			P167185	High Collapse
		16/406	P169433	
			P167187	High Collapse
2	9μm	8/203	P164594	
			P164601	Viton Seals
		16/406	P164598	
			P164603	Viton Seals
2½	10μm	8/203	P164166	
			P167186	High Collapse
		16/406	P164170	
			P164367	Viton Seals
4	20μm	8/203	P167188	High Collapse
			P164365	Viton Seals
			P164174	
9	23μm	8/203	P164174	
			P164178	
20	>50μm	8/203	P165319	
			P162233	200 wiremesh screen
74	—/—/75	8/203	P162233	200 wiremesh screen



### Filter Notes

- **SEALS:** Filters with seals made of **BunaN** are appropriate for most applications involving petroleum oil. Filters with seals made of **Viton**® (a fluorocopolymer) are required when using diester, phosphate ester fluids, water glycol, water/oil emulsions, and HWCF (high water content fluids) over 150°F. (*Viton*® is a registered trademark of DuPont Dow Elastomers.)
- **SYNTHETIC MEDIA:** Synteq® filter media is compatible with petroleum based fluids, and most phosphate esters, water oil emulsions, and HWCF (high water content fluids.)
- Donaldson high collapse filters are physically designed to withstand up to 3000 psi/ 20,700 kPa before collapsing.

## Housing Choices

Length (in./mm)	Part No.
8/203	P162451
16/203	P162452

Note: Head assemblies include head-to-housing seal.

## Head Choices

Port Size <sup>4</sup>	Working Pressure	Bypass Rating	Indicators <sup>1</sup>	Part No.
1½" SAE 4-Bolt Flange (code 61) and SAE-20 O-Ring	3000 psi	60 psi	visual LH, blank plate RH <sup>2</sup>	P166127
1½" SAE 4-Bolt Flange (code 61) and SAE-20 O-Ring	3000 psi	90 psi with reverse flow check valve	visual LH, blank plate RH <sup>2</sup>	P166149
1½" SAE 4-Bolt Flange (code 61) and SAE-20 O-Ring	3000 psi	no bypass	visual LH, blank plate RH <sup>2</sup>	P169754
1½" SAE 4-Bolt Flange (code 62)	6000 psi	60 psi	visual LH only <sup>2</sup>	P164346
1½" SAE 4-Bolt Flange (code 62)	6000 psi	90 psi with reverse flow check valve	visual LH, blank plate RH <sup>2</sup>	P170057
1¼" SAE 4-Bolt Flange (code 62)	6000 psi	90 psi with reverse flow check valve	visual LH, blank plate RH <sup>2</sup>	P170058
1¼" SAE 4-Bolt Flange (code 62)	6000 psi	90 psi with reverse flow check valve	blank plate LH, drilled, tapped, <sup>3</sup> plugged RH for P173929	P173887

### Head Notes

- On all HPK04 heads where an indicator is NOT installed, a blank plate or a plug is there.
- <sup>1</sup> Donaldson uses the inlet port as the reference point. "Left side," for instance, means that the indicator mounts on the side of the filter head that is on your left when you face the inlet port.
  - <sup>2</sup> Alternate indicator: Electrical indicator (P166298) mounts in place of visual model on left side only.
  - <sup>3</sup> Alternate indicator: Electrical indicator (P173929) mounts on right side of head only.
  - <sup>4</sup> CAUTION: Consult fitting manufacturers for maximum allowable operating pressures.

# HPK04 Service Parts

### Visual Service Indicator

(includes O-Ring & hardware)  
 Max Temp: 180°F/83°C  
 Set: 50 psi/345 kPa  
 P164315 Normal Flow model  
 P166603 Reverse Flow model  
 P166134 Blank plate

### AC/DC Electrical Service Indicators

P166298 (3-wire switch in conduit box, for left side of head only)  
 Max Temp: 250°F/121°C  
 Set: 40 psi/276 kPa  
 Voltage: 120 VAC / 28 VDC  
 Current: 250 mA  
 Circuit: Normally open (red)  
 normally closed (blue)  
 common (white)

### O-Ring

(Size 006)  
 P161315 Viton

### Head Assemblies

See Head Assembly Options table

### Head O-Ring & Back-up Kit

(Size 240)  
 P162742 BunaN O-Ring, Teflon back-up  
 P163619 Viton O-Ring, Teflon back-up

### Replacement Filter

Synteq® media on all, except No. 74 which has Wiremesh media (listed in table on p. 90)

### Housing

See housing assembly options table on page 90.

### O-Ring

(Size 904)  
 P161551 BunaN  
 P163616 Viton

### Drain Plug Kit

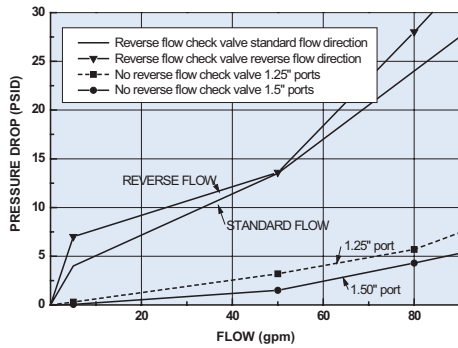
P161550  
 (with BunaN O-Ring)

- oil before assembling

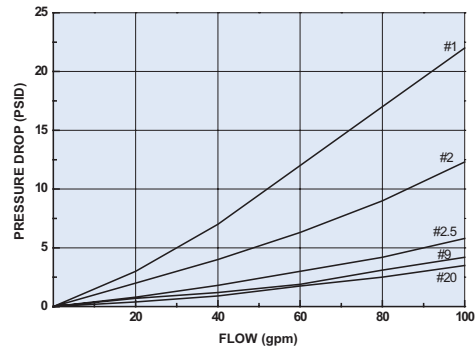
# Performance Data

For a full explanation of how our performance curves were derived, see page 150.

HPK04 Housing Only



HPK04 16" Element Only



HPK04 8" Element Only

