



**HBK05**  
 Max Flow: 60 gpm (227 lpm)



## HBK05 Spin-On Filters

**Working Pressures to:** 150 psi  
 1035 kPa  
 10.3 bar

**Rated Static Burst to:** 250 psi  
 1725 kPa  
 17.2 bar

**Flow Range to:** 60 gpm  
 227 lpm



### Features

HBK05 is a strong and durable low pressure filter with a spin-on design that simplifies servicing and reduces maintenance costs. Its heavy-duty steel canister has a rigid steel attachment plate for added strength. The head-to-canister O-ring seal is designed to ensure seal integrity beyond 250 psi/17 bar. The head is made of die-cast aluminum.

Take advantage of our mix and match system of in-stock heads and filters—so you can get exactly what you need, HBK05 is available with your choice of visual or electrical service indicators, and bypass ratings of 50 psi, 25 psi, or 5 psi. The filter media is Synteq™, our proprietary synthetic media specifically designed for liquid filtration.

HBK05 filters ship with "L", square, and O-ring gaskets (unless noted with Viton® seals, then with square and o-ring gaskets). All HBK05 filters are interchangeable with SP50/60, SP80/90 and SP100/120 spin-ons, and have 1½" - 16 UN threads.

Viton® is a registered trademark of E. I. DuPont de Nemours and Company.

#### Beta Rating

- Performance to  $\beta_{<4(c)}=1000$

#### Porting Size Options

- 1¼" NPT
- SAE-20 O-ring

#### Replacement Filter Lengths

- 6.7" / 170 mm (short)
- 10.7" / 271 mm (long)

#### Filter Collapse Ratings

- 125 psid / 863 kPa / 8.6 bar

#### Standard Bypass Ratings

- 50 psi / 345 kPa / 3.4 bar
- 25 psi / 172.5 kPa / 1.7 bar
- 5 psi / 34.5 kPa / .34 bar

#### Assembly Weight

- 6.9 lbs / 3.1 kg (long)
- 5.7 lbs / 2.6 kg (short)

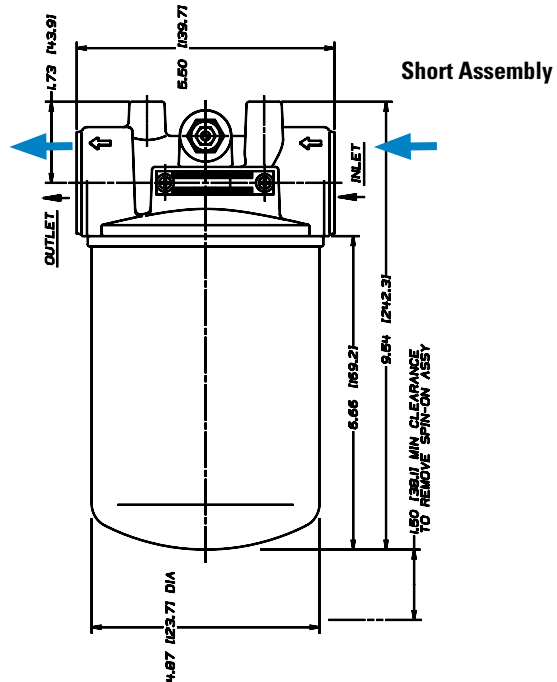
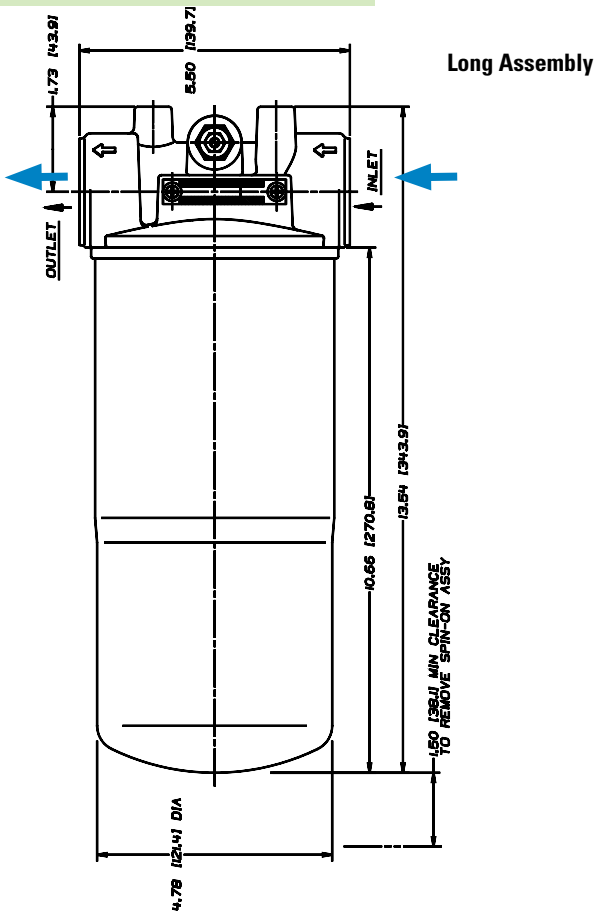
#### Operating Temperatures

- -22°F to 225°F / -30°C to 107°C

## HBK05 Specification Illustrations

All dimensions are shown in inches [millimeters].

### Assembly - Side View

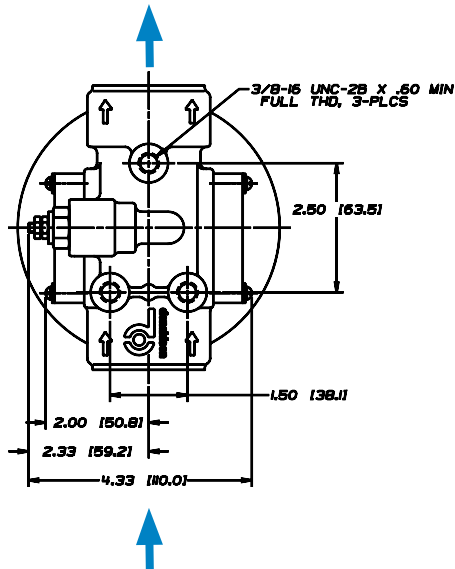


### Applications

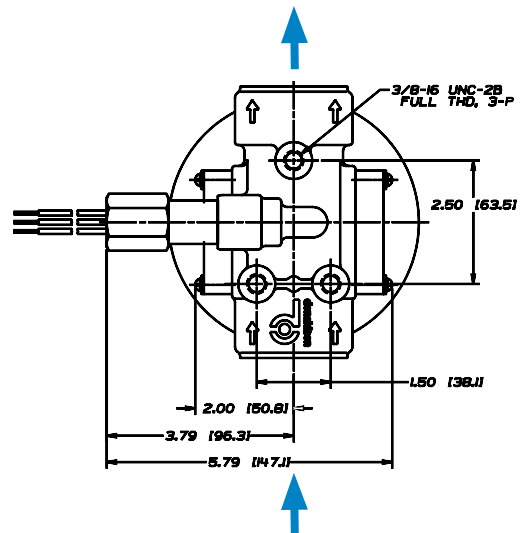
- Cooling Circuits
- Fluid Conditioning Systems
- Hydrostatic Charge Pumps
- Lube Oil Systems
- Power Transmissions
- Return Lines
- Side Loop Systems

### Head - Top View

with DC Electrical Service Indicator



with AC/DC Electrical Service Indicator





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## HBK05 Components

### Filter Choices

Media Type	$\beta_{x(c)} = 2$ Rating based on ISO 16889	$\beta_{x(c)} = 1000$	Length		Donaldson Part No.	Comments
			in	mm		
Synteq Synthetic	<4 $\mu\text{m}$		10.7	271	P167796	Viton® Seal
	6 $\mu\text{m}$		6.7	170	P167162	
	6 $\mu\text{m}$		10.7	271	P165762	
	11 $\mu\text{m}$		6.7	170	P165875	
	11 $\mu\text{m}$		10.7	271	P165876	
	13 $\mu\text{m}$		6.7	170	P167944	Viton Seal
	13 $\mu\text{m}$		10.7	271	P167945	Viton Seal
	23 $\mu\text{m}$		6.7	170	P165877	
	23 $\mu\text{m}$		10.7	271	P165878	
	50 $\mu\text{m}$		6.7	170	P165879	
50 $\mu\text{m}$		10.7	271	P165880		
Water Absorbing	10 $\mu\text{m}$		10.7	271	P561183	Cellulose media, 3-seal kit. Absorbs 350 ml water.

#### Filter Notes

\* Thread size 1/2"-16 UN

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### Head Choices

Port Size	Bypass Rating	Indicator Style & Location	Donaldson Part No.
1/4" NPT	50 psi / 345 kPa	Visual, Both Sides	P172953
1/4" NPT	25 psi / 172 kPa	Visual, Both Sides	P166418
1/4" NPT	5 psi / 34 kPa	Visual, Both Sides	P166665
SAE-20 O-Ring	25 psi / 172 kPa	Visual, Both Sides	P166439

#### Note

\* 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.



### Mix and Match

Donaldson's mix and match system provides the great performance and functional advantages of custom-engineered filters with the convenience and speedy delivery of in-stock parts. Choose your options and build an HBK05 filter to suit your specifications.

### Service Indicator Options

Use with Bypass Valve Pressure of:	Indicator Part No.	Style <sup>(3)</sup>	Description
<b>Electric Models<sup>(1)</sup></b>			
5 psi / 34.5 kPa	P163642	A	Single post DC. Normally open.
15 psi / 103 kPa	P163601	A	Single post DC. Normally open.
25 psi / 172.5 kPa	P163839	A	Single post DC. Normally closed.
25 psi / 172.5 kPa	P162400	A	Single post DC. Normally open.
25 psi / 172.5 kPa	P171143	B	2-wire with Cannon connector. Normally open.
25 psi / 172.5 kPa	P173944	C	3-wire: White = normally open. Red = normally closed. Black = common
50 psi / 276 kPa	P574967	E	DC 2-wire. Normally closed. Gold contacts. Microprocessor compatible.

### Service Indicator Options

Use with Bypass Valve Pressure of:	Indicator Part No.	Style <sup>(3)</sup>
<b>Visual Models<sup>(2)</sup></b>		
5 psi / 34.5 kPa	P162694	D
15 psi / 103 kPa	P162642	D
25 psi / 172.5 kPa	P162696	D
N/A	P165984	(blank plate)
25 psi / 172.5 kPa	P575334	H (Visual pop up)
50 psi / 345 kPa	P575335	H (Visual pop up)

#### Indicator Notes

<sup>(1)</sup>All electric models have a maximum operating temperature of 250°F/ 121°C.

<sup>(2)</sup>All visual models have a maximum operating temperature of 180°F/ 82°C.

<sup>(3)</sup>See indicator illustrations on facing page.

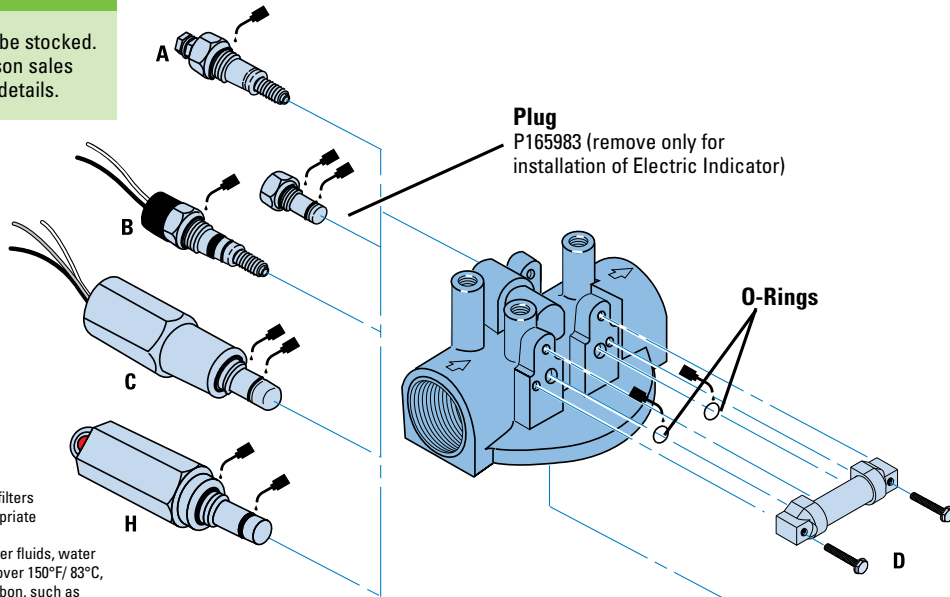
## HBK05 Service Parts

### SERVICE PARTS NOTE:

Some service parts may not be stocked. Please contact your Donaldson sales representative for lead time details.

### Service Indicator Styles

(See table on opposite page)



**Plug**  
P165983 (remove only for installation of Electric Indicator)

**O-Rings**

**Spin-On Filter**

- oil before assembling

**Head to Filter Seal**  
P166435 #246  
P165641 - Square cut gasket for use with Non-Donaldson heads

### Filter Notes

- If you're filtering petroleum-based oil, filters with seals made of Buna-N® are appropriate for most applications.
  - If you're filtering diester, phosphate ester fluids, water glycol, water/oil emulsions and HWCFC over 150°F/ 83°C, use filters with seals made of fluorocarbon, such as Viton® from DuPont Dow Elastomers, or Fluorel® from 3M Company.
  - Refer to the table in the Technical Reference Guide for fluid compatibility with our filter media.
- Viton® and Buna-N® are registered trademarks of E. I. DuPont de Nemours and Company.

## Gaskets

Each filter ships with a 3-seal kit, containing an "L" shaped, a square cut, and an O-ring gasket seal, unless otherwise noted. Use only one of the following seals. Installation instructions can be found in the technical reference section.

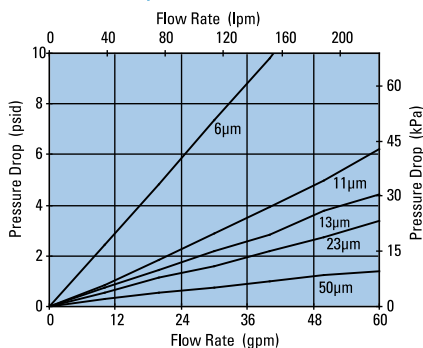
**L Shaped**  
Use with filter heads with no groove or a wide groove.

**Square Cut**  
Use with filter heads with a narrow groove.

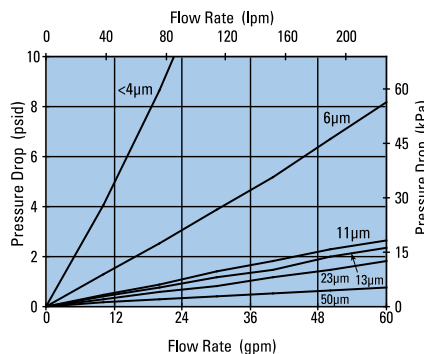
**O-Ring -246**  
Use with Donaldson HBK05 heads only.

## Performance Data

**HBK05 Filter Only**  
(Synthetic, 6.7"/170mm)



**HBK05 Filter Only**  
(Synthetic, 10.7"/271mm)



**HBK05 Head Only**

