



HMK04/24

Max Flow: 35 gpm (133 lpm) / 60 gpm (227 lpm)



## HMK04/24 DURAMAX® Spin-On Filters

### Working Pressures to:

500 psi / 3450 kPa / 35 bar

### Rated Static Burst to:

1000 psi / 6895 kPa / 69 bar

### Flow Range To:

HMK04: 35 gpm / 133 lpm

HMK24: 60 gpm / 227 lpm

### Applications

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



### Features

HMK04 (single) and HMK24 (double) Duramax® spin-on filters feature a die-cast aluminum head, heavy-duty steel body, and die-cast aluminum top plate for added strength. A special head-to-canister O-Ring seal prevents leakage. Nitrile seals are standard; fluorocarbon seals are available on some models.

Both models use the same replacement filters and feature identical pressure ratings, but the HMK24 handles greater flow capacity. There's no need to inventory two different replacement filters. A full range of media options are available, using Donaldson's exclusive Synteq™ synthetic media. Choose the indicator types and bypass options to suit your application.

### Beta Rating

- Performance to  $\beta_{<40}<sub>(1)</sub>=1000$

### Porting Size Options

- HMK04 3/4", 1" NPT
- HMK04 SAE-12, SAE-16 O-Ring
- HMK24 SAE-20, O-Ring
- HMK24 1 1/4" SAE 4-Bolt Flange Code 61

### Replacement Filter Lengths

- 5.97" / 152mm
- 9.4" / 240mm

### Standard Bypass Ratings

- 25 psi / 173 kPa / 1.73 bar
- 50 psi / 345 kPa / 3.5 bar
- No Bypass

### Assembly Weight

- HMK04 with short filter: 3.9 lbs / 1.8 kg
- HMK04 with long filter: 4.8 lbs / 2.2 kg
- HMK24: with short filter: 7.8 lbs / 3.5 kg
- HMK24: with long filter: 9.6 lbs / 4.4 kg

### Operating Temperatures

- -20°F to 250°F / -29°C to 121°C (synthetic)
- -20°F to 225°F / -29°C to 107°C (cellulose)

### Filter Collapse Ratings

- 150 psid / 10 bar
- 300 psid / 20 bar also available

### Housing Fatigue Strength Ratings\*

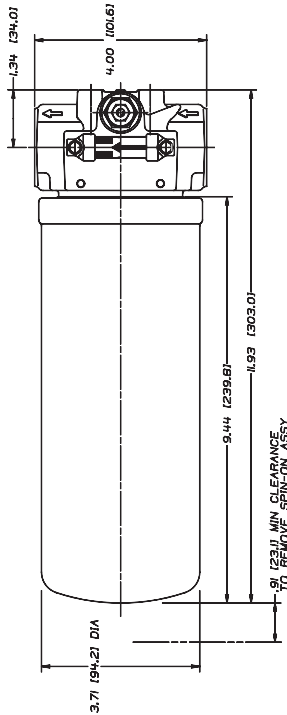
- 100,000 Cycles:  
0-500 psi / 0-3450 kPa / 34.5 bar
- 300,000 Cycles:  
0-400 psi / 0-2758 kPa / 27.6 bar
- 1,000,000 Cycles:  
0-350 psi / 0-2415 kPa / 24 bar

# HMK04/24 Specification Illustrations

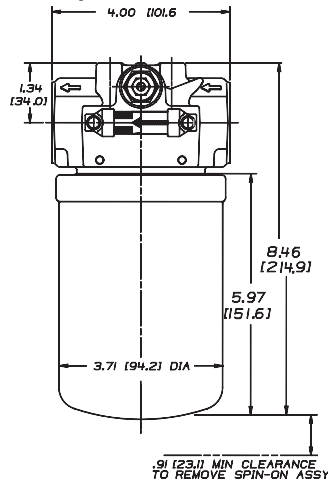
## ASSEMBLY - SIDE VIEW

All dimensions are shown in inches [millimeters].

### Long Assembly

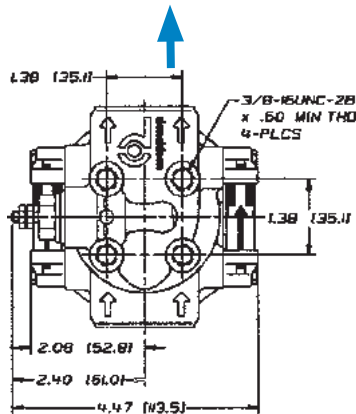


### Short Assembly

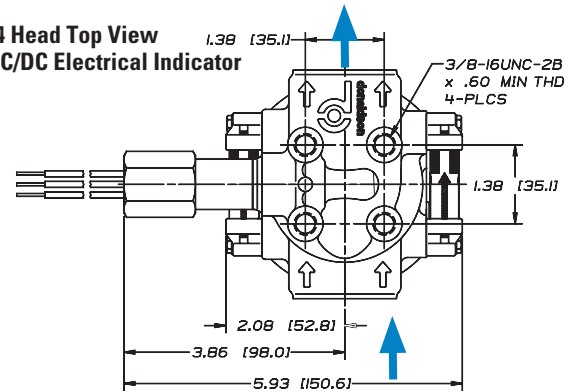


## HEAD - TOP & SIDE VIEWS

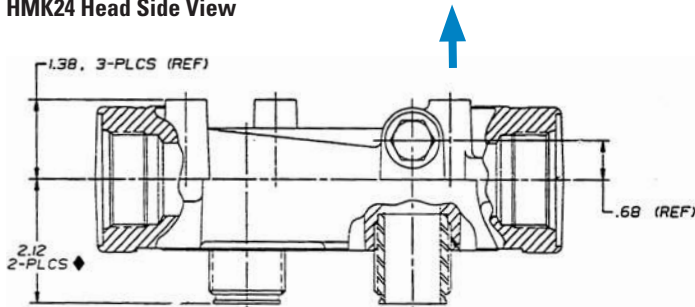
### HMK04 Head Top View with DC Electrical Indicator



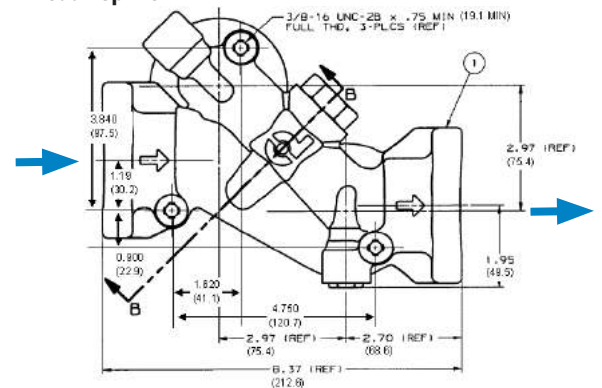
### HMK04 Head Top View with AC/DC Electrical Indicator



### HMK24 Head Side View



### HMK24 Head Top View





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Max Flow: 35 gpm (133 lpm) / 60 gpm (227 lpm)



## HMK04/24 Components

### Filter Choices

Media Type	$\beta_{x(c)} = 2$	$\beta_{x(c)} = 1000$	Length		Part No.	Comments
	Rating based on ISO 16889		in	mm		
Synteq Synthetic		<4 $\mu\text{m}$	9.4	240	P165185	<sup>1</sup> Fluorocarbon O-Ring. Compatible with water glycol
		6 $\mu\text{m}$	5.97	152	P165354	
		6 $\mu\text{m}$	9.4	240	P165332	
		11 $\mu\text{m}$	5.97	152	P163542	500 psi collapse
		11 $\mu\text{m}$	5.97	152	P164375	
		11 $\mu\text{m}$	9.4	240	P164378	
		13 $\mu\text{m}$	9.4	240	P164056	<sup>1</sup> Fluorocarbon O-Ring. Compatible with water glycol
		14 $\mu\text{m}$	9.4	240	P177047	
		22 $\mu\text{m}$	9.4	240	P164059	<sup>1</sup> Fluorocarbon O-Ring. Compatible with water glycol
		23 $\mu\text{m}$	9.4	240	P163567	500 psi collapse
		23 $\mu\text{m}$	5.97	152	P164381	
		23 $\mu\text{m}$	9.4	240	P164384	
		50 $\mu\text{m}$	5.97	152	P165335	
		50 $\mu\text{m}$	9.4	240	P165338	
Water Absorbing	10 $\mu\text{m}$		9.4	240	P560584	
Wire Mesh	150 $\mu\text{m}$		9.4	240	P573301	



**NOTE:**  
Lubricate filter-to-head threads when installing new filter to prevent thread damage. Heavyweight gear lube is recommended.

**Filter Notes**

- Refer to table in the Technical Reference Guide for fluid compatibility with our filter media.
- Standard filter collapse rating is 150 psi, except as noted.
- Thread size is 1 3/8"-12 UNF-2B
- <sup>1</sup> Filters with seals made of nitrile are appropriate for most applications involving petroleum oil. Filters with seals made of fluorocarbon are required when using diester, phosphate ester fluids, water glycol, water/oil emulsions and HWCF (high water content fluids) over 150°F. Donaldson offers both types.

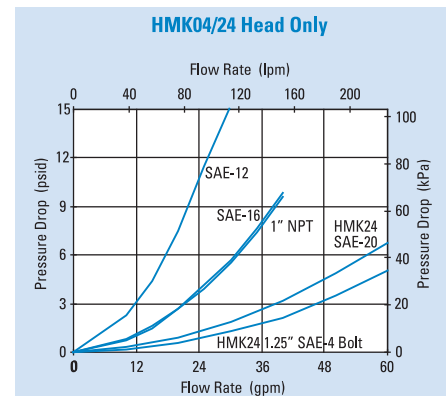
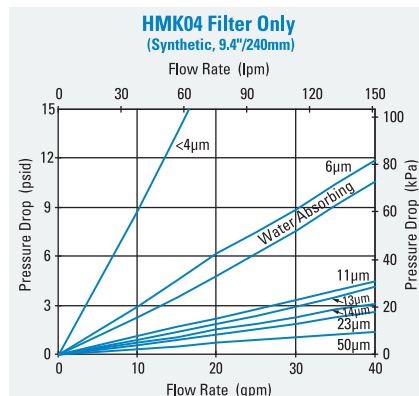
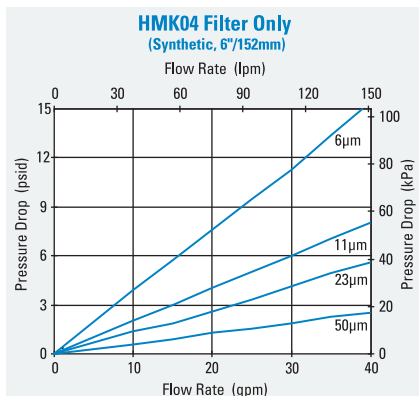
### Head Choices for HMK24 (double)

Port Size	Bypass Rating	Indicator Options <sup>1</sup>	Part No.
SAE-20 O-Ring	None	A, B, C, E, F, H	P179609
1 1/4" SAE 4-Bolt Code 61	50 psi	A, B, C, E, F, H	P179582

<sup>1</sup>Reference illustration on next page for service indicator styles.



### Performance Data



### Head Choices for HMK04 (single)

Port Size	Bypass Rating	Standard Indicator Style & Location <sup>1,2</sup>	Indicator Options	Head Part No.
¾" NPT	25 psi / 172 kPa	None	None	P169317
		D (Visual), Left Side	None	P169310
SAE-12 O-Ring	25 psi / 172 kPa	None	None	P167473
		D (Visual), Left Side	None	P166387
	No Bypass	D (Visual), Left Side (25 psi)	None	P169320
	None	None	None	P165434
	No Bypass	D (Visual), Left Side (50 psi)	None	P173750
SAE-12 O-Ring (3 ports)	50 psi / 345 kPa	A (Electrical, P165194)	B, C, E, F, H	P167529
1" NPT	25 psi / 172 kPa	D (Visual), Both Sides	A, B, C, E, F, H	P166086
		None	None	P169309
		D (Visual), Left Side	None	P166416
SAE-16 O-Ring	15 psi / 100 kPa	None	A, B, C, E, F, H	P176569
SAE-16 O-Ring	25 psi / 172 kPa	None	None	P163681
		D (Visual), Left Side	None	P166417
		D (Visual), Both Sides	A, B, C, H	P166088
		E (Electrical, P177361)	None	P176568
		A (Electrical, P162400)	B, C, H	P165537
	No Bypass	D (Visual), Both Sides (25 psi)	A, B, C, F, H	P166664
	A (Electrical, P162400)	B, C, F, H	P166902	
	50 psi / 345 kPa	D (Visual, Right Side)	All	P179381
	No Bypass	None	None	P164667
	50 psi / 345 kPa	None	None	P167201
	A (Electrical, P165194)	B, C, E, H	P166862	
SAE-16 O-Ring	5 psi	D (Visual), Both Sides	All	P564850
1" NPT	No Bypass	D (Visual), Left Side (25 psiD)	None	P564484
1" NPT	25 psi / 172 kPa	D (Visual), Left Side (25 psiD)	None	P564485

**NOTE:**

Lubricate filter-to-head threads when installing new filter to prevent thread damage. Heavyweight gear lube is recommended.

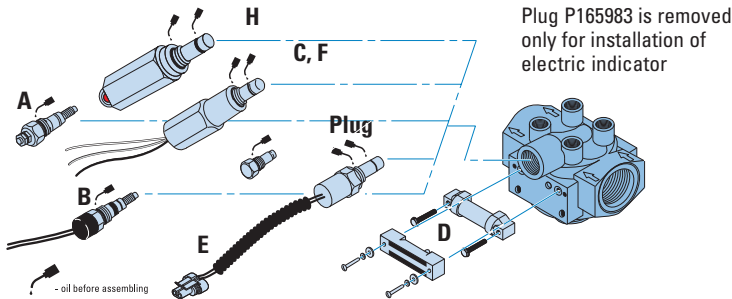


Head Notes: Reference illustration below for indicator styles. Donaldson uses the inlet port as the reference point. "Left side," for instance, means that the indicator mounts on the side of the filter head that is on your left when you face the inlet port.

### 3-Port Head for Charge Pumps



The P167529 head is designed with a 50 psi / 3.45 bar third port bypass valve that diverts all bypass flow back to the reservoir, instead of going straight through the head and into the system as it does in 2-ported heads. Unfiltered fluid is NOT allowed into the system in the case of plugged filters. Designed primarily for charge pump applications.



### Service Indicator Choices

Use with Bypass Valve Pressure of:	Indicator Part No.	Style <sup>3</sup>
<b>Visual Models (non-electric)<sup>2</sup></b>		
15 psi / 103 kPa	P162642	D
25 psi / 172.5 kPa	P162696	D
50 psi / 345 kPa	P167580	D
N/A	P165984	(blank plate)
25 psi / 172.5 kPa	P165965	D Heavy-Duty
50 psi / 345 kPa	P574177	D Heavy-Duty
25 psi / 172.5 kPa	P575334	H Pop up
50 psi / 345 kPa	P575335	H Pop up

Indicator Notes  
<sup>1</sup>All electric models have a maximum operating temperature of 250°F / 121°C.  
<sup>2</sup>All non-electric models have a maximum operating temperature of 180°F / 82°C.  
<sup>3</sup>Complete details on all service indicators can be found in the accessories section.

### Service Indicator Choices

Use with Bypass Valve Pressure of:	Indicator Part No.	Style <sup>1</sup>	Description
<b>Electric Models<sup>1</sup></b>			
5 psi / 34.5 kPa	P163642	A	Single post DC.
15 psi / 103 kPa	P163601	A	Single post DC.
25 psi / 172.5 kPa	P163839	A	Single post DC. N.C.
25 psi / 172.5 kPa	P162400	A	Single post DC. N.O.
25 psi / 172.5 kPa	P171143	B	DC 2-wire.
25 psi / 172.5 kPa	P173944	C	AC/DC 3-wire.
50 psi / 345 kPa	P165194	A	Single post DC. N.O.
50 psi / 345 kPa	P574968	B	DC 2-wire.
50 psi / 345 kPa	P574967	E	DC 2-wire.
50 psi / 345 kPa	P575549	F	DC 3-wire.
50 psi / 345 kPa	P174396	C	AC/DC 3-wire.