

# Hydraulic Filters for Industrial & Mobile Applications



**Low Pressure Filters**

**Medium Pressure Filters**

**High Pressure Filters**

**Filter Assemblies &  
Replacement Cartridges**

**Hydraulic Line Accessories**

**Reservoir Accessories**



**T.R.A.P.™**

Moisture Meets  
its Match  
see page 5





## Low Pressure Filters

Our broad line of low pressure hydraulic filters perform optimally in return-line applications with working pressures up to 150 psi/10 bar and static pressures up to 300 psi/ 21 bar.

In-tank and in-line configurations are available to accommodate virtually any industrial application.

Hydraulic Series	Flow Range	Pressure (NFPA/t3.10.17) Working	Static	Porting Types	Media Choices
SP15/25	0-30 gpm 0-114 l/min	150 psi 1034 kPa 10.3 bar	300 psi 2070 kPa 20.7 bar	1/2", 3/4" NPT SAE-8, -12 O-Ring	Synteq® Synthetic Media, Cellulose, Wiremesh, or Water Removal
HBK05	0-60 gpm 0-227 l/min	150 psi 1034 kPa 10.3 bar	250 psi 1724 kPa 17.2 bar	SAE-20 O-Ring 1 1/4" NPT	Synteq Synthetic Media
SP50/60	0-60 gpm 0-227 l/min	150 psi 1034 kPa 10.3 bar	250 psi 1724 kPa 17.2 bar	1 1/4" NPT SAE-20 O-Ring	Cellulose, Synteq Synthetic Media, Wiremesh, or Water Removal
SP80/90	0-100 gpm 0-380 l/min	150 psi 1034 kPa 10.3 bar	250 psi 1724 kPa 17.2 bar	1 1/2" NPT, SAE-24 O-Ring 2" SAE Flange	Cellulose, Synteq Synthetic Media, Wiremesh, or Water Removal
SP100/120	0-100 gpm 0-380 l/min	150 psi 1034 kPa 10.3 bar	250 psi 1724 kPa 17.2 bar	1 1/2" NPT	Cellulose, Synteq Synthetic Media, Wiremesh, or Water Removal
TT15/30/60	0-50 gpm 0-189 l/min	100 psi 690 kPa 6.9 bar	150 psi 1030 kPa 10.3 bar	3/4", 1 1/2" NPT	Cellulose
FIK	0-211 gpm 0-800 l/min	145 psi 1000 kPa 10 bar	217 psi 1500 kPa 15 bar	SAE-8, -12, -16, -20, -24 O-Ring 2" SAE 4-Bolt Flange	Synteq Synthetic Media, Cellulose, or Wiremesh
FIK Combo	0-79 gpm 0-300 l/min	145 psi 1000 kPa 10 bar	217 psi 1497 kPa 15 bar	Inlet SAE-20 and SAE-16 O-Ring Outlet (2) SAE-16 O-Ring	Synteq Synthetic Media



## Low Pressure Filters In Use

The HRK-10 low-pressure filters shown at left are used in a 2 x 2 duplex arrangement at a paper manufacturer. The filters are filtering paper machine oil before it is used to lubricate bearings. This type of arrangement allows filter servicing during system operation.

HRK10 features rugged all-steel construction, Donaldson's proprietary Synteq® filter media and unique multi-valve bypass design for superior operating performance.



HRK10

Hydraulic Series	Flow Range	Pressure (NFPA/t3.10.5.1)		Porting Types	Media Choices
		Working	Static		
TI25	0-60 gpm 0-227 l/min	150 psi 1030 kPa 10.3 bar	200 psi 1380 kPa 13.8 bar	1¼" NPT	Synteq® Synthetic Media or Cellulose
HDK06	0-150 gpm 0-568 l/min	350 psi 2413 kPa 24.1 bar	500 psi 3448 kPa 34.5 bar	2½" NPT	Synteq Synthetic Media, or Wiremesh
HFK08	0-300 gpm 0-1136 l/min	350 psi 2413 kPa 24.1 bar	500 psi 3448 kPa 34.5 bar	3" NPT SAE-20 O-Ring	Synteq Synthetic Media, or Wiremesh
HRK10	0-300 gpm 0-1136 l/min	150 psi 1034 kPa 10.3 bar	500 psi 3448 kPa 34.4 bar	4" ANSI Flange	Synteq Synthetic Media, or Wiremesh
W041	0-300 gpm 0-1135 l/min	500 psi 3448 kPa 34.4 bar	1500 psi 10342 kPa 103 bar	SAE-24 O-Ring 2" Code 61 4-Bolt, 2½" Code 61 4-Bolt	Synteq Synthetic Media
W042	0-300 gpm 0-1135 l/min	400 psi 2758 kPa 27.6 bar	1500 psi 10342 kPa 103 bar	3" SAE 4 Bolt Flange	Synteq Synthetic Media

# Medium Pressure Filters

Donaldson's famous Duramax® filters are the highest rated medium pressure filters available in a spin-on configuration.

Duramax filters are reliable, sturdy, long-lived and easy to install. Most often used as return-line filters, they are designed for working pressures up to 1000 psi/69 bar and static pressures up to 2000 psi/138 bar.

Donaldson Duramax spin-on filters protect hydraulic oil in thousands of applications around the world. They are shown on a gas turbine installation in Hungary.



Media choices include: Synteq® (Donaldson's synthetic filter media specially developed for fluid filtration), natural fiber cellulose and stainless steel wiremesh for harsh environments.

Offered in both single-head and dual-head designs to accommodate a broad range of flow ranges.

Hydraulic Series	Flow Range	Pressure (NFPA/t3.10.17)		Porting Types	Media Choices
		Working	Static		
HMK03	0-25 gpm 0-95 l/min	1000 psi 6895 kPa 69 bar	2000 psi 13790 kPa 137.9 bar	SAE-12 O-Ring	Synteq® Synthetic Media
HMK04 HMK04	0-35 gpm 0-132 l/min	500 psi 3448 kPa 34.5 bar	1000 psi 6895 kPa 69 bar	SAE-12, -16 O-Ring ¾", 1" NPT	Synteq Synthetic Media, Cellulose, or Water Removal
HMK05 HMK05	0-50 gpm 189 l/min	350 psi 2413 kPa 24 bar	800 psi 5516 kPa 55 bar	SAE-20 O-Ring 1¼" NPT	Synteq Synthetic Media, Wiremesh, or Water Removal
HMK24 (dual head, two elements)	0-60 gpm 0-230 l/min	500 psi 3450 kPa 34.5 bar	1000 psi 6895 kPa 69 bar	1¼" SAE O-Ring 1¼" SAE 4-Bolt Flange	Synteq Synthetic Media, or Water Removal
HMK25 (dual head, two elements)	0-100 gpm 0-378 l/min	350 psi 2413 kPa 24 bar	800 psi 5516 kPa 55 bar	1½" SAE 4-Bolt Flange SAE-24 O-Ring 1½" NPT	Synteq Synthetic Media, Wiremesh, or Water Removal
W061	0-100 gpm 0-379 l/min	600 psi 4137 kPa 41 bar	1500 psi 10342 kPa 103 bar	SAE-12, -16 O-Ring	Synteq® Synthetic Media

## High Pressure Filters

Donaldson high pressure filters help protect the most expensive components within a hydraulic system, typically the valves and actuators.

Designed with heavy-duty housings for working pressures 2000 - 6000 psi (138-414 bar).

All HPK, FPK & DT filters contain Synteq, a Donaldson proprietary synthetic media.



W451 filters clean the fluid on a hydraulic bench that tests hydraulic pumps, motors and cylinders using our highest performance Donaldson Triboguard™ elements.

Hydraulic Series	Flow Range	Pressure (NFPA/t3.10.5.1) Working	Static	Porting Types	Media Choices
HPK02	0-30 gpm 0-114 l/min	2000 psi 13790 kPa 137.9 bar	4500 psi 31028 kPa 310.3 bar	SAE-12 O-Ring	Synteq® Synthetic Media
FPK02	0-25 gpm 0-95 l/min	6090 psi 42000 kPa 420 bar	9135 psi 63000 kPa 630 bar	SAE-12 O-Ring	Synteq Synthetic Media
HPK03	0-60 gpm 0-227 l/min	3000 psi 20685 kPa 206.9 bar	6000 psi 41370 kPa 413.8 bar	SAE-12, -16 O-Ring	Synteq Synthetic Media or Stainless Steel Wiremesh
FPK04	0-100 gpm 0-379 l/min	4350 psi 300 bar	9135 psi 630 bar	SAE-20 O-Ring	Synteq Synthetic Media
HPK04	0-100 gpm 0-378 l/min	6000 psi 41370 kPa 413.8 bar	12000 psi 82740 kPa 827.6 bar	SAE-20, -24 O-Ring 1½", 1½" SAE 4-Bolt Flange	Synteq Synthetic Media or Stainless Steel Wiremesh
HPK05	0-200 gpm 0-757 l/min	3000 psi 20685 kPa 206.9 bar	6000 psi 41370 kPa 413.8 bar	2" SAE 4-Bolt Flange	Synteq Synthetic Media
W451	0-150 gpm 0-568 l/min	4500 psi 31028 kPa 310 bar	13500 psi 93083 kPa 931 bar	SAE-24 O-Ring, Manifold Mount, 1½" SAE 4-Bolt Flange, Code 61 1½" SAE 4-Bolt Flange, Code 62	Synteq Synthetic Media
W440	0-20 gpm 0-91 l/min	4000 psi 27580 kPa 276 bar	10000 psi 68950 kPa 690 bar	Manifold Mount	Synteq Synthetic Media
W350	0-50 gpm 0-189 l/min	3000 psi 20685 kPa 207 bar	7500 psi 51713 kPa 517 bar	SAE-12, -16 O-Ring	Synteq Synthetic Media

# Comprehensive Line of Replacement Filters

## In-Stock & Ready to Ship

Along with our complete line of hydraulic filter heads and housings for low, medium, and high pressure applications, Donaldson offers a comprehensive line of replacement filters. Spin-ons and cartridges are available in your choice of media.

When replacing another filter brand, our comprehensive and up-to-date cross-reference guide (available on our website) can lead you through performance improvement possibilities.

Our worldwide network of **authorized hydraulic distributors** is ready to serve you with their solid knowledge of Donaldson hydraulic filters and vast experience with hydraulic circuits. Most distributors stock our filters, and we have quick-ship programs so that you can get the filter you need, when you need it. To find a distributor near you, access our website and click on Industrial Hydraulics, then on Where to Buy.

Donaldson  
Triboguard™



## Hydraulic Line Accessories

Donaldson hydraulic components are available from your fluid power experts at Donaldson—your one stop shop:

- Pressure gauges for monitoring system pressure
- Hoses and test points for sampling oil and determining ISO cleanliness levels
- Flanges to connect components
- Valves for system control

### Pressure Gauges



### Test Points



### Ball Valves



### Port Flanges



# Reservoir Accessories



- Suction Strainers
  - ◆ Line Mount
  - ◆ Tank Mount

- Diffusers
  - ◆ Line Mount
  - ◆ Tank Mount

- Level Gauges
- Sight Gauges

- Plugs, Caps, Vents

- Filler Breather Assemblies
- Breathers

Introducing  
Extended Range  
T.R.A.P.<sup>™</sup>  
Breather  
Technology!

- Protect your pump from damage.
- Diffusers are highly effective in reducing aeration, foaming, turbulence and noise caused by return lines.
- A variety of Sight & Level Gauges is available. Besides standard length versions, Donaldson has several screw-in styles in plastic and steel for use in a variety of applications.
- Donaldson has a wide range of plastic Plugs, Caps & Vents that are great for small power units and gearboxes.
- Donaldson Filler Breathers and Caps come in chrome, zinc, epoxy-coated weatherproof finishes and corrosion-resistant technopolymer. Lockable versions, dipsticks and side-mount versions are available.

T.R.A.P.<sup>™</sup> (Thermally Reactive Advanced Protection) Breather provides fast-acting protection against airborne moisture and particulate contamination. It stops solid particulate down to 3µm at 97% efficiency as well as prevents moisture from entering the reservoir. Water-holding capacity is regenerated with every oil return phase for long service life. Its self-regenerating capability enables extended life.



Donaldson's T.R.A.P. breathers are available in a variety of configurations:

- ABS plastic, nylon or epoxy-coated steel construction
- NPT, BSP, UN straight thread or bayonet connections
- With and without electronic indicator options to fit a broad range of applications

## Leading Technology



- 550 engineers worldwide
- More than 500 patents
- Full range of filter media choices
- Complete testing and evaluation capabilities

## Experience & Service



- Technical expertise and support
- Ready-to-ship filters and parts within 24 hours
- Industry's largest selection of replacement hydraulic filters
- Easy-to-use online cross-reference and ordering

## Global Support



- Facilities in 37 countries
- 40 manufacturing plants and 14 distribution centers
- Sales offices worldwide

## Log On [www.donaldson.com](http://www.donaldson.com)

From the Donaldson home page click on Industrial Hydraulics to:

- Find cross-reference part numbers
- View filter specifications
- View/print brochures in PDF format
- Locate a distributor in your area



[donaldson.com](http://donaldson.com)



**Donaldson**  
Filtration Solutions

Donaldson Company, Inc.  
Industrial Hydraulics  
P.O. Box 1299  
Minneapolis, MN 55440-1299

[donaldson.com](http://donaldson.com)  
[grphydfilters@donaldson.com](mailto:grphydfilters@donaldson.com)

**North America**  
Tel.: 800-846-1846  
Fax: 952-703-4652

**Australia**  
Tel.: 61-2-4352-2022  
Fax: 61-2-4351-2036

**Asia-Singapore**  
Tel.: 65-63117373  
Fax: 65-63117399

**Europe**  
Tel.: 32-16-38-3811  
Fax: 32-16-38-3939

**South Africa**  
Tel.: 27-11-389-8808  
Fax: 27-11-908-2216

**Latin America & Caribbean**  
Tel.: 52-449-910-6385  
Fax: 52-449-910-6180

Information in this document is subject to change without notice.

© 2007 Donaldson Co., Inc.  
Printed in U.S.A. on recycled paper  
Bulletin No. HYD-200 11-09