Donaldson
FILTRATION SOLUTIONS

Donaldson Delivers

Filter Cart

For Off-Line Filtration

The Donaldson Filter Cart provides a convenient portable mode of off-line filtration, flushing and fluid transfer. Use it with your in-plant machinery and hydraulic equipment to achieve and maintain proper ISO cleanliness levels.

Dual in-series HMK05 pressure filters can provide coarse/fine particle removal or, install a water absorbing filter to obtain particulate and water removal. A SP50/60 suction filter is required to protect the pump. The powerful one horsepower motor won't bog down and when coupled with a gear pump, it provides efficient fluid transfer and filtration. Convenient features include a rear mounted motor for better balance, a removable angled drip tray and clear braided hoses.

Notice

Donaldson Filter Carts include electric motors and indoor use is recommended. Exposure to rain, snow and other elements may cause electric motors to fail. Failures that result from misapplication, improper use or storage are not covered by the Donaldson warranty.

Reference the aftermarket warranty: document no. F110064.

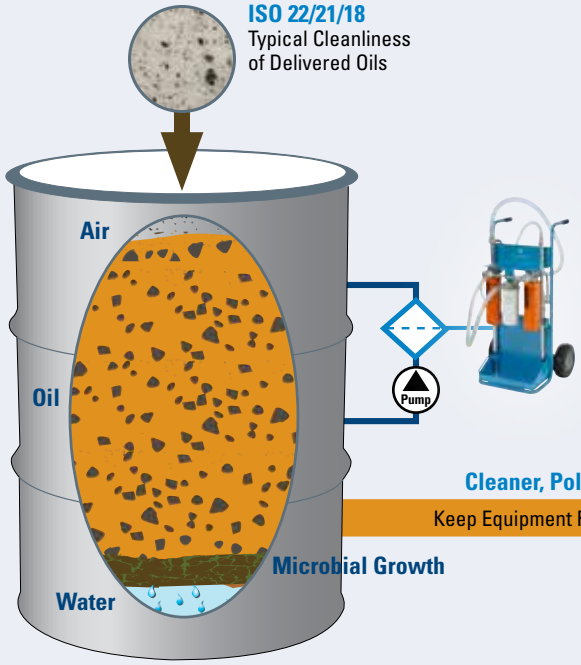
Fluid Compatibility

Not for use with diesel fuel or gasoline. For fuel solutions, please contact the Donaldson Clean Solutions team at clean.solutions@donaldson.com or 800-518-7784.

Applications

- Transferring New Oil
- Cleaning Stored Oil
- System Draining
- Line Flushing
- Hose Cleaning
- Kidney Loop Filtration
- Repairs & Equipment Rebuild Flushing
- Flushing During Equipment Commissioning

New Oil isn't Clean Oil



Oil Maintenance Starts Right in the Drum

Polish new lubricating oils inside the drum to meet and maintain baseline ISO cleanliness level – prior to dispensing into equipment, gearboxes and reservoirs.

Target ISO Cleanliness

Filter Cart Features

Stainless steel wands

- Will not break, corrosion resistant

Differential pressure indicators

- Lets you know when to change filters

Two pressure filters mounted in series

- Allows for particulate/water removal or coarse/fine particle removal

Removable angled drip tray

- Easy clean up, fluid will not leak out when tipped back

Clear braided hoses

- Visually shows fluid flowing
- 85 psi working pressure

Suction filter

- Protects pump

Oil sampling valve

- Monitors filter performance and cleanliness of oil

Motor/Pump

- Industrial brand 10 gpm / 38 lpm flow

Motor mounted on back

- Better balance
- Fluid will not drip on motor when changing filters

Overload protected switch

- Protects motor from overheating

Protects against over pressurizing

- Set at 85 psi

Foam filled tires

- Tires will not go flat

Filter Cart Assembly Choices

NOTE: FILTERS ORDERED SEPARATELY

The Importance of Temperature When Selecting a Filter Cart

Consider operating temperature ranges when determining the proper viscosity filtration solution. It's crucial to select the proper viscosity option to maintain adequate flow and avoid restriction. Refer to the oil viscosity with temperature chart located on the front cover of the catalog.

Example: ISO Grade 32 Hydraulic Oil @ 68°F = 86.7 (cSt)

Assembly Part No.	**Low Viscosity** **Max Viscosity 500 SUS (108 cSt)*** Filters ordered separately **X011297** 	**High Viscosity** **Max Viscosity 8000 SUS (1700 cSt)*** Filters ordered separately **X011298** 
Operating Temperature Range:	---------- -10° F to 160° F (-23° C to 71° C) ----------	
Filter Bypass Valve Settings:	Suction – 5 psid/0.34 bar	Suction – Y strainer
	Pressure – 25 psid/1.7 bar	Pressure – 25 psid/1.7 bar
Electrical Service:	---------- 115 volts: 14 amp, single phase, 60 Hz ----------	
Cord Length:	---------- 7 ft. /2.1 m cord with storage for 50 ft./15 m ----------	
Gear Pump Flow Rate*:	10.4 gpm/38 lpm	2 gpm/8 lpm
TEFC Motor:**	1 hp, 1800 RPM	1 hp, 1200 RPM
Fluid Compatibility:	---------- Mineral-based fluids, water glycols, polyol esters ----------	
Dry Weight:	Approximately 140 lbs. (63.5 kg)	Approximately 175 lbs. (79.38 kg)
Dimensions:	Height: 47" (1194 mm) Width: 24" (610 mm) Length: 23" (585 mm)	
	---------- Hose/Wand assembly length: 10' (3.05 m) ----------	
FIlter Notes:	Requires 3 filters: 2 pressure, 1 suction	Requires 4 pressure filters

Pressure Filter Choices

Media Type	**$ß_{x(c)} = 2$** Rating based on ISO 16889	**$ß_{x(c)} = 1000$**	**Length in**	**Length mm**	**Donaldson Part No.**
Synteq Synthetic		<4 µm	14.2	361	P564468
		6 µm	11.6	294	P165675
		6 µm	11.6	294	P171274[1]
		6 µm	14.2	361	P179763
		11 µm	7.6	193	P176207
		11 µm	11.6	294	P165659
		11 µm	11.6	294	P171275[1]
		11 µm	14.2	361	P170949
		23 µm	7.6	193	P176208
		23 µm	11.6	294	P165569
		23 µm	11.6	294	P171276[1]
		23 µm	14.2	361	P173789
		50 µm	11.6	294	P165672
		50 µm	14.2	361	P573353
Water Absorbing	10 µm		11.6	294	P179075

[1]Viton® O-ring, Epoxy

Suction Filter Choices

Media Type	**$ß_{x(c)} = 2$** Rating based on ISO 16889	**Length in**	**Length mm**	**Donaldson Part No.**
Wire Mesh	150 µm	6.7	170	P550275
	150 µm	10.7	271	P550276

***Contact Donaldson for special order options**

**Totally Enclosed Fan-Cooled

Filter Notes

- Refer to table in the Technical Reference Guide for fluid compatibility with our filter media.
- Thread sizes are1 3/4"-12 UNF-2B (HMK05) and 1 1/2"-16 UN-2B (suction filter)
- Filters with seals made of Viton® (a fluoroelastomer) are required when using diester, phosphate ester fluids, water glycol, water/oil emulsions, and HWCF (high water content fluids) over 150°F. Filters with seals made of Buna-N® are appropriate for most applications involving petroleum oil.
- Viton® is a registered trademark of E. I. DuPont de Nemours and Company.

If one of our standard filter carts doesn't meet your requirements, we will refer you to a qualified 3rd party that can help you build a customized solution featuring top-quality Donaldson filtration products.

For a custom built solution, please call 1-866-514-0012.

Filter Cart Benefits

Features	Benefits
Rugged and durable frame	Enables long service life
High efficiency media	Cost effective filtration
Two pressure filters	Two-stage filtration – coarse/fine or particulate/water
Safety relief valve	Prevents over pressurizing and damage to pump, hoses and filters
Overload protected switch	Prevents motor from overheating

Applications	
Filter new fluid	New fluids are usually above the recommended ISO cleanliness levels
Offline filtration	Filter cart can be used to supplement existing filtration
Water removal	Using Donaldson water removal filters to remove free water from the system.
Transferring fluid	Fluid is transferred from a storage container (tote, drum, tank, etc.) to a machine's reservoir
Flushing	After repairs & builds machines need to be flushed thoroughly before returning to service. During equipment commissioning, new machines have original fabrication debris and dirt that has ingressed during transport and storage.

Calculating the Time Required for Single-Pass Filtration

When using the filter cart for offline filtration the fluid will need to pass through the filter cart approximately seven times to achieve single-pass filtration. Use to following formula to calculate the amount of time needed to achieve single-pass filtration:

(Reservoir Size x 7) / Filter Cart Flow Rate = Time*

For example: if you have a 50 gallon reservoir it will take approximately 35* minutes to achieve single-pass filtration.

(50 gallons x 7) / 10 gpm = 35 minutes

*Times will vary depending on initial cleanliness of oil, system ingression, choice of media grades and other variables.

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FILTRATION SOLUTIONS

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