



FC Filter Cart

Flow rate up to 22 gpm (82 lpm)

Ideal for hydraulic fluids
(ISO VG22 ~ ISO VG68).

Filter new fluids during transfer and
replenishment (top-off).

Flush fluids already in service with
high efficiency elements in addition to
existing filtration.

Remove particulate and water.

Condition bulk oil before use.

Materials of Construction

Assembly Frame: Painted Steel
Tires: Rubber (foam filled, never flat)
Filter Assembly: Aluminum head, Steel canister
25 psid bypass valve
True differential pressure indicator
Hoses: Reinforced synthetic
Wands: Steel wands (zinc plated)

Operating Temperature

Nitrile (Buna) -40°F to 150°F
-40°C to 66°C
Fluorocarbon (Viton®)* -15°F to 200°F
-26°C to 93°C

*High temperature / phosphate ester design

Fluid Compatibility

Petroleum and mineral based fluids (standard).
For polyol ester, phosphate ester, and other
specified synthetics use Viton® seal option or
contact factory.

Weight

FC1: 140 Lbs (63,6 kg) approximate
FC2: 145 Lbs (66 kg) approximate
FC3: 235 Lbs (106 kg) approximate

Explosion Proof Option

Explosion Proof NEC Article 501, Class 1, Div 1,
Grp C & D optional. Call for IEC, Atex or other
requirements.

Electrical Service

115VAC 60Hz 1P (standard) for FC1 & FC2
see options table for other selections

Electric Motor Specifications

TEFC 56C Frame
60 Hz - 1750 RPM
50 Hz - 1450 RPM

*230VAC 1P or 440VAC 3P required for FC3

**No cord reel for FC3, any 3 phase or > 230 VAC

Recommended Viscosity Range*

Max recommended actual viscosity (based on pump
suction line limitations through hoses)

FC1, FPL1 = 800 cSt

i.e. ISO220 ≥ 68°F (20°C), ISO320 ≥ 80°F (26°C),
ISO460 ≥ 90°F (32°C)

FC2 = 500 cSt

i.e. ISO220 ≥ 75°F (23°C), ISO320 ≥ 86°F (30°C),
ISO460 ≥ 97°F (36°C)

FC3 = 500 cSt

i.e. ISO220 ≥ 75°F (23°C), ISO320 ≥ 86°F (30°C),
ISO460 ≥ 97°F (36°C)

*FC / FPL series are design optimized for lower viscosity
hydraulic oils. Media selection will be limited on FC/
FPL when running high viscosity oils ≥ ISO220, contact
factory for sizing & media selection. Consider FCL or
FSL designed for high viscosity fluid conditioning with
high efficiency medias and large elements.

Pump Specifications

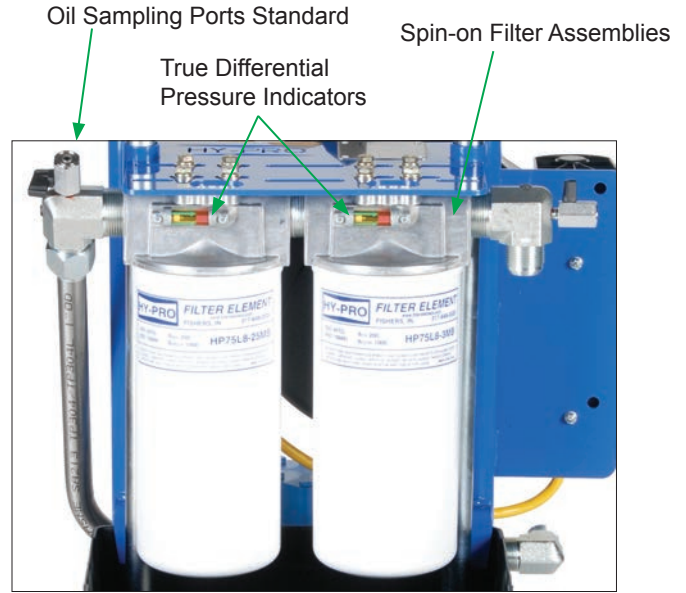
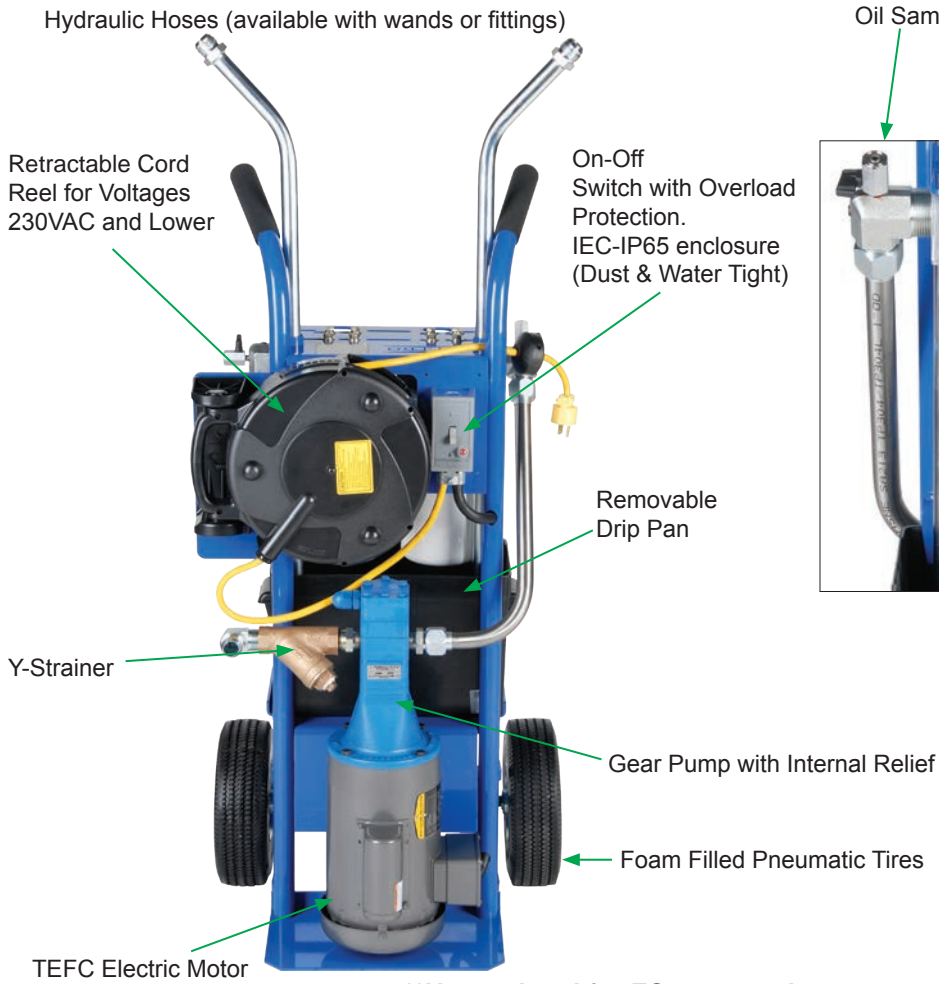
Gear pump
Internal relief full flow 100 psi, 6.8 bar standard

Viton® is a registered trademark of E. I.
du Pont de Nemours and Company or its affiliates.



FILTRATION

FC1, FC2, FC3 FILTER CART APPLICATION INFO

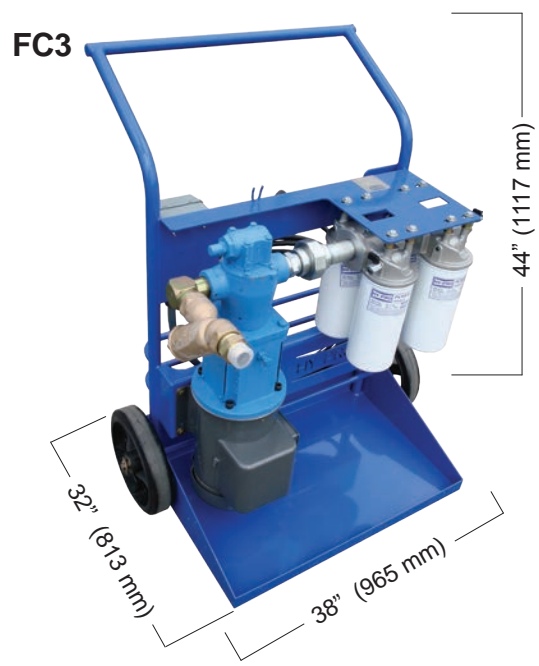


MF3 Option Changes Spin-on Assemblies to 2 Cartridge Element Style Housings in Series



****No cord reel for FC3, any 3 phase or > 230 VAC**

FILTER CART DIMENSIONS



Cleaner Fluid, Greater Reliability

When establishing a target ISO cleanliness code first identify the most sensitive component. New oil added should be cleaner than the target ISO code for the system.

Figure 1 details the improvement in component life as the ISO cleanliness is improved for roller contact bearings. Improving and stabilizing fluid cleanliness codes can increase hydraulic component and bearing life exponentially.

Lab and field tests prove time and again that Hy-Pro filters deliver lower ISO cleanliness codes, and do it with greater consistency.

Figure 1

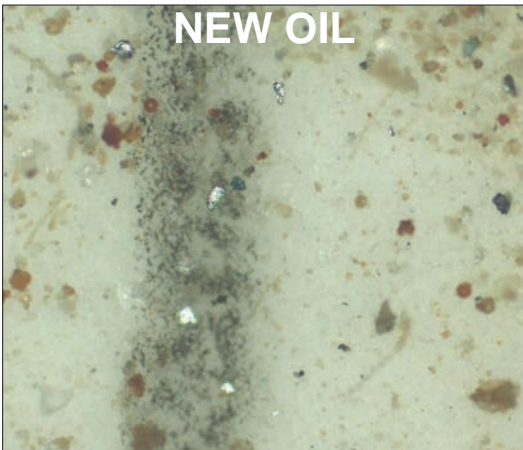
Current ISO Code	Target ISO Code	Target ISO Code	Target ISO Code	Target ISO Code
Start	2 x Life	3 x Life	4 x Life	5 x Life
28/26/23	25/22/19	22/20/17	20/18/15	19/17/14
27/25/22	23/21/18	21/19/16	19/17/14	18/16/13
26/24/21	22/20/17	20/18/15	19/17/14	17/15/12
25/23/20	21/19/16	19/17/14	17/15/12	16/14/11
22/22/19	20/18/15	16/16/13	16/14/11	15/13/10
23/21/18	19/17/14	17/15/12	15/13/10	14/12/9
22/20/17	18/16/13	16/14/11	15/13/10	13/11/8
21/19/16	17/15/12	15/13/10	13/11/8	-
20/18/15	16/14/11	14/12/9	-	-
19/17/14	15/13/10	13/11/8	-	-
18/16/13	14/12/9	-	-	-

The Right Element Combination

Figure 2 illustrates some possible combinations to use on the FC series cart. When water removal is desired use the 12A or 25A media code as a pre-filter. A finer media can be used on the main filter (second) to capture smaller particulate and reduce the ISO code. When conditioning a tote or flushing a fluid already in service, using the 1M media code will yield the quickest result on particulate contamination.

Figure 2

Current Condition	Pre-Filter	Main-Filter
ISO 25/24/22 (New Oil) with High Water Content	HP75L8-25AB $\beta_{22_{[c]}} = 1000$ + Water Removal	HP75L8-3MB $\beta_{5_{[c]}} = 1000$
ISO 25/24/22 (New Oil)	HP75L8-12MB $\beta_{12_{[c]}} = 1000$	HP75L8-1MB $\beta_{2.5_{[c]}} = 1000$
ISO 27/19/16	HP75L8-3MB $\beta_{5_{[c]}} = 1000$	HP75L8-1MB $\beta_{2.5_{[c]}} = 1000$



Filtering New Oil - Particulate and Water

New oil is typically not clean oil, and not suitable for use in hydraulic and lube systems. During the production and transportation process new oil collects high levels of solid contaminant and water. A common ISO code for new oil is 24/22/19. New oil is one of the worst sources of particulate contaminant system ingress.

The FC with water removal element will effectively remove free water while capturing particulate with high efficiency. Free and dissolved water in hydraulic and lube systems leads to accelerated abrasive wear, corrosion of metal surfaces, increased electrical conductivity, viscosity variance, loss of lubricity, fluid additive breakdown, bearing fatigue and more. The FC series filter cart includes a wide range of element combination options to tackle any challenge. The HP75L8-25AB water removal element holds 23 ounces of water while controlling particles with a beta ratio of $\beta_{25} = 200$, $\beta_{22_{[c]}} = 1000$.

Flush and Condition Existing Systems

The FC is also effective for condition fluids that are already in service. Equipping hose ends and reservoirs with quick disconnect fittings allows you to use the FC as a portable side loop system that can service several machines.

