HY-PRO

F8

Low Pressure Filter High Flow Filter Assembly

Ideal for high viscosity lubricating fluids, high flow hydraulic, and heavily contaminated fuel applications. Drop-in mounting interchange for common pulp and paper industry 8300/8310/8314 filter assemblies.

Max Operating Pressure: 500 psi (34.5 bar)

Filtration starts with the filter.

Advanced DFE rated filter elements deliver lower operating ISO Codes with high efficiency particulate removal and retention efficiency. With a range of media options down to $\beta 3_{[c]} > 4000$ + water absorbing options, you get the perfect element for your application, every time.

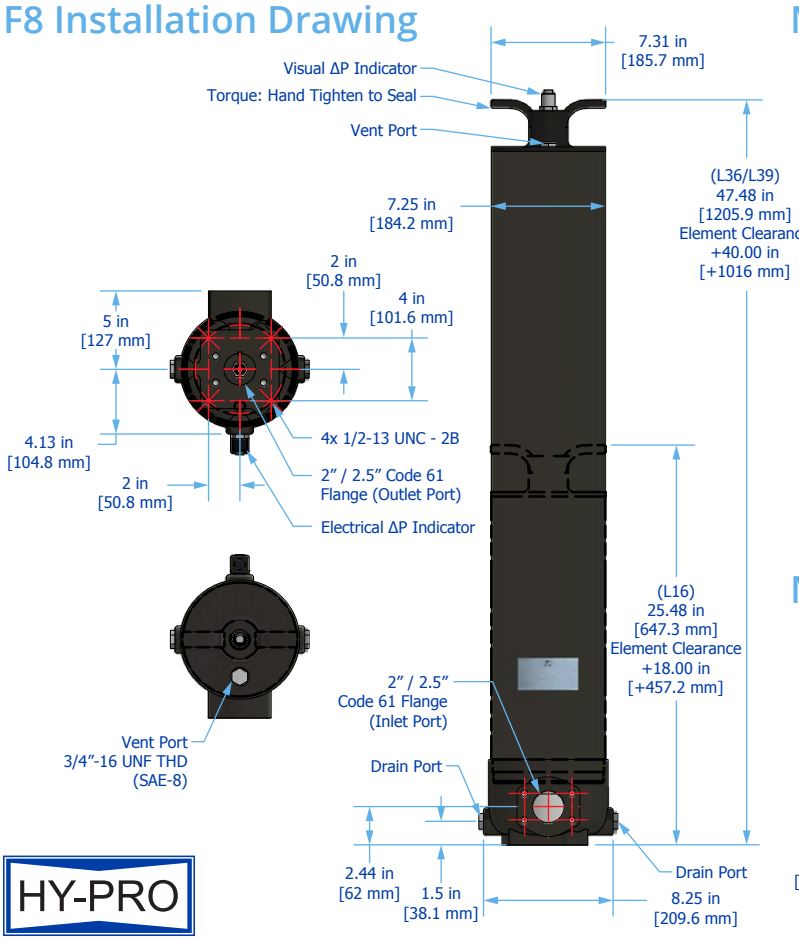
Minimize the mess.

The top loading housing on F8 filter assemblies provide easy and clean access when servicing or changing the element. Accessing the element is as simple as removing the housing cover, meaning you have no heavy bowl to lift and can get back in operation more quickly than ever.

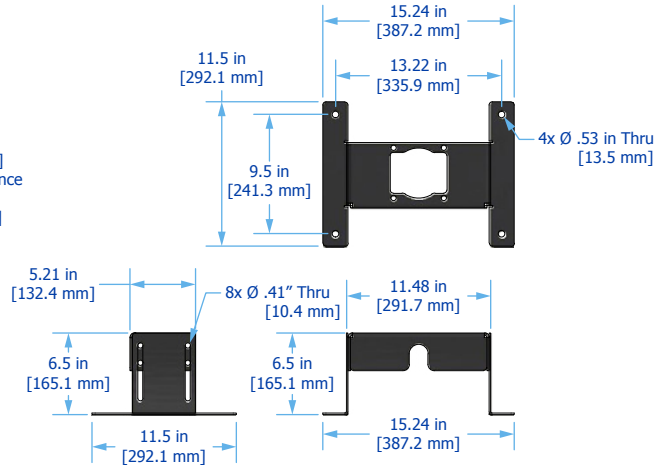
Setting the new (industry) standard.

Designed as a drop-in replacement for industry standard 8300 series filter housings, only the F8 from Hy-Pro gives you the flexibility to choose from numerous DFE rated filter arrangements. Even upgrade your existing 83** series filter elements with the HP107 series to get a new integral bypass valve with every filter.

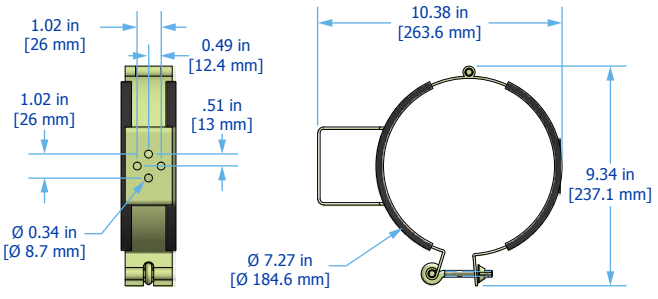
F8 Installation Drawing



M1 Option Mounting Stand



M2 Option Stabilizing Bracket



F8 Specifications

Dimensions

See Installation Drawings on page 2 for model specific dimensions.

Operating Temperature

-20°F to 250°F
(-29°C to 121°C)

Operating Pressure

500 psi (34.5 bar) max

ΔP Indicator Trigger

15 psi (1 bar): 25 psid bypass
35 psi (2.4 bar): 50 psid bypass + non bypass

Materials of Construction

Head/Lid
Cast aluminum (coated)

Bowl
Industrial coated steel

Media Description

M
G8 Dualglass, our latest generation of DFE rated, high performance glass media for all hydraulic & lubrication fluids. $\beta x_{[C]} \geq 4000$

A
G8 Dualglass high performance media combined with water removal scrim. $\beta x_{[C]} \geq 4000$

W
Stainless steel wire mesh media $\beta x_{[C]} \geq 2$

VTM
$\beta 0.9_{[C]} \geq 4000$ particulate, insoluble oxidation by-product and water removal media

Replacement Elements

To determine replacement elements, use corresponding codes from your assembly part number:

Element Type Code	Filter Element Part Number	Example
5	HP105L[Length Code] – [Media Selection Code][Seal Code]	HP105L36–6AB
6	HP106L[Length Code] – [Media Selection Code][Seal Code]	HP106L16–10MV
7	HP107L[Length Code] – [Media Selection Code][Seal Code]	HP107L36–1MV
32	HP8310L[Length Code] – [Media Selection Code][Seal Code]	HP8310L16–25AV
35	HP8310L[Length Code] – [Media Selection Code][Seal Code]	HP8310L39–3MB
8X	HP8314L[Length Code] – [Media Selection Code][Seal Code]	HP8314L39–25WV
82	HP8314L[Length Code] – [Media Selection Code][Seal Code]	HP8314L16–12MB
85	HP8314L[Length Code] – [Media Selection Code][Seal Code]	HP8314L39–16ME–WS

Fluid Compatibility

Petroleum and mineral based fluids, #2 diesel fuels (standard). For polyol ester, phosphate ester, and other specified synthetic fluids use fluorocarbon seal option or contact factory.

Filter Assembly Sizing[1]

Filter assembly clean element ΔP after actual viscosity correction should not exceed 10% of filter assembly bypass setting. For applications with extreme cold start condition contact Hy-Pro for sizing recommendations.

Step 1: Calculate ΔP coefficient for actual viscosity

Using Saybolt Universal Seconds (SUS)

$$\text{ΔP Coefficient} = \frac{\text{Actual Operating Viscosity1 (SUS)}}{150} \times \frac{\text{Actual Specific Gravity}}{0.86}$$

or

Using Centistokes (cSt)

$$\text{ΔP Coefficient} = \frac{\text{Actual Operating Viscosity}^{1}\text{ (cSt)}}{32} \times \frac{\text{Actual Specific Gravity}}{0.86}$$

Step 2: Calculate actual clean filter assembly ΔP at both operating and cold start viscosity

Actual Assembly Clean ΔP = Flow Rate X ΔP Coefficient (from Step 1) X Assembly ΔP Factor (from sizing table)

ΔP Factors[1]

Length	Units	Media 1M	3M	6M	10M	16M	25M	**W
16/18	psid/gpm	0.0463	0.0391	0.0303	0.0271	0.0266	0.0256	0.0046
	bard/lpm	0.0008	0.0007	0.0006	0.0005	0.0005	0.0005	0.0001
36/39	psid/gpm	0.0324	0.0273	0.0212	0.0190	0.0186	0.0179	0.0032
	bard/lpm	0.0006	0.0005	0.0004	0.0003	0.0003	0.0003	0.0001

[1]Max flow rates and ΔP factors assume υ = 150 SUS, 32 cSt. See filter assembly sizing guideline for viscosity conversion formula.

F8 Part Number Builder

F8 [ ] [ ] [ ] [ ] - [ ] - [ ] [ ]

Connection | Element Type | Element Length | Indicator | Special Options | Media | Seal

Connection

	Port Option	Max Flow Rate
F32	2" Code 61 flange	300 gpm (1,136 lpm)[1]
F40	2.5" Code 61 flange	300 gpm (1,136 lpm)[1]

Element Type

5	HP105 – no bypass
6	HP106 – 25 psid (1.7 bard) integral element bypass
7	HP107 – 50 psid (3.4 bard) integral element bypass
32	HP8310 – 25 psid (1.7 bard) integral housing bypass
35	HP8310 – 50 psid (3.4 bard) integral housing bypass
8X	HP8314 – no bypass
82	HP8314 – 25 psid (1.7 bard) integral housing bypass
85	HP8314 – 50 psid (3.4 bard) integral housing bypass

Element Length

16	L16 single length filter housing
36[2]	L36 single length filter housing
39[2]	L39 single length filter housing

ΔP Indicator

	Indicator Options	Thermal Lockout	Surge Control	Reset
D	Visual / Electrical (DIN 43650)	No	No	Auto
DX	Electrical switch only (DIN 43650)	No	No	Auto
S	Visual / Electrical (DIN 43650)	Yes	Yes	Manual
T	Visual / Electrical (DIN 43650)	Yes	No	Manual
V	Visual/Mechanical	No	No	Auto
X	No indicator (port plugged)	–	–	–
Y	Visual only	Yes	Yes	Manual

Special Options

M1	Mounting stand for base mount applications
M2	Stabilizing bracket

Media Selection

G8 Dualglass

1M	$\beta 3_{[C]} \geq 4000$
3M	$\beta 4_{[C]} \geq 4000$
6M	$\beta 6_{[C]} \geq 4000$
10M[3]	$\beta 11_{[C]} \geq 4000$
16M	$\beta 16_{[C]} \geq 4000$
25M	$\beta 22_{[C]} \geq 4000$

G8 Dualglass + water removal

3A	$\beta 4_{[C]} \geq 4000$
6A	$\beta 6_{[C]} \geq 4000$
10A[3]	$\beta 11_{[C]} \geq 4000$
25A	$\beta 22_{[C]} \geq 4000$

Dynafuzz stainless fiber

3SF	$\beta 4_{[C]} \geq 4000$
6SF	$\beta 6_{[C]} \geq 4000$
10SF	$\beta 11_{[C]} \geq 4000$
25SF	$\beta 22_{[C]} \geq 4000$

Stainless wire mesh

25W	25µ nominal
40W	40µ nominal
74W	74µ nominal
149W	149µ nominal

Seals

B	Nitrile (Buna)
V	Fluorocarbon
E-WS	EPR seals + stainless steel support mesh

[1]Maximum recommended flow rate based on velocity through port and internal flow path. Consult sizing guidelines or consult factory for sizing based on flow rate, viscosity, temperature, filter media selection.
[2]Compatibility will be based on Element Type selection. For elements HP105, HP106, and HP107, use Length Code 36. Length Code 39 only compatible with HP8310 and HP8314.
[3]For elements HP8310 and HP8314, use 12M or 12A for respective media code in place of 10M or 10A.

Want to find out more? Get in touch.
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