

New: F310 Series

Versalon™ Medium Pressure Filters

Features

- Flows to 120 L/min (32 US gpm)
- Pressures to 70 bar (1015 psi)
- Port size 1"
- Out-to-in filter element flow path

Notes and Specifications

Filter Housing

- **Maximum Allowable Working Pressure:**
70 bar (1015 psi)
- **Rated Fatigue Pressure:**
0 - 40 bar (580 psi) per NFPA T2.6.1 R2-2001 CAT C/90, verified by testing at 0 - 46.5 bar (675 psi)
- **Fluid Compatibility:**
Compatible with all petroleum oils, water glycols, water-oil emulsions and most synthetic hydraulic and lubrication fluids
- **Temperature Range:**
Fluorocarbon Seals:
-29 °C to 120 °C (-20 °F to 250 °F)
50 °C (122 °F) maximum in HWCF or water glycol fluids
- **Bypass Valve Settings:**
'B' option – 3.4±0.3 bard (50±4 psid)
'G' option – 4.5±0.5 bard (65±7 psid)
- **Indicator Pressure Settings:**
2.4±0.3 bard (35±4 psid) for 'B' option
3.4±0.5 bard (50±7 psid) for 'G' option
- **Materials of Construction:**
Head - SG Iron
Bowl - Aluminium

Filter Element

- **Filter Element Collapse Pressure:**
10 bard (145 psid)
- **Filter Element Construction:** Inorganic fibers impregnated and bonded with specifically formulated resins. Polyamide endcaps. Corrosion protected carbon steel core.

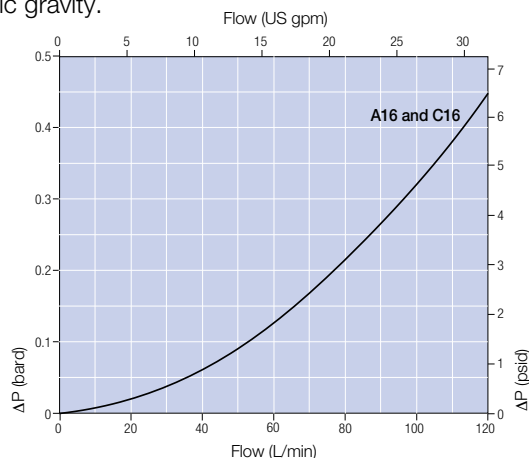


F310 Series filter housings

Pressure Drop Information

Housing pressure drop using fluid with 0.9 S.G.

Housing pressure drop is directly proportional to specific gravity.



HCG300 Filter Elements – bard/1000 L/min (psid/US gpm)

Length Code	KN	KS	KD	KT
04	5.35 (0.29)	3.48 (0.19)	2.68 (0.15)	2.43 (0.13)
08	2.75 (0.15)	1.83 (0.10)	1.41 (0.08)	1.26 (0.07)

Multiply actual flow rate times factor in table above to determine pressure drop with fluid at 32 cSt (150 SUS), 0.9 S.G. Correct for other fluids by multiplying new viscosity in cSt/32 (SUS/150) x new S.G./0.9. Note: factors are per 1000 L/min and per 1 US gpm.

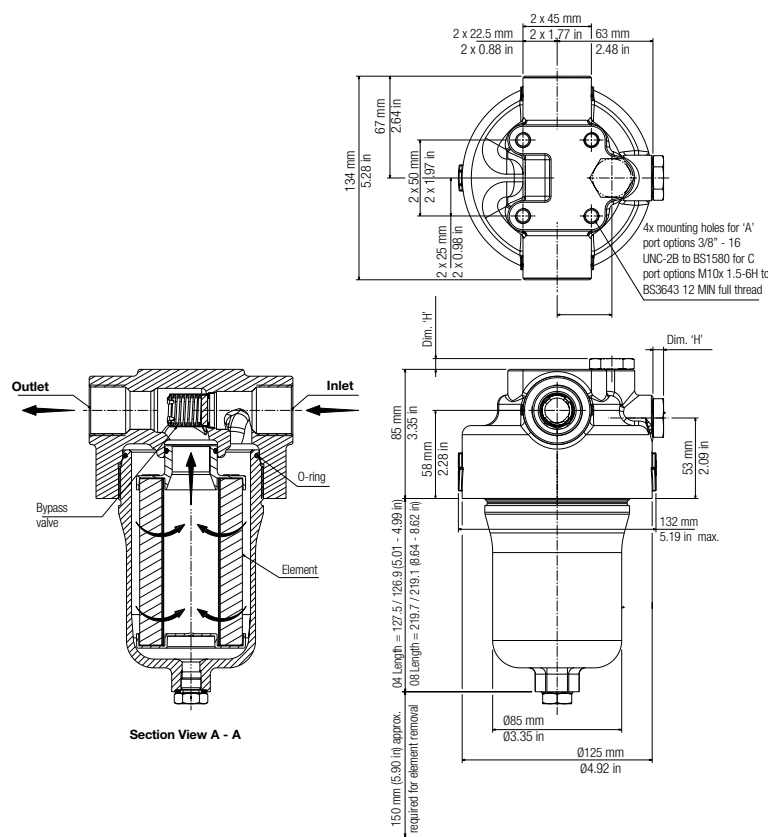
Sample ΔP calculation

F310 Series 4" length housing with C16 ports using KN grade media. Operating conditions 100 L/min flow rate using a hydraulic fluid at 20 cSt and specific gravity (s.g.) 1.2.

Total Filter ΔP

$$\begin{aligned}
 &= \Delta P_{\text{housing}} + \Delta P_{\text{element}} \\
 &= (0.32 \times 1.2/0.9) \text{ bard (housing)} \\
 &\quad + ((100 \times 5.35/1000) \times 20/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.427 \text{ bard (housing)} + 0.445 \text{ bard (element)} \\
 &= \mathbf{0.873 \text{ bard (12.7 psid)}}
 \end{aligned}$$

Dimensional Drawings



Ordering Information

Housing P/N:

HZF310  16     1X160

Element P/N: HCG300F   Z

Seal P/N: G300SKZ

Table 1: Housing Port Style Options

Code	Port Style
A	O-Ring boss per SAE J1926
C	BSP threads to ISO228

Table 2: Filter Element Options

Code	$\beta_{x(c)} \geq 1000$ based on ISO 16889
KN	7
KS	12
KD	19
KT	22

Table 3: Length Options

Housing Code	Element Code	Length L*
R	4	127 mm (5.00 in)
S	8	219 mm (8.62 in)

* Nominal length

Table 4: Valve Options

Code	Option
B	3.4 \pm 0.3 bard (50 psid)
G	4.5 \pm 0.5 bard (65 psid)

Table 5: Differential Pressure Indicator Options

Code	Indicator	'H' Dim.
0	Unmachined indicator port	-
1	Machined port with plastic shipping plug Indicator must be installed prior to operation Only available to distributors	-
B	Bleed plug and seal in place of indicator	16
C	Electrical switch - normally closed, automatic reset Connection: Deutsch DT042P	74
D	Visual indicator, window changes from white to red on indication. Automatic reset	36
U	Electrical switch Normally closed, automatic reset Connection: AMP junior timer connector	67



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