

HIGH PRESSURE FILTERS

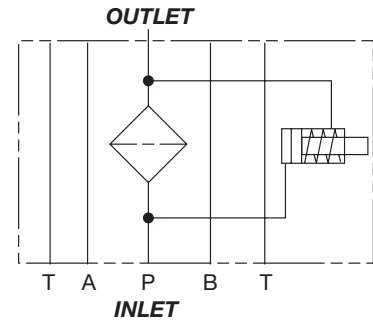
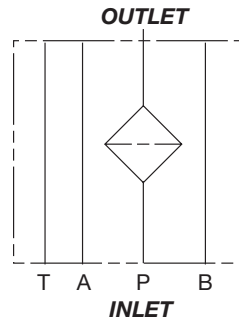
DFZ Series

Modular Stacking Filters

4568 psi • up to 10 gpm



Hydraulic Symbol



Features

- A visual (pop-up), electrical, electrical/visual (lamp) differential type clogging indicator can be installed.
- The DFZ filter can be ordered with the bowl on the left or the right side for easy element changeout.
- The DFZ filter is available in two mounting patterns to fit different hydraulic manifolds:
ANSI/B93.7M-D03 / Cetop R35
(was B93.7-D01) DF 30 Z
ANSI/B93.7M-D05 / Cetop R35
(was V93.7-D02)* DF 60 Z or DF 110 Z
*includes fifth port for optional tank connection
- Filter does not contain a bypass valve. Only available with non bypass, high collapse elements required.

Applications



Agricultural



Automotive



Construction



Industrial



Power Generation



Railways



Steel / Heavy Industry

Technical Specifications

Mounting Method		4 mounting holes (manifold mount)
Port Connection		
30	ø.25"	ANSI D03/A6 DIN 24340 / Cetop R35
60/110	ø.44"	ANSI D05/A10 DIN 24340 / Cetop R35
Flow Direction		Inlet: Side Outlet: Side
Construction Materials		
Head, Bowl		Steel
Flow Capacity		
30	6 gpm (23 lpm)	
60/110	10 gpm (38 lpm)	
Housing Pressure Rating		
Max. Allowable Working Pressure		4568 psi (315 bar)
Fatigue Pressure	30	4568 psi (315 bar) @ 250,000 cycles
	60/110	4568 psi (315 bar) @ 1 million cycles
	Burst Pressure	> 18,270 psi (1260 bar)
Element Collapse Pressure Rating		
BH4HC, V		3045 psid (210 bar)
Fluid Temperature Range 14°F to 212°F (-10°C to 100°C) Consult HYDAC for applications operating below 14°F (-10°C)		
Fluid Compatibility		
Compatible with all hydrocarbon based, synthetic, water glycol, oil/water emulsion, and high water based fluids when the appropriate seals are selected.		
Indicator Trip Pressure		
ΔP = 116 psid (8 bar) -10% (standard)		

Model Code

DFZ BH/HC 60 Q C 10 B 1 . 0 / - 1 -

Filter Type _____
 DFZ = Pressure Filter

Element Media _____
 BH/HC = Betamicon® (High Collapse) V = Metal Fiber

Size & Connection _____
 30 = D03 manifold pattern
 60 = D05 manifold pattern
 110 = D05 manifold pattern

Operating Pressure _____
 Q = 4500 psi (315 bar) (all sizes)

Type / Port Size _____
 B = 4 ports / A 6 DIN 24340/Cetop R 35 H (DFZ 30 only) .25" dia.
 C = 5 ports / A 10 DIN 24340/Cetop R 35 H (DFZ 60 & 110 only) .44" dia.

Filtration Rating (micron) _____
 3, 5, 10, 20 = BH/HC 3, 5, 10, 20 = V

Type of ΔP Clogging Indicator _____
 A, B, BM, C, D (For additional details and options, see Clogging Indicators section.)

Type Number _____
 1

Modification Number (latest version is always supplied) _____

Seals _____
 (omit) = Nitrile rubber (NBR) (standard) V = Fluorocarbon elastomer (FKM)

Bowl Location _____
 (omit) = Right Side (standard)
 1 = Left Side

Supplementary Details _____
 SO263 = Modification of elements for Skydrol or HYJET phosphate ester fluids
 W = "VD..." indicator modified with a brass piston for use with high water based emulsions/solutions (HFA) & (HFC)
 L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)
 SFREE = Element specially designed to minimize electrostatic charge generation
 cRUus = Electrical Indicator with Underwriter's Recognition
 SO376 = Modification of ON and W/HC elements for HFA, HFB, HFC, and HFD flame retardant liquids

Replacement Element Model Code

0060 D 010 BH4HC /

Size _____
 0030, 0060, 0110

Filtration Rating (micron) _____
 3, 5, 10, 20 = BH4HC
 3, 5, 10, 20 = V

Element Media _____
 BH4HC, V

Seals _____
 (omit) = Nitrile rubber (NBR) (standard)
 V = Fluorocarbon elastomer (FKM)

Supplementary Details _____
 SO263 = (same as above)
 SO376 = (same as above)

Clogging Indicator Model Code

VD 8 B . X /

Indicator Prefix _____
 VD = G 1/2 6000 psi

Trip Pressure _____
 8 = 116 psid (8 bar)

Type of Indicator _____
 B = Pop-up indicator (auto reset)
 BM = Pop-up indicator (manual reset)
 C = Electric switch - SPDT
 D = Electric switch and led light - SPDT

Modification Number _____

Supplementary Details _____

Seals _____
 (omit) = Nitrile rubber (NBR) (standard)
 V = Fluorocarbon elastomer (FKM)

Light Voltage (D type indicators only) _____
 L24 = 24V L48 = 48V L110 = 110V L220 = 220V

Thermal Lockout (VM, VD types C, D, J, and J4 only) _____
 T100 = Lockout below 100°F

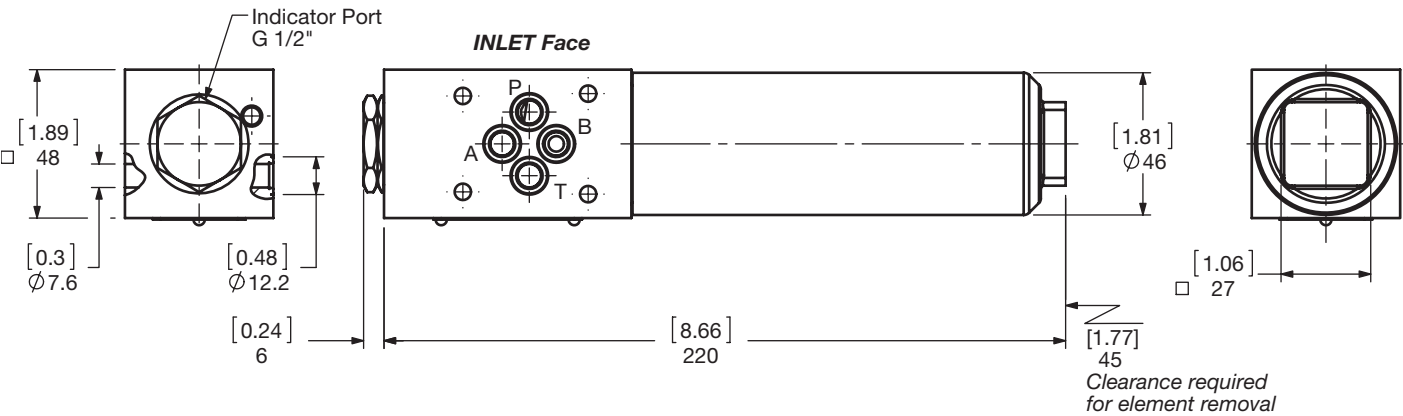
Underwriters Recognition (VM, VD types C, D, J, and J4 only) _____
 cRUus = Electrical Indicator with Underwriter's Recognition
 W = "VD..." indicator modified with a brass piston for use with high water based emulsions/solutions (HFA) & (HFC)
 (For additional details and options, see Clogging Indicators section.)

Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability

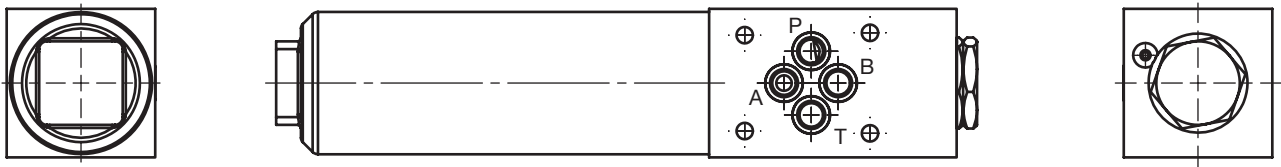
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Dimensions
DF 30 Z

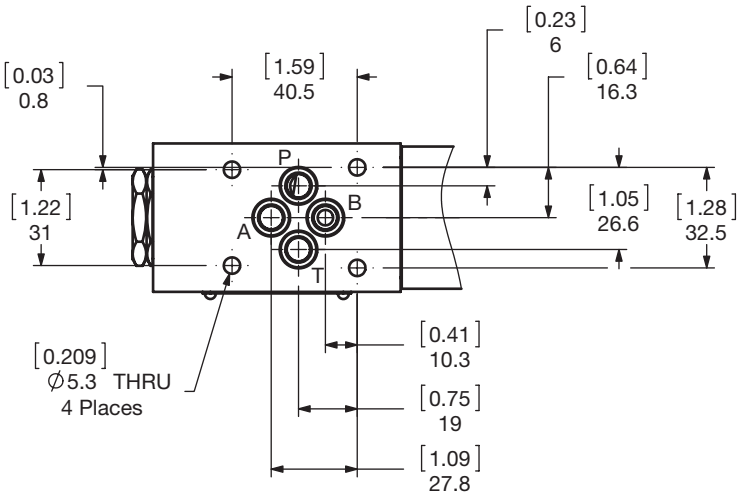
(Right Hand Version) - (optional)



(Left Hand Version) - (optional)



D03 Pattern

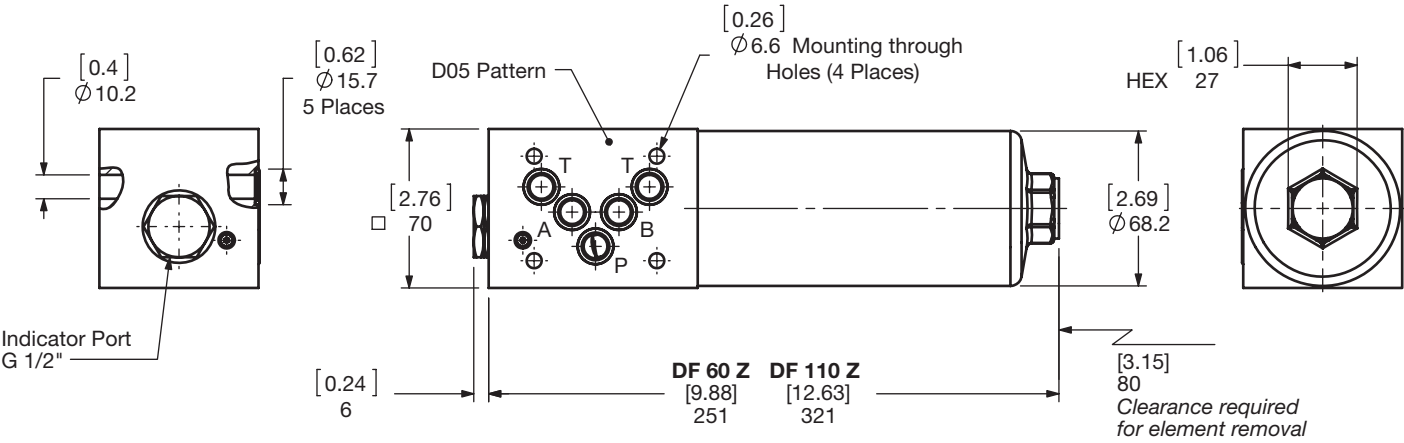


Size	30
Weight (lbs.)	5.3

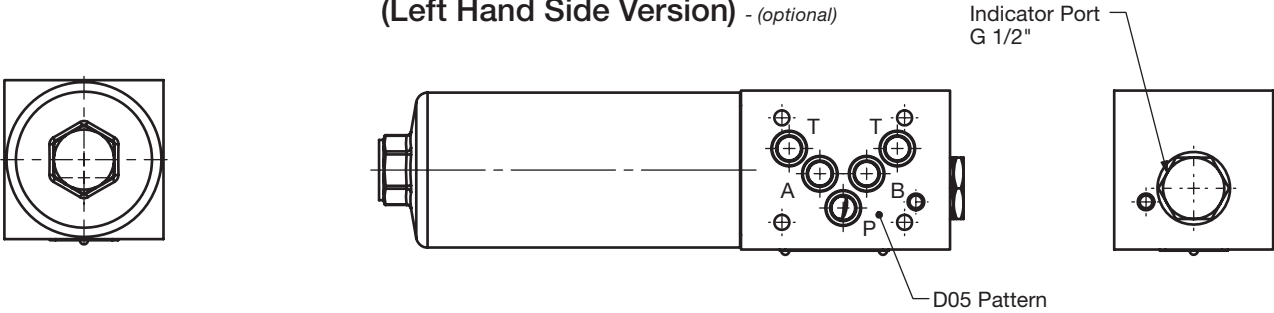
Dimensions shown are [inches] millimeters for general information and overall envelope size only. Weights listed include element.
For complete dimensions please contact HYDAC to request a certified print.

Dimensions
DF 60 / 110 Z

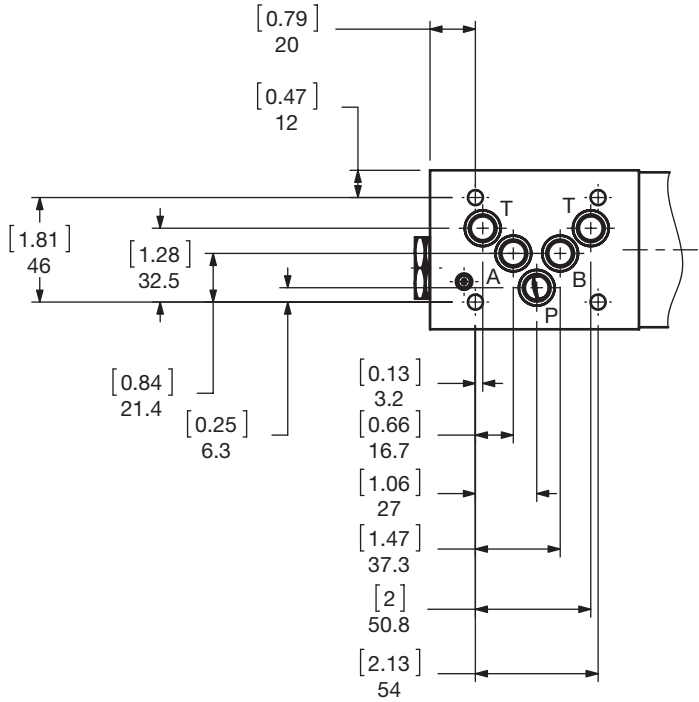
(Right Hand Side Version) - (standard)



(Left Hand Side Version) - (optional)



D05 Pattern



Size	60	110
Weight (lbs.)	13.1	15

Dimensions shown are [inches] millimeters for general information and overall envelope size only. Weights listed include element. For complete dimensions please contact HYDAC to request a certified print.

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Sizing Information

Total pressure loss through the filter is as follows:

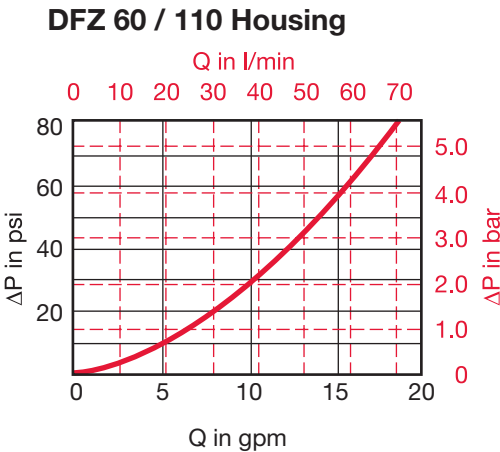
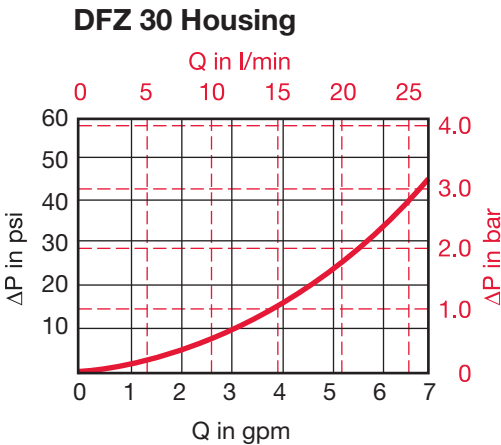
Assembly ΔP = Housing ΔP + Element ΔP

Housing Curve:

Pressure loss through housing is as follows:

Housing ΔP = Housing Curve ΔP x $\frac{\text{Actual Specific Gravity}}{0.86}$

Adjustments must be made for viscosity & specific gravity of the fluid to be used! (see "Sizing HYDAC Filter Assemblies" in Section B - Overview)



Element K Factors

ΔP Elements = Elements (K) Flow Factor x Flow Rate (gpm) x $\frac{\text{Actual Viscosity (SUS)}}{141 \text{ SUS}}$ x $\frac{\text{Actual Specific Gravity}}{0.86}$
(From Tables Below)

Betamicon	...D...BH4HC Elements (High Collapse)			
Size	3 μm	5 μm	10 μm	20 μm
0030 D XXX BH4HC	5.005	2.782	1.992	1.043
0060 D XXX BH4HC	3.216	1.789	0.993	0.670
0110 D XXX BH4HC	1.394	0.818	0.489	0.307

Metal Fiber	...D...V Elements (High Collapse)			
Size	3 μm	5 μm	10 μm	20 μm
0030 D XXX V	1.011	0.740	0.411	0.200
0060 D XXX V	0.877	0.511	0.296	0.183
0110 D XXX V	0.452	0.304	0.182	0.118

All Element K Factors in psi / gpm.

Notes

