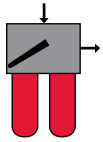


# HIGH PRESSURE FILTERS

## DFDK Series

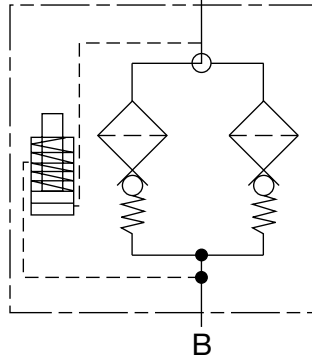
Inline Duplex Filters

4568 psi • up to 90 gpm

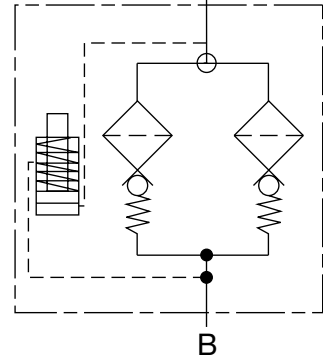


### Hydraulic Symbol

DFDK...QL  
"L" Ball Valve



DFDK...QT  
"T" Ball Valve  
(sizes 330 or larger)



### Features

- The DFDK Filters have a filter head of ductile iron and a screw-in bowl of cold-formed steel.
- The filter housings are designed to withstand pressure surges as well as high static pressure loads.
- The screw-in bowl or lid, allows the filter element to be easily removed for replacement or cleaning.
- A visual (*pop-up*), electrical, electrical/visual (lamp), or other electronic differential types of clogging indicators are available to suit each application.
- DFDK filters are available only with high collapse pressure elements since no bypass is provided.
- DFDK sizes 330 and above can be ordered with a T Ball Valve which can operate in mid position with both elements fully open and online in parallel.

### Technical Specifications

<b>Mounting Method</b>	4 mounting holes	
<b>Port Connection</b>	60/110 SAE-12 160/240/280 SAE-24 330/660/1320 2" SAE-DN 51 Code 62 Flange	
<b>Flow Direction</b>	60 - 280	330 - 1320
Inlet	Top	Top
Outlet	Side	Back
<b>Construction Materials</b>	Head Ductile iron Bowl Steel Housing (1320) Steel Lid/Cap (1320) Ductile iron	
<b>Flow Capacity</b>	60/110 13 gpm (50 lpm) 160/240/280 35 gpm (132 lpm) 330/660/1320 90 gpm (340 lpm)	
<b>Housing Pressure Rating</b>	Max. Allowable Working Pressure 4568 psi (315 bar) Fatigue Pressure Contact HYDAC Office Burst Pressure > 18,270 psi (1260 bar)	
<b>Element Collapse Pressure Rating</b>	BH4HC, V 3045 psid (210 bar)	
<b>Fluid Temperature Range</b>	14°F to 212°F (-10°C to 100°C) Consult HYDAC for applications operating below 14°F (-10°C)	
<b>Fluid Compatibility</b>	Compatible with all hydrocarbon based, synthetic, water glycol, oil/water emulsion, and high water based fluids when the appropriate seals are selected.	
<b>Indicator Trip Pressure</b>	$\Delta P = 116$ psid (8 bar) -10% (standard) Non-bypass Only	

### Applications



Automotive



Industrial



Power Generation



Pulp & Paper



Railways



Steel / Heavy Industry

## Model Code

**DFDK BH/HC 60 Q L C 3 A 1 . 2 -**

**Filter Type** \_\_\_\_\_  
DFDK = Duplex Pressure Filter with Ball Valve Selector

**Element Media** \_\_\_\_\_  
BH/HC = Betamicon® (High Collapse)    V = Metal Fiber

**Size** \_\_\_\_\_  
60, 110, 160, 240, 280, 330, 660, 1320 (larger sizes available - contact HYDAC)

**Pressure Range** \_\_\_\_\_  
K = 2320 psi (160 bar) (sizes 1320 with type code 3 only - larger sizes upon request)  
Q = 4568 psi (315 bar) (sizes 30 - 1320 with type code 1 or 2 only)

**Valve** \_\_\_\_\_  
L = ball change-over valve in "L" configuration (standard)  
T = ball change-over valve in "T" configuration (full simultaneous flow through both sides - sizes 330 and larger)

**Connection** \_\_\_\_\_  
B = 1/2" SAE 8 (size 30 only)                      L = 2" SAE DN 51 Code 62 (sizes 330 - 1320 only)  
C = 3/4" SAE 12 (sizes 60/110 only)            M = 2 1/2" SAE DN 64 Code 62 (sizes 1320 only) - 3.0 only  
F = 1 1/2" SAE 24 (sizes 160 - 280 only)

**Filtration Rating (micron)** \_\_\_\_\_  
3, 5, 10, 20 = BH/HC                              3, 5, 10, 20 = V

**Type of ΔP Clogging Indicator** \_\_\_\_\_  
A, B, BM, C, D (others available upon request)

**Type Code** \_\_\_\_\_  
1 = One Piece Bowl (sizes 60 - 660 only)  
2 = Two Piece Bowl (size 660 to 1320 only)  
3 = Upside down mounting - Element top access (size 1320 only - larger sizes upon request)

**Modification Number** (latest version always supplied) \_\_\_\_\_

**Port Configuration** \_\_\_\_\_  
omit = 2" SAE DN 50 Flange Ports (sizes 330-1320 only)  
12 = SAE Straight thread O-ring Boss Ports (sizes 60-280 only)

**Seals** \_\_\_\_\_  
(omit) = Nitrile rubber (NBR) (standard)    V = Fluorocarbon elastomer (FKM)    EPR = Ethylene Propylene (EPR)

**Supplementary Details** \_\_\_\_\_  
L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)  
W = "VD..." indicator modified with a brass piston for use with high water based emulsions/solutions (HFA) & (HFC)  
SO263 = Modification of elements for Skydrol or HYJET phosphate ester fluids  
T100 = Thermal lockout on indicator at 100°F (C, D, J, and J4 indicators only)  
cRUus = Electrical Indicator with underwriter's recognition  
SFREE = Element specially designed to minimize electrostatic charge generation

## Replacement Element Model Code

**0060 D 003 BH4HC / V**

**Size** \_\_\_\_\_  
0060, 0110, 0160, 0240,  
0280, 0330, 0660, 1320

**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)  
EPR = Ethylene propylene rubber (EPR)

**Supplementary Details** \_\_\_\_\_  
SO263 = (same as above)  
SFREE = (same as above)  
W = Modification of "V" elements for use with oil water emulsions (HFA) and water polymer solutions (HFC)

## 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** \_\_\_\_\_  
A = No indicator, plugged port  
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)  
EPR = Ethylene propylene rubber (EPR)

**Light Voltage (D type indicators only)** \_\_\_\_\_  
L24 = 24V    L110 = 110V

**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)

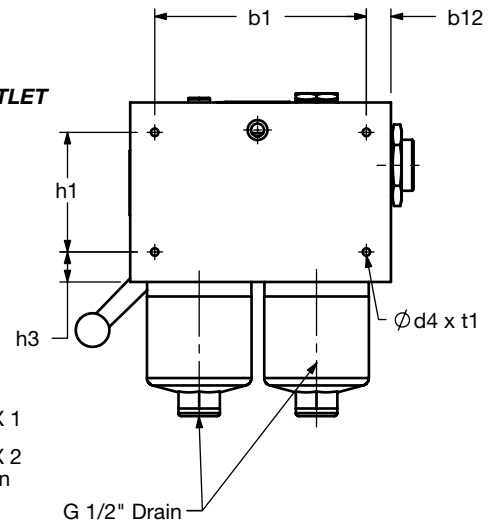
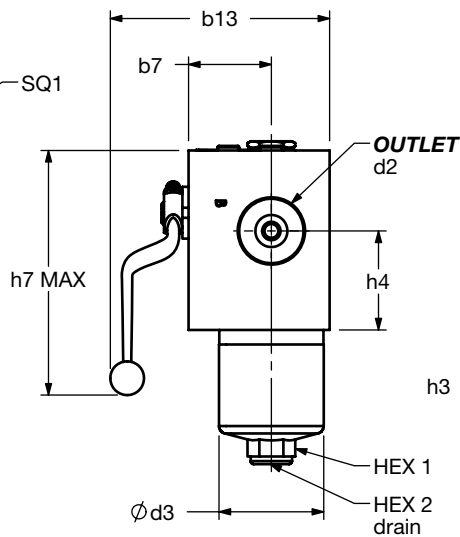
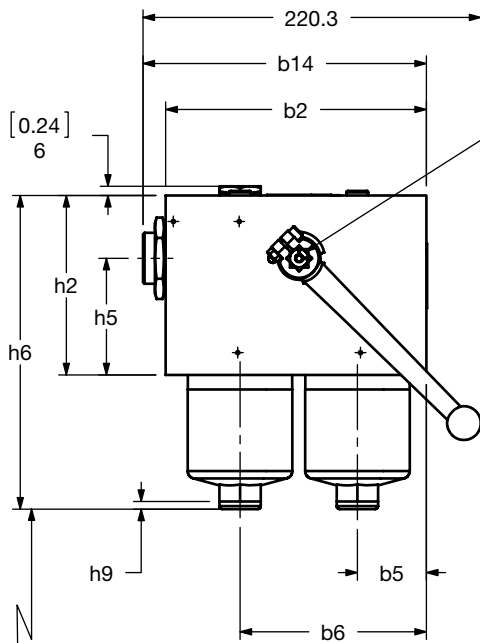
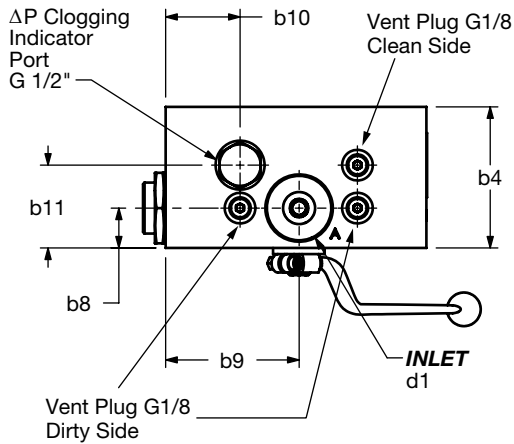
(For additional details and options, see Section H - Clogging Indicators.)

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

# HIGH PRESSURE FILTERS

## Dimensions

DFDK 60 / 110 / 160 / 240 / 280



h8  
Clearance Required  
for Element Removal

Size	60	110	160	240	280
Weight (lbs.)	33.1	37.5	72.8	79.4	99.3

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.

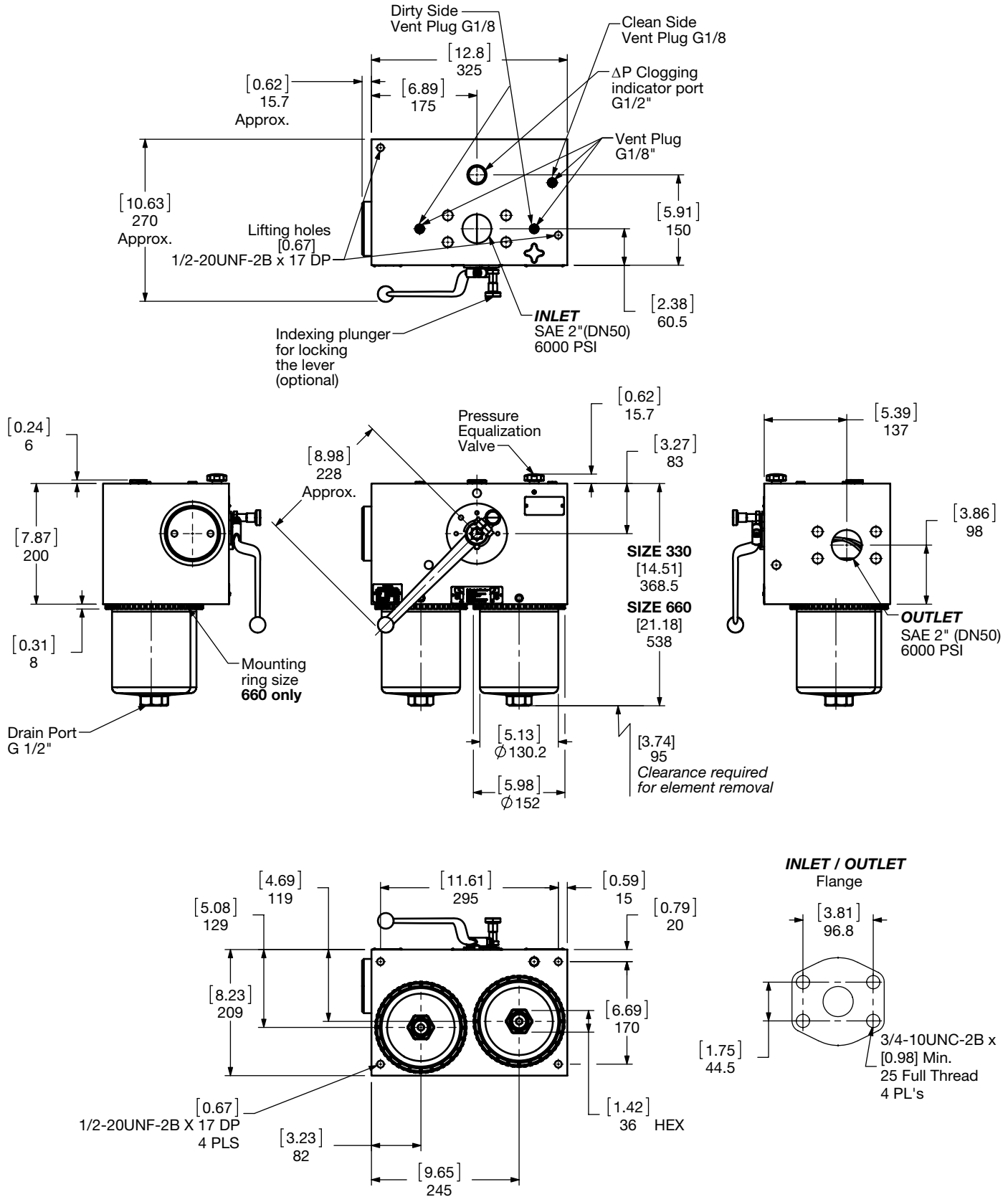
DFDK	60	110	160	240	280
<b>b1</b>	[5.43] 138	[5.43] 138	[7.48] 190	[7.48] 190	[7.48] 190
<b>b2</b>	[6.69] 170	[6.69] 170	[8.27] 210	[8.27] 210	[8.27] 210
<b>b4</b>	[3.62] 92	[3.62] 92	[5.04] 128	[5.04] 128	[5.04] 128
<b>b5</b>	[1.77] 45	[1.77] 45	[2.07] 52.5	[2.07] 52.5	[2.07] 52.5
<b>b6</b>	[4.78] 121.5	[4.78] 121.5	[6.20] 157.5	[6.20] 157.5	[6.20] 157.5
<b>b7</b>	[2.13] 54	[2.13] 54	[2.97] 75.5	[2.97] 75.5	[2.97] 75.5
<b>b8</b>	[1.02] 26	[1.02] 26	[1.40] 35.5	[1.40] 35.5	[1.40] 35.5
<b>b9</b>	[3.43] 87	[3.43] 87	[4.13] 105	[4.13] 105	[4.13] 105
<b>b10</b>	[1.91] 48.5	[1.91] 48.5	[2.07] 52.5	[2.07] 52.5	[2.07] 52.5
<b>b11</b>	[2.13] 54	[2.13] 54	[2.97] 75.5	[2.97] 75.5	[2.97] 75.5
<b>b12</b>	[0.63] 16	[0.63] 16	[0.39] 10	[0.39] 10	[0.39] 10
<b>b13 (≈)</b>	[5.91] 150	[5.91] 150	[7.60] 193	[7.60] 193	[7.60] 193
<b>b14 (≈)</b>	[7.13] 181	[7.13] 181	[8.70] 221	[8.70] 221	[8.70] 221
<b>d1*</b>	1-1/16-12UN-2B SAE-12		1-7/8-12UN-2B SAE-24		
<b>d2*</b>					
<b>d3</b>	[2.69] 68.2	[2.69] 68.2	[3.75] 95.2	[3.75] 95.2	[3.75] 95.2
<b>d4</b>	1/4-28UNF-2B		3/8-24UNF-2B		
<b>h1</b>	[3.07] 78	[3.07] 78	[3.78] 96	[3.78] 96	[3.78] 96
<b>h2</b>	[4.61] 117	[4.61] 117	[6.38] 162	[6.38] 162	[6.38] 162
<b>h3</b>	[0.77] 19.5	[0.77] 19.5	[1.30] 33	[1.30] 33	[1.30] 33
<b>h4</b>	[2.54] 64.5	[2.54] 64.5	[4.17] 106	[4.17] 106	[4.17] 106
<b>h5</b>	[2.99] 76	[2.99] 76	[3.94] 100	[3.94] 100	[3.94] 100
<b>h6</b>	[8.07] 205	[10.89] 276.5	[11.20] 284.5	[13.60] 345.5	[20.69] 525.5
<b>h7 (≈)</b>	[8.07] 205	[8.07] 205	[9.65] 245	[9.65] 245	[9.65] 245
<b>h8</b>	[2.95] 75	[2.95] 75	[3.35] 85	[3.35] 85	[3.35] 85
<b>h9</b>	[0.20] 5	[0.20] 5	[0.20] 5	[0.20] 5	[0.20] 5
<b>t1</b>	[0.28] 7	[0.28] 7	[0.43] 11	[0.43] 11	[0.43] 11
<b>HEX1</b>	[1.06] 27	[1.06] 27	[1.26] 32	[1.26] 32	[1.26] 32
<b>HEX2</b>	[0.39] 10	[0.39] 10	[0.39] 10	[0.39] 10	[0.39] 10
<b>SQ1</b>	[0.47] 12	[0.47] 12	[0.55] 14	[0.55] 14	[0.55] 14

Dimensions shown are [inches] millimeters for general information and overall envelope size only.

# HIGH PRESSURE FILTERS

## Dimensions

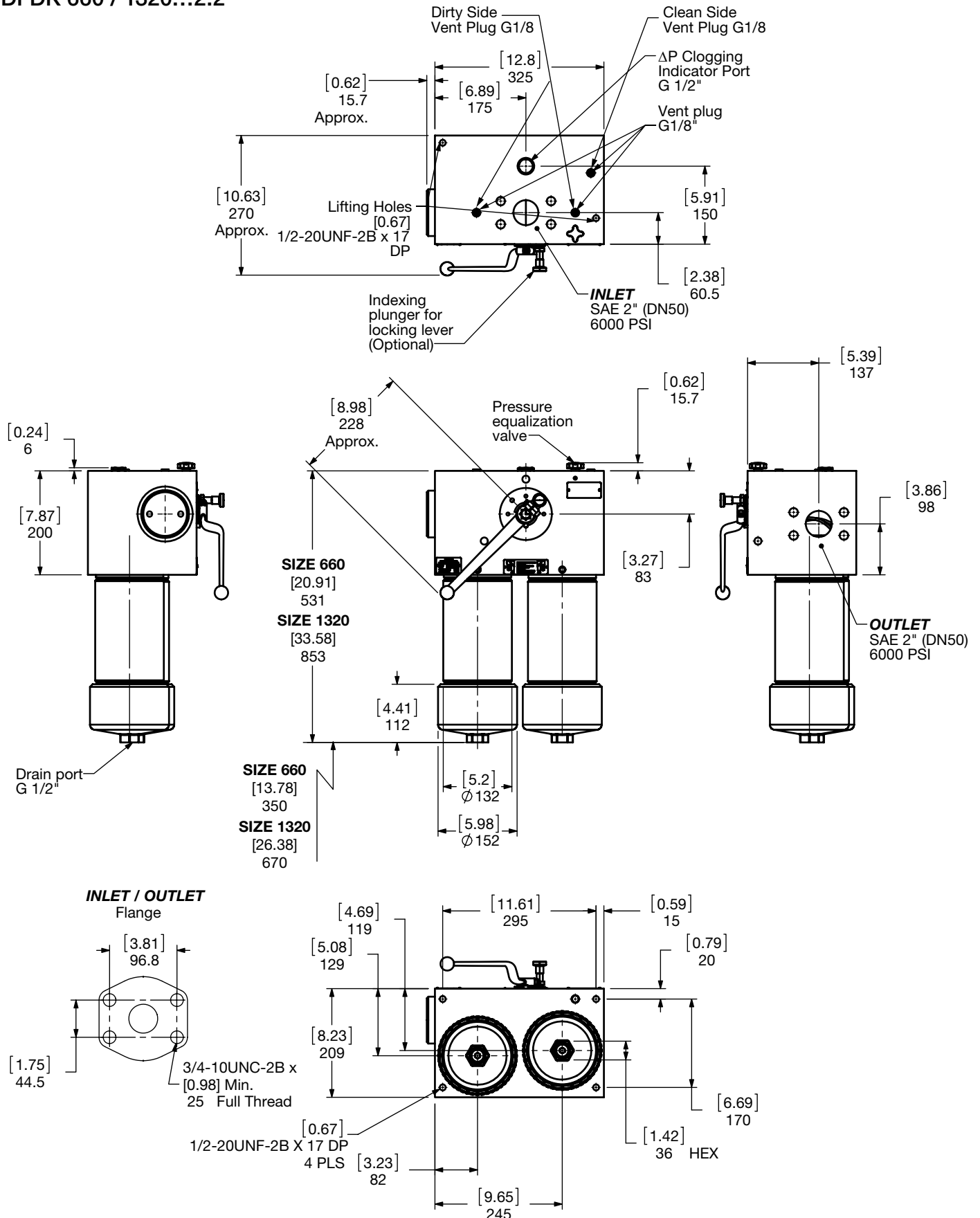
DFDK 330 / 660...1.2



Size	330	660
Weight (lbs.)	213.9	249

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 DFDK 660 / 1320...2.2



Size	660	1320
Weight (lbs.)	262.5	335.1

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.

# HIGH PRESSURE FILTERS

## Sizing Information

Total pressure loss through the filter is as follows:

$$\text{Assembly } \Delta P = \text{Housing } \Delta P + \text{Element } \Delta P$$

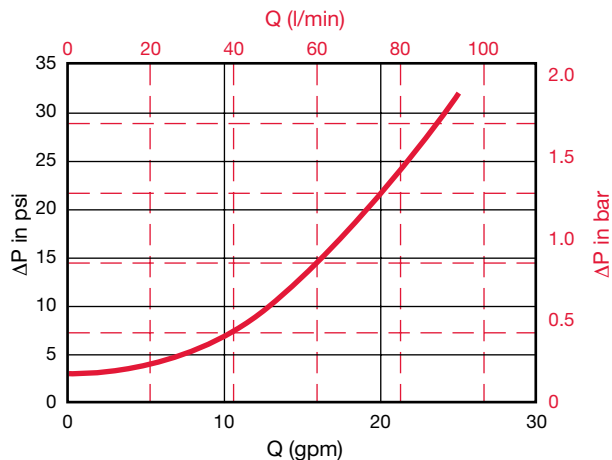
### Housing Curve:

Pressure loss through housing is as follows:

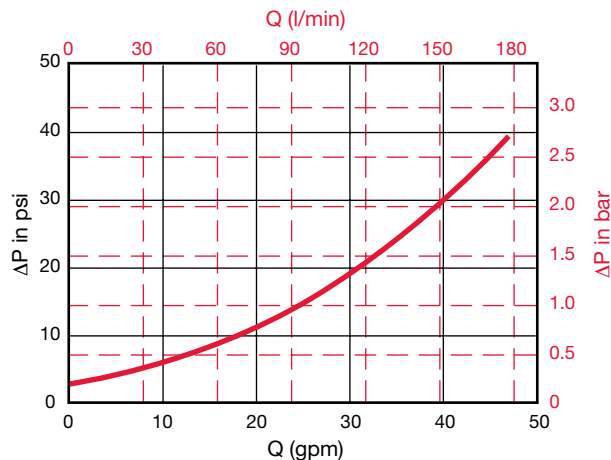
$$\text{Housing } \Delta P = \text{Housing Curve } \Delta P \times \frac{\text{Actual Specific Gravity}}{0.86}$$

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

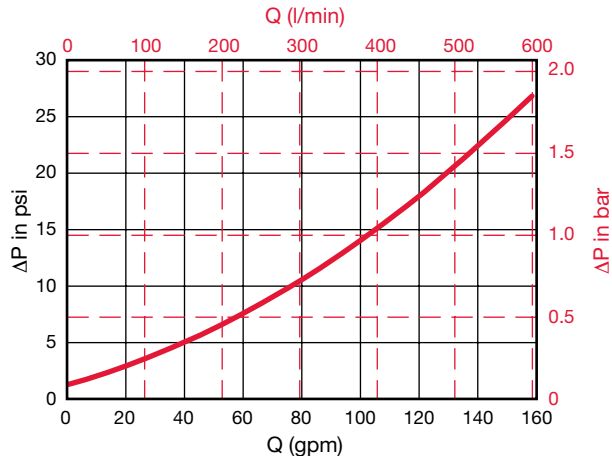
**DFDK 60 / 110 Housing**



**DFDK 160 / 240 / 280 Housing**



**DFDK 330 / 660 / 1320 QLL Housing "L" Ball Valve**



**DFDK 330 / 660 / 1320 QTL Housing "T" Ball Valve**

