



DFS



DVX-DUPL



DVF-64, DVF-65



DVX



DVF SERIES



DV SERIES

CLEAN*Diesel*[®] Vessels,
Housings & Skid Systems
 DVF-64, DVF-65, DVX, DV, DVF, DFS™

aerospace
 climate control
 electromechanical
 filtration
 fluid & gas handling
 hydraulics
 pneumatics
 process control
 sealing & shielding



ENGINEERING YOUR SUCCESS.

DVF-64, DVF-65

Small Housings for Diesel Fuel Filtration

DESCRIPTION

The versatile housings are designed to meet various requirements: a fuel coalescer/water separator, micronics filter or a fuel polisher. Ideal for fuel dispensing applications

The DVF-64 and DVF-65 filter assemblies are designed to meet the toughest hydrocarbon refueling conditions and designed for easy cartridge changeouts. The DVF-64 and DVF-65 assemblies can be used on mobile refuelers or installed in refueling cabinets. The unit can also be used for diesel fuel dispensing pumps, as a primary fuel filter/water separator for large diesel engines, or as bulk fuel handling, fuel transfer, and other higher flow applications.

PRODUCT FEATURES

- Die-cast aluminum head
- Steel filter bowl assembly
- Powder coated components
- Locking ring collar “no V-clamps”
- 1.5” NPT inlet and outlet
- Viton® seals for compatibility to various fuels
- Field proven performance
- Designed to withstand a max. pressure of 150 PSI (10 bar) and a maximum temperature of 240°F (115°C)
- Manual drain valve (½” NPT)
- Manual vent valve
- Sight glass (½” NPT)
- Wide variety of accessories, filters and applications available

APPLICATIONS

DVF-64 & DVF-65 assemblies are specifically designed to meet the filtration requirements of today’s high pressure common-rail diesel injection systems. The unit is used for fuel dispensing pumps or as a primary fuel filter/water separator on large diesel engine applications.

DVF-64 & DVF-65 filter assembly were designed to meet the toughest conditions and offer ease of filter change outs.

The assembly features a “locking ring collar”, which attaches the filter housing to the aluminum die cast filter head with four bolts. The slotted “locking ring collar” allows

maintenance personnel to hand loosen the four collar bolts, rotate, and lower the bowl assembly for filter changeouts.

With a new filter cartridge installed, simply raise the bowl and rotate into position on the locking ring and hand tighten evenly (evenly torquing the 4 closure bolts to 100 lb-in is highly recommended).

The closure hardware consists of stainless steel nuts, bolts, and washers with metal hand knobs for ease of maintenance. No wrenches or other special tools are required, allowing one person to easily change the filter cartridge (no V-band clamps are used).



DVF-64, DVF-65

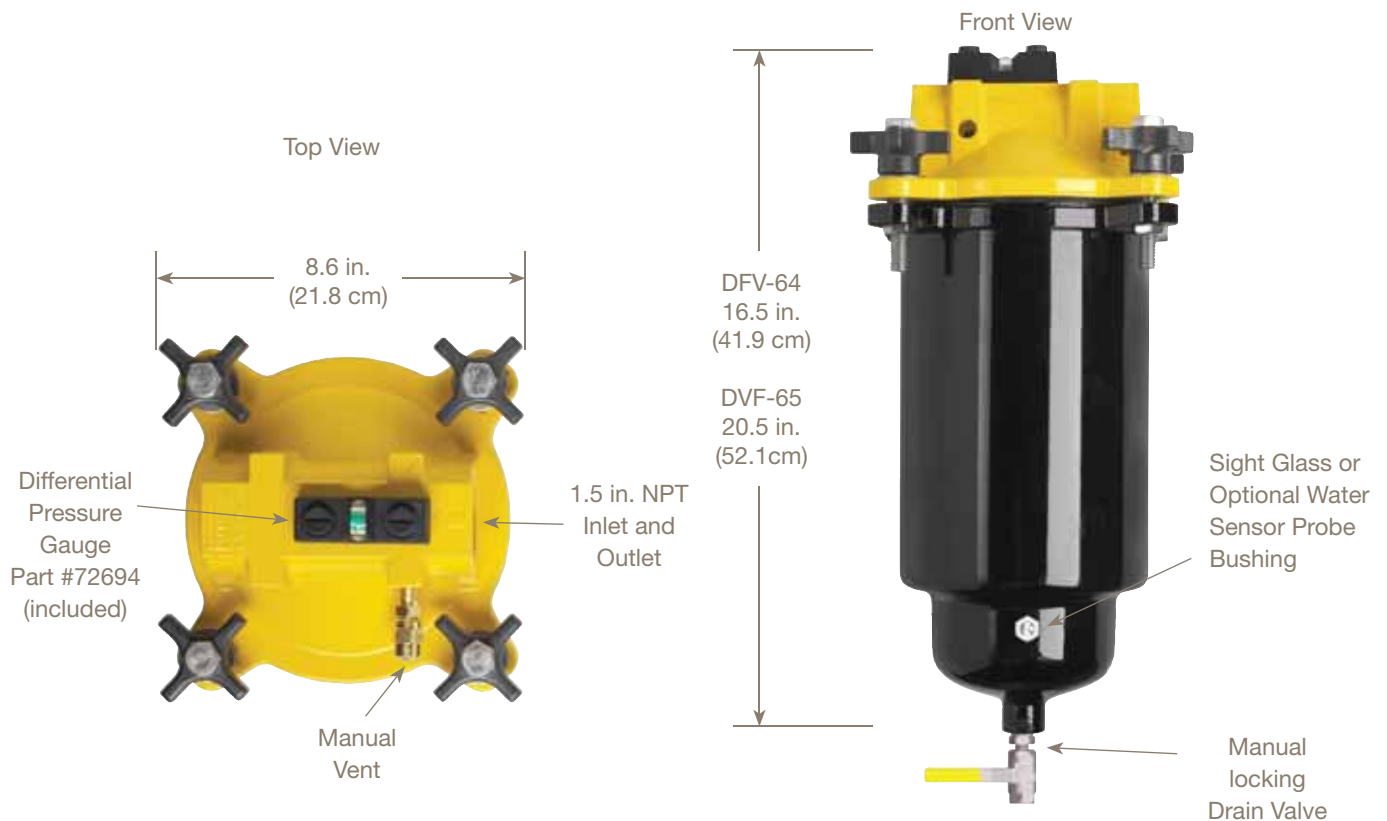
Dimensions shown are for estimating purposes only. For exact dimensional detail, obtain certified copy of vessel drawing.

REPLACEMENT FILTERS



	DVF-64	Micron (µm)	Dimensions L x OD in. (cm)	Max Flow Rate GPM (LPM)	Change ΔP
Coalescer/ Separator	DOS-609D10	10	10 x 6 (25.4 x 15.2)	20 (75.7)	15 PSID
	DOS-609D25	25			
Particulate Filtration	DFO-609PLF10	10	9.65 x 6 (24.5 x 15.2)	35 (132.5)	25 PSID
	DFO-609PLF25	25			
Water Absorber	AD-60910	10	9.65 x 6 (24.5 x 15.2)	35 (132.5)	25 PSID
	AD-60925	25			
	DVF-65				ΔP
Coalescer/ Separator	DOS-612D10	10	14 x 6 (35.6 x 15.2)	25 (95)	15 PSID
	DOS-612D25	25			
Particulate Filtration	DFO-612PLF10	10	13.7 x 6 (34.8 x 15.2)	46 (174.1)	25 PSID
	DFO-612PLF25	25			
Water Absorber	AD-61210	10	13.7 x 6 (34.8 x 15.2)	46 (174.1)	25 PSID
	AD-61225	25			

DIMENSIONS



DVX Housings

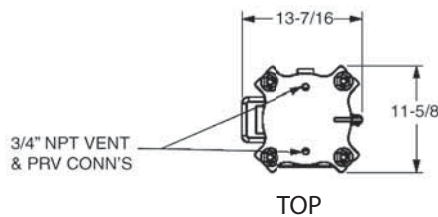
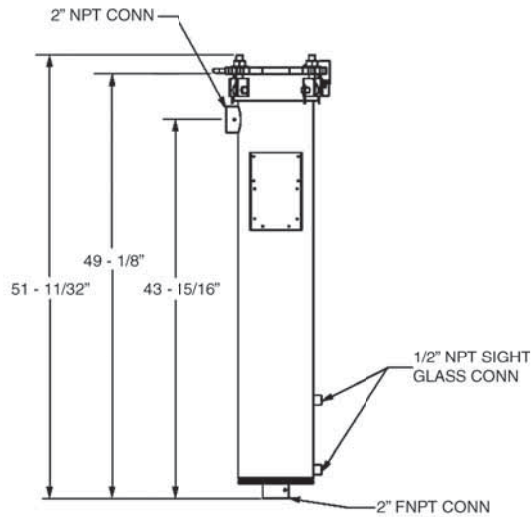
Housings for Diesel Fuel Filtration

For use with AD, DFO, DO-8/DSO-4 Cartridges

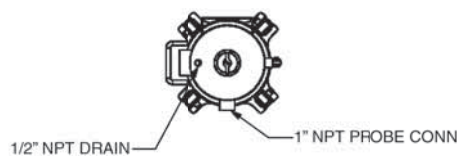


STANDARD FEATURES

- Carbon steel construction
- 250 psi design pressure
- Epoxy powder coated interior and exterior
- 2" NPT female inlet/outlet
- 1/2" NPT drain connection
- 3/4" NPT vent and relief connection
- 1/2" NPT sight glass connections
- 1" NPT water probe connection
- 1/8" NPT differential pressure gauge connections
- Lid gasket: G-2052 (Buna N)
- Leg Assembly
- Differential pressure gauge assembly



TOP



BOTTOM



DVX-2 shown with optional differential pressure gauge, sight glass assembly, and air eliminator

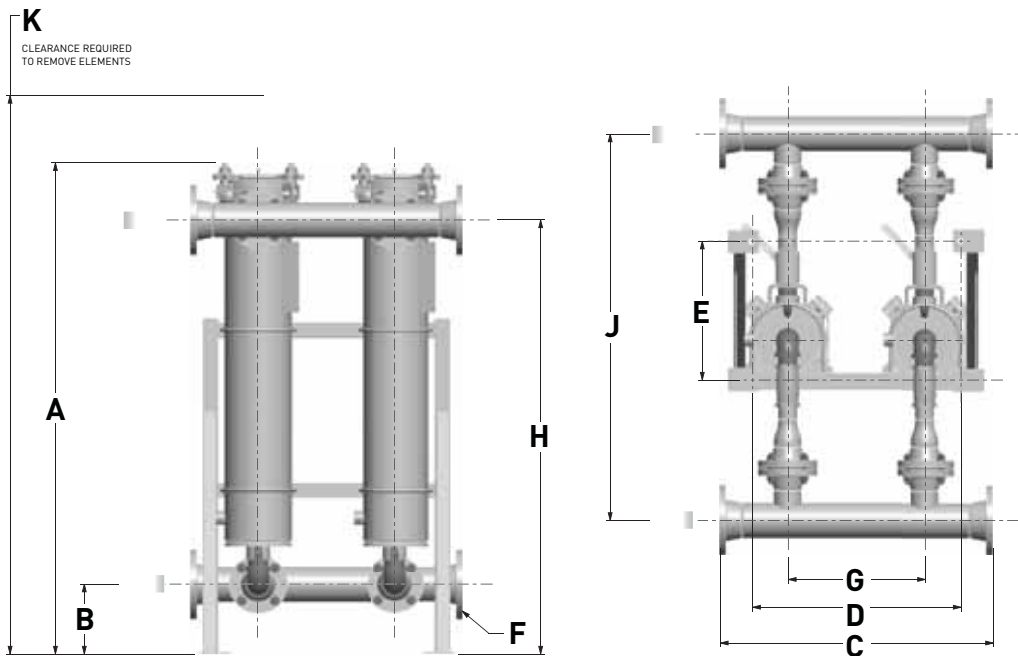
OPTIONAL FEATURES

- Air eliminator
- Drain valve
- Pressure relief valve
- Water probe
- Sight gauge
- ASME Code Stamp
- CE Mark
- Lid Gasket: G-2052V (Viton®)
- Duplex Configuration

Model	Cartridge	Flow Rates gpm (lpm)			Height in. (mm)	Cover Width in. (mm)	Cover Length in. (mm)	Dry Weight lbs. (kgs)
		Min	Max	Target				
DVX-1	DO-815/DSO-415	1 (3.8)	25 (94.6)	15 (56.8)	36 (914)			110 (50)
	DFO-614/AD-614	1 (3.8)	50 (189.3)	25 (94.6)				
DVX-2	DO-830/DSO-430	25 (94.6)	50 (189.3)	40 (151.4)	51 (1295)	13 7/16 (341)	11 5/8 (295)	125 (57)
	DFO-629/AD-629	50 (189.3)	75 (283.9)	75 (283.9)				
DVX-3	DO-844/DSO-444	50 (189.3)	100 (387.5)	75 (283.9)	66 (1676)			150 (68)
	DFO-644/AD-644	75 (283.9)	150 (567.8)	100 (387.5)				

Dimensions shown are for estimating purposes only. For exact dimensional detail, obtain certified copy of vessel drawing.

Duplex Option



Model (Flow Rate, usgpm)	Dimensions in (mm)									
	A	B	C	D	E	F	G	H	J	K
DVX-1 DPL (100)	45 ⁵ / ₈ (1159)	9 ¹ / ₁₆ (230)	35 ³ / ₈ (899)	27 (685)	19 (482)	4 (102)	17 ³ / ₄ (451)	41 ¹ / ₄ (1048)	50 ¹ / ₁₆ (1272)	65 (1651)
DVX-2 DPL (200)	63 ¹¹ / ₁₆ (1618)		11 ⁵ / ₈ (295)	57 (1448)	18 (457)			56 ¹ / ₄ (1428)	50 ¹ / ₁₆ (1272)	93 (2362)
DVX-3 DPL (300)	78 ¹¹ / ₁₆ (1999)		11 ⁵ / ₈ (295)	68 (1727)	20 (508)			71 ¹ / ₄ (1809)	50 ¹ / ₁₆ (1272)	121 (3073)

Dimensions shown are for estimating purposes only. For exact dimensional detail, obtain certified copy of vessel drawing.

DVF Series

Vertical Filter Housings For Use with DFO & AD Cartridges

STANDARD DESIGN FEATURES

- 150 psi welded steel ASME Code construction.
- Choice of micron rating from 0.5 to 75 microns.
- Choice of pleated or depth type media.
- Epoxy coated interior, primed exterior.
- Buna-N O-ring cover seals.

DVF1644 and larger vessels, such as the DVF2044 shown on the right, are provided with swing bolt closure, RF flange connections and fittings for pressure gauge, air eliminator, pressure relief valve and drain valve.

Note: In applications where increased dirt contamination is present, it may be desirable to oversize filtration equipment. Contact Velcon for oversizing recommendations

RECOMMENDED OPTIONAL ACCESSORIES

- Automatic Air Eliminator
- Pressure Relief Valve
- Differential Pressure Gauge
- Drain Valve(s)
- Sampling Probes
- ASME Code Stamp



Model	Flow Rate Range gpm (lpm)		Length in. (mm)	Qty.	Fig. No.	Dimensions in. (mm)			
	Min	Max				A	B	C	D
DVF829	29 (110)	131 (496)	29 (737)	1	2	8 5/8 (219)	3 (76)	39 (991)	41 1/8 (1045)
DVF844	44 (167)	198 (750)	44 (1118)	1	2	8 5/8 (219)	3 (76)	57 1/16 (1449)	59 7/16 (1510)
DVF1629	116 (439)	522 (1976)	29 (737)	4	2	16 (406)	15 (381)	52 13/16 (1341)	55 13/16 (1418)
DVF1644	176 (666)	792 (2998)	44 (1118)	4	2	16 (406)	15 (381)	66 3/4 (1695)	69 3/4 (1772)
DVF2044	264 (999)	1188 (4497)	44 (1118)	6	2	20 (508)	19 1/2 (495)	74 5/8 (1895)	80 7/16 (2043)
DVF2444	352 (1332)	1584 (5996)	44 (1118)	8	1	24 (610)	21 (533)	65 (1651)	72 (1829)
DVF2456	448 (1696)	2016 (7631)	56 (1422)	8	1	24 (610)	21 (533)	77 (1956)	84 (2134)
DVF2844	528 (1999)	2379 (9005)	44 (1118)	12	1	28 (711)	24 (610)	64 3/8 (1635)	79 3/4 (2026)
DVF2856	672 (2544)	3024 (11447)	56 (1422)	12	1	28 (711)	24 (610)	76 3/8 (1940)	91 3/4 (2330)
DVF3644	792 (2998)	3564 (13491)	44 (1118)	18	1	36 5/8 (930)	26 (660)	64 3/8 (1635)	84 (2134)
DVF3656	1008 (3816)	4536 (17171)	56 (1422)	18	1	36 5/8 (930)	26 (660)	76 3/8 (1940)	96 (2438)
DVF4244	1188 (4497)	5346 (20237)	44 (1118)	27	1	42 3/4 (1086)	28 (711)	66 (1676)	87 3/8 (2219)
DVF4256	1512 (5724)	6804 (25756)	56 (1422)	27	1	42 3/4 (1086)	28 (711)	78 (1981)	98 3/8 (2499)
DVF4856	1848 (6995)	8316 (31479)	56 (1422)	33	1	48 (1219)	29 (737)	80 (2032)	108 (2743)

1. For higher viscosity fluids or operating in highly variable temperature conditions, consult your Parker HFFD Representative.
 2. DVF Series are designed to accommodate our standard 6 in. O.D., 3/2 in. I.D. cartridges including Parker Velcon DFO, DI, DSO, and Aquacon® AD.
 3. Threaded base filter cartridges are available, which allow for easier cartridge change out and removal of particulate matter from the deckplates. The threaded base cartridges mount on the optional 6000T adapters.
 4. DVF16 and DVF20 Series vessels have flat covers. DVF16 Series vessels do not have hydraulic lift jacks.

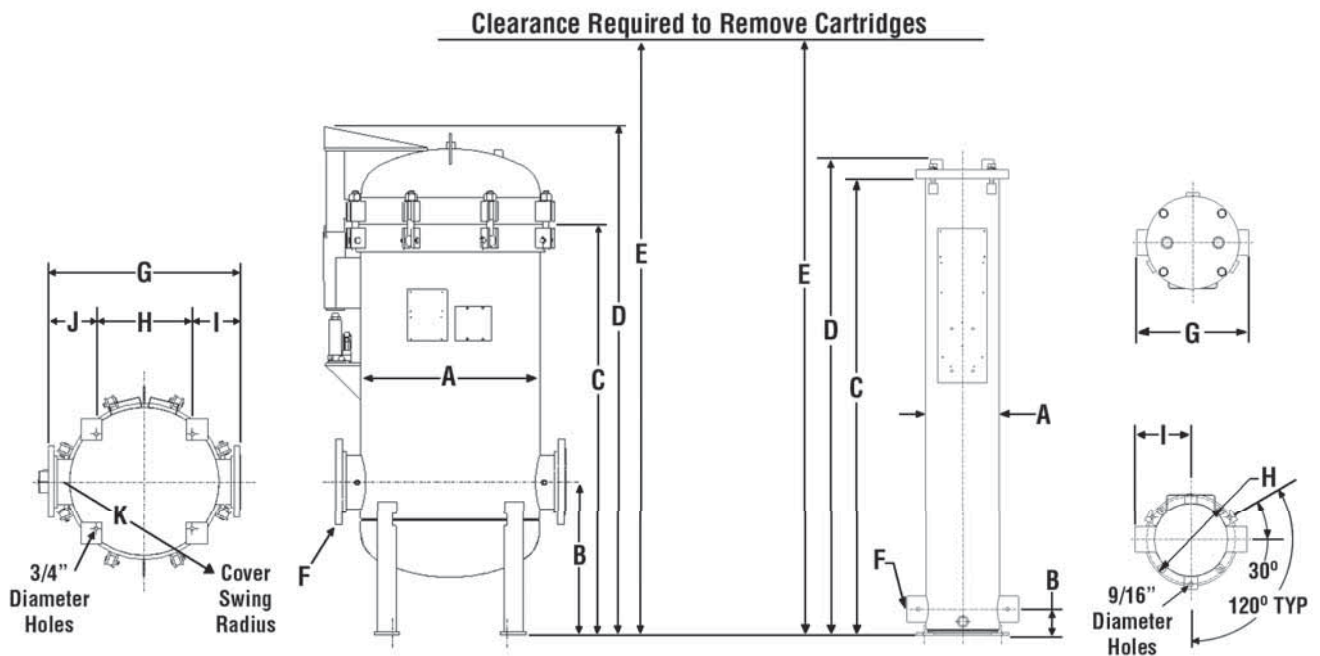


Figure 1

Figure 2

Dimensions in (mm)							Wt. w/skid lbs (kgs)	Volume usgal (ltr)
E	F	G	H	I	J	K		
68 (1727)	2 (51)	13 (330)	10 3/8 (264)	6 1/2 (165)			265 (120)	8 (30)
101 (2565)	2 (51)	13 (330)	10 3/8 (264)	6 1/2 (165)			305 (138)	11 (42)
82 (2083)	4 (102)	24 1/4 (616)	9 (229)	7 5/8 (194)	7 5/8 (194)	18 7/16 (468)	560 (254)	35 (132)
110 (2794)	4 (102)	24 1/4 (616)	9 (229)	7 5/8 (194)	7 5/8 (194)	18 7/16 (468)	620 (281)	50 (189)
118 (2997)	6 (152)	28 (711)	13 (330)	7 1/2 (191)	7 1/2 (191)	26 (660)	1100 (499)	90 (341)
112 (2845)	6 (152)	32 (813)	15 (381)	8 (203)	8 (203)	32 (813)	1300 (590)	120 (454)
122 (3099)	6 (152)	32 (813)	15 (381)	8 (203)	8 (203)	32 (813)	1350 (612)	150 (568)
108 (2743)	8 (203)	36 (914)	18 (457)	9 (229)	9 (229)	35 (889)	1600 (726)	165 (625)
120 (3048)	8 (203)	36 (914)	18 (457)	9 (229)	9 (229)	35 (889)	1750 (794)	200 (757)
109 (2769)	10 (254)	48 (1219)	23 (584)	12 1/2 (318)	12 1/2 (318)	44 (1118)	2250 (1021)	290 (1098)
121 (3073)	10 (254)	48 (1219)	23 (584)	12 1/2 (318)	12 1/2 (318)	44 (1118)	2400 (1089)	350 (1325)
110 (2794)	12 (305)	54 (1372)	28 (711)	13 (330)	13 (330)	52 1/4 (1327)	3800 (1724)	400 (1514)
122 (3099)	12 (305)	54 (1372)	28 (711)	13 (330)	13 (330)	52 1/4 (1327)	4000 (1814)	475 (1798)
165 (4191)	14 (356)	66 (1676)	36 1/2 (927)	14 3/4 (375)	14 3/4 (375)	65 (1651)	4400 (1996)	630 (2385)

DV Series

Vertical Filter-Coalescer/Separator Housings For Use with DI/DSO Cartridges

STANDARD DESIGN FEATURES

- Pleated paper separator cartridges
- 150 psi ASME Code construction
- RF flanged connections
- Swing bolt closure with O-ring seal
- Epoxy-coated interior, primed exterior
- Threaded base coalescer
- Carbon Steel Construct

OPTIONAL ACCESSORIES

- Automatic air vent (R)
- Water slug valve (R)
- Sump heater
- Pressure relief valve (R)
- Water interface control (R)
- Sump sight glass
- Differential pressure gauge (R)
- Sampling probes (R)
- Manual drain valve (R)

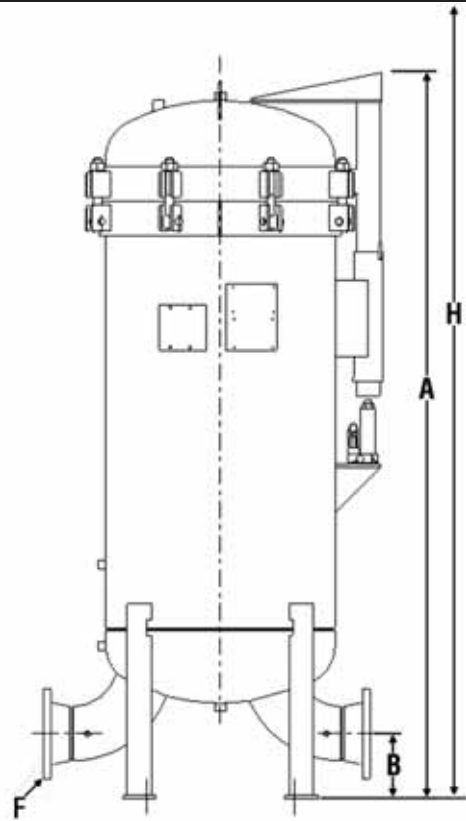
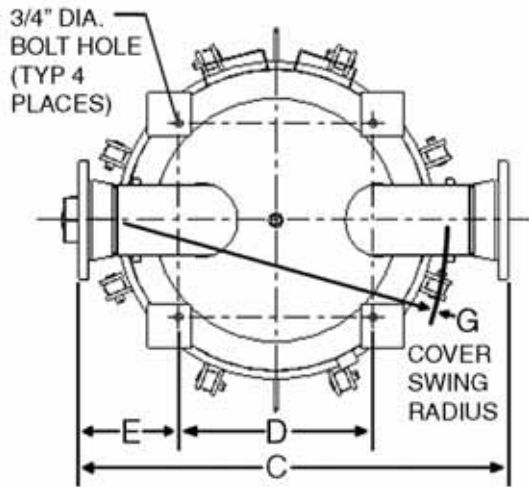
The accessory items marked with an (R) are recommended for safe, effective operation of all installations.



Model Number	Flow Rate gpm (lpm)		Cartridges		Dimensions in (mm)	
	Min - Max	Target	DI/DSO	Qty. (C/S)	A	B
DV2222	90 - 220 (335 - 835)	130 (500)	DI-622 DSO-622	4/3	62 (1575)	8 (203)
DV2233	135 - 330 (500 - 1250)	200 (750)	DI-633 DSO-629	4/3	69 (1753)	8 (203)
DV2833	200 - 495 (750 - 1875)	1125 300 ()	DI-633 DSO-629	6/5	83 (2108)	8 (203)
DV2844	265 - 660 (1000 - 2500)	400 (1500)	DI-644 DSO-633	6/5	89 (2261)	8 (203)
DV3638	420 - 1045 (1585 - 3955)	630 (2380)	DI-638 DSO-629	11/9	91 ⁹ / ₁₆ (2326)	8 (203)
DV3644	485 - 1210 (1835 - 4580)	730 (2750)	DI-644 DSO-633	11/9	96 ³ / ₈ (2448)	9 (229)
DV3656	620 - 1540 (2335 - 5830)	930 (3500)	DI-656 DSO-644	11/9	109 ¹¹ / ₁₆ (2786)	9 (229)
DV4244	660 - 1650 (2500 - 6245)	995 (3750)	DI-644 DSO-633	15/12	103 ³ / ₈ (2626)	9 (229)
DV4256	840 - 2100 (3180 - 7950)	1260 (4770)	DI-656 DSO-644	15/12	115 ³ / ₈ (2931)	9 (229)

*Dimensions shown are for estimating purposes only. For exact dimensional detail, obtain certified copy of vessel drawing.
Flow rates provided are for illustrative purposes. Actual flow rates may vary based on field conditions.

Clearance Required to Remove Cartridges



Dimensions in (mm)						Wt. w/ skid lbs (kgs)	Volume usgal (ltr)
C	D	E	F	G	H		
27 1/8 (689)	15 1/2 (394)	6 1/4 (159)	4 (102)	30 (762)	86 (2184)	1110 (503)	64 (242)
27 1/8 (689)	15 1/2 (394)	6 1/4 (159)	4 (102)	30 (762)	102 (2591)	1130 (513)	72 (273)
40 (1016)	18 (457)	12 5/8 (321)	6 (152)	35 (889)	118 (2997)	1650 (748)	170 (644)
40 (1016)	18 (457)	12 5/8 (321)	6 (152)	35 (889)	133 (3378)	1690 (767)	185 (700)
63 1/4 (1607)	23 (584)	20 1/8 (511)	6 (152)	44 (1118)	129 (3277)	2080 (943)	280 (1060)
52 1/8 (1324)	23 (584)	14 5/8 (371)	8 (203)	44 (1118)	140 (3556)	2150 (975)	305 (1155)
52 1/8 (1324)	23 (584)	14 5/8 (371)	8 (203)	44 (1118)	160 (4064)	2300 (1043)	355 (1344)
55 5/16 (1405)	28 (711)	15 (381)	8 (203)	50 (1270)	150 (3810)	3350 (1520)	450 (1703)
55 5/16 (1405)	28 (711)	15 (381)	8 (203)	50 (1270)	165 (4191)	3500 (1588)	520 (1968)

Diesel Filtration Skid

DFS™ Series - System for Removal of Particulates and Protection from Water Contaminants

Providing high quality fuel to the modern high pressure common rail fuel injection systems is imperative to avoid costly downtime and engine repair.

The Parker Velcon Diesel Filtration Skid (DFS) plays an important role in a comprehensive fuel contaminant control program as it provides fuel conditioning to assure the consistent removal of abrasive particles and damaging water.

The DFS offers a complete fuel filtration solutions which incorporates both particulate and water contaminant removal technologies mounted on a skid base that can be quickly installed and put into operation.

STANDARD FEATURES

- ASME code epoxy painted carbon steel vessels
- Swing bolt housing closures
- Independent differential pressure gauges
- Air eliminators
- Walkway
- Inlet/Outlet sample ports
- Hydraulic or mechanical housing lid lifting
- Isolation valves
- Pressure relief valve
- Threaded base coalescer
 - One package
 - Quick installation
 - Maximize Second Stage Water Removal

Key components of the DFS includes filter (DVF) and coalescing (DV) housings which have proven to withstand years of service in the most challenging environments. Parker Velcon DFO particulate filters and DI and DSO coalescer and separator cartridges are used for conditioning contaminated fuels to meet the most stringent ISO 4406 and ASTM D975 standards for emulsified and free water as well as abrasive particulate. All filtration cartridges are available with threaded base endcap option for quick filter removal and ease of installation.

OPTIONAL FEATURES

- Support hand rail
- Electronic water sensing
- Automatic vessel drain
- Water sight glass
- Fuel Condition Monitoring



DFS3
(with Optional Support
Hand Rail)



Parker Velcon Bulk Diesel Fuel Filtration

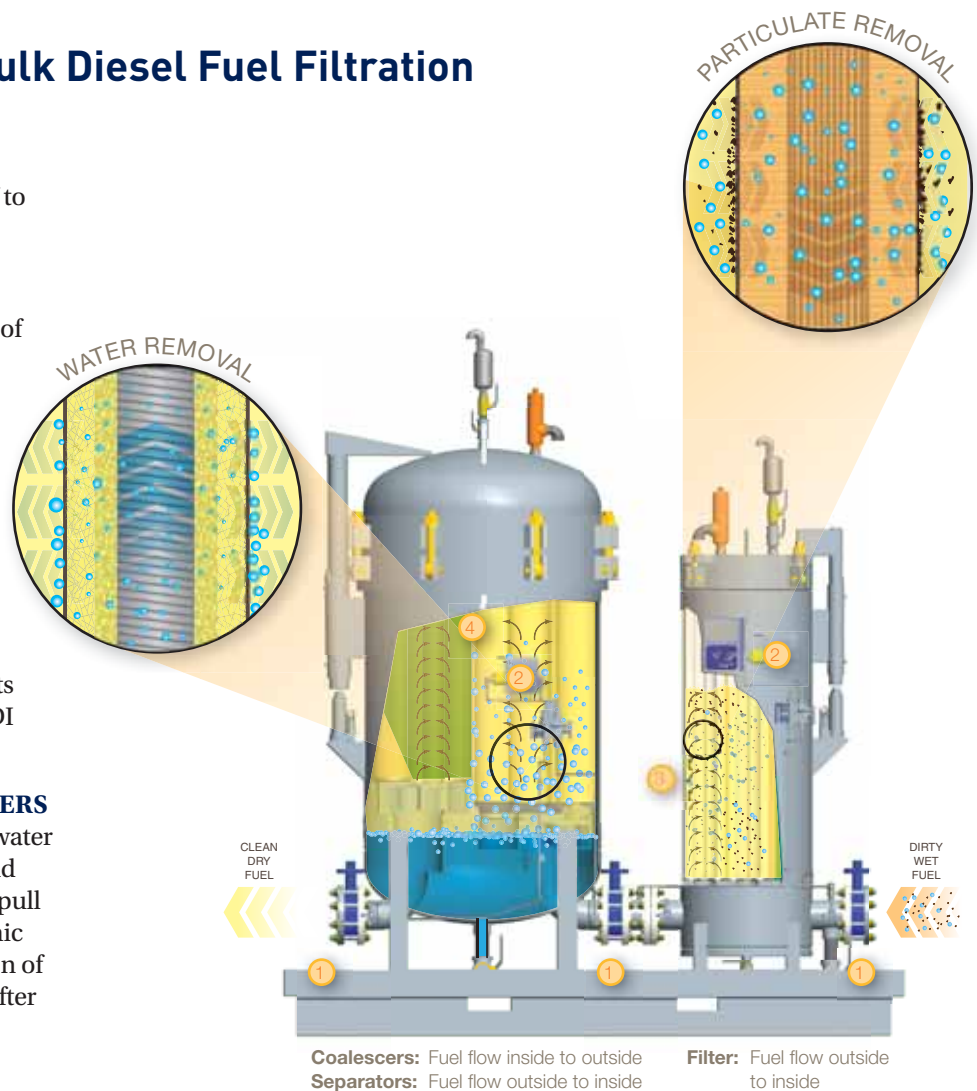
1 GATE VALVES
Allows flow shut-off to service vessels.

2 DP GAUGES
Provides indication of pressure difference between inlet and outlet of vessel so as to determine if cartridges needs to be changed out.

3 DFO PARTICULATE MICROFILTERS

Multiple cartridges work to remove solid contaminants from fuel and extend life of DI coalescers.

4 DI/DSO COALESCERS
Works to draw free water droplets together and allowing for gravity to pull the water from fuel. Hydrophobic materials allow for prevention of water passing downstream after coalescing.



DFS PART NUMBER & DIMENSIONS

Parker HFFD recommends use of threaded base endcaps for ease of installation and to minimize components.

Series	Flow Rate*		Filter Housing	Filters		Coalescer Housing	Coalescers		Separators		Approx. Footprint in (mm)	Approx. DryWeight (w/o Elements, Tie Rods, Spider Plate) lb (kg)	I/O Flange in (mm)
	Range min - max gpm (lpm)	Target gpm (lpm)		Qty.	Part Number		Qty.	Part Number	Qty.	Part Number			
DFS1	135 - 330 (500 - 1250)	200 (750)	DVF 1629	4	DFO-629	DV 2233	4	DI-633	3	DSO-629	70 x 60 (1778 x 1524)	1985 (900)	4 (102)
DFS2	230 - 570 (865 - 2160)	345 (1300)	DVF 1644	4	DFO-644	DV 2838	6	DI-638	5	DSO-629	80 x 60 (2032 x 1524)	2250 (1021)	4 (102)
DFS3	420 - 1045 (1585 - 3955)	630 (2380)	DVF 2044	6	DFO-644	DV 3638	11	DI-638	9	DSO-629	110 x 80 (2794 x 2032)	3400 (1542)	6 (152)

Dimensions shown are for estimating purposes only. For exact dimensional detail, obtain certified copy of drawings.
*Flow rates provided are for illustrative purposes. Actual flow rates may vary based on field conditions.

System Sizing

SizeRight™

Parker HFFD's extensive bulk fuel handling experience and our state-of-the-art fuel testing laboratory have quantitatively proven that increased system/housing will

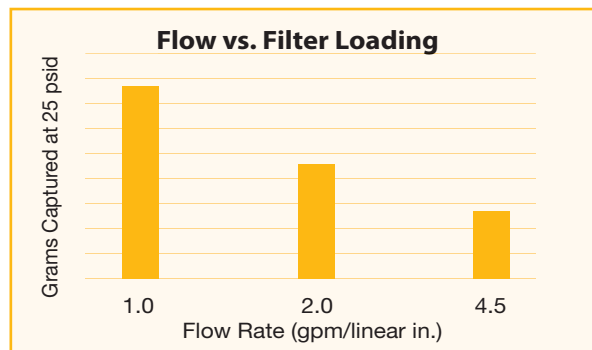
allow for lower flow rates per filter while dramatically extending the service life of the elements. Systems "sized for life" commonly see a full repayment of the additional system cost through operating savings. Using Parker HFFD's proprietary calculator in **SizeRight**, for system sizing, we can help you select the right housing and elements for your application based on your ISO

4406 cleanliness requirements and specified change-out interval. This invaluable tool can also help us in estimating your annual operating cost in maintaining your filtration system.

For additional information on this powerful tool, please contact Parker HFFD or our local representative to have your filtration system **SizeRight** for your specific needs.

ISO Code vs Mass	
ISO Code	lbs/yr (kg/yr)
24/22/20	1609 (730)
22/20/18	564 (256)
17/15/13	20 (9.1)
12/9/7	4 (1.8)

Notes: Values are based on usage of +3.5M Liter of fuel per year. Field results may vary.



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