



Features and Benefits

- New fuel / water separation media technology in a three-phase element construction for high efficiency, single-pass removal of free-water in Ultra-low Sulfur Diesel (ULSD) and Biodiesel fuels
- Prior generation coalescing products no longer provide high-efficiency separation in ULSD and Biofuels
- For use in single-pass fuel dispensing or multi-pass reservoir clean-up and continuous maintenance
- Can be upstream (suction side) or downstream (pressure side) of transfer pumps
- Helps protect expensive, vital engine components against failures caused by water contaminated fuel
- Manual water drains and up and downstream test points

70 gpm
265 L/min

100 psi
7bar
Standard

45 psi

3 bar
Sight Gauge
Option

Model no. of filter in photograph is: BDS39QPMLZ3VVM



INDUSTRIAL



POWER GENERATION



BULK OIL FILTRATION



MINING TECHNOLOGY

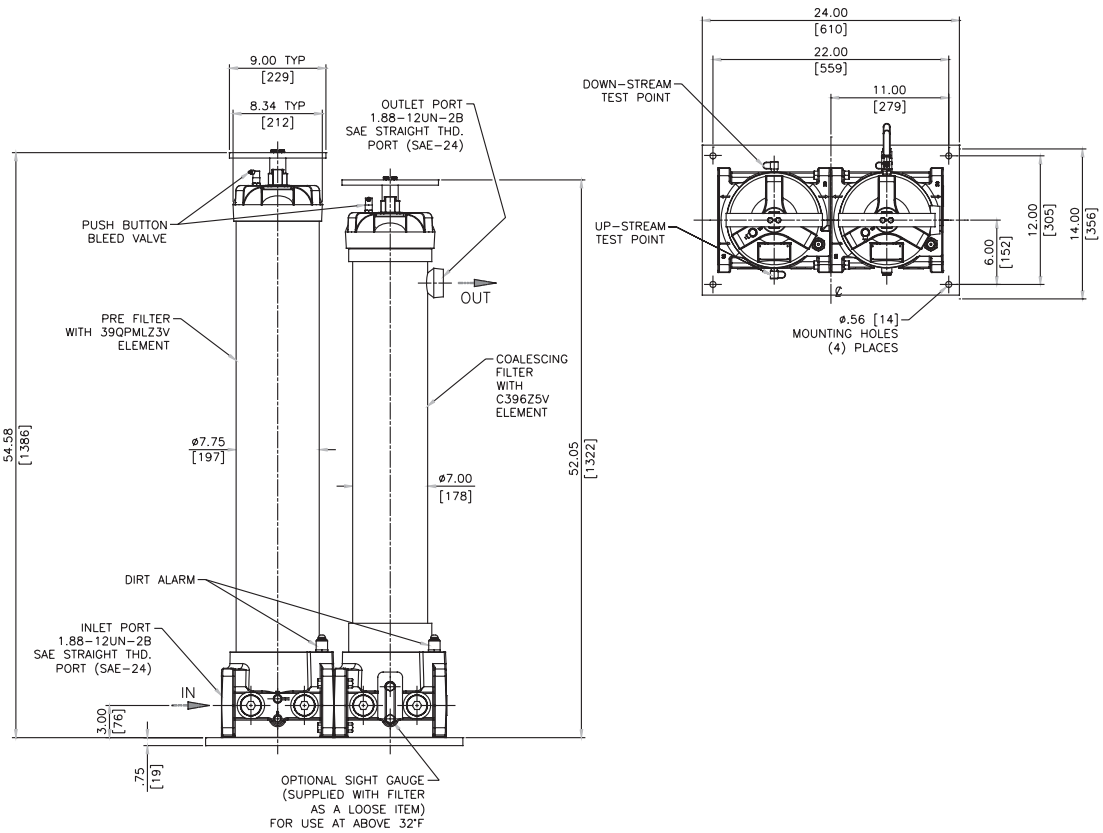


AGRICULTURE

Applications

Flow Rating:	Up to 70 gpm (265 L/min) for ULSD15
Inlet/Outlet Connection:	SAE 24
Drain Connection Upper:	1/4" NPT Ball Valve
Drain Connection Lower:	1/4" NPT Ball Valve
Max. Operating Pressure:	100 psi (7 bar); 45 psi (3 bar) with water sight gauge
Min. Yield Pressure:	400 PSI (27.6 bar) without sight gauge Contact factory for use with sight gauge
Rated Fatigue Pressure:	Contact Factory
Temperature range:	-20°F to 165°F (-29°C to 74°C) Standard 32°F to 165°F (0°C to 74°C) with included, optional sight gauge
Bypass Setting:	Particulate: 20 psi (1.37 bar) Coalescing: 15 psi (1 bar)
Porting Base:	Anodized Aluminum
Element Case:	Plated Steel
Cap:	Plated Steel
Weight:	441 Lbs. (200 kg)
Element Change Clearance:	33.8" (858 mm)

Filter Housing Specifications



Metric dimensions in ().

Installation instructions included on element.

**Element
Particulate
Performance
Information**

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x (c) \geq 200$	$\beta_x (c) \geq 1000$
39QFMLZ3	<1.0	<1.0	<2.0	<4.0	4.8

**Element Water
Coalescing
Performance
Information**

Element	Pressure Side Coalescing		Suction Side Coalescing	
	Max Flow	Single Pass Efficiency	Max Flow	Single Pass Efficiency
C396	70 GPM	> 99.5%	CF	> 99.5%

Coalescing Element

Flow Direction: Inside Out
Element Nominal Dimensions: 6.4" (163 mm) O.D. x 39.4" (1001 mm) long

Particulate Element

Flow Direction: Outside In
Element Nominal Dimensions: 6" (150 mm) O.D. x 37.80" (960 mm) long

Note:
Based on ULSD15 with
27 Bynes/CM surface
tension and 0.25%
(2500 PPM) water injection

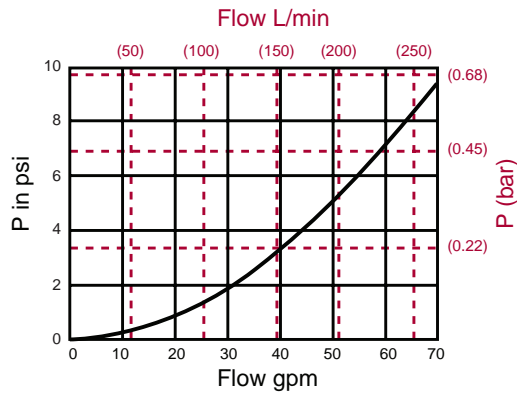
Fuel Oils

- ULSD15 and similar petroleum diesels
- Biodiesel and blends
- Synthetic diesel and blends

Fluid Compatibility

$$\Delta P_{\text{housing}} + \Delta P_{\text{OFS}}$$

BDS $\Delta P_{\text{housing}}$ for fluids with sp gr = 0.86



sp gr = specific gravity

$$\Delta P_{\text{element}}$$

$$\Delta P_{\text{element}} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor}$$

El. ΔP factors @ 37 SUS (3 cSt).

C396 = .17
 39QPMLZ1 = .01
 39QPMLZ3 = .01

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor: Divide viscosity by 37 SUS (3 cSt).

Pressure Drop Information

Based on Flow Rate and Viscosity

Notes

$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$$

Exercise:

Determine ΔP at 70 gpm (265 L/min) for BDS39QPMLZ3VVM

Solution:

$$\Delta P_{\text{housing}} = 3.0 \text{ psi [.21 bar]}$$

$$\Delta P_{\text{element (C396)}} = 70 \times .17 = 11.9 \text{ psi}$$

$$\Delta P_{\text{element (39QPML)}} = 70 \times .01 = 0.7 \text{ psi}$$

$$\Delta P_{\text{total}} = 3.0 + 11.9 + 0.7 = 15.6 \text{ psi}$$

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder BDS:

BOX 1	BOX 2	BOX 3	BOX 4
BDS			

Example: Note: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	
BDS	39QPMLZ3	V	VM	= BDS39QPMLZ3VVM

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Particulate Filter Micron Rating	Housing Seal Material	Dirt Alarm® Options
BDS	39QPMLZ1 = 1µm 39QPMLZ3 = 3µm	V = Viton®	VM = Visual Pop-Up w/ Manual Reset

*Note: Included, optional sight gauge (for use only > 32°F)

NOTES:

Box 4. Viton® is a registered trademark of DuPont Dow Elastomers.