

Bulk Fuel Coalescing Filter

QCF



Model no. of filter in photograph is: QCFCSVS24VM

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
- 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
- Can separate emulsified or finely dispersed water from fuel
- For use in single-pass fuel dispensing or multi-pass reservoir clean-up and continuous maintenance

Application Introduction: The Reason for Better Bulk Fuel Filtration

Advances in diesel engine fuel injection systems have been instrumental in complying with future emission standards. Higher pressure fuel produces a finer mist of fuel, which burns cleaner. Common rail injection systems run at higher pressures and allow more injections per combustion cycle improving fuel economy, better engine performance and lower noise. Higher pressure fuel injector systems have tighter tolerances and require complete the highest efficiency, single-pass removal to minimize wear related failures.

70 gpm
265 L/min

100 psi
7bar
Standard

45 psi
3 bar
Sight Gauge
Option



INDUSTRIAL



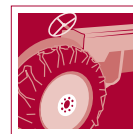
POWER
GENERATION



BULK OIL
FILTRATION



MINING
TECHNOLOGY

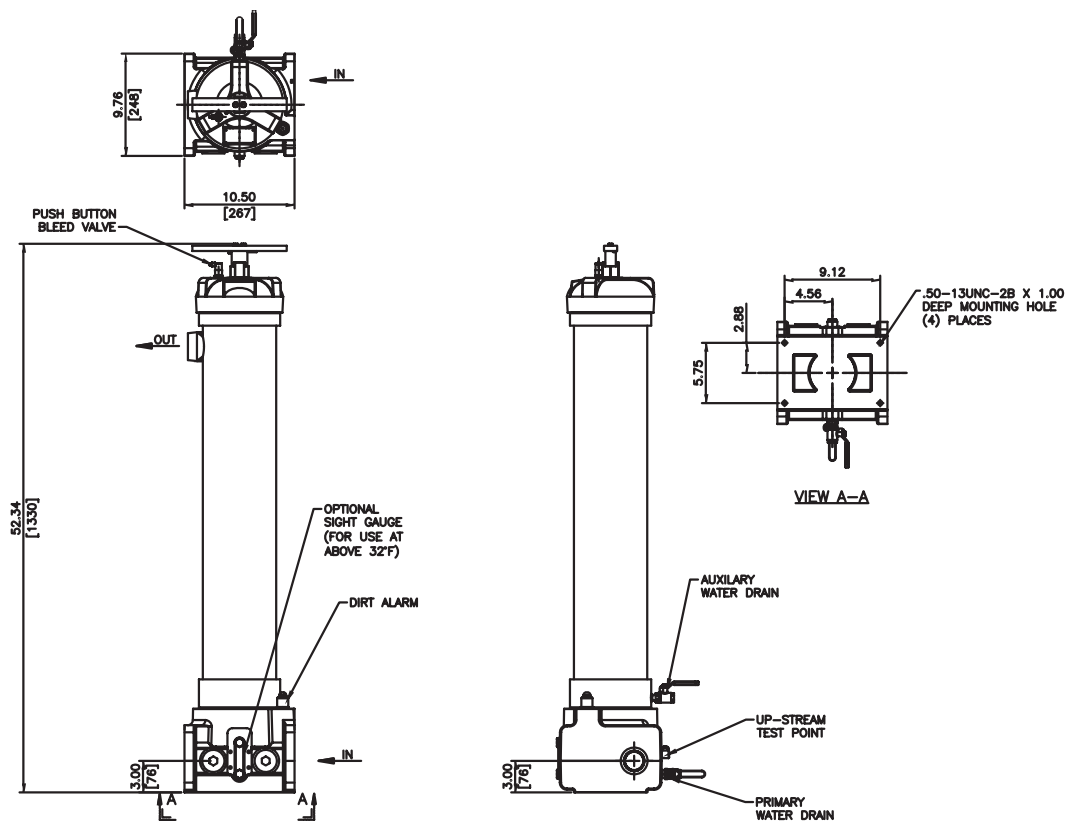


AGRICULTURE

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:	Cracking: 30 psi (2 bar)
Porting Base:	Anodized Aluminum
Element Case:	Nickel Coated Steel
Cap:	Nickel Coated Ductile Iron
Weight:	155 Lbs. (77 kg)
Element Change Clearance:	33.8" (858 mm)

Filter Housing Specifications



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%

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

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

In-Line Bulk Fuel Coalescing Filter

QCF

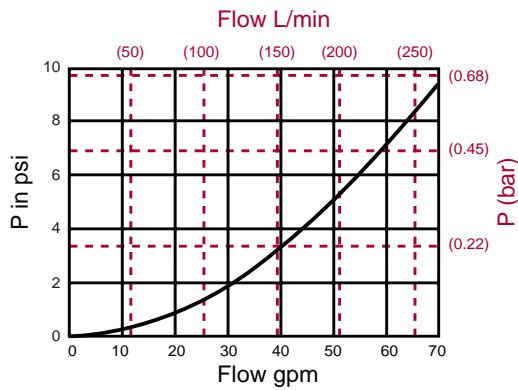
Fuel Oils

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

Fluid Compatibility

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

QCF $\Delta P_{\text{housing}}$ 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

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 QCF5VS24VM

Solution:

$$\Delta P_{\text{housing}} = 2.5 \text{ psi [0.17 bar]}$$

$$\Delta P_{\text{element}} = 70 \times 0.17 = 11.9 \text{ psi}$$

$$\Delta P_{\text{total}} = 2.5 + 11.9 = 14.4 \text{ psi}$$

Filter Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
QCF						

Example: Note: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
QCF	C	5	V	S24	VM		= QCFC5VS24VM

BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Element Series	Element Media Type	House Sealing Material
QCF	C = C396	5 = 5 µm SYN./COALESCING	V = Viton®
BOX 5	BOX 6		BOX 7
Porting	Dirt Alarm® Options		Additional Options
S24 = SAE 24	VM = Visual Pop-Up w/ Manual Reset		Omit = None (Standard)
			*For automatic drain option, contact factory.

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

NOTES:

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