

**ICF**

# In-Line Bulk Fuel Coalescing Filter

\*Coalescing Elements Patent-Pending

**16 gpm**  
**60 L/min**

**150 psi**  
**10 bar**

## Applications



POINT OF USE  
FUEL DISPENSING



FLEET FILL / BULK FUEL  
TRANSFER



BULK FUEL  
UNLOADING



PROTECTION FOR  
HIGH-FLOW FUEL  
INJECTION SYSTEMS



BULK TANK  
KIDNEY LOOP /  
RECIRCULATION

## Features and Benefits

- Patent-pending, three-phase, particulate and fuel/water separation media technology
- A revolutionary element designed for the highest single-pass water and particulate removal efficiencies in today's ultra-low sulfur diesel (ULSD) fluids
- Protects expensive Tier III and Tier IV engine components against failures caused by particulate and water transferred from bulk fuel tanks to the vehicle
- Allows users to achieve or exceed the particulate and water removal specifications of the injection system OEMs
- Previously acceptable industry standard products no longer provide the high-efficiency separation needed in today's ULSD fluids
- Housing design allows for field upgrade of any available option
- Schroeder Anti-Static Pleat® Media (ASP) is standard for all coalescing elements
- Pressure bypass indicator setting at 36 psi, with bypass valve cracking at 40 psi, allows for early indication before bypass of filter for advanced maintenance notice
- In applications >32°F (0°C) complete automation is achievable with fail-safe auto-drain feature using a remote 5 gallon (18L) or 20 gallon (75L) sump with alarm and auto shutdown
- Now available as a UL Certified, marine specific, fuel filter (ICFM)



Model no. of filter in photograph  
is: ICFV516LEP



Model no. of filter in photograph  
is: ICFM

## Markets



INDUSTRIAL



MOBILE  
VEHICLES



MARINE



MINING  
TECHNOLOGY



AGRICULTURE



POWER  
GENERATION



COMMON RAIL  
INJECTOR SYSTEMS



FLEET



RAILROAD



BULK FUEL  
FILTRATION

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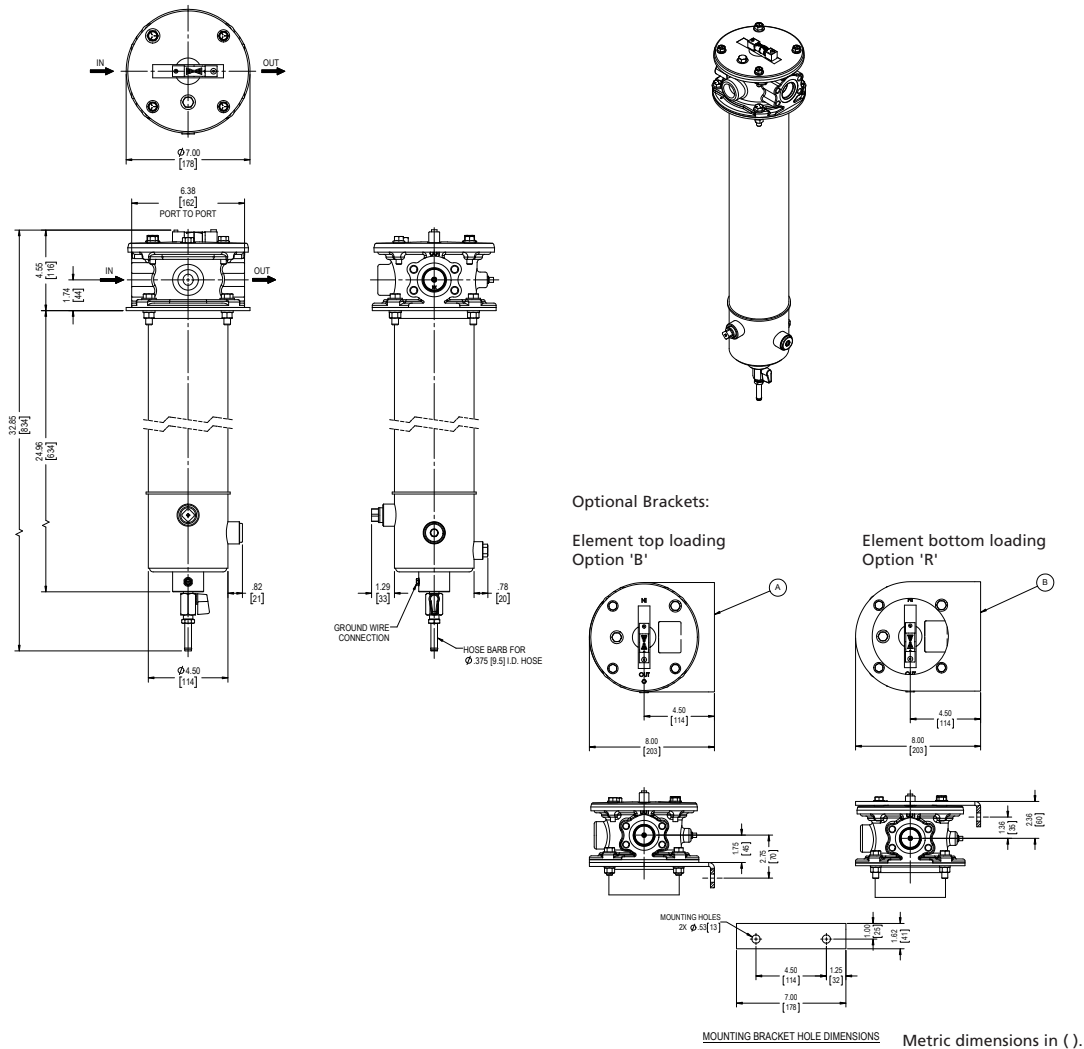
ICF

ICF

## Filter Housing Specifications

Flow Rating:	Up to 16 gpm (60 L/min) for ULSD15
Inlet/Outlet Connection:	1 1/2" NPTF Standard, -16 (ORB) SAE J1926 Optional
Max. Operating Pressure:	150 psi (10 bar)
Min. Yield Pressure:	450 psi (31 bar)
Rated Fatigue Pressure:	90 psi (6 bar), per NFPA T2.6.1-2005
Temp. Range:	32°F to 165°F (0°C to 74°C) standard and AWD option -20°F to 165°F (-29°C to 74°C) H option
Bypass Indication:	36 psi (2.5 bar) (Lower indication options available)
Bypass Valve Cracking:	40 psi (2.8 bar)
Porting Head/Cap:	Aluminum - Coating Option see Box 7
Element Bowl:	Steel - Epoxy Paint w/ High-phos Electroless Nickel Plating (Standard)
Filter Housing Weight:	15 lbs (6.8 kg) - Base unit without options or element
Element Change Clearance:	Access from top (remove cap) - 18" (457.2 mm) Access from below (remove bowl) - 2.5" (63.5 mm)
Housing Sump:	32 oz. (0.95 L)
Optional:	External water sump and non-immersion heater (power 120VAC, 235W), Sight glass, bracket, water in fuel sensor w/ or w/out remote mount light and 6' lead

Note: For other electrical options, contact factory  
Element sold separately



MOUNTING BRACKET HOLE DIMENSIONS Metric dimensions in ( ).



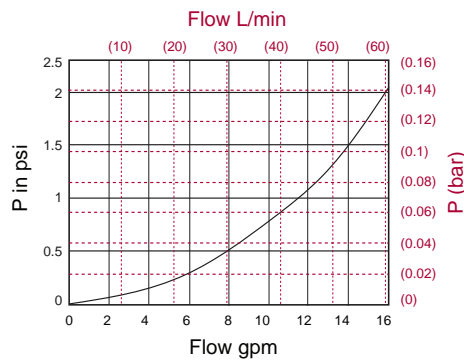
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**Pressure Drop Information Based on Flow Rate and Viscosity**

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

ICF  $\Delta P_{\text{housing}}$  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.  $\Delta P$  factors @ 37 SUS (3 cSt).

C184Z3V = 0.2

C184Z5V = 0.2

C184Z7VE = 0.09

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

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

**Notes**

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

**Exercise:** Determine  $\Delta P$  at 16 gpm (60 L/min) for ICFP24LEP

**Solution:**

$\Delta P_{\text{housing}} = 2.05 \text{ psi} = [0.14 \text{ bar}]$

$\Delta P_{\text{coalescing element}} = 16 \times 0.2 = 3.2 \text{ psi} [0.22 \text{ bar}]$

$\Delta P_{\text{total}} = 2.05 + 3.2 = 5.25 \text{ psi} [0.36 \text{ bar}]$

**Filter Element Selection Coalescing Element Performance Information**  
Elements Sold Separately

Coalescing Element	Pressure Side Coalescing	
	Recommended Flow	Single Pass Water Removal Efficiency
C184Z5V	16 gpm	≥ 99.5%
C184Z3V	16 gpm	≥ 99.5%
C184Z7VE	16 gpm	Contact Factory for Element Data

Flow Direction: Inside Out

Element Nominal Dimensions: 4.0" (102 mm) O.D. x 18.5" (470 mm) long

\*Schroeder Anti-Static Pleat Media (ASP®) is standard

\*NOTE: Efficiency based on ULSD15 with 27 Dynes/cm surface tension and 0.25% (2500 ppm) water injection. Discharge water concentration of <100 ppm free and emulsified water.

Highlighted product eligible for **QuickDelivery**