



# Making the world safer, healthier and more productive

Innovation, expertise and knowledge have led us to develop the most advanced technologies which have set the standard in fuel filtration.

We partner with our customers to understand their challenges and provide valuable solutions that reduce costs, improve process performance and reduce environmental impact.









# From the refinery to your equipment

The key factors to increase the life of your fuel systems are removal of water and debris from the fuel. Major manufacturers of diesel powered equipment are requiring the fuel to meet an ISO standard of 16/13/11 and in this case, less is better.

Facet Diesel Filtration products can help you meet these requirements with cost effective solutions for cleaning your diesel fuel supply. Our experience provides a wealth of knowledge in all types of filtration applications. Discover our line of diesel fuel filtration which ensures clean, dry fuel in every step of the way.

# **Filtration Equipment Selection**

Model M & VCS housings work in combination to remove solid contaminants and water from fuel. These models can handle flow rates of 100 gpm and higher making them an ideal solution for large volume bulk storage systems.

The SuperFlex™ housing is a great choice for flow rates from 30 to 100 gpm. It is an economical, small footprint housing which depending on the cartridge used, can be used as a microfilter or a filter water separator.

For applications where fuel is directly pumped into the equipment, the Fuel-Gard® VF-21SB/22SB can be directly connected in-line for flow rates up to 30 gpm. If no pump and motor are available at

site, the Portable Fuel Filtration Unit is an option. The unit comes complete with a VF-21SB housing, fueling nozzle and pump/motor combination to provide a complete packaged unit that can be easily transported.

Flow Rate	Equipment	
≤ 30 gpm	<ul><li>In-Line Fuel-Gard® models VF-21SB / 22SB</li><li>Portable Fuel Filtration Unit</li></ul>	
30 - 100 gpm	• SuperFlex™	
≥ 100 gpm	<ul><li> Microfilter model M</li><li> Filter water separator Model VCS</li></ul>	

#### ISO Codes and what they mean to you.

The International Organization for Standardization has developed a common test method ISO 4406 for coding the level of contamination by solid particles. It is being used by both engine and fuel system manufacturers to determine the acceptable cleanliness level of the fuel.

ISO 4406 uses a series of three numbers divided by slashes to correlate to a range of particle counts per 1 mL of fluid at three specific micron sizes (4, 6 and 14).

	Code	More Than	Up To
	23	40,000	80,000
	22	20,000	40,000
	21	10,000	20,000
	20	5,000	10,000
	19	2,500	5,000
	18	1,300	2,500
	17	640	1,300
4 μm	16		640
	15	160	320
	14	80	160
6 µm	13		80
	12	20	40
14 µm	11	10	20

Particles/mL

cleanliness level)

Fuel Quality	Code Breakdown
Typical Fuel Supply	21= 10,000 to 20,000 particles/m
ISO 4406 code: <b>21/19/17</b>	Size 4 µm & larger
(unacceptable	<b>19=</b> 2,500 to 5,000 particles/mL
cleanliness level)	Size 6 µm & larger
	<b>17=</b> 640 to 1,300 particles/mL
	Size 14 µm & larger
Recommended	<b>16=</b> 320 to 640 particles/mL
Fuel Supply	Size 4 µm & larger
ISO 4406 code:	13= 40 to 80 particles/mL
16/13/11	Size 6 µm & larger
(acceptable	11= 10 to 20 particles/mL

Size 14 µm & larger

## Improve and extend injector life and lower maintenance cost

As today's diesel engines become more advanced, it is critical to keep the diesel fuel supply to the engine as free from debris and water contamination as possible.

Poor diesel fuel filtration can cause damage to fuel injectors and fuel pumps and result in engine failures and down-time. Install Facet equipment and extend injectors life.



#### **MICROFILTERS**

- ASME code carbon steel
- Remove solid contaminant
  Thermal pressure relief valve
- Direct reading differential pressure gauge
- Automatic air eliminator & manual vent valve
- Manual drain valve



## **FILTER WATER SEPARATORS**

- ASME Code carbon steel
- Coalesces and removes water
- Thermal pressure relief valve
- Liquid level gauge
- Direct reading differential pressure gauge
- Automatic air eliminator & manual vent valve
- Manual drain valve



#### **SUPERFLEX™**

- Versatile (prefilter, coalescer or monitor)
- Economical
- Thermal pressure relief valve
- · Liquid level gauge
- Direct reading differential pressure gauge
- Automatic air eliminator & manual vent valve
- Manual drain valve



#### FUEL-GARD® VF-21SB/22SB

- Versatile and light weight
- Prefilter, coalescer or monitor
- In-line design with 11/2" in/out connections
- 150 psi design pressure
- Water sight glass
- Swing bolt quick opening closure



#### **PACKAGED FILTRATION SYSTEMS**

- Facet M, VCS or SuperFlex™ combined housings to meet with your performance requirements
- Flow rates starting at 50 gpm
- Pilot float control that manages automatic water drain and/or discharge control valve
- Inlet/outlet manual valves to isolate system during change-outs



#### PORTABLE FUEL FILTRATION UNIT

- For use when no pump or motor are available at site
- Fuel nozzle, pump/motor combination and Fuel-Gard® VF-21SB filter housing
- Can operate on 12 VDC (20 gpm) or 120 VAC (15 gpm) power
- VF-21SB housing contains a single cartridge with simple replacement
- Low cost design
- Performance requirements achieved in a single pass
- Easily transported from one job to the next



USA · FRANCE · ITALY · THE NETHERLANDS · SPAIN · UAE · UK

www.facetfiltration.com facet@filtrationgroup.com