# Vel-Max® Filter Vessel
## VX Series

## Compact, Flexible Filtration, Multipurpose Design, Simplified Maintenance

### DESCRIPTION

The compact Vel-Max Filter Vessel is suitable for flowrates up to 204 USGPM with micronic cartridges, up to 198 USGPM as a filter/separator, and up to 150 USGPM with CDF® monitor cartridges. The Vel-Max® can be used on mobile refueling equipment, fueling cabinets and for fixed fueling installations. Vel-Max is designed for easy maintenance and easy conversion to a prefilter, filter/separator, or monitor.

### APPLICATIONS

- Jet Fuel
- JP5/JP8
- Avgas
- Gasoline
- Kerosene

### STANDARD FEATURES

- Carbon steel construction
- 250 psi design pressure
- Epoxy powder coated interior & exterior
- 2" NPT female inlet/outlet
- 1/2 " NPT drain connection
- 3/4" NPT vent and pressure 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)

### OPTIONAL FEATURES

- Air eliminator
- Drain valve
- Pressure relief valve
- Water probe
- Sight gauge
- Leg assembly with adjustable height
- ASME Code Stamp
- CE Mark
- Differential pressure gauge assembly
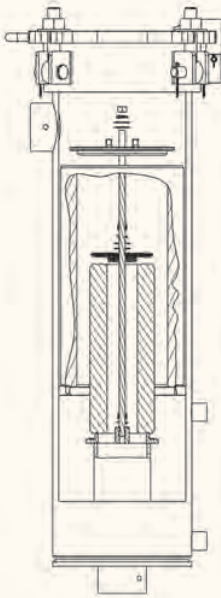- Lid Gasket: G-2052V (Viton)

NOTE: For non-EI qualified applications. Housing does not meet EI1596 or EI1581 qualifications.



Vel-Max VX-2 showing optional leg assembly, differential pressure gauge, sight glass assembly, and air eliminator.
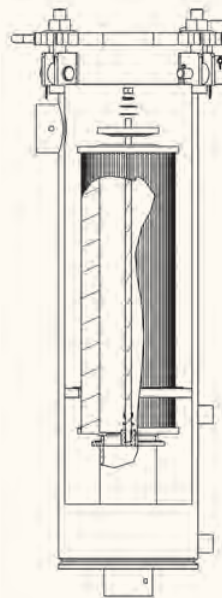
## VEL-MAX FILTER VESSEL CONFIGURATIONS/APPLICATIONS
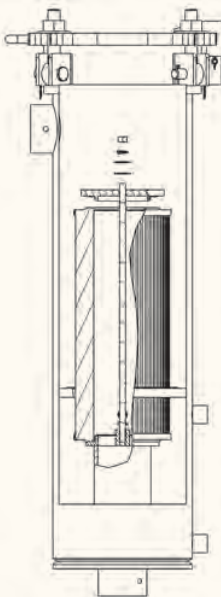
### Filter/Separator Configuration



Vel-Max Series for liquid/liquid separation uses a 2-stage coalescer separator cartridge combination to remove free and emulsified water from a liquid product stream. The first stage coalescing cartridge provides filtration as well as coalescing of free and emulsified water. The second stage separator is a hydrophobic barrier designed to repel the coalesced water droplets. The water droplets will fall and collect in the sump for removal through the manual drain.

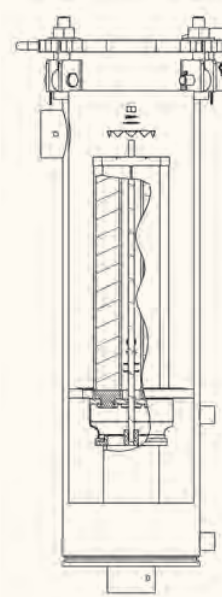### 6" or 6.25" OD x 2.625" ID Configuration



Vel-Max Series for 6" or 6.25" OD x 2.625" ID cartridges can be used in several ways. To remove solid contaminants from a flow stream, use the vessel with a pleated media filter. When used with *Aquacon* cartridges the Vel-Max will remove solids and free water by absorption from a fuel or industrial oil flow stream. Using Vel-Max with clay cartridges will remove surfactants, color and other impurities by adsorption from a fuel or industrial oil system.

### 6" OD x 3.5" ID Configuration



Vel-Max Series with 6" OD x 3.5" ID cartridges can be used in two ways. To remove solid contaminants from a flow stream, use the vessel with a pleated media filter. When used with *Aquacon* cartridges* the Vel-Max will remove solid contaminants and free water by absorption from a jet fuel or aviation gasoline flow stream.

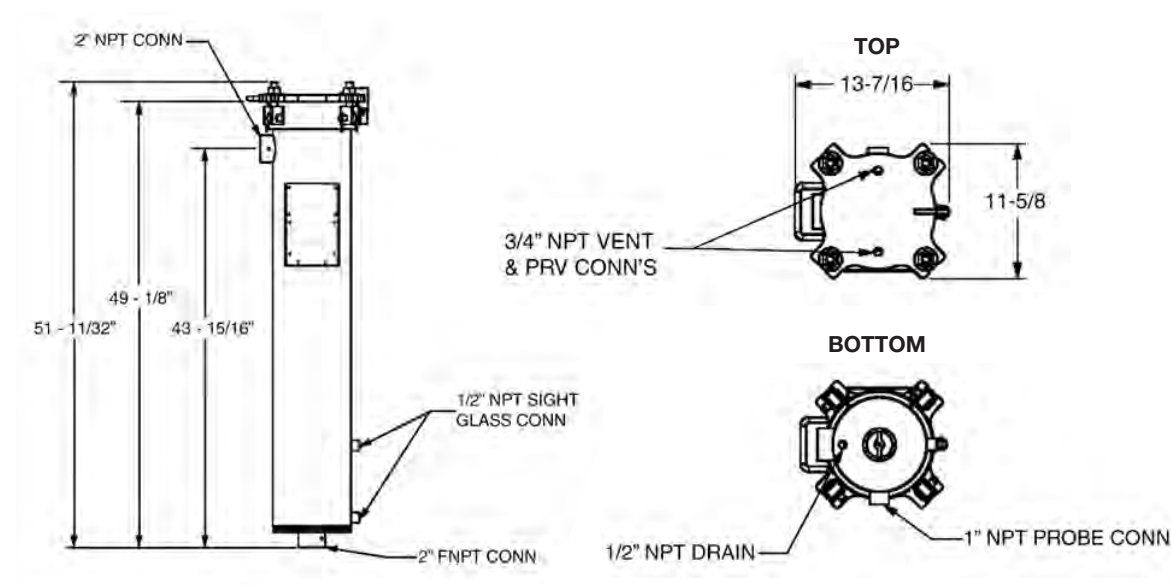### 6" or 6.25" OD x 2.625" ID Configuration



Vel-Max Series can be adapted to use 2" diameter CDF® type monitor cartridges* for removing solid contaminants and free water by absorption from jet fuel or aviation gasoline flow streams.

**\*CAUTION: Do not use *Aquacon*® or CDF® water absorbing monitor cartridges in pre-mixed jet fuel containing anti-icing additives (DiEGME, FIZZY®, Prist®, FSII)**

## VEL-MAX FILTER VESSEL SPECIFICATIONS

### DIMENSIONS

| Model | Height in. | Height mm | Cover Width in. | Cover Width mm | Cover Length in. | Cover Length mm | Dry Weight lbs | Dry Weight kgs |
|-------|------|------|----------|----------|-----------|-----------|-----|-----|
| VX-1 | 36 | 914 | 13 7/16 | 341 | 11 5/8 | 295 | 110 | 50 |
| VX-2 | 51 | 1295 | 13 7/16 | 341 | 11 5/8 | 295 | 125 | 57 |
| VX-3 | 66 | 1676 | 13 7/16 | 341 | 11 5/8 | 295 | 150 | 68 |



Drawing Shows
Dimensions for VX-2

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

### FLOW RATES (USGPM)

| Configuration | Applications | VX-1 | VX-2 | VX-3 |
|---------------|--------------|------|------|------|
| Filter/Separator | Gasoline / Aviation Gasoline | 66 | 132 | 198 |
| | Jet Fuel / Kerosene | 50 | 100 | 150 |
| Micronic Cartridges 6" OD x 3.5" ID | Gasoline / Aviation Gasoline | 68 | 136 | 204 |
| | Jet Fuel / Kerosene | 66 | 132 | 198 |
| Aviation *Aquacon* Cartridges 6" Od X 3.5" ID | Jet Fuel / Kerosene | 58 | 115 | 176 |
| Industrial Micronic & *Aquacon* Cartridges 6" or 6.25" OD x 2.625" ID | Gasoline / Av Gas / Jet Fuel / Kerosene | 50 | 100 | 150 |
| Clay Cartridges (LA-61801B) | Jet Fuel / Kerosene / Gasoline | 7.5 | N/A | 15 |
| CDF® Monitor Cartridges | | 75 | 150 | N/A |

**VEL-MAX® CARTRIDGE SELECTION TABLE**

| Filter/Separator Configuration | | | | |
|---|---|---|---|---|
| **First Stage Coalescers For:** | **Micron Rating** | **Vx-1** | **Vx-2** | **Vx-3** |
| Gasoline | 2 | O-8156 | O-8306 | O-8446 |
| Jet Fuel / Kerosene | 0.5 | O-81588 | O-83088 | O-84488 |
| **Second Stage Separators For:** | **TYPE** | **VX-1** | **VX-2** | **VX-3** |
| Jet Fuel / Kerosene / Gas | TCS | SO-415VX5 | SO-430VX5 | SO-444C |
| **6" OD X 3.5" ID CONFIGURATION** | **TYPE** | **VX-1** | **VX-2** | **VX-3** |
| MICRONIC CARTRIDGES | PLEATED PAPER | FO-614PLFxx | FO-614PLFxx (STACK OF 2) | FO-614PLFxx (STACK OF 3) |
| | | | FO-629PLFxx | FO-644PLFxx |
| | FIBERGLASS DEPTH | FO-614FGxx | FO-614FGxx (STACK OF 2) | FO-614FGxx (STACK OF 3) |
| | | | FO-629FGxx | FO-644FGxx |
| AVIATION *Aquacon* CARTRIDGES* | | ACO-61401R | ACO-61401R (STACK OF 2) | ACO-61405 (STACK OF 3) |
| | | | ACO-62901R | ACO-64401R |
| INDUSTRIAL *Aquacon* CARTRIDGES | | AC-61405 | A(C/D)-614xx (STACK OF 2) | A(C/D)-614xx (STACK OF 3) |
| | | AD-61410 | | |
| | | AD-61425 | AC-62905 | AC-64405 |
| **6" OR 6.25" OD X 2.5625" ID CONFIGURATION** | | **VX-1** | **VX-2** | **VX-3** |
| MICRONIC CARTRIDGES | PLEATED PAPER (FO) & PLEATED SYNTHETIC (FOS) | FO-718PLxx | N/A | (FO/FOS)-718xx (STACK OF 2) |
| | | FOS-618PLxx | | FO-736PLxx |
| | | FOS-718PLxx | | FOS-636PLxx |
| | FIBERGLASS DEPTH | FO-618FGAxx | | FO-618FGAxx (STACK OF 2) |
| | | | | FO-636FGAxx |
| INDUSTRIAL Aquacon® CARTRIDGES | | AC-718xx | | AC-718xx (STACK OF 2) |
| | | | | AC-736xx |
| CLAY (FULLER'S EARTH) CARTRIDGES | | LA-61801B | | LA-61801B (STACK OF 2) |
| **CDF® MONITOR CONFIGURATION** | | **VX-1** | **VX-2** | **VX-3** |
| CDF® CARTRIDGES* | | CDF-215P | CDF-230P | N/A |

*The suffix "xx" on the part number of cartridges denotes the micron rating of the cartridge. Contact Parker AFD for available micron ratings.*

**HARDWARE KITS**

| CONFIGURATION | VX-1 | VX-2 | VX-3 |
|---|---|---|---|
| Filter / Separator (Coalescer + Separator) | VX1-FSKIT | VX2-FSKIT | VX3-FSKIT |
| 6" OD X 3.5" ID Cartridge(s) | VX1-AVKIT | VX2-AVKIT | VX3-AVKIT |
| 6" OR 6.25" OD X 2.5625" ID Cartridge(s) | VX1-INKIT | N/A | VX3-INKIT |
| CDF® Monitor Cartridge(s) | VX1-CDKIT | VX2-CDKIT | N/A |

***CAUTION: Do not use Aquacon® or CDF® water absorbing monitor cartridges in pre-mixed jet fuel containing anti-icing additives (DiEGME, FIZZY®, Prist®, FSII)***