



VERTICAL FILTER VESSEL RANGE AND CARTRIDGES VF SERIES

Item code: VELCON-VF

Velcon VF Series of Vertical Vessels. Velcon cartridges to suit these vessels including:

- FO Series - Pleated Media Filter Cartridges.
- AC Series - Aquacon Water Absorbing Cartridges.
- FG Series - Fibreglass Cartridges.

FEATURES:

- 150 psi welded steel ASME Code construction.
- Choice of micron rating from 0.5 to 75 microns.
- Choice of pleated or depth type media.
- Epoxy coated interior, primed exterior.
- Buna-N O-ring cover seals.

Typical Applications:

- Jet Fuel.
- Gasoline.
- Diesel Fuels.

Recommended Optional Accessories:

- Automatic Air Eliminator.
- Pressure Relief Valve.
- Differential Pressure Gauge.
- Drain Valve(s).
- Sampling Probes.
- ASME Code Stamp.



VF SERIES FILTER VESSEL RANGE:

Vessel Code	Maximum Flow USGPM			FO Series Cartridges		Weight with skid, lbs.	Volume U.S. Gallons
	Jet Fuel	Gasoline	Diesel	Length	Qty		
VF814	67	68	65	14	1	225	5
VF829	133	136	130	29	1	265	8
VF844	200	204	195	44	1	305	11
VF1614	267	272	260	14	4	500	22
VF1629	533	544	520	29	4	560	35
VF1644	800	816	780	44	4	620	48
VF2029	800	816	780	29	6	1000	67
VF2044	1200	1224	1170	44	6	1100	88
VF2829	1600	1632	1560	29	12	1500	125
VF2844	2400	2448	2340	44	12	1600	165
VF3644	3600	3672	3510	44	18	2250	288
VF4244	5400	5508	5265	44	27	3800	400

1. Flow rates are for FO-614PLF series pleated paper cartridges. For higher viscosity fluids, consult your PETRO Representative.
2. VF Series Filters are designed to accommodate our standard 6 in. O.D., 3.5 in. I.D., 14.5 in. long cartridges that are stacked one, two, or three high. Many cartridges are available in longer lengths that eliminate stacking. For example, a 44 inch long FO-644PLF1M could be used in place of three 14.5 inch long cartridges. This makes for easier and less expensive changeouts.
3. A number of threaded base filter cartridges (e.g. FO-644PLF5TB) are available, which allow for easier cartridge changeout and removal of particulate matter from the deckplates. See data sheet #1549. The threaded base cartridges mount on the 6000T Adapters.
4. Dimensions shown are for estimating purposes only. For exact dimensions, obtain certified drawing.
5. VF16 and VF20 Series vessels have flat covers. VF16 Series vessels do not have hydraulic lift jacks.
6. Available Aquacon® Cartridges are AC-6xx05 and AD-6xx25 where xx represents cartridge lengths of 14, 29, and 44 inches.

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FO SERIES - PLEATED MEDIA FILTER CARTRIDGES:

- High Efficiency, Long Life Cartridges for Industrial Fluids.
- Large Surface Area – Allows high flow rate with low initial pressure drop and maximum contaminant holding capacity.
- Resin Impregnated Media – Maintains strength, resists effects of water and heat.
- 75 psi Collapse Strength – Heavy gauge carbon steel center tubes give safety margin against pressure surges.
- Coated Steel Components – Resist corrosion from most industrial fluids.
- Corrugated Media – Prevents pleat pinch-off, assuring all filtration media is utilized.
- Buna-N Gaskets – The best general gasket material available assures positive seal in most fluids.
- Thermoset Bonding Material – Durable endcap-to-media bond prevents internal bypassing.
- Threaded base filter cartridges – Available for easier installation.

APPLICATIONS

Velcon Pleated Media Cartridges are suitable for a broad range of polar and non-polar fluids. Recommended for applications where the contaminant is granular (non-colloidal), allowing maximum utilization of the high surface area.

Suitable for:

- All Hydrocarbon Fuels
- Cutting Oils
- Glycols
- Degreasing Fluids
- Water Emulsion Coolants
- Naphtha
- Lube Oils
- Ethyl Alcohol
- Insulating Oils
- Toluol
- Synthetic Oils
- Hydraulic Oils
- Diesel Fuel
- Biodiesel Fuel



SPECIFICATIONS

- Recommended changeout differential pressure - 25 psid.
- 75 psi Collapse strength.
- Micron ratings from 1/2 to 75.
- 98%+ Nominal filtration efficiency.
- 5 - 9 Operating pH range.
- 250°F Maximum operating temperature.
- Multi-pass (Beta Ratio) data available on request.
- For information about Flow Ratings with various viscosity fluids, refer to Form #1532.



FO CARTRIDGE INFORMATION:

Model	Dimensions	Nominal Micron Rating	Protective Outer Wrap	
FO-412PL2	4" x 12¼" x 1¾" ID	2	No	
FO-412PL5		5		
FO-418PL5	4" x 18" x 1¾" ID	5		
FO-418PL15		15		
FO-512PL1/2	For VF-61 Housing	0.5		
FO-512PL05		5		
FO-512PL25		25		
FO-614PLF1/2	6" x 14½" x 3½" ID	0.5		No
FO-614PLF1		1		
FO-614PLF2		2		
FO-614PLF5		5		
FO-614PLF5M		5	Yes	
FO-614PLF10		10	No	
FO-614PLF15		15		
FO-614PLF15M		15	Yes	
FO-614PLF25		25	No	
FO-614PLF25M		25	Yes	
FO-614PLF75		75	No	
FO-629PLF1/4		6" x 29" x 3½" ID	0.25	Yes
FO-629PLF1/2			0.5	
FO-629PLF1	1			
FO-629PLF2	2			
FO-629PLF5	5			
FO-629PLF10	10			
FO-629PLF20	20			
FO-629PLF25	25			
FO-629PLF1/2TB	6" x 29" Threaded Base		0.5	
FO-629PLF1TB		1		
FO-629PLF2TB		2		
FO-629PLF5TB		5		
FO-629PLF25TB		25		
FO-644PLF1/2	6" x 44" x 3½" ID	0.5	No	
FO-644PLF1M		1	Yes	
FO-644PLF2M		2		
FO-644PLF5M		5		



FO CARTRIDGE INFORMATION:

Model	Dimensions	Nominal Micron Rating	Protective Outer Wrap	
FO-644PLF10M	6" x 44" x 3½" ID	10	Yes	
FO-644PLF15M		15		
FO-644PLF25M		25		
FO-644PLF1/4TB	6" x 44" Threaded Base	0.25		
FO-644PLF1/2TB		0.5		
FO-644PLF1TB		1		
FO-644PLF2TB		2		
FO-644PLF5TB		5		
FO-644PLF10TB		10		
FO-644PLF25TB		25		
FO-656PLF1M		6" x 56" x 3½" ID		1
FO-656PLF1/2TB		6" x 56" Threaded Base		0.5
FO-656PLF1TB			1	
FO-656PLF2TB	2			
FO-656PLF5TB	5			
FO-656PLF25TB	25			
FO-718PLP3	6¼" x 18" x 29/16" ID	0.3	NO	
FO-718PL1/2		0.5		
FO-718PL01		1		
FO-718PL02		2		
FO-718PL05		5		
FO-718PL10		10		
FO-718PL15		15		
FO-718PL25		25		
FO-718PL50		50		
FO-736PLP3	6¼" x 36" x 29/16" ID	0.3	NO	
FO-736PL1/2		0.5		
FO-736PL05		5		
FO-736PL15		15		
FO-822PLP3	8" x 221/8" x 2" ID	0.3	No	
FO-822PL1/2		0.5		
FO-822PL05		5		
FO-829PL05		8" x 29½" x 2" ID		5



DUAL MEDIA CARTRIDGE INFORMATION:

Model	Dimensions	Nominal Micron Efficiency	
		Upstream	Downstream
FO-629PLF5/1M	6" OD x 29" OAL x 3-1/2" ID	5	1
FO-629PLF15/2M		15	2
FO-629PLF25/5M		25	5
FO-644PLF5/1M	6" OD x 44" OAL x 3-1/2" ID	5	1
FO-644PLF15/2M		15	2
FO-644PLF25/5M		25	5
FO-656PLF5/1M	6" OD x 56" OAL x 3-1/2" ID	5	1
FO-656PLF15/2M		15	2
FO-656PLF25/5M		25	5

AC SERIES - AQUACON WATER ABSORBING CARTRIDGES:

Aquacon® Cartridges have a patented* construction for removing dirt and water from hydrocarbon and other oils as well as gases. The outer media layer filters out silt, rust and other particulate contaminants. The inner layers absorb water and chemically bond it so that no water will release downstream.

When the Aquacon Cartridge reaches its water holding limit, the media swells shut and the differential pressure rapidly increases. This signals the operator that the cartridge must be changed.

- Removes free and emulsified water to less than 2 ppm.
- Differential pressure increase alerts operator to change cartridges.
- Effectively filters silt and other particulates.
- No media migration or "linting".
- Easy to install and remove.
- Does not affect oil additives.
- Fits standard filter housings.

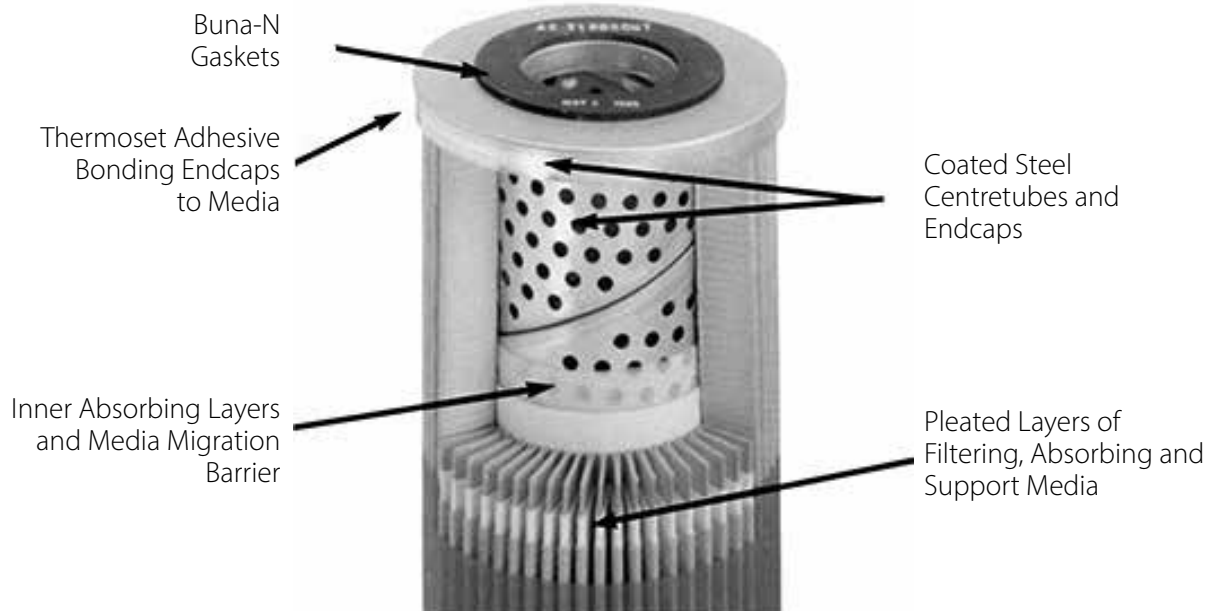
APPLICATIONS

- Gasoline
- Kerosene
- Diesel Fuel

- Insulating Oil
- Biodiesel
- Hydraulic Oil
- Turbine Lube Oil
- Quench Oil
- Synthetic Oil
- Phosphate Ester Oil

TECHNICAL INFORMATION

- Maximum operating temperature is 250°F.
- Aquacon® Cartridges will shut off flow when loaded with water or dirt. Appropriate precautions should be taken in critical applications where oil flow must be maintained.
- With some lube and hydraulic oils all of the water may not be removed in one pass, and extra passes will be required for total removal.
- Water capacity for the AC-718 cartridges ranges from 2 to 4 quarts.
- **WARNING:** Absorbent-type monitor cartridges will not remove water from fuel containing alcohol-blending agents (commonly called gasohol). For removal of solids, please use Velcon particle removal filters specifically made for gasohol. Consult your Velcon representative.



AC CARTRIDGE INFORMATION:

Model	Micrometer Reading		I.D. Inches	O.D. Inches	Length Inches	Collapse Pressure, psi	Interchange Information
	Normal	Beta _x = 75					
AC-21005(1)	5	40	1	2.625	9.75	75	Fits Velcon VF-31 Housings
AC-5121/2E(2)	0.5	3	1.875	5.625	12.125	75	Fits Velcon VF-61 Housings
AC-51205	5	40	1.875	5.625	12.125	75	
AC-61405	5	40	3.5	6	14.5	100	Interchanges with Velcon FO-614PLF, FO-629PLF, and FO-644PLF Series Cartridges
AC-62905	5	40	3.5	6	29.5	100	
AC-64405	5	40	3.5	6	44	100	
AC-718P3(2)	0.3	2	2.5625	6.25	18	75	Fits Velcon industrial housings and portable filters, interchangeable with Velcon FO-718PL and FO-736PL Series Cartridges
AC-718P4D	0.4	2.5	2.5625	6.25	18	75	
AC-7181/2(2)	0.5	3	2.5625	6.25	18	75	
AC-71801	1	6	2.5625	6.25	18	75	
AC-71805	5	40	2.5625	6.25	18	75	
AC-7361/2(2)	0.5	3	2.5625	6.25	36	75	
AC-73601	1	6	2.5625	6.25	36	75	
AC-73605	5	40	2.5625	6.25	36	75	

Notes:

1. The AC-21005 will fit into many existing housings that take "string-wound" cartridges. Check to confirm that the 9 3/4" length will seat properly in the housing.
2. The AC-5121/2E, AC-718P3, AC-7181/2 and AC-7361/2 are increased surface area/reduced water capacity cartridges specifically designed for circuit breaker oil.

FG SERIES - FIBREGLASS CARTRIDGES:

Velcon Fibreglass Depth Cartridges have proven superior in filtering colloidal or slimy contaminants. Lube oil and EDM coolant filtration are this type of application where fibreglass elements consistently filter better with dramatically longer life than other types of media.

APPLICATIONS

- Hydraulic Oils
- Cutting Oils
- Glycols
- Degreasing Fluids
- Water Emulsion Coolants
- Naphtha

- Lube Oils
- Ethyl Alcohol
- Boiler Feed Water
- Fuels
- Synthetic Oils
- Biodiesel

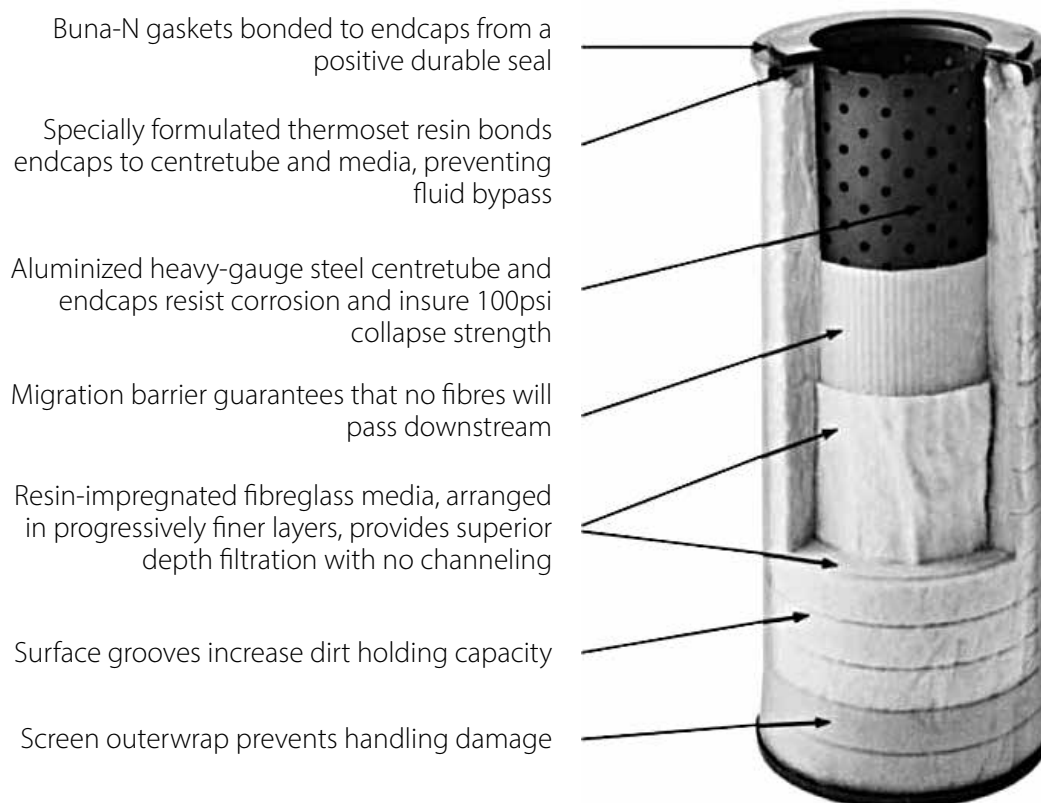
SPECIFICATIONS

- 100 psi collapse strength.
- 5 - 9 operating pH range.
- 98% + filtration efficiency.
- 250°F maximum operating temperature.
- Recommended changeout : 25 psid.

FG CARTRIDGE INFORMATION:

Model	I.D. Inches	O.D. Inches	Length Inches	Micron Rating
FO-614FG10	6	3.5	14.5	10
FO-614FG10P*	6	3.5	14.5	10
FO-614FG25	6	3.5	14.5	25
FO-618FG10P*	6	3.5	18	10
FO-622FG25	6	3.5	22	25
FO-629FG2	6	3.5	29.5	2
FO-629FG2P*	6	3.5	29.5	2
FO-629FG10	6	3.5	29.5	10
FO-629FG10P*	6	3.5	29.5	10
FO-629FG25	6	3.5	29.5	25
FO-636FG5	6	3.5	35.875	5
FO-636FG10	6	3.5	35.875	10
FO-644FG2	6	3.5	44	2
FO-644FG5	6	3.5	44	5
FO-644FG25	6	3.5	44	25
FO-644FG40P*	6	3.5	44	40
FGA SERIES				
FO-618FGA5	6	2.5625	18	5
FO-618FGA10	6	2.5625	18	10
FO-618FGA25	6	2.5625	18	25
FO-629FGA5	6	2.5625	29.5	5
FO-629FGA10	6	2.5625	29.5	10
FO-636FGA5	6	2.5625	35.875	5
FO-636FGA10	6	2.5625	35.875	10

*P designates individual unit cartons.
The primary difference between FG and FGA Series is the inner diameter





VF SERIES – CUTAWAY:

