



1.5" NPT AVIATION FILTER HOUSING AND ELEMENT

Item code: VF61E

The VF-61, and VF-62 are versatile filter housings designed for use with several different high performance Aquacon filter cartridges, as well as a variety of paper filters and coalescer/separator cartridges.

Aquacon cartridges filter out water by chemically locking it into layers of super-absorbent media. Water removal efficiency is not affected by common surfactants or additives. Water capacity is as much as 1 1/2 quarts, depending on the flow rate. These cartridges also effectively filter out dirt, rust and other particulates.

FEATURES:

- Free and emulsified water to less than 5 ppm.
- 1/2 micrometer particulate removal.
- Provides protection against "slugs" of water.
- Pressure increase signals cartridge change.
- Use with existing filter housings.

APPLICATIONS

- Jet Fuel
- Avgas
- Motor Gasoline
- Diesel Fuel
- Biodiesel Fuel
- Insulating Oil
- Hydraulic Oil
- Lubricating Oil
- Selected Solvents

As a cartridge reaches its water-holding limit, the media expands very rapidly and restricts the flow. For oils and other high viscosity liquids, the pressure drop will rapidly increase, signaling the need to change cartridges.

The VF-61, with ACO series cartridges installed, has become the standard for low flow rate full flow aviation fuel monitor applications.

Use the VF-61E with band clamp closure for areas with limited space.

VF-61



VF-61E



with Band Clamp Closure

VF-62



Pictured with Optional Hand Knobs



FILTER CARTRIDGE SELECTION TABLE:

Housing P/N	Product being filtered	Application	Cartridge P/N	Data Sheet	Type	Micron	Flow Rate (GPM)
VF-61, VF-61E	Jet Fuel & Avgas ⁽¹⁾	Dirt & Free water	ACO-512P3L	1681	Aquacon® (Absorbent)	0.3	5-50
			ACO-51201L			0.5	5-50
			OS-51288	1858	Coalescer / Separator	0.5	Jet: 5-35 Avgas: 5-45
	Mo-gas		AC-51205	1582	Aquacon® (Absorbent)	5	5-50
	Diesel ⁽¹⁾		AD-51225	1655		25	15-50
	Biodiesel		OS-51286	2118	Coalescer / Separator	5	5-18
			AD-51225	1655	Aquacon® (Absorbent)	25	15-50
	Oils		AC-51205	1582	Aquacon® (Absorbent)	5	Varies with oil viscosity ⁽²⁾
			AD-51225	1655		25	
	Solvents		ASL-51201	1692		1	5-50
	All	Dirt	FO-512PL1/2	1549	Paper Filter	0.5	Fuels: 5-50 Oils: Varies with oil viscosity ⁽³⁾
			FO-512PL05			5	
			FO-512PL25			25	
FOS-512PL25			1734	Synthetic Filter	25		
VF-62	Jet Fuel & Avgas ⁽¹⁾	Dirt & Free water	ACO-52401L	1681	Aquacon® (Absorbent)	0.5	10-100
	Motor Gasoline		AC-52405	1582		5	10-100
	Diesel ⁽¹⁾		AD-52425	1655		25	30-100
	Biodiesel		AC-52405	1582		5	Varies with viscosity See Form #1709
			AD-52425	1655		25	
	Oils		ASL-52401	1692		1	10-100
	Solvents		Dirt	FO-524PL1/2		1549	Paper Filter
	All	FO-524PL05		??			
		FO-524PL25		??			

NOTES:

- (1) For aviation and diesel fuel applications, always install a differential pressure gauge or other means of determining differential pressure.
- (2) See Data Sheet # 1709 for absorbent cartridge (AC, AD) flow rates.
- (3) See Data Sheet # 1532 for paper filter (FO) flow rates, see Data Sheet # 1747 for synthetic filter (FOS) flow rates. Please consult installation instructions and operating procedures that accompany products for more detailed information.



SPECIFICATIONS:

Filter Housing VF-61, VF-61E, VF-62

- Maximum Operating Pressure: 150 psi.
- Inlet/Outlet Connection: 1½" NPT.
- Closure Seal: Buna-N O-Ring (P/N G-0986).
- 1/8" brass petcock vent valve and ½" drain valve.
- Material:
 - VF-61, VF-62: Die cast aluminum head and closure clamp assembly; carbon steel shell with epoxy coated exterior and interior.
 - VF-61E: Die cast aluminum head; stainless steel band clamp; carbon steel shell with epoxy coated exterior and interior.
- Weight:
 - VF-61: 10 lbs., Shipping Weight: 12lbs.
 - VF-61E: 8 lbs., Shipping Weight: 10 lbs.
 - VF-62: 16 lbs., Shipping Weight: 18 lbs.

Cartridges

- Maximum Operating Temperature: 200°F.
- Collapse Strength: 75 psi (5 bar).
- pH Range: 5 - 9.
- Nominal Filtration Efficiency: 98%.

ORDERING INFORMATION:

- Specify Model VF-61, VF-61E, or VF-62 Filter Housing.
- Unit is supplied with G-0986 Buna-N O-Ring and 1/8" valve and 1/2" drain plug installed. 1/2" petcock drain valve is shipped loose.
- Cartridges are not supplied and must be ordered separately.
- Viton O-Rings (P/N G-0986A) are available but must be ordered separately. They are recommended for gasoline and solvent applications.

RECOMMENDED SPARES:

- 1 each G-0986 Buna-N O-Ring.
- If Viton O-Rings are desired, 2 each G-0986A.
- 6 each Cartridges.

OPTIONS:

- Part Number 554Y020 is a Carbon Steel 1/2" NPT Ball Valve, with Mounting Nipple.
- Part Number CK-1488 quick release hand bolts (set of 4) to replace closure bolts VF-61 and VF-62 only.
- Part Number 10678 Differential Pressure Gauge Assembly.

DIFFERENTIAL PRESSURE GAUGE:

Color Indicates Pressure Drop:

- Green: Clean 0 - 15 psi
- Red: Change 16 - 25 psi
- Code: 10678



OVER PRESSURE PROTECTION:

When exposed to a high concentration of water, the differential pressure across an absorbent cartridge (AC, ACO, AD, or ASL Series cartridges) will immediately increase. Pressure bypasses or other means to limit the inlet pressure to 75 psi (5 bar) should be installed to prevent cartridge from collapsing.

CAUTION:

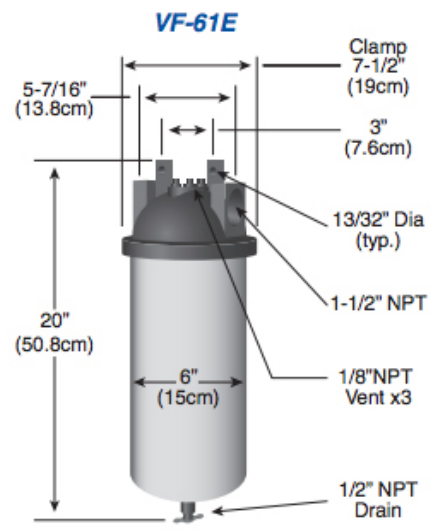
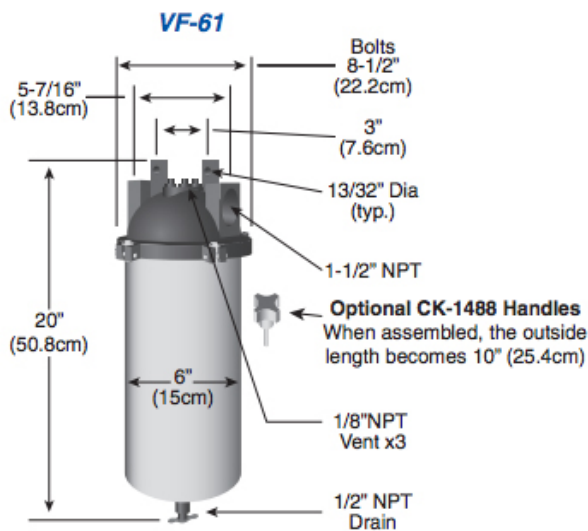
To protect the fuel system, including the filter housing & other components, be sure to install pressure relief valve(s).

Do not use Aquacon® absorbent cartridges (AC, ACO, AD or ASL Series) with pre-mixed jet fuel containing anti-icing additives, or with gasoline/alcohol blends.

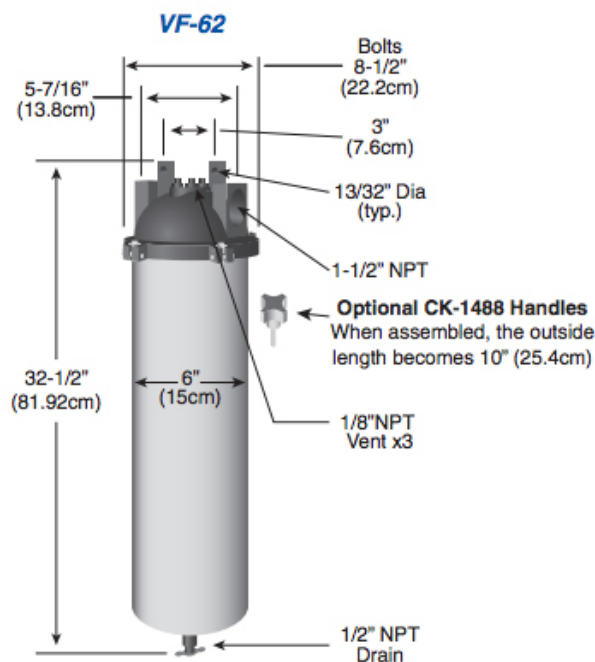


DIMENSIONS:

- Please note: Drawings are not to scale. Dimensions are shown for estimating purposes only.
- Allow 6 inches (15.2 cm) below the vessel to safely remove the vessel to gain access to the cartridge.



VF-61E has a band clamp closure. Use in areas with limited space.



VF-62 has a longer body for areas and applications that require higher flow rate.





ACO-51201L



ACO-60901L

ACO AQUACON® AVIATION FUEL FILTER CARTRIDGES

Item code: ACO51201

Remove Water and Dirt from Jet Fuel and Avgas Outside-to-In Flow Cartridges

Patented Aquacon® Filter Cartridges have a unique high-capacity inner filter medium which removes all free and emulsified water from hydrocarbon fuels down to less than 5 ppm in the effluent. Absorbed water is chemically locked into this medium.

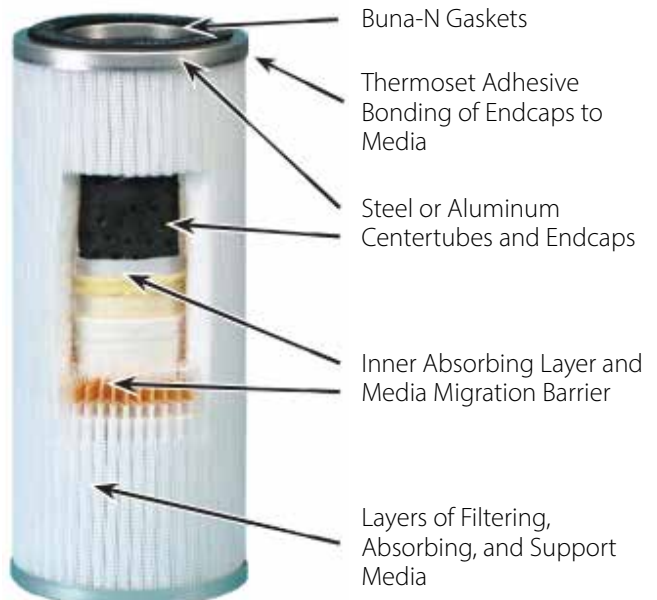
When a cartridge reaches its water holding capacity, its accordion pleats swell and cause an increase in the differential pressure which signals the operator to change the cartridge.

Solid contaminants are removed by the cartridge's two particulate filter media layers. The pleated accordion style design provides a large surface area for maximum dirt holding capacity. Models are offered for particle filtration down to 1/2 micrometer size with 98% plus efficiency. Performance is not affected by the presence of common surface active agents.

Compact Aquacon® Cartridges are quick and easy to install. Models are available to fit most existing standard housings. Refer to Cartridge Selection Table on reverse side.

FEATURES:

- Free and emulsified water removal to less than 5 ppm.
- 1/2 micrometer particle removal.
- Provides protection against "slugs" of water.
- Pressure increase signals need for cartridge change.
- Use with existing filter housings.



ACO-61401L



CARTRIDGE SELECTION TABLE:

Code	Micron Ratings	Inside Diameter (Inches)	Outside Diameter (Inches)	Length (Inches)	Collapse Pressure (psi)	Maximum Flow Rate (USGPM)	Interchange Information
ACO-21001L	0.5	1 1/32	2 5/8	9 3/4	60	15	Fits VF-31E Housing
ACO-31001L		1 5/16	3	9 3/4	75	20	Fits Purolator Vessel PR-172-3
ACO-40501SPL		1-12NF	3 3/4	5 1/2	60	10	Use with head SPH-2
ACO-40801L		1 3/4	4	8	100	13	Rellumit Replacement
ACO-40901SPL		1 3/8 -12NF	3 3/4	8 1/2	60	15	Use with head SPH-3
ACO-41201L		1 3/4	4	12 1/4	100	20	Replaces Facet C-707; Purolator Vessel PAG-50
ACO-41601L		1 3/4	4	15 13/16	100	27	Rellumit Replacement
ACO-41801L		1 3/4	4	18	100	30	Replaces Facet C-706 and Keene BP-419, BP-518
ACO-41901L		1 3/4	4	19 7/8	175	32	Rellumit Replacement
ACO-51201L		1 7/8	5 5/8	12 1/4	75	50	Fits VF-61 Housing
ACO-512P3L	0.3	1 7/8	5 5/8	12 1/4	75	50	Fits VF-61 Housing
ACO-60801L	0.5	3 1/2	6	8 1/4	100	30	Omeco 6" x 8" Replacement
ACO-60901L		1 1/2	6	9 11/16	100	36	Fits Fram/Facet VFCS-21 (Element CC-21-7); VF-609
ACO-609P3L	0.3	1 1/2	6	9 9/16	100	36	Fits Fram/Facet VFCS-21 (Element CC-21-7); VF-609
ACO-61201L	0.5	1 1/2	6	13 3/4	100	48	Fits Fram/Facet VFCS-22 (Element CC-22-7)
ACO-61401L		3 1/2	6	14 1/2	175	58	Qualified to EI 1583
ACO-62201LTB		3 1/2	6	22	175	88	Qualified to EI 1583
ACO-62901L		3 1/2	6	28 3/4	175	115	Qualified to EI 1583
ACO-63301L		3 1/2	6	33 1/4	175	133	Qualified to EI 1583
ACO-64401L		3 1/2	6	43 1/4	175	173	Qualified to EI 1583
ACO-64401LTB		3 1/2	6	44	175	176	Qualified to EI 1583
ACO-71801L		2 1/2	6 1/4	18	75	65	Fits VF-71E Housing

TECHNICAL INFORMATION:

- Maximum operating temperature is 160°F
- Micron ratings are nominal at 98%+ efficiency
- Aquacon® Cartridges can significantly reduce flow when loaded with water or dirt. Appropriate precautions should be taken in applications where fuel flow must be maintained or where surge conditions can occur.
- Replace the cartridge if the differential pressure exceeds 25 psid. For service life information, please refer to Operating Procedure # 1839 or consult your company fuel handling procedures.
- Typical water holding capacity for ACO-61401L is 700 ml.

NOTE: 1/2 micron rated Cartridges are recommended for use with jet fuel and avgas. Effluent fuel quality meets requirements for EI 1583.
CAUTION: DO NOT USE WITH PRE-MIXED FUELS CONTAINING ANTI-ICING ADDITIVES



VF-61 DIFFERENTIAL PRESSURE GAUGE

For Use with VF-61, VF-61E, VF-62

Item code: 10678

This unit measures pressure difference between two points. The gauge allows for a simple reading on an easy-to-read scale. A red/green dial with a breakpoint located at 15 psid alerts the user of the condition of the process.

This kit consists of the following components:

- Differential Pressure Gauge: aluminum body, 1/8" NPT bottom, 1" molded lens & 0-20 psid scale.
- Compression Fittings: 4 x straight, 2 x 90° elbows.
- 1/4 O.D. Copper Tubing (optional stainless tubing for jet fuel applications).

OPERATION:

When the needle is in the green zone of the gauge during normal flow, the differential pressure is less than 15 psid across the installed element, and the element does not need to be changed out.

When the needle is in the red zone, the differential pressure is more than 15 psid and the element should be changed out. It has reached its recommended maximum pressure differential.

CAUTION:

Do not mount the P/N 10678 differential pressure gauge assembly any closer than 2" from a steel bracket or pipe. The gauge has a magnetic piston, and mounting too close to steel may affect the accuracy.

