

The Clarifier

ACO & ACOX for General Aviation Use



The time to get the SAP out is NOW!



Parker Velcon 5" and 6" diameter ACO filter cartridges use Super Absorbent Polymer (SAP) to adsorb and chemically lock-in water as fuel passes through them. The low pressure, o-ring design is used in our Parker Velcon models; VF-609,

VF-61, VF-62 and VF-65 filter housings.

Additionally, Parker Velcon fabricates and offers equivalent models for competitor's filter housings. These combinations of ACO and similar SAP competitor equivalents utilized in *single-stool* vessels are not, nor have they ever been qualified to any Energy Institute (EI) specification. Single-stool filter elements were designed and tested to meet the effluent fuel requirements of EI-1583 however, as stated, were **not qualified** to meet this specification.

Unlike SAP filter monitors, ACOX elements can be used in fuel containing FSII.

When EI withdrew 1583 (December 2020), they began developing EI-1587 - *Recommended Practice For Single Cartridge Filtration Units For Aviation Fuel*. As of this writing, EI has not confirmed when the specification will be available however, there is progress being made to publish this specification soon. The EI-1587 specification will detail the use of single-stool filtration in various industry approved compact filter housings using existing qualified filtration technologies.

At this point, we recommend that our direct drop-in replacement ACOX water barrier filters be installed at time of your next SAP filter changeout. With the exact same technology as the CDFX, which is fully qualified to the latest EI-1588 specification, our ACOX will not allow water to pass downstream and of course, there is no SAP. The Aviation Fuel Industry is driving toward ZERO SAP in the system – using Water Barrier Filtration from Parker Velcon is a logical first step in the transition.

ACOX filter elements are currently available from your Parker Velcon Aviation Distributor.

To see our ACOX data sheet, [please click here](#).

See table below for the various ACOX water barrier filter model options that are available for the specific filter housing:

Filter Housing Model	Fuel	Flow Rate (GPM/LPM)	Element Model	Note
VF-61	Avgas	48/182	ACOX-512A	Effective against dirt and water. Can be used with fuel containing FSII.
	Jet			
VF-62	Avgas	96/363	ACOX-524A	Effective against dirt and water. Can be used with fuel containing FSII.
	Jet			
VF-609 and VF-21SB*	Avgas	36/136	ACOX-609A	Effective against dirt and water. Can be used with fuel containing FSII
	Jet			
VF-22SB* and VFH-1***	Avgas	48/182	ACOX-612A	Effective against dirt and water. Can be used with fuel containing FSII.
	Jet			
VF-61SS**	Avgas	56/212	ACOX-614A	Effective against dirt and water. Can be used with fuel containing FSII.
	Jet			
OPTIONAL DIFFERENTIAL PRESSURE GAUGE ASSEMBLY AVAILABLE: P/N 10678 FOR VF-61, VF-61E, VF-62 OR THE GAMMON DIFFERENTIAL PRESSURE GAUGE ASSEMBLY MODEL GTP-9700-A-1-1				
*Manufactured by Facet Filtration Group, **Manufactured by Warner Lewis ***Manufactured by Faudi Aviation				

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High Pressure ACOX

Regarding high pressure EI-1588 6" diameter ACOX elements to replace existing ACO models in 14", 29" 33", 38" and 44" lengths; due to complex design criteria and material requirements, the qualification to EI-1588 2nd Edition has been delayed slightly. However, we have numerous completed test elements on hand and will perform tests to confirm conformance to the specification soon. We expect to have these elements available for distribution in the near future.

Important Points to Remember:

- Neither ACOX nor CDFX require corrected dP because they do not capture water like SAP monitors. The requirement for a minimum 50% of maximum achievable flow rates are not applicable. Simply record the actual dP reading and stay within the 22 psi, as noted in our operational instructions:

Record differential pressure and flow rate. Change ACOX & CDFX® cartridges when differential pressure reaches 22 psid. Replace all cartridges if the differential pressure has dropped below the initial clean differential pressure reading.

- This is also noted in the *JIG Operations Bulletin 147 Requirements For WBF - Changes To JIG Standards:*

"dP correction is not applicable (as there is no correction algorithm) and the dP may temporarily rise in the presence of water in fuel and fall again for subsequent fueling operations if water has in the meantime been drained from the filter vessel."

- The use of blinds (dummy elements) is not required since minimum flow rates are not required as with SAP monitors. However, in operations with substantially oversized filter vessels operating at less than 50% maximum vessel rated flow, blinds may be installed to reduce the quantity of elements required to achieve the maximum flow rate.
- Consult your Velcon Distributor for further information about derating your filter vessel, dummy elements and the correct, decal needed for this conversion.

Parker | Velcon **BARRIER FILTER CONVERSION**

THIS VESSEL CONTAINS WATER BARRIER FILTERS THAT COMPLY WITH EI 1588 "LABORATORY TESTS AND MINIMUM PERFORMANCE LEVELS FOR AVIATION FUEL WATER BARRIER FILTERS, EDITION".

VESSEL MODEL NO.	VESSEL MANUFACTURER
<input type="text"/>	<input type="text"/>
PRODUCT	SERIAL NO.
<input type="text"/>	<input type="text"/>
PRESSURE RATING	<input type="text"/>
ELEMENT MANUFACTURER	<input type="text"/>
ELEMENT MODEL NO.	QTY. <input type="text"/>
MAXIMUM RATED FLOW	<input type="text"/>
VESSEL LID GASKET NO.	UNIT NO. <input type="text"/>
REPLACE ELEMENTS WHEN DIFFERENTIAL PRESSURES REACHES <input type="text"/> PSID	

PARKER HANNIFIN CORPORATION • AEROSPACE FILTRATION DIVISION
1210 GARDEN OF THE GODS ROAD • COLORADO SPRINGS, CO 80907 USA
TEL: +1 719 5315855 • FAX: +1 719 5315690 • WWW.VELCON.COM • WWW.PARKER.COM

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For questions or additional technical information, please contact your Parker Velcon Distributor, Parker Velcon Territory Sales Manager or Velcon Customer Service at afd.velcon.support@support.parker.com

Important Contact Information

Parker Velcon.....	vfsales@parker.com	+719-531-5855
Rob Guglielmi	robert.guglielmi@parker.com	+719-528-7224
Gene Johnson	gene.johnson@parker.com	+770-330-5286
Brad Pfeffer	brad.pfeffer@parker.com	+719-359-6748
Louis Miceli	louis.miceli@parker.com	+719-528-7242
Scott Thomas	scott.thomas@parker.com	+612-513-3627
Rick McKenna	rick.mckenna@parker.com	+719-528-7231
Anthony McAdams.....	amcadams@parker.com	+719-528-7223
Vessel Quotes	velconquotes@parker.com	
Customer Service	afd.velcon.support@support.parker.com	