



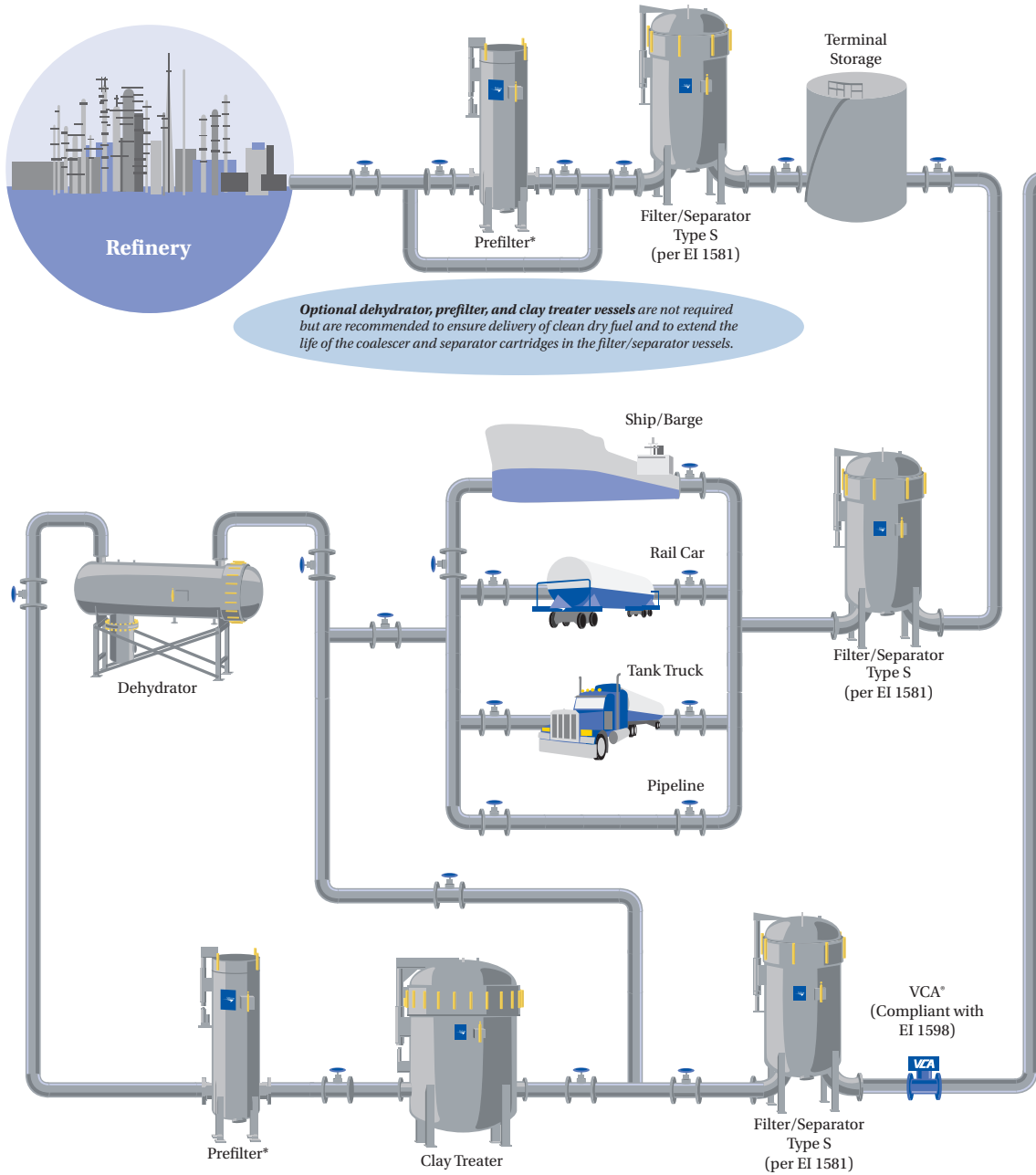
Filter Monitor Cartridges for Aviation Fuel Handling

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING **YOUR** SUCCESS.

Typical Distribution System for Clean Dry Aviation Fuel - Fuel Monitor

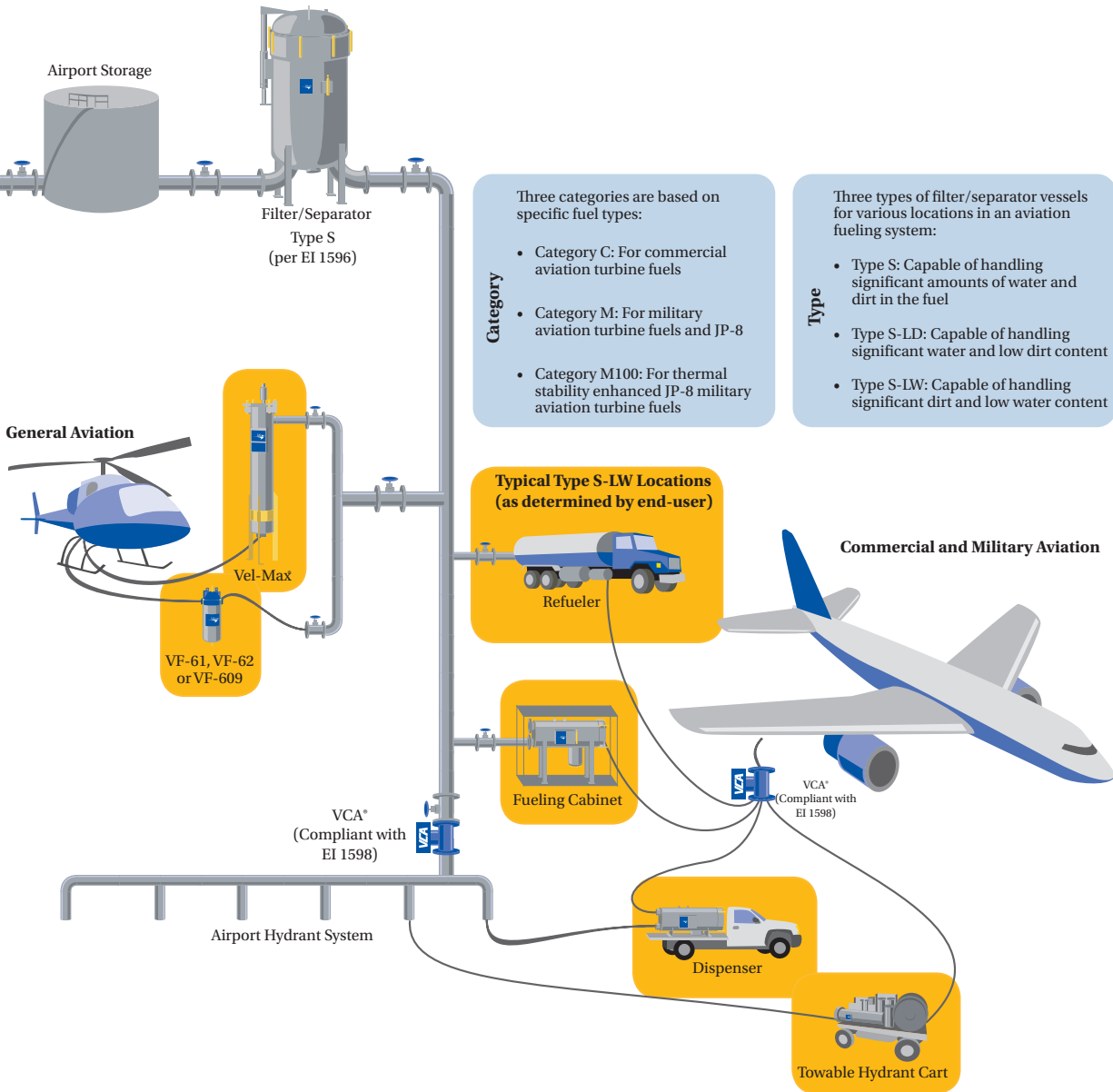


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* Prefilter elements compliance with EI 1590 and vessel compliance with EI 1596 is customer dependent.
 Optional EI 1583 Qualified Vessels/Absorbent Type Cartridges for jet fuel without anti-icing additive.

2" CDF[®] Fuel Monitor Cartridges

EI 1583 7th Edition Qualified Fuel Monitor Cartridges
CDF[®] Replacement Cartridges Assure Clean Dry Fuel
Delivery

FEATURES

- CDF[®] P SERIES are qualified to EI 1583 7th Edition specification for aviation fuel filter monitors
- IMPROVED SALT WATER PERFORMANCE
- CONDUCTIVE END CAPS and adhesive to reduce static charge within the vessel.
- O-RING SEAL minimizes the possibility of bypassing contaminated fuel at differential pressures up to 175 psi.
- RUGGED CONSTRUCTION collapse strength exceeds 175 psi differential pressure.

DESCRIPTION

The Parker Velcon CDF[®] P Series cartridges provide superior performance and reliability in standard fuel monitor housings through a unique combination of media that absorbs water and filters solids that might be present in the fuel while helping reduce static charge build-up inside the vessel.

The injection molded endcaps bond with the media and with the O-ring seal on the outlet end. This minimizes the possibility of bypassing contaminated fuel or transmission of water downstream at low flow rates.



As the cartridge removes water and/or contaminant from the influent fuel the pressure differential will increase along with a decrease in flow rate. These changes are the result of flow restriction caused by dirt retention or water absorption in the media. The rate of these changes depends on the quantity of water or contamination in the fuel.

ORDERING INFORMATION

Specify Parker Velcon model number from the cartridge selection table. CDF[®] Cartridges are packaged 20 per carton.

*****CAUTION*****

DO NOT USE WITH PRE-MIXED FUEL CONTAINING ANTI-ICING ADDITIVES.

EI SPECIFICATION 1583 7TH EDITION INFORMATION

Parker Velcon CDF® P Series Cartridges incorporate several structural features designed to meet the requirements of EI 1583 7th Edition including:

- Increased product conductivity to decrease the risk of electrostatic discharges
- Improved media structure to lower the risk of media migration
- Lower initial DP - a major factor for installations that require changing cartridges at 15 PSID.
- New structure that provides longer cartridge life in the presence of small amounts of water

Some of the requirements of the 7th edition of EI 1583 are:

- Partial Water Immersion Test
- Salt resistance tests
- Water slug test at low flow (10% of rated flow)
- Tests for trace SAP migration (≤ 50 ppb)
- Structural integrity test
- Low water (50 ppmv) at low flow (10% of rated flow)
- Testing for cartridge conductivity



SPECIFICATIONS AND TECHNICAL INFORMATION

- 175 psid (12 bar) collapse strength
- 0.5 micron rating
- 250°F (121.1°C) maximum operating temperature
- Recommended changeout differential pressure = 25 psid
- Typical water holding capacity for CDF-230P is 120 ml.
- For service life information, please refer to Operating Procedures VEL1839 or consult your company fuel handling procedures.

CARTRIDGE SELECTION TABLE

Cartridge Flow Rate USGPM	Velcon Model Number	Overall Length (in.)	Replacements for:	
			Facet Model Number	Faudi Model Number
5	CDF-205P	5 13/16"	FG-205 (-3, -4 or -6) GNG-205	M.2-134 (/4, /E or /6B)
10	CDF-210P	10 13/16"	FG-210 (-3, -4 or -6) GNG-210	M.2-261 (/4, /E or /6B)
15	CDF-215P	15 13/16"	FG-215 (-3, -4 or -6) GNG-215	M.2-387 (/4, /E or /6B)
20	CDF-220P	20 13/16"	FG-220 (-3, -4 or -6) GNG-220	M.2-515 (/4, /E or /6B)
25	CDF-225P	25 13/16"	FG-225 (-3, -4 or -6) GNG-225	M.2-642 (/4, /E or /6B)
30	CDF-230P	30 13/16"	FG-230 (-3, -4 or -6) GNG-230	M.2-770 (/4, /E or /6B)

Aquacon® ACO Aviation Fuel Filter Monitor Cartridges

El 1583 7th Edition Qualified Aviation Fuel Monitors. Remove Water and Dirt from Jet Fuel and Avgas



FEATURES

- Free and emulsified water removal to less than 5 ppm
- 1/2 micron particle removal
- Provides protection against “slugs” of water
- Pressure increase signals need for cartridge change
- Use with existing filter housings
- Improved configuration to help reduce risk of super absorbent polymer (SAP) migration downstream

DESCRIPTION

Patented **Aquacon®** Filter Cartridges have a unique high-capacity inner absorbent 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 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 micron 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.

Use Form VEL1846 for cartridge changeout recommendations at flow rates less than rated flow.

ACO CARTRIDGE SELECTION TABLE

Model Number	Micron Ratings (µm)	Inside DIA (in)	Out-side DIA (in)	Length (in)	Col-lapse Pres-sure (psi)	Max. Flow Rate (US-GPM)	Interchange Information
ACO-21001R	0.5	1 1/32	2 5/8	9 3/4	60	15	Fits VF-31E Housing
ACO-31001R	0.5	1 5/16	3	9 3/4	75	20	Fits Purolator Vessel PR-172-3
ACO-40801R	0.5	1 3/4	4	8	100	13	Rellumit Replacement
ACO-41201R	0.5	1 3/4	4	12 1/4	100	20	Replaces Facet C-707; Purolator Vessel PAG-50
ACO-41601R	0.5	1 3/4	4	15 13/16	100	27	Rellumit Replacement
ACO-41801R	0.5	1 3/4	4	18	100	30	Replaces Facet C-706 and Keene BP-419, BP-518
ACO-41901R	0.5	1 3/4	4	19 7/8	175	32	Rellumit Replacement
ACO-51201R	0.5	1 7/8	5 5/8	12 1/4	75	50	Fits VF-61 Housing
ACO-512P3R	0.3	1 7/8	5 5/8	12 1/4	75	50	Fits VF-61 Housing
ACO-60801R	0.5	3 1/2	6	8 1/4	100	30	Omeco 6" x 8" Replacement
ACO-60901R	0.5	1 1/2	6	9 11/16	100	36	Fits Fram/Facet VFCS-21 (Element CC-21-7); VF-609
ACO-609P3R	0.3	1 1/2	6	9 9/16	100	36	Fits Fram/Facet VFCS-21 (Element CC-21-7); VF-609
ACO-61201R	0.5	1 1/2	6	13 3/4	100	48	Fits Fram/Facet VFCS-22 (Element CC-22-7)
ACO-61401R	0.5	3 1/2	6	14 1/2	175	58	Qualified to EI 1583 7th Edition
ACO-62201RTB	0.5	3 1/2	6	22	175	88	Qualified to EI 1583 7th Edition
ACO-62901R	0.5	3 1/2	6	28 3/4	175	115	Qualified to EI 1583 7th Edition
ACO-63301R	0.5	3 1/2	6	33 1/4	175	133	Qualified to EI 1583 7th Edition
ACO-64401R	0.5	3 1/2	6	43 1/4	175	173	Qualified to EI 1583 7th Edition
ACO-64401RTB	0.5	3 1/2	6	44	175	176	Qualified to EI 1583 7th Edition
ACO-71801R	0.5	2 1/2	6 1/4	18	75	65	Fits VF-71E Housing

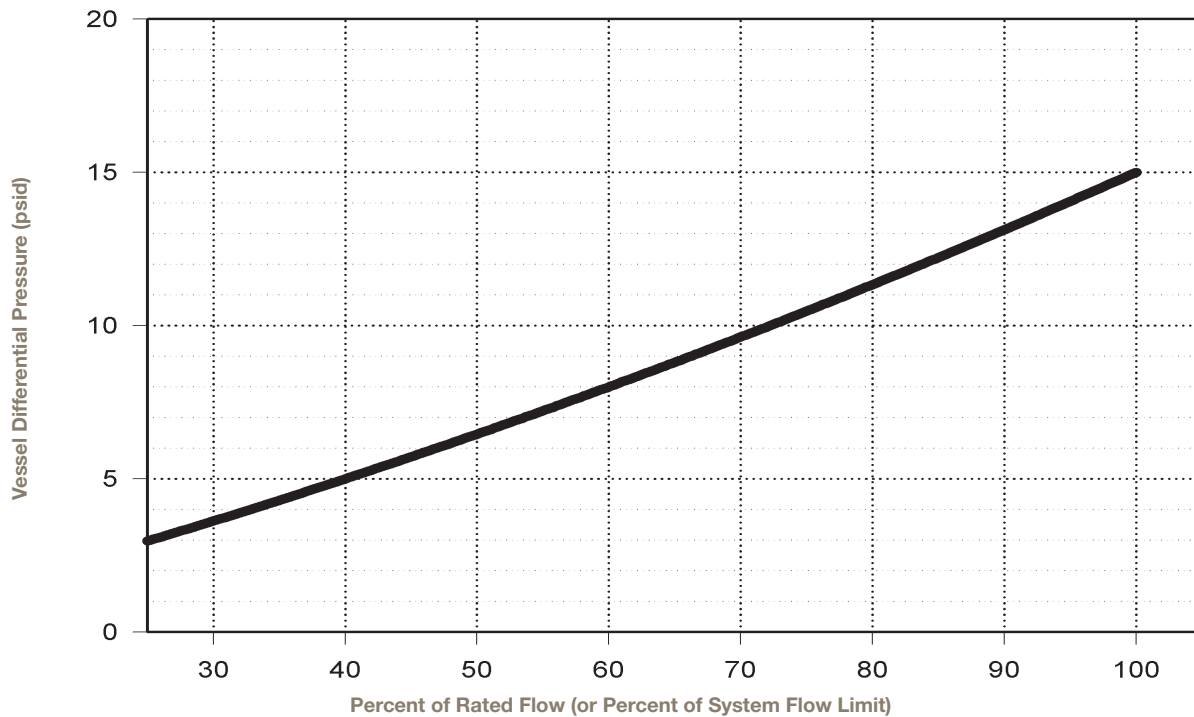
TECHNICAL INFORMATION

1. Max. operating temp.: 250°F (121.1°C)
2. Micron ratings are nominal at 98%+ efficiency
3. 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.
4. Replace the cartridge if the differential pressure exceeds 15 psid. For service life information, please refer to Operating Procedure VEL1839 or consult your company fuel handling procedures.
5. Typical water holding capacity for ACO-61401R is 700-800 ml.
6. All ACO 6 inch diameter filters are qualified to EI1583 7th Edition. Other diameters are based off of the 6 inch design and filter performance will have similar results.

NOTE: 1/2 micron rated **Aquacon**® Cartridges are recommended for use with jet fuel and avgas. Effluent fuel quality meets requirements for EI 1583 7th Edition.

CAUTION: DO NOT USE WITH PRE-MIXED FUELS CONTAINING ANTI-ICING ADDITIVES (FSII)

Cartridge Changeout Curve



Parker AFD recommends changing coalescer and monitor cartridges when the differential pressure reaches 15 PSID and the filter/separator is being operated at its rated flow. The system, however, will often be operating at lower flow rates with a corresponding lower differential pressure. If, for example, a 600 GPM filter/separator shows a differential of 12 PSID at 300 GPM and the flow rate increases to 600 GPM, the differential would be about 28 PSID, which is considerably above the recommended pressure drop for changing cartridges.

Therefore to know the pressure differential characteristics at lower flow rates for a set of coalescer cartridges which are plugged to the

extent that the differential pressure would read 15 PSID. The graph reflects differential pressure and percentage of rated flow information for Parker Velcon cartridges.

EXAMPLES:

A 1000 GPM filter/separator operating at 600 GPM (60% of rated flow) with a differential pressure less than 8 PSID, the cartridges do not require changing. If the differential pressure is 8 PSID or more, however, the elements are due for a changeout.

EXCEPTION:

If the system in the Example is limited to a maximum flow of 750

GPM by pump capacity or some other factor then 750 GPM should be considered 100% of rated flow rather than higher rating of the filter/separator. In this case, the 600 GPM flow would be 80% of rated flow and the differential pressure at this rate can be as high as 11.50 PSID without changing elements.

NOTE:

Decals of the above graph can be obtained from Parker AFD at 719-531-5580 or velconcs@parker.com and requesting decal VEL1979. These labels can be affixed to the vessel near the differential pressure gauge.