



# ACI *Aquacon*<sup>®</sup> Aviation Fuel Filter Cartridges

## Used as the “Final Defense” in Refuelers/Serviceers to Insure Water and Dirt are Kept Out of Aircraft

- Qualified to API/IP-1583 Monitor specifications
- 1/2 micrometer particulate removal
- Provide protection against “slugs” of water
- Pressure increase signals cartridge change
- Not affected by surface active agents\* (see caution info below)
- Replace existing coalescers in into-plane filter/separator vessels
- Inside-to-out flow pattern

### DESCRIPTION

Patented\* *Aquacon* Filter Cartridges have a unique high-capacity inner filter media 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 media and cannot be squeezed out.

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. Performance is not affected by the presence of surface active agents\* (see below).

The Velcon ACI open-end and threaded-base *Aquacon* Cartridges have been qualified to API/IP-1583, the “Institute of Petroleum Specifications and Qualification Procedures for Aviation Fuel Filter Monitors with Absorbent Type Elements.”

The ACI-6xx01L open-end and ACI-6xx01LTB threaded base *Aquacon* elements are intended to be installed in the final filter/separator vessel in place of coalescers for more positive protection against dirt and water downstream.

### \*\*\*\*\*CAUTION\*\*\*\*\*

In fuels containing anti-icing additive (Di-EGME, FSII, Prist<sup>®</sup>), stagnant water bottoms can absorb large amounts of the anti-icing additive. This water/FSII solution can disarm water-absorbing elements allowing water to pass downstream. Daily draining of the monitor vessel and of water bottoms upstream of the elements is **IMPERATIVE**. Also, changeout @ **15 psid**.

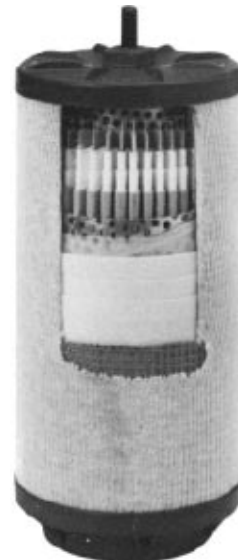


ACI-61401LTB



ACI-61401L

### ACI *Aquacon* Cartridge Construction



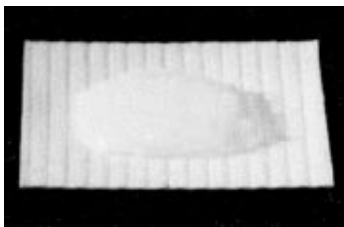
ACI-61401LTB Cutaway

\* U.S. Patent No. 4,242,206.

**Aquacon** absorbs water from aviation fuel and chemically locks it in – you can't squeeze it out!  
 Prove it with a squeeze test. Media samples available upon request.



1. Pour a small pool of water, about the size of a quarter, onto a smooth surface.



2. Place one of the media samples directly on top of the water. Note how the media swells as it absorbs and "locks in" the water.



3. Next, place the media sample between thumb and forefinger and squeeze – as hard as you wish. No free water is liberated.

## CARTRIDGE SELECTION TABLE

Model Number	O. D. Inches	Length Inches <sup>1</sup>	End-Cap Type	Maximum Flow Rate (USGPM)	Interchange Information
ACI-61401L	6	14 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	58	CC-N18, CA14-3, CA14-9
ACI-61401LTB	6	14	Screw Base/Blind	56	CC-N18SB, CA14-3SB, CA14-9SB
ACI-62201L	6	22 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	89	CC-K2, CC-K28, CA22-3, CA22-9
ACI-62201LTB	6	22	Screw Base/Blind	88	CC-K28SB, CA22-3SB, CA22-9SB
ACI-62901L	6	28 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	115	CC-N28, CA28-3, CA28-9
ACI-62901LTB	6	27 <sup>15</sup> / <sub>16</sub>	Screw Base/Blind	111	CC-N28SB, CA28-3SB, CA28-9SB
ACI-63301L	6	33 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	133	CC-K38, CA33-3, CA33-9
ACI-63301LTB	6	33	Screw Base/Blind	132	CC-K38SB, CA33-3SB, CA33-9SB Has NSN: 4330-01-439-2314
ACI-63301FL	6	33 <sup>3</sup> / <sub>8</sub>	2" ID Open-Ends	133	Faudi F. 1-842 (1.066.020)
ACI-63801L	6	38 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	153	CC-K38-1, CA38-3, CA38-9
ACI-63801LTB	6	38	Screw Base/Blind	152	CC-K38SB-1, CA38-3SB, CA38-9SB
ACI-64401L	6	43 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	173	CC-N38, CA43-3 CA43-9
ACI-64401LTB	6	44	Screw Base/Blind	176	CC-N38SB, CA43-3SB, CA43-9SB
ACI-65601L	6	57	3 <sup>1</sup> / <sub>2</sub> " ID Open-Ends	228	CC-N48, CA56-3, CA56-9
ACI-65601LTB	6	56 <sup>1</sup> / <sub>16</sub>	Screw Base/Blind	224	CC-N48SB, CA56-3SB, CA56-9SB


**Note:** Drain vessels equipped with the ACI **Aquacon** Cartridges on a daily basis from an upstream drain to ensure upstream water is removed to prolong element life.

## TECHNICAL INFORMATION

- Maximum exposure temperature is 160°F.
- Cartridges are rated at 1/2 micron nominal efficiency.
- Aquacon** Cartridges completely shut off flow when loaded with water or dirt.
- Replace the cartridge if the differential pressure exceeds 25 psid.<sup>2</sup> For service life information, please refer to Operating Procedure # 1839 or consult your company fuel handling procedures.
- ACI burst strength exceeds 175 psid. If F/S vessel coalescer deckplate or manifold is not certified to 15 bar (220 psi) strength, a differential pressure limiting device, set from 25 - 30 psid, should be installed on the filter/separator vessel.

<sup>1</sup> Overall length does not include the 1" bolt for the ACI-6xx01LTB threaded base ACI's.

<sup>2</sup> 15 psid is acceptable in fuel with anti-icing additive.



Velcon products are sold and serviced by a world-wide representative network. To order, contact Headquarters or your **LOCAL REPRESENTATIVE:**

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