

VCA®

Velcon Contaminant Analyzer
Real-time Full Flow Aviation Fuel
Condition Monitoring



Benefits

- Ability to differentiate between water and solid particulates allows for a greater diagnostic accuracy of contamination sources
- Completely transparent & contained operation
- Initiation of operation by internal flow switch
- Automatic shutdown will stop flow as soon as wet or dirty fuel is sensed
- Contaminant Measurement/Standards:
 - Particulates in Milligrams Per Liter
 - Water in Parts Per Million



Contact Information: Product Features:

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- Fully Compliant with EI 1598 Second Edition
- Differentiate between free water and dirt in fuel
- Detects both simultaneously
- Flow sensor operates VCA® only during fueling (US Patent No. 7,518,719)
- Full flow analysis – no sampling errors
- Isokinetic Compliance
- Minimal Pressure Loss
- Fouling Resistant Windows
- Visual alarm and deadman cut-off switch in case of dirty fuel or wet fuel
- Real-time PC-Based Graphical User Interface for data viewing/capturing
- Real-time RS-232 Data Stream to tie into Data Management Systems (optional)
- Easy installation cable/wiring
- Optional Data Telemetry and On-line Data Viewing/Storage System



ENGINEERING YOUR SUCCESS.

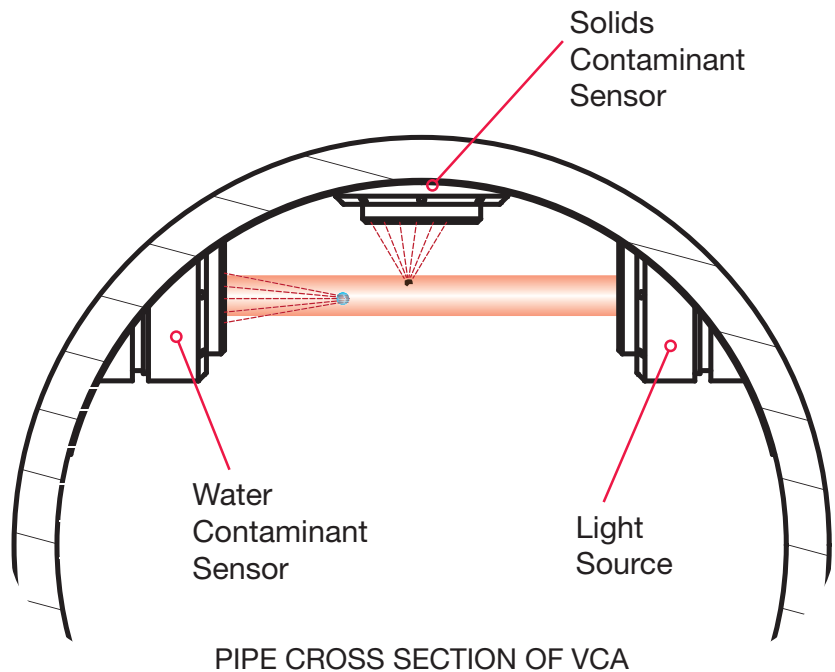
Description

The VCA® uses laser sensing technology to ensure that the fuel loaded onto commercial airliners is clean and dry. In the event of wet or dirty fuel (or both), the system can act as a final state quality check downstream of last filtration and shut down the fueling operation and alert the user with minimal amount of contaminated fuel reaching the plane.

As a “full-flow” analyzer, the VCA mounts within a fuel delivery system thereby providing a true representation of the pipeline contents. Other technologies rely on sampling only a small amount of fuel drawn from the main pipeline—a process often completed at very low flow rates, referred to as side-sampling. The VCA analyzes fuel at flow rates higher than 1000 gallons per minute through a 4-inch pipeline. Side-sampling has substantial difficulty in accurately representing contamination in high fuel-flow applications.

Particle counters fail to differentiate with precision between water and solid contaminants thereby producing erroneous results. The VCA uses two separate sensor technologies to consistently differentiate between water and solid contaminants.

The VCA analyzes the contents of flowing fuel in a pipeline approximately 600 times a second, and outputs an averaged result every two seconds in mg/l and ppm. The VCA is an ideal tool to either measure the quality of fuel at receipt, assuring agreed upon cleanliness specification are met. The VCA provides data to reassure the user that fuel cleanliness is within limits and where not, may be set to alarm or signal a system shut down.



Product Specifications

MEASUREMENT/STANDARD

- Particulate Contaminant: mg/l (milligrams per liter)
- Water Contaminant: ppm (parts per million)

MECHANICAL

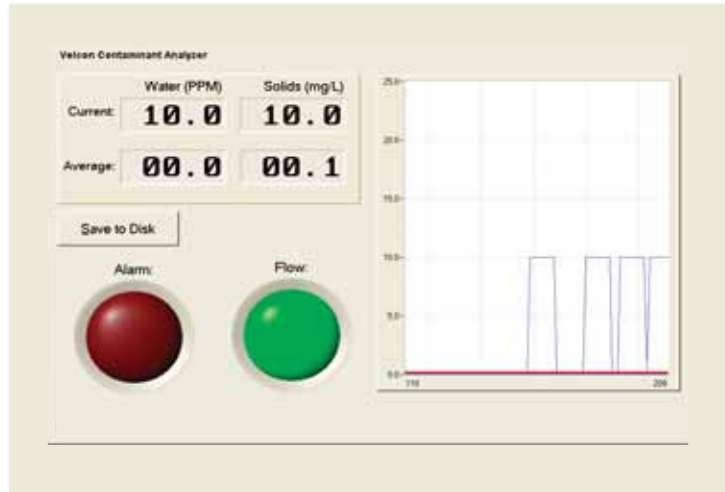
- Pressure Rating: 150 psi (10 bar)
- Flange Class: ANSI 150
- Flange Sizes: 3 & 4 in. (Other sizes available, please contact Parker HFFD)

ELECTRONICS

- Configurable Output Control Alarm Relay
- Certification: Class 1 Zone 2, IP65, NEMA 4x
- Cable Length: 15 ft (4.57 m)
- Requirements: 12-36VDC 4A or 110-240VAC
- Control Box Dimensions: 12"W x 16"H x 8"D

DATA OUTPUT

- PC-Based Interface
 - Graphical User Interface (GUI)
 - Real-Time Data
 - Scalable data graphing
- Local Data Storage
 - On-Board Data Logging (CSV)
 - User Configurable Alarms (Current & Average Values)
 - Downloadable to USB Storage Device
- Additional SCADA integration (optional)
- GPRS Telemetry (in development)
 - Cellular Network
 - Online Reporting
 - Server secure data

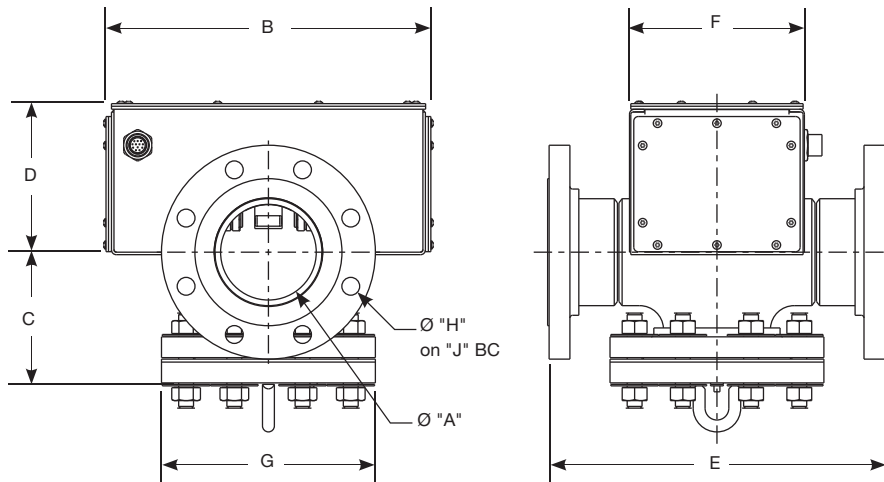


Real-time Data:
Water and Solids Concentration



Per Fueling Session:
E-mail Field Data Reporting
(with cellular telemetry option)

Dimensions



| Part Number | Dimensions mm (in) | | | | | | | | |
|-------------|--------------------|-------------------|----------------|------------------|-----------------|----------------|----------------|-------------|----------------|
| | A | B | C | D | E | F | G | H | J |
| VCA-A3 | 76 (3) | 348 (13 11/16) | 121 (4 3/4) | 144 (5 11/16) | 346 (13 5/8) | 206 (8 1/8) | 191 (7 1/2) | 19 (3/4) | 152 (6) |
| VCA-A4 | 102 (4) | 348 (13 11/16) | 140 (5 1/2) | 159 (6 1/4) | 362 (14 1/4) | 187 (7 3/8) | 229 (9) | 19 (3/4) | 191 (7 1/2) |

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