

# Particulate & Water Contaminant Analyzer

## VCA® Series. Real-time Simultaneous Monitoring of Particulate and Water Contaminants

### DESCRIPTION

The Parker Velcon Contaminant Analyzer (VCA) system with a proper filtration system can provide assurance that the fueling system receives, maintains, and dispenses fuel that meets ASTM D975 and ISO 4406 cleanliness levels.

As a “full-flow” analyzer, the VCA mounts within a fuel delivery system thereby providing a true representation of the pipeline contents. The VCA analyzes fuel at varying flow rates but it can also analyze fuel at rates higher than 1000 gallons per minute through a 3 or 4-inch pipeline (contact Velcon for other sizes).

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, ppm, and a representative ISO 4406 code.

The VCA is an ideal tool to either measure the quality of fuel at receipt, assuring agreed upon cleanliness specification are met, or at dispensing points. The VCA provides data to reassure the user that fuel cleanliness is within limits, and where not, it can be set to alarm or signal delivery system shutdown.

### BENEFITS

- Ability to simultaneously differentiate between free water and solid particulates allows for a greater diagnostic accuracy of contamination sources
- Fuel quality accountability upon receipt with record of fuel quality at dispensing point
- System alarm or relay signal to shutdown control when fuel contaminant level is exceeded
- Reduce equipment downtime by preventing particulate and water from entering fuel storage
- Fuel system peace of mind with real-time constant monitoring of fuel condition
- Fully Compliant with EI 1598 Second Edition
- 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
- 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 On-line Data Viewing/Storage System



VCA - U.S. Patent No. 7,518,719  
VCA-CV - U.S. Patent No. 8,498,750

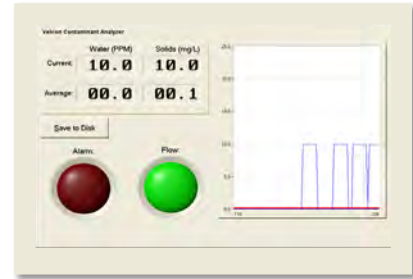


ENGINEERING YOUR SUCCESS.

**PRODUCT SPECIFICATIONS**

- Contaminant Measurement/ Standard
  - Particulate Contaminant
    - mg/l (milligrams per liter)
    - ISO 4406 Reference Codes
  - Water Contaminant
    - ppm (parts per million)
- Mechanical
  - Pressure Rating: 150 psi (10 bar)
  - Flange Class: ANSI 150
  - Wetted Materials: Powder Coated Steel, Stainless Steel, and Glass
- Electrical
  - 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)



Real-time Data:  
Water and Solids Concentration



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

**Part Numbers:**

**For Aviation:**

VCA-A3 for 3" DIA

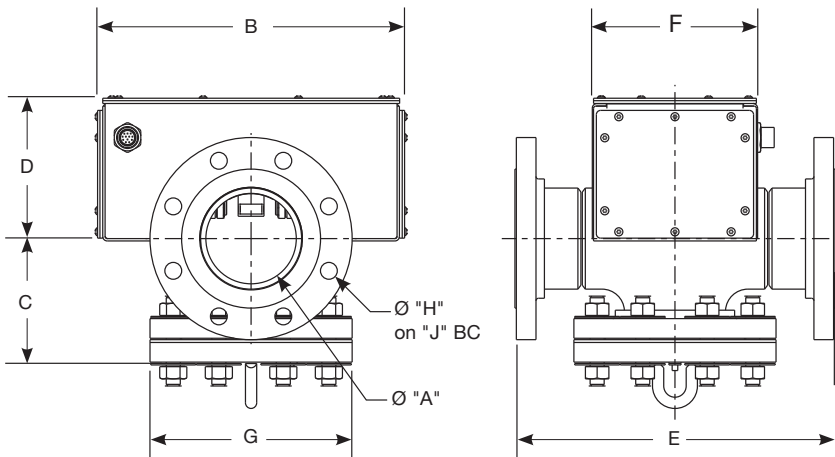
VCA-A4 for 4" DIA

**For Diesel:**

VCA-D3 for 3" DIA

VCA-D4 for 4" DIA

**DIMENSIONS**



Pipe Diameter (in.)	Dimensions in (mm)								
	A	B	C	D	E	F	G	H	J
3	3 (76)	13 1/16 (348)	4 3/4 (121)	5 1/16 (144)	13 5/8 (346)	8 1/8 (206)	7 1/2 (191)	3/4 (19)	6 (152)
4	4 (102)	13 1/16 (348)	5 1/2 (140)	6 1/4 (159)	14 1/4 (362)	7 3/8 (187)	9 (229)	3/4 (19)	7 1/2 (191)

Dimensions shown are for estimating purposes only. For exact dimensional detail, please contact Parker AFD or your Parker representative.