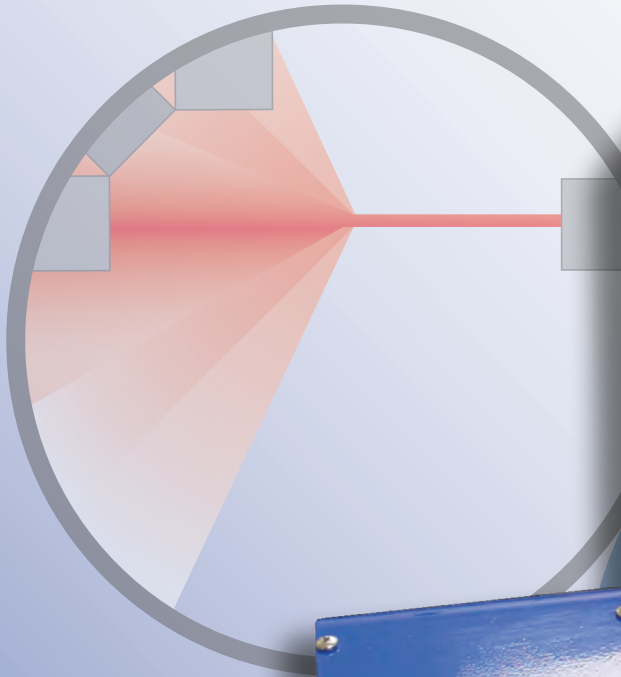




Velcon Contaminant Analyzer

VCA®



VCA® is a registered trademark of Velcon Filters, LLC.



Final Protection from Contaminated Fuel

DESCRIPTION

The VCA® uses laser sensing technology to insure that the fuel being 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 stage quality check downstream of last filtration and shut down the fueling operation and alert the user with a minimal amount of contaminated fuel reaching the plane.

BENEFITS

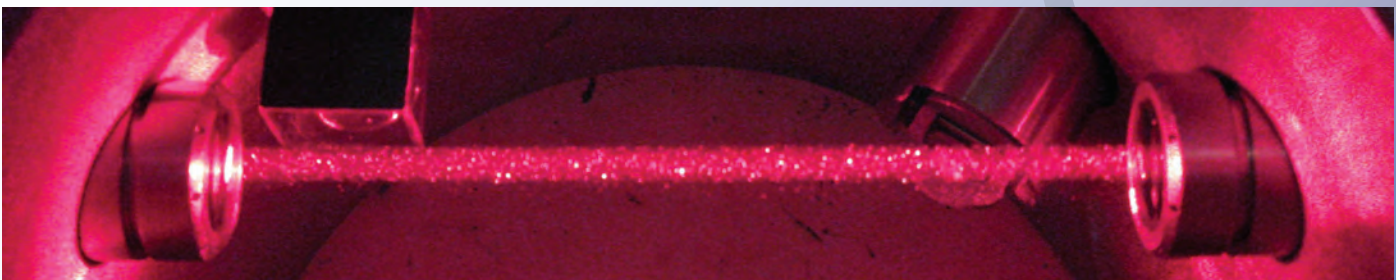
- Ability to differentiate between water and solid particulates allows for a greater diagnostic accuracy of contamination sources
- Completely transparent & contained operation:
 - » Initiation of operation by internal flow switch
 - » “In-situ” calibration that does not require removal for service
- Automatic shutdown will stop flow as soon as wet or dirty fuel is sensed

UNIQUE FEATURES

- Differentiates between free water and dirt in fuel
 - » Detects both simultaneously
- Flow sensor operates VCA® only during fueling (US Patent No. 7,518,719)
- Automatic calibration (US Patent No. 7,518,719)
- Full flow analysis – no sampling errors
- Isokinetic Compliance
- Minimal Pressure Loss
- Fouling Resistant Windows
- Visual alarm and deadman cutoff switch in case of dirty 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 Online Data Viewing/ Storage System



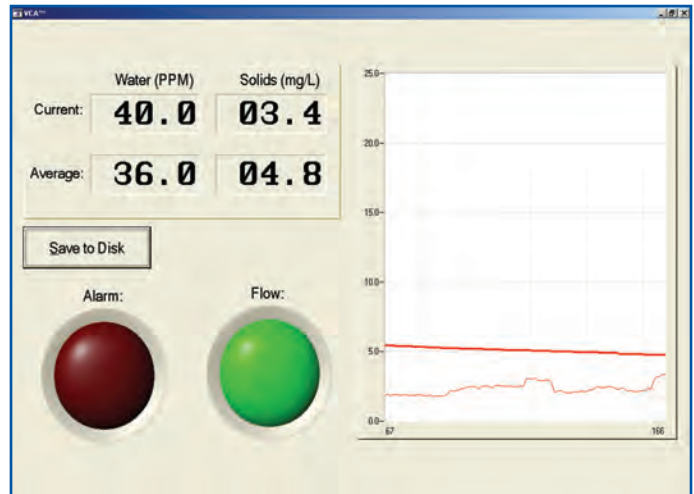
VCA® in fixed installation (VCA-03AEX)



VCA® DATA MANAGEMENT

PC-Based Graphical User Interface (GUI)

- Real-time data
- Current and average data
- Graphable, scaleable
- Flow indicator
- Alarm indicator
- Save data to disk
- Windows® XP or higher



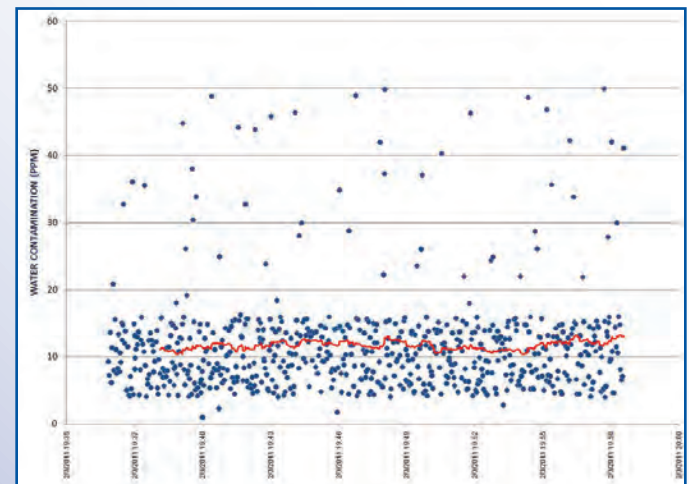
PC Based GUI for real time contamination viewing

Velcon Laboratories			
Velcon Contaminant Analyzer			
Field Test Report			
Report Date:	11/20/2010	Report ID:	568
Report Time:	10:45:54 AM	Session ID:	11254
Customer:	[REDACTED]	Site Name:	[REDACTED]
Fuel Type:	Diesel 02	Location:	[REDACTED]
VCA Model#:	VCA-07AEX	Latitude:	42.22565892
VCA Serial#:	119237	Longitude:	-103.66589436
Test Objective: To ascertain water and solid contamination levels in Diesel 02 during a refueling session at the above location.			
Test Conditions:			
Condition:	Sunny	Humidity:	25%
Temp:	36F (BC)	Wind:	W at 22 mph
Refueling Started:	10:10:54 AM	Refueling Duration:	31 minutes
Refueling Ended:	10:41:54 AM	Total Samples Taken:	419
Test Results: Alarm triggered due to contamination exceeding specified levels.			
Solids Contamination		Water Contamination:	
min(solids):	7.36202 mg/l	min(water):	1.26362 ppm
max(solids):	7.36202 mg/l	max(water):	1.26362 ppm
avg(solids):	7.362020016 mg/l	avg(water):	1.263620019 ppm
Page 1 of 3 Velcon Filters, LLC www.velcon.com 1-800-375-3333 169.22.33.231			

Sample email report generated by the telemetry system

GPRS Data Telemetry

- GSM or CDMA Network Versions
- Real-Time Updating
- Comprehensive Contamination Reports via Email
- All Quality Data Stored on Private Secure Server
- Enterprise Systems available
- US and European Systems available

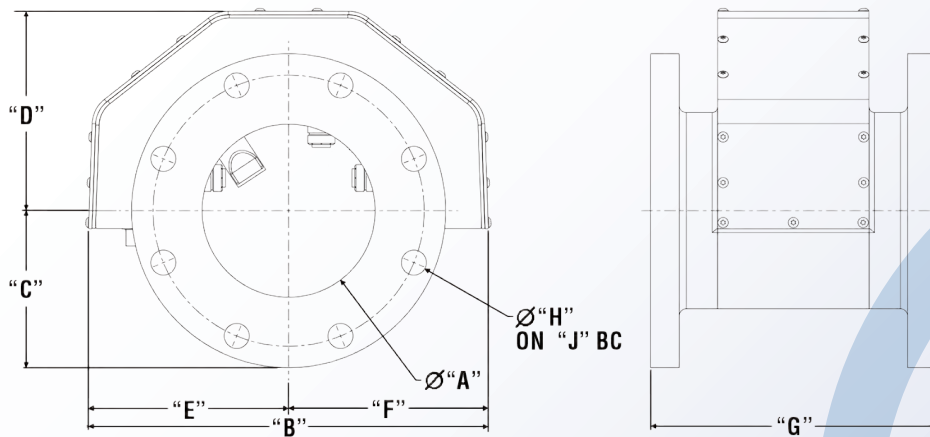


Detailed contamination distribution chart (telemetry system)

Third Party RS-232 Data Properties

- Real-time data stream
- RS-232, 8-N-1 Format (8 bits, No parity, 1 stop bit)
- Useable by any serial data device
- Updates every 3-4 seconds
- Current and average data
- Flow / No Flow Indicator
- Alarm Indicator
- Formatted for data acquisition systems

DIMENSIONAL DATA



FLANGE CLASS OPTIONS

- 150- Standard
- 300
- D80
- D100
- D150
- D250
- D300

Model Number	DIMENSIONS (Inches/ mm)								
	A	B	C	D	E	F	G	H	J
VCA-03	3.07/ 77.98	12.06/ 306.32	4.00/ 101.60	6.00/ 152.40	5.90/ 149.86	5.90/ 149.86	10.0/ 254.00	0.75/ 19.05	6.00/ 152.40
VCA-04	4.00/ 101.60	14.00/ 355.60	4.50/ 114.30	7.00/ 177.80	7.00/ 177.80	7.00/ 177.80	10.0/ 254.00	0.75/ 19.05	7.50/ 190.50
VCA-06	6.06/ 153.92	14.00/ 355.60	5.50/ 139.70	7.00/ 177.80	7.00/ 177.80	7.00/ 177.80	10.0/ 254.00	0.88/ 22.35	9.50/ 241.30
VCA-10	10.75/ 273.05	20.28/ 515.11	8.00/ 203.20	10.25/ 260.35	10.14/ 257.56	10.14/ 257.56	14.38/ 365.25	1.00/ 25.40	15.25/ 387.35

All VCA® housing material - A0356 T6 cast aluminum
For Explosive HAZ certification, add Ex to the end of the Model Number

ELECTRICAL SPECS

- 9-36 VDC 18W, or 120-240 VAC
- NEMA 4x enclosure w/ alarm light (IP 65)
- Screw connect hazardous location cabling
- Key switch available

OUTPUTS

- Alarm/ deadman with off signal
 - » 12VAC, 0.8-1.2A output
 - » Visual Alarm
 - » Must have access to deadman control
 - Real-time GUI
 - Real-time RS-232 (8N1) Data Stream*
 - Real-Time Data Telemetry (GPRS)*
- *Optional

Note: Hazardous location certification available.
EU/IEC: Ex nA op is IIA T5 Gc (CE II 3 G)

STANDARD FEATURES

- PC Based GUI
- HAZ LOC Cert
- AC-DC Voltage Converter
- 15 Feet (4.5m) Cable Length

ACCESSORY OPTIONS

Part	Part Number
Serial Data Extender	904Y505
Solar Panel Charge System	904Y507
Third Party Data Stream	904Y509
GPRS Data Telemetry	904Y511
Modular User Display with LCD Readout	904Y512

For assistance please visit the VCA Configuration Guide at
<http://www.velcon.com/Sensors/vcaconfig.html>



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

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