

Data Sheet

J. M. CANTY PORTABLE FUEL

Lube Oil Particle & Water Analyzer



Supplied by

247able.com

Call us on +44 (0)118 916 9420 | Email info@247able.com

CANTY

PROCESS TECHNOLOGY

PORTABLE FUEL / LUBE OIL PARTICLE & WATER ANALYZER



THE CANTY ADVANTAGE

The presence of solid particles and water in lubricating oils, hydraulic oils, and fuel can be problematic as they increase wear of moving parts, clog system filters and promote corrosion throughout the system. Detecting solids and water in these oils and fuel is crucial in managing the operation of equipment and enhancing its effective life cycle. Knowledge of particle shape, in addition to particle count per mL, enables the user in many cases to assess the type of particulate present and its cause which can assist in pinpointing future points of system failure and preventing them.

Combining the latest in high speed gigabit ethernet camera technology along with Canty's high intensity lighting, portable design, and imaging software, the system provides real time particle analysis of solids, water and air bubbles in oils and fuels. The method involves flowing the lubricating or hydraulic oil between a microscopic camera and high intensity light source. Images are then analyzed under a number of different parameters to provide size, shape and concentration data. As per ASTM D7596, particles in oil are classified under sliding / cutting / fatigue wear, nonmetallic particles, fiber particles, water droplets & air bubbles to provide a comprehensive understanding of the condition of the fluid, and indicate where and how possible failures are likely to occur. The portable design allows for in testing in the field leading to the quickest and most reliable results possible.

FEATURES

- **Measuring Principle as per ASTM D7596 & ASTM D8049**
- Data reporting to ISO4406 and D8072
- Detects and discerns solids, water and air in fuels and oils - no imaging instruments cannot discern
- Visual Verification
- Ethernet Connectivity
- Intuitive Software Interface
- Measurement to 0.7 μ m
- Portable design for field testing
- High intensity lighting for maximum magnification

APPLICATIONS

- Lubrication Oil Analysis
- Jet Fuel Analysis
- Diesel Fuel Analysis
- Turbine Oil Analysis
- Bunker Fuel Analysis

BENEFITS

- Independent Reading Of Water & Solids
- Portable design for field testing
- Record Video For Later Analysis
- Optional Save Video & Images If Needed
- Visual Verification of reading
- Sub classification of solid particles based on shape analysis

SPECIFICATIONS

- Compression fittings, NPT, tri-clamp, and luer Lock Connections Available
- Particle Size Range = .7 - 480 micron
- 120 V AC / 60 Hz or 240 V AC / 50 Hz
- Variable Gap

CANTY

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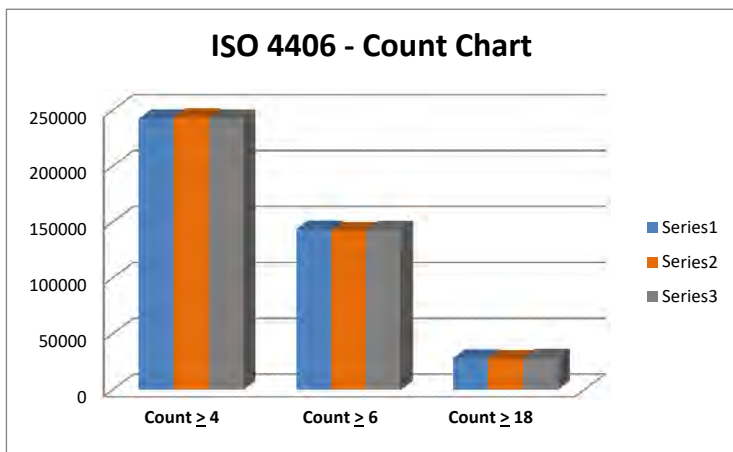
ORDERING INFORMATION

PART NUMBER (120 V AC)=

PLB - A G 1 K 6 1 B 1 2 A Z

PART NUMBER (240 V AC)=

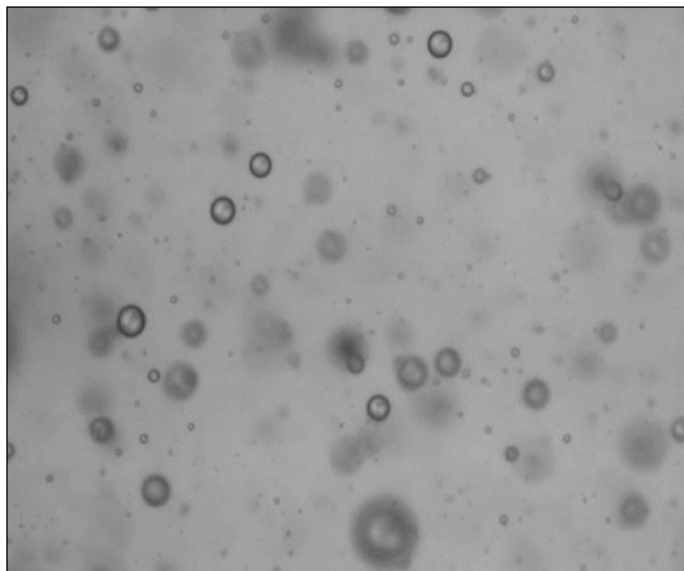
PLB - A G 1 K 6 2 B 1 2 A Z



ISO > 4	ISO > 6	ISO > 14
25	24	22
25	24	22
25	24	22

Count & size data output

Data reporting to ISO 4406



Visual images to verify contamination



Compact Portable Case

Data Sheet

J. M. CANTY PORTABLE INFLOW™



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PROCESS TECHNOLOGY

PORTABLE INFLOW™

Combining the latest in Ethernet technology with CANTY fused glass, LED lighting and CANTYVISION™ software, the INFLOW™ Process Particle Analyzer provides real time particle size and shape analysis. The Portable Multiphase Meter models measure 0.7 micron - 20,000 micron particles under process conditions. By continuously



measuring the product OIL, WATER, SAND, and GAS the OiW / WiO is continually analyzed. This allows the user to see the impact of any change to the refining or drilling system. By using a vision based system CANTY can easily detect all phases and separate them to give PPM/PPB distribution as well as SIZE distribution of all particulates.

No sampling or lab analysis is required! The CANTY INFLOW™ has been engineered to offer the user a means to measure OiW/WiO monitoring online and real time. The INFLOW™ offers continuous, microscopic, non-destructive viewing and provides particle size analysis with two dimensional results. NO BUILDUP on product lens due to superior fused glass design. Superior lighting allows crude oil to become easy to monitor. CANTYVISION™ software is installed on weatherproof laptop, and connected to the INFLOW™ measurement system via Gigabit Ethernet network. Live images of the process can be viewed from any networked PC. The live images are remotely analyzed by CANTYVISION™ software.

The camera and light are into the process stream and away from the wall which, is made possible by the Fuseview™ sight glass, which allows the optical fused pieces to be located in the center of the fluid stream, which is unique to the CANTY system. The fused glass seal contains no gaskets, ledges, or steps allowing the highest velocity, representative sample and keeps the sensor clean, even in the harshest of environments (polymer, crude oil, drilling mud, epoxy, etc.). The fused glass seal location keeps the sensor in line with the process temperature to avoid the product build up due to thermal change. The image processor can be configured with multiple zone sensing on the image of the fluid. The results from the zones can be compared to base line values for reliability and alarm on detection of a problem. A fixed InFlow™ unit is also available for hook up to process lines.

FEATURES

- 0.7 micron - 20,000 micron Particle Size Options. See Part Number.
- Gigabit Ethernet Connectivity
- Real Time Monitoring Of CIP In Flow
- Supplied With Internal O-ring Seals
- Easily Installed Modular Unit
- Fused Glass Process Barriers
- Regulated LED Light Source Emits Cold Light To Prevent Product Bake-On
- OPC, 4-20mA Current Loop, EXCEL spreadsheet and Relay Outputs Are Available

ADVANTAGES

- Oil / Water / Sand / Gas Count and Characterization
- PPM / PPB Output
- Oil in Water detection
- Water in Oil detection
- Crude Oil
- Various Process Connection Sizes Available
- Fully Cleanable Unit
- High Throughput
- Provides Both A Real Time, In Flow Measurement And A Continuous Real Time View Of The Product

PARTICLE SIZE ANALYSIS

- Replaces and Correlates to Screen Analysis
- Distribution By Major, Minor Diameter
- Visually Verifiable Results Via Live Images
- Particle Area
- Histogram Distributions - Bin Size
- Percent Passing by Volume vs. Size
- Particle Perimeter
- Full EXCEL data logging
- Many Library Functions

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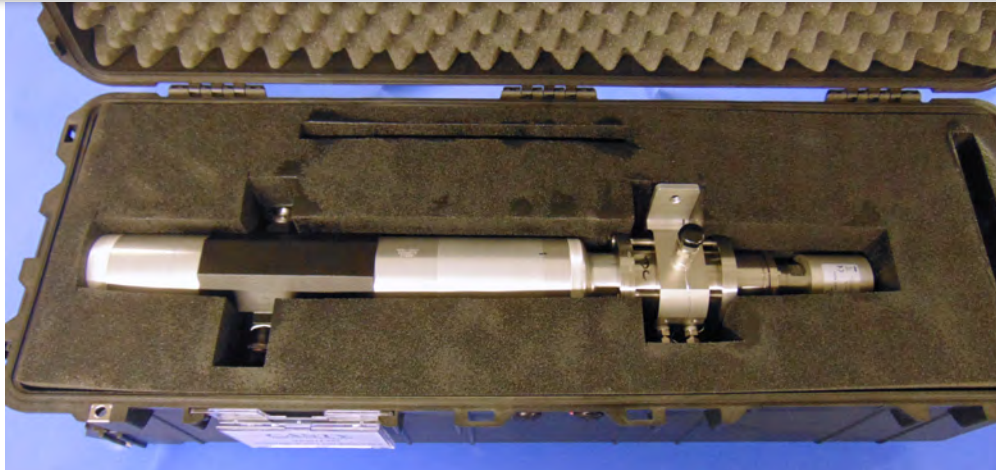
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TECHNICAL SPECIFICATIONS



CASE (OPTIONAL)



POWER SUPPLY

Notes:

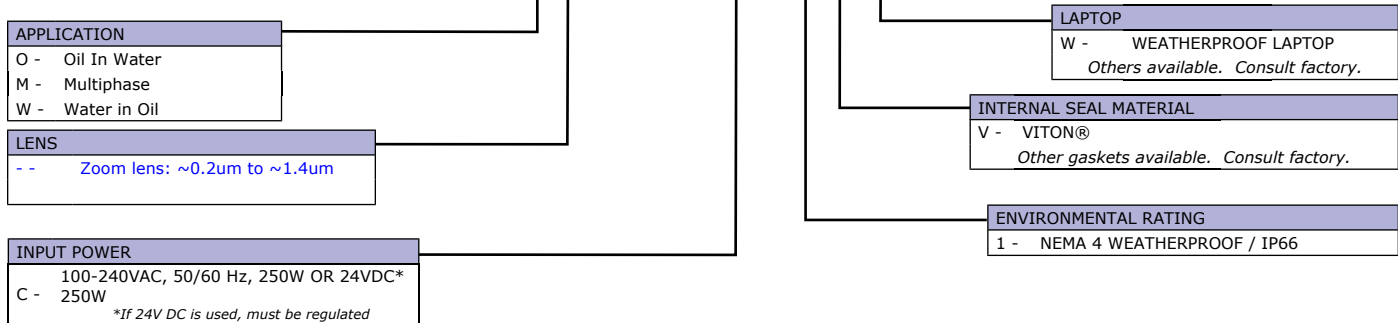
- A. Camera and Light PSUs must be located within 100 feet of the unit. The Camera Power Supply enclosure has the same environmental rating as the system.
- B. Small gap sizes used with samples that do not stay uniformly distributed may require verification of the data with a Cauty MicroFlow™.

Ordering Information

HOW TO ORDER: Select the appropriate symbols and build a part number :

EXAMPLE:

PIF - B 0 1 1 C



STANDARDS	
CONNECTION TYPE:	Compression Fitting
CONNECTION SIZE:	1/2" (12.7mm)
PRESSURE RATING:	500 PSI/ 35 BAR
WETTED METAL MATERIAL:	316L Stainless Steel

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