



### PROCESS TECHNOLOGY

# MACROFLOW™ PARTICLE SIZING SYSTEM



### THE CANTY ADVANTAGE

The Canty Macroflow™ is a unique vision system designed to analyze particles in suspension on a macro scale using CantyVision™ software. Particles are analyzed in real time for two dimensional size, shape, and color. A sample or continuous flow is analyzed under actual operating conditions of temperature and pressure. The image sensor is a high resolution, high speed CCD camera coupled to an adjustable macro-zoom lens system to cover a wide range of particle size. Ethernet controlled zoom and focus capabilities with preset calibration options for multiple lens settings are offered. Canty Fuseview technology is incorporated into the structure. Fused glass far exceeds all other windows in safety and performance. Canty fiberoptic cold lighting is integrated into the Macroflow™ design, so no additional heat is introduced into the process. The rugged construction allows for use in the field as well as in the lab. The flush design has no pockets and provides a seamless flow pattern where particles can be analyzed without concerns of attrition or damaging effects.

# **APPLICATIONS**

- Measure dissolving rates for soluble material
- Polymer Bead Growth and Shape Analysis
- Mining and Aggregate Particle Size
- Color Analysis for Lab or In-line
- In-Line Particle Size for Process Control
- Gel, Emulsion and Bubble Classifier
- Micro-Reactor Analysis Dual Inputs and Flush Loop with Sanitary Connections
- Percent Solids / Turbidity
- End Product Quality Control and Lot Certification
- Replace Laser and Sieve with Two Dimensional Distribution by Shape

# **FEATURES**

- Particle Size, Shape and Distribution with Real Time Analysis
- Fused Glass Pressure Barrier Standard
- Rated 150 PSI @ 500 Deg. F., Options Through 6,000 PSI.
- On-line or Lab Plus (remote control)
- Seamless Design. Unit Can Be Orientated Horizontal or Vertical
- In-Line Dilution Port
- Instantaneous Mixing Port
- Regulated Temperature Option
- Bypass Loop Option Available for Flow Control
- 3/4 Inch Sanitary Connections Standard











O-RING & SANITARY GASKET MATERIAL

(O-Ring-Teflon® encapsulated silicone)

A - Viton®

B - BUNA C - EPDM

D - Silicone

F - Chemraz®

THERMAL REGULATION

and 1/2" deep flowpath included

2 - Internal thermal heat exchanger

3 - 2 Thermal wells for Ø 3/16" rod

1 - Fixed gap based on gasket thickness, full cell

FLOW PATH SPACING CONTROL (GASKET -TEFLON®)

width 4 3/8", 1/4" deep and 1/2" deep flowpath

2 - Fixed gap based on gasket thickness, w/ centering

shape (venturi). Center cell width 1", 1/4" deep

flowpath 3/8" OD tubing connection

heating elements (elements not included)

WETTED METAL MATERIAL

D - Hastelloy® C276 or equal

E - Hastelloy® C-22® or equal

- INPUT POWER

1 - 120V AC / 60 Hz 2 - 230V AC / 50 Hz

B - 316L Stainless steel

E - Kalrez®

G - Teflon®

1 - None

included

### **Ordering Information**

HOW TO ORDER: Select the appropriate symbols and build a model number as shown:

### **EXAMPLE:** MAC - L A 1 K 1 1 B 2 1 A Z

TYPE -

L - Laminar Flow

H- High Pressure

# SYSTEM VIDEO FORMAT -

- A EIA (US B&W) 640 x 480
- B NTSC (US Color) 640 x 480
- C CCIR (European B&W) 768 x 576
- D PAL (European Color) 768 x 576
- E Ethernet (Color) 1600 x 1200, 800 x 600
- F Ethernet (B&W) 1600 x 1200, 800 x 600
- G Gigabit Ethernet (B&W) 1600 x 1200 H - Gigabit Ethernet (Color) 1600 x 1200

# **ENVIRONMENTAL RATING -**

- 1 Lab unit (General purpose enclosure)
- 2 NEMA 4 weatherproof, IP 66
- 3 Lab Plus (Ethernet remote control)
- 4 Explosion proof (US-120 V) or Flameproof (Europe-230 V)

### SYSTEM ILLUMINATION -

- K Backlight
- L Darkfield
- M Cross Polarized
- N Amplified / Focused
- P Phase Contrast

### PARTICLE SIZE RANGE P.S. View P.S. Measure

1 - (4.8μm - 6,000μm) (10μm - 1,200μm) w/ 1/4" Deep flowpath @ 1600 x 1200 2 - (4.8μm - 12,000μm) (10μm - 2,400μm) w/ 1/2" Deep flowpath @ 1600 x 1200 3 - (10μm - 6,000μm)

(20µm - 1,200µm) w/ 1/2" Deep flowpath @ 800 x 600 (20µm - 2,400µm) w/ 1/2" Deep flowpath @ 800 x 600 (25µm - 1,200µm) w/ 1/4" Deep flowpath @ 640 x 480, 768 x 576 4 - (10μm - 12,000μm) 5 - (13µm - 6,000µm)

(25μm - 2,400μm) w/ 1/2" Deep flowpath @ 640 x 480, 768 x 576 6 - (13μm - 12,000μm) For smaller sizes refer to Microflow sheet TA9309-1.

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# Flow Diagram Flow Cell

# **SPECIFICATIONS**

- Power: 120V AC / 60 Hz (230V AC / 50Hz, models available)
- Weatherproof Seals on Camera and Light Source
- Gasket Materials: Teflon®

- 3/4 inch Sanitary flow connections (two in and two out, with two plugs)
- Optional Laboratory Flow Loop Sample Feed

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