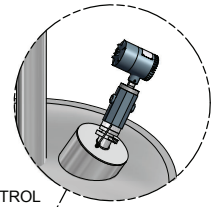


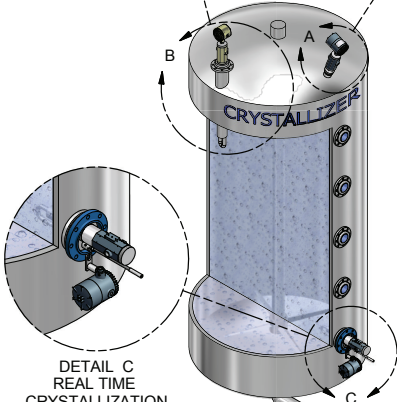
DETAIL B  
REAL TIME  
CRYSTALLIZATION



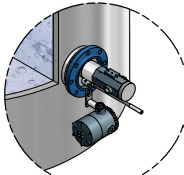
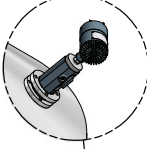
DETAIL A  
FOAM / LIQUID  
LEVEL



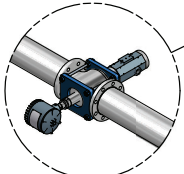
DETAIL K  
CENTRIFUGE CONTROL



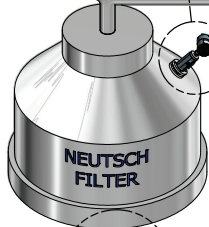
DETAIL L  
CAKE DETECTION  
"DRY LAND"



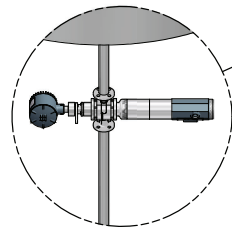
DETAIL C  
REAL TIME  
CRYSTALLIZATION



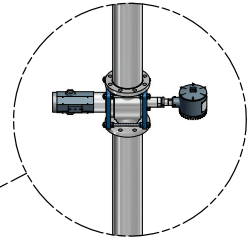
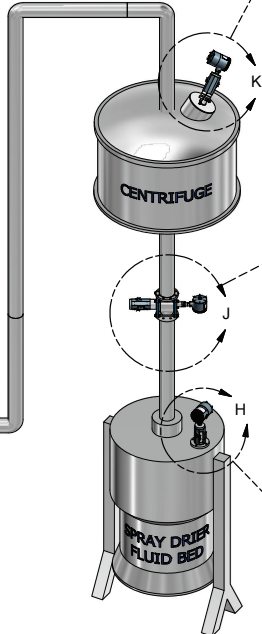
DETAIL D  
TURBIDITY  
PARTICLE SIZE



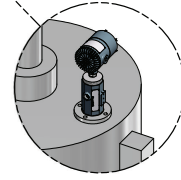
DETAIL E  
FILTER BREAK THROUGH  
OPACITY / TURBIDITY



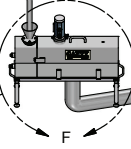
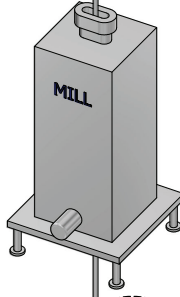
DETAIL E  
FILTER BREAK THROUGH  
OPACITY / TURBIDITY



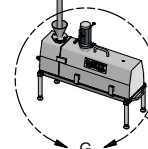
DETAIL J  
FILTER BREAK THROUGH  
OPACITY / TURBIDITY



DETAIL H  
CANTY VISION SYSTEM



DETAIL F  
ONLINE PARTICLE SIZE  
ANALYSIS / BLACK SPECK



DETAIL G  
ONLINE PARTICLE SIZE  
ANALYSIS / BLACK SPECK

# PHARMACEUTICAL & BIOTECH APPLICATIONS

# CANTY

## PROCESS TECHNOLOGY

## CAMERA SYSTEMS



### HOW IT WORKS

J.M. Canty cameras are patented systems designed to illuminate and view inside a pressure or process vessel through a single connection. There is no need for multiple vessel ports. Canty supplies an integrally mounted camera and lighting system (optional) in a connection as small as a 2" NPT. The industry standard video output can be displayed on a video monitor in the comforts of a control room, or recorded on any VCR. A standard video monitor or TV with video input may be used to display the image.

### CANTY LIGHTS MAKE IT POSSIBLE

The key to Canty Camera/Light combination systems is the Canty light. Canty uses fiber optic light guides to focus cool, effective light into a process vessel or area. Cool light eliminates product bake-over on the viewing window. Fiber optic light guides have been specifically designed to work in conjunction with cool light to maximize the light transmission into the vessel. The resulting live, remote video image from this illumination is unparalleled!

### THE COMPLETE PACKAGE

Canty can meet all your needs! Included as standard equipment on every camera system are power supplies, a high resolution B & W, color or Ethernet camera, pre-focused lens and WP, IP66, explosion proof or flame proof enclosure. What's more – all wiring and maintenance are external. Many optional monitors, recording and control options are available. All cameras can be easily integrated with a Canty Vector System for various process measuring and control functions such as non-contact level control, particle sizing, etc. Please consult the factory for details.

### APPLICATIONS

- Polymers – Verify empty, monitor level
- Crystallizers – Liquid and foam level
- Fermentors – Liquid and foam level
- High purity pharmaceutical applications
- Toxic Material – Remote viewing
- Foam and Fluid Level monitoring in:
  - Shredders
  - Nutsche Filters
  - Strippers
  - Hoppers
  - Latex Applications
  - Pressure Vessels

### FEATURES

- FM, CSA and approvals to CENELEC on various models. World wide approval!
- 10,000 PSI ratings are available
- Up to 2000° F capabilities
- 2" NPT, 2" flange and larger, 2" Tri-Clamp® and larger connections are available.
- High resolution CCD cameras – available in B&W and color, NTSC, PAL and Ethernet output.
- Remotely view your process from the comforts of a control room
- Single nozzle viewing/illuminating (with light)
- Remote light dimming options
- Spray rings are available to keep your window clean

### SPECIFICATIONS

CCD Sensor:	1/2" format. 811(H) x 508(V) typ.
Sensitivity:	Available from .0001 lux usable picture (low light B&W). 0.1 lux is typical (color). Varies with model.
Video Output:	1.0 V p-p, 75Ω typ.(analog) or Ethernet options.
Ambient Temp:	-30°C to 50°C
Current Req.:	500 mA typical
Cable:	RG 59/U, 75Ω coaxial cable suitable CCTV applications (analog) or Cat5e Ethernet (Ethernet Models)
Environmental ratings:	NEMA 4, IP66, Explosion proof (Class 1, Div. 1, Groups B, C & D, Class II, Div. 1, Groups E, F & G) or Flameproof EEx d IIC T6

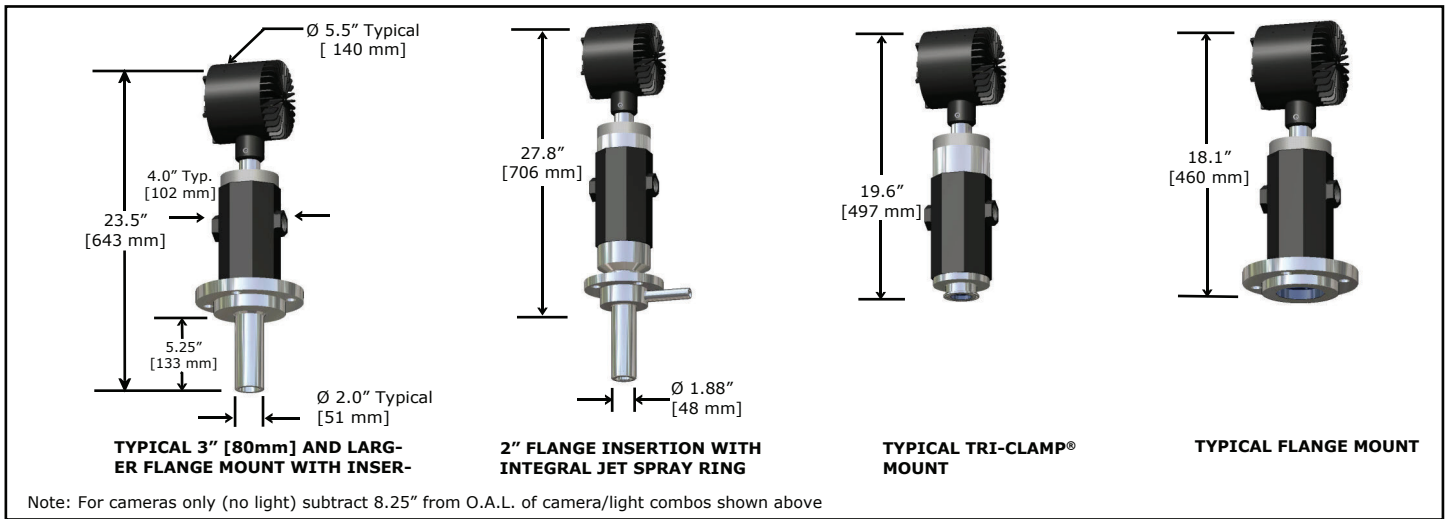
### OPTIONS

- Vector System - level/foam control, volume control, in-line particle sizing, color analysis
- Time/date generators – overlay time and date stamp onto video picture
- Data overlay – overlay pH, temp, pressure, etc. on-to video picture
- Fiber Optic Link – replaces coaxial cable, need for conduit

**CANTY**

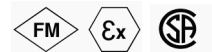
JM Canty Inc | Buffalo, NY USA | Ph: (716) 625 4227 | Fax: (716) 625 4228  
JM Canty Ltd | Dublin, Ireland | Ph: +353 (01) 882 9621 | Fax: +353 (01) 882 9622

[www.jmcanty.com](http://www.jmcanty.com)



### Ordering Information

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



**EXAMPLE:**

**V 6 B 2 1 B D 1 J**

**VISION SYSTEM**

- V - North American standard
- VE - European standard

**ENVIRONMENTAL RATINGS**

- 6 - NEMA 4 weather proof, IP66
- 7 - Explosion proof (US) or Flame proof (Europe)

**CAMERA OPTIONS**

- B - B & W camera
- L - Low Light B & W camera
- C - Color camera
- I - Infrared (near) B & W
- E - Ethernet Network Video camera

**LENS OPTIONS**

(Note: Some lenses are not available with certain mounting connections. Consult your binder for details)

- 2 - 56° (H) x 43° (V) x 69° (D)
- 3 - 69° (H) x 53° (V) x 80° (D)
- 6 - 41° (H) x 31° (V) x 50° (D)

**CAMERA POWER SUPPLY OPTIONS**

- 1 - [User supplies 120 V AC. Power supply in a non WP or EXP enclosure. User provides enclosure and switch as needed.](#)
- 2 - No power supply required.
- 5 - [User supplies 120 V AC. Power supply in a WP enclosure.](#)
- 6 - [User supplies 240 V AC. Power supply in an IP/WP enclosure.](#)
- 7 - [User supplies 120 V AC. Power supply in an EXP enclosure. PSU enclosure is rated Class I, Div 1, Groups C & D.](#)
- 8 - [User supplies 240 V AC. Power supply in non WP or FP enclosure. User provides enclosure and switch as needed.](#)

**WETTED MATERIAL OPTION**

- B - 316 L Stainless Steel\*
- D - Hastelloy® C-276 or equal
- E - Hastelloy® C-22® or equal
- F - Glass (BoroPlus™)\*\*

**LIGHT OPTIONS**

- G - HYL 80 1SRDO (240 V)
- J - HYL 80 1SRDO (120 V)
- N - Camera only - will not accept an integral light
- 0 - Combo w/o light - will accept an existing light (Note: Without a light source the camera cannot maintain WP or EXP integrity)

**NON WETTED MATERIAL**

- 0 - No flange required (if selecting a flanged model). Select this option when choosing NPT or Tri-Clamp® models also.
- 1 - 150 # carbon steel ANSI flange
- 2 - 150 # 316L stainless steel ANSI flange
- 3 - 300 # carbon steel ANSI flange
- 4 - 300 # 316L stainless steel ANSI flange
- 6 - 16 Bar carbon steel DIN flange
- 7 - 16 Bar stainless steel DIN flange
- 8 - 10 Bar carbon steel DIN flange
- 9 - 10 Bar stainless steel DIN flange

**MOUNTING CONNECTION**

Consult factory for additional sizes and ratings.

- B - 2" NPT, 5.25" insertion
- C - 3" ANSI flange
- D - 4" ANSI flange
- E - 2" ANSI flange
- F - 3" ANSI flange, 5.25" insertion
- G - 100 mm DIN flange
- H - 4" ANSI flange, 5.25" insertion
- J - 100 mm DIN flange, 5.25" insertion
- K - 2" ANSI flange, 5.25" insertion
- M - 3" Tri-Clamp® 5.25" insertion
- P - 4" Tri-Clamp® 5.25" insertion
- U - 4" Tri-Clamp®
- Q - 80 mm DIN flange
- S - 80 mm DIN flange, 5.25" insertion
- T - 2" ANSI flange, 5.25" insertion, with integral spray ring
- 2 - 2" Tri-Clamp®
- 3 - 3" Tri-Clamp®

**CANTY**

JM Canty Inc | Buffalo, NY USA | Ph: (716) 625 4227 | Fax: (716) 625 4228  
 JM Canty Ltd | Dublin, Ireland | Ph: + 353 (01) 882 9621 | Fax: +353 (01) 882 9622

[www.cantylight.com](http://www.cantylight.com)

Document Number: TA7259-1 Rev. 9

\*Canty reserves the right to upgrade to Hastelloy® C family of alloys or equal at their own cost  
 \*\* Not available with all models

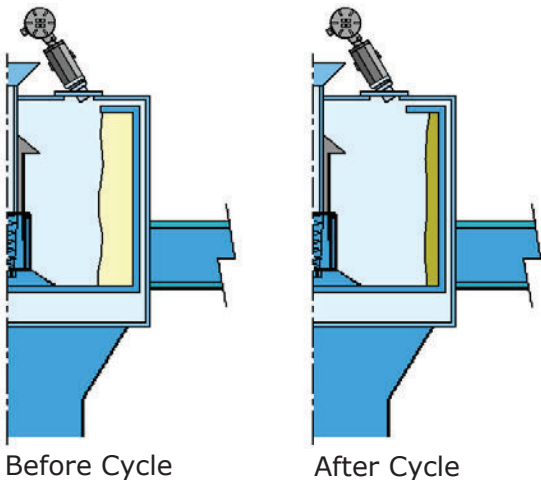
All registered trademarks are the property of their respective owners.

# CANTY

## PROCESS TECHNOLOGY

## CENTRIFUGE CAMERA CONTROL

### BASKET / PEELER STYLE

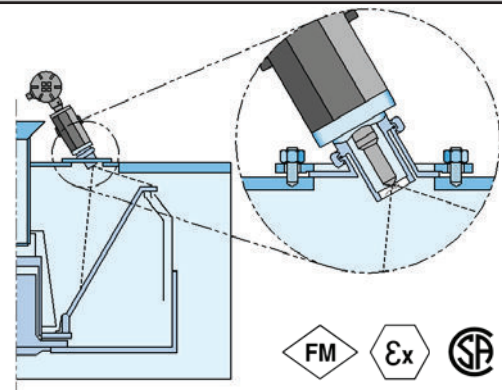


The Canty Camera / Light combination is Tri-clamp® mounted on to the existing light or sight port of the centrifuge to allow continuous internal viewing from the control room. In the control room, the Vector™ image processing computer will analyze this view and provide a 4-20mA output of fill level, filtering level, and a separate cake (solids) detection signal. The level control allows for consistent batching to the centrifuge. The cake detection 4-20mA output signal provides for immediate detection of solids, which prevent the cake from cracking. This means higher product yield due to fewer washes, and ultimately better product quality.

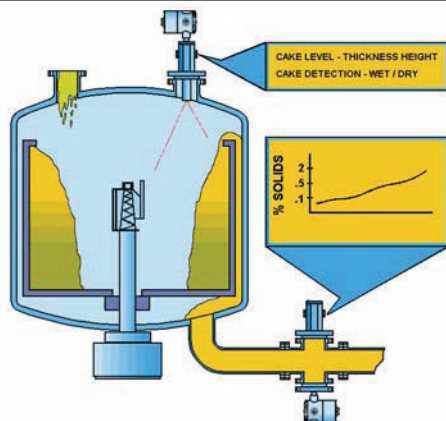
### CONTINUOUS / PUSHER STYLE

The Canty Camera / Light combination is used to view and control the color line on this type of centrifuge. This avoids operator error, optimizes recovery, and minimizes washing liquid by providing a 4-20mA output signal to continually control the color line.

In addition, a second reading off the Canty Vector™ System can be used to control the surface color of the product.



### DECANTER / INVERTED BASKET STYLE



The Canty Camera / Light combination views the liquid concentrate discharge from the centrifuge to determine color, % solids and broken particulate, and provides the 4-20mA output required for continuous control.

In addition, cake dryness can be determined if looking at the loss of liquid flow.

Cleaning is provided by a separate spray-tube.

**CANTY**

JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

Ph: (716) 625 4227  
Ph: + 353 (01) 882 9621

Fax: (716) 625 4228  
Fax: +353 (01) 882 9622

[www.jmcanty.com](http://www.jmcanty.com)

All registered trademarks are the property of their respective owners.

## Ordering Information

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

### Basket / Peeler Style

## CBB1100-60D

Wetted Material \_\_\_\_\_

- B = 316 Stainless Steel
- D = Hastelloy® C276

Camera / Light options \_\_\_\_\_

- 1 = 1SRDO (Toroidal light with dimmer)
- 2 = 1SDO (Standard light with dimmer)
- 3 = Remote flex bundle lighting (72" TYP.)

Environmental Rating \_\_\_\_\_

- 1 = Explosion Proof (120V)
- 2 = Flame Proof (240V)
- 3 = WP (120V)
- 4 = IP (240V)

Video Output \_\_\_\_\_

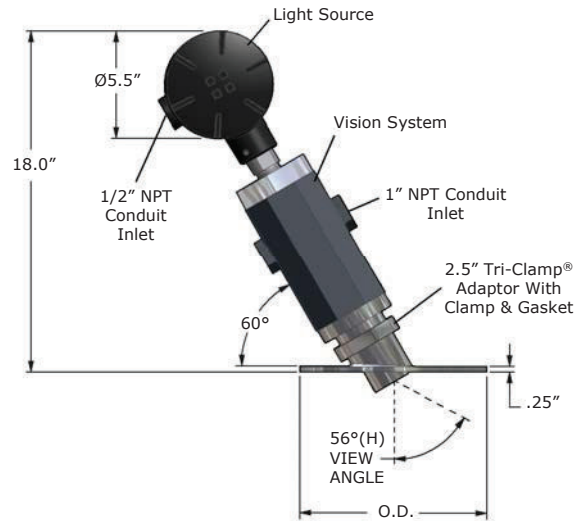
- 0 = EIA U.S. B&W Format
- 1 = CCIR Euro B&W Format
- 2 = NTSC U.S. Color Format
- 3 = PAL Euro Colour Format
- 4 = Ethernet, US Format \*
- 5 = Ethernet, Euro Format\*

Spraytube \_\_\_\_\_

- 0 = None
- 1 = Spraytube

Outer Diameter

Specify Outer Diameter in inches  
I.e. 6"



### Continuous / Pusher Style

Same part number structure as above. Consult factory if alternate mounting angle is required.

### Decanter / Inverted Basket Style (Sightflow mount)

## CDD13010B

Wetted Material \_\_\_\_\_

- B = 316 Stainless Steel
- D = Hastelloy® C276

Mounting options \_\_\_\_\_

- 1 = Flanged
- 2 = Tri-Clamp®

Size \_\_\_\_\_

- 2 = 2" (only in Flange Mount)
- 3 = 3"
- 4 = 4"

Video Output \_\_\_\_\_

- 0 = EIA U.S. B&W Format
- 1 = CCIR Euro B&W Format
- 2 = NTSC U.S. Color Format
- 3 = PAL Euro Colour Format
- 4 = Ethernet, US Format \*
- 5 = Ethernet, Euro Format\*

Environmental Rating \_\_\_\_\_

- 1 = Explosion Proof (120V)
- 2 = Flame Proof (240V)
- 3 = WP (120V)
- 4 = IP (240V)

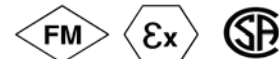
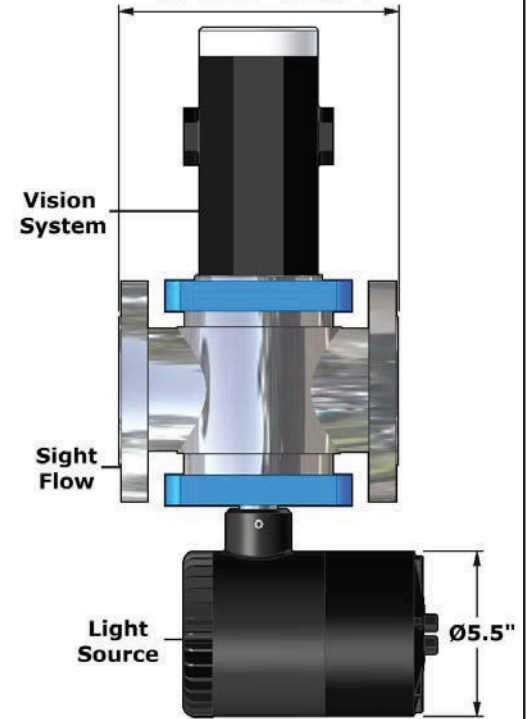
Spray Ring \_\_\_\_\_

- 0 = None
- 1 = Spray Ring

Gasket Material

- B = Buna
- V = Viton®

[2" Unit = 7.88"]  
[3" Unit = 9.38"]  
[4" Unit = 11.00"]



**CANTY**

JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

Ph: (716) 625 4227  
Ph: + 353 (01) 882 9621

Fax: (716) 625 4228  
Fax: +353 (01) 882 9622

www.jmcanty.com  
Document P/N TA9618-1 Rev. 5

\* qty. 5 client CantyVisionClient™ software included. No Vector required.

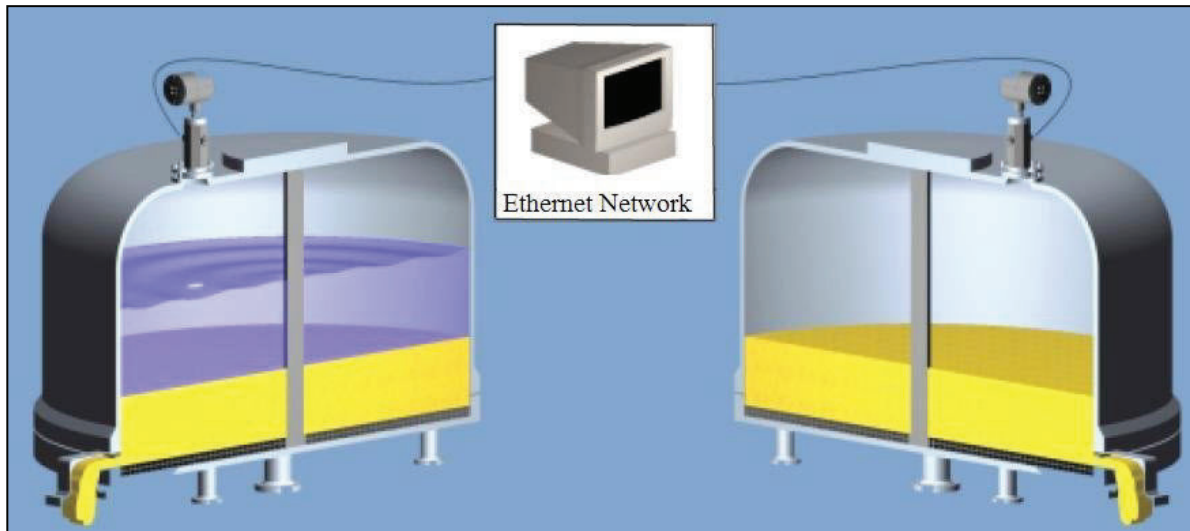
All registered trademarks are the property of their respective owners.

# CANTY

PROCESS TECHNOLOGY

## NUTSCHE FILTER PAT CONTROL SYSTEM

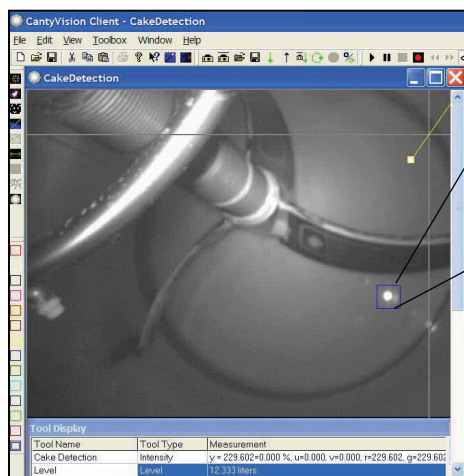
Process Analytical Technology



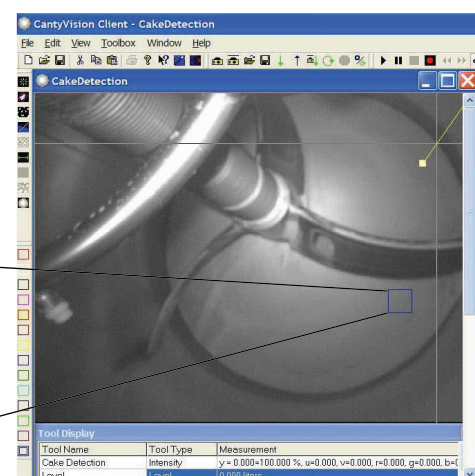
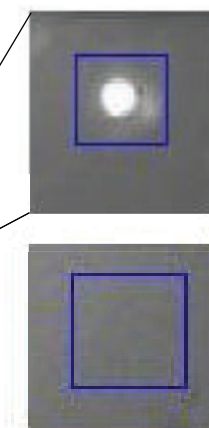
### THE CANTY ADVANTAGE

**Stop washing your product away!!!** Canty offers a unique vision based approach for non-contact cake detection and level measurement designed for Nutsche Filters. Cake detection is the determination of the transition from liquid slurry to solids "cake". It's critical to determine this transition in a timely manner to avoid cracking in the cake layer. Cracks will cause inconsistent washes and lost product. CANTYVISIONCLIENT™ software performs cake detection with image analysis in real time, by identifying the transition and generating an output signal for control to produce a homogeneous product without washing it away (through 4-20mA, OPC Interface, Modbus, etc...). Simultaneously, level measurement can be performed with the same vision system and crystallizer efficiency can be calculated. Combine this with an in-line Canty Crystalscope™ for true size and shape of crystals as they grow in real time for total process control. Operators can view the process at all times for visual verification and results are archived for historical record.

### CANTYVISION™ SOFTWARE IMAGES



**LIQUID SURFACE**



**CAKE SURFACE**

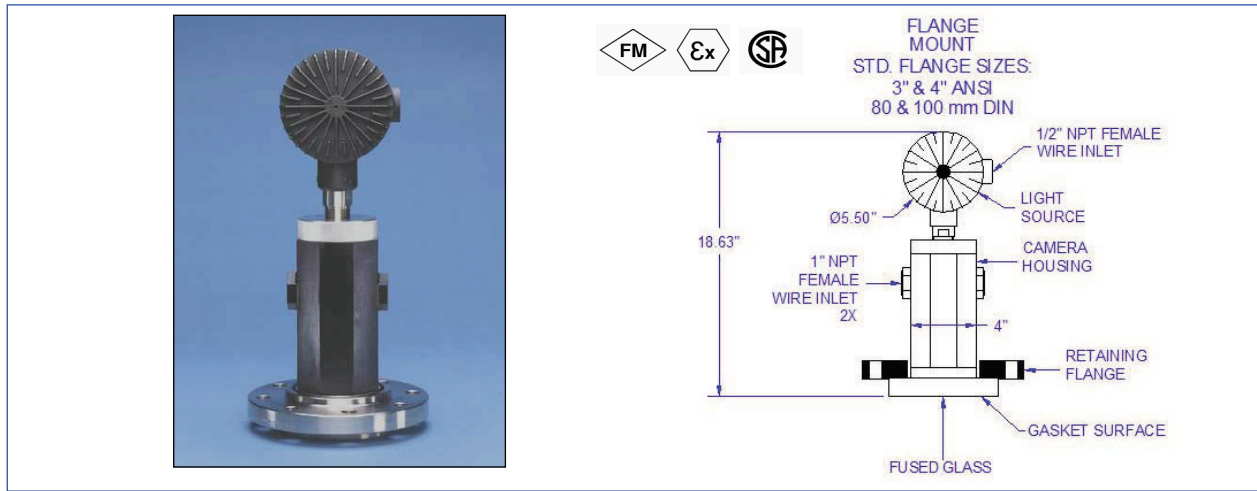
**CANTY** JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

Ph: (716) 625 4227  
Ph: + 353 (01) 882 9621

Fax: (716) 625 4228  
Fax: +353 (01) 882 9622

## Dimensional Information



## Ordering Information

How To Order : Select the appropriate options and build a part number as shown.

### Camera System:

### V7E21BC2J

VISION SYSTEM \_\_\_\_\_

- V - NTSC (North American standard)
- VE - PAL (European standard)

ENVIRONMENTAL RATINGS \_\_\_\_\_

- 6 - NEMA 4 Weather proof, IP66
- 7 - Explosion Proof (US) or Flame Proof (Europe)

CAMERA OPTIONS \_\_\_\_\_

- E - Ethernet Network Video

LENS OPTIONS \_\_\_\_\_

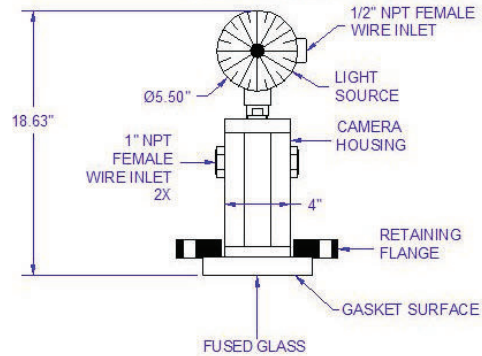
(Note: Some lenses are not available with certain mounting connections. Consult your binder for details)

- 2 - 56° (H) x 43° (V)
- 3 - 76° (H) x 62° (V)
- 6 - 41° (H) x 31° (H)

CAMERA POWER SUPPLY OPTIONS \_\_\_\_\_

- 1 - [User supplies 120 V AC. Supplied in a non WP or EXP enclosure. User provides enclosure and switch as needed.](#)
- 2 - No power supply required.
- 5 - [User supplies 120 V AC. PSU in a WP enclosure.](#)
- 6 - [User supplies 240 V AC. PSU in a WP enclosure.](#)
- 7 - [User supplies 120 V AC. PSU in an EXP /FP enclosure.](#)
- 8 - [User supplies 240 V AC. PSU in non WP or FP enclosure.](#)

FLANGE MOUNT  
STD. FLANGE SIZES:  
3" & 4" ANSI  
80 & 100 mm DIN



LIGHT OPTIONS

- G - HYL 80 1SRDO (240 V)
- J - HYL 80 1SRDO (120 V)

NON WETTED MATERIAL

- 0 - No flange required (if selecting a flanged model). Select this option when choosing NPT or Tri-clamp® models also)
- 1 - 150 # carbon steel ANSI flange
- 2 - 150 # 316L stainless steel ANSI flange
- 6 - 16 Bar carbon steel DIN flange
- 7 - 16 Bar stainless steel DIN flange
- 8 - 10 Bar carbon steel DIN flange
- 9 - 10 Bar stainless steel DIN flange

MOUNTING CONNECTION

Consult the factory for additional sizes and ratings

- C - 3" ANSI flange
- D - 4" ANSI flange
- G - 100 mm DIN flange
- Q - 80 mm DIN flange

WETTED MATERIAL OPTION

- B - 316L Stainless Steel
- D - Hastelloy® C-276
- E - Hastelloy® C-22®

### Optional Jet Spray Ring: SR1A1CA

CLEANING SYSTEM \_\_\_\_\_

- SR - Spray Ring

STYLE \_\_\_\_\_

- 1 - Open Channel

PRESSURE \_\_\_\_\_

- A - 150#
- 1 - 10 Bar
- 2 - 16 Bar

INSERTION LENGTH

- A - None (Flush Mount)

Connection Size

- C - 3" ANSI Flange
- D - 4" ANSI Flange
- J - 80 mm DIN Flange
- K - 100 mm DIN Flange

MATERIAL CONSTRUCTION

- 1 - 316L Stainless Steel
- 4 - Hastelloy® C-276
- 5 - Hastelloy® C-22®



JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

Ph: (716) 625 4227  
Ph: + 353 (01) 882 9621

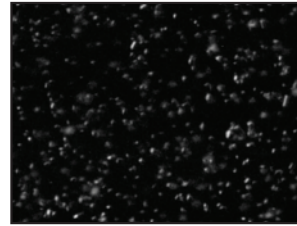
Fax: (716) 625 4228  
Fax: +353 (01) 882 9622

# CANTY

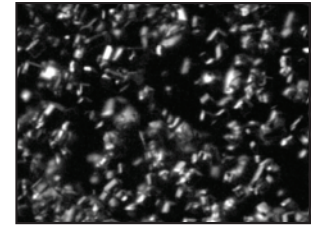
## PROCESS TECHNOLOGY

### CRYSTALSCOPE™ PAT PARTICLE SIZING SYSTEM

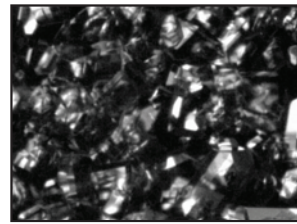
Process Analytical Technology



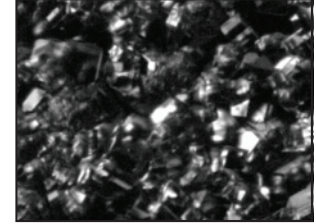
Stage I-Seeding Stage



Stage II-Crystal Growth



Stage III-Crystal Growth



Stage IV-Full Growth

#### THE CANTY ADVANTAGE

#### Control your crystal size and prevent spontaneous nucleation!!!

The Canty CrystalScope™ is a vision based system for monitoring crystal size in real time from nucleation to full growth. This inline microscope includes a high speed camera with adjustable shutter speed, combining a lens configuration that offers dynamic Ethernet controlled calibration for magnification and focus settings. Incorporated into the CrystalScope™ design is Canty's patented uniform fiberoptic "cold" lighting system which is vital to imaging crystals for true two dimensional size and shape for process control (through 4-20 mA, OPC interface, Modbus, etc ...). Canty Fuseview™ technology is incorporated to provide a high pressure, high temperature hermetic seal. The gap between the fused glass interfaces can be adjusted to optimize the image, displaying silhouettes of the crystals. The CantyVision™ results from the image analysis lead to automated adjustments to temperature and vacuum during the critical stages of crystal growth, without the need to gather samples to be analyzed in the lab. Better control in crystallization will result in increased efficiency during filtration. Combine this with a Canty "cake" detection system for your Nutsche Filter or centrifuge for total real time process control. Operators view the process at all times for visual verification and results are archived for historical record.

#### FEATURES

- Real Time Crystal Size Analysis
- Standard Ethernet Control From Canty Vector System
- Uniform Backlighting For True Shape Illumination
- Ethernet controlled Magnification For Variable Lens Settings
- Fused Glass, High Pressure/Temperature Seal From Process
- Various Outputs, 4-20mA, OPC Interface, Modbus, etc ...

#### PARTICLE SIZING

- Crystal Distribution By Major, Minor Diameter, Area, Perimeter Available with Vector System.
- Crystal Size & Shape
- Crystal Count
- Density Of Crystals
- Detection Of Seeding Problems
- Automated Temperature & Vacuum Controls During Crystal Growth
- Increased Efficiency During Filtration

#### SPECIFICATIONS

- Power: 120 VAC / 60 Hz (230VAC / 50 Hz)
- Shutter Speed: variable up to 1/100,000 sec

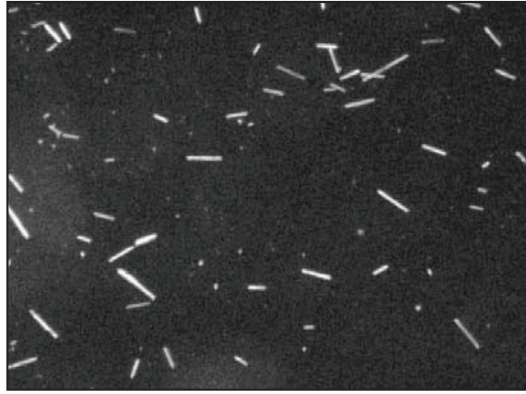
**CANTY** JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

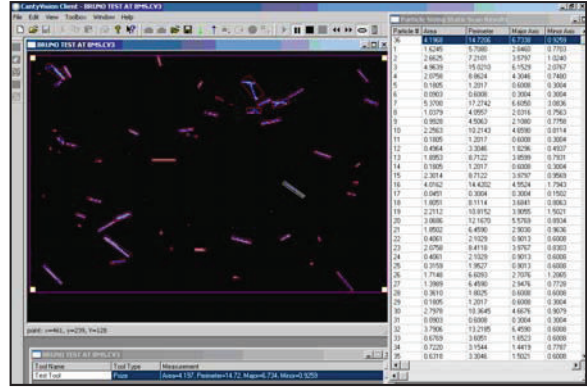
Ph: (716) 625 4227  
Ph: + 353 (01) 882 9621

Fax: (716) 625 4228  
Fax: +353 (01) 882 9622





Raw Image



CantyVision™ scanned image

## Ordering Information

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

**EXAMPLE:**

**VOA743A1C**

**Video Format/Input Power**

- A - EIA B&W, 115V AC, 60 Hz (North American Standard)
- B - CCIR B&W, 230V AC, 50 Hz (European Standard)
- C - NTSC Color, 115V AC, 60 Hz (North American Standard)
- D - PAL Color, 230V AC, 50 Hz (European Standard)

**Environmental Rating**

- 6 - WP/ IP
- 7 - EXP/ FP

**Connection**

- 3 - 4" Tri-Clamp®
- 4 - 4" Flanged
- 5 - 6" Tri-Clamp®
- 6 - 6" Flanged

**Insertion Length**

- 1 - Variable Depth (6"- 36"; 152 mm- 914 mm)
- 2 - 42" (1067 mm)
- 3 - 72" (1829 mm)
- 4 - 102" (2591 mm)

**O-Ring Material**

- B - Viton®
- C - Buna
- D - EPDM
- E - Silicone

**Wetted Material**

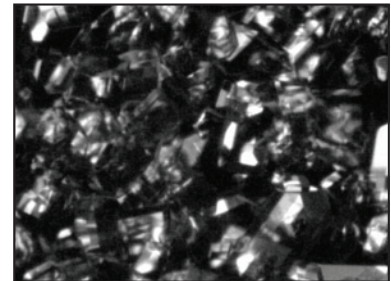
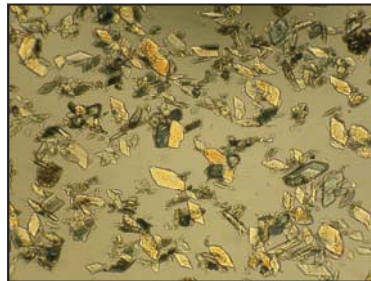
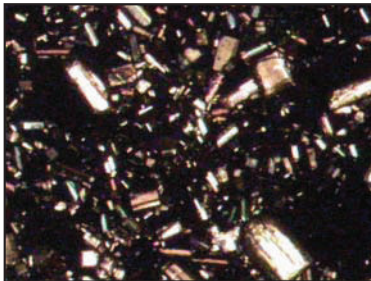
- 1 - 316L Stainless Steel\*
- 2 - Hastelloy® C276 Or Equal
- 3 - Hastelloy® C-22® OR Equal

**Data Outputs**

- A - None
- B - 2 Channel 4-20 mA
- C - 8 Channel 4-20 mA
- D - OPC Interface
- E - Modbus

\* Canty reserves the right to upgrade to Hastelloy® C-family of alloys or equal at their own cost.

• The [Canty Vector System](#) is included with the Crystal Scope.



# CANTY

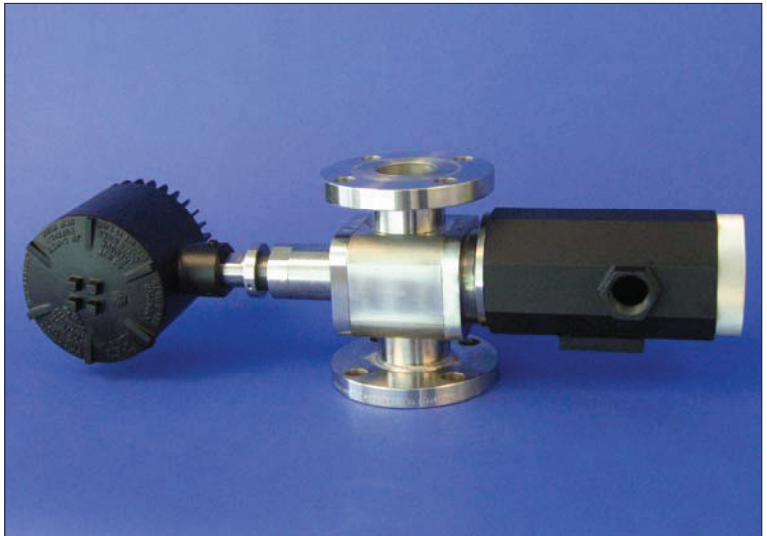
## PROCESS TECHNOLOGY

### INFLOW™ PARTICLE SIZING SYSTEM

Combining the latest in Ethernet technology with Canty fused glass, lighting and CANTYVISIONCLIENT™ software, the INFLOW™ Process Particle Analyzer provides real time particle size and shape analysis. Various models measure 0.7 micron - 20,000 micron particles under process conditions.

No sampling or lab analysis is required! Each unit can be fully integrated into existing TCP/IP networks. Some systems may require a side stream to control flow rates.

CANTYVISIONCLIENT™ software is installed on a user-supplied PC, 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 CANTYVISIONCLIENT™ software. A comprehensive library of standard utilities and data functions provide a multitude of *real-time* process information.



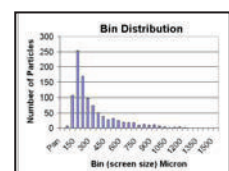
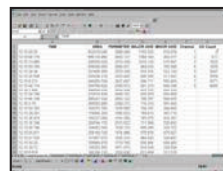
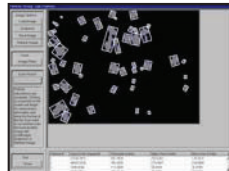
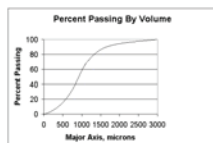
The CANTY INFLOW™ Fluid Particle Sizing System uses a 0-1/2" variable insertion measurement gap. This insertion is made possible by the Fuseview™ sight glass, which allows the optical fused pieces to be located in the center of the fluid stream, which is unique to the Canty system. The fused glass seal 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. The setup is first verified in the lab with the Canty MICROFLOW™, which is an optically identical unit.

#### FEATURES

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

#### ADVANTAGES

- Provides Both A Real Time, In Flow Measurement And A Continuous Real Time View Of The Product
- Various Process Connection Sizes Available (Flanged, Tri-Clamp®, Swagelok®, Tube or NPT)
- Fully Cleanable Unit
- High Throughput
- Available In NEMA4, IP66, Explosion Proof or Flame Proof Packages
- Digital Video Storage to Customer PC / DVD or Network Drive



#### 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 datalogging
- Many Library Functions

**CANTY**

JM Canty Inc  
JM Canty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

Ph: (716) 625 4227  
Ph: +353 (01) 882 9621

Fax: (716) 625 4228  
Fax: +353 (01) 882 9622

## MOUNTING CONNECTIONS



**FLANGE CONNECTION**

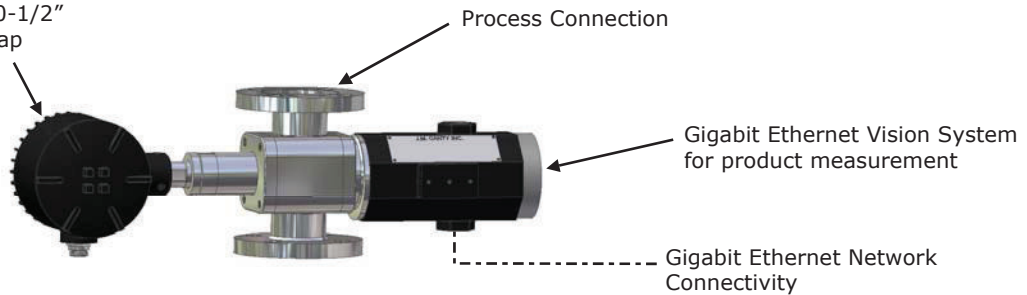
### TRI-CLAMP® CONNECTION



**SWAGelok® CONNECTION**

Canty Light - Provides optimal backlighting with variable 0-1/2" [12.7mm] measurement gap

### TYPICAL PACKAGE



**Notes:**

1. Camera and Light PSUs are not shown but must be located within 100 feet of the unit. The Camera Power Supply enclosure has the same environmental rating as the system. The Ethernet Controlled Regulated Power Supply is provided in a NEMA Type 1 enclosure.
2. CantyVisionClient™ Software is included but the customer provides the PC which is not included with the system. Reference Document TA10592-1 for computer requirements.
3. Small gap sizes used with samples that do not stay uniformly distributed may require verification of the data with a Canty MICROFLOW™.

## Ordering Information

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

### EXAMPLE:

**V S 6 C 1 1 0 A A 1 V**

<b>APPLICATION</b> S - In Line Particle Sizing	<b>INTERNAL SEAL MATERIAL</b> B - BUNA V - VITON® S - SILICONE E - EPDM N - NEOPRENE K - KALREZ® C - CHEMRAZ®
<b>PARTICLE SIZE RANGE</b> Field of View (mm)   P.S. Measure (micron) 1 - 10.7 x 8   33 - 2200 2 - 16 x 12   50 - 3200 3 - 26 x 18   80 - 4800 4 - 3 x 2.2   9 - 600 5 - 6 x 4.4   18 - 1200 6 - .3 x .24 (Max Zoom) - 2 x 1.7 (Min Zoom)   .7 - 480	<b>ENVIRONMENTAL RATING</b> 1 - NEMA 4 WEATHERPROOF 2 - IP 66 3 - EXPLOSION PROOF 4 - FLAME PROOF
<b>CONNECTION TYPE</b> A - Tri Clamp® B - Swagelok® C - Flange (ANSI/DIN) D - Tube Diameter E - NPT (Female)	<b>ANSI OR DIN PRESSURE RATING / FLANGE PATTERN</b> ANSI   DIN A - 150 PSI   D - 10 BAR B - 300 PSI   E - 16 BAR C - 600 PSI   F - 25 BAR
<b>CONNECTION SIZE</b> 0 - 1/2" (12.7mm)   3 - 3" (80mm) 7 - 3/4" (19mm)   4 - 4" (100mm) 1 - 1" (25mm)   6 - 6" (150mm) 5 - 1.5" (38mm)   8 - 8" (200mm) 2 - 2" (50mm)	<b>INPUT POWER</b> A - 120 V AC / 60Hz / 250W B - 230 V AC / 50Hz / 250W
<b>WETTED METAL MATERIAL</b> 1 - 316L Stainless Steel 2 - Hastelloy® C276 or equal 3 - Hastelloy® C-22® or equal	<b>NON-WETTED METAL MATERIAL(PRESSURE BEARING)</b> 0 - Carbon Steel 1 - 300 Series Stainless Steel

**CANTY** JM Canty Inc | JM Canty Intl Ltd

Buffalo, NY USA | Dublin, Ireland

Ph: (716) 625 4227 | Ph: +353 (01) 882 9621

Fax: (716) 625 4228 | Fax: +353 (01) 882 9622

# CANTY

## PROCESS TECHNOLOGY

### INDUSTRIAL SOLIDSIZER™ Particle Analysis System



#### FEATURES

- Particle distribution by major, minor diameter, area, perimeter available with Canty Vector System
- Real time, on-line particle size analysis
- Adjustable lens magnification (sub micron through boulders – no upper size limit). Consult factory
- Fiber optic lighting backlighting for true shape illumination
- Shape Analysis
- External video connectors for signal processing by Canty Vector System (optional)
- Optional light filters available for wavelength sensitive materials

#### ONLINE PARTICLE SIZING

The Canty Industrial SolidSizer™ is an on-line particle sizing tool for lab environments to determine particle size, shape and distribution, thereby eliminating the need for sieve analysis.

#### THE CANTY ADVANTAGE

The JM Canty Industrial SolidSizer™ is a vision-based sensor used with the Vector System for dry particle size measurement in a production environment as an on-line production tool. The SolidSizer™ includes a B & W camera with a shutter speed control and a variable magnification lens, a light source with a flexible fiber optic light guide to generate a uniform light field to display silhouette images of opaque particles, and a vibratory feeder to present sample material to the camera / lights in free fall. The weatherproof camera is equipped with a spray ring that can be charged intermittently to control dust buildup on the outside of the camera view port. The camera video is provided to the Vector System for analysis that extracts particle size information. This sheet identifies the features of the SolidSizer™ and provides ordering information. Typical installations also include the Vector System.

#### APPLICATIONS

- Pharmaceutical powders
- Polymer pellets and beads
- Agricultural products
- Aggregates
- Crushed rock
- Glass bead applications
- Screen break detection
- Agglomeration control
- Spray dryers and fluid bed applications
- Replaces existing lab screen / sieve systems
- End product Q.C. and lot certification
- Many, Many More

#### SPECIFICATIONS

- Power: 120V AC / 60 Hz (230V AC / 50 Hz)
- Shutter Speed: variable up to 1/100,000 sec
- Instrument Air: 20 to 30 PSI when required

#### BENEFITS

- Reduces Lab Screening Labor by 99%
- Output Matches Sieve/Screen Data - Direct Replacement
- Three Month Pay Back

## Ordering Information

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

**EXAMPLE:**

S C - 1 2

**STYLE SELECTION**

C - Industrial

**VIDEO SYSTEM FORMAT**

G - Gigabit Ethernet, B&W, 1600 x 1200  
 H - Gigabit Ethernet, Color, 1600 x 1200

**ENVIRONMENTAL RATING**

2 - Weatherproof  
 3 - Explosionproof

**SYSTEM ILLUMINATION**

K - Backlighting  
 L - Back / Front (Ringlight), Black Speck Only

**ACCESSORIES**

1 - No Accessories  
 2 - Black Speck Only  
 3 - Particle Size and Black Speck

**TRAY MATERIAL**

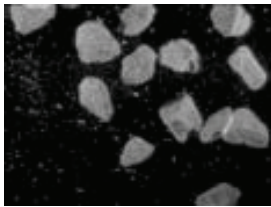
2 - Stainless Steel

**INPUT POWER**

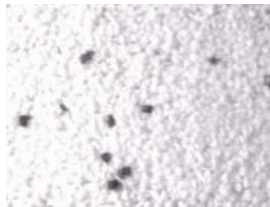
1 - 120 V AC 60Hz  
 2 - 230 V AC 50Hz

**LENS**

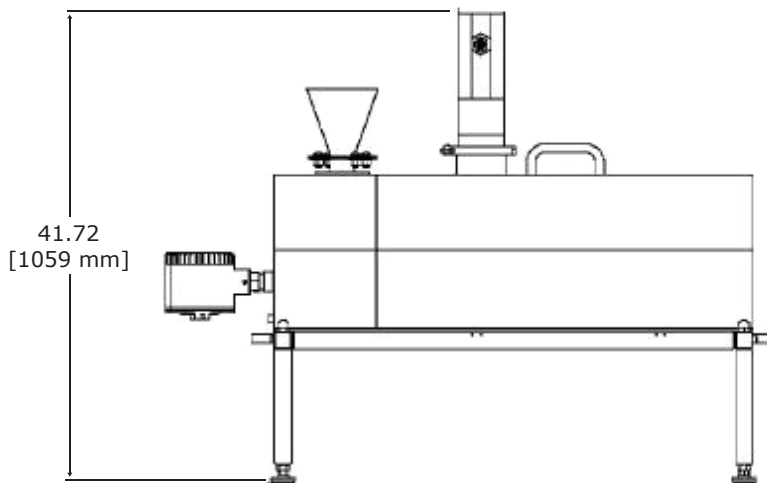
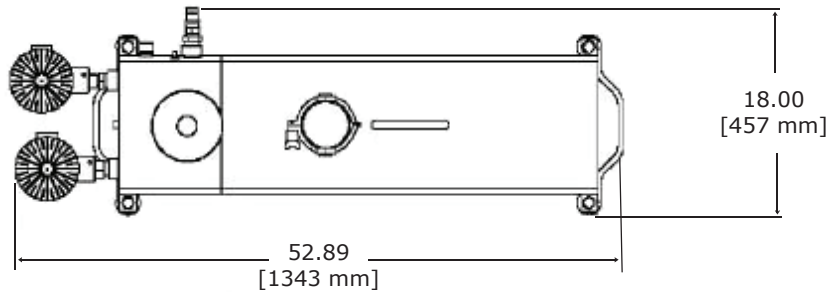
1 - Macro Zoom  
 PS range 10-6000 Microns



Live Image



Black Speck Detection



\* Fines separator is used to separate small particles (under 80 micron) for optimal particle orientation. Consult factory if required for your application.

**CANTY**

JM Canty Inc  
 JM Canty Intl Ltd

Buffalo, NY USA  
 Dublin, Ireland

Ph: (716) 625 4227  
 Ph: + 353 (01) 882 9621

Fax: (716) 625 4228  
 Fax: +353 (01) 882 9622