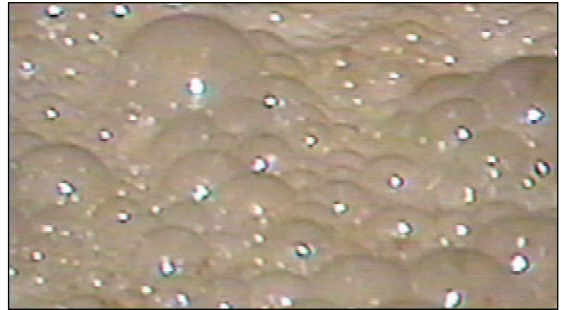
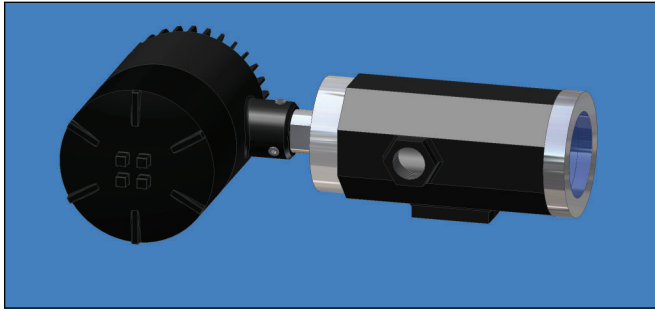


# CANTY

## PROCESS TECHNOLOGY

### FROTH CONTROL SYSTEMS

#### Ethernet Based Camera Systems



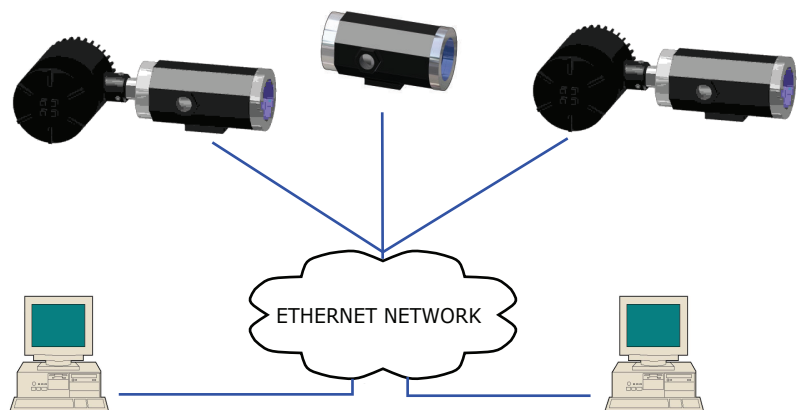
An Ethernet camera is used to provide the measurement image to a customer supplied PC with Microsoft Windows XP O/S and Ethernet connectivity. CANTYVISIONCLIENT™ software is included with each camera. CANTYVISIONCLIENT™ software interfaces with each camera thru TCP/IP to obtain digital images over an Ethernet network. The image from each camera is dynamically analyzed for bubble size, froth velocity and stability.

**P/N: VD4912-303** - Ideal for open tanks

Ethernet Camera System w/ Companion Light, NEMA 4 WP enclosure

- 120V AC supply required. Cauty provides 120V AC to 12V DC transformer.
- 41 d (H) view angle
- Companion 80W Toroidal Lighting System w/ Long Life Bulb for Continuous Illumination
- Includes CANTYVISIONCLIENT™ software for bubble size, froth velocity, stability.
- Customer provides suitable mounting bracket

- **Remote View and Control over Ethernet Network**
- **Point and Click Control**
- **TCP/IP Communication**
- **CANTYVISIONCLIENT™ Software**
- **Installs on any Microsoft XP PC**
- **Optional Recording Software**
  - Burn to CD, Archive on Hard Drive
- **Optional Wireless Video Transmission System Available**



**CANTY**

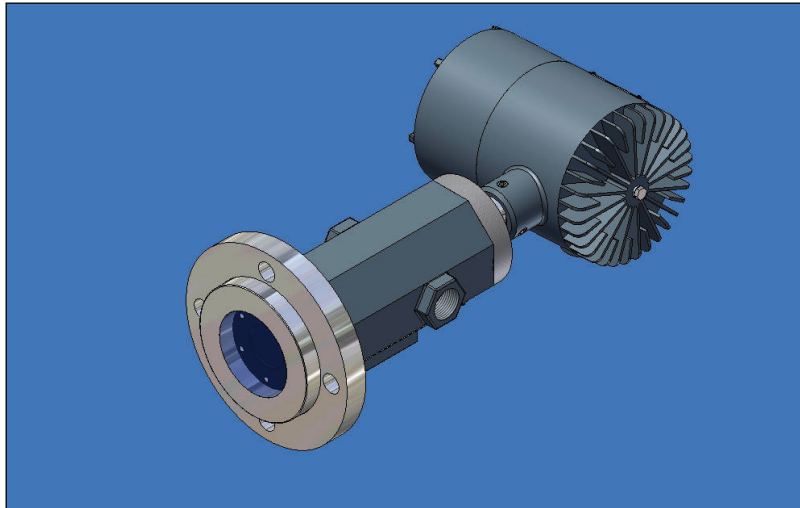
JM Cauty Inc  
JM Cauty Intl Ltd

Buffalo, NY USA  
Dublin, Ireland

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Fax: (716) 625 4228  
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[www.jmcauty.com](http://www.jmcauty.com)



**Camera With Companion Light - 3", 150# ANSI flange connection**  
**P/N : V6E61BC1J** - Ideal for enclosed tanks

Ethernet Camera System w/ Companion Light, NEMA 4 WP enclosure. 3", 150# ANSI flange mount.

- 120V AC supply required. Cauty provides 120V AC to 12V DC transformer.
- 41 d (H) view angle
- Companion 80W Toroidal Lighting System w/ Long Life Bulb for Continuous Illumination
- Includes CANTYVISIONCLIENT™ software for bubble size, froth velocity, stability.
- Designed for use on moly tanks with applications using nitrogen gas for a completely enclosed process

## **CautyVision™ Froth Analysis Software**

- **Measure Bubble Size**
- **Froth Velocity**
- **Froth Stability Measurement**
- **Single Input, 8 Input, 12 Input Multiplexer Options**
- **Optional 4-20 mA Current Loop Outputs Available**
- **Output to EXCEL Spreadsheet, Archive to File, CD**

**CANTY**

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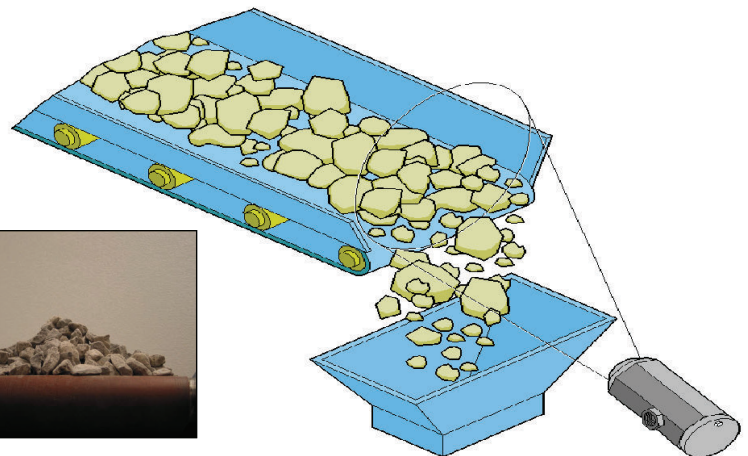
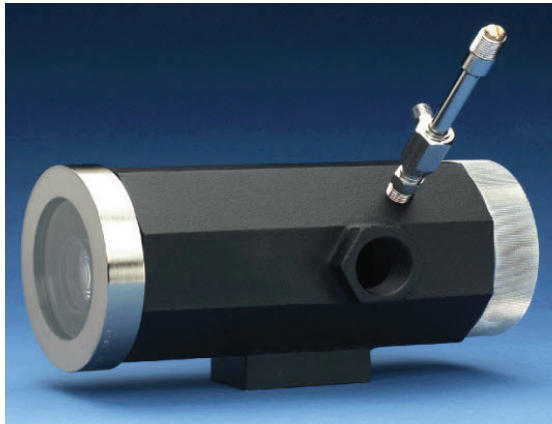
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# CANTY

## PROCESS TECHNOLOGY

## VISION BASED VOLUME MEASUREMENT



### HOW IT WORKS

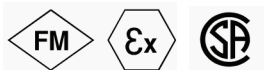
**Eliminate costly maintenance for your belt scales!!!** The CantyVision™ Volume Based Measurement System consists of a non-contact Ethernet camera that constantly analyzes product profile on a conveyor belt to produce an integrated volume with no maintenance required. The measurement results are output in a rate of weight per time through 4-20mA, OPC Interface, or Modbus where the user selects the measured units. The Canty system avoids the large errors associated with belt scales and eliminates the need for frequent calibration. Material moisture content will not alter the volume solution the way a belt scale will be affected because it is a vision based system. The system is calibrated by initially viewing the empty belt. A full belt is then presented or simulated to provide the span. By properly locating the camera, the tracking position of the belt can also be provided. CantyVision™ looks for the edge of the belt in contrast to the head pulley. This gives an accurate belt position to within .01 inch (.25 mm) allowing for alarming and preventive maintenance. By locating the camera underneath the belt, a continual visual and optional inspection can be made to look for wearing, tearing and other conditions.

### FEATURES

- +/- 1% Accuracy
- Full Range Analysis - Minute Feed Rates Through Tons/Min
- Simple, Quick Calibration - Less Than 5 Minutes
- Non Contact Measurement System
- Independent of Moisture Content
- No Re-calibration Required for Varying Samples

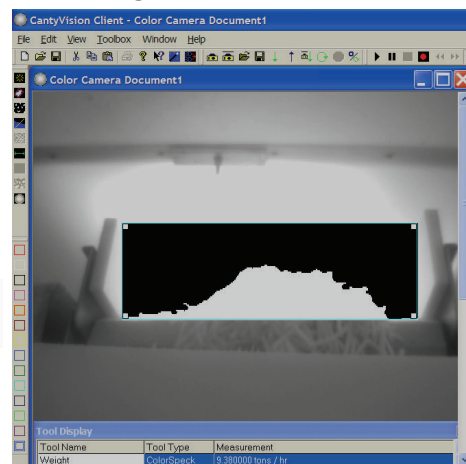


Raw Image



### APPLICATIONS/ INDUSTRIES

- Aggregates/ Powders
- Abrasives
- Solids Handling
- Food
- Pharmaceutical
- Chemical



Processed Image

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Document P/N: TA10487-100 Rev. 3

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

EXAMPLE: **VTMSE5061-WP**

VIDEO OUTPUT FORMAT  
VTMS - Vision System  
NTSC (North American Standard)  
VTME - Vision System  
PAL (European Standard)

CAMERA OPTIONS  
E - Ethernet camera, Color  
R - Ethernet camera, B&W Near IR

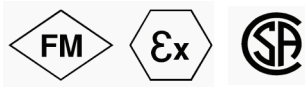
CAMERA APPLICATION  
5 - Surveillance

CAMERA PSU ENVIRONMENTAL RATING  
0 - [Non WP or EXP camera power supply](#)  
1 - [WP camera power supply](#)  
2 - [EXP or FP camera power supply](#)

CAMERA ENCLOSURE ENVIRONMENTAL RATING /INPUT VOLTAGE  
WP - Weather Proof, NEMA 4 and IP66 rated. User supplies 120V AC  
IP - Weather Proof, NEMA 4 and IP66 rated. User supplies 240V AC  
EXP - Explosion proof Class 1, Div. 1, Groups B, C, and D.  
Class II, Div. 1, Groups E, F and G. Flame proof EEx d IIC T6.  
User supplies 120V AC.  
FP - Explosion proof Class 1, Div. 1, Groups B, C and D,  
Class II, Div. 1, Groups E, F and G. Flame proof EEx d IIC T6.  
User supplies 240V AC.

ADDITIONAL OPTIONS  
1 - No additional options  
2 - Cooling Tube  
3 - Spray Ring  
4 - Spray Ring and Cooling Tube

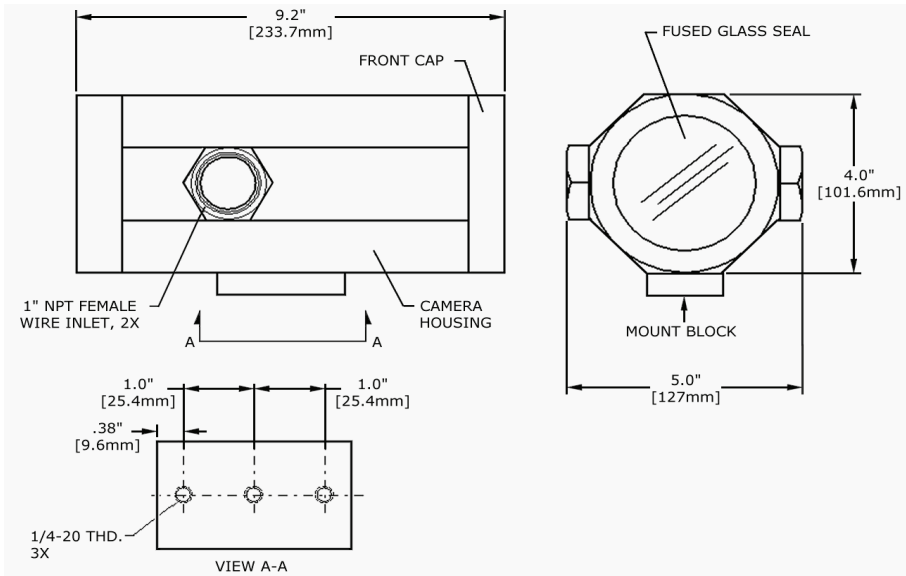
LENS OPTION AND APPROXIMATE LENS VIEW ANGLES  
1 - Manual iris lens with standard view angle, 41°H x 31°V  
2 - Manual iris lens with wide view angle, 69°H x 53°V  
3 - Auto iris lens with wide view angle, 58°H x 45°V  
6 - Manual iris lens with narrow view angle, 7°H x 5°V  
7 - 6x Zoom Lens with Auto Iris, 8 - 48mm FL  
Provides view angles: 43°H x 33°V at 8mm  
8°H x 6°V at 48mm



Select Lens View Angle for the Vision System Camera using chart below which indicates distance from belt that camera should be mounted for various combinations of lens View Angles and belt widths.

Lens View Angle	Belt Width						
	12 in. Belt	18 in. Belt	24 in. Belt	30 in. Belt	36 in. Belt	40 in. Belt	48 in. Belt
	41° (H) X 31° (V)	24 in.	36 in.	48 in.	60 in.	72 in.	84 in.
	69° (H) X 53° (V)	13 in.	20 in.	26 in.	33 in.	40 in.	46 in.
22° (H) X 17° (V)	44 in.	66 in.	-	-	-	-	-

DIMENSIONAL INFORMATION





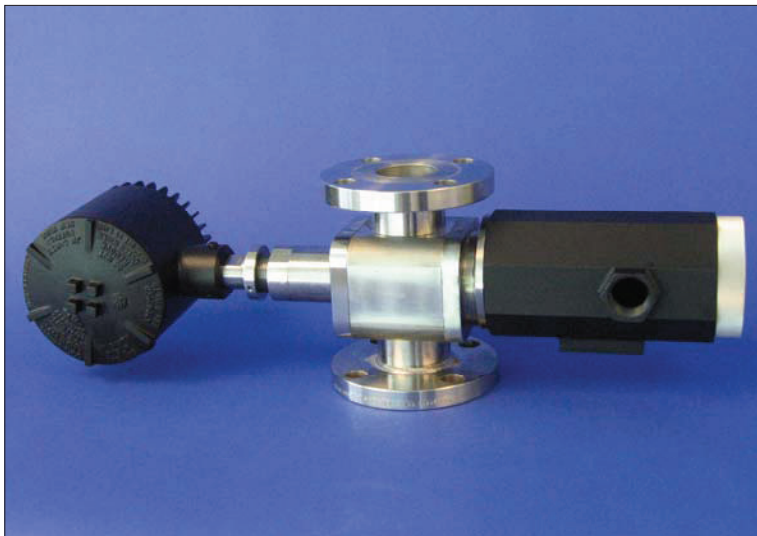
## PROCESS TECHNOLOGY

### 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.



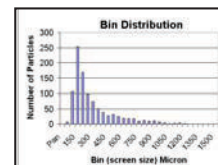
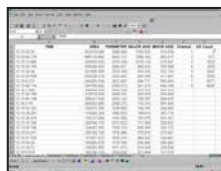
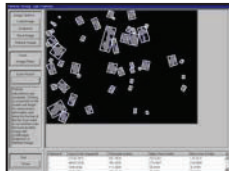
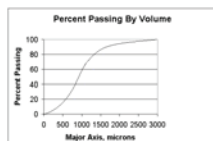
The CANTY INFlow™ Fluid Particle Sizing System uses a 0-1/2" variable insertion measurement gap. This insertion is made possible by the Fuseview™ sight glass, which allows the optical fused pieces to be located in the center of the fluid stream, which is unique to the Canty system. The fused glass seal 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

## MOUNTING CONNECTIONS



**FLANGE CONNECTION**

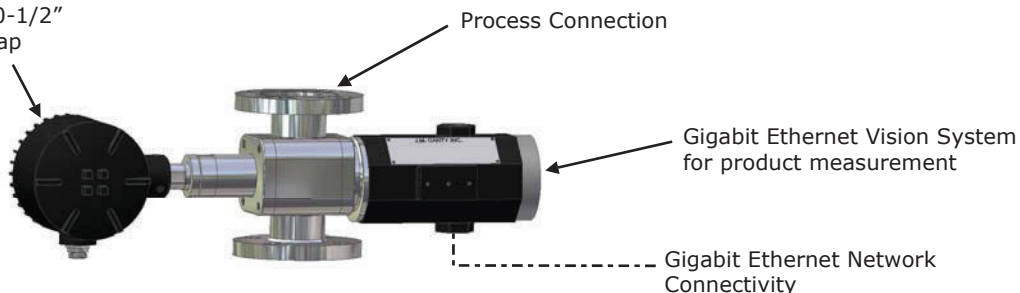
## TRI-CLAMP® CONNECTION



**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                      N - NEOPRENE V - VITON®                K - KALREZ® S - SILICONE              C - CHEMRAZ® E - EPDM														
<b>PARTICLE SIZE RANGE</b> <table border="1"> <thead> <tr> <th>Field of View (mm)</th> <th>P.S. Measure (micron)</th> </tr> </thead> <tbody> <tr> <td>1 - 10.7 x 8</td> <td>33 - 2200</td> </tr> <tr> <td>2 - 16 x 12</td> <td>50 - 3200</td> </tr> <tr> <td>3 - 26 x 18</td> <td>80 - 4800</td> </tr> <tr> <td>4 - 3 x 2.2</td> <td>9 - 600</td> </tr> <tr> <td>5 - 6 x 4.4</td> <td>18 - 1200</td> </tr> <tr> <td>6 - .3 x .24 (Max Zoom) - 2 x 1.7 (Min Zoom)</td> <td>.7 - 480</td> </tr> </tbody> </table>	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
Field of View (mm)	P.S. Measure (micron)														
1 - 10.7 x 8	33 - 2200														
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5 - 6 x 4.4	18 - 1200														
6 - .3 x .24 (Max Zoom) - 2 x 1.7 (Min Zoom)	.7 - 480														
<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> <table border="1"> <thead> <tr> <th>ANSI</th> <th>DIN</th> </tr> </thead> <tbody> <tr> <td>A - 150 PSI</td> <td>D - 10 BAR</td> </tr> <tr> <td>B - 300 PSI</td> <td>E - 16 BAR</td> </tr> <tr> <td>C - 600 PSI</td> <td>F - 25 BAR</td> </tr> </tbody> </table>	ANSI	DIN	A - 150 PSI	D - 10 BAR	B - 300 PSI	E - 16 BAR	C - 600 PSI	F - 25 BAR						
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<b>CONNECTION SIZE</b> <table border="1"> <tbody> <tr> <td>0 - 1/2" (12.7mm)</td> <td>3 - 3" (80mm)</td> </tr> <tr> <td>7 - 3/4" (19mm)</td> <td>4 - 4" (100mm)</td> </tr> <tr> <td>1 - 1" (25mm)</td> <td>6 - 6" (150mm)</td> </tr> <tr> <td>5 - 1.5" (38mm)</td> <td>8 - 8" (200mm)</td> </tr> <tr> <td>2 - 2" (50mm)</td> <td></td> </tr> </tbody> </table>	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				
0 - 1/2" (12.7mm)	3 - 3" (80mm)														
7 - 3/4" (19mm)	4 - 4" (100mm)														
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5 - 1.5" (38mm)	8 - 8" (200mm)														
2 - 2" (50mm)															
<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														

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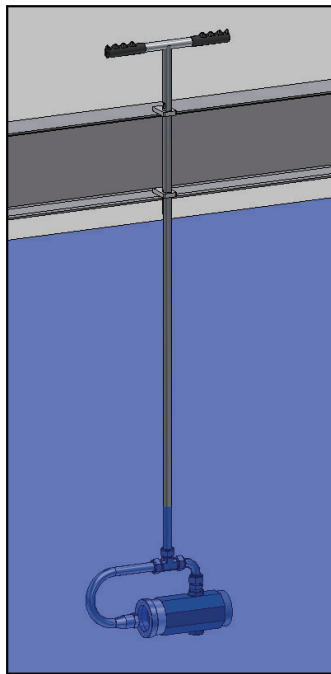
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Document P/N: TA10601-1 REV. 3

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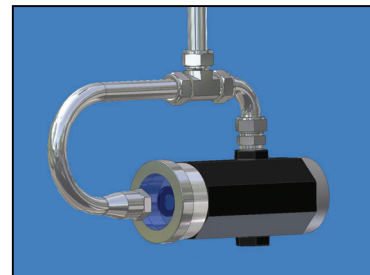
## IMMERSION TURBIDITY/COLOR ANALYSIS/ PERCENT SOLIDS ANALYZER

### THE SOLUTION



Combining the latest in CCD Ethernet camera technology with Canty fused glass, lighting and CantyVision Client software, the Immersion Analyzer System provides real time, in-line measurement of either turbidity, color analysis or percent solids, determined by the P/N purchased.

No sampling or lab analysis is required! Each unit can be *fully* integrated into existing TCP/IP networks. CantyVision Client software is installed on a user-supplied PC, and connected to the in-line measurement system via Ethernet network. Images of the process can now be seen at any networked PC. The live images are remotely analyzed by CantyVision Client software. A comprehensive library of standard utilities and data functions provide a multitude of *real-time* process information.



The CANTY Immersion Turbidity, Color Measurement or Percent Solids Measurement System uses a variable insertion measurement gap, which is unique to the Canty system. Our unique fused glass seal allows our equipment to be easily submersed into the product for quick, highly accurate process measurement. The image process can be setup with multiple zone sensing on the image of the fluid thus comparing results for reliability and allowing immediate detection of any problem.

### FEATURES

- Ethernet Connectivity For Measurement
- Ergonomic Immersion Package
- Fused Glass Seals Instrument from Process
- Regulated High Intensity Light Source
- 316L SS and Anodized Aluminum Wetted Material
- Rugged, Industrial Sensor
- Easy to Operate

### ADVANTAGES

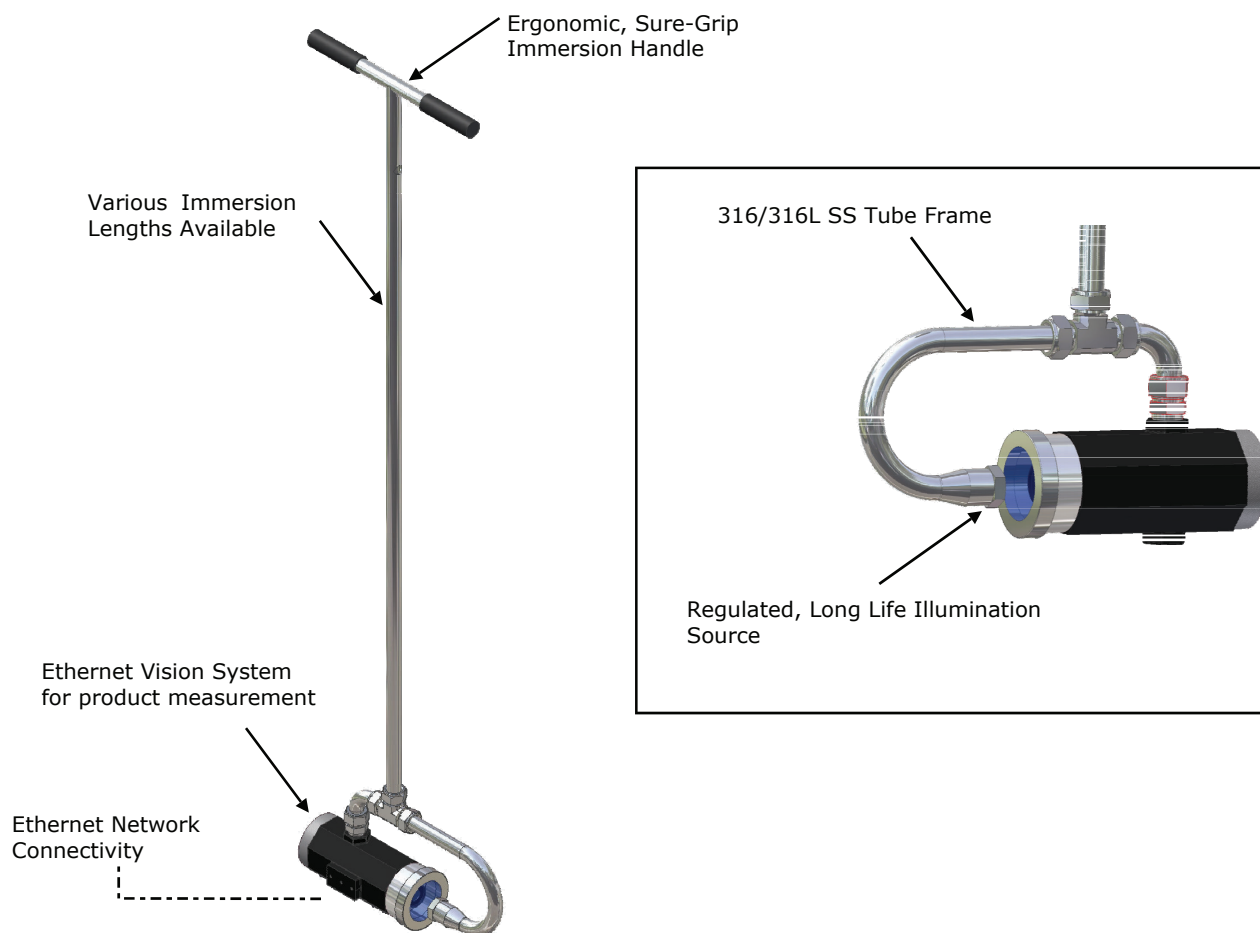
- No Lab Sampling Required
- Low Cost Measurement System
- Provides Both A Real Time Measurement And A Continuous Real Time View
- Fully Cleanable Unit
- Digital Video Storage to Customer PC
- Low Cost Measurement System

### COMMON APPLICATIONS

- Effluent Turbidity Measurement



## TYPICAL PACKAGE



### Notes:

1. Camera/Light PSU Enclosure not shown. Portable integrated PSU is provided in NEMA type 4 enclosures typ. and must be located within 100 feet of sensor.
2. Customer PC to install CantyVision Client Software is not included. Reference datasheet TA10592-1.
3. Approximate Weight : 18 lbs.

## HOW TO ORDER

### Ordering Information

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

**EXAMPLE:**

**VDTA501**

APPLICATION

T - Turbidity  
C - Color Analysis  
P - Percent Solids

IMMERSION HANDLE LENGTH

3 - 3 ft.  
4 - 4 ft.  
5 - 5 ft.  
6 - 6 ft.

ENVIRONMENTAL RATING

1 - NEMA4 WP  
2 - IP66

INPUT POWER

0 - 120V AC, 60Hz, 250 W  
1 - 230V AC, 50Hz, 250 W

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