



vision
without
limits

LabCam
Bio-Reactors

CANTY

PROCESS TECHNOLOGY

BUFFALO DUBLIN THAILAND

PRODUCT OVERVIEW

Ideal mounting location next to lab reactor with image has full view of level and foam.

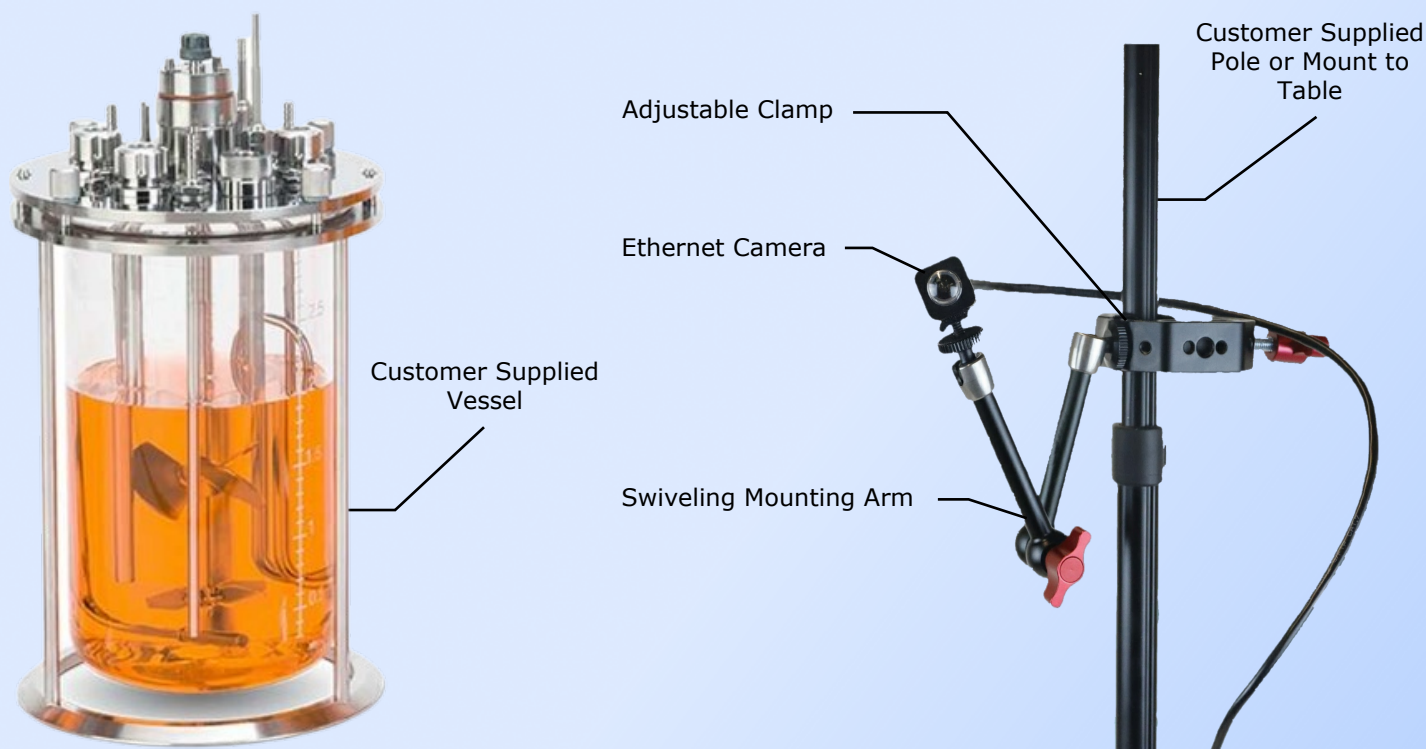


- Camera can be clamped to a table or pole for flexible configuration.
- Camera mounting arm can be adjusted to optimal height and can also be rotated.
- Customer to supply uniform background for optimum analysis.

LAB REACTOR - FOAM ANALYSIS

How It Works

The CANTY LabCam™ is a lab/R&D camera engineered and designed for foam measurement to automate the control. The LabCam™ Ethernet camera technology is an easy to install and compact package. Coupled with CautyVision™ software, the LabCam™ can be used for full control and the data can be imported directly into a LIMS system. This system is perfect for controlling foam in a lab reactor. CANTY offers other systems for stainless reactor or single use bag.



ADVANTAGES

- Non-Contact foam & level monitoring and control
- Able to use on any size Bench-Top Bioreactor
- Correlates to markings / ruler on side of vessel
- Gives liquid level and foam level as two separate measurements
- Able to record continuous video feed or batches
- Ease of use
 - Multiple configurations and easily movable equipment to optimize system set-up

**Non-Contact
Foam & Level
Control**



HOW TO ORDER

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

EXAMPLE:

VLC- A F 1

HEIGHT RANGE

A - 10"
B - 20"
C - 30"

POWER

F - POE

SOFTWARE

1 - NO SOFTWARE INCLUDED
2 - SOFTWARE LICENSE FOR ANALYSIS INCLUDED - FOR INSTALL ION ON CUSTOMER SUPPLIED WINDOWS BASED PC

CORE UNIT INFORMATION - VECTOR CONTROL MODULE



SOFTWARE FEATURES



- Supports up to six cameras
- OPC outputs
- Up to eight analog 4-20mA outputs
- Link to technical support (when Internet connected)
- Digital IO
- Four USB Ports
- Four serial ports
- CantyVision™ Software installed
- Full administrative control embedded operating system
- Fan-less solid state vision control system



How It Works

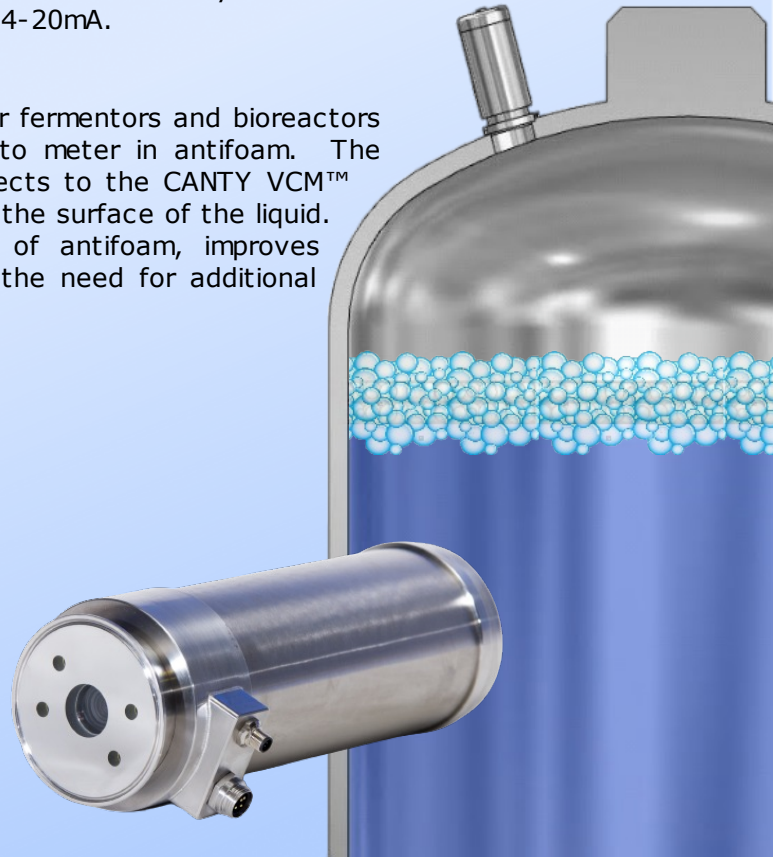
The CANTY BioCam™ is a process camera engineered and designed for sanitary applications. The BioCam™ combines the latest in LED lighting with Ethernet camera technology in a streamlined package. The camera utilizes built-in strobe LED light that has been optimized to run efficiently as to not obstruct photosensitive processes. The all-in-one design is both compact and sanitary and unlike its predecessors requires no additional external power supply for operation. A built in heater eliminates condensation from forming on the glass and provides for a clear image at all times. Coupled with the Cauty Vector Control Module, the BioCam™ can be used for full control via OPC or 4-20mA.

Foam Detection

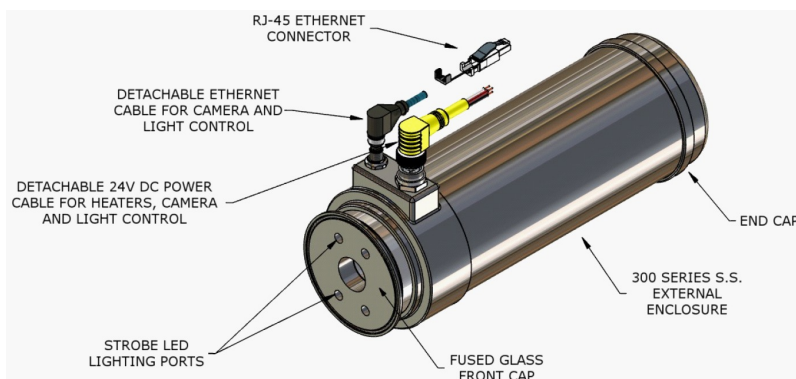
The CANTY BioCam™ is uniquely qualified to view inside your fermentors and bioreactors and provides a continual control signal allowing the user to meter in antifoam. The BioCam™ is an Ethernet based imaging system which connects to the CANTY VCM™ image processor that determines the percentage of foam on the surface of the liquid. The foam control function allows for significant savings of antifoam, improves process performance in cell culture growth and eliminates the need for additional antifoam fluids in purification.

Features

- Built in LED light source - maintenance free
- Compact all-in-one design
- Sanitary 316L S.S. Housing
- No external power supplies required
- Available in 24V DC, 120V AC, 240V AC
- Strobed light allows for optimized illumination without interfering with photosensitive processes
- Built in heater to prevent fog and condensation
- System outputs via OPC or 4-20mA to a DCS or PLC for complete, closed-loop control
- Ideal system for foam detection - Cauty Vector Control Module can output and control the addition of anti-foam
- Single use models also available



CONDENSATION-FREE



Bioreactors and fermenters are known to be difficult to see inside if not impossible. The issue is that the heat of the process generates steam in the head space. CANTY's unique heated fused sight glass has overcome this problem by heating and controlling the temperature of the fused glass to closely match the process temperature thereby avoiding condensation which would make the sight glass useless.

CANTY Advantage

- BioCam™ only needs 1 nozzle!
- Light & camera are combined into one housing for accurate foam detection, reduction in space, and easy calibration.
- Cost savings as we only need 1 nozzle for two pieces of equipment.

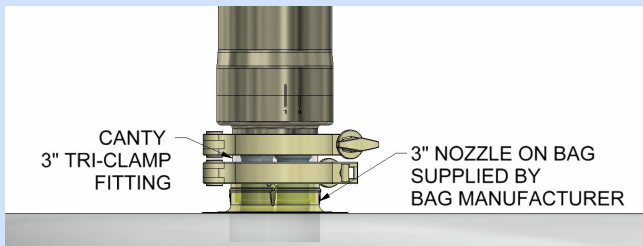
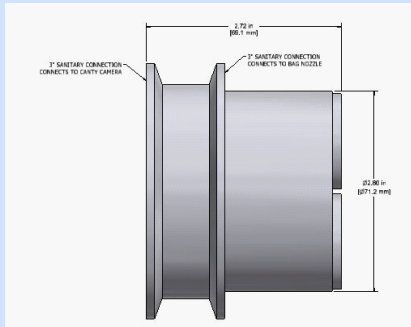


Key Components

- Compact, sanitary
- No additional external power supply
- LED lighting
 - Built-in strobe
 - Does not obstruct photosensitive processes
- Ethernet camera technology
- Clear image at all times
 - Internal heater prevents condensation

SINGLE-USE FITTINGS INFORMATION

3" SINGLE USE SANITARY FITTINGS **FOR CANTY S.U.BIOCAM** *(one fitting required per system)*



Note: The best way to order the fittings is through the bag manufacturer, this way the fitting will be sealed and gamma radiated all together.

How to Order from Bag Manufacturer:

- Thermo Fisher: Part number SL20012.02 "CANTY 3 fitting"
- Cytivia: Request "the CANTY fitting" from your Cytiva sales representative
- Consult CANTY with questions

Single Use Fittings for the CANTY S.U.BIOCAM™ are disposable and seal on the bag to isolate the camera from the process. The fitting utilizes a tri-clamp connection for both camera and bag connections, and require a separate tri-clamp for each connection. The fittings are gamma radiated with the bag if you order it with the bag. CANTY does not gamma radiate; if you buy direct from CANTY it will require installation in a clean room which can be cumbersome with a Single Use Bioreactor bag. The fitting should be mounted as close to top center of the bag as possible; if choosing a different location consult CANTY to see how much of the bag will be seen.

**CANTY'S GOAL IS TO PROVIDE EQUIPMENT TO ENHANCE PROCESS CONTROL
AND YIELD. WE ACCOMPLISH THIS BY DESIGNING, MANUFACTURING, AND
SERVICING THE FINEST EQUIPMENT IN THE WORLD.**

Some of Our Valued Customers:

ABBOTT LABORATORIES
ABBVIE
ALEXION PHARMACEUTICALS
ALLERGAN
AMGEN
ASTRAZENECA
BAXTER INTERNATIONAL
BAYER
BIOGEN
BRISTOL-MYERS SQUIBB
CELGENE
COVIDIEN
ELI LILLY & CO.
GILEAD SCIENCES

GLAXOSMITHKLINE
HUMAN GENOME
JOHNSON & JOHNSON
MALLINCKRODT
MEDIMMUNE
MERCK & CO.
NOVARTIS
NOVO NORDISK
PFIZER
REGENERON PHARMACEUTICALS
ROCHE
SANOFI
SHIRE PHARMACEUTICALS
TEVA PHARMACEUTICALS

AND YOU!!!



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