

CANTY

PROCESS TECHNOLOGY

ULTRATEMP™ CAMERA - HYDROGEN REFORMER



HYDROGEN REFORMER

The Canty Ultratemp™ is an excellent tool for optimizing the hydrogen reformer to increase efficiency and life of the reformer. Every tube is monitored for temperature real time and continuous.

THE CANTY ADVANTAGE

The CANTY Ultratemp™ is a vision-based camera system used with the CANTY Vector System image processor to monitor temperature of the tubes inside a hydrogen reformer. The CautyVision™ Software accurately measures temperature as well as bend in the tube for complete control. In comparison to thermocouples which are costly, not reliable, and monitor only one tube, a camera system can monitor multiple tubes at the same time. The CautyVision™ software can output a signal to alarm if the tube has increased in temperature over a certain time to an operator screen, PLC, or DCS for closed loop control. The steam can then be introduced to clean the tube and avoid plugging and then switch back to the natural gas. The pyrometer is not effective for controlling the temperature in the reformer due to the time intervals in between analysis is taken. Also, not everyone measures at the same point and this could lead to a change in temperature when a change never occurred. To calibrate the system the pyrometer can be used initially. If the temperature in the tubes increase over 10°C over 10 min, a plug has a chance to take place. With the Ultratemp™ this event can be avoided completely.

FEATURES

- Temperature Control
- Visual Verification
- 1 Camera for Multiple Tube Monitoring
- Real Time Analysis
- Jet Spray Ring For Cleaning
- Up to 3' Insertion Available
- Wall Mounted So Operators Do Not Handle
- More Cost Effective Than Thermocouples
- Eliminate Errors Associated Pyrometers
- Ethernet Gigabit Camera
- 1 Degree Accuracy
- Visual Verification
- Data Can Be Stored With Images Or Video
- All Data Is Stored On Excel Or In A Database For Later Use And Easy Storage
- **SAFEST OPTION FOR OPERATORS**

APPLICATIONS

- Hydrogen Reformer
- Steam Reformer
- Reheat Boiler
- Prereformer
- Millisecond Furnace
- Hydrogen Cracker
- Hydrocracking

BENEFITS

- Easy Calibration
- Continuous Output
- Reading Independent Of Emissivity
- Optional Save Video & Images If Needed
- **REDUCE DOWN TIME**
- **INCREASE YIELD**

SPECIFICATIONS

- Power: 120 VAC / 60 Hz (230 VAC / 50 Hz)
- Ethernet Camera Resolution

ANALYSIS WITH CANTYVISION

- CautyVision™ System Can Measure And Control Your Process Parameters
- Inflow™ Systems Use A live Video Data
- CautyVision™ Can Perform Concentration / Particle Size / Count Functions
- Microsoft Windows Based Operating System
- Ethernet OPC or 4-20 mA Devices

CANTY

Buffalo, NY USA
Ph: (716) 625 4227

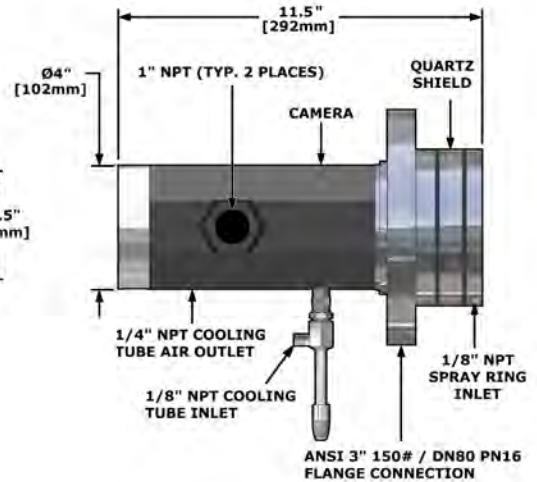
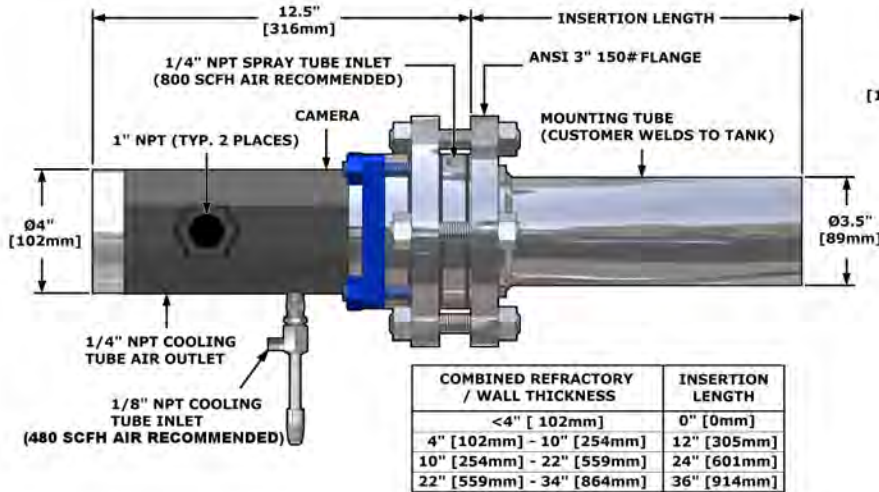
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MOUNTING CONNECTIONS

Insertion sizes 12" and Larger

Non Insertion Models



- For 0" Insertion models, customer must provide a 3", 150# ANSI (U.S.) or DN80 PN16 (Europe) flange connection to mount camera.
- For all other insertion lengths, customer must provide a 3.5" [89 mm] diameter mounting hole to weld Cauty supplied mounting tube to furnace.
- Layout drawings and additional insertion lengths available. Consult factory.

Ordering Information

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

EXAMPLE:

VSH DE 6 5 H 1 - S - 3FL150S - OINS

VIDEO OUTPUT FOMAT	
VSH -	NORTH AMERICAN STANDARD
VEH -	EUROPEAN STANDARD

TEMPERATURE RATING	
5 -	FURNACE OPERATING 2000° F TEMP AT LENS 1300°F (NO INSERTION)
6 -	FURNACE OPERATING 2000° F TEMP AT LENS 1300°F (INSERTION MODELS)
7 -	FURNACE OPERATING 2500° F TEMP AT LENS 1600°F (INSERTION MODELS)

LENS VIEW ANGLES	
<u>INSERTION MODELS</u>	
D -	65° (H) X 49° (V)
<u>NON-INSERTION</u>	
H -	69° (H) X 53° (V)

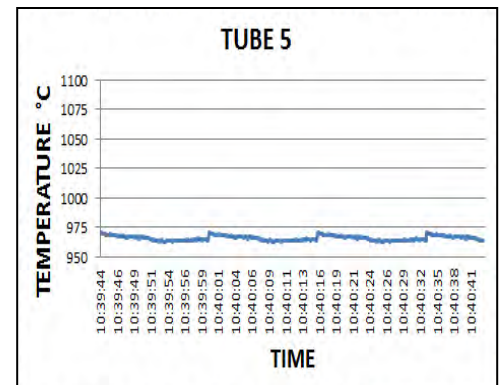
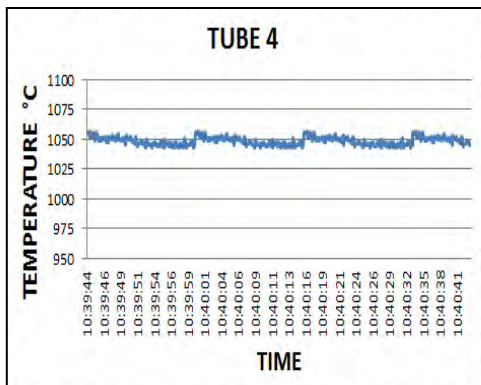
INSERTION LENGTH	
OINS -	FLUSH MOUNT - NO INSERTION
12INS -	12" [305mm] INSERTION
24INS -	24" [610mm] INSERTION
36INS -	36" [914mm] INSERTION

MATERIAL OF CONSTRUCTION	
3FL150S -	3" 150# ANSI FLANGE MOUNT
80FL16S -	80mm 16 BAR DIN FLANGE MOUNT (OPTION FOR FLUSH MOUNT ONLY)

CAMERA SUPPLY OPTIONS	
1 -	POWER SUPPLY IN NEMA TYPE 1 ENCLOSURE (120V AC INPUT)
2 -	POWER SUPPLY IN IP 20 ENCLOSURE (230V AC INPUT)
5 -	POWER SUPPLY IN WP NEMA 4X ENCLOSURE (120V AC INPUT)
6 -	POWER SUPPLY IN IP66 ENCLOSURE (230V AC INPUT)

NOTE: Accessory Kit part number: V401-KIT available to aid in installation contains 100-1000 SCFH and 60-600 SCFH Flowmeters along with a 0.5 micron oil/vapor removal filter.

TUBE 4 IS PLUGGED!!!



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Document P/N: TA11500-1021