

MODEL PDC-20 (TUBING AND CATHETERS)

In-Line Pinhole Detector for Corrugated Tubing and Catheters

- >> Reliable pinhole detection at virtually any speed
- >> Wide range of products may be detected
- >> Regulated test voltage
- >> Digital voltage display



PDC-20

Manufacturers of products such as corrugated tubing and medical catheters have long sought an economical method of locating pinholes and flaws during the production process.

In-line optical or laser inspection systems are costly and limited to the size hole that can be detected. Often these systems are not suitable for pinhole detection in transparent products or on convoluted surfaces.

Clinton Instrument Company introduces the Model PDC-20 In-Line Pinhole Detector, a low cost, non-destructive electronic system that uses high voltage to instantly locate defects in dielectric (non-conductive) products and coatings.

The system works by energizing the outer surface of a product with a high voltage electrode, through which the product travels. The product rides over a grounded electrode, which can be an extension of the extrusion tooling, or a metallic mandrel or carrier, if present. If

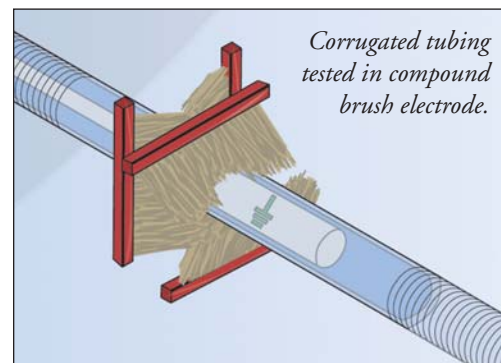
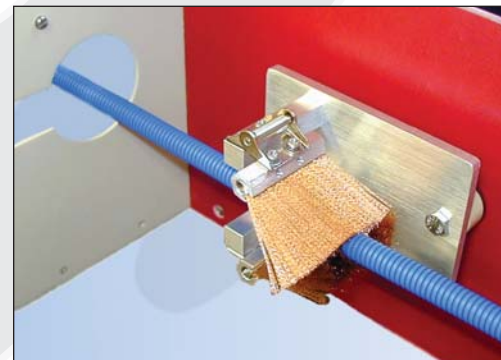
the product has a braided metallic reinforcement, this can often be utilized as the grounded electrode.

Defect-free product will insulate these electrodes from each other. However, when a pinhole passes between the electrodes, a discharge through the hole will occur that is instantly detected and reported by the system.

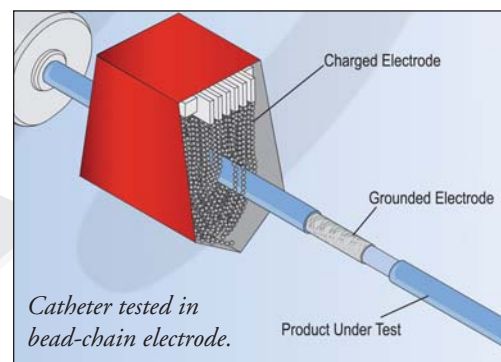
The control unit generates and regulates the applied test voltage, which is displayed on the digital voltmeter. Pinholes and other defects are reported on the front panel fault light and digital counter. Various process control outputs are provided that may be used to activate external alarms and controllers.

The PDC-20 In-Line Pinhole Detector is easy to use and is current limited for safe operation. Its advanced circuitry delivers optimum fault detection at virtually any production speed.

With over 50 years experience in high voltage pinhole and defect detection, the Clinton Instrument Company has gained considerable expertise in the testing of a wide range of product types. Please contact the factory to discuss your specific application.



Corrugated tubing tested in compound brush electrode.



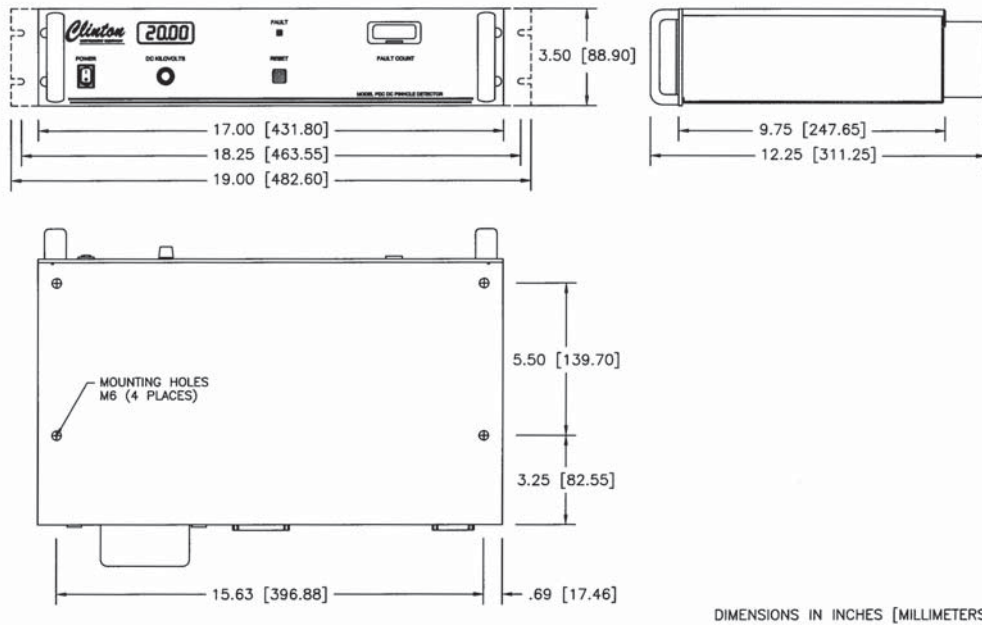
Catheter tested in bead-chain electrode.

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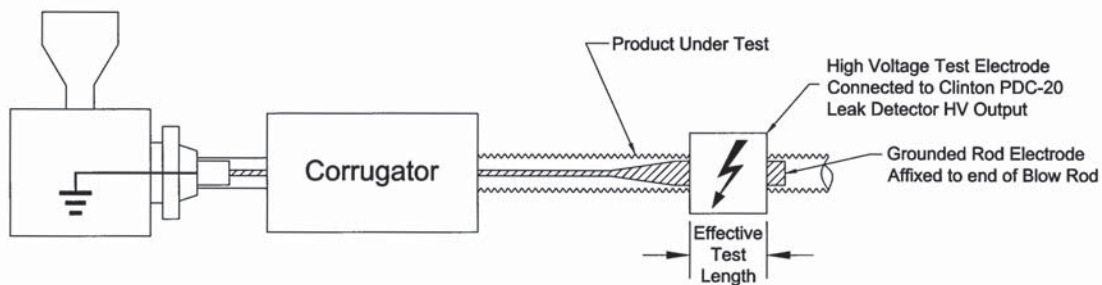
PDC-20 SPECIFICATIONS

Voltage Test Range 1KV to 20KV D.C.
 Voltage Display 3-1/2 digit 14.5mm LED display, accuracy 1-1/2% of reading +/- digit.
 Fault Indication 8-digit electronic counter, 11mm LCD display, non-volatile memory; amber indicating light.
 Fault Resolution 1.5 to 200 milliseconds, adjustable.
 Output Current 0.75 to 1.5 milliamperes maximum.
 Detection Sensitivity Adjustable from 200 μ A. to 1.5 μ A.
 Operating Modes Continuous HV/Remove HV on Fault. Momentary Process Control/Latch until Reset.
 Process Control Relay form "C" contacts rated 2 amps max for both NO and NC circuits. Front panel or external reset. In non-latch modes, closure time is adjustable from 50 milliseconds to 2-1/2 seconds.

High Voltage On Isolated transistor output.
 Line Speed Consult factory.
 Power Requirements 100 to 240VAC 1 amp, 49-61 Hz. Power supply is self-adjusting.
 Dimensions:
 Control Unit 17.0" W x 12.3" D x 3.5" H (432mm W x 311mm D x 89mm H).
 Electrode Consult factory
 Connecting Cable 8' Standard, 25' (8m) maximum.
 Weight:
 Control Unit 19 lbs. (8.8 kg.)



Grounded Rod Electrode Method



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Specifications subject to change without notice. 06/04 EN