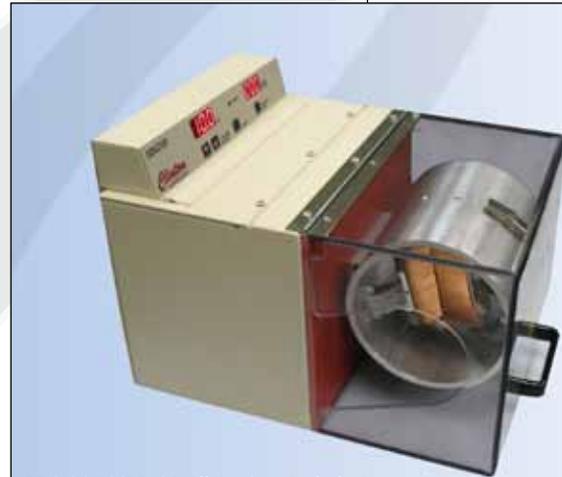


# PDC-T Series

## In-Line Pinhole Detectors for Corrugated Tubing

- >> Pinhole detection for corrugated tubing on the production line
- >> Reliable at virtually any wire line speed
- >> Regulated test voltage
- >> Digital voltage display



PDC-20AC/BR-3A All-In-One Pinhole Detector

Manufacturers of corrugated tubing struggle with in-line optical and laser inspection systems designed to detect pinholes during the production process. These systems are costly, limited to the size of the hole that can be detected, and often are unsuitable for use on transparent or convoluted products.

Clinton introduces the PDC-T In-Line Pinhole Detector Series, a low cost, non-destructive electronic system that use high voltage to instantly locate defects in non-conductive corrugated tubing.

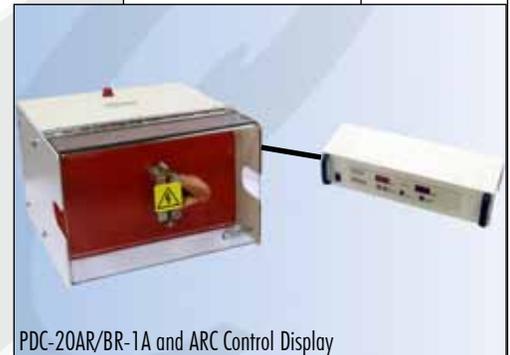
The system works by energizing the outer surface of a product with a high voltage electrode, through which the product travels. The product rides over a grounded electrode, which can be an extension of the extrusion tooling or a metallic mandrel or carrier. If the product has a braided metallic reinforcement, this too can act 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 system is available in three configurations: an all-in-one unit; an electrode assembly located up to 200 feet from a remote 19" ARC control display; and an electrode assembly that receives and responds to digital commands from a PLC or computer.

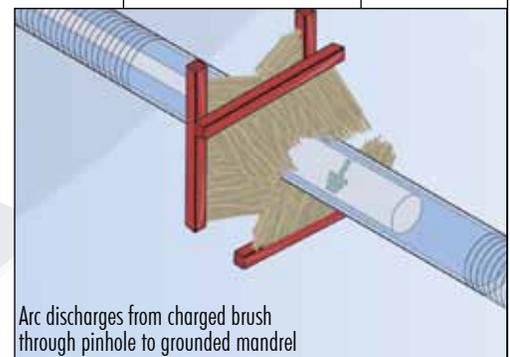
Typical test products are corrugated tubing made of polyethylene or nylon in diameters to 3". Please contact the factory to discuss your specific application.



PDC-20AR/BR-1A and ARC Control Display



Corrugated tubing tested in BD-22S bead chain electrode.



Arc discharges from charged brush through pinhole to grounded mandrel

**Clinton**  
INSTRUMENT COMPANY

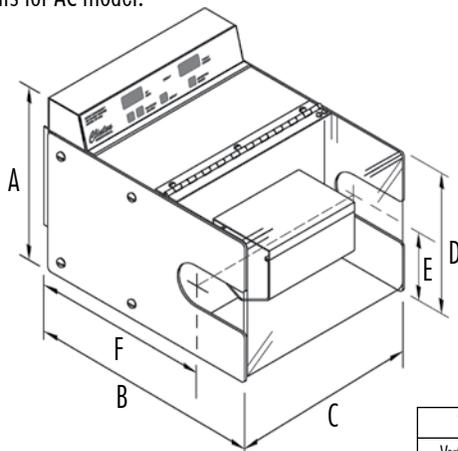
# PDC-T SPECIFICATIONS

Voltage Test Range.....1KV to 20KV (minimum voltage varies on electrode design.)  
 Output Current .....0.75 milliamperes maximum.  
 Fault Indication.....Red 3-digit 14.2mm high LED display; amber indicating light.  
 Fault Response .....Less than 1 millisecond.  
 Fault Resolution.....10 milliseconds minimum adjustable to 1 second.  
 Detection Sensitivity.....Adjustable from 200  $\mu$ A. to 1.5mA.  
 Operating Modes.....Continuous HV/Remove HV on Fault. Momentary Process Control/Latch until Reset.  
 Process Control.....Relay, form "C" contacts rated 1 amp max @ 240VAC, 2 amps max @120VAC, for both NO and NC circuits. Front panel or external reset in non-latch modes, closure time is adjustable from 50ms to 2.5 seconds.

Electrode Assemblies:  
 BD-22S.....Bead Chain Assembly, max 2" product diameter.  
 BR-1A.....Brush Assembly Phosphor Bronze, max 1" product diameter.  
 BR-3A.....Brush Assembly Phosphor Bronze, max 3" product diameter.  
 Power Requirements.....100 to 240VAC 1 amp, 49-61 Hz. Power supply is self-adjusting.  
 Communications.....RS-485 Serial Interface; Analog (optional); Ethernet (optional); Profibus (optional).  
 Safety.....CE Approved.  
 Designed to IEC-1010.

Specifications subject to change without notice. 11/11 EN  
 Please consult factory for help in choosing equipment for specific applications.

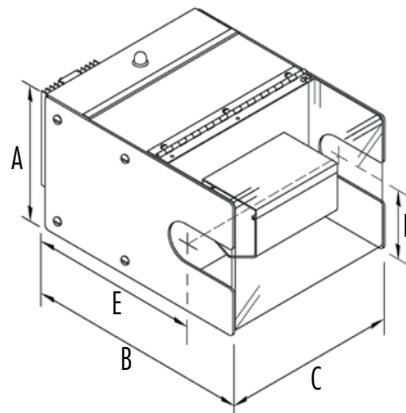
Measurements for AC model.



Wireline Center	
Vertical	Horizontal

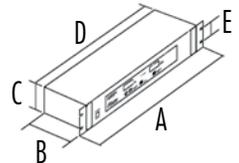
	A	B	C	D	E	F
BD-12, 13, 14, BR-1A, BR-1ALZ, FB-12	9.5" [241 mm]	13.9" [353 mm]	11.5" [293 mm]	7.5" [190 mm]	3.8" [95 mm]	10.0" [254 mm]
BD-22S	10.5" [266 mm]	15.4" [292 mm]	11.6" [294 mm]	8.5" [216 mm]	4.3" [109 mm]	11.0" [279 mm]
BD-15	11.4" [290 mm]	16.3" [414 mm]	12.5" [318 mm]	9.4" [240 mm]	4.8" [120 mm]	11.5" [290 mm]
BR-3A, BR-3ALZ	11.4" [290 mm]	17.8" [452 mm]	13.5" [344 mm]	9.4" [240 mm]	Call Factory for Details	

Measurements for models AR with optional ARC.



	A	B	C	D	E
BD-12, 13, 14, BR-1A, BR-1ALZ, FB-12	7.5" [190 mm]	13.9" [353 mm]	11.5" [293 mm]	3.8" [95 mm]	10.0" [254 mm]
BD-22S	8.5" [216 mm]	15.4" [292 mm]	11.6" [294 mm]	4.3" [109 mm]	11.0" [279 mm]
BD-15	9.4" [240 mm]	16.3" [414 mm]	12.5" [318 mm]	4.8" [120 mm]	11.5" [290 mm]
BR-3A, BR-3ALZ	9.4" [240 mm]	17.8" [452 mm]	13.5" [344 mm]	Call Factory for Details	

ARC display dimensions.



A	B	C	D	E
19.0"	5.8"	3.5"	17.0"	1.8"
Wireline Center		Vertical	Horizontal	

## Grounded Rod Electrode Method

