

DC-AC & -AR

Digital DC Spark Tester Series

- >> Reliable DC spark testing at any speed
- >> 1KV, 10KV and 20KV models
- >> Versatile configurations
- >> Test voltages from 50v
- >> Optional bare wire differentiation
- >> Wide range of electrode styles
- >> CE approved



DC-10AR/BD-14 with BRC Smart Controller

Clinton's DC-AC & DC-AR Digital D.C. Spark Tester series will fit almost anywhere on the wire line, working either as a standalone spark tester or as part of a fully process-controlled quality system.

The spark tester is available in 1KV, 10KV, and 20KV models and in four configurations:

- >> DC-AC all-in-one spark tester
- >> DC-AR spark tester and remote 19" ARC display located up to 200 feet away
- >> DC-AR spark tester and remote BRC Smart Controller located up to 200 feet away
- >> DC-AR spark tester, without display, that receives and responds to digital commands from a PLC or computer

Equipped with a 4" long bead chain electrode, the spark tester meets UL444 test standards for communications cables at virtually any line speed. If the manufacturer's main concern is finding bare wire, the BRC

Smart Controller can identify lengths of bare wire 1/2" or longer, based on line speed indication from an encoder, tachometer signal or serial interface.

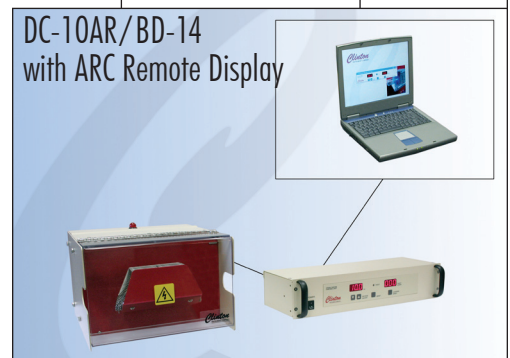
Digital test voltage and fault count displays are easy to read, and a safety interlock switch removes high voltage when the electrode cover is lifted. Wiring and setup are done externally-- there is no need to open up the unit.

Membrane switches on the display panel all the spark tester to be configured for respooling or extrusion modes and to set the length of time that process control relay contacts are energized after a fault occurs. The form C relay contacts are accessible on a rear panel connector for easy wiring to external alarms, lights or machines that are to be controlled by the spark tester. Optional communication modules are available to integrate the spark tester into old or new control systems.

1KV versions (DC-1AC or DC-1AR) with high density brush electrodes accurately test at voltages from approximately 50 volts to 1000 volts DC and are non-destructive. Please contact the factory regarding your application.



DC-20AC/BD-14 with optional X3A Horn/Light Tower



DC-10AR/BD-14 with ARC Remote Display



DC-1AR/BR-1A Brush Electrode

(Computer shown in photos not included nor offered by CIC.)

Clinton
INSTRUMENT COMPANY

DC-AC & -AR SPECIFICATIONS

Voltage Test Range:

- DC-1AC or -AR 50v to 1KV (minimum voltage varies on electrode design.)
- DC-10AC or -AR 500v to 10KV (minimum voltage varies on electrode design.)
- DC-20AC or -AR 500v to 20KV (minimum voltage varies on electrode design.)

Output Current:

- DC-1AC or -AR 2 milliamperes maximum.
- DC-10AC or -AR 1.5 milliamperes maximum.
- DC-20AC or -AR 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 1.5 milliseconds.

Detection Sensitivity

- DC-1AC or -AR 200 μ a. at 1000v.
- DC-10&20AC or -AR Less than 600 μ a. at 5KV.

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.

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.

DC-AC & -AR ELECTRODES

Bead Chain Assemblies (DC-10&20AC/AR only) :

- BD-12 Bead Chain Assembly 1" Product Diameter, 2" along wire line.
- BD-13 Bead Chain Assembly 1" Product Diameter, 3" along wire line.
- BD-14 Bead Chain Assembly 1" Product Diameter, 4" along wire line.
- BD-15 Bead Chain Assembly 1" Product Diameter, 5" along wire line.
- BD-22S Bead Chain Assembly 2" Product Diameter, 2" along wire line.

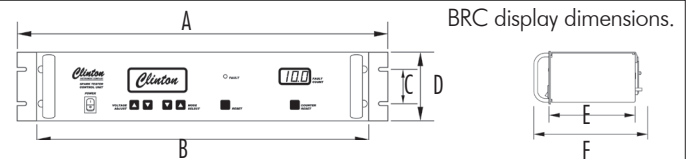
Brush Assemblies:

- BR-1A Brush Assembly Phosphor Bronze 1" Product Diameter.
- BR-3A Brush Assembly Phosphor Bronze 3" Product Diameter.
- FB-12 Fiberlite Brush Assembly.

Roller Assemblies:

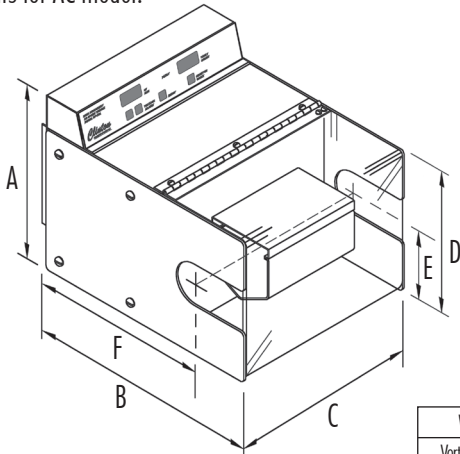
- R-46 Roller Assembly .25" (6mm) max. Product Thickness, 6" (150mm) Product Width.

Please consult factory for help in choosing equipment for specific applications.



A	B	C	D	E	F
19.0" [482.6]	17.0" [431.8]	1.8" [44.4]	3.5" [88.9]	5.8" [145.9]	7.6" [192.6]

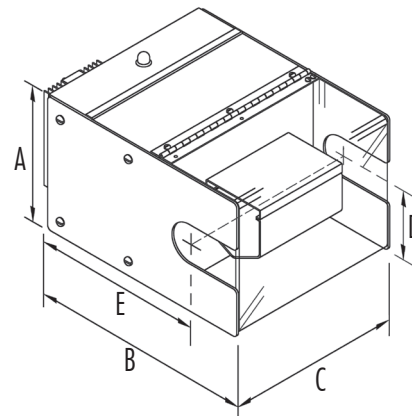
Measurements for AC model.



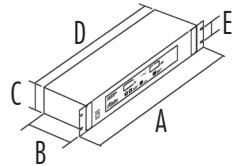
Wireline Center	
Vertical	Horizontal
E	F

	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" [344 mm]	13.5" [344 mm]	9.4" [240 mm]	Call Factory for Details	
BRTC-6	11.5" [293 mm]	19.1" [292 mm]	12.5" [318 mm]	9.6" [244 mm]	Call Factory for Details	

Measurements for models AR with optional ARC.



ARC display dimensions.



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

	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]
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Specifications subject to change without notice. 10/11 EN