

ES614 ESD Air Discharge Work Station



(Note: the ES613 ESD simulator is not included)

1. Description

Air discharge ESD test and measurement has been an inconsistent task due to the difficulty of holding the ESD simulator gun and zapping the same spot. The inconsistency of the ESD discharge waveforms generated by different ESD guns designs. The loosely controlled IEC and ISO standard did not specify air discharge waveform parameters. However, the air discharge waveform is a function of many parameters such as the ESD simulator physical structure, the ESD gun tip shape, the approaching speed, angle and path, the test environment temperature, humidity and pressure. All these parameters vary the arch length and ESD zap location of the device under test.

ES614 Series ESD Simulator Air Discharge Work Station has a digitally controlled linear guide way system developed to control the ESD simulator approaching speed and travel path for air discharge tests and calibration. This instrument can greatly improve air discharge test consistency in terms of the approaching speed and travel path. It also integrates high precision environmental sensors including temperature, relative humidity and pressure sensor to record the ESD test related environmental parameters.

2. Features

- Numerical Controlled ESD Air Discharge Approaching Speed
- Precision Humidity, Temperature, Pressure Sensors Integrated
- LabVIEW Controlled Test and Report Software
- Spring Loaded Air Discharge Tip
- Customizable Holder for Different ESD Simulators Available

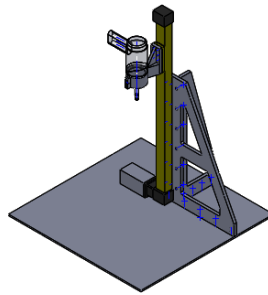
3. Applications

- ESD Simulator Air Discharge Approaching Speed Control
- Automated ESD Simulator Air Discharge with Remote Control
- ESD Simulator Air Discharge Waveform Calibration

4. Specifications

ES614-500 ESD Air Discharge Motion Controller	
Maximum ESD Gun Weight	1.5 kg (ES613-G20 is 0.8 kg)
Maximum Travel Length	500 mm
Moving Speed Control	1 – 500 mm/s (± 5%)
Moving Resolution	0.037 mm step
PC Control Port	USB
Front Panel Control	1 turn knob speed control Push button moving start
Controller Dimension	36 X 34 X 16 cm
Controller Weight	About 5 kg (11 lb)
Integrated Precision Temperature Sensor	
Full Accuracy Range	From -0 to 65 °C
Absolute Accuracy	± 1 °C
RMS noise	0.005 °C
Integrated Precision Humidity Sensor	
Response time (τ63%)	1s
Humidity Range	From 0 to 100 %
Humidity Accuracy	± 3 % relative humidity
Humidity Hysteresis	< 2 % relative humidity
Integrated Precision Pressure Sensor	
Operating range	From 300 to 1100 hPa
RMS Noise	0.2 Pa (equiv. to 1.7 cm)
Sensitivity Error	± 0.25 % (equiv. to 1 m at 400 m height change)
Temperature Coefficient	±11.5 Pa/K (equiv. to ±12.6 cm at 1°C temperature change)

ES614-WSA ESD Air Discharge Work Station Type A



Dimension	610 X 610 X 750 mm
Surface Finish	Silver Color Anodized
Weight	About 12 kg (26 lb)

5. Ordering Information

Line	Part # or Option #	Description
1	ES614-500	ES614 ESD Air Discharge Motion Controller up to 500 mm/s
2	ES614-WSA	ES614 ESD Air Discharge Work Station Type A
3	ES614-LS	Laptop with LabVIEW RTE and Complied ES614 Software
4	ES613-SAT	Spring Loaded Air Discharge Gun Tip for ES613 ESD Simulator
5	ES613-SCT	Spring Loaded Contact Discharge Gun Tip for ES613 ESD Simulator

Customized ESD Gun Holder and Spring Loaded Tip might be available upon request