Model 210HS-2B

Charge-to-Mass Ratio (Q/m) Test System*

TREK, INC. introduces the industry's first portable Q/m analyzer which utilizes the “draw-off” toner transfer method to yield repeatable high accuracy toner charge measurements. The TREK Model 210HS-2B Charge-to-Mass Ratio (Q/m) Test System is used to quickly and accurately determine the charge-to-mass ratio characteristics of both single and dual component electrophotographic toners and other charged particulates. Interchangeable mesh filters accommodate various sizes of charged particles. The system is highly portable for use directly on the production line as well as in the laboratory.

The TREK Model 210HS-2B system employs a unique specimen separation and transfer technique which avoids the creation of measurement errors due to the undesired additional charging of the toner as caused by the rapid air movement associated with "blow-off" type measurement systems.

The TREK Model 210HS-2B is configured as a separate main indicator unit, a plug-in sample cell unit, and a plug-in absorption nozzle unit to allow for different configurations in response to various user applications. When stronger suction is required, such as for single component toners, an optional external pump is used which is controlled by the Main Indicator Unit. For additional information regarding the TREK Model 210HS-2B Electrophotography Toner/Powder Charge-to-Mass Ratio (Q/m) Test System, please visit our web site at http://www.trekinc.com.

** Measuring toner mass requires the use of a weigh scale which is not included in the Charge-to-Mass Ratio Test System.*

An Industry First

A Q/m analyzer which avoids the creation of measurement errors associated with traditional "blow-off” measurement techniques

Accurately determines the charge-to-mass ratio characteristics of electrophotographic toners

Designed to handle single and dual component toners

Employs a unique specimen separation and transfer technique

Can be configured to different application requirements

Lightweight and portable

CONTROL WITHOUT COMPROMISE

Model 210HS-2B Specifications

Performance

Measurement Range
0 to ±2 microcoulombs (1.999 µC) full scale. (other ranges optionally available)

Measurement Resolution
0.001 µC (1 nC).

Accuracy
Better than 0.25% of full scale (±5 nC).

Stability
Drift with Time
Less than ±0.005 nC/s.

Drift with Temperature
Less than 200 ppm/°C, over the range of 15°C to 35°C.

Vacuum Pressure
10 kPa.

Internal Pump
At 60 Hz Line Frequency
Maximum Blow-Out Pressure
0.01 MPa (0.1 kg_f/cm^2).
Maximum Blow-Out Quantity
28.0 liters/minute.
Maximum Suction Pressure
0.032 MPa (0.32 kg_f/cm^2).

At 50 Hz Line Frequency
Maximum Blow-Out Pressure
0.01 MPa (0.1 kg_f/cm^2).
Maximum Blow-Out Quantity
26.0 liters/minute.
Maximum Suction Pressure
0.029 MPa (0.29 kg_f/cm^2).

Features

Main Indicator Unit Front Panel
Pump Switch
Activates the internal or external pump(s).
Input 1 Connector
A BNC connector for connecting the Absorption Nozzle Unit to the Main Indicator Unit.
Input 2 Connector
A BNC connector for connecting the Sample Cell Case to the Main Indicator Unit.

Features (cont.)

Main Indicator Unit Front Panel (cont.)
Air Connector
A connector for connection of the air hose of the Absorption Nozzle Unit.
Reset 1 Switch
A switch to null the coulombmeter for the Absorption Nozzle Unit.
Reset 2 Switch
A switch to null the coulombmeter for the Sample Cell Case.
Display 1
A display to indicate the charge of the Faraday cage in the Absorption Nozzle Unit.
Display 2
A display to indicate the charge of the Faraday cage in the Sample Cell Case.

Main Indicator Unit Rear Panel
P1/P2/P1P2 Switch
A switch to designate control of an internal pump, an external pump, or both.
AC Outlet Connector
A switched outlet to control an external pump.

General

Main Indicator Unit
Dimensions
210 mm H x 250 mm W x 370 mm D (8.26″ H x 9.8″ W x 14.56″ D).
Weight
6 kg (13 lb).

Power Requirements
Line supply of 104 to 127 V AC, or 198 V to 242 V AC, at 48 to 63 Hz (specify when ordering).

Sample Cell Case
Dimensions
40 mm H x 120 mm W x 120 mm D (1.57″ H x 4.72″ W x 4.72″ D).
Weight
0.5 kg (1.1 lb).

Stainless Steel Mesh (supplied)
Plain Woven No. 400
0.030 mm diameter,
0.034 mm opening,
27.8% opening ratio.

General

Absorption Nozzle Unit
Dimensions
1600 mm L (63″ L).

Weight
350 g (0.8 lb).

Operating Conditions
Temperature
5°C to 40°C.

Included Accessories

Screw driver, plastic wrench, extra silicon tubes, Type #2 filter papers (H6001), extra number 400 mesh screens, line cord, and manual.

Nozzle Filter Section
Nozzle Filter set (filter case, nozzle hose, filter case stopper, and silicon tubes).

Cell Case Section
Sample Cell Case (with cell case, cell case stand, and cell case stopper).

Optional Accessories

External Pump (90 V to 126 V AC) 210HS-EP-G-CE (16115).
External Pump (180 V to 250 V AC) 210HS-EP-K-CE (16111).
Carrying Case (C3014).

Certification

TREK, INC. certifies that each Model 210HS-2B is tested and calibrated to specifications using measurement equipment traceable to the National Institute of Standards and Technology or traceable to consensus standards.
A Certificate of Calibration accompanies each instrument when it is shipped from the factory.

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