



POWDER RESISTIVITY MEASURING SYSTEM PD-600

USE

Research & Development, Quality Control, etc.

APPLICATIONS

Powder materials of carbon products:

Materials used for rechargeable battery electrodes, condensers and resistance material and insulating electronics / cokes / graphite / carbon black / carbon fiber / nano carbon, etc.

Metal powder:

Materials used for battery electrodes, thin film materials such as copper powder or ITO powder, for circuit board materials, for example conductive paste and electro conductive paint.

Others:

Printer toner, magnetic material such as ferrite, food material, pharmaceutical related and automobile parts

SPECIFICATIONS

Measuring method	Constant-current / -voltage methods
Measuring Units	Low resistance (10^{-4} - $10^7 \Omega$) Loresta-GX High resistance (10^3 - $10^{14} \Omega$) Hiresta-UX
Power supply	AC 90 - 240V / 50 - 60Hz
Max. Load	0,01kN - 20kN (~60Mpa)
Hydraulic unit	automatic
Probe unit	20mm (Ø) x 40mm (L)
Probe types	4-Pin Electrode (inner-pin distance 3mm) Ring Electrode (Ø 20mm)
Necessary accessories	Window PC with Excel
Dimensions (W x D x H in cm)	
Main Unit	43 x 23 x 49 (42kg)
Hydraulic Pump	57 x 37 x 32 (29kg)

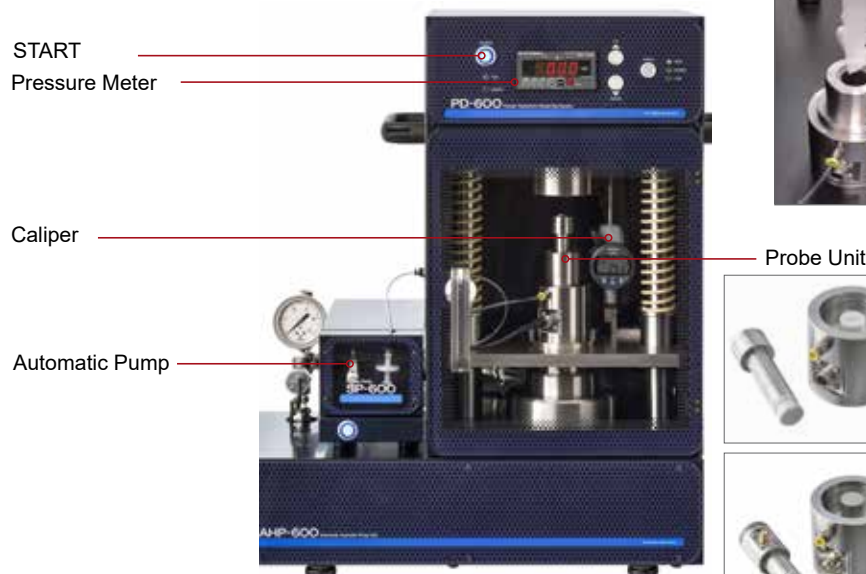


FEATURES

The Powder Measuring System MCP-PD600 contains a high precision pressure gauge for the measurement of conductive powders for maximum pressure of 20kN and is quickly attached to either the Loresta-GX or Hiresta-UX unit.

- Fully automatic, just input the load value and press START
- Newly developed cylinder pump allows measuring from low load (0.01kN)
- 4-pin probe for precise measurement of low range resistivity / Ring probe for high range resistivity
- Improved powder filling performance with a new vacuum-pump.

DETAILS



PROBES



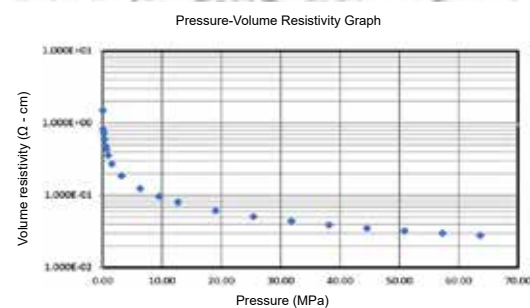
For Low Resistivity Measurement in addition with LORESTA-GX (4 Terminal Method)



For High Resistivity Measurement in addition with HIRESTA-UX. (Ring Electrode)

TEST REPORT (EXAMPLE)

Sample CARBON BLACK									
No.	Load (kN)	Pressure (MPa)	Thickness (mm)	RCF	Resistance (Ω)	Resistivity (Ω -cm)	Conductivity (S/cm)	Density (g/cm³)	
1	0.01	0.03	11.60	1.460	OK	8.804E-01	1.491E+00	6.706E-01	1.388E-01
2	0.03	0.10	10.94	1.539	OK	4.869E-01	8.199E-01	1.220E+00	1.472E-01
3	0.05	0.16	10.40	1.610	OK	4.378E-01	7.332E-01	1.364E+00	1.548E-01
4	0.10	0.32	9.58	1.730	OK	3.639E-01	6.032E-01	1.658E+00	1.681E-01
5	0.15	0.48	9.03	1.819	OK	2.969E-01	4.878E-01	2.050E+00	1.783E-01
6	0.20	0.64	8.72	1.874	OK	2.663E-01	4.354E-01	2.297E+00	1.846E-01
7	0.29	0.92	8.21	1.972	OK	2.206E-01	3.569E-01	2.802E+00	1.963E-01
8	0.49	1.56	7.50	2.121	OK	1.713E-01	2.724E-01	3.671E+00	2.148E-01
9	1.00	3.18	6.47	2.372	OK	1.213E-01	1.863E-01	5.368E+00	2.448E-01



Sample IRON POWDER									
No.	Load (kN)	Pressure (MPa)	Thickness (mm)	RCF	Resistance (Ω)	Resistivity (Ω -cm)	Conductivity (S/cm)	Density (g/cm³)	
1	0.09	3.15	4.19	3.096	OK	1.875E+00	2.433E+00	4.110E-01	3.039E+00
2	1.99	6.33	4.02	3.155	OK	6.127E-01	7.777E-01	1.286E+00	3.166E+00
3	2.99	9.52	3.90	3.200	OK	3.442E-01	4.291E-01	2.330E+00	3.269E+00
4	3.99	12.70	3.78	3.241	OK	2.309E-01	2.827E-01	3.537E+00	3.371E+00
5	7.99	25.43	3.46	3.349	OK	8.970E-02	1.039E-01	9.624E+00	3.682E+00
6	11.97	38.10	3.23	3.424	OK	5.725E-02	6.330E-02	1.580E+00	3.994E+00
7	15.97	50.83	3.05	3.479	OK	4.331E-02	4.594E-02	2.177E+00	4.177E+00
8	19.99	65.63	2.91	3.520	OK	3.560E-02	3.647E-02	2.742E+00	4.376E+00

