HTSH-1100

Expert solution for electrical characterization of materials at high temperatures & under controlled atmospheres

- Ambient to 1100 °C
- 2 and 4-point measurements
- Easy sample mounting
- K-type thermocouple
- Variable controlled atmospheres
- Gas pressure up to 2 bar relative
- Compatible with tubular furnaces

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APPLICATIONS

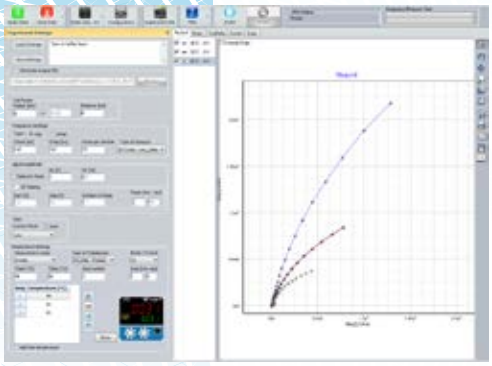
- Electrical Impedance
- Dielectric constant/Dielectric loss
- Conductivity (bulk, grain boundary, etc)
- Material purity
- Activation energy
- Phase transitions temperatures

High Temperature Sample Holder (HTSH-1100) is a test fixture dedicated to characterization of electrical properties of solid material using the parallel plate capacitor method over the temperature range between the room temperature and 1100 °C. HTSH-1100 can also be used for heat treatment in controlled atmospheres.

The HTSH-1100 is compatible with the Bio-Logic High Temperature Furnace HTF-1100 and other tubular furnaces with a minimal worktube diameter of 46 mm. A k-type thermocouple placed closely to the sample ensures an accurate control and measurement of the temperature close to the sample.

The HTSH-1100 can operate under controlled environment conditions with inert gas or active gas (Ar_2, N_2, O_2,..) and with variable pressures up to 2 bar relative. A quartz tube is supplied with the HTSH-1100 for performing measurements under controlled atmospheres. The HTSH-1100 base is fitted with a gas inlet/outlet for gas flow. A safety valve rated at 30 PSI limits the internal gas pressure to 2 bar. It also allows gas to escape when the internal pressure increases with temperature and exceeds 2 bar.

Sample Holders		Operating Temperature	Features	Compatibility
HTSH-1100	Ð=25 mm	Ambient to 1100°C	Quartz tube for controlled atmosphere Leak-tight up to 2 bar relative K-type thermocouple	HTF-1100 & Tubular furnaces
	Ð=12 mm			
	Ð=06 mm			
	Ð=03 mm			



Software

MT-Lab® software interface allows user to set geometric factor of the cell (diameter, thickness) for the cell constant calculation and so the calculation of the electrical conductivity from raw impedance data. MT-Lab® software allows also compensation of residuals and stray impedances with MTZ-35.

SPECIFICATIONS

Temperature range	from RT to 1100°C
Electrodes	High purity Platinum disc (1 mm thickness)
Electrode diameter	3 mm, 6 mm, 12 mm or 25 mm
Temperature accuracy	±1 °C
Maximum sample diameter/thickness	27 mm // 5 mm
Quartz tube dimension	270.5 x 45.5 mm
Temperature probe	Inconel shielded K-Type thermocouple
Dimension with quartz tube	310.5 x 80.0 mm
Weight	1.2 kg

Compatible with:

- HTF-1100
- MTZ-35

Brochure released on December 2016 - Pictures and specifications subject to change

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