



## CERAMICS DENSITY TESTER TTD-LPC

Ceramics Density Tester TTD-LPC, engineered for precise ceramic density measurements across a wide range of sample sizes. This versatile tester offers maximum weight capacities of 1500g, 2000g, 3000g, and 6000g, with respective weighing precisions of 0.01g for the first three capacities and 0.1g for the 6000g capacity.

Density Meter, Density Tester, Densimeter, Specific Gravity Tester

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**Maximum Weight:** 1500g / 2000g / 3000g / 6000g

**Weighing Precision:** 0.01g / 0.01g / 0.01g / 0.1g

**Density Precision:** 0.001g/cm<sup>3</sup> Compliant with ASTM standards C20, C134, C373, C329, D4254, D854, as well as AASHTO standards T166 and T0705.

Ceramics Density Tester TTD-LPC is equipped with four functions and can directly display Bulk Density, Wet Density, Porosity, Absorption, Apparent Density, Open Pores, Closed Porosity, and Total Porosity.

## APPLICATIONS

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## Suitable for

Applications include the ceramic industry, pharmaceuticals (pill medicine), porous material research institutes, construction, geological exploration, roadway research, permanent magnets (Sm, Co, Nd, Dy), secondary batteries (Li, Ni, Co, Mn), mixed rare earth materials, Mn-Zn ferrite, Ni-Zn ferrite, NdFeB, Sm-Co, rare earth magnetic materials, and materials for treating water collapse.

## Principle

According to ASTM standards C20, C134, C373, C329, D4254, D854, and AASHTO standards T166 and T0705, using methods such as the Archimedes principle buoyancy method, optional boiling water method, sealing wax method, and vacuum saturation method enables accurate and efficient display of bulk density, porosity, and water absorption results.

## Specific

- 1. BULK :** Adopting the water saturation method for a porous material.
- 2. BK+ :** Adopting water saturation method for porous absorbent material. With five groups of memory functions.
- 3. WAX :** A wax sealing method for porous absorbent material.
- 4. DS :** Nonabsorbent material.

## FEATURES

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- An infrared temperature sensor automatically detects water temperature and compensates accordingly.

- Ceramics Density Tester TTD-LPC features automatic temperature compensation, manual temperature compensation, and solution compensation functions.
- Reads body density, apparent porosity, wet density, and volume directly in absorbent product density measurement mode.
- Built-in memory functions allow for the simultaneous measurement of five groups of samples in absorbent product density measurement mode.
- The density of the absorbent product can be directly determined using the sealing wax method.
- Directly displays values for the development of new materials. Equipped with HI and LO limit functions and a buzzer, the device determines whether the specific gravity of the test object meets standards in non-absorbent product density measurement mode. It also features a mixing ratio function for two groups.
- Ceramics Density Tester TTD-LPC equipped with RS-232 and USB interfaces.
- Utilizes a large-size water tank design to minimize errors caused by suspension rail buoyancy. The water tank dimensions are 210 x 170 x 120 mm.

## TECHNICAL SPECIFICATIONS

| Model               | TTD-LPC1500             | TTD-LPC2000 | TTD-LPC3000 | TTD-LPC6000 |
|---------------------|-------------------------|-------------|-------------|-------------|
| Max weight          | 1500g                   |             | 3000g       | 6000g       |
| Weighting precision | 0.01g                   |             |             | 0.1g        |
| Density precision   | 0.001 g/cm <sup>3</sup> |             |             |             |
| Wet density         | 0.001 g/cm <sup>3</sup> |             |             |             |
| Porosity            | 0.01 %                  |             |             |             |
| Absorption          | 0.01 %                  |             |             |             |
| Apparent DS         | 0.001 g/cm <sup>3</sup> |             |             |             |
| Open pores          | 0.001 g/cm <sup>3</sup> |             |             |             |

|                |                                                                                      |                                                                                                                                           |
|----------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Close porosity |                                                                                      | 0.01 %                                                                                                                                    |
| Total porosity |                                                                                      | 0.01 %                                                                                                                                    |
| Max ratio      |                                                                                      | 0.01 %                                                                                                                                    |
| Mode           | Bulk density (Adopting water saturation method)                                      | Porous material : Show Bulk density, Wet density, Porosity, Absorption, Apparent DS, Open pores, Close porosity, Total porosity           |
|                | Bulk density (Adopting water saturation method)<br>(Five groups of memory functions) | Porous absorbent material : Show Bulk density, Wet density, Porosity, Absorption, Apparent DS, Open pores, Close porosity, Total porosity |
|                | Bulk density (Wax sealing method)                                                    | Porous absorbent material : Show Bulk density directly                                                                                    |
|                | Nonabsorbent material                                                                | Show Density, Volume, Mix ratio directly                                                                                                  |



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