SMART INSTRUMENTS COMPANY PVT. LTD.

SMART PYCNO 30

TRUE DENSITY METER

Features :

- Fully Indigenous.
- Economical.
- Non-Destructive Testing.
- Easy to operate.

+ More durable Stainless Steel Cups.

+ Wide operating range offers greatest sample size flexibility with high accuracy.

- Two interchangeable sample cells.

+ Two matching reference volumes.

Description:

True Density is an important parameter to be measured. It is defined as the mass to the volume occupied by that mass. Therefore, contribution to the volume made by pores or internal voids must be excluded when measuring the true density. For non-porous material, it can be measured by fluid displacement method but for porous materials, where it is difficult to penetrate the fluid into the pores, gas displacement method is useful. The apparatus used to measure sample volume of such material is well known as *'pyknometers'* or *'pycnometers'* where *'pycnos'* means 'thickness' or 'density'.

The instrument, **Smart Pycno 30,** is specifically designed to measure the true volume of powders, solids etc. It employes Archimedes Principle of gas displacement. Normally Helium gas is recommended since its small atomic dimension ensures penetration into finest pores. Its behaviour as an ideal gas is also desirable.

Smart Pycno 30 determines the true volume of powder or solid material. Different sample cell sizes are available to accommodate various samples. The Helium gas is pressurized in the known volume reference chamber. The sample cell is kept in the sample chamber. The pressurised gas is allowed to flow into this sample cell. Depending upon the sample volume, the initial pressure drops and becomes stable and that reading is noted. From these two pressure readings, true volume of sample is calculated. Finally the True Density of the sample is calculated by dividing the weight of the sample by its true volume. The reference chamber and sample chamber volume are initially calibrated by known volume stainless steel spheres.

Specifications :

Manually Operated True Density Meter

Gas Recommended : Ultrahigh Pure Helium Gas. Nitrogen gas is recommended for Helium permeable material

Accuracy : ± 0.5% (When properly prepared and sample size between 35 to 150 cc for large cup and 4 to 18 cc for micro cup)

Repeatability:± 0.3%

Dimensions: 35 cm (L)* 17.5 cm (H) * 31cm(D)

Weight: 7 Kg. (Approximately)

Power :230V AC, 50HZ, 3W

All specification are valid at25°C

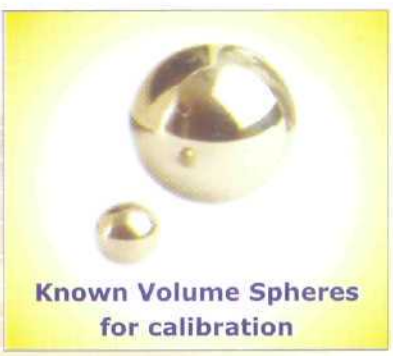
Application :

Useful in density measurement of Metal Oxides, Refractories, Carbon Black, Activated Carbon, Silica, Metal Powders, Ceramics, Graphite, Catalysts, Pharmaceuticals, Pigments, Minerals, Organic Powders and many more.

Useful in :

- Metallurgical and Material Science Labs
- 4 Research and Development Labs
- \+ Process & Quality Control

Sample Cups



Known Volume Spheres for calibration

Our Other Product Range

- BET Surface Area Analyser
- Tap Dens.ty Meter
- Diqital Gas Flow Meter

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