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Core Lab

Abacus Bulk Volume Weigh Station Datasheet

University Training Equipment



Abacus Bulk Volume Weigh Station



Abacus Bulk Volume Weigh Station is an easy-to-use bulk-volume apparatus that uses the fluid displacement principle (with a reservoir for approximately 300 ml of mercury) to determine quickly and accurately the Bulk Volume (BV-Hg) of plug-size core samples. The apparatus includes an electronic balance with an integrated, mercury-immersion reservoir interfaced with a personal computer.

The host computer system for data acquisition and control, utilizes a Windows based graphical interface to guide the user through the operation of the ABACUS system. The operating software allows the operator to acquire and save sample measurement data in HTML format, compatible with the common spreadsheets, databases and word processors.

The ABACUS graphical user interface accepts sample entry by number or by depth and allows the operator to measure sequentially or randomly BV-Hg, sample weight and dimensions. Mercury-immersion bulk volume BV-Hg, weight, data are calculated and stored to disk or sent to optional printer. The included digital calipers measure accurately the length and diameter of the plug samples. The measured data is automatically logged to the computer providing automatic calculation of flow area, caliper bulk factor and shape factors.

ABACUS requires operator input of ambient room temperature to calculate and apply automatically the operating density of the mercury.

Parameters Measured/Computed on a Standard System

Mercury Immersion Bulk Volumes on plug-size samples
Caliper Bulk Volume, length and Diameter