CEMENT > FLUIDITY

GROUT VOLUME CHANGE APPARATUS (Micrometer Bridge Set)

Code : C026

- Designed for evaluating the height change of hydraulic-cement grout cylinders in hardened condition, providing accurate measurement of volumetric stability according to internationally accepted testing practice.
- Utilizes a rigid micrometer bridge frame that establishes a fixed reference position over the specimen, enabling repeatable, high-precision height readings throughout the curing period without disturbing the sample.
- Equipped with a precision depth micrometer capable of detecting very small vertical movements of the grout surface, ensuring exact monitoring of expansion or shrinkage as the material hydrates.
- Features a tapered steel cylinder mold specifically configured for grout testing, ensuring uniform confinement, proper compaction, and consistent specimen geometry in accordance with recognized grout testing procedures.

- A smooth, ground glass plate is placed over the fresh grout to form a sealed and level upper surface, minimizing moisture loss and external interference while promoting reliable contact for initial reference readings.
- A controlled hold-down weight applies uniform pressure on the glass plate during the early hours of setting, providing stable restraint and allowing the grout to develop under conditions representative of practical application.

STANDARDS

ASTM C1090

TECHNICAL SPECIFICATIONS

- Test Method: Height change measurement of hydraulic-cement grout cylinders
- Specimen Type: Cylindrical grout specimen as prescribed in ASTM C1090/C1090M
- Measurement Principle: Vertical displacement of specimen surface relative to fixed bridge reference
- Depth Gauge: Mechanical micrometer depth gauge with fine-resolution graduations
- Bridge Frame: Rigid, non-corroding metal frame with four support columns and a precision-machined top plate
- Restraint System: Glass plate and hold-down weight for controlled early-age restraint
- Cylinder Mold Type: Steel tapered mold with detachable base for accurate specimen casting
- Tamping Tool: Steel tamping rod with hemispherical end for proper grout consolidation
- Mixing Method: Compatible with mixers conforming to standardized grout preparation procedures
- Curing Conditions: Designed for use in moist curing rooms or sealed laboratory environments
- Measurement Ages: Typically at 1, 3, 7, 14, and 28 days (or as required by project specifications)

EQUIPPED WITH

- Micrometer bridge frame
- Precision micrometer depth gauge
- Steel tapered cylinder mold with detachable base
- Steel tamping rod
- Glass plate for specimen sealing
- Hold-down weight

SUPPLIED WITH

- Complete micrometer bridge apparatus
- Glass plate
- Hold-down weight
- Steel cylinder mold
- Steel tamping rod