Vicat Apparatus

- **Rigid frame construction for accurate readings.**
- **Reversible plunger with removable needle.**
- **Includes needle and hard rubber mold.**

The Vicat Apparatus is designed for determining the normal consistency, standard consistency and time of setting of cement and lime in accordance with ASTM and AASHTO specifications.

The apparatus consists of a frame bearing a movable plunger of 300 grams weight. The Plunger is 10 mm diameter at one end and is fitted with a removable 1 mm diameter needle at the other end. The plunger is reversible and carries an indicator which moves over the scale graduated in millimeters.

The apparatus is supplied complete with plunger, needle and hard rubber mold.

### Specifications
- **Plunger.** Reversible; 10 mm diam. at one end and 1 mm diam. needle at other end; combined weight 300 grams.
- **Needle.** Steel; mounted in plunger; 1 mm diam. x 50 mm long.
- **Scale.** Graduated in millimeters.
- **Mold.** Hard rubber; 70 mm base diam. x 60 mm top diam. x 40 mm h.
- **Weight.** Net 4 lbs. (1.8 kg).

### Ordering Information
**EI38-2012.** Includes Vicat needle and mold.

### Replacement Parts
- **EI38-2620.** ASTM Vicat Needle.
- **EI38-2660.** ASTM Vicat Mold and Glass Plate.
Acme Laboratory Penetrometer
ASTM C-403; AASHTO T-197.

- Hydraulically operated with 200 lbf. (890 N) capacity gauge.
- Can be used in either the laboratory or field.
- Includes six stainless steel proctor needles.

The ASTM penetrometer resistance test of concrete is a procedure used to measure the rate of hardening of mortars sieved from concrete mixtures. The test is used to determine the effects of variables such as temperature, cement, mix design, additions and ad-mixtures upon hardening characteristics of concrete.

The Acme Laboratory Penetrometer is designed for highly accurate laboratory or field studies. This hydraulically operated apparatus is designed to develop uniformity in complete time-rate-penetration resistance studies of concrete mortar. The unit is supplied complete with six penetration needles.

**Specifications**
- **Capacity:** 200 lbf. (890 N).
- **Operation:** Hydraulic.
- **Needles:** 6 included; 1/40, 1/20, 1/10, 1/4, 1/2 and 1 sq. in. end areas; stored in wooden block holder.
- **Weight:** Shpg. 60 lbs. (27 kg).

**Ordering Information**
EI38-2670. Includes one package of data sheets.

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Mortar Penetrometer
ASTM C-403.

- 130 lb. capacity with 1 lb. subdivisions.
- Includes 6 interchangeable needles as specified in ASTM testing standards.
- Plated for rust resistance and long life.
- Convenient carrying case with individual compartments.

The Mortar Penetrometer set is used for determining the rate of hardening of mortars sieved from concrete mixtures. The unit consists of a specially calibrated spring dynamometer with a pressure-indicating scale on the stem of the handle. The pressure scale is calibrated to 130 lbs. by 1 lb. subdivisions. There is a major division located at each 10 lb. interval. A sliding ring on the stem indicates the maximum load obtained during the test.

**Specifications**
- **Penetrometer:** Calibrated spring dynamometer.
- **Pressure Scale:** 130 lbs. x 10 lb. and 1 lb. subdivisions.
- **Test Reading:** Indicated by sliding ring.
- **Needles:** Includes: 1, 1/2, 1/4, 1/10, 1/20 and 1/40 sq. in. end area needles.
- **Carrying Case:** Plastic with shelf; 18” w. x 6” d. x 4-3/4” h. (457 x 152 x 121 mm).
- **Weight:** Net 7 lbs. (3.2 kg).

**Ordering Information**
EI38-2675. Includes penetrometer, six needles and carrying case.