



The apparatus comprises the following :-

- i) A Permeability cell complete with a perforated plate, rubber 'O' ring and plunger.
- ii) Wooden stand fitted with a manometer, a flow-meter and a capillary tubing.
- iii) 10 Nos. filter paper discs.

ACCESSORIES :

HC36.10.2 Filter paper punch

HC36.10.3 Permeability Cell.

●● **HC36.15**

Air Permeability Apparatus (Rigden Type) IS:269-1958

Developed by Rigden for the determination of fineness of cement as represented by specific surface expressed as total surface area in sqcm per gram of cement.

The equipment consists of :-

- i) A permeability cell range 500 to 10,000 cm²/gm complete with perforated plate and plunger.
- ii) One precision bore U-tube with a two-way stop-cock fitted on a wooden stand.
- iii) Suction Bulb with rubber tubing.
- iv) 10 Nos. filter paper discs.

ACCESSORIES :

HC 36.15.1 Filter paper punch.

HC36.15.2 Permeability cell range 10,000 cm²/gm to 50,000 cm²/gm complete with perforated plate and plunger.

CONSISTENCY

●● **HC37.10**

Vicat Apparatus, With Dashpot Confirming to IS : 5513-1976

For determination of consistency of standard cement paste and initial and final setting times of cement. The equipment comprises the following :-

- i) A frame with a vertically movable rod having a cap at the top.
- ii) Vicat mould in the form of frustum of a cone with internal diameter of 60 mm at the top, 70 mm at the bottom and a height of 40 mm.
- iii) Glass base plate for the mould.
- iv) Initial Setting Time Needle.
- v) Final Setting Time Needle.
- vi) Consistency plunger.

HC37.10.3 Initial setting time needle.

HC37.10.4 Final setting time needle

HC37.10.5 Consistency plunger.

HC37.10.6 Frustum type mould.



HC 37.10

ACCESSORIES :

HC 37.10.1 Split type vicat mould with clamping ring.

HC37.10.2 Base plate, mild steel.

●● HC37.15

Vicat Apparatus (Modified) IS2542(Pt.1)

ASTM C-187, C-191, C-472 & C-110

For determination of normal consistency of hydraulic cement, gypsum plaster and lime and setting time of cement, gypsum plaster and gypsum concrete.

The Apparatus consists of the following :-

- i) A frame with a vertically moving bearing rod.
- ii) Mould in the form of frustum of a cone 70 mm bottom dia, 60 mm top dia and 40 mm high with base plate.
- iii) Needle 1 mm dia x 50 mm long.
- iv) Plunger 10 mm dia x 50 mm long.
- v) Plunger 19 mm dia x 44.4 mm long.
- vi) Plunger 12.5 mm dia x 25 mm long.
- vii) One brass weight.



HC37.15

ACCESSORIES :

HC37.05.6 Vicat Mould.

HC37.15.2 Plunger 10mm dia x 50mm long.

HC37.15.3 Plunger 19mm dia x 44.4mm long.

HC37.15.4 Plunger 12.5mm dia x 25mm long.

HC37.15.5. Needle 1 mm dia x 50 mm long

●● HC37.20

Gillmore Apparatus ASTM C-266

For determination of setting time of hydraulic cement.

The apparatus comprises the following :-

- i) One base with a central vertical rod having two horizontal cross-arms. The lower cross arm is adjustable in height.
- ii) Initial Needle 2.12mm dia, 113.4 g weight.
- iii) Final Needle 1.06 mm dia, 453.6 g weight.
- iv) One glass plate.



HC37.20

●● HC37.25

Southard Viscosimeter IS : 712-1984

For determination of volume yield of quick lime and adjusting the consistency of lime putty mixture.

The equipment consists of the following :-

- i) One 50 mm internal dia metal cylinder mounted on wooden stand and having a close fitting piston with 65 mm working stroke.
- ii) A metal bridge for measuring slump.
- iii) One lime putty density vessel 63 mm I.D. and 80 mm deep.

●● HC37.30

Flow Table (Hand Operated) IS: 712-1984

Used for determining the workability of building lime.

It comprises :

- i) One 300 mm dia polished steel table with three engraved circles of 70 mm, 110 mm and 190 mm dia at the top face.
- ii) A frame having a horizontal shaft carrying a cam on one side and a wheel on the other, adjusted to raise the table by 12.5 mm and allow it to fall freely.
- iii) Truncated conical mould 65 mm inside dia at the bottom, 40 mm inside dia at top and 90 mm high.



HC37.30

ACCESSORIES :

HC 37.30.1 Flow Mould.

●● **HC37.35**

Flow Table (Motorised) IS-712-1984

Same as HC37.30 but provided with a motor drive for operation of the cam at about 60 r.p.m. to give approximately one drop per second to the table top.

Suitable for operation on 220 V, 50 Hz, Single phase supply.

●● **HC37.40**

Flow Table (Hand Operated) IS: 5512-1983

Used for making flow tests for consistency of mortars in tests of hydraulic cements and pozzolanic materials.

It comprises the following :-

- i) A machined table top 250 mm dia of Gun metal fitted with a vertical shaft. Total weight 4.00 ± 0.05 kg.
- ii) A cast iron frame with a machined base and a smooth vertical hole at the top for the table shaft. It has a horizontal shaft carrying a cam at one end and a hand wheel at the other. The cam allows 12 mm free drop of the table.
- iii) A conical mould 100 mm inside dia at bottom, 70 mm inside dia at top and 50 mm high.



HC37.40

ACCESSORIES :

HC37.40.1 Mild steel base plate 250 mm x 250 mm x 25 mm thick for fixing to the underside of the flow table. It can be used for both HC 37.40 & HC37.45.

HC37.40.2 Flow Mould.

●● **HC37.45**

Flow Table (Motorised)

Similar to HC37.40 but with the difference that the cam shaft is driven by a motor drive at approximately 100 R.P.M.

Suitable for operation on 220/230 V, 50 Hz, single phase supply.



HC37.45

●● **HC37.50**

Flow Table (Hand Operated) IS: 1199-1959

Used for determination of fluidity of cement concrete mixture where the nominal size of



HC37.55

aggregate does not exceed 38 mm.

It consist of the following :-

- i) A brass table top 762 mm dia, finely machined at the top and having reinforcing ribs at the bottom. A vertical shaft is fitted to the underside of the table in the centre.
- ii) A steel frame with machined base and a polished smooth vertical hole for the table shaft. A horizontal shaft carries a cam at one end and a hand wheel at the other. The cam is adjusted to give a free drop of 12.5 mm to the table top.
- iii) A conical mould in the form of frustum of a cone 250 mm inside dia at base, 170 mm inside dia at top and 120 mm high. It is provided with two lifting handles.

●● **HC37.55**

Flow Table (Motorised)

Similar to HC37.50 but provided with a motor drive for the cam shaft to drive it at approx 60 r.p.m.

Suitable for operation on 220 V, 50 Hz, single phase supply.