

## TENSILE & FLEXURAL STRENGTH

### ●● HC40.05

#### Tensile Strength Tester, Hand Operated BS:12, IS : 269-1958

Used for estimation of tensile strength of cement briquettes. The equipment comprises the following :-

- i) A loading machine, double lever type, with a steel scale marked from 0 to 500 Newtons in 10 Newton division. Maximum loading capacity 5 kN. Automatic loading system using lead shot.
- ii) Lead shot 15 kg.
- iii) Set of weights for weighing lead shot comprising one each for weighing upto 0.5 kN, 1 kN, 1.5 kN and 2 kN.
- iv) One standard briquette mould with base plate.

#### ACCESSORIES :

HC40.05.1 Lead Shot 15 kg.



HC40.10

### ●● HC40.10

#### Tensile Strength Tester, Electrically Operated BS:12, IS : 269-1958

Used for estimation of tensile strength of cement briquettes. In this unit the loading is through sliding of a calibrated weight on a steel yard instead of lead shot as in HC40.05

The apparatus comprises the following :-

- i) A double lever loading machine with calibrated sliding weight and a motor drive with reduction gear. Ball bearings are used for the sliding weight to minimize friction. At the point of failure of the specimen, the steel yard operates a micro-switch which switches off the motor drive automatically thus facilitating the recording of failure load of the specimen. The load scale is engraved on the steel yard. The capacity of the unit is 9 kN.
- ii) One standard briquette mould (single) with base plate.

### ●● HC40.15

#### Briquette Mould (Single) BS : 12, IS : 269-1958

For casting of cement briquettes for tensile strength tests. It is a two part split mould made of gun metal.

Two thumb screws facilitate easy and quick assembling and dismantling of the mould. The minimum cross section of the briquettes cast is 25.4 mm x 25.4 mm. Supplied complete with a steel base plate.



HC40.15

### ●● HC40.20

#### Briquette Mould (Three Gang)

For casting three cement briquettes at a time for the tensile strength test on cement.



HC40.20

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



### ●● HC40.25

**Standard Spatula BS : 12, IS: 269-1958**

It is used for casting of cement briquettes in briquette moulds.

It consists of a blade with shank and a wooden handle of specified shape, dimensions and weight.



HC40.25

### ●● HC40.30

**Gauging Trowel BS:12, IS:4031, IS : 10086-1982**

Of specified shape and dimensions with straight edges and a wooden handle. Weight  $210 \pm 10g$ .



HC40.30

### ●● HC40.35

**Trowel IS:4031 - 1968, IS : 10086-1982**

The trowel blade of thickness 1.5 mm and 100 to 150 mm long with straight edges and a wooden handle.

### ●● HC40.40

**Tile Flexure Strength Tester IS:654-1972**

For determination of breaking load of clay roofing tiles (Mangalore Pattern.)

The equipment consists of two self aligning

bearing rollers and one loading roller all of 40 mm dia. and length 305 mm. The centres of bearing rollers can be set at 250 mm or 270 mm apart. The loading is done through a double lever loading system by means of a steady flow of lead shot from a container into the receiver hung on the lever system. The lead shot flow stops automatically when the specimen fails.

The failure load of the tile is estimated by multiplying the weight of the lead shot in the receiver by the lever ratio of the system i.e. 1:12.

Maximum capacity of the machine is 2 kN. Lever ratio is 1:12. Supplied complete with 20 kg lead shot.

### ●● HC40.45

**Tile Flexure Strength Tester IS:1237-1980**

For carrying out transverse strength tests on cement concrete flooring tiles.

The equipment consist of two bearing rollers and a third self aligning loading roller, all 25 mm in diameter. The center to

center distance between bearing rollers can be set at 150, 200 or 250 mm.

The loading is through double lever loading system by means of a steady flow of lead shot from a lead shot container to a receiver hung on the lever system. The rate of flow of lead shot is adjustable as per required rate of loading.

The flow of lead shot stops automatically on failure of test specimen and the breaking load can be calculated by multiplying the weight of lead shot in the receiver by 12.

Maximum capacity of the machine is 2 kN. Lever ratio is 1 : 12. Supplied complete with 20 kg lead shot.



HC40.45

## ●● HC40.50

**Flexure Testing Machine, Motorised, 4kN capacity conforming IS : 1727-1967 and IS : 4031-1968**

For carrying out transverse strength tests on 40 mm x 40 mm x 160 mm mortar prisms.

The equipment consists of motorised load frame with a constant rate of strain to load the specimen at the rate of  $5 \pm 1$  kg/sec. A 4 kN proving ring is provided for measuring the applied force. The flexure test attachment consists of two supporting rollers spanned 100 mm apart, one of the rollers being self seating.

The third loading roller, also of 10 mm dia, is placed in the centre of two. All the three rollers are assembled over a base plate having two vertical side (guide) plates. A special loading adaptor is provided to be screwed at the lower side of the proving ring which sits over the loading roller.

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

## ●● HC40.550

**Flexure Testing Machine, Motorised, 4kN conforming IS : 1727-1967 and IS : 4031-1968**

The machine is same as HC40.50 except that the system have load cell for load measurement and digital indicator with peak hold facility and computer interface.



HC40.50