

Indian Standard

## SPECIFICATION FOR CONSOLIDOMETER FOR DETERMINATION OF CONSOLIDATION PROPERTIES

**1. Scope** — Covers the details of consolidometer used for one dimensional consolidation test for determination of consolidation characteristics of soils for sizes 50 mm and 60 mm.

**2. Dimensions** — The dimensions with tolerance of different equipment shall be as detailed in Fig. 1 to 11. Except where tolerances are specially mentioned against the dimensions, all dimensions shall be taken as nominal dimensions and tolerances as given in IS : 2102 (Part 1)-1980 'General tolerances for dimensions and form and position: Part 1 General tolerances for linear and angular dimensions (*second revision*)' for medium class shall apply.

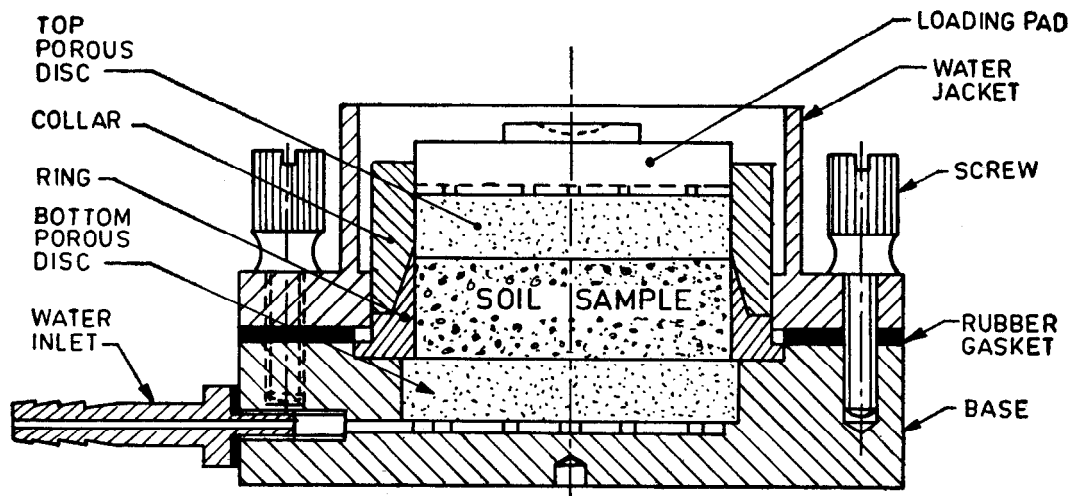


FIG. 1 CONSOLIDOMETER ASSEMBLY

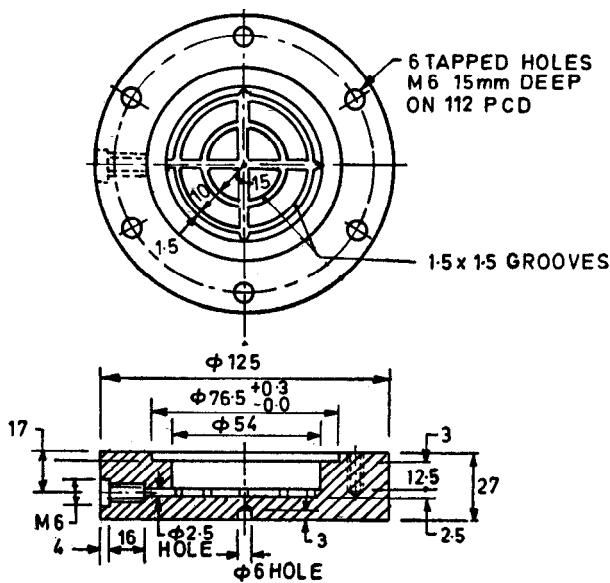


FIG. 2A BASE FOR 50 mm SIZE

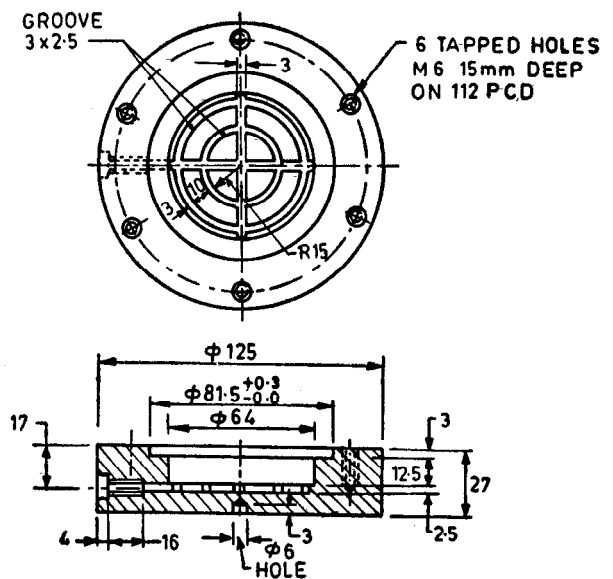


FIG. 2B BASE FOR 60 mm SIZE

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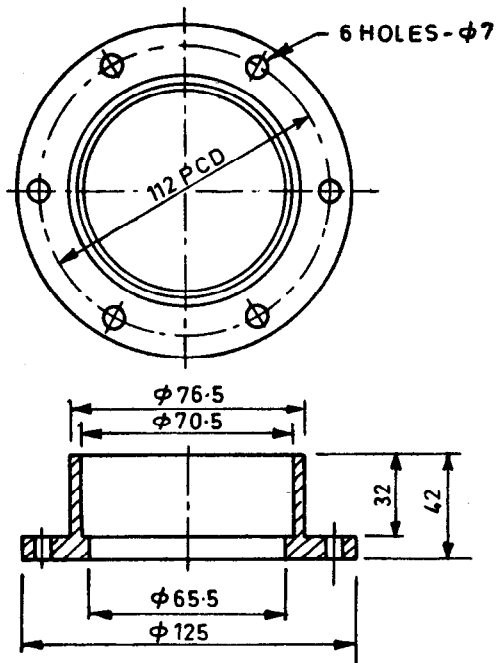


FIG. 3A WATER JACKET OF 50 mm SIZE

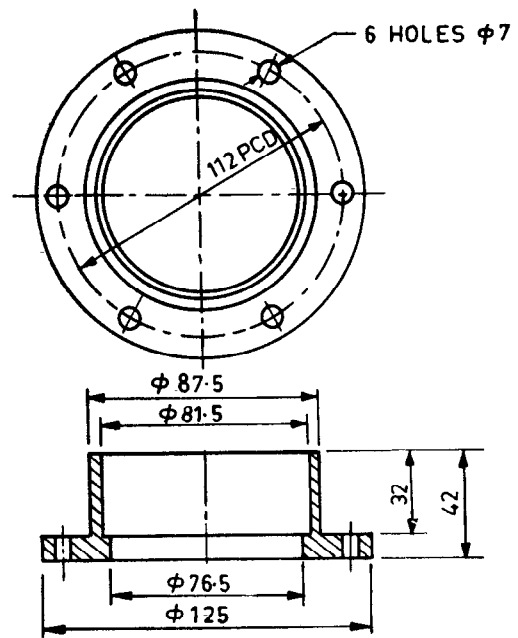
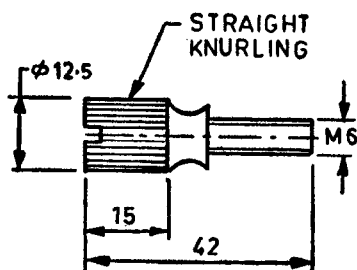
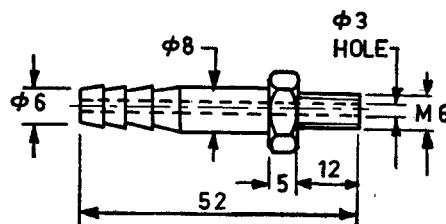


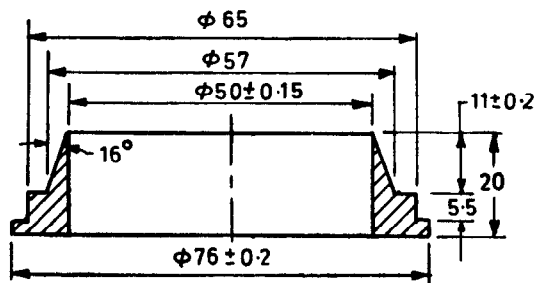
FIG. 3B WATER JACKET OF 60 mm SIZE



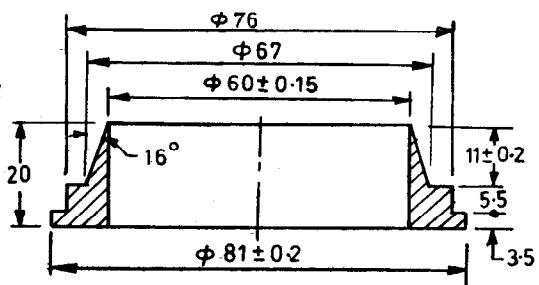
All dimensions in millimetres.  
FIG. 4 SCREWS



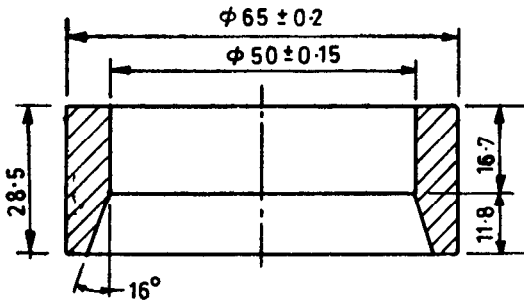
All dimensions in millimetres.  
FIG. 5 WATER INLET



All dimensions in millimetres.  
FIG. 6A RING FOR 50 mm SIZE

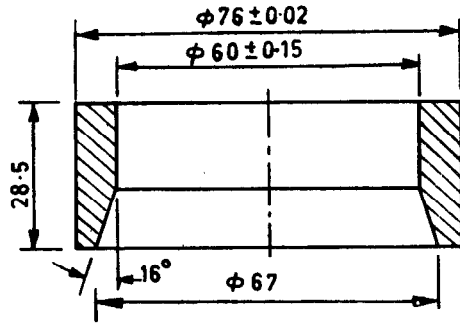


All dimensions in millimetres.  
FIG. 6B RING FOR 60 mm SIZE



All dimensions in millimetres.

FIG. 7A COLLAR FOR 50 mm SIZE



All dimensions in millimetres.

FIG. 7B COLLAR FOR 60 mm SIZE

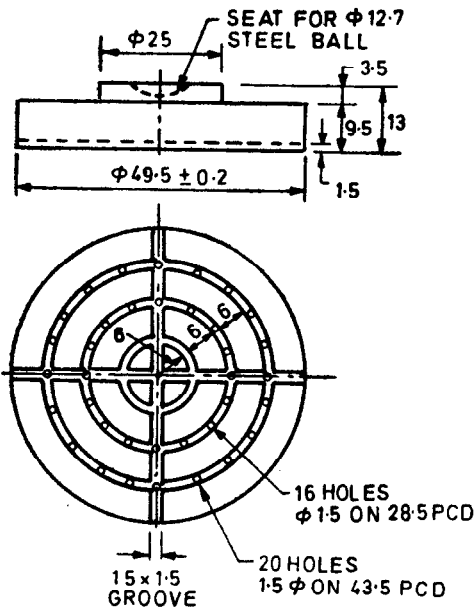


FIG. 8A LOADING PAD FOR 50 mm SIZE

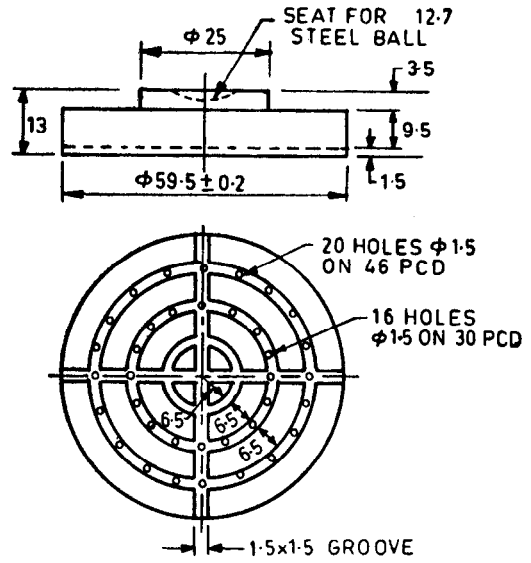
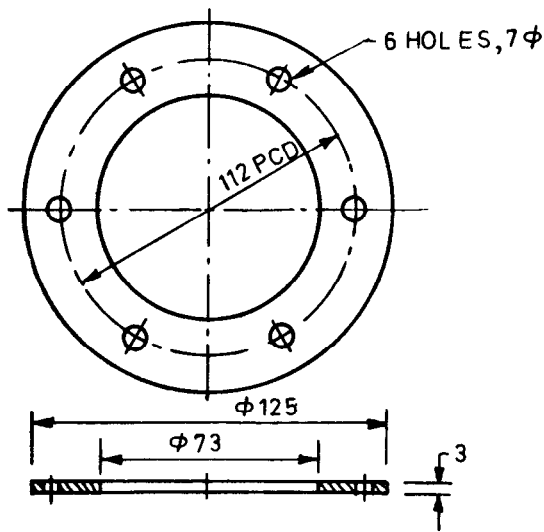
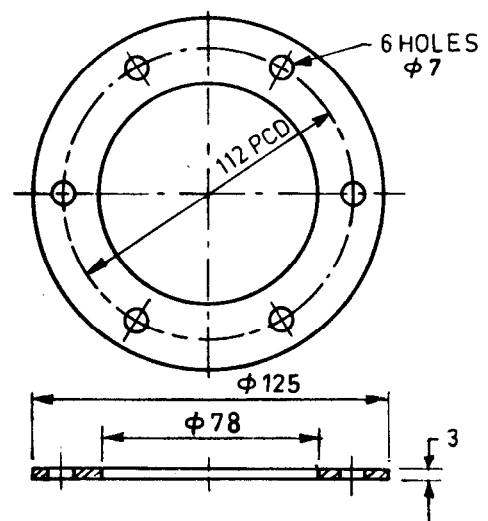


FIG. 8B LOADING PAD FOR 60 mm SIZE



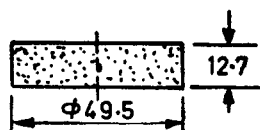
All dimensions in millimetres.

FIG. 9A RUBBER GASKET FOR 50 mm SIZE



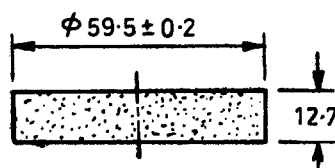
All dimensions in millimetres.

FIG. 9B RUBBER GASKET FOR 60 mm SIZE



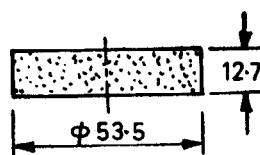
All dimensions in millimetres.

FIG. 10A POROUS DISC 'A' (FOR 50 mm SIZE)



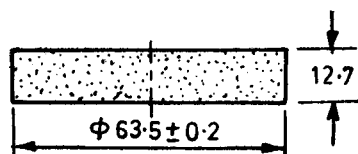
All dimensions in millimetres.

FIG. 10B POROUS DISC 'A' (FOR 60 mm SIZE)



All dimensions in millimetres.

FIG. 11A POROUS DISC 'B' (FOR 50 mm SIZE)



All dimensions in millimetres.

FIG. 11B POROUS DISC 'B' (FOR 60 mm SIZE)

**3. Material** — The materials for the construction of the various equipment shall be as given in Table 1.

TABLE 1 MATERIALS FOR CONSTRUCTION OF CONSOLIDOMETER EQUIPMENT

| SI No. | Parts of Equipment | Material     | Remarks                | Relevant Indian Standard |
|--------|--------------------|--------------|------------------------|--------------------------|
| ( 1 )  | ( 2 )              | ( 3 )        | ( 4 )                  | ( 5 )                    |
| i)     | Base               | Leaded brass | Chrome/Rodinium plated | IS : 292 - 1983*         |
| ii)    | Water jacket       | -do-         | -do-                   | IS : 292 - 1983*         |
| iii)   | Screws             | -do-         | -do-                   | IS : 292 - 1983*         |
| iv)    | Water inlet        | -do-         | -do-                   | IS : 292 - 1983*         |
| v)     | Ring               | -do-         | -do-                   | IS : 292 - 1983*         |
| vi)    | Collar             | -do-         | -do-                   | IS : 292 - 1983*         |
| vii)   | Loading pad        | -do-         | -do-                   | IS : 292 - 1983*         |
| viii)  | Gasket             | Rubber       | —                      | —                        |
| ix)    | Porous disc A      | Stone        | —                      | IS : 3622 - 1977†        |
| x)     | Porous disc B      | Stone        | —                      | IS : 3622 - 1977†        |

\*Specification for leaded brass ingots and castings ( *second revision* ).

†Specification for sandstone ( slabs and tiles ) ( *first revision* ).

#### 4. Construction

**4.1** The ring and the collar shall be machined smooth inside. The inside diameters of the ring and collar shall be matching.

**4.2** The assembly shall be leakproof when water is filled in the water jacket with hand tightening of the screws.

#### 5. Marking

**5.1** The following information shall be clearly and indelibly marked on each equipment :

- a) Name of the manufacturer, his registered trade-mark or both;
- b) Date of manufacture; and
- c) Type of material.

**5.1.1 Standard Marking** — Details available with the Bureau of Indian Standards, New Delhi.