

## DETERMINATION OF THE LIQUID, PLASTIC & SHRINKAGE LIMITS

ASTM D 4318 AASHTO T 89 UNI 10014 BS 1377

### LIQUID LIMIT

#### T 624 CASAGRANDE LIQUID LIMIT DEVICE

With ebonite base and removable brass cup.  
The height of drop of the cup may be adjusted via the hand crank mechanism.  
A built-in blow counter is supplied as standard. Grooving tool is not supplied and must be ordered separately.  
Dimensions: 150 x 150 x 120 (h) mm.  
Weight: 3 kg



T 624

#### T 624/E MOTORISED CASAGRANDE LIQUID LIMIT DEVICE

Same as T 624. This device is fitted with an electric motor with direct connection to the cam shaft that allows the cup to have a drop frequency of 120 blows per minute (according to Standards). In fact, the electric control panel is fitted with a screw for the correct calibration of the apparatus according to the laboratory voltage.  
Power supply: 220-240 V, 50 Hz, single phase. Grooving tool is not supplied and must be ordered separately.  
Dimensions of Casagrande device: 180 x 160 x 125 (h) mm  
Dimensions of electric system: 80 x 60 x 152 (h) mm  
Weight: 3.5 kg.

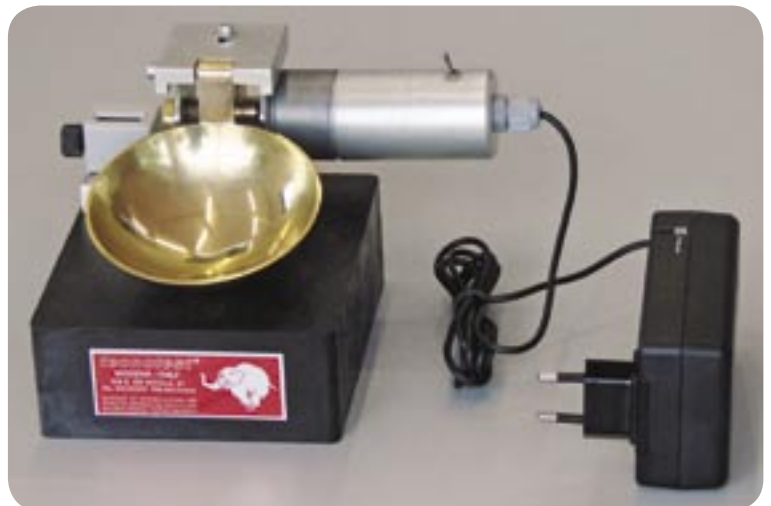
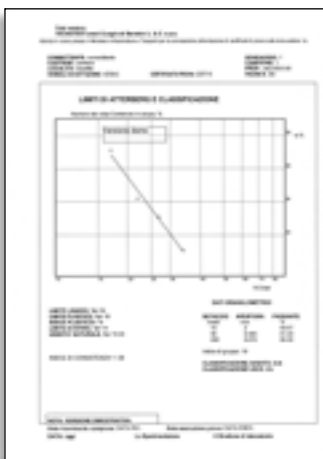


T 624/A T 624/R T 624/C T 624/D T 624/AS

#### Accessories and spare parts:

T 624/C	Grooving tool (BS)
T 624/D	Grooving tool (ASTM)
T 624/AS	Grooving tool (AASHTO - UNI)
T 624/A	Smooth bowl
T 624/R	Roughened bowl

#### AD 225/001 "LIMITS OF ATTERBERG" SOFTWARE AND UNI 10006 CLASSIFICATION



T 624/E

**SHRINKAGE LIMIT**

ASTM D 427 AASHTO T 92 BS 1377 UNI 10014

**T 625/1 SHRINKAGE LIMIT SET**

The case contains:

- V 502/3** EVAPORATING PORCELAIN DISH 160 mm DIA.
- T 625/3** SHRINKAGE DISHES, 45 mm DIA. (2 pcs)
- T 625/7** GLASS CUP, 60 cc
- T 625/4** PERSPEX PRONG PLATE
- V 232/2** GLASS GRADUATED CYLINDER, 25 cc
- DV 719** SPATULA WITH BLADE OF 33 x 120 mm

Dimensions: 300 x 260 x 120 (h) mm. Weight: 4 kg  
All items can be ordered individually.

**Accessories and spare parts:**

- Z 45** Mercury metal (1 kg) in bottle



T 625/1

**LINEAR SHRINKAGE**

BS 1377

**T 627 LINEAR SHRINKAGE MOULD**

Made of brass.  
Semicircular section, radius 12.5 mm x 140 mm long.  
The variation in length of the soil sample is the "linear shrinkage".



T 627

**PLASTIC LIMIT**

ASTM D 4318 AASHTO T 90 BS 1377 UNI 10014  
UNI-CEN-ISO/TS 17892:12

**T 625/2 PLASTIC LIMIT SET**

The case contains:

- T 668** GLASS PLATE 30 x 30 x 1 cm
- V 502/3** PORCELAIN DISH, 160 mm DIA.
- DV 719** SPATULA WITH BLADE OF 33 x 120 mm
- DV 790/S** ALUMINIUM MOISTURE CANS  
83 cc, 55 mm dia. x 35 mm. 6 pieces

Dimensions: 500 x 400 x 130 (h) mm. Weight: 4 kg  
Each item can be ordered separately

**Accessories and spare parts:**

- T 668/5** Glass plate 500 x 500 x 10 (h) mm
- T 625/9** Stainless steel bar 3 mm dia. x 200 mm long



T 625/2

### LIQUID LIMIT

BS 1377 UNI-CEN-ISO/TS 17892:12

Clayish soil changes from plastic state to liquid state depending on its water content. In order to determine the passage from the first to the second state, the standards recommend that a test with the "cone penetrometer" be carried out: a standardized cone is allowed to drop and from a fixed height within a definite time, on the soil sample.

The water content (percentage) which gives a 20 mm penetration, is assumed to be the "LIQUID LIMIT".

#### T 100 LIQUID LIMIT CONE PENETROMETER

Hand-operated model with dial gauge having 0.1 mm graduations and automatic zeroing. The cast aluminium base has levelling screws, and provision is made for adjusting cone height in relation to the sample.

Supplied complete with 35 mm long stainless steel penetration cone with smooth surface (30° angle), cone test gauge and a brass penetration sample cup having 55 mm diameter and 35 mm deep.

Dimensions: 260 x 240 x 530 (h) mm. Weight: 6.5 kg

#### T 100/SA CONE PENETROMETER

Identical to T 100 but supplied without accessories.

#### T 101 SEMI-AUTOMATIC PENETROMETER

Identical to T 100 but with timed electronic release mechanism. Complete with accessories.

Power supply: 220-240 V, 50 Hz, single phase.

Weight: 8.5 kg.

#### T 101/SA CONE PENETROMETER

Identical to T 101 but supplied without accessories.

#### Accessories and spare parts:

**T 100/1** Penetration test cone in stainless steel with smooth surface, 35 mm long with an angle of 30°

**T 100/2** Calibration disc

**B 531/P** Penetration sample cup in brass 55 mm diameter x 35 mm deep

#### D 850 SULPHATE CONTENT ION-EXCHANGE APPARATUS

BS 1377

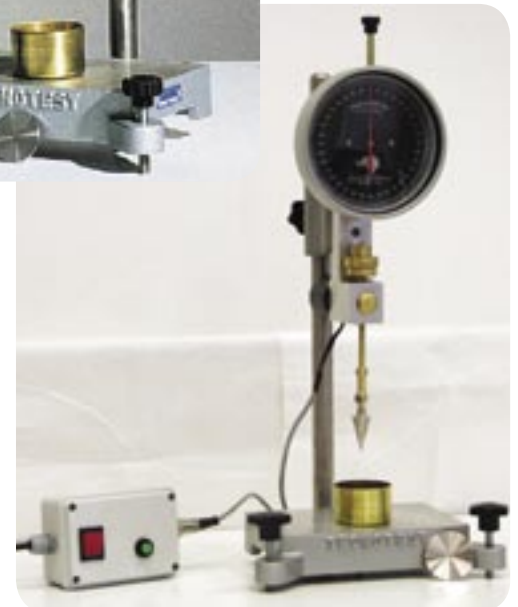
Used for determination of sulphate content of ground water and aqueous soil extracts. The apparatus (pyrex made) consists in an ion-exchange column (10 mm dia., 400 mm high) with connection and 500 ml balloon (constant head) fitted on a stand.

Dimensions: 200 x 200 x 600 mm. Weight: kg 5

#### D 850/R ION-EXCHANGE RESIN. 1000 g



T 100



T 101



D 850