

PERMEABILITY OF CONCRETE TO OXYGEN

STANDARD

UNI (project E07001900),
Cembureau method

58-E0031

**Oxygen concrete permeameter.
Battery operated**

This method, which is applicable to cast and cored concrete specimens, concerns the determination of the concrete permeability to oxygen conforming to the Hagen-Poiseuille relationship.

Consisting of:

- Permeability cell for specimens 150 mm dia. x 50 mm high
- Volumetric gas flow meter, soap bubble type.
- High precision pressure regulator
- Digital readout unit and pressure transducer
- Stainless steel wall mounting panel and connections.

Overall dimensions:

- Panel (l x h x d) 700x1100x120 mm
Weight 14 kg
- Cell (dia. x h) 345x180 mm
Weight 19 kg

Total weight approx.: 33 kg

The apparatus have to be fitted to a suitable oxygen cylinder with pressure regulator and pressure gauge.



58-E0031



58-E0031 Detail of permeability cell

WATER PENETRATION

58-E0023

**Water penetration test set
(Dr Karstens method)**

General description and specifications

For the determination of water permeability of building materials and prefabricated building parts.

The test can be performed either horizontally or vertically.

The test set consists of 3 vertical and 3 horizontal, water penetration test tubes, 250 ml washing bottle and 250 g of plasticine cement.

Case dimension: 420x280x90 mm

Weight approx.: 1.75 kg

Spare parts

- 58-E0023/3 Plasticine cement, 250 g



58-E0023

WATER AND GAS PERMEABILITY

58-E0030

**Air and water permeability test set.
John Figg method**

General description and specifications

Deep permeability test

A drilled hole up to 10 mm diameter and 40 mm deep is sealed with a silicone rubber plug through which a hypodermic needle is passed into the void. In the water test, water is forced through the needle into the void. The time for absorption of 0.01 ml of water is measured. In the air pressure test a vacuum of 55 kPa below atmospheric pressure is created in the void and the time for a 5 kPa rise to occur is measured.



58-E0030 complete set

Surface permeability test

Measurements are carried out at the surface by clamping a steel chamber on a smooth area of the concrete.

The apparatus comprises essentially:

- Digital manometer
- Hand vacuum pump
- Water syringe
- Pack of 25 test plugs
- Cup grinding wheel
- Stainless steel surface chamber and clamping pliers, drill bits, anchors.

Power supply: standard 9 V battery

Dimensions: 430x300x150 mm

Weight complete with case: 5.4 kg

Spare parts

- 58-E0030/1 Pack of 25 test plugs