

## Torrent Concrete Permeability Tester

The particular features of the TORRENT method are a two-chamber vacuum cell and a pressure regulator, which ensure that an air flow at right angles to the surface is directed towards the inner chamber. This permits the calculation of the concrete or cement permeability coefficient  $kT$  on the basis of a simple theoretical model.

### Details

The unit has a user-friendly menu technique and measures the pressure increase as a function of time according to a specific sequence. The associated data is automatically collected by the display unit and the permeability coefficient  $kT$  and the depth of penetration  $L$  of the vacuum are calculated. The measurement takes 2-12 minutes, depending on the permeability of the concrete. In the case of dry concrete, the quality class of the concrete cover can be read from a table using the  $kT$  value. In the case of moist concrete,  $kT$  is combined with the electrical concrete resistance  $p$  ( $\rho$ ) and the quality class is determined from a nomogram.

The TORRENT permeability tester is based on investigations which were carried out by the research centre of "Holderbank Management and Consulting Ltd.", Switzerland. The results of these measurements, which were made in the laboratory and on the building site, are in good agreement with laboratory methods, such as oxygen permeability, capillary suction, chloride penetration, etc.



### Kit Supplied With:

- Display Unit
  - With non-volatile memory for up to 200 measured objects.
  - Display on 128x128 graphic LCD.
  - Interface RS 232.
  - Print out of measured objects and transfer to PC with MS Hyperterminal.
  - Battery operation with six 1.5 V, LR 6 batteries for 60 hours. Temperature range  $-10^{\circ}$  to  $+60^{\circ}\text{C}$ .
- Transfer cable 9/9-poles, 1.5 m
- Printer cable 9/9+25-poles, 1.5/0.3 m for printer with serial interface
- Carrying strap
- Carrying case 325 x 295 x 105 mm.
- Control unit
  - With membrane pressure regulator, pressure sensor and two-chamber vacuum cell.
  - Vacuum connection: small flange 16 KF.

### About PCTE

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclometers, Extensometers, Tiltmeters, Load Cells and Dataloggers