



Perma2 Permeability Tester

The Perma2 laboratory test device measures the resistance of concrete against the penetration of chloride. The measurement data estimates the chloride diffusion coefficient of concrete for the service life prediction. As well as the durability-based design of concrete structures and quality control of concrete.

The ASTM C1760 test provides an indicator of concrete resistance to the penetration of chloride. In addition it provides estimates for the bulk electrical conductivity of saturated specimens of hardened concrete. Results show a rapid indication of the concrete's resistance to the penetration of chloride by diffusion. Results can also be compared to the apparent chloride diffusion coefficient that is determined using ASTM C1556 test method.



Application:

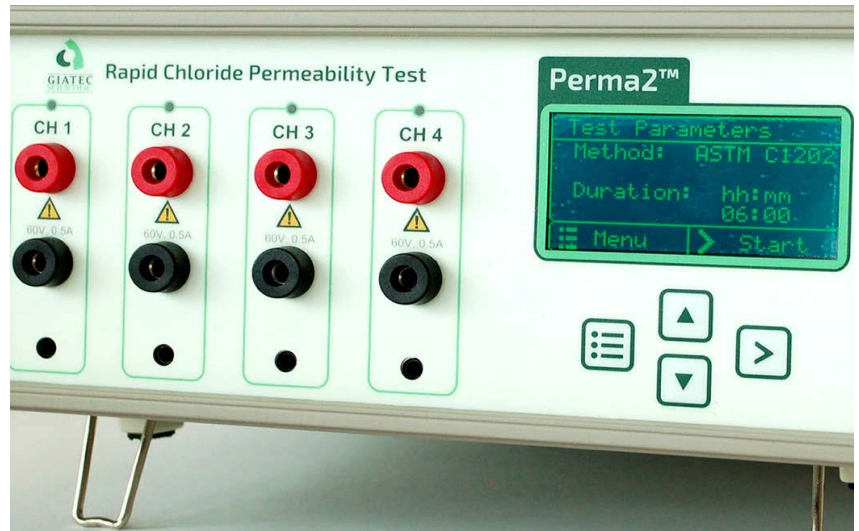
Perma2 device can be used for testing durability of concrete exposed to chloride-contaminated environment including:

- Concrete's ability to resist chloride ion penetration (ASTM C1202, AASHTO T277)
- Bulk electrical conductivity of concrete (ASTM C1760)
- Performance-based quality control of concrete
- Estimation of chloride diffusion coefficient of concrete
- Estimation of chloride migration coefficient of concrete
- Service life design of concrete structures
- Estimation of the remaining life of concrete structures



Features:

- Standalone operation
- Easy-to-assemble
- Auto-sealable cells with rubber gasket and spacer (i.e. does not require caulking)
- Accurate (± 0.1 mA)
- Flexible logging interval time (1 to 10 min)
- Automatic temperature control system
- Four measurement channels
- User-friendly PC software
- Customizable setup
- USB connection to computer
- Verification kit



Technical Specifications:

Type	Value
Applied Voltage	60 ± 0.1 V
Range of Current Measurement	0 ~ 500 ± 0.1 mA Or $\pm 0.2\%$ (whichever greater)
Temperature Measurement Range	0~100 $\pm 1^\circ$ C
Measurement Channels	4
Short Circuit Protection System	Yes
Data Display on LCD	Yes
Timer Display on LCD	Yes
LCD Display Area	65 mm \times 33 mm
Dimensions of Device	280 mm \times 240 mm \times 104 mm
Weight	2 Kg

Operational Conditions:

Type	Value
Operating temperature	15 $^\circ$ C ~45 $^\circ$ C
Operating humidity	30~ 80%
Storage temperature	0 ~ 70 C
Operating voltage/current	100 ~ 240 V, 50/60Hz
Operating temperature	15 $^\circ$ C ~45 $^\circ$ C