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The complete electrical resistivity solution for concrete durability testing

The advanced Resipod family offers a complete solution for measuring the electrical resistivity of concrete both in the laboratory under controlled conditions and on site. The construction industry is rapidly moving towards performance based specifications for concrete durability and this is largely determined by the permeability of the concrete. The electrical resistivity of concrete is determined by the resistivity of fluid in the pores, the pore structure and the degree of saturation. It is therefore directly related to the permeability of the concrete. All of these factors are affected by construction practice and this makes electrical resistivity an ideal test method for use in quality control programs and performance based specifications.

Unmatched Features

The Resipod provides a variety of features that are unique in a concrete surface resistivity instrument:

- Simple to use
- Fully integrated surface resistivity instrument
- Highest resolution available for a surface resistivity instrument (±0.2 kΩcm possible with the full 200µA nominal current)
- Surface resistivity (SR) and bulk resistivity (BR) test configurations available
- Variable spaced probe version with the automatic correction for sample geometry
- Hold, save and delete function, with on-board memory
- USB connection and dedicated PC software
- Designed to float (waterproof)

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Made in Switzerland

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Application Overview

Application	Resipod	Resipod Geometric	Resipod Bulk Resistivity
Surface resistivity test on standard cylinders (4” x 8”, 100 x 200mm or 6” x 12”, 150 x 300mm) with a maximum aggregate size of 1.5”, 38mm. Fixed probe spacing (1.5”, 38mm)	●	●	●
Bulk resistivity test on cylinders up to 100mm (4”) diameter			●
Surface resistivity test on non-standard cylinders with aggregate sizes that may exceed > 1.5”, 38mm		●	
Correction factor for probe spacing	●	●	●
Correction factor for sample geometry		●	
User definable correction factor		●	
Variable probe spacing		●	
Surface resistivity mapping on site for: estimation of likelihood of corrosion, corrosion rate and implementation of cathodic protection systems	●	●	

Resipod Surface Resistivity (SR) Method

In 2011 the American Association of State Highway and Transportation Officials (AASHTO) became the first standards body to define permeability classes based on resistivity measurements (T 358 Standard Method of Test for Surface Resistivity Indication of Concrete’s Ability to Resist Chloride Ion Penetration).

Since that time this test has established itself as a simple, economical alternative to the ASTM C 1202 Rapid Chloride Permeability test with several clear advantages:

- Much faster to perform
- No sample preparation necessary
- Test can be repeated at different ages e.g. 28 days, 56 days
- The same cylinder can be used for compressive strength testing

Resipod with 1.5” (38mm) probe spacing is fully compliant with the above mentioned standard

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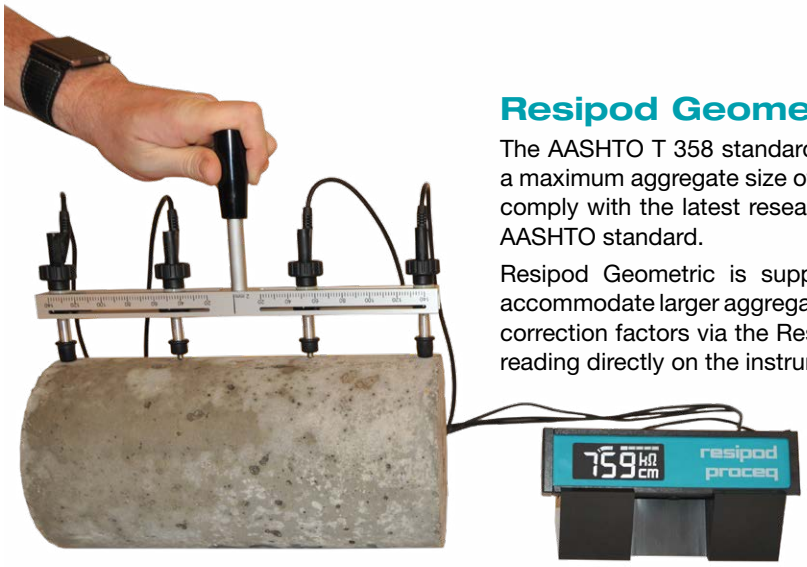


Resipod Geometric (SR) Method

The AASHTO T 358 standard is limited to particular sample geometries and a maximum aggregate size of 1.5”, 38mm. Resipod Geometric is designed to comply with the latest research intended to extend the current limits of this AASHTO standard.

Resipod Geometric is supplied with a variable spacing probe that can accommodate larger aggregate sizes. It also allows the user to enter geometric correction factors via the ResipodLink software to give the correct resistivity reading directly on the instrument.

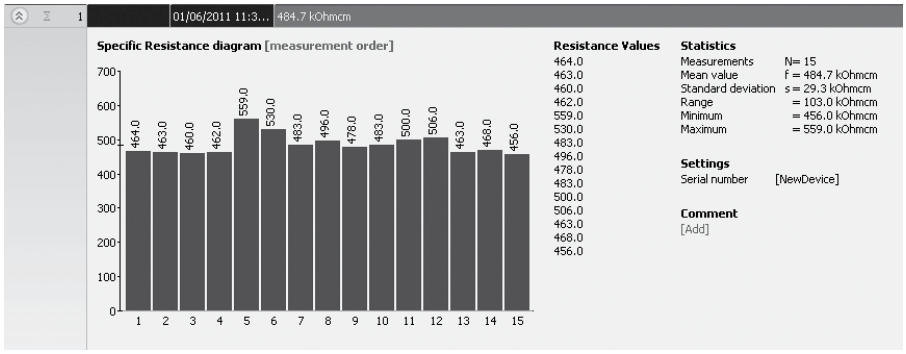
Resipod Bulk Resistivity (BR) Method

The Bulk Resistivity test is an alternative method where the sample resistivity is measured between electrical plates placed at either end of the sample. The geometry factor is very simple and the test is rapid to perform, with similar advantages as the surface resistivity test.

The Resipod Bulk Resistivity kit provides everything necessary for carrying out this test on standard 4”, 100mm diameter cylinders.

ResipodLink Software

All measurements saved on the Resipod may be downloaded for analysis with the ResipodLink software included with all models. User defined correction parameters may also be defined in the software and uploaded to Resipod.



Technical Information ResipodLink Software

System requirements: Windows XP, Windows Vista, Windows 7, Windows 8, USB-Connector. An internet connection is necessary for automatic updates and for firmware updates (using PqUpgrade) if available. PDF Reader is required to show the “Help Manual”.

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Technical Information Resipod

Resistivity measurement	
Range	1 – ca. 1000 kΩcm (depending on probe spacing)
Accuracy (nominal current 200µA)	±0.2 kΩcm or ±1% (whichever is greater)
Accuracy (nominal current 50µA)	±0.3 kΩcm or ±2% (whichever is greater)
Accuracy (nominal current <50µA)	±2 kΩcm or ±5% (whichever is greater)
Display	3½ digit
Frequency	40 Hz AC
Memory	Non volatile, ca. 500 measured values
Power Supply	>50 hours autonomy
Charger connection	USB type B, (5V, 100mA)
Dimensions	197 x 53 x 69.7 mm (7.8 x 2.1 x 2.7 inch)
Weight	318g (11.2 oz)
Operating temperature	0° to 50°C (32° to 122°F)
Storage temperature	-10° to 70°C (14° to 158°F)

Ordering Information

Units	**Description**
381 10 000	Resipod, 50mm probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case
381 20 000	Resipod, 38mm (1.5”) probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case
381 30 000	Resipod Bulk Resistivity, 50mm probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case, Bulk Resistivity Accessory
381 40 000	Resipod Bulk Resistivity, 38mm (1.5”) probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case, Bulk Resistivity Accessory
381 50 000	Resipod Geometric, 50mm probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case, Resipod Geometric Accessory
381 60 000	Resipod Geometric, 38mm probe spacing, test strip, foam contact pads, charger with USB-cable, software, carrying strap, documentation and case, Resipod Geometric Accessory
Parts and Accessories	
381 01 088	Bulk Resistivity Accessory
381 01 094	Variable Spacing Probe
381 01 043S	Set of replacement foam contact pads (20 pieces)
381 01 038	Resipod Test strip
381 01 092S	Bulk Resistivity contact pad (10 pieces)
341 80 112	USB charger

Service and Warranty Information

Proceq is committed to providing complete support for the Resipod testing instrument by means of our global service and support facilities. Furthermore, each instrument is backed by the standard Proceq 2-year warranty and extended warranty options.

Standard warranty

- Electronic portion of the instrument: 24 months
- Mechanical portion of the instrument: 6 months

Extended warranty

When purchasing a Resipod, max. 3 additional warranty years can be purchased (for the electronic portion of the instrument). The additional warranty must be requested at time of purchase or within 90 days of purchase.

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