

Profometer Covermeter

As direct successors of the Profometer 5+ S and Scanlog models the Profometer PM-600, PM-630 and PM-650 continue the successful tradition that began 40 years ago. They are the sixth generation of the Profometer cover meter with all new technology.

The Profometer PM600 range is directly compatible with the Profometer Corrosion Half Cell Potential mapping system, as an upgrade or combined system purchase.

The new Profometer uses the latest technology available to accurately locate steel reinforcing in concrete and measure cover (i.e. the depth of the bar). It also has the ability to estimate the bar diameter of rebar in existing structures. The Profometer PM-600/630/650 uses a new generation design protected Profometer Touchscreen Unit. Both instruments offer unique on-site measuring and analysis functions, and real time control over the measurement procedure.

Applications

The Profometer PM-600/630 is the perfect on-site solution where the location, depth and size of rebar needs to be known. This may include

- Corrosion investigation
- Quality Control and Assurance of new concrete structures.
- Location of rebar for penetrations or coring

Measurement Principle

The Profometer PM-600/630 uses electromagnetic pulse induction technology to detect rebar. Multiple coil arrangements in the probe are periodically charged by current pulses and thus generate a magnetic field. On the surface of any electrically conductive material which is in the magnetic field eddy currents are produced. They induce a magnetic field in the opposite direction. The resulting change in voltage can be utilized for the measurement. Advanced signal processing allows localization of a rebar, determination of the cover and estimation of the rebar diameter. This method is unaffected by all nonconductive materials such as concrete, wood, plastics, bricks etc.

However any kind of conductive materials within the magnetic field will have an influence on the measurement to the quality and the strength of the material.



Features

- The housing is specially designed to be used onsite in harsh environments, including carrying strap, integrated stand and sunshield cover.
- High resolution colour touchscreen allowing best possible measuring and analysis of the data for an entire working day
- Future proof investment through direct upgrade possibilities to upcoming products
- Digital probe interface for interference free communication with Profometer Touchscreen
- Improved resolution for better close reinforcing detection.
- All instruments conform to the following standards and norms: BS 1881 Part 204, DIN 1045 (Germany) and SN 505 262 (Switzerland).

Benefits

- Best rebar detection and data presentation in field environment
- Long working hours and access to real time data with preliminary processing
- Designed with modular concept means it is Compatible with upcoming Profometer products which makes the system expandable
- Strong in data quality as the signal output is digital
- Best resolution among counterparts in market
- Conform to most of the well-known international standards

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Measurement Modes PM-600 & PM-630

Locate Mode

With the Locate Mode you can precisely detect the rebar location and direction as well as measure the cover and the rebar diameter.

Statistics View

The statistics and the following snapshot views allow comprehensive review of the measured data directly on the screen. The statistics view presents a graphical overview of the distribution of cover measurements.

Snapshot view

The snapshot view shows cover for each rebar with the diameter displayed as a number.

Measurement Modes PM-630 Only

Single-Line Scan

Linear scan of the cover across the first layer of rebar with diameter measurement. Colour classification of cover and rebar diameter.

Multi-Line Scan

Multiple linear scans across the first layer of rebar over a rectangular area. Cover and diameter are shown in one view. Can review in Single-Line view.

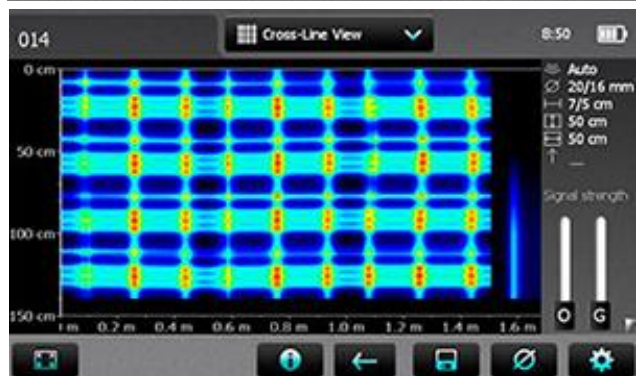
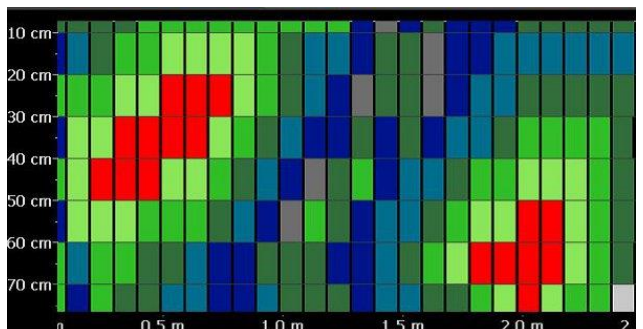
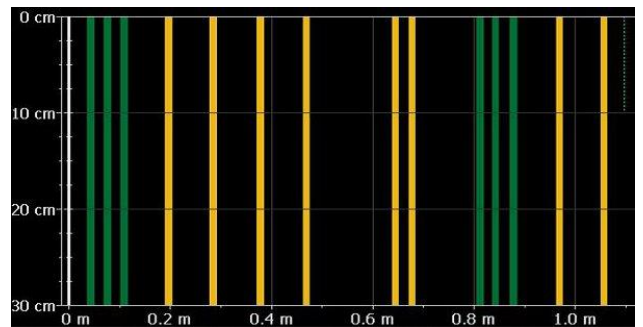
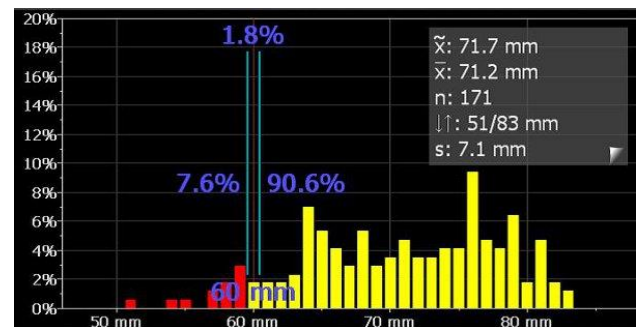
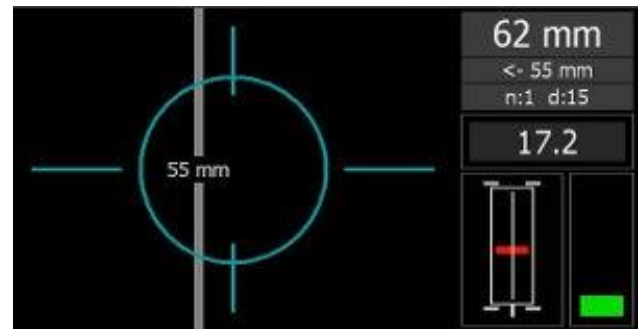
Area Scan

The grid display of the Area Scan Mode allows a simplified view of the measured cover data. It is best suited for a Canin+ half-cell potential measurements for corrosion analysis.

Measurement Modes PM-650 Only

Cross-Line Scan

The cross-Line scan combines scans in the X and Y directions allowing for review of first and second reinforcing layers. Signal strength, cover and diameter visualization modes are supported.



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Profometer Corrosion

The Profometer PM-600-630-650 readout is fully compatible with the Profometer Corrosion add on, this creates a fully capable Half-Cell potential meter with mapping and in system data interpretation.

Measuring Range & Resolution

The Profometer- PM-600-630-650 has three measuring range from 10mm to 185mm and the measuring accuracy subjects to the specific measurement range working on. Resolution is the ability to resolve closely spaced bars for accurate location. Resolution is controlled by both the depth and spacing of the reinforcing. The graph above indicates.

PM-Link Software

Manually recording the measurements of a test series is a time consuming business that can be an unnecessary source of errors. The recently launched PM-Link software makes note taking obsolete.

Data exchange can be done easily by connecting the Profometer touchscreen unit directly to the USB-port of the PC. The included Windows based software PM-Link allows the user to download, edit and present the data measured by the Profometer PM-600/630. The most common units and rebar dimensions are supported. All data can be exported either in graphical format or as a CSV file to third party programs.

Profometer Probe

- Detachable probe cart for smooth measuring with on-board wireless path measurement.
- Control buttons directly on the probe
- Integrated Spot Probe for measurements in corners and where space is limited
- LED indicates proximity and location of rebar
- Positioning sensor records orientation of probe
- Sealed probe with waterproof connections
- Extension handle option



Form Supplied

- Profometer Touchscreen
- Universal probe with probe cart
- Probe cable 1.5 meter (5 ft),
- Battery charger
- USB cable
- Chalk
- DVD with software
- Documentation
- Carrying strap
- Carrying case

Optional Accessories

- Telescopic extension rod with probe cable 3m
- Probe cable 3m
- Probe cable 10m
- Profometer test block
- Quick charger (external)
- Battery complete
- Self-adhesive protective film (set of 3)
- Chalk (set of 10)

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