

profometer®

The all-in-one solution for rebar assessment and corrosion analysis



New Feature
2-Layer Neighboring Rebar
Correction Artificial Intelligence

ASTM DIN BS SN DGZFP SIA UNI JGJ/T JSCE



Interactive

Full flexibility

- ✓ Upgrade anytime between cover meter and corrosion analysis instruments
- ✓ Easily switch the probes of the combined instrument
- ✓ New technologies will be added to further increase application range

High productivity

- ✓ Easy and immediate data interpretation with 2D grid and statistical views
- ✓ Dual-core processor for fast data acquisition
- ✓ Dedicated software for efficient custom reporting

User friendliness

- ✓ Profometer touchscreen with illustrative display and assisted workflow
- ✓ On-site post processing of the measured data
- ✓ Rugged housing for harsh environments



Profometer Corrosion interface box
Ready to connect half-cell electrodes to your Profometer unit


profometer®

Speed-up your measuring and reporting!

Profometer 6 Cover Meters

- ✓ Advanced cover meters and rebar locators based on the eddy current pulse induction principle
- ✓ Assisted scan of any surface regardless of its size and geometry
- ✓ Universal probe and detachable ruggedized cart with wireless path measuring system
- ✓ Complies with international standards BS, DIN, DGZfP, SN, SS, DBV




 Find out more

Profometer Corrosion

- ✓ Most versatile half-cell potential solution
- ✓ Proceqs unique wheel electrodes allow the fastest and most efficient on site testing
- ✓ Compatible with existing Canin and most third party electrodes
- ✓ Complies with international standards ASTM, RILEM, DGZfP, SIA, UNI, JGJ/T, JSCE



 Find out more

Profometer® Touchscreen Universal

Proceq History of Innovation since 1954





Proceq SA of Switzerland, founded in 1954, is a leading manufacturer of the highest quality portable instruments for non-destructive testing of materials. The popular Original Schmidt concrete test hammer, the patented SilverSchmidt (Q-value) and the Carboteq are just an excerpt of Proceqs proud inventions.

Revolutionary Profometer Touchscreen

As direct successors to the Profometer 5+ and Canin+ models, the **Profometer 6 instruments** continue the successful tradition that began 40 years ago representing the sixth Profometer generation.

In its current version the Profometer brand extends its features to cover additional methodologies related to the testing of reinforcement steel, incorporating both rebar assessment and corrosion analysis functionalities, thus replacing the world renowned Canin instrument for corrosion.

- ✓ Housing specially designed to be used on-site 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 (battery lifetime >8h)
- ✓ Dual core processor supporting diverse communication and peripheral interfaces
- ✓ Future proof investment through direct upgrade possibilities to upcoming Profometer products

Profometer 6 Cover Meters			Profometer Corrosion
Profometer 600	Profometer 630 AI	Profometer 650 AI	
			
For safe drilling, coring and cutting, conformity check of concrete cover, fire resistance assessment and rebar assessment on unknown structures			For corrosion analysis
Rebar Location			j
Cover Measurement			
Diameter Estimation			
1-Layer NRC			
2-Layer AI			j + l
Cover Calibration			
Single-Line Scan	l		
Multi-Line Scan			
Area Scan			j + l
Cross-Line Scan	l	l	
Corrosion Potential	k	k	

Functionality

- j k Upgrade kits available (attachable hardware)
l Software upgrades available (activation key)

 See how easy you can upgrade your instrument

Artificial Intelligence (AI) Cover Estimation



The Profometer 630/650 AI models set a new benchmark in cover reading accuracy. The new artificial intelligence cover estimation feature is based on a self-learning algorithm, with the ability to estimate cover for two layer rebar configurations. The Profometer AI models yield the most accurate cover readings for standard orthogonal two layer rebar configurations with a over 90% probability that first layer cover measurements are within a 2 mm accuracy.

Cover Calibration

This feature allows the new Profometer AI models to be calibrated on-site. Simply measure the actual cover to an exposed rebar and enter this value into the Profometer AI. This data will then be used to optimize the cover measurement over the whole measurement area. Only one such reference cover value needs to be entered and this highly flexible feature is independent of the rebar geometry and cover depth.

- ✓ Both features are included in the Profometer 630/650 AI models
- ✓ Existing Profometer 630/650 users can simply purchase an upgrade kit to enable these features:

392 00 201



Upgrade kit from Profometer 630 to 630 AI

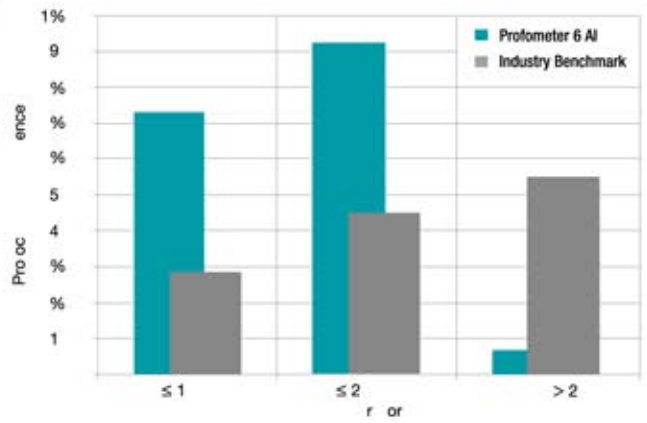
consisting of software upgrade (activation key) and ruggedized cart for Profometer 6 universal probe

392 00 202



Upgrade kit from Profometer 650 to 650 AI

consisting of software upgrade (activation key) and ruggedized cart for Profometer 6 universal probe



New Ruggedized
Scan Cart

Broad wheels with soft rubber for high stability and precise positioning even on irregular surfaces

Ruggedized housing structure for maximum durability in harsh testing environments

Large diameter wheels prevent locking caused by the ingress of dirt and debris

Integrated spot probe for measurements in corners and LED indicating proximity and location of rebars



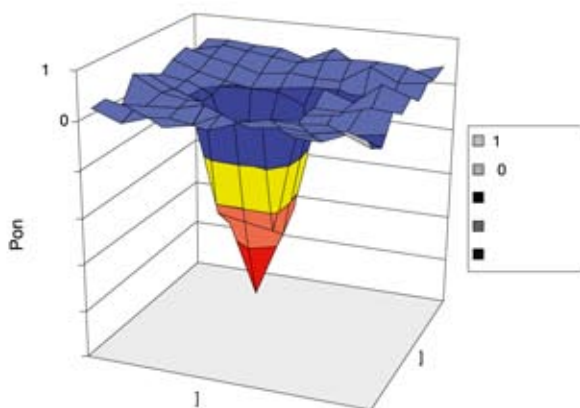
The Technology

The half-cell method is used to identify active corrosion of re bars based on the electro chemical properties of reinforced concrete. **All the Proceq electrodes (rod or wheel) are based on a Copper / Copper Sulphate (Cu/CuSO_4) half-cell.** However specific applications or customer preferences sometimes require different reference electrodes. This is why the Profometer Corrosion voltage input range allows also the connection of Silver / Silver Chloride (Ag/AgCl) electrodes or Saturated Calomel ($\text{Hg}/\text{Hg}_2\text{Cl}_2$) reference electrode. **The standard cable supplied with the Proceq rod electrode can be easily connected to most third party rod electrodes allowing the full compatibility of the system.**



The detection of the hot spots where active corrosion begins - involves the measuring of the localized negative values of the half-cell potential (i.e. corrosion potential). When using a rod electrode the user has to define a grid fine enough not to

miss any local negative peak, while the use of a wheel electrode on the new Profometer Corrosion ensures a new level of accuracy. **The wheel system is fast enough to measure the electrical potential continuously along its linear paths, ensuring the most negative measured value will always be recognized and stored with its associated location.**

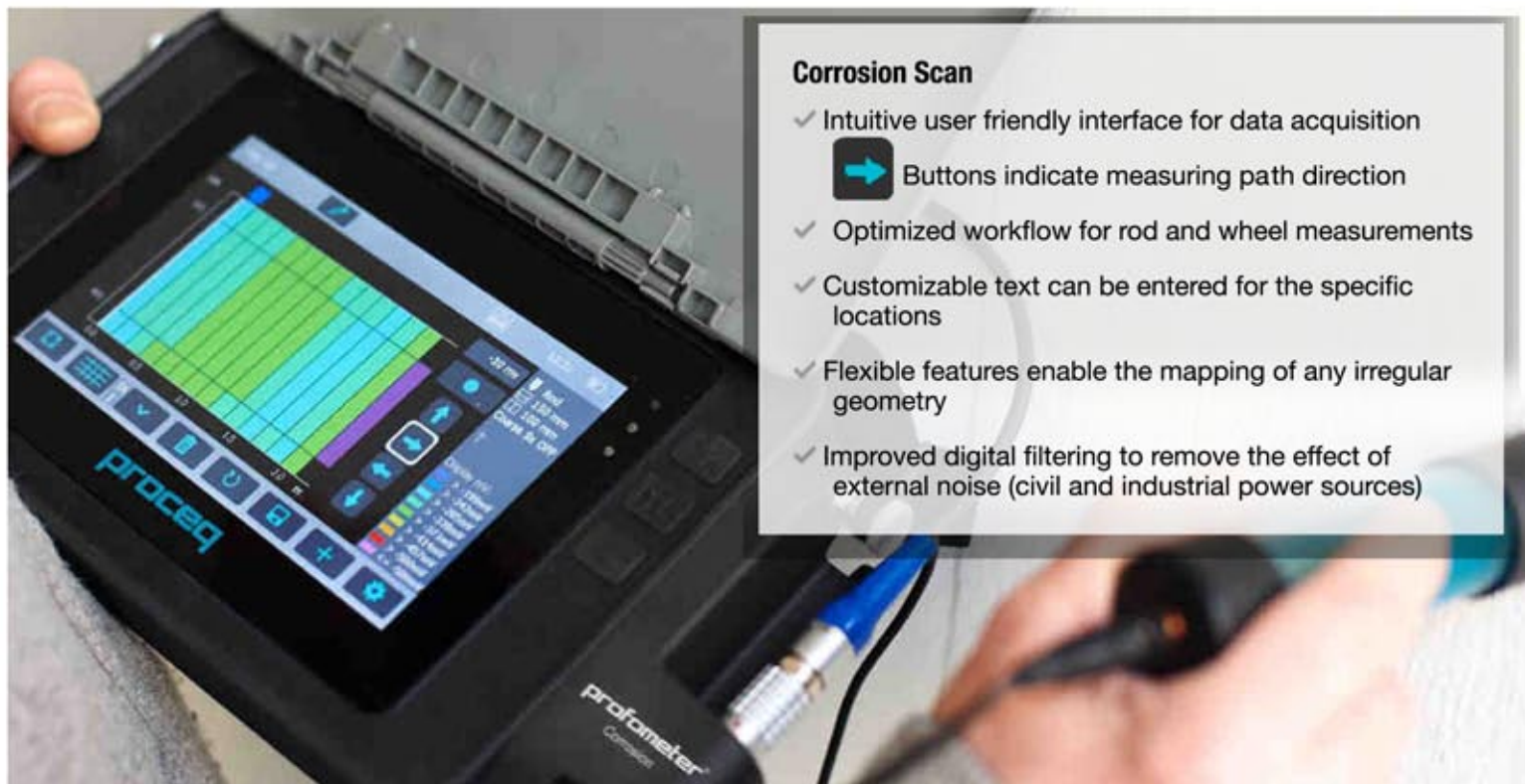


The electrical potential distribution over a corroding area can be represented as a funnel centered on the anode, whose shape and extent is defined by the actual ongoing corrosion as well as by the concrete electrical resistivity



Profometer Corrosion Overview

As the direct successor to the Canin, the Profometer Corrosion represents the most advanced corrosion instrument in the market based on the half-cell method. In addition to the basic rod electrode, the use of Proceq's unique one and four wheel electrodes enables the highest on site productivity on large areas.

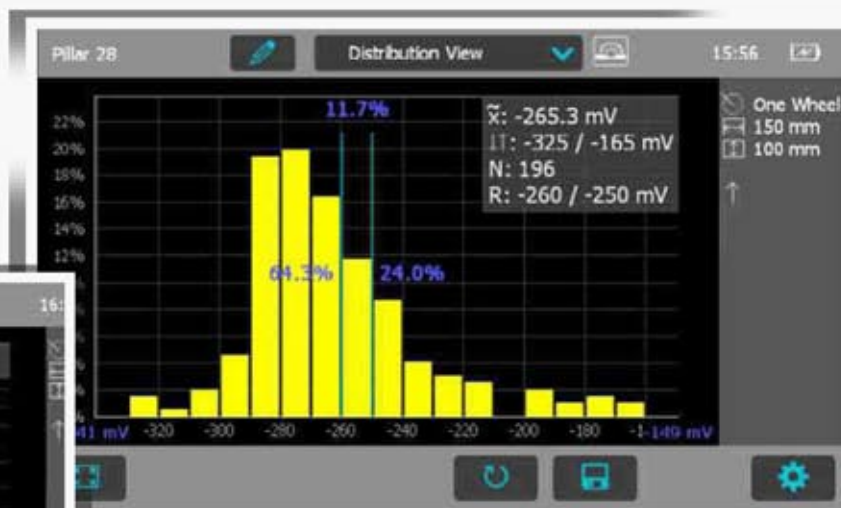


Corrosion Scan

- ✓ Intuitive user friendly interface for data acquisition
 - ➔ Buttons indicate measuring path direction
- ✓ Optimized workflow for rod and wheel measurements
- ✓ Customizable text can be entered for the specific locations
- ✓ Flexible features enable the mapping of any irregular geometry
- ✓ Improved digital filtering to remove the effect of external noise (civil and industrial power sources)

Statistical Views

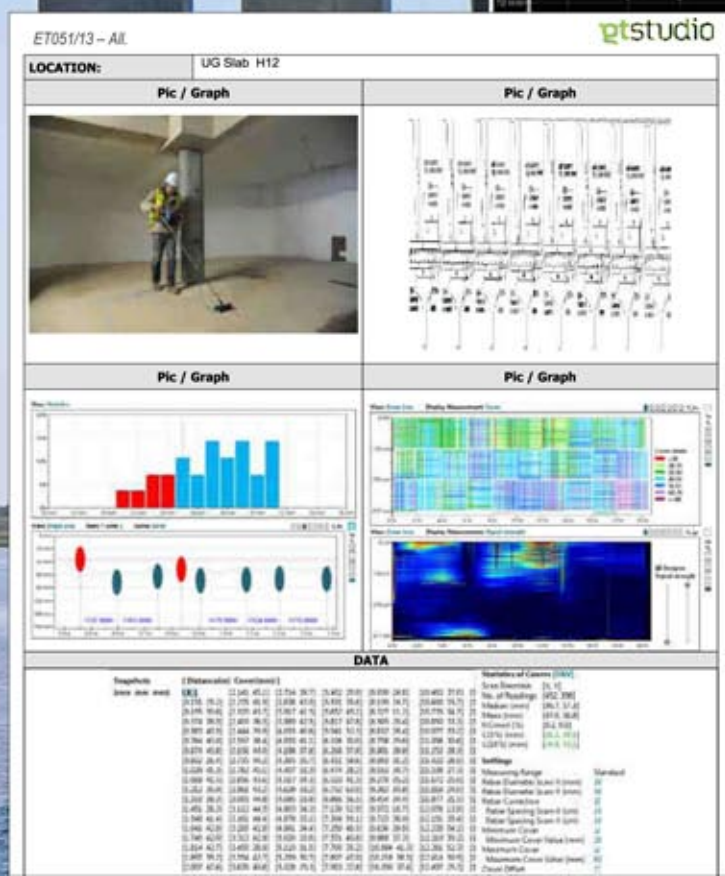
- ✓ Immediate on site data interpretation
- ✓ Customizable Distribution, Cumulative Distribution, Chipping Graph Views
- ✓ Predefined ASTM compliant layout



Adjustable cursors defining corrosion thresholds

Proceq Profometer Link PC tool is included with all Profometer 6 Cover Meter and Profometer Corrosion units. It is based on an integrated suite enabling the user to process the data coming from rebar detection / concrete cover as well as corrosion potential measurement. The Profometer units can be connected to the PC via USB and the software is fully compatible with Windows 7, 8 and 10 (32- and 64-bit).

- ✓ All features available on the touchscreen unit are also implemented on the PC
- ✓ Create custom reports with exported graphs and charts
- ✓ Support for the merging of several corrosion scans into a single graph
- ✓ Picture and table export (csv files) for further processing, combined data evaluation and reporting on any third party software



Profometer 6 Cover Meters

Cover measuring range	Up to 185 mm (7.3 inch)
Cover measuring accuracy	± 1 to ± 4 mm (0.04 to 0.16 inch)
Measuring resolution	Depending on diameter and cover
Path measuring accuracy on smooth Surface	± 3 mm (0.12 inch) + 0.5% to 1.0% of measured length
Diameter measuring range	Cover up to 63 mm (2.50 inch), Diameter up to 40 mm (# 12)
Diameter measuring accuracy	± 1 mm ($\pm \# 1$) on single rebar
Standards and guidelines	BS 1881-204, DIN 1045, DGZfP B2, SN 505262, SS 78-B4, DBV guidelines, CE certification

Profometer Corrosion

Voltage measuring range	-1000 to + 1000 mV
Voltage resolution	1 mV
Impedance	100 MW
Sampling rate	900 Hz
Standards and guidelines	ASTM C876, RILEM TC 154-EMC, DGZfP B3, SIA 2006, UNI 10174, JGJ/T 152, JSCE E 601, CE certification

Profometer Touchscreen Universal

Display	7 colour display 800x480 pixels
Memory	Internal 8 GB flash memory
Regional settings	Metric and imperial units and multi-language and timezone supported
Power input	12 V +/-25 % / 1.5 A
Dimensions	250 x 162 x 62 mm
Weight (of display device)	About 1525 g (incl. battery)
Battery	3.6 V, 14 Ah
Battery lifetime	> 8h (in standard operating mode)
Humidity	< 95 % RH, non condensing
Operating temperature	-10°C to +50°C
IP classification	Touchscreen IP54, universal probe IP67

NDT Training on rebar assessment and corrosion analysis

Proceq's training modules are strongly focused on a practical approach to routine testing of in-situ concrete quality, as well as on user specific applications using the Profometer products. Visit our website or contact your Proceq representative.



Upgrade kits

Cover Meters

Corrosion

Cover meter

392 10 001

Profometer 600

consisting of Profometer touchscreen, universal probe with ruggedized scan cart, probe cable 1.5 m (5 ft), power supply, USB cable, chalk, DVD with software, documentation, carrying strap and carrying case



392 001 15 **Software upgrade** (activation key)

Scan cover meter

392 20 001

Profometer 630 AI

consisting of Profometer touchscreen, universal probe with ruggedized scan cart, probe cable 1.5 m (5 ft), power supply, USB cable, chalk, DVD with software, documentation, carrying strap and carrying case



392 001 16 **Software upgrade** (activation key)

Cross-scan cover meter

392 30 001

Profometer 650 AI

consisting of Profometer touchscreen, universal probe with ruggedized scan cart, probe cable 1.5 m (5 ft), power supply, USB cable, chalk, DVD with software, documentation, carrying strap and carrying case



392 50 002

Upgrade kit to Profometer Corrosion

consisting of interface box, cable coil, l=25 m (82 ft) with clamp, DVD with software, documentation and carrying case



Upgrade kits

392 50 003

Upgrade kit

to Profometer 600 Cover Meter consisting of universal probe with ruggedized cart, probe cable 1.50m (5ft), software upgrade to cover meter



392 50 001

Profometer Corrosion

consisting of Profometer touchscreen, interface box, battery charger, cable coil l=25 m (82 ft) with clamp, USB cable, DVD with software, documentation, carrying strap and carrying case



Spot checks

Ideal for line and area scans

Scanning areas at 4x speed

392 50 010

Profometer Corrosion rod electrode

with spare parts, cable and copper sulphate 250g



330 01 001

Profometer Corrosion one wheel electrode

with telescopic rod 1.7 m (5.6 ft), encoder, cables, spare parts, tool kit, copper sulphate 250g, citric acid



330 01 004

Profometer Corrosion four wheel electrode

with telescopic rod 1.7 m (5.6 ft), encoder, cables, spare parts, tool kit, copper sulphate (250 g), citric acid (250 g), carrying case



Accessories

392 40 040

Profometer 6 telescopic extension rod 1.7 m (5.6 ft) with probe cable 3 m (10 ft)

330 00 322

Profometer Corrosion telescopic extension rod for rod electrode 1.7 m (5.6 ft), with 3 m (10 ft) cable

327 01 053

Quick charger (external) for touchscreen unit

356 00 082

Display antiglare protection film for touchscreen unit

327 01 033

Spare battery

Service and Support

Proceq is committed to providing the best support and service available in the industry through the Proceq certified service centers worldwide. This results in a complete support for the Profometer by means of our global service and support facilities.

Subject to change without notice. All information contained in this documentation is presented in good faith and believed to be correct. Proceq SA makes no warranties and excludes all liability as to the completeness and/or accuracy of the information. For the use and application of any product manufactured and/or sold by Proceq SA explicit reference is made to the particular applicable operating instructions.

Warranty Information

Each instrument is backed by the standard Proceq warranty and extended warranty options.

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