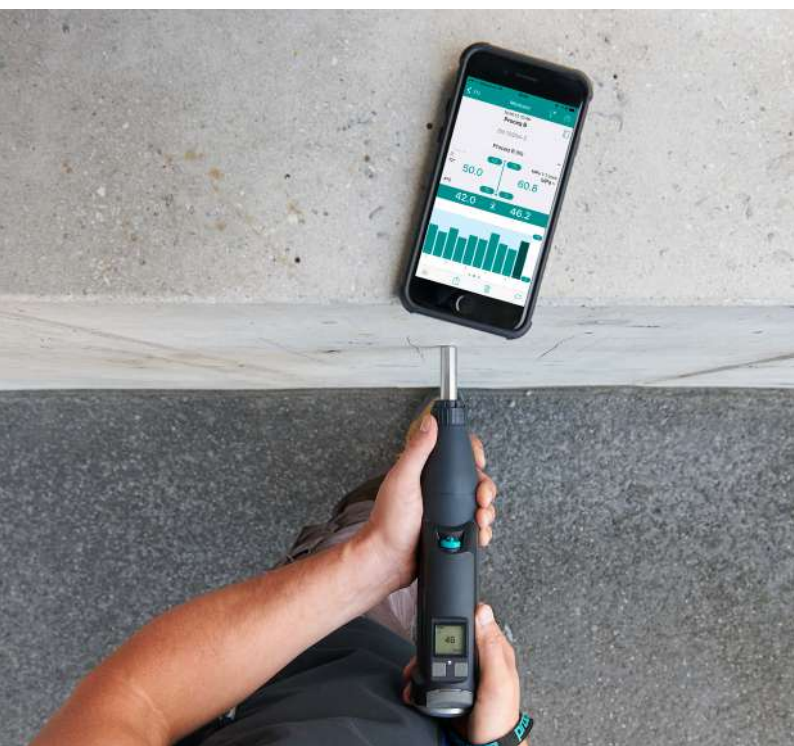


Portable Non-Destructive Concrete Testing Instruments



Future-proof solutions

Putting innovation first

Proceq is a global leader in the development of portable, non-destructive concrete testing solutions that enable users to increase productivity and reliability, while also lowering costs of on-site investigations of concrete structures.

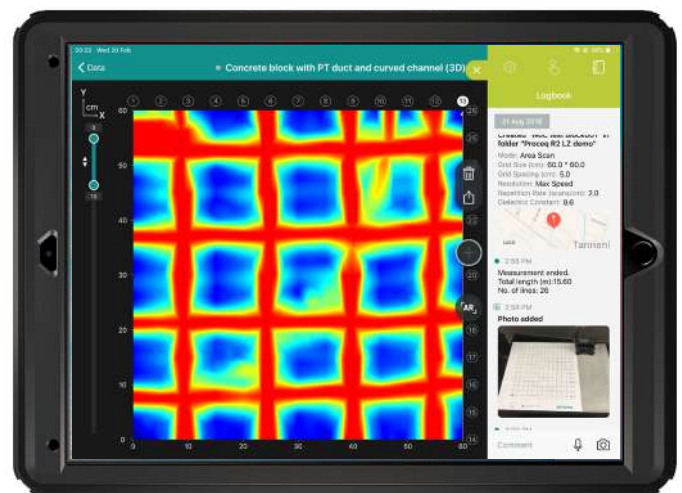
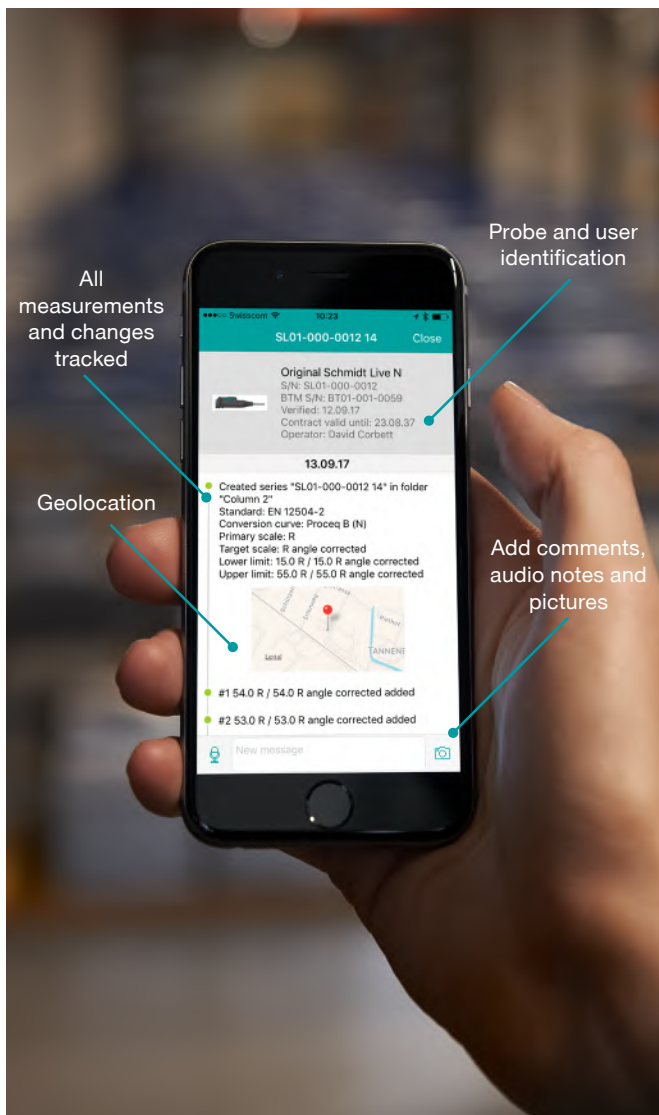
Proceq's product portfolio is continuously developing to address needs such as determining concrete strength and homogeneity on-site, assessing the status of reinforcement steel, and more recently, giving the ability to create a complete image of the internal structure of concrete elements. The most recent technological advances include the introduction of

Artificial Intelligence (A.I.), Augmented Reality (AR) and the Internet of Things (IoT) to support the user both in on-site assessment and rapid report generation.

Customers benefit from a variety of on-site and web-based training on solving inspection challenges. Training sessions and seminars take place all over the world in Proceq's training facilities as well as at customer facilities and include both classroom and hands-on sessions. They are designed to help users understand technical principles and get the most benefit from their investments in high-quality equipment.

Proceq Live

User-friendly, sophisticated mobile apps



Logbook feature shown on the iPhone (left) and iPad (right)

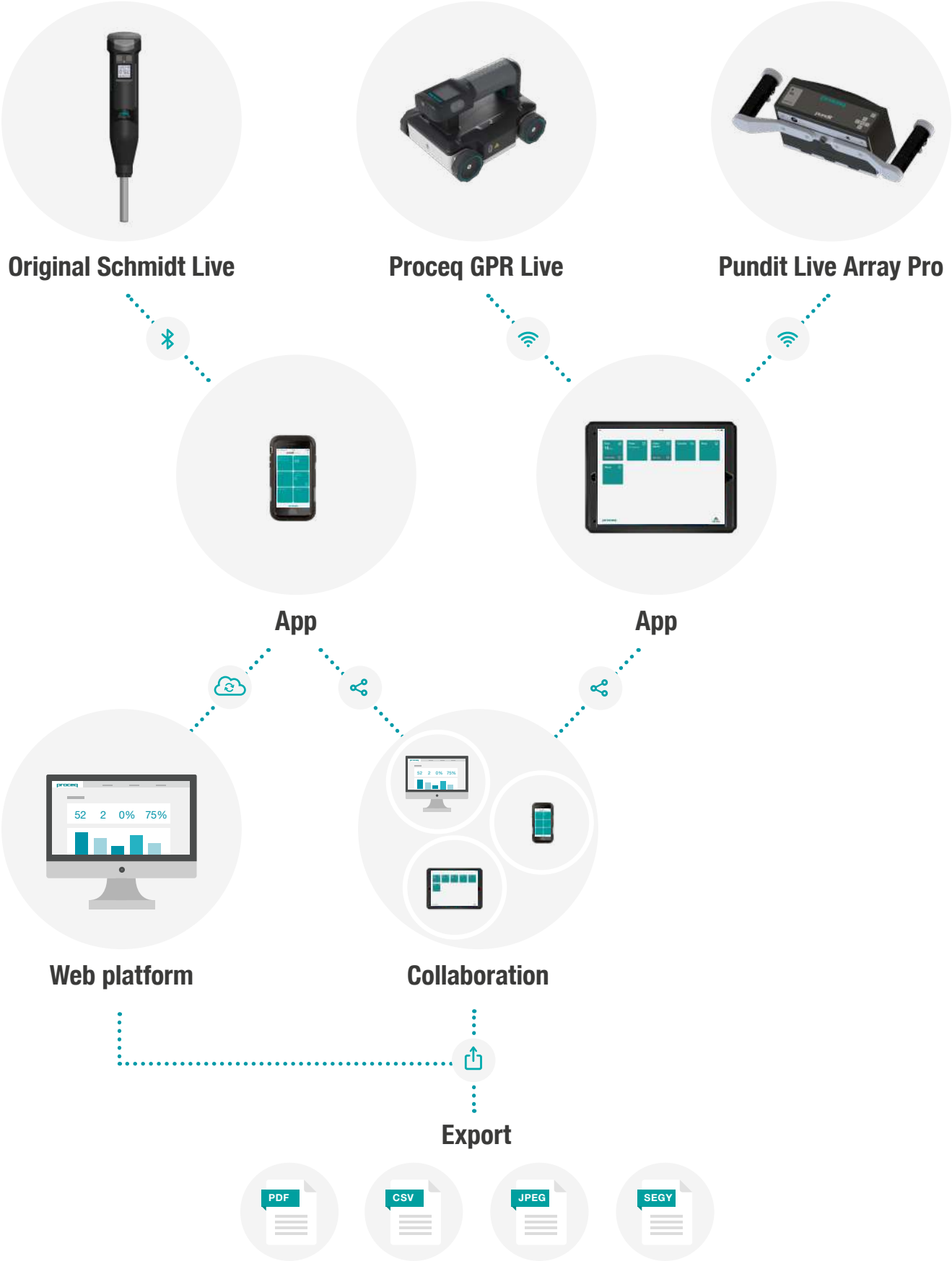
The new Swiss-made Proceq Live devices are compatible with and connect wirelessly to any iPad or iPhone using Wi-Fi or Bluetooth. Digital reporting, data sharing, and backup are possible with the app, all while using highly secure cloud services. The unique Logbook feature records the key parameters associated with every test including settings, time stamps, photos, site notes, and geolocation. Reports can be sent directly from the device on-site or the office.

Proceq GPR Live / Pundit Live Array Pro: iPad compatible
Original Schmidt Live: iPhone compatible






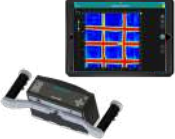
Proceq Live

Secure cloud-based ecosystem



Product Applications

From single rebar detection to 3D concrete imaging

		Profoscope	Profometer 6 AI	Proceq GPR Live	Pundit Live Array Pro
					
Maximum detection depth		15 cm	15 cm	70 cm (dry concrete)	250 cm
Assessment of rebar structure	Detect 1st layer rebar	●	●	●	
	Detect 2nd layer rebar			●	
	Estimate rebar diameter	●	●		
	Rebar cover measurement	●	●	●	
	Rebar cover statistical assessment		●		
	Likelihood of corrosion		●		
	2D imaging		●	●	●
	3D imaging			●	●
Detection and sizing of non-rebar objects	Non-metallic			●	●
	Tendon ducts			●	●
	Pipes			●	●
Detection and sizing of defects	Voids (water)			●	
	Voids (air)			●	●
	Delaminations				●
	Honeycombing				●
	Grouting defects				●
	Quality variations				●
Measurement of slab thickness				●	●

Proceq GPR Live

Structural imaging



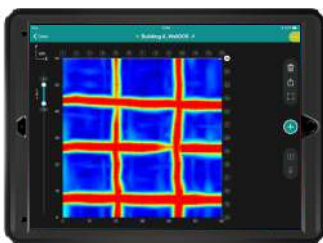
Proceq GPR Live probe combined with the device tablet holder

Flexibility product setup

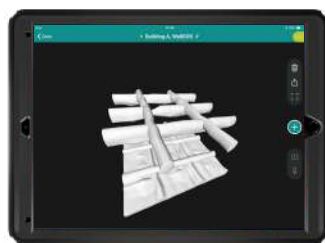
Proceq GPR Live offers a wide selection of accessories to fit your needs, such as the on-device tablet holder for single-handed operation and the telescopic rod for accessing hard-to-reach areas. Unlike other GPR products, its flexible setup allows the user to always have a large screen at an optimal viewing position with all controls within easy reach.

The Proceq GPR Live app is intuitive and simple to use. The user interface offers many different live view settings that help to optimize on-site data acquisition and evaluation. A.I. functions, laser guidance, and the rollback cursor assist object tagging. Live view settings include:

- Area scans, line scans
- Non-migrated/migrated B-scans
- Real-time time-slice view
- On-site 3D View and Augmented Reality



Proceq GPR Live time-slice view



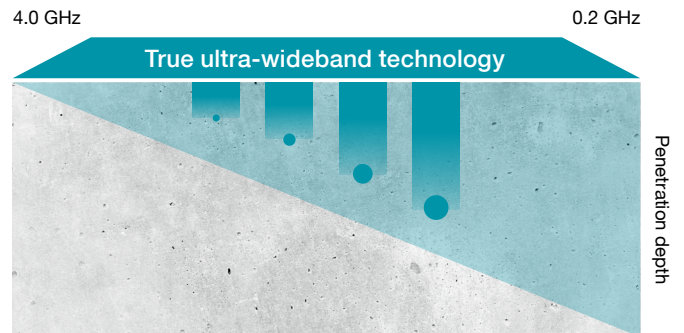
Proceq GPR Live Pro 3D View

Technical specifications

Measuring principle	Stepped-frequency Continuous-Wave GPR
Frequency range	0.2 to 4.0 GHz
Central frequency	2.4 GHz
Max. depth range	70 cm / 28 inches on dry concrete
Dimensions	220 x 180 x 143 mm / 8.7 x 7.1 x 5.6 in

Proceq GPR Live is the beginning of a new era in NDT. The unique ultra-wideband technology in structural building assessment combined with a compact wireless probe delivers unmatched performance. Our unique stepped-frequency continuous-wave (SFCW) technology delivers the widest frequency spectrum in the concrete assessment market. Customers addressing typical applications with multiple separate antennas in the range of 0.9 to 3.5 GHz can now rely on a single device with all frequencies they will ever need.

Applied standards and norms: AASHTO R 37-04, ACI 228.2R.98, ASTM D4748-10, ASTM D6087-08, ASTM D6432-11, EN 302066 - ETSI.



Proceq GPR Live covers all frequencies from 0.2 to 4.0 GHz with one single device. Lower frequencies allow deep penetration depths while higher frequencies allow for the detection of small objects.

Product models

	Basic	Pro	Unlimited
Available for purchase	●	●	
Available for rental		●	●
Ultra-wideband GPR antenna	●	●	●
Basic time-slice view	●	●	●
Pro time-slice view		●	●
3D View		●	●
Data sharing and reporting		●	●
Secure cloud features		●	●
Lifetime warranty			●

Weight	2 kg / 4.4 lb
Battery	8 x AA (alkaline or rechargeable)
Battery lifetime	3.5 hours of continuous use
Display	Any iPad
IP classification	IP54

Profometer® & Profoscope

Rebar detection and cover measurement








Profometer 650 AI

Proceq products in the Profometer 6 AI family are advanced cover meters that enable the precise and non-destructive measurement of concrete cover, estimation of rebar diameter and the detection of rebar locations using eddy current pulse induction as the measuring method. New A.I. functions significantly improve detection accuracy. Based on the new generation Profometer touchscreen, Profometer 6 AI offers real-time control over the measurement procedure directly on-site. The high-resolution color display allows data collection, evaluation, and analysis for an entire working day. Profometer 6 AI's flexible concept allows the user to upgrade anytime between cover meter and corrosion analysis instruments.

Profoscope is the world's most accurate and user-friendly hand-held rebar locator that uses the same measuring principle as the Profometer products.

Applied standards and norms: BS 1881-204, DIN 1045, DGZfP B2, SN 505 262, SS 78-B4, DBV-guideline (Concrete Cover and Reinforcement), CE certification.

Portfolio and applications overview

	Profometer 6 Cover Meters				Profometer Corrosion
	Profoscope(+)	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 of rebars in concrete
Rebar location	●	●	●	●	
Cover measurement	●	●	●	●	①
Diameter estimation	●	●	●	●	
1-Layer NRC*	●	●	●	●	
2-Layer NRC* with A.I.			●	●	
Cover calibration			●	●	
Single-line scan		③	●	●	① + ③
Multi-line scan			●	●	
Area scan			●	●	
Cross-line scan		③	③	●	① + ③
Corrosion potential		②	②	②	●
File-based reporting	●	●	●	●	●

① ② Upgrade kits available (attachable hardware) ③ Software upgrades available (activation key). *NRC: Neighbouring Rebar Correction

Compressive strength and homogeneity



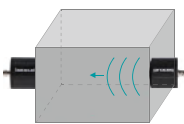


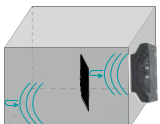





Pundit Live Array Pro

Ultrasonic testing of concrete enables the detection of voids, pipes, and cracks, and also provides information on the uniformity of concrete, cavities, cracks, defects, and slab thickness. Moreover, measuring the pulse velocity reveals insights about the quality of the concrete.

Pundit Live Array Pro, Proceq's revolutionary wireless tomography scanner, is compatible with and connects wirelessly to the Pundit Live app. Thanks to its A.I. and on-site 3D visualization capabilities, it supports the user to assess concrete structures and detect defects faster and easier than ever before.

Applied standards and norms: EN12504-4, ASTM C 597-02, BS 1881 Part 203, ISO1920-7:2004, IS13311, CECS 21. CE certification.

Portfolio and applications overview

Technology	Product	Measurement modes	Assessment of concrete quality	
Ultrasonic pulse velocity Through transmission: access from two sides 	Pundit Lab(+) 	<ul style="list-style-type: none"> A-scan Data logging 	<ul style="list-style-type: none"> Compressive strength using SONREB Determination of crack depth Modulus of elasticity 	
	Pundit 200 	<ul style="list-style-type: none"> A-scan Line scan Data logging Area scan 		
Ultrasonic pulse echo Single side access 	Single-channel 	Pundit 200 Pulse Echo 	<ul style="list-style-type: none"> Slab thickness from a single side Detection and localization of voids, pipes, cracks (parallel to surface), honeycombing Location of pipes and tendon ducts beyond the rebar layer Pundit 250 Array: <ul style="list-style-type: none"> with real time B-scan and panorama B-scan capability Upgrade to 16 channels Pundit Live Array Pro: <ul style="list-style-type: none"> Fastest solution with best on-site imaging capabilities Wireless and IoT-enabled with reporting features and A.I. user support 	
	Multi-channel 8 dry point contact channels 	Pundit 250 Array 		<ul style="list-style-type: none"> A-scan Real-time B-scan Panorama B-scan
		Pundit Live Array Pro 		<ul style="list-style-type: none"> A-scan Line scan 3D view Extended range

Ultrasonic pulse velocity transducers

							
	24 kHz	54 kHz	150 kHz	250 kHz	500 kHz	54 kHz	40 kHz (S-wave)
Max. grain size	≈77 mm	≈34 mm	≈12 mm	≈7 mm	≈3 mm	≈34 mm	≈34 mm
Min. lateral dimension	154 mm	69 mm	25 mm	15 mm	7 mm	69 mm	55 mm
Applications	Mass concrete	Most concrete applications	Small concrete objects	Fine grained rock, refractory bricks	Fine grained rock, ceramics	Rough/rounded concrete surfaces	Determination of elastic modulus

Original Schmidt®

Compressive strength and homogeneity







Original Schmidt Live

Proceq’s rebound hammers have been used for decades for the reliable on-site estimation of concrete compressive strength, and the rapid assessment of variations in uniformity. Each of our rebound hammers is built to support your applications with unparalleled accuracy and productivity.

Original Schmidt Live is the world’s most advanced R-value hammer, operating as a stand-alone analog or digital hammer when connected to an iPhone. It can also connect to a Bluetooth printer for direct print-out of results. The full productivity potential of the hammer is unleashed by the Schmidt Live app, which significantly reduces the time required for testing and reporting according to all major standards.

Applied standards and norms: SilverSchmidt: ASTM C805, EN 12504-2, EN 13791. Original Schmidt / Original Schmidt Live / Schmidt OS-120: ISO/DIS 8045, EN 12 504-2, ENV 206, DIN 1048 part 2, BS 1881 part 202, ASTM C805, ASTM D5873 (Rock), NFP 18-417, B 15-225, JGJ/T 23, JJG 817-199. CE certification.

Portfolio and applications overview

	Concrete compressive strength range					
	1 – 5 MPa 145 – 725 psi	5 – 10 MPa 725 – 1450 psi	10 – 30 MPa 1450 – 4351 psi	30 – 70 MPa 4351 – 10153 psi	70 – 100 MPa 10153 – 14504 psi	>100 MPa >14504 psi
	Fresh concrete Very low strength concrete		Normal concrete		High strength concrete	Ultra-high performance concrete
SilverSchmidt 			SilverSchmidt ST/PC Type N			
			SilverSchmidt ST/PC Type L			
	SilverSchmidt PC Type L with Mushroom plunger					
Original Schmidt 			Original Schmidt Type N			
			Original Schmidt Type L			
Original Schmidt Live 			Original Schmidt Live Type N			
			Original Schmidt Live Type L			
Schmidt OS-120 	Schmidt OS-120PT					

Type N	Standard impact energy. Minimum thickness of test object: 100 mm (3.9") and should be firmly fixed in the structure.
Type L	Low impact energy. Suitable for brittle objects or structures less than 100 mm (3.9") thick.
	Only with user-defined custom curves.

Technical specifications – Original Schmidt Live

Impact energy Type N	2.207 Nm (1.63 ft lbf)	Memory capacity	2'000 measurement series
Impact energy Type L	0.735 Nm (0.54 ft lbf)	Display	100 x 100 pixel, graphic
Dimensions of housing	61 x 84 x 275 mm / 2.4 x 3.3 x 10.8 in	Charger connection	Micro USB
Weight (N-hammer)	1090 g / 2.4 lb	IP classification	IP54
Weight (L-hammer)	850 g / 1.9 lb		

Profometer® Corrosion

Corrosion analysis



Profometer Corrosion with a 4 wheel electrode

Corrosion of reinforcing steel is the primary cause of deterioration of reinforced elements. The mapping of the electrical potential as measured on the surface of the concrete allows the detection of the spots with an increased likelihood of corrosion. It thus represents a primary tool for the maintenance and the structural assessment of concrete structures.

As the direct successor to the Proceq Canin+, Profometer Corrosion represents the most advanced corrosion instrument on the market. Thanks to its flexible concept, the user can upgrade anytime to the features and functions of the Profometer 6 AI cover meters.

Applied standards and norms: ASTM C876, RILEM TC 154-EMC, DGZfP B3, SIA 2006, UNI 10174, JGJ/T 152, JSCE E 601, CE certification.



- ✓ Most versatile half-cell potential solution available
- ✓ Proceq's unique wheel electrodes allow the fastest and most efficient on-site testing
- ✓ Compatible with existing Canin and most third-party electrodes
- ✓ Improved digital filtering to remove the effect of external noise, e.g., from civil and industrial power sources
- ✓ Profometer touchscreen with high-resolution color display, user-friendly interface, and assisted inspection workflow



Technical specifications – Profometer touchscreen

Display	7" color display, 800 x 480 pixel, 133.28 PPI	Battery	3.6 V, 14 Ah
Memory	Internal 8 GB flash memory	Battery lifetime	More than 8 hours in standard operating mode
Regional settings	Metric & imperial units, multi-language supported	Humidity	<95% RH, non-condensing
Power input	12 V ±25% / 1.5 A	Operating temperature	-10 to 50 °C / 14 to 122 °F
Dimensions	250 x 162 x 62 mm / 9.8 x 6.4 x 2.4 in	IP classification	Touchscreen IP54, universal probe IP67
Weight	1525 g / 3.4 lb (incl. battery)		

Resipod & Torrent

Corrosion analysis, durability, and permeability



Resipod: The construction industry is rapidly moving towards performance-based specifications for concrete durability of new structures; at the same time, assessing the service life of actual reinforced-concrete elements is a growing concern. Concrete resistivity has been used for years as one of the critical parameters used to determine the quality of concrete, both in new constructions and in existing structures. Resipod is the world’s most versatile concrete surface resistivity meter for lab and on-site testing to assess durability, homogeneity, and corrosion.

Applied standards and norms: Resipod complies with the AASHTO Standard T 358 on surface resistivity.

Resipod portfolio and applications overview

	Resipod	Resipod Geometric	Resipod Bulk Resistivity
Surface resistivity test on standard cylinders	●	●	●
Bulk resistivity test on cylinders up to 100 mm (4”) diameter			●
Surface resistivity test on non-standard cylinders (aggregate sizes > 1.5”, 38 mm)	●	●	●
Correction factor for probe spacing and sample geometry		●	
Variable probe spacing		●	
Surface resistivity mapping on-site for estimation of likelihood of corrosion, corrosion rate and implementation of cathodic protection systems	●	●	



Torrent: “Covercrete” is the layer of concrete that protects the rebars from aggressive elements that cause corrosion. Proceq’s air permeability tester Torrent provides a fast, reliable and non-destructive measurement of the air permeability of concrete structures. Torrent enables the completely non-destructive testing of “covercrete” quality on-site according to the Swiss standard SIA 262/1. A measurement of the concrete permeability with Torrent takes only 2 to 12 minutes. The permeability data can be analyzed afterward with ease, thanks to Torrent’s display.

Applied standards and norms: SN 505 252/1, Annex E.

Technical specifications – Torrent

Connections	RS-232 or with adapter to USB
Battery	6x LR6 (1.5 V) batteries for 60 hrs of operation
Operating temperature	-10 to 60 °C / 14 to 140 ° F
Carrying case	325 x 295 x 105 mm / 12.8 x 11.6 x 4.1 in
Total weight	2.1 kg / 4.6 lb
Memory capacity	200 measured values

Technical specifications – Resipod

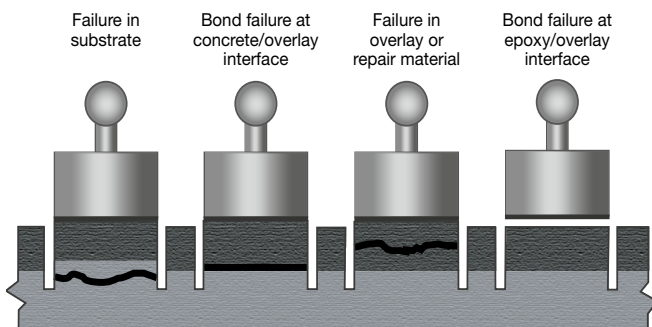
Resolution (nominal current 200 μA)	±0.2 kΩcm or ±1%
Resolution (nominal current 50 μA)	±0.3 kΩcm or ±2%
Resolution (nominal current <50 μA)	±2 kΩcm or ±5%
Frequency	40 Hz
Memory capacity	Non-volatile, ca. 500 measured values
Power supply	More than 50 hours of autonomy
Charger connection	USB type B, 5 V, 100 mA
Operating temperature	0 to 50 °C / 32 to 122 °F

Proceq DY-2 Strength



Pull-off or adhesion (bond) testing is one of the most widely used testing methods in the construction industry. However, operator influence in applying load during testing has a well-known significant impact on the repeatability and reliability of test results. Proceq DY-2 automated pull-off testers completely remove operator influence thanks to an integrated feedback control motor that ensures a verifiably constant load-rate. Moreover, the Proceq DY-2 family covers the complete range of pull-off applications with unmatched ease of operation and the ability to store a complete record of the testing procedure.

Applied standards and norms: EN 1542, EN 1015-12, EN 1348, ISO 4624, BS 1881 Part 207, ASTM D4541, ASTM C1583, ASTM D7234-05, ASTM D7522, ZTV-SIB 90.



Failure-mode reporting


Most pull-off testing standards require the operator to record the mode of failure. Proceq DY-2 is unique in that it allows this information to be automatically identified and saved along with the test result. For example “B 100%” indicates a complete failure in the overlay or repair material.

Typical adhesives used are:

- Devcon 2 Ton Epoxy
- Loctite 907, Loctite 3430
- Sikadur 30, Sikadur 31
- Araldite Regular/Rapid



Portfolio and applications overview

		Working range		Maximum pulling speed
		Tensile force	Test disc Ø 50 mm	
	Proceq DY-206	0.6 – 6 kN	0.3 – 3.1 MPa	4.65 mm/min 0.183 inch/min
		135 – 1349 lbf	44 – 443 psi	
	Proceq DY-216	1.6 – 16 kN	0.81 – 8.1 MPa	2.2 mm/min 0.086 inch/min
		360 – 3597 lbf	118 – 1182 psi	
	Proceq DY-225	2.5 – 25 kN	1.3 – 12.7 MPa	2.2 mm/min 0.086 inch/min
		562 – 5620 lbf	185 – 1847 psi	

Examples for Ø 50 mm test discs. Note: Below the working range, the accuracy is not guaranteed.

Technical specifications

Max. stroke	5 mm
Calibration accuracy	DY-216, 225 EN ISO 7500-1 Class 1 DY-206 EN ISO 7500-1 Class 2
Memory capacity	100 measurements
Battery	1500 mAh, 3.7 V (min. 80 measurements)
Charger connection	USB type A, 5 V, 500 mA

Weight	4.5 kg / 9.9 lb
Dimensions of housing	109 x 240 x 205.5 mm / 4.3 x 9.4 x 8.1 in
Operating temperature	-10 to 50 °C / 14 to 122 °F
IP classification	IP54

Ordering information

Proceq GPR Live

393 10 100	Proceq GPR Live Basic
393 10 200	Proceq GPR Live Pro
393 99 200	Proceq GPR Live Pro – initial rental fee
393 99 300	Proceq GPR Live Unlimited – initial rental fee

Profometer

392 10 001	Profometer 600
392 20 001	Profometer 630 AI
392 30 001	Profometer 650 AI
392 50 001	Profometer Corrosion

Profoscope

391 10 000	Profoscope
391 20 000	Profoscope+

Pundit

326 10 001	Pundit Lab
326 20 001	Pundit Lab+
327 10 001	Pundit PL-200
327 20 001	Pundit PL-200PE
327 30 110	Pundit 250 Array
327 10 002	Pundit Touchscreen
327 30 150	Pundit Live Array Pro
327 30 160	Pundit Live Array Pro – initial rental fee

Resipod

381 10 000	Resipod, 50 mm probe spacing
381 20 000	Resipod, 38 mm probe spacing
381 30 000	Resipod Bulk Resistivity
381 50 000	Resipod Geometric

Torrent

380 02 200	Torrent Permeability Tester
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Schmidt

310 01 001	Original Schmidt Type N
310 01 002	Original Schmidt Type N (PSI)
310 03 002	Original Schmidt Type L
310 06 001	Schmidt OS-120PT
310 06 002	Schmidt OS-120PM
341 30 000	SilverSchmidt ST Type N
341 40 000	SilverSchmidt ST Type L
341 31 000	SilverSchmidt PC Type N
341 41 000	SilverSchmidt PC Type L
340 10 000	Original Schmidt Live N
340 20 000	Original Schmidt Live L
340 10 001	Original Schmidt Live Print N
340 20 001	Original Schmidt Live Print L

Proceq DY-2

346 10 000	Proceq DY-206
346 20 000	Proceq DY-216
346 30 000	Proceq DY-225

Service and warranty information

Proceq is committed to providing complete support for each 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 for electronic components.

Standard warranty

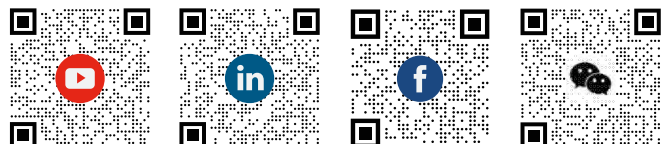
- Electronic components of the instrument: 24 months
- Mechanical components of the instrument: 6 months

Extended warranty

When acquiring a new instrument, 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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