Sonatest

AlphaGage+



Inspect with Confidence

Simplicity | Capability | Reliability

sonatest.com

AlphaGage+

The Sonatest AlphaGage+ is definitely a key asset for inspectors, maintenance operators and QA technicians looking to measure essentially any engineering material thickness as it combines years of ultrasonic R&D into an extremely rugged and perfectly ergonomic hand held enclosure.

It is also a very versatile piece of equipment as it can be used to perform integrity assessments of metal steel works affected by corrosion or erosion processes as well as to measure precisely the thickness of a critical piece of equipment.

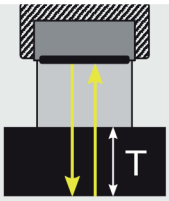






- Simply brilliant user interface design
- Ergonomic enclosure and accessories
- Fast Min/Max mode at 25 Hz
- Large hi-resolution LED backlight
- Colour screen or vibration alarms
- Multiple sizes reading display
- Custom design for IP67 rating
- Up to 27hr continuous operation
- Re-chargeable via USB port

Aerospace Automotive Manufacturing



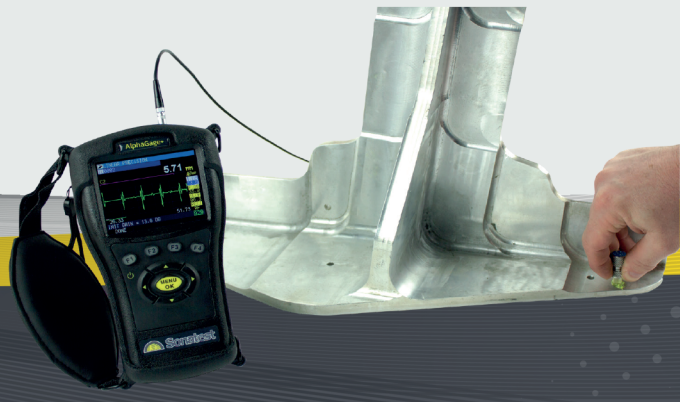
Precision Gauge

Precision gauges are particularly effective when using single element transducers and delay line wedges in Pulse-Echo configuration to achieve higher accuracy than corrosion gauges and meet very strict quality control requirements.

Standard features include: a wide thickness range (up to 20" in steel), a 1 micron resolution (0.0001" or 0.001 mm), store and recall up to 2,700 setups, a high end 30 MHz bandwidth instrument and a "Zoom Auto Tracking" functionality.

Typical Applications

- Castings & turbine blades
- Plastic parts
- Coil steel & auto body panels
- Fiberglass & gel coatings
- Velocity Measurement
- Aluminium, glass, ceramics & zinc



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Field Upgradable

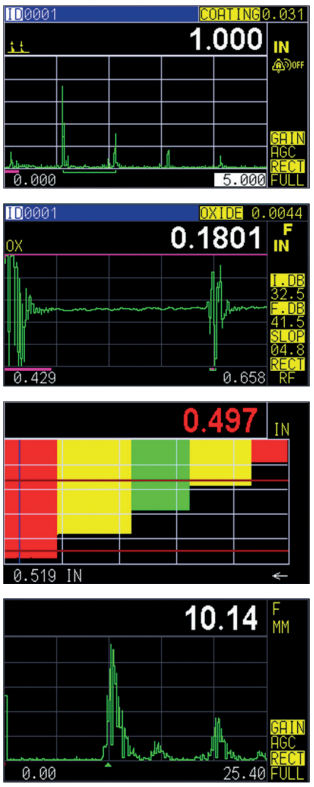
Upgradable in the field, the AlphaGage+ is a flexible solution as it can be fully loaded from the start or upgraded anytime later by easily activating its valuable software options when required.

True Thickness (under coating)
When a metal surface is protected by anti-corrosion paint or coating, true wall thickness measurement using Echo-to-Echo function is a key feature and available on all AlphaGage+ models.

Oxide Scale (boiler tube)
Simultaneously display the boiler tube wall thickness as well as the internal oxide scale thickness at their velocities greatly improves the efficiency of investigation to extend tube life.

Data Logger (B-Scan)
With internal SD card memory of up to 32GB, store without limit thickness readings with ID location for corrosion mapping or profile assessment and send readings to Microsoft ExcelTM (DataXLS) for further asset maintenance evaluation.

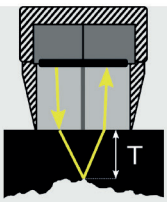
Live Waveform (A-Scan)
Display live A-scan for echo verification and real time control of acoustic range, rectification, gain and blanks or combine the A-Scan with B-Scan view for even more detailed analysis.



Power Generation

Oil & Gas

Service Companies



Corrosion Gauge

Without being limited to, the corrosion gauges generally use dual element transducers in a Pitch & Catch configuration to reduce surface problems and measure accurately the remaining wall thickness of metal structures subject to corrosion.

Standard features include: a wide thickness range (up to 23" in steel), coating thickness and substrate thickness displayed simultaneously on gauge with live waveform, temperature correction and file compare features for data logger versions.

Typical Applications

- Pipes & Boiler tubes
- Pressure vessels
- High temperature applications
- Storage tanks
- Ship hulls
- Steel beams



Specifications

Measurements	
Transducers	Single or Dual element (according to gauge model)
Thickness Range (fct. of probe & material)	Typical range in steel (corrosion mode): 0.508mm to 584mm (0.020"-23") Typical range in steel (precision mode): 0.152 to 584mm (0.006 - 23") and as low as 0.076 mm (0.003") in plastics.
Velocity Range	0.508 to 18.699 mm/µs (0.0200 to 0.7362 in/µs)
Resolution	On corrosion mode: 0.01 mm or 0.1 mm (0.001" or 0.01") On precision mode: 0.001 mm or 0.01 mm (0.0001" or 0.001")
Measurement Rate	4 Hz or 25 Hz
Bandwidth	0.5 MHz to 30 Mhz (-3dB)
Differential Mode	Displays the difference from actual thickness measurement in absolute or percentage of a user entered reference value.
Fast Min/Max	Displays minimum and maximum simultaneously with actual thickness at up to 25 Hz.
Gain Settings	Manual adjustment (Low, Standard, High) and Automated Gain Control (AGC)
Alarms	According to alarm conditions, the gauge can vibrate (ideal for loud environments), beep or change the colour of the main display.
Enclosure	
Connector Type	Lemo 00
Size	Length 184 mm (7.25") x Width 102 mm (4.00") x Height 51 mm (2.00")
Weight	520 g (1.2 lb) with internal Li-ion battery 450 g (1.0 lb) with optional alkaline tray (3xAA batteries)
Display	3.5" high resolution colour TFT display, 320 x 240 pixels, sunlight readable, including multiple colour pallets.
Backlight Management	Light Emitting Diode (LED) backlight, includes variable light intensity.
General	
Operating Temperature	-20 to 50°C (-4 to 122°F)
Operating Time	27h @ 4 Hz & 11h @ 25Hz in continuous operation with standard 3.7V Li-ion internally rechargeable battery (optional alkaline tray 3xAA batteries available for extended life)
Setup Storage	Internal memory for up to 2,700 calibration and preset setup fields.
Data Storage	With Data Logging (DL) option, a 2GB micro SD card is included (expandable up to 32GB)
UI Languages	English, French, German, Spanish, Italian, Russian, Czech, Finnish, Chinese, Japanese, Hungarian.
Certifications	CE certified, RHOS complaint and designed for IP67.
Warranty Limited	2 year warranty under normal use on parts and labor.

Versions

Part Number	Description
AlphaGage+ C	High performance hand-held CORROSION thickness gauge.
AlphaGage+ P	High performance hand-held PRECISION thickness gauge.
AlphaGage+ CP	High performance hand-held CORROSION & PRECISION combined thickness gauge.
Add. options	Data Logging (DL), Waveform (W) and Oxide Scale (OS) software options available on all models.

Accessories

Part Number	Description
149103	Plastic Carry Case
149104	Li-ion Battery Pack
149105	Rubber Boot and Neck Strap
149107	Charger with USB
149108	Magnetic Ball Head
149109	Neck Strap
USB--09-6	Mini USB cable, 6 foot

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