Microgage III Series

The new portable precision thickness gauge range from Sonatest Ltd, the Microgage III series, are available with monochrome and colour displays, with or without A-Scan capability. All instruments across the range a field upgradeable, allowing the operator to opt for further features further down the line without returning the instrument to the factory.

The variety of features offered by the MICROGAGE III series allows the user to select a quality tool that will exceed their application needs. The Echo-to-Echo capability allows the measurement of the thickness of materials without removing paint or coatings.

Designed with the user in mind, the MICROGAGE III utilises state-of-the–art digital technology to produce fast and accurate readings. Available in 7 models including basic (B), datalogging (DL), with and without waveform(W)with monochrome or colour (C) displays.

Features include:
• 0.0001 resolution
• Live A-scan (colour optional)
• Vibration and colour change with alarm
• Storage and recall of set ups
• 30 MHz bandwidth
• Zoom auto tracking
• Datalogger 100, 000 readings
• Multiple Modes for challenging applications
• Real-Time adjustment of initial gain, slope, range, rectification, zoom and blankings.
• Sunlight readable
• Languages include: English, German, French, Spanish, Italian, Czech, Finnish among others.

All software options are field upgradeable, no need to return to factory.

Applications include:
Coil Steel, Fibreglass Thickness (boats), Titanium (golf club heads), Rubber Tyres, Thin Walled Components, Aerospace applications, Plastics Manufacturing.

Ultrasonic Precision Thickness Gauge

Monochrome or Colour Displays

Specifications

PHYSICAL
Weight: 230 g (8 ounces)
Size: 5.0 w x 127.0 h x 31.8 d mm (3" x 5" x 1.25" inches)
Operating Temperature: -20° to 50°C (-4° to 122° F)
Material Surface Temp: -20° to 537°C (-5° to 1000° F)
Depending on probe use.
Package: Custom, splash-proof (IP54), high-impact plastic with rubber, illuminating keypad for go/no-go testing.

Thickness Range: 0.10mm - 508mm (0.004 - 20 ins), depending on material, temperature and transducer selection
Material Velocity Calibration Range: 0.508-18.699 mm/μsec (0.200-0.7362 in/μsec)

POWER SOURCE
Battery type: 2 x AA alkaline.
Battery Life: Monochrome operates for 200 hrs (40 hrs with backlight on). Colour display up to 40 hrs (15hrs with backlight on).

Display: 128 x 64 Graphics LCD monochrome.
220 x 170 Graphic Colour TFT display
Information Displays: LoS, min, max, large reading while displaying min at the same time, velocity, zero, calibration, units, freeze, unfreeze, % battery life remaining, gain - low, std, high, echo to echo symbol.
Units: English/Metric/Microseconds

Languages: English, German, French, Spanish, Czech, Finnish & others.

Resolution: 0.001 mm (0.0001 ins); 0.01mm (0.001ins)
Probe recognition: via pick list from menu
Delay line zero measurement: Auto at power up with listed numeric value. Ideal for correcting delay line wear/curvature and for transducer acoustic drift at elevated temperatures.
Stored Setups: Ability to store up to 30 custom set up to retain valuable parameter settings such as sound, velocity, gain, slope, range.
Modes of Measurement:
Class 1: Main bang to first wall back echo
Class 2: Delay line (interface echo) to first back echo.
Class 3: Echo to Echo following an interface echo from a delay line or water column.

Bandwidth: 0.5 - 30 MHz (-3dB)
Pulser: Square Wave

Waveform: Live colour waveform with dynamic colour change on alarm, large thickness reading. Live monochrome waveform.
Rectify: RF, Full Wave, Half Wave+, Half Wave-.
Gain: Auto or Manual in 1dB steps for varying test conditions Low, Standard and High for varying test conditions.
Time Dependant Gain: adjust for slope and gain level as a function of time.
B-Scan: Cross sectional representation of test piece.
Measurement rate: 4/sec and 20/sec in fast mode.

Alarms: Minimum/Maximum depth, vibralarm, beeps and display flashes as well as keypad illumination and dynamic waveform colour change.

Illuminating Keypad: F1 = Red, F2 = Yellow and F3 = Green for easy, go/no go testing (patent pending).
Backlight: Light emitting diode, On/Off or Auto On based on valid readings or last key press.
Ergonomics: User selectable left or right display via keypad (pat. pending)
Shut Off: Auto time out (after 1-31 minutes user programmable after no reading L.O.S. or no key press or "never").

MODES
Differential Mode: Displays the difference from the actual thickness measurement and a user entered reference value.
Scan Mode: Simultaneously displays minimum or maximum thickness value at 20 measurements per second (ideal for tracking minimum depth).
Freeze Mode: Freezes display (ideal for high temp. measurements)
Hold Mode: Holds display to retain last thickness reading in reverse video display.

Protective Pouch: Custom moulded pouch with wrist strap for either left handed or right handed operators.
Case: Customised, splash proof, high impact plastic with rubber. Illuminated keypad for go/no-go testing.
Carrying Case: Custom moulded pouch with wrist strap for left or right handed operators (optional).
Shipping Case: Hard plastics with high density moulded cut out for all accessories (optional)
Standard Microgage III series kit includes: UT Thickness gauge, transducer (less than 10MHz with cable), operator manual, cable, couplan and carry case. Data XLS software available with DL versions only.

Warranty: Limited 2 year warranty on parts and labour.

Feature	Microgage III B	Microgage III	Microgage III DL	Microgage III W	Microgage III DLW
Thickness Range 0.10 mm - 508mm (0.004 - 20 inches)	•	•	•	•	•
Scan Mode (20 MHz)	•	•	•	•	•
Hold Mode	•	•	•	•	•
Freeze Mode	•	•	•	•	•
Illuminated Keypad	•	•	•	•	•
Units (Inches/Millimetres/Microseconds)	•	•	•	•	•
Gain	-	•	•	•	•
Differential	-	•	•	•	•
Alarms (with vibrate)	Yes (no vibrate)	•	•	•	•
B-Scan	-	optional	•	•	•
A-Scan	-	optional	optional	•	•
Datalogger	-	optional	•	-	•
Main bang blanking	-	optional	optional	•	•
Interface blanking	-	optional	optional	•	•
Stored set ups	-	•	•	•	•

For Colour display models add a "C" to the model name/number e.g. Microgage III DLC. For A-Scan Capability add a "W" to the model number.

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