EXTECH®

PRODUCT DATASHEET

Ultrasonic Thickness Gauges

Extech offers Thickness Gauges designed in compact, handheld, rugged housing ideal for field use. The ultrasonic technology allows for non-destructive thickness measurements for primarily steel structures. Select models with digital thickness readout or live color waveform and datalogging function.

Applications:

- **Boiler Tubes**
- **Containers**
- **Compressors**
- **Pressure Vessels**
- **Home Oil Tanks**
- **Shafts**
- **Storage Tanks**
- **Pipes**
- **Bridge Pins**
- **Ship Hulls**
- **Steam Lines**
- **Bond Inspection**



Transducer



TKG100 TKG250 TKG150

Common Features

- Wide measurement range:
  5MHz probe: 0.040" to 20" of steel
  10MHz probe: 0.030" to 2" of steel (optional)
- Sunlight readable dot-matrix display with backlight
- Multiple transducer options for high temperature and difficult to measure materials
- Fast minimum feature to capture minimum thicknesses
- On screen display of 8 languages
- Splash-proof (IP54), high impact, compact housing

Model TKG100 & TK150 Additional Feature

- Sun light readable

Model TKG150 Additional Features

- Echo to Echo option to reduce coating errors
- 100K internal datalogger with export to Excel
- B-scan (visual cross section of test piece)
- Vibrate on alarm

Model TKG250 Additional Features

- Color LCD display shows red, yellow and green visual alarm indication
- Live Waveform (A-scan for thickness verification)
- File compare feature as a real time corrosion monitor
- Dynamic change of waveform color on alarm
- Grid review of saved readings
- Echo to Echo option to ignore coatings
- 100K internal datalogger with export to Excel
- B-scan (visual cross section of test piece)
- Vibrating alarm indication

Specifications on back page

Ordering

TKG100..... Digital Ultrasonic Thickness Gauge
TKG150..... Digital Ultrasonic Thickness Gauge/Datalogger
TKG250..... Color Waveform Ultrasonic Thickness Gauge/Datalogger
For replacement accessories and 10MHz transducer, please contact us.

MADE IN U. S. A.

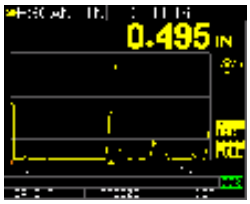
2 YEAR WARRANTY

CE

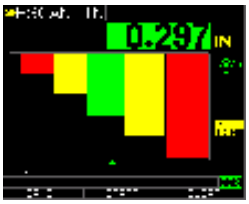
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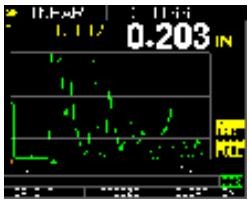
TKG250 Color Screen displays



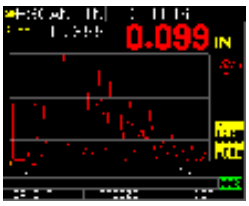
Alarm Warning Screen



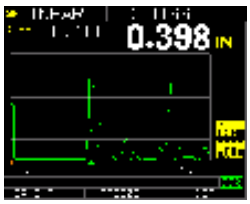
B-Scan Screen



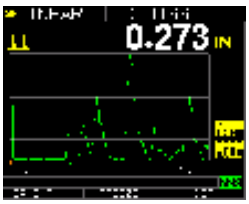
Normal Screen - No Alarm



Change color on Alarm



Differential Screen



RF Waveform Screen



All models include 2oz bottle of couplant, 2 AA batteries, Transducer (5MHz, 0.375" diameter) with potted cable, and hard case, plus a certificate of calibration to NIST. TKG150 and TKG250 also include protective holster, USB cable, and Extech XPorter software.

Common Functions	Description
Thickness Range (in Steel)	5MHz probe: 0.040 to 20" (1.0 to 508mm); 10MHz probe: 0.030 to 2" (0.76 to 50.8mm)
Material velocity calibration range	0.200 to 0.7362 in/µS (0.508 to 18.699mm/µS)
Languages	English, French, Spanish, Italian, Czech, German, Portuguese, Slovak, Finnish, and Hungarian
Hold Mode	Holds display to retain last thickness reading with reverse video display
Freeze Mode	Freezes display (ideal for high temperature readings)
Fast Min/Max Mode	Displays Min or Max and actual thickness value at 20 measurements/sec
Units	Inches/Millimeters/Microseconds
Alarms	Audible beeping; illuminae flashing display and keypad; and vibration feedback (only on the TKG150/TKG250 models)
Illuminating Keypad	F1 = Red, F2 = Yellow, F3 = Green for easy, go/no-go testing

Additional Functions	Model TKG100	Model TKG150	Model TKG250
Gain - Variable adjustment	—	Low, Standard, High	In 1dB steps from 20-90dB or Automatic Gain Control (AGC) for waveform
B-Scan - Displays a cross section of the test piece	—	Displays a visual cross section of inspection area with no correlation to distance. B-Scan alarm colors consist of: Red = below minimum/above maximum; Yellow = Caution; and Green = Good.	
Echo to Echo	—	Measure the metal thickness only (paint & coatings do not affect base material thickness value)	
Differential Mode	—	Displays the difference from the actual thickness measurement and a user entered reference value	
Velocity Mode	—	Displays acoustic sound speed to measure thickness of unknown materials	
Datalogger	—	Stores 50k readings (expandable to 100k) and 5,000 waveforms; file names up to 20 characters long; and the included Extech XPorter software extracts .csv data files that can be opened for viewing in MS Excel, Notepad, or Wordpad. TKG250 also has file compare & grid review features.	
Range	—	—	Adjustment of manual range control or auto zoom tracking to center echoes independent of selected range
Rectification Modes	—	—	RF, Half Wave Positive, Half Wave Negative and Full Wave Rectification
Live Waveform (A-Scan)	—	—	Full adjustments for gain in 1dB step or AGC, main bang blank, blank after first received echo, range including zoom auto tracking to center echoes independent of material and rectification
Battery Life	Up to 50 hrs (20hrs w/backlighting)	Up to 50 hrs (20hrs w/backlighting)	8 to 14hrs (depends on operating conditions)

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