Material Thickness

The thickness of materials cannot always be determined by direct measurement as access to both sides is not always possible. The effects of corrosion and erosion at the back of a metal panel may reduce its thickness significantly yet not affect the front surface. Pipelines, for example, may have been eroded by the flow of material inside . Machined or cast items may have thin walls that can not be determined by callipers or other not-destructive tests.

Ultrasonic Thickness Gauge AT-140A/AT-140B

The Amittari Ultrasonic Thickness Gauge, are used for measuring the thickness of materials where access to only one side of the test piece is available.
Many different materials can be measured including steel, cast iron, plastic, epoxy resin and glass fibre, etc.
• Backlight Display
• Metric/Imperial Conversion
• Manual/Auto Power off
• Low Battery Indicator
• Computer Connection

Specifications

Model	AT-140A	AT-140B
Measurement Range	1.2~200mm (0.05~8") (45# steel)	1.2~300mm (0.05~12") (45# steel)
Velocity Range	500~9000m/s	
Resolution	0.1mm (0.001")	0.01mm (0.001")
Accuracy	$\pm(0.5\%n+0.1)$	
Measurement Unit	millimeters and inches	
Operation Temperature	0~40°C (32~104°F)	
Operation Humidity	<85%RH	
Power Supply	4x1.5V AAA Um-4 Battery	
Size	140 x 70 x 31mm (5.5 x 2.8 x 1.2")	
Weight (Without Battery)	130g (4.59oz)	
Standard Accessories	Main Unit	
	Coupling Agent	
	5MHzΦ8 Standard Probe	
	Carrying Case	
	Operation Manual	
Optional Accessories	Other Optional Probes (See Page 2)	
	USB Cable & Software (See Page 2)	
	Bluetooth Adapter & Software (See Page 2)	

Measurement Codes & Materials

The Amittari Ultrasonic Thickness Gauge, with 11 types of codes, can measure 11 types of materials. Also, the custom velocity can be set to measure the corresponding sample thickness.

Code	Material	Code	Material
cd01	Steel	cd07	Quartz Glass
cd02	Cast Iron	cd08	Polyethylene
cd03	Aluminum	cd09	PVC
cd04	Red Copper	cd10	Gray Cast Iron
cd05	Brass	cd11	Nodular Cast Iron
cd06	Zinc	xxxx	Sound Velocity

Probes

Amittari provides various kinds of Ultrasonic Thickness Probes to meet the Users' need, including
• Standard Probe: Standard probe for general flat workpiece thickness measurement.
• Curved Surface Probe: Specially used for thickness measurement of curved surface workpiece.
• Thin Material Probe: Specially used for thin material thickness measurement.
• Plastics Measurement Probe: Specially used for thickness measurement of plastics.
• Cast Iron Measurement Probe: Specially for cast iron thickness measurement.
• High Temperature Probe: Specially used for thickness measurement of high temperature workpiece, up to 300°C (572°F).
When selecting the probe, the user can select the corresponding probe according to the physical properties, material and temperature of the workpiece, also, the measuring range of the probe.

Probe Model	Diagram	Measuring Range	Internal Diameter	Frequency	Operating Temp.
5MHz Φ8 Standard Configure Probe		1.5~200mm (0.06~8") (Steel)	8mm (0.31")	5MHz	0~50°C (32~122°F)
5MHz Φ6 Thin Material Probe		1.0~50mm (0.04~1.97") (Steel)	6mm (0.24")	5MHz	0~50°C (32~122°F)
2MHz Φ10 Plastics Measurement Probe		1.0~50mm (0.04~1.97")	10mm (0.39")	2MHz	0~50°C (32~122°F)
2MHz Φ10 Cast Iron Measurement Probe		3.0~40mm (0.12~1.57")	10mm (0.39")	2MHz	0~50°C (32~122°F)
5MHz Φ12 High Temperature Probe		3.0~200mm (0.12~8")	12mm (0.47")	5MHz	60~300°C (140~572°F)

Data Statistics Software

This powerful software provides the user the means to analyze test results. Through continuous inspection data statistic will help you to reduce re-work and scrap levels - increasing your profits and quality. With the computers and printers, the following functions can be realized:
• Data Management (Excel file output)
• Charting
• Printing

Data Transmission Methods

There are two ways to transmission measurement data:
• USB Data Cable wired output
• Bluetooth Adapter wireless output
By these two ways above, data transmission from the gauge to computer can be realized.
Among them, there are two optional Bluetooth adapters: 10 meter Bluetooth adapter and 100 meter Bluetooth adapter.