Digital Ultrasonic Thickness Testers Time TT130

TT130 is a hand held microprocessor controlled thickness gauge specifically designed for measuring the thickness of metallic and non-metallic materials e.g. aluminium, titanium, plastics, ceramics, glass and other good ultrasonic wave-conducting as long as the material has parallel top and bottom surfaces.

With uses in many areas of industry TT130 can perform precise measurements on various types of raw materials, components parts, and assembled machinery. It can also be used to monitor all types of pipes and pressure vessels for loss of thickness due to corrosion.

TT130 is very easy to use, after a simple calibration to a known thickness or sound velocity, the gauge will give fast and accurate readings in millimetres. Sound velocities for 5 different materials can be pre-set and 10 thickness readings can be stored in the memory.

Specifications

Material :	Metallic & Non-Metallic	Measuring units :	mm
Range (probe dependant) :	1.0 to 225.0 mm	Frequency :	5 MHz
Accuracy :	+/-1% of Material Thickness + 0.1 mm	Display :	4 digit LCD
Resolution :	0.01 up to 99.99 mm	Memory :	10 readings
	0.1 from 100.0 to 225 mm	RS232 :	no
Sound velocity range :	1000 to 9999 m/sec	Sound Velocity :	5 Preset Sound Velocities
Probe Tip diameter :	12 mm	Auto power off :	yes
Pipe Diameter Limits :	20 mm x 3 mm	Power Supply :	2 x 1.5 AA Alkaline
Calibration :	Automatic Zero Point	Alarm limit setting :	no
Working Temp. :	-5 to 40 deg C	Battery Life :	250 hours per battery set
Relative Humidity :	< 90%	Dimensions :	126 x 68 x 23 mm
Surface Temperature :	< 60 deg C	Weight :	170g

Optional probes

Type of Probe	Working Frequency	Measuring Thickness Range	Minimum Size of Measuring Pipe	Characteristic
5PØ10	5MHz	1.2 - 225	Ø20 x 3	Straight Probe
5PØ10/90°	5MHz	1.2 - 225	Ø20 x 3	Right Angle Probe
7PØ6	7MHz	0.75 - 60	Ø15 x 2	For testing thin materials
SZ2.5P	2.5MHz	3 - 300		For testing thick materials with Rough Surfaces
ZW5P	5MHz	4 - 80		High Temp up to 300 deg C

Standard Package

- Plastic case – foam lined with Combination Lock
- **2 Probes – Straight & Right angle – both 5 MHz**
- Coupling Agent – ie Vaseline or Grease Hand Cleaner
- Instruction Manual

STANDARD VELOCITY IN MATERIALS

FOR ULTRASONIC THICKNESS GAUGES

METALS

		m/s
A	ALUMINIUM	6 320 - 6 400
	ALUMINIUM 2024-T4	6 380
	ASBESTOS CEMENT	2 200
B	BERYLLIUM	12 890
	BISMUTH	2180
	BORON CARBIDE	10 920
	BRASS	3 800 - 4 700
C	CADMIUM	2 770 - 2 800
	CAST IRON	3 500 - 5 600
	" " (MODULAR GRAPHITE)	5 600
	CAST GREY MIDDLE	4 600
	CONSTANTAN	5 230
	COPPER	4 650 - 4 720
	CHROMIUM	6 200
G	GOLD	3 200 - 3 250
	INCONEL	5 820
	IRON	5 890 - 5 930
	LEAD	1 960 - 2 400
M	MANGANESE	4 660 - 4 700
	MAGNESIUM	5 770 - 5 840
	MERCURY	1 450
M	MOLYBDENUM	6 250 - 6 300
	NICKEL	5 480 - 6 040
	PLATINUM	3 960
S	SILVER	3 600 - 3 700
	SILVER - GERMAN	4 750
	MOTOR OIL (SAE 30)	1 750
	STEEL, MILD	5 900 - 6 100
	STEEL, CASTING	5 850
	STEEL, STAINLESS (AUSTENITIC)	5 660 - 6 120
	STELLITE	7 050
T	TIN	3 300 - 3 330
	TITANIUM	5 900 - 6 100
	TUNGSTEN CARBON	6 650
	TUNGSTEN	5 180 - 5 400
	URANIUM	3380
W	WATER	1 470
	WOLFRAM	5 460
	ZINC	4 170 - 4 320
	ZIRCALOY 2	4 700
	ZIRCONIUM	4 650

NON-METAL (m/s)

A	ACRYLIC	2 870
	ACRYLIC RESIN	2 730 - 2 870
	AIR	330
	ALUM. OXIDE	8 700
C	CERAMIC (MACOR)	5 631
	CLAY	2 600
	CONCRETE	3 650 - 4 270
	DIAMOND	17 500
	DIESEL OIL	1 250
	EPOXY RESIN	2 650
G	GLASS (FLINT)	4 260
	GLASS (CROWN)	5 260 - 6 120
	GLASS (QUARTZ)	5 570
	GLASS (WINDOW)	6 800
	GLYCERINE	1 920
	ICE	3 980
H	HI-DENSITY POLYETHELENE (GREY & WHITE NOT BLACK)	2 220 - 2 300
M	METHYLENE-OXIDE	9 980
	MONEL	5 360 - 5 400
	MOTOR OIL (SAE 30)	1 750
N	NEOPRENE	1 600
N	NYLON	2 600 - 2 690
	OIL (SAE 30)	1 740
P	PARAFFIN WAX	2 200
	PERSPEX	2 860
	PHENOLIC	1 400
	PLEXI GLASS	2 700
	POLYAMIDE	2 380
	POLYETHYLENE	1 900 - 2 400
	POLYURETHANE	1 780 - 1 900
	POLYSTYRENE	2 340 - 2 400
	PORCELAIN	5 600 - 5 900
	PVC	2 400
Q	QUARTZ X CUT	5 740
	QUARTZ FUSED	5 980
	QUARTZ GLASS	5 640
R	RUBBER (BUTYL)	1 900
	RUBBER (SOFT)	1 480
	RUBBER (VULC.)	2 300
S	SILICONE RUBBER	948
	TEFLON	1 350 - 1 520
	WATER	1470

NB NOTE : THIS SCHEDULE IS ONLY A GUIDE