

SA40 Ultrasonic Thickness Gauge

Top Users : Sasol, Anglo, Caltex, Koeberg, Dorbyl



Technical Specifications

Technique :	Pulse Echo with Dual Probe
Display :	4 Digits LCD with Backlight
Measuring Range :	0.8 to 225.0 mm
Accuracy :	+/- 1%
Resolution :	0.01 up to 99.99 mm
	0.1 from 100.0 to 225 mm
Velocity Range :	500 to 9,999 m/sec
Display Circle :	1 sec
Coupling Indication	
Memory :	40 data can be stored and recalled
Units :	mm or Inch
Low Battery Indicator	on LCD
Auto Shut-Off :	After 5 Minutes of non - use
Power :	2 Ea. 1.5v AA Alkaline Cells
Operating Temp. :	0 to 40 °C
Operating Humidity :	20 to 90% RH
Size :	124 x 67 x 30 mm
Weight :	240 g
Case - Foam Lined :	240 x 220 x 80 mm

Packing List

- SA-40 Gauge
 - PT-5 Probe (5Mhz)
 - Two 1.5v AA Batteries
 - A Bottle of Couplant
 - Operation Manual
 - Calibration Cert. of Readings
- All Above incl. in Hard Foam Lined Carry Case

Example of Readings with SA40

Test Block	Readings
70.00 mm	69.97 mm
60.00	60.02
48.00	48.02
30.00	30.01
24.00	24.01
15.00	15.00
10.00	10.02
4.00	4.01
2.00	1.99
1.00	0.97

Optional Probes

<u>Probes</u>	<u>Frequency</u>	<u>Diameter</u>	<u>Applications</u>
PT-5	5MHz	Diam 10 mm	For Standard Applications
XT-5	5MHz	Diam 7 mm	For Tubes with Small Diameters
GT-5	5MHz	Diam 12 mm	For High Temperature up to 400 deg C (with removeable sleeve)
CT-2.5	2.5MHz	Diam 12 mm	For unfavorable attenuation



STANDARD VELOCITY IN MATERIALS

FOR ULTRASONIC THICKNESS GAUGES

METALS

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

NON-METAL (m/s)

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

NB NOTE : THIS SCHEDULE IS ONLY A GUIDE