

# 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 <b>400 deg C</b> (with removeable sleeve)
CT-2.5	2.5MHz	Diam 12 mm	For unfavorable attenuation



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# 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**



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