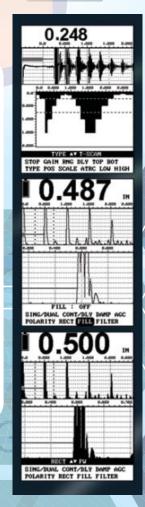
<u>เครื่องวัดความหนาระบบ วัลตร้าโซนิค</u>

The Nova TG 210 & Nova TG410 - A-Scan Ultrasonic Thickness GaugesBigger Is Not Always Better! The All New Nova A-Trace Series of Ultrasonic Thickness Gauges define a new standard for performance, features and portability in Hand-held Ultrasonic Thickness Gauges. This ALL NEW Nova A-Trace Series offers Pulse Rep Rates up to 300Hz, With Display Updates of 30Hz, fast enough for all but the most demanding applications. With the introduction of three NEW, Industry Leading Features including Split-view, Split-scan and Auto-track The New Nova Series possibly presents the best features for price in High Performance Ultrasonic Thickness Gauges today. The high speed, fully sunlight readable, backlit display offers Quarter VGA resolution. The resolution of the display will appear to approach analogue! User interface is via simple plain text menus located at the bottom of the display. Large numeric display zone offers full 7/16" high characters representing Thickness.



NOVA TG410:

- All of the features of the TG210 & also Precision Measurement, all in one Gauge. o Split-screen, A-trace o Data logging of more than 100,000 points with more than 1,500 waveforms, B-Scan or combination.
- Auto Probe Recognition
- Multi-probe capability
- Alarm modes
- USB Output (optional extra for Data Transfer software and cable)
- Calibratable from 0.020 to 20"
- Through Paint Capable
- Scrolling B-Scan Standard
- Encoded B-Scan Option Available
- Single or Dual Element, Contact or Delay Line / Bubbler. Range 0.0050" 20" Gating from IP-1st, 1st-2nd, 2nd-3rd. IP Blocking Gate, IF Blocking Gate & Echo Blocking.
- High-Resolution (0.0001in, 0.0025mm)



Technical Specifications

- •Display: o240 \times 320 Graphic (2.3"W \times 3.1"H)oBack light On / Off / Auto with reading. Last reading hold oSplit-view: (Hand-held Industry First)
- Main Trace Window: 100 10% in 10% Increments
- Split View Window: 10% 100% in 10% Increments as a Function of Main Trace Window Size
- Split-scan: (Hand-held Industry First) Display A-Trace and B-Scan Simultaneously
- Auto-track: (Hand-held Industry First)
- When in Split-view, Second Window Displays a Zoom View of the Main A-Trace which Tracks The Echo Being Measured oScreen Freeze Mode •Physical: 3.25" Wide x 1.4" Deep x 7" Long All Aluminium with gasketed end caps •Range: 0.005" 20" Total incorporating 40" Delay Resolution 0.0001" Inch/mm selectable •Velocity Range: 0.0490 to .9999 in/us fully adjustable.•Calibration: Range, Delay, Velocity & Zero•Pulser / Receiver: Up to 300Hz Rep Rate, Unique and Adjustable IP Suppression Mode•Display Mode: RF, +HW, -HW, FW •GAIN: Hardware AGC or user selectable gain 66dB with 96dB Attenuation 500Khz 20MHz
- Probe Select: Single / Dual Element Probe Library Selection
- Damping: 8 Damping Levels 22 2K Ohms
- Alarm: LED Thickness High, Lo or High/Lo I/O:
- RS-232 I/O: Download data from logger (Optional USB Connectivity)
- Memory: 2 Megabyte data logger. 30+ character alpha numeric identification of files. Store 20,000+ Data Points with Waveforms & B–Scans
- Operational Modes: Single/Dual/Angle/Contact/Delay
- Gates: Contact IP–1st, 1st–2nd Permits Through Paint Delay/Bubbler/Immersion IP Blocking, IF Blocking, IF–1st, 1st–2nd Echo Block, POSITIVE or NEGATIVE Gating
- B-Scan Features: Stacked Echo or Section View
- 'T' Scan Time encoded 'B' Scan (Scrolling) Encoded B-Scan
- Power Requirements: Operates on 3 or 6 AA Alkaline or NiMH Batteries
- Charger & Batteries Included
- Transducers, cables and accessories are available for almost any application
- Pelican Style Hard Plastic carry case included
- CE Approved



Features

1.Capable of performing measurements on a wide range of material, including metals, plastic, ceramics, composites, epoxies, glass and other ultrasonic wave well-conductive materials.

2.Transducer models are available for special application, including for coarse grain material and high temperature applications.

3.Probe-Zero function, Sound-Veloctiy-Calibration function.

4.Two-Point Calibration function.

5.Coupling status Indicator showing the coupling status.

6.Battery information indicates the rest capacity of the battery.AAA model battery and Ultra-low power consumption, it is can continue working 100 hours.

7.Auto sleep and auto power off function to conserve battery life.

8.Usb port with Protective Membrane and datapro software to process the memory data on the PC.

9.Optional thermal mini-printer to print the measured data via USB port.

10,Adjust gain function ,can easy to test the cast iron material.







SPECIFICATION

Display: 12864 LCD with LED backlight.

 Measuring range:
 0.75mm~300.0mm (0.03inch~11.8 inch)

 Sound velocity:
 1000m/s~9999m/s (0.039~0.394in/ns

 Display resolution:
 0.01mm or 0.1mm (lower than 100.0mm)

0.1mm (more than 99.99mm)

Accuracy: n(0.5%Thickness +0.02)mm, depends on Materials and condi

tions

Units: Metric/Imperial unit seletable.

Lower limit for steel pipes: 5MHz probe: F20mm ∅3.0mm(F0.8 №0.12 inch)

10MHz probe: F20mm ∅3.0mm(F0.6 №0.08 inch)

Power Source: 2pcs 1.5V AA size, batteries.100 hours typical operating

time(LED

backlight off).

Communication: USB serial port
Outline Dimensions: 150mm74mm32mm

Weight: 238 g

Four measurements readings per second for single point measurement, Memory for up to 5 files(up to 100 values for each file) of stored values

Features

1.Capable of performing measurements on a wide range of material, including metals, plastic, ceramics, composites, epoxies, glass and other ultrasonic wave well-conductive materials.

2.Transducer models are available for special application, including for coarse grain material and high temperature applications.

3.Probe-Zero function, Sound-Veloctiy-Calibration function. 4.Two-Point Calibration function.

5.Coupling status Indicator showing the coupling status.
6.Battery information indicates the rest capacity of the battery.

7.Auto sleep and auto power off function to conserve battery life.

8.Optional software to process the memory data on the PC.
9.Optional thermal mini-printer to print the measured data via USB port.

10,Adjust gain function ,can easy to test the cast iron material.



Specifications

- Display: 128×64 LCD with LED backlight.
- Measuring range: 0.75mm~300.0mm (0.03inch~11.8 inch)
- Sound velocity: 1000m/s~9999m/s (0.039~0.394in/µs
- Display resolution:0.01mm or 0.1mm (lower than 100.0mm)
 - 0.1mm (more than 99.99mm)
- Accuracy: ±(0.5%Thickness +0.02)mm, depends on Materials and conditions
- Units: Metric/Imperial unit seletable.
- Lower limit for steel pipes: 5MHz probe: F20mm'3.0mm(F0.8'0.12 inch)

Features

- Automatic Self Calibration
- Couplant Indicator
- Automatic Power Off Divice
- High Low Limit Alarm
- LCD Brightness Adjust
- Though Coating Capability
- Low Battery Indicator

Velocity Range

Outside Dimension

1000 - 9999 m/s (0.0393 - 0.3936 inch/us)

Display Type

4 Digital LCD with advanced backlight

Memory

500 Test Values

Power

2 pcs. 1.5v AA Batteries 149 mm x 73 mm x 32 mm

Weight

160 g

TM-230D TM-250D



Through Paint or Coating Ultrasonic Thickness Gauge

SPECIFICATION

Specification		TM-230D	TM-250D	
Measuring Range (Steel)	Standard	0.8 mm - 250 mm Depending of the Probes		
	Through Coating	3 mm - 18 mm Depnding of the probes		
Display Resolution		0.1 mm or 0.01 inch	0.1 mm / 0.1 mm or 0.01 inch /0.01 inch	
Tolerance		+- 0.1 mm in steel	+- 0.025 mm in steel	

TM-8812

The TM-8812 is a handheld microprocessor-controlled ultrasonic thickness gauge specifically designed to measure the thickness of metallic and non-metallic materials e.g. aluminium, titanium, plastics, ceramics, glass, plastics including rubber and other good ultrasonic wave conductors, as long as they have parallel top and bottom surfaces. This gauge can be used to determine the exact thickness of pipework to ensure the correct settings on an ultrasonic flow meter. The TM-8812 will check a pipe for loss of thickness due to corrosion or erosion.

Features

Pocket sized and light weight
Range of 0.05 ~ 9.0" (1.2 ~ 225mm)
Resolution of 0.001" (0.1mm)
Display selectable in mm or inch
Built-in calibration test plate
Low Battery Indication
RS232C interface



Specifications:

Display 4 digit 0.7" (10mm) LCD

Measurement range 0.05 ~ 9.00" (1.2 ~ 225mm) [45# Steel]

Resolution 0.001" (0.1mm) **Accuracy** \pm 0.5%n + 0.1

Velocity range $3,281 \sim 29,528 \text{ ft/sec} (1,000 \sim 9,000 \text{ m/s})$

Operating Temperature4 each 1.5V AA (UM4)
32-122°F (0-50°C)
Case construction
Rugged ABS plastic

Dimensions 4.7" L x 2.44" W x1.2"H (120 mm x 62 mm x 30 mm)

Weight With batteries: 9 oz (260 g)

Accessories Carrying Case

4 each 1.5V AA (UM4) Batteries

Instruction Manual

Applications

Used for measuring thickness and corrosion of pressure vessels, chemical equipment, boilers, oil storage tanks etcin industries of petroleum, shipbuilding power station and machine manufacturing.



TM-8818



SPECIFICATION

Case meterial Aluminum
Display 4 Digit LCD
Operating Principle Ultrasonic

Measuring range (metric/Imperial) 0.9 - 400 mm (45 Steel)
Battery Indication Low battery indication
Sound velocity 1000 - 9000 m/s
Lower limit steel pipes Diameter 2 x 3.0 mm

Calibration Block Included
Resolution 0.01 /0.1mm
Accuracy +- (0.5% n+0.1)

Automatic memory material code and the value of sound velocity

Power off

Auto power off & manual power off

Operating Conditions Temperature 0 40 C , Humidy : < 85% RH

Power Supply 2 x 1.5 V AA (UM-3) Battery

Dimensions 130 x 76 x 31 mm

Weight 340g (Not including Batteries)

Applications

MODEL MX2

The MX-2 is ideal for the person that tests a few different materials regularly. The MX-2 contains 8 velocities of common materials and two velocities that the user can set using a simple sofware program. The tool's backlit display is easy to read, even in dim light, and the unit operates for up to 200 hours on a single set of batteries. The MX-2 comes complete, ready to use, and is protected by Dakota Ultrasonics 5 year limited warranty.



MADE IN JAPAN





MODEL MX2

PHYSICAL

Weight: 10 ounces

Size: 2.5 W x 4.75 H x 1.25 D inches 63.5 W x 120.7 H x 31.8 D mm

Operating Temperature: -20 to 120F (-20 to 50C)

Case: Extruded aluminum body / nickel plated aluminum end caps. Resistant to impact and environ-

mentally sealed.

POWER SOURCE

Two 1.5V alkaline or 1.2V NiCad AA cells.

Typically operates for 200 hours on alkaline and 130 hours on NiCad.

DISPLAY

Multi-function 4.5 digit liquid crystal display with 0.500 inch numerals, backlit for use in poor light conditions.

Measurements displayed in inches, inches/microsecond, millimeters, and meters/second. Bar graph indicates stability or reading.

SOFTWARE

Comes complete with cable and software to transfer the velocity to the gauge.

MEASURING

Range: Measures from 0.025 to 19.999 inches (0.63 to 500 millimeters)

Switch to select English or metric units. Resolution: 0.001 inch (0.01 millimeter) Velocity Range: .0492 to .3937 in/m s

1250 to 10,000 meters/sec

Built-in: Stainless steel reference disk for probe zeroing.

Four readings per second for single point measurements or 16 per second in SCAN mode.

Velocity Settings: The MX-2 has 8 set velocities and 2 that are custom to the user's applications. The set velocities are as follows:

- 1. Steel 4340 (.233)
- 2. Stainless Steel 303 (.223)
- 3. Aluminum 2024 (.251)
- 4. Cast Iron (.179)
- 5. Plexiglass (.106)
- 6. PVC (.094)
- 7. Polystyrene (.092)
- 8. Polyurethane (.070)
- 9. Custom





<u>เครื่องวัดความหนาระบบ วัลตร้าโซนิค</u>

Measuring Range in Steel
0.040 - 8.00 inches
1.00 - 200.0 mm

TI-45NA Ultrasonic Wall Thickness Gauge accurately measures wall thickness and the extent of corrosion of all metals, ceramics, glass and most rigid plastics – from only one side! The attractive, ergonomic housing design is extremely compact, lightweight and rugged. It fits comfortably in the palm of your hand and incorporates a back light that illuminates the LCD in poorly lit areas.



IT-45N

ULTRASONIC THICKNESS

Features

- TI-45NA includes new Pipe Mode for stable measurement on small diameter pipe (1" and larger)
- Resolution of 0.001" (0.01mm)
- Extremely small & lightweight operates from a single AA battery
- Switch-selectable units inches or mm
- Built-in calibration test plate
- Quick display update with last reading retained on the display
- Display symbols alert user to poor coupling and low battery conditions
- TI-45N-HD includes slip-on, ergonomic rubber sleeve for improved grip and additional physical protection
 - User Adjustment of Acoustic Velocity or selection 10 preset velocities



Features

- Class leading performance for the price
- Auto Probe Recognition
- Time encoded B-scan
- Multi-probe capability
- USB, data logging, alarm modes



TG-110-DL MADE IN USA

Physical / Case	Weight	0.8lb (0.36kg)	
	Dimensions (W x H x D)	3.00in. x 4.90in. x 1.25in. (76mm x 99mm x 32mm)	
	Operating Temperature	14 °F to 122 °F (-10 °C to 50 °C)	
	Case Construction	Aluminum body, rubber end caps	
	Connector type	Lemo01	
Keypad	Keypad construction	Tactile membrane feedback keys	
/	Transducer type	Dual	
Transducer	Freq range	2.25MHz or 5MHz (included), 10MHz (optional)	
	Cable length	6ft (1.83m) (included)	
Power Source Power Source		AA batteries	
	Battery life	150 hours	
Display	Display type	Backlit liquid crystal	
Display	Display size	128 x 64 pixels, 1.96in. x 1.25in. (50mm x 32mm)	
Certification	Certification	Factory Calibration	
Warranty	Warranty	1 year	
Measurements	Thickness range	0.022in. to 50.000in. (0.559mm to 1,270.00mm)	
	Units displayed	in. / mm	
	Resolution	0.001in. (0.025mm)	
	Material Velocity Range	0.0490 to 0.9999in./μs (1.24 to 25.40mm/μs)	
	Acquisition Speed	4 readings per second	
Memory	Data Logger	50,000 readings, 30 character	
Interface	I/O	USB	

<u>เครื่องวัดความหนาระบบ วัลตร้าโซนิค</u>

Durable

- Solvent, acid, oil, water and dust resistant—weatherproof
- Impact resistant lens
- Shock-absorbing, protective rubber holster with belt clip
- Two year warranty on body AND probe

Accurate

- Precision transducers provide fast, accurate readings
- Certificate of Calibration showing traceability to NIST included
- Conforms to national and international standards including
 ASTM E797
- Built-in temperature compensation ensures measurement accuracy

Versatile

- Universal Gage Body accepts all PosiTector UTG, 6000, DPM and SPG probes
- Flip display enables right-side-up viewing
- Selectable display languages
- Hi contrast backlit display for bright or dark environments
- Single or two point adjustment
- Inch/mm switchable
- Uses alkaline or rechargeable batteries (built-in charger)

UTG-M/ UTG-C1/ UTG-C/ UTG-M



Multiple Echo

SPECIFICATION



0.503	0.747	0.12	0.747	0.152
Order Code	UTG C1	UTG C3	UTG M1	UTG M3
Included Body	Standard	Advanced	Standard	Advanced
Included Probe	UTG C		UTG M2	
Probe Type	5 MHz Dual Element		5 MHz Contact	
Thru-Paint Capability	no		yes	
Danga Cingla Esha	0.040" t	o 5.000"	0.100" to 5.000"	
Range Single Echo	1.00 to 12	25.00 mm	2.50 to 125.00 mm	
Range Multiple Echo	NA		0.100" to 2.500"	
			2.50 to 60.00 mm	
Resolution	0.0	01"	0.001"	
Resolution	0.01	mm	0.01 mm	
Accuracy	±0.0	001"	±0.001"	
Accuracy	±0.03	3 mm	±0.03 mm	

Corrosion

*สอบดามราคาได้ที่ 02-9744354-6 หรือสายด่วน 082-1288881, 081-7731860

PosiTector UTG

เครื่องวัดความหนาระบบ อัลตร้าโซนิค

Features

- High accuracy and resolution up to 0.001mm or 0.0001inch
- Measuring ultra thin sample as low as 0.15mm or 0.006inch
- Display units : Imperial and Metric
- Automatic sefe calibration
- Couplant indicator
- Automatic power off device
- High-low limit alarm
- LCD brightness adjust
- Low battery indictor

Standard Delivery

- Main processor with Calibration block (4.00mm)
- Precision probe (D11R) with replaceable delay tip
- Coupling paste
- Operation manual
- Consumer-type 2 AA type alkaline battery (3Volt)
- Carrying case

HIGH PRECISION



SPECIFICATION

Managuring Dango (for Stool)	Interface-Echo Model (I-E or Standard Mode)	1.50 mm - 20.0 mm (0.059 in - 0.787 in)	
Measuring Range (for Steel)	Echo - Echo Mode (E-E or High Precision Mode)	0.15 mm - 10.0 mm (0.006 in - 0.394 in)	
Measuring Accuracy	+- 0.005 mm or 0.0002 inch (if thickness < 3 mm)		
	+- 0.05 mm or 0.002 inch (if thickness < 20 mm)		
Display Resolution	mm : 0.1 /0.01 /0.001		
Display Resolution	inch : 0.01 / 0.001 / 0.0001		
Sound Velocity Range	1000 to 9999 m/sec (0.0394 - 0.3936) inch/msec		
Measuring Refresh Frequency	4 Hz in normal mode, up to 25 Hz		
Memory Capacity	500 test values		
Multiple Calibrations	One point or Two point		
Display LCD	42 x 57 mm LDC Size with El backingth and adjustal	ple contrart , font size up to 13.75 mm (0.54 inch)	
Power Source	2 Pcs 1.5V AA	Size Batteries	
Continuous Working Period	Vorking Period About 200 Hours (with Backlight off)		
Power off	Auto power off if idie for 4 minutes		
Operating Temperature	Temperature -10 C to +50 C		
Unit Size	2.9 W x 5.9 H x 1.26 D inches (73 W x 149 H x 32D mm)		
Weight	200	G	

Applications

- Flaw detection and thickness gauging in most materials
- Corrosion mapping on pipes, tanks, vessels
- A-, B-, C-csan imaging
- Composite Inspection using thickness or amplitude flaw gates

Features

- All-in-one high-resolution, high-speed, flaw detector, thickness gauge and B-, C-scan imaging system
- Robust alumium case with rabber end caps
- 5.7" VGA sun readable Color display
- Spike and square wave tuneable pulser, 500Hz PRF
- Compatible with range of manual and automatic scanners for encoded B-scan and C-scan imaging



HIGH PERFORMANCE IMAGING FLAW

SPECIFICATION

Physical	Package Includes	Standard package includes Reptor instrument, Pellcan style shippng case,	
	Package ilicidues	manual, battrry, AC charger (110-240V) and Calibration Certificate	
	Dimensions	5.75 x 9.50 x 3.00 in (146 mm x 241mm x 76mm)	
	Weight	5.6lb (2.54kg) including battery	
	Case Construction	Alumium body, rubber end caps	
	Operating Temperature	15'F to 122 'F (-10 C to 50 C	
Display	Туре	Sun readble Color VGA	
	Size	50Hz, 640 x 480 pixels, 3.40 x 4.55in (86 x 116 mm)	
Measurements	Resolution	0.001 in (0.0025mm)	
	Thickness Range	0.010 in. to 400 in. (0.254mm to 10.160 mm)	
	Velocity Range	0.0490 to 0.9999 in /us 1.24 mm to 25.4 mm us)	
	Display modes	RF, +HW, -HW, FW filled or outlined	