ISO 9001

ULTRASONIC THICKNESS GAUGE TT100/110/120/130

Features:

- Portable size and easy operation
- Suitable for any metallic and non-metallic materials ultrasonic can go through
- Self-compensating of nonlinearity function is supplied for correction of pickup nonlineasity
- 10 measuring values recorded
- optional 2.5MHz, 5MHz and 7MHz transducers are available
- Clear 4-Digit LCD display with backlight
- 5 pre-set sound velocities for repeating applications
- mm / inch selectable
- TT100 and TT130 are suitable for thickness testing of various materials with sound speed range 1000-9999m/s
- TT110 and TT120 are easy-operation models with only two keys suitable for thickness testing of steel
- TT120: high-temperature model with range up to 300˚C

Technical Specification

	TT100	TT110	TT120	TT130
Measuring range	0.75 -300.00mm (steel)			
Measuring range for steel pipes	Φ20 × 3.0mm			
Diameter of transducer	Φ10 (standard) Φ6 (optional) Φ12(optional)			
Display resolution	0.1mm			0.01mm
Calibration	4.0mm steel base plate integrated			
Tolerance	±(1%H+0.1) mm (H means the thickness of tested piece)			
Measuring units	mm/inch			
Sound velocity range	1000-9999m/s	5900 m/s		1000-9999m/s
Display	4-Digital LCD with backlight	4-Digital LCD		
Surface temperature	-10˚C to +60˚C		-10˚C to +300˚C	-10˚C to +60˚C
Battery indicator	Low battery voltage indication			
Power supply	2 Pcs. AA batteries 1.5V			
Working time	250 hours			
Dimensions	126mm × 68mm × 23mm			
Weight	Approx. 250g including batteries			

Standard delivery

- Main unit 1
- 5MHz transducer 1
- 5MHz/90° transducer 1
- ZW5P high temperature transducer for TT120 1
- Integrated steel calibration plate 4.0mm 1
- Batteries AA 1.5V 2
- Couplant 1
- TIME Certificate 1
- Warranty card 1
- Instruction manual 1

Optional accessories

- Optional transducers (See page 29)

ULTRASONIC THICKNESS GAUGE TT300/300A/310/320/340

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TT300/TT300A

TT310

TT320

TT340

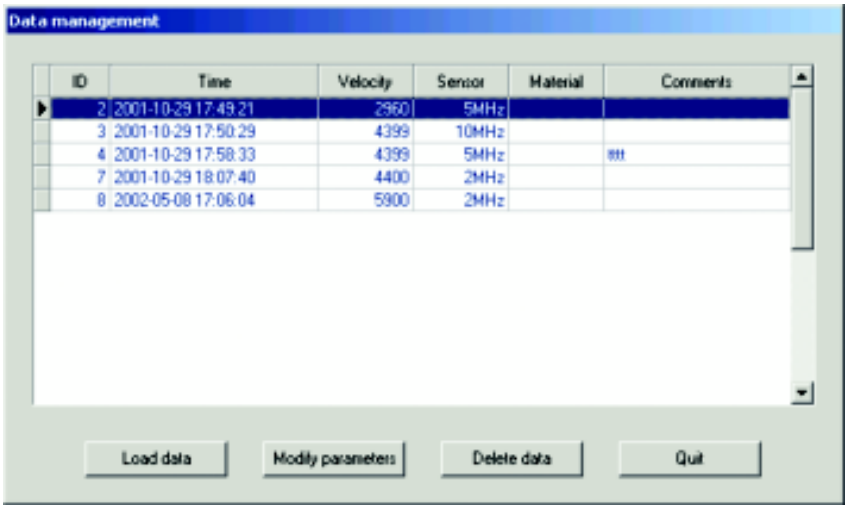
Features:

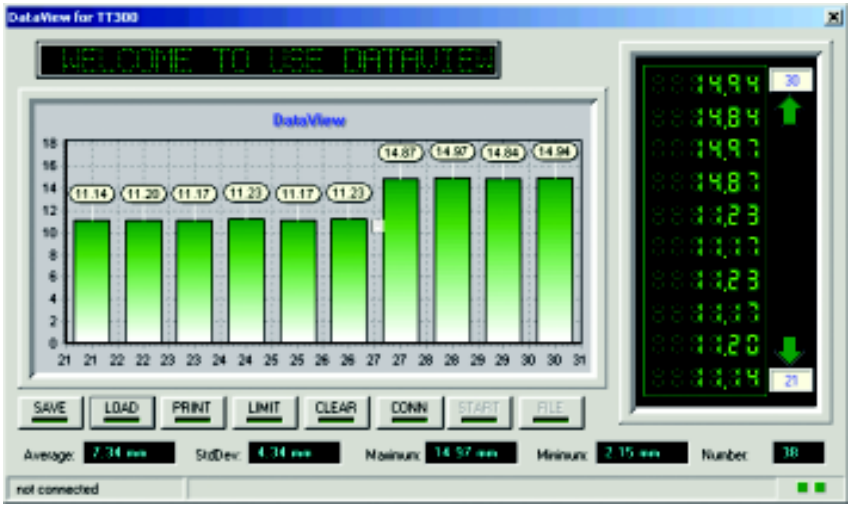
- Advanced handheld ultrasonic thickness gauge
- Suitable for most metallic and non-metallic materials ultrasonic can go through
- Auto-calibration of zero point, correction of system error
- Display current thickness or minimum thickness (menu selectable)
- Upper-lower limits setting and sound alarm
- Memory of 500 readings
- Two point calibration for high accuracy
- Display resolution 0.1mm/0.01mm selectable
- Display in mm or inch
- Large LCD display with adjustable backlight
- Low battery indicator
- TT300: Equipped with RS232 interface for connecting with printer and PC with optional software. 5Pϕ10 transducer for normal purpose and optional TSTU32 transducer for casting iron
- TT300A: Can be equipped with low frequency transducer for thickness testing of thin work piece, and auto-calibration is avaible
- TT310: Economical model with easy operation
- TT320: high-temperature model with range up to 300˚C
- TT340: equipped with TSTU32 transducer for casting iron

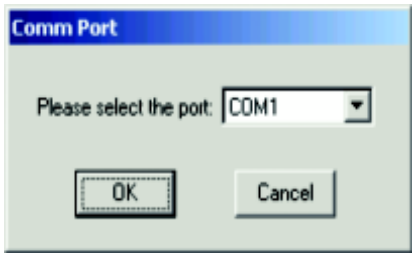
Technical Specification

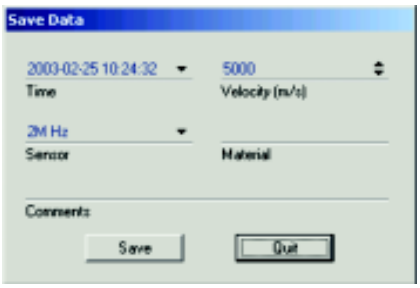
	TT300	TT300A	TT310	TT320	TT340
Measuring range	1.2-225.0mm (steel)	0.75-225.0mm (steel)	1.2-225.0mm (steel)	1.2-225.0mm (steel) 5.0-80.0mm(steel, high-temp)	1.2-225.0mm (steel)
Tolerance	± 1% H +0.1mm (H means the thickness of tested piece)	± 0.5%H+0.01mm (H means the thickness of tested piece)	± 1% H +0.1mm (H means the thickness of tested piece)		
Measuring range of steel pipes	ϕ20mm x 3.0mm	ϕ15mm x 2.0mm ϕ20mm x 3.0mm	ϕ20mm x 3.0mm		
Display resolution	0. 1/0.01mm or 0.01/0.001inch	0.01mm/0.001inch	0. 1mm / 0.01inch		
Data output	RS232	—			
Sound velocity	1000m/s~9999m/s				
Power supply	2pcs AA batteries (2pcs) 1.5V				
Battery life	100 hours without backlight				
Sound speed	1000m/s~9999m/s				
Measuring units	mm/inch				
Dimensions	152mm × 74mm × 35mm				
Weight	370g	250g	370g		
Surface temperature	-10˚C ~ +60˚C			-10˚C ~ +300˚C	-10˚C ~ +60˚C
Dimensions	152mm × 74mm × 35mm				

Dataview for TT300









Standard delivery

• Main unit	1
• Transducer 5P ϕ10	1
• Transducer ZW5P for TT320	1
• Transducer TSTU32 for TT340	1
• Rubber jacket	1
• Couplant	1
• Batteries AA 1.5V	2
• Screwdriver	1
• Instruction manual	1
• TIME certificate	1
• Warranty card	1

Optional accessories

- Optional transducers (See page 29)
- Printer TA230(see page 47)
- Dataview software for TT300

ULTRASONIC THICKNESS GAUGE TT500

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Features:

- A scan thickness measuring, easy for users to identify the measuring errors by analyzing the waveform on screen
- Function of echo-echo measurement is available. It is used for measuring the distance between echo to echo, and thus users will get to know the thickness of steel plate even though it is covered by coating, such as inspection of oil tanks
- Min. and Max. mode function is supplied for users to find out the Min. (or Max.) value from a group of measuring results. it is very useful for inspecting the wall thickness of pipes and pressure vessels
- D-value mode function. It comprises normal D-value mode and percentage D-values mode. It will enhance operator's working efficiency greatly. Specially, users working with exact and changeless process requirements will benefit from TT500 immensely
- Large memory up to 100 A-scan images and 10000 thickness values
- Manual gain adjustment/auto gain selectable
- Up and low limits alarm is available

Technical Specification

Measuring range	0.75~508.00mm
Sound speed	1000~9999m/s
Scanning mode	A scan
Gain range	20~70db step: 1db
Rectification	Positive half wave, negative wave, full wave, and RF
Testing mode	Standard mode: testing from primary pulse to the first echo
	Testing between two echoes
Resolution	Standard: 0.01 low: 0.1
Memory	100 A scan graphs and 10000 thickness values in 100 groups
Communication	RS232 port to PC or printer
Printer	TP UP-NH-S thermal printer
Tolerance (steel)	1. when resolution is 0.01mm and thickness H<10mm, the tolerance is ± 0.05mm
	2. when resolution is 0.01mm and thickness H ⩾ 10mm, the tolerance is ±(0.5%H 0.01mm)
	3. when resolution is 0. 1mm, the tolerance is ±(1%H 0.1mm)
Low limits for steel pipes	1.φ20mm × 3.0mm tolerance is less than ± 0.1mm (resolution =0.01mm, 5MHz transducer)
	2.φ20mm × 3.0mm tolerance is less than ± 0.2mm (resolution =0. 1mm, 5MHz transducer)
Pulse frequency	1KHz
Working temperature	0°C ~40°C
Dimensions	234 × 127 × 38mm
Weight	1Kg

Standard Delivery

Main unit	1
Battery	1
Couplant	1
Transducer 5PΦ10	2
Protection case	1
Instruction manual	1
Warranty card	1
TIME certificate	1

Optional Accessory

- Optional transducers (See page 29)
- Printer TP UP-NH

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ULTRASONIC THICKNESS GAUGE OPTIONAL ACCESSORIES

Optional Transducers

5Pφ10 for TT1 series and TT3 series

5Pφ10 /90° for TT1 series

5Pφ10 /90° for TT3 series

7Pφ6 for TT1 series

ZW5P for TT120 and TT320

SZ2.5P for TT1 series

TSTU32 for TT300 & TT340

5Pφ10 for TT500

5Pφ10 /90° for TT500

7Pφ6 for TT500

ZW5P for TT500

Transducer Parameters

Transducer	Feature	Testing range	Contacting diameter	Frequency	Tested surface temperature
5Pφ10	Standard straight	1.2~225.0mm(steel)	10mm	5MHz	-10℃~+60℃
5Pφ10/90°	Standard angle	1.2~225.0mm(steel)	10mm	5MHz	-10℃~+60℃
7Pφ6	Small diameter	0.75~60mm, φ15 × 2.0mm (steel)	6mm	7MHz	-10℃~+60℃
ZW5P	High-temperature	5.0~80.0mm (steel)	12mm	5MHz	-10℃~+300℃
SZ2.5P	High penetration	3.0~300.3mm (steel)	12mm	2.5MHz	-10℃~+60℃
TSTU32	High penetration	5.0~40.0mm (cast iron)	22mm	2MHz	-10℃~+60℃

Guideline to standard velocity in materials

Metals (m/sec)							
Aluminum	6260	Gold	3240	Nickel	5630	Tin	3230
Brass	4640	Inconel	5720	Platinum	3960	Titanium	6070
Cast iron	4500	Iron	5900	Silver	3600	Tungsten carbon	5650
Copper	4700	Lead	2200	Steel, mild	5900	Tungsten	5400
Cadmium	2800	Manganese	4700	Steel, low carbon	5850	Zinc	4200
Chromium	6200	Magnesium	6310	Steel, stainless	5790	Zirconium	4650

Non-metals (m/sec)							
Acrylic Resin	2730	Ice	3980	Polyamide	2380	Rubber (butyl)	1900
Aluminum oxide	8700	Neoprene	1600	Polyethylene	1900	Rubber (soft)	1450
Ceramic	5631	Nylon	2620	Polyurethane	1900	Rubber (vulc.)	2300
Diamond	17500	Paraffin	2200	Polystyrene	2400	Silicone rubber	948
Epoxy resin	2650	Perspex	2850	Porcelain	5600	Teflon	1350
Glass	5440	Plexi glass	2700	PVC	2400	Water (20℃)	1480