

TITEST

TT3000

Ultrasonic Bolt Tension Meter

Higher-end model of TT series to measure the bolt axial tension non-destructively.
Enhanced communication and usability as well as basic functions of TT2000.

◆ Adopted all touch panel

- ✓ Capable of intuitive operations with icon, menu bar, and operative instruction display.
- ✓ Wide screen (7.5 inch) makes operations easy even with wearing gloves.



TT3000

- ◆ Variety of external interfaces available
 - ✓ Manage measurement conditions and result by USB, LAN, and SD card.



- ◆ The portable battery allows use anywhere, even when being charged.

- ◆ High resolution
 - ✓ Axial tension : 0.01kN
 - ✓ Elongation : 0.0001mm
 - ✓ Time : 0.1nS

◆ Selectable English/Japanese languages



English software



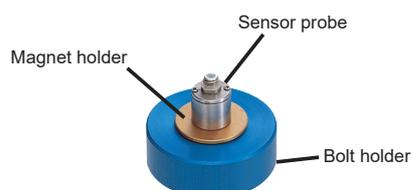
Japanese software



TT3000 Specifications

Item	Details	
Measuring method	Ultrasonic pulse propagation time difference	
Measuring object	Bolt axial tension	
Applicable bolt length	5.00~25000.00 mm	
Applicable bolt diameter	M5 or more (Optional ultrasonic sensor covers M8 or more, M14 or more size)	
Ultrasonic wave frequency	1 ~ 20MHz	
Range of speed	500 ~ 20,000m/s	
Measuring items	Bolt axial tension / Bolt Initial Length / Elongation / Stress / Traveling Time	
Resolution	Axial tension	0.1kN / 0.01kN (Selectable)
	Time	0.1ns
	Elongation	0.0001mm
Data updating	Measurement	0.04sec (Shortest time)
	Screen	0.2sec
Capacity of data memory	2000 bolts, Upto 50 different type of bolts	
Bolt temperature correction	Key Input System, -100 to +500 C degree/Auto, Thermocouple Unit	
Detection method	Full wave, Positive half wave, Negative half wave, RF wave	
Display	Color TFT 7.5, 640 x 480 dots, Touch panel in a resistance film system	
External interface	Type K thermocouple Input - 1ch, USB - 1ch for serial communication, SD Card, SD/SDHC/SDXC, up to 64GB - 1ch, LAN (TCP / IP) :1ch, VGA single monitor output - 1ch, Photo coupler inlet 4ch/outlet 4ch, Analog output 4-20mA 1ch, Max. load resistance 500Ω, Encoder input - 1ch	
Power supply	AC Adapter 100 - 240V, Output DC12V 60W Built-in battery 11h usage, 4h battery charging Enable to charge by AC adapter during use	
Operating temperature (Body)	-10 to +60 C degree under AC adapter operation, 0 to +40 C degree under battery operation with no condensation	
Dimensions	H168.1 x W250 x D64mm (Not including projection parts)	
Weight	1.56kg (Including a battery and a carrying handle)	
Case material	ABS	
Waterproof/dust proof	IP 20 when closing battery lid	
Regulation	CE Low voltage directive : 2014/35/EU, EMC directive 2014/30/EU, RoHS 2 directive 2011/65/EU	
Language	English/Japanese	
Standard accessories	Operation manual, Calibration test result, Traceability chart, AC Adapter, Li-Ion battery, USB cable, SD card, Power cable, sensor probe cable, sensor probe, Carrying handle, Aluminum case	

■ Ultrasonic sensor probe



Part No.	Model	Applicable bolt size
607	5C6.4N	M8 and more L1<50mm
608	5C12.7N	M14 and more L1<2m

* Part No.607 comes with TT3000

■ AFC-20G2 Axial Tension Calibrator (Optional)



To calibrate ultrasonic tension meters, TT series

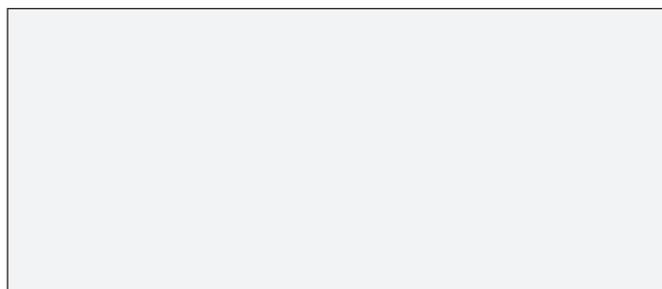
- ✓ Can add measuring axial tension to the bolt without tightening the bolt.
- ✓ The measuring axial tension can be easily and repeatedly applied by the hydraulic pump operation.
- ✓ A variety of sizes and length of the bolts can be measured by the attached bolt measurement jigs.

AFC-20G2 Specifications

Accuracy±2%+1digit

Item	Details	
Measurement Range [kN]	Min. ~ Max.	20 ~ 200
	1 digit	0.01
Available Bolt Size (Reference) [mm]	M10 Standard accessory	45 ~ 80
	M16 Standard accessory	50 ~ 85
	M20 Standard accessory	70, 87, 175, 187, Max. 300
Dimensions [mm]	Height	451
	Width	438 (Body 300)
	Depth	409
Weight [kg]	55	
Power supply AC[V]	100 ~ 240V ± 10% 50 / 60Hz	
Temperature in use	0 ~ 40℃ less than 85%HR (No condensation)	

Note: Required a nut with the same strength as the measurement bolt for inspection.



- Designs and specifications are subject to change without notice.
- All rights reserved. No reproduction or republication without written permission.
- ©Tohnichi Mfg. Co., Ltd. All Rights Reserved.