

JETCO  
ADVANCED TORQUE TOOLS



Made in the USA

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# TORQUE TESTERS

## TED Series Torque Tester

Quickly and Easily Test/Calibrate Your Own:

- Micrometer "Clicker" Torque Wrenches
- Dial Type Torque Wrenches
- Torque Screwdrivers
- Electric Torque Screwdrivers
- Pneumatic Torque Screwdrivers
- DC Nutrunners



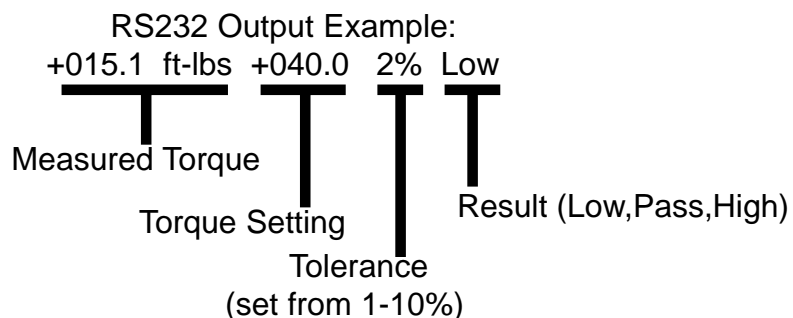
- Mount anywhere on a bench or on optional stand
- Integral Invertable Mounting Bracket
- +/- 1% I.V. accuracy from 10-100% of full scale
- Three way LED's and buzzer for Pass/Fail prompting
- Durable NO-BREAK Rotary Neck Design
- Operates on 9 volt battery or 110volt (-P option)
- Three Engineering Units (ft.lb., in.lb.,Nm)
- Three modes of operation:
  - Track Mode
  - Peak Hold Mode
  - First Peak Mode (for testing click wrenches)
- Auto Clear Function  
(no need to press keys to clear LCD)
- Large Easy to Read Digits
- Auto Send Function (send data via RS232 on "-P" models)
- Internally Rechargeable 9 volt batteries on "-P" models**



Drive Size	Drive Type	Torque Range			Graduations			Accuracy	I.V. +/- 1 grad	Power	Rs-232 out	
		English	Metric		English	Metric					9 Volt Only	AND 110 Volt
1/4"	Male Sq.	7.5-75	.6-6.25	.8-8.5	0.01	0.01	0.001	1%	9 Volt	TED-75I	TED-75I-P	
1/4"	Male Sq.	10-100	.8-8.3	1.0-11.0	0.1	0.01	0.01	1%	9 Volt	TED-100I	TED-100I-P	
3/8"	Male Sq.	25-250	2-21 ft.lb.	2.8-28	0.1	0.01	0.01	1%	9 Volt	TED-250I	TED-250I-P	
3/8"	Male Sq.	60-600	5.0-50	6.8-67.8	0.1	0.01	0.01	1%	9 Volt	TED-50F	TED-50F-P	
1/2"	Male Sq.	300-3000	25-250	34-340	1	0.1	0.1	1%	9 Volt	TED-250F	TED-250F-P	
3/4"	Male Sq.	720-7200	60-600	81-814	1	0.1	0.1	1%	9 volt	TED-600F	TED-600F-P	

All testers supplied with one female square drive adapter

-P option has RS232 output and rechargeable batteries



# TORQUE TESTERS

## TED Series Features



Huge Digits

Three LED's for Under/Within/Over Target

Three Engineering Units

Durable All Steel Rotary Head for Easy Viewing

Automatic Direction Detection

Quick Set Target Torque

Track, Peak and First Peak Modes

Very Latest Digital Microcontroller Technology

Rs232 Auto Send output (-P models)

Convenient Auto-Clear Mode (No need to keep pressing keys)

Accurate Strain Gage Technology

Software Contrast Adjust

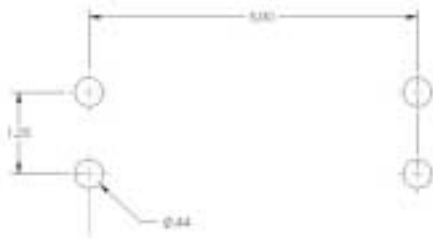
High Alloy Torsion Drive

Integral Structural Steel Mounting Frame

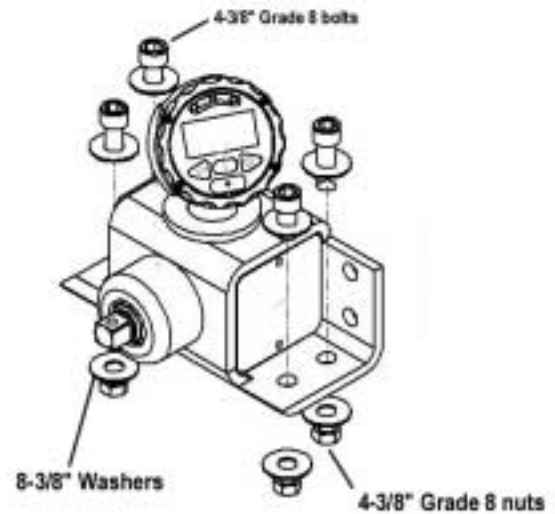
9 Volt Battery or 110 Volt Power Options



Invert and rotate the display for vertical testing of torque tools



Mounting Hole Pattern



# Torque Testers

## TTS-1000 Full Feature Torque System

Full Featured Portable Torque Calibration Display with External "Smart" Transducers

- Accuracy +/- .5% of reading from 10-100 % of transducer range (with bench mount transducers)
- External Smart Transducers range from 5 in.lb.-2000 ft.lb.
- Rechargeable 9 volt battery or 110 volt operation.
- Memory for up to 1300 torque values
- Rs232 output of torque value
- First Peak, Peak, Track modes
- Universal Mounting Bracket
- 5 Torque Units of measure
- High and Low tolerance setting
- % of target tolerance setting
- 5 Programmable filters for power tools
- Automatic Clear Function for hands free testing of tools.
- Automatic Bi-directional (CW and CCW)



Universal Mounting Stand Supplied Standard

The TTS-100 is the most versital torque calibration system on the market. Used by many torque wrench manufacturing companies to calibrate torque wrenches in production. Durable, portable and accurate. Add transducer ranges as your needs increase. Purchase an adapter cable and adapt your current third party transducers to this meter. We can even install smart chips on your non-smart transducers for automatic recognition of the attached transducer. This hand held meter has a dual processor and samples torque at an amazing 8000 samples per second. This gives you the performance needed to test pulse tools and power tools. Attach an in-line or extension style transducer and you can test/verify fasteners on the production line. Attach a rotary style transducer and you can test DC power tools realtime. Perfect for testing break-away torque on tight fasteners.

How to order:

1. Order one TTS-1000

you will get:

- One TTS-1000 meter
- One 110 volt transformer
- One RS232 data cable
- One RS232 serial port adapter

2. Order the appropriate Bench Mount or In-line transducer(s)

3. Order a BKT-4 bracket if you purchase any Bench Mount transducer up to 600 ft.lb.



29-2000 cable adapts third party mv/v transducers to the TTS-1000

# Torque Transducers



Bench mount transducers are used primarily for calibration of torque tools on a solid work surface. These transducers offer greater accuracy. Each has a full scale "primary" range (listed below) however each can be used in ft.lb., in.lb., in.oz NM or cmkg by using the units button on the TTS-1000 (up to 9,999). For Example a BMF-250 can be used as a 3000 in.lb. or a 340Nm transducer. All bench mount transducers up to 600 ft.lb. require a bracket for mounting. Each transducer has a 4 ft. cable. Each transducer has a built in computer chip which stores the calibration data. The TTS-1000 reads this data on power up and automatically sets all calibration data.

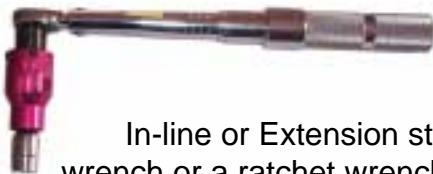
<u>Part Number</u>	<u>Range</u>	<u>Drive</u>	<u>Accuracy w/TTS-1000</u>
BMI-50	5-50 in.-lb.	1/4" Female	.5% Indicated Value
BMI-100	10-100 in.-lb.	1/4" Female	.5% Indicated Value
BMI-250	25-250 in.-lb.	1/4" Female	.5% Indicated Value
BMF-50	5-50 ft.-lb.	3/8" Female	.5% Indicated Value
BMF-100	10-100 ft.-lb.	1/2" Female	.5% Indicated Value
BMF-250	25-250 ft.-lb.	1/2" Female	.5% Indicated Value
BMF-500	50-500 ft.-lb.	3/4" Female	.5% Indicated Value
BMF-600	60-600 ft.-lb.	3/4" Female	.5% Indicated Value



**\*All above part numbers require a BKT-4 bench mounting bracket**

BMF-1000F	100-1000 ft.-lb.	1" Female	.5% Indicated Value
BMF-2000F	200-2000 ft.-lb.	1" Female	.5% Indicated Value

\*BMF-1000 and BMF-2000 have integral bench mounting bracket



In-line or Extension style transducers can be placed inbetween the torque wrench or a ratchet wrench and the application for real-time monitoring of torque . Use this type of transducer to measure break-away torque, audit fasteners or as a very accurate torque wrench. Each transducer has a 4 ft. cable.

<u>Part Number</u>	<u>Range</u>	<u>Drive</u>	<u>Accuracy w/TS-1000</u>
IL-250i	25-250 in.lb.	3/8"F to 3/8"M	1% Indicated Value
IL-50F	5-50 ft.lb.,	3/8"F to 3/8"M	1% Indicated Value
IL-150F	15-150 ft.-lb.	1/2"F to 1/2"M	1% Indicated Value
IL-250F	25-250 ft.-lb.	1/2"F to 1/2"M	1% Indicated Value
IL-1000F	100-1000 ft.-lb.	1"F to 1"M	1% Indicated Value
IL-2000F	200-2000 ft.-lb.	1"F to 1"M	1% Indicated Value



# Electronic Torque Wrenches

## Digital Dial Torque Wrench



### Digital Torque Wrench with Rotary LCD

Highest accuracy torque wrench available (calibrate up to .5%). Non length dependent design means the wrench remains accurate no matter where you apply the force.

Patented rotary display lets you read the LCD at any angle from any side. Three Units of measure Ft.lb., In.Lb.,Nm. Two modes of operation: Track and Peak hold. Super fast 2500 samples per second mean you can pull on the wrench as fast as you want and retain accuracy.

Quick target torque setting for PASS/FAIL prompting. Target torque Pass/Fail "zone" can be set from +/-1% to +/-10% of target torque value. When the torque reached by the wrench is under the target zone you get a yellow light. When the torque reached by the wrench is within the target zone you get a green light and a buzzer (PASS). When the torque reached by the wrench is over the target zone you get a red light and intermittent buzzer. Target torque is quickly set with one button. Runs on standard 9 volt battery. Up to 50 hours operation. Software contrast control for all temperature conditions.

2000 ft.lb. version comes with t-bar extensions and can be used as a torque multiplier tester/input device.

RS232 and 9 volt internal NiMH charging circuit with 110volt power adapter a combined option add "-P" to part number.

DB9 connector and cable included with option.

All wrenches supplied in a blow molded plastic box except 2000ft.lb. wrench.

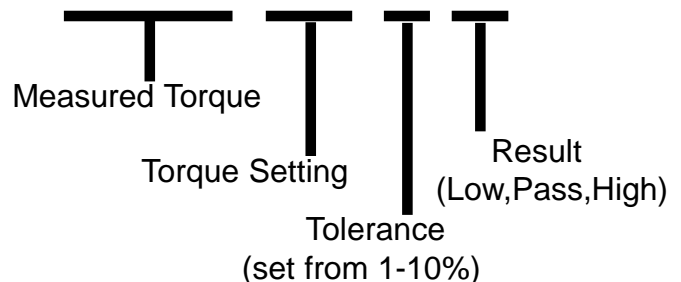
Wrenches supplied with NIST traceable calibration certification to 1% IV but can be calibrated to .5% IV.

"-P" models supplied with RS232 output and 110 volt transformer



### RS232 Output Example:

+015.1 ft-lbs +040.0 2% Low





# Electronic Torque Wrenches

## Digital Dial Specifications



**Accuracy:**

+/-1% I.V. from 10-100% of full scale +/- 1 increment

**Display:**

1/2" high 4 Digit LCD with software controlled contrast adjustment for cold/hot weather  
Patented rotary display for viewing at all angles (no reading upside down digits)

**Set Torque Prompting:**

**Quickly set target torque with plus and minus keys:**

Yellow light when applied torque is under tolerance  
Green light and buzzer when applied torque is within tolerance  
Red light and buzzer when applied torque is over tolerance

**Target tolerance setting:**

Quickly set target tolerance from 1-10% of torque setting:

ie., Set torque value = 100 ft.lb.

Target tolerance set to 4%

Result:

Yellow light when under 96 ft.lb.

Green light with buzzer when torque is within 96-104 ft.lb.

Red light and continuous buzzer when torque is over 104 ft.lb.

**Power**

9 Volt standard

9 Volt Nimh rechargeable and 110 volt transformer with "-P" option

Battery Life: Up to 20 hours

**Modes of Operation:**

Track Mode (display tracks up and down as torque is applied)

Peak Hold Mode (display holds the highest torque applied)

Auto Clear Mode (display automatically clears when wrench starts new torque application)

**RS232 output (requires -P option):**

Wrench sends the following information when the clear key is pressed:

Actual Torque value, Units, Target Torque Setting, Pass/Fail status

\*-P option on ED series must be specified when ordering

<b>Part #</b>	<b>Range 1</b>	<b>Range 2</b>	<b>Range 3</b>	<b>Drive</b>	<b>Length</b>	<b>Weight</b>
ED-75I	7.5-75 in.lb.	.85-8.5 Nm	.625-6.25 ft.lb	1/4"	10.3"/270mm	1.6lb/725g
ED-100I	10-100 in.lb.	1-11 Nm	8-8.3 ft.-lb.	1/4"	10.3"/270mm	1.6lb/725g
ED-250I	25-250 in.lb.	3-30 Nm	2.1-21 ft.lb	3/8"	10.3"/270mm	1.6lb/725g
ED-50F	5-50 ft.lb.	60-600 in.lb.	70-70Nm	3/8"	0.3"/270mm	1.6lb/725g
ED-250F	25-250 ft.lb.	35-350 Nm	300-3000 in.lb.	1/2"	22"/560mm	3lb/1.4kg
ED-600F	60-600 ft.lb.	720-7200 in.lb.	81-814 Nm	3/4"	47"	10lb

Other ranges available upon request

**Add -P to part number for rechargeable batteries and RS232 output**

**ALL above part numbers supplied with a blow molded case**

# Electronic Torque Wrenches

## Superduty Series



Super duty electronic torque wrench is built on strong thick wall torque wrench tubing body. Batteries install in handle with thick threaded steel end cap that will not break when dropped. LCD "floats" between circuit board and cover minimizing the chances of breakage. LCD window is covered with thick clear scratch resistant urethane. 1" slim electronic housing is made of durable Nylon 6 material and is no wider than the torque wrench tube. Cushion grip is easy on the users hand. Large 1/2" high digits are easily read from a distance. Three lights (yellow, green, red) and a buzzer prompt user when correct torque is applied. Target torque is quickly set with one button. Go/NoGo target torque range can be set from +/-1 to +/-10% of target value. When under the target zone user sees a yellow light. When within the target zone (zone automatically calculated by wrench) the user sees a green light and hears a buzzer. When torque is over the target zone user sees a red light and hears an intermittent buzzer. Three units of measure: ft.-lbs, in.-lbs, Nm. System automatically converts torque to different units of measure. Software adjustable LCD contrast for hot and cold weather. 4 AA batteries power the wrench for up to 50 hours of use. Supplied accuracy +/-2% IV both directions. Wrench is calibrate able to +/-1% IV or better with dead weights. RS232 output/input and internal recharge circuitry with 110 volt power supply a combined option. Wrench can download torque, units, target torque, under, within, over target results (Go/No Go). Computer can upload to wrench: Target torque, units, clear mode, target tolerance, Enable/Disable keys (like units or target keys). Software updates can be downloaded via the internet and sent directly to the wrench (-P option). Each is supplied with a CW calibration certification traceable to NIST.



Large display and easily understandable keypad standard on all Superduty wrenches

# Electronic Torque Wrenches

## Superduty Specifications

**Accuracy:**

+/-2% I.V. from 10-100% of full scale +/- 1 increment

**Display:**

1/2" high 4 Digit LCD with software controlled contrast adjustment for cold/hot weather

**Set Torque Prompting:****Quickly set target torque with plus and minus keys:**

Yellow light when applied torque is under tolerance

Green light and buzzer when applied torque is within tolerance

Red light and buzzer when applied torque is over tolerance

**Target tolerance setting:**

Quickly set target tolerance from 1-10% of torque setting:

ie., Set torque value = 100 ft.lb.

Target tolerance set to 4%

Result:

Yellow light when under 96 ft.lb.

Green light with buzzer when torque is within 96-104 ft.lb.

Red light and continuous buzzer when torque is over 104 ft.lb.

**Power**

4 AA batteries standard model

4-AA NIMh rechargeable batteries and 110 volt transformer with "-P" option

**Modes of Operation:**

Track Mode (display tracks up and down as torque is applied)

Peak Hold Mode (display holds the highest torque applied)

Auto Clear Mode (display automatically clears when wrench starts new torque application)

**RS232 output (requires -P expansion kit):**

Wrench sends the following information when the clear key is pressed:

Actual Torque value, Units, Target Torque Setting, Pass/Fail status

**-P expansion kit includes:**

1. Data cable
2. RS232 DB9/Power adapter
3. 110 Volt wall transformer
4. 4 AA Nimh batteries

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<u>Part #</u>	<u>Range</u>	<u>Drive Length</u>	
EX-150F	15-150 ft.lb., 20-204Nm, 180-1800 in.lb.	1/2"	18"
EX-250F	25-250 ft.lb., 34-340Nm, 300-3000 Ft.lb.	1/2"	22"

\*Add -P to the part number for RS232 and rechargeable batteries option

# Mechanical Dial Torque Wrenches

## Industrial Quality

- Non-length dependent design.
- Alloy steel precision torsion drive.
- Dual scale.
- Dual direction.
- Memory follower needle on each wrench.
- Dial protected with steel guard.
- Ranges from 6 in.lb to 2000 ft.lb..
- NIST calibration cert supplied standard.
- Serial number hard marked on each wrench.
- 3% accuracy from 20-100% of range (ANSI).



<u>Part Number</u>	<u>Range</u>	<u>Graduations</u>	<u>Drive</u>	<u>Length</u>	<u>Case</u>	<u>Weight</u>	<u>Memory Needle</u>
<b>D1-30i</b>	0-30 in.lb.	.5 in.-lb.	1/4"	10.63"	Plastic Blow	1.6lb	YES
	0-3.5 Nm	.1Nm		27mm	Molded	.73kg	
<b>D1-75i</b>	0-75 in.lb.	1 in.-lb.	1/4"	10.63"	Plastic Blow	1.6lb	YES
	0-9 Nm	.2Nm		27mm	Molded	.73kg	
<b>D1-150i</b>	0-150 in.lb.	2 in.-lb.	3/8"	10.63"	Plastic Blow	1.6lb	YES
	0-13 Nm	.5 Nm		27mm	Molded	.73kg	
<b>D1-250i</b>	0-250 in.lb.	5 in.-lb.	3/8"	10.63"	Plastic Blow	1.6lb	YES
	0-30 Nm	.5Nm		27mm	Molded	.73kg	
<b>D1-600i</b>	0-600 in.lb.	10 in.-lb.	3/8"	10.63"	Plastic Blow	1.6lb	YES
	0-70 Nm	2 Nm		27mm	Molded	.73kg	
<b>D1-50F</b>	0-50 ft.-lb.	1 ft.-lb.	3/8"	10.63"	Plastic Blow	1.6lb	YES
	0-70 Nm	2 Nm		27mm	Molded	.73kg	



<u>Part Number</u>	<u>Range</u>	<u>Graduations</u>	<u>Drive</u>	<u>Length</u>	<u>Case</u>	<u>Weight</u>	<u>Memory Needle</u>
<b>D3-100F</b>	0-100 ft.-lb.	2 ft.lb	1/2"	22"	Plastic Blow	3.0 lb	YES
	0-140Nm	2.5Nm		56mm	Molded	1.4Kg	
<b>D3-175F</b>	0-175 ft.-lb.	5 ft.-lb.	1/2"	22"	Plastic Blow	3.0 lb	YES
	0-240 Nm	5 Nm		56mm	Molded	1.4 Kg	
<b>D3-250F</b>	0-250 ft.-lb.	5 ft.-lb.	1/2"	22"	Plastic Blow	3.0 lb	YES
	0-350 Nm	10 Nm		56mm	Molded	1.4 Kg	

# Mechanical Dial Torque Wrenches

## High Torque Ranges



D4-350F(M) Mine Roof Bolt Wrench with guard, reverse scale and mirror mount

<u>Part Number</u>	<u>Range</u>	<u>Graduations</u>	<u>Drive</u>	<u>Length</u>	<u>Case</u>	<u>Weight</u>	<u>Memory Needle</u>
<b>D4-350F (M)*</b>	0-350 ft.-lb.	10 ft.-lb.	3/4"	26.5"	Plastic Blow	7 lb	YES
	0-480 Nm	10 Nm		67 mm	Molded	3.15 Kg	

\*Add the M suffix for the Mine Roof Bolt version with guard, reverse scale and mirror mount

<b>D4-600F</b>	0-600 ft.-lb.	10 ft.-lb.	3/4"	48"	Plastic Blow	7.5 lb	YES
	0-350 Nm	10 Nm		122 mm	Molded	4 Kg	

D4-600F supplied with 1 extension



D4-1000F supplied with 1 extension

<u>Part Number</u>	<u>Range</u>	<u>Graduations</u>	<u>Drive</u>	<u>Length</u>	<u>Case</u>	<u>Weight</u>	<u>Memory Needle</u>
<b>D4-1000F</b>	0-1000 ft.-lb.	20 ft.-lb.	1"	77" with extension	Metal	20 lb	YES
	0-1400 Nm	25 Nm		196 mm		9 Kg	



D5-2000F supplied with 5 extensions. Use as T handle

<u>Part Number</u>	<u>Range</u>	<u>Graduations</u>	<u>Drive</u>	<u>Length</u>	<u>Case</u>	<u>Weight</u>	<u>Memory Needle</u>
<b>D5-2000F</b>	0-2000 ft.-lb.	40 ft.-lb.	1"	125" with extension	Crdb	46 lb	YES
	0-2800 Nm	50 Nm		317.5 mm		21 Kg	



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