

# TORQUE TOOLS

## World Leader In Torque Tools.

Snap-on® gives you more ways to turn more fasteners than anyone else, and most importantly, we give you all the options you need to tighten them correctly. Snap-on gives you the advantage of the largest selection of torque tools. So whether you are looking for torque screwdrivers or full featured calibration systems, we have the products in the styles and the ranges you need.

These are the products that have earned their reputation in the real world where it matters most – in the factories and shops, in the field and in the laboratories. They are products trusted to build jet engines and farm tractors, spacecraft and machine tools, nuclear reactors and automobiles. Whenever rotating assemblies or high stresses occur, that's where you'll find the world's finest torque products.

Snap-on torque wrenches are made in City Of Industry, California.



SNAP-ON TORQUE TOOLS SNAP-ON TORQUE TOOLS SNAP-ON TORQUE TOOLS

TORQUE TOOLS



T H E R E I S A D I F F E R E N C E ™

# Torque Techwrench® Torque Wrenches

Techangle™ Torque Wrenches are truly revolutionary. They do the job of multiple torque wrenches and an angle gauge to complete precise “torque plus turn” specifications at a fraction of the cost. And even better, it saves you some serious time on each and every head bolt or connecting rod nut. [www.torqueinlesstime.com](http://www.torqueinlesstime.com)



ATECH2FR100

## TECHANGLE™ FEATURES:

The Snap-on® TechAngle™ wrench eliminates the need for angle gauges and protractors, providing the most accurate and fastest way to achieve torque plus angle tightening sequences now specified by many manufacturers. Digital readout shows you your torque setting, and then changes to the follow up angle you desire. Not affected by ratcheting. Angle calculation based on the same gyroscope technology that keeps helicopters flying level.

- Torque Accuracy: 2% CW, 3% CCW from 20-100% F.S. 4% CW, 6% CCW from 10-19% F.S. 8% CW, 10% CCW from 5-9% F.S.
- Angle Accuracy ±1% of reading ±1°@ angular velocity >10°/sec <180°/sec.
- Display Resolution 1°
- More information at: [www.snapon.com/torque/techangle](http://www.snapon.com/torque/techangle) and [www.torqueinlesstime.com](http://www.torqueinlesstime.com)

## TECHWRENCH® FEATURES: (all models)

- Manual Preset and automatic Track and Peak Hold modes
- Torque Units Conversion, N•m, ft-lb, in-lb.
- Audible (tone) and Tactile (vibrating handle) Preset Alerts
- Display Resolution 0.1 ft-lb, 0.1 N•m, 1 in-lb.
- Each button has ONLY one function (power on, preset increase, preset decrease, unit of measure select)
- Comfortable, non-slip grip handle
- Stand on handle bottom keeps tool from rolling off flat surface
- Sealed Flex head ratchets move ±15°
- Three “AA” Alkaline cells for battery power included
- Low Battery Indicator and Auto Shut-off after 2 minutes idle
- Operating Temperature 40-110°F (5-42°C)
- Storage Temperature 0-122°F (-20-50°C)
- Humidity up to 90% Non-condensing
- Designed to withstand shocks without failure
- Splash-proof, protects against water and most automotive shop fluid
- EU/CE-DE, ES, FR, IT, NL, PT, UK and Japanese Language Manual
- ISO-6789-2003 and ASME B107-28-2005 Standards compliant
- Certificate of N.I.S.T. traceability for 20% to 100% of full scale
- Includes storage case
- More information at: [www.snapon.com/torque/techwrench](http://www.snapon.com/torque/techwrench)

## TECHANGLE™ Models / 2% Accuracy / Flex Head

Specifications	ATECH2FR100	ATECH3FR250
Square Drive, inches	3/8	1/2
Head Type	Sealed Flex Head	Sealed Flex Head
Gear Teeth	36	36
Gear Action	10°	10°
Range, in. lb.	60-1200	150-3000
Range, ft. lb.	5-100	12.5-250
Range, N•m	13.5-135.0	17.5-340
Angle Range	5°-360°	5°-360°
Head Depth, inches	5/8	3/4
Head Width, inches	1 5/32	1 3/8
Operating Temperature	40-110°F (5-42°C)	40-110°F (5-42°C)
Storage Temperature	0-122°F (-20-50°C)	0-122°F (-20-50°C)
Humidity	up to 90% non-condensing	up to 90% non-condensing
Housing Color	Grey	Grey
Length, inches	17	26
Ratchet Service Kit	RKRF936	RKRS936

The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale.

## TECHWRENCH® FEATURES: (Standard models)

- Torque Accuracy Ratchet Head Models: 2% CW, 3% CCW from 20-100% F.S. 4% CW, 6% CCW from 10-19% F.S. 8% CW, 10% CCW from 5-9% F.S. (TECH2 only)
- Torque Accuracy Interchangeable Head Models: 4% CW, 6% CCW from 20-100% F.S. 8% CW, 12% CCW from 10-19% F.S. 16% CW, 20% CCW from 5-9% F.S. (TECH Y only)
- Tolerance (early preset alert) - 2% of torque setting



TECH2R100

## Standard Models / 2% Accuracy / Fixed Head

Specifications	TECH1R240	TECH2R100	TECH3R250
Square Drive, inches	1/4	3/8	1/2
Head Type	Sealed Fixed Ratchet	Sealed Fixed Ratchet	Sealed Fixed Ratchet
Gear Teeth	36	36	36
Gear Action	10°	10°	10°
Range, in. lb.	24-240	60-1200	300-3000
Range, ft. lb.	2-20	5-100	25-250
Range, N•m	2.7-27.12	6.7-135	34-339
Head Depth, inches	7/16	5/8	3/4
Head Width, inches	7/8	1 5/32	1 5/8
Housing Color	Red	Red	Red
Length, inches	15 1/4	17 1/4	26 1/4
Ratchet Service Kit	RKRT936	RKRF936	RKRS936

The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale.

## Standard Models / 2% Accuracy / Flex Head

Specifications	TECH1FR240	TECH2FR100	TECH3FR250	TECH4R600
Square Drive, inches	1/4	3/8	1/2	3/4
Head Type	Sealed Flex Head	Sealed Flex Head	Sealed Flex Head	Sealed Fixed Ratchet
Gear Teeth	36	36	36	32
Gear Action	10°	10°	10°	11°
Range, in. lb.	24-240	60-1200	300-3000	720-7200
Range, ft. lb.	2-20	5-100	25-250	60-600
Range, N•m	2.7-27.12	6.7-135	34-339	81-813
Head Depth, inches	7/16	5/8	3/4	1 1/4
Head Width, inches	7/8	1 5/32	1 5/8	2 1/2
Housing Color	Red	Red	Red	Red
Length, inches	15 1/4	17 1/4	26 1/4	48
Ratchet Service Kit	RKRT936	RKRF936	RKRS936	RKRQC4

The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale.



TECH2FR100

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

For more information visit: [www.snapon.com/torque/techwrench](http://www.snapon.com/torque/techwrench)

# Techwrench® Torque Wrenches **Torque**

## Standard Models / 4% Accuracy / Interchangeable Head and "D" Models

Stock No.	Range, in. lb.	Range, ft. lb.	Range, N•m	Shank Diameter	Housing Color	Length, inches
TECH1J240	24-240	2-20	2.7-27.12	J (0.425")	Red	13 3/4
TECH2Y100	60-1200	5-100	6.7-135	Y (0.560")	Red	15 1/2
TECH3X250	300-3000	25-250	34-339	X (0.735")	Red	23 3/4
TECH4Z600	720-7200	60-600	81-813	Z (0.990")	Red	42
TECH1JD240	24-240	2-20	2.7-27.12	J (0.425")	Grey	13 3/4
TECH2YD100	60-1200	5-100	6.7-135	Y (0.560")	Grey	15 1/2
TECH3XD250	300-3000	25-250	34-339	X (0.735")	Grey	23 3/4
TECH4ZD600	720-7200	60-600	81-813	Z (0.990")	Grey	42

Wrench length specification does not include the length of interchangeable heads. The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale. See pg 300-303 for Interchangeable Tool Heads.

TECHMEMORY™ Electronic Torque Wrenches include TORQLOG™, a downloading software on CD for IBM PC's and a 6' RS232 Serial cable. Two Microsoft® Excel® templates are also in the CD for customer convenience. The DOWNLOAD template provides basic statistical analysis of dumped readings. The DATE/TIME template adds a date and time stamp to each reading while the wrench is attached to the PC. Templates can be customized to suit specific user needs. Six button operation. RS232 Port for downloading data to computer for analysis. All models include 3 "AA" batteries for power.

### TECHMEMORY™ FEATURES:

- Torque Accuracy TECH1, 2 and 3 Ratchet Head Models: 1% CW, 1.5% CCW 2% CW, 3% CCW from 10-19% F.S. 4% CW, 8% CCW from 5-9% F.S. (TECH2 only)
- Torque Accuracy TECH4 Ratchet Head Model: 2% CW, 3% CCW from 20-100% F.S. 4% CW, 6% CCW from 10-19% F.S.
- Torque Accuracy Interchangeable Head Models: 4% CW, 6% CCW from 20-100% F.S. 8% CW, 12% CCW from 10-19% F.S. 4% CW, 20% CCW from 5-9% F.S. (TECH Y only)

### TECHMEMORY™ APPLICATIONS:

- Automotive Service—printout provides assurance that lug nuts, head bolts, etc. have been tightened to specification
- Assembly Operations—gather data to manage quality
- Manufacturing ISO and SPC—generate statistics for technical files and process auditing
- Military—document compliance with maintenance schedules and inspections
- Aviation—include torque data in maintenance reports



TECH2FRM100



TECH2YM100

TECH2YDM100



TECH3XD250

### TECHWRENCH® FEATURES: (all "D" models)

- Hidden Torque Preset Adjustment (momentary display at Zero/Tare)
- Hidden Tolerance Adjustment + and - 1 to 16 percent of preset value

TECH2Y100



Comfortable, non-slip grip handle. Stand on handle bottom keeps tool from rolling off flat surface. Flex head ratchet moves 15°. All models have a Low Battery Indicator and Auto Shutoff (after 2 minutes idle). Designed to withstand shocks without failure. Splash-proof to protect against water and most automotive shop fluid. Includes storage case. EU/CE—DE, ES, FR, IT, NL, PT, UK all models. Also Japanese language. Complies with ISO-6789-2003 and ASME B107-28-2005 Standards. Additional technical information is available at: [www.snapon.com/torque/techwrench](http://www.snapon.com/torque/techwrench).

- Manual Peak Store, Recall, Clear and Print Functions
- Memory Capacity 1000 Peak Readings
- TECHLOG™ Download Software CD included
- Excel® Download Template with basic statistics
- Date/Time Excel® Download Template (wrench attached to PC)
- Serial RS232, with selectable 1200 to 19.2K baud rate
- Serial Cable 6' with 9-pin PC Interconnect included

## Memory Models / 1% Accuracy / Ratcheting / Flex Head

Specifications	TECH1FRM240	TECH2FRM100	TECH3FRM250	TECH4RM600
Square Drive, inches	1/4	3/8	1/2	3/4
Head Type	Flex Head	Flex Head	Flex Head	Fixed Ratchet
Gear Teeth	36	36	36	32
Gear Action	10°	10°	10°	11°
Range, in. lb.	24-240	60-1200	300-3000	720-7200
Range, ft. lb.	2-20	5-100	25-250	60-600
Range, N•m	2.7-27.12	6.7-135	34-339	81-813
Head Depth, inches	7/16	3/8	3/4	1 1/4
Head Width, inches	7/8	1 5/32	1 5/8	2 1/2
Torque Setting Resolution	0.1 ft. lb. (0.1 N•m, 1 in. lb.)	1 ft. lb. (1 N•m, 1 in. lb.)	1 ft. lb. (1 N•m, 1 in. lb.)	1 ft. lb. (1 N•m, 1 in. lb.)
Overall Length, in. (mm)	15 (381)	17 (432)	26 (660)	48 (1,219)
Ratchet Service Kit	RKRT936	RKRF936	RKRS936	RKRQC4
Housing Color	Red	Red	Red	Red
Weight, lbs. (kg)	1.7 (.77)	2.2 (.98)	3.7 (1.68)	10.0 (4.54)

The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale.

## Memory Models / 4% Accuracy / Interchangeable Head and "D" Models

Specifications	TECH1JM240	TECH1JDM240	TECH2YM100	TECH2YDM100	TECH3XM250	TECH3XDM250
Head Type	Interchangeable	Interchangeable	Interchangeable	Interchangeable	Interchangeable	Interchangeable
Range, in. lb.	24-240	24-240	60-1200	60-1200	300-3000	300-3000
Range, ft. lb.	2-20	2-20	5-100	5-100	25-250	25-250
Range, N•m	2.7-27.12	2.7-27.12	6.7-135	6.7-135	34-339	34-339
Shank Dia.	J (0.425")	J (0.425")	Y (0.560")	Y (0.560")	X (0.735")	X (0.735")
Torque Setting	0.1 ft. lb.	0.1 ft. lb.	1 ft. lb.	1 ft. lb.	1 ft. lb.	1 ft. lb.
Resolution	(0.1 N•m, 1 in. lb.)	(0.1 N•m, 1 in. lb.)	(1 N•m, 1 in. lb.)			
Housing Color	Red	Grey	Red	Grey	Red	Grey
Overall Lgth., in. (mm)	13 1/2 (343)	13 1/2 (343)	15 1/2 (394)	15 1/2 (394)	23 1/2 (597)	23 1/2 (597)
Weight, lbs. (kg)	1.6 (.73)	1.6 (.73)	1.9 (.86)	1.9 (.86)	2.9 (1.32)	2.9 (1.32)

Wrench length specification does not include the length of interchangeable heads. The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale. See pg 300-301 for Interchangeable Tool Heads.

### WARNING

- Do not exceed rated torque.
- Do not use chrome or industrial finish hand tools with power drivers.
- Over torquing can cause breakage. Wrench can break while breaking fasteners loose. An out of calibration torque wrench can cause part of tool breakage.
- Periodic recalibration is necessary to maintain accuracy.



For more information visit: [www.snapon.com/torque/techwrench](http://www.snapon.com/torque/techwrench)

- Do not use a torque wrench to break fasteners loose.
- Do not use with impact wrenches.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Broken tools can cause injury.
- Read additional safety precautions on pages 534 to 537.

# Torque Adjustable Click Type

The QD Series of click-type Torque Instruments feature an innovative design that provides consistently accurate readings and rugged, troublefree performance.

## FEATURES:

- **Certificate of Calibration.** A Certificate of Calibration is packed with every QD Series Torque Instrument. Actual certification readings and individual instrument serial number are included. Each torque instrument, as calibrated at the factory, is certified to meet the accuracy specified in ANSI B107.14M-2004 and was calibrated on a torque standard traceable to the National Institute of Standards Technology (NIST)
- **Accuracy.** All QD Series Torque Instruments are accurate to  $\pm 4\%$  clockwise and  $\pm 6\%$  counterclockwise from 20% of full scale to full scale
- **Long Life Ratchet Head.** QD Series Torque Instruments feature the Snap-on® High Strength Sealed Ratchet Head. Sealed ratchet heads keep out dirt and moisture while being virtually maintenance free. U.S. Patent 4,934,220 applies to all QD Series Ratchet Head Models. U.S. Patent 6,125,722 applies to 1/4", 3/8" and 1/2" drive Ratchet Head Models only
- **Minimal Friction "Hour Glass" Cam.** Retains and releases lubricant where needed to reduce friction
- **Laser Marked Scale.** Easier reading with varying light sources
- **Positive Stop.** Instrument can not be accidentally disassembled if wound down past scale
- **Long-Term Protection.** Each instrument includes a storage case

 Certificate of Calibration				
Model No.	QD2FR75	Serial Number	0198492147	
Type	Micrometer adjustable	Calibration equipment	Versatest	
Range	15.00 ft-lb - 75.00 ft-lb	Accuracy of calibrator	.25%	
Manufacturer	Snap-on			
Set Torque (ft-lb)	Readings (ft-lb)			
Clockwise torque (Tolerance: 4.0%)				
15.00	15.11 0.7%	15.11 0.7%	15.11 0.7%	15.11 0.7%
45.00	44.44 -1.2%	44.44 -1.2%	44.44 -1.2%	44.44 -1.2%
75.00	76.56 1.3%	77.19 2.6%	77.19 2.6%	77.19 2.6%
Counterclockwise torque (Tolerance: 6.0%)				
15.00	15.23 1.5%	15.23 1.5%	15.23 1.5%	15.65 3.7%
45.00	45.30 0.7%	45.30 0.7%	45.30 0.7%	45.30 0.7%
75.00	72.32 -3.6%	72.32 -3.6%	72.32 -3.6%	72.32 -3.6%
Result: Measured values are within tolerance according to: ISO 6789				
Date	1/21/05	Operator	Eric Brathwaite	Supervisor
				Gilbert Cervantes
<small>Calibration is performed by comparison with reference standards which have been calibrated by a recognized NIST laboratory and are therefore traceable to the National Institute of Standards and Technology. The issuer of this certificate bears sole responsibility for calibration and documentation thereof. Duplication of this certificate or parts hereof is prohibited.</small>				



QD2100



QD2R100

## US Torque Instruments (in. lb.) / $\pm 4\%$ Accuracy

Sq. Dr.	Stock No.	Head Style			Range, min.	Range, max.	Increments	Length, in.	Head Width, in.	Head Depth, in.	Storage Case	Ratchet Service Kit
1/4	QD150	Fixed			10 in. lb.	50 in. lb.	.5 in. lb.	9 3/4	5/8	13/16	PBQD1	
1/4	QD1R50	Fixed Ratchet			10 in. lb.	50 in. lb.	.5 in. lb.	9 7/8	7/8	7/16	PBQD1	RKRT936
1/4	QD1200	Fixed			40 in. lb.	200 in. lb.	1 in. lb.	10 15/16	5/8	13/16	PBQD1	
1/4	QD1R200	Fixed Ratchet			40 in. lb.	200 in. lb.	1 in. lb.	11 1/16	7/8	7/16	PBQD1	RKRT936
3/8	QD2R200	Compact Ratchet			40 in. lb.	200 in. lb.	1 in. lb.	11 1/16	7/8	7/16	PBQD1	RKRF936
3/8	QD21000	Fixed			200 in. lb.	1000 in. lb.	5 in. lb.	14 9/16	1	1 3/16	PBQD2	RKRT936
3/8	QD2R1000	Fixed Ratchet			200 in. lb.	1000 in. lb.	5 in. lb.	15 9/16	1 5/32	9/16	PBQD2	RKRF936
1/2	QD3R1600	Fixed Ratchet			320 in. lb.	1600 in. lb.	10 in. lb.	19	1 5/8	3/4	PBQD3	RKRS936
1/2	QD32500	Fixed			500 in. lb.	2500 in. lb.	10 in. lb.	18 1/8	1	1 1/4	PBQD3	RKRS936
1/2	QD3R2500	Fixed Ratchet			500 in. lb.	2500 in. lb.	10 in. lb.	19 1/8	1 5/8	3/4	PBQD3	RKRS936

## US Torque Instruments (ft. lb.)

3/8	QD275	Fixed			5 ft. lb.	75 ft. lb.	.5 ft. lb.	14 9/16	1	1 3/16	PBQD2	
3/8	QD2FR75	Flex Head			5 ft. lb.	75 ft. lb.	.5 ft. lb.	15 3/4	1 5/32	9/16	PBQD2	RKRF936
3/8	QD2100	Fixed			20 ft. lb.	100 ft. lb.	.5 ft. lb.	14 9/16	1	1 3/16	PBQD2	
3/8	QD2R100	Fixed Ratchet			20 ft. lb.	100 ft. lb.	.5 ft. lb.	15 9/16	1 5/32	9/16	PBQD2	RKRF936
1/2	QD3150	Fixed			30 ft. lb.	150 ft. lb.	1 ft. lb.	18	1	1 1/4	PBQD3	
1/2	QD3R150	Fixed Ratchet			30 ft. lb.	150 ft. lb.	1 ft. lb.	19	1 5/8	3/4	PBQD3	RKRS936
1/2	QD3250	Fixed			50 ft. lb.	250 ft. lb.	1 ft. lb.	23 3/16	1	1 1/4	PBQD3	
1/2	QD3R250	Fixed Ratchet			50 ft. lb.	250 ft. lb.	1 ft. lb.	24 3/16	1 5/8	3/4	PBQD3	RKRS936
1/2	BRUTUS3R250D	Fixed Ratchet			50 ft. lb.	250 ft. lb.	1 ft. lb.	28	1 3/8	3/4	PBQD3	RKRS936
3/4	QD4400	Fixed			80 ft. lb.	400 ft. lb.	2.5 ft. lb.	33 3/4	1 1/2	1 1/2	PBQC4	
3/4	QD4R400	Fixed Ratchet			80 ft. lb.	400 ft. lb.	2.5 ft. lb.	35 3/4	2 1/2	1 1/4	PBQC4	RKRQC4
3/4	QD4600	Fixed			120 ft. lb.	600 ft. lb.	5 ft. lb.	40 3/4	1 1/2	1 1/2	PBQC4	
3/4	QD4R600	Fixed Ratchet			120 ft. lb.	600 ft. lb.	5 ft. lb.	42 3/4	2 1/2	1 1/4	PBQC4	RKRQC4
1	QD5R1000	Fixed Ratchet			200 ft. lb.	1000 ft. lb.	5 ft. lb.	71	3 1/8	1 1/2	PBQC5	RKRQC5

## Metric Torque Instruments (kg•m, kg•cm)

3/8	QD2RM1000	Flex Head			200 kg•cm	1000 kg•cm	5 kg•cm	15 9/16	1 5/32	9/16	PBQD2	RKRF936
1/2	QD3RM30	Fixed Ratchet			6 kgm	30 kgm	.2 kgm	19	1 5/8	3/4	PBQD3	RKRS936

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# Adjustable Click Type Torque Wrenches **Torque**



QD2RN50

## Newton Meter Torque Wrenches / $\pm 4\%$ Accuracy

Sq. Dr., in.	Stock No.	Head Style			Range, min.	Range, max.	Increments	Length, in.	Head Width, inches	Head Depth, inches	Storage Case	Ratchet Service Kit
1/4	QD1RN6	Fixed Ratchet	36	10°	12 dN•m	60 dNm	.5 dN•m	9 7/8	7/8	7/16	PBQD1	RKRT936
1/4	QD1RN25	Fixed Ratchet	36	10°	50 dN•m	250 dNm	1 dN•m	11 3/4	7/8	7/16	PBQD1	RKRT936
3/8	QD2RN25	Compact Ratchet	36	10°	50 dN•m	250 dNm	1 dN•m	11 3/4	7/8	7/16	PBQD2	RKRF936
3/8	QD2RN50	Fixed Ratchet	36	10°	10 N•m	50 N•m	.5 N•m	15 9/16	1 5/32	9/16	PBQD2	RKRF936
3/8	QD2RN100	Fixed Ratchet	36	10°	20 N•m	100 N•m	.5 N•m	15 9/16	1 5/32	9/16	PBQD2	RKRF936
1/2	QD3RN200	Fixed Ratchet	36	10°	40 N•m	200 N•m	2 N•m	19	1 5/8	3/4	PBQD3	RKRS936
1/2	QD3RN350	Fixed Ratchet	36	10°	70 N•m	350 N•m	2 N•m	24 3/16	1 5/8	3/4	PBQD3	RKRS936
3/4	QD4RN800	Fixed Ratchet	32	11°	150 N•m	800 N•m	5 N•m	42 3/4	2 1/2	1 1/4	PBQC4	RKRQC4

## Torque Screwdrivers



QDRIVER3P



QDRIVER3

## Preset Torque Screwdrivers / $\pm 6\%$ Accuracy

Ideal tools for low torque assemblies and precision applications. Drivers accept all standard 1/4" hex screwdriver bits. Cam-over torque limiting clutch free wheels when set torque is achieved. Accuracy is  $\pm 6\%$  from 20-100% of full scale, in clockwise direction only for all drivers in series. Lightweight, rugged construction features red anodized aluminum body with stainless steel shank. Comfortable, ergonomic tri-lobe grip and magnetic bit retention.

Stock No.	Range, minimum	Range, maximum	Length, inches
QDRIVER1P	6 in. oz. (4 N•cm)	32 in. oz. (22 N•cm)	4 9/16
QDRIVER2P	10 in. oz. (7 N•cm)	100 in. oz. (70 N•cm)	5 5/8
QDRIVER3P	1.5 in. lb. (16 N•cm)	15 in. lb. (169 N•cm)	5 5/8
QDRIVER4P	4 in. lb. (45 N•cm)	40 in. lb. (451 N•cm)	6

## Adjustable Torque Screwdrivers / $\pm 6\%$ Accuracy

Ideal tools for low torque assemblies, precision applications and dash/under dash work on most domestic and imported vehicles. Drivers accept all standard 1/4" hex screwdriver bits. Cam-over torque limiting clutch free wheels 90° when set torque is achieved. Accuracy is  $\pm 6\%$  from 20-100% of full scale, in clockwise direction only for all drivers in series. Lightweight, rugged construction features red anodized aluminum body with stainless steel shank. Comfortable, ergonomic tri-lobe grip and magnetic bit retention.

Stock No.	Range	Resolution	Length, inches
QDRIVER2	20 - 100 in. oz. (14 - 70 N•cm)	1 in. oz.	5 7/16
QDRIVER3	3 - 15 in. lb. (34 - 169 N•cm)	.2 in. lb.	5 7/16
QDRIVER4	5 - 40 in. lb. (56 - 451 N•cm)	.5 in. lb.	6 11/16
QDRIVER4NM	90 - 450 N•cm		6 11/16

## Torque Limiting Drivers / $\pm 4\%$ Accuracy

**QTS135 Adjustable Limiting Driver.** Micrometer type adjustment. Clutch allows 25° of free rotation on reaching set torque. Guaranteed Accuracy: Within  $\pm 4\%$  of setting from 20% of capacity to full capacity clockwise and counterclockwise.

Stock No.	Range, minimum	Range, maximum	Increments	Length, inches
QTS135	5 in. lb.	35 in. lb.	0.5 in. lb.	7



QTS135

**QTS135 U.S. Preset Limiting Driver.** A torque limiting screwdriver featuring a clutch mechanism to help prevent over torquing by allowing free rotation upon reaching the set torque value. Ideal selection for assembly line work where the same requirement is constant. Wrench can be reset at different torque values or readjusted for accuracy whenever necessary.



### WARNING

- Do not exceed rated torque.
- Do not use chrome or industrial finish hand tools with power drivers.
- Over torquing can cause breakage. Wrench can break while breaking fasteners loose. An out of calibration torque wrench can cause part of tool breakage.
- Periodic recalibration is necessary to maintain accuracy.



- Do not replace worn parts individually; use entire contents of the service kit.
- Do not use a torque wrench to break fasteners loose.
- Do not use with impact wrenches.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Broken tools can cause injury.
- Read additional safety precautions on pages 534 to 537.

# Torque Adjustable Click Type Torque Wrenches, TQ Series

## TQ Thumb Wheel Series:

- Flex Head Models — offer sealed Snap-on® ratchets, which flex up to 15° to provide knuckle and obstruction clearance
- Fixed Ratchet Models — offer a sealed Snap-on® ratchet that is rigidly fixed in line with the torque body
- Snap-on® Sealed Ratchet Head — is virtually maintenance free; more time working with the tool, less time on tool maintenance
- Thumb Screw Type Adjustment — is faster than cycling through a micrometer style torque wrench. Guard prevents setting from being changed accidentally. Setting is displayed in window. Conversion table to N•m displayed on handle
- Sealed Neck — keeps dust and grit away from the torque mechanism for longer tool life
- "Split Beam" Measuring Element — provides accurate, reliable readings and eliminates the heavy coil spring used in conventional click type wrenches. This yields fewer moving parts, reducing friction and wear

- Cushion Grip Handle — provides comfort plus control and resists most automotive fluids
- Designed for measuring torque in a clockwise direction only. Wrench is not reversible
- EU — GB, FR, ES, DE
- Japanese language also

## Guaranteed Accuracy:

**TQ Series - Accurate within ±4% of any clockwise setting from 20% of full scale to full scale.**

**TQR400E/TQR600E Only: ±4% of setting when used in the following orientations: Main body vertical orientation. Torque wrench square drive axis with vertical orientation. In all other positions, guaranteed accuracy is ±5%. Accuracy is guaranteed in the clockwise direction from 20% of capacity to full capacity.**



TQFR250E



TQR600E

## U.S. Reading Torque Wrenches with Conversion Scale - ±4% Accuracy

Square Drive, in.	Stock No.	Head Style			Range, max.	Range, min.	Increments	Length, inches	Head Width, inches	Head Depth,* inches	Ratchet Service Kit
3/8	TQFR50B	Flex Head	30	12°	600 in. lb.	120 in. lb.	10 in. lb.	17 5/8	1 1/8	9/16	RKQJA2D
3/8	TQFR100B	Flex Head	30	12°	100 ft. lb.	20 ft. lb.	2 ft. lb.	17 5/8	1 1/8	9/16	RKQJA2D
3/8	TQR100B	Fixed Ratchet	30	12°	100 ft. lb.	20 ft. lb.	2 ft. lb.	18 5/8	1 5/32	5/8	RKRF936
1/2	TQFR250E	Flex Head	36	10°	250 ft. lb.	50 ft. lb.	5 ft. lb.	22 3/8	1 5/8	3/4	RKRS936
1/2	TQR250E	Fixed Ratchet	36	10°	250 ft. lb.	50 ft. lb.	5 ft. lb.	22 3/8	1 5/8	3/4	RKRS936
3/4	TQR400E**	Detach Ratchet	32	11°	400 ft. lb.	80 ft. lb.	10 ft. lb.	38 1/8	2 1/2	1 1/4	RKRTQ4
3/4	TQR600E**	Detach Ratchet	32	11°	600 ft. lb.	120 ft. lb.	10 ft. lb.	48 5/8	2 1/2	1 1/4	RKRTQ4

## Newton Meter Torque Wrenches with Conversion Scale - ±4% Accuracy

3/8	TQFRN130B	Flex Head	30	12°	130 N•m	25 N•m	5 N•m	17 5/8	1 1/8	9/16	RKQJA2D
3/8	TQFRN68B	Flex Head	30	12°	68 N•m	14 N•m	2 N•m	17 5/8	1 1/8	9/16	RKQJA2D
1/2	TQFRN350D	Flex Head	32	11°	350 N•m	70 N•m	5 N•m	22 1/8	1 5/8	3/4	RKQT3

## Metric Meter Torque Wrenches with Conversion Scale - ±4% Accuracy

1/2	TQFRM34D	Flex Ratchet	32	11°	5.0 kg•m	34 kg•m	1.0 kg•m	22 1/8	1 5/8	3/4	RKTQ3
3/4	TQFRM80C	Detach Ratchet	32	11°	26.0 kg•m	80 kg•m	2.0 kg•m	48	2 3/8	1 1/4	RKRQC4

All wrenches are non-reversible.

\*Does not include square drive dimension.

\*\*3-piece construction disassembles for storage/transport.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

## Torque Comparator

### TCR175 Torque Comparator

- Comparator can be used to determine if a torque wrench requires calibration to maintain proper application of torque
- A large and easy to read dial and simple operation makes the tester quick and easy to use for everyday verification of torque calibration
- 1/2" female square drive input and 175 ft. lb. capacity with 5 ft. lb. graduations and 230 N•m capacity with 10 N•m increments is a perfect fit for the most popular torque wrenches
- Compact design and a simple mounting plate allows for convenient installation in any direction - horizontally on a bench, vertically on a wall, or on any other sturdy, flat surface

- Integrated exercise adaptor makes it easy to break in the wrench for getting the most accurate results (as per B107.14M standard)
- 2% accurate within ± 2% of the reading from 20% of full scale to full scale clockwise and counter clockwise
- Can check a 3/8" drive torque wrench by using an adaptor A2A or adaptor GAF2A
- Includes a certificate of calibration compliance



TCR175

# TORQOMETER® Torque Wrenches **Torque**



TE50FUA



TE175L



## U.S. Reading - Standard 2% Accuracy

Square Drive, inches	Basic Models	Follow up Models	Signal Models	Range	Increments	Length, inches	Width, inches	Head* Depth, inches	Storage Case
1/4	TE1A	TE1FUA	—	15 in. lb.	1/4 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE3A	TE3FUA	—	30 in. lb.	1/2 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE6A	TE6FUA	—	75 in. lb.	1 in. lb.	9 29/32	2 11/16	1 1/4	PB9
3/8	TE12A	TE12FUA	TE12LA	150 in. lb.	2 1/2 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE25A	TE25FUA	TE25LA	300 in. lb.	5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE50A	TE50FUA	TE50LA	600 in. lb.	10 in. lb.	12 1/2	2 11/16	1 1/4	PB9
	TE12FA	TE12FFUA	TE12FLA	12 ft. lb.	1/2 ft. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE25FA	TE25FFUA	TE25FLA	25 ft. lb.	1/2 ft. lb.	9 29/32	2 11/16	1 1/4	PB9
	TE50FA	TE50FFUA	TE50FLA	50 ft. lb.	1 ft. lb.	12 1/2	2 11/16	1 1/4	PB9
1/2	TE51	TE51FU	TE51L	600 in. lb.	10 in. lb.	15	2 11/16	1 9/16	—
	TE51F	TE51FFU	TE51FL	50 ft. lb.	1 ft. lb.	15	2 11/16	1 9/16	—
	TE100	TE100FU	TE100L	100 ft. lb.	1 ft. lb.	16	2 3/4	1 3/8	PBR5
	TE175	TE175FU	TE175L	175 ft. lb.	2 1/2 ft. lb.	18 3/4	2 3/4	1 3/8	PBR5
	TE250	TE250FU	TE250L	250 ft. lb.	5 ft. lb.	23 3/4	2 3/4	1 3/8	PB8A
3/4	TE352A	TE352FUA	TE352LA	350 ft. lb.	5 ft. lb.	29 7/8	3 1/4	1 25/32	—
	TE602A	TE602FUA	TE602LA	600 ft. lb.	10 ft. lb.	40 7/8	3 1/4	1 25/32	PB39
1	TE803**	TE803FU**	TE803L**	800 ft. lb.	10 ft. lb.	66 13/16	3 9/16	2 1/32	—
	TE1003**	TE1003FU**	TE1003L**	1000 ft. lb.	10 ft. lb.	66 13/16	3 9/16	2 1/32	—
	TE1503†	TE1503FU†	TE1503L†	1500 ft. lb.	25 ft. lb.	80	4 13/32	2 1/8	—
	TE2003†	TE2003FU†	TE2003L†	2000 ft. lb.	25 ft. lb.	80	4 13/32	2 1/8	—
	TE2005†	TE2005FU†	TE2005L†	2000 ft. lb.	25 ft. lb.	80	3 9/16	2 3/8	—
1 1/2	TE3005†	TE3005FU	TE3005L	3000 ft. lb.	50 ft. lb.	140	5 1/2	2 13/16	—



TESI75



TESI75L

## Newton Meter Reading - Standard 2% Accuracy

Square Drive, inches	Basic Models	Follow-up Models	Signal Models	Range, N•m	Increments, N•m	Length, inches	Width, inches	Head* Depth, inches	Storage Case
1/4	TESI5	TESI5FU	TESI5L	5	.2	9 29/32	2 11/16	1 1/4	PB9
	TESI10	TESI10FU	TESI10L	10	.5	9 29/32	2 11/16	1 1/4	PB9
3/8	TESI20	TESI20FU	TESI20L	20	.5	9 29/32	2 11/16	1 1/4	PB9
	TESI30	TESI30FU	TESI30L	30	1	9 29/32	2 11/16	1 1/4	PB9
	TESI60	TESI60FU	TESI60L	60	2	12 1/2	2 11/16	1 1/4	PB9
	TESI70	TESI70FU	TESI70L	70	2	12 1/2	2 11/16	1 1/4	PB9
	TESI75	TESI75FU	TESI75L	75	1	12 1/2	2 11/16	1 1/4	PB9
1/2	TESI125	TESI125FU	TESI125L	125	5	16	2 11/16	1 3/8	PBR5
	TESI200	TESI200FU	TESI200L	200	5	18 3/4	2 3/4	1 3/8	PBR5
	TESI250	TESI250FU	TESI250L	250	5	18 3/4	2 3/4	1 3/8	PBR5
3/4	TESI500A	TESI500FUA	TESI500LA	500	10	29 7/8	3 1/4	1 25/32	PB39
	TESI800A	TESI800FUA	TESI800LA	800	20	40 7/8	3 1/4	1 25/32	PB39
1	TESI1360**	TESI1360FU**	TESI1360L**	1360	20	66 13/16	3 9/16	2 1/32	—
	—	TESI2803FU†	TESI2803L†	2800	50	80	4 13/32	2 1/8	—
1 1/2	TESI2805†	—	—	2800	50	80	4 25/32	2 3/8	—
	—	TESI4000FU	TESI4000L	4000	100	140	5 1/2	2 13/16	—

\*Does not include square drive dimension.

\*\*Includes separately packed 92TQPA 4' tubular extension handle.

†Includes separately packed 93TQPA 5' tubular extension handle.

### Guaranteed Accuracy:

Standard 2% models are accurate within ±2% of the reading from 20% of full scale to full scale clockwise and counterclockwise.



### WARNING

- Do not exceed rated torque.
- Do not use to break fasteners loose.
- Do not force head against flex stops.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.



- Periodic recalibration is necessary to maintain accuracy of any torque wrench. Recalibrate every 6 months or more frequently depending on use.
- Read additional safety precautions on pages 534 to 537.

# Torque TORQOMETER® Torque Wrenches

TER175



TER175L



## Combination U.S./Newton Meter Reading - Precise 1% Accuracy

Sq. Dr. in.	Basic Models	Follow up Models	Signal Models	N•m Range	N•m Increments	U.S. Range	U.S. Increments	Length, inches	Width, inches	Head* Depth, inches	Storage Case
1/4	TER1A	TER1FUA	—	1.7 N•m	.05 N•m	15 in. lb.	.5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TER3A	TER3FUA	—	3.5 N•m	0.1 N•m	30 in. lb.	1 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TER6A	TER6FUA	—	8.4 N•m	0.2 N•m	75 in. lb.	1 in. lb.	9 29/32	2 11/16	1 1/4	PB9
3/8	TER12A	TER12FUA	TER12LA	17 N•m	.5 N•m	150 in. lb.	5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TER25A	TER25FUA	TER25LA	3200 N•cm	50 N•cm	300 in. lb.	5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TER50A	TER50FUA	TER50LA	60 N•m	1 N•m	600 in. lb.	20 in. lb.	12 1/2	2 11/16	1 1/4	PB9
1/2	TER51	TER51FU	TER51L	60 N•m	1 N•m	600 in. lb.	20 in. lb.	15	2 11/16	1 5/16	—
	TER100	TER100FU	TER100L	140 N•m	5 N•m	100 ft. lb.	2 ft. lb.	16	2 3/4	1 3/8	PBR5
	TER175	TER175FU	TER175L	230 N•m	10 N•m	175 ft. lb.	5 ft. lb.	18 3/4	2 3/4	1 3/8	PBR5
	TER250	—	TER250L	340 N•m	10 N•m	250 ft. lb.	10 ft. lb.	23 3/4	2 3/4	1 3/8	PB8A
3/4	TER352A	TER352FUA	TER352LA	480 N•m	10 N•m	350 ft. lb.	5 ft. lb.	29 7/8	3 1/4	1 3/8	PB39
	TER602A	TER602FUA	TER602LA	800 N•m	20 N•m	600 ft. lb.	20 ft. lb.	40 7/8	3 1/4	1 25/32	PB39
1	TER1003**	TER1003FU**	TER1003L**	1360 N•m	20 N•m	1000 ft. lb.	20 ft. lb.	66 13/16	3 9/16	2 1/2	—

TEC175



TEC175L



## Combination U.S./Metric Reading - Standard 2% Accuracy

Sq. Dr. in.	Basic Models	Follow up Models	Signal Models	Metric Range	Metric Increments	U.S. Range	U.S. Increments	Length, inches	Width, inches	Head* Depth, inches	Storage Case
1/4	TEC1A	TEC1FUA	—	16 kg•cm	1 kg•cm	15 in. lb.	.5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TEC3A	TEC3FUA	—	35 kg•cm	1 kg•cm	30 in. lb.	1 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TEC6A	TEC6FUA	—	90 kg•cm	2.5 kg•cm	75 in. lb.	1 in. lb.	9 29/32	2 11/16	1 1/4	PB9
3/8	TEC12A	TEC12FUA	TEC12LA	175 kg•cm	5 kg•cm	150 in. lb.	5 in. lb.	9 29/32	2 11/16	1 1/4	PB9
	TEC25FA	TEC25FFUA	TEC25FLA	350 kg•cm	10 kg•cm	25 ft. lb.	1 ft. lb.	9 29/32	2 11/16	1 1/4	PB9
	TEC50A	TEC50FUA	TEC50LA	700 kg•cm	20 kg•cm	600 in. lb.	20 in. lb.	12 1/2	2 11/16	1 1/4	PB9
1/2	TEC51	TEC51FU	TEC51L	700 kg•cm	20 kg•cm	600 in. lb.	20 in. lb.	15	2 11/16	1 5/16	—
	TEC100	TEC100FU	TEC100L	14 kg•m	.5 kg•m	100 ft. lb.	2 ft. lb.	16	2 3/4	1 3/8	PBR5
	TEC175	TEC175FU	TEC175L	25 kg•m	1 kg•m	175 ft. lb.	5 ft. lb.	18 3/4	2 3/4	1 3/8	PBR5
	TEC250	TEC250FU	TEC250L	35 kg•m	1 kg•m	250 ft. lb.	10 ft. lb.	23 3/4	2 3/4	1 3/8	PB8A
3/4	TEC352A	TEC352FUA	TEC352LA	50 kg•m	1 kg•m	350 ft. lb.	10 ft. lb.	29 7/8	3 1/4	1 25/32	PB39
	TEC602A	TEC602FUA	TEC602LA	80 kg•m	2 kg•m	600 ft. lb.	20 ft. lb.	40 7/8	3 1/4	1 25/32	PB39
1	TEC803**	TEC803FU**	TEC803L**	110 kg•m	2 kg•m	800 ft. lb.	25 ft. lb.	66 13/16	3 9/16	2 1/2	—
	—	TEC1003FU**	TEC1003L**	136 kg•m	2 kg•m	1000 ft. lb.	20 ft. lb.	66 13/16	3 9/16	2 1/2	—
	—	TEC1503FU†	TEC1503L†	200 kg•m	5 kg•m	1500 ft. lb.	25 ft. lb.	80	4 13/32	2 1/8	—
	—	TEC2003FU†	TEC2003L†	280 kg•m	5 kg•m	2000 ft. lb.	50 ft. lb.	80	4 13/32	2 1/8	—
1 1/2	TEC2005†	TEC2005FU†	TEC2005L†	280 kg•m	5 kg•m	2000 ft. lb.	50 ft. lb.	80	4 13/32	2 3/8	—
	—	TEC3005FU	TEC3005L	400 kg•m	5 kg•m	3000 ft. lb.	50 ft. lb.	140	5 1/2	2 13/16	—

\*Does not include square drive dimension.

†Includes separately packed 93TQPA 5' tubular extension handle.

\*\*Includes separately packed 92TQPA 4' tubular extension handle.

### Guaranteed Accuracy:

Precise 1% models are accurate within ±1% of the reading from 20% of full scale to full scale clockwise and counterclockwise.

Standard 2% models are accurate within ±2% of the reading from 20% of full scale to full scale clockwise and counterclockwise.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

# T-Handle TORQOMETER® Torque Wrenches **Torque**



TEX602TLA



TEXC2003TFU



85TQP

## U.S. Reading Standard 2% Accuracy

Input Drive Female Sq., in.	Output Drive Male Sq., in.	Follow up Models	Light Signal Models	U.S. Range, ft. lb.	U.S. Increments, ft. lb.	Metric Range, kg•m	Metric Increments, kg•m	Length, inches	Width, inches	Head Depth, inches	"T" Bars	Optional "T" Bars/ Extension Handles Length Ext. inches	Length inches
3/4	3/4	TEX602TFUA	TEX602TLA	600	10	—	—	9	3 1/4	3 3/4	79TQP	45	—
3/4	1	TEX1003TFUA	TEX1003TLA	1000	10	—	—	9 7/8	3 5/8	4 1/8	81TQP	66	—
1	1	—	TEX2003TL	2000	25	—	—	10 7/8	4 3/8	4 7/16	82TQP	18	85TQP 31
1	1 1/2	TEX2005TFU	—	2000	25	—	—	10 7/8	4 3/8	4 7/16	82TQP	18	85TQP 31

## Combination U.S./Metric Reading

3/4	3/4	TEXC602TFUA	TEXC602TLA	600	20	80	2	9	3 1/4	3 3/4	79TQP	45	—
3/4	1	TEXC1003TFUA	TEXC1003TLA	1000	20	136	2	9 7/8	3 5/8	4 1/8	81TQP	66	—
1	1	TEXC2003TFU	TEXC2003TL	2000	50	280	5	10 7/8	4 3/8	4 7/16	82TQP	18	85TQP 31

## TORQOMETER® Torque Drivers - 1/4" Drive



TQSC4FUA



TQSSC4FUA

## U.S. Reading Standard 2% Accuracy

Standard Basic Models	Standard Follow up Models	Length, inches	Stubby Basic Models	Stubby Follow up Models	Length, inches	Range	Increments
TQS025A	TQS025FUA	7 3/4	TQSS025A	TQSS025FUA	5 1/4	48 in. oz./3 in. lb.	1 in. oz./ 1/16 in. lb.
TQS050A	TQS050FUA	7 3/4	TQSS050A	TQSS050FUA	5 1/4	96 in. oz./6 in. lb.	2 in. oz./ 1/8 in. lb.
TQS1A	TQS1FUA	7 3/4	TQSS1A	TQSS1FUA	5 1/4	192 in. oz./12 in. lb.	4 in. oz./ 1/4 in. lb.
TQS2A	TQS2FUA	7 3/4	TQSS2A	TQSS2FUA	5 1/4	384 in. oz./24 in. lb.	8 in. oz./ 1/2 in. lb.
TQS2.5A	TQS2.5FUA	7 3/4	TQSS2.5A	TQSS2.5FUA	5 1/4	480 in. oz./30 in. lb.	12 in. oz./1 in. lb.
TQS4A*	TQS4FUA*	8 11/16	TQSS4A*	TQSS4FUA*	5 1/4	50 in. lb.	1 in. lb.
TQS6A*	TQS6FUA*	8 11/16	TQSS6A*	TQSS6FUA*	5 1/4	75 in. lb.	1 in. lb.

## Combination U.S./Metric Reading - Standard 2% Accuracy

—	TQSC1FUA	7 3/4	—	TQSSC1FUA	5 1/4	17 kg•cm/15 in. lb.	.5 kg•cm/.5 in. lb.
—	TQSC2.5FUA	7 3/4	—	TQSSC2.5FUA	5 1/4	35 kg•cm/30 in. lb.	1 kg•cm/1 in. lb.
—	TQSC4FUA*	8 11/16	—	TQSSC4FUA*	5 1/4	56 kg•cm/50 in. lb.	2 kg•cm/2 in. lb.
—	TQSC6FUA	—	—	TQSSC6FUA*	5 1/4	90 kg•cm/75 in. lb.	3 kg•cm/5 in. lb.

## Combination U.S./Newton Meter Reading - Standard 2% Accuracy\*\*

—	TQSR1FUA	7 3/4	—	—	—	160 N•cm/15 in. lb.	5 N•cm/.25 in. lb.
—	TQSR2.5FUA	7 3/4	—	—	—	3.4 N•m/30 in. lb.	.1 N•m/1 in. lb.
—	TQSR4FUA*	8 11/16	—	—	—	550 N•cm/50 in. lb.	10 N•m/1 in. lb.
—	TQSR6FUA*	8 11/16	—	—	—	8.4 N•m/75 in. lb.	.2 N•m/5 in. lb.

All drivers come in PB47 Plastic Case.

\*Includes 1/4" internal square drive in handle.

\*\* Precise 1% models are available on special order.

ANSI Spec. B107.14M-2004 applies to all these models.

## Torque Angle Gauges

### TA358 Torque Angle Gauge

Gauge determines angle controlled torque tightening. Allows user to follow manufacturer's specifications calling for fasteners to be tightened after torque loads are applied. Use on automotive, diesel and industrial equipment plus head bolts and rod bolts on motorcycles. 3/8" square drive.

### TA362 Torque Angle Gauge

Allows you to follow manufacturer's specifications calling for fasteners to be tightened after torque loads are applied. Calibrated in degrees in large, easy-to-read increments. 3/4" square drive.

TA360. Similar to TA362 above except 1/2" square drive.



TA362

### RELATED ITEMS

TechAngle™ Wrench, pg 292



### WARNING

- Do not exceed rated torque.
- Do not use to break fasteners loose.
- Periodic recalibration is necessary to maintain accuracy of any torque wrench. Recalibrate every 6 months or more frequently depending on use.
- Read additional safety precautions on pages 534 to 537.



# Torque Interchangeable Head, Click Type Torque Wrenches

Interchangeable heads permit ratcheting, fixed, or open end torquing capability with either adjustable or preset torque wrench bodies. A push of the locking pin provides quick change action, with a wide range of head styles to choose from.

- Selection—there are two adjustable models for quickly setting desired torque and eight preset models for assembly line work
- Slim Profile—each torque body is thin enough and long enough to get into tight areas
- Micrometer Type Adjustment—ensures fast, accurate settings and changes
- Guaranteed Accuracy—all QC Series interchangeable torque wrenches are accurate  $\pm 4\%$  clockwise and  $\pm 6\%$  counterclockwise from 20% of full scale to full scale



QC11200



QC1P300



QC3P200

## Torque Wrench Bodies/Adjustable/ $\pm 4\%$ Accuracy

Stock No.	Model Type	Shank Dia.	Range	Increments	Length, inches
QC11200	Adjustable	J (0.425")	40-200 in. lb.	1 in. lb.	9 <sup>3</sup> / <sub>8</sub>
QC2175	Adjustable	J (0.425")	5-75 ft. lb.	.5 ft. lb.	13

## Torque Wrench Bodies/Pre-Set/ $\pm 4\%$ Accuracy

Stock No.	Model Type	Shank Dia.	Range	Length, inches
QC1P60	Preset	J (0.425")	10-60 in. lb. (11-66 dN•m)	6
QC1P100	Preset	J (0.425")	15-100 in. lb. (17-113 dN•m)	8
QC1P300	Preset	J (0.425")	60-300 in. lb. (68-339 dN•m)	10
QC2P75	Preset	J (0.425")	5-75 ft. lb. (7-100 N•m)	11
QC3P150	Preset	Y (0.560")	30-150 ft. lb. (41-203 N•m)	23
QC3P200	Preset	Y (0.560")	40-200 ft. lb. (55-270 N•m)	23
QC4P300	Preset	X (0.735")	60-300 ft. lb. (82-400 N•m)	27



QJD12A

## Square Drive Heads / Ratcheting

Allow use of torque wrench bodies above with sockets, crowfoot wrenches, or other similar attachment.

Square Drive, inches	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	Head O.D., in.	Depth, in.	Center of Fastener to Retaining Pin	Ratchet Service Kit
<sup>1</sup> / <sub>4</sub>	QJD8A** (350)				<sup>17</sup> / <sub>32</sub>	<sup>9</sup> / <sub>64</sub>	QJD Series - 2.50"	RKRT936
<sup>3</sup> / <sub>8</sub>	QJD12A** (900)	QYD12A** (1,200)			<sup>21</sup> / <sub>32</sub>	<sup>11</sup> / <sub>64</sub>	QYD Series - 3.00"	RKRF936
<sup>1</sup> / <sub>2</sub>	QJD16A** (900)	QYD16A** (2,400)	QXD16A** (3,000)		<sup>21</sup> / <sub>32</sub>	<sup>11</sup> / <sub>64</sub>	QXD Series - 4.50"	RKRS936
<sup>3</sup> / <sub>4</sub>			QXD24A (3,600)	QZD24B (7,200)	<sup>25</sup> / <sub>32</sub>	<sup>11</sup> / <sub>64</sub>	QZD Series - 5.75"	RKRQC4
1			QXD32A (3,600)	QZD32B (7,200)	<sup>29</sup> / <sub>32</sub>	<sup>11</sup> / <sub>64</sub>		RKRQC5

\*\* U.S. Patents 4,934,220 and 6,125,722 apply to these ratchet heads.

Value in parentheses is the Maximum Recommended Working Torque, in. lb.



QYSD16A

## Square Drive Heads / Fixed

Allow use of torque wrench bodies above with sockets, crowfoot wrenches, or other similar attachment.

Square Drive, inches	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	Center of Fastener to Retaining Pin
<sup>1</sup> / <sub>4</sub>	QJSD8A (350)				QJD Series - 2.50"
<sup>3</sup> / <sub>8</sub>	QJSD12A (900)	QYSD12A (1,200)			QYD Series - 3.00"
<sup>1</sup> / <sub>2</sub>	QJSD16A (900)	QYSD16A (2,400)	QXSD16A (3,000)		QXD Series - 4.50"
<sup>3</sup> / <sub>4</sub>			QXSD24A (3,600)	QZSD24A (7,200)	QZD Series - 5.75"
1			QXSD32A (3,600)	QZSD32A (7,200)	

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

# Heads for Click Type Torque Wrenches **Torque**

Center of fastener to retaining pin:

- \* QJO Series - 2.50"
- \* QYO Series - 3.00"
- \* QXO Series - 4.50"
- \* QZO Series - 5.75"



QJO28A

## Open End Heads

	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	O.D., inches	Head Depth, inches
1/4	QJO8A* (55)				17/32	9/64
5/16	QJO10A (110)				21/32	11/64
3/8	QJO12A (220)				25/32	11/64
7/16	QJO14A (310)				29/32	11/64
1/2	QJO16A (410)				1 1/16	11/64
9/16	QJO18A (695)	QYO18A (695)			1 1/16	11/64 [QJO18A = 9/32]
5/8	QJO20A (835)	QYO20A (835)			1 5/16	11/64 [QJO20A = 9/32]
11/16	QJO22A (900)	QYO22A (1,185)			1 7/16	11/64 [QJO22A = 5/16]
3/4	QJO24A (900)	QYO24A (1,500)	QXO24A (1,500)		1 19/32	11/64 [QJO24A = 11/32]
13/16	QJO26A (900)	QYO26A (2,310)	QXO26A (1,965)		1 23/32	3/8
7/8	QJO28A (900)	QYO28A (2,310)			1 23/32	3/8
15/16	QJO30A (900)	QYO30A (2,400)	QXO30A (2,400)		1 29/32	13/32
1	QJO32A (900)	QYO32A (2,400)	QXO32A (3,575)		2 1/32	7/16
1 1/16	QJO34A (900)	QYO34A (2,400)		QZO32A (3,575)	2 3/16	15/32
1 1/8		QYO36A (2,400)	QXO36A (3,600)	QZO36A (4,400)	2 5/16	15/32
1 3/16				QZO38A (5,200)	2 7/16	1/2
1 1/4		QYO40A (2,400)	QXO40A (3,600)	QZO40A (5,775)	2 9/16	17/32
1 5/16		QYO42A (2,400)		QZO42A (5,600)	2 21/32	9/16
1 3/8		QYO44A (2,400)	QXO44A (3,600)		2 3/16	19/32
1 7/16		QYO46A (2,400)	QXO46A (3,600)	QZO46A (7,200)	3	19/32
1 1/2		QYO48A (2,400)	QXO48A (3,600)	QZO48A (7,200)	3 1/16	5/8
1 9/16		QYO50A (2,400)	QXO50A (3,600)	QZO50A (7,200)	3 3/16	21/32
1 5/8		QYO52A (2,400)	QXO52A (3,600)	QZO52A (7,200)	3 11/32	11/16
1 11/16			QXO54A (3,600)	QZO54A (7,200)	3 13/32	23/32
1 3/4			QXO56A (3,600)	QZO56A (7,200)	3 9/16	23/32
1 13/16			QXO58A (3,600)	QZO58A (7,200)	3 21/32	13/32
1 7/8			QXO60A (3,600)	QZO60A (7,200)	3 13/16	25/32
2			QXO64A (3,600)	QZO64A (7,200)	4 1/16	27/32
2 1/16				QZO66A (7,200)	4 3/16	27/32
2 1/8				QZO68A (7,200)	4 5/16	5/8
2 1/4				QZO72A (7,200)	4 9/16	15/16
2 1/2				QZO80A (7,200)	5 1/16	1

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

\*Use with QC1P100 and QC1I200 Torque Bodies only; other heads may be used with all listed torque bodies.

## Open End Heads

	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	O.D., mm	Head Depth, mm
6	QJOM6A* (60)				13.5	3.6
7	QJOM7A* (75)				13.5	3.6
8	QJOM8A* (120)				16.5	3.3
9	QJOM9A (170)				19.8	4.8
10	QJOM10A (265)				19.8	4.8
11	QJOM11A (400)				22.9	5.6
12	QJOM12A (430)				26.9	6.1
13	QJOM13A (495)				26.9	6.1
14	QJOM14A (665)	QYOM14A (665)			29.5	6.6
15	QJOM15A (885)	QYOM15A (885)			33.3	6.9
16	QJOM16A (900)	QYOM16A (1,060)			33.3	6.9
17	QJOM17A (900)	QYOM17A (1,235)	QXOM17A (1,235)		37.1	7.3
18	QJOM18A (900)	QYOM18A (1,375)	QXOM18A (1,375)		37.1	7.3
19	QJOM19A (900)	QYOM19A (1,650)	QXOM19A (1,650)		40.4	7.6
20		QYOM20A (1,925)	QXOM20A (1,925)		43.7	9.2
21	QJOM21A (900)	QYOM21A (2,160)	QXOM21A (2,160)		43.7	9.2
22	QJOM22A (900)	QYOM22A (2,400)	QXOM22A (2,470)		43.7	9.2
23	QJOM23A (900)	QYOM23A (2,400)	QXOM23A (2,745)		47	10
24	QJOM24A (900)	QYOM24A (2,400)	QXOM24A (2,970)	QZOM24A (2,970)	49	11
25	QJOM25A (900)	QYOM25A (2,400)		QZOM25A (3,295)	52	11
26	QJOM26A (900)		QXOM26A (3,570)	QZOM26A (3,570)	53	11
27	QJOM27A (900)	QYOM27A (2,400)		QZOM27A (3,825)	55	12
29		QYOM29A (2,400)	QXOM29A (3,600)	QZOM29A (4,550)	58	12
30		QYOM30A (2,400)	QXOM30A (3,600)	QZOM30A (4,950)	61	13
32		QYOM32A (2,400)	QXOM32A (3,600)	QZOM32A (5,755)	65	14
34		QYOM34A (2,400)	QXOM34A (3,600)	QZOM34A (6,595)	68	14
36		QYOM36A (2,400)	QXOM36A (3,600)	QZOM36A (7,200)	74	15

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

\*Use with QC1P100 and QC1I200 Torque bodies only; other heads may be used with all listed torque bodies.



QJOM11A

Center of fastener to retaining pin:

- \* QJOM Series - 2.50"
- \* QYOM Series - 3.00"
- \* QXOM Series - 4.50"
- \* QZOM Series - 5.75"

### WARNING

- Do not exceed rated torque.
- Do not use to break fasteners loose.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Do not replace worn parts individually; use entire contents of the service kit.



- Periodic recalibration is necessary to maintain accuracy of any torque wrench. Recalibrate every 6 months or more frequently depending on use.
- Read additional safety precautions on pages 534 to 537.

### RELATED ITEMS

Wrench Bodies, pgs 293, 300

# Torque Heads for Click Type Torque Wrenches



QJX12A



QXX52A

## 12-Point Box End Heads

	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	O.D., inches	Head Depth, inches
1/4	<b>QJX8A</b> (220)				13/32	3/16
9/32	<b>QJX9A</b> (250)				13/32	3/16
3/8	<b>QJX12A</b> (490)				9/32	1/4
7/16	<b>QJX14A</b> (715)				21/32	5/16
1/2	<b>QJX16A</b> (900)				3/4	11/32
9/16	<b>QJX18A</b> (900)	<b>QYX18A</b> (1,340)			27/32	3/8
5/8	<b>QJX20A</b> (900)	<b>QYX20A</b> (2,050)			15/16	13/32
11/16	<b>QJX22A</b> (900)	<b>QYX22A</b> (2,400)			1 1/32	7/16
3/4	<b>QJX24A</b> (900)	<b>QYX24A</b> (2,400)	<b>QXX24A</b> (2,630)		1 1/8	15/32
13/16	<b>QJX26A</b> (900)	<b>QYX26A</b> (2,400)			1 3/16	17/32
7/8	<b>QJX28A</b> (900)	<b>QYX28A</b> (2,400)	<b>QXX28A</b> (3,600)		1 9/32	9/16
15/16	<b>QJX30A</b> (900)	<b>QYX30A</b> (2,400)	<b>QXX30A</b> (3,600)		1 3/8	19/32
1	<b>QJX32A</b> (900)	<b>QYX32A</b> (2,400)	<b>QXX32A</b> (3,600)		1 15/32	21/32
1 1/16	<b>QJX34A</b> (900)	<b>QYX34A</b> (2,400)		<b>QZX34A</b> (5,940)	1 9/16	11/16
1 1/8			<b>QXX36A</b> (3,600)	<b>QZX36A</b> (6,430)	1 5/8	11/16
1 3/16		<b>QYX38A</b> (2,400)		<b>QZX38A</b> (7,200)	1 3/4	3/4
1 1/4		<b>QYX40A</b> (2,400)	<b>QXX40A</b> (3,600)	<b>QZX40A</b> (7,200)	1 13/16	3/4
1 5/16				<b>QZX42A</b> (7,200)	1 29/32	3/4
1 7/16			<b>QXX46A</b> (3,600)	<b>QZX46A</b> (7,200)	2 1/16	7/8
1 1/2		<b>QYX48A</b> (2,400)	<b>QXX48A</b> (3,600)	<b>QZX48A</b> (7,200)	2 5/32	7/8
1 9/16				<b>QZX50A</b> (7,200)	2 1/4	7/8
1 5/8		<b>QYX52A</b> (2,400)	<b>QXX52A</b> (3,600)	<b>QZX52A</b> (7,200)	2 11/32	7/8
1 3/4				<b>QZX56A</b> (7,200)	2 17/32	1 1/32
1 13/16			<b>QXX58A</b> (3,600)	<b>QZX58A</b> (7,200)	2 5/8	1 1/32
1 7/8			<b>QXX60A</b> (3,600)	<b>QZX60A</b> (7,200)	2 11/32	1 1/32
2			<b>QXX64A</b> (3,600)	<b>QZX64A</b> (7,200)	2 7/8	1 1/32
2 1/16				<b>QZX66A</b> (7,200)	2 21/32	1 3/16
2 1/8				<b>QZX68A</b> (7,200)	3 1/16	1 3/16
2 1/4				<b>QZX72A</b> (7,200)	3 7/32	1 3/16
2 1/2				<b>QZX80A</b> (7,200)	3 19/32	1 5/16

Center of fastener to retaining pin:

\* **QJX** Series - 2.50"

\* **QYX** Series - 3.00"

\* **QXX** Series - 4.50"

\* **QZX** Series - 5.75"

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

**RELATED ITEMS**

Wrench Bodies, pgs 293, 300

## 12-Point Box End Heads



QYXM21A

	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	O.D., mm	Head Depth, mm
6	<b>QJXM6A</b> (180)				11	5
7	<b>QJXM7A</b> (240)				11	5
8	<b>QJXM8A</b> (265)				13	6
9	<b>QJXM9A</b> (355)				14	6
10	<b>QJXM10A</b> (630)				15	7
11	<b>QJXM11A</b> (710)				17	8
12	<b>QJXM12A</b> (805)				18	8
13	<b>QJXM13A</b> (900)				20	9
14	<b>QJXM14A</b> (900)	<b>QYXM14A</b> (1,400)			21	9
15	<b>QJXM15A</b> (900)	<b>QYXM15A</b> (1,770)			22	10
16	<b>QJXM16A</b> (900)	<b>QYXM16A</b> (2,195)			24	10
17	<b>QJXM17A</b> (900)	<b>QYXM17A</b> (2,365)	<b>QXXM17A</b> (2,365)		25	11
18	<b>QJXM18A</b> (900)	<b>QYXM18A</b> (2,400)	<b>QXXM18A</b> (2,690)		27	12
19	<b>QJXM19A</b> (900)	<b>QYXM19A</b> (2,400)	<b>QXXM19A</b> (2,860)		28	12
20	<b>QJXM20A</b> (900)	<b>QYXM20A</b> (2,400)	<b>QXXM20A</b> (3,070)		30	13
21	<b>QJXM21A</b> (900)	<b>QYXM21A</b> (2,400)	<b>QXXM21A</b> (3,295)		31	13
22	<b>QJXM22A</b> (900)	<b>QYXM22A</b> (2,400)	<b>QXXM22A</b> (3,600)		32	14
23	<b>QJXM23A</b> (900)	<b>QYXM23A</b> (2,400)	<b>QXXM23A</b> (3,600)		34	15
24	<b>QJXM24A</b> (900)	<b>QYXM24A</b> (2,400)	<b>QXXM24A</b> (3,600)	<b>QZXM24A</b> (4,505)	35	15
25				<b>QZXM25A</b> (4,950)	37	16
26	<b>QJXM26A</b> (900)	<b>QYXM26A</b> (2,400)		<b>QZXM26A</b> (5,380)	38	16
27	<b>QJXM27A</b> (900)	<b>QYXM27A</b> (2,400)	<b>QXXM27A</b> (3,600)	<b>QZXM27A</b> (5,940)	39	17
29		<b>QYXM29A</b> (2,400)		<b>QZXM29A</b> (6,640)	42	18
30		<b>QYXM30A</b> (2,400)	<b>QXXM30A</b> (3,600)	<b>QZXM30A</b> (7,035)	44	19
32		<b>QYXM32A</b> (2,400)	<b>QXXM32A</b> (3,600)	<b>QZXM32A</b> (7,200)	46	19
34		<b>QYXM34A</b> (2,400)		<b>QZXM34A</b> (7,200)	48	19
36		<b>QYXM36A</b> (2,400)		<b>QZXM36A</b> (7,200)	53	22

Center of fastener to retaining pin:

\* **QJXM** Series - 2.50"

\* **QYXM** Series - 3.00"

\* **QXXM** Series - 4.50"

\* **QZXM** Series - 5.75"

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

# Heads for Click Type Torque Wrenches **Torque**

## Flare Nut Heads, 6-Point

	Shank Dia. J (0.425")	Shank Dia. Y (0.560")	O.D., inches	Head Depth, inches
7/16	<b>QJRXS14A</b> (500)		27/32	11/32
1/2	<b>QJRXS16A</b> (650)		29/32	3/8
15/16	<b>QJRXS30A</b> (900)		1 1/2	19/32
5/8		<b>QYRXS20A</b> (950)	1 3/32	7/16
11/16		<b>QYRXS22A</b> (1,100)	1 9/32	15/32
3/4		<b>QYRXS24A</b> (1,245)	1 1/4	1/2
13/16		<b>QYRXS26A</b> (1,400)	1 5/16	17/32
7/8		<b>QYRXS28A</b> (1,600)	1 13/32	9/16
15/16		<b>QYRXS30A</b> (1,750)	1 1/2	19/32
1		<b>QYRXS32A</b> (1,900)	1 9/16	5/8
1 1/8		<b>QYRXS36A</b> (2,200)	1 3/4	11/16

Value in parentheses is the Maximum Recommended Working Torque, in. lb.

## Flare Nut Heads, 6-Point

	Shank Dia. J (0.425")	Shank Dia. Y (0.560")	O.D., mm	Head Depth, mm
10	<b>QJRXSM10A</b> (400)		20	8
11	<b>QJRXSM11A</b> (500)		21	9
12	<b>QJRXSM12A</b> (600)		22	9
13	<b>QJRXSM13A</b> (700)		24	9
14	<b>QJRXSM14A</b> (740)		25	10
16		<b>QYRXSM16A</b> (900)	27	11
17	<b>QJRXSM17A</b> (900)	<b>QYRXSM17A</b> (1,000)	29	11
18		<b>QYRXSM18A</b> (1,125)	30	12
19		<b>QYRXSM19A</b> (1,250)	32	12
20		<b>QYRXSM20A</b> (1,350)	33	13

Values in parentheses is the Maximum Recommended Torque, in. lb.

## Flare Nut Heads, 12-Point

	Shank Dia. J (0.425")	Shank Dia. Y (0.560")	O.D., inches	Head Depth, inches
9/16		<b>QYRX18A</b> (800)	1	13/32
5/8	<b>QJRX20A</b> (900)	<b>QYRX20A</b> (950)	1 3/32	7/16
11/16	<b>QJRX22A</b> (900)	<b>QYRX22A</b> (1,100)	1 5/32	15/32
3/4	<b>QJRX24A</b> (900)	<b>QYRX24A</b> (1,245)	1 1/4	1/2
13/16	<b>QJRX26A</b> (900)	<b>QYRX26A</b> (1,400)	1 11/32	17/32
7/8	<b>QJRX28A</b> (900)	<b>QYRX28A</b> (1,600)	1 13/32	9/16
15/16	<b>QJRX30A</b> (900)	<b>QYRX30A</b> (1,750)	1 1/2	19/32
1	<b>QJRX32A</b> (900)	<b>QYRX32A</b> (1,900)	1 19/32	21/32
1 1/16		<b>QYRX34A</b> (2,050)	1 21/32	11/16
1 1/8		<b>QYRX36A</b> (2,200)	1 3/4	23/32
1 3/16		<b>QYRX38A</b> (2,400)	1 7/16	3/4
1 1/4		<b>QYRX40A</b> (2,400)	1 29/32	25/32

Values in parentheses is the Maximum Recommended Torque, in. lb.



QJRX18A

Center of Fastener to Retaining Pin:

<b>QJRXS</b> Series - 2.50"	<b>QYRX</b> Series - 3.00"
<b>QYRXS</b> Series - 3.00"	<b>QJRO</b> Series - 2.50"
<b>QJRXSM</b> Series - 2.50"	<b>QYRO</b> Series - 3.00"
<b>QYRXSM</b> Series - 3.00"	<b>QJROM</b> Series - 2.50"
<b>QJRX</b> Series - 2.50"	<b>QYROM</b> Series - 3.00"

## Open End Heads / Ratcheting

	Shank Dia. J (0.425")	Shank Dia. Y (0.560")	O.D., inches	Head Depth, inches
5/16	<b>QJRO10A</b> (130)		5/8	3/16
7/16		<b>QYRO14A</b> (415)	7/8	1/4
1/2		<b>QYRO16A</b> (515)	1	9/32
9/16	<b>QJRO18A</b> (720)	<b>QYRO18A</b> (720)	1 1/8	9/32
5/8		<b>QYRO20A</b> (1,100)	1 7/32	5/16

Values in parentheses is the Maximum Recommended Torque, in. lb.

## Open End Heads / Ratcheting

	Shank Dia. J (0.425")	Shank Dia. Y (0.560")	O.D., mm	Head Depth, mm
10	<b>QJROM10A</b> (245)		20	6

Values in parentheses is the Maximum Recommended Torque, in. lb.

## Geared Head Multipliers

### Geared Head Multipliers-X4 Models

Use singly or stack up to three X4s. Stacking multiplies, not adds, torque ratios—resulting torque can be considerable. Only the torque ratio changes; total capacity is equal to and does not exceed the capacity of the largest wrench in the stack.

Specifications	GA184A	GA185	GA190
Reaction Type	Bar	Bar	Bar
Output Capacity, ft. lb.	1,000	2,000	2,000
Input Capacity, ft. lb.	249	588	588
Gear Ratio	4.0:1	4.0:1	4.0:1
Torque Ratio	3.4:1**	3.4:1**	3.4:1**
Reductions	1	—	1
Input Drive Female Square, inches	1/2	3/4	3/4
Output Drive Male Square, inches	3/4	1	1
Dimension A, O.D., inches	3 1/2	3 3/4	3 3/4
Dimension B, Length, inches	6 5/8	6 5/8	6 5/8
Dimension C, Head Height, inches	1/2	3/4	1 1/2
Dimension D, Drive End Height, inches	3/4	1	1
Dimension E, Overall Height, inches	3 11/32	4 3/8	5
Overall Length, inches	22	25	25
Anti-Backlash	—	—	Yes

\*\*Torque accuracy ratio is ±10%.

NOTE: Handle or other anchor plate serves as a "reaction bar" and must be placed against a strong fixed object.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.



 **WARNING**

- Do not exceed rated torque.
- Do not use to break fasteners loose.
- Read additional safety precautions on pages 534 to 537.



# Torque Geared Head Multipliers



YA391



YA394

## Geared Head Multipliers

Some models feature a replacement square drive to protect components by automatically shearing when rated output is exceeded by 3% to 10%. All models include an input/output conversion chart in ft. lb. and N•m.

Specifications	YA290PLUS	YA300	YA391	YA292	YA392	YA393	YA394	YA395
Reaction Type	Bar	Bar	Bar	Bar	Bar	Bar	Plate	Plate
Output Capacity, ft. lb.	750	1,000	1,200	2,000	2,200	3,200	5,000	8,000
Input Capacity, ft. lb.	227	303	200	500	162	173	189	154
Gear Ratio	1:04	4.0:1	6.3:1	4.27:1	15.0:1	20.25:1	29.25:1	60.0:1
Torque Ratio	1:3.3	3.3:1**	6.0:1*	3.7:1**	13.6:1*	18.5:1*	26.5:1*	52.0:1*
Reductions	1	1	1	1	2	3	2	2
Input Drive Female Square, inches	1/2	1/2	1/2	3/4	1/2	1/2	1/2	1/2
Output Drive Male Square, inches	3/4	3/4	3/4	1	1	1	1 1/2	1 1/2
Bearings	—	—	Needle	—	Needle	Needle	Needle	Needle
Length, inches	8 3/4	17 1/2	20	19 1/2	20	20	15	15 1/2
Width, inches	2 3/4	2 13/16	4	4 1/2	4	4	8 5/8	6
Height, inches	3 1/4	3 5/16	4 1/16	3 3/4	5 13/16	6 1/2	8 3/4	10 3/4
Storage Case	Yes	—	Yes	—	Yes	Yes	Yes	Yes
Angle Protractor	—	—	Yes	—	Yes	Yes	—	—
Anti-Backlash	—	—	—	—	Yes	Yes	Yes	Yes
Replacement Square Drive	No	—	YA391RK	—	YA392RK	YA393RK	YA394RK	YA395RK

\*Torque accuracy ratio is ±5%.

\*\*Torque accuracy ratio is ±10%.

NOTE: Handle or other anchor plate serves as a "reaction bar" and must be placed against a strong fixed object.

## Reversible Air Motor

**YA390.** Provides up to 200 ft. lb. of input power for each of the YA Series Gear Multipliers. Output drive: 1/2". Maximum operating air pressure: 60 PSIG. Free speed: 70 RPM. Dimensions: 16 1/4" x 3 1/8" x 4 3/4".



YA390

# Electronic Torque Wrenches

## Electronic Dial Type Torque Wrenches

Great addition to worldwide automotive, nuclear, military and industrial markets.

Digital accuracy is + / - 1% from 20% to 100% of full scale in both directions.

3 step LED visual signal system: Over torque alarm (Red), Approaching target warning signal when getting close (Yellow at 90% of target), and Target achieved signal when desired torque is obtained (Green).

Secondary audible alarm goes off when desired torque is reached.

Features:

- Display can be turned 360 degrees to allow left hand usage
- 4 units of measurement on the same torque wrench: in. lb., ft. lb., N•m, Kg•cm
- Large 2 inch easy to read single scale eliminates confusion on conversion scales
- Tough polycarbonate body insures durability
- Comfort cushion grip reduces strain for prolonged use
- Rubber boot protects work piece
- The durable, composite and steel body beam provides years of accurate service
- Packaged in storage box for maximum protection
- 9 Volt battery with long life and easy replacement, 80 hours
- Battery cover designed to be FOD proof
- EU/CE - DE, ES, FR, IT, GB (all units)



ED2600

Stock No.	Square Drive, inches	Range, maximum	Range N•m
ED1050	1/4	50 in. lb., 4.17 ft. lb., 57.61 Kg•cm	6.7 to 67.8 N•m
ED2250	3/8	250 in. lb., 20.83 ft. lb., 288.03 Kg•cm	33.9 to 339 N•m
ED2600	3/8	600 in. lb., 50 ft. lb., 691.27 Kg•cm	81.3 to 813.5 N•m

# Electronic Torque Wrenches **Torque**



QCE215A

## ELECTROTORK® Torque Wrenches

Feature a high degree of accuracy either clockwise or counterclockwise regardless of handhold position. Easy-to-read scales and sealed membrane keypad enhance operator usefulness. Each wrench includes a storage case.

Stock No.	Square Drive, inches	Range	Increments	Length, inches
QCE115A	1/4	5-50 in. lb., 5.6-56 dNm, 5.7-57 kg•cm, 80-800 in. oz	.01 in. lb., .01 dN•m, .01 kg•cm, .10 in. oz.	13 1/2
QCE215A	3/8	25-250 in. lb., 28-282 dN•m, 29-288 kg•cm	.01 in. lb., .10 dN•m, .10 kg•cm	14 7/8
QCE225A	3/8	5-50 in. lb., 68-677 dNm, 69-691 kg•cm, 60-600 in. lb.	.01 ft. lb., .10 dN•m, .10 kg•cm, .10 in. lb.	14 7/8
QCE325A	1/2	25-250 ft. lb., 34-338 N•m, 3.4-34 kg•m	.10 ft. lb., .10 N•m, .01 kg•m	21 1/2
QCE425A	3/4	60-600 ft. lb., 81-813 N•m, 8.3-83 kg•m	.10 ft. lb., .10 N•m, .01 kg•m	46 1/2

**PBQCE1** Storage case for all QCE Series ELECTROTORK® Torque Wrenches. The certification of accuracy provided per ASME and ISO Standards is 20% to 100% of full scale.

- Largest Storage Capacity Available—up to 4,000 torque values can be stored in memory
- Downloading Capability—individual torque values and store values in memory may be directly downloaded to a printer or data logger via an RS-232 connection
- Selectable Modes of Operation—"peak hold" and "track" modes of operation are standard
- Range—available from 5 in. lb. to 600 ft. lb. Engineering units can be selected through the keypad (in. oz., in. lb., ft. lb., N•m, dN•m, k•gm, and kg•cm)
- Accuracy—±1% from 10% to 100% of scale
- Quality Construction—proven industrial quality. All ELECTROTORK® electronic torque wrenches are designed for continuous use
- 9V alkaline battery included



QC1ETT50

## Electronic Torque Testers

Designed to be a sturdy, low cost tester, these electronic torque testers can be placed on the wall in the factory or on a bench to allow operators to test torque wrenches or power tools without having to leave their station.

- Integral transducer and sturdy housing allow mounting in virtually any position
- Integral Transducer: Full bridge strain gauge, 350 ohms, 1500 µE, 3mV/V F.S., 3.75V excitation
- Unique neck design allows operator to see display when testing long torque wrenches
- Accuracy: ±0.5% of reading ±1 count in the least significant digit (10% to 100% of full range) at 25° C
- Display Accuracy: 4 digits, 9,999 counts
- Stability: +0.044% per °C
- Track and Peak modes
- Can be used with non-impacting power tools (joint rate simulators required)
- Dual scale (English/N•m or English/dN•m)
- Auto/manual display reset
- Reads bi-directional (clockwise and counterclockwise)
- Uses rechargeable NiCad batteries. Charger included
- All testers include power adaptor cord, socket adaptor (internal to internal) and PB1ETT Storage Case

Stock No.	Square Drive, inches	Range English	Range, N•m
QC1ETT400	1/4	40-400 in. oz.	28-280 cN•m
QC1ETT10	1/4	10-100 in.oz.	7.0-70.6 cN•m
QC1ETT50	1/4	5-50 in. lb.	5.6-56 dN•m
QC1ETT100	1/4	10-100 in. lb.	11.3-113 dN•m
QC2ETT250	3/8	25-250 in. lb.	28-280 dN•m
QC2ETT1000	3/8	100-1,000 in. lb.	113-1,130 dN•m
QC3ETT250	1/2	25-250 ft. lb.	34-339 N•m
QC4ETT600	3/4	60-600 ft. lb.	81-813 N•m

The certification of accuracy provided per ASME and ISO Standards is 10% to 100% of full scale.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

## WARNING



- Do not exceed rated torque.
- Over torquing can cause breakage. Wrench can break while breaking fasteners loose. An out of calibration torque wrench can cause part of tool breakage.
- Periodic recalibration is necessary to maintain accuracy.
- Do not use a torque wrench to break fasteners loose.

- Do not use with impact wrenches.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Broken tools can cause injury.
- Read additional safety precautions on pages 534 to 537.

# Torque VERSATORQ® Metering / Data Acquisition System

The VERSATORQ® system can be used for any job requiring repetitive torque applications or regular inspection of fastener torque. This system can also be used to verify pneumatic and mechanical torque wrench accuracy. Peak torque can be captured by using a rotary sensor with a non-impact power tool operating at

less than 1,000 RPM and being driven into a soft joint. Inspectors can check critical fastener torque and record data for quality audits. Perfect for process quality control. The VERSATORQ® system can internally perform statistical analysis, including histograms, and print to a serial printer.

- **Versatile** - battery operated and lightweight, with available ranges from 2 in. oz. to 20 in. oz. to 150 ft. lb. to 1,500 ft. lb. and 7 units of measure: in. oz., in. lb., ft. lb., N•m, d•Nm, kgm, and kgcm. The VERSATORQ® system can be used with sockets, extensions, universal joints, ratcheting drivers, or any of these combined
- **Data Acquisition** - store and recall up to 3,500 readings. An internal memory backup battery retains setup and last memory data for up to ten years
- **Track or Peak Mode** - track mode displays applied torque value and peak mode displays highest torque value
- **Easily Calibrated** - customer calibration supports ISO9000. Instructions for step by step calibration provided in the users manual
- **Smart Sensors** - built in EEPROM memory chip stores sensor identification and calibration factors. Factory calibrated, a sensor retains its accuracy with all VERSATORQ® meters; just plug in the desired sensor. Periodic recalibration is necessary

- **120VAC/220VAC, 60 Hz Adaptor** - rechargeable battery and handy belt clip allow you to take it to the task or use it at the bench with the optional table stand and AC adaptor
- **PC Statistical Analysis Output** - download histogram, minimum and maximum reading, mean, sigma N, sigma, Cp, Cpk, % error, and number of readings under and over tolerance
- **Serial Port Interface with Computer or Printer** - true RS-232 communications port for downloading to computer or serial printer. Also configurable to MITUTOYO statistical printer protocol
- **Visual and Audio Cues** - analog bar graph at top of display provides a live indication of applied torque. An OVER warning flag comes on to indicate that maximum sensor range has been exceeded. Green MIN LED indicates lower tolerance has been achieved, and Red MAX LED indicates upper tolerance has been exceeded. Audio alarm produces a distinctive 2 kHz tone. Includes an audio output jack for optional headphones in a noisy environment



**VERSATORQ1®**  
Torque Acquisition Meter  
Includes VERSACHARGE1 Charger and PB57A Case.



**VERSAMETER®**

Sensors sold separately.

**VERSAMETER®**  
Electronic Torque Acquisition Meter  
Performs most of the same functions as the VERSATORQ® Torque Acquisition Meter. Will not perform the Data Storage/Recall, Statistical Analysis and Histogram functions and does not offer the Serial Output Port feature.

## VERSATORQ1®/VERSAMETER® System Specifications

### Specifications

<b>Description</b> - VERSATORQ	120VAC Charger, and Carrying Case.
<b>Description</b> - VERSATORQ1	Basic Torque Acquisition Meter
<b>Modes</b> - VERSAMETER	TRACK, PEAK HOLD
<b>Display</b>	4 digit with alpha and numeric function flags
<b>Display Capacity*</b>	+/- 4 digits, 8000 counts
<b>Accuracy</b>	±1% of Reading (10 to 100% of Sensor Range) (+/- 2% with VERSA1S10 and VERSA1S20 Sensors)
<b>Push-Button Keypad</b>	MIN/MAX Alarm, ZERO TARE, SET-UP, UNITS, STORE/RECALL/CLEAR, SEND, STATISTICS, ENTER
<b>Units Of Measure</b>	in. oz., in. lb., ft. lb., N•m, dN•m, kg•m, kg•cm
<b>Operating Temperature</b>	5°C to 42°C (40°F to 110°F)
<b>Storage Temperature</b>	-10°C to 50°C (-2°F to 12°F)
<b>Humidity</b>	Up to 90%, non-condensing
<b>Dimensions</b>	3" W, 2.5" H (3" with belt clip), 6" D
<b>Weight</b>	1 lb.
<b>Charge Life (full charge to shutoff)</b>	20 hours continuous
<b>Battery Charger</b>	120VAC or 220VAC, 50-60 Hz
<b>Data Storage/Recall</b>	3500 measurements
<b>Battery Charger Output</b>	9VDC, 200mA
<b>Serial Output Port - VERSATORQ1</b>	RS-232 (True), 300-19.2K baud, and Mitutoyo (statistical protocol)
<b>Statistical Analysis - VERSATORQ1</b>	MAX, MIN, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo
<b>Histogram - VERSATORQ1</b>	Lower set limit, upper set limit, 10 divisions

\*VERSTAORQ® display ignores torque input less than .5% of full scale in track mode and 2.0% of full scale in peak mode.

## VERSATORQ® System Accessories

Stock No.	Description
<b>VERSACHARGE1</b>	Power Pack, 120VAC to 9VDC
<b>VERSACHARGE2</b>	Power Pack, 220VAC to 9VDC (Europe)
<b>VERSACHARGE3</b>	220VAC to 9VDC Power Pack / Charger (Australia / United Kingdom)
<b>VERSAPHONE</b>	Head Phones
<b>VERSACABLE</b>	RS-232 Serial Printer Cable
<b>VERSACABLE2</b>	PC Interface Cable
<b>PB57A</b>	Carrying Case

## VERSATORQ® Sensors

Stock No.	Square Drive, inches	Range	Sensor Diameter, inches	Sensor Length, inches	Cable Length, inches
<b>VERSA1S20*</b>	1/4	2-20 in. oz.	.5	2.9	48
<b>VERSA1S10*</b>	1/4	1-10 in. lb.	.7	2.9	48
<b>VERSA1S50</b>	1/4	5-50 in. lb.	.9	2.1	48
<b>VERSA1S200</b>	1/4	20-200 in. lb.	.9	2.1	48
<b>VERSA2S100</b>	3/8	10-100 ft. lb.	1.2	2.4	48
<b>VERSA3S250</b>	1/2	25-250 ft. lb.	1.4	2.6	48
<b>VERSA4S600</b>	3/4	60-600 ft. lb.	2.0	3.9	96
<b>VERSA5S1500**</b>	1	150-1500 ft. lb.	2.4**	4.4	92†

\*Knurled handles allow for fingertip control.

\*\*Diameter does not include side mounted connector.

†Heavy duty coiled cord with 4-pin MS-style connector.

**NOTE:** Please reference the VERSATORQ® instruction manual for the sensor ranges and resolutions in different units of torque measurement.



**VERSA2S100**

# VERSATEST™ Electronic Torque Tester **Torque**

The VERSATEST™ Indicator is a laboratory grade instrument used for precise, in house torque wrench testing and calibration. High precision torque transducers provide system readings with an accuracy of +/- 0.25% of indicated value. Transducers are available in ranges from 15-200 in. oz. to 200-2,000 ft. lb. and feature a special built in memory chip that identifies the range and maintains the calibration between all VERSATEST™ Indicators. Setup and calibration programming is entered via front panel membrane keys. The VERSATEST™ can store and recall up to 3,000 different torque/force readings. Statistical analysis stored in memory can be downloaded to a computer or serial printer. A hard wired lithium battery keeps the internal memory and the date/time clock operating for up to ten years.



VERSATEST™

## VERSATEST™ Specifications:

Display	Large 5.5" x 1.5" backlighted LCD graphics display (240 x 64 dot matrix, 0.67" torque digits character height) 5 significant digits +/- 32,000 counts (16 bit A/D)
Capacity	5 significant digits +/- 32,000 counts (16 bit A/D)
Sample Rate	2000 samples per second
Display Rate	5 updates per second
Accuracy*	+/- 0.25% OF READING AT 25° C (with TTC Transducer calibration)
Temperature Drift	+ 0.03% / °C (+0.017% / °F)
Bar Graph	100 segment analog of applied torque scaled to Limits Set value
Units Of Measure	in. oz., in. lb., ft. lb., N•m, dN•m, kg•cm and kg•m
Modes	TRACK, PEAK HOLD, FIRST PEAK, POWER TOOL
Soft Key User Interface	Units, Calibration, Date/Time, Statistics, Hi/Low Limits Set, Data Store, Data Recall, Printer Setup, Zero, Auto/Manual Store/Send/Clear
Select Keys	Increment, Decrement, Shift Left, Shift Right, Enter
Operating Temperature	10 to 32° C (50 to 90° F)
Storage Temperature	-20 to 50° C (-2 to 122° F)
Humidity	85% Relative Humidity @ 21° C (70° F)
Dimensions	10" wide x 4" high x 10.5" deep (including carry handle)
Power Supply	Auto Switching 100VAC-24-VAC, 50/60 Hz, 50 watts
Data Storage/Recall	3,000 Measurements
Statistical Analysis	Max, Min, Range, Mean, Sigma N, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo
Histogram	Lower Set Limit, Upper Set Limit, 10 Divisions
Printer/Computer Serial Output Port	RS232 (True), 300-19.2K Baud
Computer Serial Com Port	RS232 (True), 300-19.2K Baud
Analog Output	+(CW)/-(CCW) 1.8V at Transducer Full Range Linearity, +/- 1% of reading
Loader Control Relays	Two, Normally Open, Form A, Rated 12VDC @ 1/2A close contact at 110% CW or CCW or torque/force transducer range

\* TTC Transducers used with, but not calibrated to, the VERSATEST™ Indicator provide a system accuracy of +/- 0.5% of reading @ 25° C.



TTC400

## Transducers

All TTC Series Transducers include the correct adaptor for the indicated torque range.

Stock No.	Description	Square Drive Size	Range	Bench Top Mounting Bracket
TTC5	Transducer	1/4	15-200 in. oz.	TTC3421
TTC6	Transducer	1/4	4-50 in. lb.	TTC3421
TTC65	Transducer	1/4	15-150 in. lb.	TTC3421
TTC7	Transducer	3/8	30-400 in. lb.	TTC3421
TTC8	Transducer	3/8	80-1000 in. lb.	TTC3421
TTC10	Transducer	1/2	10-125 ft. lb.	TTC3422
TTC11	Transducer	1/2	20-250 ft. lb.	TTC3422
TTC12	Transducer	3/4	60-600 ft. lb.	TTC3422
TTC13	Transducer	1	100-1000 ft. lb.	TTC15001
TTC14	Transducer	1	200-2000 ft. lb.	TTC15001
TTC400*	4- in 1- Transducer	1/4	4-50 in. lb. (min.)	—
		3/8	30-400 in. lb.	—
		3/8	80-1000 in. lb.	—
		1/2	20-250 ft. lb. (max.)	—

\* TTC400 requires th TTC5000-1 Adaptor Plate when used with the TTC600 Manual Loader, TTC800 Motorized Loader and VERSA600LDR.

## Features:

- Large LCD Display
- Automatic Downloading
- Two RS232C Serial Ports—Use with Printer and PC
- Data Storage/Recall (with Date/Time stamp) holds up to 3,000 measurements
- Real Time Clock
- Smart Transducers
- Solenoid Locking Mechanical Loader
- Analog Output—Connect to Oscilloscope or X-Y Plotter
- External Printer can be mounted on top of the VERSATEST™ unit
- Remote Foot Switch Interface for Send/Print Functions
- Multiple Languages (English, German, Spanish, French)
- Four Modes—TRACK, PEAK HOLD, FIRST PEAK, POWER TOOL
- Statistic Process Control (SPC) built in
- CE Conformity



VERSATEST600

## VERSATEST600 Electronic Torque Metering System

Provides high speed monitoring of static and dynamic torque inputs. Includes the VERSATEST™ Indicator, VERSA600LDR Loader, TTC12 Transducer, TTC400 4-in-1 Transducer and TTC5000-1 4-in-1 Adaptor Plate.

**VERSA600LDR Mechanical Loader.** Portable, table top torque wrench loader with safety shield. Unit will load dial, micrometer, beam and electronic torque wrenches. Optional torque screwdriver testing kit allows testing of torque screwdrivers. Maximum capacity of 600 ft. lb. Use with any TTC Series Transducer from 15 in. oz. to 600 ft. lb. Four cushion pads for adhesion to work surfaces without slipping. Large wheel for smooth cranking action.

*All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.*

## Accessories

TTC3421	Mounting Bracket "A"
TTC3422	Mounting Bracket "B"
TTC15002	Mounting Bracket "C"
TTC1121	Serial Printer
TTC501	Connects TTC610 Digital Indicator to PC.
TTC502	Connects TTC610 Digital Indicator to printer.
TTC75002	Torque Screwdriver Testing Kit



## WARNING

- Counter balance or anchor mounting base.
- Read additional safety precautions on pages 534 to 537.



# Torque Electronic Torque Tester and Calibrator

The TTC2000/TTC2800 Electronic Torque Tester/Calibrators feature the very latest digital circuitry for fast and accurate torque testing with the most advanced and user friendly system available today. At the heart of the system is the TTC610 or TTC810 Digital Indicator which automatically recognizes different transducers and electronically zeros the system - all without pushing one button. The TTC2000/TTC2800 System excels at versatile data acquisition, including measurement, storage, retrieval, statistical analysis and automatic downloading to the built in serial printer or an external printer/computer.

Use the TTC2000/TTC2800 System to accurately test all types of torque wrenches, torque screwdrivers, torque multipliers, cable tensiometers, tension and compression gauges as well as power tools such as nut runners, and electric/pneumatic screwdrivers. Developed under contract to the U.S. Air Force, the TTC2000/TTC2800 Electronic Torque Tester/Calibrators are the standard by which torque instruments are tested and calibrated.

- Automatic Sensor Recognition with TTC Series "Smart" Transducers
- Range: 15 in oz. to 2,000 ft. lb (bi-directional)
- Total Uncertainty (10% to 100% of range): +/- 0.25% of indicated torque value
- Alpha-numeric 8 digit display
- Memory to 3,000 values
- Includes low profile serial printer
- Date and time stamp for stored values
- Statistical analysis performed on stored data
- Programmable manual or automatic options for clear, store and print functions
- Recall and review of stored torque values
- Modes—TRACK, PEAK, FIRST PEAK, POWER TOOL and ANGLE
- RS232C port is standard
- Analog output is standard
- Full digital circuitry
- Eight torque measurement units: in. oz., in. lb., ft. lb., cN•m, dN•m, N•m, kg•cm and kg•m
- Automatic lock up for transducer protection
- Automatic zero
- Automatic transducer recognition
- Operates on 120VAC or 240VAC
- CE Conformity

Motor Controller on TTC2800 - mounts in this location.



## TTC2000 / TTC2800 System Specifications

### TTC2000 Manual Loader System

Torque/Force Display	Eight digit, alpha-numeric, super bright red LED, 0.55 inch character height
Capacity	8 digits +/- 32,000 counts (16 bit A/D)
Accuracy*	+/- 0.25% of reading at 25° C (with TTC Transducer calibration)
Temperature Drift	+ 0.03% / C (+ 0.017% / F)
Units Of Measure	TORQUE: ft. lb., in. lb., in. oz., N•m, dN•m, kg•cm and kg•cm; FORCE: lbf, ozf, N, dN, kp and gf
Maximum Range Display	2-line x 16 character 5 x 8 dot-matrix LCD used for MAX. Transducer range, Units, Angle, Calibration, Date/Time, Statistics, Torque/Force or Torque/Angle Limits Set, Data Store/Recall, Printer Set Up
Modes	Track, Peak Hold, Angle, First Peak, Power Tool
Operating Temperature	10 to 32° C (50 to 90° F)
Storage Temperature	-20 to 50° C (-2 to 122° F)
Humidity	Up to 90%, Non-condensing
Power Supply	120VAC +/-10%, 50/60Hz @ 3.14A (including motor current).
Data Storage/Recall	3,000 Measurements
Statistical Analysis	Max, Min, Range, Mean, SigmaN, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo
Histogram	Lower Set Limit, Upper Set Limit, 10 Divisions
Printer/Computer Serial Output Port	RS232 (True), 300-19.2K Baud
Computer Serial Com Port	RS232 (True), 300-19.2K Baud (Optional)
Analog Output	+(CW)/-(CCW) 1.8V at Transducer Full Range Linearity, +/-1% of reading
Loader Control Relays	Two, Normally Open, Form A, Rated 120VDC @ 1/2A close contact at 110% CW or CCW or torque/force transducer range
Loader Hand Crank	Input torque 8 ft. lb. Maximum, Output Torque 2,000 ft. lb. Maximum

### TTC2800 Motorized Control Loader System

Motorized Loader Modes	Manual; Auto Dial; Auto 1st Peak
Motorized Loader Power Supply	120VAC +/- 10% Hz @ 3.14A (including motor current); (optional step down transformer for 240VAC operation)

### TTC2800-220V

Power Supply	120VAC +/-10%, 50/60Hz @ 3.14A (including motor current).
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TTC2000

Basic System.  
Optional accessories on next page.

All Snap-on® Torque Wrenches, Drivers and Testers are provided with a Certificate of Calibration. All wrenches and drivers are calibrated per ASME B-107-14 and ISO 6789 Standards for Accuracy, from 20% to 100% of full scale, using NIST traceable equipment.

## TTC2000 / TTC2800 System Components

Stock No.	Description	Application
<i>TTC2000 Components</i>		
<b>TTC600</b>	Mechanical Loader	Applies load to torque wrenches for testing on TTC2000. Includes loader, torque indicator stand, torque pin, protective shield, small transducer adaptor, and power cord. 45" W x 24" D x 9.5" H.
<b>TTC610 KRL762PY</b>	Digital Indicator Roller/Storage Cabinet	Torque tester for the TTC2000 System. Used to mount TTC600/TTC610 (TTC2000) or TTC800/TTC810 (TTC2800) and store accessories. Not available individually.
<i>TTC2800 Components</i>		
<b>TTC800</b>	Motorized Loader	Applies load to torque wrenches for testing on TTC2800 System
<b>TTC810 KRL762PY</b>	Digital Indicator Roller/Storage Cabinet	Torque Tester for the TTC2800 System Used to mount TTC600/TTC610 (TTC2000) or TTC800/TTC810 (TTC2800) and store accessories. Not available individually.

# Electronic Torque Tester and Calibrator **Torque**

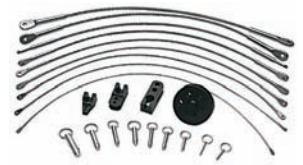


TTC8

TTC400



TTC2620



TTC2600



TTC2610



TTC26302

## Transducers

All TTC Series Transducers include the correct adaptor for the indicated torque range.

Stock No.	Description	Sq. Drive Size	Range	Bench Top Mounting Bracket
TTC5	Transducer	1/4	15-200 in. oz.	TTC3421
TTC6	Transducer	1/4	4-50 in. lb.	TTC3421
TTC65	Transducer	1/4	15-150 in. lb.	TTC3421
TTC7	Transducer	3/8	30-400 in. lb.	TTC3421
TTC8	Transducer	3/8	80-1000 in. lb.	TTC3421
TTC10	Transducer	1/2	10-125 ft. lb.	TTC3422
TTC11	Transducer	1/2	20-250 ft. lb.	TTC3422
TTC12	Transducer	3/4	60-600 ft. lb.	TTC3422
TTC13	Transducer	1	100-1000 ft. lb.	TTC15002
TTC14	Transducer	1	200-2000 ft. lb.	TTC15002
TTC400*	4-in-1 Transducer	1/4	4-50 in. lb.	—
		3/8	30-400 in. lb.	—
		3/8	80-1000 in. lb.	—
		1/2	20-250 ft. lb.	—
TTC5000-1**	4-in-1 Adaptor Plate	—	—	—

\*TTC400 requires the TTC5000-1 Adaptor Plate when used with the TTC600 Manual Loader, TTC800 Motorized Loader and VERSA600LDR.

\*\*Required for TTC400 4-in-1 Torque Transducer to be used on TTC600/TTC800 Loaders.

## Calibration Wheels / Arms

The following calibration equipment can be used to calibrate any TTC Series Transducer. Arms are certified to manufacturers standards.

TTC500	2.5" Calibration Wheel, 1/4" sq. dr.
TTC1510	5" Calibration Wheel, 1/4" sq. dr.
TTC1520	10" Calibration Butterfly, 1/2" sq. dr. (adaptor is optional)
TTC1540	40" Calibration Arm, 1 1/4" sq. dr. with adaptors



TTC25002

## Accessories

Stock No.	Description
TTC501	Connects TTC610 Digital Indicator to PC.
TTC502	Connects TTC610 Digital Indicator to printer.
TTC25002	Free standing calibration stand with mounting block and hardware for use with TTC2000/TTC2800 Systems and all TTC Series Transducers.
TTC75002	Torque Screwdriver Testing Kit
TTC900121	Smart Cable Replacement
TTC5500-1	Extension Arm



QC2JRS400

## Force Testing Equipment

- Reaction arms, cables, mounting plates and fixtures are available for testing tensiometers plus compression and tension gauges. The TTC600 and TTC800 Loaders and TTC Series Transducers can be configured to deliver compression and tension loads
- The TTC610/TTC810 Indicator also provides measurement, display, storage and statistical analysis for FORCE inputs

TTC2600	Tensiometer Testing Kit
TTC2610	Tension Gauge Testing Kit
TTC2620	Compression Gauge Testing Kit
TTC26302	Force Arm Kit (Only one is needed for any Force Testing Kit)

## Weight Sets

The following calibration equipment can be used to calibrate any TTC Series Transducer. All weights are NIST (NBS) traceable.

TTC3200	Weight Set #1 (Use for all TTC Series Transducers)
TTC3210	Weight Set #2 (For 200 in. oz. to 250 ft. lb. TTC Series Transducers)
TTC3220	Weight Set #3 (For 600 ft. lb. To 2,000 ft. lb. TTC Series Transducers)

## Weight Hangers / Trays

The following calibration equipment can be used to calibrate any TTC Series Transducer. Weight Trays certified as to weight.

TTC301	Weight Hanger, 8 oz.
TTC3040	Weight Tray, 7.5 lb.
TTC3020	Weight Tray, 15 lb.
TTC3030	Weight Tray, 50 lb.



## Joint Rate Simulator Adaptors

Use with torque tester when testing non-impacting power tools. Square drive adaptor is placed on top of square drive of the torque tester and tightened with a set screw. An adaptor bit is inserted into the power tool and mated to the top of the joint adaptor. By stacking the Belleville washers in set patterns, the joint rate adaptor can simulate soft, medium, or hard joints.

Stock No.	Square Drive, inches	Capacity, in. lb.	Adaptor Bit	Load Screw
QC1JRS50	1/4	50	1/4" Hex x 3/16" Hex	1/4" x 28 x 1
QC2JRS400	3/8	400	3/8" Square Internal x 3/8" Hex	7/16" x 20 x 1.5
QC2JRS1000	3/8	1,000	3/8" Square Internal x 1/2" Hex	5/8" x 18 x 1.5

## WARNING

- Counter balance or anchor mounting base.
- Over torquing can cause breakage. Wrench can break while breaking fasteners loose. An out of calibration torque wrench can cause part of tool breakage.
- Do not exceed rated torque.



- Do not use a torque wrench to break fasteners loose.
- Periodic recalibration is necessary to maintain accuracy.
- Broken tools can cause injury.
- Read additional safety precautions on pages 534 to 537.

# Torque Electronic Bench Top Torque Testers

## Horizontal Torque Testers and Transducers

The TBT600A is designed to be a complete and flexible calibration solution for calibration laboratories. The peak hold feature incorporates a new "hands free" mode to increase efficiency. A certificate generation function allows the unit to print certifications directly to a printer or to a computer for storage. The NTEP certified scale is independently traceable to NIST standard Handbook 44, and stores dated data of tester calibration for auditing purposes. Additionally the TBT600A can create custom modifications to the system that can be installed by the owner without having to return the unit to the factory. The end result is a state of the art system that sets the standard for complete, accurate torque testing and verification.

- NTEP certified Class II/III electronics deliver NIST certified accuracy that is unmatched in horizontal master testers with 10,000,000 counts and 10 display updates per second
- The sturdy welded steel plate construction of the mechanical subassembly delivers many years of dependable service
- Software interface is easy to use and optimized for fast, efficient calibration of torque wrenches
- Unit is easily calibrated to stated accuracy with Snap-on® test bars and Class F test weights
- Displays in units of ft. lb., in. lb., in. oz., N•m, kg•m and kg•cm
- Includes TBTT16A, TBTT100A and TBTT600A Transducers



TBT600A



Stock No.	Description	Range	Resolution
TBTT16A	Transducer	7.5 in. lb. to 200 in. lb.	.002 ft. lb., .02 in. lb., .025 in. oz., .002 N•m., .0002 kg•m., .02 kg•cm
TBTT100A	Transducer	5 ft. lb. to 100 ft. lb.	.01 ft. lb., 1 in. lb., 2 in. oz., .01 N•m., .001 kg•m, 1 kg•cm
TBTT600A	Transducer	5 ft. lb. to 100 ft. lb.	.01 ft. lb., 1 in. lb., 2 in. oz., .01 N•m., .001 kg•m, 1 kg•cm

# Nut Splitters and Cable Cutters Nut Splitters

## Hydraulic Nut Splitter

**CG675HY** Six tons of controlled hydraulic power for removal of frozen or corroded nuts up to 2H hardness and 1 3/4" across the flats or 2" hex on soft nuts. Includes CG652 Ram and Pump Set. Has a 1 1/2" stroke.

**CG675** Nut splitter without the hydraulics.



CG675HY

### RELATED ITEMS

Rethreading Tools, pgs 337-339

## Manual Nut Splitter

**NC52 Nut Splitter.** For splitting nuts up to 3/4" across the flats. Bar acts as a handle to hold tool securely.  
**NC52-3 Extra Cutter.**  
**NC52-4A Anvil.**



NC52

## Cable Cutters

### Hydraulic Cable Cutters

**CG410HY** Cut steel cable up to 1 1/2" in diameter easily with up to 29 1/3 tons of force generated by this hydraulic package. The hardened tool steel cutting blade and die make clean, square cuts and provide long, dependable service. Both can be resharpened. Includes CG420-2A pump, CG420-3-1 hose, and CG420-4 coupler set.

**CG410HY2S** Hydraulic cable cutter with Two-Stage Pump.

**CG410** Cable Cutter without the hydraulics.

**CG420-2A** One Stage 20-ton, 35-ton, and 50-ton Pump.

**CG420-3-1 Hose.**

**CG420-4 Coupler.**



CG410HY