Snap-on®

TORQUE INSTRUMENTS

INNOVATION, ACCURACY, DURABILITY

TORQUE 101

Q: WHY CHOOSE Snap-on

A: Snap-on has innovative torque solutions for any industry.

Snap-on manufactures and sells an extensive array of torque products to cover the needs of professionals within important industries such as:

- Automotive
- Aviation/aerospace
- Marine
- Construction
- Energy / oil & gas
- Manufacturing
- Mining
- Military

A: Snap-on offers a wide range of torque wrenches.

Snap-on's product line is diverse and there is a wide selection of choices regarding accuracy level, torque ranges, mechanical and electronic designs, ratchet types, swing arc, physical dimensions, ergonomics and overall features. If a unique application exists, Snap-on will have the torque solution for it.

A: Snap-on services what they sell.

Snap-on stands by their product with industry-leading warranties, calibration, maintenance and servicing.

A: The vast majority of Snap-on torque products are designed, made and assembled in the USA.

Snap-on believes in the importance of local manufacturing. Wherever possible, Snap-on uses American-made parts, American production facilities and a quality American workforce.

A: Snap-on knows torque.

Snap-on knows that torque is critical. And with vehicle manufacturers investing heavily to reduce weight and increase fuel mileage by using a wide array of materials such as high-strength alloys, aluminum and engineered composites, torque is more important than ever. Improved capabilities and technology mean manufacturers can maintain exceptional tolerances on components that are contingent on accurate, consistent torque and angle application. Because of that, Snap-on has torque solutions for any application and are the established benchmark of quality and precision in all industries.

Q: WHAT IS TORQUE?

A: Torque is rotational or turning force.

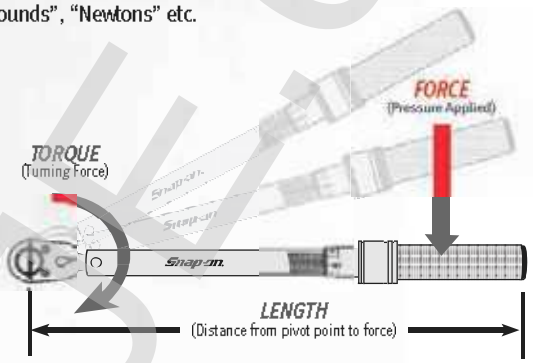
Torque is measured in length and force: Length means distance from "center of drive" to "center of handle". Force means "pounds", "Newtons" etc.

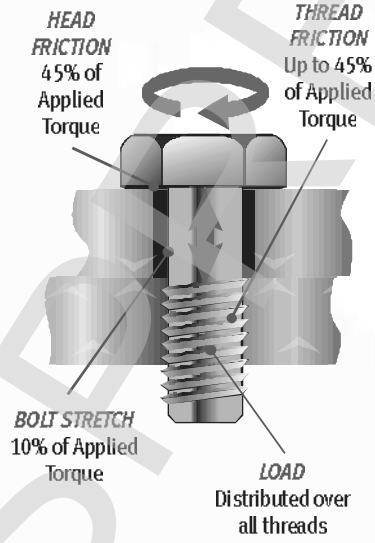
Q: HOW DO YOU CALCULATE TORQUE?

A: Torque = Length × Force

The standard torque formula used to calculate torque is: "L x F = T"

Example: 2 ft. (length) x 30 lbs. (amount of force at center of handle) =
60 ft. lbs. of torque (60 Ft. Lbs.)





Q: WHAT DOES TORQUE DO?

A: Torque creates a "Clamp Load" to join two pieces of material.

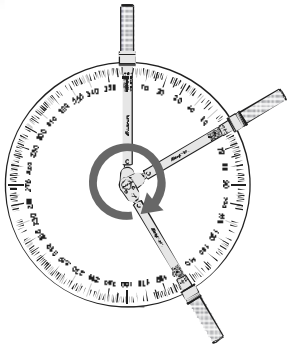
- Bolts (or threaded fasteners), are designed to create clamping force, also called "clamp load".
- When torque is applied to a threaded fastener, it draws together the joint, (two pieces of material).
- As additional torque is applied to the fastener, the joint is pulled together creating a clamp load as the fastener begins the stretching process. It's this fastener stretch that creates and maintains clamping force, like a stretched bungee cord maintaining tension.
- The actual amount of clamp load is determined by several factors:
  - The amount of torque applied to the fastener.
  - The material and grade of the fastener.
  - The external friction on the joint – friction under the fastener head, and friction between the threads of the fastener and material it's connected to.

Q: WHAT IS TORQUE PLUS ANGLE?

A: Torque Plus Angle creates a more exact clamp load for torque-sensitive equipment.

Auto manufacturers and makers of other high performance equipment are increasingly specifying fasteners with a combination of torque value followed by additional tightening with "angle", or degrees of wrench turn. Manufacturers can calculate a more exact final "clamp load" for their applications, since "torque & angle" minimizes the impact of thread or under-head friction.

EXAMPLE
Apply 80 ft. lbs. of torque, then apply 90 degrees of rotation



U.S. Patents

Snap-on has always been at the forefront of tool innovation, and torque products is no exception. Illustrated here are the US Patent numbers granted to Snap-on for the Control Tech & TechAngle models.

U.S. Patent No.	Model
9156148	Control Tech & TechAngle
9242356 / 9839997	Control Tech & TechAngle
9395257	Control Tech & TechAngle
9523618	Control Tech
D699531	Control Tech
D702519	TechAngle

Q: WHY IS APPLYING PROPER TORQUE IMPORTANT?

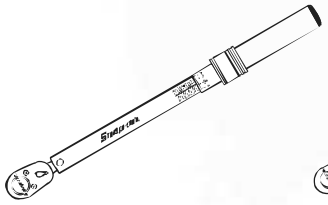
A: Creating proper Clamp Load prevents damage and equipment failures.

- Safety & Performance: Applying accurate torque is critical to assembly applications, engines and precision equipment.
- Creating a proper clamp load is the main objective when applying torque to a fastener. Engine cylinder heads, pipe coupling, wheels, all need to be "clamped" uniformly to specific torque values.
- There are three main factors that affect the correct application of torque: (1) Condition of components, (2) Accuracy of torque instrument, (3) Properly applied torque values.
- Applying torque incorrectly can lead to stripped threads, premature loosening or broken fasteners that can cause catastrophic failure. Leaking joints may cause engine or equipment failures.

Q: WHAT IS A TORQUE INSTRUMENT AND WHAT DOES IT DO?

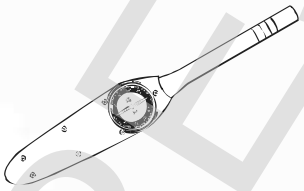
A: Any device that applies a pre-determined amount of torque to a fastener.

- It may be mechanical or electronic in design.
- A torque wrench has some type of indicating device which lets the operator know when the correct torque has been achieved: "click" or "impulse-break" feel; sound; lights; gauge; or some combination of these.

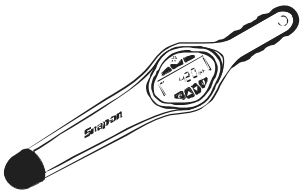


MICROMETER (CLICK TYPE)
The most popular type of mechanical torque wrench. An internal spring is tightened by turning the handle. The spring pushes against a block, and both are calibrated so the block pivots when the torque setting is reached. This quick pivoting creates the "click" sound. When the force at the handle is released, the block resets to it's original position and is ready for the next torque application.

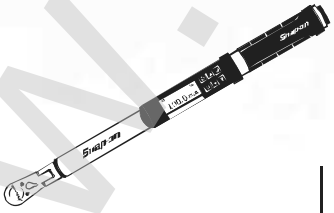
SPLIT BEAM (QUICK ADJUST)
Also called a "Quick Adjust" wrench, this type is most popular for automotive tire and wheel installation and other heavy use environments. Torque value is set by turning a small knob on the side of the wrench. Two internal arms (the "split beam") bend when force is applied at the handle, and a trigger device reacts when the set torque is reached, causing a "click" that can be felt and heard.



MECHANICAL DIAL
Uses a fixed, non-ratcheting square drive. Available in single scale and dual scale models. As force is applied at the handle, an internal beam flexes against a precision movement which rotates a needle pointing to the torque value against the dial scale. A memory needle indicates the highest torque value achieved.



DIGITAL DIAL
More accurate than a mechanical dial, and easier to use and read because of large LCD readout and color LED light bar. Utilizes an internal electronic strain gage to measure torque. Uses a fixed, non-ratcheting square drive as do the mechanical dial wrenches. The strain gage positioning on the torsion drive allows this instrument to be non-length sensitive.



ELECTRONIC
Most versatile and accurate torque wrench. Operates by means of a internal electronic strain gage with digital readout. Torque value setting can be heard (beep) felt and seen (digital screen and lights). Snap-on TechAngle models enable fast and easy application of desired torque, plus additional angle application through internal Gyro chip which measures up to 360 degrees of rotation.

TORQUE SCREWDRIVERS
Used for applying torque in low torque applications, such as electronic assembly manufacturing, medical devices, etc. The cam-over design prevents over-torquing. Ergonomic tri-lobe handle design. Available in adjustable models, or factory preset to a single torque value.

TORQUE TERMS

A.S.M.E. – American Society of Mechanical Engineers, known for setting codes and standards for mechanical devices, including torque.

CW (Clockwise) / CCW (Counter Clockwise) – Used in all accuracy statements & Certs. Some tools have different accuracy depending on direction of use.

Calibration – Adjusting a torque tool or a torque transducer in order to bring it back within spec, which is performed on a calibration system such as the Snap-on TTC2200 or TTC2800. Typical calibration accuracy is ± 4% CW of indicated value.

Certification – A form which lists the results of the calibration test. Almost all Snap-on tools are supplied with a N.I.S.T. traceable cert. Snap-on also conforms to the ISO 6789, which is the standard set forth by the International Organization for Standardization (ISO) for torque measurement.

Cycling – For mechanical torque wrenches, to "exercise" the wrench for use. With a new wrench, and for first use of the day, set the wrench at the desired torque value and pull for several clicks on a stationary fastener. This exercises the internal wrench mechanism and ensures smooth and accurate operation.

ISO 17025 – A laboratory accreditation standard. Most all torque wrenches (including Snap-on) do not come with ISO 17025 accredited certifications. But torque wrenches can receive accredited certification for an additional fee (range of $50-$200 depending on tool) if the end-user desires.

N.I.S.T. – National Institute of Standards and Technology is a non-regulatory agency of the US Department of Commerce. They are the federal agency that sets standards for all weights and measures in the U.S. All Snap-on torque products are calibrated on testers calibrated with weights and arms that are all traceable back to N.I.S.T.

Newton – A common unit of weight used for torque from the SI system (not metric). Equivalent to 102 grams / .273 pounds.

Rolling Torque – Measuring the prevailing torque, or resistance, of a rotating shaft.

Strain Gage – Electronic device used to measure the bend (turn resistance) of an object. The measured strain is then translated into torque.

Testing – Determines the accuracy of the tool. It does not include adjusting the tool. Commonly called "as found" data.

Torque Plus Angle (T&A) – Tightening the fastener to a specific torque, then further turning a specific number of degrees (angle) of rotation. Example: 70 ft. lbs. + 40 degrees.

Torque to Yield (TTY) – Same method as T&A except utilizes "single use" or "TTY" fasteners (special one-time-use fasteners which are stretched into their yield zone and cannot be used again).

ATECH

The advanced technology and intuitive design of the new TechAngle® Torque Wrench from Snap-on® makes it possible to tighten fasteners to exacting standards, under even the most demanding conditions, faster and with more accuracy than ever before.

TechAngle® Electronic Torque Wrenches

Advanced Features
- DUAL PROGRESSIVE LEDs allow user to see active torque at various work positions; enables user to anticipate torque target for more accurate torque application
- LARGE LCD SCREEEN with bright backlight; numbers become larger and bolder during active torque for optimal viewing
- FOUR ALERT MODES (LCD, LED, Audible, Vibratory) provide excellent feedback in all working conditions
- LOW PROFILE BUTTONS protect against accidental activation

Multiple Measurement Modes
- SIX MEASUREMENT MODES (ft-lb, in-lb, Nm, dNm, kg-cm, and angle) at the touch of a button

Programmable
- TEN PRESETS allow programming of common torque applications which saves time
- ADVANCED FEATURES include cycle counter, customizable sleep timer, language selection, auto torque calculation for torque adapters, calibration alerts, battery level indication, and numerous alert mode customizations. These features allow you to customize the torque wrench to your work preferences
- TORQUE THEN ANGLE MODE allows the user to torque fasteners and then switch to angle mode without removing the torque wrench from a fastener

Multi-Lingual Display
- Programmable to display commands and settings in English, Spanish, French or German

Highly Accurate
- Torque measurement; 2% CW and 3% CCW

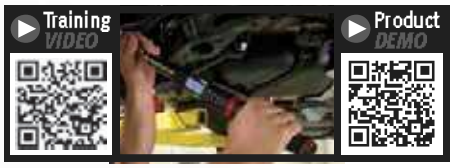
Durability
- POWER INTERRUPTION TECHNOLOGY prevents loss of continuity if dropped; prevents loss of work during head bolt pattern applications
- 2-YEAR WARRANTY on TechAngle® and Control Tech™ models
- STORAGE CASE included

Sealed Head
Keeps contamination out and lubrication in for better performance and longer tool life.

Dual 80® Technology
Precise yet strong ratchet function with minimal ratcheting arc and very little lost motion, for ratcheting in tighter areas.

Angle Head Control
Head moves ±15° to avoid obstructions. Torque accuracy: ±2%CW, ±3%CCW, 20% to 100% of full scale. Angle accuracy: ±1% of reading, ±1° at angular velocity >10°/sec.

Strong and durable 100% Steel Body Construction
Features chrome plating for superior oxidation resistance



TechAngle® Steel Models

01 Digital | Reversible | ±2-3% Accurate | CE

Calculates Rolling Torque
Some models measure the rotating resistance of a fastener or a component such as a cam or vehicle differential preload.

Techangle® All Steel Torque Wrenches

Square Drive	Model*	Handle Color	Head Style	Gear Teeth	Swing Arc	Range (In.-lb.)	Range (ft.-lb.)	Range (N•m)	Length (In.)	Head Width (In.)	Head Depth (In.)	Weight w/o batteries lb. (kg)	Battery Type (qty)
1/4"	ATECH1FS100	Chrome	Sealed Flex Head	72	5°	4-100	0.33-8.33	0.45-11.3	11 5/8"	7/8"	7/16"	0.93 (0.42)	Lithium (1)
1/4"	ATECH1FS240	Chrome	Sealed Flex Head	72	5°	12-240	1-20	1.36-27.12	11 5/8"	7/8"	7/16"	0.93 (0.42)	Lithium (1)
3/8"	ATECH2CS100	Chrome	Sealed Flex Head	72	5°	4-100	0.33-8.33	0.45-11.3	11 5/8"	7/8"	7/16"	0.93 (0.42)	Lithium (1)
3/8"	ATECH2CS240	Chrome	Sealed Flex Head	72	5°	12-240	1-20	1.36-27.12	11 5/8"	7/8"	7/16"	0.93 (0.42)	Lithium (1)
3/8"	ATECH2FS100	Chrome	Sealed Flex Head	80	4.5°	60-1,200	5-100	6.8-135	15 7/16"	1 1/4"	9/16"	2.85 (1.29)	AA Alkaline (3)
1/2"	ATECH3FS250	Chrome	Sealed Flex Head	80	4.5°	150-3,000	12.5-250	16.9-339	26 3/4"	1 5/8"	3/4"	4.35 (1.97)	AA Alkaline (3)
3/4"	ATECH4RS600	Chrome	Sealed Flex Head	32	11°	360-7,200	30-600	40.7-813.5	48 11/16"	2 1/2"	1 1/4"	10.95 (4.96)	AA Alkaline (3)

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

Dual Progressive LED's
Allows user to see active torque at various work positions. Enables user to anticipate torque and slow down as they get closer to desired torque level.


Approaching Target


Target Achieved


Over Torque

Easy-to-Read Backlit LCD Display
Large LCD screen-numbers become larger and bolder during active torque making it easier to read during use.

Protected Battery Cap
Designed with solid brass contacts prevents accidental loosening and ensures continuity.

Comfort Grip with Flared End
"Motorcycle-style" handle with seamless textured grip offers a comfortable, non-slip surface. Flared end prevents your hand from slipping off during high leverage applications.

Low Profile Buttons
Protects against accidental activation.

Multi-Sensory Indicators
Along with the easy-to-read LCD screen and LED indicator lights, the audible beep and handle vibration work together to signal when torque is within the targeted range.

Fully Programmable
Quickly change units of measure appropriate for specific applications.

Calculates Rolling Torque All models measure the rotating resistance of a fastener or a component such as a cam or vehicle differential preload.

Durable Housing Temperature and chemical resistant housing protects internal electronics from drops, collisions and more.

TechAngle® Soft Grip Models

Comfort Grip · Digital · Reversible · ±2-3% Accurate


Available in Multiple Housing Colors

Techangle® Torque Wrenches

Square Drive	Model*	Handle Color	Head Style	Gear Teeth	Swing Arc	Range (in.-lb.)	Range (ft.-lb.)	Range (N•m)	Length (in.)	Head Width (in.)	Head Depth (in.)	Weight w/o batteries lb. (kg)	Battery Type (qty)
1/4"	ATECH1FR240B	Black	Sealed Flex Head	72	5°	12-240	1-20	1.36-27.12	16 7/16"	7/8"	7/16"	1.9 (8.6)	AA Alkaline (3)
3/8"	ATECH2F100GB	Green	Sealed Flex Head	80	4.5°	60-1, 200	5-100	6.8-135.0	17 15/16"	1 1/4"	9/16"	2.3 (1.04)	AA Alkaline (3)
3/8"	ATECH2F1000B	Orange	Sealed Flex Head	80	4.5°	60-1,200	5-100	6.8-135.0	17 15/16"	1 1/4"	9/16"	2.3 (1.04)	AA Alkaline (3)
3/8"	ATECH2F100RB	Red	Sealed Flex Head	80	4.5°	60-1,200	5-100	6.8-135.0	17 15/16"	1 1/4"	9/16"	2.3 (1.04)	AA Alkaline (3)
3/8"	ATECH2FR100B	Black	Sealed Flex Head	80	4.5°	60-1,200	5-100	6.8-135.0	17 15/16"	1 1/4"	9/16"	2.3 (1.04)	AA Alkaline (3)
1/2"	ATECH3F250GB	Green	Sealed Flex Head	80	4.5°	150-3,000	12.5-250	16.9-339	26 5/8"	1 5/8"	3/4"	3.75 (1.68)	AA Alkaline (3)
1/2"	ATECH3F2500B	Orange	Sealed Flex Head	80	4.5°	150-3,000	12.5-250	16.9-339	26 5/8"	1 5/8"	3/4"	3.75 (1.68)	AA Alkaline (3)
1/2"	ATECH3F250RB	Red	Sealed Flex Head	80	4.5°	150-3,000	12.5-250	16.9-339	26 5/8"	1 5/8"	3/4"	3.75 (1.68)	AA Alkaline (3)
1/2"	ATECH3FR250B	Black	Sealed Flex Head	80	4.5°	150-3,000	12.5-250	16.9-339	26 5/8"	1 5/8"	3/4"	3.75 (1.68)	AA Alkaline (3)
1/2"	ATECH3FR300B	Black	Sealed Flex Head	80	4.5°	1,480-3,600	15-300	20.3-406.7	30"	1 5/8"	3/4"	3.95 (1.79)	AA Alkaline (3)

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

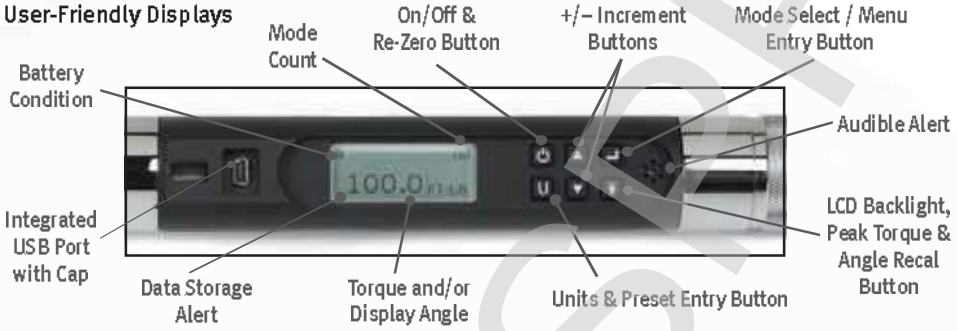
CONTROL TECH™

With robust features such as multi–sensory torque indicators, multi–lingual display, USB data downloads, programmable settings and built–in calibration, Snap–on Control Tech™ digital torque wrenches deliver high performance in the most demanding fields.

Control Tech™ Electronic Torque Wrenches

Control Tech™ Electronic Torque Wrenches provide instant data on the exact torque actually applied, enabling a more precise torque application across multiple fasteners. Every model features a large, backlit LCD screen for better visibility in a variety of working conditions and a high capacity memory for storage of 1,500 readings. And unlike click-type wrenches, digital wrenches tell the user when calibration is due, can be programmed for specific settings, and stores a data trail for an extra measure of validation.

User-Friendly Displays



Multilingual Display

- Programmable to display commands and settings in English, Spanish, French or German

LED Indicator Lights

- Dual-side LED indicator lights with configurable settings provide operational guidance
- Click-types can easily be overtorqued by as much as 20% because the user doesn't stop pulling the wrench the instant it clicks. Digital wrenches have yellow/green/red lights that tell the user when to stop pulling

Convenient Data Download

- USB plug and play technology allows data download without additional software for an audit proof trail and process control

Calculates Rolling Torque

- All models measure the rotating resistance of a fastener or a component such as a cam or vehicle differential preload

Multi-Sensory Indicators

- Ideal for any working condition thanks to audible, tactile and visual indicators
- The easy-to-read LCD screen, LED indicator lights, audible beep and handle vibration work together to signal when torque is within the targeted range

Torque & Angle Combo Mode

- The most accurate and fastest way to achieve torque plus angle in a single motion
- Control torque accuracy to +/- 2% CW and +/- 3% CCW
- Control angle accuracy to +/- 1% of reading and +/- 1°

DUAL 80 TECHNOLOGY

Dual 80® Technology

- Precise yet strong ratchet function with minimal ratcheting arc and very little lost motion

Built-In Calibration Factor*

- Eliminates the need to perform manual calculations (use with interchangeable heads and torque adapters)

Fully Programmable

- 50 memory presets with a batch count of 99
- Presets can be locked to prevent inadvertent changes or tampering

Sequence Programming

- Program different torque applications in sequence and lock-in job mode to ensure the operator follows sequence without error

Calibration Due Indicator*

- Alerts you when calibration is needed

Reliable Data Trail

- Time stamped data trail for quality control, job auditing and torque verification

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All wrenches and drivers are calibrated per ASME® and ISO® Standards for Accuracy, from 20% to 100% of full scale, using NIST® traceable equipment.

USB | Digital | Reversible | ±1-2% Accurate

Control Tech™ Electronic Torque Wrench

Square Drive	Model*	Handle Color	Head Style	Gear Teeth	Swing Arc	Range (In.-lb.)	Range (ft.-lb.)	Range (N•m)	Length (Inches/mm)	Weight without batteries	Battery Type (qty)
1/4"	**CTECH1FR240A**	Chrome	Sealed Flex Head	72	5°	12–240	1-20	1.4–27.2	14 1/8" (358 mm)	2 lb. (0.9 kg)	AA Lithium (3)
3/8"	**CTECH2FR100A**	Chrome	Sealed Flex Head	80	4.5°	60–1,200	5-100	6.8–135.6	17 1/4" (437 mm)	2.7 lb. (1.2 kg)	AA Lithium (3)
1/2"	**CTECH3FR250A**	Chrome	Sealed Flex Head	80	4.5°	150–3,000	12.5-250	16.9–339	26 3/4" (678 mm)	4.5 lb. (2.10 kg)	AA Lithium (3)
3/4"	**CTECH4R600A**	Chrome	Sealed Fixed Head	32	11°	360-7,200	30-600	40.7–813.5	48 5/8" (1,234 mm)	10.5 lb. (4.8)	AA Lithium (3)

NEW Control Tech™ Micro Electronic Torque Wrench

THE SAME GREAT FEATURES OF THE CONTROL TECH IN A SMALLER SCALE

The NEW Control Tech™ Micro Electronic Torque Wrench boasts all of the same, great features you come to expect from the Control Tech line of wrenches, but in a smaller, more compact scale.

USB | Digital | Reversible | ±2-6% Accurate

Square Drive	Model*	Handle Color	Head Style	Gear Teeth	Swing Arc	Range (In.-lb.)	Range (ft.-lb.)	Range (N•m)	Accuracy	Length (Inches/mm)	Weight without batteries	Battery Type (qty)
1/4"	**CTECH1MR100**	Chrome	Fixed Head	72	5°	5-100	0.42-8.33	0.56-11.3	± 2% CW ± 3% CCW	11" (279.4 mm)	0.9 lb. (0.42 kg)	AA Lithium (1)
1/4"	**CTECH1MR240**	Chrome	Fixed Head	72	5°	12-240	1-20	1.36-27.12	± 4% CW ± 6% CCW	11 5/8" (294.64 mm)	0.93 lb. (0.42 kg)	AA Lithium (1)
3/8"	**CTECH2MR100**	Chrome	Fixed Head	72	5°	5-100	0.42-8.33	0.57-11.3	± 2% CW ± 3% CCW	11" (279.4 mm)	0.9 lb. (0.42 kg)	AA Lithium (1)
3/8"	**CTECH2MR240**	Chrome	Fixed Head	80	4.5°	12-240	1-20	1.36-27.12	± 4% CW ± 6% CCW	11 5/8" (294.64 mm)	0.93 lb. (0.42 kg)	AA Lithium (1)

Convenient *NEW* Features

- New 1-piece design for improved strength
- Easy battery replacement
- One AA Lithium battery yields 40 hours of continuous use (also accepts Alkaline or NiMH re-chargeable - Not included)

NEW, Shorter, Slimmer, Lightweight Design Factor!

- Features a *NEW* one-piece compact body and low profile head
- Perfect for restricted access areas where normal torque wrenches can't fit

Torque & Angle Combo Mode

- The most accurate and fastest way to achieve torque plus angle in a single motion
- *IMPROVED* Torque accuracy:
  +/-4% CW +/-6% CCW (5 to 19% of full scale)
  +/-2% CW +/-3% CCW (20 to 100% of full scale)
- Angle range 0 - 360°

NEW FOD Compliant Integrated USB Port with Sliding Door

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

QD SERIES

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

Reversible

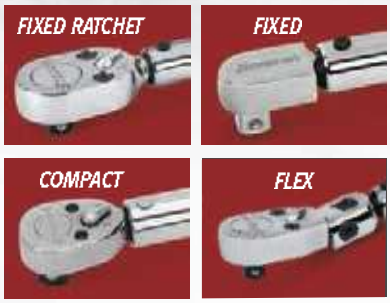
± 4-6% Accurate

QD3FR250A

Made in U.S.A.

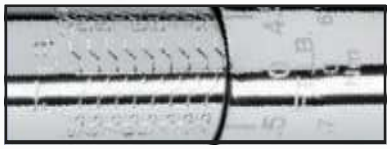
QD Series Adjustable Click-Type Torque Wrenches

The torque value is preset by turning the handle in a clockwise or counter-clock wise direction and then "clicks" when the user pulls and achieves the preset value.



FOUR DIFFERENT HEAD STYLES AVAILABLE

- QD models are available in Fixed, Compact, Fixed Ratchet and Flex head versions



EASY–TO–READ ROLL–MARKED SCALE

- QD models with the "A or B" suffix have roll-marked scales for better performance and visibility in varying light conditions

CERTIFICATE OF CALIBRATION

- Actual certification readings and individual instrument serial number are included
- Each factory-calibrated torque instrument, is certified to meet ASME B107.300-2010 (B107.14) 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 ±4% CW and ±6% CCW from 20% of full scale to full scale unless otherwise noted

LONG LIFE RATCHET HEAD

- The QD Series features maintenance free, high strength, sealed ratchet head which keeps out dirt and moisture

MINIMAL FRICTION "HOUR GLASS" CAM

- Retains and releases lubricant where needed to reduce friction

POSITIVE STOP

- Instrument can not be accidentally disassembled if wound down past scale

KNURLED HANDLE

- For a secure non-slip grip

INCLUDES CASE

- For safe transport and storage

Square Drive	Model*	Head Style	Gear Teeth	Swing Arc	Range	Increments	Length	Head Width	Head Depth
QD Series Adjustable Click-Type (in.-lb.)									
1/4"	QD150	Fixed	–	–	10-50 in.-lb.	0.5 in.-lb.	9 3/4"	5/8"	13/16"
1/4"	QD1R50	Fixed Ratchet	36	10°	10-50 in.-lb.	0.5 in.-lb.	9 7/8"	7/8"	7/16"
1/4"	QD1200	Fixed	–	–	40-200 in.-lb.	1 in.-lb.	10 15/16"	5/8"	13/16"
1/4"	QD1R200	Fixed Ratchet	36	10°	40-200 in.-lb.	1 in.-lb.	11 1/16"	7/8"	7/16"
3/8"	QD2R200	Compact	36	10°	40-200 in.-lb.	1 in.-lb.	11 1/16"	7/8"	7/16"
3/8"	QD21000A	Fixed	–	–	200-1,000 in.-lb.	5 in.-lb.	14 9/16"	1"	1 3/16"
3/8"	QD2R1000A	Fixed Ratchet	80	4.5°	200-1,000 in.-lb.	5 in.-lb.	15 9/16"	1 5/32"	9/16"
1/2"	QD3R1600A	Fixed Ratchet	80	4.5°	300-1,600 in.-lb.	10 in.-lb.	19"	1 5/8"	3/4"
1/2"	QD32500A	Fixed	–	–	500-2,500 in.-lb.	10 in.-lb.	18 1/8"	1"	1 1/4"
1/2"	QD3R2500A	Fixed Ratchet	80	4.5°	500-2,500 in.-lb.	10 in.-lb.	19 1/8"	1 5/8"	3/4"
QD Series Adjustable Click-Type (ft.-lb.)									
3/8"	QD2100A	Fixed	–	–	20-100 ft.-lb.	0.5 ft.-lb.	14 9/16"	1"	1 3/16"
3/8"	QD275A	Fixed	–	–	15-75 ft.-lb.	0.5 ft.-lb.	14 9/16"	1"	1 3/16"
3/8"	QD2FR75B †	Flex	80	4.5°	5-75 ft.-lb.	0.5 ft.-lb.	15 5/8"	1 5/32"	9/16"
3/8"	QD2R100A	Fixed Ratchet	80	4.5°	20-100 ft.-lb.	0.5ft.-lb.	15 9/16"	1 5/32"	9/16"
1/2"	QD3150A	Fixed	–	–	30-150 ft.-lb.	1 ft.-lb.	18"	1"	1 1/4"
1/2"	QD3250A	Fixed	–	–	50-250 ft.-lb.	1 ft.-lb.	23 3/16"	1"	1 1/4"
1/2"	QD3R150A	Fixed Ratchet	80	4.5°	30-150 ft.-lb.	1 ft.-lb.	19"	1 5/8"	3/4"
1/2"	QD3R250A	Fixed Ratchet	80	4.5°	50-250 ft.-lb.	1 ft.-lb.	24 3/16"	1 5/8"	3/4"
1/2"	QD3FR250A* †	Flex	80	4.5°	50-200 ft.-lb.	1 ft.-lb.	25 3/4"	1 5/8"	3/4"
1/2"	BRUTUS3R300**	Fixed Ratchet	36	10°	60-300 ft.-lb.	2 ft.-lb.	32 1/2"	1 3/4"	3/4"
3/4"	QD4400A	Fixed	–	–	75-400 ft.-lb.	2.5 ft.-lb.	33 3/4"	1 1/2"	1 1/2"
3/4"	QD4600A	Fixed	–	–	100-600 ft.-lb.	5 ft.-lb.	40 3/4"	1 1/2"	1 1/2"
3/4"	QD4R400A	Fixed Ratchet	32	11°	75-400 ft.-lb.	2.5 ft.-lb.	35 3/4"	2 1/2"	1 1/4"
3/4"	QD4R600A	Fixed Ratchet	32	11°	100-600 ft.-lb.	5 ft.-lb.	42 3/4"	2 1/2"	1 1/4"
1"	QD5R1000A	Fixed Ratchet	30	12°	200-1,000 ft.-lb.	5 ft.-lb.	71"	3 1/8"	1 1/2"
QD Series Metric Adjustable Click-Type (kg-m, kg-cm)									
3/8"	QD2RM1000A	Flex	80	4.5°	200-1,000 kg-cm	5 kg-cm	15 9/16"	1 5/32"	9/16"
1/2"	QD3RM30A	Fixed Ratchet	80	4.5°	6-30 kg-m	0.2 kg-m	19"	1 5/8"	3/4"
QD Series Newton Meter Adjustable Click-Type (N•m)									
1/4"	QD1RN6A	Fixed Ratchet	36	10°	1-6 N•m	0.5 N•m	9 7/8"	7/8"	7/16"
1/4"	QD1RN25A	Fixed Ratchet	36	10°	5-25 N•m	0.1 N•m	11 3/4"	7/8"	7/16"
3/8"	QD2RN25A	Compact	36	10°	5-25 N•m	0.1 N•m	11 3/4"	7/8"	7/16"
3/8"	QD2RN50A	Fixed Ratchet	80	4.5°	10-50 N•m	0.5 N•m	15 9/16"	1 5/32"	9/16"
3/8"	QD2RN100A	Fixed Ratchet	80	4.5°	20-100 N•m	0.5 N•m	15 9/16"	1 5/32"	9/16"
1/2"	QD3RN200A	Fixed Ratchet	80	4.5°	40-200 N•m	2 N•m	19"	1 5/8"	3/4"
1/2"	QD3RN350A	Fixed Ratchet	80	4.5°	70-350 N•m	2 N•m	24 3/16"	1 5/8"	3/4"
3/4"	QD4RN800A	Fixed Ratchet	32	11°	150-800 N•m	5 N•m	42 3/4"	2 1/2"	1 1/4"
1"	QD5RN1500A	Fixed Ratchet	30	12°	300-1,500 N•m	10 N•m	68 7/16"	3 1/8"	1 1/2"

* Unidirectional wrench (Clockwise only) ** Heavy duty main tube and yoke, +/- 6% accuracy † Heavy duty yoke/new long-life cam

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

TQ SERIES

The TQ Series use a 'split beam' measuring element providing accurate, reliable readings and eliminate the heavier coil springs used in conventional click–type wrenches.

Comfort Grip

±4% Accurate

TQFR250E

MULTIPLE COLORS AVAILABLE

TQ Series Adjustable Click Type Torque Wrenches

MAINTENANCE FREE

- Snap-on® sealed ratchet head is virtually maintenance free for more time working with the tool and less time on tool maintenance
- Sealed neck keeps dust and grit away from the torque mechanism for longer tool life

CONVENIENT FEATURES

- 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
- Cushion grip handle provides comfort plus control and resists most automotive fluids
- CE: EU — GB, FR, ES, DE
- Chrome-plated for a durable, long-lasting finish

ACCURACY

- "Split Beam" measuring element provides accurate, reliable readings and eliminates the heavy coil spring used in conventional click-type wrenches
- Fewer moving parts reduces friction and wear
- Guarantees accuracy within ±4% from 20% of full scale to full scale
- Designed for measuring torque in a clockwise direction only (wrench is not reversible)

INCLUDES CASE

- For safe transport and storage

Made in U.S.A.

US Reading Torque Wrenches w/ Conversion Scale (Non-Reversible)

Square Drive	Model	Handle Color	Head Style	Gear Teeth	Swing Arc	Range	Increments	Length	Head Width	Head Depth*
3/8"	TQFR50C	Red	Flex Head	36	10°	120-600 in. lbs.	10 in. lbs.	18 5/8"	1 5/8"	9/16"
3/8"	TQFR100C	Red	Flex Head	36	10°	20-100 ft. lbs.	2 ft. lbs.	18 5/8"	1 5/8"	9/16"
3/8"	TQFR100CG	Green	Flex Head	36	10°	20-100 ft. lbs.	2 ft. lbs.	18 5/8"	1 5/8"	9/16"
3/8"	TQFR100CO	Orange	Flex Head	36	10°	20-100 ft. lbs.	2 ft. lbs.	18 5/8"	1 5/8"	9/16"
3/8"	TQFR100CHV	Hi-Viz	Flex Head	36	10°	20-100 ft. lbs.	2 ft. lbs.	18 5/8"	1 5/8"	9/16"
1/2"	TQFR250E	Red	Flex Head	36	10°	40-250 ft. lbs.	5 ft. lbs.	22 3/8"	1 5/8"	9/16"
1/2"	TQFR250EG	Green	Flex Head	36	10°	40-250 ft. lbs.	5 ft. lbs.	22 3/8"	1 5/8"	3/4"
1/2"	TQFR250EO	Orange	Flex Head	36	10°	40-250ft. lbs.	5 ft. lbs.	22 3/8"	1 5/8"	3/4"
1/2"	TQFR250EHV	Hi-Viz	Flex Head	36	10°	40-250 ft. lbs.	5 ft. lbs.	22 3/8"	1 5/8"	3/4"
1/2"	TQR250E	Red	Fixed Head	36	10°	40-250 ft. lbs.	5 ft. lbs.	22 3/8"	1 5/8"	3/4"
3/4"	TQR400E**	Red	Detachable	32	11°	130-400 ft. lbs.	10 ft. lbs.	38 1/8"	2 1/2"	1 1/4"
3/4"	TQR600E**	Red	Detachable	32	11°	200-600 ft. lbs.	10 ft. lbs.	48 5/8"	2 1/2"	1 1/4"

* Does not include square drive dimension.
** Three-piece construction disassembles for storage/transport.

Made in U.S.A.

Newton Meter Torque Wrenches w/ Conversion Scale (Non-Reversible)

Square Drive	Model	Handle Color	Head Style	Gear Teeth	Swing Arc	Range	Increments	Length	Head Width	Head Depth*
3/8"	TQFRN130B†	–	Flex Head	30	12°	25-130 N•m	5 N•m	17 5/8"	–	9/16"
3/8"	TQFRN68B†	–	Flex Head	30	12°	14-68 N•m	2 N•m	17 5/8"	–	9/16"
1/2"	TQFRN350E	Red	Flex Head	32	11°	70-350 N•m	5 N•m	22 1/8"	–	9/16"

* Does not include square drive dimension.
† 3/8" drive models in this table are metal handle.

Metric Torque Wrenches w/ Conversion Scale (Non-Reversible)

Square Drive	Model	Handle Color	Head Style	Gear Teeth	Swing Arc	Range	Increments	Length	Head Width	Head Depth*
1/2"	TQFRM34D	–	Flex Head	32	11°	5-34 Kg•m	1 Kg•m	22 1/8"	1 5/8"	3/4"
3/4"	TQRM80C	–	Detachable	33	11°	26-80 Kg•m	2 Kg•m	48"	2 3/8"	1 1/4"

* Does not include square drive dimension.

DIAL

Dial Torque Wrenches allow the user to easily apply and monitor torque. Available in a wide selection of models, drive sizes, ranges, scales and dial configurations.

±1-2% Accurate

Steel Welded Bodies with bright nickel-chrome finish

Heat Treated Dial Guards
Protects the dial crystal from damage

Made in U.S.A.

TE50A

3 Models Available
Available in 1-needle "Basic", 2-needle "Follow Up" and convenient lighted "Signal" versions

Patented Torsion Bar
machined from aircraft quality alloy steel for long life and precise performance across the entire scale

Multiple Dial Configurations
Scale readings available for Newton Meter, US, Combination Newton Meter/US and Combination US/Metric

TORQOMETER®
Torque Wrenches

Dial torque wrenches allow the user to easily apply and monitor torque with high accuracy and reliability.
With a wide selection of models to choose from (1/4"–1 1/2" drives) and multiple ranges, scales, and dial configurations, there is a dial wrench to cover nearly every need.
A certificate of calibration is available if needed, plus, most dial-type torque wrenches include a rugged hard case for safe transport and storage (see charts for more information).

Rugged Hard Case
for safe transport and storage
available for most models

BASIC MODEL
- Needle shows torque achieved

FOLLOW UP MODEL
- Two separate needles show targeted torque and torque achieved

SIGNAL MODEL
- Features a built-in light that flashes when targeted torque is achieved

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

DIAL

TESI SERIES Newton Meter Reading (+/-2% Accuracy)

• Dial printed in N•m

Made in U.S.A.

Square Drive	Basic Model	Follow Up Model	Signal Model	Range	Increments	Length	Width	Head Depth*	Storage Case
1/4"	TESI5	–	TESI5L	5 Nm	0.2 N•m	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TESI10	TESI10FU	TESI10L	10 N•m	0.5 N•m	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TESI20	TESI20FU	TESI20L	20 N•m	0.5 N•m	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TESI30	TESI30FU	TESI30L	30 N•m	1 N•m	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TESI60	TESI60FU	TESI60L	60 N•m	2 N•m	12 1/2"	2 11/16"	1 1/4"	•
3/8"	TESI70	TESI70FU	TESI70L	70 N•m	2 N•m	12 1/2"	2 11/16"	1 1/4"	•
3/8"	TESI75	TESI75FU	TESI75L	75 N•m	1 N•m	12 1/2"	2 11/16"	1 1/4"	•
1/2"	TESI125	TESI125FU	TESI125L	125 N•m	5 N•m	16"	2 11/16"	1 3/8"	•
1/2"	TESI200	TESI200FU	TESI200L	200 N•m	5 N•m	18 3/4"	2 3/4"	1 3/8"	•
1/2"	TESI250	TESI250FU	TESI250LA	250 N•m	5 N•m	18 3/4"	2 3/4"	1 3/8"	•
3/4"	TESI500A	TESI500FUA	TESI500LA	500 N•m	10 N•m	29 7/8"	3 1/4"	1 25/32"	•
3/4"	TESI800A	TESI800FUA	TESI800LA	800 N•m	20 N•m	40 7/8"	3 1/4"	1 25/32"	•
1"	TESI1360**	TESI1360FU**	TESI1360L**	1,360 N•m	20 N•m	66 13/16"	3 9/16"	2 1/32"	
1"	TESI2803†	TESI2803FU†	TESI2803L†	2,800 N•m	50 N•m	80"	4 13/32"	2 1/8"	
1 1/2"	TESI2805†	TESI2805FU†	TESI2805L†	2,800 N•m	50 N•m	80"	4 25/32"	2 3/8"	
1 1/2"	–	TESI4000FU	TESI4000L	4,000 N•m	100 N•m	140"	5 1/2"	2 13/16"	

Note: Wrenches in chart do not include certificate of calibration. Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number. GTE models feature a black oxide finish.

* Does not include square drive dimension.

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

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

†† Includes 94TQPA 10' extension handle.

TE SERIES US Reading (+/-2% Accuracy)

• Dial printed in in-lb (ft-lb)

Made in U.S.A.

Square Drive	Basic Model	Follow Up Model	Signal Model	Range	Increments	Length	Width	Head Depth*	Storage Case
1/4"	TE1A	TE1FUA	–	15 in.-lb.	1/4 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TE3A	TEFUA	–	30 in.-lb.	1/2 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TE6A	TE6FUA	–	75 in.-lb.	1 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	GTE6A	–	–	75 in.-lb.	1 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TE12A	TE12FUA	TE12LA	150 in.-lb.	2 1/2 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TE25A	TE25FUA	TE25LA	300 in.-lb.	5 in.-lb.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TE50A	TE50FUA	TE50LA	600 in.-lb.	10 in.-lb.	12 1/2"	2 11/16"	1 1/4"	•
3/8"	TE12FA	TE12FFUA	TE12FLA	12 ft.-lb.	1/2 ft.-lb.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TE25FA	TE25FFUA	TE25FLA	25 ft.-lb.	1/2 ft.-lb.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TE50FA	TE50FFUA	TE50FLA	50 ft.-lb.	1 ft.-lb.	12 1/2"	2 11/16"	1 1/4"	•
1/2"	TE51	TE51FU	TE51L	600 in.-lb.	10 in.-lb.	15"	2 11/16"	1 5/16"	
1/2"	TE51F	TE51FFU	TE51FL	50 ft.-lb.	1 ft.-lb.	15"	2 11/16"	1 5/16"	
1/2"	TE100	TE100FU	TE100L	100 ft.-lb.	1 ft.-lb.	16"	2 3/4"	1 3/8"	•
1/2"	TE175	TE175FU	TE175L	175 ft.-lb.	2 1/2 ft.-lb.	18 3/4"	2 3/4"	1 3/8"	•
1/2"	GTE175	–	–	175 ft.-lb.	2 1/2 ft.-lb.	18 3/4"	2 3/4"	1 3/8"	•
1/2"	TE250	TE250FU	TE250L	250 ft.-lb.	5 ft.-lb.	23 3/4"	2 3/4"	1 3/8"	•
3/4"	TE352A	TE352FUA	TE352LA	350 ft.-lb.	5 ft.-lb.	29 7/8"	3 1/4"	1 25/32"	
3/4"	TE602A	TE602FUA	TE602LA	600 ft.-lb.	10 ft.-lb.	40 1/2"	3 1/4"	1 25/32"	•
1"	TE803**	TE803FU**	TE803L**	800 ft.-lb.	10 ft.-lb.	66 13/16"	3 9/16"	2 1/32"	
1"	TE1003†	TE1003FU**	TE1003L**	1,000 ft.-lb.	10 ft.-lb.	66 13/16"	3 9/16"	2 1/32"	
1"	TE1503†	TE1503FU†	TE1503FU†	1,500 ft.-lb.	25 ft.-lb.	80"	4 13/32"	2 1/8"	
1"	TE2003†	TE2003FU†	TE2003L†	2,000 ft.-lb.	25 ft.-lb.	80"	4 13/32"	2 1/8"	
1 1/2"	TE2005†	TE2005FU†	TE2005L†	2,000 ft.-lb.	25 ft.-lb.	80"	3 9/16"	2 3/8"	
1 1/2"	TE3005††	TE3005FU††	TE3005L††	3,000 ft.-lb.	50 ft.-lb.	140"	5 1/2"	2 13/16"	

Note: Wrenches in chart do not include certificate of calibration. Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number. GTE models feature a black oxide finish.

* Does not include square drive dimension.

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

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

†† Includes 94TQPA 10' extension handle.

DIAL

Dial Torque Wrenches allow the user to easily apply and monitor torque. Available in a wide selection of models, drive sizes, ranges, scales and dial configurations.

± 1-2% Accurate

TER175L

Made in U.S.A.

TER SERIES Combination US & Newton Meter (Precise 1% Accuracy)

• Dial printed in N•m plus in-lb (ft-lb)

Square Drive	Basic Model	Follow Up Model	Signal Model	Range (N•m)	Increments (N•m)	Range (US)	Increments (US)	Length	Width	Head Depth*	Storage Case
1/4"	TER1A	TER1FUA	–	1.7 Nm	0.05 N•m	15 in. lbs.	0.5 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TER3A	TER3FUA	–	3.5 N•m	0.1 N•m	30 in. lbs.	1 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TER6A	TER6FUA	–	8.4 N•m	0.2 N•m	75 in. lbs.	1 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TER12A	TER12FUA	TER12LA	17 N•m	0.5 N•m	150 in. lbs.	5 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TER25A	TER25FUA	TER25LA	3,200 N•m	50 N•m	300 in. lbs.	5 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TER50A	TER50FUA	TER50LA	60 N•m	1 N•m	600 in. lbs.	20 in. lbs.	12 1/2"	2 11/16"	1 1/4"	•
1/2"	TER51	TER51FU	TER51L	60 N•m	1 N•m	600 in. lbs.	20 in. lbs.	15"	2 11/16"	1 5/16"	
1/2"	TER100	TER100FU	TER100L	140 N•m	5 N•m	100 ft. lbs.	2 ft. lbs.	16"	2 3/4"	1 3/8"	•
1/2"	TER175	TER175FU	TER175L	230 N•m	10 N•m	175 ft. lbs.	5 ft. lbs.	18 3/4"	2 3/4"	1 3/8"	•
1/2"	TER250	–	–	340 N•m	10 N•m	250 ft. lbs.	10 ft. lbs.	23 3/4"	2 3/4"	1 3/8"	•
3/4"	TER352A	TER352FUA	TER352LA	480 N•m	10 N•m	350 ft. lbs.	5 ft. lbs.	29 7/8"	3 1/4"	1 3/8"	•
3/4"	TER602A	TER602FUA	TER602LA	800 N•m	20 N•m	600 ft. lbs.	20 ft. lbs.	40 7/8"	3 1/4"	1 25/32"	•
1"	TER1003**	–	TER1003L**	1,360 N•m	20 N•m	1,000 ft. lbs.	20 ft. lbs.	66 13/16"	3 9/16"	2 1/32"	

Note: Wrenches in chart do not include certificate of calibration. Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number. GTE models feature a black oxide finish.

* Does not include square drive dimension.

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

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

†† Includes 94TQPA 10' extension handle.

TEC175

Made in U.S.A.

TEC SERIES Combination US & Metric (+/-2% Accuracy)

• Dial printed in kg-cm (kg-m) plus in-lb (ft-lb)

Square Drive	Basic Model	Follow Up Model	Signal Model	Range (Metric)	Increments (Metric)	Range (US)	Increments (US)	Length	Width	Head Depth*	Storage Case
1/4"	TEC1A	TEC1FUA	–	16 kg-cm	1 kg-cm	15 in. lbs.	0.5 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TEC3A	TEC3FUA	–	35 kg-cm	1 kg-cm	30 in. lbs.	1 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
1/4"	TEC6A	TEC6FUA	–	90 kg-cm	2.5 kg-cm	75 in. lbs.	1 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TEC12A	TEC12FUA	TEC12LA	175 kg-cm	5 kg-cm	150 in. lbs.	5 in. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TEC25FA	TEC25FFUA	TEC25FLA	350 kg-cm	10 kg-cm	25 ft. lbs.	1 ft. lbs.	9 29/32"	2 11/16"	1 1/4"	•
3/8"	TEC50A	TEC50FUA	TEC50LA	700 kg-cm	20 kg-cm	600 in. lbs.	20 in. lbs.	12 1/2"	2 11/16"	1 1/4"	•
1/2"	TEC51	TEC51FU	TEC51L	700 kg-cm	20 kg-cm	600 in. lbs.	20 in. lbs.	15"	2 11/16"	1 5/16"	
1/2"	TEC100	TEC100FU	TEC100L	14 kg-m	0.5 kg-m	100 ft. lbs.	2 ft. lbs.	16"	2 3/4"	1 3/8"	•
1/2"	TEC175	TEC175FU	TEC175L	25 kg-m	1 kg-m	175 ft. lbs.	5 ft. lbs.	18 3/4"	2 3/4"	1 3/8"	•
1/2"	TEC250	TEC250FU	TEC250L	35 kg-m	1 kg-m	250 ft. lbs.	10 ft. lbs.	23 3/4"	2 3/4"	1 3/8"	•
3/4"	TEC352A	TEC352FUA	TEC352LA	50 kg-m	1 kg-m	350 ft. lbs.	10 ft. lbs.	29 7/8"	3 1/4"	1 25/32"	•
3/4"	TEC602A	TEC602FUA	TEC602LA	80 kg-m	2 kg-m	600 ft. lbs.	20 ft. lbs.	40 7/8"	3 1/4"	1 25/32"	•
1"	TEC803**	TEC803FU**	TEC803L**	110 kg-m	2 kg-m	800 ft. lbs.	25 ft. lbs.	66 13/16"	3 9/16"	2 1/32"	
1"	–	–	TEC1003L**	136 kg-m	2 kg-m	1,000 ft. lbs.	20 ft. lbs.	66 13/16"	3 9/16"	2 1/32"	
1"	–	TEC1503FU†	TEC1503L†	200 kg-m	5 kg-m	1,500 ft. lbs.	25 ft. lbs.	80"	4 13/32"	2 1/8"	
1"	–	TEC2003FU†	TEC2003L†	280 kg-m	5 kg-m	2,000 ft. lbs.	50 ft. lbs.	80"	4 13/32"	2 1/8"	
1 1/2"	TEC2005†	TEC2005FU†	TEC2005L†	280 kg-m	5 kg-m	2,000 ft. lbs.	50 ft. lbs.	80"	4 13/32"	2 3/8"	
1 1/2"	–	TEC3005FU	TEC3005L	400 kg-m	5 kg-m	3,000 ft. lbs.	50 ft. lbs.	140"	5 1/2"	2 13/16"	

Note: Wrenches in chart do not include certificate of calibration. Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number. GTE models feature a black oxide finish.

* Does not include square drive dimension.

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

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

†† Includes 94TQPA 10' extension handle.

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

TORQUE DRIVERS

Torque Drivers are ideal for low torque applications and are available in adjustable torque, torque preset and torque limiting models.

±6% Accurate

Torque Screwdrivers

- Ideal 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 when set torque is achieved
- Accuracy is ±6% from 20–100% of full scale in clockwise direction only
- Lightweight, red aluminum body with stainless steel shank
- Comfortable ergonomic tri-lobe grip and magnetic bit retention
- Textured body provides a nonslip grip
- Not supplied with certificate of calibration

QDRIVER1P

Preset

Model	Range	Increments	Length
QDRIVER1P	6-32 in.-oz. (4-22 N•cm)	–	4 9/16"
QDRIVER2P	10-100 in.-oz. (7-70 N•cm)	1 in. oz.	5 5/8"
QDRIVER3P	1.5-15 in.-lb. (16-169 N•cm)	0.02 in. lb.	5 5/8"
QDRIVER4P	4-40 in.-lb. (45-451 N•cm)	0.5 in. lb.	6"

ASME® B107.300-2010 Type III, Class A, Style 2, Design A

QDRIVER2

Adjustable

Model	Range	Increments	Length
QDRIVER2	20-100 in.-oz. (14-70 N•cm)	1 in.-oz.	5 7/16"
QDRIVER3	3-15 in.-lb. (3-169 N•cm)	0.2 in.-lb.	6 1/4"
QDRIVER4	5-40 in.-lb. (56-451 N•cm)	0.5 in.-lb.	6 11/16"
QDRIVER4NM	50-450 N•cm	5 N•cm	6 11/16"

ASME® B107.300-2010 Type III, Class A, Style 1, Design A

TPMS Adjustable Torque Screwdriver

- For maintaining/installing popular styles of tire pressure monitoring sensors
- Manufactured from aircraft-grade aluminum
- Dedicated torque measurements for popular TPMS ratings (4, 12, 35 in-lb)

Model	Range, Detected	Length	Accuracy
QDTPMS35	4 in.-lb., 12 in.-lb., 35 in.-lb.	6 5/8"	+/- 6%

ATECHMS80M

Approaching Target | Target Achieved | Over Torque

ATECHMS80F

TechAngle® Screwdriver

- Four alert modes (LCD, LED, Audible, Vibratory)
- Advanced features: programmable sleep timer, cycle counter, overload indication, calibration alert, battery level, language selection and torque record memory including 10 presets and storage for up to 50 records
- Three modes of operation: Torque, Angle, Torque Then Angle
- Displays in 6 units of measure: in-lb., in-oz., ft-lb., Nm, Kg-cm, cNm, angle
- Guaranteed accuracy +/- 2% CW and 3%CCW at 20%-100% full scale (+/- 4%CW and 6% CCW at 4% to 19% of full scale)

Model	Drive	Range	Increments	Length
ATECHMS80F	1/4" Female Hex Drive	4-80 in.-lbs. (0.45-9 Nm)	0.01 in. lbs.	7 1/2"
ATECHMS80M	1/4" Male Drive	4-80 in.-lbs. (0.45-9 Nm)	0.01 in. lbs.	7 1/2"

Torque Limiting Drivers

QDRIVER2A

Preset

- Cam over torque limiting clutch free wheels when set torque is achieved
- Ideal selection for assembly line work where same requirement is constant

Model	Range	Increments	Length
QDRIVER2A	20-100 in-oz (14–70 N•cm)	1 in.-oz.	5 7/16"
QDRIVER3A	3-15 in-lb (34–169 N•cm)	0.2 in.-lb.	6 1/4"
QDRIVER4A	5-40 in-lb (56–451 N•cm)	0.5 in.-lb.	6 11/16"
QDRIVER4NMA	50-450 N•cm	5 N•m	6 11/16"

QTS135

Adjustable

- Micrometer type adjustment
- Clutch allows 25° of free rotation on reaching set torque
- Guaranteed accuracy: within ±4% of setting from 20% of capacity to full capacity clockwise and counterclockwise

Model	Range	Increments	Length
QTS135	5-35 in.-lb.	0.5 in-lb	7"
QTSP135	5-35 in.-lb.	0.5 in-lb	7- 1/2"

TORQUE ADAPTERS

For use with torque wrenches where the type of fastener, clearance, and obstructions dictate the use of a wrench adapter versus a standard socket.

Made in U.S.A.

1/2" DRIVE SAE

Stock No.	Size	Working Torque
SRDH321	1"	4,312 in. lbs.
SRDH341	1 1/16"	3,564 in. lbs.
SRDH361	1 1/8"	5,192 in. lbs.
SRDH401	1 1/4"	5,600 in. lbs.
SRDH441	1 3/8"	5,600 in. lbs.

3/8" DRIVE SAE

Stock No.	Size	Working Torque
FRDH101	5/16"	190 in. lbs.
FRDH121	3/8"	420 in. lbs.
FRDH141	7/16"	500 in. lbs.
FRDH161	1/2"	710 in. lbs.
FRDH181	9/16"	1,050 in. lbs.
FRDH201	5/8"	1,400 in. lbs.
FRDH221	11/16"	1,400 in. lbs.
FRDH241	3/4"	1,400 in. lbs.
FRDH281	7/8"	2,000 in. lbs.
FRDH301	15/16"	2,706 in. lbs.

3/8" DRIVE METRIC

Stock No.	Size	Working Torque
FRDHM8	8 mm	212 in. lbs.
FRDHM10	10 mm	420 in. lbs.
FRDHM12	12 mm	690 in. lbs.
FRDHM13	13 mm	720 in. lbs.
FRDHM14	14 mm	1,050 in. lbs.
FRDHM15	15 mm	1,200 in. lbs.
FRDHM16	16 mm	1,400 in. lbs.
FRDHM17	17 mm	804 in. lbs.
FRDHM18	18 mm	1,400 in. lbs.
FRDHM19	19 mm	1,400 in. lbs.
FRDHM21	21 mm	2,000 in. lbs.

12-Point Torque Adapters

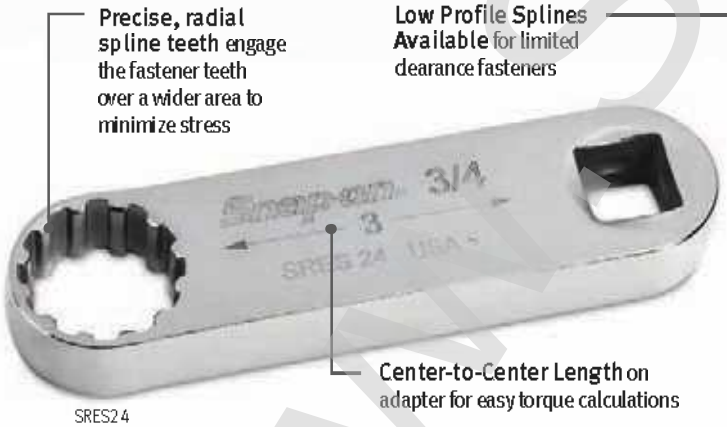
Torque adapters get into tighter areas where standard sockets cannot reach. Manufactured from special alloy steel, precision forged and heat treated for optimum strength and durability, Snap-on's larger torque adapter sizes are forged thicker than competitor's models for strength when you need it. The double hex (12-point) configuration allows the socket to engage a single hex fastener every 30° rather than every 60°, allowing for better access in restricted areas. And unlike competitor's offerings, these high-strength adapters are made with pride in the USA, insuring the finest quality and durability.

1/4" DRIVE SAE

Stock No.	Size	Working Torque
TRDHL81	1/4"	176 in. lbs.
TRDHL101	5/16"	220 in. lbs.
TRDHL121	3/8"	484 in. lbs.
TRDHL141	7/16"	560 in. lbs.

1/4" DRIVE METRIC

Stock No.	Size	Working Torque
TRDHM6	6 mm	144 in. lbs.
TRDHM7	7 mm	192 in. lbs.
TRDHM8	8 mm	212 in. lbs.



Made in U.S.A.

12-Point Spline Torque Adapters

Snap-on® spline wrenching tools have been developed to service high tensile strength spline nuts and bolts widely used on both military and commercial aircraft. Precise, radial spline teeth engage the fastener teeth over a wider area to minimize stress, and allow application of high torque to reduce risk of damage to the fastener or to the tool. Chrome tools comply with Military Spec. MS-33787 and MIL-W-89823. The unique spline wrenching configuration can also be used on ordinary six- and 12-point fasteners with an advantage similar to the Snap-on Flank Drive® wrenching system.

1/2" DRIVE SPLINE

Stock No.	Size	Working Torque
SRES18	#18 - 9/16"	2,275 in. lbs.
SRES20	#20 - 5/8"	2,450 in. lbs.
SRES22	#22 - 11/16"	2,975 in. lbs.
SRES24	#24 - 3/4"	3,500 in. lbs.
SRES26	#26 - 13/16"	4,410 in. lbs.
SRES28	#28 - 7/8"	4,900 in. lbs.
SRES30A	#30 - 15/16"	6,000 in. lbs.

3/8" DRIVE LOW PROFILE SPLINE

Stock No.	Size	Working Torque
FRESL24	#24-3/4"	465 in. lbs.
FRESL28	#28-7/8"	605 in. lbs.

3/8" DRIVE SPLINE

Stock No.	Size	Working Torque
FRES7	#7 - 7/32"	140 in. lbs.
FRES8	#8 - 1/4"	195 in. lbs.
FRES9	#9 - 9/32"	220 in. lbs.
FRES10	#10 - 5/16"	250 in. lbs.
FRES12	#12 - 3/8"	515 in. lbs.
FRES14	#14 - 7/16"	875 in. lbs.
FRES16	#16 - 1/2"	1,575 in. lbs.
FRES18	#18 - 9/16"	1,750 in. lbs.
FRES20	#20 - 5/8"	1,750 in. lbs.
FRES22	#22 - 11/16"	1,750 in. lbs.
FRES24	#24 - 3/4"	1,750 in. lbs.

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

TORQUE MULTIPLIERS

Use of torque multipliers are essential when high torque is needed and are ideal in heavy industries. Multiple reaction fixtures available for true torque multiplication.

±4% Accurate

MTM Series
Torque Multipliers

Torque multipliers are ideal for use in the Oil & Gas, Mining, Railroad, Heavy Fleet, Power Gen and Aviation industries. They are calibrated to give exact multiplication ratio and have a guaranteed accuracy of +/-4%. Their compact dimensions allow excellent access and easy handling in any environment. Robust construction means minimal maintenance and long life in demanding work environments. Compact carrying case included and a variety of optional reaction fixtures available separately.

Bar Style Multipliers

MTMB740
MTMB950
MTMB1990

- Compact dimensions allow excellent access and easy handling
- 5:1 torque ratio
- Supplied with two reaction bar styles for maximum versatility

Rugged Hard Case for safe transport and storage included

Compact Manual Multipliers

MTMC730
MTMC1475

- Compact dimensions allow excellent access and easy handling
- Up to a 27:1 torque ratio
- Anti Wind-Up Ratchet (AWUR) fitted as standard; keeps the multiplier loaded for easier operation
- Calibrated to give exact multiplication ratio, and each multiplier issued with unique calibration certificate
- Variety of alternative reaction styles available

TORQUE MULTIPLIERS SPECIFICATIONS

Stock No.	Torque Ratio	Certification	Anti-Windup	Torque Output (ft. lbs.)		Torque Output (Nm)		Input Size	Output Size
				Min	Max	Min	Max		
MTMB740	5:1	No	No	74	740	100	1000	1/2	3/4
MTMB950	5:1	No	No	96	950	130	1300	1/2	3/4
MTMB1990	5:1	No	No	200	1990	270	2700	3/4	1
MTMC730	22:1	Yes	Yes	74	730	100	1000	3/8	3/4
MTMC1475	27:1	Yes	Yes	147	1475	200	2000	1/2	1

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TORQUE EQUIPMENT

Accuracy is the most important aspect of any Torque Instrument. Digital torque testers give you fast, precise readings to help keep your torque instruments error–free.

CE

1/2" & 3/8" Dual Drive Digital Torque Checker

QUICKLY CHECK BOTH MECHANICAL AND ELECTRONIC TORQUE WRENCHES ANY TIME

QCDTC3250

- A quick and easy way to determine the accuracy of mechanical and electronic torque wrenches
- Large, easy-to-read backlight LCD display
- Range: 25 ft. lbs. to 250 ft. lbs. (34-339 Nm)
- Reads in ft. lbs., in. lbs. and Nm
- Accuracy: +/- 1% CW and +/- 1% CCW, 10% to 100% of full scale
- Tough, composite housing with integrated adapter storage
- Torque check functions: Track/Peak Hold/First Peak
- Adjustable auto shutoff feature
- CE approved
- Mounting hardware included

Easy-to-Use Color Touchscreen

- Color-coded numbers indicate low, good and high torque readings
- Color bar at the top allows the user to see progress relative to the target torque

Torque Comparators

DETERMINE IF A TORQUE WRENCH REQUIRES CALIBRATION TO MAINTAIN PROPER APPLICATION OF TORQUE

- Compact design with 1/4" steel mounting plate allows for convenient installation in any direction: horizontally on a bench, vertically on a wall, or on any other sturdy, flat surface
- Does not include certificate of calibration

TCR600

1/2" Drive *TCR175*

- 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
- Integrated exercise adapter makes it easy to break in simple, providing the most accurate results (as per B107-300 standard)
- 2% accurate within ±2% of the reading from 20% of full scale to full scale clockwise and counterclockwise
- Can check a 3/8" drive torque wrench by using an A2A or GAF2A adapter

3/4" Drive *TCR600*

- Similar to TCR175 except for these differences:
- 3/4" female square drive input and 600 ft-lb capacity with 10 ft-lb graduations and 800 N•m capacity with 20 N•m increments

Stock No.	Drive Size	Capacity (ft.-lb./N•m)	Increments (ft.-lb./N•m)
TCR175	1/2"	175 (230)	5 (10)
TCR600	3/4"	600 (800)	10 (20)

1/2" or 3/8" Drive Digital Torque Testers

CONVENIENTLY TEST TORQUE SETTINGS ON TORQUE WRENCHES PRIOR TO USE

QC2DTT250 (3/8" Drive)

QC3DTT250 (1/2" Drive)

- Can be mounted on a wall or in a bench-top vise
- Features an easy-to-use touch screen to capture peak torque values during a test in real time
- Download stored torque data to a PC
- Testing options: quick check or ASME® style test
- Refresh rate of 1,000 data points per second
- Record and track torque wrench test results by serial number, plus adds traceability by using wrench serial numbers and technician I.D.
- Choose your wrench type
- Reads in Nm, kg cm, ft. lbs., in. lbs., in. oz.
- ±0.5% of indicated test value from 10%–100% or rated capacity
- Memory Capacity: 500 records (complete check mode only)
- Includes AC/DC power supply, six AA batteries, USB cable and carrying case
- Also available in 1/4", 1/2" & 3/4" drive versions; ask your Rep for details

CE

Stock No.	Drive Size	Range	
QC2DTT250	3/8"	25-250 in. lb.	28.2-282.5 dNm
QC3DTT250	1/2"	25-250 ft. lb.	33.9-339.0 Nm

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