

# THE WORLD'S GREATEST FORCE IN ROTATIONAL FORCE

# FOR EVERY TORQUE APPLICATION ACROSS EVERY CRITICAL INDUSTRY, PROFESSIONALS TURN TO SNAP-ON®



#### **ERROR PROOFING - WIRELESS CONNECTIVITY FOR REAL TIME PROCESS CONTROLS**

When defect-free is the only option, no one prevents potential failures – at the source, before they have a chance to move down the line – like Snap-on®. Our torque tools are part of your error-proofing efforts, allowing your processes to virtually eliminate defects. ControlTech-Link®, the torque system that applies to the most critical aspect of the production process, assures torque is being properly and accurately applied during the production process. It's next-level quality assurance and quality control from the company synonymous with quality.



#### HEAVY-DUTY BOLTING - TONS OF FORCE. TONS OF EXPERTISE.

With critical industries come weighty issues: compromised structural integrity, extreme applications in punishing environments, and the high cost of failure. They require Snap-on's unmatched expertise. Our solutioneers bring on-the-ground experience around the world – from oil and gas in the North Sea to copper mines in South America, North American railroads and global power generation. They also advise on torque applications, customized engineering, technical proposals, integration with internal systems and more. When the cost of failure is high, Snap-on® helps ratchet up success.



#### MECHANICAL MAINTENANCE - TORQUE THAT TIGHTENS UP MAINTENANCE.

To maximize industrial maintenance, professionals rely on the world's top producer of torque tools and solutions: Snap-on®. Our comprehensive torque portfolio elevates maintenance in critical industries because – as a key input to preventive maintenance – it helps avoid breakdowns, eliminates downtime and assures productivity in asset deployment. Keeping refineries online, factories moving forward, wind towers turning and airlines' ground equipment doing their jobs. For torque that makes the industrial world go 'round – and keeps the economy in motion – it's Snap-on®.



#### PRECISION ASSEMBLY - THE MOST COMPLETE TORQUE ASSORTMENT EVER ASSEMBLED.

No matter what you're assembling, Snap-on® has a lineup of torque tools like no other. Our selection includes a full line of torque screwdrivers for low-torque assembly, productivity-enhancing ergonomic handles and magnetic bit retention. Click-type torque wrenches with fixed, fixed-ratchet, compact or flex heads to match torque tools precisely to the manufacturing process. And ControlTech® electronic torque wrenches that combine accuracy, versatility, and programmability for use across the production floor. It all comes together with Snap-on®.



#### **SERVICE & TRAINING - PUTTING TORQUE TO THE TEST.**

Because accuracy is the most important aspect of any torque instrument, Snap-on® puts all our tools to the test. Our electronic and digital torque testers, master calibration systems, portable torque acquisition meters, horizontal torque testers and transducers and torque comparators give you fast, precise readings to help keep your torque instruments error-free. And in instances when your tool's accuracy gets a little off – when it's dropped, misused, or even worn out – our calibration laboratories offer the equipment and expertise to get the torque back to pinpoint precision. By any measure, Snap-on® is the best.

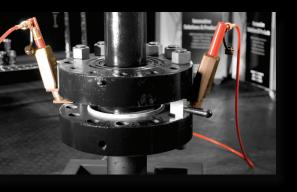
# TOOLS AND SOLUTIONS FOR OIL AND GAS

EXTREME CONDITIONS CALL FOR TOOLS AND SOLUTIONS THAT CAN HANDLE ANYTHING



#### **UPSTREAM**

Snap-on® has a full range of tools and solutions to support upstream operations, whether it's onshore or offshore exploration & extraction, shale fracking or mining oil sands. In addition to having the right tools to manufacture and maintain your equipment, we have the best tools and solutions for keeping your service trucks in top shape.



#### **MIDSTREAM**

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. These tasks are critical to midstream operations, and we have the right products and solutions to keep your pipelines and service infrastructure in top shape.



#### **DOWNSTREAM**

We've been making tools for 100 years — so it should come at no surprise that we have the broadest range of tools anywhere on the planet. We are committed to offering tools and solutions that are vitally important to refineries and petrochemical plants.





#### **ControlTech® Electronic Torque Wrenches**

ControlTech® 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.

#### **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

#### **LED Indicator Lights**

- Dual-side LED indicator lights with configurable settings provide operational guidance
- Click-types can easily be over-torqued 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

#### **Multi-Lingual Display**

 Programmable to display commands in setting in English, French, Spanish or German

#### **Convenient Data Download**

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

#### **Dual 80® Technology**

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

#### **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 and Angle Combo Mode**

- The most accurate and fastest way to achieve torque plus angle in a single motion
- Control torque accuracy to +/- 1.5% CW and +/- 3% CCW
- Control angle accuracy to +/-1% of reading and +/-1°

#### **Calibration Due Indicator**

· Alerts you when calibration is needed

#### **Reliable Data Trail**

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

Stock No.	Head Type	Square Drive, inches	Gear Teeth	Torque Range, in-lb	Torque Range, ft-lb	Torque Range, N•m	Shank Diameter, Inches	Weight, lb (kg)	Length, inches (mm)
CTECHBN340A	IZO/ISO (Interchangeable)		_	12.5–250.8	150–3,009	17.0–340.0	_	3.75 (1.7) w/o head, w/batteries	23.9 (607) w/o head
CTECHAN135A	IZO/ISO (Interchangeable)		_	60–1,195	5.0-99.6	6.8–135.0	_	2.85 (1.2) w/o head, w/batteries	17.8 (452) w/o head
CTECHAN30A	IZO/ISO (Interchangeable)		_	1.11–22.13	13.3–365.5	1.50-30.00	_	2.0 (.9) w/o head, w/batteries	13.3 (338) w/o head
CTECH1R240A	Fixed Head	1/4	72	12-240	1.0-20.0	1.4-27.2	_	2.0 (.9)	14.1 (358)
CTECHL1240A	Fixed Head	1/4	_	12-240	1.0-20.0	1.4–27.2	_	1.1 (0.49)	12.4 (315)
CTECH1FR240A	Sealed Flex Head	1/4	72	12-240	1.0-20.0	1.4-27.2	_	2.0 (.9)	14.1 (358)
CTECH2FR100A	Sealed Flex Head	3/8	80	60-1,200	5.0-100.0	6.8–135.6	_	2.7 (1.2)	17.2 (437)
CTECH3FR250A	Sealed Flex Head	1/2	80	150-3,000	12.5-250	16.9–339	_	4.5 (2.10)	26.7 (678)
CTECH4R600A	Sealed Fixed Head	3/4	32	360-7,200	30-600	40.7–813.5	_	10.5 (4.8)	48.6 (1,234)
CTECHL1R240A	Sealed Fixed Head	1/4	72	12-240	1.0-20.0	1.4-27.2	_	1.2 (0.54)	14.1 (358)
CTECH1J240A	Interchangeable	_	_	12-240	1.0-20.0	1.4-27.2	J (0.425)	1.8 (0.8)	12.5 (318)
CTECH2Y100A	Interchangeable	_	_	60–1,200	5-100	6.8–135.6	Y (0.560)	2.7 (1.2)	17.2 (437)
CTECH3X250A	Interchangeable	_	_	150-3,000	12.5–250	16.9–339	X (0.735)	3.6 (1.6)	24.1 (612)
CTECH4Z600A	Interchangeable		_	30–600	360-7,200	40.7-813.5	Z (0.990)	7.6 (3.5)	44.8 (1,138)
CTECH4ZN650A	Interchangeable	_	_	288-5,754	24-479.5	32.5-650	Z (0.560)	5.7 (2.58)	32.1 (815.34)
CTECHL1J240A	Interchangeable			12–240	1.0-20.0	1.4–27.2	J (0.425)	1.0 (0.45)	12.5 (316)





#### ControlTech® Micro Electronic Torque Wrench

- Fully-featured electronic torque wrenches with a smaller form factor
- Shorter length than the standard ControlTech® for a finer touch
- Three feedback methods work for both torque and angle: visual (LDC/LED); audible (beep); and tactile (vibration)
- Torque and angle presets can be selected, and torque jobs can be created with presets
- Steel construction and rugged gyroscope provide extreme drop protection
- Real-time clock to indicate when calibration is required
- FOD-proof cover slides open to reveal a USB port
- Torque accuracy ±1.5% clockwise, ± 3% counter-clockwise
- Angle range 0 to 360°
- Storage capacity up to 1,500 readings

Stock No.	Shank Size, mm	Head Type	Torque Range, in-lb	Torque Range, ft-lb	Torque Range, N•m	Square Drive, inches	Gear Teeth	Gear Action	Weight, lb (kg)	Length, inches (mm)
CTECHANM30	9 x 12	IZO/ISO Interchangeable Head	13.3–265.5	1.11–22.13	1.5–30	N/A	N/A	N/A	0.8 (0.36)	10.22 (259.59)
CTECH1MR100	_	Fixed Head	5-100	0.42-8.33	0.57-11.30	1/4	72	5°	0.9 (0.41)	10.9 (267)
CTECH2MR100	_	Fixed Head	5-100	0.42 - 8.33	0.57 - 11.30	3/8"	72	5°	0.9 (0.41)	10.9 (267)
CTECH2MR1200	_	Fixed Head	60-1,200	5–100	6.8-135.6	3/8	80	4.5°	1.6 (.73)	15.4 (391)
СТЕСНЈМ300	_	J-shank interchangeable	15-300	1.25-25	1.7-34	N/A	N/A	N/A	0.8 (0.36)	10.15 (257.81)
CTECH1MR240	_	Fixed Head	12-240	1–20	1.36-27.12	1/4	72	5°	0.93 (0.42)	11.6 (295)
CTECH2MR240	_	Fixed Head	12-240	1–20	1.36–27.12	3/8	80	4.5°	0.93 (0.42)	10.9 (267.05)

#### **User-Friendly Displays**



Integrated USB Port with Swing Door

**Units &** reset Entry Rutton

LCD Backlight, Angle Recal Button

#### **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





**Approaching Target** 

#### **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 Target Achieved 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



#### **Dual 80® Technology**

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

#### Durability

- · Rugged all-steel body is designed to stand up to industrial use
- · Industry-leading 2 year warranty

#### Shorter, Slimmer, **Lightweight Design Factor!**

- Features a 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) +/-1.5% CW +/-3% CCW (20 to 100% of full scale)
- Angle range o 360°

#### **Multi-Lingual Display**

 Programmable to display commands and settings in English, Spanish, French or German, Italian, Dutch, Portuguese







- Do not exceed rated torque
  Do not use to break fasteners loose
- Periodic recalibration is necessary to maintain accuracy
   Read safety precautions on pages W1 to W4











#### ControlTech®

#### **Electronic Torque Wrenches**

 Features Torque & Ángle Combo Mode – the most accurate and fastest way to achieve torque plus angle in a single motion

J-Shank, Y-Shank, X-Shank,

Contact your Snap-on Industrial Representative

Z-Shank & ISO/IZO

- Real time information with data logging
- Each wrench displays multiple torque units and angle

for details

- Customizable features: 50 presets, torque then angle, torque and angle, low profile buttons, power interruption technology, cycle counter, battery level indicator and more
- Precise multi-axis gyroscope and unique algorithm provides automatic flex compensation
- Meets or exceeds ISO 6789 standard
- Improved Torque accuracy:
- +/-4% CW +/-6% CCW (5 to 19% of full scale)
- +/-1.5% CW +/-3% CCW (20 to 100% of full scale)
- Rugged all-steel body is designed for industrial use (aluminum handle for 1,200 in-lb models)
- Angle range 0 360°

#### 1/4" Drive ControlTech® Micro Electronic Torque Screwdrivers

- Four modes of operation: Torque, Angle, Torque Then Angle, and Torque and Angle
- Durable composite tri-lobe hinge grip for better finger control; won't roll off uneven surfaces
- Program up to 50 pre-sets
- Job mode with ability to lockout users store up to 1500 torque and angle readings
- Accuracy: ±4% CW and ±6% CCW at 5 to 19% of full scale and ±2% CW and ±3% CCW at 20 to 100% of full scale



Approaching Target

# GET THE CONNECTORQ APP FOR YOUR

#### **MOBILE DEVICE**

**DOWNLOAD CONNECTORQ NOW** in the App Store, Google Play or Microsoft Store and sync to the tool to take readings, diagnose and then store and share results on your existing mobile device.



Target Achieved

Over Torque

#### **CONNECTORQ App**

- Reports peak torque and angle values
- · Quality control management with lock-out functions
- · Add or edit users
- Create and record specific torque jobs
- Create and distribute torque presets to ControlTech® wrenches or screwdrivers
- · Review and log torque sequences
- Scan QR or barcode for quick job mode set ups
- Send all stored data in a CSV file via email







Google Play and the Google Play logo are trademarks of Google LLC. Apple and the Apple logo are trademarks of Apple Inc., registered in the U.S. and other countries and regions. App Store is a service mark of Apple Inc. Microsoft<sup>®</sup>, and the Windows logo are registered trademarks of Microsoft Corporation in the United States and/or other countries

#### **ControlTech® Torque Wrenches**

	•					
Drive Size	ControlTech® Bluetooth® Torque Wrench	ControlTech-Link® Torque Wrench	Head Type	Range (in-lb)	Range (ft-lb)	Range (N•m)
1/4"		CTLNK1R240	Fixed Ratchet	12-240	1–20	1.4-27.2
3/8"	CTECHW2F100AS		Flex Head	60-1,200	5-100	6.8-135.6
5/6	CTECHW2R100AS	CTLNK2R100	Fixed Ratchet	60-1,200	5-100	6.8-135.6
1/2"	CTECHW3F250AS		Flex Head	150-3,000	12.5-250	16.9-339
1/2	CTECHW3R250AS	CTLNK3R250	Fixed Ratchet	150-3,000	12.5-250	16.9-339
3/4"	CTECHW4R650AS		Fixed Ratchet	288-5,754	24-479.5	32.5-650
3/4	CTECHW4R600AS	CTLNK4R600	Fixed Ratchet	360-7,200	30-600	40.7-813.5
J (0.425")		CTLNK1J240	Interchangeable	12-240	1–20	1.4-27.2
Y (0.560")	CTECHWY100AS	CTLNK2Y100	Interchangeable	60-1,200	5-100	6.8-135.6
1 (0.560 )		CTLNK2Y125	Interchangeable	75-1500	6.25-125	8.5-169.5
X (0.735")	CTECHWX250AS	CTLNK3X250	Interchangeable	150-3,000	12.5-250	16.9-339
Z (0.560")	CTECHWZN650AS		Interchangeable	288-5,754	24-479.5	32.5-650
2 (0.560 )	CTECHWZ600AS	CTLNK4Z600	Interchangeable	360-7,200	30-600	40.7-813.5
IZO/ISO (9 x 12 mm)	CTECHWAN135AS		Interchangeable	60-1,195	5-99.6	6.8-135
IZO/ISO (14 x 18 mm)	CTECHWBN340AS		Interchangeable	150-3,009	12.5-250.8	17-340

#### **ControlTech® Micro Torque Wrenches**

• All of the same, great ControlTech® features but in a smaller, more compact scale

Drive Size	ControlTech® Bluetooth® Micro Torque Wrench	ControlTech-Link® Micro Torque Wrench	Head Type	Range (in-lb)	Range (ft-lb)	Range (N•m)
1/4"	CTECHW1MR100S	CTLNK1MR100	Fixed Ratchet	5-100	0.42-8.33	0.57-11.30
1/4	CTECHW1MR240S	CTLNK1MR240	Fixed Ratchet	12-240	1–20	1.36-27.12
	CTECHW2MR100S	CTLNK2MR100	Fixed Ratchet	5-100	0.42-8.33	0.57-11.30
3/8"	CTECHW2MR240S	CTLNK2MR240	Fixed Ratchet	12-240	1–20	1.36-27.12
	CTECHW2M1200S	CTLNK2MR1200	Fixed Ratchet	60-1,200	5-100	6.8-135.6
J (0.425")	CTECHWJM300S	CTLNK1JM300	Interchangeable	15-300	1.25-25	1.7-34
Y (0.560")	CTECHWYM1200S	CTLNKYM1200	Interchangeable	60-1,200	5-100	6.8-135.6
IZO/ISO	CTECHWANM30S		Interchangeable	13.3-265.5	1.11-22.13	1.5-30
(9 x 12 mm)	CTECHWANM135S		Interchangeable	60-1,195	5-99.6	6.8-135

#### ControlTech® Micro Torque Screwdrivers

		•		
Drive Size	ControlTech® Bluetooth® Micro Screwdriver	ControlTech-Link® Micro Screwdriver	Range (in-lb)	Range (in-oz)
1/4" Hex	CTECHWMS100FS	CTLNKMS100F	0.31-6.25	5-100
1/4 Hex	CTECHWMS80FS	CTLNKMS80F	4-80	64-1280
4/411 € = 1.00	CTECHWMS100MS	CTLNKMS100M	0.31-6.25	5-100
1/4" Square	CTECHWMS80MS	CTLNKMS80M	4-80	64-1280

# CREATE A WIRELESS DIGITAL TORQUE WRENCH NETWORK



# NOW OFFERING FOUR INTERFACES

# ControlTech-Link® System WIRELESS CONNECTIVITY FOR REAL TIME PROCESS CONTROLS

- Wirelessly link to plant level manufacturing execution systems (MES) through Snap-on's new, cutting-edge controller
- Provides real time process controls for multiple operators and documents every torque event; eliminating redundant operations, mistakes, rework, and reducing warranty costs
- Can also be configured as a standalone data collection system, or control system

Controller (with 1 interface) CTLNKCTRL
Controller (with 4 interfaces) CTLNKCTRL4
Barcode Scanner Manager CTLNKBCSM
External I/O Module CTLNKEXTIOM
ControlTech Link Host Software CTLNKHOST
Internal I/O Cable CTLNKINTIOC

#### **QP Series Preset Screwdrivers**

- Ergonomic requires only 18° of rotation to achieve preset torque value
- No over-torquing clutch releases automatically when preset torque is attained
- Accuracy of +/- 6% (from 20% to100% of capacity)
- Bi-directional versatility CW and CCW operation
- Preset to any torque value via a torque tester and a 1/4" hex drive

Drive Size	Range (in-oz)	Range (in-lb)	Range (N•m)
QPDRIVER2	20-100	1.25-6.25	10-70
QPDRIVER3	40-240	4-20	0.33-1.65
QPDRIVER4	115.2-576	5-40	0.8-4

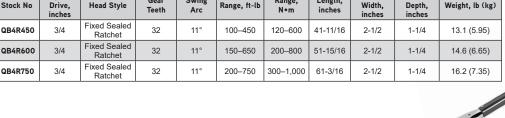


### TORQUE WRENCHES

#### Break-Over Type Torque Wrench

- The unique break-over mechanism provides a clear indication that the torque target has been reached and allows a large break angle, making torque overshoot much less likely
- Easy adjustment with easy-to-read scale to reduce the possibility for errors
- Rugged design and durable powder-coated finish ensure years of trouble-free operation in the most demanding applications
- Snap-on® sealed ratchet is high-strength and virtually maintenance-free, providing both long cycle life and minimal downtime
- Large plastic handgrip makes the wrench comfortable to use and guides the operator's hand to the correct position
- The quick-release mechanism allows the tool to be easily disassembled into two pieces for convenient storage and portability

Stock No	Square Drive, inches	Head Style	Gear Teeth	Swing Arc	Range, ft-lb	Range, N•m	Length, inches	Head Width, inches	Head Depth, inches	Weight, lb (kg)
QB4R450	3/4	Fixed Sealed Ratchet	32	11°	100-450	120–600	41-11/16	2-1/2	1-1/4	13.1 (5.95)
QB4R600	3/4	Fixed Sealed Ratchet	32	11°	150–650	200–800	51-15/16	2-1/2	1-1/4	14.6 (6.65)
QB4R750	3/4	Fixed Sealed Ratchet	32	11°	200–750	300–1,000	61-3/16	2-1/2	1-1/4	16.2 (7.35)





- Dual 80® Technology ratchet design features 80-tooth gear with dual pawls
- Sealed ratchet head keeps out dirt and moisture, while being virtually maintenance free
- Roll-marked scale for better visibility and permanency
- Reduced swing arc allows technician to use in tighter areas, such as engine compartments, offering overall improved clearance
- Accurate to ±3% clockwise from 20% of full scale to full scale
- Unique cam design minimizes friction due to reduced contact area between cam and internal tube wall
- Cam retains and releases lubricant where needed, reducing friction for more accurate and repeatable torque values
- · Packaged with certificate of calibration
- Rugged, trouble-free performance

Stock No.	Square Drive, inches	Gear Teeth	Head Depth, inches	Head Style	Head Width, inches	Increments	Length, inches	Range, maximum	Range, minimum	US Patent	Gear Action
QE1R200	1/4	36	7/16	Fixed Ratchet	7/8	1 in-lb	11-1/16	200 in-lb	40 in-lb	(#4,934,220 and #6,125,722)	10°
QE2FR75	3/8	80	9/16	Flex Ratchet	1-5/32	.5 ft-lb	15-3/4	75 ft-lb	5 ft-lb	(#4,934,220 and #6,125,722)	
QE2R100	3/8	80	9/16	Fixed Ratchet	1-5/32	.5 ft-lb	15-9/16	100 ft-lb	20 ft-lb		
QE3R250	1/2	80	3/4	Fixed Ratchet	1-5/8	1	24-3/16	250 ft-lb	50 ft-lb	(#4,934,220 and #6,125,722)	



# ControlTech® Bluetooth® Intrinsically Safe Wireless Electronic Torque Wrenches

- Our intrinsically safe line of torque wrenches complies with key safety standards, including IEC60079-0, IEC60079-11, UL 121201 and CAN/CSA C22.2 NO. 213-17, UL 508 (Part One) and CSA C22.2. No. 14-13.
- On board rechargeable NiMH battery and smart charging system via USB
- Ingress protected for water and dust rated to IP55
- Real time information with data logging
- Customizable features: 50 presets, torque then angle, torque and angle, low profile buttons, power interruption technology, cycle counter, battery level indicator and more
- Meets or exceeds ISO 6789 standard
- Improved Torque accuracy: +/-1.5% CW +/-3% CCW (20 to 100% of full scale)
- Rugged all-steel body is designed for industrial use
- Two year torque wrench warranty and one year battery warranty, plus storage case included
- Angle range 0 360°

Stock No	Head Type	Shank/Drive Size	Torque Range (in-lb)	Torque Range (ft-lb)	Torque Range (N•m)	UL Intrinsically Safe
CTECHW1UA135	ISO Shank	9x12 mm	60–1,195	5–99.6	6.8–135	Class 1 Div 2
CTECHW1UB400	ISO Shank	14x18 mm	177–3,540	14.8–295	20–400	Class 1 Div 2
CTECHW1UR650	Sealed Fixed Ratchet	3/4"	288–5,753	24–479.4	32.5–650	Class 1 Div 2



QB4R600

#### ADJUSTABLE CLICK-TYPE TORQUE WRENCHES

#### Adjustable Click-Type Torque Wrenches

The QD Series of Click-Type Torque Instruments features an innovative design that provides consistently accurate readings and rugged, trouble-free performance.

- CERTIFICATE OF CALIBRATION: A Certificate of Calibration is packed with every QD Series Torque Instrument. Actual certification readings and individual instrument serial numbers are included. Each torque instrument, as calibrated at the factory, is certified to meet the accuracy specified in ANSI® 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 Wrenches are accurate to ±4% clockwise and ±6% counterclockwise from 20% of full scale to full scale
- LONG LIFE RATCHET HEAD: QD Series Torque wrenches feature the Snap-on® High-Strength Sealed Ratchet Head. Sealed ratchet heads keep out dirt and moisture while being virtually maintenance-free. US Patent #4,934,220 applies to all QD Series Ratchet Head models. US Patent #6,125,722 applies to 1/4", 3/8" and 1/2" Drive Ratchet Head models only.
- MINIMAL FRICTION "HOURGLASS" 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
- ONE YEAR WARRANTY
- STORAGE CASE included with each instrument
- All QD models with "A" suffix have roll-marked scales for better permanence and visibility



## **US Torque Instruments (in-lb)**

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, minimum	Range, Maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	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	36	10°	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	36	10°	40 in-lb	200 in-lb	1 in-lb	11-1/16	0.875	0.4375	PBQD1	RKRT936
3/8	QD2R200	Compact Ratchet	36	10°	40 in-lb	200 in-lb	1 in-lb	11-1/16	7/8	7/16	PBQD1	RKRFC936
3/8	GQT2R200NP	Fixed Ratchet	32	11°	40 in-lb	200 in-lb	1 in-lb	8.97	.88	.88	WPB7	R21AR-RK
3/8	QD21000A	Fixed	_	_	200 in-lb	1,000 in-lb	5 in-lb	14-9/16	1	1-3/16	PBQD2	_
3/8	GQT2R1000NP	Fixed Ratchet	32	11°	200 in-lb	1,000 in-lb	5 in-lb	14	1.26	1.07	WPB50A	R22AR-RK
1/2	QD3R1600A	Fixed Ratchet	80	4.5°	300 in-lb	1,600 in-lb	10 in-lb	19	1-5/8	3/4	PBQD3	RKRS80A
1/2	QD3R2500A	Fixed Ratchet	80	4.5°	500 in-lb	2,500 in-lb	10 in-lb	19-1/8	1-5/8	3/4	PBQD3	RKRS80A
1/2	QD32500A	Fixed	_	_	500 in-lb	2,500 in-lb	10 in-lb	18-1/8	1	1-1/4	PBQD3	_



# **US Torque Instruments (ft-lb)**

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, minimum	Range, Maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	Storage Case	Ratchet Service Kit
3/8	QD2100A	Fixed	_	_	20 ft-lb	100 ft-lb	.5 ft-lb	14-9/16	1	1-3/16	PBQD2	_
3/8	QD275A	Fixed	_	_	15 ft-lb	75 ft-lb	.5 ft-lb	14-9/16	1	1-3/16	PBQD2	_
3/8	QD2FR75	Flex Ratchet	36	10°	.5 ft-lb	75 ft-lb	.5 ft-lb	15-3/4	1-5/32	9/16	PBQD2	RKRF936
1/2	QD3150A	Fixed	_	_	30 ft-lb	150 ft-lb	1 ft-lb	18	1	1-1/4	PBQD3	_
1/2	QD3250A	Fixed	_	_	50 ft-lb	250 ft-lb	1 ft-lb	23-3/16	1	1-1/4	PBQD3	_
1/2	QD3R250A	Fixed Ratchet	80	4.5°	50 ft-lb	250 ft-lb	1 ft-lb	24-3/16	1-5/8	3/4	PBQD3	RKRS80A
1/2	GQT3R250NP	Fixed Ratchet	32	11°	50 ft-lb	250 ft-lb	1 ft-lb	23-3/4	1-3/4	1-21/50	WPB5	R33AR-RK
3/4	QD4400A	Fixed	_	_	75 ft-lb	400 ft-lb	2.5 ft-lb	33-3/4	1-1/2	1-1/2	PBQC4	_
3/4	QD4R400A	Fixed Ratchet	32	11°	75 ft-lb	400 ft-lb	2.5 ft-lb	35-3/4	2-1/2	1-1/4	PBQC4	RKRQC4
3/4	QD4600A	Fixed	_	_	120 ft-lb	600 ft-lb	5 ft-lb	40-3/4	1-1/2	1-1/2	PBQC4	_
3/4	QD4R600A	Fixed Ratchet	32	11°	100 ft-lb	600 ft-lb	5 ft-lb	42-3/4	2-1/2	1-1/4	PBQC4	RKRQC4
1	QD5R1000A	Fixed Ratchet	30	12°	200 ft-lb	1,000 ft-lb	5 ft-lb	71	3-1/8	1-1/2	PBQC5	RKRQC5







- Must wear eye protection
- Do not exceed rated torque
   Do not use to break fasteners loose
- Periodic recalibration is necessary to maintain accuracy
   Read safety precautions on pages W1 to W4

## **ADJUSTABLE CLICK-TYPE TORQUE WRENCHES**



# 1/2" Drive Heavy Duty Torque Wrench • Torque 60 to 300 ft-lb

- Expanded range allows extended coverage with 1/2" drive tool servicing a majority of vehicles and large pick-ups
- · Gives user additional range in applying torque and angle on high torque applications
- Roll-stamped tube: stamped scale ft-lb offers better permanency and visibility in increments of 2 ft-lb
- Features heavy-duty components; thicker diameter main tube, cam and internal components for strength and durability
- Overall length is 32-1/2", accuracy is ±6% CW and CCW

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Increments	Head Width, inches	Head Depth, inches	Storage Case	Ratchet Service Kit
1/2	BRUTUS3R300	Fixed Ratchet	36	10°	2 ft-lb	1-3/4	3/4	PBTQ4	RKRS80A



# Metric Torque Instruments (kg m, kg cm)

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, Minimum	Range, Maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	Storage Case	Ratchet Service Kit
3/8	QD2RM1000A	Flex Head	80	4.5°	200 kg•cm	1,000 kg•cm	5 kg•cm	15-9/16	1-5/32	9/16	PBQD2	RKRF80
1/2	QD3RM30A	Fixed Ratchet	80	4.5°	6 kg•m	30 kgm	.2 kgm	19	1-5/8	3/4	PBQD3	RKRS80A



# **Newton Meter Torque**

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, Minimum	Range, Maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	Storage Case	Ratchet Service Kit
1/4	QD1RN6A	Fixed Ratchet	36	10°	1 N•m	6 N•m	.05 N•m	9-7/8	7/8	7/16	PBQD1	RKRT936
1/4	QD1RN25A	Fixed Ratchet	36	10°	5 N•m	25 N•m	.1 N•m	11-3/4	7/8	7/16	PBQD1	RKRT936
3/8	QD2RN25A	Compact Ratchet	36	10°	5 N•m	25 N•m	.1 N•m	11-3/4	7/8	7/16	PBQD2	RKRFC936
3/8	QD2RN50A	Fixed Ratchet	80	4.5°	10 N•m	50 N•m	0.5 N•m	15-9/16	1-5/32	9/16	PBQD2	RKRF80
3/8	QD2RN100A	Fixed Ratchet	80	4.5°	20 N•m	100 N•m	0.5 N•m	15-9/16	1-5/32	9/16	PBQD2	RKRF80
1/2	QD3RN200A	Fixed Ratchet	80	4.5°	10 N•m	200 N•m	2 N•m	19	1-5/8	3/4	PBQD3	RKRS80A
1/2	QD3RN350A	Fixed Ratchet	80	4.5°	70 N•m	350 N•m	2 N•m	24-3/16	1-5/8	3/4	PBQD3	RKRS80A
3/4	QD4RN800A	Fixed Ratchet	32	11°	150 N•m	800 N•m	5 N•m	42-3/4	2-1/2	1-1/4	PBQC4	RKRQC4
1	QD5RN1500A	Fixed Ratchet	30	12°	300 N•m	1,500 N•m	10 N•m	68.4	3-1/8	1-1/2	S10-117-6	RKRQC5









# **US Reading Torque Wrenches with Conversion Scale/±4% Accuracy**

Adjustable Click Type Torque Wrench

- 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 is 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; 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
- 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® standards for accuracy, from 20–100% of full scale, using NIST® traceable equipment
- Wrenches are non-reversible
- CE: EU-GB, FR, ES, DE

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	*Head Depth, inches	Head Width, inches	Range, minimum	Range, maximum	Increments	Length, inches	Storage Case
3/8	TQFR100C	Flex Head	36	10°	9/16	1-5/8	20 ft-lb	100 ft-lb	2 ft-lb	18-5/8	PBTQ1
1/2	TQR250E	Fixed Ratchet	36	10°	3/4	1-5/8	40 ft-lb	250 ft-lb	5 ft-lb	22-3/8	PBTQ3
1/2	TQFR250E	Flex Head	36	10°	9/16	1-5/8	40 ft-lb	250 ft-lb	5 ft-lb	22-3/8	PBTQ3
3/4	TQR400E†	Detach Ratchet	32	11°	1-1/4	2-1/2	130 ft-lb	400 ft-lb	10 ft-lb	38-1/8	PBTQ4
3/4	TQR600E†	Detach Ratchet	32	11°	1-1/4	2-1/2	200 ft-lb	600 ft-lb	10 ft-lb	48-5/8	PBTQ4

†Available in red only

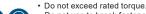
**Colors Available** 



ADD SUFFIX TO STOCK NUMBER FOR SPECIAL COLORS.







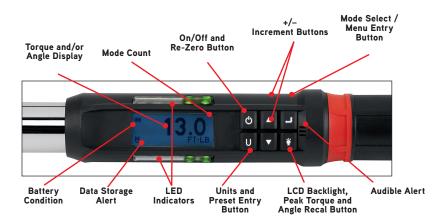
Do not use to break fasteners loose.

Periodic recalibration is needed to maintain accuracy.

• Read Safety Precautions on pages W1-W4

## **TECHANGLE® TORQUE WRENCHES**







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

# TechAngle® Models (2% Accuracy)

Specifications	ATECH2FQ125B	ATECH3FS250	ATECH3FR250B	ATECH4RS600*
Square Drive, inches	3/8	1/2	1/2	3/4
Head Type	Sealed Flex Head	Sealed Flex Head	Sealed Flex Head	Sealed Fixed Head
Gear Teeth	80	80	80	32
Gear Action	4.5°	4.5°	4.5°	11°
Range, in-lb	60-1,500	150-3,000	150-3,000	360-7,200
Range, ft-lb	5–125	12.5–250	12.5–250	30-600
Range, N•m	6.78-169.48	16.9–339	16.9–339	40.7-813.5
Head Depth, inches	9/16	3/4	3/4	1-1/4
Head Width, inches	1-1/4	1-5/8	1-5/8	2-1/2
Weight (without batteries), lb (kg)	2.2 (0.9)	4.35 (1.97)	3.75 (1.68)	10.95 (4.96)
Battery, Type (qty)	AA Alkaline (3)	AA Alkaline (3)	AA Alkaline (3)	AA Alkaline (3)
Length, inches	17-25/32	26.7	26.6	48.7
Storage Case	PBATECH100B	PBATECH250B	PBATECH250B	PBATECH4

(US #9156148, #9395257, #9242356, #D702519)





ADD SUFFIX TO STOCK NUMBER FOR SPECIAL COLORS.

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 20–100% of full scale, using NIST® traceable equipment. Angle accuracy ±1% of reading, ±1 degree at angular velocity > 10 deg/sec < 180 deg/sec, +/- 1 deg of test fixture; angle range 0–360°. Operating/storage temperature 0–130°F. Humidity: up to 90% non-condensing. CE approved.







# TechAngle® Models (2% Accuracy)

- DUAL PROGRESSIVE LEDs allow user to see active torque at various work positions; enables the user to anticipate torque target for more accurate torque application
- LARGE LCD SCREEN 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
- SIX MEASUREMENT MODES (ft-lb, in-lb, Nm, dNm, kg-cm, and angle) at the touch of a button
- 10 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 adaptors, calibration alerts, battery level indication, and numerous alert mode customizations, allowing the user 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-AXIS GYRO COMPENSATION patent pending mechanism compensates for tilt angle while tightening in a flexed position providing greater accuracy
- MULTI-LINGUAL DISPLAY programmable to display commands and signals in English, Spanish, French or German
- LOW-PROFILE BUTTONS protect against accidental activation
- HIGHLY ACCURATE torque measurement; 2% CW and 3% CCW
- POWER INTERRUPTION TECHNOLOGY prevents loss of continuity if dropped; prevents loss of work during head bolt pattern applications
- COMFORTABLE HANDLE WITH FLARED END provides a secure, non-slip grip during high-leverage applications
- PROTECTED BATTERY CAP design with solid brass contacts prevents accidental loosening and ensures continuity
- TWO YEAR WARRANTY standard on ATECH and CTECH models
- STORAGE CASE included
- LOW END ACCURACY (ATECH125 MODELS) ±2% CW/±3 CCW, 20-100% F.S.; ±4% CW/±6% CCW, 5-19% F.S.

# TechAngle® Models (2% Accuracy)

Specifications	ATECH1FS240	ATECH1FQS240	ATECH2FM100	ATECH2CS240
Square Drive, inches	1/4	1/4	3/8	3/8
Head Type	Sealed Flex Head	Sealed Flex Head	Sealed Flex Head	Sealed Flex Head
Gear Teeth	72	72	80	72
Gear Action	5°	5°	5°	5°
Range, in-lb	12–240	12-240	60-1,200	12–240
Range, ft-lb	1–20	1–20	5–100	1–20
Range, N•m	1.36-27.12	1.36-27.12	7–135	1.5-30
Head Depth, inches	7/16	7/16	1-1/16	29/32
Head Width, inches	7/8	7/8	1-3/16	7/8
Weight (without batteries), lb (kg)	.93 (.42)	.93 (.42)	1.6 (.73)	.93 (.42)
Battery, Type (qty)	Lithium Metal (1)	Lithium Metal (1)	Lithium Metal (1)	Lithium Metal (1)
Length, inches	11.6	11.6	15.4	11.5
Storage Case	PBATECH240M	PBATECH240M	PBQD2	PBQD1

(US #9156148, #9395257, #9242356, #D702519)

#### Colors Available







ADD SUFFIX TO STOCK NUMBER FOR SPECIAL COLORS.

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 20–100% of full scale, using NIST® traceable equipment. Angle accuracy ±1% of reading, ±1 degree at angular velocity > 10 deg/sec < 180 deg/sec, +/- 1 deg of test fixture; angle range 0-360°. Óperating/storage temperature 0-130°F. Humidity: up to 90% non-condensing. CE approved.







- · Do not exceed rated torque.
- · Do not use to break fasteners loose.
- · Periodic recalibration is needed to maintain accuracy.
- Read Safety Precautions on pages W1-W4





#### Standard Models/2% Accuracy/Fixed Head

- Manual preset, automatic track and peak hold modes
- Torque units conversion: N•m, ft-lb, in-lb
- Audible (tone) and tactile (vibrating handle) preset alerts
- Stand on handle bottom keeps tool from rolling off flat surface
- Dual 80<sup>®</sup> Technology on all 72- and 80-tooth ratchet heads
- Low battery indicator and auto shutoff (after two minutes idle)
- ISO® 6789-2003 and ASME® B107.300-2010 standards compliant
- Certificate of NIST® traceability for 20–100% of full scale

Specifications	TECH1R240	TECH2R100	TECH3R250	TECH4R600
Square Drive, inches	1/4	3/8	1/2	3/4
Head Type	Sealed Fixed Ratchet	Sealed Fixed Ratchet	Sealed Fixed Ratchet	Sealed Fixed Ratchet
Gear Teeth	72	80	80	32
Gear Action	5°	4.5°	4.5°	11°
Range, in-lb	24–240	60-1,200	300-3,000	720-7,200
Range, ft-lb	1–20	5–100	25–250	60-600
Range, N•m	2.71–27.12	6.8–135	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
Length, inches	15-1/4	17-1/4	26-1/4	48
Operating Temperature	40-110 °F (5-42 °C)			
Storage Temperature	0-122 °F (-20-50 °C)			
Battery, Type (qty)	AA Alkaline (3)	AA Alkaline (3)	AA Alkaline (3)	AA Alkaline (3)

CE

### Standard Models/2% Accuracy/Flex Head

- Techwrench® (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
- Torque accuracy interchangeable head models: 4% CW, 6% CCW from 20–100% F.S. (TECH Y only)
- Sealed flex head ratchets move ±15°



Specifications	TECH1FR240	TECH2FR100	TECH3FR250
Square Drive, inches	1/4	3/8	1/2
Head Type	Sealed Flex Head	Sealed Flex Head	Sealed Flex Head
Gear Teeth	72	80	80
Gear Action	5°	4.5°	4.5°
Range, in-lb	24-240	60-1,200	300-3,000
Range, ft-lb	1–20	5–100	25-250
Range, N•m	2.7–27.1	6.8-135	34-339
Head Depth, inches	7/16	5/8	3/4
Head Width, inches	7/8	1-5/32	1-5/8
Length, inches	15-1/4	17-1/4	26-1/4
<b>Operating Temperature</b>	40-110 °F (5-42 °C)	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)	0-122 °F (-20-50 °C)
Storage Case	PBTECH2	PBTECH2	PBTECH3



# Standard Models/4% Accuracy/Interchangeable Head

Specifications	TECH1J240	TECH2Y100	TECH3X250	TECH4Z600
Head Type	Interchangeable	Interchangeable	Interchangeable	Interchangeable
Range, in-lb	24-240	60-1,200	300-3,000	720–7,200
Range, ft-lb	1–20	5–100	25-250	60-600
Range, N•m	27.1-27.12	6.8-135	34-339	81-813
Shank (dia.)	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")
Length, inches	13-3/4	15-1/2	23-3/4	42
Operating Temperature	40-110 °F (5-42 °C)	40-110 °F (5-42 °C)	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)	0-122 °F (-20-50 °C)	0-122 °F (-20-50 °C)
Storage Case	PBTECH2	PBTECH2	PBTECH3	PBATECH4

Wrench length specification does not include the length of interchangeable heads. The certification of accuracy provided per ASME $^{\circ}$  and ISO $^{\circ}$  standards is 20–100% of full scale.





### Standard Models/2% Accuracy/Ratcheting Head

FEATURES:

- Torque and angle combo modes provide the most accurate and fastest way to achieve torque plus angle in a single motion (patent pending)
- Snap-on® ControlTech® Industrial Electronic Torque Wrenches are fully programmable for reliable and consistent torque application
- Torque Plus Angle combo modes allow the user to simultaneously complete precise "torque plus turn" specifications in a single motion
- In addition to the LED indicator lights, an audible beep and handle vibration alert the user when target torque is achieved

- The rugged all-steel construction is designed to stand-up to even the toughest work conditions
- Dual side LED indicator lights with configurable settings
- Large LCD screen with backlight
- Four indicator modes: LCD, LED, audible, vibratory
- · Presets with lockout ability
- Sequence programming and job mode
- USB downloadable data
- Industry-leading two year warranty
- Includes storage case
- Complies with ISO®-6789-2003 and ASME® B107.300 (B107.28) Standards for Electronic Torque Instruments

- CTECH wrenches are manufactured with an all-steel body for strength
- CTECHL wrenches are manufactured for rugged black anodized 6061-T for durability and reduced weight
- Torque Accuracy: ±2%CW, ±3CCW
- Angle Accuracy: ±1% of reading, ±1° @ Angular Velocity >10°/ Sec. < 180°/Sec. +/- of fixture</li>
- Angle Range: 0–360°
- Storage Capacity: 1,500 readings
- Number of Presets: 50
- Operating Temperature: 0–130 °F (-18–54 °C)
- Storage Temperature: 0–130 °F (-18–54 °C)

# Standard Models/2% Accuracy/Interchangeable Head

• Built-in calibration factor for different head lengths (patent pending)

Stock No.	Head Type	Square Drive, inches	Gear Teeth	Gear Action	Torque Range, in-lb	Torque Range, ft-lb	Torque Range, N•m	Shank Diameter, inches	Weight, lb (kg)	Length, inches (mm)
CTECH1MR100	Sealed Fixed Ratchet	1/4	72	5°	5-100	0.42-8.33	0.57-11.30	_	0.9 (0.41)	10.9 (277)
CTECHL1R240A	Sealed Fixed Ratchet	1/4	72	5°	12-240	1.0-20.0	1.4-27.2	_	1.2 (0.54)	14.1 (358)
CTECH4R600A†	Sealed Fixed Ratchet	3/4	32	11°	360-7,200	30-600	40.7-813.5	_	10.5 (4.8)	48.6 (1,234)
CTECH1FR240A*	Sealed Flex Ratchet	1/4	72	5°	12-240	1.0-20.0	1.4-27.2	_	2.0 (0.91)	14.1 (358)
CTECH2FR100A	Sealed Flex Ratchet	3/8	80	4.5°	60-1,200	5.0-100.0	6.8-135.6	_	2.7 (1.2)	17.2 (437)
CTECH3FR250A***	Sealed Flex Ratchet	1/2	80	4.5°	150-3,000	12.5–250	16.9-339	_	4.5 (2.10)	26.7 (678)
CTECH1R240A*	Fixed Ratchet	1/4	72	5°	12–240	1.0-20.0	1.4-27.2	_	2.0 (0.91)	14.1 (358)
CTECH1MR240	Fixed Ratchet	1/4	72	5°	12-240	1–20	1.36-27.12	_	0.93 (0.42)	11.6 (295)
CTECH2MR100	Fixed Ratchet	3/8	72	5°	5-100	0.42-8.33	0.57-11.30	_	0.9 (0.41)	10.9 (277)
CTECH2MR1200	Fixed Ratchet	3/8	80	4.5°	60-1,200	5–100	6.8-135.6	_	1.6 (.73)	15.4 (391)
CTECH2MR240	Fixed Ratchet	3/8	80	4.5°	12–240	1–20	1.36-27.12	_	0.93 (0.42)	11.6 (295)
CTECH3R250A	Fixed Ratchet	1/2	80	4.5°	150-3,000	12.5-250	16.8-339	_	_	_
CTECHL1240A	Fixed Head	1/4	_	_	12-240	1.0-20.0	1.4-27.2	_	1.1 (0.49)	12.4 (315)
CTECHYM1200	Interchangeable	_	_	_	60-1,200	5–100	6.8-135.6	Y (0.560")	1.4 (.63)	13.75 (349)
CTECHL1J240A	Interchangeable	_	_	_	12-240	1.0-20.0	1.4-27.2	J (0.425")	1.0 (0.45)	12.5 (318)
CTECH1JM240	Interchangeable	_	_	_	12–240	1–20	1.36–27.12	J (0.425")	0.80 (0.36) w/battery, excluding case	10.15 (258)
CTECH1J240A	Interchangeable			_	12–240	1.0-20.0	1.4–27.2	J (0.425")	1.8 (0.8)	12.5 (318)
CTECH2Y100A	Interchangeable	_	_	_	60-1,200	5–100	6.8-135.6	_	2.7 (1.2)	17.2 (437)
CTECH3X250A	Interchangeable	_	_	_	150-3,000	12.5-250	16.9-339	X (0.735")	_	24.1 (612)
CTECH4Z600A	Interchangeable	_	_	_	30-600	360-7,200	40.7-813.5	Z (0.990")	7.6 (3.5)	44.8 (1,138)
CTECHAN135A	IZO/ISO (Interchangeable)	_	_	_	60–1,195	5.0-99.6	6.8–135.0	9 x 12 mm	2.85 (1.2) w/o head, w/batteries	17.8 (452) w/o head
CTECHAN30A	IZO/ISO (Interchangeable)	_		_	1.11–22.13	13.3–365.5	1.50-30.00	9 x 12 mm	2.0 (.9) w/o head, w/batteries	13.3 (338) w/o head
CTECHBN340A	IZO/ISO (Interchangeable)	_	_	_	150-3,009	12.5–250.8	17.0-340.0	14 x 18 mm	3.75 (1.7) w/o head, w/batteries	

\*Uses Ratchet Service Kit RKRT72A. Includes three AAA Lithium batteries. †Uses Ratchet Service Kit RKRQC4. Includes three AAA Lithium batteries. \*\*\*Uses Ratchet Service Kit RKRS80A. Includes three AA Lithium batteries. Torque parameters comply with ISO® 6789:2003 and ASME® B107:300-2010 (B107.29)





- · Always pull wrench in direction of fixed jaw.
- Do not exceed rated torque
- Do not use to break fasteners loose.
  Periodic recalibration is needed to maintain accuracy.

• Read Safety Precautions on pages W1–W4

# **ADJUSTABLE CLICK-TYPE**



# US Torque Instruments: Dual-Scale (ft-lb/N•m)

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Head Depth, inches	Head Width, inches	Range, minimum	Range, maximum	Increments	Length, inches	Storage Case
1/2	GQT3R250NP	Fixed Ratchet	32	11°	1.42	1.74	50 ft-lb	250 ft-lb	1	23.75	WPB5
3/8	QD2R100A	Fixed Ratchet	80	4.5°	9/16	1-5/32	20 ft-lb	100 ft-lb	.5 ft-lb	15-9/16	PBQD2
3/8	QD2100A	Fixed	_	_	1-3/16	1	20 ft-lb	100 ft-lb	.5 ft-lb	14-9/16	PBQD2
3/8	QD2R75A	Fixed	80	4.5°	9/16	1-5/32	10 ft-lb	75 ft-lb	.5 ft-lb	15-3/4	PBQD2
3/8	QD2FR75B	Flex Head	80	4.5°	9/16	1-5/32	5 ft-lb	75 ft-lb	.5 ft-lb	15-3/4	PBQD2
3/8	QD275A	Fixed	_	_	1-3/16	1	15 ft-lb	75 ft-lb	.5 ft-lb	14-9/16	PBQD2
1/2	QD3150A	Fixed	_	_	1-1/4	1	30 ft-lb	150 ft-lb	1 ft-lb	18	PBQD3
1/2	QD3R250A	Fixed Ratchet	80	4.5°	3/4	1-5/8	50 ft-lb	250 ft-lb	1 ft-lb	24-3/16	PBQD3
1/2	QD3FR250A*	Flex Head	80	4.5°	3/4	1-5/8	50 ft-lb	250 ft-lb	1 ft-lb	25-3/4	PBATECH300B
1/2	QD3250A	Fixed	_	_	1-1/4	1	50 ft-lb	250 ft-lb	1 ft-lb	23-3/32	PBQD3
3/4	QD4R400A	Fixed Ratchet	32	11°	1-1/4	2-1/2	75 ft-lb	400 ft-lb	2.5 ft-lb	35-3/4	PBQC4
3/4	QD4400A	Fixed	_	_	1-1/2	1-1/2	75 ft-lb	400 ft-lb	2.5 ft-lb	33-3/4	PBQC4
3/4	QD4R600A	Fixed Ratchet	32	11°	1-1/4	2-1/2	100 ft-lb	600 ft-lb	5 ft-lb	42-3/4	PBQC4
3/4	QD4600A	Fixed	_	_	1-1/2	1-1/2	120 ft-lb	600 ft-lb	5 ft-lb	40-3/4	PBQC4
1	QD5R1000A	Fixed Ratchet	30	12°	1-1/2	3-1/8	200 ft-lb	1,000 ft-lb	5 ft-lb	71	PBQC5

<sup>\*</sup>Clockwise-only calibration



# Metric Torque Instruments (kg m, kg cm)

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, minimum	Range, maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	Storage Case
3/8	QD2RM1000A	Flex Head	80	4.5°	200 kg•cm	1,000 kg • cm	5 kg•cm	15-9/16	1-5/32	9/16	PBQD2
1/2	QD3RM30A	Fixed Ratchet	80	4.5°	6 kg∙m	30 kg•m	.2 kg●m	19	1-5/8	3/4	PBQD3

<sup>&</sup>quot;A" suffix models feature roll-marked tubes and 80 tooth gears



# **Newton Meter Torque Wrenches/±4% Accuracy**

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Head Depth, inches	Head Width, inches	Range, minimum	Range, maximum	Increments	Length, inches	Storage Case
1/4	QD1RN25B	Fixed Ratchet	36	10°	7/16	7/8	5 N•m	25 N●m	.1 N•m	11-3/4	PBQD1
1/4	QD1RN6B	Fixed Ratchet	36	10°	7/16	7/8	1 N•m	6 N•m	.05 N●m	9-7/8	PBQD1
3/8	QD2RN100A	Fixed Ratchet	80	4.5°	9/16	1-5/32	20 N•m	100 N●m	.5 N•m	15-9/16	PBQD2
3/8	QD2RN25B	Compact Ratchet	36	10°	7/16	7/8	5 N•m	25 N●m	.1 N•m	11-3/4	PBQD2
3/8	QD2RN50A	Fixed Ratchet	80	4.5°	9/16	1-5/32	10 N●m	50 N●m	.5 N•m	15-9/16	PBQD2
1/2	QD3RN200A	Fixed Ratchet	80	4.5°	3/4	1-5/8	40 N●m	200 N●m	2 N•m	19	PBQD3
1/2	QD3RN350A	Fixed Ratchet	80	4.5°	3/4	1-5/8	70 N <b>●</b> m	350 N●m	2 N•m	24-3/16	PBQD3
3/4	QD4RN800A	Fixed Ratchet	32	11°	1-1/4	2-1/2	150 N●m	800 N●m	5 N•m	42-3/4	PBQC4
1	QD5RN1500A	Fixed Ratchet	30	12°	1-1/2	3-1/8	300 N•m	1,500 N●m	10 N•m	68.4	S10-117-6

<sup>&</sup>quot;A" suffix models feature roll-marked tubes

The QD Series of Click-Type Torque Instruments feature an innovative design that provides consistently accurate readings and rugged, trouble-free 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® B107.300-2010 (B107.14) and was calibrated on a torque standard traceable to the National Institute of Standards Technology (NIST®).
- ACCURACY: All QD/QE Series Torque Wrenches are accurate to ±4% clockwise and ±6% counterclockwise from 20–100% of full scale
- LONG LIFE RATCHET HEAD: QD/QE Series Torque wrenches feature the Snap-on® High-Strength Sealed Ratchet Head. Sealed ratchet heads keep out dirt and moisture while being virtually maintenance free. US Patent #4,934,220 applies to all QD Series Ratchet Head models. US 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
- POSITIVE STOP: Instrument can not be accidentally disassembled if wound down past scale
- KNURLED HANDLE for a secure non-slip grip
- ONE YEAR WARRANTY
- STORAGE CASE included with each instrument
- All QD models with "A" suffix have roll-marked scales for better permanence and visibility













# US Torque Instruments (in-lb)/±4% Accuracy

Square Drive, inches	Stock No.	Head Style	Gear Teeth	Swing Arc	Range, minimum	Range, maximum	Increments	Length, inches	Head Width, inches	Head Depth, inches	Storage Case
3/8	GQT2R1000NP	Fixed Ratchet	32	11°	200 in-lb	1,000 in-lb	5 in-lb	14	1.26	1.07	WPB50A
3/8	GQT2R200NP	Fixed Ratchet	32	11°	40 in-lb	200 in-lb	1 in-lb	8.97	.88	.88	WPB7
1/4	QD1R200A	Fixed Ratchet	36	10°	40 in-lb	200 in-lb	1 in-lb	11-1/16	7/8	7/16	PBQD1
1/4	QD1200A	Fixed	_	_	40 in-lb	200 in-lb	1 in-lb	10-15/16	5/8	13/16	PBQD1
1/4	QD1R50A	Fixed Ratchet	36	10°	10 in-lb	50 in-lb	.5 in-lb	9-7/8	7/8	7/16	PBQD1
1/4	QD150A	Fixed	_	_	10 in-lb	50 in-lb	.5 in-lb	9-3/4	5/8	13/16	PBQD1
3/8	QD21000A	Fixed	_	_	200 in-lb	1,000 in-lb	5 in-lb	14-9/16	1	1-3/16	PBQD2
3/8	QD2R200A	Compact Ratchet	36	10°	40 in-lb	200 in-lb	1 in-lb	11-1/16	7/8	7/16	PBQD1
1/2	QD3R1600A	Fixed Ratchet	80	4.5°	300 in-lb	1,600 in-lb	10 in-lb	19	1-5/8	3/4	PBQD3
1/2	QD3R2500A	Fixed Ratchet	80	4.5°	500 in-lb	2,500 in-lb	10 in-lb	19-1/8	1-5/8	3/4	PBQD3
1/2	QD32500A	Fixed	_	_	500 in-lb	2,500 in-lb	10 in-lb	18-1/8	1	1-1/4	PBQD3
1/4	QE1R200	Fixed Ratchet	80	10°	40 in-lb	200 in-lb	1 in-lb	11-1/16	7/8	7/16	PBQD1
3/8	QE2R100	Fixed Ratchet	80	4.5°	20 ft-lb	100 ft-lb	.5 ft-lb	15-9/16	1-5/32	9/16	PBQD2
3/8	QE2FR75	Flex Ratchet	80	10°	5 ft-lb	75 ft-lb	.5 ft-lb	15-3/4	1-5/32	9/16	PBQD2
1/2	QE3R250	Fixed Ratchet	80	10°	50 ft-lb	250 ft-lb	1 ft-lb	24-3/16	1-5/8	3/4	PBQD3







Do not exceed rated torque
Do not use to break fasteners loose

· Periodic recalibration is needed to maintain accuracy

• Read Safety Precautions on pages W1-W4





TE175LC

# US Reading/Standard 2% Accuracy Wrenches with Certificate of Calibration

- Dial torque wrenches allow the user to easily apply and monitor torque
- Long-lasting performance given minimal component contact
- Steel welded bodies with bright nickel-chrome finish
- Heat-treated dial guards protect the dial crystal from damage
- Patented torsion bar machined from aircraft quality alloy steel for long life and precise performance across the entire scale
- Operating temperature range of 0-100 °F

- Wide selection of models—from 1/4–1-1/2" drives to ranges, scales, and dial configurations—there is a dial wrench to cover nearly every need
- Certificate of calibration models, add "C" suffix to stock number

#### 48" Tubular Extension Handle

 Tubular extension handle is packed with the following torque wrenches: TE803, TE803FU, TE803L, TE1003, TE1003FU, TE1003L, TESI1360, TESI1360FU, TESI1360L, TER1003, TER1003FU, TER1003L, TEC803, TEC803FU, TEC803L, TEC1003FU and TEC1003L

Square Drive, inches	Basic Models Stock No.	Follow up Models Stock No.	Signal Models Stock No.	Range	Increments	Length, inches	Width, inches (mm)	Head Depth, inches	Storage Case
1/4	GTE6A	_	_	75 in-lb	1 in-lb	9-29/32	2-11/16 (68)	_	PB9
1/4	TE1AC	TE1FUAC	_	15 in-lb	1/4 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
1/4	TE3AC	TE3FUAC	_	30 in-lb	1/2 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
1/4	TE6AC	TE6FUAC	_	75 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE12AC	TE12FUAC	TE12LAC	150 in-lb	2-1/2 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	_	TE12FFUAC	_	12 ft-lb	1/2 ft-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE25FAC	TE25FUAC	TE25LAC	25 ft-lb	1/2 ft-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE25AC	TE25FFUAC	_	300 in-lb	5 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE50FAC	TE50FUAC	TE50LAC	50 ft-lb	1 ft-lb	12-1/2	2-11/16 (68)	1-1/4	PB9
3/8	TE50AC	TE50FFUAC	TE50FLAC	600 in-lb	10 in-lb	12-1/2	2-11/16 (68)	1-1/4	PB9
1/2	TE51C	_	TE51LC	50 ft-lb	1 ft-lb	15	2-11/16 (68)	1-5/16	_
1/2	TE100C	TE100FUC	_	100 ft-lb	1 ft-lb	16	2-3/4 (70)	1-3/8	PBR5
1/2	TE175C	TE175FUC	TE175LC	175 ft-lb	2-1/2 ft-lb	18-3/4	2-3/4 (70)	1-3/8	PBR5
1/2	TE250C	TE250FUC	TE250LC	250 ft-lb	_	23-3/4	2-3/4 (70)	1-3/8	PB8A
1/2	_	TE51FUC	_	600 in-lb	10 in-lb	15	2-11/16 (68)	1-5/16	_
1/2	_	TE51FFUC	_	50 ft-lb	1 ft-lb	15	2-11/16 (68)	1-5/16	_
3/4	TE352AC	TE352FUAC	TE352LAC	350 ft-lb	5 ft-lb	29-7/8	3-1/4 (83)	_	_
3/4	TE602AC	TE602FUAC	TE602LAC	600 ft-lb	10 ft-lb	40-7/8	3-1/4 (83)	_	PB39
1	TE1503C	TE1503FUC	TE1503LC	_	25 ft-lb	80	4-13/32 (112)	_	_
1	TE1003C	TE1003FUC	TE1003LC	_	10 ft-lb	66-13/16	3-9/16 (91)	_	_
1	TE2003C	TE2003FUC		_	25 ft-lb	80	4-13/32 (112)	_	_
1	TE803C	_	TE803LC	800 ft-lb	10 ft-lb	66-13/16	3-9/16 (91)	_	_
1-1/2	_	TE2005FUC	_	_	25 ft-lb	80	3-9/16 (91)	_	_
1-1/2	TE3005C	_	_	_	50 ft-lb	_	5-1/2 (140)	_	_

<sup>\*</sup>Does not include square drive dimension.

Basic model = 1 needle Follow-up = 2 needles Signal = signal light GTE models feature a black oxide finish.





TE50FUA **TE175L** 

#### **US Reading/Standard 2% Accuracy**

- Dial torque wrenches allow the user to easily apply and monitor torque
- Long-lasting performance given minimal component contact
- Steel welded bodies with bright nickel-chrome finish
- Heat-treated dial guards protect the dial crystal from damage
- Patented torsion bar machined from aircraft quality alloy steel for long life and precise performance across the entire scale
- Operating temperature range of 0–100 °F
- Wide selection of models—from 1/4-1-1/2" drives to ranges, scales, and dial configurations—there is a dial wrench to cover nearly every need
- Certificate of calibration models, add "C" suffix to stock number

Square Drive, inches	Basic Models Stock No.	Follow up Models Stock No.	Signal Models Stock No.	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 (68)	1-1/4	PB9
1/4	TE3A	TE3FUA	_	30 in-lb	1/2 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
1/4	TE6A	TE6FUA	_	75 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE12A	TE12FUA	TE12LA	150 in-lb	2-1/2 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE25A	TE25FUA	TE25LA	300 in-lb	5 in-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE50A	TE50FUA	TE50LA	600 in-lb	10 in-lb	12-1/2	2-11/16 (68)	1-1/4	PB9
3/8	TE12FA	TE12FFUA	TE12FLA	12 ft-lb	1/2 ft-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE25FA	TE25FFUA	TE25FLA	25 ft-lb	1/2 ft-lb	9-29/32	2-11/16 (68)	1-1/4	PB9
3/8	TE50FA	TE50FFUA	TE50FLA	50 ft-lb	1 ft-lb	12-1/2	2-11/16 (68)	1-1/4	PB9
1/2	TE51	TE51FU	TE51L	600 in-lb	10 in-lb	15	2-11/16 (68)	1-5/16	_
1/2	TE51F	TE51FFU	TE51FL	50 ft-lb	1 ft-lb	15	2-11/16 (68)	1-5/16	_
1/2	TE100	TE100FU	TE100L	100 ft-lb	1 ft-lb	16	2-3/4 (70)	1-3/8	PBR5
1/2	TE175	TE175FU	TE175L	175 ft-lb	2-1/2 ft-lb	18-3/4	2-3/4 (70)	1-3/8	PBR5
1/2	TE250	TE250FU	TE250L	250 ft-lb	5 ft-lb	23-3/4	2-3/4 (70)	1-3/8	PB8A
3/4	TE352A	TE352FUA	TE352LA	350 ft-lb	5 ft-lb	29-7/8	3-1/4 (83)	1-25/32	_
3/4	TE602A	TE602FUA	TE602LA	600 ft-lb	10 ft-lb	40-7/8	3-1/4 (83)	1-25/32	PB39
1	TE803**	TE803FU**	TE803L**	800 ft-lb	10 ft-lb	66-13/16	3-9/16 (91)	2-1/32	_
1	TE1003†	TE1003FU**	TE1003L**	1,000 ft-lb	10 ft-lb	66-13/16	3-9/16 (91)	2-1/32	_
1	TE1503†	TE1503FU†	TE1503L†	1,500 ft-lb	25 ft-lb	80	4-13/32 (112)	2-1/8	_
1	TE2003 <sup>†</sup>	TE2003FU†	TE2003L†	2,000 ft-lb	25 ft-lb	80	4-13/32 (112)	2-1/8	_
1-1/2	TE2005†	TE2005FU†	TE2005L†	2,000 ft-lb	25 ft-lb	80	3-9/16 (91)	2-3/8	_
1-1/2	TE3005	TE3005FU**	TE3005L**	3.000 ft-lb	50 ft-lb	_	5-1/2 (140)	2-13/16	_

<sup>\*</sup>Does not include square drive dimension.

Wrenches in chart do not include certificate of calibration. Wrenches with a certificate of calibration are available on previous page. Basic model = 1 needle Follow-up = 2 needles Signal = signal light GTE models feature a black oxide finish. Basic model = 1 needle

\*\*Includes separately packed 92TQPA 4' tubular extension handle. TE3005 includes 94TQPA 10' extension handle



#### **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





- · Do not exceed rated torque. · Do not use to break fasteners loose.
  - Periodic recalibration is needed to maintain accuracy.
  - · Do not use "cheater bars" on handles.
  - · Pull, do not push on handle.
  - Read Safety Precautions on pages W1-W4

Tincludes separately packed 93TQPA 5' tubular extension handle



## **Newton Meter Reading/Standard 2% Accuracy**

Square Drive, inches	Stock No.	Follow-Up Models Stock No.	Light Signal Models Stock No.	Range, N•m	Increments, N•m	Length, inches	Width, inches (mm)	Head Depth*, inches
1/4	_	TESI5FU	TESI5L	5	.2	9-29/32	2-11/16 (68)	1-1/4
1/4	TESI10	TESI10FU	TESI10L	10	.5	9-29/32	2-11/16 (68)	1-1/4
1/2	TESI125	TESI125FU	TESI125L	125	5	16	2-11/16 (68)	1-3/8
3/8	TESI20	TESI20FU	TESI20L	20	.5	9-29/32	2-11/16 (68)	1-1/4
3/8	TESI30	TESI30FU	TESI30L	30	1	9-29/32	2-11/16 (68)	1-1/4
3/8	TESI60C	TESI60FU	TESI60L	60	2	12-1/2	2-11/16 (68)	1-1/4
3/8	TESI70	TESI70FU	TESI70L	70	2	12-1/2	2-11/16 (68)	1-1/4
3/8	TESI75	TESI75FU	TESI75L	75	1	12-1/2	2-11/16 (68)	1-1/4
1/2	TESI200	TESI200FU	TESI200L	200	5	18-3/4	2-3/4 (70)	1-3/8
1/2	TESI250	TESI250FU	TESI250L	250	5	18-3/4	2-3/4 (70)	1-3/8
3/4	TESI500A	TESI500FUA	TESI500LA	500	10	29-7/8	3-1/4 (83)	1-25/32
3/4	TESI800A	TESI800FUA	TESI800LA	800	20	40-7/8	3-1/4 (83)	1-25/32
1	TESI1360**	TESI1360FU**	TESI1360L**	1,360	20	66-13/16	3-9/16 (91)	2-1/32
1	TESI2803	TESI2803FU†	TESI2803L†	2,800	50	80	4-13/32 (112)	2-1/8
1-1/2	TESI2805†	TESI2805FU†	_	2,800	50	80	4-25/32 (121)	2-3/8
1-1/2	_	TESI4000FU	TESI4000L	4,000	100	14 (356)	5-1/2 (140)	2-13/16

\*Does not include square drive dimension.
†Includes separately packed 93TQPA 5' tubular extension handle.
Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number.

Signal = signal light

\*\*Includes separately packed 92TQPA 4' tubular extension handle. Wrenches in chart do not include certificate of calibration.



# **Combination US/Newton Meter Reading/Precise 1% Accuracy**

Square Drive, inches	Stock No.	Follow-Up Models Stock No.	Light Signal Models Stock No.	Range, N•m	Increments, N•m	US Range	US Increments	Length, inches	Width, inches (mm)	Head Depth*, inches
1/4	TER1A	TER1FUA	TER1LA	1.7	.05	15 in-lb	.5 in-lb	9-29/32	2-11/16 (68)	1-1/4
1/4	TER3A	TER3FUA	TER3LA	3.5	0.1	30 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4
1/4	TER6A	TER6FUA	_	8.4	0.2	75 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TER12A	TER12FUA	TER12LA	17	.5	150 in-lb	5 in-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TER25A	TER25FUA	TER25LA	0-3,200 N•cm	50 N●cm	0-300 in-lb	5 in-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TER50A	TER50FUA	TER50LA	60	1	600 in-lb	20 in-lb	12-1/2	2-11/16 (68)	1-1/4
1/2	TER51	TER51FU	TER51L	60	1	600 in-lb	20 in-lb	15	2-11/16 (68)	1-5/16
1/2	TER100	TER100FU	TER100L	140	5	100 ft-lb	2 ft-lb	16	2-3/4 (70)	1-3/8
1/2	TER175	TER175FU	TER175L	230	10	175 ft-lb	5 ft-lb	18-3/4	2-3/4 (70)	1-3/8
3/4	TER352A	TER352FUA	TER352LA	480	10	350 ft-lb	5 ft-lb	29-7/8	3-1/4 (83)	1-3/8
3/4	TER602A	TER602FUA	TER602LA	800	20	600 ft-lb	20 ft-lb	40-7/8	3-1/4 (83)	1-25/32
1	TER1003**	_	TER1003L**	1,360	20	1,000 ft-lb	20 ft-lb	66-13/16	3-9/16 (91)	2-1/32

<sup>\*</sup>Does not include square drive dimension.

Wrenches in chart do not include certificate of calibration.

\*\*Includes separately packed 92TQPA 4' tubular extension handle Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number.

Basic model = 1 needle Follow-Up = 2 needles Signal = signal light

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%–100% of full scale, using NIST® traceable equipment.







TEX602TLA

85TQP

TEX2003TFU

Optional "T" Bars/

#### IIS Reading/Standard 2% Accuracy

os nea	uiiig/s	otaliualu 2	o Accuracy						Extension Handles				
Input Drive Female Square, inches	Male	Follow-Up Models Stock No.	Light Signal Models Stock No.	US Range, ft-lb	US Increments, ft-lb	Length, inches	Width, inches	Head Depth*, inches	Increments, ft-lb	"T" Bar	Length, inches	Ext. Handle	Ext. Handle Length, inches
3/4	3/4	TEX602TFUA*	TEX602TLA*	600	10	9	3-1/4	3-3/4	_	81TQP	66	_	_
3/4	1	TEX1003TFUA	TEX1003TLA	1,000	10	9-7/8	3-5/8	4-1/8	_	81TQP	66	_	_
1	1	TEX1503TFU	TEX1503TL	1,500	25	10-7/8	4-3/8	4-7/16	_	82TQP	18	85TQP	31
1	1	TEX2003TFU	TEX2003TL	2,000	_	10-7/8	4-3/8	4-7/16	25	82TQP	-	85TQP	31
1	1-1/2	TEX2005TFU	TEX2005TL	2,000	25	10-7/8	4-3/8	4-7/16	_	82TQP	18	85TQP	31
1-1/2	1-1/2	TEX3005TFU	TEX3005TL	3,000	50	12	5-1/8	6-1/2	_	83TQP	18	87TQP	66
1-1/2	1-1/2	TEX4005TFU	TEX4005TL	4,000	50	12	5-1/8	6-1/2	_	84TQP	20	89TQP	72

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.

\*T-Bar not included.

Basic model= 1 needle

Follow-Up = 2 needles Signal = signal light.

**TEC175** 





TEC175L

# Combination US/Metric Reading/Standard 2% Accuracy

Square Drive, inches	Stock No.	Follow-Up Models Stock No.	Light Signal Models Stock No.	Metric Range, kg•m	Metric Increments, kg•m	US Range	US Increments	Length, inches	Width, inches (mm)	Head Depth*, inches
1/4	TEC1A	TEC1FUA	_	16	1	15 in-lb	.5 in-lb	1-1/4	2-11/16 (68)	1-1/4
1/4	TEC3A	TEC3FUA	_	35	1	30 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4
1/4	TEC6A	TEC6FUA	_	90	2.5	75 in-lb	1 in-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TEC12A	TEC12FUA	TEC12LA	175	5	150 in-lb	5 in-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TEC25FA	TEC25FFUA	TEC25FLA	350	10	25 ft-lb	1 ft-lb	9-29/32	2-11/16 (68)	1-1/4
3/8	TEC50A	TEC50FUA	TEC50LA	700	20	600 in-lb	20 in-lb	12-1/2	2-11/16 (68)	1-1/4
1/2	TEC51	TEC51FU	TEC51L	700	20	600 in-lb	20 in-lb	15	2-11/16 (68)	1-5/16
1/2	TEC100	TEC100FU	TEC100L	14	.5	100 ft-lb	2 ft-lb	16	2-3/4 (70)	1-3/8
1/2	TEC175	TEC175FU	TEC175L	25	1	175 ft-lb	5 ft-lb	18-3/4	2-3/4 (70)	1-3/8
1/2	TEC250	TEC250FU	TEC250L	35	1	250 ft-lb	10 ft-lb	23-3/4	2-3/4 (70)	1-3/8
3/4	TEC352A	TEC352FUA	TEC352LA	50	1	350 ft-lb	10 ft-lb	29-7/8	3-1/4 (83)	1-25/32
3/4	TEC602A	TEC602FUA	TEC602LA	80	2	600 ft-lb	20 ft-lb	40-7/8	3-1/4 (83)	1-25/32
3/4	TEC803**	TEC803FU**	TEC803L**	110	2	800 ft-lb	25 ft-lb	66-13/16	3-9/16 (91)	2-1/32
1	_	_	TEC1003L	136	2	1,000 ft-lb	20 ft-lb	66-13/16	3-9/16 (91)	2-1/32
1	_	TEC1503FU†	TEC1503L†	200	5	1,500 ft-lb	25 ft-lb	80	4-13/32 (112)	2-1/8
1	_	TEC2003FU†	TEC2003L†	280	5	2,000 ft-lb	50 ft-lb	80	4-13/32 (112)	2-1/8
1-1/2	TEC2005	TEC2005FU†	TEC2005L†	280	5	2,000 ft-lb	50 ft-lb	80	4-13/32 (112)	2-13/16
1-1/2	TEC3005	TEC3005FU	TEC3005L	400	5	3,000 ft-lb	50 ft-lb	14 (356)	5-1/2 (140)	2-13/16

<sup>\*</sup>Does not include square drive dimension.

Wrenches in chart do not include certificate of calibration.

Basic model = 1 needle Follow-Up = 2 needles Signal = signal light

\*\*Includes separately packed 92TQPA 4' tubular extension handle. Wrenches with a certificate of calibration are available.

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

- · Do not exceed rated torque.
- · Do not use to break fasteners loose.
- Periodic recalibration is needed to maintain accuracy.
  Do not use "cheater bars" on handles.
- · Pull, do not push on handle.
- Do not force head against flex stops.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil. Do not replace worn parts individually; use entire contents of the service kit.
- Recalibrate every 6 months or more depending on use. ANSI B107.14M specifies that accuracy is maintained through 5000 cycles for click-type torque wrenches.

  • Read Safety Precautions on pages W1–W4









# **TORQOMETER® TORQUE DRIVERS - 1/4" DRIVE**

#### Combination US/Metric Reading/Standard 2% Accuracy



	_	•	
Standard Follow-Up Models Stock No.	Increments	Length, inches	Range
TQSSC1FUA	.5 kg•cm/.5 in-lb	5-1/4	17 kg●cm/15 in-lb
TQSSC2.5FUA	1.000 kg • cm/1.0 in-lb	5-1/4	35 kg•cm/30 in-lb
TQSSC4FUA	2 kg•cm/2 in-lb	5-1/4	56 kg •cm/50 in-lb
TQSSC6FUA	3 kg•cm/5 in-lb	5-1/4	90 kg •cm/75 in-lb
TQSC1FUA	.5 kg•cm/.5 in-lb	7-3/4	17 kg •cm/15 in-lb
TQSC2.5FUA	1.000 kg • cm/1.0 in-lb	7-3/4	35 kg •cm/30 in-lb
TQSC4FUA*	2 kg•cm/2 in-lb	8-11/16	56 kg•cm/50 in-lb
TQSC6FUA*	_	_	90 kg/70 in-lb

Wrenches in chart do not include certificate of calibration. Wrenches with a certification of calibration are available by adding "C" to the end of the stock number. All wrenches include PB47 Storage Case.

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

Basic model = 1 needle Follow-Up = 2 needles

# T-HANDLE TORQOMETER® TORQUE WRENCHES





TEXC602TFUA

TEXC4005TL

Optional "T" Bars/

**Combination US/Metric Reading/Standard 2% Accuracy** 

	3/2-00-10-10-10-10-10-10-10-10-10-10-10-10-										Extension nandles			
Input Drive Female Square, inches	Output Drive Male Square, inches	Follow-Up Models	Light Signal Models Stock No.	US Range, ft-lb	US Increments, ft-lb	Metric Range, kg•m	kg●m	Length, inches	Width, inches (mm)		"T" Bar	"T" Bar Length, inches	Ext. Handle	Ext. Handle Length, inches
3/4	3/4	TEXC602TFUA	TEXC602TLA	600	20	80	2	9	3-1/4	3-3/4	81TQP	66	_	_
3/4	1	TEXC1003TFUA	TEXC1003TLA	1,000	20	136	2	9-7/8	3-5/8	4-1/8	81TQP	66	_	_
1	1	TEXC1503TFU	TEXC1503TL	1,500	25	200	5	10-7/8	4-3/8	4-7/16	82TQP	18	85TQP	31
1	1	TEXC2003TFU	TEXC2003TL	2,000	50	280	5	10-7/8	4-3/8	4-7/16	82TQP	18	85TQP	31
1	1-1/2	TEXC2005TFU	TEXC2005TL	2,000	50	280	5	10-7/8	4-3/8	4-7/16	82TQP	18	85TQP	31
1-1/2	1-1/2	TEXC3005TFU	TEXC3005TL	3,000	100	400	5	12	5-1/8	6-1/2	83TQP	18	87TQP	66
1-1/2	1-1/2	TEXC4005TFU	TEXC4005TL	4,000	100	550	10	12	5-1/8	6-1/2	84TQP	20	89TQP	72

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. Basic model = 1 needle Follow-Up = 2 needles Signal = signal light

# **TORQOMETER® TORQUE WRENCHES - 1/4" DRIVE**



# **US Reading Standard/2% Accuracy**

	-	•				
Standard Basic Models Stock No.	Standard Follow-up Models Stock No.	Length, inches	Stubby Basic Models Stock No.	Stubby Follow-up Models Stock No.	Increments	Range
TQS1A	TQS1FUA	5-1/4	_	TQSS1FUA	4 in-oz/1/4 in-lb	192 in-oz/12 in-lb
TQS012A	TQS012FUA	5-1/4	TQSS012A	TQSS012FUA	1/2 in-oz/1/32 in-lb	24 in-oz/1.5 in-lb
TQS2A	TQS2FUA	5-1/4	TQSS2A	TQSS2FUA	8 in-oz/1/2 in-lb	384 in-oz/24 in-lb
TQS025A	TQS025FUA	5-1/4	TQSS025A	TQSS025FUA	1 in-oz/1/16 in-lb	48 in-oz/3 in-lb
TQS4A*	TQS4FUA*	5-1/4	TQSS4A	TQSS4FUA	1 in-lb	50 in-lb
TQS050A	TQS050FUA	5-1/4	TQSS050A	TQSS050FUA	2 in-oz/1/8 in-lb	96 in-oz/6 in-lb
_	TQSS25FUA	5-1/4	_	_	1 in-lb	75 in-lb
TQS6A*	TQS6FUA*	5-1/4	TQSS6A	TQSS6FUA	1 in-lb	75 in-lb
TQS008A	TQS008FUA	7-3/4	_	TQSS008FUA	1/2 in-oz	16 in-oz
TQS2.5A	TQS2.5FUA	7-3/4	TQSS2.5A	_	12 in-oz/1 in-lb	480 in-oz/30 in-lb
TQS004A	TQS004FUA	8-5/8	_	_	1/4 in-oz	8 in-oz

Wrenches in chart do not include certificate of calibration. Wrenches with a certification of calibration are available by adding "C" to the end of the stock number.

All wrenches include PB47 Storage Case.

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

Basic model = 1 needle

Follow-up = 2 needles

#### **TORQOMETER® TORQUE WRENCHES - 1/4" DRIVE**

## Combination US/Newton Meter Reading/Standard 2% Accuracy\*\*

Standard Basic Models Stock No.	Length, inches	Standard Follow-up Models Stock No.	Stubby Basic Models Stock No.	Stubby Follow-up Models Stock No.	Range	Increments
_	5-1/4	_	TQSSI.055A	TQSSI.11FUA	.055 N●m	.001 N●m
TQSSI.11A	5-1/4	_	TQSSI.11A	_	.110 N●m	.005 N●m
TQSSI.34FUA	5-1/4	_	TQSI.34FUA	TQSSI.34FUA	.34 N•m	.01 N●m
_	5-1/4	_	_	TQSSI.70FUA	.70 N•m	.02 N•m
_	5-1/4	_	_	TQSSI1.35FUA	1.35 N●m	.05 N•m
TQSI055A	5-1/4	TQSI055FUA	_	TQSSI055FUA	.055 N●m	.001 N●m
_	7-3/4	TQSR1FUA	_	_	1.6 N●cm/15 in-lb	5 N•cm/.25 in-lb
_	7-3/4	TQSR2.5FUA	_	_	3.4 N●m/30 in-lb	.1 N•m/1 in-lb
_	7-3/4	TQSI135FUA	_	_	1.35 N●m	.05 N•m
_	8-11/16	TQSR4FUA*	_	_	5.5 N●m/50 in-lb	.1 N•m/1 in-lb
_	8-11/16	TQSR6FUA*	_	_	8.4 N●m/75 in-lb	.2 N●m/5 in-lb

\*Includes 1/4" internal square drive in handle. \*\*Precise 1% models are available on special order. Wrenches in chart do not include certificate of calibration.

All wrenches include PB47 Storage Case. Wrenches with a certificate of calibration are available by adding "C" to the end of the stock number.

ANSI® Spec. B107.300 applies to all these models. Basic model = 1 needle Follow-up = 2 needles

### **Torque Angle Gauges**

#### TA358<sup>‡</sup> 3/8" Square Drive Torque Angle Gauge

- Determines angle controlled torque tightening
- Allows user to follow manufacturer's specifications
- Used on automotive, diesel and industrial equipment, plus head bolts and rod bolts on motorcycles

#### TA360<sup>‡</sup> 1/2" Square Drive Torque Angle Gauge

- Allows user to follow manufacturer's specifications
- Calibrated in degrees in large, easy-to-read increments



# **TORQUE SCREWDRIVER**





# TechAngle® Electronic Torque Screwdriver

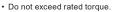
- Four alert modes (LCD, LED, Audible, Vibratory)
- Advanced features: programmable sleep timer, cycle counter, overload indication, calibration alert, battery level, language selection and torque record memory including 10 presets and storage for up to 50 records
- Three modes of operation: Torque, Angle, Torque Then Angle
- Displays in seven units of measure: in-lb, in-oz, ft-lb, Nm, Kg-cm, cNm and angle
- Guaranteed accuracy ±2% CW and 3% CCW at 20–100% of full scale (±4% CW and 6% CCW at 5–19% of full scale)

Stock No.		Range	Increments	Length, inches
ATECHMS80F	1/4" Hex Electronic Screwdriver (Tool Only)	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS80FK	1/4" Hex Electronic Screwdriver Kit	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS100F*	1/4" Hex Electronic Screwdriver (Tool Only)	5–100 in-oz	.01 in-lb	7-1/2
ATECHMS80M	1/4" Square Electronic Driver (Tool Only)	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS80NM	1/4" Square Electronic Driver Kit	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS80NF	1/4" Square Electronic Driver Kit	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS80MK	1/4" Square Electronic Driver Kit	4-80 in-lb (0.45–9 N●m)	.01 in-lb	7-1/2
ATECHMS100M <sup>‡</sup>	1/4" Square Electronic Driver (Tool Only)	5–100 in-oz	.01 in-lb	7-1/2
ATECHMS100MK	1/4" Square Electronic Driver Kit	5–100 in-oz	.01 in-lb	7-1/2

#### **MSTECHHDL Electronic Driver L-Handle**

• T-handle for assisted turning above 40 in-lb





- Do not use to break fasteners loose.
- Periodic recalibration is needed to maintain accuracy.
- ‡These products can expose you to chemicals which are known to the state of California to cause cancer and reproductive harm. See pages P1–P2 for details.
- Read Safety Precautions on pages W1-W4







#### **ODRIVER1P**

#### **Preset Torque Screwdrivers**

- Ideal for low-torque assemblies and precision application
   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 for all drivers in series
- Lightweight construction features aluminum body with steel shank
- Comfortable ergonomic tri-lobe grip and magnetic bit retention
- Textured body provides a nonslip grip
- Not supplied with Certificate of Calibration
- When ordering, user must designate desired torque rating to be set

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

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



#### Adjustable 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 for all drivers in series
- · Lightweight construction features body with steel shank
- Comfortable ergonomic tri-lobe grip and magnetic bit retention
- Textured body provides a nonslip grip

Range	Increments	Length, inches
20-100 in-oz (14-70 N●cm)	1 in-oz	5-7/16
3-15 in-lb (34-169 N•cm)	0.2 in-lb	6-1/4
5-40 in-lb (56-451 N•cm)	0.5 in-lb	6-11/16
50-450 N●cm	5.0 N•cm	6-11/16
	20-100 in-oz (14-70 N•cm) 3-15 in-lb (34-169 N•cm) 5-40 in-lb (56-451 N•cm)	20–100 in-oz (14–70 N ocm) 1 in-oz 3–15 in-lb (34–169 N ocm) 0.2 in-lb 5–40 in-lb (56–451 N ocm) 0.5 in-lb 50–450 N ocm 5.0 N ocm

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



#### TPMS Torque Screwdriver

Stock No.	Description	Range, Dedicated	Overall Length, inches	Accuracy
QDTPMS35	TPMS Adjustable Torque Screwdriver	4 in-lb, 12 in-lb, 35 in-lb	6-5/8	±6%

#### **QDTPMS35 TPMS Adjustable Torque Screwdriver**

- Highly accurate torque tool intended for maintaining or 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)



# Adjustable Torque Drivers (1/4" Square Drive)

•	•	•	
Stock No.	Range	Increments	Length, inches
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

#### **Torque Limiting Drivers**

Stock No. Range, minimum		Range, maximum	Increments	Length, inches	
QTS135	5 in-lb	35 in-lb	0.5 in-lb	7	
QTSP135	5 in-lb	35 in-lb	0.5 in-lb	7-1/2	

#### **QTSP135 US Preset Limiting Driver**

- Clutch mechanism to help prevent over-torquing by allowing free rotation upon reaching the set torque
- Ideal selection for assembly line work where the same requirement is constant
- Can be reset at different torque values or readjusted for accuracy whenever necessary with a torque tester
- Torque limit is pre-set at the factory so when ordering, user must designate desired torque rating to be set

#### QTS135 Adjustable Limiting Driver

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



#### INTERCHANGEABLE HEADS



#### **Torque Wrench Bodies/Adjustable**

- 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
- Adjustable models provide quick torque settings across the scale range while preset models are dedicated to a single torque measurement (good for repetitive assembly operations)
- Slim-profile allows access to tight areas
- Micrometer-style adjustment for fast, accurate torque setting
- All QC series interchangeable torque wrenches are accurate to ±4% clockwise and ±6% counterclockwise from 20–100% of full scale
- Tube scales are roll-marked for better permanency and visibility

Stock No.	Model	Shank (dia.)	Range	Increments	Length, inches
QC1I200	Adjustable	J (0.425")	40–200 in-lb	1 in-lb	9-3/8
QC2175	Adjustable	J (0.425")	5–75 ft-lb	.5 ft-lb	13



#### **Torque Wrench Bodies/Preset**

Stock No.	Model	Shank (dia.)	Range	Length, inches
QC1P60	Preset	J (0.425")	10-60 in-lb (1.1-6.8 N●m)	6
QC1P100	Preset	J (0.425")	15–100 in-lb (1.7–11.3 N●m)	8
QC1P300	Preset	J (0.425")	60–300 in-lb (6.8–33.9 N●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

No calibration certificates on preset torque bodies





- Do not exceed rated torque.
  - · Do not use to break fasteners loose.
- Periodic recalibration is needed to maintain accuracy.
- Read Safety Precautions on pages W1–W4



#### Torque Wrench Bodies/Adjustable/Dual Range

- Plug-and-play system of interchangeable heads are consistently sized from pin to the center of the fastener, so no adjustment calculations are needed
- Minimal friction "hour glass" cam retains and releases lubricant where needed to reduce friction
- Push buttons for quick-release of interchangeable head
- Positive stop ensures the instrument cannot be accidentally disassembled if wound down past scale
- Each instrument comes in a molded storage case for long-term protection
- Tube scales are roll-marked for better permanency and visibility
- Includes certificate of calibration

Stock No.	Range, N•m	Range, ft-lb	Increments	Shank Type	Weight, lb (kg)	Length, inches (mm)
QD2IN50A	10-50	9.2-35.0	0.5 N•m/0.4 ft-lb	J	2.3 (1.12)	14-1/2 (368)
QD2IN100A	20–100	16.6–71.9	0.5 N●m/0.4 ft-lb	J	2.3 (1.12)	14-1/2 (368)
QD3IN200B	40-200	37–140	2 N●m/1.2 ft-lb	Y	3.36 (1.64)	23 (584)
QD3IN350A	70-350	59–251	2 N•m/1.2 ft-lb	X	3.36 (1.64)	23 (584)
QD4IN800A	150-800	129-572	5 N●m/4.3 ft-lb	Z	11.14 (5.46)	41-1/2 (1,054)

ASME® B107.300



#### Square Drive Heads/Ratcheting

•		•					
Square Drive, inches	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	Head O.D., inches	Depth, inches	Repair Kit
1/4	QJD8A-72	_	_	_	15/16	7/16	RKRT72A
1/4	QJD8SL-72	_	_	_	15/16	7/16	RKRT72A
3/8	QYD12A-80**	_	_	_	1-1/4	9/16	RKRF80
3/8	QYD12SL-80	_	_	_	1-1/4	9/16	RKRF80
3/8	_	QJD12A-80**	_	_	1-1/4	9/16	RKRF80
3/8	_	QJD12SL-80	_	_	1-1/4	9/16	RKRF80
3/8	_	_	QXD12A-80	_	1-1/4	9/16	RKRF80
1/2	QJD16A**	_	_	_	1-5/8	3/4	RKRS936
1/2	QJD16SL	_	_	_	1-5/8	3/4	RKRS80A
1/2	_	QYD16A**	_	_	1-5/8	3/4	RKRS936
1/2	_	QYD16SL	_	_	1-5/8	3/4	RKRS80A
1/2	_	_	QXD16A**	_	1-5/8	3/4	RKRS80A
3/4	_	_	QXD24A	_	2-1/2	1-1/4	RKRQC4
3/4	_	_	_	QZD24BDP	2-1/2	1-1/4	RKRQC4
1	_	_	_	QZD32BDP	2-1/2	1-1/2	RKRQC5

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

Value in parentheses in chart is the Maximum Recommended Working Torque, ft-lb

Center of Fastener to Retaining Pin

QYD Series - 3.00" QXD Series - 4.50"

QZD Series - 5.75"

QJD-SL Series - 3.5"

QYD-SL Series - 4.43"

Allow use of torque wrench bodies on previous page with sockets, crowfoot wrenches or other similar attachment



# Square Drive Heads/Fixed

Square Drive, inches	J (0.425")	Y (0.560")	X (0.735")	Z (0.990")	Head O.D., inches	Head Depth, inches
1/4	QJSD8A	_	_	_	5/8	3/4
3/8	QJSD12A	QYSD12A	_	_	1	1
1/2	QJSD16A	QYSD16A	QXSD16A	_	1	1-1/4
3/4	_	_	QXSD24A	QZSD24ADP	1-1/2	2
1	_	_	QXSD32A	QJSD8A	1-3/4	2-1/4

Value in parentheses is the Maximum Recommended Working Torque, ft-lb

Center of Fastener to Retaining Pin

QJD Series - 2.50"

QYD Series - 3.00"

QXD Series - 4.50" QZD Series - 5.75"

Allow use of torque wrench bodies on previous page with sockets, crowfoot wrenches or other similar attachments



#### Ratcheting Box End Heads, 12-Point, mm

Center of Fastener to Retaining Pin QJBOER Series - 2.50" QYBOER Series - 3.0"

	J (0.425")	Y (0.560")	Head O.D., mm	Head Depth, mm
10	QJB0ERM10A	_	21.5	8
13	QJB0ERM13A	_	25	10
15	QJB0ERM15A	_	28.5	11
16	QJB0ERM16A	QYBOERM16A	30.5	11
17	QJB0ERM17A	_	32	12
18	QJB0ERM18A	QYBOERM18A	34.5	12
19	QJB0ERM19A	_	41.7	12.9
22	QJB0ERM22A	_	41.7	14.5
24	QJB0ERM24A	QYB0ERM24A	46.5	15.5



# Ratcheting Box End Heads, 12-Point, inches

Center of Fastener to Retaining Pin QJBOER Series - 2.50" QYBOER Series - 3.0"

<b>□</b>	J (0.425")	Y (0.560")	Head O.D, inches	Head Depth, inches
3/8	QJB0ER12A	_	27/32	5/16
7/16	QJB0ER14A	_	7/8	11/32
1/2	QJB0ER16A	_	1-1/32	1/4
9/16	QJB0ER18A	_	1-1/16	13/32
5/8	QJB0ER20A	QYBOER20A	1-3/16	7/16
11/16	_	QYB0ER22A	1-1/4	15/32
3/4	QJB0ER24A	QYB0ER24A	1-7/16	1/2

# INTERCHANGEABLE HEAD, CLICK-TYPE TORQUE WRENCHES



# Box End Heads, 0° Offset, 12-Point, inches

Center of fastener to retaining pin:

• QJXD Series: 2.50" • QYXD Series: 3.00" • QXXD Series: 4.50"

	Stock No.	Shank (dia.)	Maximum Recommended Working Torque, ft-lb
3/8	QJXD12A	J (0.425")	60
7/16	QJXD14A	J (0.425")	60
1/2	QJXD16A	J (0.425")	60
9/16	QJXD18A	J (0.425")	60
5/8	QYXD20A	Y (0.560")	160
11/16	QJXD22A	J (0.425")	60
11/16	QYXD22A	Y (0.560")	160
3/4	QJXD24A	J (0.425")	60
3/4	QYXD24A	Y (0.560")	160
7/8	QJXD28A	J (0.425")	60
15/16	QJXD30A	J (0.425")	60
15/16	QYXD30A	Y (0.560")	160
1	QJXD32A	J (0.425")	60



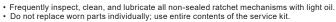
QYXB24A

# Box End Heads, 10° Offset, 12-Point, inches

Center of fastener to retaining pin:

• QJXB Series: 2.50" • QYXB Series: 3.00" • QXXB Series: 4.50"

	Stock No.	Shank (dia.)	Maximum Recommended Working Torque, ft-lb
1/2	QJXB16A	J (0.425")	60
9/16	QJXB18A	J (0.425")	60
5/8	QJXB20A	J (0.425")	60
5/8	QYXB20A	Y (0.560")	160
11/16	QJXB22A	J (0.425")	60
3/4	QJXB24A	J (0.425")	60
3/4	QYXB24A	Y (0.560")	160
7/8	QYXB28A	Y (0.560")	160
15/16	QYXB30A	Y (0.560")	160
1	QYXB32A	Y (0.560")	160
1-1/8	QYXB36A	Y (0.560")	160
1-3/8	QXXB44A	X (0.735")	240
1-1/2	QXXB48A	X (0.735")	240



- Do not exceed rated torque.
- Do not use to break fasteners loose.
- · Periodic recalibration is needed to maintain accuracy.
- Read Safety Precautions on pages W1-W4







# INTERCHANGEABLE HEAD, CLICK-TYPE TORQUE WRENCHES

#### Box End Heads, 10° Offset, 12-Point, mm

Center of fastener to retaining pin:

• QJXBM Series: 2.50" • QYXBM Series: 3.00"

mm <u></u>	Stock No.	Shank (dia.)	Maximum Recommended Working Torque, ft-lb
11	QJXBM11A	J (0.425")	60
12	QJXBM12A	J (0.425")	60
13	QJXBM13A	J (0.425")	60
14	QJXBM14A	J (0.425")	60
16	QJXBM16A	J (0.425")	60
18	QJXBM18A	J (0.425")	60
19	QJXBM19A	J (0.425")	60
18	QYXBM18A	Y (0.560")	160
24	QYXBM24A	Y (0.560")	160
28	QYXBM28A	Y (0.560")	160

# Box End Heads, 40° Bend, 12-Point, mm



Size, mm	Stock No.	Shank (dia.)	Center of Fastener to Retaining Pin
18	QYSBXM18A	Y (0.560")	QYSBXM Series – 3.00"
24	QYSBXM24A	Y (0.560")	QYSBXM Series – 3.00"

#### ISO/IZO Ratchet Head Inserts

Stock No.	Square Drive, inches (mm)	Width, mm	Insert Size, mm	Max Recommended Working Torque, N•m
IZTRAT9X12	1/4 (6)	37	9 x 12	25
IZFRAT9X12	3/8 (10)	38	9 x 12	160
IZSRAT9X12	1/2 (13)	38	9 x 12	160
IZSRAT14X18	1/2 (13)	40	14 x 18	265
IZLRAT14X18	3/4 (19)	40	14 x 18	960
QIZ16Q14X18	1/2 (13)	40	14 x 18	265

## **IZO Torque Insert Heads**

Stock No.	Description (Chart)
IZ70E9X12	7 mm OE insert 9 x 12
IZ80E9X12	8 mm OE insert 9 x 12
IZ90E9X12	9 mm OE insert 9 x 12
IZ100E9X12	10 mm OE insert 9 x 12
IZ110E9X12	11 mm OE insert 9 x 12
IZ130E9X12	13 mm OE insert 9 x 12
IZ140E9X12	14 mm OE insert 9 x 12
IZ150E9X12	15 mm OE insert 9 x 12
IZ160E9X12	16 mm OE insert 9 x 12
IZ170E9X12	17 mm OE insert 9 x 12
IZ180E9X12	18 mm OE insert 9 x 12
IZ190E9X12	19 mm OE insert 9 x 12
IZ130E14X18	13 mm OE insert 14 x 18
IZ140E14X18	14 mm OE insert 14 x 18
IZ150E14X18	15 mm OE insert 14 x 18

Stock No.	Description (Chart)
IZ170E14X18	17 mm OE insert 14 x 18
IZ180E14X18	18 mm OE insert 14 x 18
IZ190E14X18	19 mm OE insert 14 x 18
IZ220E14X18	22 mm OE insert 14 x 18
IZ240E14X18	24 mm OE insert 14 x 18
IZ270E14X18	27 mm OE insert 14 x 18
IZ300E14X18	30 mm OE insert 14 x 18
IZ320E14X18	32 mm OE insert 14 x 18
IZ360E14X18	36 mm OE insert 14 x 18
IZ10IR9X12	10 mm Insert Ring 9 x 12
IZ11IR9X12	11 mm Insert Ring 9 x 12
IZ12IR9X12	12 mm Insert Ring 9 x 12
IZ13IR9X12	13 mm Insert Ring 9 x 12
IZ14IR9X12	14 mm Insert Ring 9 x 12
IZ15IR9X12	15 mm Insert Ring 9 x 12

Stock No.	Description (Chart)
IZ17IR9X12	17 mm Insert Ring 9 x 12
IZ19IR9X12	19 mm Insert Ring 9 x 12
IZ13IR14X18	13 mm Insert Ring 14 x 18
IZ14IR14X18	14 mm Insert Ring 14 x 18
IZ15IR14X18	15 mm Insert Ring 14 x 18
IZ17IR14X18	17 mm Insert Ring 14 x 18
IZ19IR14X18	19 mm Insert Ring 14 x 18
IZ22IR14X18	22 mm Insert Ring 14 x 18
IZ24IR14X18	24 mm Insert Ring 14 x 18
IZ27IR14X18	27 mm Insert Ring 14 x 18
IZ30IR14X18	30 mm Insert Ring 14 x 18
IZ32IR14X18	32 mm Insert Ring 14 x 18
IZ36IR14X18	36 mm Insert Ring 14 x 18
IZWI9X12	Welding insert 9 x 12
IZWI14X18	Welding insert 14 x 18

#### **INTERCHANGEABLE HEAD**

## Thin Open End Heads, inches



QJ022ARTH60

Center of fastener to retaining pin:

QJO Series: 2.50"QYO Series: 3.00"

	•		
	Stock No.	Shank (dia.)	Maximum Recommended Working Torque, ft-lb
11/16	QJ022ARTH60	J (0.425")	60
7/8	QJ028ARTH	J (0.425")	60
15/16	QJ030ARTH	J (0.425")	60
1	QJ032ARTH	J (0.425")	60
1-1/16	QJ034ARTH	J (0.425")	60
1-1/8	QJ036ARTH	J (0.425")	60
1-3/16	QJ038ARTH	J (0.425")	60
1-1/4	QJ040ARTH	J (0.425")	60
1-3/8	QJ044ARTH	J (0.425")	60
1-1/2	QJ048ARTH	J (0.425")	60
1-9/16	QJ050ARTH	J (0.425")	60
1-5/8	QJ052ARTH	J (0.425")	60
1-3/4	QJ056ARTH	J (0.425")	60

			Marataran
	Stock No.	Shank (dia.)	Maximum Recommended Working Torque, ft-lb
1-7/8	QJ060ARTH	J (0.425")	60
2	QJ064ARTH	J (0.425")	60
2-1/16	QJ066ARTH	J (0.425")	60
2-11/16	QJ086ARTH	J (0.425")	60
15/16	QYO30ARTH	Y (0.560")	160
1-1/16	QYO34ARTH	Y (0.560")	160
1-5/8	QY052ARTH	Y (0.560")	160
1-3/4	QYO56ARTH	Y (0.560")	160
1-7/8	QYO60ARTH	Y (0.560")	160
2	QYO64ARTH	Y (0.560")	160
2-1/8	QYO68ARTH	Y (0.560")	160
2-1/4	QY072ARTH	Y (0.560")	160

# Open End Heads, mm

	J (0.425")	Y (0.560")	X (0.735")	Z (0.990") Dual Pins	O.D., mm	Head Depth,
6	QJOM6A (5)	_	_	_	13	<b>mm</b> 4
7	QJOM7A (6)	_	_	_	15	4
8	QJ0M8A (10)	_	_	_	17	4
9	QJOM9A (14)	_	_	_	19	5
10	QJOM10A (22)	_	_	_	21	5
11	QJOM11A (33)	_	_	_	23	6
12	QJOM12A (36)	_	_	_	25	6
13	QJOM13A (41)	_	_	_	27	6
14	QJOM14A (55)	QYOM14A (55)	_	_	29	7
15	QJOM15A (60)	QYOM15A (74)	_	_	31	7
16	QJOM16A (60)	QYOM16A (88)	_	_	33	7
17	QJOM17A (60)	QYOM17A (103)	QXOM17A (103)	_	35	8
18	QJOM18A (60)	QYOM18A (115)	QXOM18A (115)	_	37	8
19	QJOM19A (60)	QYOM19A (138)	QXOM19A (138)	_	39	9
20	QJOM20A (60)	QYOM20A (160)	QXOM20A (160)	_	41	9
21	QJOM21A (60)	QYOM21A (160)	QXOM21A (180)	_	43	9
22	QJOM22A (60)	QYOM22A (160)	QXOM22A (206)	_	46	10
23	QJOM23A (60)	QYOM23A (160)	QXOM23A (229)	_	47	10
24	QJOM24A (60)	QYOM24A (160)	QXOM24A (240)	QZOM24ADP (250)	49	11
25	QJOM25A (60)	QYOM25A (160)	QXOM25A (240)	QZOM25ADP (275)	52	11
26	QJOM26A (60)	QYOM26A (160)	QXOM26A (240)	QZOM26ADP (298)	53	11
27	QJOM27A (60)	QYOM27A (160)	QXOM27A (240)	QZOM27ADP (319)	55	12
29	QJOM29A (60)	QYOM29A (160)	QXOM29A (240)	QZOM29ADP (379)	58	12
30	QJOM30 (60)	QYOM30A (160)	QXOM30A (240)	QZOM30ADP (413)	61	13
32	QJOM32 (60)	QYOM32A (160)	QXOM32A (240)	QZOM32ADP (480)	65	14
34	_	QYOM34A (160)	QXOM34A (240)	QZOM34ADP (480)	68	14
36	QJOM36A (60)	QYOM36A (160)	QXOM36A (240)	QZOM36ADP (480)	74	15
41	_	QYOM41 (160)	QXOM41A (240)	QZOM41ADP (480)	83	18
46	_	_	QXOM46A (240)	QZOM46ADP (480)	93	19
49	_	_	_	_	86	18
50	_	_	_	QZOM50ADP (480)	102	20
55	_	_	QXOM55A (240)	QZOM55ADP (480)	113	23
60	_	_	_	QZOM60ADP (480)		27
65	_	_	_	QZOM65ADP (480)	130	26
70	l –	_	_	QZOM70ADP (480)	169	31



QJOM27A

Center of fastener to

- retaining pin:
   QJOM Series: 2.50"
   QYOM Series: 3.00"
- QXOM Series: 4.50" QZOM Series: 5.75"





- Do not exceed rated torque.
- Do not use to break fasteners loose.
   Periodic recalibration is needed to maintain accuracy.
   Read Safety Precautions on pages W1–W4

Value in parentheses is the Maximum Recommended Working Torque, ft-lb

# QJ028A



# Center of fastener to

retaining pin:
• QJO Series: 2.50" • QYO Series: 3.00"

• QXO Series: 4.50"

• QZO Series: 5.75"

# **Open End Heads, inches**

<b>□</b> Ţ	J (0.425")	Y (0.560")	X (0.735")	Z (0.990") Dual Pins	Head Depth, inches	O.D., inches
1/4	QJ08A (5)	_	_	_	9/64	17/32
9/32	QJ09A (7)	_	_	_	5/32	21/32
5/16	QJ010A (9)	_	_	_	11/64	21/32
3/8	QJ012A (18)	_	_	_	11/64	25/32
7/16	QJ014A (26)	_	_	_	11/64	29/32
1/2	QJ016A (34)	QYO16A (58)	_	_	11/64	1-1/16
9/16	QJ018A (58)	QYO18A (58)	_	_	9/32	1-1/16
5/8	QJ020A (60)	QY020A (70)	_	_	9/32	1-5/16
11/16	QJ022A (60)	QY022A (99)	_	_	5/16	1-7/16
3/4	QJ024A (60)	QY024A (125)	QX024A (125)	_	11/32	1-19/32
13/16	QJ026A (60)	QYO26A (160)	QX026A (164)	_	3/8	1-23/32
7/8	QJ028A (60)	QY028A (160)	_	_	3/8	1-23/32
15/16	QJ030A (60)	QY030A (160)	QX030A (200)	_	13/32	1-29/32
1	QJ032A (60)	QY032A (160)	QX032A (240)	QZ032ADP (298)	7/16	2-1/32
1-1/16	QJ034A (60)	QY034A (160)	QX034A (240)	QZ034ADP (480)	15/32	2-3/16
1-1/8	QJ036A (60)	QY036A (160)	QX036A (240)	QZ036ADP (367)	15/32	2-5/16
1-3/16	QJ038A (60)	QY038A (160)	QX038A (240)	QZ038ADP (433)	15/32	2-5/16
1-1/4	QJ040A (60)	QYO40A (160)	QX040A (240)	QZ040ADP (480)	17/32	2-9/16
1-5/16	_	QY042A (160)	QX042A (240)	QZ042ADP (480)	9/16	2-21/32
1-3/8	QJ044A (60)	QY044A (160)	QX044A (240)	QZ044ADP (480)	19/32	2-3/16
1-7/16	_	QYO46A (160)	QX046A (240)	QZ046ADP (480)	19/32	3
1-1/2	QJ048A (60)	QYO48A (160)	QX048A (240)	QZ048ADP (480)	5/8	3-1/16
1-9/16	_	QY050A (160)	QX050A (240)	QZ050ADP (480)	21/32	3-3/16
1-5/8	QJ052A (60)	QY052A (160)	QX052A (240)	QZ052ADP (480)	11/16	3-11/32
1-11/16	_	_	QX054A (240)	QZ054ADP (480)	23/32	3-13/32
1-3/4	_	QY056A (240)	QX056A (240)	QZ056ADP (480)	23/32	3-9/16
1-13/16	_	_	QX058A (240)	QZ058ADP (480)	13/32	3-21/32
1-7/8	_	QY060A (240)	QX060A (240)	QZ060ADP (480)	25/32	3-13/16
2	_	_	QX064A (240)	QZ064ADP (480)	27/32	4-1/16
2-1/8	_	_	QX068A (240)	QZ068ADP (480)	27/32	4-3/16
2-1/4	_	QY072 (240)	_	QZ072ADP (480)	15/16	4-9/16
2-3/8	_	_	_	QZ076ADP (480)	_	_
2-1/2	_	_	_	QZ080ADP (480)	1	5-1/16
2-7/8	_	QY092 (240)	_	_	5/8	5-31/32

Value in parentheses is the Maximum Recommended Working Torque, ft-lb

# Box End Heads, 15° offset, 12-Point, inches

	J (0.425") X (0.735")		Y (0.560")	Y (0.560") Z (0.990")		Head Depth, inches
7/32	QJX7A (10)	_	_	_	13/32	3/16
1/4	QJX8A (18)	_	_	_	13/32	3/16
9/32	QJX9A (41)	_	_	_	13/32	3/16
5/16	QJX10A (41)	_	_	_	1/2	7/32
3/8	QJX12A (60)	_	_	_	9/32	1/4
7/16	QJX14A (60)	_	QYX14A (60)	_	21/32	5/16
1/2	QJX16A (60)	_	QYX16A (75)	_	3/4	11/32
9/16	QJX18A (60)	_	QYX18A (112)	_	27/32	3/8
5/8	QJX20A (60)	QXX20A (171)	QYX20A (160)	_	15/16	13/32
11/16	QJX22A (60)	QXX22A (200)	QYX22A (160)	_	1-1/32	7/16
3/4	QJX24A (60)	QXX24A (219)	QYX24A (160)	_	1-1/8	15/32
13/16	QJX26A (60)	QXX26A (240)	QYX26A (160)	QZX26A (275) QZX26ADP (275)	1-3/16	17/32
7/8	QJX28A (60)	QXX28A (240)	QYX28A (160)	_	1-9/32	9/16
15/16	QJX30A (60)	QXX30A (240)	QYX30A (160)	QZX30A (300) QZX30ADP (300)	1-3/8	19/32
1	QJX32A (60)	QXX32A (240)	QYX32A (160)	_	1-15/32	21/32
1-1/16	_	QXX34A (240)	_	_	1-9/16	11/16
1-1/16	QJX34A (60)	_	QYX34A (160)	QZX34ADP (300)	1-9/16	11/16
1-1/8	_	QXX36A (240)	QYX36A (160)	QZX36ADP (480)	1-5/8	11/16
1-3/16	_	QXX38A (240)	QYX38A (160)	QZX38ADP (480)	1-3/4	11/16
1-1/4	QJX40A (60)	QXX40A (240)	QYX40A (160)	QZX40ADP (480)	1-9/16	11/16
1-5/16	_	QXX42A (240)	QYX42A (160)	QZX42ADP (480)	1-29/32	3/4
1-3/8	_	QXX44A (240)	QYX44A (160)	QZX44ADP (480)	2	3/4
1-7/16	_	QXX46A (240)	_	QZX46ADP (480)	2-1/16	7/8
1-1/2	_	QXX48A (240)	QYX48A (160)	QZX48ADP (480)	2-5/32	7/8
1-9/16	_	QXX50A (240)	_	QZX50ADP (480)	2-1/4	7/8
1-5/8	_	QXX52A (240)	QYX52A (160)	QZX52ADP (480)	2-11/32	7/8
1-11/16	_	QXX54A (240)	_	_	2-7/16	7/8
1-11/16	_	_	_	QZX54ADP (480)	2-7/16	7/8
1-3/4	_	QXX56A (240)	_	QZX56ADP (480)	2-17/32	1-1/32
1-13/16	_	QXX58A (240)	_	QZX58ADP (480)	2-5/8	1-1/32
1-7/8		QXX60A (240)	_	QZX60ADP (480)	2-11/32	1-1/32
2	_	QXX64A (240)	_	QZX64ADP (480)	2-7/8	1-1/32
2-1/16	_	_	_	QZX66ADP (480)	2-21/32	1-3/16
2-1/8	_	_	_	QZX68ADP (480)	3-1/16	1-3/16
2-3/8	_	_	_	QZX70ADP (240)	3-1/8	1-1/8
2-1/4	_	_	_	QZX72ADP (480)	3-7/32	1-3/16
2-3/8	_	_	_	QZX76ADP (480)	3-13/32	1-9/32
2-1/2	_	_	_	QZX80A (480) QZX80ADP (480)	3-19/32	1-5/16
2-9/16	_	I – –	-	QZX82A (480)	_	





Center of fastener to retaining pin:

- QJX Series 2.50"
- QYX Series 3.00"
  QXX Series 4.50"
  QZX Series 5.75"

#### Adaptor QZD32A-1 Z Shank to 1" Drive Adapter

• Adaptor Z Shank to 1" Drive



# Ratcheting Flare Nut Heads, 12-Point, mm

mm Ţ	Stock No.	Shank (dia.)
16	RTWHM16J	J (0.425")
16	RTWHM16JSL	J (0.425")











Do not exceed rated torque.
Do not use to break fasteners loose.
Read Safety Precautions on pages W1–W4

# QJXM9A



# Center of fastener to retaining pin: • QJXM Series – 2.50" • QYXM Series – 3.00"

- QXXM Series 4.50"
- QZXM Series 5.75"

#### Box End Heads, 12-Point, mm

	J (0.425")	X (0.735")	Y (0.560")	Z (0.990") Dual Pins	Head Depth, mm	O.D., mm
6	QJXM6A (15)	_	_	_	5	11
7	QJXM7A (20)	_	_	_	5	11
8	QJXM8A (22)	_	_	_	6	13
9	QJXM9A (30)	_	_	_	6	14
10	QJXM10A (53)	_	_	_	7	15
11	QJXM11A (59)	_	_	_	8	17
12	QJXM12A (60)	_	_	_	8	18
13	QJXM13A (60)	_	_	_	9	20
14	QJXM14A (60)	QXXM14A (117)	QYXM14A (117)	_	9	21
15	QJXM15A (60)	_	QYXM15A (148)	_	10	22
16	QJXM16A (60)	QXXM16A (183)	QYXM16A (160)	_	10	24
17	QJXM17A (60)	QXXM17A (197)	QYXM17A (160)	_	11	25
18	QJXM18A (60)	QXXM18A (224)	QYXM18A (160)	_	12	27
19	QJXM19A (60)	QXXM19A (238)	QYXM19A (160)	_	12	28
20	QJXM20A (60)	QXXM20A (240)	QYXM20A (160)	_	13	30
21	QJXM21A (60)	QXXM21A (240)	QYXM21A (160)	_	13	31
22	QJXM22A (60)	QXXM22A (240)	QYXM22A (160)	_	14	32
23	QJXM23A (60)	QXXM23A (240)	QYXM23A (160)	_	15	34
24	QJXM24A (60)	QXXM24A (240)	QYXM24A (160)	QZXM24ADP (375)	15	35
25	_	QXXM25A (240)	_	QZXM25ADP (413)	16	37
26	QJXM26A (60)	_	QYXM26A (160)	_	16	38
27	QJXM27A (60)	QXXM27A (240)	QYXM27A (160)	QZXM27ADP (480)	17	39
29	_	QXXM29A (240)	QYXM29A (160)	QZXM29ADP (480)	18	42
30	_	QXXM30A (240)	QYXM30A (160)	QZXM30ADP (480)	19	44
32	_	QXXM32A (240)	QYXM32A (160)	QZXM32ADP (480)	19	46
34	_	QXXM34A (240)	QYXM34A (160)	QZXM34ADP (480)	19	48
36	_	QXXM36A (240)	QYXM36A (160)	QZXM36ADP (480)	22	53
41	_	QXXM41A (240)	_	QZXM41ADP (480)	22.4	59.4
46	_	QXXM46A (240)	_	QZXM46ADP (480)	24.6	66.5
50	_	_	_	QZXM50ADP (480)	26.9	73.2
55	_	_	_	QZXM55ADP (480)	30.2	81.8
60	_	_	_	QZXM60ADP (480)	33.3	89.7

Value in parentheses is the Maximum Recommended Working Torque, ft-lb

#### Ratcheting Flare Nut Heads, 12-Point, inches



Center of fastener to retaining pin:

- RTWH "J" Series 2.50" RTWH "Y" Series 3.00"

<b>□</b> Ţ	J (0.425")	Y (0.560")
3/8	_	RTWH24YSL
7/16	RTWH28JSL	_
1/2	RTWH32JSL	_
9/16	RTWH36JSL	_
9/16	_	RTWH36YSL
5/8	RTWH40JSL	_
5/8	_	RTWH40YSL
11/16	RTWH44JSL	_
11/16	_	RTWH44YSL
3/4	RTWH48JSL	_
3/4	_	RTWH48YSL
13/16	RTWH52JSL	_
13/16	_	RTWH52YSL
7/8	RTWH56JSL	_
7/8	_	RTWH56YSL
15/16	_	RTWH60YSL
1	_	RTWH64YSL
1-1/16	_	RTWH68YSL
1-1/8	_	RTWH72YSL
1-1/4	_	RTWH80YSL
1-3/8	_	RTWH88YSL
1-5/8	_	RTWH104YSL
1-1/2		RTWH96YSL

## Flare Nut Heads, 6-Point, inches

	J (0.425")	Y (0.560")	O.D., inches	Head Depth, inches
5/16	QJRXS10A (17)	_	21/32	9/32
3/8	QJRXS12A (29)	_	3/4	5/16
7/16	QJRXS14A (42)	_	27/32	11/32
1/2	QJRXS16A (54)	_	29/32	3/8
9/16	QJRXS18A (60)	_	1	13/32
5/8	QJRXS20A (60)	QYRXS20A (74)	1-3/32	7/16
11/16	QJRXS22A (60)	QYRXS22A (92)	1-5/32	15/32
3/4	QJRXS24A (60)	QYRXS24A (104)	1-1/4	1/2
13/16	QJRXS26A (60)	QYRXS26A (117)	1-5/16	7/32
7/8	QJRXS28A (60)	QYRXS28A (133)	1-13/32	9/16
15/16	QJRXS30A (60)	QYRXS30A (146)	1-1/2	19/32
1	QJRXS32A (60)	QYRXS32A (158)	1-9/16	5/8
1-1/8		QYRXS36A (160)	1-3/4	11/16





Center of fastener to retaining pin:

- QJRXSM Series 2.50"
- QYRXSM Series 3.00"
- QJRXS Series 2.50"
- QYRXS Series 3.00"
- QYRX Series 3.00"

#### Flare Nut Heads, 6-Point, mm

mm <u></u> T	J (0.425")	Y (0.560")	O.D., mm	Head Depth, mm
8	QJRXSM8A (17)	_	17	7
10	QJRXSM10A (33)	_	20	8
11	QJRXSM11A (42)	_	21	9
12	QJRXSM12A (50)	_	22	9
13	QJRXSM13A (58)	QYRXSM13A (58)	24	9
14	QJRXSM14A (60)	_	25	10
15	QJRXSM15A (60)	QYRXSM15A (71)	26	10
16	QJRXSM16A (60)	QYRXSM16A (75)	29	11
17	QJRXSM17A (60)	QYRXSM17A (83)	29	11
18	_	QYRXSM18A (94)	30	12
19	QJRXSM19A (60)	QYRXSM19A (104)	32	12
20	QJRXSM20A (60)	QYRXSM20A (113)	33	13

Value in parentheses is the Maximum Recommended Torque, ft-lb



Center of fastener to retaining pin:

- QJRXSM Series 2.50"
- QYRXSM Series 3.00"
- QJRXS Series 2.50" QYRXS Series 3.00"
- QYRX Series 3.00"

# Flare Nut Heads, 12-Point, inches

	Y (0.560")	Head O.D, inches	Head Depth, inches
5/8	QYRX20A (79)	1-1/16	15/32
11/16	QYRX22A (92)	1-7/32	1/2
3/4	QYRX24A (104)	1-1/4	17/32
13/16	QYRX26A (117)	1-9/32	9/16
7/8	QYRX28A (133)	1-13/32	1-3/8
15/16	QYRX30A (146)	1-1/2	5/8
1	QYRX32A (158)	1-7/32	23/32
1-1/16	QYRX34A (160)	1-5/8	23/32
1-1/8	QYRX36A (160)	1-23/32	3/4
1-3/16	QYRX38A (160)	1-13/16	7/8
1-1/4	QYRX40A (160)	1-27/32	23/32
1-3/8	QYRX44A (160)	2	13/16
1-1/2	QYRX48A (160)	2-5/32	27/32
1-5/8	QYRX52A (160)	2-11/32	1

Value in parentheses is the Maximum Recommended Torque, ft-lb

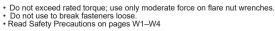


Center of fastener to retaining pin:

- QJRXSM Series: 2.50"
- QYRXSM Series: 3.00"
- QJRXS Series: 2.50"
- QYRXS Series: 3.00"
- QYRX Series: 3.00"













CTM600SS

#### 1" Drive Heavy Duty Cordless Torque Multiplier

Untethered Access - No Power Cable or Hose - Improving Safety, Convenience and Versatility

- Multiple units of torque measurement, including Nm and ft. lbs.
- Torque, Torque and Angle with Final Torque and Torque Audit functionality available in "Advanced" mode
- Clear indication of successful joint application

#### **User-Specific Functionality**

- 12 user IDs can be downloaded to the tool and results can be stored against individual users
- 20 unique stand-alone targets plus 20 unique work groups targets for each work group
- Maximum Audit Mode target angle (720°)

#### **Data Driven**

- Display and on-board storage of final torque or torque and angle values
- Save up to 3,000 times and date stamped readings
- Results can be output in CSV (comma-separated values) format for users not able to use EvoLog
- Ability to product and store real time graphs via EvoLog
- Usage counter gives the ability to see the amount of times the tool has been used since the last reset
- Allows tool integration into third party control systems

#### **Precise Operation**

- Operation Direction feature designed primarily for undoing bolts (when doing sequence tightening, it is possible to undo an incorrectly tightened bolt without interrupting the sequence)
- Two stage tightening gives faster application of a Snug Torque and Angle Target
- Turn Angle option can be used to check if bolts have already been tightened in an assembly process

#### **Overheat-Prevention**

 Industrial motor used by the CTM will keep going where most other battery-powered tools will overheat

#### **Accurate Results**

- Transducer controlled battery powered torque tool designed for accurately applying torque to threaded fasteners
- Unique "intelligent joint sensing" technology continually measurers the joint during tightening and when necessary, employs dynamic breaking to avoid torque over-shoot due to motor inertia
- Consistently achieves highly accurate results of ±3%

#### **Features**

- USB and Bluetooth® 4.0 Data Transfer plus Software
- "Safe to start" button ensures hands are safely positioned at start up
- OLED display ensure's visibility in all conditions
- Key lock features prevents unauthorized usage
- Brushless motor for low maintenance
- 18V, 5.0Ah Battery and efficient motor give outstanding fastening performance per charge

Stock No.	Drive Size, inches	Torque Range, ft-lb	Torque Range, Nm	Tool Weight, lb (kg)	Max Output Speed, RPM
CTM600SS	3/4	118 - 600	160 - 800	8.2 (3.7)	8.2 (3.7)
CTM1000	1	250-1,000	340-1,350	13 (5.9)	32
CTM2000	1	500-2,000	680-2,700	15 (6.8)	13
СТМ3000	1	750-3,000	1,020–4,000	18.3 (8.3)	118 - 600



#### Pneumatic Torque Wrenches **PTM Features:**

- Twin motor technology allows the PTM to be both lightweight and fast
- Compact and powerful, allowing excellent access to a variety of threaded fasteners
- The secondary trigger ensures hands are away from pinch points during operation
- Run-down speeds up to 224 RPM (for PTM370)
- A wide range of reaction fixtures are available, making this an extremely versatile tool
- These are non-impacting tools with low vibration levels
- Operate at noise levels below 85 dB (under load)
- Gearbox rotates independently from the handle, so reaction forces are never transferred back to the operator
- All tools are supplied with a Certificate of Calibration and torque vs. pressure chart
- PTM Series offers a wide range of torque output, from 74-4,500 ft-lb
- Accuracy of ±5%
- Includes case, cranked reaction fixture, tool hanger, secondary handle, and male quick connect

Stock No.	Square Drive Size	Torque Range (ft-lb)	Torque Range (N•m)
PTM370	3/4	74–370	100–500
PTM590	3/4	118–590	160-800
PTM740	3/4	147–740	200-1,000
PTM1000	1	200-1,000	270-1,350
PTM1475	1	295-1,475	400-2,000
PTM1990	1	400-1,990	540-2700
PTM2950	1-1/2	590-2,950	800-4,000
PTM2950SA	1	590-2,950	800–4,000
PTM3300	1-1/2	660-3,320	900-4,500
PTM4400	1-1/2	885-4,425	1200–6,000



# Wheel Torque Extension

- Works with reaction cups, keeping reaction forces away from wheels and hubs
- 9" reach allows easier access to recessed wheel lugs
- Adjustable reaction arm accommodates a wide array wheel hub designs
- Rugged steel construction designed for a maximum working torque of 1,000 ft-lb

Stock No.	Drive Size, inches	Length, inches	Maximum Torque Output, ft- lb (N•m)	Storage Case	Weight, lb
WTE4G72L6	3/4	6	750 (1,000)	(Not Included)	6
WTE4G72L9	3/4	9	1,000 (1,350)	(Not Included)	8-1/2



#### 3/4" Drive Pneumatic Torque Multiplier Internal Control 740 ft-lb

#### PTM740IC

- Easy to read LED display and control panel allows the user to adjust torque output on the tool
- Integrated secondary trigger module keeps the operator's hands away from pinch points during operation
- Dual motor technology provides fast rundown speeds and an accurate finally torque in one smooth without changing gears
- The bi-directional operation allows the tool to be used for both CW and CCW directions
- Colored LED indicator provides user feedback indicating joint status (low, within tolerance, high result) when the fastener is tightened
- Electronically controlled solenoid quickly shuts off air flow when target torque is achieved, providing highly repeatable operation
- Durable steel gearbox allows for long tool life
- Aluminum housing minimizes tool weight while providing exceptional durability
- Included tool hanger bracket and secondary handle help to reduce user fatigue

#### Filter/Regulator Unit **PTMFRL**

• Filter and lubricator in one unit

• The large pressure gauge allows the operator to easily select the appropriate pressure

 Adjustable lubricator provides the proper amount of lubrication for PTM Series of tools

**PTMFRL** 

ME52B06L

 Required to operator SpinTORQ and PTM Series torque wrenches

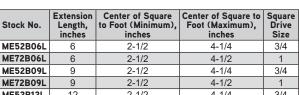
\*Optional FRL Units required to run PTQ wrenches

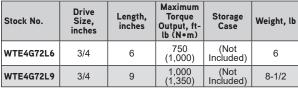
# **Bladed Multiplier Extension**

For use with Torque Multipliers

- Allows access to recessed fasteners
- Retention clip allows for fast and easy installation and removal
- · Reaction blade fits into spaces with very limited clearance

Wheel Torque; equipment maintenance and repair











Must wear eye protection

Do not exceed rated torque
 Do not use to break fasteners loose

Do not use to break fasteners loose
Periodic recalibration is necessary to maintain accuracy
Read safety precautions on pages W1 to W4



## **TORQUE REACTION FIXTURES**



The Right Angle Gearbox enables the benefits of our pneumatic torque tools to be brought to a host of applications from which they are currently excluded due to space limitations. The Right Angle Gearbox can be purchased as a stand-alone product and retrofitted to existing tools by qualified technicians. It is recommended the tool be re-calibrated after a Right Angle Gearbox has been fitted.









### **Reaction Fixture Accessories**

PTM	СТМ	мтм	Gearbox Size	Reaction Arm	Description	Length, inches	Offset, inches
				MTMC18646	Steel Cranked	5.2	3.2
				MTMC218590	Double Sided	9.8 (OAL)	-
PTM370	PTM370 PTM590 CTM600SS	мтмс730	52mm	MTMC218576	Straight Plate	9.8	-
PTM590		MIMC/30	52mm	MTMC218694	Weld Ring	-	-
				RA18558	Reaction Adaptor	-	-
				SR52B06	Sliding Reaction	9.8	-
				MTMC19289	Steel Cranked	5.6	3.9
				ACR18494	Al Cranked	6.60	3.90
				MTMC18293	Double Sided	7.9 (OAL)	-
PTM740 PTM1000	СТМ1000	MTMC1475	72mm	MTMC18292	Straight Place	6.9	-
PTM1000	CTM2000	MIMCI475	/2mm	MTMC18695	Weld Ring	-	-
				SR72B06	Sliding Reaction (3/4" SD)	11.8	-
				SR72B08	Sliding Reaction (1" SD)	11.8	-
				RA18290	Reaction Adaptor	-	-
				MTMC19291	Steel Cranked	6.9	4.1
		MTMC2950	92mm	ARC18936	Al Cranked	8.1	4.9
				MTMC18980	Double Sided	9.5 (OAL)	-
PTM2950	СТМ3000			MTMC18979	Straight Plate	7.9	-
				MTMC18696	Weld Ring	-	-
				SR92B08	Sliding Reaction (1" SD)		
				SR92B12	Sliding Reaction (1-1/2" SD)	11.8	-
				MTMC19293	Steel Cranked	8.3	3.9
				ACR18961	Aluminum Cranked	7.8	6.2
PTM3300		MTMC5100	119mm	MTMC18981	Double Sided	11.8 (OAL)	-
PTM4400		MIMCSIOO	117111111	MTMC16687	Straight Plate	13.8	-
				MTMC18697	Weld Ring	-	-
				SR119B12	Sliding Reaction	11.8	-
PTM370, PTM590	CTM600SS		-	SRF18241	Short Reaction Foot	2.55	3
PTM740	CTM1000	MTMC730 MTMC1475	-	SR18291	Straight Reaction	11.8	-
PTM1000 PTM1475	PTM1000 CTM2000 PTM1475		-	SRP18298	Straight Reaction with Peg	11.8	4.5







PTQ1WTCUPD30



PTQ1WTCPD362



PTQ1WTCPD562



WTE4G72L9

## **Pneumatic Torque Wrench Wheel Torque Accessories**

· Wheel extension and cup combine to create a reaction point when torquing lug nuts on trucks and heavy equipment

Stock No.	Description	Use with Snap-on Sockets				
PTQ1WTCPBWD1	Deep well cup to fit 13/16" Budd wheel studs	BW626A, BWD482				
PTQ1WTCPBWD2	Deep Well Cup to fit 21 mm Budd wheel studs	BWDM412				
PTQ1WTCUPD30	Deep Well Cup to fit 30 mm lugs	SIMM302				
PTQ1WTCUP342	Standard Cup	IM322A, IM342A				
PTQ1WTCUPD35	Deep Well Cup	SIM382, SIM402, SIM422, SIM442, SIMM302, SIMM322 SIMM332, SIMM352				
PTQ1WTCUP362	Standard Cup	IM362				
PTQ1WTCPD362	Deep Well Cup	SIM322, SIM342, SIM362				
PTQ1WTCUP482	Standard Cup to fit 38 mm and 1-1/2" lugs	IM482, IMM382				
PTQ1WTCUP542	Standard Cup	IM502, IM522, IM542				
PTQ1WTCUP562	Standard Cup to fit 41 mm and 1-3/4" lugs	IM562, IMM412				
PTQ1WTCPD562	Deep Well Cup to fit 1-7/16" and 1-3/4" lugs	SIM462, SIM482, SIM522, SIM562				

- **Bar Style Multipliers** Supplied with two reaction bar styles for maximum versatility
- Robust construction means minimal maintenance and long life
- Includes two reaction fixtures



metades	two read	cion incluic	<b>J</b>							
Stock No.	Torque Ratio	Certification	Anti-Wind-Up	Torque Output, Minimum ft-lb	Torque Output, Maximum ft-lb	Torque Output, Minimum N•m	Torque Output, Maximum N•m	Input Drive Female Square, inches	Output Drive Male Square, inches	Reaction Type
MTMB740	5:1	No	No	74	740	100	1,000	1/2	3/4	Bar and Cranked
MTMB950	5:1	No	No	96	950	130	1,300	1/2	3/4	Bar and Cranked
MTMB1990	5:1	No	No	200	1,990	270	2,700	3/4	1	Bar and Cranked

## **Bar Style Multipliers**

- Anti Wind-up Ratchet (AWUR) fitted as standard; keeps the multiplier loaded for easier operation
- Robust construction means minimal maintenance and long life
- Angle Protractor for easy torque and angle tightening
- High ratios allow the use of a small torque wrench
- Supplied with bar style reaction only



Stock No.	Torque Ratio	Certification	Anti-Wind-Up	Torque Output, Minimum ft-lb	Torque Output, Maximum ft-lb	Torque Output, Minimum N•m	Torque Output, Maximum N•m	Input Drive Female Square, inches	Output Drive Male Square, inches	Reaction Type
MTMB2200	15.5:1	No	Yes	220	2,200	300	3,000	1/2	1	Bar
MTMB3300	26:1	No	Yes	330	3,300	450	4,500	1/2	1	Bar

## **Compact Manual Multipliers**

- Compact dimensions allow excellent access and easy handling
- Anti Wind-up Ratchet (AWUR) fitted as standard; keeps the multiplier loaded for easier operation
- MTMC units are calibrated to give exact multiplication ration, and each MTMC unit is issued with unique calibration certificate
- A variety of alternative reaction styles available



**MTMC730** 

Stock No.	Torque Ratio	Certification	Anti- Wind-Up	Torque Output, Minimum ft-lb	Torque Output, Maximum ft-lb	Torque Output, Minimum N•m	Torque Output, Maximum N•m	Input Drive Female Square, inches	Output Drive Male Square, inches	Reaction Type
MTMC730	22:1	Yes	Yes	74	730	100	1,000	3/8	3/4	Interchangeable
MTMC1475	27:1	Yes	Yes	147	1,475	200	2,000	1/2	1	Interchangeable
MTMC2950	25:1	Yes	Yes	295	2,950	400	4,000	1/2	1	Interchangeable
MTMC5100	25:1	Yes	Yes	516	5,100	700	7,000	1/2	1-1/2	Interchangeable

## Plate Style Multipliers

- High ratios allow the use of a small torque wrench
- Anti Wind-up Ratchet (AWUR) fitted as standard; keeps the multiplier loaded for easier operation

Stock No.	Torque Ratio	Certification	Anti- Wind-Up	Torque Output, Minimum ft-lb	Torque Output, Maximum ft-lb	Torque Output, Minimum N•m	Torque Output, Maximum N•m	Input Drive Female Square, inches	Output Drive Male Square, inches	Reaction Type
MTMP4400	25:1	No	Yes	450	4,400	610	6,000	1/2	1-1/2	Plate
MTMP7000	125:1	No	Yes	700	7,000	950	9,500	1/2	1-1/2	Plate
MTMP14700	125:1	No	Yes	1470	14,700	2,000	20,000	1/2	2-1/2	Plate
MTMP25000	87.5:1	No	Yes	2,500	25,000	3,400	34,000	3/4	2-1/2	Plate



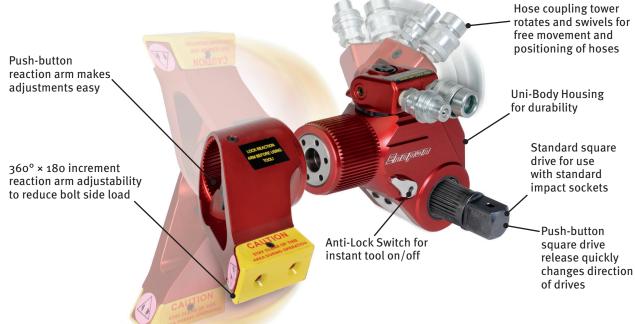




Must wear eye protection Do not exceed rated torque Do not use to break fasteners loose

Periodic recalibration is necessary to maintain accuracy
 Read safety precautions on pages W1 to W4





- Limited Over-Stroke Mechanism
- Dual Pawl Mechanism provides problem free operation and equal load ratchet mechanism
- Corrosion free finish
- Piston design prevents side load and the cylinder is maintenance free
- Small operating radius...if a socket fits, the tool fits
- Ergonomic design
- An anti-backlash mechanism is the only way to get full torque on a corroded nut and prevent pre-stall or turning speed slow down. It is a must to operate multiple torque tools with a single hand and your only assurance to get preset torque on all fasteners no matter what

HTQEP



## **Hydraulic Pumps**

Stock No.	Tank	STAGES	Flow Rate	Voltage	Amperage (115 V)	Amperage (230 V)	Air Volume	Gauge
HTQPP	1 gallon	3	770 in³ min	N/A	N/A	N/A	3,800 cu. in/sec	0-10K PSI (±1% ACC)
HTQEP-230	1 gallon	3	620 in <sup>3</sup> min	230	N/A	7 amp	N/A	0-10K PSI (±1% ACC)



## **Hydraulic Square Drive Torque Wrenches**

Snap-on® hydraulic torque wrenches are some of the most field proven tools in the world market today. They are recommended for all torque applications. Our one-way ratchet assures...

- Each nut is turned 24 degrees to avoid a slow down due to bolt torsion as fasteners are getting tight.
- Heavily corroded nuts usually create torsion in the bolt. It can be overcome with a second stroke at full torque as the ratchet is a one-way ratchet that does not inadvertently let bolt torsion relax.
- On vertical applications, our tools find their proper reaction point without being held against it.

- Ideal to use four tools to close flanges parallel.
- Compact, ergonomic design for torque requirements up to 37,000 ft-lbs-
- High strength metal square drive for performance and durability
- 360 degree rotatable tension absorbing reaction arm for a perfect fit on many jobs
- Uniswivel technology for free movement and positioning of tool and hoses
- Snap-on® HTQ wrenches provide plus or minus 3% accuracy

Stock No.	Square Drive Size	Torque Range, ft-lb (N•m)	L1 inches (mm)	L2 inches (mm)	L3 inches (mm)	H1 inches (mm)	H2 inches (mm)	H3 inches (mm)	H4 inches (mm)	R1 inches (mm)	R2 inches (mm)	Weight lb (kg)
HTQ.7	3⁄4″	120–822 (167–1,114)	3.96 (100.6)	5.98 (151.9)	.93 (23.6)	1.62 (41.2)	2.53 (64.3)	3 (76.2)	4.25 (108)	.81 (20.6)	3.32 (84.3)	2.7 (1.2)
HTQ1	3⁄4″	190–1,340 (272–1,817)	4.88 (123.9)	7.33 (186.2)	1.13 (28.7)	1.97 (50)	2.85 (72.4)	3.66 (93)	4.9 (124.5)	.98 (25)	4.12 (104.7)	3.95 (1.8)
нтоз	1″	450–3,230 (657–4,379)	6.34 (161)	9.6 (243.8)	1.51 (38.4)	2.63 (66.8)	3.81 (96.8)	4.88 (124)	6.12 (155.5)	1.31 (33.3)	5.32 (135.1)	8.3 (3.8)
HTQ5	1-1/2"	720–5,590 (1,137–7,578)	7.61 (193.3)	11.52 (292.6)	1.81 (46)	3.16 (80.3)	4.92 (125)	5.85 (148.6)	7.22 (183.4)	1.57 (39.9)	6.4 (162.6)	14.2 (6.5)
нтQ8	1-1/2"	1,200–8,000 (1,627–10,845)	8.43 (214.2)	12.47 (316.73)	1.70 (43.18)	3.57 (90.7)	5.23 (132.8)	6.38 (162)	8.07 (205.2)	1.70 (43.2)	6.97 (177.6)	32.5 (14.75)
HTQ10	1-1/2"	2,200–11,520 (2,343–15,617)	9.51 (241.6)	14.38 (365.3)	2.26 (57.4)	3.95 (100.3)	5.62 (142.8)	7.32 (185.9)	8.8 (223.5)	1.96 (48.8)	7.97 (202.4)	24.8 (11.3)









Must wear eye protection
Do not exceed rated torque
Do not use to break fasteners loose Do not use to break residence.
 Read and follow instructions
 recautions on p

Read safety precautions on pages W1 to W4

## LTQ™ Series Torque Wrench System

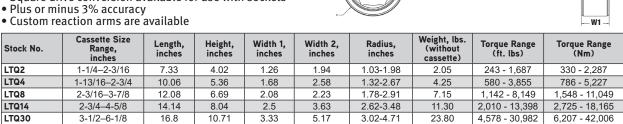




## LTQ<sup>™</sup> Series

Limited Clearance Torque Wrench System

- Low-profile makes this wrench especially well-suited for limited clearance applications
- Rugged design suitable for heavy industry applications
- Five models with torque output up to 30,982 ft-lbs
- Wide array of wrench/cassette combinations available, covering all fractional hex sizes from 1-1/4" to 6-1/8"
- Complete selection of fractional hex sizes available
- Cassettes are quickly and easily changed
- Uniswivel technology for free movement and positioning of tool and hoses
- Square drive conversion available for use with sockets



0

0

0

(0)

(0)

#### LTQ™ Series Interchangeable Cassettes

• For a complete selection of cassette hex sizes available (1-1/4" to 6-1/8") scan this QR code or contact your Snap-on® Industrial Representative today

16.8



### AutoTORQ Hydraulic Chain Pipe Wrench

A Portable, Safer & Faster Alternative to Being "Hands-On"

Specifically designed to be a portable solution to tighten and loosen threaded pipe connections. It replaces manual methods for "making" and "breaking" these connections. It provides a safer and faster alternative to the hands-on set up of tongs and come-a-longs and helps eliminate more than half of the injuries on a rig and in shop environments.

With the press of a button, the AutoTORQ Hydraulic Chain Pipe Wrench allows the user to move away from the dangerous area around the pipe. Available in five models covering pipe outside diameters from 1" to 14", pipe make-up and breakout is a breeze. Just by latching the chain around the pipe and adjusting the slack with the tensioning nut, tightening and loosening of tubular threaded joints are no problem.

In addition to its unmatched safety, the AutoTORQ Hydraulic Chain Pipe Wrench gives operators the portability to go anywhere it's needed. When compared to the lack of portability offered by tabletop models, there is no comparison.

The AutoTORQ Advantage

SAFE - Once the AutoTORQ is set up on the pipe, the operator stands a safe distance away from the tool and watches it do the work.

**COMPACT** - The AutoTORQ has wrench arms that are much shorter than tong handles, allowing it to work in tight spaces.

**STABLE** - Designed to maintain a secure footing on the pipe through the entire power stroke.

POWERFUL - 20% or more torque output than competing tools.

**PORTABLE - Preferable to bucking** machines and other tools that require the pipe to be loaded into the tool.

- Incredible safety benefits
- 6,000 psi operating pressure
- Torque range: 10,367 to 83,988 ft.-lbs.



Stock No.	Stock No. Pipe Outside Diameter inches (mm)	Maximum Torque Ftlb. (Nm)	Weight Lb. (Kg)	Stock No. Low Profile
PW1STR	1 to 6 (25 to 152)	10,367 (14,222)	60 (27)	PW1LPR
PW2STR	2-1/8 to 5 (54 to 127)	23,158 (31,398)	114 (52)	PW2LPR
PW3STR	3 to 8-1/4 (76 to 210)	24,380 (33,055)	136 (62)	PW3LPR
PW4STR	4-1/4 to 10-3/4 (108 to 273)	46,620 (63,208)	189 (86)	PW4LPR
PW5STR	4 to 14 (102 to 356)	83,998 (113,886)	350 (159)	-











Must wear eye protection
 Use only for intended purpose
 Read and follow instructions
 Read safety precautions on pages W1 to W4



## **Torque Backup Wrenches**

- Prevents the rotation of bolts during torque
- Wrenches don't bind, so less time is spent removing the backup wrench after the fastener is torqued
- Compact design fits in very tight clearance positions
- 12-Point design allows easier indexing to designed position
- Hands-free operation keeps fingers away from pinch points
- No hammering or prying necessary when releasing torsion stress
- Individual wrench heads sold separately

BTQCY4 – Hydraulic Torque Backup Wrench Manual Torque Backup Wrenches - See Table Below

## Interchangeable Wrench Heads for Hydraulic Backup Wrench (Fractional)

Stock No.	Size, inches
BTQ32H	1
BTQ36H	1-1/8
BTQ40H	1-1/4
BTQ44H	1-3/8
BTQ46H	1-7/16
BTQ48H	1-1/2
BTQ50H	1-9/16
BTQ52H	1-5/8
BTQ54H	1-11/16
BTQ56H	1-3/4
BTQ58H	1-13/16
BTQ60H	1-7/8
BTQ62H	1-15/16
BTQ64H	2
BTQ66H	2-1/16
BTQ70H	2-3/16
BTQ72H	2-1/4
BTQ74H	2-5/16
BTQ76H	2-3/8
BTQ80H	2-1/2
BTQ82H	2-9/16
BTQ86H	2-11/16
BTQ88H	2-3/4
BTQ90H	2-13/16
BTQ92H	2-7/8
BTQ94H	2-15/16
BTQ96H	3
BTQ98H	3-1/16
BTQ100H	3-1/4

## Interchangeable Wrench Heads for Hydraulic Backup Wrench (Metric)

•	
Stock No.	Size, mm
BTQM30H	30
BTQM32H	32
BTQM36H	36
BTQM41H	41
BTQM46H	46
BTQM50H	50
BTQM54H	54
BTQM55H	55
BTQM58H	58
BTQM60H	60
BTQM63H	63
BTQM65H	65
BTQM70H	70
BTQM75H	75
ВТQМ77Н	77
BTQM80H	80
BTQM85H	85

# Manual Torque Backup Wrench (Fractional)

**BTQ76** 

Stock No.	Size, inches
BTQ18	9/16
BTQ20	5/8
BTQ24	3/4
BTQ28	7/8
BTQ30	15/16
BTQ32	1
BTQ34	1-1/16
BTQ36	1-1/8
BTQ38	1-3/16
BTQ40	1-1/4
BTQ42	1-5/16
BTQ44	1-3/8
BTQ46	1-7/16
BTQ48	1-1/2
BTQ50	1-9/16
BTQ52	1-5/8
BTQ54	1-11/16
BTQ56	1-3/4
BTQ58	1-13/16
BTQ60	1-7/8
BTQ62	1-15/16
BTQ64	2
BTQ66	2-1/16
BTQ68	2-1/8
BTQ70	2-3/16
BTQ72	2-1/4
BTQ74	2-5/16
BTQ76	2-3/8

Stock No.	Size, inches
BTQ78	2-7/16
BTQ80	2-1/2
BTQ82	2-9/16
BTQ84	2-5/8
BTQ86	2-11/16
BTQ88	2-3/4
BTQ92	2-7/8
BTQ94	2-15/16
BTQ96	3
BTQ100	3-1/8
BTQ104	3-3/8
BTQ108	3-1/2
BTQ112	3-5/8
BTQ116	3-3/4
BTQ120	3-13/16
BTQ122	3-7/8
BTQ124	4
BTQ128	4-1/8
BTQ132	4-1/4
BTQ136	4-1/2
BTQ144	5-5/8
BTQ180	5-5/8
BTQ156	4-7/8
BTQ160	5
BTQ172	5-3/8
BTQ184	5-3/4
BTQ196	6-1/8

## Manual Torque Backup Wrench (Metric)

Stock No.	Size, mm
BTQM27	27
BTQM30	30
BTQM32	32
BTQM36	36
BTQM41	41
BTQM45	45
BTQM46	46
BTQM50	50
BTQM55	55
BTQM60	60
BTQM65	65
BTQM70	70
BTQM75	75
BTQM77	77
BTQM80	80
BTQM85	85
ВТQМ90	90
BTQM95	95
BTQM100	100
BTQM105	105
BTQM110	110
BTQM115	115
BTQM120	120
BTQM130	130

### FastLUBE 70+

- · Provides smooth make-up and break-out
- Prevents rust and corrosion and even includes and H<sub>2</sub>S inhibitor
- Contains pure molybdenum disulfide, more than any other moly-paste
- Perfect for general use threaded connections and press fits and ideal for use on nut splitter chisels
- Use for wear-in applications and a variety of jobs where friction is present

Stock No.	Description
FMP70-2.25	2.25lb., 1 Pint
FMP70-16BT	12oz. Brush Tip Can
FMP70-16BT-C	12oz. Brush Tip Can - Case
FMP70-18	18lb., 1 Gallon
FMP70-4.5	4.5lb., 1 Quart
FMP70-4.5C	4.5lb., 1 Quart - Case
FMP70-90	5 Gallon Pail



FMP70-16BT

## **FastLUBE AG**

- Superior lubricant for eliminating galling on stainless steel threaded connections and achieving a metal-to-metal seal
- Lowers torque requirements, reduces friction under pressure and is equally effective on other gallingsusceptible materials, ferrous alloys and more common types of carbon steel
- Contains a high percentage of PTFE flakes that prevent leaks on fluid connections at pressures up to 20,000 psi, and eliminates the need for Teflon® tape

	~
Stock No.	Description
FAG12BT	12oz. Brush Tip Can
FAG2.5	2.5lb., 1 Quart
FAG50	5 Gallon Pail
FAG12BT-C	12oz. Brush Tip Can - Case
FAG2.5C	2.5lb., 1 Quart - Case



FAG12BT

#### FastLUBE RS18

- Film-forming lubricant with strong polar attraction
- Applies readily to threads and other machined parts that are subjected to heavy loads and frictional heat
- Eliminates wear and gall on stainless steel and other threaded connections
- Completely water-insoluble and recommended for shafts and other galling-susceptible mechanisms
- No stirring needed

Stock No.	Description
RS18-12BT	12oz. Brush Tip Can
RS18-2.5	2.5lb., 1 Quart
RS18-10	1 Gallon
RS18-50	5 Gallon Pail
RS18-2.5C	2.5lb., 1 Quart - Case



RS18-12BT









Must wear eye protection
 Use only for intended purpose
 Read and follow instructions

• Read safety precautions on pages W1 to W4



## **Manual Torque Multipliers**

- Ideal for use in the oil and gas industry, mining, railroad, heavy fleet, power gen and aviation
- Compact dimensions allow excellent access and easy handling
- Maximum torque output range from 730–25,000 ft-lb (MTMP25000)
- Anti-Wind-Up Ratchet (AWUR) fitted as standard, except for MTMB740, MTMB950 and MTMB1990; keeps the multiplier loaded for easier operation
- MTMC units are calibrated to give exact multiplication ratio, and each MTMC unit is issued with unique Certificate of Calibration
- True torque multiplication, accuracy guaranteed better than ±4%
- A variety of alternative reaction fixtures are available

Specifications	MTMC730	MTMB740	MTMB950	MTMP14700	MTMC1475	MTMB1990
Reaction Type	Interchangeable	Bar and Cranked	Bar and Cranked	Plate	Interchangeable	Bar and Cranked
Torque Ratio	22:1	5:1	5:1	125:1	27:1	5:1
Certification	Yes	No	No	No	Yes	No
Anti-Wind-Up	Yes	No	No	Yes	Yes	125:1
Torque Output, Minimum ft-lb	74	74	96	1470	147	200
Torque Output, Maximum ft-lb	730	740	950	14,700	1,475	1,990
Torque Output, Minimum N•m	100	100	130	2,000	200	270
Torque Output, Maximum N∙m	1,000	1,000	1,300	20,000	2,000	2,700
Input Drive Female Square, inches	3/8	1/2	1/2	1/2	1/2	3/4
Output Drive Male Square, inches	3/4	3/4	3/4	2-1/2	1	1

Specifications	MTMB2200	MTMP25000	MTMC2950	MTMB3300	MTMP4400	MTMC5100	MTMP7000
Reaction Type	Bar	Plate	Interchangeable	Bar	Plate	Interchangeable	Plate
Torque Ratio	15.5:1	87.5:1	25:1	26:1	25:1	25:1	135:1
Certification	No	No	Yes	No	No	Yes	No
Anti-Wind-Up	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Torque Output, Minimum ft-lb	220	2,500	295	330	450	516	700
Torque Output, Maximum ft-lb	2,200	25,000	2,950	3,300	4,400	5,100	7,000
Torque Output, Minimum N•m	300	3,400	400	450	610	700	950
Torque Output, Maximum N∙m	3,000	34,000	4,000	4,500	6,000	7,000	9,500
Input Drive Female Square, inches	1/2	3/4	1/2	1/2	1/2	1/2	1/2
Output Drive Male Square, inches	1	2-1/2	1	1	1-1/2	1-1/2	1-1/2

## **TORQUE TESTERS**

## **Electronic Torque Testers**

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.

- Includes Track and Peak modes
- Can be used with nonimpacting power tools (joint rate simulators required)
- Dual scale (English/N•m or English/dN•m)
- Reads bidirectional (clockwise and counterclockwise)
- Uses rechargeable Ni-Cad batteries (2 Ni-Cad 9 V)
- Charger included

- Integral transducer and sturdy housing allow mounting in virtually any position
- Integral Transducer: Full bridge strain gauge, 350 ohms, 1,500  $\mu E$ , 3 mV/V F.S., 7.5 V 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 (10–100% of full range) at 25 °C
- Display Accuracy: four digits, 9,999 counts
- Stability: +0.044% per °C



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

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

## **Digital Torque Testers (DTT Series)**

- Can be mounted on a wall or in a bench-top vise
- Features an easy-to-use touchscreen 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 add traceability by using wrench serial numbers and technician I.D.
- Choose wrench type
- ±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, (6) AA alkaline batteries, USB cable and carrying case
- Highly accurate scale (±0.5% ±1 count 10-100% CW and CCW of indicated test value @ 25 °C)
- Ability to customize between units of measure (N•m, kg-cm, ft-lb, in-lb, in-oz), operation modes (Track, Peak, First Peak) and wrench type
- Operating temperature (10-32 °C/50-90 °F)
- Refresh rate of 1,000 data Points Per Second
- CSA/UL Requirements: Power supply listed under UL (C and US); 100-240V/50-60 Hz, 6 A input and 9 V/1.66 A output
- Includes a Certificate of Calibration



**0C3DTT250** 

Stock No.	Description	
DTS8269	AC Adaptor	
2344-0050-03	Table Mounting Bracket For DTT Testers	
DTS95095	Power Cord, UK	
DTS95096	Power Cord, Australia	
DTS95097	Power Cord, EU	

NOTE: Must order the adaptor and appropriate power cord.

Specifications	QC2DTT250	QC3DTT250
Square Drive, inches	3/8	1/2
Range English	25–250 in-lb	25–250 ft-lb
Range, N•m	2.9–28.2	33.9–338.9
Accuracy	±0.5% of Indicated Test Value from 10-100% or Rated Capacity	±0.5% of Indicated Test Value from 10–100% or Rated Capacity
Operating Modes	TRACK, PEAK, FIRST PEAK	TRACK, PEAK, FIRST PEAK
Operating Temperature	32–122 °F (0–50 °C)	32–122 °F (0–50 °C)
Humidity	85% Relative Humidity @ 21 °C (70 °F)	85% Relative Humidity @ 21 °C (70 °F)
Power Supply	Included 9 V AC/DC Adaptor, (6) AA Batteries Included	Included 9 V AC/DC Adaptor, (6) AA Batteries Included
Data/Surge/Recall	Memory Capacity—500 Records (complete check mode only)	Memory Capacity—500 Records (complete check mode only)

NOTE: Must order the adaptor and appropriate power cord.





## **Horizontal Torque Testers and Transducers**

- Includes (3) transducers
- Full digital display
- Covers ft-lb, in-lb, in-oz, N•m, kg-m, kg-cm scales
- Peak hold and first peak hold capability
- NIST® traceable

Stock No.	Description	Range	Resolution
TBTT100A	Transducer	5–100	.01 ft-lb, 1 in-lb, 2 in-oz, .01 N●m, .001 kg-m, 1 kg-cm
TBTT16A	Transducer	7.5–200 in-lb	.002 ft-lb, 02 in-lb, .002 N • m., .0002 kg-m, .02 kg-cm
TBTT600A	Transducer	30-600 ft-lb	.05 ft-lb, 5 in-lb, 10 in-oz, 1 N●m, .01 kg-m., 1 kg-cm
TBT600A	Horizontal Torque Tester	5-600	_





- Do not exceed rated torque.
  - Do not use to break fasteners loose.
     Periodic recalibration is needed to maintain accuracy.
     Read Safety Precautions on pages W1–W4

## **VERSATORQ® 2 TORQUE METERING AND DATA ACQUISITION SYSTEM**

## **Versatorg® 2 System Torque Acquisition Meters**

The Snap-on® Versatorq® 2 portable ATEX®/UL® certified electronic torque analyzer displays torque readings from sensors that attach between sockets and the driver. This highly versatile torque analyzer and data acquisition system can be used with various sockets, extensions, universal joints, and ratcheting drivers. Sensors, purchased separately, are available in eight ranges from 2–20 in-oz to 150–1,500 ft-lb and provide readings with an accuracy of 1% or 2% (dependent on the transducer).

Now "intrinsically safe" for use in hazardous environments (ATEX, UL®, ULC, CE compliant).

- Ideal for applying torque (CW and CCW) in confined spaces with tight access and jobs requiring repetitive torque applications
- Accuracy rating ±1% of reading (10–100% of sensor range). ±2% with VERSA1S10A and VERSA1S20A
- Track mode displays applied torque value and Peak mode displays highest torque value
- Non-volatile flash memory retains data for 10 years or more
- Plug-and-play mini USB for easy data download; no client software needed
- Customer calibration supports ASME® and ISO®
- Includes carrying case (PB57A), mini USB cable (USBATOMINIB), belt clip (276-61) and batteries
- Versatorq® 2 sensors (sold separately) enable accurate torque application using a standard ratchet or breaker bar of any length, with data readout and storage on the cable-connected Versatorq® 2 meter
- Versatorq® 2 sensors available from 2 in-oz up to 1,500 ft-lb with readings in seven popular measurement scales



## **Versatorq® 2 System Torque Acquisition Meters**

Specifications	VERSATORQ2			
Display	4 Digit with Alpha and Numerical Function Flags			
Display Capacity*	4 Digits			
Accuracy	±1% of Reading (10–100% of Sensor Range) (±2% with VERSA1S10A and VERSA1S20A Sensors)			
Units of Measure	in-oz, in-lb, ft-lb, n●m, cN●m, kg●cm, kg●m			
Operating Temperature	40-110 °F (23-42 °C)			
Storage Temperature	-2–122 °F (-20–22 °C)			
Humidity	Up to 90% Non-Condensing			
Dimensions	3" W x 2-1/2" D x 6" L			

<sup>\*</sup>Versatorq® display ignores torque input less than .5% of full scale in Track mode and 2.0% of full scale in Peak mode. Hazardous Location Designation: Class 1, Zone 2, Ex ic !!A. Temperature Class: T6

#### **VERSATORQ2 Versatorq® 2 System**

- Includes carrying case (PB57A), mini USB cable (USBATOMINIB), belt clip (276-61) and batteries
- Sensors sold separately



## Versatorq® 2 Sensors

Stock No.	Square Drive, inches	Range	Sensor Diameter, inches	Sensor Length, inches	Cable Length, inches (mm)
VERSA1S10A*	1/4	1–10 in-lb	.7	2.9	48 (1,219)
VERSA1S20A*	1/4	2–20 in-oz	.5	2.9	48 (1,219)
VERSA1S200A	1/4	20-200 in-lb	.9	2.1	48 (1,219)
VERSA1S50A	1/4	5-50 in-lb	.9	2.1	48 (1,219)
VERSA2S100A	3/8	10-100	1.2	2.4	48 (1,219)
VERSA3S250A	1/2	25-250 ft-lb	1.4	2.6	48 (1,219)
VERSA4S600A	3/4	60-600 ft-lb	2.0	3.9	96 (2,438)
VERSA5S1500A**	1	150-1,500 ft-lb	2.4	4.4	92 (2,336)



## Versatorq® 1 System Accessories

Stock No.	Description
VERSACABLE	RS232 Serial Printer Cable
VERSACABLE2	PC Interface Cable

Please reference the VERSATORQ® 2 instruction manual for the sensor ranges and resolutions in different units of torque measurement.





VERSATEST

#### Versatest™

The Versatest™ indicator is a laboratory-grade monitor designed 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. Twelve transducers are available in ranges from 5 in-oz to 2,000 ft-lb. The 4-in-1 Transducer, with a range of 5 in-lb to 250 ft-lb is also available.

All transducers feature a built-in memory chip that identifies the transducer and maintains the calibration. Setup and calibration programming is entered via soft touch keys. The Versatest<sup>™</sup> can store and recall up to 3,000 torque readings. Torque readings stored in memory can be downloaded to a computer with optional download cable and software.

Specifications	VERSATEST	
Description	Electronic Torque Tester/Calibrator	
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	
Power Supply	Auto Switching 100-240 VAC, 50/60 Hz, 50 watts	
Statistical Analysis	Max, Min, Range, Mean, Sigma N, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo	
Accuracy	±0.25% of reading at 25 °C (with TTC Transducer calibration)	
Modes	Track, Peak Hold, First Peak, Power Tool	
Storage Temperature Range	-20-50 °C (-2-122 °F)	
Select Keys	Increment, Decrement, Shift Left, Shift Right, Enter	
Temperature Drift Percentage	+0.03 °C (+0.017 °F)	
Sample Rate	2,000 samples per second	
Analog Output	+(CW)/-(CCW) 1.8 V at Transducer Full Range Linearity, ±1% of Reading	
Printer/Computer Serial Output Port	RS232 (True), 300-19.2K Baud	
Histogram	Lower Set Limit, Upper Set Limit, 10 Divisions	

#### Versatest™

#### **VERSATEST Electronic Torque Tester/Calibrator**

- Large LCD display
- Accuracy: ±0.25% of indicated value, CW and CCW, from 10-100% of full scale
- Two RS232C serial ports; for use with a printer and PC
- Data storage /recall (with date/time stamp) up to 3,000 readings
- Real-time clock
- Seven Torque Units: ft-lb, in-lb, in-oz, N•m, dN•m, kgm, kg-cm
- Will also load torque screwdrivers
- Smart Plug-and-Play transducers
- Analog output connect to oscilloscope or X-Y plotter
- External Printer can be mounted on top of the Versatest<sup>™</sup> unit
- Four Modes: Track, Peak Hold, First Peak, Power Tool
- Transducers available from 5 in-oz to 2,000 ft-lb
- Statistic Process Control (SPC) built in
- Automatic or manual downloading

- All transducers are individually serialized with Certificate of Calibration traceable to NIST®
- Five Languages: English, Spanish, French, Japanese, German
- CE Conformity

#### **VERSATEST600 Versatest™ Complete Electronic Torque Calibration System**

- Provides high-speed monitoring of static and dynamic torque inputs
- Includes the Versatest™ Digital Monitor, VERSA600LDR2 600 ft-lb Mechanical Loader, TTC400 4-in-1 Transducer, TTC5000-1 Bracket and TTC12 3/4" 600 ft-lb Transducer

### VERSA600LDR2 Versatest™ Mechanical Torque Loader

- Unit will load dial, micrometer, beam and electronic torque wrenches
- Maximum capacity of 600 ft-lb
- Use with any TTC series transducer from 15 in-oz to 600 ft-lb







Do not exceed rated torque. Periodic recalibration is needed to maintain accuracy. Read Safety Precautions on pages W1–W4

## **ELECTRONIC TORQUE TESTER AND CALIBRATOR**

## **Electronic Torque Tester and Calibrator**

TTC2000 Master Torque Calibration System (Manual)
The system tests and calibrates most click-type, digital, dial torque wrenches as well as torque screwdrivers.
Twelve transducers are available in ranges from 5 in-oz to 2,000 ft-lb. Also available is the 4-in-1 Transducer, with a range of 4 in-lb to 250 ft-lb. All transducers feature a built-in memory chip that identifies the transducer and maintains the calibration. Set up and calibration programming is entered via soft touch keys. The TTC2000 can store and recall up to 3,000 torque readings.
Torque readings stored in memory can be downloaded to a computer with optional download cable and software. Optional kits are available to calibrate cable tensionmeters, tension and compression gauges and non-impact power tools.

# TTC2800/TTC2822 Master Torque Calibration System (Motorized)

The TTC2800 has the same features as the TTC2000 series except for the following enhanced features:

- Electric motor powered crank for easy calibration
- Is offered in 110 V version (TTC2800/Complete TTC2800SYS or 220 V version (TTC2822/Complete system TTC2822SYS)

TTC2000SYS Complete Master Torque Calibration System (Manual) includes: TTC610 Digital Monitor, TTC600 2000 ft-lb Mechanical Loader, SM0773PU Tool Cabinet w/ Casters, TTC400 4-in-1 Transducer, TTC5000-1 Bracket, TTC12 3/4" 600 ft-lb Transducer, TTC14 1" 2000 ft-lb Transducer, TTC5500-1 Extension Arm, 2000-SW WedgeLink Software, TTC503 Download Cable.

TTC2800SYS Complete Master Torque Calibration System (Motorized) includes: TTC2800 Monitor, Loader and Tool Cabinet w/ Casters, TTC400 4-in-1 Transducer, TTC5000-1 Bracket, TTC12 3/4" 600 ft-lb Transducer, TTC14 1" 2,000 ft-lb Transducers, TTC5500-1 Extension Arm, 2000-SW WedgeLink Software, TTC503 Download Cable





OSYS TTC2800SYS

#### **Features**

- Accuracy: ±0.25% of indicated value, CW and CCW, from 10–100% of full scale
- Units of Torque: ft-lb, in-lb, in-oz, N•m, dN•m, Kgm, Kg-cm
- Units of Force: lbf, ozf, n, dN, kp, gg
- Four Modes: TRACK, PEAK HOLD, FIRST PEAK, POWER TOOL
- Includes built-in low-profile serial printer
- Transducers available from 5 in-oz to 2,000 ft-lb
- Loader hand crank maximum input torque is 8 ft-lbs, maximum output is 2,000 ft-lb
- All transducers are individually serialized with certificates of calibration traceable to N.I.S.T.
- Programmable automatic or manual options for CLEAR, STORE or SEND
- RS232 serial port for downloading data to PC
- Operating Temperature: 10-32 °C (50-90 °F)
- Automatic lockup in the event of transducer overload
- Data storage/recall (with date/time stamp) up to 3,000 readings
- Dual Voltage: 110 V or 220 V Real Time Clock
- Smart "Plug and Play" transducers
- NIST® traceable

Specifications	TTC2000SYS	TTC2800SYS	
Accuracy	±0.25% of reading at 25 °C (with TTC Transducer calibration)	±0.25% of reading at 25 °C (with TTC Transducer calibration)	
Maximum Range Display	2-line x 16 character 5 x 8 dot-matrix LCD used for MAX. Transducer range, Units, Calibration, Date/Time, Statistics, Torque/Force or Torque Limits Set, Data Store/Recall, Printer Set Up	2-line x 16 character 5 x 8 dot-matrix LCD used for MAX. Transducer range, Units, Calibration, Date/Time, Statistics, Torque/ Force or Torque Limits Set, Data Store/Recall, Printer Set Up	
Modes	Track, Peak Hold, First Peak, Power Tool	Track, Peak Hold, First Peak, Power Tool	
Motorized Loader Modes	_	Manual; Auto Dial; Auto Click	
Motorized Loader Power Supply	_	120 V AC ±10% Hz @ 3.14 A (including motor current); (optional step-down transformer for 240 V AC operation)	
Power Supply	UL Approved, 120 VAC/220 VAC, 50/60 Hz	120 VAC ±10%, 50/60 Hz @3.14 A (including motor current). (Includes stepdown transformer for 240 VAC operation.)	
Operating Temperature Range	10-32 °C (50-90 °F)	10-32 °C (50-90 °F)	
Printer/Computer Serial Output Port	RS232 (True), 300-19.2K Baud	RS232 (True), 300-19.2K Baud	
Statistical Analysis	Max, Min, Range, Mean, SigmaN, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo	Max, Min, Range, Mean, SigmaN, Sigma, Cp, Cpk, % Error, -NoGo, +NoGo	
Temperature Drift Percentage	+0.03 °C (+0.017 °F)	+0.03 °C (+0.017 °F)	
Torque/Force Display	Eight digit, alpha-numeric, super bright red LED, 0.55 inch character height	Eight digit, alpha-numeric, super bright red LED, 0.55 inch character height	
Storage Temperature Range	-20-50 °C (-2-122 °F)	-20-50 °C (-2-122 °F)	
Туре	TTC2000 Manual Loader System	TTC2800SYS Motorized Control System	
Analog Output	+(CW/-(CW) 1.8 V at Transducer Full Range Linearity, ±1% of reading	+(CW/-(CW) 1.8 V at Transducer Full Range Linearity, ±1% of reading	
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	and kg●cm; TORQUE: ft-lb, in-lb, in-oz, N●m, dN●m, kg●cm and kg●cm; FORCE: lbf, ozf, N, dN, kp and gf	
Capacity, digits [counts] (bit A/D)	8 [±32,000] (16)	8 [±32,000] (16)	
Computer Serial Com Port	RS232 (True), 300-19.2K Baud (Optional)	RS232 (True), 300-19.2K Baud (Optional)	
Data Storage/Recall	3,000 Measurements	3,000 Measurements	
Histogram	Lower Set Limit, Upper Set Limit, 10 Divisions	Lower Set Limit, Upper Set Limit, 10 Divisions	
Humidity	Up to 90% Non-Condensing	Up to 90% Non-Condensing	
Loader Control Relays	two, Normally Open, Form A, Rated 12 DVC @ 1/2 A close contact at 110% CW or CCW or torque/force transducer range 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	Input torque 8 ft-lb Maximum, Output Torque 2,000 ft-lb Maximum	

Total Uncertainty: Add 7.5–100% of Range and 8–100% of Range. Training programs are available by location (P/N STRN01 to STRN07)



## **Electronic Torque Tester and Calibrator**

### TTC2000 Electronic Torque Tester/Calibrator

- Automatic sensor recognition with TTC series "Smart" transducers
- Range: 15 in-oz-2,000 ft-lb (bidirectional)
- Total uncertainty (10–100% of range): ± 0.25% of indicated torque value
- · Alpha-numeric eight-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 and Power Tool
- Optional angle encoder
- 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
- NIST® traceable



TTC2800SYS

#### TTC2800SYS Motorized Torque Tester/Calibrator

- Front Panel Function Keys: SELECT Torque/Force; MODE, UNIT; ZERO TARE; CALIBRATION; DATE/TIME; SET LÓW; STORE DATA; RECALL DATA; STATISTICS; SEND/AUTO SEND; AUTO CLEAR; MANUAL CLEAR; ENTER; VALUE increment; VALUE decrement; DIGIT left; DIGIT right
- Model TTC2800SYS includes: TTC2800 TTC Monitor, Motorized Loader, and Cabinet, TTC400 4-in-1 Transducer Kit (4 in-lb-250 ft-lb), TTC5000-1 4-in-1 Transducer Bracket, TTC12 Transducer Kit (60-600 ft-lb), TTC14 Transducer Kit (200–2,000 ft-lb), TTC5500-1 Extension Arm, 2000-SW WedgeLink Software and 2000-50-3 Download Cable
- NIST® traceable

#### **TTC2000SYS Electronic Manual Torque** Tester/Calibrator

- TTC2000SYS includes: TTC2000 Monitor, Mechanical Loader and Cabinet, TTC400 4-in-1 Transducer Kit (4 in-lb-250 ft-lb), TTC12 Transducer Kit (60-600 ft-lb), TTC14 Transducer Kit (200-2,000 ft-Lb), TTC5500-1 Extension Arm, TTC5000-14-in-1 Transducer Bracket, 2000-SW WedgeLink Software and 2000-50-3 Download Cable
- NIST® traceable

#### TTC2800-220V Motorized Torque Tester/Calibrator (220 V AC)

- Front Panel Function Keys: SELECT Torque/Force; MODE, UNIT; ZERO TARE; CALIBRATION; DATE/TIME; SET HIGH; SET LOW; STORE DATA; RECALL DATA; STATISTICS; SEND/AUTO SEND; AUTO CLEAR; MANUAL CLEAR; ENTER; VALUE increment; VALUE decrement; DIGIT left; DIGIT right
- NIST® traceable

#### TTC280220V Motorized Torque Tester/Calibrator (220 V AC)

- Front Panel Function Keys: SELECT Torque/Force; MODE, UNIT; ZERO TARE; CALIBRATION; DATE/TIME; SET HIGH; SET LOW; STORE DATA; RECALL DATA; STATISTICS; SEND/AUTO SEND; AUTO CLEAR; MANUAL CLEAR; ENTER; VALUE increment; VALUE decrement; DIGIT left; DIGIT right
- NIST® traceable



**TTC610** 



**TTC810** 

#### **TTC610 Digital Indicator**

 For electronic torque tester and calibrator **TTC810 Digital Indicator** TTC600 Loader

**TTC800 Motorized Loader** TTC503 USB Download Cable for SureTest and TTC systems







- Do not exceed rated torque.
- Do not use to break fasteners loose.
- Periodic recalibration is needed to maintain and assure torque tester accuracy.
   Read Safety Precautions on pages W1–W4

## **ELECTRONIC TORQUE TESTER AND CALIBRATOR**



TTC8



#### **Transducers**

All TTC series transducers include the correct adaptor for the indicated torque range.

Stock No.	Description	Range	Bench Top Mounting Bracket
TTC4***	1/4" Drive Transducer	5-50 in-oz	TTC3421
TTC5	1/4" Drive Transducer	15–200 in-oz	TTC3421
TTC6	1/4" Drive Transducer	4-50 in-lb	TTC3421
TTC65	1/4" Drive Transducer	15–150 in-lb	TTC3421
TTC7	3/8" Drive Transducer	30-400 in-lb	TTC3421
TTC8	3/8" Drive Transducer	80–1,000 in-lb	TTC3421
TTC10	1/2" Drive Transducer	10-125 ft-lb	TTC3422
TTC11	1/2" Drive Transducer	20-250 ft-lb	TTC3422
TTC12	3/4" Drive Transducer	60-600 ft-lb	TTC3422
TTC13	1" Drive Transducer	100-1,000 ft-lb	TTC15002
TTC14	1" Drive Transducer	200-2,000 ft-lb	TTC15002
TTC400**	1/4", 3/8" and 1/2" Drive 4-in-1 Transducer	4 in-lb-250 ft-lb	N/A
TTC34325	4-in-1 Table Mounting Bracket	_	_
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 VERSA600LDR2. Total Uncertainty: Add 7.5–100% of Range and 8–100% of Panna (to some transfurers)
- 8–100% of Range (to some transducers).

  \*\*Required for TTC400 4-in-1 Torque Transducer to be used on TTC600/TTC800 loaders.
  Total Uncertainty: Add 7.5–100% of Range and 8–100% of Range (to some transducers).

  \*\*\*Accuracy is +/-0.5% of indicated test value from 10–100% of indicated torque value.
  Total Uncertainty: Add 7.5–100% of Range and 8–100% of Range (to some transducers).









## **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

Stock No.	Description
TTC2600	Tensiometer Testing Kit
TTC2610	Tension Gauge Testing Kit
TTC2620	Compression Gauge Testing Kit
TTC26302	Force Arm Kit

Force testing feature can only be used with single transducers and CANNOT be used with the TTC400 4-in-1 multi transducer.

#### **TTCCALKIT Calibration Kit**

- Includes TTC3200 Weight Set (#1), TTC500 2-1/2" Calibration Wheel, TTC1510 5" Calibration Wheel, TTC1520 10" Butterfly Calibration Wheel, 2000-226-3 Adaptor (1/2" x 3/8"), TTC1540 40" Calibration Arm, 390-2-2 4 oz Calibration Weight Tray, TTC3018 oz Calibration Weight Tray, TTC3040 7.5 lb Calibration Weight Tray, TTC3020 15 lb Calibration Weight Tray, TTC3030 50 lb Calibration Weight Tray and TTC25002 Calibration Stand Kit
- Kit can be used on all TTC Systems

#### Accessories

**TTC900121 Smart Cable Replacement** 

## **ELECTRONIC TORQUE TESTER AND CALIBRATOR**

## **Joint Rate Simulator Adaptors**

- Use with torque tester when testing nonimpacting power tools
  Square drive adaptor is placed on top of square drive of the torque tester and tightened with a set screw
- 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.	Adaptor Bit	Capacity, in-lb	Load Screw	Square Drive, inches
QC1JRS50	1/4" Hex x 3/16" Hex	50	1/4" x 28 x 1	1/4
QC2JRS1000	3/8" Square Internal x 1/2" Hex	1,000	5/8" x 18 x 1.5	3/8
QC2JRS400	3/8" Square Internal x 3/8" Hex	400	7/16" x 20 x 1.5	3/8



## **Weight Sets**

Used to calibrate any TTC Series transducer. All weights are NIST® (NBS) traceable.

Stock No.	Description		
TTC3200	No. 1 Weight Set (for all transducers)		
TTC3210	No. 2 Weight Set (200 in-oz-600 ft-lb)		
TTC3220	No. 3 Weight Set (600-2,000 ft-lb)		

## Weight Hangers/Trays

Used to calibrate any TTC series transducer. Weight trays are certified as to weight.

Stock No.	Description	
390-2-2	Weight Hanger (4 oz)	
TTC301	Weight Hanger (1/2 lb)	
TTC3020	Weight Tray (15 lb)	
TTC3030	Weight Tray (50 lb)	
TTC3040	Weight Tray (7.5 lb)	

## **TORQUE COMPARATORS**

## **Accessories**

Stock No.	Description
TTC75002	Torque Screwdriver Testing Kit (for 2800 and 2000 Series Systems)
TTC75006	Torque Screwdriver Testing Kit (for VERSATEST600 Loader System)
2000-150-03	Transducer Mount (60-600 ft-lb to 200-2,000 ft-lb)
TTC3421	Tranducer Mount (5–50 in-oz to 80–1,000 in-lb)
TTC3422	Transducer Mount (10–125 ft-lb to 60–600 ft-lb)
TTC5500-1	Extension Arm (For 2000 and 2800 Series Loaders)
TTC25002	Complete Calibration Stand Kit (Including Adaptors)
TTC501	PC Cable
260-27	1/4" Hex x 1/4" Square Socket Adaptor
342-40	Female 1/4" Square x 1/4" Square Socket Adaptor
342-41-1	Female 1/4" Square x 3/8" Square Socket Adaptor
342-41-2	Female 3/8" Square x 3/8" Square Socket Adaptor
65-26-2	Female 1/2" Square x 3/8" Square Socket Adaptor
65-78-1	Female 1/2" Square x 3/4" Square Socket Adaptor
65-78-2	Female 3/4" Square x 3/4" Square Socket Adaptor
75-20	Female 1" Square x 1" Square Socket Adaptor
75-25-1	Female 1" Square x 3/4" Square Socket Adaptor
2000-0154-18	1-1/4" Male x 3/4" Female Square Drive Reducer
2000-152-3	1/2" Male x 3/8" Female Square Drive Reducer
2000-226-2	1" Male x 3/4" Female Square Drive Reducer
2000-226-3	3/4" Male x 1/2" Female Square Drive Reducer
TTC500	2-1/2" Calibration Wheel (max 50 in-oz)
TTC1510	5" Calibration Wheel (max 150 in-lb)
TTC1520	10" Butterfly Wheel (max 250 ft-lb)
TTC1530	1/2" and 3/8" Drive 20" Calibration Arm
TTC1540	1-1/4" Drive 40" Calibration Arm







Do not exceed rated torque.
Periodic recalibration is needed to maintin and assu
Read Safety Precautions on pages W1–W4

## **TORQUE COMPARATORS**







**QCDTC3250** 

TCR175C

TCR600C

## **Torque Digital Checker**

# QCDTC3250 Electronic Torque Digital Checker—1/2 and 3/8" (25-250 ft-lb)

- Easy method to check a 1/2 or 3/8" drive torque wrench
- Highly Accurate: ± 1% CW and ± 1% CCW of indicated value
- Large, easy-to-read backlit LCD screen
- Three measurement modes: ft-lb, in-lb, N•m
- Three primary torque checking modes— Track, Peak Hold, First Peak
- Integrated exercise adaptor on mounting plate to "break in" mechanical torque wrenches before testing
- Includes GAF2A 3/8" adaptor with storage pocket for convenience when testing 3/8" drive torque wrenches
- Integrated exercise adaptor on mounting plate (allows user to break-in for accurate results per ASME® B107-300 standard)
- Battery powered by 3 AA alkaline batteries optional AC adaptor available (DTS8269)
- Adjustable shut-off feature
- CE approved
- Includes Certificate of Calibration

# TCR175C Torque Comparator (Certificate of Calibration)

 Determine if a torque wrench requires calibration to maintain proper application of torque

- 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 adaptor 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
- Can check a 3/8" drive torque wrench by using an A2A or GAF2A adaptor

# TCR600C Torque Comparator (Certificate of Calibration)

- 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
- 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
- Use on most 3/4" drive torque wrenches

- **TorqCheck Digital Torque Checker** Provides accurate torque reading to validate torque instrument calibration
- Three Modes of Operation: Track, Click, and Dial
- Includes N.I.S.T. Calibration Certificate
- Powered by Micro USB 2.0
- 4-button panel user interface
- Compact form factor for convenient mounting locations
- •Accuracy: ±1%
- LCD DisplayOperating Temperature Range is 32°F to 120°F
- •Storage Temperature Range is -4°F to 155°F •Power Consumption: 0.5W
- •Environmental Protection: IP 40







TQCK1M15

TQCK1M100

**TQCK10M300** 

Stock No.	Torque Range	Maximum Torque	Input	Weight, lb
TQCK1M15	5.0-240 in-oz	288 in-oz	1/4" Male Hex	3.09
ТQСК1М100	5.0-100 in-lb	120 in-lb	1/4" Male Hex	3.09
ТQСК10М300	15.0-300 in-lb	360 in-lb	10mm Male Hex	3.09
TQCK3F300	7.5-300 ft-lb	360 ft-lb	1/2" Female Square	5.95
TQCK27M800	40-800 ft-lb	960 ft-lb	27mm Male Hex	7.72
TQCK27M1500	75-1500 ft-lb	1650 ft-lb	27mm Male Hex	7.72







TQCK3F300

**TQCK27M800** 

TQCK27M1500

## **TorqCheck Vice Bracket TQCKVISEBRKT**

- Use with TQCK1M15, TQCK1M100, TQCK10M300, TQCK3F300
- Not for use with 27 mm Male Hex Models (TQCK27M800 and TQCKM1500)



Snap-On в Україні 38 (067) 235-22-00 e-mail: snapon.ukraine @*gmail.com* 03134 Україна м. Київ вул. Пшенична 2-В