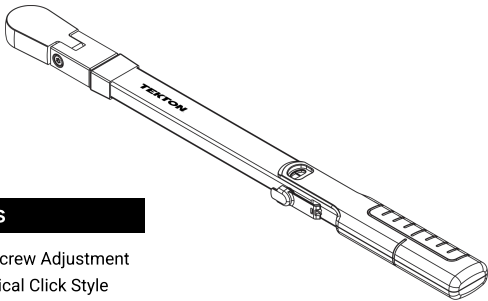


Split Beam Torque Wrenches

PRODUCT MANUAL



FEATURES

- Thumbscrew Adjustment
- Mechanical Click Style
- 90-Tooth Ratchet
- Clockwise Direction
- +/-4% Accuracy

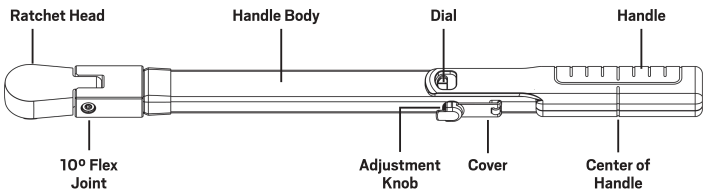
WRENCH MODELS

Item	Drive Size	Units	Range	Minimum Increment	Effective Length		Overall Length	
					in.	mm	in.	mm
TRQ61222	3/8 in.	Nm	26–130	2	15.6	396	18.8	478
TRQ62222	1/2 in.	Nm	70–350	5	19.2	488	22.8	579

Before using the torque wrench, we recommend you read and understand the entire manual. This tool is a precision measuring instrument that you should operate, store, and maintain with care. Failure to follow instructions could result in damage to the tool, damage to property, or injury.

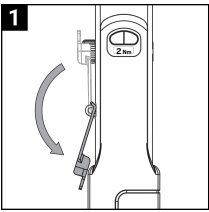
- Store at any setting.
- If you drop or damage the wrench, test and verify its accuracy before use.

TORQUE WRENCH DIAGRAM

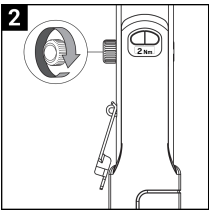


SETTING THE TARGET VALUE

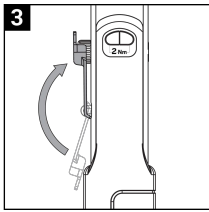
Determine the required torque for your application in Newton meters (Nm). If you encounter a torque specification in a different unit, you'll need to convert it to Nm. The visual conversion scale engraved on the back of the handle body provides a quick ft-lb to Nm approximation. For other units or precise values, use the torque unit conversion table on page 4.



Flip the cover down to access the adjustment knob.

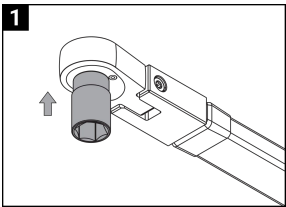


Turn the adjustment knob to the desired torque value.



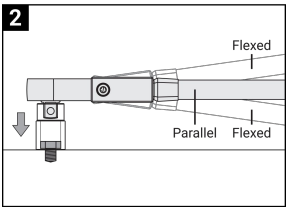
Replace the cover over the adjustment knob to secure it during use. Confirm the torque setting is accurate.

APPLYING TORQUE



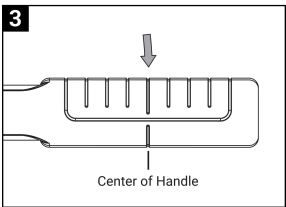
Attach a drive tool to the drive tang and engage the nut or bolt to be tightened.

For off-axis tools, like a crowfoot wrench, calculate a leverage adjustment if needed (Page 5).



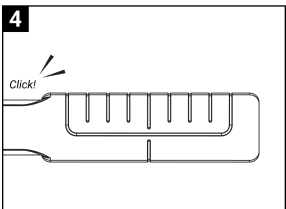
Engage the drive tool on the fastener or fitting. For the most accurate reading, the ratchet head must be parallel with the wrench body.

The 10° flex joint provides clearance for working around obstacles but, when flexed, can reduce accuracy by up to 4 percent due to the offset from the plane of rotation.



Grip the center of the handle and apply torque **SLOWLY** in a clockwise direction.

Don't use the torque wrench on electrical circuits. The handle doesn't provide insulation from electrical current.



STOP applying torque when you hear and feel a click. This means you've reached the desired torque value.

Don't keep pulling after the click, as this can overtighten the fastener. Use extra care when working at lower torque settings.

Don't use extensions on the handle—doing so produces inaccurate torque and can damage the wrench.

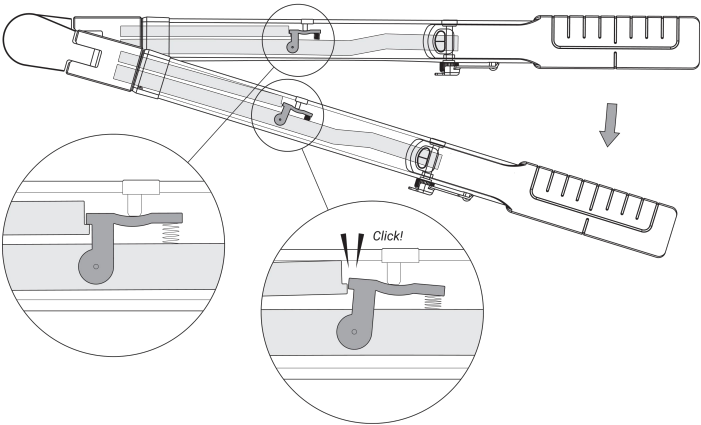
TORQUE UNIT CONVERSIONS

1 in-lb	1 ft-lb	1 Nm
= 0.0833 ft-lb	= 12.0000 in-lb	= 8.8507 in-lb
= 0.1130 Nm	= 1.3558 Nm	= 0.7376 ft-lb
= 0.0115 kg-m	= 0.1383 kg-m	= 0.1020 kg-m
= 1.1521 kg-cm	= 13.8255 kg-cm	= 10.1972 kg-cm

Example: To convert 80 ft-lb to Nm, multiply 80 by 1.3558. The result is 108.5 Nm.

INTERNAL MECHANICS

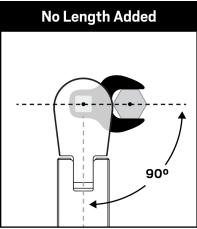
The split-beam mechanism drives and measures torque in the clockwise direction only.



HOW TO CORRECT FOR OFF-AXIS TOOLS

Using an off-axis tool such as a crowfoot wrench or torque adapter can alter the effective length of the torque wrench. When this happens, you must adjust the target value on the wrench to ensure the correct torque is applied to the fastener.

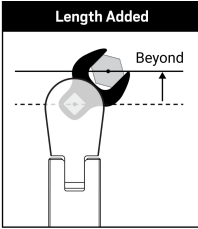
No Length Added



No correction is needed if the drive square and fastener are aligned at a right angle to the handle.

OR

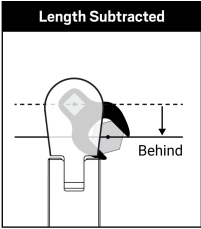
Length Added



Beyond

A correction is needed if the fastener is positioned beyond or behind the drive square, changing the effective length. Use the formula below to correct your target value.

Length Subtracted



Behind

CORRECTION FORMULA

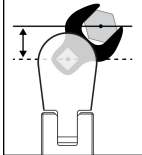
See page 6 for a reference diagram

$$T1 \times \left(\frac{L}{L + C} \right) = T2$$

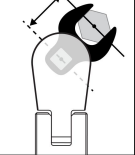
- T1 – Torque specification for the fastener.
- L – Effective length of the torque wrench, measured from the center of the drive tang to the center of the handle.
- C – Change in length caused by the drive tool extending beyond or behind the drive square.
- T2 – Corrected target value you should set on the torque wrench.

How to Measure Change in Length (C)

✓ Accurate



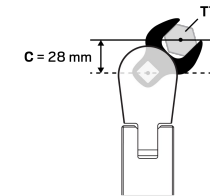
✗ Inaccurate



TORQUE CORRECTION EXAMPLES

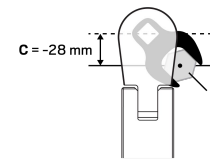
$$T1 \times \left(\frac{L}{L + C} \right) = T2$$

Example 1: Length Added

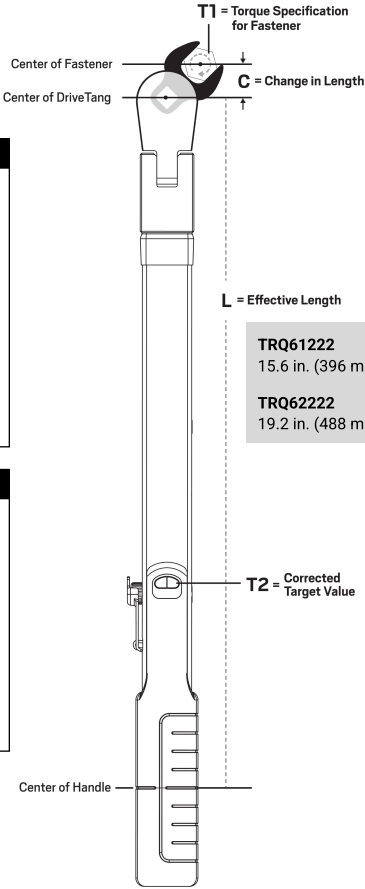


$110 \text{ Nm} \times \left(\frac{396 \text{ mm}}{396 \text{ mm} + 28 \text{ mm}} \right) = 102.7 \text{ Nm}$

Example 2: Length Subtracted



$110 \text{ Nm} \times \left(\frac{396 \text{ mm}}{396 \text{ mm} + (-28 \text{ mm})} \right) = 118.4 \text{ Nm}$



- TRQ61222
15.6 in. (396 mm)
- TRQ62222
19.2 in. (488 mm)

STORAGE AND MAINTENANCE

This tool is a precision measuring instrument that should be operated, stored, and maintained with care.

- Store the torque wrench in the storage case in a dry location.
- The torque wrench can be stored at any torque setting since there's no internal tension when the wrench is at rest. By comparison, other torque wrenches, like micrometer-style models, often need to be stored at the lowest torque setting.
- If the torque wrench is not used regularly, operate it several times at a low torque setting to redistribute lubricant to the internal moving parts.
- Clean the wrench by wiping it with a clean, dry, lint-free cloth. Do not immerse the wrench in any type of liquid or cleaner to avoid damaging the internal components.
- The components in the handle are lubricated for life and should not be oiled.
- The components in the ratchet head may be lubricated for smooth use as needed.

 The ratchet head can be disassembled, if needed, for lubrication or service. Don't disassemble other parts of the wrench.

RATCHET HEAD SERVICE KITS

Torque Wrench	Ratchet Service Kit
TRQ61222 - 3/8 Inch Drive (26–130 Nm)	TRQ9X032
TRQ62222 - 1/2 Inch Drive (70–350 Nm)	TRQ9X033

 **CAUTION:** Only the ratcheting mechanism is user-serviceable. If you disassemble any other part of your torque wrench you may take it out of calibration. The parts and assembly may vary slightly depending on the model.

CERTIFICATE OF CALIBRATION

 Each wrench is calibrated to be accurate within +/-4%.

This torque wrench has a serial number engraved on the side that matches a unique certificate of calibration included in the case.



Serial Number

WARRANTY AND SUPPORT

We keep it simple—if your tool doesn't work like it should, let us know and we'll make it right. No time limits, no receipts, and we ship replacement parts within the United States and Canada.

CONTACT INFORMATION

 [tekton.com/support](https://www.tekton.com/support)

 616-214-8887

 support@tekton.com

