

EN

Original Instructions
Version 2 – April 2023

DRAPER®

TORQUE WRENCH

78639, 78641, 78642



1. Scope

This tool has been designed to tighten screws, bolts and other fixings to the required torque. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

Important: This torque wrench is a precision tool. It must **NOT** be used to pry or loosen nuts, bolts or fixings; to separate materials; as a substitute for ratchet spanners; or as a breaker bar. Use in such a way will invalidate your warranty. **DO NOT** use these tools to torque left-handed threads.

Part of our core range, this product is suitable for use by enthusiasts and tradespersons alike.

Read this manual in full before attempting to use this product and retain it for later use. Always use the latest version of the manual.

2. Specification


Stock No.	78639	78641	78642
Part No.	BTW	BTW	BTW
Drive size:	1/4"	3/8"	1/2"
Torque range:	5–25Nm	20–110Nm	30–210Nm

3. Notes on Use

Important: Read this section in full **BEFORE** attempting to use this tool. Failure to follow these instructions may result in damage to the tool or cause it to require recalibration.

Important: ALWAYS read the manufacturer's instructions for the recommended torque settings. Incorrect torque settings can result in serious damage or injury when the workpiece is used.

- Before first use, or after extended periods of disuse, ensure that the torque wrench is correctly lubricated:
 - Set the micrometer to its maximum torque settings and then slowly reduce it to its minimum setting.
 - Operate the wrench several times at a low torque setting.

- Before first use, test the torque wrench on non-critical fixings to familiarise yourself with the responses that indicate the configured torque is reached.
Important: Some responses may be less noticeable at lower torques.
- **ALWAYS** select the correct size and type of socket for use with the fastening.
- **NEVER** set the micrometer beyond its maximum or minimum settings as this may damage the internal spring and distort the calibration.
- **ALWAYS** return the torque wrenches to their minimum settings when not in use.
 - Failure to do this will weaken the internal spring and distort the calibration of the tool.
 - Damage caused to the tool in this way is not covered by your warranty.
- Observe all standard safety precautions and good practices when in a workshop environment.
- Inspect the product before every use for cracked, corroded or broken parts.
 **WARNING! DO NOT use this product if it is damaged in any way. Contact Draper Tools for repair and replacement options.**
- Use this product only for its intended purpose and do not modify it in any way.

Reaching the Set Torque

The torque wrench exhibits the following responses when the correct torque has been reached:

- **Audible:** The tool will “click”.
- **Tangible:** The handle will “break away” from the fixing.
- **Visible:** The handle will be seen to “break away” from the fixing.

Important: These responses may be less perceptible at lower torques.

 **CAUTION! Once this has occurred, DO NOT continue to rotate the torque wrench as this will deliver an incorrect torque and may damage the fixing.**

4. Reading the Micrometer

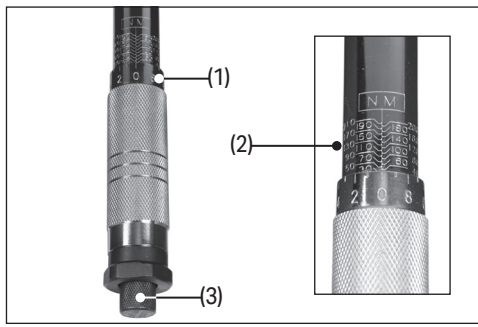


Fig. 1 –
Torque setting:
30Nm (30 + 0)

The micrometer features two scales for selecting the correct torque for the wrench:

- **Primary scale (1):** The numbers listed vertically along the wrench shaft.
 - Each value can be read where its numbered horizontal line meets the vertical centre line.
- **Secondary scale (2):** The numbers listed horizontally around the upper edge of the handle.
 - Read each value when it aligns with the vertical centre line of the primary scale.

The primary scale is shown in newton-metres (Nm) on the back of the handle shaft and in pound-feet (lb-ft) on the front.

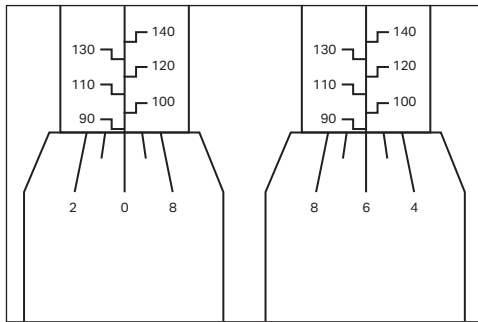


Fig. 2

To set the torque of the wrench (example 96Nm):

1. Rotate the locking screw (3) at the base of the wrench anticlockwise to unlock the handle.
2. Rotate the handle until its upper edge aligns with the 90Nm value line of the primary scale and 0.0 on the secondary scale aligns with the centre line.
 - To increase the torque, twist the handle **clockwise**.
 - To decrease the torque, twist the handle **anticlockwise**.
3. Rotate the handle clockwise until 6.0 on the secondary scale is aligned with the primary scale's centre line.
4. If an incorrect torque value is set, rotate the handle anticlockwise to a value lower than the target torque, then adjust the torque upwards; this delivers a more accurate result.
5. Rotate the locking screw clockwise to secure the handle in place.

5. Operation

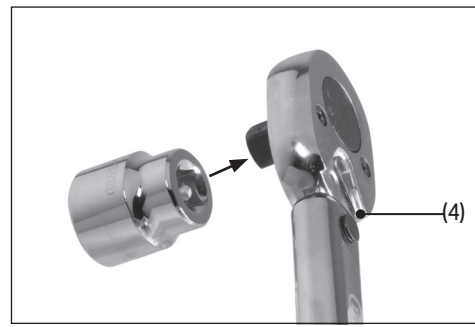


Fig. 3

1. Select the required socket or bit and adaptors as appropriate and install them onto the square drive.
2. Set the rotation direction by positioning the switch (4) on the back of the wrench head:
 - To rotate the ratchet head **clockwise**, move the switch to the right position.
 - To rotate the ratchet head **anticlockwise**, move the switch to the left position.
3. Set the wrench torque; see **4 Reading the Micrometer**.
4. Place the bit or socket onto the fixing and crank the wrench smoothly and evenly in the chosen direction.
 - On the **forward** stroke, the wrench will turn the bolt or screw.
 - On the **backward** stroke, the wrench can be repositioned without affecting the position of the bolt or screw.
5. When the configured torque has been reached, the tool will exhibit an audible, tangible and visual response; see **3 Notes on Use**.
 - Important: DO NOT** crank the torque wrench any further after this has occurred. Responses may be less perceptible at lower torques.
6. Carefully remove the wrench from the fixing.

6. Maintenance and Disposal

Important: A torque wrench is a precision tool. Failure to calibrate your tool regularly or to store the correctly will constitute misuse and invalidate your warranty.

- Keep the product free from grease, chemicals and other substances to prevent damage from corrosion.
 - Penetrating oils may be used to keep moving parts clean and prevent binding.
 - Wipe the wrench with a dry cloth only; do not use solvents or chemicals that may interfere with the internal lubrication.
- Store this product in a clean and dry location, out of direct sunlight and out of reach of children.
- **ALWAYS** return the torque wrench to its lowest micrometer reading before storage.
 - Failure to do this will weaken the internal springs and distort the calibration of the tool.
- Have the torque wrench calibrated at least once a year by a certified calibration centre.
 - Frequently used tools should be calibrated more often.
- **NEVER** attempt to repair or adjust this product.
 - Servicing, repairs and calibration must be carried out **ONLY** by qualified and authorised service agents.

If the torque wrench fails to function correctly for any of the following reasons, return the tool to an authorised Draper Tools agent:

- The ratchet fails to function.
- The handle lock fails to function.
- The handle lock nut comes loose.
- The wrench does not “click” at the set torque.
- The handle does not break away at the set torque.

At the end of its working life, dispose of the product responsibly and in line with local regulations; recycle where possible.

7. Conversion Chart

	mN/m millinewton-metre	cN/m centinewton-metre	N/m newton-metre	daN/m decanewton-metre	cm/kg centimetre-kg	m/kg metre-kg	in-oz inch-ounce	in/lb inch-pound	ft-lb foot-pound
1mN/m	1	0.1	0.001	0.0001	0.0102	0.000102	0.1416	0.00885	0.000738
1cN/m	10	1	0.01	0.001	0.102	0.00102	1.416	0.0885	0.00738
1N/m	1000	100	1	0.1	10.2	0.102	141.6	8.85	0.738
1daN/m	10000	1000	10	1	102	1.02	1416	88.5	7.38
1cm/kg	98	9.8	0.098	0.0098	1	0.01	13.9	0.868	0.0723
1m/kg	9810	981	9.81	0.98	100	1	1390	86.8	7.23
1in-oz	7.06	0.706	0.00706	0.0007	0.072	0.00072	1	16	192
1in-lb	112.9	11.29	0.1129	0.01129	1.152	0.0115	0.063	1	12
1ft-lb	1355	35	1.355	0.1135	13.8	0.138	0.0052	0.083	1

8. Warranty

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Proof of purchase must be provided.

If, upon inspection, it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty covers parts and labour for the lifetime of the product. However, if the tools are hired out, the warranty period is 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper Tools repair agent.

Visit drapertools.com/warranty for full details.

9. Explanation of Symbols



Read the instruction manual



Maximum Nm



Minimum Nm



Square Drive

Please visit drapertools.com/manuals for the latest version for this manual.

Draper Tools

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