RECOMMENDED CALIBRATION SERVICE PROVIDER



Accuracy: = ±4% of the reading within the effective working range of the tool. *

* **ISO6789: 1992** states the effective working range of the tool is from 20% to 100% of its maximum torque value.

CROMWELL METROLOGY

Telephone: 0116 257 2338
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www.cromwell.co.uk

UKAS CALIBRATION 0244

CROMWELL metrology

QUALITY GUARANTEE & WARRANTY

Q-TORQ PRODUCTS carry one years manufacturers warranty.

Q-TORQ PRODUCTS are designed & manufactured to the highest standards & specifications
Assuring the quality and performance required by all sectors of industry.

Q-TORQ PRODUCTS are fully guaranteed against faulty materials & workmanship
Should they be found to be defective, they will either be repaired or replaced free of charge (fair wear and tear and/or misuse excepted).

Please retain supplier invoice as proof of purchase.

KENNEDY TOOLS
Wigston Works, Leicester, England, LE18 2FS.
www.kennedy-tools.co.uk

Supplied by an ISO9001 approved company.

AVAILABLE FROM YOUR DISTRIBUTOR

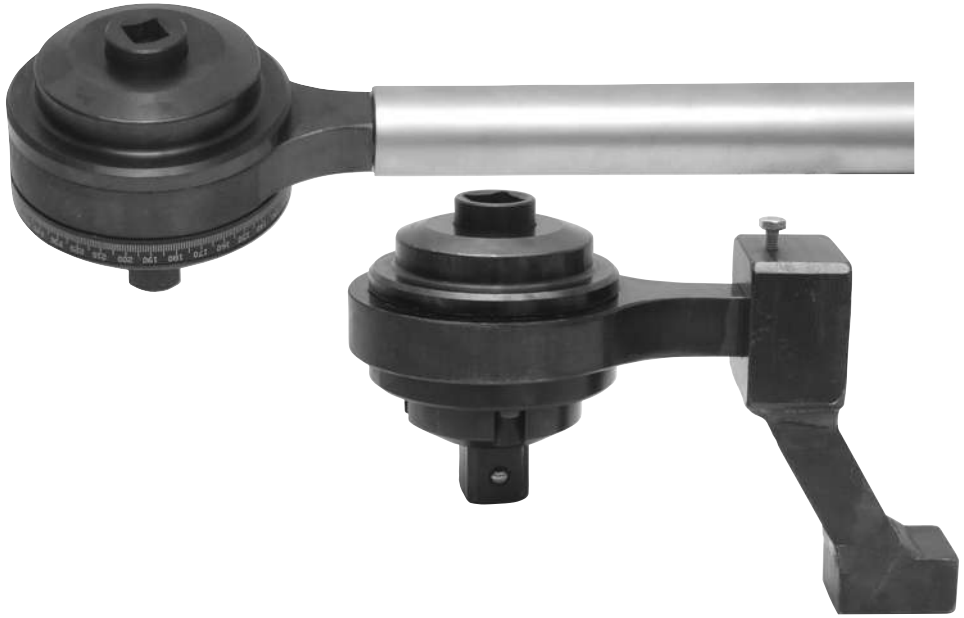
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Q-TORQ Quality Torque

TORQUE MULTIPLIER

TM270 KEN-555-4500K — **5.4:1 – MAX TORQUE 2700 Nm**
TM168 KEN-555-4520K — **6:1 – MAX TORQUE 1680 Nm**

- Ideal for applications where no electrical or air supply is available.
- Enables precision tightening of threaded fasteners.
- Aids the loosening of nuts that are corroded or seized.
- Accurate to within ±4%, taking the uncertainty out of high torque tightening.



OPERATOR'S MANUAL

You have purchased a Q-TORQ product that is designed for high performance and a long service life. If safety and maintenance procedures are followed and the tool is used correctly it will last for many years.

SAFETY & MAINTENANCE

- Ensure that the torque multiplier is protected from damp/wet conditions.
- Take care not to drop the multiplier or to subject the multiplier to heavy blows.
- When using torque tools it is possible that fasteners may break or slip. Always stand with both feet on the floor and avoid applying torque in awkward positions.
- The drive part of the tool and any accessories should always be in line with the fastener. Misalignment and uncontrolled movement will affect accuracy.
- Only use the tool on the job that it has been designed for.
- Always store tools away from dirt, oil and swarf as this can damage mechanisms. Return the multiplier to its case when not in use.
- We recommend that your torque tool be calibrated annually.

SPECIFICATIONS

Model	Order Code	Drive	Gear Ratio	Maximum torque
TM168	KEN-555-4520K	½" F x ¾" M	6 to 1	1680 Nm/1242 lbf.ft
TM270	KEN-555-4500K	¾" F x 1" M	5.4 to 1	2700 Nm/1998 lbf.ft

CONTENTS

- Torque multiplier head
- Replacement square drive
- Reaction anchor

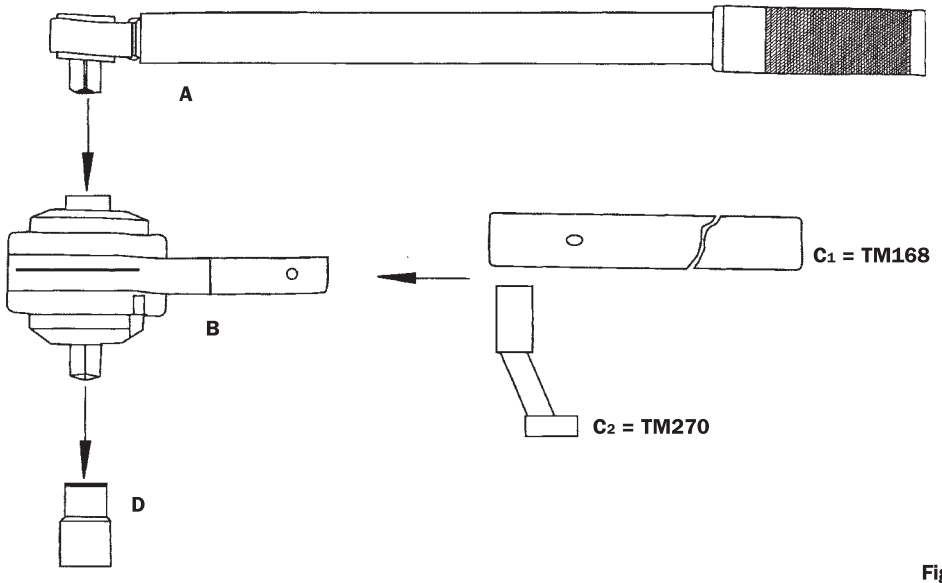


Fig. 1

Legend:
A torque wrench. **B** Torque multiplier head. **C1** Reaction anchor bar. **C2** Reaction anchor. **D** socket .

OPERATING INSTRUCTIONS

INTRODUCTION

Q-TORQ torque multipliers are designed for use in applications where it is necessary to increase the input torque from a standard ratchet torque wrench (supplied separately). Each is engineered to a high standard and is of a high build specification, which will ensure a long working life with minimum maintenance.

Required torque levels are achieved by setting the input device to the required output, and divided by the multiplier of the tool in use: TM168 4 6; TM270 4 5.4. See examples below:

Input Torque		Output Torque			
		TM168 (6:1)		TM270 (5.4:1)	
100 Nm	74 lbf.ft	**600 Nm**	444 lbf.ft	**540 Nm**	400 lbf.ft
200 Nm	148 lbf.ft	**1200 Nm**	888 lbf.ft	**1080 Nm**	800 lbf.ft
280 Nm	207 lbf.ft	**1680 Nm**	1242 lbf.ft	**1512 Nm**	1118 lbf.ft
400 Nm	295 lbf.ft			**2160 Nm**	1593 lbf.ft
500 Nm	370 lbf.ft			**2700 Nm**	1998 lbf.ft

USING THE TORQUE MULTIPLIER

The use of long levers when applying high torque input to threaded fasteners can be dangerous. Using a shorter lever with a torque multiplier reduces the risk of accidents, and at the same time enables the operator to work in space limited environments. Q-TORQ torque multipliers allow torque to be applied in a slower and more accurate manner, reducing the physical effort on the part of the operator.

Preparing to use the torque multiplier:

TM168: Fit the reaction anchor bar (C_1) to the multiplier head, align the location hole with the spring loaded retaining ball, as shown in Fig 1. Ensure that the reaction bar is secure, to avoid movement during use.

It is recommended that a ½" square drive torque wrench, set to the target value, divided by 6, is used to input torque. Select a ¾" square drive socket, which fits the target device.

TM270: Fit the reaction anchor (C_2) to the multiplier head and make secure using the retaining screw, ensuring no movement during use. It is recommended that a ¾" square drive torque wrench, set to the target value divided by 5.4 is used to input torque. Select a 1" square drive socket which fits the target device.

Reaction anchors C_1 and C_2 should always be positioned against a solid object to prevent the multiplier rotating, taking into account the direction of use.

To protect the internal gearing of the multiplier, the output square drive is calibrated to break if it is exerted to torque pressures 20% higher than the maximum torque input value (TM168=1488lbf.ft/2016 Nm, TM270=2398 lbf.ft/3240 Nm).

REPLACING THE SQUARE DRIVE

A replacement square drive is supplied, in case any damage or wear occurs to the existing drive. To remove the worn/damaged drive, use a suitable pair of internal circlip pliers. Make sure that all debris is cleared from the drive location before fitting the new drive. To fit, position the circlip around the new drive before fixing into position using a suitable pair of external circlip pliers.