SENATOR®
QUALITY TOOLING

OPERATING INSTRUCTIONS

1/2" SQUARE DRIVE TORQUE WRENCH

CAPACITY: 42-210Nm

ORDER CODE
SEN-557-0500K

- **Reversible ratchet head.**
- **"CLICK + SNAP" action indicates when the pre-set torque level has been reached.**
- **Engraved kgf.m and Nm scale on barrel.**
- **Micrometer type sleeve allows preset torque values to be accurately set.**
- **Manufactured to ISO 6789-2:2017 (BS EN 26789:2003).**



IDENTIFICATION

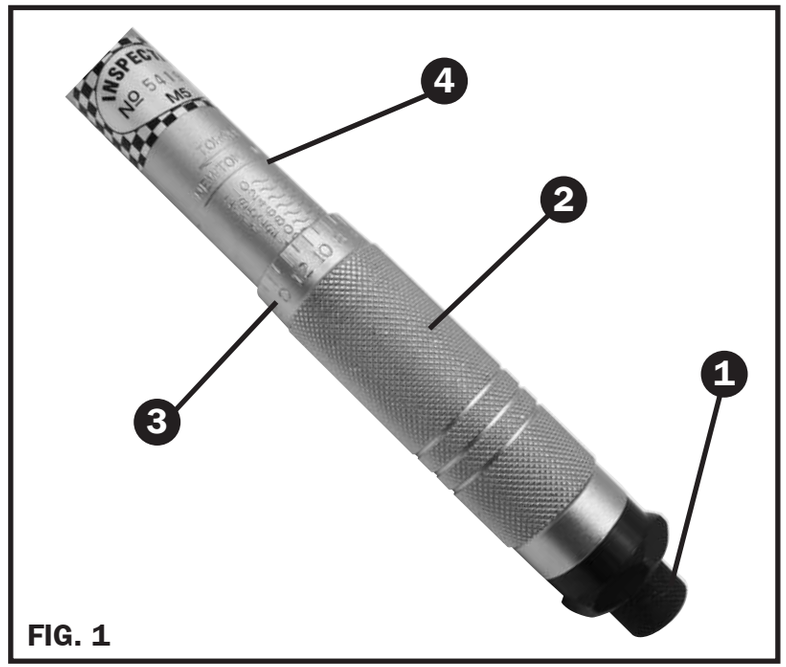
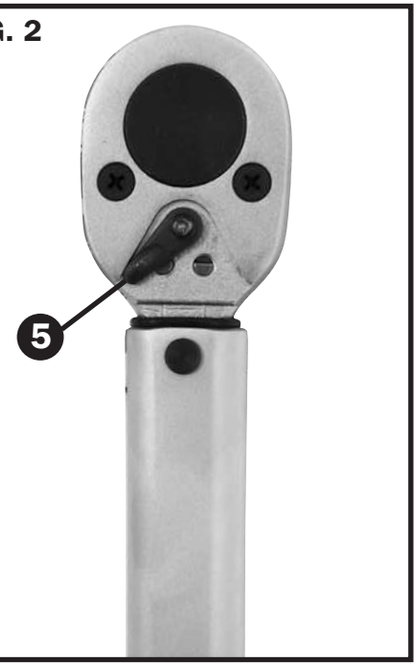


FIG. 1

1. Lock nut.
2. Knurled handle.
3. Horizontal scale.
4. Linear scale.
5. Reversing switch.

FIG. 2



INSTRUCTIONS FOR USE

Torque setting adjustment:
Example: To set the torque to 50Nm.

1. To unlock the handle turn the lock nut **(1)** anti-clockwise.
2. Turn the knurled handle **(2)** until the zero marked on the scale **(3)** is in line with the next lowest torque setting on the Newton meter linear scale **(4)**. In this case 42Nm.
3. Continue to turn the knurled handle eight more graduations (1 graduation on scale **(3)** equals 1Nm). The wrench is now set at 50Nm.
4. Tighten the lock nut **(1)** to secure the setting.

Method of use:

IMPORTANT!
Always use the correct size socket and if necessary an accessory. Preferably do not use knuckle or universal joints, as these could result in incorrect torque settings.

1. Place the square drive onto the socket or extension bar so that the wrench is perpendicular to the nut or bolt that you wish to be tightened.
2. Gripping the knurled handle **(2)** with the right hand, whilst supporting the square drive end with the left hand, gently but firmly apply a steady pull to the handle (in a clockwise direction) until a click is heard and a slight 'break' in the handle is felt. Do not turn any further.

Please note: This torque wrench has a reversible ratchet head (see fig. 2). Set the direction indicator **(5)** to clockwise or anti-clockwise.

WARNING

After use always adjust to the lowest torque setting.

- Release the wrench immediately when the click is heard/felt as continuing will result in an incorrect torque setting being applied and may cause possible damage to parts.
- Please note that the 'click' becomes weaker with the lower torque settings.
- If the wrench is new or has not been used for a while then operate it a few times on a lower torque setting to allow the internal lubrication to recoat working parts.
- Do not turn adjustment below lowest torque setting.

SAFETY & MAINTENANCE

You have purchased a quality 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.

- Always follow instructions for assembly before operation.
- Ensure your workpiece is firmly held or fixed before commencing work.
- 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 for which it has been designed.
- Keep the tool clean by wiping. Never dip in cleaning fluid.
- Always store tools away from dirt, oil and swarf as this can damage mechanisms.
- We recommend that your torque tool be calibrated annually.

TORQUE CONVERSION CHART

Foot Pounds	*Kilo-gram Metres*	*Newton Metres*	*Newton Metres*	Foot Pounds	*Kilo-gram Metres*	*Kilo-gram Metres*	*Newton Metres*	Foot Pounds
lbf.ft	***kgf.m***	***N.m***	***N.m***	***lbf.ft***	***kgf.m***	***kgf.m***	***N.m***	***lbf.ft***
5	0.69	6.78	10	7.38	1.02	1	9.81	7.23
10	1.38	13.55	20	14.76	2.04	2	19.61	14.47
15	2.07	20.33	30	22.14	3.06	3	29.42	21.70
20	2.77	27.10	40	29.52	4.08	4	39.23	28.93
25	3.46	33.88	50	36.90	5.10	5	49.04	36.17
30	4.15	40.65	60	44.28	6.12	6	58.84	43.40
35	4.84	47.43	70	51.66	7.14	7	68.65	50.63
40	5.53	54.20	80	59.04	8.16	8	78.46	57.86
45	6.22	60.98	90	66.42	9.18	9	88.26	65.10
50	6.91	67.75	100	73.80	10.20	10	98.07	72.33
55	7.60	74.53	110	81.18	11.22	11	107.88	79.56
60	8.30	81.30	120	88.56	12.24	12	117.68	86.80
65	8.99	88.08	130	95.94	13.26	13	127.49	94.03
70	9.68	94.85	140	103.32	14.28	14	137.30	101.26
75	10.37	101.63	150	110.70	15.30	15	147.11	108.50
80	11.06	108.40	160	118.08	16.31	16	156.91	115.73
85	11.75	115.18	170	125.46	17.33	17	166.72	122.96
90	12.44	121.95	180	132.84	18.35	18	176.53	130.19
95	13.13	128.73	190	140.22	19.37	19	186.33	137.43
100	13.83	135.50	200	147.60	20.39	20	196.14	144.66
105	14.52	142.28	210	154.98	21.41	21	205.95	151.89
110	15.21	149.05						
115	15.90	155.83						
120	16.59	162.60						
125	17.28	169.38						
130	17.97	176.15						
135	18.66	182.93						
140	19.36	189.70						
145	20.05	196.48						
150	20.74	203.25						
155	21.43	210.03						

CONVERSION FORMULAS

1kgf.cm = 13.887 ozf.in
1kgf.cm = 0.868 lbf.in
1kgf.cm = 0.098 N.m

1kgf.m = 7.233 lbf.ft
1kgf.m = 9.807 N.m

1N.m = 141.6 ozf.in
1N.m = 0.738 lbf.ft
1N.m = 8.851 lbf.in

SENATOR Torque Wrenches are manufactured and tested to
ISO 6789-2:2017 (BS EN 26789 : 2003)
Accuracy = ± 4% of the set load.

QUALITY GUARANTEE & WARRANTY

SENATOR TOOLS carry a one year manufacturers warranty.

SENATOR TOOLS are designed & manufactured to the highest standards & specifications.

Assuring the quality and performance required by all sectors of industry.

SENATOR TOOLS 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.

Senator Tools continually strives to improve its products. Specifications may change without prior notice.

SENATOR TOOLS
P.O. Box 14, Wigston, Leicester, England, LE18 1AT.

Senator is a registered trade mark of The Kennedy Group Ltd.

Always dispose of unwanted tools, accessories and packaging materials in an environmentally friendly manner. Never allow lubricants to contaminate rivers, water ways or drains.