

Dear User

Thank you for purchasing GEARWRENCH products. Please read this instruction carefully before using GEARWRENCH preset torque wrench. Should you have any further queries, please contact the GEARWRENCH authorized dealers and GEARWRENCH authorized service center or directly call the GEARWRENCH customer service hotline. Please keep this instruction.

Specification

Accuracy: forward $\pm 3\%$

Product number	Torque adjustment (N.m)	Specifications of square head	Effective length (mm)	Full length (mm)	Head width (mm)	Head height (mm)	Weight (kg)
85160	1-5	1/4"	135.5	190	25	21	0.20
85161	5-25	3/8	161.5	215	25	25	0.22
85162	10-50	3/8	174.5	235	25	25	0.37
85163	20-100	1/2	240.5	315	32	34	0.63
85164	40-200	1/2	381.0	461	32	34	1.15

As per ISO 6789-2003 standard

Warning:

- 1) This torque wrench is a product specially designed for tightening the bolts and nuts. Do not use it for other purposes except the fastening.
- 2) Do not loosen the bolt or nut with the torque wrench. For loosening the bolt or nut, the excessive torque may cause damage to the torque wrench or injury.
- 3) Keep the handle clean and free of oil and dirt. Otherwise, it will slip when tightened and cause the injury.
- 4) Check the wrench for crack, scratch and rust. Above defects may cause damage to the torque wrench and may result in personal injury. Perform the functional test and repair if necessary.
- 5) In case of high-station work, the wrench falling protection shall be provided. The accidental drop of wrench or sleeve will cause a serious accident.
- 6) Do not lengthen the handle with a tube. Otherwise, the wrench may be damaged, causing an accuracy error.



Precautions:

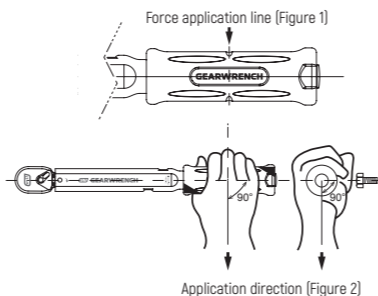
- 1) While using the torque wrench, do not apply pressure via your own weight, and do not push or pull it too hard. Otherwise, the wrench may be damaged and break away from the bolt, causing an injury.
- 2) Do not use it above the maximum torque value. Otherwise, the wrench may be damaged or injury may occur.
- 3) Do not use the torque wrench of which the pins have been loosened or fallen off. Please contact the GEARWRENCH Service Center or GEARWRENCH Service Hotline for the check and repair.
- 4) Do not modify the torque wrench yourself. Self-modification will weaken the strength of torque wrench, causing the accuracy error and injury.
- 5) Do not throw the torque wrench, and do not apply the impact to it. Otherwise, the wrench may be damaged and deformed, the accuracy weakened and service life shortened, resulting in an injury.
- 6) Repair the torque wrench only with spare parts specified by GEARWRENCH. Please contact the GEARWRENCH authorized dealers and GEARWRENCH authorized service center to obtain the parts of GEARWRENCH.
- 7) Do not use the torque wrench above the range. Otherwise, the torque wrench may be damaged or injury may occur.
- 8) Regularly check the function and accuracy to ensure that the torque wrench is in optimal condition to prevent injury.



Operation specifications

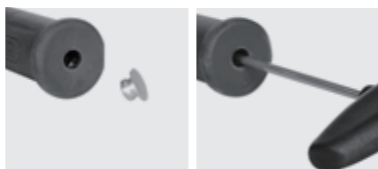
- 1) Do not use the torque wrench in water or other liquids as this may cause damage to internal mechanisms and result in the accidents. If the torque wrench accidentally falls into water or other liquids, be sure to check and repair it.
- 2) While using the torque wrench, hold the handle at the force line on the surface. Otherwise, the measurement accuracy may be affected. [Figure 1]
- 3) Stop tightening immediately if a "click" sound is given; otherwise the actual torque value will be greater than the set value.
- 4) Make sure that your hands and elbows do not touch the surrounding objects before the use to avoid the injury.
- 5) Do not use the torque wrench as a hammer. The deformed head and sleeve will hamper the operation and reduce the accuracy of torque wrench.

- 6) Application direction Force shall be applied perpendicularly to the axis of torque wrench and the center axis of bolt; the force shall be applied smoothly to make the torque wrench rotate constantly. [Figure 2]
- 7) Dust, dirt, oil and water on the torque wrench shall be removed after use or before storage. The storage of contaminated wrench may result in the poor operation and abnormal accuracy.
- 8) For the long time of storage, the torque wrench shall be set to the minimum torque, coated with the anti-rust oil and stored in a dry place. Improper storage may lead to a rapid decline of accuracy and seriously affect the service life.



Setting method of torque

- 1) Pull out the adjusting hole plug at the end of torque wrench and insert the torque adjustment tool into the hole. [Figure 3]
Note: Torque adjustment tool is not a standard accessory and shall be purchased separately.
- 2) Rotate the inserted tool and set the torque value with the torque wrench detector.
Note: The torque wrench shall be operated by the trained person and calibrated by the GEARWRENCH approved torque detector. The accuracy of torque detector shall not be less than $\pm 1\%$
- 3) Torque value increases when the adjustment tool is rotated clockwise, and the torque value decreases when it is rotated counterclockwise.
- 4) After setting the torque, insert the adjusting plug into the hole
- 5) The torque adjustment tool shall be kept by a special person. It is recommended to verify the torque on the torque detector before the use.



[Figure 3]

Operation steps

- 1) Please set the torque value. For the torque setting method, please refer to the previous item.
(The preset torque wrench may be used directly)
- 2) Please select the GEARWRENCH sleeve that matches the specifications of square head. The working hex specifications of sleeve shall match the widths of opposite sides of bolt or nut.
- 3) Fit the hex end of sleeve into the bolt head or nut.
- 4) Tighten the torque wrench by rotating it clockwise. For the counterclockwise operation, the torque wrench will not make a "click" sound.
Enforced reverse operation may cause damage to this product. This product only applies to fasten the right-handed bolts and nuts.
- 5) Stop tightening immediately if a "click" sound is given

As a high-precision measuring tool unlike general hand tools, it is recommended that GEARWRENCH preset torque wrench is used by experienced professionals. Abnormal use may cause the accidental damage to the product itself, the workpieces to be tightened and your health.

Detection and calibration

- 1) During the use or storage, GEARWRENCH preset torque wrench shall be detected and calibrated at least once a year.
- 2) It is recommended to perform a detection and calibration for GEARWRENCH preset torque wrench every 5000 operations
- 3) Detection and calibration shall be performed on GEARWRENCH approved equipment or by GEARWRENCH authorized or recognized agencies and service providers.

Warranty of GEARWRENCH Preset Torque Wrench

- 1) For the damage due to the material or process defects or accuracy beyond forward $\pm 3\%$ according to the professional torque test device within 12 months after the date of purchase by user (subject to the invoice date), GEARWRENCH will provide the repair and calibration or replace the parts for free.
- 2) The product damage or accuracy beyond forward $\pm 3\%$ caused by misoperation, abnormal use or external damage are not covered under the warranty.
- 3) The products repaired or calibrated by third parties other than the GEARWRENCH officially authorized service organizations are not covered under the warranty.

GEARWRENCH

85160, 85161, 85162, 85163, 85164

PRESET TORQUE WRENCH OPERATING INSTRUCTION

