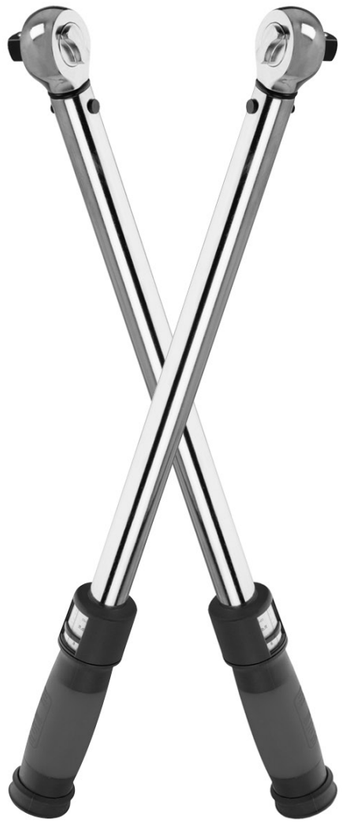
Certification

Before shipment, this torque wrench was calibrated to an accuracy of +/- 4% in the clockwise direction.



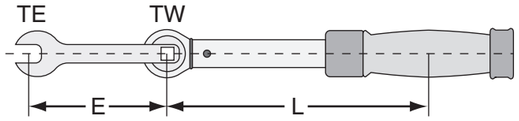
Thank you for choosing Grizzly!

Using Extensions

Depending on the type of extensions used, you may need compensate for added leverage by using a lower torque setting to reach the true torque setting applied to the fastener.

Note: *Compensation is only needed if the total length of the torque wrench is extended. Typical socket extensions that remain perpendicular to the ratchet head do not change the length of the torque wrench, and therefore, do not change the torque applied to the fastener.*

Extension Formula



$$TW = TE\left(\frac{L}{L+E}\right)$$

TE = Actual Torque at Extension
TW = Torque Setting on Wrench
E = Extension Length
L = Torque Wrench Length from Drive to Center of Handle

Example: *To reach 50 Lb.ft of torque with a 6" long extension, set the torque on the wrench to 37 Lb.ft. See the steps below for details.*

E = 6" L = 17" TE = 50 Lb.ft	*Step 1.* $TW = 50\left(\frac{17}{17+6}\right)$ *Step 2.* $TW = 50\left(0.739\right)$
Set Torque to TW = 37 Lb.ft	*Step 3.* TW = 36.95

Typical Fastener Torque Settings

The charts below offer average torque recommendations for different fastener sizes. Exact torque settings are defined by fastener material type and plating, lubrication, surface finish, and whether or not the parts being fastened have gasketed joints. Always follow the manufacturer's torque recommendations for your particular fasteners. Regardless of any torque recommendations, **NEVER exceed the maximum torque setting on your wrench.**

Inch Fastener Torque Settings in Foot Pounds

Material/Grade Bolt Size	SAE 2 A307	SAE 5 A325	SAE 8 A354
1/4-20	6	10	12
5/16-18	12	20	25
3/8-16	22	38	50
7/16-14	36	55	85
1/2-13	58	85	125
9/16-12	80	125	175
5/8-11	112	175	245
3/4-10	180	300	425

Metric Fastener Torque Settings in Foot Pounds

Material/Grade Bolt Size	CLASS 4.8	CLASS 8.8	CLASS 10.9
M5-0.8	3	5	8
M6-1	4	9	13
M8-1.25	12	22	32
M10-1.5	24	44	63
M12-1.75	41	76	111
M14-2	66	123	177
M16-2	103	199	280
M20-2.5	131	258	354

Grizzly Industrial, Inc.®

MODEL H8000/H8001 INDUSTRIAL TORQUE WRENCH

INSTRUCTION SHEET

#TR8543 PRINTED IN CHINA

Introduction

Use this wrench to tighten fasteners (nuts, bolts, etc.) to specific torque settings.

During operation, when the preset torque is reached, the torque wrench will "click" to indicate that tensioning is finished and no more pressure should be applied.

This model features a 45-tooth reversible ratchet that has the capability to torque both left and right handed fasteners.

This model is built with hardened alloy and rubber grips for long-term industrial use; however, as with all torque wrenches, the internal mechanisms can be damaged if the wrench is used or stored improperly.

To keep your torque wrench working accurately, we strongly recommend that you carefully follow the **Operation Tips** and **Torque Wrench Care** on this sheet.

Typical Usage

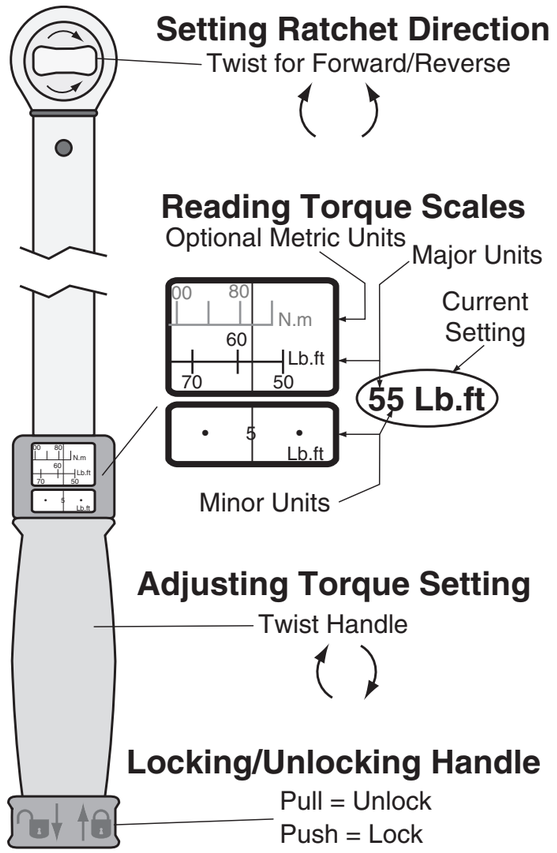
1. Unlock the handle, set the desired torque, and lock the handle.

2. Attach a socket and set the ratchet direction.

3. Hold only the handle of the wrench and tighten the fastener slowly until the wrench clicks, then stop applying pressure (continued pressure may damage the torque wrench internal components).

4. Repeat as necessary with the remaining fasteners.

5. After using the wrench, unlock and turn the handle to the lowest setting for storage. (Don't adjust the setting lower than the minimum torque setting or you may damage the wrench.)



Model H8000 Specifications

Maximum Torque Setting ..... 100 Lb.ft
Minimum Toque Setting ..... 20 Lb.ft

Model H8001 Specifications

Maximum Torque Setting ..... 250 Lb.ft
Minimum Toque Setting ..... 50 Lb.ft

Operation Tips

- Hold the torque wrench only by the center of the handle when tightening fasteners. Try to keep your forearm perpendicular to the wrench when applying pressure. Holding the torque wrench incorrectly will result in inaccurate final torque tensions.

- Tighten fasteners in a slow and controlled manner, and stop applying pressure immediately after the torque wrench clicks. Using the torque wrench in a hurried or jerky manner may result in inaccurate final torque tensions.

- Lock the handle after setting the torque so it does not change the setting during use.

- If using extensions, refer to the back of this page for important formulas that will help you avoid over-torquing your work.

- Fastener threads should be clean and free of any dirt or grime. Dirty threads create excessive friction during tensioning and cause the torque wrench to click before it reaches the true torque. A small amount of lubricant placed on the threads is typically recommended for consistent results.

- When tightening many fasteners that hold a single part, torque the fasteners in a criss-cross manner in multiple passes that incrementally work up to 100% of the desired torque. For example, on the first pass tighten the fasteners 60% of the final torque, then 80% on the next pass, and 100% on the final pass. This procedure will provide even, consistent results on the final tension of all the fasteners.

- Avoid torquing fasteners that are already tightened or that have been overtightened. Instead, loosen them first, then apply the desired torque. Never use the torque wrench to loosen fasteners.

Torque Wrench Care

- Avoid cheater bars or extension pipes. Using these items on the back of the torque wrench, or using the torque wrench as a breaker bar or pry bar, will ruin the delicate parts inside the wrench and void the warranty.

- Always store the torque wrench at the lowest setting or the springs will lose their memory and make the wrench inaccurate. However, never force the torque setting below the lowest setting as this can also damage the torque wrench mechanism.

- The internal parts of the torque wrench are lubricated for the life of the tool. However, the ratchet head may be lubricated to maintain smooth operation.

- Have the wrench recalibrated by a trained professional once a year or if you suspect the wrench has been misused.

- DO NOT exceed the maximum torque setting of your torque wrench.

- DO NOT use the torque wrench as a hammer or allow it to get banged around in a tool box. We recommend storing it inside the included case to prevent accidental damage during storage.

- DO NOT use solvents to clean the wrench. Instead use denatured alcohol or window-type cleaners with a clean cloth.

- DO NOT disassemble the torque wrench for any reason. The internal components are under tension and may cause serious personal injury.

- DO NOT submerse the wrench in water or other liquids.