

# Hi-Force®

HYDRAULIC TOOLS

## INSTRUCTION MANUAL:

Model Series: TWM50/100/200/300/400/550/850

### Hi-Force – Manual Torque Wrench Range – Click Type



#### **Important Note:**

Before putting this Hand Torque Wrench into operation, please validate the certificate (provided along with this tool) by completing the section "date of first issue, sign and stamp."

#### **1.0 Inspection of the product upon receipt:**

On receipt of the product, visually inspect the item for any evidence of shipping damage. Please note shipping damage is not covered by warranty. If shipping damage is found notify the carrier immediately and refrain from putting the product into service. The carrier is responsible for repair and replacement costs resulting from damage in transit shipment.

#### **2.0 Safety Precautions:**



Read and follow all the instructions and safety warnings carefully prior to use of the equipment. Failure to do so could result in equipment damage or failure of the equipment or personal injury. Hi-Force will not be held responsible for any damage to the equipment or personal injury resulting from unsafe use of the product, lack of maintenance or incorrect operation. If in doubt on the correct usage of any Hi-Force equipment, contact your nearest Hi-Force office or distributor. If the operator has not been trained on high pressure hydraulic equipment and its safe use consult your local Hi-Force sales office who can offer you training courses for operators.



All operators should ensure that all necessary personal protective equipment as specified by their employer is worn when operating any hydraulic equipment. Safety shoes, safety glasses/ visor and protective gloves should be worn at all times. All relevant risk assessments should be completed prior to use of the equipment.

### Available models and specifications:

Model No:	Square Drive	Torque Nm	Torque Lbf.ft	Main Scale Division Nm	Micro Scale Division Nm	Overall Length mm	Ratchet Head Dia. Mm	Weight kgs
TWM50	3/8"	5-50	3.5-37	2.50	0.25	334.00	35.00	0.54
TWM100	1/2"	20-100	15-75	5.00	0.50	394.00	44.00	0.90
TWM200	1/2"	40-200	30-150	10.00	1.00	485.00	44.00	1.10
TWM300	1/2"	60-300	45-220	10.00	1.00	577.00	46.00	1.40
TWM400	3/4"	80-400	60-300	10.00	1.00	686.00	67.00	2.00
TWM550	3/4"	110-550	80-405	10.00	1.00	956.00	69.00	3.80
TWM850	3/4"	250-850	185-630	10.00	1.00	1379.00	69.00	4.70



Read this entire manual before operating the torque wrench.

Failure to observe the following warnings could result in serious bodily injury.

These instructions are part of the torque wrench.

They must be kept in a safe place for later use and be passed along with the torque wrench if it is sold, loaned, or otherwise transferred.

The torque wrench should be used only by TRAINED PERSONNEL who have been taught how to safely use and handle the torque wrench. Using the torque wrench without training may result in SERIOUS INJURIES or DEATH.

Employers purchasing this torque wrench MUST ensure employees using the torque wrench have read and understood these Operating Instructions prior to using the torque wrench. The Operating Instructions MUST be available to the employees for reference at all times.

#### **OVERLOAD HAZARD**

The torque wrench can be overloaded during use and break causing SERIOUS INJURY or DEATH.

ALWAYS use only original accessory parts.

Accessory parts not approved by the manufacturer may cause the torque wrench to overload or fail. ALWAYS inspect the torque wrench for damage BEFORE use.

NEVER use a damaged torque wrench.

NEVER use the torque wrench if it has been dropped, used to strike other objects, or if anything has fallen on it.

#### **INACCURATE TORQUE SETTINGS**

An out-of-calibration torque wrench can cause part or tool breakage and inaccurate torque settings, resulting in SERIOUS INJURY or DEATH.

ALWAYS use only tested and calibrated torque wrenches. ALWAYS use an approved torque tester.

#### **EXPLOSION AND FIRE HAZARD**

Sparks can occur when using the torque wrench, which can cause an explosion or a fire and can cause SERIOUS INJURY or DEATH.

NEVER use the torque wrench in areas where sparks can cause explosions or fires.

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### TEMPERATURE WARNINGS

When the torque wrench is exposed to temperatures below 64°F and above 82°F, or high levels of humidity (above 90%), it may cause inaccurate torque settings.

ALWAYS check the torque wrench with an approved torque tester before and during use in these conditions.

The torque wrench is designed to tighten bolts and nuts to a specific tightening or torque specification.



Take the following safety precautions to prevent injuries and damage caused by improper handling and unsafe use of the torque wrench:

- NEVER use the torque wrench for loosening bolts and nuts.
- NEVER use a damaged torque wrench.
- NEVER modify any parts of the torque wrench or accessory parts.
- NEVER use a torque wrench or an accessory part that has been modified.
- ALWAYS inspect the torque wrench, especially the square drive and the housing, for damage before use.
- ALWAYS release the torque wrench IMMEDIATELY after you hear the click indicating that you have reached the desired torque setting.
- ALWAYS use the torque wrench ONLY in the direction of rotation indicated on the housing.
- ALWAYS use only original accessory parts or parts approved by the manufacturer.
- ALWAYS reset the torque wrench to the lowest setting after each use or at the end of the workday.
- ALWAYS hold the torque wrench in the center of the handle when using the tool accessories.

### Setting the Torque



ALWAYS make sure that you use the scale with the requisite unit. Non-compliance of the requisite scale can result in faulty screw connections. These might cause damage, SERIOUS INJURY or DEATH

Familiarize yourself with the torque wrench and its scales. The torque wrenches are equipped with a double scale (N·m / lbf·ft or lbf·in). Check the unit and scale required.

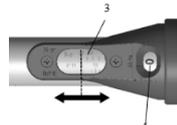
The desired torque ALWAYS has to be set before using the torque wrench.



Pull out the locking button (1) on the end of the handle (2).



Turn the handle (2) until the desired torque in the particular scale (3) N·m or lbf·ft / lbf·in is identical with the mark in the reading glass.

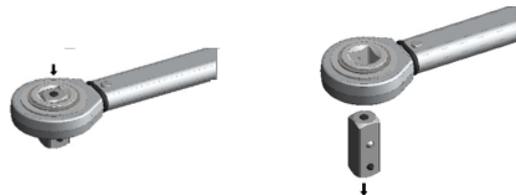


Make a precise adjustment of the main scale using the micrometer scale (4).



Push the locking button (1) back into the end of the handle (2). Attention should be paid to ensure that the locking button (1) engages properly. Only then is the torque safe.

To change the direction of rotation for the 3/4" with square drive, push the trigger pin with your thumb and push the square drive through, rotate the torque wrench and replace the square drive.



### Operation:

Using a suitable socket, turn the torque wrench by the handle slowly and steadily in the direction of the arrow (follow the direction of rotation arrow) until a click sound can be heard and a slight jerk felt.



ALWAYS release the torque wrench IMMEDIATELY on the sound of a click. After use, ALWAYS reset the torque wrench to the lowest setting.

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### Maintenance

Testing and Calibrating



#### **FAULTY TIGHTENING TORQUE HAZARD**

An un-calibrated torque wrench can cause screw connections, the torque wrench and accessories to fail and produce faulty screw connections. This might cause SERIOUS INJURY or DEATH.

Always use tested and calibrated torque wrenches ONLY. Always use tested torque testing equipment ONLY.

Powerful forces are at work when using the torque wrench. When torque wrenches are not tested or not serviced there is a risk that they will not bear the loads or will indicate faulty tightening torques. ALWAYS take the following safety information into account in order to prevent SERIOUS INJURY or DEATH:

- ALWAYS test the accuracy of the torque wrench with an approved torque tester before use.
- NEVER use a faulty torque wrench.
- ALWAYS have the torque wrench calibrated on a regular basis.

According to DIN EN ISO 6789 the minimum calibration interval requirement for a torque wrench is one year or 5000 load cycles (whichever case occurs first). A firm's own specifications or quality requirements for screwing applications can also lead to considerably shorter calibration intervals.

### WARNING

NEVER neglect recalibrating the torque wrench. Improper calibration can cause the torque wrench to be damaged.

Calibration should ONLY be implemented by authorized specialists, an accredited calibration laboratory or the manufacturer.

A calibration certificate as per DIN EN ISO 6789 comes with every new torque wrench. The torque wrench and the calibration certificate are labeled with the identical serial number.



For full and comprehensive details on this piece of equipment and all of the Hi-Force range of torque & tension bolting tools please go to:

[www.hi-force.com](http://www.hi-force.com)