



30150TW38I (shown) 1/4" & 3/8" Design

Ratchet Head (in.-lb. graduations)					
Part Number	Torque Range		Graduations		Drive Size
	in.-lb.	Nm	in.-lb.	Nm	
30150TW14I *	30-150	3.4-17.0	1.0	0.11	1/4"
30150TW38I *	30-150	3.4-17.0	1.0	0.11	3/8"
50250TW38I *	50-250	5.7-28.3	1.0	0.11	3/8"
150750TW38F	150-750	-----	5.0	-----	3/8"
150750TW12F	150-750	-----	5.0	-----	1/2"

* Note: Dual Scale Model



30150TW716I (Range: 30-150 In-Lb)

Cementex Products, Inc.

“Click” Type Torque Sensing Wrenches

Micrometer Adjustable Torque Sensing Wrenches:

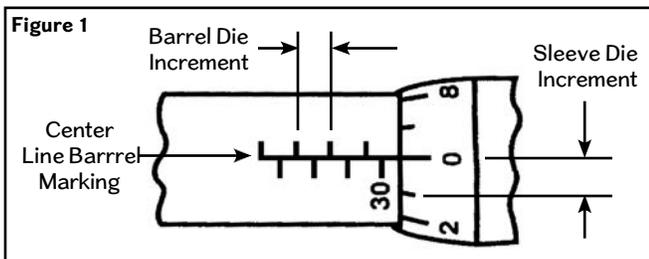
These torque sensing wrenches automatically signal by *SOUND* and *IMPULSE* when the desired torque is reached. These wrenches are calibrated for right hand (clockwise) and left hand (counterclockwise) torque applications.

Setting a Torque:

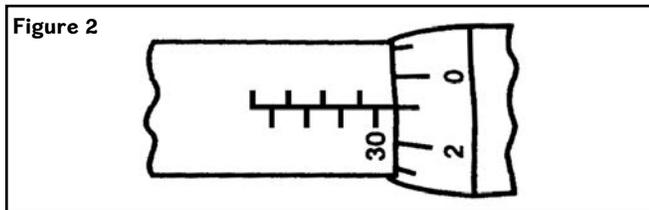
Unlock: Pull back, fully, and hold the automatic lock collar. While holding the lock collar, advance the handle up the barrel by turning it in a clockwise direction or counterclockwise to move down the barrel. The barrel is marked in even increments of torque and one complete turn of the handle will change the torque setting one complete barrel increment.

If the barrel is marked in increments of ten, each complete turn of the handle would change the torque setting by ten. The sleeve die is marked around the circumference with intermediate increments.

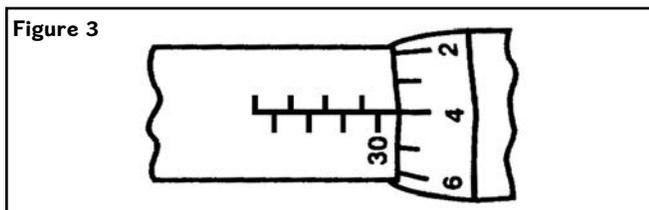
The sleeve die markings start at 10 and are divided into ten equal marks. Every other mark is numbered. To set at an even barrel increment the zero marking on the sleeve die should line up with the center of the barrel marking, see Figure 1.



By advancing the handle one sleeve die mark you have increased the torque an amount equal to 1/10th the increase between two-barrel increments, see Figure 2.



If the barrel increments are 10, 20, etc. and the original setting was 30, by moving the handle on the sleeve die one increment you increase the torque an amount equal to 1. Your new torque setting would be 31. If you turned the handle four (4) sleeve die marks in a clockwise direction from zero you have advanced the torque four (4) increments and your new torque setting would be 34, see Figure 3.



Lock:

When you have lined up a sleeve die mark with the center line barrel mark, you can release the lock collar and it will automatically move forward and lock the handle to the barrel.

To Use:

Attach the appropriate socket wrench or adapter to the torque wrench square drive and apply to the application. Hold the torque wrench by the CENTER of the handle and tighten the fastener. Apply force with a steady, smooth action.

Do not apply force by holding any part of the wrench, other than the load point on the booted handle. Do not use an extension or other lever aid on the handle. When the torque setting is reached, the wrench will momentarily release with a feel impulse and audible click. The wrench will move freely through a small arc of approximately two (2) degrees. At this point the set torque has been achieved and force on the handle must be released. The wrench will automatically snap back to its original position and is ready for the next torque application.

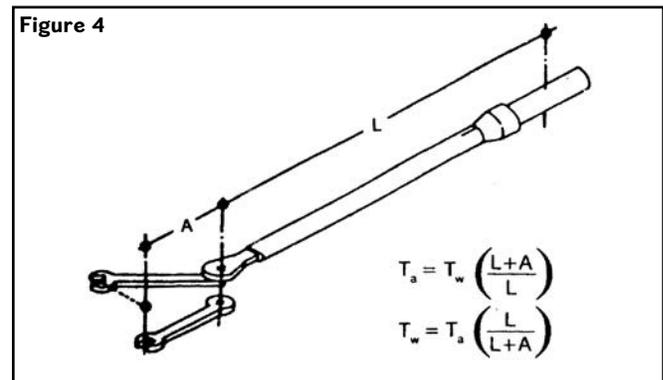
NOTE: When set at the lower torque range, the audible signal will be much lower. However, there is an audible sound which in conjunction with the feel impulse should present no difficulty in operating the wrench at the lower scale settings.

Torque Extensions:

When an extension is used on the drive end of the torque wrench, the torque applied at the end of the extension is **NOT** the same as the torque setting on the wrench. The method of determining the actual torque produced using various types of extensions is as follows:

- T_a = Torque applied at the end of extension
- T_w = Torque Wrench setting
- L = Length of wrench (center of handle to drive)
- A = Length of extension *

*** Note: Dimension always taken parallel to the line of the wrench regardless of extension configuration.**



NOTE: To obtain the actual torque values as calculated, force must be applied only at the center point of the handle.

Cementex Products, Inc.

“Click” Type Torque Sensing Wrenches

Torque Settings for Dual Scale Models 30150TW14I, 30150TW38I, 50250TW38I, 150750TW38F, 150750TW12F:

The torque settings of these wrenches are read from two micrometer scales: Major and Fine. These wrenches can be utilized in Foot-Pounds (ft-lbs) or Inch-Pounds (in-lbs) and Newton meters (Nm) applications. Therefore, there are two major and fine scales. The ft-lbs or in-lbs and Nm scales are on opposite sides of the barrel.

Scale increments:

1575TW38F or 1575TW12F:

Major	ft-lb = 5 ft-lbs
Fine	ft-lb = 0.5 ft-lbs
Major	Nm = 6.8 Nm
Fine	Nm = 0.7 Nm (rounded)

30150TW14I, 30150TW38I, 50250TW38I:

Major	in-lb = 10 in-lbs
Fine	in-lb = 1 in-lbs
Major	Nm = 1.1 Nm
Fine	Nm = 0.11 Nm (rounded)

Setting the wrench is accomplished by considering all torque settings as being made up of two parts, major scale plus fine scale. *Example: A torque setting of 42 ft-lbs would be 40 ft-lbs on the major scale plus 2 ft-lbs on the fine scale.*

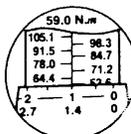
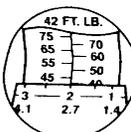
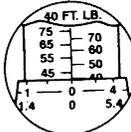
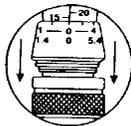
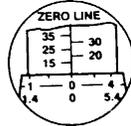
These wrenches can be set to the desired torque as follows:

- Grasp the locking collar between the thumb and forefinger and pull it toward the wrench handle as far as possible. Hold it in this position.
- While holding the barrel of the wrench securely in one hand, rotate the handle until the major scale increment below the torque desired is even with the edge of the sleeve and the 0 increment on the sleeve is in line with the zero line of the barrel.
- Rotate the handle clockwise until the fine scale torque increment desired lines up with the zero line on the barrel. Release the lock collar and the wrench is automatically locked at the torque setting selected.

NOTE: The lock collar will not lock until an increment line on the sleeve lines up with the zero line on the barrel.

- For Newton meter torque settings, use the same procedure as described in steps 1-3 but using the Newton meter major scale on the barrel and the fine scale on the sleeve. The illustration shows a setting of 59.0 Nm. This can be accomplished by setting 57.6 on the major scale plus 1.4 on the fine scale.

NOTE: The fine scale values have been rounded to the nearest whole decimal.



Single Setting (Preset) Torque Wrenches:



These wrenches are designed so when torque is applied to a fastener, it will momentarily release and signal by impulse and audible click (or snap) that the preset torque value has been reached.

The preset torque wrench is calibrated and sealed at the factory to the torque value specified by the customer. Wrenches are also available not preset or sealed when requested. Wrenches preset at the factory are set to an accuracy tolerance of the specified torque value.

To Use:

Attach the appropriate adapter to the torque wrench and apply to the application. Hold the torque wrench by the padded handle and tighten the fastener. Apply force with a steady, smooth action.

Do not apply force by holding any part of the wrench, other than the padded handle. Do not use an extension or other lever aid on the handle. When the torque setting is reached, the wrench will momentarily release with a feel impulse and audible click (or snap). The wrench will move through a small arc about the pivot pin. At this point the set torque has been achieved and force on the handle must be released. The wrench will automatically snap back to its original position and is ready for the next torque application.

CAUTION: Do not apply force after the wrench releases, clicks (or snaps) at the set torque. If the fastener is over torqued, loosen it and repeat the operation.

NOTE: Always actuate the wrench a few times before use and after a period when the wrench has not been in use.

To Calibrate or Re-Calibrate:

- Calibration of this torque wrench should only be done on a certified Torque Tester for the required torque range.
- Using a suitable adapter, attach the wrench to the torque tester.
- Using a hex key, loosen the lock plug in the rear of the handle.
- Using a hex key or screwdriver on our preset models, turn the adjusting plug clockwise to increase the torque value or counterclockwise to decrease. Turn the adjusting plug-in small increments at a time. Actuate the wrench by applying force on the handle and observe the readings on the torque tester. Continue this procedure until the desired torque setting has been reached.
- Tighten the lock plug and recheck the torque reading on the torque tester.
- Make sure the seal washer is in place before applying any liquid seal over the lock plug.