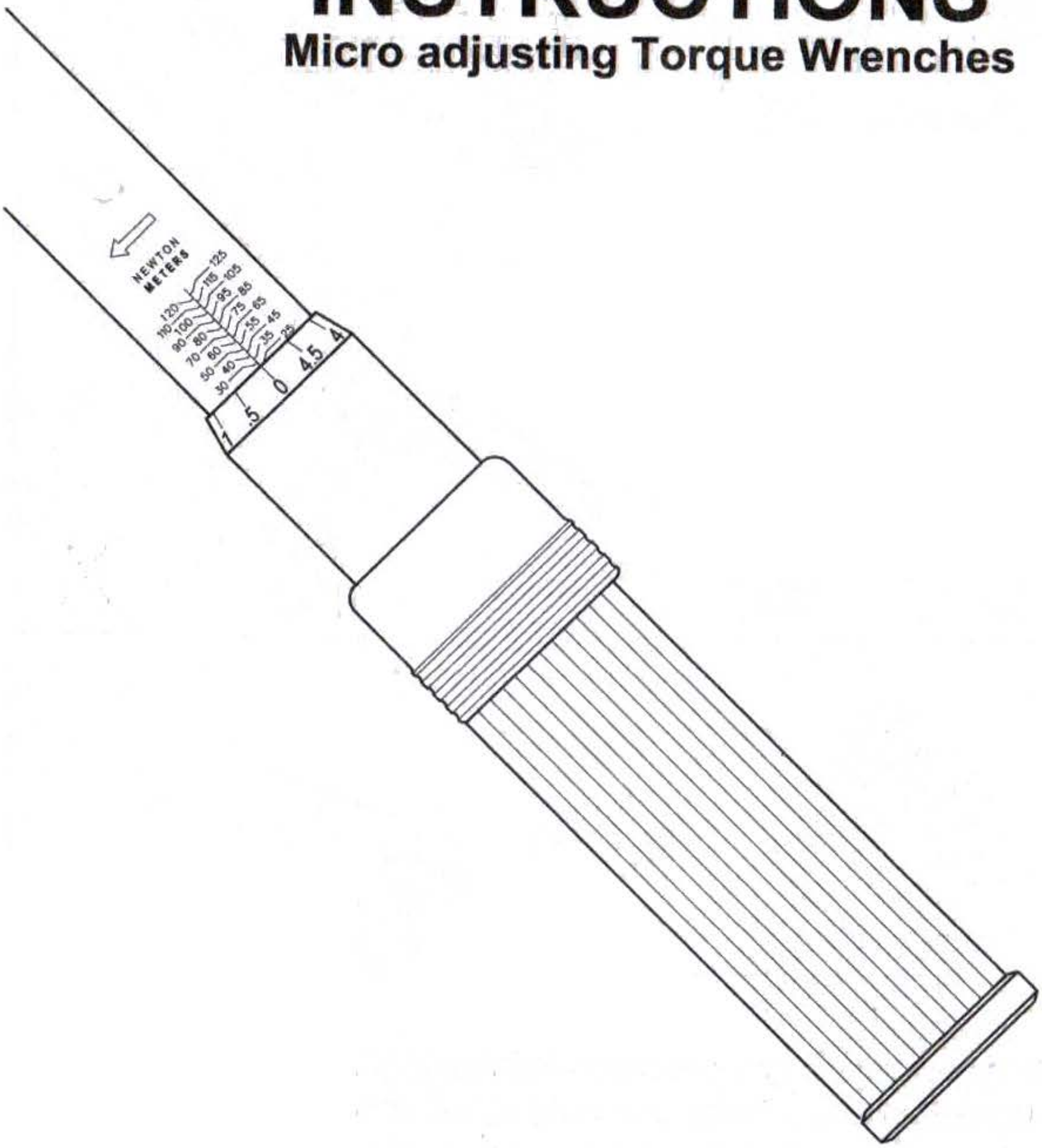
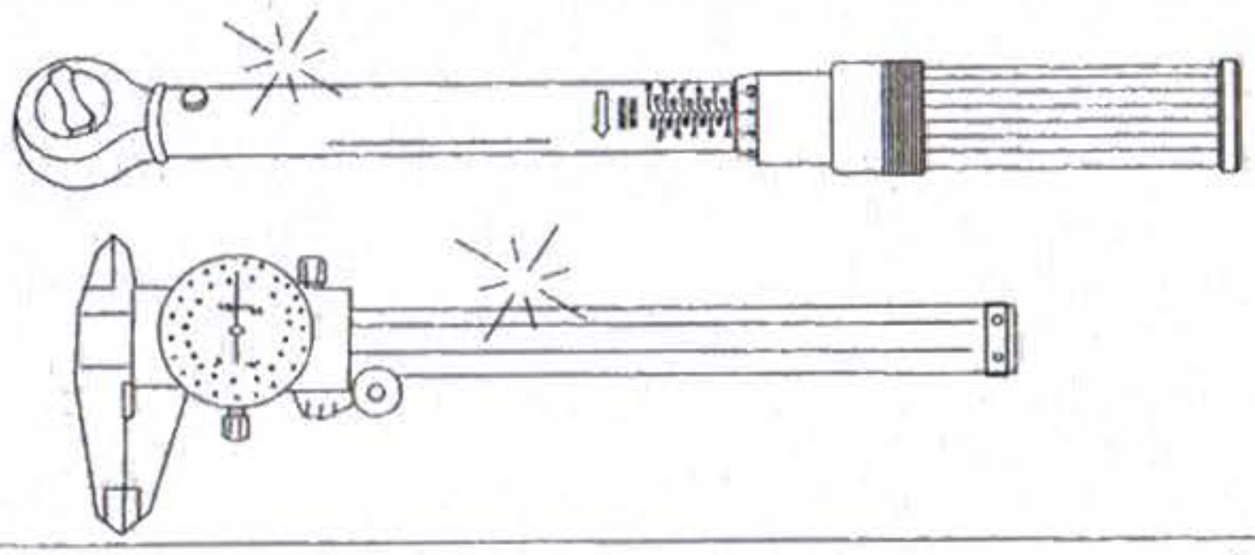
INSTRUCTIONS

Micro adjusting Torque Wrenches



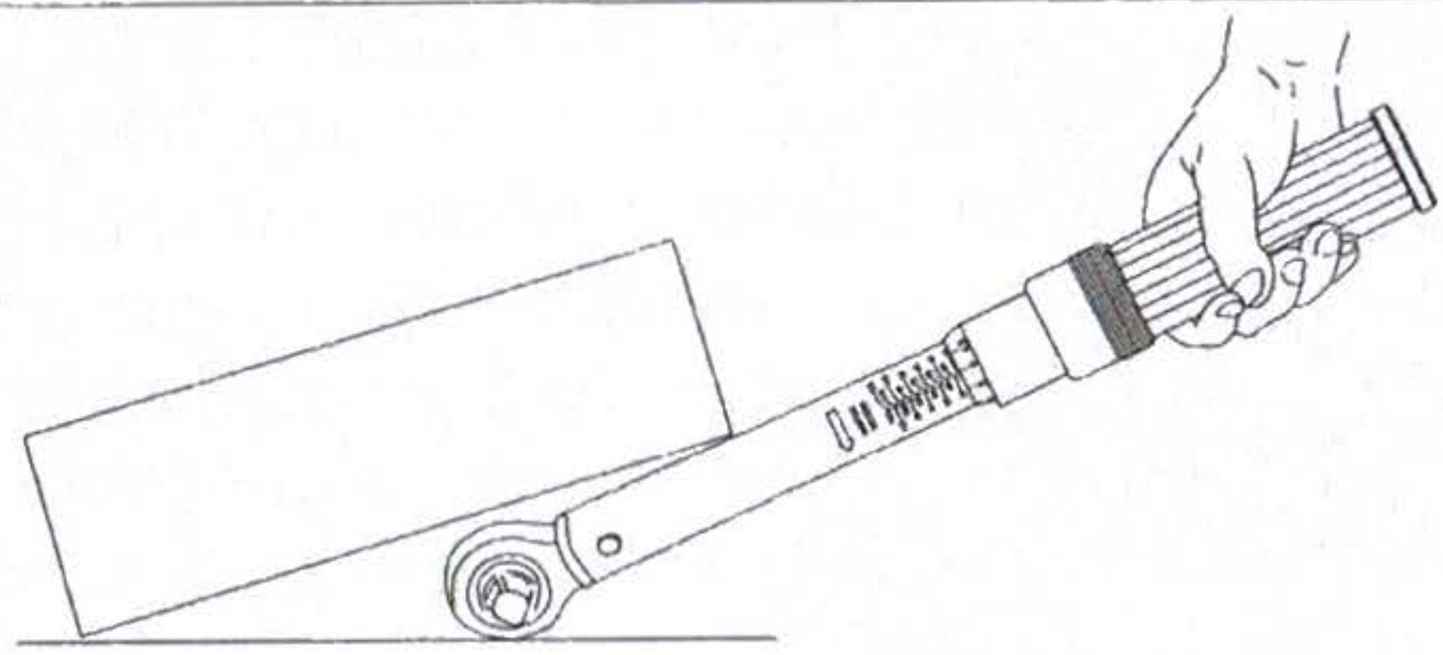
READ BEFORE YOU USE

1



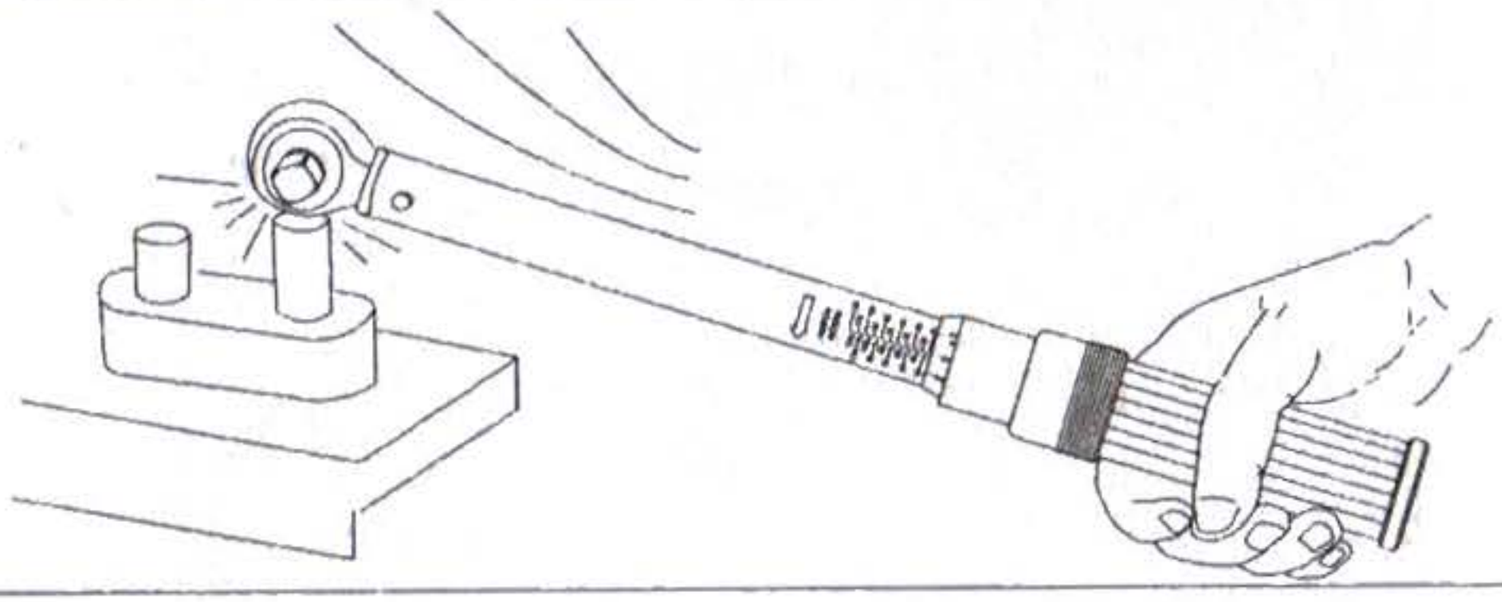
✓

2



X

3



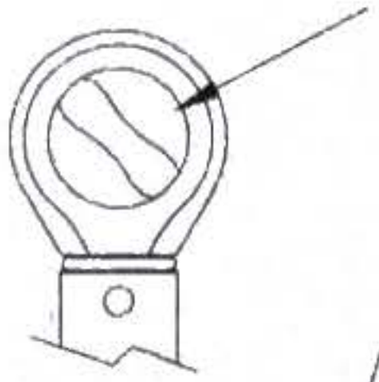
X

1.This torque wrench is a precision instrument intended to be used only to tighten screws, bolts and nuts to a desired torque.
2. Do not use it as a "nut breaker", pry bar, hammer, or in lieu of a regular ratchet wrench.
3.Do not apply torque in excess of the maximum capacity of the wrench. Apply load on the grip only, and do not use any handle extension bars (a piece of pipe put over the grip).
4.Head Holder torque wrench should be used with NovaTork heads.If using special heads,please set torque as formula on page 7.

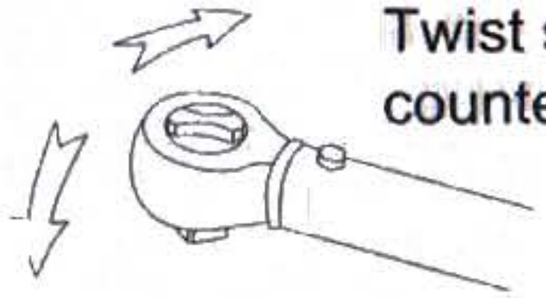
5. Make sure that you adjust the wrench to the exact torque units your specifications call for, or you will severely under-torque or over-torque, causing severe damage to the equipment you are working on.
6. Do not disassemble the wrench for any reason. Highly stressed internal components may cause severe injury when released in an unintended manner.
7. The wrench should be re-calibrated periodically. The calibration of the wrench should be checked at least once a year, after any abnormal handling or overloading, or after 5,000 cycles ("clicks").

Head types

1. Fixed Ratchet head



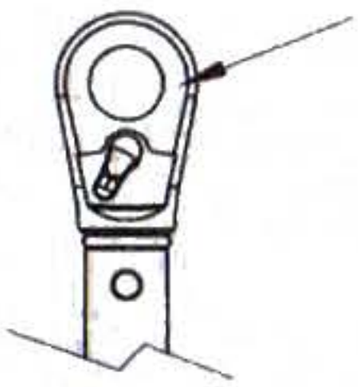
45-tooth reversible ratchet:wrench operates in both clockwise and counterclockwise direction. However, unless stated otherwise, the wrech is calibrated in clockwise direction only.



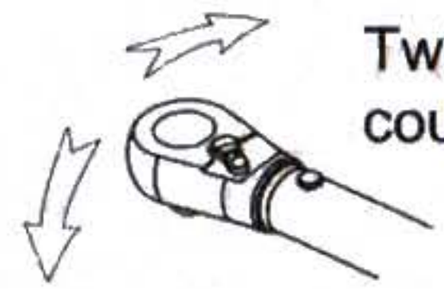
Twist shifter cap clockwise for countercklockwise direction

Twist shifter cap countercklockwise for clockwise direction

2. Fixed Ratchet head



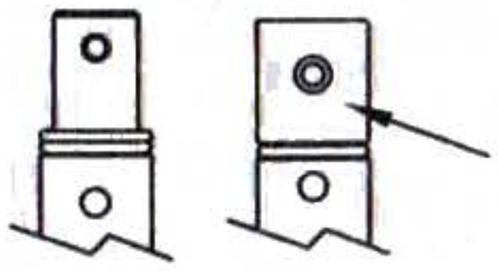
30/22-tooth reversible ratchet:wrench operates in both clockwise and counterclockwise direction. However, unless stated otherwise, the wrech is calibrated in clockwise direction only.



Twist shifter cap clockwise for countercklockwise direction

Twist shifter cap countercklockwise for clockwise direction

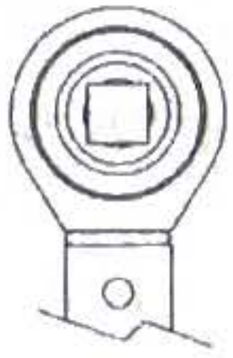
3. Head holder



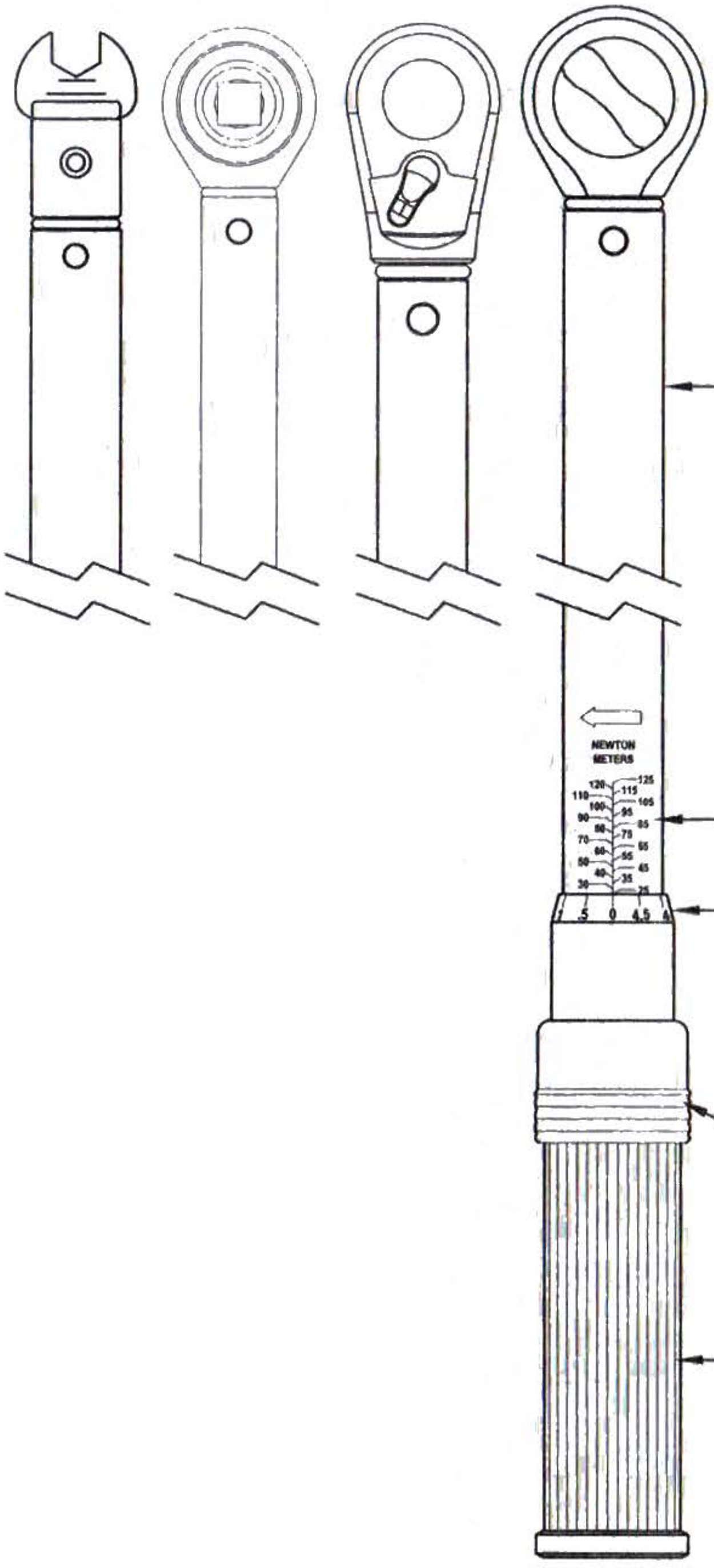
Round Square

Holds different size Ratchet Heads, Open End, Box End or Open Box End heads.

4. Heavy duty one way ratchet head



One way contructure with better abrasion performance, up and down to reverse direction.



Torque wrench indicates when the preset torque has been reached by releasing for a few degree of free travel, which is usually accompanied by an audible "click" signal.

Hardened alloy steel housing

EASY TO READ SCALES:

Major Torque Scale

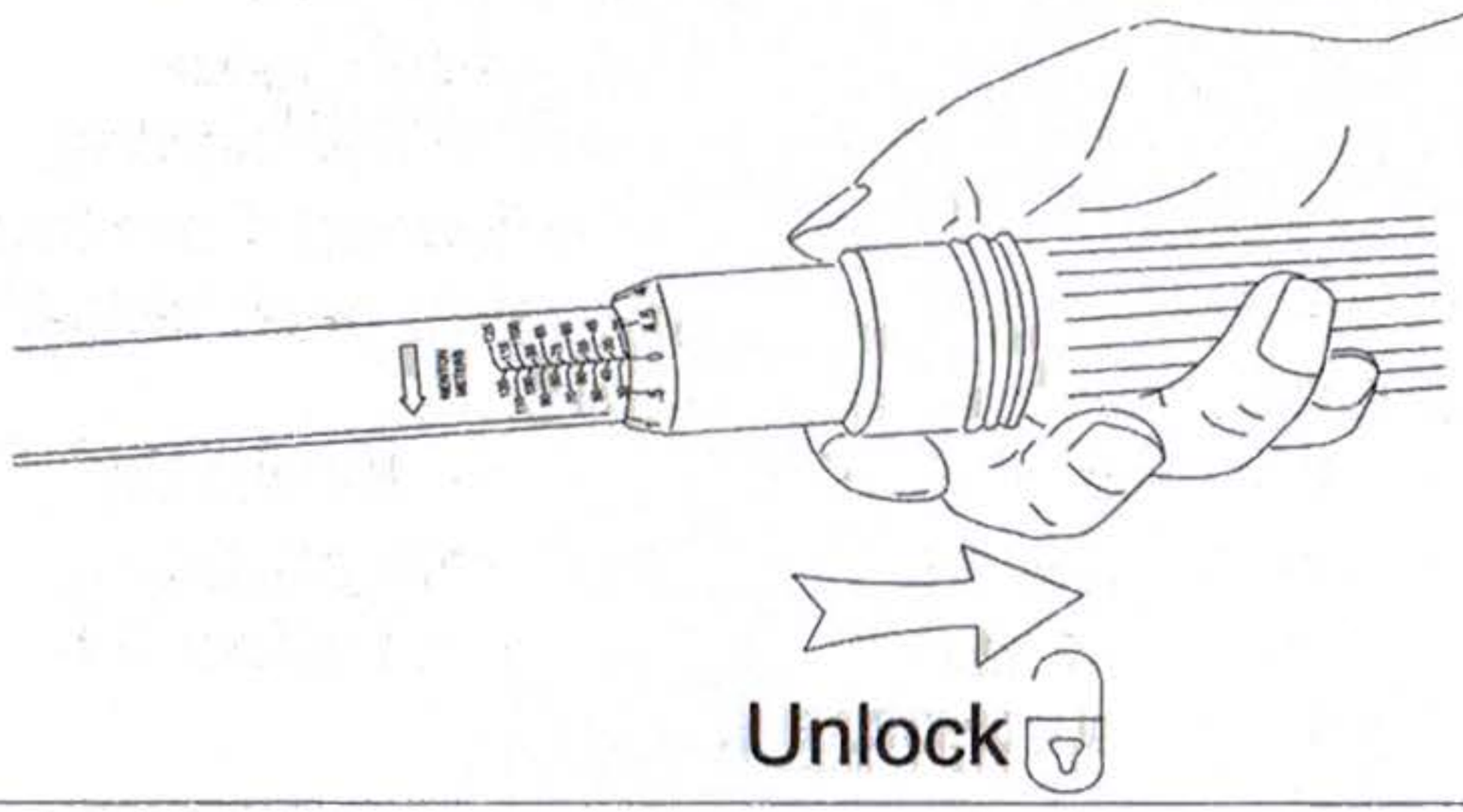
Minor Torque Scale (Convenient reference secondary units scale is located on back side)

Pull-adjust-release style lock knob secures selected torque from accidental change

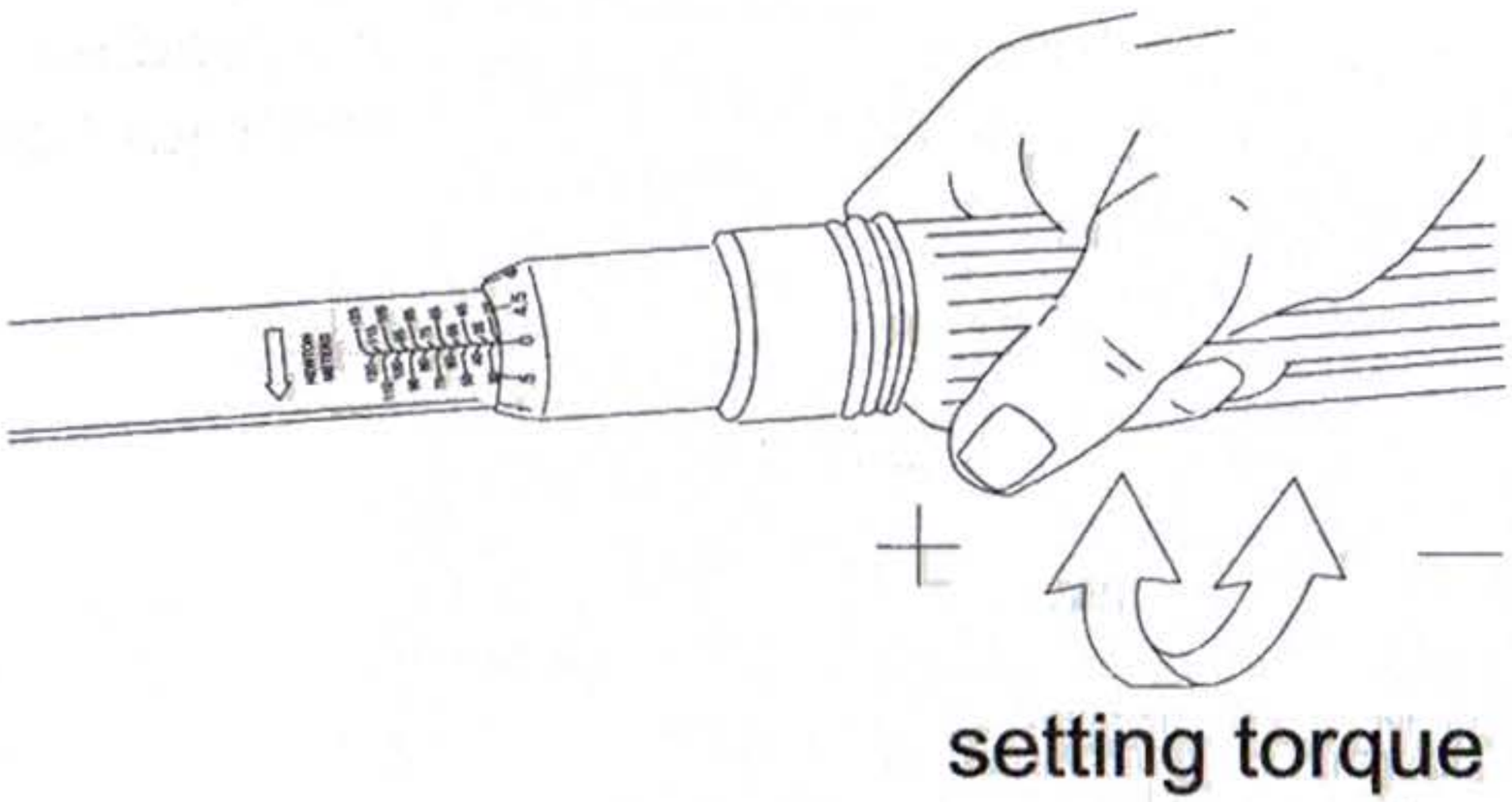
All-metal durable knurled grip

SETTING TORQUE

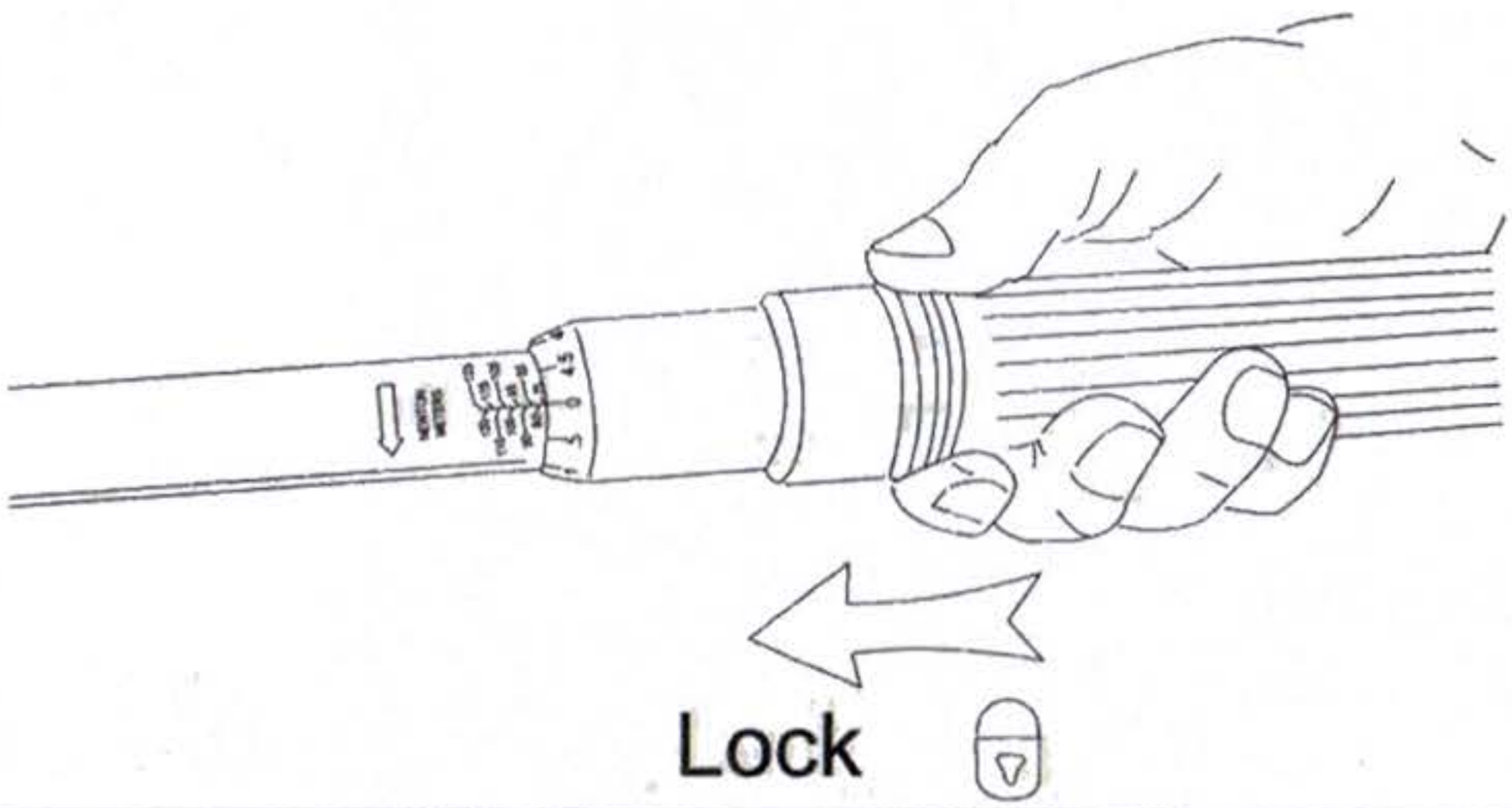
1



2



3

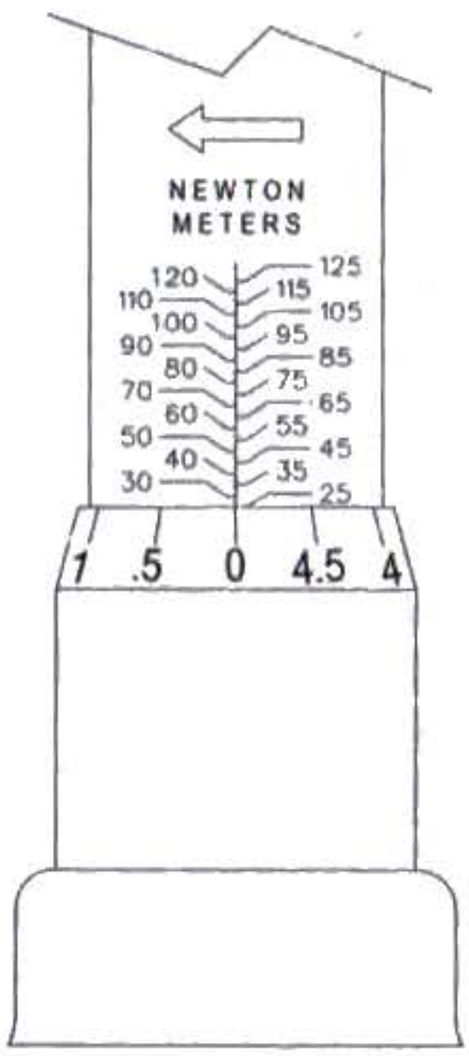


SETTING TORQUE

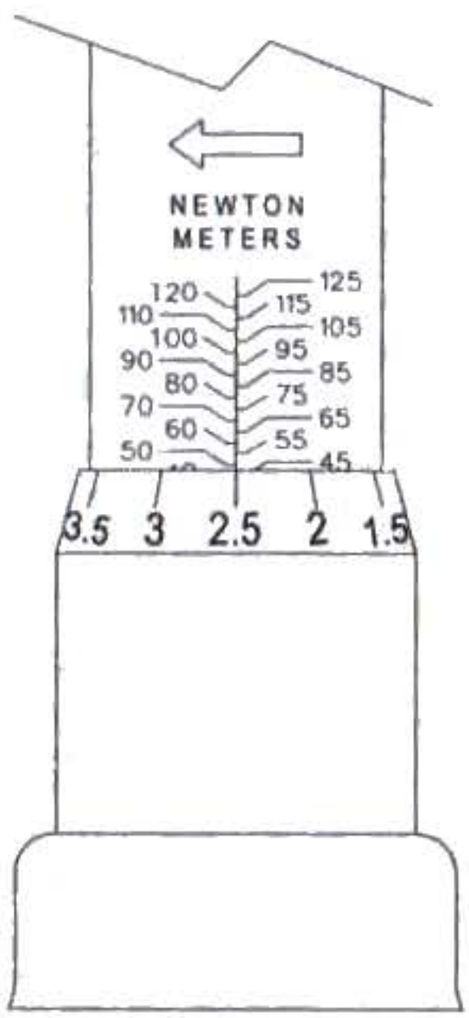
1.When the locking ring was pulling and rotate the handle clockwise will increase the torque value, counterclockwise will be decreased. When setting, from small value to a large value adjusting if the torque exceeds the set value, please adjusted back below the set torque value and then to reset it.
2. Loosen the locking ring and the handle will be locked.Secondary scale pointer will shift slightly outsides the middle position, but will not affect the accuracy of your settings.
3. Main scale will show both metric or English values of total torque, secondary scale shows the precise torque segments. Look at the example illustrated as below.

EXAMPLES OF SETTING

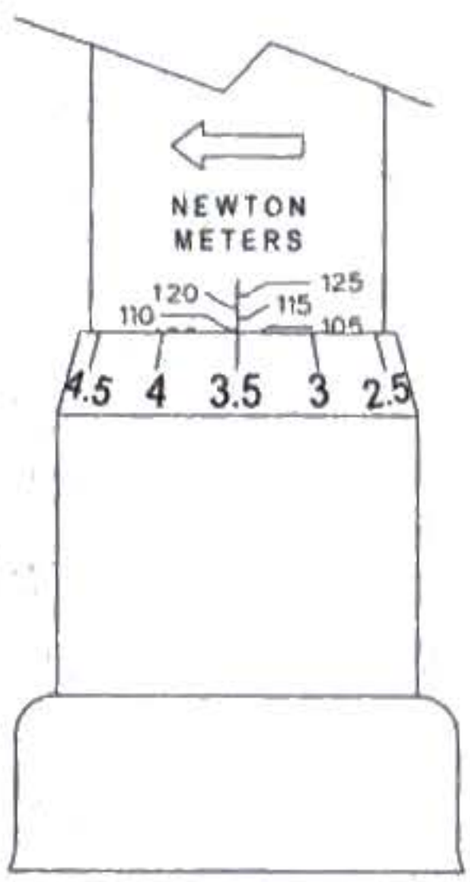
125 N.m wrench



25.0 N.m
(18.4 Lb.ft)



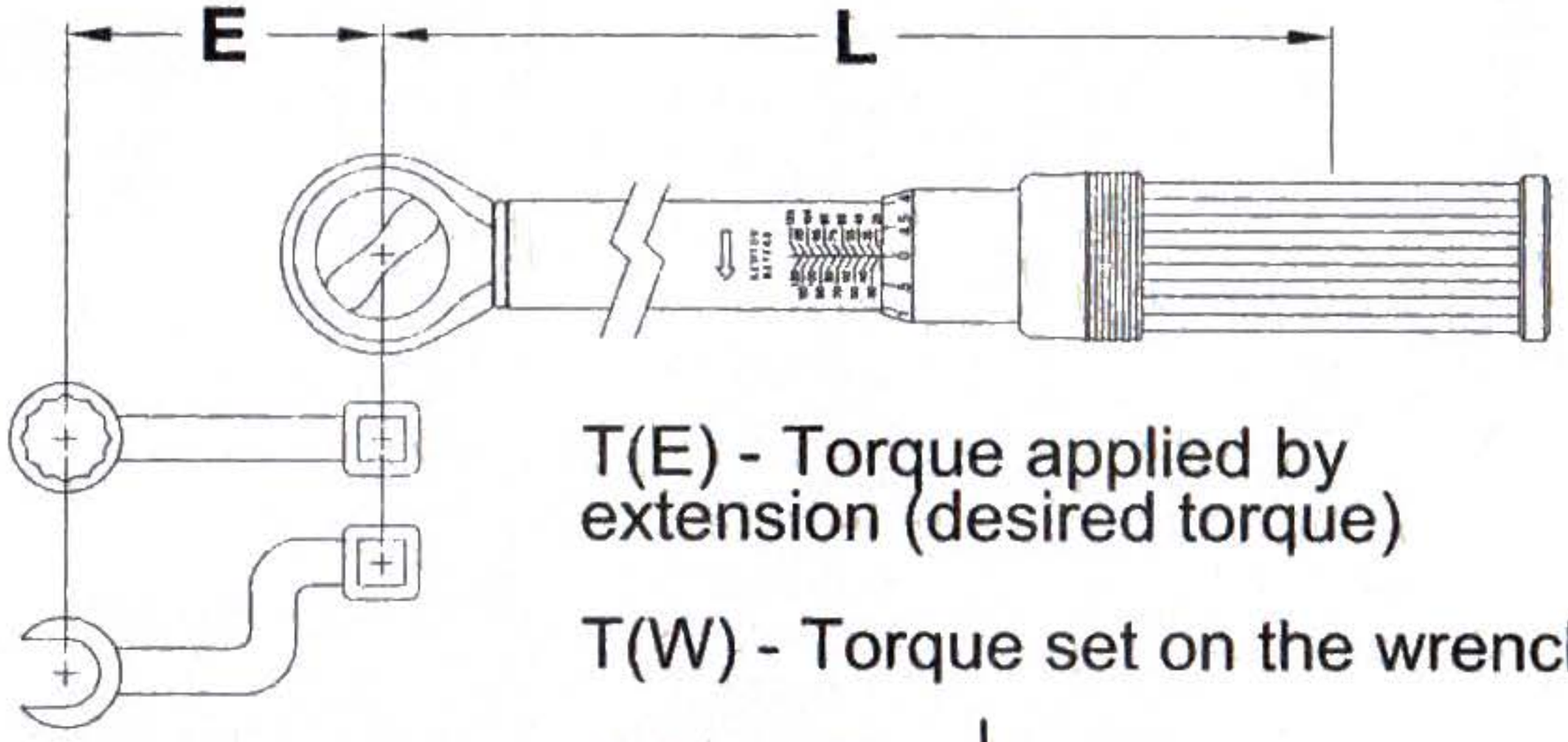
47.5 N.m
(35.0 Lb.ft)



108.5 N.m
(80.0 Lb.ft)

USE OF EXTENSIONS

Extensions that put the center of the fastener being tightened away from the centerline of the ratchet drive, result in the effective torque being different from the one shown on the wrench. Consequently, the torque set on the wrench must be corrected using the formula shown on the next page.



T(E) - Torque applied by extension (desired torque)

T(W) - Torque set on the wrench

$$T(W) = T(E)\frac{L}{L+E}$$

APPLYING TORQUE

1. Insert an appropriate socket or drive attachment onto the square drive of the ratchet and onto the fastener you want to tighten.
2. Apply hand pressure to the grip, and ONLY TO THE GRIP. You may support the wrench at the ratchet head with the other hand to steady it, especially when using long socket extensions, without appreciably affecting the accuracy of the wrench.
3. If, due to the required effort, you need to use both hands, put the other hand on the top of the first hand, never on any other part of the wrench.
4. Apply slow and steady pull or push until the wrench momentarily releases, with or without a distinct "click" sound. Release the pressure right at this point. DO NOT OVERTORQUE!

SAFETY WARNING

Overtorqued or defective fasteners, sockets, as well as the wrench itself, may suddenly break causing you to lose balance, fall, or to suffer other trauma. Be sure that you have firm footing, are properly balanced, and if necessary are using appropriate harness, back support, or other safety device.

MAINTANANCE

1. When not in use, adjust the wrench to its lowest reading (except on Preset and Electronic torque wrenches), and store it in the provided case.
2. With the exception of the ratchet mechanism, do not lubricate the wrench. The ratchet mechanism may be lubricated as needed with a few drops of light machine oil.
3. Do not use acetone or other solvents to clean the wrench, use window cleaner or denatured alcohol applied with a clean cloth instead.
4. With the exception of the ratchet mechanism, there are no user-serviceable parts. Do not disassemble the torque wrench for any reason. When service is needed, send the wrench to the nearest factory-authorized service center.

CERTIFICATION

This torque wrench is certified to have been calibrated prior to shipment to the accuracy of +/- 4% in the clockwise direction.