## NovaTork ${ }^{\circledR}$

## STM Torque Wrenches

## READ BEFORE YOU USE



1, This torque wrench is a precision instrument intended to be used only to tighten screws, bolts and nuts to a desired torque. Do not use it as a "nut breaker", pry bar, or in lieu of a regular ratchet wrench.
2. Do not apply torque in excessof the maximum capacity of the wrench.
3. Apply load to the grip only, and do not use any handle extension bars. Any such misuse will result in inaccurate readings, and it may damage the wrench.
4,The head for Holder torque wrench suggest to use our standard heads,if fit with other head, please figure out the torque by page 7's formula. Any incorrect application will cause error, will cause damge on the torque wrench.
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").User can make calibrate period according to their own applications.

## HEAD TYPE

1, Fixed Ratchet head

2, Pear-shape Ratchet head

3, Heavy duty one way ratchet head


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

4, Head Holder


Head holder for various of Ratchet heads, open ends, ring ends, open ring ends.


Ergonomic soft grip

Lock Knob secures selected torque from accidental change Pull-Push to set torque value

## SETTING TORQUE

1. Pull the lock knob out, rotate grip in clockwise direction to increase torque value, to decrease torque value in couter-clockwise direction, adjust torque from low to high, please adjust back to lower torque and increase smoothly if exceeds the set value.


2, The major scales show the amount of torque in both primary and secondary units. The minor scale shows fine increments in primary units. See examples on the below.


## For example

## 100 N.m wrench


92.5 N.m

200 N.m
wrench


90 N.M

300 N.m wrench


60 N.m

3, Push back the lock knob, the figure in minor scale will be middle or a little offset to two sides, this won't effect the accracy of setting.


Extend Drive results 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 below.


Non-standard heads

$T(E)$ - Torque applied by extension (desired torque)
$T(W)$ - Torque set on the wrench
$T(W)=T(E) \frac{L_{F}}{L_{F}+L_{*}-L}$
In the formula the " $L$ " is: $9 \times 12$ head: $L=17.5$
$14 \times 18$ head: $\mathrm{L}=25$
$24 \times 32$ head: L=35
$27 \times 36$ head: $L=50$

## 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 usinglong 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 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 cleaners or denatured alcohol applied with a clean cloth instead.
3. With the exception of the ratchet mechanism, there are no user-serviceable parts. User can not dis-assemble the torque wrench.

## Calibrate report before shipment

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

