

## EXTENSIONS & ADAPTERS

When using an extension or adapter (increasing the effective length of the torque wrench) the output torque value will change. To calculate the new torque output of the wrench use the following formula:

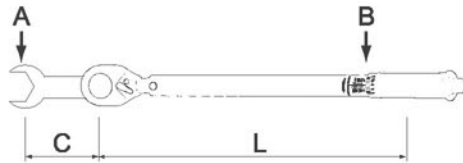
$$A = \frac{L+C}{L} \times B$$

A = Torque exerted @ end of adapter

L = Distance between square drive and hand position

B = Wrench scale reading

C = Length of adapter or extension



A number of variables including the length of the adapter or extension, length of the wrench and variations in hand position on the wrench will affect the accuracy of the above calculation.

## STANDARD

We calibrate each torque wrench at the factory using torque standards according to DIN ISO 6789 & ASME B107.300-2010, and certifies it meets the accuracy requirements of specifications DIN ISO 6789 and ASME B107.300-2010.

CONVERT FROM	TO	MULTIPLY BY
ozf-in	lbf-in	0.0625
lbf-in	ozf-in	16
lbf-in	kgf-cm	1.1519
lbf-in	lbf-ft	0.083333
lbf-in	kgf-m	0.011519
lbf-in	N-m	0.1130
lbf-in	dN-m	1.130
lbf-ft	N-m	1.356
lbf-ft	kgf-m	0.1382
lbf-ft	lbf-in	12
N-m	dN-m	10
N-m	kgf-cm	10.20
N-m	kgf-m	0.10197
N-m	lbf-in	8.8507
N-m	lbf-ft	0.73756
dN-m	lbf-in	0.885
dN-m	N-m	0.100
kgf-cm	lbf-in	0.8681
kgf-cm	N-m	0.09807
kgf-m	lbf-ft	7.233
kgf-m	N-m	9.807

# SUMAKE®

## TORQUE WRENCH

### INSTRUCTION MANUAL

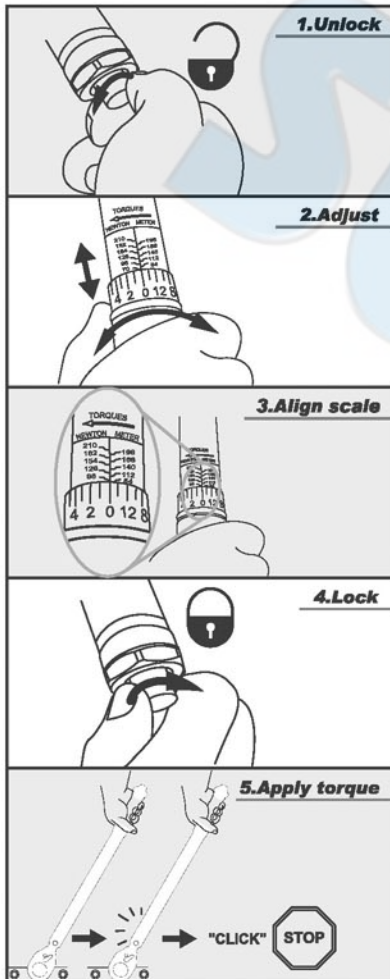
RATCHET HEAD

TORQUE SCALE

HANDLE

LOCK & UNLOCK COLLAR

## OPERATION



## SAFETY INSTRUCTIONS

### WARNING

#### RISK OF FLYING PARTICLES

- NEVER USE TORQUE WRENCH TO BREAK LOOSE FASTENERS.
- NEVER USE TORQUE WRENCH AS A LEVER BAR.
- USE OF DAMAGED HAND TOOLS, SOCKETS, EXTENSIONS AND ACCESSORIES MAY RESULT IN INJURY.
- DO NOT USE TORQUE WRENCH AS A HAMMER.
- TORQUE WRENCHES NOT IN CALIBRATION MAY CAUSE DAMAGE TO PARTS OR TOOLS.
- DO NOT USE EXTENSIONS ON HANDLE AS DAMAGE TO TORQUE WRENCH WILL RESULT.
- OVER TIGHTENING OF FASTENERS MAY RESULT IN BREAKAGE.



**ALWAYS USE EYE PROTECTION WHILE USING HAND TOOLS**



### WARNING



#### INJURY MAY RESULT FROM ELECTRICAL SHOCK

- HANDLE IS NOT INSULATED, DO NOT USE ON LIVE ELECTRICAL OR HIGH VOLTAGE CIRCUITS.

## CARE AND MAINTENANCE

- The torque wrench is a precision instrument, and should be stored with care. Don't throw it around, use hammer with it, or use it as lever bar.
- The torque wrench is lubricated for life and should not be oiled. The only exception is the ratchet head which may be lubricated as needed for smooth operation.
- The torque wrench is a precision measuring instrument. Calibration must be done regularly to ensure accuracy and it's the owner's responsibility. Suggested calibration period is at least every 12 months or even shorter depending on situation.
- Always store the torque wrench in the box after use to stay away from dirt and humidity.
- Never disassemble the torque wrench by yourself. For any need to disassemble the torque wrench or repair it, please look for assistance from qualified service station. Any incorrect action to disassemble the torque wrench may result in damage of this instrument.