



The Patented
Wireless Swing Type Torque Transducer
Compatible with
All Interchangeable Head Torque Wrenches

Passion for Innovation
Your Problems ~ Our Inspiration

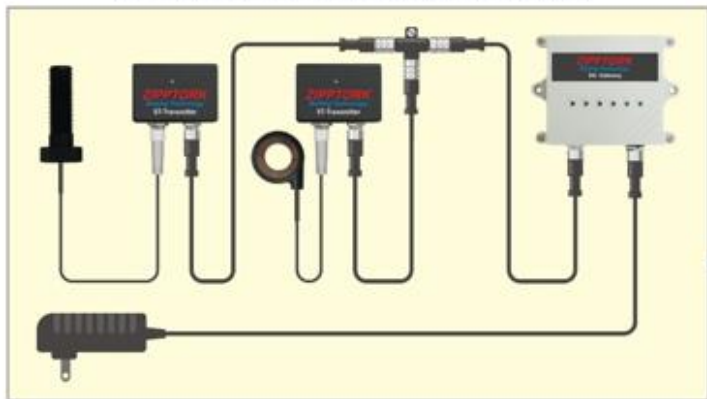
www.zipptork.com

Torque Control & Bolt Load Control System

Bolt Load Control System

Applicable To

Control Bolt Load / Control Bolting Sequence
Monitor bolted Joint Status / Bolting Work Record and Uploading
The Ultimate Solution of Bolting Technology



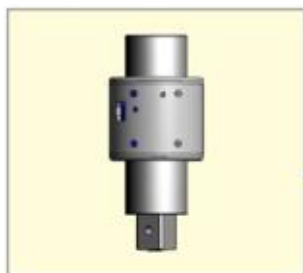
SWC Sensing Bolt / SBC Sensing Washer

Granted Patents Anti-vibration wireless Bolt Load Transducer
Anti-vibration Sensing Washer Bolting Sequence Control Method



WTT

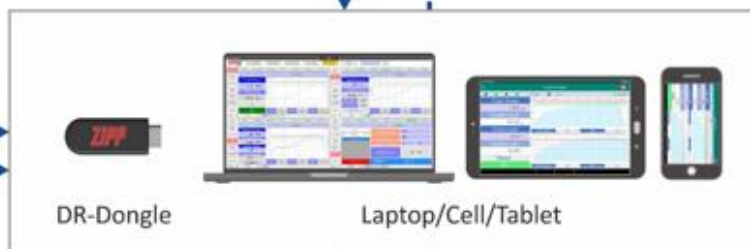
Wireless Tension Transducer



BLT

Bolt Load Transducer

Can be fastened by any type of manual & air or DC driven impact or pulse wrench of ANY BRAND with ANY TORQUE MECHANISM



DR-Dongle

Laptop/Cell/Tablet

The ONLY Torque Controller capable to control
Air or Cordless impact & pulse wrenches in the field



Cordless Wrench with
built-In ECB Controller

Torque Control System

Applicable To

Calibrate tool Torque ~ Prior to Work
Monitor/Control Bolting Torque ~ During the Process
Verify Residual Torque ~ After Bolted
With great control accuracy, durability
and complete process record for traceability



TCA/TCB/TCC Torque Controller

Unique Bolting Torque Controllability



Patented & the ONLY wireless anti-vibration
Torque Transducer in the field



STA

Swing Type Torque Transducer



TTAS/TTES/TTEH/TTEB

Rotary Type Torque Transducer

Applicable to any type of air & cordless impact
or pulse wrench of ANY BRAND with
ANY TORQUE MECHANISM

Torque Control Series Products

Smart Series

Torque Controller / Wireless Torque Transducer / Torque Tension Tester / Dongle

Applicable to any Air Impact wrench/ Oil Pulse tool regardless of brand & torque mechanism

Patented control device & algorithm

Cost-Effective Solutions

Easy set-up in minutes

Data collection for traceability

Remote configuration and monitoring with IoT Gateway

Dynamic Torque Control for discrete type tools



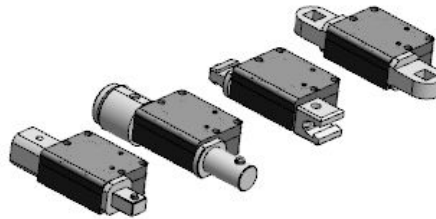
TCA / TCB / TCC

Torque Controller



TTAS/TTES/TTEB/TTEH

Rotary Type
Torque Transducer



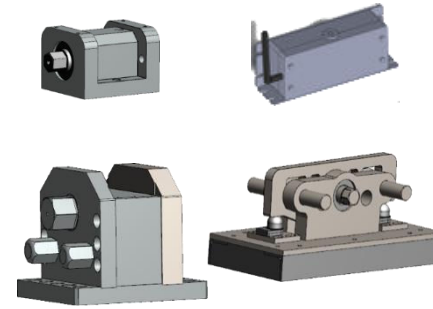
STA

Swing Type
Torque Transducer



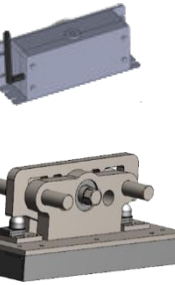
DR

Dongle

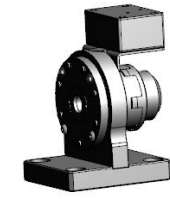


TTS/TTL

Torque Tester

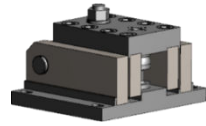


LTS/LTL



TTT

Torque Tension Tester



LTT

Torque Sensing Series Products

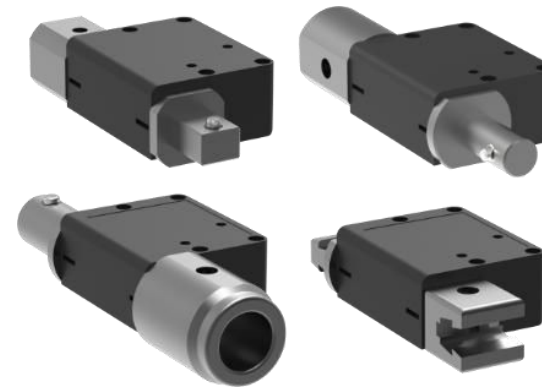
Wireless Series Torque Transducers

Applicable to any Air Impact wrench/ Oil Pulse tool regardless of brand & torque mechanism

Unique wireless & anti-vibration design / Cost-Effective Solutions/ Easy set-up in minutes
Data collection for traceability / Dynamic Torque Control for discrete type tools



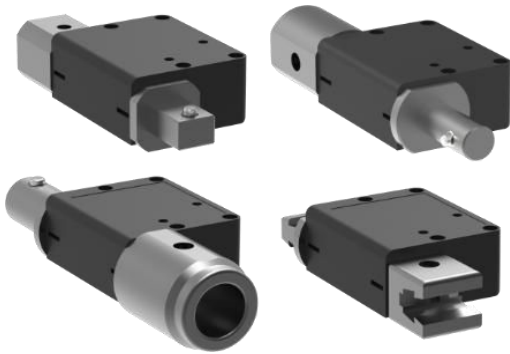
TTAS / TTES / TTEH / TTEB / TTER
Rotary Type Torque Transducer



STA
Swing Type Torque Transducer

Wireless Swing Type Torque Transducers

STA Wireless Swing Type Torque Transducers



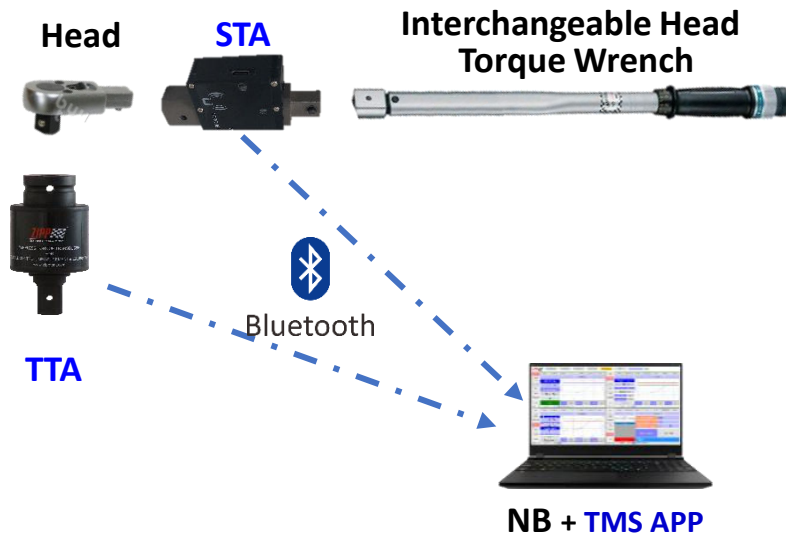
data link

1. Patented design: the only swing-type torque transducer to be mounted and detachable between the “Interchangeable Head Wrench” and “Head.”
2. Wireless design for great maneuverability.
3. Digitalize conventional “ Interchangeable Head Wrenches” for torque. and angle control throughout the process & residual torque verification after bolted.
1. The head adaptor design allows for easy replacement of various types of HEADs, increasing maneuverability and convenience.
2. Data can be transmitted wirelessly via BT 5.0 G to a Gateway, peripheral device, or cloud server.
3. Available torque capacity ranges from **20NM** to **1,000NM**.
4. One-year or 500,000 cycles warranty.

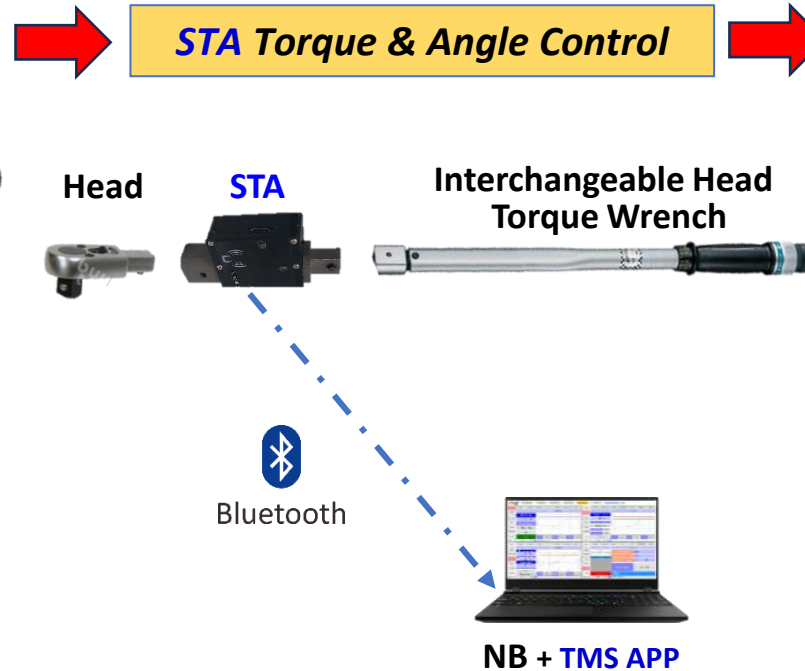
STA Application System Architecture

- Attached are the Interchangeable Head Torque wrenches and the corresponding type of **HEAD** for torque and angle control during the bolting process
- The torque wrench, STA, and the corresponding type of HEAD must be calibrated after assembly and before use.
- All bolting relevant data can be transmitted wirelessly and collected or uploaded to peripheral devices.

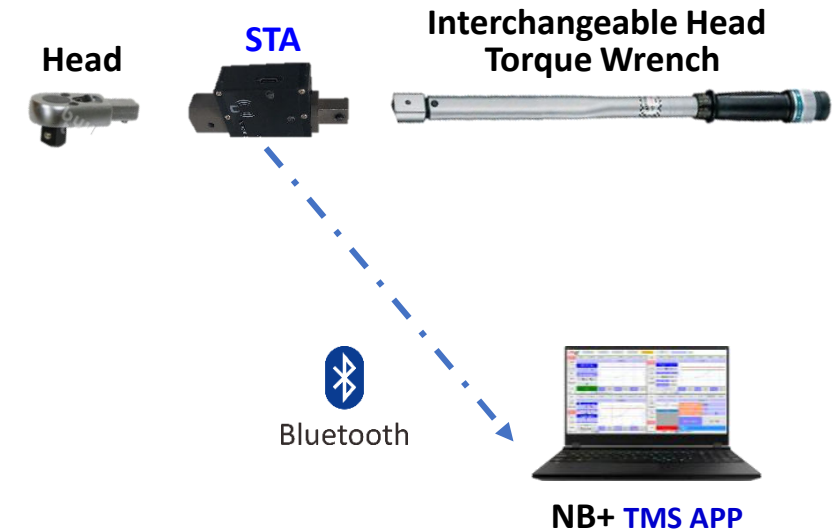
STA Torque & Angle Calibration



STA Torque & Angle Control



STA -Residual Torque Verification

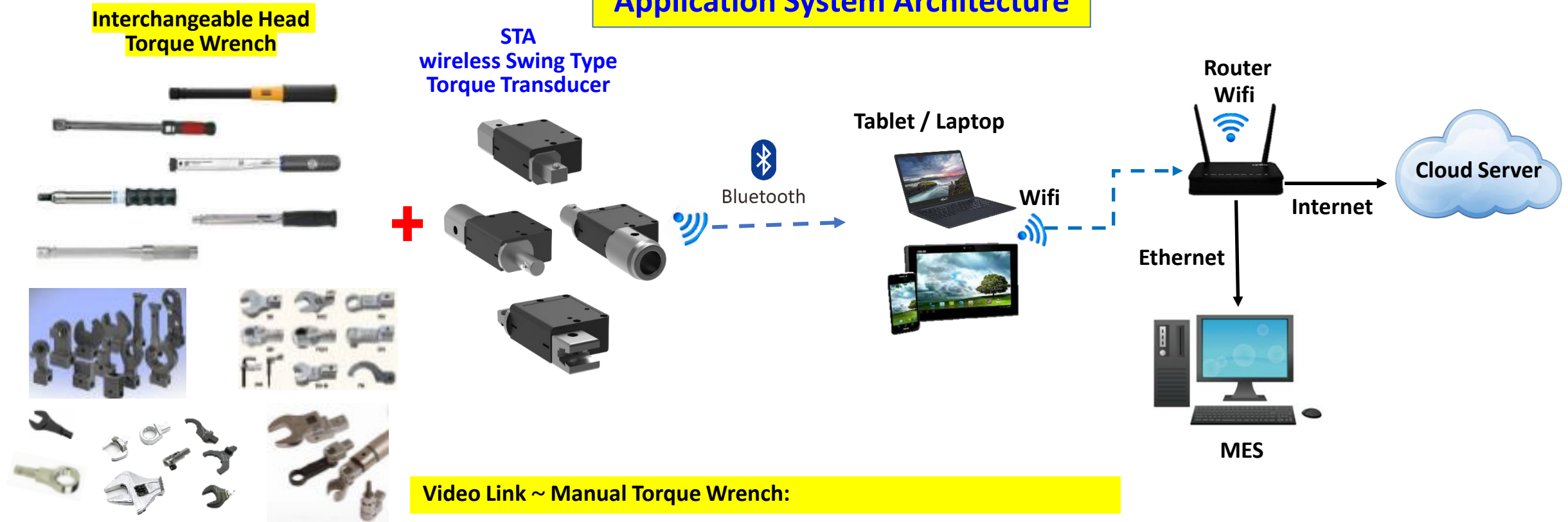


Torque Sensing & Data Collection for Interchangeable Head Torque Wrenches

Interchangeable Head Torque Wrench+ STA wireless Swing Type Torque Transducer → Tablet / Laptop
(APP~Android/Windows) → WiFi → peripheral devices or Cloud Server

**Torque control accuracy within $\pm 5\%$ or less, depending on the quality and stability
of the tool used and the grip of the tool during operation**

Application System Architecture



Application Embodiments of

Combinations of the IHTW, the Heads, The STA Transducers, and various types of Head Adaptors

Main Brands
Atlas Copco, EGA,
M.Shimizu, Crane

IHTW

European DIN Style

Rectangular Structure in
9 X12, 14 X 18, 24 X 32, 27 X 36

Standard Type STA

Hybrid Type STA

Versatile Type STA

Combo Type STA

RF-Rectangular Female, Out

RF-Rectangular Male, In

Adaptor Slot

Adaptor Slot

Adaptor Slot

Adaptor Slot

Head Adaptor
Output End

RF-Rectangular Female, Out

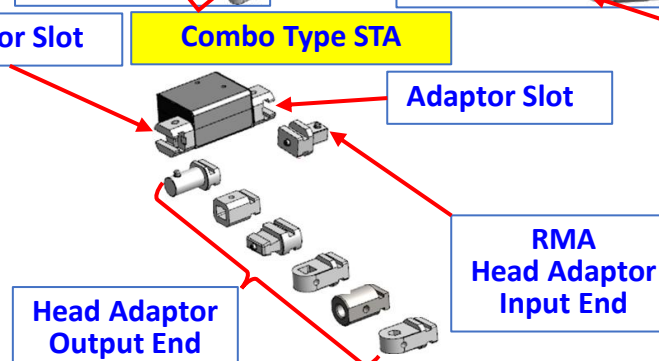
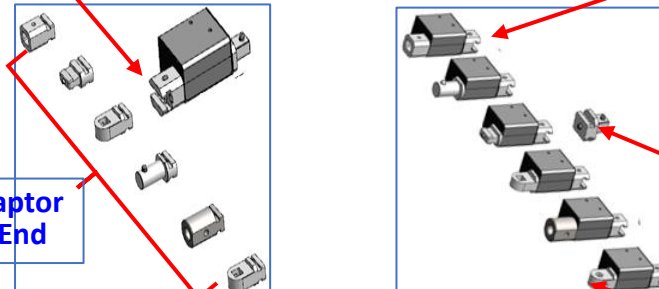
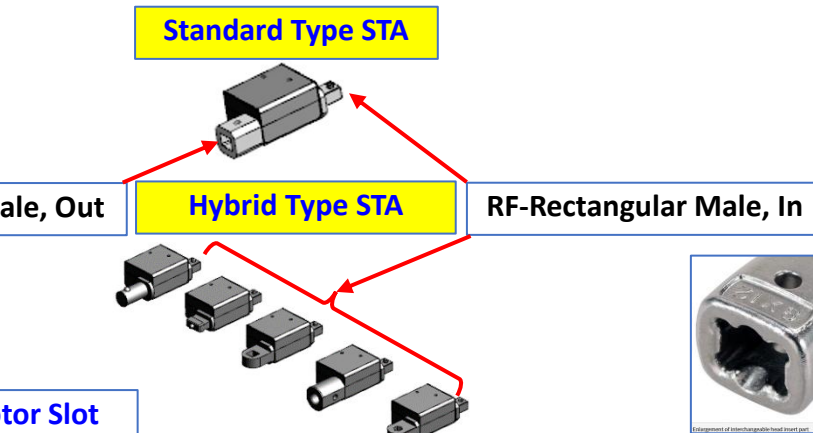
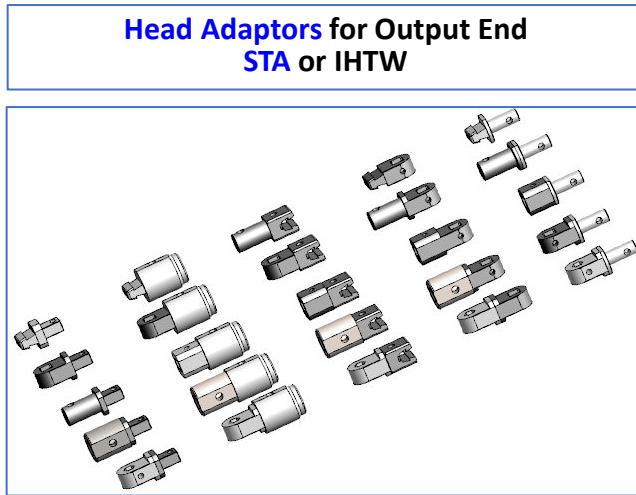
RMA
Head Adaptor

Head Adaptor
Output End

Head Adaptor
Output End

RMA
Head Adaptor
Input End

Head Adaptors for Output End
STA or IHTW



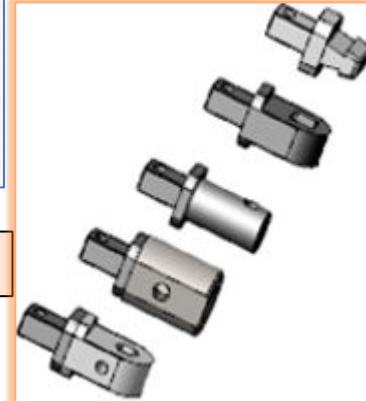
IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the **Head** Structure of the **IHTW** (Interchangeable Head Torque Wrench) or swing-type **Torque Transducers** to assemble with other types of **Heads**

Atlas Copco **EGA** **Crane** **M.Shimizu**

IHTW with European DIN Type of Heads

Rectangular Structure in 9 X12, 14 X 18, 24 X 32, 27 X 36 mm



Head Adaptors to be attached to the output end of IHTW to convert the **HEAD** structure for accessing other type of **HEADS**

STA to be installed between the output end of IHTW & the **HEAD** of original rectangular type of **HEADS**

Standard Type	Hybrid Type	Versatile Type	Versatile Type	Combo Type

IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the Head Structure of the IHTW (Interchangeable Head Torque Wrench) or swing type **Torque Transducers** to assemble with other type of **Heads**

Torqueleade - Gedore	EGA	BAHCO	Spigot Type Interchangeable Head Torque Wrench	Spigot HEAD's Input I.D. in 8, 16 & 22 mm
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<https://www.surkontools.com/norbar-torque-wrench-ratchet-heads>

Norbar Torque Wrench Ratchet Heads

Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADs

STA to be installed between the output end of IHTW & the HEAD of original Spigot type of HEADs

Standard Type	Hybrid Type	Versatile Type	Versatile Type	Combo Type

IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the **Head** Structure of the **IHTW** (Interchangeable Head Torque Wrench) or swing-type **Torque Transducers** to assemble with other types of **Heads**

Sturtevant Richmond



Dovetail

Box Heads



Hex-Key Heads



Open-End Heads



Square-Drive Heads



Hex

IHTW with American Type of Heads



<https://www.mcmaster.com/products/interchangeable-head-torque-wrenches/>

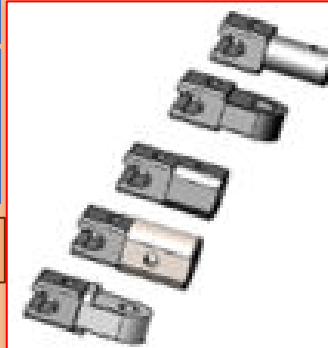
Adapter for DIN Style Heads

This series has two sizes: **9mm x 12mm** and **14mm x 18mm**. Ideal when you have heads with DIN-style rectangular connectors and need to connect them to SR interchangeable head torque wrenches.



Adapter for Round Style Heads

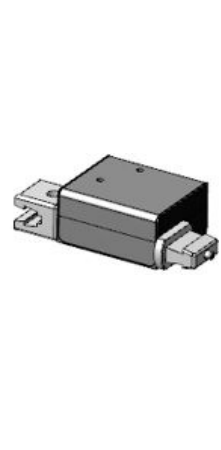
This series has two sizes: **"J" and "Y"**. Ideal when you have heads with round connectors and need to connect them to S/R interchangeable head torque wrenches.



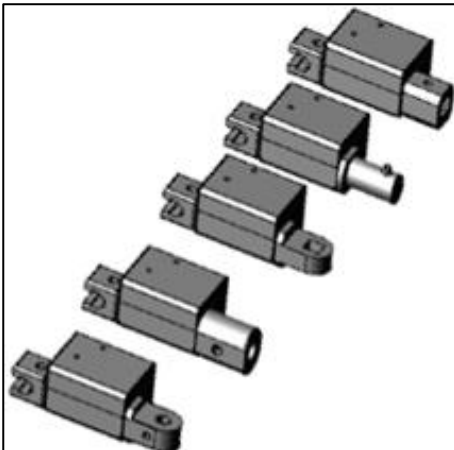
Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADs

STA to be installed between the output end of IHTW & the HEAD of original SR type of HEADs

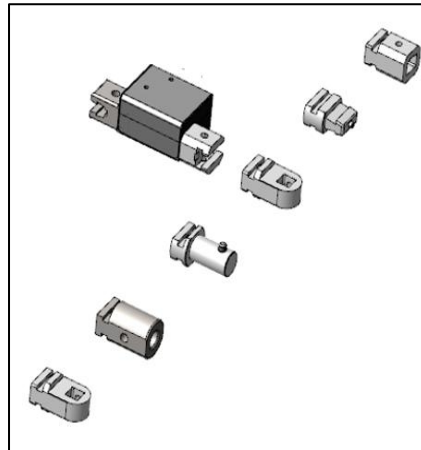
Standard Type



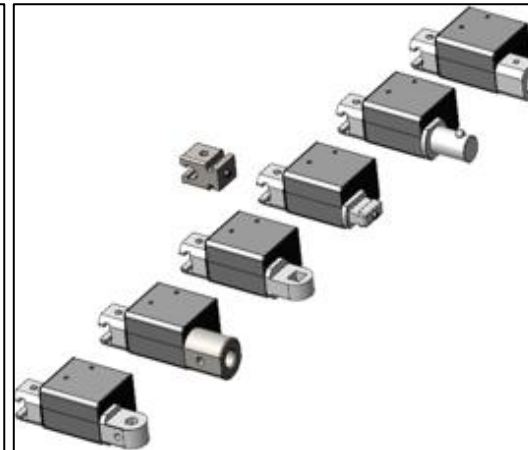
Hybrid Type



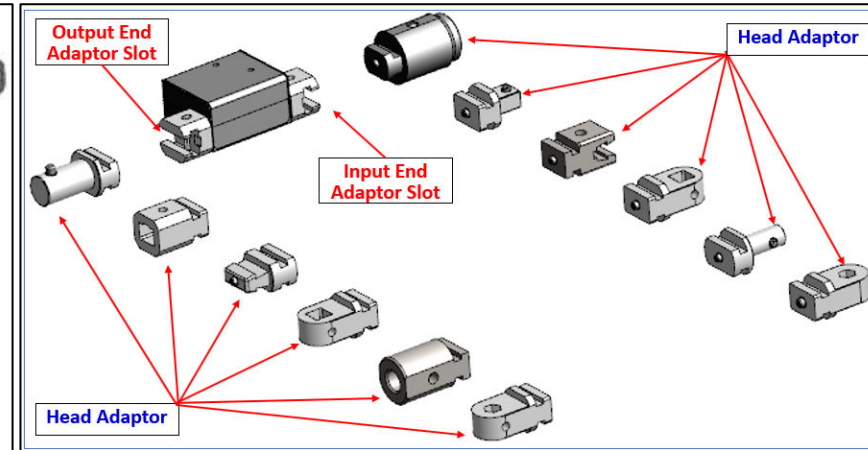
Versatile Type



Versatile Type



Combo Type



IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the Head Structure of the IHTW (Interchangeable Head Torque Wrench) or swing-type Torque Transducers to assemble with other types of Heads

Snap-on-CDI



IHTW with American Type of Heads



Square Drive (Inches)	J (0.425")	Max Torque Ft. Lbs.	Y (0.560")	Max Torque Ft. Lbs.	X (0.735")	Max Torque Ft. Lbs.	Z (0.990")	Max Torque Ft. Lbs.	Z Dual Pins



Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADs

The output end ID of IHTW & Adaptor or HEAD's shank OD either for "J" , "Y" , "X" or "Z" size should be custom-made upon request.

STA to be installed between the output end of IHTW & the HEAD of original CDI type of HEADs

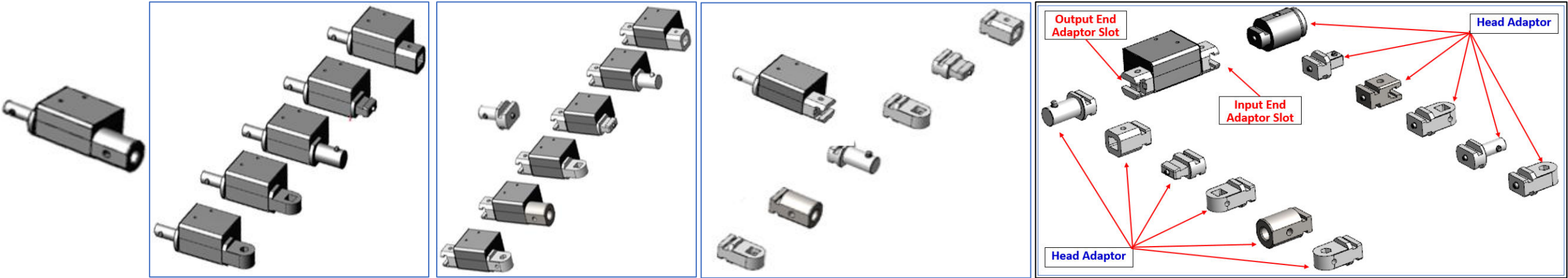
Standard Type

Hybrid Type

Versatile Type

Versatile Type

Combo Type



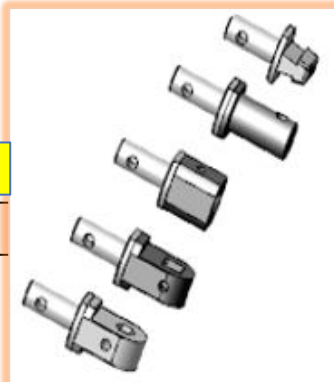
IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the **Head** Structure of the **IHTW** (Interchangeable **Head** **Torque** **Wrench**) or swing-type **Torque Transducers** to assemble with other types of **Heads**

Stanley-Proto



IHTW with American Type of Heads


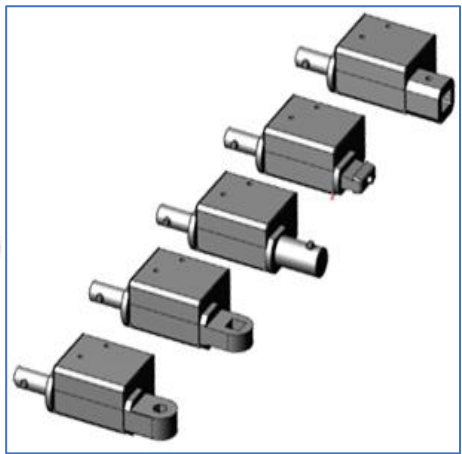
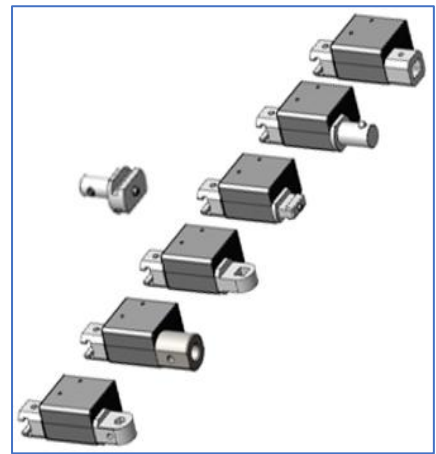
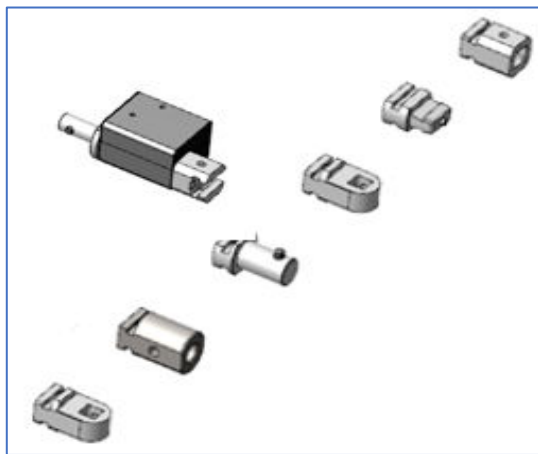
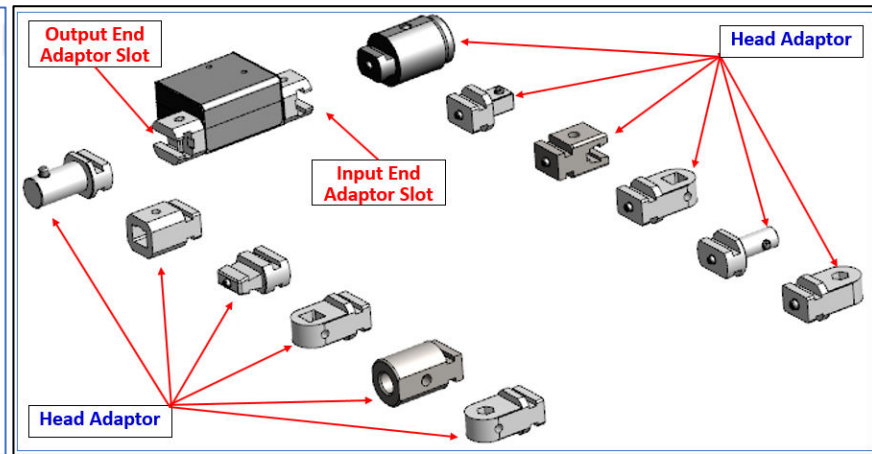


<https://www.protoindustrial.com/en/searchlistproduct/category-Precision%20Torque%20Tools/brand-Proto/subcategory-Interchangeable%20Head%20Torque/>

Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADs

The output end ID of IHTW & Adaptor or HEAD's shank OD either for H4 (1/4") , H5 (3/8") or H7 (1/2") Drive size should be custom-made upon request.

STA to be installed between the output end of IHTW & the HEAD of original PROTO type of HEADs

Standard Type	Hybrid Type	Versatile Type	Versatile Type	Combo Type
				

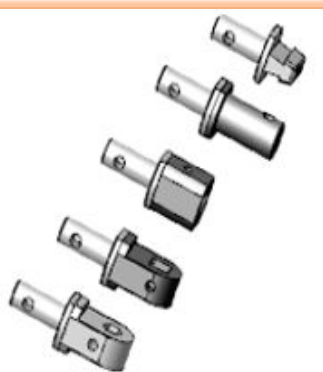
IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the Head Structure of the IHTW (Interchangeable Head Torque Wrench) or swing type **Torque Transducers** to assemble with other type of **Heads**

UTICA

IHTW with American Type of Heads

Utica replacement "A" series drive heads are not interchangeable with Utica "B" series heads.



Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADS

The output end ID & Adaptor Head OD either for UTICA "A" size or "B" size should be custom-made upon request.

STA to be installed between the output end of IHTW & the HEAD of original UTICA type of HEADS

Standard Type	Hybrid Type	Versatile Type	Versatile Type	Combo Type

IHTW Head Structure & Corresponding Head Adaptors

Head Adaptors for converting the Head Structure of the IHTW (Interchangeable Head Torque Wrench) or swing type **Torque Transducers** to assemble with other type of Heads

Tohnichi

Tone

<https://www.tonetool.co.jp/>

IHTW with Japanese Type of Heads

6D, 8D, 10D, 12D, 15D, 19D, 22D, 27D, 32D (mm)



SH type open head



RH Ring Head



QH Ratchet Head



Head Adaptors to be attached to the output end of IHTW to convert the HEAD structure for connecting other type of HEADs

HEAD's ID in 6,8,10,12,15,19,22,27 & 32 mm with the same profile as Spigot type head, but, different in sizes. It should be custom-made upon request

STA to be installed between the output end of IHTW & the HEAD of original **TOHNICHI** type of HEADs

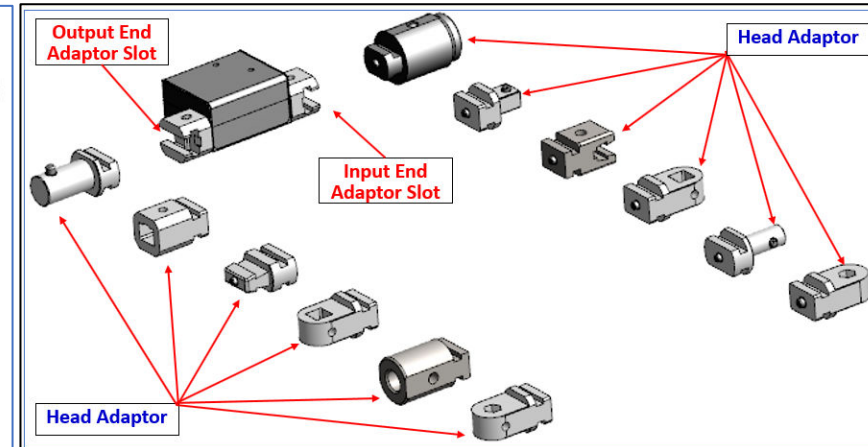
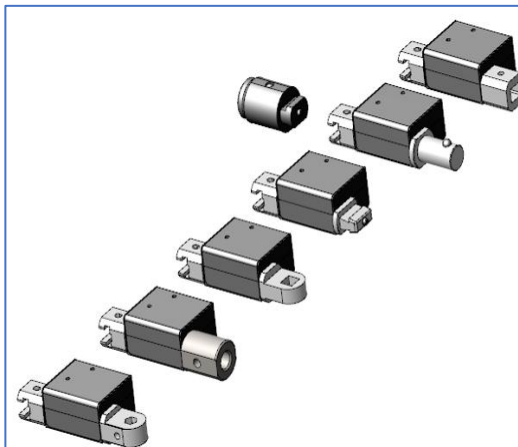
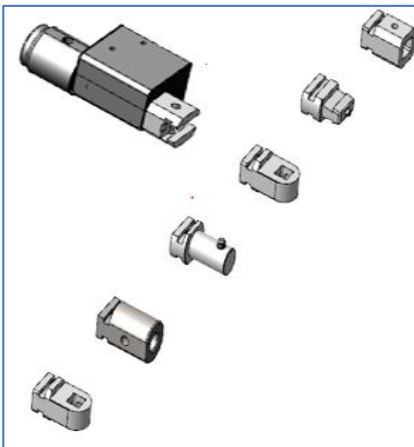
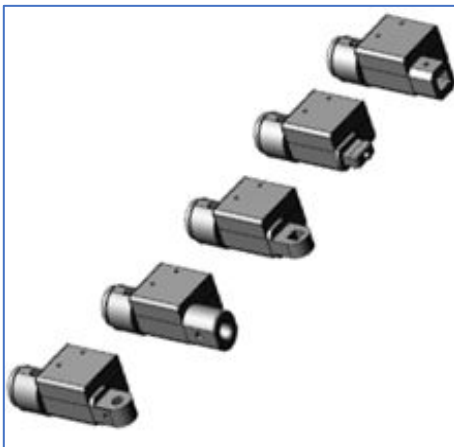
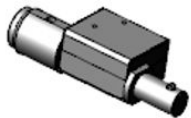
Standard Type

Hybrid Type

Versatile Type

Versatile Type

Combo Type



Torque Tools Compatible with STA Wireless Swing-type Torque Transducers

Type of Heads



Transducer



Interchangeable Head Torque Wrenches



European DIN Style

Atlas Copco

EGA

Crane

M.Shimizu

Rectangular Structure in 9 X12,
14 X 18, 24 X 32, 27 X 36 mm

Spigot Type

Torqueleade - Gedore

EGA

BAHCO

Input I.D. in 8, 16 & 22 mm

Japanese Style

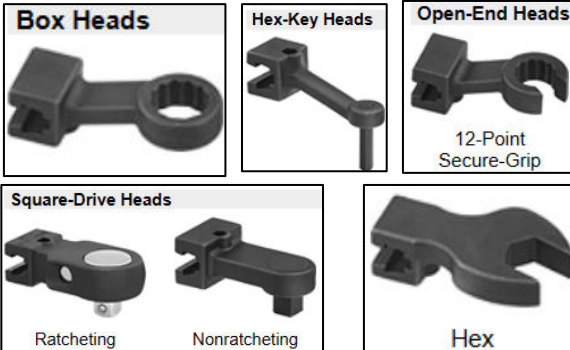
Tohnichi

Tone

6D, 8D, 10D, 12D, 15D,
19D, 22D, 27D, 32D (mm)

Torque Tools Compatible with STA Wireless Swing-type Torque Transducers

Type of Heads



Transducer



Interchangeable Head Torque Wrenches

American Style

Snap-on-CDI

"J" , "Y" , "X" or "Z" size

Stanley-Proto

H4 (1/4") , H5 (3/8") or
H7 (1/2") Drive Size

UTICA

Utica "A" series drive heads
& "B" series drive heads

Sturtevant Richmond

Dovetail Type



CDI/Williams/Norbar Interchangeable Head Torque wrenches

Snap-on

<https://shop.snapon.com/product/Torque-Wrench-Bodies-Adjustable/Adjustable-Torque-Wrench-Body/QC2I75>

NORBAR

https://www.norbar.com/products/view/product/categoryname/tt-wrenches/rangename/ttfth-female-torque-handles-/pname/ttfth20-9-x-12-mm-4-20-n-m-35-180-lbf-in/category_multid/50/range_multid/363/id/23458

CDI

<https://www.bluetoad.com/publication/?m=53784&i=470827&p=26&ver=html5>

Williams

https://www.williams-industrial.com/us_en/interchangeable-head-torque-wrenches-pb_50nmimhw---150mfimhssw_.html



☐ [Compare](#)

CP Desoutter CF2005 Flection Static Torque Wrench (3.7-51.6 ft.lbs.) by CP Desoutter Tools

Please call us at 1-800-353-4676 for pricing, availability, or to order.

The Expert Wrench is a powerful, compact system capable of performing advanced tightening strategies including torque control, angle control and yield control. These wrenches ensure quality torque results for all your bolted assemblies. The wrench can record, store, and download the tightening data. Each ETW-E kit includes the wrench, battery charger, cable, storage case, operations manual and calibration certificate. [more info](#)



☐ [Compare](#)

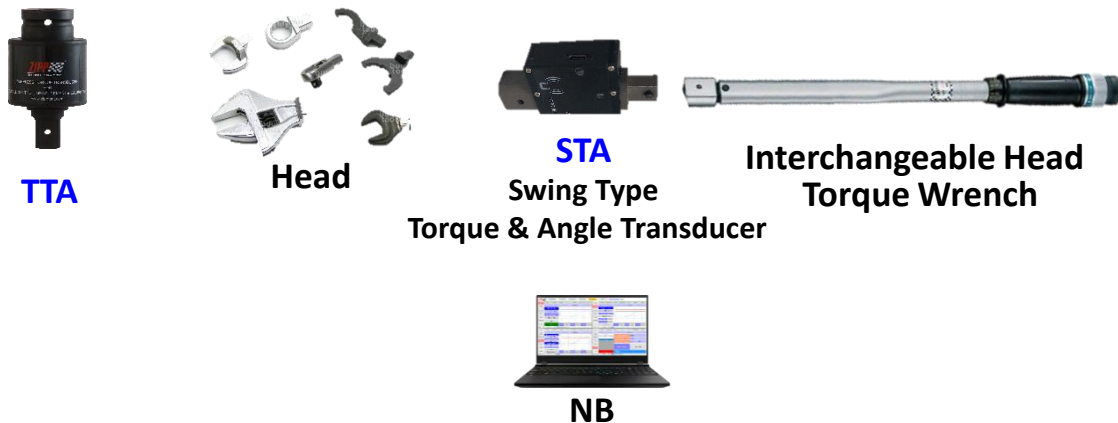
CP Desoutter CF2010 Flection Static Torque Wrench (7.4-110.5 ft.lbs.) by CP Desoutter Tools

Please call us at 1-800-353-4676 for pricing, availability, or to order.

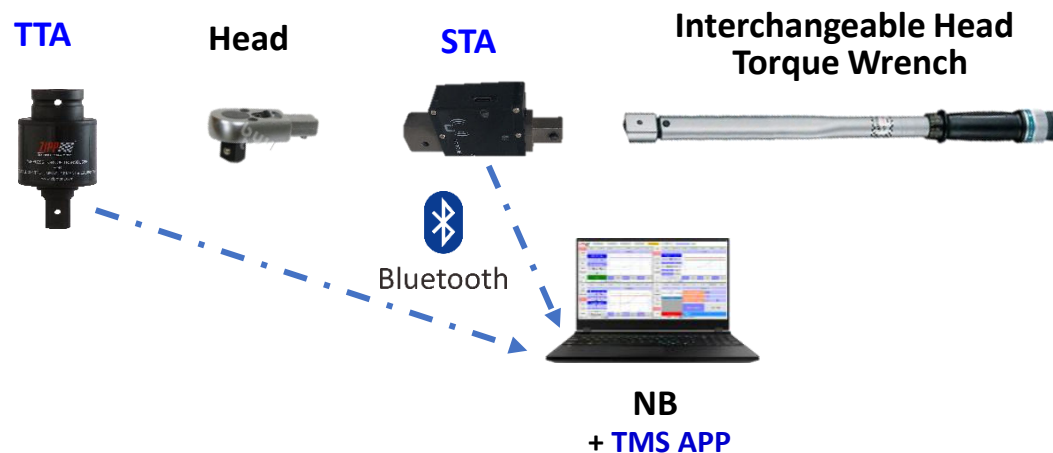
The Expert Wrench is a powerful, compact system capable of performing advanced tightening strategies including torque control, angle control and yield control. These wrenches ensure quality torque results for all your bolted assemblies. The wrench can record, store, and download the tightening data. Each ETW-E kit includes the wrench, battery charger, cable, storage case, operations manual and calibration certificate. [more info](#)

STA-Torque & Angle Calibration

What are required



System Architecture

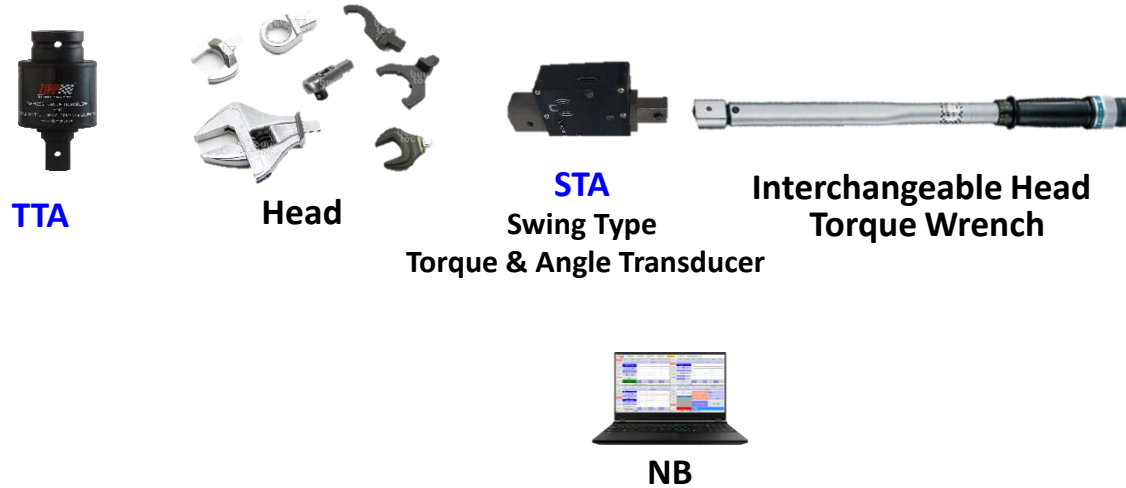


Procedures

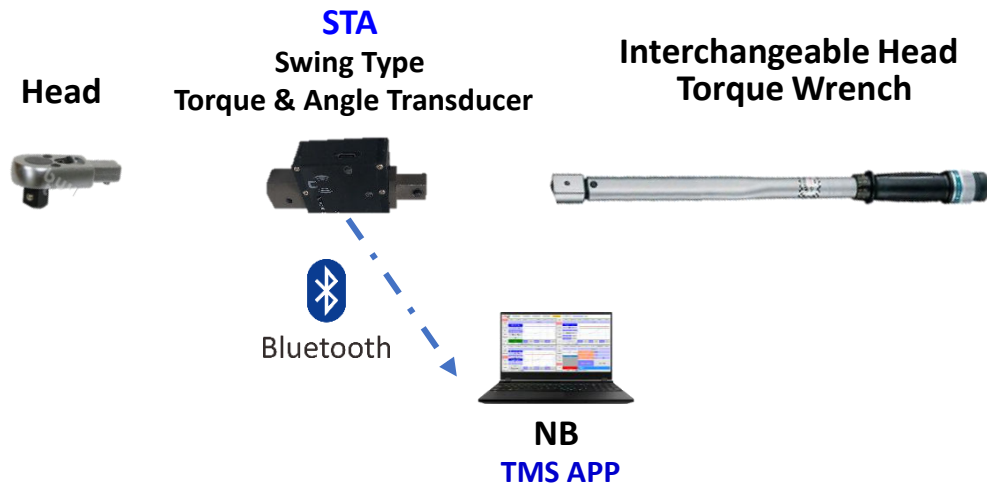
1. Assemble the **HEAD** with **STA** & Interchangeable Head Torque Wrench
2. Open **TMS APP** software
3. Complete the pairing of **TTA** and **STA**, respectively. After setting, turn on the **TTA** and **STA**.
4. Continue to press the "Torque Correction" button to enter the "Torque Correction" page.
5. . In the TMS APP, select the STA mode to enter the settings page, where you can select the STA model you want to use.
6. In **the TMS APP**, select **STA mode to enter the settings** page and select the TTA model you want to use.
7. Press the "Add" button and enter the tool combination number & name, Head number, and torque wrench number. The system automatically retrieves the **STA** number in the connection
8. Set the target torque
9. Insert the assembled STA wrench into the **TTA**, then continue to attach the socket and start to tighten the bolt.
10. Stop tightening when the **TTA** indicates that the target torque has been reached.
11. The system automatically fills the static torque value of **TTA** and **STA** into the corresponding form field in the software to complete the torque calibration.
12. After the system completes the correction of the torque value, the operator needs to measure the length of the torque arm and fill in the angle parameter, then press the "Save" button to complete the angle calibration.

STA -Torque Control

What are required



System Architecture

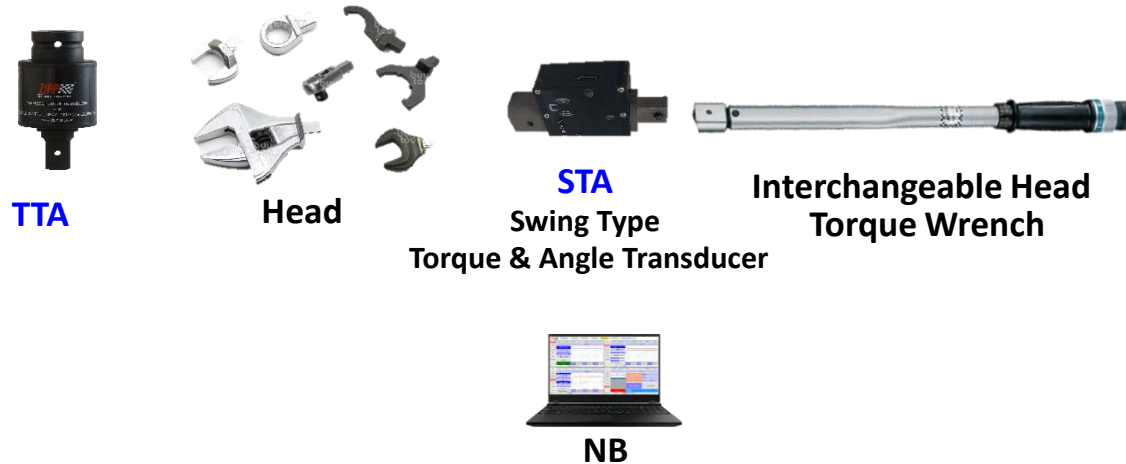


Procedures

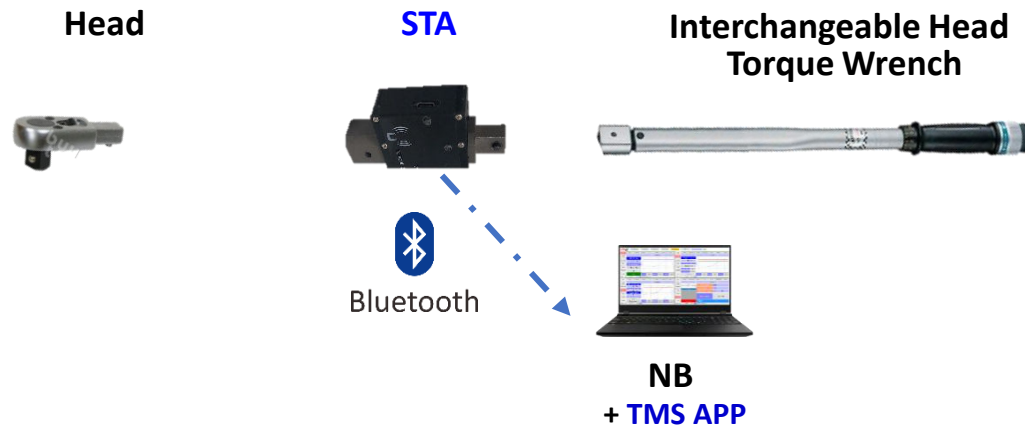
1. Open the **TMS APP** software
2. Enter the STA mode and then press the "setup" button to enter the "setup" page
3. Select the combination code
4. Please follow the combination shown in the tool combination code to complete the assembly (head with **STA** and interchangeable head wrench) in order.
5. Turn on the **STA transducer** power
6. Select the **STA transducer** you want to use (should be the same as the tool combination setting)
7. Select the working mode <torque>.
8. Set the inspection conditions and accuracy
9. Return to the work page
10. Set the final target torque
11. Start bolting
12. Release the **STA** after bolting to the target torque prompted by the system.
13. QC judgment
14. System completion work record (operator ID, date& time, target torque, actual torque, accuracy, and tool combination code)Translated with www.DeepL.com/Translator (free version)

STA -Torque & Angle Control

What are required



System Architecture

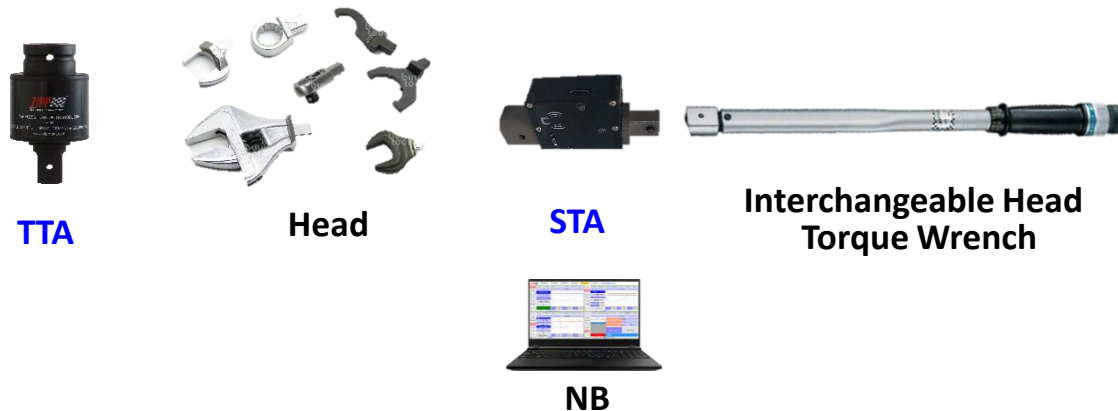


Procedures

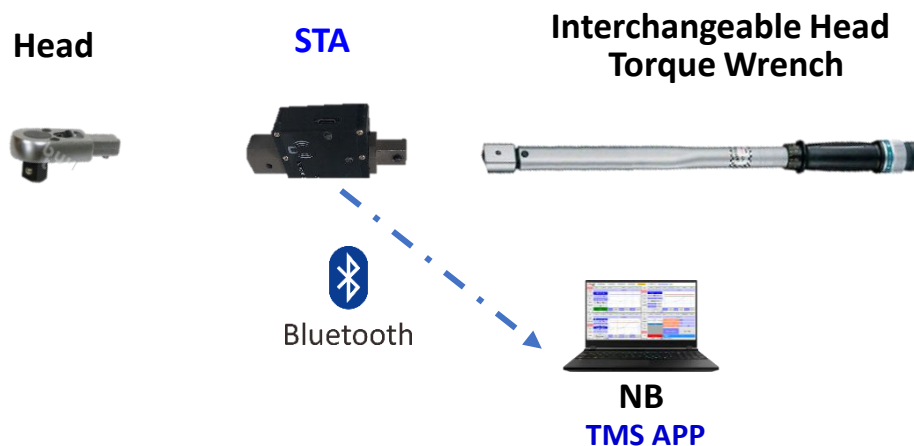
1. Open the **TMS APP** software
2. Enter the **STA mode** and then press the "setup" button to enter the "setup" page
3. Select the combination code
4. Please follow the combination shown in the tool combination code to complete the tool combination (headset with **STA** and interchangeable head torque wrench) in order
5. Turn on the **STA transducer** power
6. Select the **STA transducer** you want to use (the same tool combination setting is required)
7. Select the working mode **<Torque + Angle>**.
8. Set the inspection conditions and accuracy
9. Return to work page
10. Set the initial target torque
11. Set the final target torque
12. Set the target angle
13. Start bolting
14. Release the **STA** after bolting to the target torque prompted by the system.
15. Start bolting again and release **STA** after reaching the target angle.
16. QC judgment
17. The system completes the work record (operator ID, date & time, target torque, actual torque, QC result, and tool combination code)

STA-Residual Torque Verification

What are required



System Architecture



Procedures

1. Open the **TMS APP** software
2. Enter the STA mode and then press the "setup" button to enter the "setup" page
3. Select the combination code
4. Follow the combination shown in the tool combination code to complete the tool combination (head with **STA** and the wrench)
5. Turn on the **STA transducer**.
6. Select the **STA transducer** you want to use (to be the same tool combination setting)
7. Select the working mode **<Torque Verification>** .
8. Set the inspection conditions and accuracy
9. Return to work page
10. Set the target torque
11. Set the target angle
12. Start inspection
13. Loosen the **STA** after tightening to the target angle prompted by the system.
14. QC judgment
15. System complete with work record (operator ID, date & time target torque, actual torque, inspection conditions & accuracy, and tool combination code)

Interchangeable Head Torque Wrenches Compatible with STA **ZIPPTORK** Bolting Technology Torque Control • Bolt Load Control

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GEDORE	FACOM	LAWTON TOOLS	ZEMO
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