E-MEDElectronic Torque Wrench

700~15000 N.m

Operating Manual

E-MED 40

E-MED 60

E-MED 80

E-MED 100

E-MED 150

Content

Safety Instruction

Note:

This product is safe and reliable, and failure to comply with the precautions and instructions for use set out in this manual may result in injury to the product, the operator and their colleagues. WREN will not be responsible for such injuries.

1.The WREN Electronic Torque Wrench system is intended for bolting in commercial and industrial applications.

2.Before operating, be sure to read and understand this user manual and pay attention to the safety signs on the tool system and in this manual.

3.Only qualified personnel trained in the safe operation of torque tools and tool systems should attempt to install, operate and judge tool systems improperly trained or operated that may result in serious injury.

4.Please do not disassemble or attempt to repair the tool system; Otherwise, the quality guarantee service will no longer be available. If the tool fails or is damaged and does not function properly, please contact WREN for technical support. This wrench system should only be used if the environment and operation are correct Command.

5.Electric shock can cause serious or fatal injury, do not link the wrench operating system without verifying that the power supply is connected. Make sure the wrench controller and tool handle are properly grounded before turning on the power.

6.Do not touch any power supply until the power switch is disconnected, the AC power is cut off, and there is no high voltage, do not touch any power supply, do not conduct connections, or remove the top plate of the E-MED servo motor wrench controller.

7.Ensure that all power cords of connected AC cables comply with national and local electrical regulations. Improper wiring can lead to unsafe conditions for equipment or personnel. WREN does not recommend replacing the AC power supply used. If you use a different cable or power adapter, please make sure the ground pin is correct.

8.Wear protective goggles when using and keep no part of your body touching moving parts and reaction arm contact points. During the use of the E-MED Electronic Torque Wrench, please always hold the wrench handle tightly to maintain support for the wrench, which can prevent accidental slip damage during the fastening process.

9.It is not allowed to exceed the maximum torque value of the E-MED wrench tool system. Otherwise, the quality guarantee service will no longer be available.

10.The E-MED wrench tool system is proofread by professional proofreaders. Proofreading must be done by professional proofreading technicians, improper proofreading can cause damage to tools and joints.

1.General Information

1.1 System Element

The E-MED electronic torque wrench system produced by WREN consists of the following parts:

E-MED touch screen controller (Fig. 2)
data transmission cable (Fig. 3)
AC power cord (Fig. 4)
Standard reaction arm and retaining ring (Fig. 5)
Quality Certificate
Operating manual

Fig. 1: Torque Wrench

Fig 2: Touchscreen Controller

Fig. 3: Data Transporting Cable

Fig 5: Raection Arm

Fig. 4: AC Power Cable

1.2 Specification

1.2.1 Torque Range

Torque range for E-MED

1.2.2 Electrical specification

Make sure that all of the following electrical specifications are met when using the wrench tool system.

E-MED 40	700-4000
E-MED 60	800-6000
E-MED 80	1350-8000
E-MED 100	2000-10000
E-MED 150	4000-15000

Rated Input Voltage	AC Voltage	220v
Frequency		50Hz
Peak Current		25A
Rated Working Voltage	DC Voltage	230v

Fig. 6

Note: Since the peak current is 25A, as shown in Fig. 6, please pay attention to the adaptation.

1.2.3 Environmen Description

The E-MED series tool should only be operated if the following storage environments and use are met.

Notice

	All Modes	
Ambient operating temperature range	Celsius	Fahrenheit
The lowest	-20	-4
The highest	40	104
Storage Range	-25 to 70	-13 to 158
Humidity	10% to 90% non-condensing	
All Areas	Combustible gases or vapors are prohibited	
Shock Resistant	According DIN IEC 68-2-6/29 为 10G	
Vibration Resistant	DIN IEC 68-2-6/69 为 1G, 10-50Hz	

2.O Power requirement

Danger !

2.1 AC Power

The installer of this equipment shall comply with the national electronic standards or standards of equivalent effect; proper management of protective devices; Follow local guidelines for grounding, power outages, and other general protective measures for indoor and outdoor electrical installations. The following section outlines the power requirements for E-MED series tools

Electric shocks can cause serious injury or be life-threatening. Do not connect the power supply to the tooling system without verifying grounding. Before turning on the power switch, make sure the controller and tool handle are properly grounded. Do not touch any power supply or plug or remove the top cover of the controller until it is confirmed that the power switch is in the open position, the AC power supply is disconnected, and there is no high voltage power. WREN does not recommend replacing the power cable, if you use a different cable or adapter, please make sure there is a grounding plug, and pay attention to stability and reliability when connecting.

Danger !

Ensure that all power wiring connecting AC power cords complies with national and local electrical regulations. Improper wiring can lead to unsafe equipment personnel. The controller requires 220V AC. Single-phase wires must be grounded. The branch circuit current must reach 25 amps to ensure correct operation of the tool and avoid electrical loads and tripping.

2.2 Grounding Safety

Important Message!

Grounding is a mandatory basic protective measure against the occurrence of electric shock.
This product is equipped with a dedicated grounding power cord that connects the tool handle to the controller via an AC power connector. Operators should consciously comply with a guaranteed grounding procedure and all national and local electrical regulations.

2.3 Ground Leakage Protect

Ground fault circuit breakers are second-level protective devices to avoid electric shock situations in the event of a ground wire failure.
Note: National and local electrical regulations may have requirements for the use of ground fault circuit breakers. Please check to comply with the standard.

2.4 Extend the wire

The quality and condition of the extension cord is very important to ensure the safety of personnel and the performance of the product. Please consult and comply with national and local electrical regulations.Although some devices require longer wiring, for any extension wire, the extended wire will cause tripping at low voltage as well as the speed of the tool system in situations requiring greater torque.

2.5 Handle abnormal power outage

If the power supply to this product is cut off, do not turn it on for one minute. This allows input overload protection to function properly. Repeated switching of the power supply at too high a frequency may cause tripping and shorten the service life of the product.

3.O Tool system installation

3.1 Description of Handle

The E-MED series tool is a trigger activation type with a forward and reverse switch (Fig. 7). An LED status display on each side of the tool housing (Fig. 8) indicates to the operator that the tool is ready to run, that the bolting has been successful, or that the connection has failed.

1.Forward and reverse switch—Controls the direction of rotation.

2.Trigger button—The tool activates.

Fig. 7

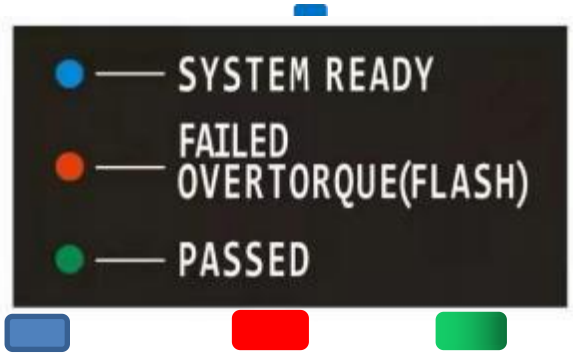


Fig. 8

3.2 Controller Description

The controller contains a touch screen, and the connectors of the AC power supply and tool handle are located on the right side of the controller, as shown in Fig. 9 and Fig. 10.

1.E-MED tool handle connector
2. AC input connector (220V AC)
3.TF card socket
4. Touch screen
5. Boat type switch

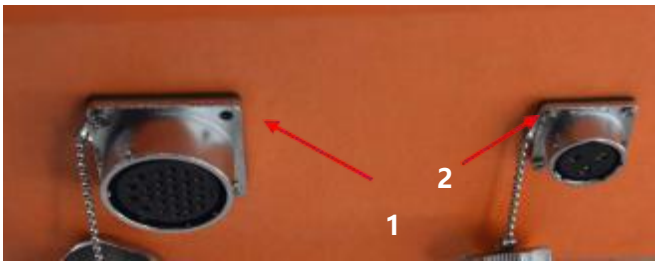


Fig. 9

Fig. 10

3.3 Connect the Handle, Controller, Power

Danger ! Electric shocks can cause serious or fatal injuries. Before turning on the power switch, verify that the controller and tool handles are properly grounded. Do not power on the tool or operate the tool without checking the grounding condition.

Notice ! Do not disconnect the connector when the power is on. Failure to do so will damage the tool or controller.

Following the instructions below, the operator can safely connect to the E-MED tool system. Once these steps are completed, the tool system is ready to power up.

1. Refer to the 2.0 Power Requirements and ensure compliance before connecting the tool handle or AC cable to the controller.
2. Connect the tool handle cable to the plug on the right side of the controller.
3. Make sure the alternating current is grounded.
4. Make sure the AC cable is in good condition; There are no cuts or cracks on the cable insulation jacket, and the latch and grounding plug are in good condition for use.
5. Make sure the power plug is in the disconnected position.

6. Connect the cable to the cable plug on the right side of the controller.
7. Connect the cable to the power supply.
8. Check that the controller and tool handle are properly grounded.

4. Touchscreen Interface

Notice

Touchscreens are susceptible to mechanical vibration, and any external forces applied to components may cause damage.
Moisture or moisture and high temperatures can cause damage to the touchscreen. Avoid this when storing and gently wipe clean or dry before use.
Note: Fingerprint oil ulcer can easily stain the surface of the screen. Please gently wipe clean with a soft, lint-free rag.

4.1 Login Interface

After the connection is completed, turn on the power, the wrench indicator lights up, the display screen enters the loading interface, and then the login interface is displayed, the login interface display and specific functions are shown in Fig. 11, the default password of the administrator is 123456.

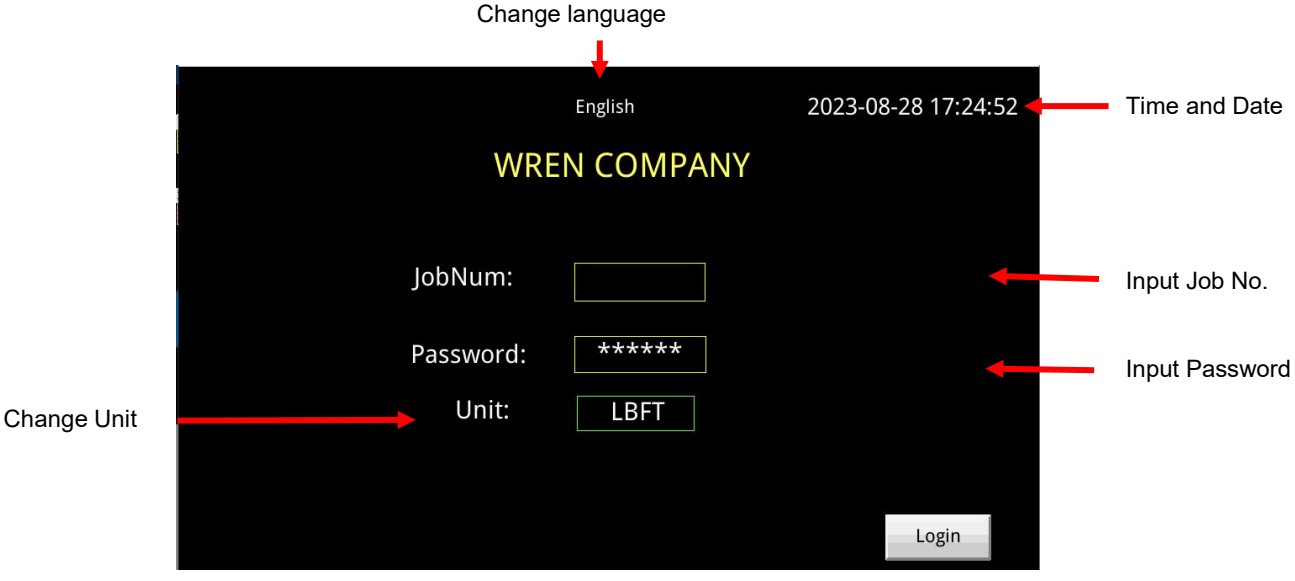


Fig. 11

4.2 Home Screen

The home screen of the E-MED tool: system menu selection, torque, angle setting, Bluetooth smart sleeve, data recording, real-time display of motor speed and temperature, etc., as shown in Fig. 12.

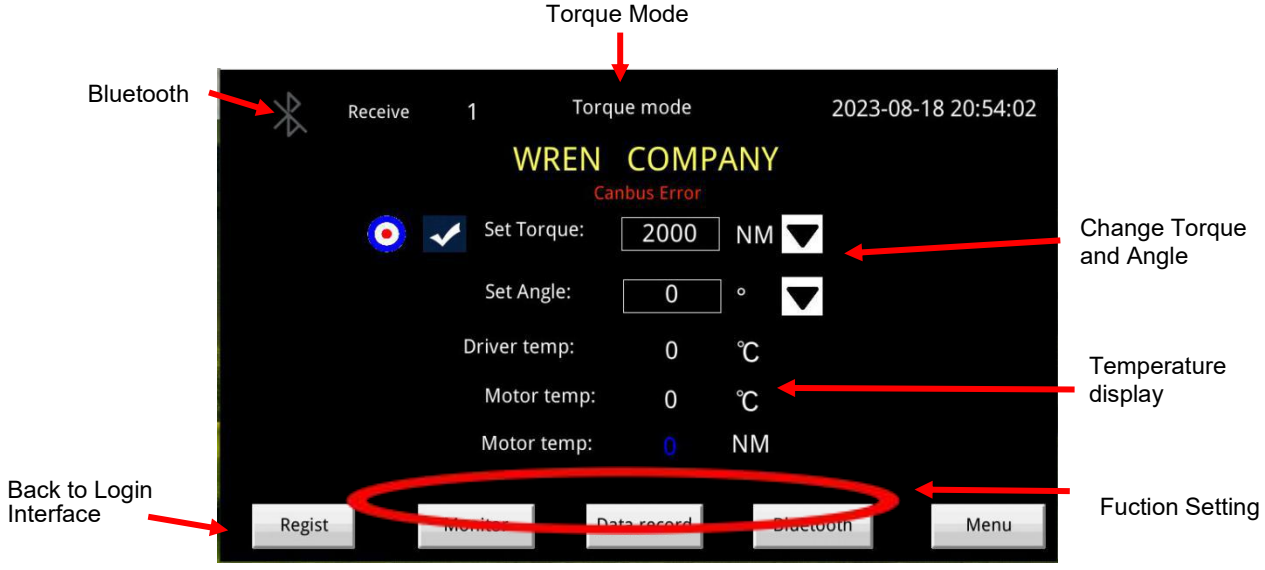


Fig. 12

4.3 Status Display

Through the status display button, detailed information such as real-time motor speed can be displayed on the main interface, as shown in Fig. 13.

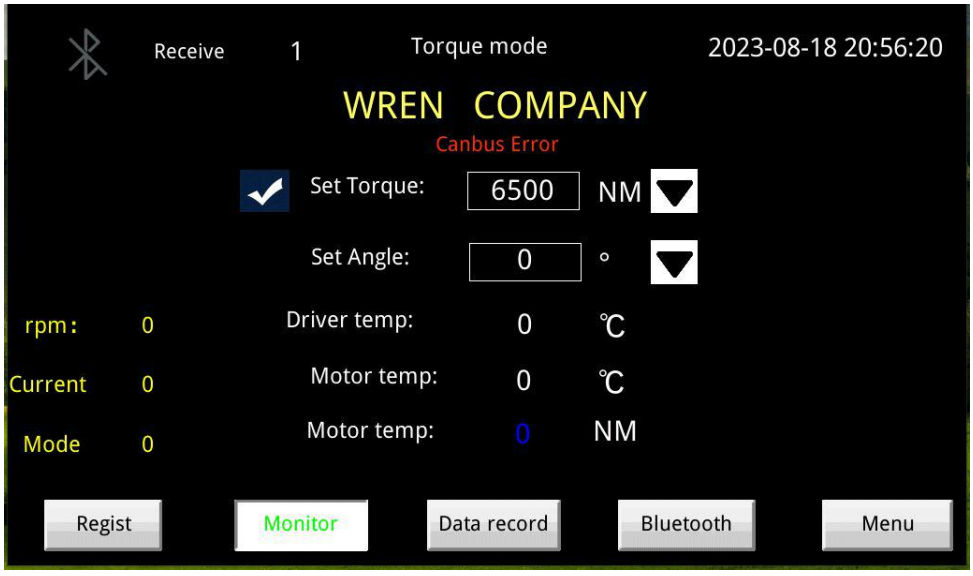


Fig. 13

4.3.1 Data Record

You can view the exported data through the data record button, as shown in Fig. 14, and the exported data is stored in the TF card.
Note: The SD card is inserted and the font color changes to green.

Fig. 14

4.3.2 Bluetooth Setting

Click Bluetooth settings, you can connect a smart socket with Bluetooth function, as shown in Fig. 15, after the connection is successful, the Bluetooth sign will light up.

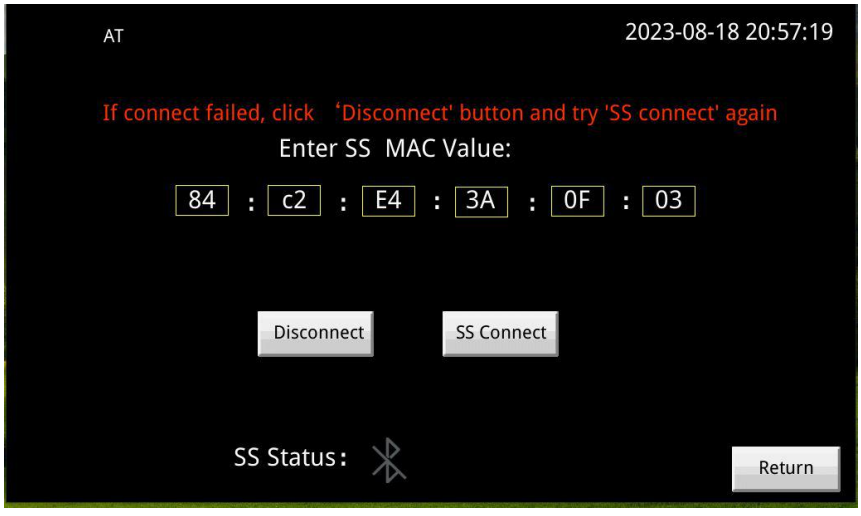


Fig. 15

4.3.3 Change Torque and Angle

（1）Torque Mode

Click Set Torque to set the torque value to be entered, click the triangle sign next to the number box, you can select the preset torque, as shown in Fig. 16;

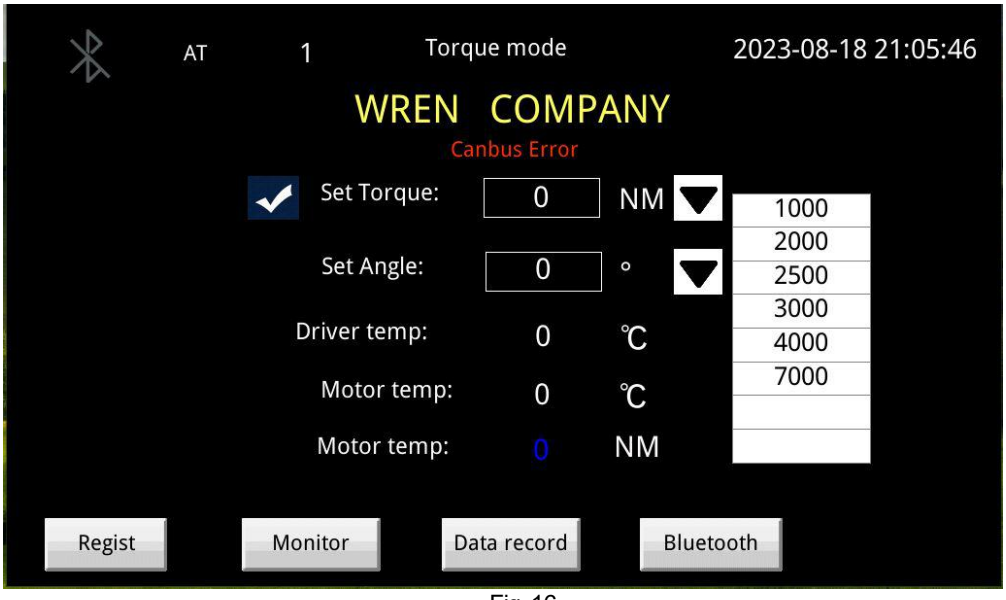


Fig. 16

(2）Angle Mode

Click Set Angle, change the options, and then click the Set Angle digital box, you can set the angle value to be entered, click the triangle sign next to the number box, you can select the preset angle, as shown in Fig. 17;

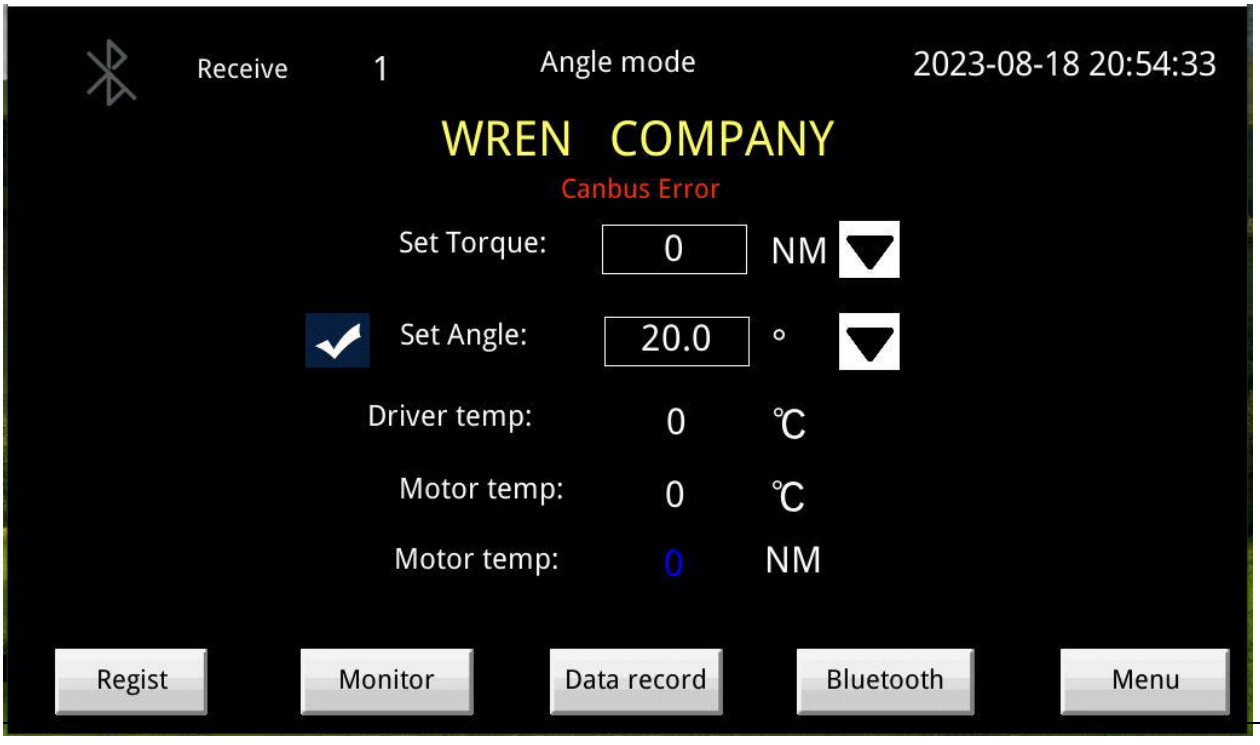


Fig. 17

(3）Torque and Angle Mode

When there is a torque value, set the angle, or when there is an angle value, set the torque, then enter the torque plus angle mode, and the output torque is the actual torque value generated by the set torque at this angle, as shown in Fig. 18;

Fig. 18

Note: In angle mode or torque plus angle mode, if the output torque exceeds the maximum torque value of the wrench, an error will be displayed and the LED light will turn red.

4.3.4 System Menu

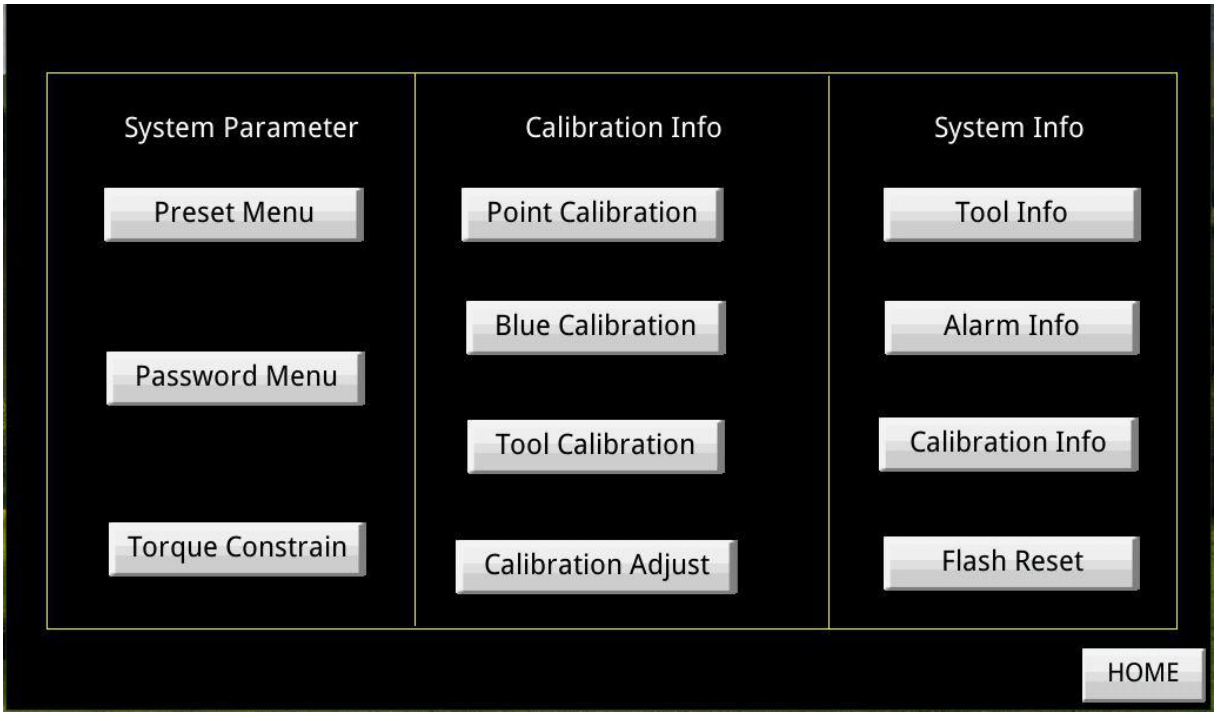


Fig. 19

(1) Modification of system parameters

(1.1) Click the preset value setting, you can add or delete the preset torque and the preset angle, as shown in Fig. 20, first click the number box, enter the torque preset value, and then click Insert, you can insert the torque into the torque preset list on the main interface; Enter the torque that already exists in the list, click Delete, you can delete the preset torque in the main interface list. The angle preset operation is the same as the torque preset operation, you can add or delete angles in the main interface list, the list of preset values is shown in Figure 16 and Fig. 17.

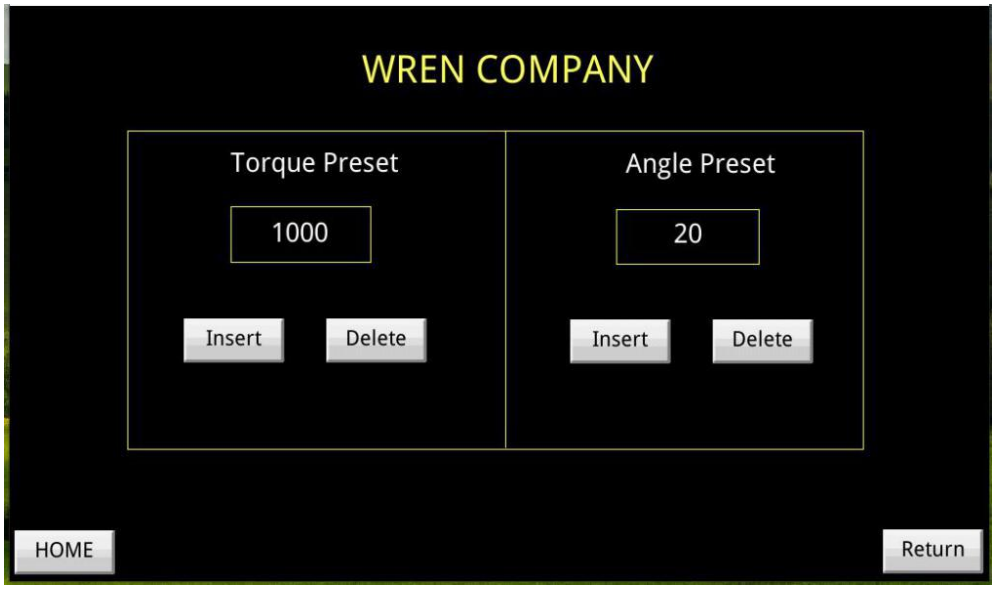


Fig. 20

(1.2) Click Password Change, enter the new password and the old password 123456, the operator password cannot be modified, as shown in Fig. 21.

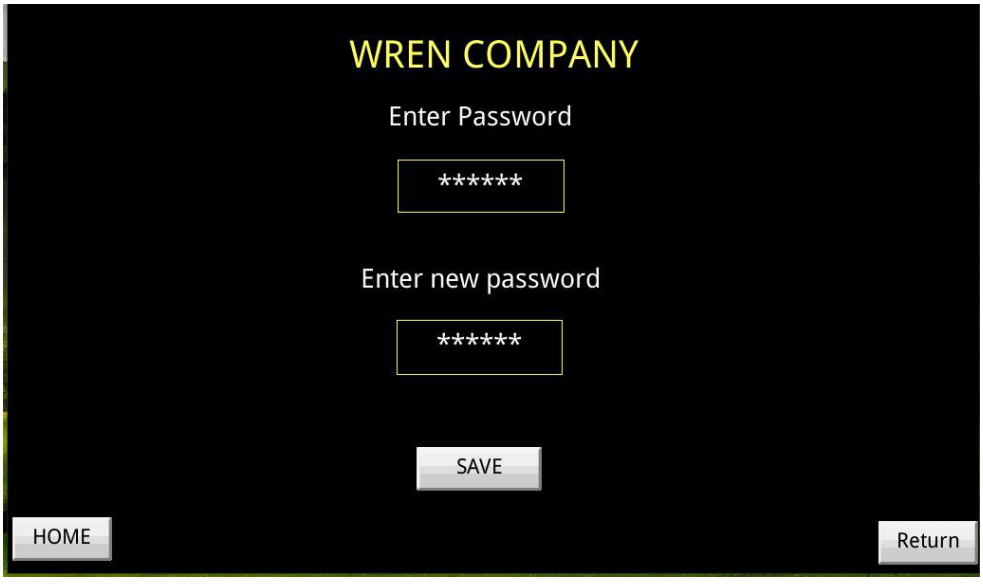


Fig. 21

(1.3) Torque limit, the maximum torque and minimum torque can be set, at this time the wrench will adjust the output torque range, Reverse angle: the release angle of the reaction arm, as shown in Fig. 22.

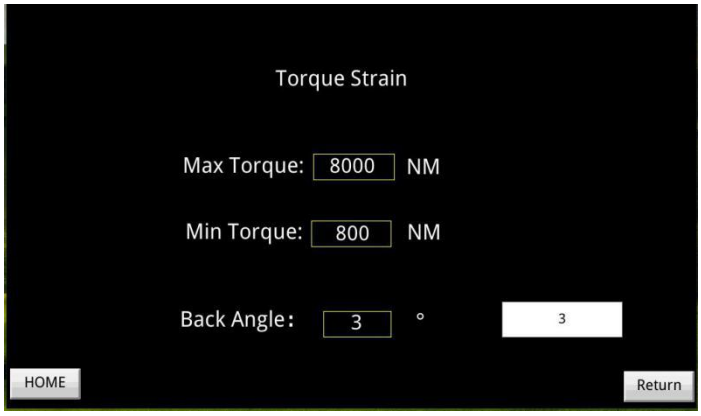


Fig. 22

(2) Calibration Setting

(2.1)Point Calibration, for a fixed torque, the start point calibration setting, can stabilize and accurately output a fixed torque, this calibration is valid for all points within the torque range of the tool.

If you want to use point calibration, you need to install the wrench on the calibration table or install a matching smart sleeve and make sure that the calibration tool unit matches the wrench unit. Open the point calibration page, as shown in Fig. 23, enter the required fixed torque, then start the wrench, run once, get the actual torque through the calibration device or smart sleeve, click the actual torque number box to enter the torque value, and then click Next.
The second step requires repeating the above operation steps, as shown in Fig. 24, to further ensure that the point calibration is accurate, and then click Save to enter the point calibration mode.
After entering the point calibration mode, return to the main interface, and before setting the torque option, the point calibration icon will be displayed, as shown in Fig. 25. For the set torque during the point calibration process, the system adjusts the actual torque until a new torque is entered or the exit point calibration mode is entered, see below item 3.3.

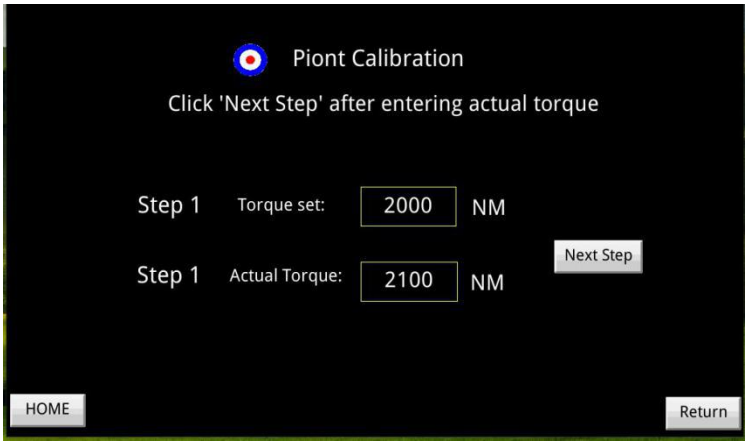


Fig. 23

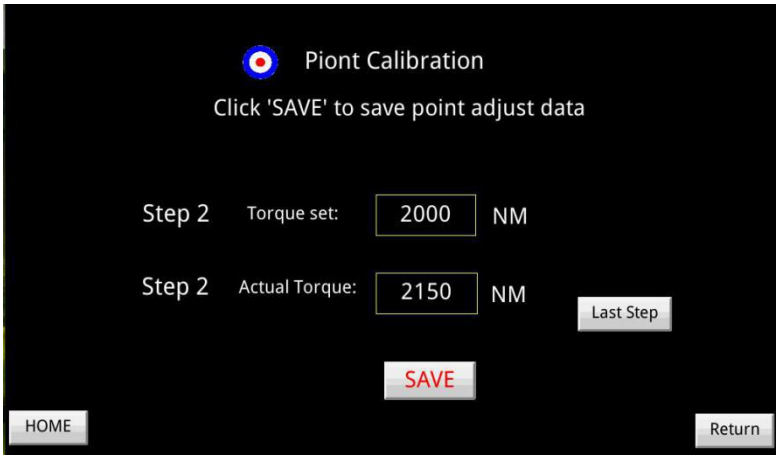
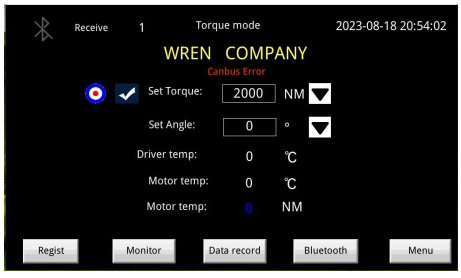


Fig. 24



Before Calibration

After Calibration

Fig. 25

（2.2) Bluetooth calibration, if you buy a matching Wren smart socket, you can use Bluetooth calibration, as shown in Figure 26. Through the WREN Smart Socket APP, you can view the WREN Smart Socket MAC value, turn on Bluetooth and enter the MAC value, click Bluetooth connection for smart socket matching, and the Bluetooth icon will light up after success.

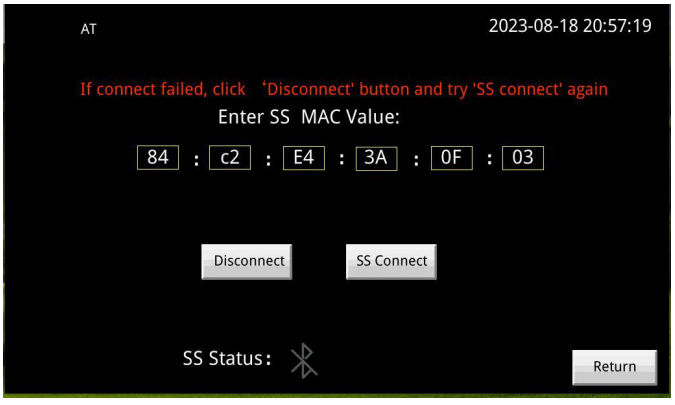


Fig. 26

After the connection is successful, enter the Bluetooth mode, install the wrench on the Smart socket, enter the required calibrating torque, and then start the wrench, through the smart socket, the system will automatically input the actual torque for calibration, the same as the point calibration, two steps are required and saved, as shown in Fig. 27.

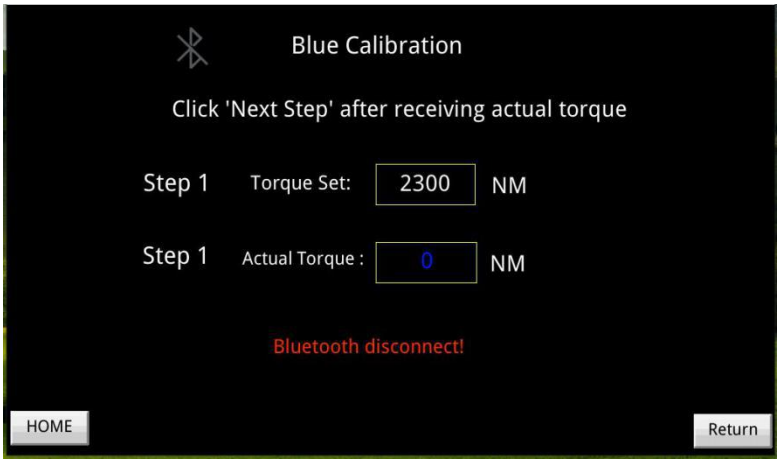


Fig. 27

(2.3)Tool calibration, by segmenting the tool torque range, entering the actual torque value multiple times to adjust the tool accuracy, the actual torque value is the actual torque measured by the calibration instrument after the tool is pressed.
The maximum percentage segmentation is generally 7%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, and then the three percentage 80%, 90%, 100% tools will be automatically generated based on the previously entered values. Be careful not to exceed the torque range of the tool, as this will damage the tool.
This function is generally a factory calibration tool, the factory has been calibrated, if you need to adjust, please do it under the professional guidance of the manufacturer, the calibration demonstration is Fig. 28.

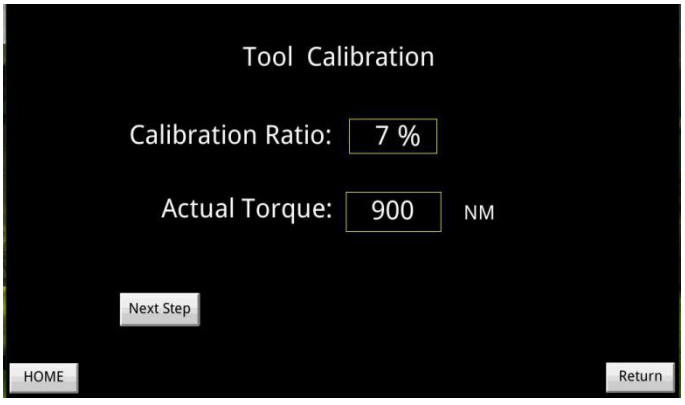


Fig .28

(2.4)Scale adjustment, this function can adjust the scale of the tool. The torque 1000 does not need to be adjusted, and the calibration range is 800~1200. Fig. 29

This calibration will affect the torque output curve obtained by the tool calibration, so as to accurately adjust the overall compression range, click the minus and plus signs on the screen, and click the save button after adjusting the scale to complete the scale adjustment of the tool.

Note that a digital increase increases the output torque, and a decrease in the number decreases the output torque.

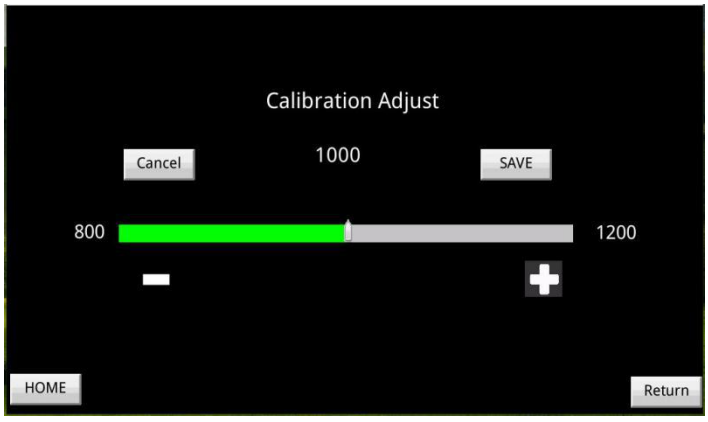


Fig. 29

（3）System Message

(3.1)Tool information, tool details query interface, as shown in Fig. 30.

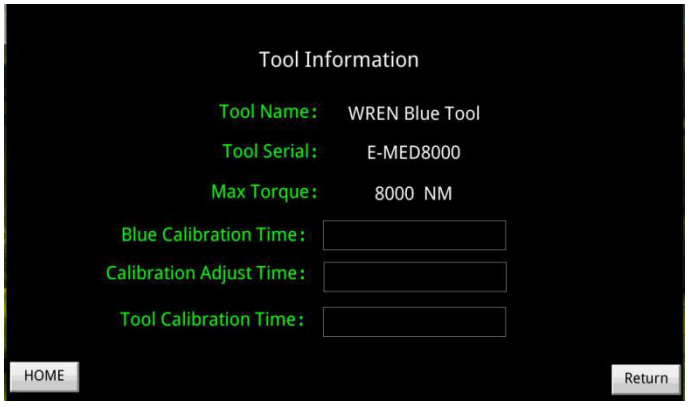


Fig. 30

(3.2) Alarm information, if the wrench red light lights up to report an error (Figure 8), you can query the cause of the error through the alarm information, adjust and repair the tool, click Clear after the adjustment is completed, the system will automatically reset, and if it cannot be reset, it will report the error again, as shown in Fig. 31.

Fig. 31

The detailed error is as follows：

1	Fault for short circuit
2	Fault for undervoltage
3	Communication is not working or is out of phase
4	Fault for voltage too high
5	The drive is overheating
6	Motor current overrun
7	Reverse performance error
8	Motor commutation failed
9	STO disconnects
10	Speed tracking error
11	Speed overrun
12	Location tracking errors
13	Location overrun
14	The motor failed to start
15	The incremental encoder did not find the zero point
16	Motor blocking failure
17	Controller and driver failure

Note that if the error cannot be resolved after adjustment,
please consult WREN and we will provide the customer with a solution.

(3.3) Point correction information, query point correction information, as shown in Fig. 32.

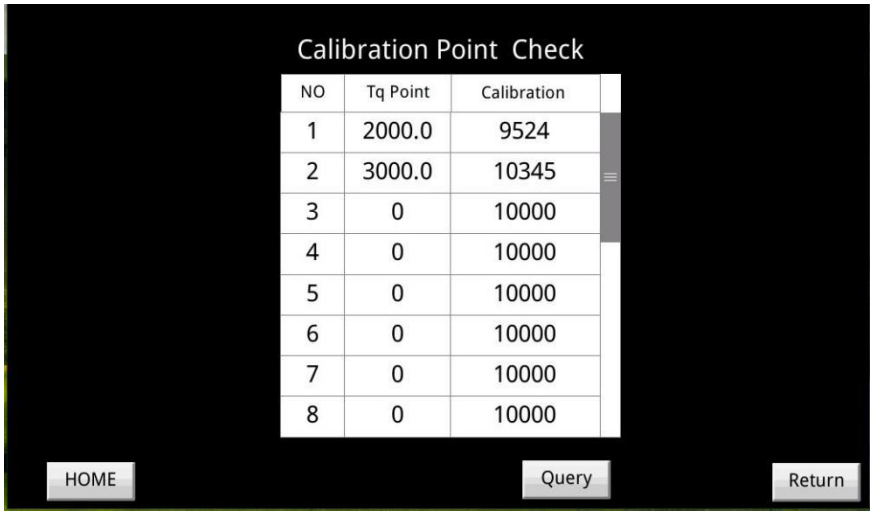


Fig .32

(3.4) Flash clearing, a system tool used by the manufacturer, customers do not need to adjust.

5. General operating instruction

5.1 Reaction Arm

Warning

Only trained and qualified personnel should operate this tool.

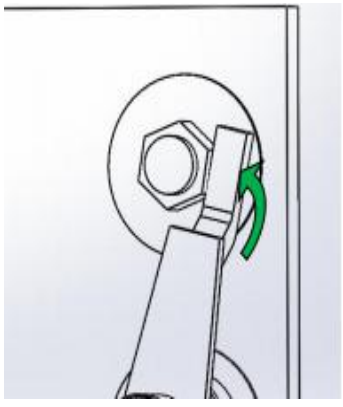
This section describes how the operator performs torque cycling when a reaction arm is required. When using a torque wrench, always keep your body parts away from the electric torque wrench moving parts and reaction arm. Failure to do so may cause serious harm.

Before operating the torque wrench, confirm that the reaction arm has a solid contact point.

5.1.1 Reaction Arm Install

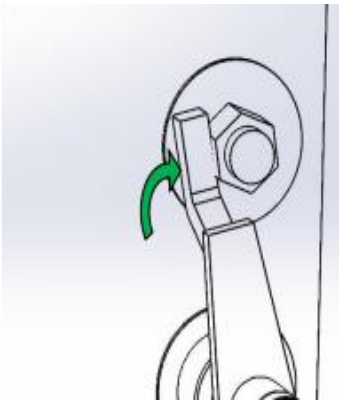
Confirm that the reaction arm and circlip are securely installed to secure the reaction arm. Before operating the wrench tool, make sure that the reaction arm touches the rigid contact point. When using the tool, keep the body part away from the reaction arm. Fig. 33 and 34

Fig. 33



Clockwise

Fig .34



Counterclockwise

Warning:During operation, keep hands and body parts away from the reaction arm and reducer.

5.1.2 Height of Reaction Arm

Confirm that the highest point of the sleeve is consistent with the height of the highest point of the reaction arm, as shown in Fig. 35. The highest point of the reaction arm cannot be higher or lower than the highest point of the sleeve, as shown in Fig. 36.

Correct: The reaction arm is at the same level as the sleeve.

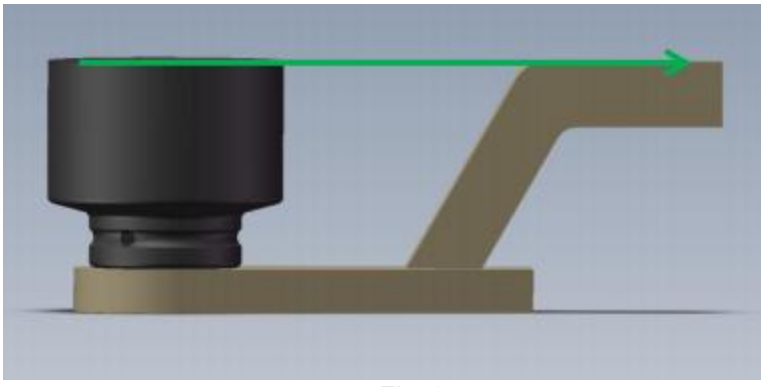


Fig .35

Error: The reaction arm is too short or too long.

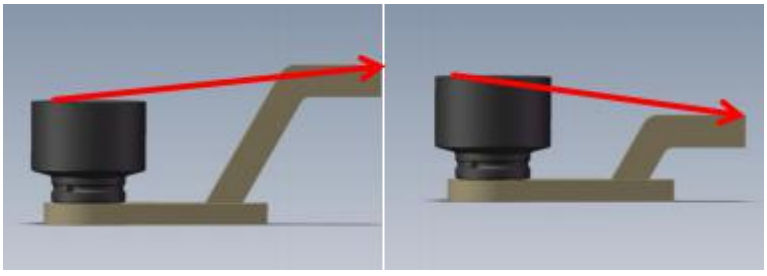


Fig .36

Improper use of the reaction arm will not be warranted and will result in premature failure of the electric torque wrench.

5.1.3 Length of Reaction Arm

Confirm that the reaction arm and foot align the nut, as shown in Fig.37. The reaction arm cannot be longer or shorter than the nut, as shown in Fig. 38

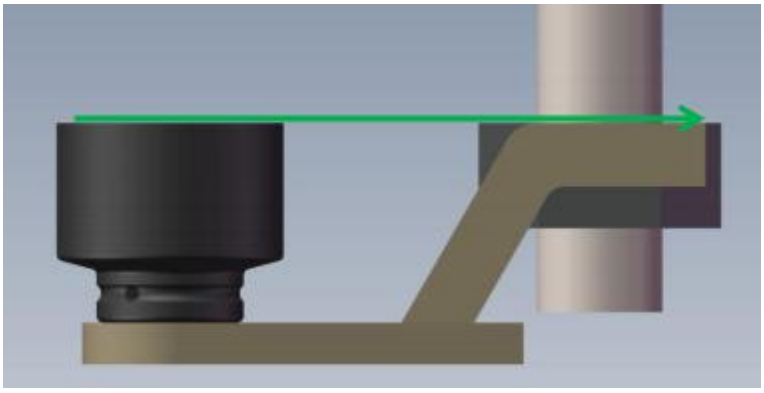


Fig. 37: Correct Length

Error: The reaction arm is long

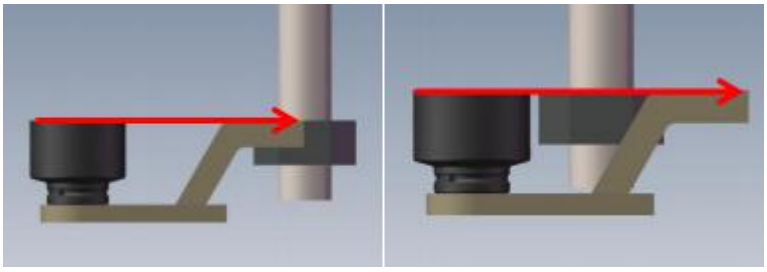


Fig.38: Error length

Contact Rennes or a dealer to customize the reaction arm.

5.1.4 Touching Point

Confirm that the reaction arm is in contact in the middle of the reaction arm foot. Fig.39. Do not touch the back of the reaction arm and foot.

Correct: The reaction arm is the middle contact between the reaction arm and foot.

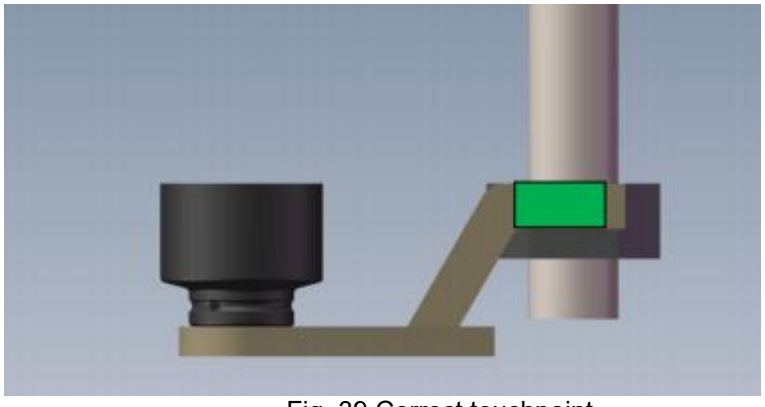


Fig. 39 Correct touchpoint

Error: The reaction arm is a posterior contact between the feet of the reaction arm. This can cause premature tool failure.

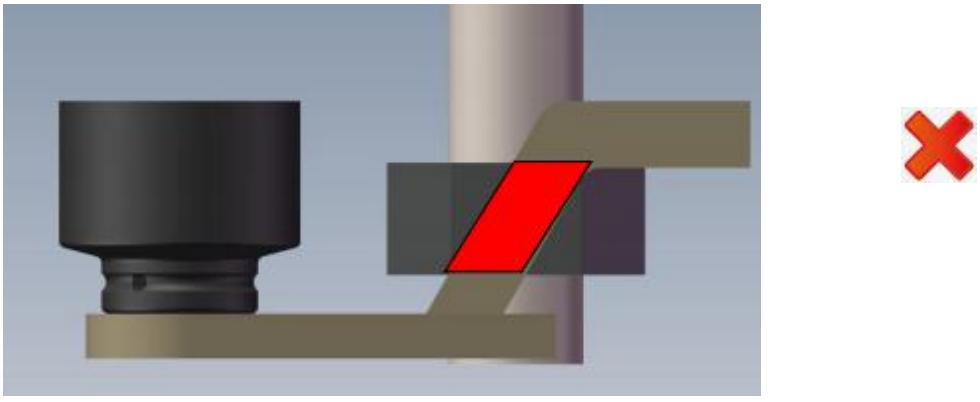


Fig. 40 Wrong touchpoint

5.2 Direction of Wrench

Before using the wrench, confirm the running direction of the wrench and perform the correct operation.

Push to right trigger= Tighten

Push to left trigger = Loosen

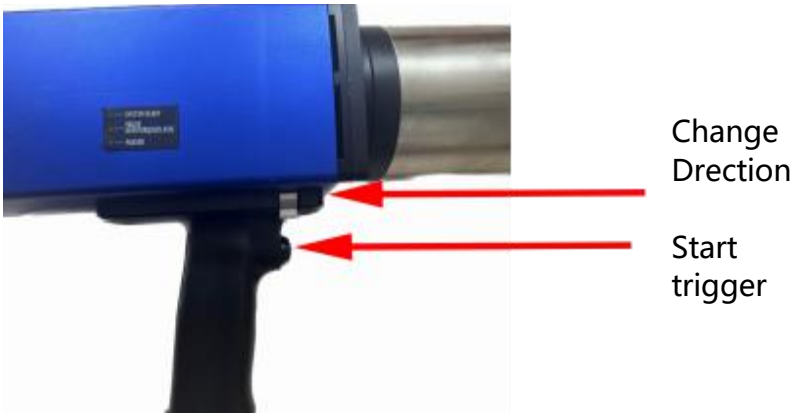


Fig. 41

5.3 Work Process

Operating torque cycle:
1. Fix the reaction arm to the electric torque wrench with a snap.
2. Change the torque setting through the tool controller, see (4.3.3).
3. Insert the output shaft of the electric torque wrench into the socket square.
4. Place the forward/reverse switch in the corresponding position.
5. Press and hold the trigger.

Note: To stop at any time, just release the trigger.

6. Contact US

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