



RAD[®]

TORQUE SYSTEMS - INNOVATION DRIVEN PERFORMANCE

USER MANUAL

E-RAD SERVO CONTROLLED

135 - 10.000 Nm



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1. General instructions

NOTE: Do not operate the tool before reading these instructions. If breakdown, malfunction or damage occurs, do not attempt to repair, please contact RAD Torque Systems B.V. immediately.

RAD servo controlled torque wrenches are reversible, non-impacting, torque controlled tightening tools and must always be operated with the following:

- E-RAD BLU cable
- E-RAD BLU control box
- Impact sockets with locking pin and o-ring
- Proper reaction arm with retaining ring.

2. Assembly

1. Ensure compliance before connecting the tool handle or AC power cable to the controller
2. Connect the tool handle cable to the tool handle connector on the right side of the controller
3. Ensure the AC mains supply is earth grounded
4. Ensure the AC power cable is in good condition; there are no cuts or breaks in the cable insulating jacket and the plug pins and earth ground pin are present and in good condition
5. Ensure the E-RAD BLU power switch is in the off position
6. Connect the E-RAD BLU AC power cable to the AC mains input power connector on the right side of the controller
7. Connect the E-RAD BLU AC power cable to the AC mains supply
8. Check that the E-RAD BLU controller and tool handle are properly earth grounded.



WARNING! Always check all cable connections before switching on the torque wrench.

When the tool is in operation the reaction arm rotates in the opposite direction to the output square drive and must be allowed to rest squarely against a solid object or surface adjacent to the bolt to be tightened.

WARNING! Always keep hands clear of the reaction arm when the tool is in use or serious injury could result.

3. Setting torque

3.1 Connectors

Before the tool is turned on/off ensure that:

- Tool and controller are connected by cable
- Controller is connect to power net by power cable

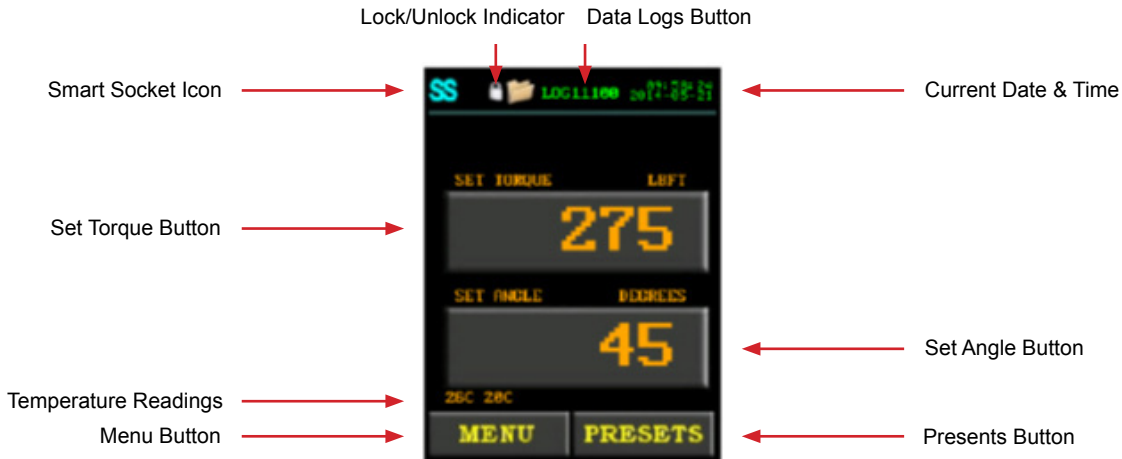
3.2 Control buttons

The E-RAD BLU is trigger activated (2) with a forward/reverse switch (1) as shown in Figure 1.



Figure 1

After switching ON, the E-RAD display will show the following:



3.3 Set torque

To select the required torque, tip the set torque button and choose the number followed by the green enter button. The angle can be set in the set angle button.

After setting the torque and (if required) the angle, the tool can be operated.

The control box can be closed after setting the torque.

The led indicator LEDS tell the operator when the tool is ready (1- blue), when the torquing has failed (2 -red) or passed (3 - green) as shown in Figure 2

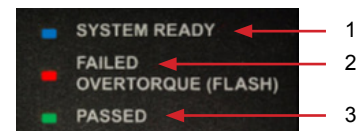


Figure 2

Warning: Always be very careful with using the angle function. Please check the application requirements carefully before selecting angle. Torque values can increase significantly using the angle function.

Loosening bolts will require more torque than tightening. Always increase the torque set when loosening a bolt.

3.4 Set torque using presets

Tip the “presets” button in the main screen to choose (load) a preset. If no presets are saved, tip “load preset”, choose the torque and angle and tip “save preset”.

3.5 Choose log

The standard log name will be the smart handle / tool number. For example SH0008.

Tip the map in the main screen to select another datalog. If no logs are made before, choose “select log” and then “new”. In this way a new log(name) can be selected.

Viewing the current log can be done by tipping the “view log” button.

3.6 Change units

Always check if the set torque is given in NM or in FBFT. To change the tools units, tip the “menu” button and select option 2 – change units.

4. Export data to PC

To export the data from the E-RAD BLU to your PC, simply connect the controller to your PC using the provided data cable (printer cable). Choose “menu” and option 3 – pc transfer and the data exchange can be controlled from the PC.

The E-RAD data logger software can be downloaded free of charge from www.eradtorque.com.

5. Movement of the reaction arm

5.1 Installing the reaction arm

Ensure the reaction arm and retaining ring are installed securely to hold the reaction arm in place. Make sure the reaction arm is in contact with a solid reaction point before you operate the tool. When the tool is in operation the reaction arm rotates in the opposite direction to the output square drive and must be allowed to rest squarely against a solid object or surface adjacent to the bolt to be tightened (Figure 3).

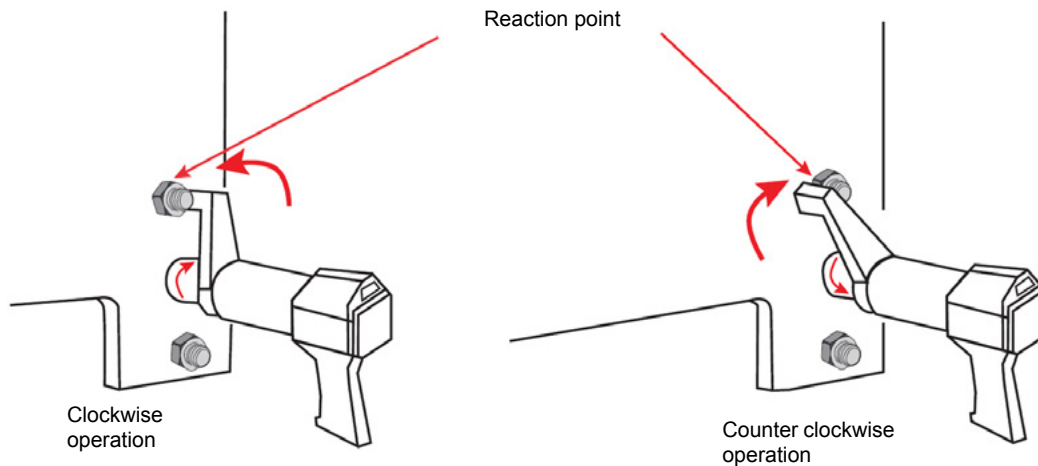


Figure 3

WARNING: In use, this tool must be supported at all times in order to prevent unexpected release in the event of a fastener or component failure!

5.2 Reaction arm height

Ensure the height of the socket is even with the height of the reaction arm as seen below in Figure 4A. The height of the socket cannot be shorter or higher than the height of the reaction arm as seen below in Figure 4B and 4C.

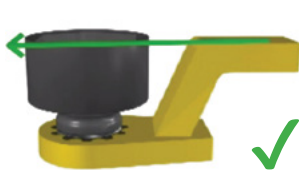


Figure 4A



Figure 4B



Figure 4C

NOTE: Improper reaction will void warranty and can cause premature tool failure.

5.3 Reaction arm foot

Ensure the foot of the reaction arm aligns with the length of the nut as seen in Figure 5A. The length of the foot cannot be shorter or longer than the nut as seen in Figure 5B and 5C.

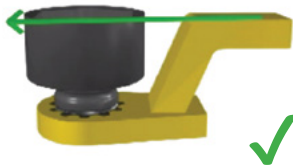


Figure 5A



Figure 5B



Figure 5C

5.4 Reaction point

Ensure the reaction arm reacts off the middle of the foot as seen in Figure 6A. Do not react off the heel of the reaction foot as seen in Figure 6B.

Please contact RAD Torque Systems B.V. or your local RAD authorized distributor for custom reaction arms.

WARNING: Always keep your hand and body parts clear of the reaction arm and barrel when the tool is in operation (Figure 6C).



Figure 6A



Figure 6B



Figure 6C

6. Safety

RAD tools are developed for tightening and loosening threaded fasteners using very large forces. For your safety and that of others, warning labels and attention labels are prominently attached to the torque wrench and its accessories.

NOTE: Make sure you observe the directions on the warning labels at all times.

RAD tools have been designed with safety in mind however, as with all tools you must observe all general workshop safety practices, and specifically the following:

- Before using your new tool, get familiar with all its accessories and how they work
- Always wear safety goggles when the tool is in operation
- Make sure the reaction arm is in contact with a solid contact point before you operate the tool
- Keep your body parts clear of the reaction arm and the contact point
- Make sure the reaction arm snap ring is securely in place to hold the reaction arm or blank in place.

RAD tools are safe and reliable. Not following precautions and instructions outlined here can result in injury to you and your fellow workers. New world technologies incorporated is not responsible for any such injury.

7. Warranty

7.1 New tool warranty

Any new tool E-RAD torque wrench purchased from RAD Torque Systems B.V., or through one of its authorized distributors or agents, is warranted to the original purchaser against defects in materials and workmanship for a period of twelve (12) month from the date of delivery to the end user. This guarantee is valid until fifteen (15) months after the original calibration date. Excluded from this are the electric components which have six (6) months warranty after date of deliver to the final customer with a maximum of 9 months after the original RAD calibration date. Excluded from this are the electric components which have six (6) months warranty after date of deliver to the final customer with a maximum of 9 months after the original RAD calibration date.

Furthermore, the warranty conditions determine that no warranty applies if:

1. The defect, wholly or partly, is due to unusual, inappropriate, improper or careless use of the product;
2. The defect, wholly or partly, is due to unusual, is due to normal wear and tear or lack of proper maintenance;
3. The defect, wholly or partly, is due to unusual, is due to installation, assembly, modification and / or repair by the customer or by third parties;
4. The product altered, modified, used or processed is;
5. The product is transferred to a third party;
6. RAD Torque Systems B.V. has obtained the product, wholly or partly, from a third party, and RAD Torque Systems B.V. can not claim compensation under warranty;
7. RAD Torque Systems B.V. in manufacturing of the product raw materials, and suchlike has used on the instructions of the customer;
8. The product has a small deviation in it's quality, finishing, size, composition and suchlike, which is not unusual in the industry or if the defect was technically unavoidable;
9. The customer has not fulfilled all obligations under the agreement promptly and correctly towards RAD Torque Systems B.V..

7.2 Repaired tool warranty

After the warranty has expired a three (3) month warranty applies to the original purchaser against defective in material or workmanship or both from the date of repair.

To qualify for the above mentioned warranties, written notice to RAD Torque Systems B.V. must be given immediately upon discovery of such defect, at which time RAD Torque Systems. will issue an authorization to return the tool. Freight costs must be paid in advance. When returning a tool, the reaction arm/s being used with the tool must also be returned.

For the latest warranty terms, please see our sales conditions on our website www.radtorque.nl

8. Contact

RAD Torque Systems B.V.

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