RAD®
TORQUE SYSTEMS

E-RAD ELECTRIC SERIES

135 - 16.500 Nm

User manual for

- ***E-RAD 950***
- ***E-RAD 2000***
- ***E-RAD 3400***
- ***E-RAD 3400-90°***
- ***E-RAD 4000***
- ***E-RAD 4500***
- ***E-RAD 8000***
- ***E-RAD 10K***
- ***E-RAD 15K***

USER MANUAL

Table of contents

NOTE! This is the quick user manual for the basic functions of the E-RAD BLU. If you want to learn about all functions, please request our extended user manual.

1. General instructions

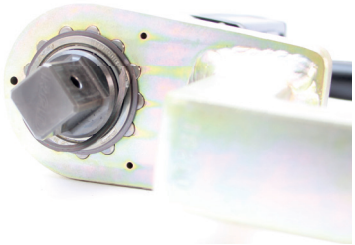
NOTE: Do not operate the tool before reading these instructions. If breakdown, malfunction or damage occurs, do not attempt to repair, please contact RAD Torque Systems B.V. immediately.

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 control box
2. Connect the torque wrench cable to the torque wrench connector on the right side of the control box
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 control box
7. Connect the E-RAD BLU AC power cable to the AC mains supply
8. Check that the E-RAD BLU control box and torque wrench are properly earth grounded.



9. Spread the retaining ring open with a screwdriver and place the open side in the groove at the end of the gearbox.

10. Then gradually press the retaining ring until it is completely closed.

11. To remove the reaction arm, place a screwdriver at the beginning of the retaining ring and spread the retaining ring open. Then pull the retaining ring off and remove the reaction arm.

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

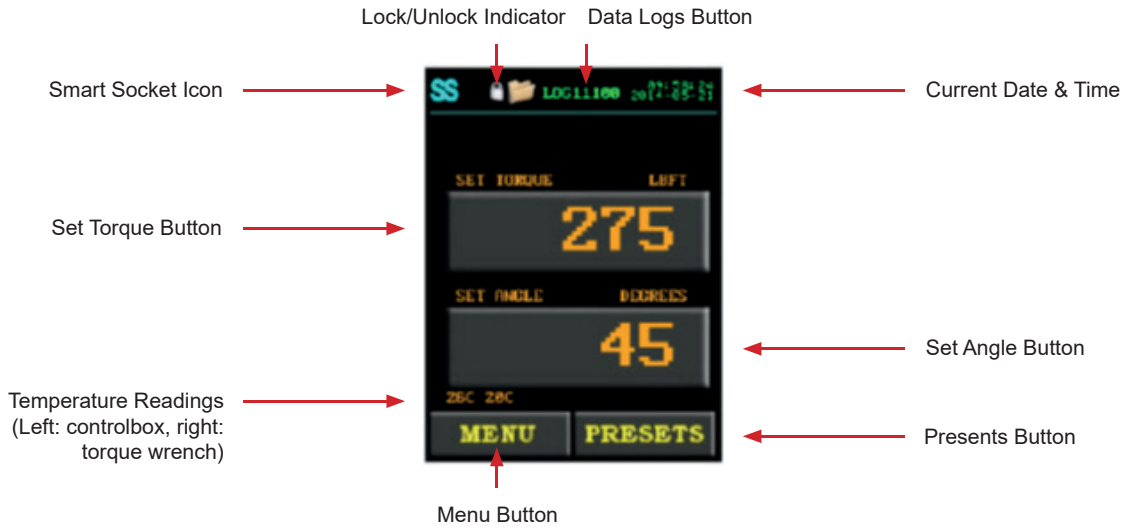
Before the tool is turned on/off ensure that:

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

Figure 1



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), when the torqueing has failed (2) or torqueing has passed (3) as shown in Figure 2

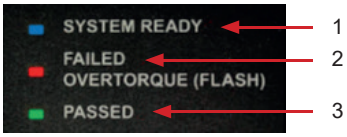


Figure 2

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. For that reason, 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.
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.radtorque.eu.

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).

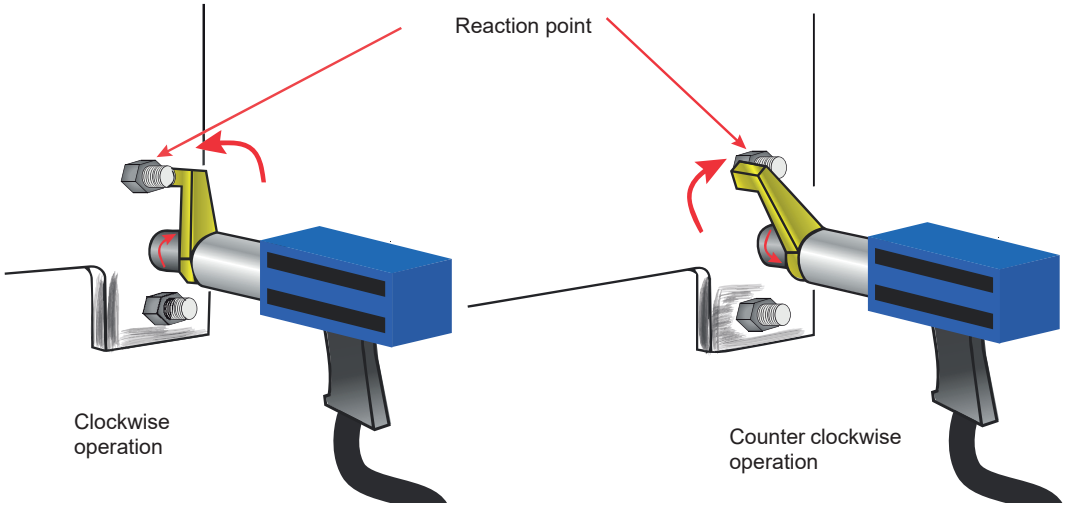


Figure 3

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.

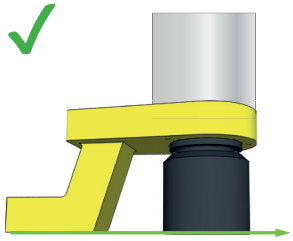


Figure 4A

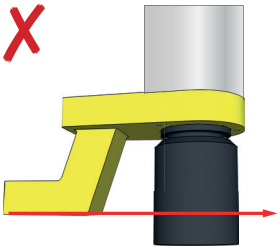


Figure 4B

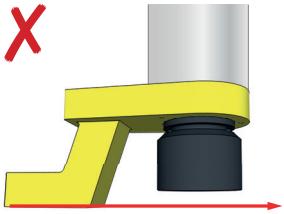


Figure 4C

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.

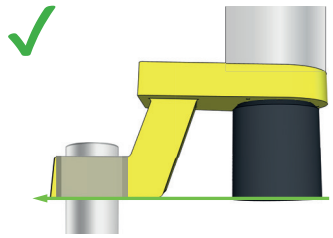


Figure 5A

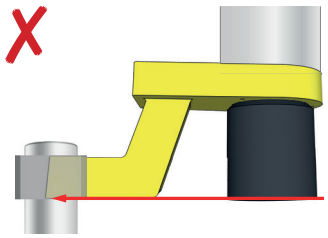


Figure 5B

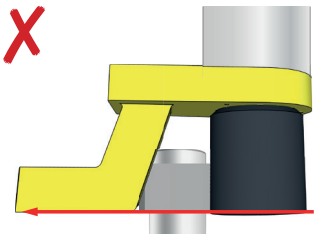


Figure 5C

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).

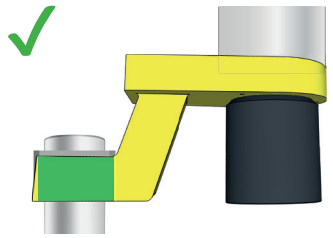


Figure 6A

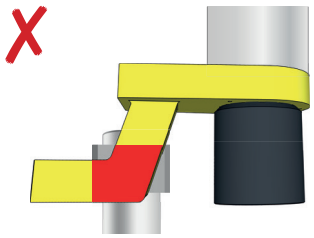


Figure 6B

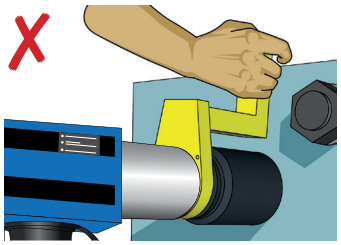


Figure 6C

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. RAD Torque Systems B.V. is not responsible for any such injury.

NOTE: The E-RAD BLU can be upgraded with the wireless E-RAD LIVE module. This transforms the E-RAD into a full bolting guidance system and real-time online datalogger. As the LIVE module is integrated inside the standard E-RAD BLU control box, there are no extra cables or other equipment necessary. The perfect solution for jobsites.

7. Warranty

7.1 New tool warranty

(1) RAD B.V. guarantees the proper performance of the goods delivered for a period of twelve (12) months after delivery to the final customer and is limited to fifteen (15) months after the original RAD B.V. calibration date. (2) Excluded from this warranty are electric components of RAD B.V.'s digital tools (e.g. MB-RAD, MV-RAD, E-RAD, SmartSocket™, RT and TV-RAD) which have a twelve (12) month warranty after date of delivery to the final customer with a maximum of nine (9) months after the original RAD B.V. calibration date. Mechanical components of these tools fall under the terms of paragraph 1.

7.2 Repaired tool warranty

(1) Once a tool is beyond its new tool warranty, RAD B.V., for a period of three (3) months from the date of repair, will replace or repair for the original purchaser, free of charge, any part or parts, found upon examination by RAD B.V., to be defective in material or workmanship or both. If any tool or part is replaced or repaired under the terms and conditions of this warranty, that tool or part will carry the remainder of the warranty from the date of original repair. To qualify for the above mentioned warranties, written notice to RAD B.V. must be given immediately upon discovery of such defect, at which time RAD B.V. will issue an authorization to return the tool. The defective tool must promptly be returned to RAD B.V., all freight charges prepaid. When returning a tool, the reaction arm(s) being used with the tool must also be returned.

7.3 Customer cannot invoke a warranty if

(1) the defect, wholly or partly, is due to unusual, inappropriate, improper or careless use of a delivery;
(2) the defect, wholly or partly, is due to normal wear and tear or lack of proper maintenance;
(3) the defect, wholly or partly, is due to installation, assembly, modification and/or repair by the Customer or by third parties;
(4) the delivery is altered, modified, used or processed; (5) the delivery is transferred to a third party;
(6) RAD B.V. has obtained the tool, wholly or partly, from a third party, and RAD B.V. cannot claim compensation under warranty;
(7) RAD B.V. in manufacturing of the tool, has used raw materials, and suchlike on the instructions of the Customer;
(8) the tool has a small deviation in its 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 promptly and correctly fulfilled all obligations under the agreement towards RAD B.V.

8. Contact

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Notes

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RADIAL®
TORQUE TOOLS

THE EXCLUSIVE MASTER DISTRIBUTOR FOR RAD TORQUE SYSTEMS IN EAST- AND WESTERN EUROPE (EXCLUDING THE UK), NORTH AFRICA AND CENTRAL ASIA:

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