RAD®
TORQUE SYSTEMS - INNOVATION DRIVEN PERFORMANCE

USER MANUAL

B-RAD BATTERY SERIES

150 - 2.000 Nm

User manual for:

- ***B-RAD 700***
- ***B-RAD 700-2***
- ***B-RAD 950-2***
- ***B-RAD 1400***
- ***B-RAD 1400-2***
- ***B-RAD 2000***
- ***B-RAD 2000-2***

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Figure 1

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

- Fully charged battery
- Impact sockets with locking pin and o-ring
- Proper reaction arm with retaining ring.

NOTE: These torque wrenches contain metal components that can be dangerous in hazardous areas.

2. Assembly

1. Make sure the battery is fully charged
2. Slide in the battery pack until it engages
3. Fasten and secure the reaction arm on the jagged side of the gearbox with the retaining ring

B-RAD torque wrench

Figure 2

3. Setting torque

3.1 Setting direction of rotation

Only operate the rotational direction switch and transportation switch when the motor is at standstill, see Figure 5.

Right setting	=	Tightening
Left setting	=	Loosening
Central setting	=	Transportation position

Figure 5

NOTE: For applications where higher accuracy and more precise settings are required, we have the Digital Battery Series.

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.

3.2 Operating the torque wrench

1. Use only suitable and proper impact sockets.
2. Can the handle be rotated for ease of installation.
3. Make sure that there is no movement between the tool and the reaction arm.
4. The reaction arm is placed against a solid reaction point before the trigger is pulled. This prevents movements of reaction arm.
5. The trigger should be depressed until the torque wrench stops automatically.

The B-RAD tool comes fully calibrated with a quick reference torque chart label on the barrel of the tool, see Figure 3. Simply rotate the quick grip torque to the desired torque setting reference number which can be seen on the torque chart, see Figure 4. Once this is done, select forward or reverse and you are ready to torque when you depress the trigger. When the tool reaches the desired torque, the clutch mechanism will slip. When this happens, release the trigger immediately. Damage will result to the tool if the clutch is allowed to slip for extended periods of time.

1. Select the torque range based on the amount of Nm required as seen on the torque chart label, see Figure 3.
2. Place the dial at the correct torque setting. The torque is now set, see Figure 4.

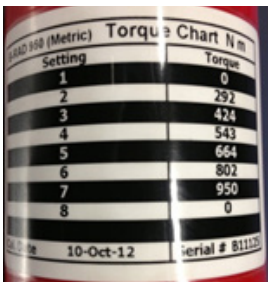


Figure 3

Figure 4

WARNING: Keep your hand and body parts clear of the reaction arm and barrel when the tool is in operation.

4. Battery

Warning! Before initial use, check that the voltage and frequency stated on the charger's rating plate match the figures for your own electrical supply.

Warning! Unplug charger immediately if the cable or charger is damaged. Unplug immediately if any sign of smoke or flames.

Warning! To reduce risk of injury, charge only rechargeable RAD batteries, other types of batteries may burst causing personal injury and damage.

Warning! Do not submit the casing to impact or drill into the casing. Do not throw battery packs or charger in fire or immerse in water. Keep battery packs dry. Do not use any damaged or deformed battery packs.

Warning! RAD chargers should only be operated between 0-49 degrees Celsius. Keep away from moisture.

Warning! Slightly acidic, flammable fluid may leak from defective Li-ion battery packs. If battery fluid leaks out and comes into contact with your skin, rinse immediately with plenty of water. If battery fluid leaks and comes into contact with your eyes, wash them with clean water and seek medical treatment immediately.

Lithium-ion battery chargers are to be used exclusively for charging RAD 18V Lithium-ion battery packs with the maximum capacity of 5.2AH.

Note: To prevent the battery from draining, always remove battery from tool before storage.

4.1 Battery pack faults

Warning indicator stays on

The battery pack is not being charged. The temperature is too high or too low. If the temperature of the battery pack is between 0–49 degrees Celsius, the charging process begins automatically.

Warning indicator flashes on

The battery pack is defective, remove from charger immediately.
The battery fails to charge, contacts may be dirty. Remove the battery pack, clean the contacts and replace the charger.

Note: In the case of prolongued activity of electromagnetic disturbances, the battery charger ends the charging process prematurely for safety reasons. Remove the plug and plug in again after 2 seconds.

Warning beep

In the case of a too high operating temperature, the battery will give a loud beep tone. The Lithium-ion battery should be disconnected immediately to cooldown. The Lithium-ion battery can be used again if it is cooled down.

5. Battery charger

Before initial use, check that the voltage and frequency stated on the rating plate match the figures for your own electrical supply and check that the ventilation slits are clear. Minimum clearance from other objects is 5 centimeters.

1. Connect to electrical supply, the red and green indicator lights up for approximately 1 second.
2. Once the self test is completed, the indicator lights are off.
3. Insert the battery pack into the charging shaft socket; push it to the back until it engages.
4. Charge the battery pack before use. Only once it has been charged and discharged five charging cycles does the battery pack reach its full charging capacity. You may store charged Lithium-ion battery packs and recharge them after an interval of no more than six months.

5.1 Removing and inserting the battery pack

Removal: Press in the release button and remove the battery pack.
Inserting: Slide in the battery pack until it engages.

6. Movement of the reaction arm

6.1 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, see Figure 6.

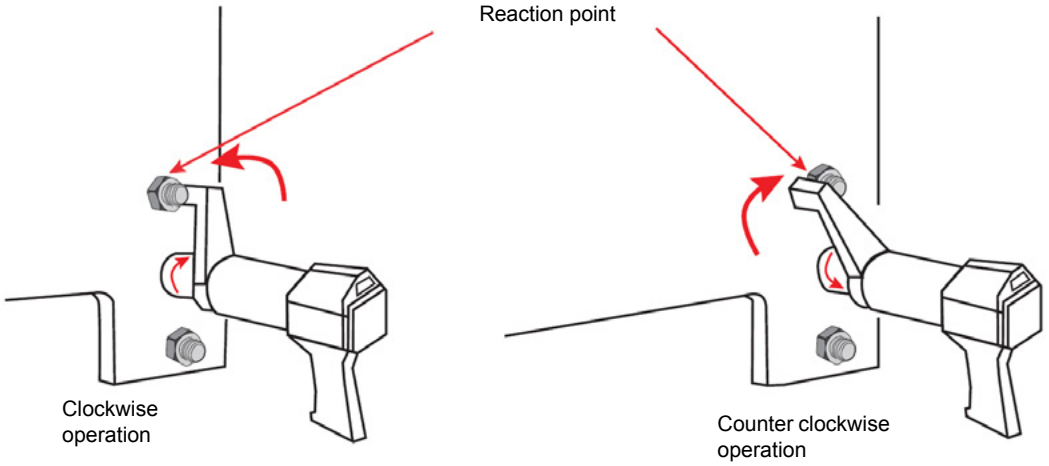


Figure 6

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!

6.2 Reaction arm height

Ensure the height of the socket is even with the height of the reaction arm as seen below in Figure 7A. The height of the socket cannot be shorter or higher than the height of the reaction arm as seen below in Figure 7B and 7C.

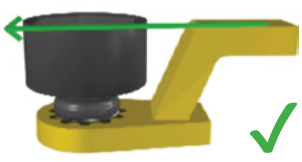


Figure 7A

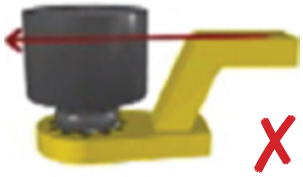


Figure 7B

Figure 7C

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

7.2 Reaction arm foot

Ensure the foot of the reaction arm aligns with the length of the nut as seen in Figure 8A. The length of the foot cannot be shorter or longer than the nut as seen in Figure 8B and 8C.

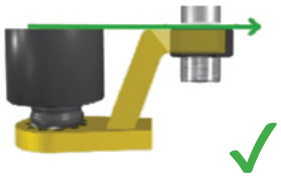


Figure 8A

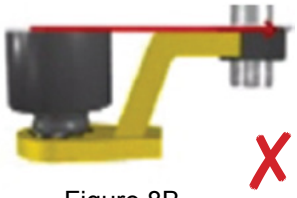


Figure 8B

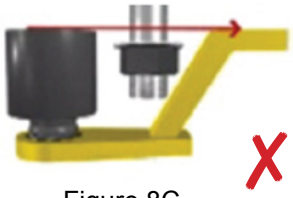


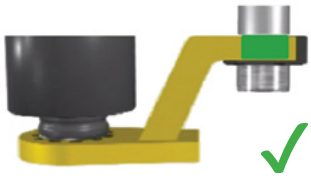
Figure 8C

7.1 Reaction point

Ensure the reaction arm reacts off the middle of the foot as seen in Figure 9A. Do not react off the heel of the reaction foot as seen in Figure 9B.

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, see Figure 9C.



Afbeelding 9A

Afbeelding 9B

Afbeelding 9C

7. 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. incorporated is not responsible for any such injury.

8. Warranty

8.1 New tool warranty

Any new tool branded with the RAD name and 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.

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 abtained 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..

8.2 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.

9. Contact

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