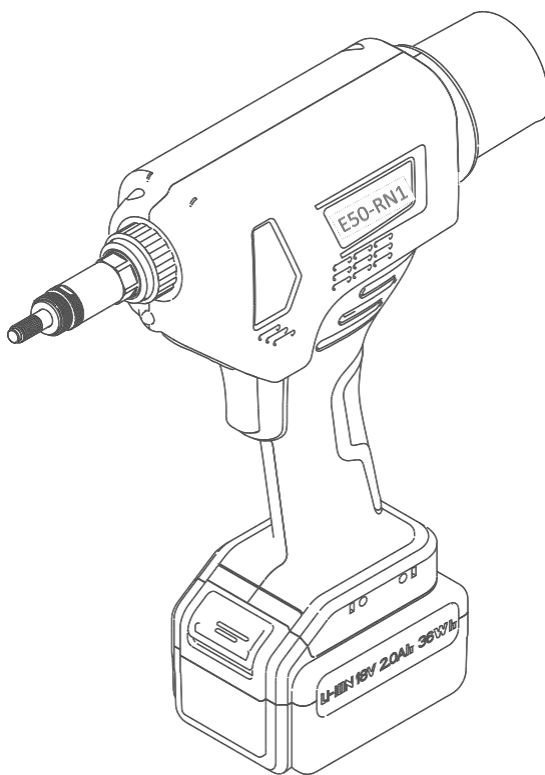




FASTENING SYSTEM

Owner's Manual
Cordless riveter
Models: E50 – RN1 / E50 – RN2



The following manual is available in digital format at <https://www.specialinsert.it/accessories/manuali-di-editore/> or by framing the QR CODE on the label attached to the machine. The customer can request the paper version when ordering or within one month of receipt.

Specialinsert® declines all liability arising from incorrect use of the machine.

©Ownership and rights reserved. Translations, reprints, reproductions, copies and distribution to third parties of this manual, even if partial, in any form, require written permission from Specialinsert®.

www.specialinsert.it

Translated instructions for E50-RN1/E50-RN2 models

Index

	Page
1. Introduction	3
1.1 The Instruction Manual	3
1.2 Conventions Used in the Manual	3
1.3 Warranty Period and Conditions	4
2. Safety precautions	5
2.1 Work Area Safety	5
2.2 Electrical Safety	5
2.3 Personal safety	5
2.4 Power tool use and care	6
2.5 Battery Usage	7
2.6 Using the Charger	7
2.7 Support	7
2.8 Tool Maintenance	7
2.9 Environmental protection	7
3. Tool overview	8
3.1 Rating label	8
3.2 Models/Technical Specifications	9
3.3 Weighted Sound Pressure Level	9
3.4 Vibration	9
3.5 Configuration/Accessories	10
3.6 Technical cutaway and consumables	11
4. Preparation of the tool	12
4.1 Replacing the mandrel	12
4.2 Mandrel Setting	13
4.3 Battery check	13
4.4 Checking the tool	14
5. Setting the tool functions	14
5.1 Programming Mode	14
5.2 Traction adjustment	14
5.3 Stroke adjustment	15
Correspondence table between control unit pilot lights and strain stroke	16
5.4 Setting the riveting mode	17
5.5 Fully automatic riveting	17
5.6 Riveting in conventional mode	17
5.7 Function display panel	17
6. Operation of the tool	18
6.1 Instructions for Setting the Deformation	18
6.2 Deformation Insert Control	19
6.3 Manual unscrewing of blind rivet nut	19
6.4 Instructions for setting up the riveting process	20
7. Charger and batteries	21
7.1 Technical Parameters	21
7.2 Using the Charger	21
7.3 Battery Usage	21
8. FAQ (Questions and Answers)	22
9. Troubleshooting	22
Anomalies, Possible causes, Solutions	22
10. CE Declaration of Conformity	23

1. INTRODUCTION

1.1 The Instruction Manual

This manual provides the user with all the information necessary to use the equipment properly and to operate it as independently and safely as possible. It includes information regarding technical aspects, operation, storage, and safety. The manual is also intended for qualified maintenance technicians.

authorized by the manufacturer or his representative.



The customer must not perform operations reserved for specialized technicians authorized by the manufacturer. The manufacturer is not liable for damages resulting from failure to comply with this prohibition.

The instruction manual must always be kept in a specific paper or digital archive available to the user, always accessible and protected from anything that could compromise its readability..






Attention! Before performing any operation, the user or specialized technician must read the instruction manual in its entirety. If in doubt about the correct interpretation of the instructions, contact the manufacturer for any necessary clarification.

Specialinsert ® declines all responsibility for damages to third parties resulting from failure to comply with all instructions and warnings provided.

In its constant commitment to improving its products, Specialinsert® reserves the right to modify technical and construction features without notice. Consequently, the customer will not be entitled to any rights.

1.2 Conventions Used in the Manual

	Indicates a danger with risk for the user and/or safety regulations to be observed. follow to ensure safety and avoid damage to the equipment
	Warning or note about key features, useful information, or important precautionary operating instructions
	You must consult the instruction manual before to perform a certain operation

1.3 Warranty period and conditions

The customer has rights under the legislation governing the sale of goods intended for professional use applicable in the country of use. This warranty does not affect such rights if they are more extensive than those indicated herein.

The guarantee is valid for both the distributor and the end customer, includes costs for components or labour and has a duration of **one year** from the date shown on the final delivery note. Warranty requests must be submitted within **10 days** from the date of discovery of the lack of conformity.

The lack of conformity will be corrected by repair or replacement, free of charge for labor and materials. The customer may choose their preferred remedy, but the manufacturer's choice will be mandatory if:

- the alternative remedy can be adopted without significant inconvenience to the customer or
- the remedy chosen by the customer imposes unreasonable costs compared to the other remedy, taking into account the current value of the appliance or the extent of the defect itself.

The manufacturer always chooses whether the single damaged component will be replaced or repaired and may require that the replaced components be presented or kept available for any checks.

Without authorization, the customer cannot have defects of conformity corrected by third parties at the manufacturer's expense.



The warranty does not apply in the event of any breakages or accidents, direct or indirect, occurring to the equipment itself and/or to things and/or people., **if they are not attributable to defects already present at the time of placing on the market** and which were not recognizable by the purchaser. (At the time of purchase, the purchaser must inspect the equipment and immediately report any obvious defects.) Therefore, damages caused by:

- a) Improper operations. Examples include: failure to comply with all the instructions contained in this manual (problems caused by operator negligence or error, inadequate maintenance, failure to follow instructions, etc.) and use despite obvious, perceptible defects.
- b) Conditions external to the equipment (environment, materials, power supply network, components used, etc.).
- c) Transport, handling and storage.
- d) Corrosion and normal wear (to which consumable parts, such as heads, spindles, and gaskets, are subject). Finally, please remember that the warranty never covers maintenance costs.

We also remind you that, regardless of whether a problem occurs or not and whatever its origin, the warranty ceases for:

- a) Modifications or adjustments not specifically permitted in the manual or without written authorization from the manufacturer.
- b) Use of spare parts or accessories other than the original ones or those not authorised by the manufacturer.

2. SAFETY PRECAUTIONS

To reduce the risk of electric shock, personal injury, fire, and damage to the tool, follow these safety precautions.

2.1 Work area safety

- a) Keep the work area clean and well-lit. A cluttered or dark area can cause accidents.
- b) Do not use power tools/chargers in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which can ignite the dust or fumes.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause loss of control.

2.2 Electrical safety

- a) The charger's electrical plug must match the outlet. Never modify the electrical plug in any way. Do not use adapters with grounded power tools. Unmodified plugs and suitable tools reduce the risk of electric shock.
- b) Avoid body contact with earthed surfaces, such as pipes, radiators, ranges, and refrigerators. The risk of electric shock increases if your body is earthed.
- c) Do not expose power tools to rain or moisture. Water entering a power tool increases the risk of electric shock.
- d) When using/charging a power tool outdoors, use an extension cord suitable for outdoor use. Using an extension cord suitable for outdoor use reduces the risk of electric shock.
- e) If using a power tool in a damp location is unavoidable, use a power supply protected by a residual current device (RCD). The presence of an RCD reduces the risk of electric shock.

2.3 Personal safety

- a) Remain alert, watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating a power tool can result in serious personal injury.
- b) Use personal protective equipment. Always wear eye protection. Personal protective equipment, such as non-slip safety shoes or heat protection, used under appropriate conditions, will reduce personal injury.
- c) Avoid accidental starting. Carrying power tools with your finger on the switch or operating power tools that have the switch on invites accidents.
- d) Remove any adjusting wrench or key before turning the power tool on. An adjusting wrench left attached to a rotating part of the power tool may result in personal injury.
- e) Do not overreach. Always maintain proper footing and balance. This will allow better control of the power tool in unexposed situations. — 32 — IEC 62841-1:2014 © 1 EC 2014
- f) Pay attention to postural problems due to prolonged and repetitive use, typically in an automatic way. In this case, it is advisable to take some breaks (if possible) or change the position of your legs and shoulders.

- g) Dress appropriately. Do not wear loose clothing or jewelry. Keep hair and clothing away from moving parts. Loose clothing, jewelry, or long hair can become entangled in moving parts.
- h) If devices are provided for connecting dust extraction and collection systems, ensure they are connected and used correctly. The use of dust extraction systems can reduce dust-related risks.
- i) Don't let familiarity with frequent tool use cause you to neglect tool safety principles. A careless action can cause serious injury in a fraction of a second.

2.4 Use and care of the power tool

- a) This tool is to be used only for riveting deformation inserts and must not be used for other purposes (e.g. in place of a hammer).
- b) Do not overload the tool. Use it only within the range specified in the function settings.(see paragraph 5 'Setting the tool functions').

- c) Do not block the engine ventilation openings. Do not insert objects into the ventilation openings.
- d) Please keep the packaging boxes and accessories and handle them with care.
And) The tool and accessories should be stored in the plastic case, kept in a dry place, out of reach of children. and do not allow persons unfamiliar with the power tool or these instructions to operate it. Power tools are dangerous in the hands of untrained users.
- f) Do not force the power tool. Use the correct power tool for the intended application. The correct power tool will do the job better and safer at the speed for which it was designed.
- g) Do not use the power tool if the switch does not turn it on.
- h) Remove the battery from the power tool before making any adjustments, changing accessories, or storing the power tool. These preventive safety measures reduce the risk of accidentally starting the power tool.
- i) Check for misalignment or binding of moving parts, breakage of components, or other conditions that may affect the operation of the power tool. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

- k) Use the power tool, tool heads, chucks, etc., in accordance with these instructions, taking into account the working conditions and the work to be performed. Using the power tool for operations other than those intended could result in a hazardous situation.
- l) Keep handles and gripping surfaces dry, clean, and free of oil and grease. Slippery handles and gripping surfaces prevent safe handling and control of the tool in unexpected situations.

⚠ 2.5 Battery usage

- a) Do not charge damaged, contaminated or wet batteries.
- b) Batteries should never be thrown into water or fire; used batteries should be disposed of properly.
- c) Do not charge when the ambient temperature is below 0°C or above 45°C.

⚠ 2.6 Using the charger

- a) For charging, you must use the original battery and the manufacturer's charger.
- b) The battery must not be charged with a damaged, dirty or damp charger.
- c) Do not place metal objects in the charging area, as a short circuit may occur.
- d) Do not charge in a humid environment, near an open fire, or in an environment with flammable and highly combustible gases that can easily explode.

⚠ 2.7 Assistance

- a) Have your power tool repaired by a qualified technician using only identical replacement parts.
This will ensure the safety of your power tool.

⚠ 2.8 Tool maintenance

- a) Regular maintenance prolongs the life of lithium battery tools and should be performed by an authorized dealer or the manufacturer at least **once every 6 months**. If used more frequently, it is recommended that maintenance be performed more frequently.
- b) Maintenance of the riveting tool is limited to the replacement of worn parts and parts subject to rapid wear, jaws, jaw sliders (head, mandrel, lock nut), etc.
- c) To keep your tools in good working order, check wearing parts frequently. If any wear or damage is found, contact your dealer to purchase consumables.

⚠ 2.9 Environmental protection

When replacing the lithium batteries used in this product, be sure to observe the following points:

- a) If there are regulations in your country, region or municipality, make sure you take the old battery to a specialized company or collection point for disposal.
- b) Do not throw old batteries into garbage, fire or water!

ATTENTION!

- Tools must be positioned so that they cannot fall, to avoid unnecessary damage and safety accidents.
- When installing the battery, be sure to secure it in place. A "click" indicates the battery is secure.
- Before servicing this tool, the battery must be removed.
- Before charging, check that the charger and power supply are in good condition.
- Use a power supply suitable for the charger.
- Plugs, power cords, and chargers should be checked regularly. If a problem is found, it should be repaired by maintenance personnel.
- Maintenance personnel must have professional skills; only qualified professionals should perform repairs. If in doubt, return the unit to an authorized dealer or the manufacturer for repair.
- Original spare parts must be used during maintenance.

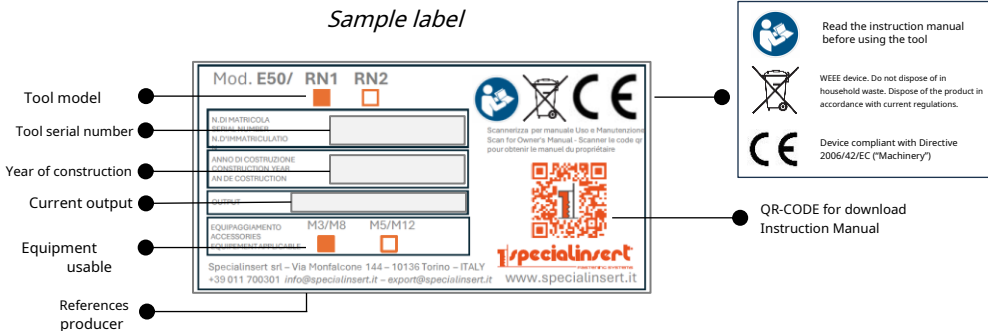
3. TOOL OVERVIEW

3.1 Identification plate

A plate containing the mandatory marking for certifying conformity to the Machinery Directive is attached to the appliance. For any missing information on the plate, please refer to this manual.

☞ If the plate is illegible, it must be replaced.

Sample label



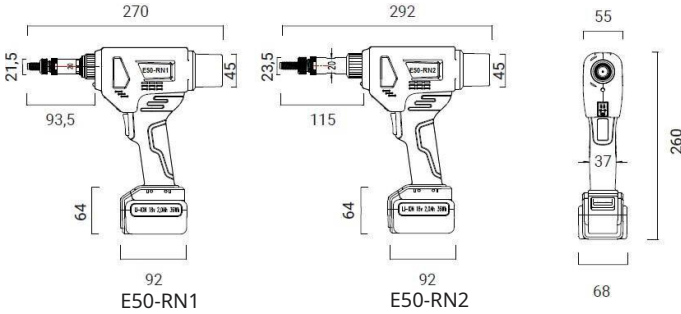
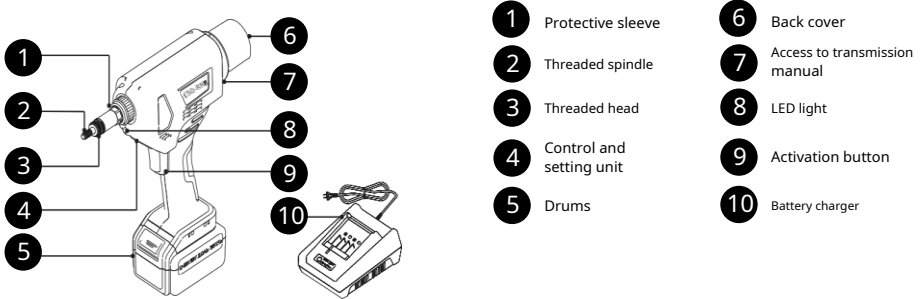
Labels on the left side of the image:

- Tool model
- Tool serial number
- Year of construction
- Current output
- Equipment usable
- References producer

Labels on the right side of the image:

- Read the instruction manual before using the tool
- WEEE device. Do not dispose of in household waste. Dispose of the product in accordance with current regulations.
- Device compliant with Directive 2006/42/EC ("Machinery")
- QR-CODE for download Instruction Manual

3.2 Models/Technical specifications



Model	E50-RN1	E50-RN2
Motor	18V Brushless Motor	
Riveting mode	Conventional riveting/Automatic riveting	
Traction	18000N	24000N
Race	6 mm (adaptable)	9 mm (adjustable)
Net weight (battery included)	1.5kg	1.64kg
For installation of inserts	M3 - M8 - TC/SC/1*	M5 - M12
Material specifications	All materials and specifications of DEFORM-NUT inserts® closed to round, hexagonal and semi-hexagonal shank	

* Chuck and head for M10 deformation insert are supplied and sold separately

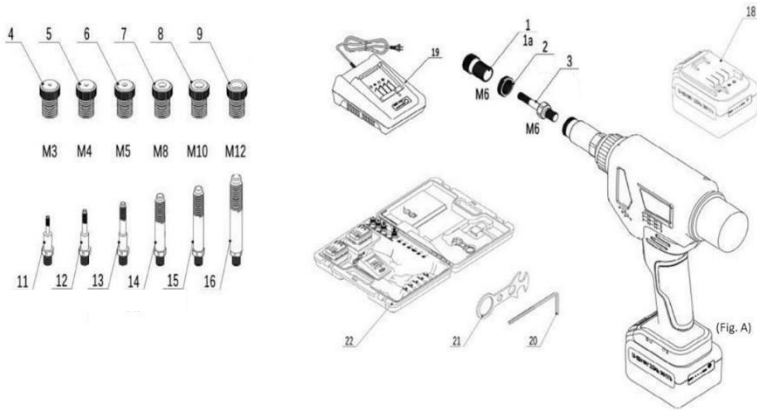
3.3 Weighted Sound Pressure Level

Model	E50-RN1	E50-RN2
A-Weighted Sound Pressure Level	THE _{PA} < 70 dB ₁₀	

3.4 Vibrations

Model	E50-RN1	E50-RN2
Total value of vibrations to which the system is exposed hand/arm	< 2.5 m/s ²	

3.5 Configuration/Accessories (Fig.A)

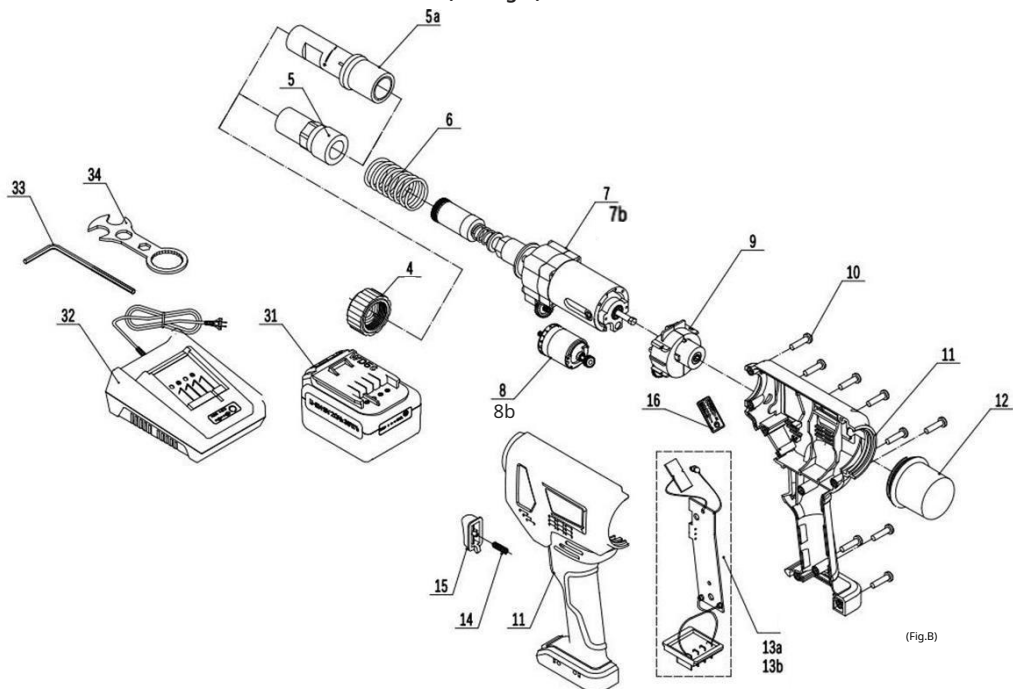


BASIC EQUIPMENT FOR EVERY MACHINE			
No.	CODE	DESCRIPTION	Qty.
18	E/BATT18V	LI-ION BATTERY 18V 2.0 AH-36WH	2
19	E/CABATT18V	DOUBLE INSULATED BATTERY CHARGER INPUT: 100-240V ~ 50-60Hz 1A / OUTPUT: 18V=2A	1
20	E/BR 5H	Allen key	1
21	E/CH UNIV	UNIVERSAL KEY	1
22	E/HOUSES	ABS CASE	1

E50/RN1 ATTR. / 2 18 V BATTERIES + COMPLETE KIT M3-M8			
1	E50/206	M 6 E50 SPINDLE HEAD	1
2	E/50 200	MANUAL HEAD TIGHTENING RING	1
3	E50/106/1	M6 E50 RN1 - RN2 SPINDLE	1
4	E50/203	M 3 E50 SPINDLE HEAD	1
5	E50/204	M 4 E50 SPINDLE HEAD	1
6	E50/205	M 5 E50 SPINDLE HEAD	1
7	E50/208	M 8 E50 SPINDLE HEAD	1
11	E50/103/1	M3 E50 RN1 - RN2 SPINDLE	1
12	E50/104/1	M4 E50 RN1 - RN2 SPINDLE	1
13	E50/105/1	M5 E50 RN1 - RN2 SPINDLE	1
14	E50/108/1	M8 E50 RN1 - RN2 SPINDLE	1

E50/RN2 ATTR. / 2 18 V BATTERIES + COMPLETE KIT M5-M12			
1	E50/206	M 6 E50 SPINDLE HEAD	1
2	E/50 200	MANUAL HEAD TIGHTENING RING	1
3	E50/106/1	M6 E50 RN1 - RN2 SPINDLE	1
6	E50/205	M 5 E50 SPINDLE HEAD	1
7	E50/208	M 8 E50 SPINDLE HEAD	1
8	E50/210	M10 E50 SPINDLE HEAD	1
9	E50/212	M 12 E50 SPINDLE HEAD	1
13	E50/105/1	M5 E50 RN1 - RN2 SPINDLE	1
14	E50/108/1	M8 E50 RN1 - RN2 SPINDLE	1
15	E50/110/1	M10 E50 RN1 - RN2 SPINDLE	1
16	E50/112/1	M12 E50 RN2 SPINDLE	1

3.6 Technical breakdown and consumables (see Fig.B)



(Fig.B)

LIST OF COMPONENTS COMMON TO MODELS E50-RN1, E50-RN2

No.	CODE	DESCRIPTION	QTY
4	RE50 0 004	THREADED RING TRANSMISSION COVER	1
6	RE50 0 006	SPRING	1
9	RE50 0 009	REDUCER	1
10	RE50 0 010	HOUSING SCREWS	9
11	RE50 0 011	E50-RN PROTECTIVE COVER	1
12	RE50 0 012	REAR COVER	1
14	RE50 0 014	RETURN SPRING BUTTON	1
15	RE50 0 015	BUTTON	1
16	RE50 0 016	CONTROL UNIT	1
31	E/BATT18V	LI-ION BATTERY 18V 2.0 AH-36WH	1
32	E/CABATT18V	DOUBLE INSULATED BATTERY CHARGER INPUT: 100-240V ~50-60Hz 1A / OUTPUT: 18V=2A	1
33	E/BR 5H	Allen key	1
34	E/CH UNIV	UNIVERSAL KEY	1

E50-RN1 PARTS LIST

5	RE50 0 005	PROTECTIVE SLEEVE	1
7	RE50 0 007	TRANSMISSION/DEFORMATION GROUP	1
8	RE50 0 008	E50/RN1 BRUSHLESS MOTOR	1
13th	RE50 C 013	E50/RN1 PRINTED CIRCUIT BOARD	1

E50-RN2 PARTS LIST

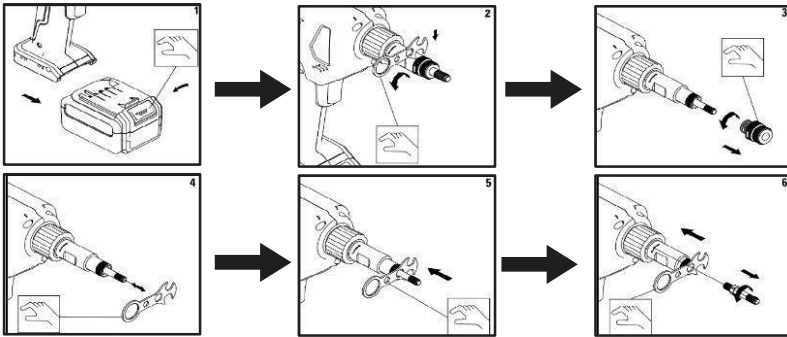
5	RE50 0 005	PROTECTIVE SLEEVE	1
7b	RE50 B 007	TRANSMISSION/DEFORMATION GROUP	1
8b	RE50 B 008	E50/RN2 BRUSHLESS MOTOR	1
13b	RE50 C 013	PRINTED CIRCUIT BOARD	1

4. PREPARING THE TOOL

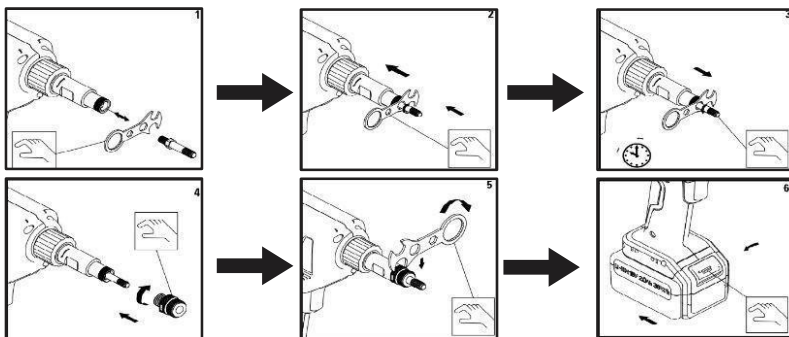
Before using the riveting tool, please read the following important instructions carefully.

⚠ 4.1 Replacing the spindle

Be sure to remove the battery from the riveter before replacing the mandrel and nosepiece, otherwise there is a risk of injury! Select the appropriate mandrel with the corresponding nosepiece that matches the insert size. The component replacement procedure is illustrated in the following images:



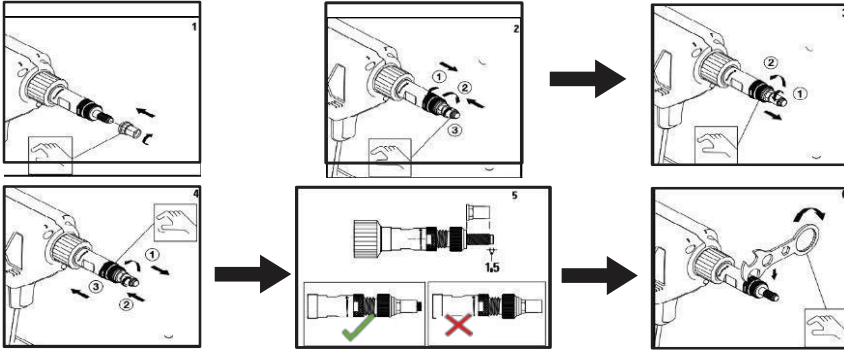
Removing the old chuck: First, make sure the battery has been removed from the tool as shown in figure ①. Then: ② loosen the lock nut with the supplied wrench, ③ unscrew the threaded sleeve, and ④ guide the round hole of the wrench onto the threaded sleeve down in the direction of the arrow, ⑤ use the wrench to push the sleeve down in the direction of the arrow and hold it in place, ⑥ then unscrew the threaded spindle.



Inserting a new chuck: ① Align the round hole of the supplied wrench with the chuck, ② Press the sleeve with the wrench in the direction of the arrow and hold it in place, ③ Screw the chuck clockwise until the hexagonal part of the chuck is no longer visible in the sleeve (it is engaged after a 60-degree turn): the chuck is then correctly installed. ④ Screw on the nose ⑤ and tighten the lock nut with the wrench. ⑥ Insert the battery last.

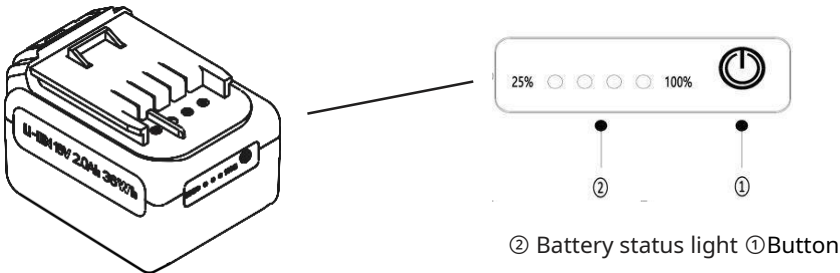
4.2 Setting the spindle

Correctly adjust the mandrel length according to the length of the deformation insert (see the figures below). The adjustment sequence is as follows:



① screw the insert onto the chuck ②, loosen the lock nut, adjust the ring nut ③ e ④ as shown in figure ⑤, check that the chuck, after adjustment, protrudes ≈ 1.5 mm beyond the insert - the chuck is then correctly adjusted, ⑥ tighten the lock nut with the universal wrench in the direction of the arrow

4.3 Battery check



Press button ① once to check the battery charge.

Battery status light ② is always green:

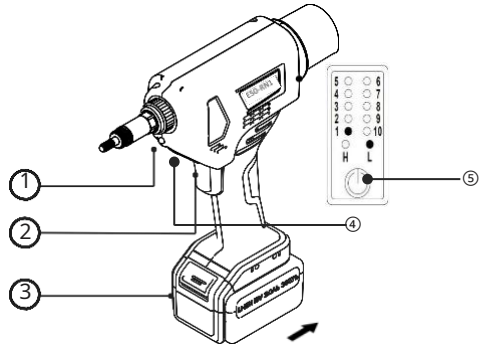
- Full gauge, 100% energy
- Three lights, 75% energy
- Two lights, 50% energy
- A light, 25% energy. Battery needs to be recharged.

THEIMPORTANT: For the installation of particularly resistant inserts (e.g. M8), the charge must be full, otherwise the power may not be sufficient.

4.4 Tool control

Install the battery ③ in the direction of the arrow. Press the button ②, the white LED light ① lights up and remains steady, indicating that the power supply is working normally.

- ① LED light
- ② Activation button
- ③ Drums
- ④ Control Panel
- ⑤ Control panel center button



☞ Save energy with auto-sleep mode: after completing operations within one minute, the white LED light automatically turns off and the tool enters auto-sleep mode; to restart power, simply press the power button.

5. SETTING THE TOOL FUNCTIONS



5.1 Programming Mode

☞ The following notes are important: please read them carefully when programming.

- Press button ② to start the machine. The white LED light ① and the green LEDs on the control panel ④ will light up to confirm startup.
- Press and hold the central button ⑤ for approx. 5 seconds. The LED indicators will light up progressively from 1 to 10 (clockwise) after 3 rotations, confirming entry into programming mode.
- Once the settings and parameterizations have been carried out (see paragraphs 3.1 to 3.5), wait approximately 5 seconds without pressing the central button ⑤. The LED indicators light up progressively from 10 to 1 (counterclockwise) by making 3 rotations and confirming the exit from the programming mode.



5.2 Traction mode: Traction adjustment (L)

Traction force mode (L) indicates normal traction force. Traction force mode (H) indicates increased traction force.

Set the tensile force based on the specifications and strength of the insert. Before setting the tensile force, familiarize yourself with the insert's specifications and its intended application.

- Entering Programming Mode (Section 5.1)
- Press the button ⑤ for 1.5 seconds to set the traction mode. Each press causes the corresponding LED indicator to light up green and the voltage is alternately switched between LH.

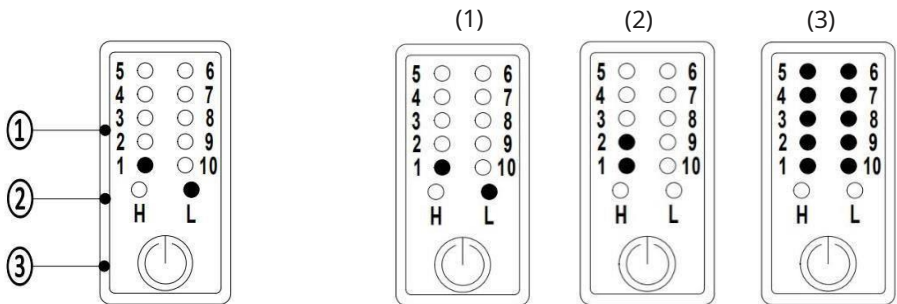
☞ To avoid excessive stress/damage to the mandrel, it is highly recommended to set the pull mode to L when riveting small inserts.

5.3 Stroke adjustment

The stroke setting, using the indicator lights, can be adjusted from 1 to 10. Before adjusting the stroke, read the following instructions to distinguish the characteristics of the different types of equipment (E50-RN1, E50-RN2).

Adjusting the E50-RN1 tool stroke (same operation also for the E50-RN2 model)

- Entering Programming Mode (Section 5.1)
- The stroke indicator ① lights up and the green light flashes slowly in L riveting mode (factory setting). To increase the stroke by 0.2 mm, press button ③ again: the stroke indicator ① flashes green quickly. The stroke has now been increased by 0.4 mm; pressing button ③ again, the stroke is increased by another 0.2 mm to 0.6 mm: the green light is always on.
- The travel setting ranges from 1 to 6 mm, incrementing by 0.2 mm with each press of the button (see Figure 2); a full 6 mm of travel (as shown in Figure 3) is the maximum travel setting (all 10 lights are on). A second short press of the button, after the full display (all lights) has been displayed, resets the travel to 0.2 mm (see Figure 1).
- If you do not confirm by pressing the activation button within 1 minute, the white light will turn off automatically and the power supply he comes restored pressing The button of activation.
- The indication of the insert deformation force indicated on the display, it comes stored as the last setting and is displayed when the unit is turned back on.



Adjusting and displaying the stroke/gear	E50-RN1	E50-RN2
1 extra gear, the green light flashes slowly	0.2 mm	0.3 mm
2 more gears, the green light flashes quickly	0.4 mm	0.6 mm
3 more gears, the green light it's on and it's not flashing (it's steady)	0.6 mm	0.9 mm
Full travel (all gears), green light is always on (steady)	6.0 mm	9.0 mm

Correspondence table between control unit warning lights and deformation stroke

Model E50-RN1										
Numbering on control module	1	2	3	4	5	6	7	8	9	10
The green light flashes slowly	0.2	0.8	1.4	2	2.6	3.2	3.8	4.4	5	5.6
The green light flashes quickly	0.4	1	1.6	2.2	2.8	3.4	4	4.6	5.2	5.8
The green light is on and steady	0.6	1.2	1.8	2.4	3	3.6	4.2	4.8	5.4	6
Model E50-RN2										
Numbering on control module	1	2	3	4	5	6	7	8	9	10
The green light flashes slowly	0.3	1.2	2.1	3	3.9	4.8	5.7	6.6	7.5	8.4
The green light flashes quickly	0.6	1.5	2.4	3.3	4.2	5.1	6	6.9	7.8	8.7
The green light is on and steady	0.9	1.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1	9

The values in the table are expressed in mm and correspond to the deformation travel

5.4 Setting the riveting mode

Before switching to riveting mode, refer to the specifications and properties of the insert material, as well as other information about riveting conditions, to select the appropriate riveting mode. There are two modes: fully automatic and conventional.

5.5 Riveting in fully automatic mode (with flashing green light)

Fully automatic riveting mode is possible thanks to the "flashing green light" ② in the riveting modes (L) and (H). **It is recommended to use fully automatic mode only with semi-hex shank inserts.**

there
And

- Place the insert loosely into the seat.
- Bring the tip of the mandrel close to the threaded part of the insert, keeping it perpendicular to the plane. Light pressure starts the machine.
- The entire cycle (Tighten – Deform – Unscrew) occurs automatically without using the control button.

Please note: The fully automatic riveting mode is only suitable for assembly line operation, in combination with hexagonal or half-hexagonal shank inserts. For round shank inserts, conventional riveting is recommended.

5.6 Riveting in conventional mode (with steady green light)

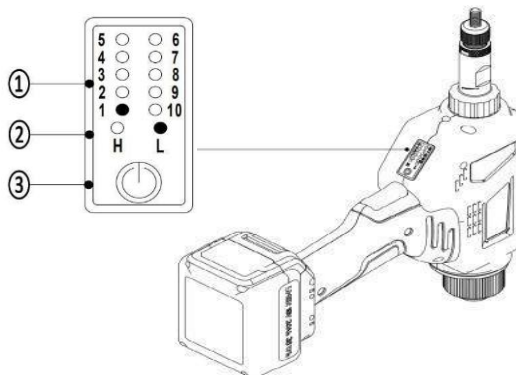
Conventional riveting mode is possible thanks to the "always green light"

- Place the free insert close to the chuck and apply light pressure.
- The machine automatically screws the insert until it contacts the head.
- Place the insert inside the designated seat and press the control button
- The cycle (screw-unscrew) is started until the machine is freed from the insert.

5.7 Function display panel


To switch to fully automatic riveting mode, press the ③ button for 3 seconds: the green light is flashing!

To switch to conventional riveting mode, the ③ button must be pressed for 3 seconds and the green light stops flashing, it's fixed.




6. OPERATION OF THE TOOL

(Important tips before starting work)

 Charge the battery to 100% before first use (according to current regulations). Make sure charging does not stop below 50% of battery capacity.

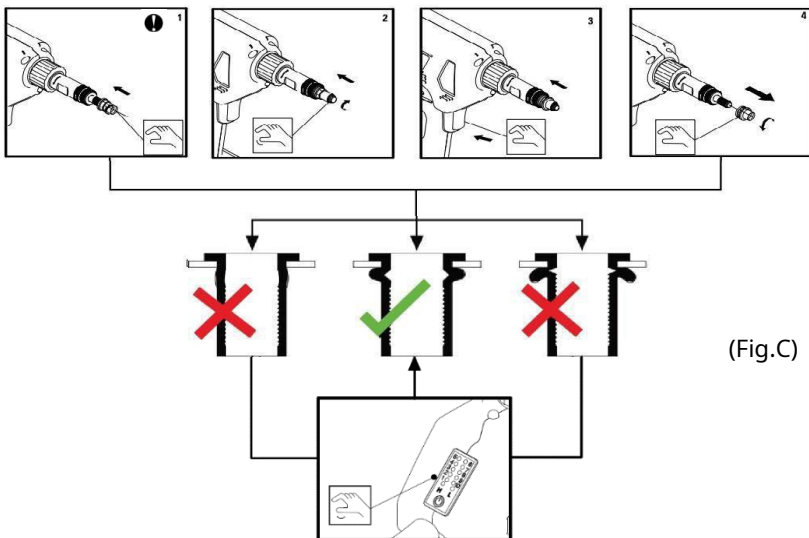
6.1 Instructions for installing the deformation insert

The stroke depends on the thickness of the sheet metal being riveted. Remember that thin sheet metal requires a longer stroke than thick sheet metal (when using the same type of insert). Adjustment is performed by deforming the insert on a sample sheet metal and checking the deformation created. Therefore, pre-installation (i.e., a sample riveting) is necessary once the function is set (i.e., before starting the actual riveting operations – see Fig. C). We recommend using SPECIALINSERT® brand DEFORM-NUT® deformation inserts.

 Pay particular attention to this operation. The threaded tubular rivet, during deformation and release, should not be held with your fingers but with suitable pliers, because the insert generates heat during deformation.

- ① Insert the insert ½ turn according to the following illustrations directly onto the chuck
- ② Press the insert in the direction of the arrow and it will screw in automatically.
- ③ Press the trigger button to start the deformation cycle
- ④

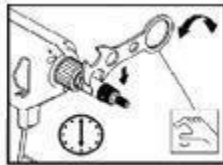
The test process is complete, and the mandrel automatically installs the insert. Check the process according to the illustration below and verify that the riveting conditions are satisfactory.



(Fig.C)

6.2 Control of the deformation insert

If, after the adjustment process, the result of the deformation insert setting does not match the image in the center, it means that the stroke has not been set correctly. Further fine tuning can be done by adjusting (+/-) with the universal wrench (see Fig. D).

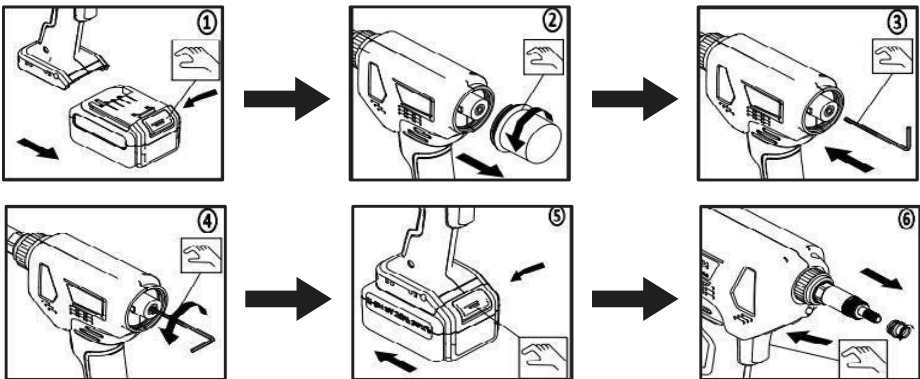


(Fig.D)

If the fine calibration does not have the desired result, check/re-perform the instructions in '5.3 Stroke Adjustment'.

6.3 Manual unscrewing of deformation inserts

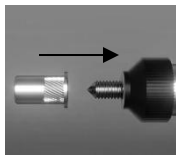
Important note: Too high a tensile force or too long a working stroke Long (incorrect setting) insert threads can be damaged. Furthermore, incorrect settings can cause severe deformation of the insert thread and prevent automatic release. If the insert is stuck and still inserted in the chuck, use the Allen key to manually unscrew the stuck insert, as follows:



① Remove the battery, ②unscrew the protective cap in the direction of the arrow to remove it, ③ insert the Allen key into the hexagonal hole at the rear end in the direction of the arrow, ④loosen the locked insert from the threaded spindle counterclockwise in the direction of the arrow, ⑤install the battery, ⑥the threaded spindle extends automatically after pressing the unlock button.

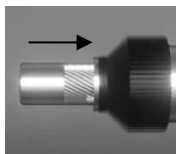
6.4 Instructions for setting up the riveting process

Images for representation purposes only



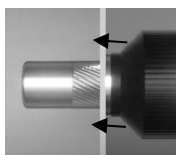
① Bring the insert closer to the chuck in the direction of the arrow and screw in by hand for at least 2 turns

⚠ Be careful NOT to apply pressure to the chuck at this stage to avoid triggering the automatic screwing process.



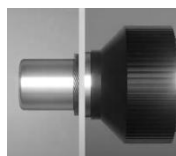
② Apply light pressure to the insert on the chuck in the direction of the arrow. The machine will start, screwing the insert in until it contacts the head.

⚠ Be careful and do not hold the insert with your fingers but with suitable pliers.



③ Insert the insert into the mounting hole. Apply light axial pressure with the tool on the part to be assembled to ensure proper seating.

☞ Make sure the insert head is in contact with the receiving material. Any void or gap may prevent the insert from deformation properly.



④ Press the trigger to start the cycle. The machine automatically starts the deformation and unscrewing process.

⚠ During use, the operation must be carefully monitored, checking in particular that the vibrations are regular and/or that no abnormal overheating occurs. Any deviation from normality must be reported.



⑤ Once the deformation is complete, the machine automatically unscrews the chuck, freeing the machine from the insert.

☞ Do not try to counteract the machine by applying counter pressure



⑥ The insert is in place and the machine is ready for a new cycle.

☞ Periodically check the integrity of the spindle thread and the battery condition. (See Section '4.3 Battery Check')

☞ The procedure described refers to the **Riveting in conventional mode** (see paragraph 5.6). **The automatic mode** (see paragraph 5.7) differs at point ①. In fact, the insert is not screwed into the machine but is instead placed freely inside the seat. By bringing the tip of the chuck perpendicular to the insert and applying light pressure, the machine starts the complete cycle (tightening/deformation/unscrewing) without having to press the trigger.

☞ **ATTENTION! This mode is only for hex/half-hex body inserts.** 20

7. CHARGER AND BATTERY

7.1 Technical parameters


Double insulated charger

Output: 18V = 2.0Ah Input:
100-240V ~ 50-60Hz 1A Net
weight: 0.27Kg

Drums

Output: 18V - 2.0Ah -36Wh
Net weight: 0.37Kg

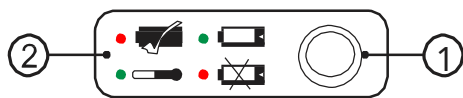
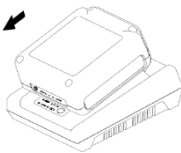
7.2 Using the charger

The charger connects to the power supply. When the green light on the charger  it is always on with a steady green light and is working properly. The battery is charged by inserting it into the charger in the direction of the arrow (Fig. E).

Meaning of the loading symbols (Fig.F)

Situation	Charging indicator light (1)	Meaning of the symbols of loading (2)	Meaning/Actions
When inserting the battery into the charger	Red light on	The battery is in good condition. Charging time is about an hour.	In good condition
	Green Light On	Battery abnormality: can not to be loaded	Immediately disconnect the power, remove the battery and replace it with a new
With a charged battery	Green Light On	The battery is fully charged charge, remove it from the charger	In good condition
	Red light on	High internal temperature. The charger stops to function	Immediately disconnect the power, remove the battery and replace it with a new

(Fig.E)



(Fig.F)

① Charging indicator light

② Loading symbols

7.3 Battery usage

- During use, check the battery charge level (see paragraph '4.3 Checking the battery').
- The battery is equipped with deep discharge protection (ECP) and can be recharged approximately 1000 times.
- Do not use the charger until the battery has cooled sufficiently.
- If battery operating time is significantly reduced during normal use, the battery should be replaced.

8. FAQ (QUESTIONS AND ANSWERS)

	REQUESTS	ANSWERS
DRUMS USE	Is it possible not to use them for a long period of time?	Please charge the battery every 6 months, otherwise its performance may deteriorate after 6 months.
	Does charging after each use affect battery life?	Tip: When the remaining battery life is only 25% (a light on the display) or when the battery is dead, you need to recharge it to increase its life.
	If the tool housing is used continuously in conventional riveting mode (see 3.5) for a certain period of time, heating the housing Does it affect normal use?	As the high-speed motor rotates the gear, the heat generated during the riveting process is transferred to the outside, without compromising the normal use of the tool. The user is advised to wear suitable protective gloves.

9. TROUBLESHOOTING

	ANOMALY	POSSIBLE CAUSES	SOLUTIONS
DURING THE LOAD	The battery has been charged in the charger for charging and green light is on.	Malfunction or damage to the battery, error, charging not possible	Stop charging immediately, remove the battery and replace it with a new one.
	The red light is on while the battery is charging	Temperature Of load (battery overheating) outside of the normal range (0°C-45°C)	Turn off the power immediately, remove the battery and check the charger
USE	All the indicator lights on the function panel they flash	Low power alarm	Remove the battery and check it
	The light flashes once within a certain period of time and yes turns off after 15 seconds.	Engine short circuit alarm	Stop using the tool immediately and remove the battery. Send the tool to qualified and professional maintenance personnel for inspection and repair. If in doubt, contact your authorized dealer for advice. and timely repair.
	The light flashes 3 times within a certain period of time and yes turns off after 15 seconds.	Control unit overheating alarm	
	The light flashes 4 times within a certain period of time and yes turns off after 15 seconds.	Engine block alarm	
	The light flashes 5 times within a certain period of time and yes turns off after 15 seconds.	Power failure or current flow excessively high	
	The insert deformation does not it has been settled correctly	Damaged insert thread	
		Damaged spindle	Replace the spindle (see 1.4 List of consumables and 2.1 Replacing the spindle)
		The head of the deformation insert is not in contact with the threaded sleeve	The length of the spindle is adjusted in wrong way; adjust according to the length of the insert deformation (see 2.1 Replacing the spindle).
		Low battery. Check the panel. power indicator	Recharge (see 2.3 Checking the battery, together with 5. Charger and Battery).
	The spindle cannot be extract	Too high a tensile force or working stroke too long, resulting in deformation or damage to the thread of the insert deformation	- Unscrew the insert manually deformation with the Allen key (see 4.3 Manually unscrew the inserts deformation). - Adjust the traction force or working stroke (see 3.1 Adjusting the traction force traction and 3.2 Travel adjustment).
		Damaged deformation insert thread	Use a new deformation insert
		The hole provided for the riveted plate is not perpendicular to the plane or the accuracy of the drilling does not meet the required requirements	Check the hole provided for the riveted plate in process and see it again
Premature termination of the riveting process before the tool stops to function completely		Wait until the tool stops working completely (see 4. Tool Operation - Tips important before starting work)	
Deformation inserts loosen after the installation	The deformation insert is not perpendicular to the hole expected of the piece during processing	Set the operation correctly (see 4. Operation of the tool - Tips important before starting work)	
	The pulling force is too weak	Adjust the pulling force correctly (see 3.1 Adjusting the pulling force)	
	The deformation insert is loosened before reach the set working stroke	Set the working stroke correctly (see 3.2 Setting the stroke)	

10. EC DECLARATION OF CONFORMITY

An original copy showing the model and serial number is included in paper form inside the package. We recommend keeping it..

Directive 2006/42/EC 'Machinery', Annex II

The manufacturer

SPECIALINSERT SRL

Via Monfalcone 144 – 10136 TURIN (ITALY)

+39 011 700301

info@specialinsert.it – export@specialinsert.it

www.specialinsert.it

declares under his/her own exclusive responsibility that:

The following models

Name	BATTERY-POWERED RIVETERS
Types and models	E50-RN1 E50-RN2
Serial numbers	Reported on the machine and in the document inside of the packaging

comply with all applicable points of Directive 2006/42/EC ("Machinery");

- The following standards were used as reference for the conformity check:

EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction

IEC 62841-1:2014 Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements

- The machine is subject to the conformity assessment procedure based on internal production control;
- The person responsible for compiling the technical file is the legal representative and the file is archived at the office indicated above.

Piero Arduini
President

