



QUALITY • SERVICE • PERFORMANCE

NB80A
Battery Blind Rivet Nut Tool
Installation Manual



BRUSHLESS TECHNOLOGY




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

SAFETY INSTRUCTIONS/WARNINGS

To reduce the risk of personal injury to yourself and/or others, or property damage, please be sure to follow the safety instructions below.

Description of the warnings:

-  **Danger** - A cause of potential danger of serious injury/death.
-  **Warning** - A cause of potential danger of serious injury/death.
-  **Caution** - A cause of risk of minor injury or loss of property.


Description of actions to be followed:

-  This is to alert the user to prohibited actions.
-  This is to advise the operating steps that must be followed to correctly use the appliance.

This tool is restricted to setting blind rivet nuts and must not be used for any other purpose, especially any impact use. Only use the tool within the specified setting ranges in the function settings. Oversetting can cause severe damage. (See pages 15-17).

Do not block or insert objects into the motor ventilation on the tool body.

It is recommended that you wear safety glasses, any personal protective equipment and adhere to all relevant safe practice measures when using this tool.

-  Please handle with care all of the accessories within the plastic case. The tool and accessories should be kept in the plastic case, stored in a dry place and out of reach of children.

Battery Use

- Please ensure that the battery is charged to 100% on first use. Approximate charging time is about an hour.
- Do not charge damaged, leaking, or wet batteries.
- Batteries must not be put in fire or water at any point.
- Used batteries must be disposed of safely and in compliance with respective governing country regulations.
- Do not charge when the ambient temperature is below 0°C or above 45°C.

Charger Use

- Only the original manufacturer's charger must be used for charging the battery.
- The battery must be charged with a clean, dry, and undamaged charger.
- Ensure there are no metal objects in the charging area to create a possible short circuit.
- This charger must not be used by any person without prior training unless a safety officer is on-site to supervise or instruct them.

Danger

- Do not use near flammable liquids/gases that can cause a risk of explosion.
- Do not use the tool in a damp environment that can cause the risk of electric shock.
- Do not operate the tool aimed at yourself/others.

Warning

- Tools should be placed down safely to prevent any falls that can cause unnecessary damage.
- When installing the battery and after hearing a "click" sound, ensure that the battery is firmly locked in place.
- Before charging, check that the charger and its power supply equipment are in good condition.
- Use a power supply unit that matches the charger.
- Plugs, power leads and chargers should be checked regularly to comply with all safe practice procedures.
- Maintenance personnel must be qualified professionals to carry out any repairs. If in doubt, please return the tool to the authorised distributor for repair.
- When servicing the tool, always ensure the battery is removed.
- Only original spare parts must be used during maintenance.

TOOL MAINTENANCE AND ENVIRONMENTAL COMPLIANCE

! Maintenance

- Regular maintenance prolongs the life of tools with a lithium battery and should be carried out by qualified maintenance personnel or an authorised repair agent.
- To keep the tool in a good working condition, please check common wearing parts (mandrels, heads etc) on a regular basis.
- In case of damage or possible warranty claim, please contact your authorised distributor.

! Repair

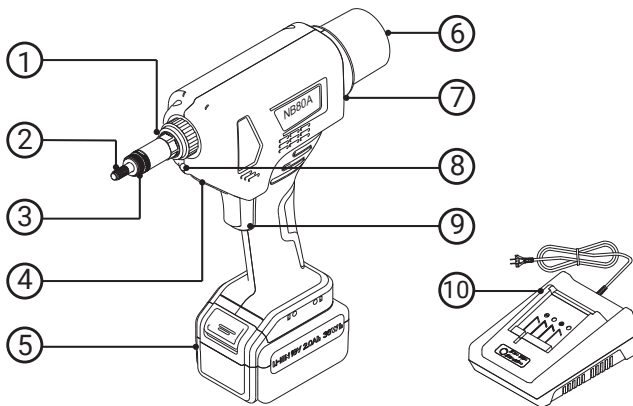
- The 12-month return to base warranty for this tool is from the date of purchase. All wearing parts e.g., mandrels, heads, etc. are excluded with the exception of a manufacturing fault/faults.
- All repairs should only be carried out by qualified maintenance personnel or an authorised repair agent. If in doubt, please return the tool to your authorised distributor for repair.

! Environmental Compliance

When replacing the lithium batteries used in this product, be sure to observe that all used batteries must be disposed of safely and in compliance with respective governing country regulations.

- ! Failure to comply with all/any of the warnings and instructions will invalidate the manufacturer's warranty.

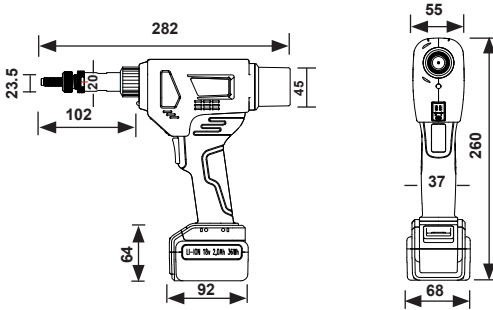
TOOL OVERVIEW



Key Parts

- | | |
|-------------------|-----------------------|
| 1. Head | 6. Rear Cover |
| 2. Mandrel | 7. Body |
| 3. Adjustment Nut | 8. Illuminating Light |
| 4. Control Panel | 9. Trigger |
| 5. Battery | 10. Charger |

Technical Dimensions and Capacity

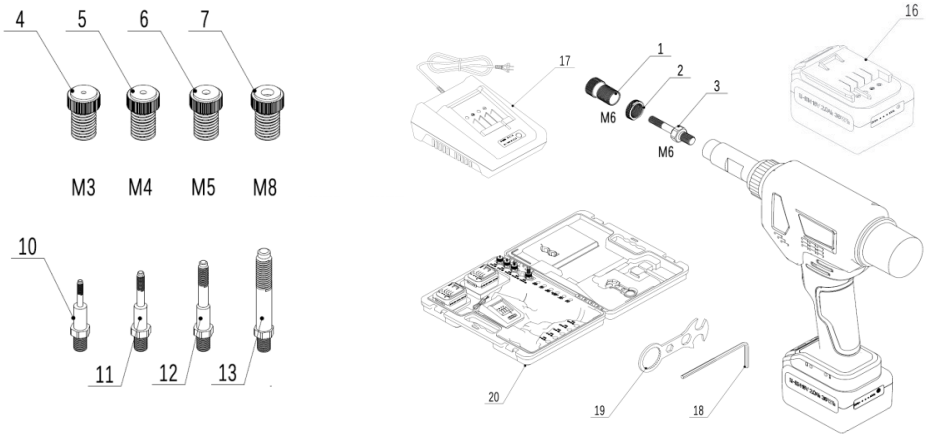


Technical Data	
Capacity	M3-M8
Material Capabilities	All round body, semi and full hexagonal blind rivet nuts in all materials.
Motor Type	18V Brushless Technology
Vibration Magnitude	1.5m/s ²
Noise Level	< 90dB
Riveting Style	Conventional Spin/Pull & Fully Automatic
Traction Force	18000N
Stroke Length (adjustable)	6.0mm Max

Capacity Guide				
Thread Size	Rivet Nut Material			
	Alum	Steel	A2 St/St	A4 St/St
M3				
M4				
M5				
M6				
M8				
M10	X	X	X	X
M12	X	X	X	X

Tool comes complete with M3, M4, M5, M6 and M8 mandrels and heads.

Wearing Parts and Accessories



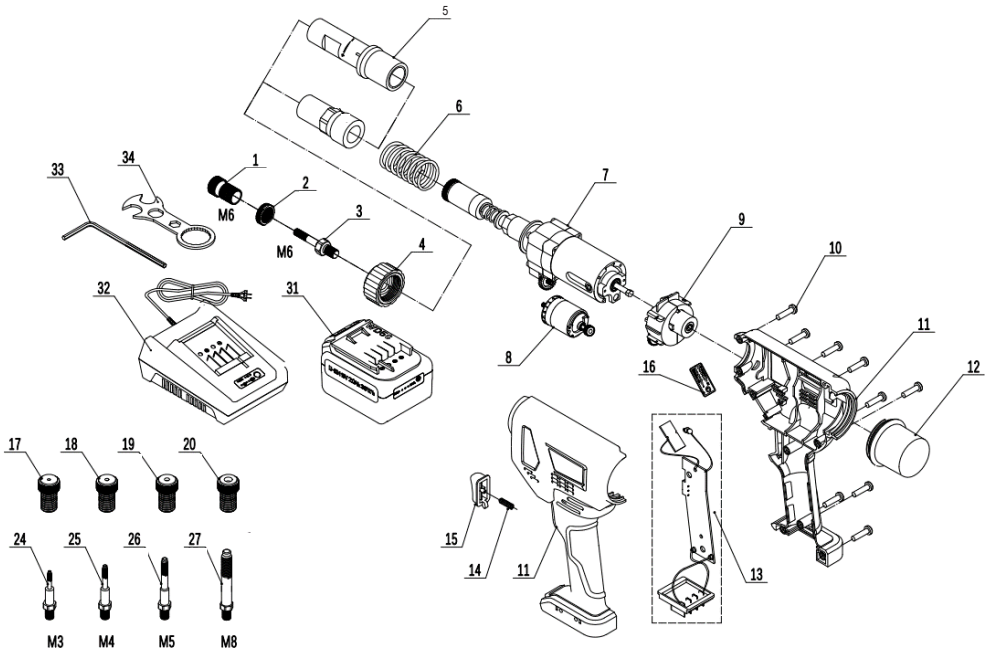
Wearing Parts List

No	Article Number	Description	Qty/Tool
1	TSBL43249H00	M6 Head	1
2	TSBL43232H00	Adjustment Nut	1
3	TSBL43243H00	M6 Mandrel	1
4	TSBL43252H00	M3 Head	1
5	TSBL43251H00	M4 Head	1
6	TSBL43250H00	M5 Head	1
7	TSBL43248H00	M8 Head	1
10	TSBL43246H00	M3 Mandrel	1
11	TSBL43245H00	M4 Mandrel	1
12	TSBL43244H00	M5 Mandrel	1
13	TSBL43242H00	M8 Mandrel	1
16	TSBZ41718H00	Battery 18V 2Ah 36W	2
17	TSBZ41734H00	Charger UK ECP-BR-5A	1
18	TSBF60273H00	Hex Key	1
19	TSBL42157H00	Spanner	1
20	TSBB01642H00	Storage Case (*)	1

Please Note:-

(*) Factory order part on request.

Full Parts List and Exploded Drawing



Turnover for full list

Full Parts List

No	Article Number	Spec.	Qty/Tool	Description
1	TSBL43249H00	M6	1	M6 Head
2	TSBL43232H00		1	Adjustment Nut
3	TSBL43243H00	M6	1	M6 Mandrel
4	TSBL23002H00		1	Screw Cover
5	TSBZ42050H00		1	Nosepiece Pedestal
6	TSBZ42078H00		1	Cover Tube
7	TSBZ41819H00		1	Gear Box
8	TSBZ41922H00		1	Brushless Motor
9	TSBZ41806H00		1	Gears Assembly
10	TSBF60577H00		9	Self-Drill Screw
11	TSBZ41709H00		1	Body (Blue)
12	TSBL42296H00		1	Rear Cover
13	TSBZ41876H00		1	PCB
14	TSBL42162H00		1	Spring for Trigger
15	TSBL42133H00		1	Trigger
16	TSBL42239H00		1	Control Panel
17	TSBL43252H00	M3	1	M3 Head
18	TSBL43251H00	M4	1	M4 Head
19	TSBL43250H00	M5	1	M5 Head
20	TSBL43248H00	M8	1	M8 Head
24	TSBL43246H00	M3	1	M3 Mandrel
25	TSBL43245H00	M4	1	M4 Mandrel
26	TSBL43244H00	M5	1	M5 Mandrel
27	TSBL43242H00	M8	1	M8 Mandrel
31	TSBZ41718H00	18V-2.0A-36Wh	2	Battery
32	TSBZ41734H00	18V-2.0A	1	Charger, UK ECP-BR-5A
33	TSBF60273H00		1	Hex Key
34	TSBL42157H00		1	Spanner

Primary Spares

Secondary Spares

Warranty Parts

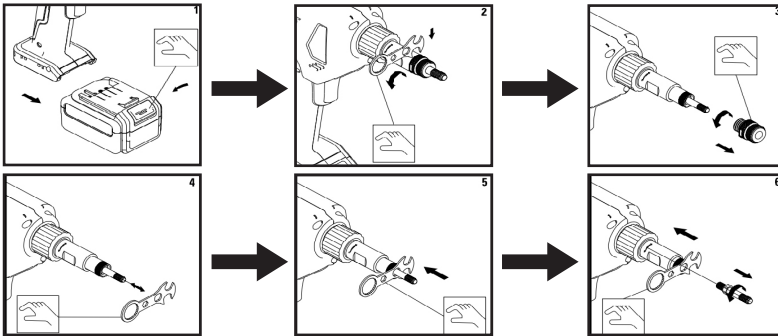
PREPARATION BEFORE USE

⚠ Danger - Please read the instructions carefully before use.

Changing the Mandrels

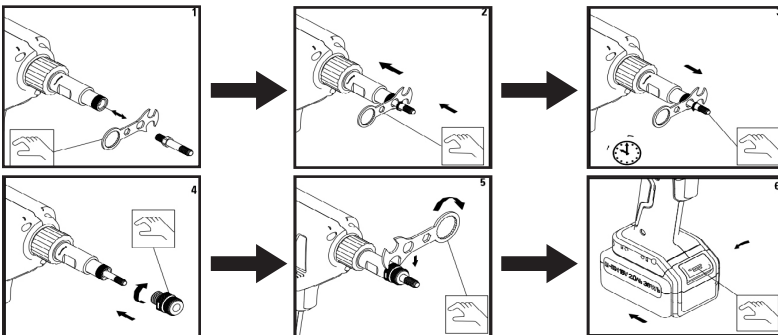
Ensure the battery is removed from the riveting tool before carrying out any work to prevent any risk of injury. Select the appropriate mandrel and head for the thread size of the blind rivet nut you require.

The procedure for removing the mandrel is as follows:-



1. Make sure that the battery has been removed from the tool.
2. Loosen the adjustment nut with the spanner.
3. Unscrew the head and adjustment nut completely.
4. Guide the round hole of the spanner over the threaded mandrel.
5. Push the spanner back against the spring-loaded sleeve to release the mandrel.
6. Unscrew the threaded mandrel and remove.

The procedure for inserting the new mandrel is as follows:-

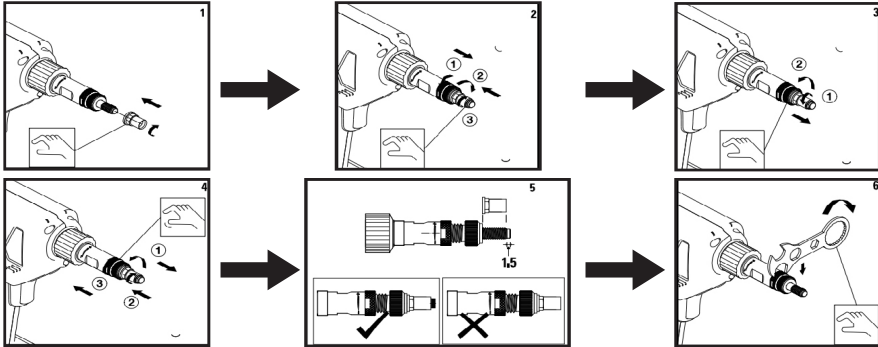


1. Select the new mandrel size you require.
2. Guide the round hole of the spanner over the threaded mandrel and push back the spring-loaded sleeve to thread the mandrel into the sleeve.
3. Screw the mandrel all the way in until the hexagon part can't be seen, then release the pressure. Rotate mandrel to ensure it has locked in place.
4. Replace the adjustment nut onto the corresponding head for the new mandrel size and screw into place.
5. Tighten the adjustment nut before use.
6. Connect battery, ready for use.

Setting the Mandrel/Head and Adjustment Nut

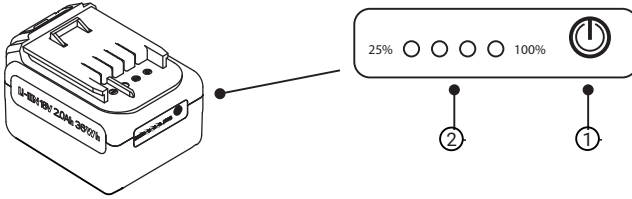
The setting of the mandrel/head and adjustment nut correctly is all according to the length of the blind rivet nut to be used.

The setting up is as follows:



1. Partially screw the rivet nut onto the mandrel.
2. Loosen the adjustment nut and screw the head as far back as it can go.
3. Screw the rivet nut fully onto the mandrel along with the 1.5mm tolerance shown in image 5. For closed-end rivet nuts, you screw all the way on until the thread cams out and then rotate anti-clockwise 1.5 turns.
4. Screw the head forward until it reaches the head of the rivet nut, also taking up any slack in the mandrel. Screw the adjustment nut backwards towards the tool.
5. Shows correct and incorrect setting.
6. Tighten the adjustment nut with the spanner before use.

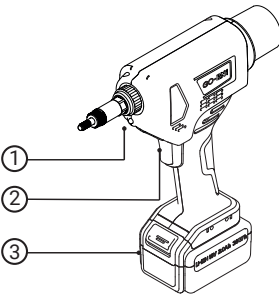
Checking the Battery



- Press button (1) once to check the battery.
- The battery status indicator light (2).
- Four lights (red, amber and two green) - 100% energy. Fully charged.
- Three lights (red, amber and one green) - 75% energy.
- Two lights (red and amber) - 50% energy. *Recharge if you are setting high strength rivets.
- One light (red) - 25% energy. Recharge the battery to full power.

Checking The Tool

- ① White LED light
- ② Trigger
- ③ Battery



Insert battery ③ in the direction of the arrow and click to lock it into place.

Pull the trigger ② and the white LED light ① will light up indicating the tool has power and is ready for use. Press and hold the stroke setting button (see Function Settings) for 5 seconds and the green display lights up will flash consecutively releasing the lock.

Important Note:- The tool has an energy-saving automatic sleep mode. If the tool has not been operated for over one minute, the white LED light goes off automatically to signal the tool has gone into automatic sleep mode. Pull the trigger again to restore power.

FUNCTION SETTINGS

⚠ Warning Read the following important notes carefully when you are ready to prepare the function settings and especially before you use the tool.

Setting the Traction Force

The traction function ② is factory pre-set to L.

The Stroke setting ① is factory pre-set to 0.6mm (see page 14).


The traction force mode (L) is for general traction force.


The traction force mode (H) is for increased traction force.

Please set the traction force according to the specifications and the strength of the blind rivet nut.

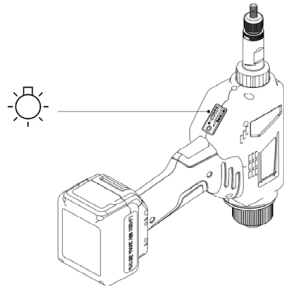
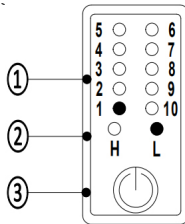
Before setting the traction force, check the technical characteristics of the blind rivet nut and its application range.

Press the button ③ for 1.5 seconds to set the traction force mode. Each time you press it, the traction force indicator ②, which will light up in green and will change from L-H alternately. Select either L or H for use.

① Stroke Control Indicator Light 

② Riveting Mode Indicator Light 

③ Button 



⚠ Warning To avoid excessive stress/damage to the mandrel, it is strongly recommended to set the traction force mode to L when riveting small blind rivet nuts.

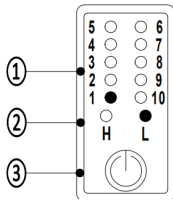
Unlocking the Function Settings

Hold the button ③ for 8 seconds until the stroke setting ① LEDs light up in a waterfall pattern. Once you have set the traction force and stroke settings (see next page) the tool will automatically lock the settings.

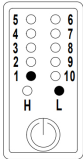
Setting the Stroke Adjustment

The stroke setting indicator lights can be set/adjusted between 1-10. (0.6-6.0mm).

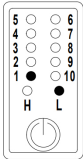
First, pull the trigger button on the tool and the white LED light will indicate the tool has power.



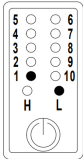
1. Stroke Indicator Light (green)
2. Traction Force (L/H)
3. Stroke Setting Button



Press button ③ quickly to start the stroke setting. The stroke indicator light ① lights up and the green light flashes slowly. The traction power will be in factory setting L. To change the traction power to H please see page 14.



To increase the stroke by 0.6mm, press button ③ quickly and the stroke indicator light ① changes to a fast flashing green light. The stroke has been increased by 0.6mm to setting no 2. Repeat this process to the required stroke setting number. Press button ③ again and the green light is permanently on, setting the stroke.



The maximum stroke setting of 6.0mm is when all 10 lights are on. The stroke and traction power are saved as the last setting on the function display and will default when the unit is started up again. To clear, hold button ③ for five seconds.

If there is no use within 1 minute, the tool will turn off automatically. Pull the trigger to restore power and the white LED light will turn on.

Setting the Stroke Adjustment (cont)

Stroke Indicator Number	Stroke Setting (mm)
1	0.6
2	1.2
3	1.8
4	2.4
5	3.0
6	3.6
7	4.2
8	4.8
9	5.4
10	6.0

Riveting in Conventional Mode (with Fixed Green Light)

The tool is factory set for conventional riveting mode. It is recommended to use the conventional riveting mode with all rivet nuts, but especially round body type. In this setting when the rivet nut is threaded onto the mandrel with slight pressure the tool automatically screws on until the rivet nut meets the head. The rivet nut is then inserted into the hole on the workpiece, the trigger is pulled to set the rivet nut and the mandrel auto spins off to complete the cycle.

Riveting in Fully Automatic Mode (with Flashing Green Light)

The fully automatic riveting mode is made possible by holding down button ③ for 5 seconds. The riveting mode (L) or (H) will now have a "flashing green light". It is recommended to use the fully automatic mode only with semi and full hexagonal shank rivet nuts(see special note below). The rivet nut is inserted into the workpiece (hole) and the mandrel is automatically screwed into the rivet nut (threading), automatically pulls the rivet nut (deformation) (without actuating the trigger) and auto spins off. The fully automatic riveting mode is suitable for assembly line work and significantly increases capacity. To reset back to conventional, hold down button ③ for 5 seconds.

⚠ Special Note:- the fully automatic riveting mode is only suitable for assembly-line operation, in combination with semi or full hexagonal blind rivet nuts. For round blind rivet nuts, we recommend the conventional riveting mode only.

TOOL OPERATION

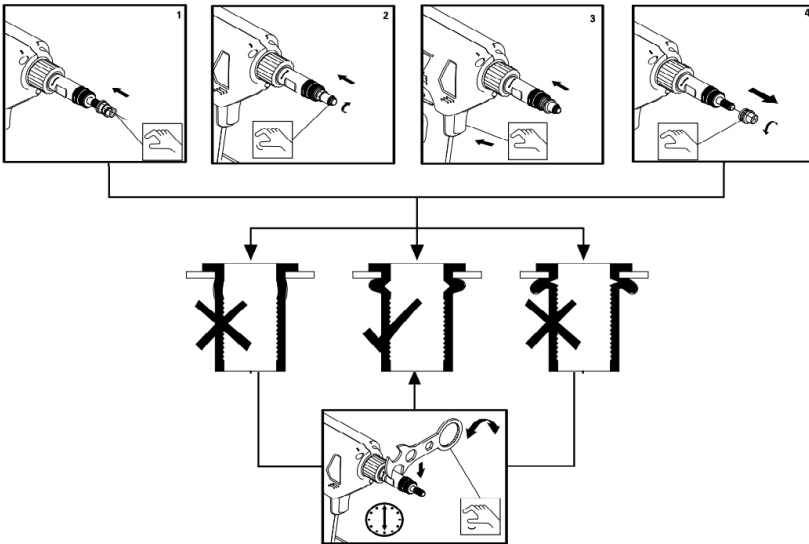
Checks and Pre-installation

Please ensure the battery is 100% charged before use.

Check the stroke adjustment functions are set for the rivet nut specification, material type and thickness of material the insert will be fixed into. Due to both batch variation and different types of specification of blind rivet nuts, installation performance can vary greatly. Therefore, we highly recommend that pre-installation (sample setting) is performed before any continual use. The use of JRP brand rivet nuts is recommended for optimum performance.

Check there is no damage to the thread on the mandrel and it is clean of any foreign bodies prior to use.

1. Screw the rivet nut by hand for the first half to three quarter turns onto the mandrel.
2. Push the rivet nut in the direction of the arrow to activate the auto-spin.
3. Press the trigger to pull and set the rivet nut.
4. The mandrel will automatically be activated in reverse and spin out.



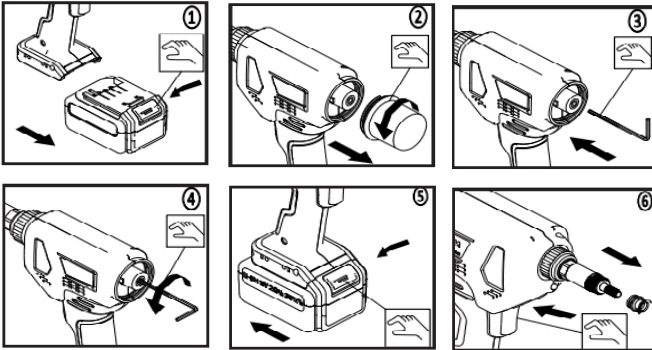
Checking the Rivet Nut Setting

If after setting the rivet nut does not look like the image in the middle with the tick, then the stroke will require further adjustment. Increase the stroke adjustment for the image on the left and decrease the adjustment for the image on the right.

Manually Unscrewing Rivet Nuts

Too high a traction force or too much stroke can cause the rivet thread to deform and lock onto the mandrel, stopping the auto-reverse from working. To remove the tool from a jammed rivet nut manually please follow the following procedure:-

1. Remove the battery from the tool.
2. Unscrew and remove the rear cover (P/No 12).
3. Insert the hex key (P/No 33) into the rear of the tool.
4. While holding the tool still, manually turn the hex key anticlockwise until the mandrel thread is free from the rivet nut.
5. Reconnect the battery.
6. Check the mandrel thread is not damaged and the stroke settings are correct to restart working.



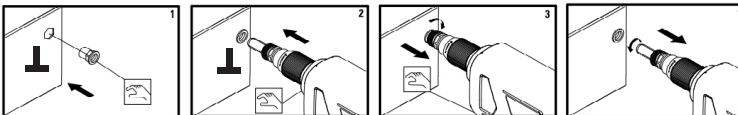
⚠ Warning Read the following important notes carefully when you are ready to prepare the function settings and especially before you use the tool.

Rivet Nut Setting Process

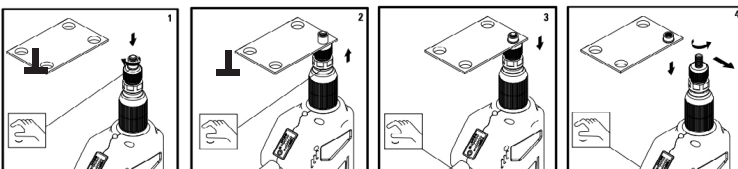
Please see below guidance on best practice for installation.

1. Screw the rivet nut onto the mandrel.
2. Present the rivet nut into the workpiece ensuring the tool is square to the application. Failure to do this will cause damage to the tool.
3. Press the trigger to set the rivet nut.
4. After setting, the tool will go into auto-reverse and leave the rivet nut captive in the workpiece.

Conventional Setting



Inverted Setting

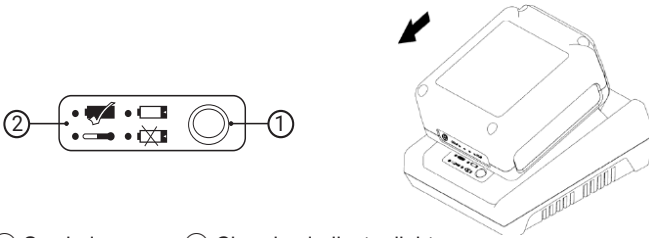


CHARGER AND BATTERIES

Charger Technical Capabilities

Output	18V-2.0A
Input	100-240V – 50-60HZ/1A
Net Weight	0.27Kg
Gross Weight	0.31Kg

When the charger is connected to the power supply and working normally, the indicator light ① is always green. The battery is loaded in the direction of the arrow.



② Symbols ① Charging indicator light

Operation	Charging indicator light ①	Signs ② Meaning	Measures
When the battery is loaded into the charger	Red light on	The battery is in good condition. Charge time is about 30 minutes.	In good condition.
	Green light on	If the light stays green there is either a battery malfunction or it is already fully charged.	Stop charging immediately, remove the battery. Check the charge level and replace it with a new one if required.
When the battery is being charged	Green light on	The battery is fully charged. Please remove the battery.	In good condition.
	Red light on	If the red light has stayed on for a significant period of time, check the heat of the charger and battery charge indicator. The charger has either stopped working or there is a fault with the battery.	Stop charging immediately, remove the battery. Check the charge level and replace it with a new one if required.

Battery Technical Capabilities

- Before use, ensure the battery is charged and refer to section **Checking the Battery** for guidance.
- The battery has excessive discharge protection (ECP) and can be re-charged up to one thousand times.
- Always allow the battery to cool after use before placing it into the charger.
- When the batteries working time is significantly reduced during normal use, it indicates that the battery life has reached its maximum and should be replaced.

FREQUENTLY ASKED QUESTIONS

Q: Is the battery okay if it is not used for a long time?


A: As with all batteries they will deteriorate without use, so please re-charge every six months.

Q: Does charging after each use affect the battery life?

A: To extend the lifespan of the battery it is recommended to use up to full charge, or to at least below 25% (one red light), before fully re-charging.

Q: If the tool is used continuously in the conventional or fully automatic riveting mode for an extended period, will the heat in the tool housing affect normal use?

A: Although heat is generated by the high-speed motor and transferred to the housing, normal use is unaffected. The user is advised to wear suitable protective gloves in line with current health and safety guidelines.

 **Warning** When any of the methods to the right have failed to troubleshoot, the tool must be repaired by qualified maintenance personnel or alternatively send the tool back to the authorised distributor for repair. Failure to maintain or follow maintenance advice can invalidate the tool warranty. ►

TROUBLESHOOTING

Malfunctions		Probable Causes	Corrective Action
When charging	Battery loaded into charger, the green light is on, but it is not fully charged.	Battery malfunction or damage, error, unable to charge.	Stop charging immediately, remove the battery, and replace it with a new one.
	Red light is on for a significant period.	The charger has either stopped working or there is a fault with the battery.	Cut off the power immediately, remove the battery, and check the charger.
Operation	All indicators on the function display panel are flashing.	Low power alarm.	Cut off the power immediately, remove the battery, and check the charger.
	The indicator light flashes once and shuts down after 15 seconds.	Motor short circuit alarm.	Stop using the tool immediately and remove the battery. Please send to qualified professional maintenance personnel for inspection and repair. If in doubt please return the tool to the authorised dealer for repair.
	The indicator light flashes 3 times and shuts down after 15 seconds.	Control panel overheating abnormal alarm.	
	The indicator light flashes 4 times and shuts down after 15 seconds.	Motor blocking alarm.	
	The indicator light flashes 5 times and shuts down after 15 seconds.	Power on failure or abnormal high current flow.	
	The rivet nut failed to be pre-installed.	Rivet nut thread damaged.	
		Mandrel thread damaged.	Replace the mandrel.
		The rivet nut flange is not fully attached to the head on the tool.	Mandrels incorrectly adjusted. Adjust according to the length of the rivet nut.
		No battery power. Check the battery status display panel.	Charging - see Checking the Battery and Charger and Batteries.
	The rivet nut cannot be withdrawn.	Too much working tension or working stroke is too high, resulting in deformed or damaged thread of the rivet nut.	Unscrew the rivet nut manually with the hex key (see use with the hex key) Adjust the working stroke (see Function Settings)
		Rivet nut thread damaged.	Use new rivet nut.
		Rivet nut threads not centred or misaligned to the flange.	Use new rivet nut.
		The clearance hole of the workpiece is misaligned or not concentric.	Check the clearance hole is within tolerance and rework them if required.
		Artificial pre-wind before the tool stops working completely	Wait until the tool has fully cycled including the auto reverse spin out. (see Rivet Nut Setting Process).
The rivet nut is not square to the clearance hole in the workpiece during operation.		Adopt the correct operation mode. (see Rivet Nut Setting Process).	
Loose rivet nuts after installation.	Working tension is too low.	Set the working tension correctly (see Function Setting).	
	The rivet nut is loose in the workpiece after setting.	Set the working stroke correctly (see Stroke Setting).	

WARRANTY

The 12-month return to base warranty for this tool is from the date of purchase.
Proof of purchase will be required for any warranty claims.

All wearing parts are not covered by the warranty.

Damage caused by normal wear and tear, overloading, improper use or by unqualified personnel is not covered by the warranty.

In the case of improper use, the manufacturers are not liable for storage, accident, misuse, loss, and failure due to non-conformity of the equipment. The maximum liability for damages is limited to the value of the product itself and does not cover the relevant parts.

If you have any queries, questions, or warranty claims, please contact your local distributor in the first instance.

CE/UKCA DECLARATION OF CONFORMITY

We hereby declare that this battery tool is compliant with the following standards, directives and guidance when used in accordance with the operating instructions.

Harmonised Standards:

EN55014-1:2006 + A1:2009 + A2:2011
EN55014-2:2015
EN60335-1:2012 + A13:2017
EN61000-3-2:2014
EN61000-3-3:2013 + A1:2019
EN62841-1:2015 + AC:2015

European Directives:

2014/30/EU
2014/35/EU
2006/42/EC
2011/65/EU

UK Statutory Guidance and Regulations:

- The Supply of Machinery (Safety) Regulations 2008 ^(SG)
- The Electromagnetic Compatibility Regulations 2016 ^(R)
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 ^(R)

[View the Declaration of Performance here](#)



Hexstone Ltd.
14/02/2023