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# BT-2

BATTERY POWERED INSTALLATION TOOL



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INSTRUCTION MANUAL FOR U.S. OPERATIONS



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M39080



M39083  
1.5 Ah - 14.4V



M39085



M39084  
3.0Ah - 14.4V



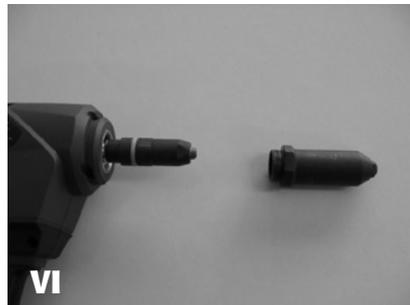
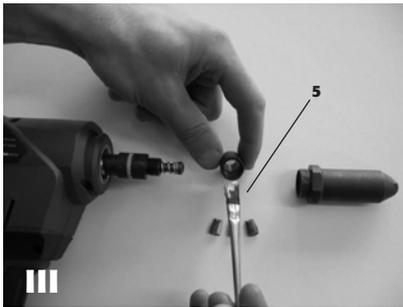
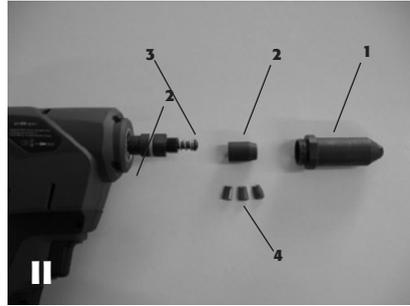
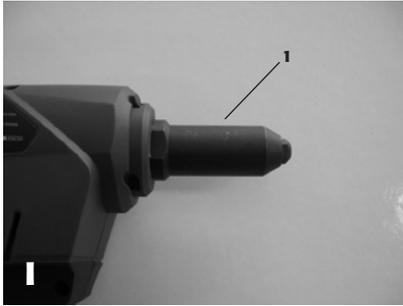
M96208 - 3/32"  
M96209 - 1/8"  
M96210 - 5/32"  
M96211 - 3/16"



M96224



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## Security advice

### General security advice for electric riveting machines.

Please read all security advices and instructions. Failure to comply with the security advice and the instructions can lead to electric shock, fire and/or serious injuries.

### Please preserve all security advice and instructions for future reference.

The term "electric riveting machine" used in the security advices refers to the line-powered MARSON BT-2 charger (with power cord) and to the battery-powered MARSON BT-2 riveting machine (without power cord).

## 1. Workspace safety

- a) **Keep your workspace in a clean condition and provide sufficient lighting.**  
Messy or insufficiently illuminated work areas can lead to accidents.
- b) **Do not operate the electric riveting machine in an environment with risk of explosions which contains flammable liquids, gases or dust.** Electric riveting machines create sparks which can inflame the dust or the vapors.
- c) **Keep away children and other persons while operating the electric riveting machine.**  
In case of distraction you can lose control of the machine.

## 2. Electric safety

- a) **The connector plug of the electric riveting machine has to fit into the power socket.**  
The plug must not be modified in any way. Do not use adapter plugs together with protectively grounded electric riveting machines. Unchanged plugs and fitting sockets reduce the risk of electric shocks.
- b) **Avoid body contact with grounded surfaces like pipes, heaters, cookers and refrigerators.**  
If your body is grounded, an increased risk of electric shock persists.
- c) **Do not expose electric riveting machines to rain or humidity.** Water entering an electric riveting machine increases the risk of electric shock.
- d) **Do not misuse the cable to carry or hang up the electric riveting machine or to pull the plug from the socket.**  
Do not expose the cable to heat, oil, sharp edges and moving device parts. Damaged or entwined cables increase the risk of an electric shock.
- e) **If you are using the electric riveting machine outside, only use extension cords suitable for outside use.**  
The use of an extension cord suitable for outside use reduces the risk of electric shock.
- f) **If the use of the electric riveting device in a wet environment is unavoidable, use a fault-current circuit breaker.**  
The use of a fault-current circuit breaker reduces the risk of electric shock.

## 3. People safety

- a) **Stay alert, be careful with your actions and use the electric riveting machine in a reasonable way.**  
Do not use the electric riveting machine if you are tired or under the influence of alcohol, drugs or medication. A momentary inattentiveness while using the electric riveting machine can lead to serious injuries.
- b) **Wear protective clothing and always wear protective goggles.** Wearing protective clothing like a dust mask, skid-proof safety shoes, a protective helmet or ear protectors (depending on the conditions and aims you use the electric riveting machine for) reduces the risk of injuries.
- c) **Avoid inadvertent start ups of the machine.** Make sure that the electric riveting machine is turned off before you connect it to the electric supply and/or to the battery, while picking it up or carrying it. Holding your fingers close to the power switch when carrying the electric riveting machine or connecting it to the power supply while it is turned on may lead to injuries.
- d) **Remove adjusting tools and screwdrivers before switching on the electric riveting machine.**  
A tool or screwdriver placed into a rotating part of the device can lead to injuries.
- e) **Avoid unnatural body positions. Ensure you are standing firmly and always preserve your balance.**  
This way you can better control the electric riveting machine, should an unexpected situation occur.
- f) **Wear appropriate clothes. Do not wear large clothes or jewelry.** Avoid putting your hair, clothes and gloves close to the moving parts of the device. Wide clothing, long hair and jewelry can be caught up in the moving parts.
- g) **If the mandrel collection devices can be mounted, make sure that they are connected and used correctly.**



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#### 4. Operation and handling of the electric riveting machine

a) **Do not overload the machine.**

Use the electric riveting machine that is suitable for your work.

The suitable electric riveting machine allows you to work better and safer in the specified range of performance.

b) **Do not use an electric riveting machine that has a defect power switch.**

An electric riveting machine which cannot be turned on and off any more is dangerous and has to be repaired.

c) **Remove the plug from the power socket and/or remove the battery before making adjustments to the device, changing accessories or putting the device away.** This safety precaution prevents the inadvertent start of the electric riveting machine.

d) **Store unused electric riveting machines out of the reach of children.** Do not allow persons not familiar with the device or persons who haven't read these instructions to operate the device. Electric riveting machines are dangerous when in the hands of inexperienced persons.

e) **Pay attention to the maintenance of electric riveting machines.** Check if the moving parts are functioning flawlessly and do not jam.

Check for broken and damaged parts that could influence the operation of the electric riveting machine.

Repair the damaged parts before using the device. Many accidents with electric riveting machines stem from maintenance failures.

f) **Use the electric riveting machine, accessories, tools etc. according to these instructions.** Take into consideration the working conditions and the type of work. The use of electric riveting machines for tasks other than the intended ones can lead to dangerous situations.

#### 5. Use and handling of the battery tools

a) **Only recharge the batteries in charging devices approved by the manufacturer.**

There is a risk of fire when using a charging device designed for a specific battery type when it is used with other batteries.

b) **In electric riveting machines, only use batteries that have been designed for this type of use.**

Using other battery types may lead to fire and injuries.

c) **When not using the battery, keep it away from paper clips, coins, keys, nails, screws and other small metallic object which may cause the contacts to connect. If the battery contacts short-circuit, it may lead to burns or fire.**

d) **Fluid may emerge from the battery if it is used incorrectly.** Avoid contact with that fluid. In case of accidental contact with the body, rinse the area with water. If the battery fluid comes in contact with the eyes, additionally call for medical help. Emerging battery fluid can lead to burns and irritation of the skin.

#### 6. Service

A **Only allow qualified personnel repair your electric riveting machine and use only original spare parts for that.**

This ensures the continuous safety of the electric riveting machine.

#### 7. Security advice for electric riveting machines

- Hold the electric riveting machine firmly with both hands when working and keep standing steadily. The electric riveting machine can be operated safer when using both hands.
- Immediately turn off the electric riveting machine if the electric riveting tool jams.
- Be prepared for a high reacting torque which causes strong recoil. The tool jams when the electric riveting machine is overloaded.
- Hold the electric riveting machine tightly.
- Secure the work-piece that is to be riveted. A work-piece is held more securely by a clamping device or a bench vise than by hand.
- Make sure that the power switch is turned to the "Off" position before inserting a battery. Holding your fingers close to the power switch when carrying the electric riveting machine or inserting a battery while is "On" may lead to accidents.
- Do not open the battery, as this leads to the risk of a short-circuit. Keep the battery away from heat (e.g. permanent sun radiation) and from fire due to risk of explosion.
- If the battery is damaged or used in an inappropriate manner, vapors may emerge from it. Get some fresh air and call for medical help in case of complaints. The vapors can lead to irritation of the respiratory tracts.
- If the battery is defective, fluid may emerge from it and coat adjacent objects. Check the parts affected, clean them or replace them, if necessary.
- Use the battery only with your MARSON BT-2 electric riveting machine. This is the only way to prevent dangerous overload of the battery.



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## Technical specifications

### Battery-powered MARSON BT-2 electric riveting machine

For processing blind rivets with pole cross-sections of 2.4-5.0 mm, all materials

- Weight: 3.5 lb (without battery)
- Stroke: 21 mm
- Engine: 14.4 V DC motor
- Installation force: 10.000 N
- CE according to EU regulation No. 2006/42/EG

### Quick-replacement of the rechargeable battery

- Nominal voltage: 14.4 V
- Capacity:
  - Li-Ion 1.5 Ah (4 cells)
  - \*\*\*Li-Ion 3.0 Ah (8 cells)
- Weight:
  - 1.5 Ah: 0.73 lb
  - 3.0 Ah: 01.21 lb

### Charging device

- Input voltage: 100-240 V / 50-60 Hz
- Output voltage: 14.4 V
- Output current: max. 1.5 A
- Recharging time:
  - 1.5 Ah: <60 minutes
  - 3.0 Ah: <120 minutes
- Weight: 0.90 lb

### Data on noise and vibrations

- Noise emission: LPA = 78.8 dB
- Uncertainty: K = 3 dB
- The noise level during operation can exceed 80 dB(A)
- Use ear protectors!
- Vibrations: <2.5 m/s<sup>2</sup>

Total weight (including 1x 1.5 Ah battery, charging device and packaging): 9.9 lb

Configurations with power plugs for worldwide use are available (CE/ECM/UL/ETL/CB/SAA)

## Operational description

### Depicted components

The numbering of the components in the picture refers to the picture of the electric riveting machine



- A) Nosepiece
- B) Frame head
- C) Failure indication
- D) Mandrel collector
- E) Trigger
- F) Riveting area illumination
- G) Battery
- H) Battery locking switch

\*\*\* The components depicted or described are not part of the default scope of delivery. You can find all accessories in our accessory program.

### Charging the battery

Note: The battery is partially charged on delivery.

To guarantee full power of the battery, charge it completely in the charger before first use. Pay attention to the charge indicator on the charging device. The Li-Ion battery can be recharged at any time without affecting its fatigue life. Interrupting the charging process doesn't damage the battery.

The battery is equipped with a temperature monitoring system which only allows for charging between 32°F and 113°F. Please consider the notices for disposal.

### Removing the battery

The battery (G) is equipped with a **locking mechanism (H)**. As long as the battery remains inside the electric riveting machine it is held in position by a spring. To remove the battery (G), press the unlocking button (H) and pull the battery from the electric riveting device. Don't use force.

### Putting the device into operation

Insert the battery. Only use original MARSON BT-2 Li-Ion batteries with the voltage depicted on the type label of your electric riveting machine. The use of other batteries may lead to injuries and risk of fire. Push the battery (G) from under into the stand of the electric riveting machine, holding the locking button (H) pressed. Push the battery into the stand completely until it is securely locked.

### Switching the device into stand-by mode

Press the trigger (E) for a short time. The white LED for the illumination of the riveting area lights up. The device is thereby switched to stand-by for three minutes. Pressing the power switch again will reset the stand-by counter to three minutes.

### Changing nosepieces

The nosepieces (A) are marked with numbers corresponding to the rivet cross-section. Hold the power switch (E) pressed, that will lead to the clamping mechanism moving into the rear position. Use the included wrench SW 11 to switch to the required nosepiece and release the power switch.

### Riveting

Insert the rivet into the nosepiece (A) and the other end of the rivet into the work-pieces to be riveted. Press the power switch until the rivet is removed, then release the power switch. Tilt the riveting device backwards so that the removed rivet pin falls into the mandrel collection device (D). If the rivet doesn't come off in a single working stroke, repeat the procedure.

### Failure

If rivets which exceed the indicated power of the device are used or if the battery is empty or overloaded, the device will stop operating and the red LED (C) will light up. Wait until the red LED (C) goes out and press the power switch (E) for a short time. The device will revert to the original position. If the battery is empty, the device is powered down by a protective circuit and the working tool doesn't move any more.

Don't press the power switch again after the electric riveting machine has been powered down automatically, this may lead to battery damage.

### Changing the clamping jaw (>> page 3)

The clamping jaws are wearing parts. If you are unable to rivet in a single working stroke you should change the clamping jaws:

- I. (1) Frame head
- II. (2) Jaw case
  - (3) Riveting machine
  - (4) Clamping jaws (3 parts)  
Remove the frame head (1) and the jaw case (2) from the device (3) and remove the clamping jaws (4) from the jaw case (2).
- III. Oil the jaw case (2) with Molykote® D grease (5).
- IV. Hold the jaw case (2) so that its forward part is faced down.
- V. Place the clamping jaws (4) in the jaw case (2) with their smooth sides facing outwards.
- VI. Mount the jaw case (2) with the new clamping jaws (4) and finally replace the forward sleeve (1).

### Notices on optimal handling of the battery

Keep the battery away from wetness and water. Only store the battery at temperatures from 0° to 45°C. Do not leave the battery in the car, e.g. in summer. If the battery is working for significantly shorter periods of time after a recharge, it is used up and needs to be replaced. Please consider the notices for disposal.

### Maintenance and service

Take the battery out of the electric riveting machine for transportation and storage. Risk of injury occurs if you inadvertently press the power switch. Keep the electric riveting machine and the ventilation slots clean to ensure good and safe operation. If the electric riveting machine should fail despite the meticulous manufacturing and quality control procedures, the repairs should be done by an authorized service center for MARSON electric riveting devices. Please, quote the serial number indicated on the type label of the electric riveting machine whenever turning to our customer service or ordering spare parts.

### Disposal

Electric riveting machines, accessories and packaging should be disposed in a way which makes them available for environment-friendly recycling. Only valid for European Union countries:

Do not dispose of electric riveting machines in household waste. According to European regulation 2002/96/EG concerning electric and electronic appliances and its implementation in national laws, the electric riveting machines that are not functional need to be collected separately to make them available for environment-friendly recycling.

### Batteries:

Li-Ion: Do not dispose of batteries in household waste, do not throw them into fire or water. Batteries should be collected and recycled or disposed of in an environment-friendly way. Only valid for European Union countries: According to European regulation 91/157/EWG, defective and used up batteries need to be recycled. Batteries that are not functional can be handed over at your store or directly disposed of in an environment-friendly way.



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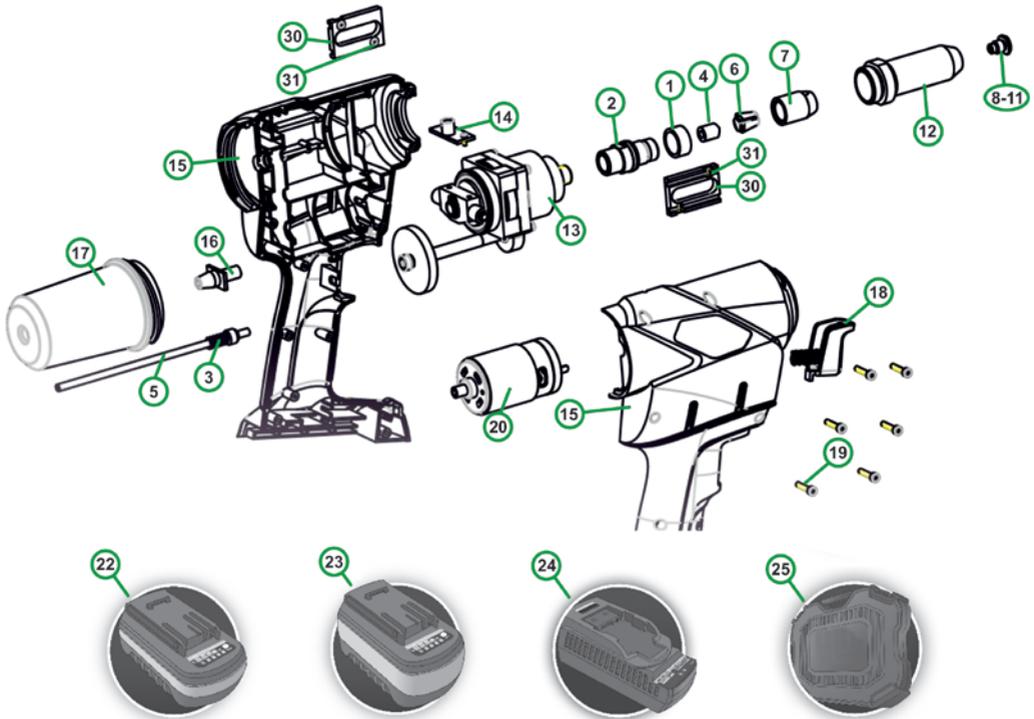


## BT-2 Parts List

Part No.	Description	Diagram
M96201	COMPRESSION SLEEVE	1
M96202	COMPRESSION SLEEVE ADAPTER	2
M96205	GUIDE SLEEVE KIT	3, 4, 5
M96206	JAWS SET	6
M96207	JAW CASE	7
M96208	3/32" NOSEPIECE	8
M96209	1/8" NOSEPIECE	9
M96210	5/32" NOSEPIECE	10
M96211	3/16" NOSEPIECE	11
M96212	FRAME HEAD	12
M96213	GEAR BOX COMPLETE	
M96214	MAGNET HOLDER (WITH MAGNET)	14
M96215	HOUSING LEFT & RIGHT	15
M96216	PLASTIC TUBE	16
M96217	MANDREL COLLECTOR	17
M96218	TRIGGER AND PRESSURE SPRING	18
M96219	HOUSING SCREWS SET (10 PCS)	19
M96220	ELECTRONIC ASSEMBLY KIT	20
M96221	ELECTRONIC ASSEMBLY SCREWS	21
M39083	BATTERY 14.4 V/1.5 AH	22
M39084	BATTERY 14.4 V/3.0 AH	23
M39085	QUICK CHARGER	24
M96224	BT2 MOLDED CASE	25
M96226	GEAR BOX BEARING	30
M96227	BEARING SCREWS	31



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## Accessories

Part No.	Description
M96229	NOSEPIECE BOX
M96231	1/8" RETENTION NOSEPIECE
M96232	3/16" RETENTION NOSEPIECE
M96233	5/32" RETENTION NOSEPIECE
M96234	3/16" EXTENDED NOSPIECE (11MM)
M96235	3/16" EXTENDED NOSPIECE (14MM)
M96236	3/16" EXTENDED NOSPIECE (16MM)
M96237	EXTENDED FRONT SLEEVE (165MM)

# Alcoa Fastening Systems & Rings



For more than 120 years, the name Alcoa has been recognized worldwide as a strong leader in product quality and customer support. These strengths are found in every product manufactured for Alcoa Fastening Systems & Rings, offering the greatest breadth and depth of fastening system solutions in the industry.

Alcoa Fastening Systems & Rings (AFSR) maintains company offices in the United States and in many other countries. AFSR fastener distributors are also located in many of the world's industrial centers, where they provide a ready source of AFSR fasteners, installation tools, tool parts, and application assistance.

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