

# OPERATING MANUAL

ROSAW

**12.20MSB**

**Battery Powered Rail Band Saw**



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**These operating instructions were produced in accordance with the current state of technology at the time of printing.  
The right to change on the basis of further developments is reserved.  
Dimensions and weights are approximated.  
Photographs show special layouts in some cases.**

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**1. General**

Staff operating and maintaining this machine must have read and understood these operating instructions.

**1.1 About these instructions**

The following symbols are used to mark operating procedures, lists and other elements of these instructions:

| Symbol   | Explanation   |
|--|---|
| <ul style="list-style-type: none"> <li>1. Action</li> <li>2. Action</li> </ul>   | <b>Operating procedure</b> - the sequence of actions must not be changed. |
| <ul style="list-style-type: none"> <li>• List 1                             <ul style="list-style-type: none"> <li>- List 1.1</li> </ul> </li> <li>• List 2</li> </ul> | <b>List</b> - Sequence may be changed.                                    |
| <ul style="list-style-type: none"> <li>▶ Measure</li> <li>▶ Measure</li> </ul>   | <b>Measure</b> - the sequence must not be changed.                        |

**1.2 General Regulations**

Appropriate legal requirements and accident prevention measures for use of this appliance must generally be observed. If they are not observed, the operator of the appliance takes responsibility for any legal consequences.

In the event of differences between prevailing regulations that apply to use of the machine and the manufacturer's or sub-contractor's specifications, whichever limitations are the most stringent must apply. The buyer must make available all appliances and operational or supporting materials to enable the delivered product to be used and personnel to be trained. Enough safe and clear track and work sections must be provided to allow personnel to learn and practice how to use the goods delivered. ROBEL Bahnbaumaschinen GmbH together with its customer service organizations are however happy to provide further advice, training or other consultative services. Further details and conditions can be obtained separately.

### 1.3 Intended Audience for this Operating Manual

This manual contains the information needed to use the machine they describe correctly. The manual has been written exclusively for technically qualified personnel.

Qualified personnel in this context are:

- Personnel who can prove that they are qualified to use this machine either through training or experience,
- Personnel who are familiar with the machine's safety concepts,
- Maintenance and service personnel who are specially trained to repair the machine and its accessories.

Only persons who can read and understand this manual are allowed to use the machine. They should sign to indicate that they have read and understood the manual. Replacement, maintenance and operation of the machine should only occur where official regulations are strictly followed for its use and safety, especially where they relate to safety and protection of the workplace and environment as well as the operating, maintenance and safety regulations or other instructions supplied by the manufacturer or supplier.

### 1.4 Liability Exclusions

The manufacturer declares himself to be exempt from any responsibility for damage arising when the machine is not used in a designated way. This also includes use of the machine without safety mechanisms.

Any use of the machine other than that specified above is not designated and endangers the lives and health of operating and maintenance personnel as well as the material property of the operator. The manufacturer of the machine declares himself free from liability for damage to people or property belonging to the operator or a third party if:

- the machine is not used as specified,
- operating and maintenance personnel have not read and understood the aforementioned directions and have used the machine for other purposes,
- operating or maintenance personnel are not sufficiently qualified or the appliance has been used under conditions exceeding limiting values,
- the appliance has not been serviced within the time specified.

These exclusions from liability for damage to people or material property do not affect other exclusions.

## **1.5 Copyright**

Specific characteristics and particular attributes of the machine are the intellectual property of ROBEL Bahnbaumaschinen GmbH. The copyright on its use remains with ROBEL Bahnbaumaschinen GmbH. It may not be reproduced either in full or in part, published or otherwise exploited for competitive purposes, whether for payment or not. Its contents may not be passed by company employees to anyone outside the business.

## **1.6 Acceptance, Equipment and Operating Licence**

It is the buyer's responsibility to check that the condition, fittings, performance and especially the safety features of the goods delivered match the relevant specifications agreed and to take account of the regulations specified in the contract.

The buyer must equip the goods delivered with all fittings necessary to meet relevant operational and safety regulations, norms, statutory regulations or other regulations, e.g. fire extinguisher, first aid box, signal and telecommunications equipment, additional warning devices, protective clothing, safety notices etc.

Unless otherwise agreed, no fittings of this nature are provided with the goods delivered.

Furthermore it is the buyer's responsibility to demonstrate that the goods delivered have been accredited for use by the appropriate authority. Any documentation to be provided by the manufacturer or supplier (descriptions, proof, attestations, etc.) to enable this should be specified in the contract of supply.

Any additional measures and costs required to achieve operational accreditation must be borne by the buyer.

## **1.7 Validity of these instructions**

These operating instructions apply to machines with the following EDP nos.:

- 520 990 0004
- The supplied battery, EDP No. 780 680 0001, must only be charged with the charger supplied with it, EDP No. 780 685 0001.

## 2. Safety

### 2.1 Designated use

The Battery Powered Rail Band Saw 12.20 has been designed and manufactured for sawing all common flat bottom rails (foot width of max. 153 mm).

It is suitable for sawing structural and alloy steels as normally used for rails.

The rail band saw must only be used together with the tensioning block.

As a rule, the rail must only be sawn in an unstressed state. If tensile stress is present, only a straight rail may be sawn, or a deflection of the rail must be prevented.

### 2.2 Foreseeable misuse

Freehand sawing or hand-guided sawing is not permitted.

The machine is not built for use in flooded environments or during heavy rainfall, rockfall, snowfall, etc.

### 2.3 Conventions of layout

These operating instructions use the following warning information and symbols in order to protect the operator's personal safety and physical well-being and the assets of the machine operating company from damage.

#### DANGER



Indicates that non-compliance with the instructions will result in death or severe (irreversible) injuries of the operating personnel.

#### WARNING



Indicates that non-compliance with the instructions may result in death or severe (irreversible) injuries of the operating personnel.

#### CAUTION



Indicates that non-compliance with the instructions may result in minor injuries of the operating personnel.

#### NOTICE


Points out that non-compliance with instructions may result in damage to the machine or other assets of the operating company.



Contains important information about the machine, its operation or about a section of the instructions on hand.



**Structure of the warnings** The warnings are structured as follows:

| <b>SIGNAL WORD</b>  |   |
|---|---|
|  | <p><b>Type and source of danger!</b></p> <p>Possible consequences when ignoring the danger.</p> <p>▶ Measure to avoid the danger.</p> |

#### **2.4 Design changes, original parts**

The manufacturer will not be liable if any unauthorised changes to machine components and attachments are made.

Original parts and accessories have been designed specifically for this machine. The use of non-approved spare parts may result in structural features of the machine being changed or impaired.

The manufacturer is not liable for any damage which is proven to be attributed to the use of such parts or inferior operating fluids.

#### **2.5 Protective devices**

Danger to life for the operator and others from manipulation of the safety devices.

- ▶ The operator is obliged to actually fit the designated protective devices during operation or to leave them in the predetermined factory position.
- ▶ The person commissioned to carry out maintenance must refit the protective devices after completing his work.

#### **2.6 Safety regulations**

The necessary requirements for protecting life, health, material property and the environment when handling the machine must take precedence!

- ▶ Before using the device, make sure you can prove that all personnel affected have been made aware of the following relevant regulations and provisions:
  - Statutory national safety regulations
  - Provisions of the respective building code and works rules
  - Provisions of the respective professional and trade associations
  - Occupational and environmental health and safety regulations
  - Approvals regulations
  - Company-internal regulations
  - All other applicable regulations, in addition to and in concert with the manufacturer's safety and operating regulations

If necessary, the office in charge of operation must lay down additional regulations and measures geared to the special tasks of the machine to ensure that all safety requirements are

met.

In addition to the information mentioned above the specific safety regulations must be observed and adhered to.

## 2.7 Qualifications of staff

**Operator** The operator was trained by the operating company in the tasks assigned to him and informed of the potential dangers arising from inappropriate behaviour.

- Requirements for the operator**
- Comprehensive training on the machine
  - Knowledge of content of these operating and maintenance instructions
  - Knowledge of content of operating and maintenance instructions of suppliers' and additional equipment
  - Knowledge of national regulations and laws concerning the machine and additional equipment
  - Physical and mental fitness
  - Power of concentration, sense of responsibility, reliability
  - Necessary national requirements (qualifications, minimum age)
  - No influence of alcohol, medicines, drugs or fatigue, etc.

## 2.8 Personal protective equipment

The approved personal protective equipment has to be used when operating and maintaining the machine.

- ▶ Wear protective gloves!
- ▶ Wear ear protection!
- ▶ Wear appropriate, close-fitting clothing that cannot be caught by rotating machine parts of saw blades.
- ▶ Remove rings and necklaces, etc.

The protective equipment will be determined by:

- These operating instructions
- National safety rules
- Rules of the professional trade associations
- etc.
- ▶ If there are differences between the prevailing regulations within the operating company's scope of validity and those of the manufacturer and his suppliers, whichever regulations are the most stringent shall be applied.

**2.9 Information on particular types of dangers**

**Danger due to manual handling**

If the permissible per-person lifting weight is exceeded when lifting or carrying, there is a risk of injuring muscles, tendons, joints or bones.

- ▶ Prior to transportation, ensure that the pathway is free of obstructions or trip hazards.
- ▶ When lifting or carrying machinery or equipment, adhere to the permissible per-person lifting weight.

It is the responsibility of the operating company to ensure that the national safety regulations and guidelines of the trade associations in the respective countries are observed. The values stated in the warning notices of these operating instructions relate to regulations in Germany.

- ▶ Ensure that a risk assessment has been carried out and that the following aspects with regard to operators and the transport task have been considered:
  - Frequency of transport
  - Age
  - Gender
  - Operator's state of health
  - Uneven flooring
  - Poorly lit worksites
  - Bad weather
  - Working under time pressure
  - etc.
- ▶ Observe the relevant guidelines on lifting and transporting heavy machinery or equipment.
- ▶ Mechanical aids to lifting are always the preferred method of handling where possible, e.g. hoists, tail lift, rail trolleys etc.
- ▶ Always use the handles to lift the modules.
- ▶ Always use two hands and address the modules symmetrically.
- ▶ Do not twist the spine when handling.
- ▶ Do not carry any of the modules more than 10 meters without a rest, or without using a mechanical aid.
- ▶ Contact your Health and Safety Advisor for more information.

**Danger from electrical voltage**

Some parts may be live and may cause severe to fatal injuries when getting in contact with them.

- ▶ Work on the electrical system only by authorised electrical engineers.
- ▶ Rectify faults (contact faults, external damage to cables or housings, etc.) straight away.
- ▶ Before working on the electrical system: Shut off the power supply to the system, switch off the drive and disconnect

the power supply.

- ▶ During work on the electrical system: Do not touch any live lines.
- ▶ Check earthing cables are securely seated and complete.
- ▶ Check that the connecting surfaces of the earthing cables are clean and free from corrosion.

#### **Danger from battery**

Danger to life, risk of injuries or risk of damage to property from incorrect use of batteries.

- ▶ Protect the battery from heat (including e.g. prolonged exposure to the sun), fire and immersion in water.
- ▶ Before use the battery in conjunction with other ROBEL machines you have to contact ROBEL. Only this will safeguard the battery from hazardous overloading.
- ▶ Remove the battery from the machine before any work is carried out on the machine (e.g. installation, maintenance), as well as prior to transport or storage of the machine.
- ▶ Do not attempt to charge a wet battery.

If the anode and cathode come into contact with other metals in the battery housing this can result in the generation of heat which can cause electrolytic fluid to leak out.

- ▶ As the electrolytic fluid is flammable make sure to move the battery away from any potential sources of fire immediately.
- ▶ In the event of a fire: Only use fire extinguishers of fire class D (dry extinguisher).
- ▶ Before you start extinguishing the fire place yourself on the side of the fire from which the wind is blowing to make sure you do not inhale any toxic vapours.

If the battery is damaged or used improperly vapours may escape that can cause irritation of eyes, skin and the respiratory system. The vapours can cause irritation of the respiratory system.

- ▶ In case of inhalation: Immediately ventilate the room or go into the open air. Consult a doctor if you have more serious symptoms.
- ▶ In case of contact with skin: Clean the skin thoroughly with soap and water.
- ▶ In case of contact with eyes: Rinse your eyes thoroughly with water for a minimum of 15 minutes, then consult a doctor.

There is the risk of a short circuit.

- ▶ Never open or disassemble the battery. ROBEL Bahnbaumaschinen GmbH does not accept any warranty claims for open batteries.
- ▶ Only use original Robel batteries that have been approved for your device. The use of other batteries can result in injuries and a risk of fire. ROBEL Bahnbaumaschinen GmbH

will not accept any liability or warranty claims for other batteries used.

**Dangers arising from the charger**

The charger is designed to charge batteries.

- ▶ Only use the charger for the purpose for which it was manufactured. If in doubt, please contact the manufacturer.

Danger to life, risk of injuries or risk of damage to property from incorrect use of chargers.

- ▶ Only use the charger in closed rooms.
- ▶ Do not expose the charger to humid or wet environments.
- ▶ Do not carry the charger while holding it by the power plug.
- ▶ Do not pull at the cable to disconnect the charger from the socket.
- ▶ Keep the power cable away from sharp edges, oil and heat.
- ▶ Do not use the charger on easily flammable surfaces or in a combustible environment.
- ▶ When not in use, store the charger in a dry, securely locked place that is not accessible for children.
- ▶ The charger must only be serviced by qualified personnel. This ensures the sustained safety of the charger.
- ▶ Only use the charger for charging the batteries specifically designated and specified by the manufacturer, see Chap. 1.7.

The charger is designed such that it may only be used by persons (including children over the age of 8) who have the physical, sensory and mental abilities to use the charger safely.

- ▶ Persons who do not have the physical, sensory or mental abilities or sufficient experience to use the charger safely must not use the charger without being supervised or instructed by a qualified person.
- ▶ Children have to be supervised so that they do not play with the charger.
- ▶ The charger must not be cleaned or serviced by children without supervision.
- ▶ Keep the charger out of the reach of children.
- ▶ Do not allow anybody to use the charger who is not familiar with operating the charger or with these operating instructions.
- ▶ Observe the minimum and maximum charging temperature (see Chap. 3).

Danger to life, risk of injuries or risk of damage to property from the use of damaged chargers.

- ▶ Do not use any damaged chargers (e.g. if the charger has been dropped or the power cable or power plug have been damaged).
- ▶ If the cable or power plug have been damaged, get the

device replaced by the manufacturer, a customer service point or by an authorised specialist.

- ▶ Do not open or disassemble the charger.

Danger of short circuit.

- ▶ Make sure the charger does not get in contact with metal objects.
- ▶ Keep the air vents of the charger free from metal swarf.

The charger generates and uses radio frequency energy and can radiate it.

- ▶ If the charger is not installed and used as described in the operating instructions, this can lead to hazardous interference in the radio communications.

#### **Danger from heat**

Risk of injury from touching hot parts.

- ▶ Prior to work on heated parts, switch off engines and allow hot parts to cool down for at least 30 minutes.
- ▶ Do not touch heated parts.

#### **Risk of environmental damage**

The majority of the components and parts used are subject to special regulations for collection and disposal.

- ▶ Dispose of components according to material groups (steel, plastics, oils, etc.).
- ▶ Collect waste oil in line with the relevant regulations and dispose of it accordingly.

#### **Danger arising from unauthorised start-up**

Unauthorised start-up and misuse can result in dangers and damage of any kind.

- ▶ It is up to the operating company to assess this risk.
- ▶ Unauthorised start-up by unauthorised persons is strictly prohibited.
- ▶ It is the responsibility of the operating company to implement appropriate measures against unauthorised start-up of the machine.

### **2.10 Accident prevention**

The accident prevention regulations of the Civil Engineering association also find application in these operating instructions and are to be carefully read and adhered to.

- ▶ Always observe the general and internal accident prevention regulations.
- ▶ Consider the potential risks of accidents in association with the special tasks of the machine and provide for appropriate training.
- ▶ Check that the machine is in proper working order before putting it into service:
  - Equipment, devices, tools, accessories, safety equipment, etc. are complete and intact.

- Inspection and maintenance work has been carried out professionally and on schedule.
  - Operating fluids have been topped up (fuel, lubricants, etc.)
  - All prerequisites for carrying out work safely have been met with regard to you and other persons, material property and the environment.
- ▶ Beware of the particular dangers of the machine and your work area, especially:
    - persons and obstacles,
    - adherence to safety clearances,
    - traffic on adjacent tracks,
    - secure fitting of all protective equipment,
    - compliance with all operationally necessary safety measures.
  - ▶ Leaking operating fluids (oil, grease, etc.) must be removed immediately to prevent a fire hazard or risk of slipping. Keep suitable oil binding agents and cleaning agents at hand.
  - ▶ Before leaving the machine perform the following checks:
    - It has been shut down properly.
    - It is secured against moving unintentionally.
    - Tools and accessories are stowed away safely.
  - ▶ Use only tools and appliances that work properly.
  - ▶ Rectify smaller faults straight away in order to avoid larger faults.

**First Aid** Please ensure the following to be able to provide First Aid in an emergency:

- ▶ Make sure that the First Aid kit is in proper condition, complete and clean at all times.
- ▶ Consult the medical service or doctor at your office regarding First Aid measures and appropriate equipment.
- ▶ Immediately replenish used up material.
- ▶ Store First Aid equipment (First Aid kit, blankets etc.) and fire extinguishers within easy reach.
- ▶ Carry material for securing accident sites.

**2.11 Fire safety**

Everybody is obliged, as far as possible and reasonable to refrain from any actions that may cause a fire or favour the spreading of a fire. In addition, all measures required to prevent the development or spreading of a fire must be taken in individual cases.

With smouldering fires in electrical equipment toxic vapours are released from charring cables, also with fires of fuels, oil or paints.

In general, any fires that occur are to be fought only with powder extinguishers.

**General** The following fire safety measures must be adhered to.

- ▶ Only approved fire extinguishers (powder-type extinguishers) of the prescribed fire protection class must be used.
- ▶ The fire extinguishers must be periodically checked and provided with an inspection label (at least every 2 years, check the expiry date!).
- ▶ After using a fire extinguisher it is to be replaced straight away.



### 3. Technical specification

#### 3.1 Electric motor

|        |        |
|--------|--------|
| Output | 1600 W |
|--------|--------|

#### 3.2 Battery

|                         |                    |
|-------------------------|--------------------|
| EDP order no.           | 780 680 0001       |
| Length x Width x Height | 325 x 140 x 150 mm |
| Weight                  | 6.2 kg             |
| Voltage                 | 43,2 V             |
| Capacity                | 16,2 Ah            |
| Energy content          | 700 Wh             |
| Ingress protection code | IP34               |

#### 3.3 Rail Band Saw

|                                      |              |
|--------------------------------------|--------------|
| Cutting area (rail dimensions W x H) | 162 x 195 mm |
| Standard cutting speed               | 72 m/min     |
| Feed system                          | Manual       |
| Feed depth                           | 195 mm       |
| Ingress protection code              | IP44         |

#### 3.4 Dimensions

##### Working space for saw unit and assembled tensioning block

|        |        |
|--------|--------|
| Length | 951 mm |
| Width  | 595 mm |
| Height | 685 mm |

##### Transport dimensions for saw unit

|        |        |
|--------|--------|
| Length | 795 mm |
| Width  | 595 mm |
| Height | 490 mm |

##### Transport dimensions for tensioning block

|        |        |
|--------|--------|
| Length | 293 mm |
| Width  | 294 mm |
| Height | 621 mm |

#### 3.5 Weights

|                               |                |
|-------------------------------|----------------|
| Weight of tensioning block    | approx. 19 kg  |
| Weight of saw unit with motor | approx. 45 kg  |
| Coolant reservoir (empty)     | approx. 1.5 kg |

**3.6 Environmental conditions**

|           |  |
|-----------|--|
| Operation | - 10° to 60° C   |
| Storage   | - 10° to 45° C   |
|           | for along service life, storage in a cool, frost-free environment will be beneficial |

If stored at a temperature of below 0 °C for longer than 2 hours the machine must be warmed up before putting it into use.

The service life of the battery depends on its proper care and, above all, on the correct operating temperature of 25 °C on average.

With increasing age the battery capacity will deteriorate even if it has been properly cared for.

**3.7 Saw band**

|               |                         |
|---------------|-------------------------|
| EDP order no. | 980 127 2008            |
| Dimensions    | 2195 x 20 x 0.9 mm      |
| Toothing      | Kombi 4/5 Chip Splitter |

**3.8 Cutting time**

|  |                  |
|--|------------------|
| Recommended cutting time for UIC60 rails   | approx. 2.75 min |
| Recommended cutting time for S49/S54 rails | approx. 2.5 min  |

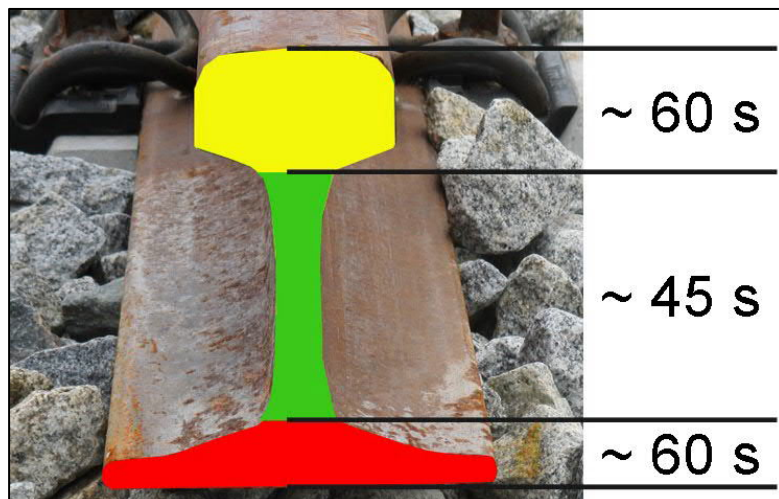


Fig. 2: Cutting time with consistent feed rate

The feed speed must be adjusted with the hand wheel in such a way that swarf is produced in a satisfactory manner. The swarf should be neither blue nor yellow in colour, nor should it have a powdery consistency. Even when very hard rails are cut, care should be taken that the swarf is small and spiralled in shape. This means:

- slow lowering of the unit at the rail head at the start of the cut;
- faster lowering as soon as the saw band has completely cut into the rail head;
- increased cutting speed as the web is sawn through, and
- considerably reduced lowering speed when sawing the foot of the rail.

### 3.9 Cutting fluid

- Cooling lubricant Blaser BC251250 (EDP No. 998 000 0169)

Alternative

- Water-miscible cooling lubricant, concentrate: BIOWAS EP1 (EDP No. 980 104 0177), bio-degradable

Concentration range in use: 2% in water  
(mix 100 ml concentrate with 5 litres water)

### 3.10 Noise and vibration

|                                   |                       |
|-----------------------------------|-----------------------|
| Sound power level L <sub>WA</sub> | 88.2 dB(A)            |
| Vibration total value             | <2.5 m/s <sup>2</sup> |

### 3.11 Charger

|                                   |                    |
|-----------------------------------|--------------------|
| EDP order no.                     | 780 685 0001       |
| Length x Width x Height           | 340 x 200 x 140 mm |
| Weight                            | 3,5 kg             |
| Primary Voltage                   | 100...240 V AC     |
| Input                             | 300 W              |
| Secondary Voltage                 | 49,2 V DC          |
| Current                           | 5 A                |
| Ingress protection code           | IP20               |
| Allowed temperature of recharging | 0 to 40 °C         |

### 3.12 Rail profile templates (if ordered)

- Template S 49/54 and UIC 60: EDP No. 820 405 0100
- Other rail profiles can be ordered (for example AS68: EDP No. 509 405 0120).

## 4. Description of machine

### 4.1 Machine

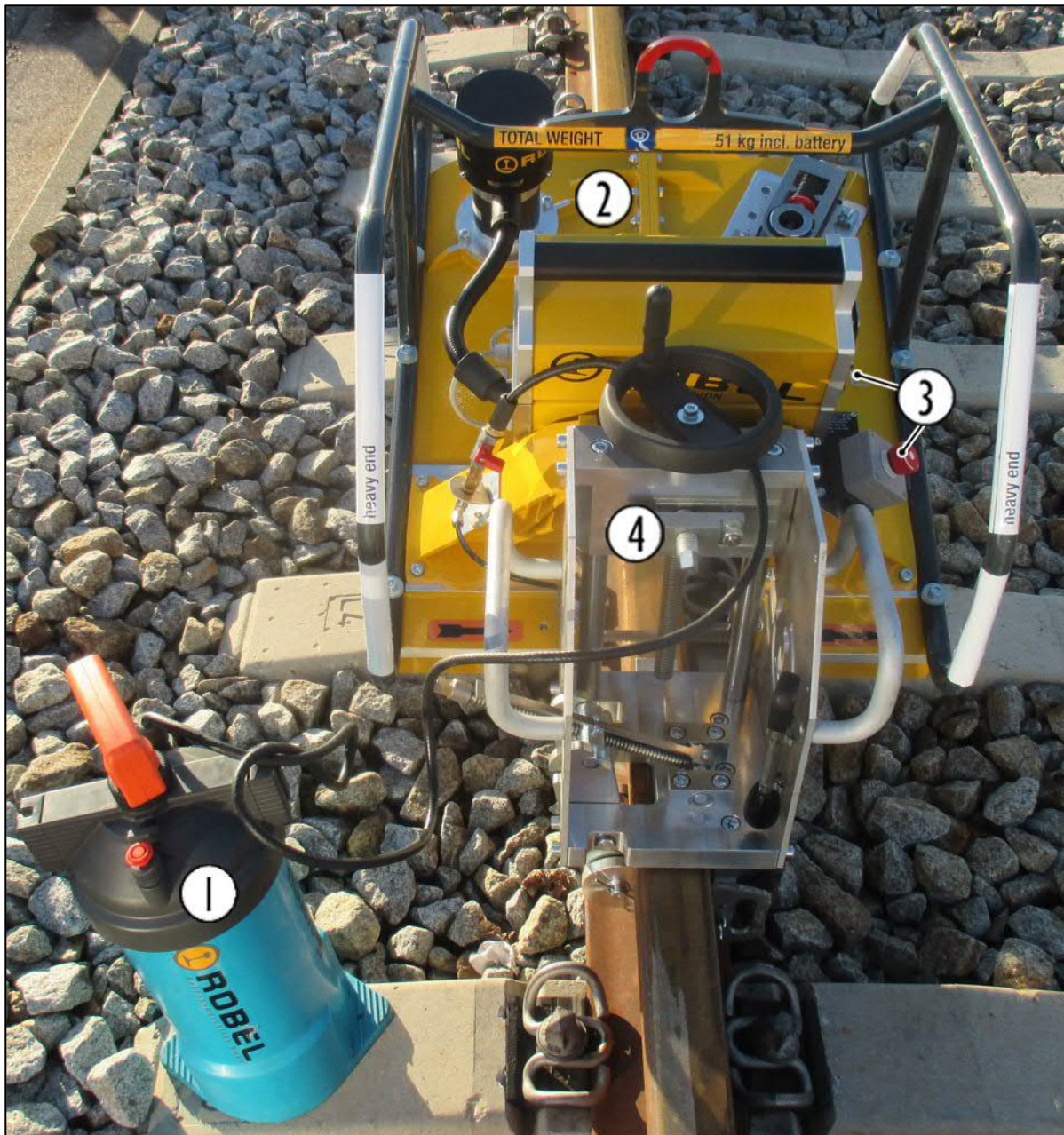
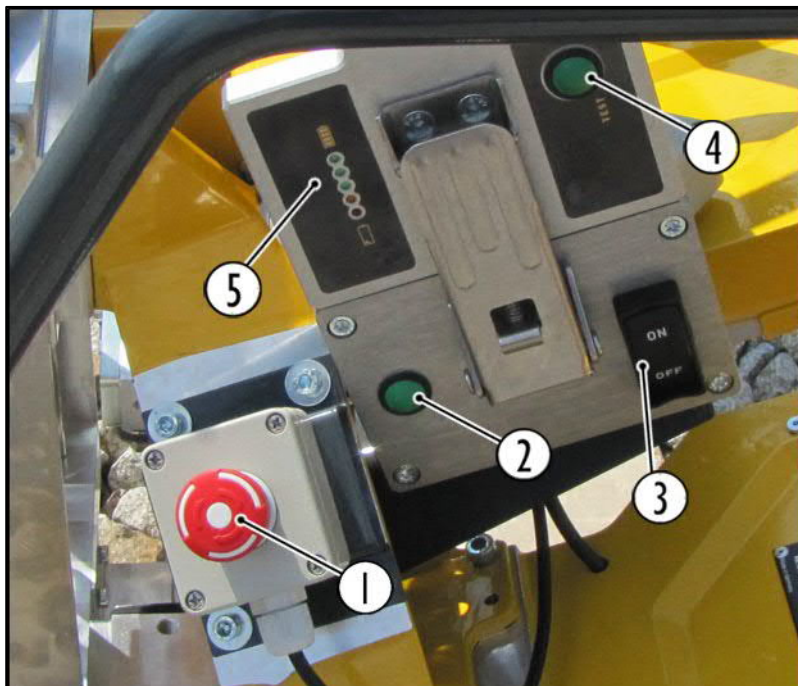


Fig. 1: Rail Band Saw

- 1 Coolant reservoir
- 2 Saw unit

- 3 Controls
- 4 Tensioning block

**4.2 Operating and indicator elements**



**Fig. 2: Operating and indicator elements**

- 1** Motor stop switch
- 2** Button „On/Off“
- 3** ON-/OFF-Switch
- 4** Button „Test“
- 5** LED strip “Battery charge status”

## 4.3 Tensioning block with depth adjustment

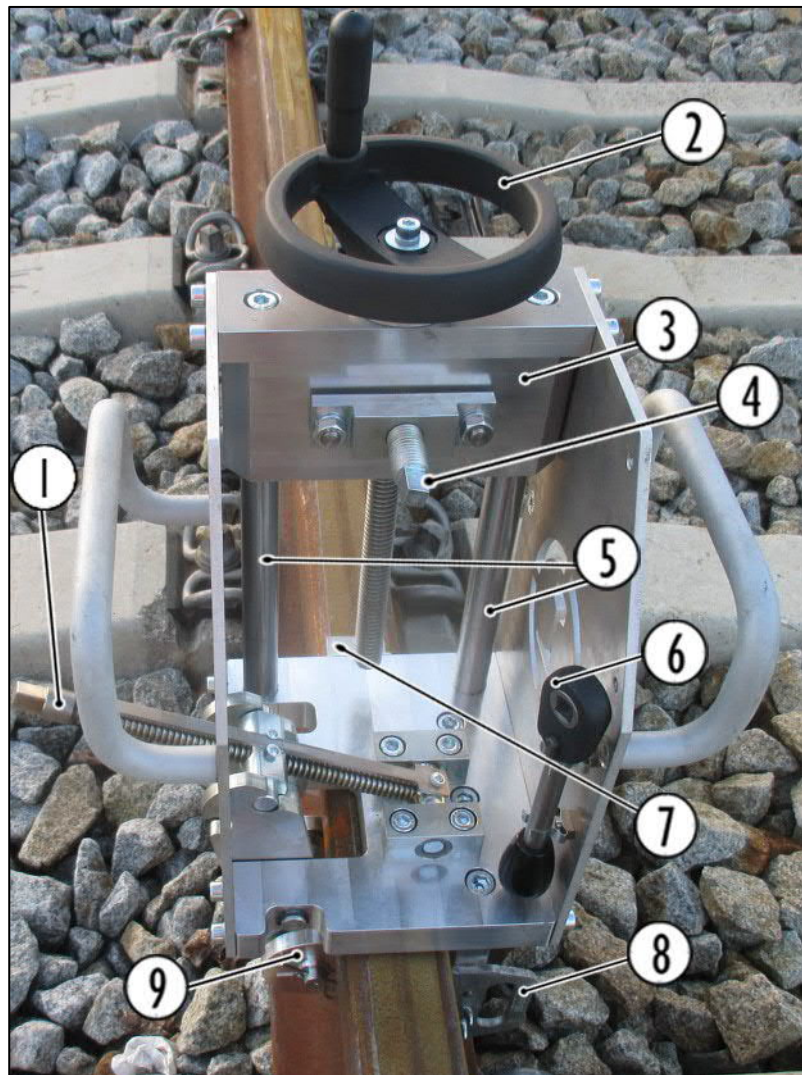
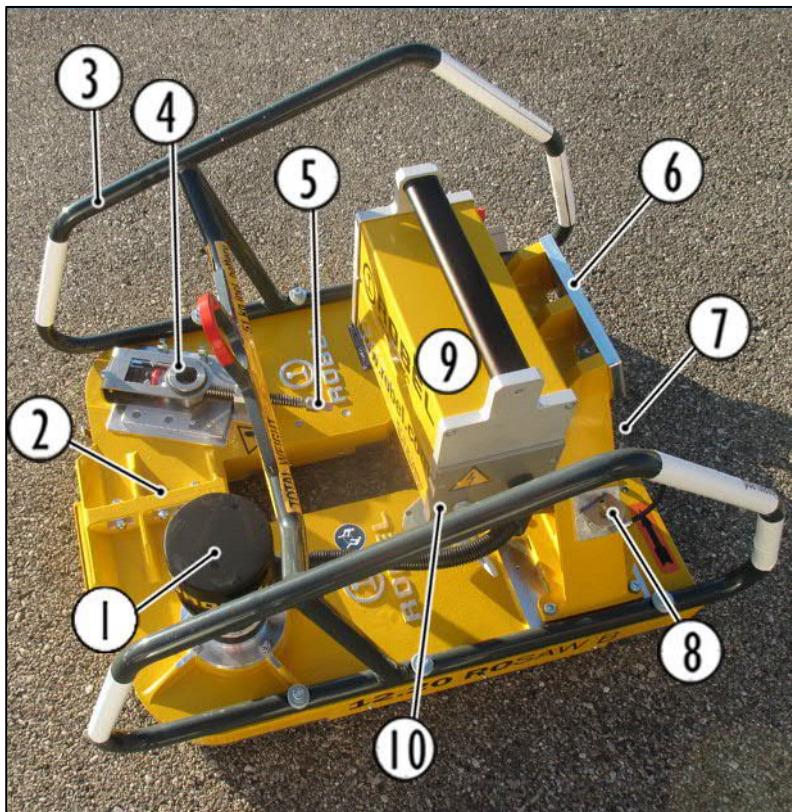


Fig. 3: Tensioning block with depth adjustment

- 1 Tensioning screw for clamping to the rail
- 2 Hand wheel for depth adjustment
- 3 Guiding carriage for saw unit
- 4 Tensioning screw for saw unit mounting bracket
- 5 Guide columns
- 6 Ratchet tensioner
- 7 Bearing bracket
- 8 Rail profile template
- 9 Fish plate area counter support

**4.4 Saw unit**



**Fig. 4: Saw unit from the top (operating side)**

- 1** Motor gearbox unit
- 2** Split saw frame
- 3** Safety bar and carrying handle
- 4** Saw band tensioning unit
- 5** Connection for ratchet tensioner for adjusting saw band tensioning
- 6** Connecting plate
- 7** Saw band
- 8** Connection for cutting fluid hose
- 9** Battery
- 10** Battery holder

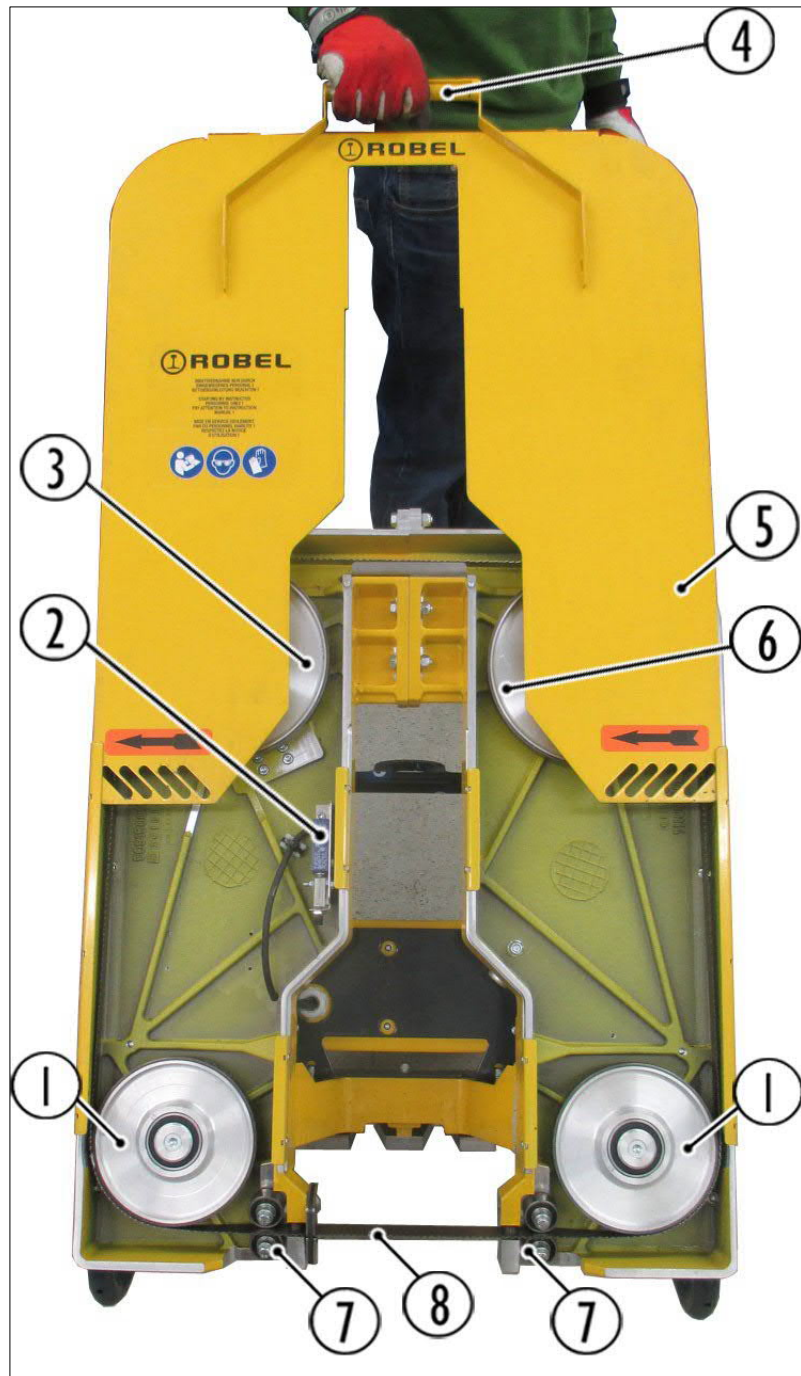


Fig. 5: Saw unit from the bottom (working side)

- 1 Return roller
- 2 Limit switch (cover contact)
- 3 Tensioning roller
- 4 Handle
- 5 Cover
- 6 Drive roller
- 7 Guide rollers of saw band guide
- 8 Saw band



**4.5 Saw band tensioning**

The saw band tension is set using the ratchet tensioner. The indicator sleeve is moved with the ratchet tensioner until the central (silver) mark on the red indicator sleeve coincides with the arrow.

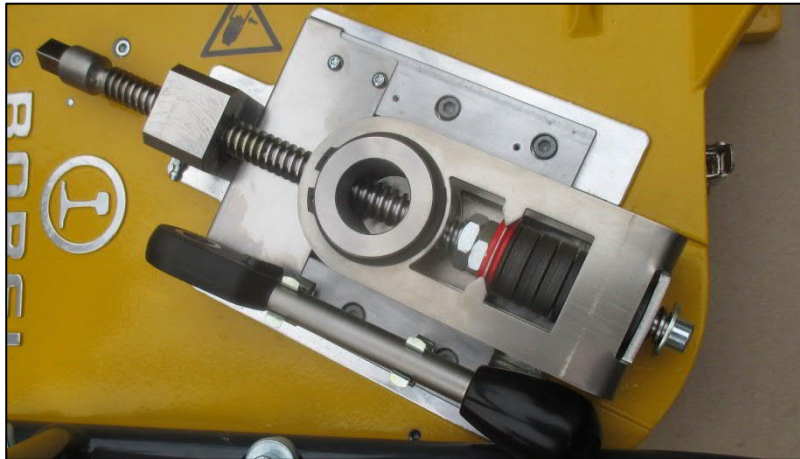


Fig. 6: Tensioned saw band

**4.6 Saw band**

Saw band 2195 x 20 x 0.9 mm, Kombi 4/5 chip splitter tooth-  
ing.

The service life of the saw band is mainly determined by the geometrical design of the very small and narrow dimensions of the machine.

Jamming or sticking of the saw band must be avoided, because as a result there may not be enough friction available to keep the saw band moving. This could cause it to slip off the rollers, or even block the motor.

**CAUTION**



**Risk of injury!**

When the saw band stops it can slip off the rollers or even block the motor.

- ▶ Prevent the saw band from jamming or getting stuck at all times.

If e.g. the cutting fluid is too oily and despite being sufficiently tensioned the saw band easily slips off the rollers, this leads to premature wear in the saw band.

## 4.7 Cutting fluid

A cutting fluid is used to keep the saw band cool.

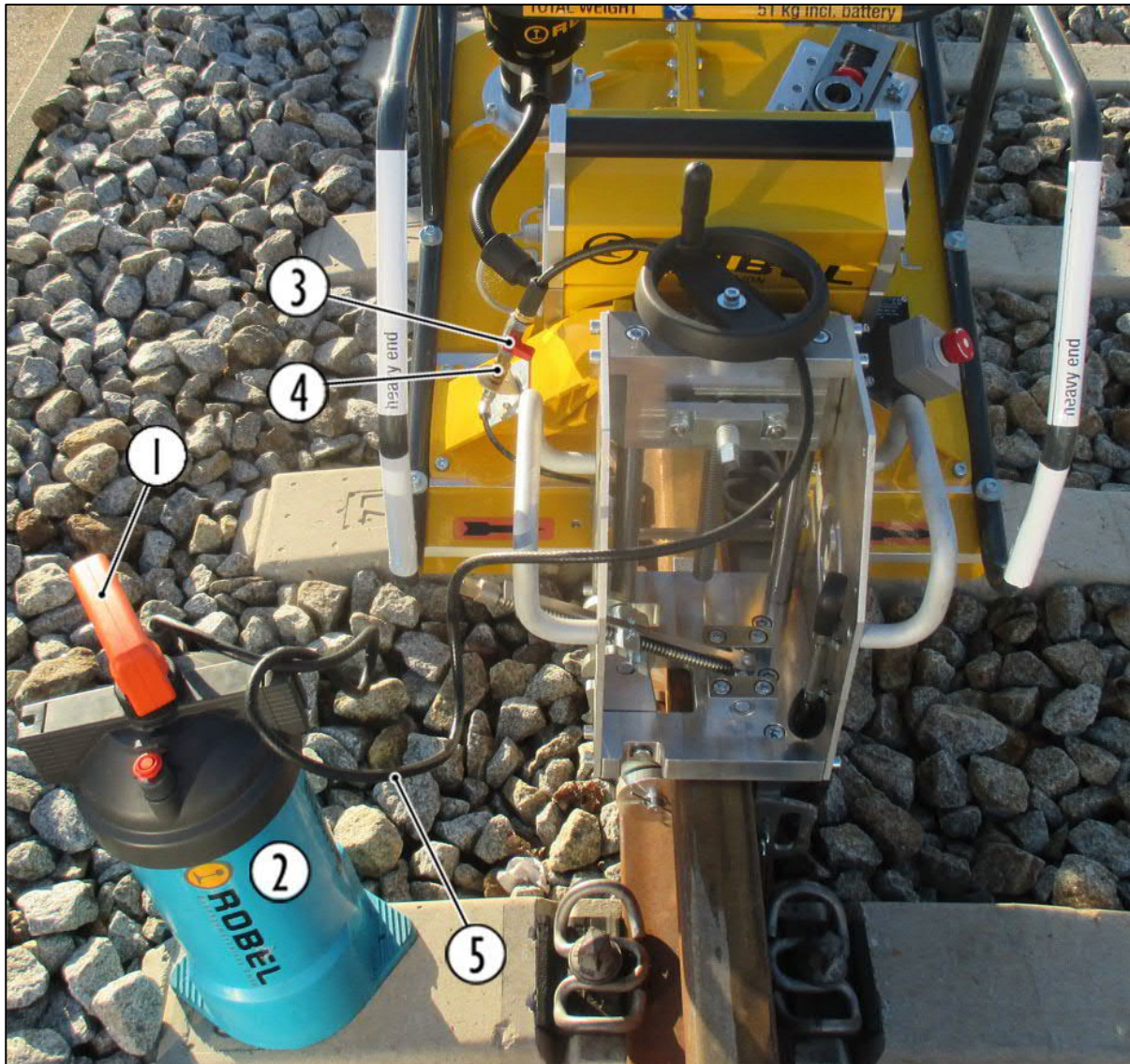


Fig. 7: Coolant reservoir

- |   |                   |   |                 |
|---|-------------------|---|-----------------|
| 1 | Handle            | 4 | Hose connection |
| 2 | Coolant reservoir | 5 | Hose            |
| 3 | Stop valve        |   |                 |



**Too much** cutting fluid reduces the friction between saw band and drive roller and can slow down the cutting operation.

Cutting fluid that is **too greasy** reduces the friction between saw band and drive wheel and results in the saw band slipping. The saw band gets stuck in the cut, wears prematurely and produces inaccurate cuts.

**4.8 Accessories**

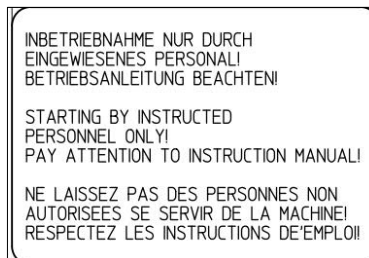


**Fig. 8: Charger with attached battery**

- 1 Charger for battery EDP order-no. 780 685 0001
- 2 Battery complete, EDP order-no. 780 680 0001

**4.9 Labels and signs**

**4.9.1 Labels and signs used**



**Fig. 9: Label "Start-up"**



**Fig. 10: Type plate with CE marking (example)**



**Fig. 11: Warning sign "Crushing hazard"**



**Fig. 12: Label "Read operating instructions"**



**Fig. 13: Label "Directional arrow"**



**Fig. 14: Label "Logo of manufacturer"**



Fig. 15: Label "Lifting point"



Fig. 16: Label "Wear protective gloves"



Fig. 17: Label „Wear eye protection“



Fig. 18: Label "Voltage"



Fig. 19: Label "heavy end"



Fig. 20: Label "19 kg"



Fig. 21: Label "not to be carried more than 10 m"

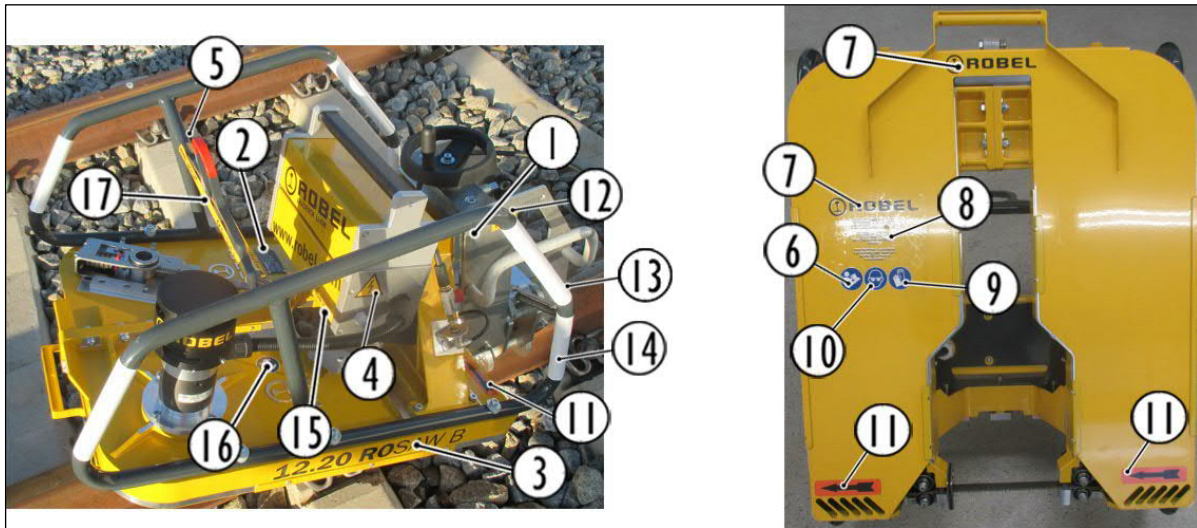


Fig. 22: Two person lift label



Fig. 23: Label " Total weight 51 kg incl. battery"

**4.9.2 Position of labels and signs on the machine**



**Fig. 24: Labels and signs**

- |   |                                     |    |  |
|---|-------------------------------------|----|--|
| 1 | Warning sign: Crushing hazard       | 10 | Label "Wear eye protection"              |
| 2 | Type plate                          | 11 | Label "Directional arrow"                |
| 3 | Label "12.20 ROSAW B"               | 12 | Label "19 kg"                            |
| 4 | Label "Earth conductor"             | 13 | Label "heavy end"                        |
| 5 | Label "Lifting point"               | 14 | White labels for handles                 |
| 6 | Label "Read operating instructions" | 15 | Label "Not to be carried more than 10 m" |
| 7 | Label "Logo of manufacturer"        | 16 | Label "Carry with two people"            |
| 8 | Label "Start-up"                    | 17 | Label "Total weight 51 kg incl. battery" |
| 9 | Label "Wear protective gloves"      |    |  |

## 5. Commissioning and operation

### 5.1 Checking the battery charge status

3. Check battery for any visible damage.
4. Check battery charge.
5. Press the „test“ button.

The battery charge status will be indicated at the LED strip “Battery charge status” for approx. 4 seconds.

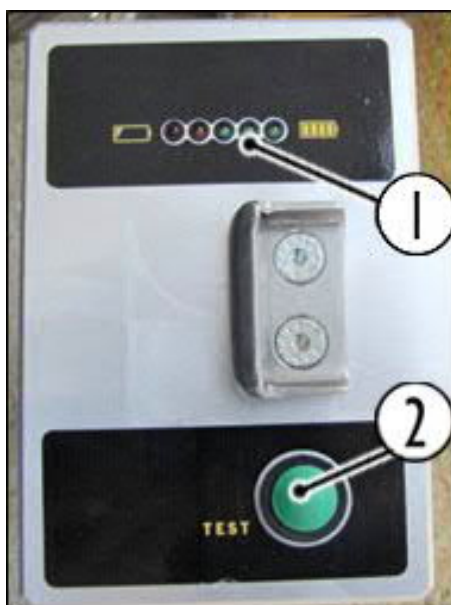


Fig. 25: Checking the battery charge status

- 1 LED strip “Battery charge status”
- 2 Button „Test“

| LED                 | Charging state [%]       |
|---------------------|--------------------------|
| red                 | from 0 to 20 % ("empty") |
| red+orange          | from 20 to 40 %          |
| red+orange+1x green | from 40 to 60 %          |
| red+orange+2x green | from 60 to 80 %          |
| red+orange+3x green | from 80 to 100 %         |

**5.2 Preparing the machine**

1. Check the tensioning block and saw unit for any damage and make sure that all protective devices are intact.
2. Prepare the tensioning block, saw unit and coolant reservoir.

**5.3 Fitting fully charged battery**

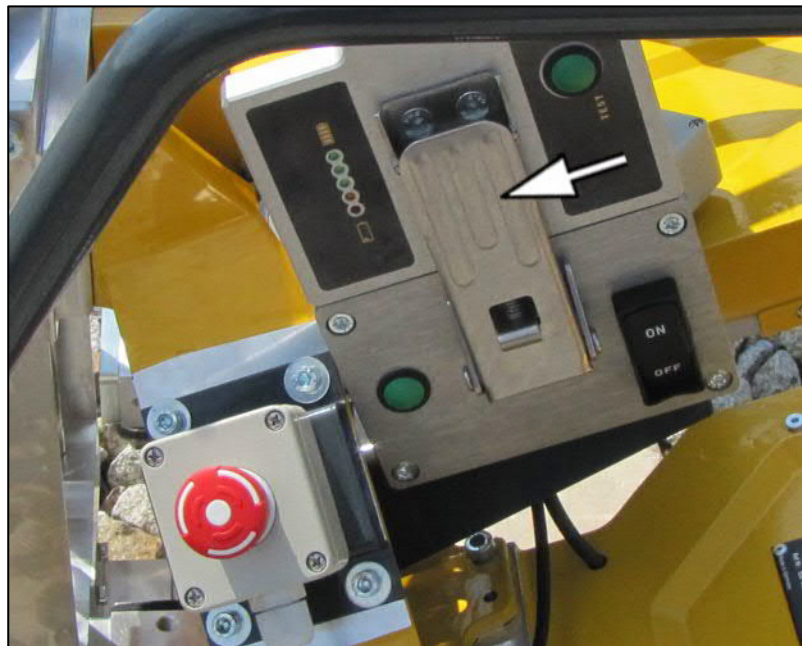
**NOTICE**

**Risk of damage!**

Contaminated contacts can result in damage to the battery.

- ▶ Put battery only on clean ground.
- ▶ In particular, avoid pollution of the charging pin and the bushing contacts (e. g. by sand or soil).

1. Fix fully charged battery.
2. Close the clamping hook.



**Fig. 26: Close the clamping hook**

#### 5.4 Checking clamping hook

The clamping hook must be closed securely, i.e. no gap must be visible between the battery and its support area.



Fig. 27: Gap-free support

1. Check that the battery is seated solidly on the support area.
2. If the clamping hook is not closed securely enough readjust the spring by turning it.



Fig. 28: Readjusting spring



**5.5 Mounting the tensioning block on the rail**

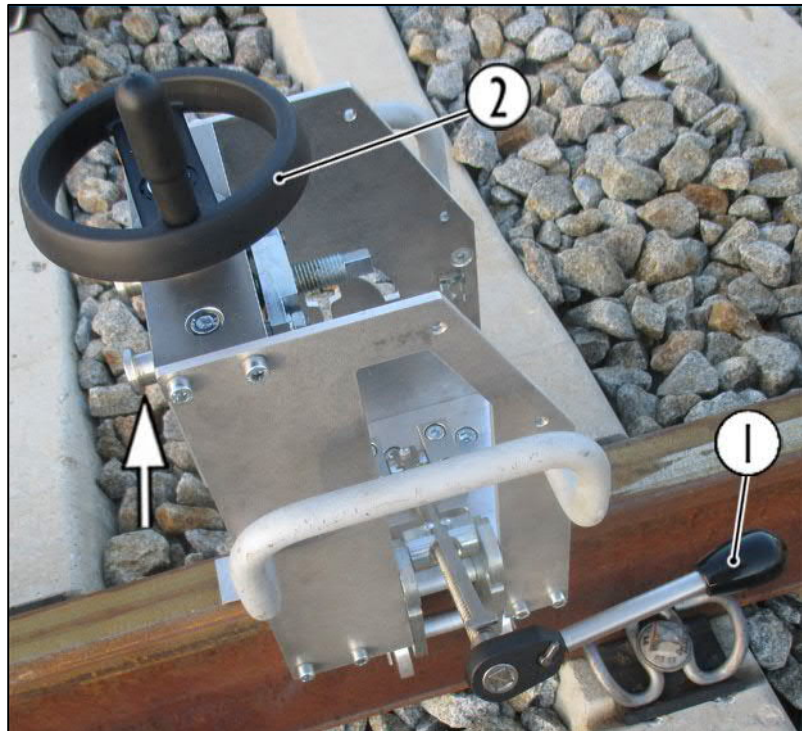


Fig. 29: Mounting the tensioning block

1. Mark the rail with a line at the place it is to be cut.
2. Make sure that the location of use is clear and that unauthorised persons stay away from the location.
3. Select the suitable rail profile template.
4. Screw the templates to the tensioning block.
5. Place the tensioning block onto the rail.
6. Align the bearing bracket to the marked line.
7. Screw the tensioning block to the rail using the locking bolt (1).
8. Check whether the rail profile templates are lying correctly against the rail.

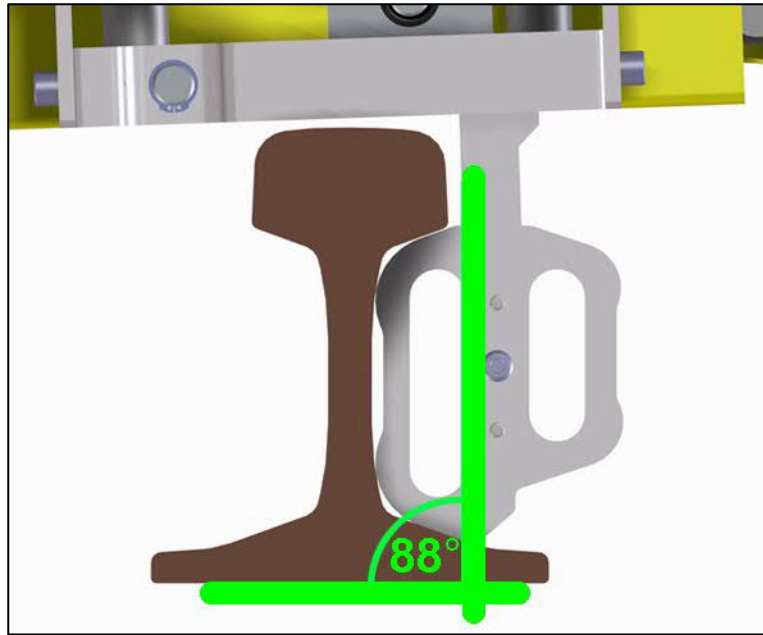


Fig. 30: Rail profile templates correctly on the rail

When the rail profile templates are lying correctly against the rail, the saw is mounted at an angle of  $2^\circ$ .

9. Screw the guiding carriage upwards using the hand wheel (2).

## 5.6 Preparing the saw unit

### Removing the saw band transport protection

1. Remove the transport protection and stow away.



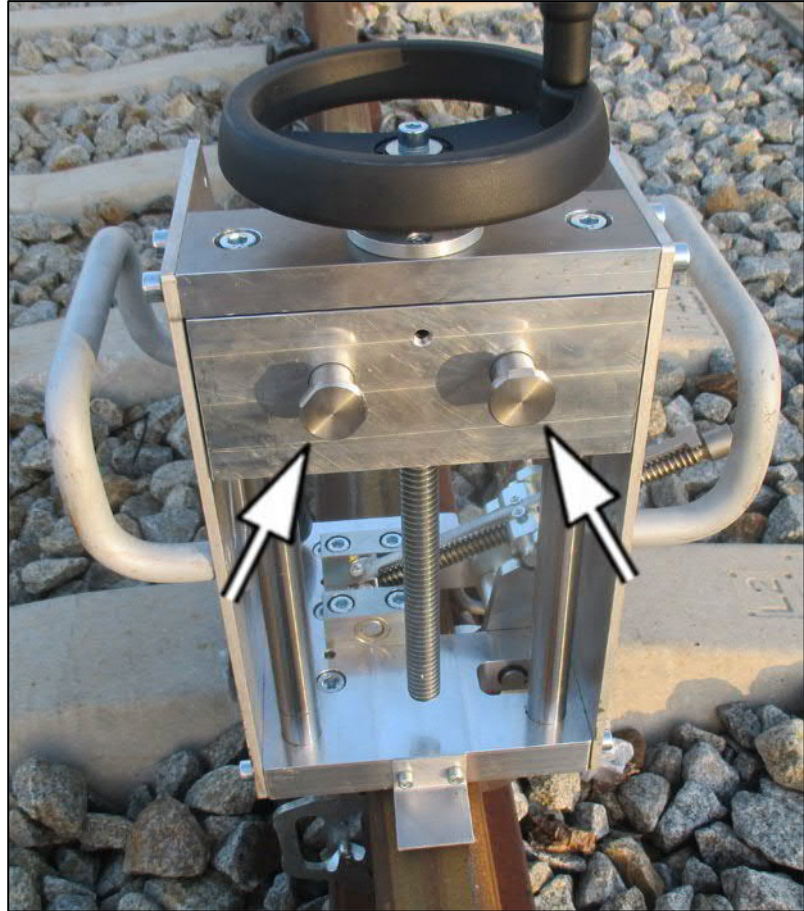
Fig. 31: Removing the transport protection

2. Check that the guiding carriage is in the highest position.

**5.7 Mounting the saw unit**

**Prerequisites:**

- Saw band transport protection has been removed.



**Fig. 32: Clamping bolt on tensioning block**

1. Fasten the saw unit to the tensioning block by hooking the two holes of the connecting plate into the clamping bolt of the tensioning block (see arrows in figure).



**Fig. 33: Fasten the saw unit to the tensioning block**

2. Make sure the clamping bolts are firmly engaged in the holes on the connecting plate.



Fig. 34: Mounting the saw unit

3. Then turn the ratchet tensioner clockwise until the connecting plate is securely connected to the tensioning block.
4. Using the hand wheel for depth adjustment, turn the saw unit downwards counter-clockwise until the saw band is just in front of the rail.
5. Check that the saw band is perpendicular to the baseplate of the tensioning block. A steel rule, for example, can be placed against the saw band for this.

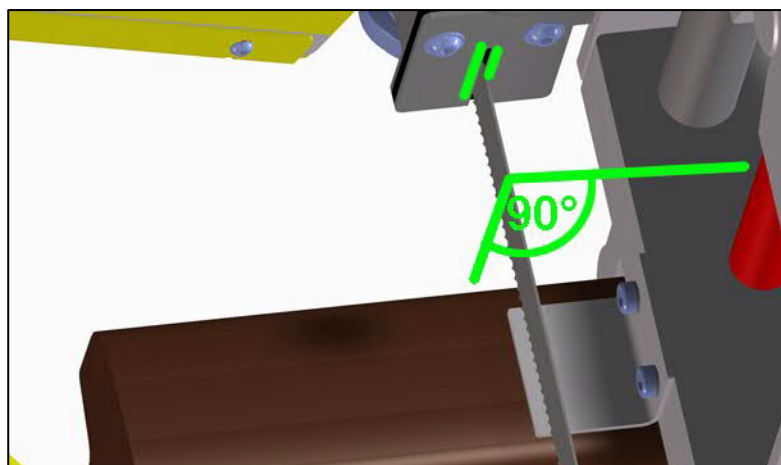
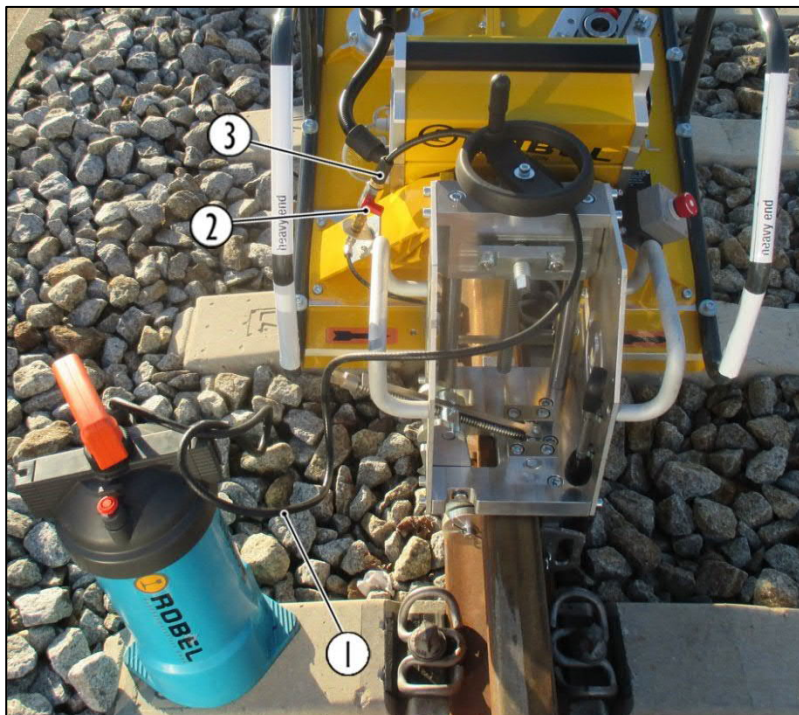


Fig. 35: Saw band perpendicular to baseplate of tensioning block

**5.8 Connecting the coolant reservoir**



**Fig. 36: Connecting the coolant reservoir**

- 1. Check that the stop valve (2) is closed.**
- 2. Connect the supplied cutting fluid reservoir via the hose (1) to the hose sleeve at the hose connection gland (3) of the saw.**  
(To remove the reservoir, pull back the locking mechanism on the sleeve and withdraw the hose sleeve from the machine.)
- 3. Check that sufficient cutting fluid is in the reservoir, replenish if necessary.**

## 5.9 Starting the motor

### CAUTION



#### Risk of injury!

As soon as the motor is switched on the saw band starts moving.

- ▶ Do not touch the moving saw band.

#### Danger of overheating!

- ▶ Never cover the electric motor.

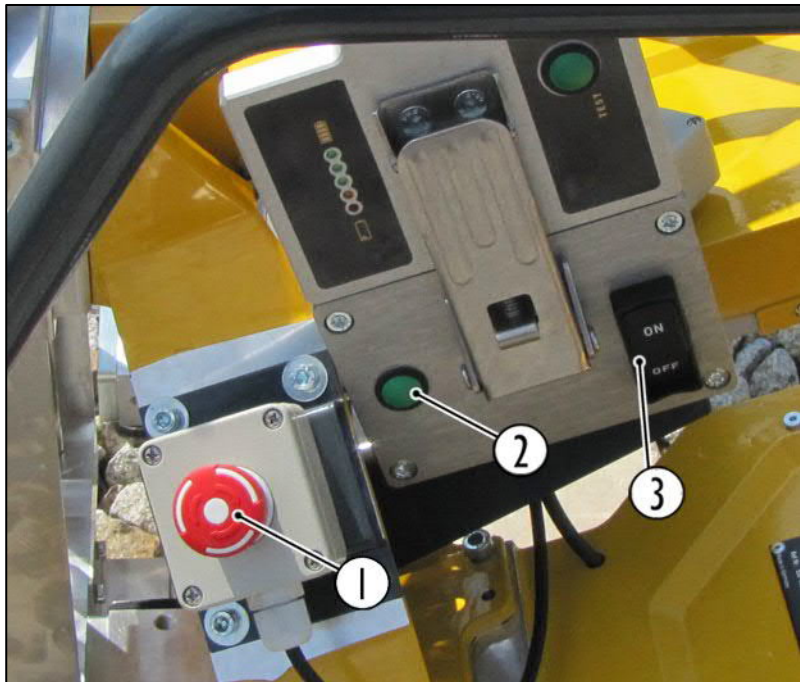


Fig. 37: Starting the motor

1. Release the motor stop switch (1).
2. Press the “ON/OFF” button (2).  
Control will be initialised.
3. Turn the “ON/OFF switch” (3) to “ON”.  
Motor is running.

### 5.9.1 Restart following motor stop

Once the fault that resulted in pressing the motor stop switch has been rectified proceed as follows:

1. Release the motor stop switch.
2. Turn the ON/OFF switch to “OFF”.
3. Then turn the ON/OFF switch back “ON” again.  
Motor is running.

### 5.9.2 Re-start after automatic shut-off

After the machine has been switched off by the automatic shut-off during cutting, proceed as follows:

1. Move the saw unit up slightly with the hand wheel so that the saw band can start moving freely.
2. Turn the ON/OFF switch to "OFF".
3. Press the "ON/OFF" button to initialise the control system.
4. Then turn the ON/OFF switch back "ON" again.

Motor is running.

### 5.10 Sawing

1. Check that the teeth of the saw band (cutting direction) match the direction of rotation of the saw band (direction is indicated on the cover).
2. If the direction of rotation is not correct turn the saw band round (see chap. 5.12).
3. Tension the saw band using the ratchet tensioner.
4. Start the motor.
5. Make sure that the saw band coincides with the marked cutting line.
6. Before starting cutting, move the stop valve for the coolant lubrication in hose direction (open) so that a small amount of fluid runs over the saw band during sawing.
7. Turn the hand wheel for depth adjustment counter-clockwise and smoothly put the saw band into contact with the rail.

#### NOTICE

##### **Risk of damage to the saw band!**

If the saw band is advanced too quickly there is a risk that the blade jams in the cut.

- ▶ Avoid vibrations and any sticking of the saw blade.
- ▶ Feed the band more slowly or move the saw unit upwards until the saw band is moving again.
- ▶ Make sure that no blue or dark yellow coloured swarf is produced.

8. Proceed with the steady and consistent rotary motion so that the saw band cuts through the rail. Do not apply too much pressure during cutting as this may result in the saw band getting stuck or an uneven cut.
9. Should the saw band nevertheless get stuck during cutting, carefully turn the hand wheel in the opposite direction until the band moves freely again. Then continue cutting.

10. To avoid damaging the saw band or the band jamming when sawing, ensure that only the green LEDs are lit.

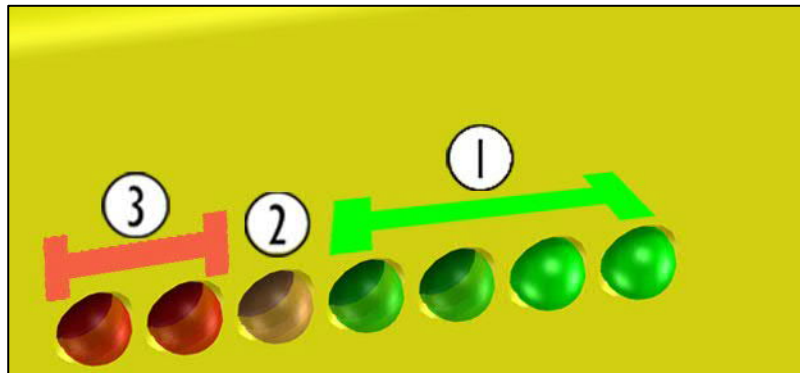


Fig. 38: Illuminated LEDs at the battery display

- 1 Green LEDs: ideal current input during sawing
- 2 Amber LED: reduce feed rate
- 3 Red LEDs: the machine will shut off shortly

11. After finishing cutting turn the hand wheel clockwise until the guiding carriage is in the top position.
12. Switch off the motor.
13. Remove the swarf and replenish the cutting fluid if necessary.

#### 5.11 Dismantling the rail band saw

1. Separate the coolant reservoir from the saw unit.
2. Turn the ratchet tensioner so that the clamping bolts release the connecting plate.
3. Remove the saw unit from the tensioning block.
4. Dismantle the tensioning block.



**5.12 Replacing the saw band**

**CAUTION**



**Risk of injury!**

Sharp teeth of the saw band and rebounding swarf can result in injuries.

- ▶ Separate the battery from the machine.
- ▶ Wear eye protection.
- ▶ Wear work gloves (acc. to EN388 performance rating 4543 cut protection class 5).

**Prerequisites:**

- Battery has been removed from the machine.

**Tools, aids, materials:**

- Metal tool (insertion aid)
1. Place the saw frame with the housing cover facing up on an even and clean surface.
  2. Open the fasteners and pull the housing cover out of its guides and remove carefully.

**CAUTION**



**Risk of injury!**

The saw band can rebound.

- ▶ Hold the saw band (wear work gloves!)

**Removing the saw band**

3. Fully de-tension the saw band using the ratchet tensioner.
4. With both hands take the saw band from the bottom end upwards out of the guide rollers and then remove it.
5. Dispose of the saw band in line with regulations.
6. Remove the swarf on the inside of the machine and on the rollers.

**Inserting the saw band**

7. Take the new saw band (1) and peel off a small bit of the fire safety label in order to identify the sawing direction.
8. Ensure to leave the saw band tooth protector on the saw band teeth when fitting.
9. Check that the cutting direction of the saw band matches the arrow on the cover (saw band direction of rotation).
10. If the saw teeth are pointing in the opposite direction, the saw band must be turned around.
11. First place the saw band over the two return rollers, then place it in the centre of the drive and tensioning rollers and insert it smoothly into the guide rollers. Make sure that the saw teeth point in the right direction.

The band lies on the rollers such that the teeth stand

freely above them.



Fig. 39: Inserting the saw band

12. Using the ratchet tensioner slightly increase the saw band tension.
13. Check that the saw band still lies correctly within the guide rollers.
14. Apply a light tension by turning the ratchet tensioner. Check that the saw band still lies correctly within the guide rollers.
15. Remove the saw band tooth protector.
16. Close the cover and fasten it with the fasteners.



Fig. 40: Closing the quick fasteners

17. The indicator sleeve is moved with the ratchet tensioner until the central (silver) mark on the red indicator sleeve coincides with the arrow.
18. Fit the saw unit on the tensioning block, see chap. 5.7.
19. Start the motor.
20. Check that the saw band runs smoothly in the guide rollers.



After replacing the saw band make the first cut at a lower feed rate so that the teeth of the saw band are sawn in.

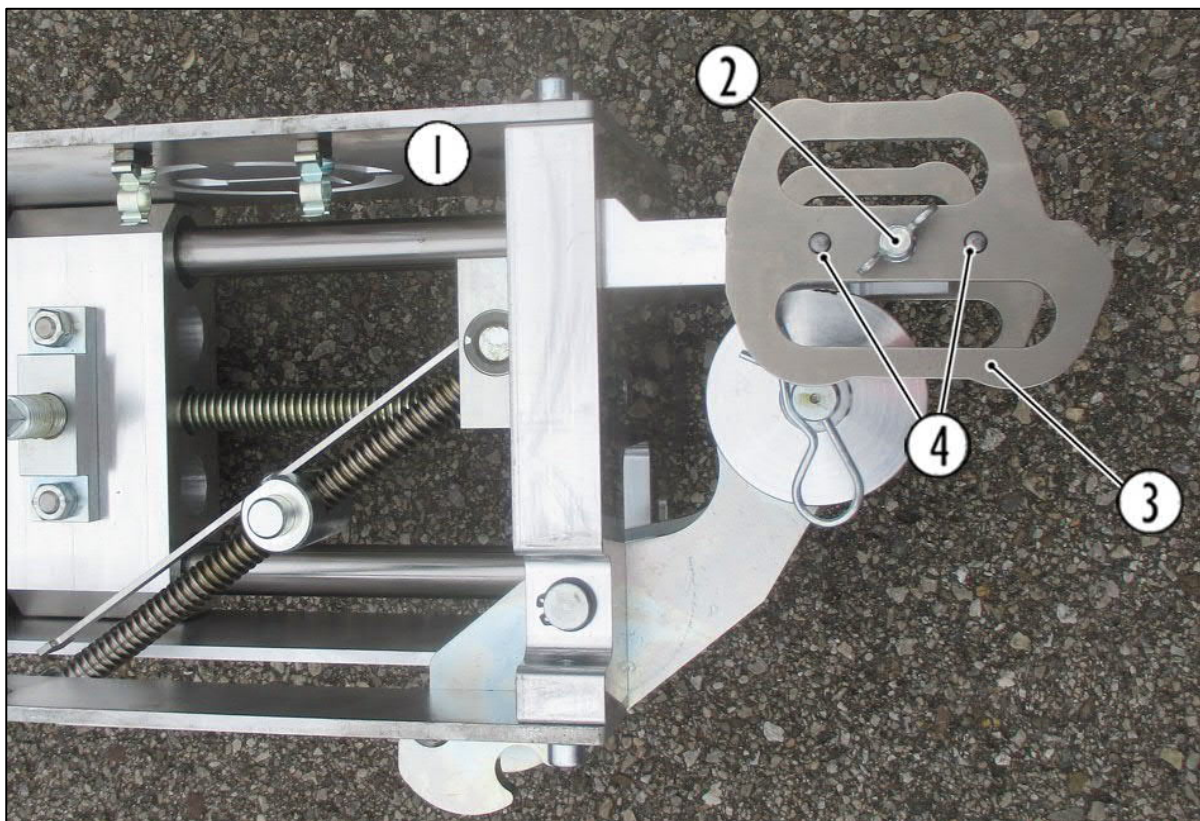
Cutting time is about 4 minutes.

**5.13 Changing the rail profile template**



Pay attention to the template side associated with the rail type!

The rail profile templates have to be fitted in such a way that the rail name points to the rail and the note "TOP" can be seen above the rail name.



**Fig. 41: Fitting the rail profile template**

- |   |   |
|---|---|
| <p>1 Tensioning block</p> <p>2 Wing screw</p> | <p>3 Rail profile template</p> <p>4 Dowel pin</p> |
|---|---|

The rail profile templates must comply with the rail type (fish plate area).

1. For dismantling remove the wing screw (2).
2. Fit a suitable template (3).

The two dowel pins (4) must grip again in the designated holes.

3. Re-tighten the wing screw securely.

4. Proceed in the same way with the second template.

#### 5.14 Recharging the battery

The temperature range for charging the battery pack is between 20 and 45 °C.

#### WARNING



#### Explosion and fire hazard!

An inappropriate charger can cause damage to the battery.

- ▶ Only use this charger because this lithium ion battery is specifically designed to be used with your machine.

1. The supplied battery, EDP No. 780 680 0001, must only be charged with the charger supplied with it, EDP No. 780 685 0001.

#### NOTICE

#### Risk of damage!

- ▶ Use the charger only in containers or a workshop.



The battery is delivered partly charged. Charge the battery fully before its first use in order to ensure full performance.

The battery can be charged at any time without reducing its service life. Interrupting the charging process does not.

The battery is equipped with a temperature monitoring system which only allows charging at a temperature range of 20 to 45 °C to ensure a long service life of the battery.

2. Put battery on the charger and fasten it.
3. Disconnect the charger after and/or before each charging process from the power supply as the charger should re-initialise prior to each charging process.
4. Connect charger to an electrical supply.

The battery will be charged.

**Charging time** The charging time depends on several factors, for example:

- the discharge status of the battery
- the ambient temperature during charging
- the battery temperature
- the battery age

The charging time is approx. 3 to 4 hours.

- After use**
1. Check that the charger is complete and undamaged.
  2. Clean the charger if necessary.
  3. No longer use the charger if it is damaged.

## 6. Transport and storage

### 6.1 Transport

#### CAUTION



#### Risk of injury!

- ▶ Always use mechanical assistance (trolleys, hoists etc.) when available.
- ▶ Always use two hands, keep a firm grip and keep close to the equipment when lifting and handling.
- ▶ When carrying equipment for a distance greater than 10 m, rest stops should be taken.
- ▶ If you need to carry more than 30 m, plan in mechanical assistance.

1. Fit the transport protection to the saw band.



Fig. 42: Fitting the transport protection

2. The tensioning block and saw unit can be transported separately.

**CAUTION**



**Risk of injury!**

- ▶ Carry the tensioning block always with two hands.



**Fig. 43: Carrying tension block, coolant reservoir and battery**

## 3. Carry the saw unit by the safety bars.

**CAUTION****Risk of injury!**

The saw unit is too heavy to carry for a long distance.

- ▶ This item should only be handled manually where there is no other option, and that it must not be carried for more than 10 m.

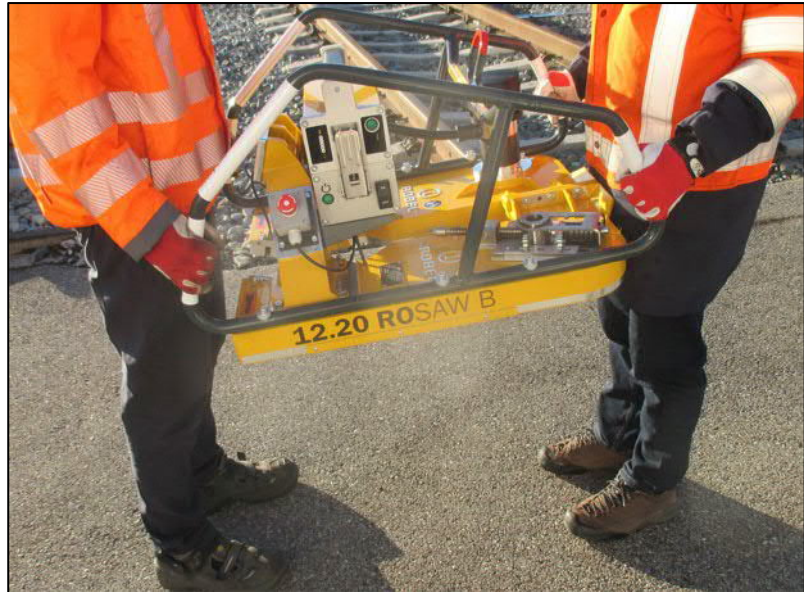


Fig. 44: Carrying the saw unit

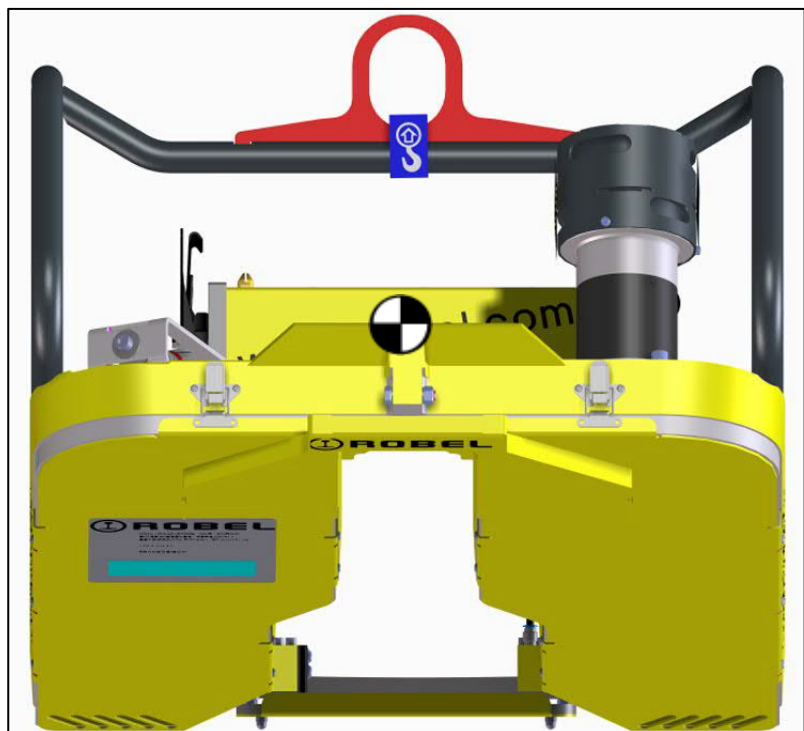


Fig. 45: Centre of gravity

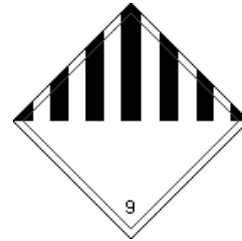


**Battery** Batteries are subject to the requirements of the Dangerous Goods Regulations. The user must refer to national regulations to transport batteries by road.

For transport by third parties (e.g. transport by air, haulier) special requirements have to be met. In this case it is absolutely essential to consult a dangerous goods expert.

Each package must contain a covering letter and must be marked with the following labels:

**UN 3480**



**Caution**

The packages in this consignment consist of

**LITHIUM ION BATTERIES**

Shipment must be handled with care

Damaging can cause fire or explosion

If the package is damaged it must be quarantined, inspected and repacked

For further information contact:

Tel. 0049 (0) 8654 609-0

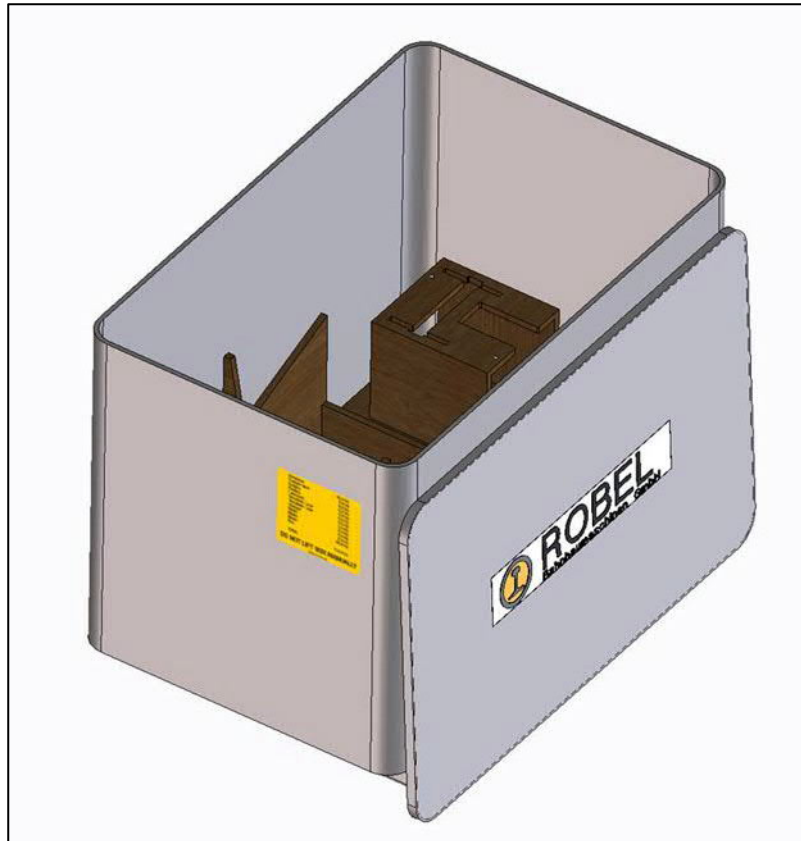
**Transport box**


Fig. 46: Transport box with label of weights

|                                 |                 |
|---------------------------------|-----------------|
| Bandsaw                         | 45,0 kg         |
| Coolant tank                    | 5,0 kg          |
| Battery                         | 6,2 kg          |
| Battery                         | 6,2 kg          |
| Lubricant                       | 5,0 kg          |
| Template / pair                 | 0,5 kg          |
| Template / pair                 | 0,5 kg          |
| Charger                         | 3,5 kg          |
| Blade                           | 0,3 kg          |
| Blade                           | 0,3 kg          |
| Blade                           | 0,3 kg          |
| Box                             | 40,0 kg         |
| <b>TOTAL</b>                    | <b>112,8 kg</b> |
| <b>DO NOT LIFT BOX MANUALLY</b> |                 |
| Sticker for the box             |                 |

Abb. 47: Label of weights

1. Move the transport box with a mechanical assistance (for example a forklift truck).

**6.2 Storage**

1. Before the machine is stored empty the coolant reservoir and dispose of the coolant in the correct manner.
2. Remove swarf from inside the saw unit (e.g. with a brush) before storage.
3. Slightly de-tension the saw band using the ratchet tensioner.
4. Fit the saw band guard.

The storage area must be dry and dust-free.

- Battery**
1. Before a prolonged period of non-use charge the battery to approx. 60% charge and check it every three months.
  2. Store the battery in a dry, well ventilated place. Protect it from humidity and water.  
Humidity: 0-80%
  3. Storage temperature: -10 °C to +45 °C .



Do not exceed the maximum storage temperature. E.g. do not leave the battery in the car in the summer and store it only away from direct sunlight.

Do not store the battery together with other metal objects.

## 7. Repairing faults

| Description of fault                            | Cause  | Remedy   |
|---|--|--|
| Motor doesn't start                             | Cover not closed, limit switch has released.                           | ▶ Close the cover and fasten it with the fasteners.  |
| Machine switches off immediately after starting | Ambient temperature is too cold  | ▶ Warm up the machine before starting the machine again  |
| Saw band gets stuck but motor continues turning | Lowering pressure is too high  | ▶ Reduce lowering pressure (turn depth adjustment upwards until saw band is moving freely again, then turn downwards again).   |
| Machine does not operate                        | Lack of drive energy   | ▶ Change or charge battery   |
|   | Battery is not properly attached to the machine                        | ▶ Pretensioning of clamping hook (see chap. 5.4)   |
| Machine rattles                                 | Feed rate too high (swarf is not removed from the cut by the saw band) | ▶ Reduce feed rate until the machine runs smoothly.  |
| Automatic shut-off                              | Feed rate too high or current input too high                           | ▶ Move the saw unit up slightly with the hand wheel so that the saw band can start moving freely, for re-start see Chap. 5.9.2 |
| Broken saw band                                 | Wear   | ▶ Remove saw frame from tensioning block and change the saw band, see chap. 5.12   |
| Cut in sawing direction is not right-angled     | Tensioning block loose   | ▶ Check seating of tensioning block, fit tightly to the rail if necessary  |
|   | Saw unit not fitted correctly on the tensioning block                  | ▶ Check if the saw unit with the connecting plate is fitted correctly on the clamping bolts, refit correctly if necessary.     |
| Cut is bulging                                  | Saw band worn  | ▶ Replace the saw band, see chap. 5.12   |
|   | Saw band not tensioned correctly                                       | ▶ Tension the saw band   |
| Cut is bulging or band cannot be guided.        | Play in bearing of band guide  | ▶ Replace the bearing  |
| Poor cut quality, with blade jamming            | Teeth run below edge of roller   | ▶ Replace the saw band, see chap. 5.12   |

**Battery Error codes**

| Error LED flashes | Cause                           | Remedy   |
|-------------------|---------------------------------|--|
| ■                 | Undervoltage (<2,9 V per cell)  | <ul style="list-style-type: none"> <li>▶ Charge battery with charger.</li> <li>▶ If this is not possible, contact Robel Service.</li> </ul>  |
| ■ ■               | Load overcurrent                | <ul style="list-style-type: none"> <li>▶ Detach battery from machine and wait approx. 10 seconds.</li> </ul>   |
| ■ ■ ■             | Charge overcurrent              | <ul style="list-style-type: none"> <li>▶ Detach battery from machine and wait approx. 10 seconds.</li> </ul>   |
| ■ ■ ■ ■           | Short circuit                   | <ul style="list-style-type: none"> <li>▶ Detach battery from machine/charger and wait approx. 10 seconds.</li> </ul>   |
| ■ ■ ■ ■ ■         | Overvoltage (> 4,25 V per cell) | <ul style="list-style-type: none"> <li>▶ Connect battery to machine and operate the machine.</li> </ul>  |
| ■ ■ ■ ■ ■ ■       | FETs overtemperature            | <ul style="list-style-type: none"> <li>▶ Wait approx. 10 minutes until BMS-board has cooled down.</li> </ul>   |
| ■ ■ ■ ■ ■ ■ ■     | Pack overtemperature            | <ul style="list-style-type: none"> <li>▶ Wait approx. one hour until the cells have cooled down.</li> </ul>  |
| ■ ■ ■ ■ ■ ■ ■ ■   | Pack undertemperature           | <ul style="list-style-type: none"> <li>▶ Ensure that the battery has a temperature between 0 and 45 °C before charging.</li> <li>▶ Ensure that the battery has a temperature above -10 °C (&gt; -10 °C) before discharging (operate).</li> </ul> |

## 8. Maintenance

1. Always use the recommended lubricants and when carrying out repairs use original spare parts. This is important both for the warranty and for the increased operational safety of your machine.
2. When ordering spare parts please provide the following information:
  - Type of machine
  - Machine number
  - Assembly
  - Description and number of spare part
  - Quantity
  - Shipping method
  - Despatch address
3. Observe the prescribed maintenance intervals!
4. When performing maintenance work, observe the country-specific safety and environmental regulations!

### 8.1 Maintenance schedule

| Interval     | Maintenance task   |
|--------------|--|
| Daily        | Cleaning: remove swarf from machine (every 7 to 10 cuts)         |
| Daily        | Lightly oil the guide column (tensioning block).                 |
| Daily        | Check the cooling lubricant, replenish if necessary              |
| Monthly      | Grease all shafts  |
| Every 20 hrs | Check the guide rollers for the saw band guide                   |
| Every 20 hrs | Check shafts in bearings for play                                |
| Every 50 hrs | Check bearing of the drive roller and tensioning roller for play |

**8.2 Cleaning and care**

**NOTICE**

**Risk of damage!**

Solvents and aggressive, flammable cleaning agents corrode paintwork and plastic components.

- ▶ Do not use solvents or aggressive and flammable detergents!

The rail band saw must be cleaned after every 7-10 cuts.

1. Remove the cover from the machine.
2. Remove the swarf from the guides and bearings of the guide rollers as well as the drive, tensioning and return rollers.

**8.3 Visual checks**

1. Check fixing screws and threads.
2. Check bearing of the drive roller and tensioning roller for play.
3. Check bearing of the guide rollers for play.

**8.4 Lubricating**

1. Lightly grease the guide columns using a universal oil.
2. Grease all shafts monthly.

## 8.5 Replenishing the cooling lubricant

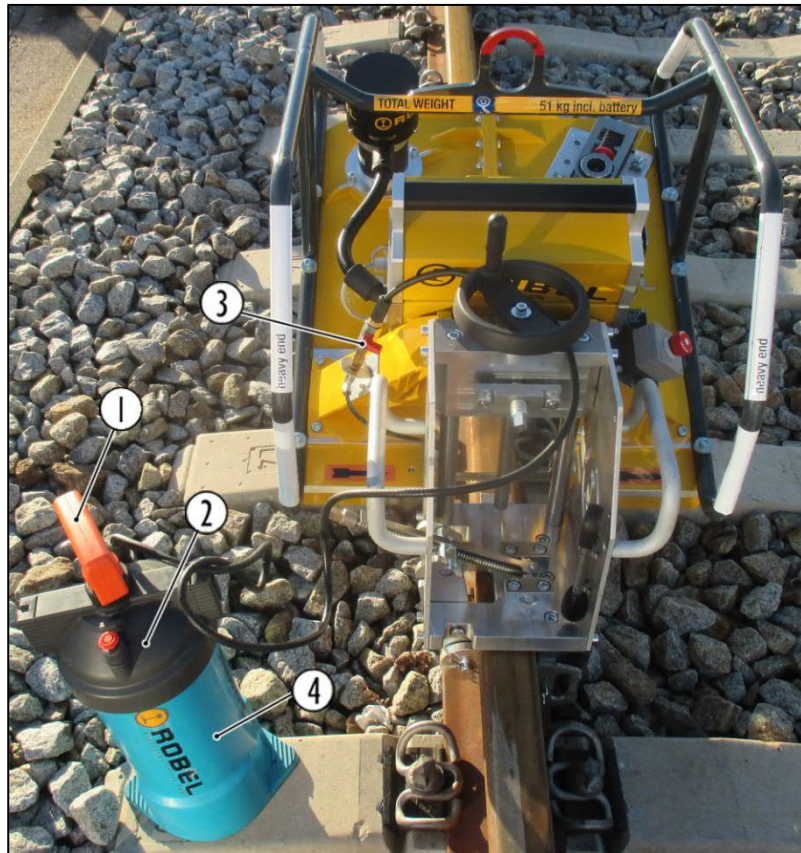


Fig. 48: Replenishing cooling lubricant

- 1 Handle of the hand pump
- 2 Reservoir lid
- 3 Stop valve
- 4 Coolant reservoir

1. Set the stop valve (3) on the saw to 'stop' vertically to the hose.
2. Unscrew the reservoir lid and remove it.
3. Fill in the cooling lubricant.
4. Replace the reservoir lid and tighten securely by hand, making sure that the O-ring is seated correctly.
5. After filling it, sufficiently pump up the coolant reservoir prior to every sawing process, using the hand pump (1).

When a reservoir pressure of approx. 2 bar is reached, the valve opens and lets the excess pressure escape.



## 9. Environmental protection and disposal

### 9.1 Environmental protection

1. During all work on and with the machine make sure to observe the statutory duties on waste prevention and correct waste disposal as well as the environmental protection laws applying in the country of use.
2. During repair and maintenance work substances which can pollute water, such as lubricants and oils, must not contaminate soil or enter the drains.

### 9.2 Disposal

Batteries, accessories and packaging are to be disposed of in an environ-mentally responsible manner.

**Batteries must not be put in with domestic waste.**

For EU countries the following applies: According to European Directives 2012/19/EC and 2006/66/EC, waste electrical and electronic equipment as well as faulty or spent batteries must be collected separately and recycled in an environmentally responsible manner.

For more information contact ROBEL Bahnbaumaschinen GmbH on +49 (0)8654 609-0



If the machine reaches the end of its life cycle, ensure a safe and proper disposal, particularly of parts or substances which are harmful for the environment. These include, among others, batteries, lubricants, and plastics.

1. Since there is a risk of potential environmental pollution, have the machine disposed of by an approved specialist firm.
2. In any case, check which materials can be used for recycling. Have these disposed of by appropriate waste management companies.

## 10. Appendix

### CE conformity declaration



#### EG-Konformitätserklärung (deutsche Originalfassung)

EC Declaration of Conformity (English translation)  
 Déclaration „CE“ de Conformité (Traduction française)

#### gemäß Maschinen-Richtlinie 2006/42/EG, Anhang II A

as defined by the Machinery Directive 2006/42/EC Annex II A  
 conformément à la directive „CE“ relative aux machines 2006/42/CE, Annexe II A

|   |  |
|---|--|
| <b>Hersteller (Name und Anschrift):</b><br>Manufacturer (name and address):<br>Fabricant (nom et adresse):  | ROBEL Bahnbaumaschinen GmbH<br>Industriestraße 31<br>D-83395 Freilassing   |
| <b>Hiermit erklären wir, dass die</b><br>Herewith we declare that the model<br>Par la présente, nous déclarons, que le modèle fourni par                                | Akku-Schienenbandsäge<br>Battery Powered Rail Band Saw<br>Scie à ruban à rails à batterie<br>Typ/type/type 12.20 |
| <b>folgenden einschlägigen Bestimmungen entspricht:</b><br>complies with the following provisions applying to it:<br>correspond aux dispositions pertinentes suivantes: | 2006/42/EG   |
| <b>Angewandte harmonisierte Normen:</b><br>Applied harmonized standards:<br>Normes harmonisées appliquées:  | DIN EN ISO 12100: 2011   |
| <b>Angewandte Normen:</b><br>Applied standards:<br>Normes appliquées:   | DIN EN 62133: 2013   |
| <b>Bevollmächtigt für die techn. Dokumentation:</b><br>Responsible person for technical documentation:<br>Personne chargée pour la documentation technique:             | Mag. Bernhard Lair<br>Abt. Technische Dokumentation<br>Industriestraße 31, D-83395 Freilassing                   |

Freilassing, 28.02.2017

  
 Otto Widrböther

Leiter HMG/Head of HGM/  
Direct. gestion de mach.

  
 Wolfgang R. Fally

Geschäftsführer/General Manager/  
Gérant

Ort, Datum  
Place, date / Lieu, date

Unterschrift, Angabe der Funktion im Unternehmen  
Signature, acting in the company / Signature, en qualité de

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**Geschäftsführer:**  
Dipl.-Ing. Wolfgang R. Fally  
**Registergericht:** Traunstein; HRB181  
**Ust-ID-Nr.:** DE 131554634

**Bankverbindung:**  
Hypo Vereinsbank Freilassing  
IBAN: DE34 7102 0072 0009 333100  
BIC: HYVEDEMM410

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