

## **Bandsaw mill**

BSW 76EPRO with electric motor BSW 76GLPRO with petrol engine



### **Operating manual**

(Translation of the original operation manual)

Both the model number and serial number can be found on the nameplate on the machine. You should keep both numbers safe so that you can refer to them in the future. This manual explains the function and application of the machine.

### FOR YOUR SAFETY

Read the user manual before commissioning. Safety and warning instructions must be observed!



Version BSW76EPRO / BSW76GLPRO (07.24 en)



Project ID: BSW 76EPRO I BSW 76GLPRO Rev.: 2024-07-30 © LUMAG GMBH Rudolf-Diesel-Str. 1a 84375 Kirchdorf a.Inn

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Thank you for choosing the mobile bandsaw mill from LUMAG. Your new bandsaw mill has been manufactured to the highest standards of reliability, ease of operation and safety.

Please enter the date of purchase here for reference purposes: \_

Keep the receipt.

### 1 PREFACE

### 1.1 INFORMATION ON THE USER MANUAL

The German version is the user manual. All other language versions are translations of the original user manual.

Always keep this user manual in a safe place for later reference whenever any information about the machine is needed.

When passing on the machine, always include this user manual.

Read and observe the safety instructions and warnings in this user manual.

### 1.2 LIMITATION OF LIABILITY

We have made every effort to inform you as comprehensively as possible about accident prevention when operating the machine, but accept no liability for incomplete information about listed danger points and sources.

The manufacturer accepts no liability for damage due to:

- Non-compliance with the user manual
- Improper use of the machine
- Improper assembly, commissioning, operation and maintenance of the machine
- Operating the machine with defective safeguards or improperly installed or non-functioning safety and protective devices
- Failure to observe the instructions in the user manual regarding transport, storage, function, operation, maintenance and care of the machine
- Unauthorised structural changes to the machine
- Inadequate monitoring of machine parts subject to wear and tear
- Improperly performed repairs
- Disaster situations caused by foreign bodies and force majeure



### **1.3 MACHINE DESIGNATION**

The designation "Machine" replaces the trade name of the object to which this user manual – see cover sheet – refers.

### 1.4 COPYRIGHT

All documents are protected by copyright. A passing on and duplication of documents, also in extracts, as well as communications of the contents to third parties are not permitted, as far as not expressly agreed.

### 1.5 RESERVATIONS

Information on technical data, dimensions and illustrations of the machine, as well as changes in safety standards, are subject to further development and are therefore not binding for the delivery in every case.

Errors in printing and wording reserved.



### 2 **PRODUCT DESCRIPTION**

### 2.1 INTENDED USE

This bandsaw mill is designed exclusively for sawing soft, hard or dry logs or prismatic workpieces without branches. Their length depends on the design of the machine.

The rails and log supports are reinforced by a steel frame that is specially designed for sawing directly on the ground. The material is placed against the stops on the rail track (which also serves as a guide) and secured in place with the clamping fixtures. The saw carriage, which is driven by an electric motor or combustion engine, moves along the rails. The saw head is fed manually.

The machine does not require any special foundation: A level and firm concrete floor is sufficient. We recommend anchoring the machine to the floor, especially when installing rails. The feet are provided with mounting holes that allow them to be fixed to the floor with heavy-duty dowels.

Only one person may be in the work area of the machine. Never allow two or more people to work on the same machine.

The machine must not be used with materials that do not correspond to the above-mentioned materials.

Any other use is considered improper and is prohibited. The manufacturer does not accept any responsibility for any damage caused by improper use.

Modifications to this machine or the use of parts that have not been tested and approved by the manufacturer can lead to unforeseen damage and hazards during operation.

### 2.2 POSSIBLE MISUSE



### WARNING!

### The following applications are prohibited:

- Sawing logs containing metal parts such as nails, wire, etc.
- Operation by more than one person.
- Operation in potentially explosive atmospheres.
- Safeguards must not be dismantled or bypassed.
- Use of non-approved accessories.
- The machine must not be operated for commercial purposes.

## Persons who are not familiar with the user manual, children, young people as well as persons under the influence of alcohol, drugs or medication must not operate the machine.



### 2.3 RESIDUAL RISKS

Even if the machine is used correctly, there is always a certain residual risk that cannot be ruled out. The following potential hazards can be derived from the type and design of the machine, depending on its use:

- Touching the bandsaw blade in the uncovered areas
- Reaching into the running bandsaw blade (cutting injury)
- Risk of injury due to the tipping machine
- Risk of injury due to workpiece kickback
- Risk of injury when removing chips
- Risk of injury due to tool breakage



## **3 MACHINE OVERVIEW**



3

BSW 76EPRO





- 1 Saw head
- 2 Saw carriage
- 3 Rail track (consists of 3 rail segments)
- A Cutting thickness scale
- B Electric cutting height adjustment
- C Electric motor or petrol engine with E-start
- D Coolant tank
- E Lifting eye
- F Protective cover for band wheels (tensioning wheel + drive wheel)
- G Chip ejection
- H Chassis (saw carriage guide)
- I Log stop, short (3 x)
- J Log stop, long (3 x)
- K Log support (cross strut)
- L End stop (4 x)
- M Clamping fixture, short (2 x)
- N Clamping fixture, long (2 x)
- O Foot, levelling (18 x)
- P Fixed blade support
- Q Band guard, mounted
- R Adjustment lever of movable blade guide
- S T-handle band tension
- T Locking lever (right/left) for saw head
- U Push handle
- V Electric box (BSW 76EPRO) or throttle lever (BSW 76GLPRO)
- W Locking brake (parking lock)
- X Safety switch on push handle (BSW 76EPRO)

1 Bandsaw blade, mounted (not shown)



### SAFETY INSTRUCTIONS



For your own safety and the safety of others, do not work with the bandsaw mill or bandsaw blade before you have read and understood the entire manual.



WARNING! This symbol indicates that failure to follow the instructions may result in serious injury or, in the worst case, death.



Liability for correct installation, maintenance and safe operation of parts and components of the bandsaw mill lies entirely with the persons who install or use the sawmill.



The machine is designed to be used by one person.

Ensure that all warning and information stickers are attached, clean and clearly legible. Defective stickers must be replaced immediately.

#### 4.1 EXPLANATION OF SYMBOLS

parts can be very hot after sawing.



WARNING! This symbol indicates that special attention is required and is accompanied by corresponding information on the hazard.

ATTENTION! Pay particular attention when this symbol appears in the text. It is followed by a reminder or a warning.

For your own safety and the safety of others, do not work with the bandsaw mill or bandsaw blade before you have read and understood the entire manual.

WARNING! Cutting tool: Careless handling of the machine can lead to life-threatening injuries. Bandsaw blades are extremely sharp and dangerous!

Always wear protective gloves when working with the bandsaw mill or when handling bandsaw blades. There is a risk of serious cutting injuries when handling bandsaw blades. Bandsaw blades and machine





Always wear approved hearing protection when working with the machine. Even brief exposure to highfrequency noise can damage your hearing. Always wear tight-fitting safety goggles when working with the machine and when handling the bandsaw blades. Under certain circumstances, the use of a protective mask is also recommended.



Always wear approved safety footwear with cut protection, steel toe caps and non-slip soles when working with the machine and when handling the bandsaw blade.

Always wear long protective trousers when working with the machine or handling the bandsaw blade. Do not wear loose-fitting clothing, scarves, necklaces, etc. that could get caught in the device during use. Tie back long hair before working with the bandsaw.



Always use approved safety goggles when working with the machine.

Always use an approved dust mask when working with the bandsaw mill.



### 4.2 OPERATOR



**WARNING!** Suitable personal protective equipment (PPE) must always be worn whenever the machine is in use. Suitable personal protective equipment does not prevent the risk of injury, but it does reduce the impact of an injury in the event of an accident.



Do not work with the machine or handle bandsaw blades if you are very tired, have consumed alcohol or taken medication that could impair your vision, judgement or control over your body.

### 4.3 LOCATION

The machine is intended for operation in a hall or under a shed. Ensure good ventilation. It must not be used outdoors and must be protected from weather influences (rain). The bandsaw mill must not be used under potentially explosive conditions.

**DANGER!** Do not operate the machine with a petrol engine in a closed or poorly ventilated room. This can lead to death by asphyxiation or carbon monoxide poisoning. (Model BSW 76GLPRO.)



Only use the bandsaw mill in full daylight or with sufficient lighting.



Select a location with firmly compacted and flat ground with sufficient space for the bandsaw mill, logs and sawn timber. If possible, set up the machine in such a way that the wind carries the sawdust away from the operator. Set up the bandsaw mill on a level surface with at least 5 metres of free space without obstacles on all sides. We recommend supporting the guide rails with concrete bases or wooden blocks under each cross strut. If the bandsaw mill is to be installed permanently, attach the feet of the guide rails to concrete slabs.

Take additional precautions to prevent the risk of inhaling harmful dust (e.g. wear a dust mask).





Always have a first aid kit available at the workplace.



### 4.4 SAFETY EQUIPMENT

Do not use the machine if the safety equipment is defective.

### 4.4.1 End stop

Mechanical stops prevent the saw carriage from rolling off at the end of the track.

### 4.4.2 Locking brake

The machine is equipped with a mechanical brake on the saw carriage, which quickly brings the saw carriage to a standstill when in the active position.

#### 4.4.3 Protective cover

The band guard must be adjusted according to the workpiece to be processed. It must be ensured that the bandsaw blade is protected except for the part required for sawing. This minimises the risk of injury.

### 4.4.4 Limit switch

The machine is equipped with two limit switches that enable controlled height adjustment of the saw head.

### 4.5 WORKING WITH THE BANDSAW MILL



**DANGER!** Cutting tool: Always stand behind the saw carriage when operating the machine and always keep both hands on the push handles. Do not stand in front of the saw carriage or the bandsaw blade. Do not pull the saw unit back through the cut!

**DANGER!** Cutting tool: Do not clean the bandsaw blade or the band wheels of a bandsaw mill with a hand brush or spatula while the band is moving. Incorrect handling of bandsaw blades can lead to life-threatening injuries. Bandsaw blades are extremely sharp!

**WARNING!** Use suitable carrying equipment to transport bandsaw blades.

Secure the bandsaw blade against unfolding by tying it together at several points.



**WARNING!** Only use the machine if all safeguards all other safety equipment required for processing are in perfect working order. Check the function of the EMERGENCY STOP SWITCH before each use. If the test fails, replace it immediately.



<u>∧</u> ∧ **WARNING!** Risk of crushing due to rotating parts: Even slight pressure on the trigger mechanism of the saw head can cause the saw head to drop uncontrollably and the crank to turn rapidly, which can lead to serious injury.

**WARNING!** The coupling mechanism is very sensitive. Even slight pressure on the control while the machine is running can cause the clutch to engage and the bandsaw blade to move.

**WARNING!** Do not make any modifications to this machine that would result in it no longer conforming to the original design. Do not use the bandsaw mill if you suspect that third parties have made modifications. Only use the accessories recommended in this manual.



**WARNING!** If a blade or belt is damaged, the belt pulleys may continue to run. You must wait until the machine has come to a complete standstill before opening the safeguard(s).

**WARNING!** Do not saw wood that contains foreign objects such as nails, metal parts and the like.





WARNING! Adjust the movable blade guide as close as possible to the log.

Do not work alone! Always make sure that another adult is within hearing distance in case you need to call for help.

Do not stand between a wood stack and the bandsaw mill. Always stand to the side of the wood stack when handling logs. Do not stay in places where there is a risk that a log could fall on you.

Ensure that the machine is properly installed and maintained in accordance with the instructions in this user manual.

The machine is designed for operation at an ambient temperature between +5°C and 40°C and at altitudes not exceeding 1000 m above sea level. Humidity should be below 50 % at 40°C. Storage or transport can take place at temperatures between -25°C and 55°C.

### Danger area:

The following drawing shows the workplace from above. It shows the minimum safety distance to be kept by any person other than the operator. When working, the operator must remain in the indicated (\*) boundary area between the dotted lines and the nearest side of the saw mill.





 $\triangle$ 

**WARNING!** Keep hands, arms, legs and other parts of the body away from bands, cables or other movable parts. Always observe that the position of the bandsaw blade and the cables changes when the saw carriage is moved.

**WARNING!** Risk of crushing/running over by the saw carriage. Always use the locking brake (parking lock) when stopping the saw carriage.

**WARNING!** Risk of tripping on the guide rails and log supports (cross struts). Do not cut the path short by walking over the rails.

**WARNING!** Always suspend any electrical cables so that they are not in the way and are not damaged or pose a tripping hazard.

**DANGER!** Do not operate the petrol engine indoors. Ensure good ventilation. Exhaust gases contain pollutants that can be life-threatening. (Model BSW 76GLPRO)

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**WARNING!** Risk of crushing between the bandsaw mill and the log during loading.

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9	

Do not climb onto the guide rails or the log supports (cross struts). When the machine is not in use, for example at the end of a cut, always release the band tension with the saw head locked.

The following figures provide overview of the stop zone (parking) and the operator position on the machine.





### Check before each use:

- The operator wears the prescribed personal protective equipment (PPE).
- Maintenance measures were carried out properly.
- The bandsaw blade is stationary when the machine is idling.
- The machine was constructed in such a way that it is stable and the rail track is supported along its entire length.
- The locking brake on the saw carriage and the rail end stops are properly installed.
- All components of the bandsaw mill are firmly secured and functional.
- All protective equipment is attached to the machine and is functional.
- The bandsaw blade must be installed correctly and rotate freely in the correct direction.

### Check each time before sawing:

- There are no other persons or animals in the danger area of the machine.
- The work area is free of obstacles that could pose a tripping hazard or distraction.
- The bandsaw blade runs freely, the clamps and log stops must not touch the blade.
- The movable blade guide is correctly adjusted to the maximum width of the log.
- The log sits correct and firmly.
- The rail track is free of waste, dirt and other debris.

### When using the BSW 76EPRO:



DANGER! Dangerous voltage, risk of short circuit.



Work on the electrical system may only be carried out by an authorised electrician.



The machine with electric motor must be connected via a residual current circuit breaker (RCD).

### When using the BSW 76GLPRO:



**DANGER!** Risk of burns. The engine and its exhaust silencer become very hot during operation and for some time after switching off. This also applies to the engine when idling.

**DANGER!** Fire hazard. Petrol and petrol vapours are flammable. Be aware of the associated risk of fire, explosion and inhalation.



**DANGER!** Fire hazard. The engine must be switched off and allowed to cool down for at least 10 minutes before refuelling.



Always switch off the combustion engine before leaving the workplace. Even if it is only for a short time to clear away the sawn timber or carry out some maintenance.



**DANGER! Short circuit**. Regularly check the battery cables for damage. Ensure that no metal parts come into contact with the battery terminals.



### 5 STORAGE

The bandsaw blade must be removed from the machine, rolled up, secured and stored in a safe, dry place even if it is not used only for a short period of time. The bandsaw blade must be kept out of reach of children and other persons. Before the next use, the bandsaw blade must be checked for damaged teeth and cracks.

When storing the BSW 76EPRO bandsaw mill for longer periods, the following must be observed:

- Lower the saw head to the lowest position and lock it in place
- Empty the coolant tank
- Remove the bandsaw blade from the machine
- Disconnect the cable for electrical connection
- Secure the saw carriage and prevent it from moving

### When storing the BSW 76GLPRO bandsaw mill for longer periods, the following must be observed:

- Lower the saw head to the lowest position and lock it in place
- Empty the fuel tank and coolant tank
- Remove the bandsaw blade from the machine
- Close the fuel switch
- Secure the saw carriage and prevent it from moving

Store the bandsaw mill in a place that is not accessible to children and other persons, preferably in a locked room.



Storage or transport can take place at temperatures between -25°C and 55°C.



### **6 MAINTENANCE**



### WARNING! Risk of serious injury.

Before all repair, set-up, maintenance and cleaning work on the machine:

- Shut down the drive and secure it against restarting and unauthorised commissioning.
- Wait for the bandsaw blade to come to a standstill.
- In the case of electric motors, disconnect the machine from the power supply! To do this, unplug the device.
- Close the fuel valve on combustion engines.
- Clean the machine of wood residues, chips and other contamination.

These preventive measures minimise the risk of unintentional start-up of the machine.



### WARNING! Risk of burns.

During operation, combustion engines and electric motors and their components become very hot and retain this heat for some time after being switched off. Be careful when handling the machine to avoid burns. Allow the machine to cool down completely before carrying out any repair, set-up, maintenance and cleaning work on the machine or before storing the machine.

### WARNING! Do not attempt to dismantle the fixed safeguards!

Fixed safeguards may only be removed during repair, set-up and maintenance, e.g. when replacing the bandsaw blade, the drive belt or cleaning.



### 7 TRANSPORT OF THE BANDSAW MILL



**Warning!** Risk of crushing. Keep people and animals away from the danger area of 5 m around the machine when lifting and transporting machine parts. Secure the load during transport.



The saw carriage and the rail track must not be lifted or transported as long as they are mounted together. The parts must be transported separately.

**Lifting the saw carriage:** Lower the saw head to the lowest position and lock it in place with the locking levers on the right and left of the frame of the saw carriage. Use safe lifting gear to lift the saw carriage using the two lifting eyes on the frame carrier. *Weight: see technical data.* 

Lifting the rail track: Use a pallet truck or forklift to lift the rail track from below. Protect the forks with suitable wooden material before lifting. Ensure that the rail track is well balanced and secure the load before transporting it on the pallet truck or forklift.

Weight: see technical data.



### 8 SCOPE OF DELIVERY

After unpacking, check the contents of the carton and / or transport box for:

- completeness
- potential transport damage

Immediately notify the dealer or manufacturer of any complaints. Later complaints will not be accepted.

The machine is equipped with a bandsaw blade (not shown), which is inserted in the machine, with an electric motor (mod. BSW 76EPRO) or with the oil filling of the engine and without fuel (mod. BSW 76GL).

The transport box also includes 18 levelling feet (O), three short log stops (I), three long log stops (J), two short clamping fixtures (M), two long clamping fixtures (N), a coolant tank (D) and a movable blade guide (R). See also... MACHINE OVERVIEW (3.)

The machine is delivered disassembled. The assembly work concerning point 9 must be observed.

If you have any questions or problems with the machine, please contact us. You can reach us by **e-mail:** info@lumag-maschinen.de or by telephone on +49 8571/92 556-0.



Fig.: Scope of delivery BSW 76EPRO





Fig.: Scope of delivery BSW 76GLPRO



### 9 INSTALLATION

### 9.1 WORKPLACE

Make sure that there is sufficient space around the machine. To ensure that repair, set-up, maintenance and cleaning can also be carried out without obstructions, a clearance of at least 5 metres must be provided on all four sides of the machine during installation. The safety zone on the left-hand side of the bandsaw mill must be extended by 10.0 metres. In order to exclude any danger to other persons during operation – in case of tool failure, ejection of material to be cut due to insufficient clamping, tearing of the saw band, etc.

The effective space requirement also depends on the maximum length of the logs to be processed.

No unauthorised persons may be present in the danger area. There must be no foreign objects in the danger area and the floor must be firm and level to prevent tripping.

### 9.2 MACHINE SET-UP

### WARNING!

Always protect the machine against moisture, rain and dust! The machine should be installed under a roof!

The machine does not require any special foundation. For safe operation of the machine, we recommend installing the machine on a level concrete slab or on concrete slabs in a hall or under a roof.

The selected location must ensure access to the electrical connection (BSW 76EPRO) and convenient handling of workpieces (log stacks/sawed timber).

After the rail track and extension section(s) have been installed at the location of use, the saw carriage is lifted with a crane or forklift truck using the lifting eyes on the frame carrier and then carefully lowered onto the rail track.

Once the machine has been set up, it must be levelled by means of the feet using a spirit level.

The feet are provided with mounting holes that allow them to be fixed to the floor with heavy-duty dowels.

### 10 ASSEMBLY

### 10.1 RAIL TRACK

Assemble the rail system loosely using the provided screws, washers and nuts. It is important that the screws are not yet fully tightened at this point. This is only done after the saw carriage has been mounted and the rails have been connected.

We recommend placing the rails on firm and level feet that are at least 10 cm high. This means that sawdust can be easily removed from the underside of the rail track and the height of the log stops can be easily adjusted.

The following figure illustrates assembly of the rail track including its dimensions.



Fig.: Rail track with levelling feet, log stops, clamping fixtures





 $\Rightarrow$  Attach the log supports to the left and right rail using the screws, washers and nuts.





 $\Rightarrow$  Attach the rail segments to each other. Attach the flat bar under the two rails using the screws, washers and nuts. Leave a little clearance, tighten the nuts only hand-tight!





⇒ Attach the feet hand-tight to the left and right rail using the nuts. After set-up, the rail track must be levelled using the feet and a spirit level. To do this, loosen the lock nut (k) and adjust the height using the adjusting nut (s).



**IMPORTANT NOTICE:** Make sure that the rails run parallel and are already well levelled. All nuts are only tightened once the assembled saw carriage is rolling smoothly on the track and is adjusted to the correct track width.

 $\Rightarrow$  Attach the end stops (4 pieces in total) at the start and end of the assembled rail track using the screws, washers and nuts. When doing so, tighten the nuts.



**NOTICE:** Make sure that the end stops are mounted on the inside of the rails, not on the outside!



### **10.2 LOG STOPS AND CLAMPING FIXTURES**

The following figure provides an overview of possible positioning of the stops (I+J) and clamping fixtures (M+N) on the rail track. Stops and clamping fixtures are accessories that can be attached at various points along the rail.

They provide support for clamping and prevent the risk of being run over by a tree log.



Fig.: Fitting log stops and clamping fixtures

### 10.2.1 Log stops

The bandsaw mill has three end stop sets, one short and one long set. The longer set is ideal for larger logs. The shorter set is suitable for logs with a smaller diameter and squared timber.

- $\Rightarrow$  Insert the log stops (I or J) into the holder on the log support.
- $\Rightarrow$  Apply waterproof grease to all T-bolt threads (1 thread per log stop).
- $\Rightarrow$  Secure the log stops with the T-handle.



Log stop set



T-bolt thread



### 10.2.2 Clamping fixture

Please observe that the clamping fixtures can be attached at various points along the rail track. Depending on how many rail segments are used, select a position for the clamping fixture in which the log is pressed firmly against the stop (I or J) of the rail guide.

- ⇒ Assemble the parts of the long clamping fixture (N) as shown below. Simply slide the short clamping fixture (M) onto the holder.
- $\Rightarrow$  Attach the holder to the left and right rail using the provided 4 screws, washers and nuts, as shown below.
- $\Rightarrow$  Apply waterproof grease to the crank thread and all T-bolt threads (2 x per long clamping fixture and 1 x per short clamping fixture)
- $\Rightarrow$  Secure the clamping fixtures with the T-handles.







Fitting the clamping fixture

Greasing crank and T-bolt threads



Before cutting or moving the saw carriage, the stops and clamping fixtures must be adjusted to such a position (height) that there is no collision with the saw band! The length of the round logs must not exceed the cutting length of the machine.



### **10.3 SAW CARRIAGE**

The figure illustrates the assembled saw carriage. Familiarise yourself with points 10.3.1 to 10.3.10 before starting the assembly. The assembly material can partly be found on the components or loose in the box or in a screw bag.

The assembly steps refer to both the electrical machine (BSW 76EPRO) as well as the machine with engine (BSW 76GLPRO). Assembly steps that are exclusively intended for the electrical machine are marked accordingly.





Fig.: Complete saw carriage BSW 76EPRO

Fig.: Complete saw carriage BSW 76GLPRO

#### 10.3.1 Assembly: Chassis

⇒ Using two people, position the square guide rail (a) on the chassis, with rollers at the bottom on the guide rail. Connect the two parts with 2 screws, lock nuts and the back plate. Repeat the same step for the round tube guide rail (b), shown on the right.



Fig.: Assembly: Chassis

NOTICE: The side with the rollers must face inwards.



#### 10.3.2 Assembly: Saw carriage frame

- $\Rightarrow$  Bring the chassis into an upright position with the help of two other people.
- ⇒ Insert the saw carriage frame into the right and left foot sections on the chassis until it rests on the roller bolts. Then lift the frame slightly on both sides (approx. 5 mm). Now secure the frame by tightening the two screws (M10x40) on each side.

NOTICE: The locking brake must be easy to apply.



Fig.: Assembly: Sliding carriage frame

#### 10.3.3 Assembly: Saw head

After assembly of the chassis with the sliding carriage frame, the saw head can be positioned.

⇒ Place a tarpaulin on the shipping pallet to which the bandsaw mill was attached. The tarpaulin ensures that the protective cover of the band wheels is not scratched. Lift the saw head out of the transport box with the help of <u>at least two people</u> or a mechanical system and place the saw head upside down on the tarpaulin.

#### ATTENTION! The saw head is very heavy (approx. 220 kg).

The correct technique must be applied to avoid any injury or damage.



Fig.: Saw head BSW 76EPRO



Fig.: Saw head BSW 76GLPRO





### Danger of death during lifting and transport operations!

- Falling loads or parts can kill people.
- Only use lifting and transport equipment and stop, holding and securing devices that are in perfect technical condition and have sufficient load-bearing capacity.
- Before starting any lifting and transport operations, make sure that the attached load is securely fastened and that the holding and securing devices are fully functional and reliable.
- Only ever carry out lifting and transport operations under the guidance and instruction of a supervisor.
- Lifting and transport operations may only be carried out by qualified and authorised personnel.
- Do not stand under suspended loads.
- During lifting and transport operations, always wear a safety helmet.
- $\Rightarrow$  Attach lifting straps approved for the purpose. Insert the strap loop under the shaft on the saw head and connect it to the lifting device. Use a suitable lifting aid for the lifting process.
- $\Rightarrow$  Position the saw head on the corresponding guide rail receptacles (a+b) on the left and right of the chassis. Then lower the saw head onto the chassis.

**NOTICE:** It must be possible to insert the saw head without friction.



Fig.: Assembly: Saw head BSW 76GLPRO (BSW 76EPRO not shown)



### ATTENTION!

#### Now lock the saw head: Press down both locking levers.

- $\Rightarrow$  Always lock both locking levers to prevent the saw head from moving:
  - When setting up and turning the assembly.
  - When loading and transporting the saw carriage.
  - During maintenance and adjustment work on the machine.
  - During sawing.
- $\Rightarrow$  Ensure that the clamping jaws close securely around the guide rails when the locking levers are actuated.

Locking the saw head: **Press the locking lever down (a)** Releasing the saw head: **Press the locking lever up (b)** 



Fig.: Locking the saw head BSW 76GLPRO (BSW 76EPRO not shown)



### 10.3.4 Assembly: Carrier with lifting eyes and cable guide

Mount the carrier with lifting eyes and cable guide at the respective guide rails (a + b) as shown below.

⇒ Slide the carrier onto the respective guide rails (a + b). Screw the carrier to the guide rail (a) using two screws (M12x70) and the spacer plate. The carrier is now secured in place.

NOTICE: In the next step 13.3.5, the cutting height indicator and the carrier are screwed to the guide rail (b).



Fig.: Assembly: Carrier with lifting eyes with cable guide BSW 76GLPRO (BSW 76EPRO not shown)



#### 10.3.5 Assembly: Cutting height indicator

Mount the cutting height indicator together with the carrier on the guide rail (b) as shown below.

- $\Rightarrow$  Position the holder of the cutting height indicator (c) on the round clamp on the carrier with the lifting eyes.
- $\Rightarrow$  Fit the holder and carrier to the guide rail (b) using 2 hexagon screws and nuts (M8x30).

NOTICE: Tighten the screws on the round clamp alternately until the flanges meet at the outer edge.

 $\Rightarrow$  After attachment of the holder, the measuring tape (d) can be placed on the holder.

**NOTICE:** The measuring tape is equipped with a magnet on the back for easy attachment.

- ⇒ Fit the measuring rod (e) to the receptacle on the guide rail (b) using 2 hexagon screws (M6x25) and snap rings (6 mm).
- $\Rightarrow$  The measuring pointer (f) is slid over the measuring rod. Tighten the star knob screw.

**NOTICE:** The measuring tape (d), measuring rod (e) and measuring pointer (f) can also be fitted at a later time – e.g. after the saw carriage has been placed on the rail track.



Fig.: Assembly: Cutting height indicator BSW 76GLPRO (BSW 76EPRO not shown)



### 10.3.6 Assembly: Winch with electric drive (height adjustment) and coolant tank holder

Mount the winch with electric drive (1.) and the holder for the coolant tank (2.) on the carrier with the lifting eyes as shown below.

The figure below shows an electric drive with mounted switch box (BSW 76GLPRO)

**NOTICE:** With the BSW 76EPRO, the switch box for the electric drive is fixed at a later stage.

- $\Rightarrow$  Using two people, position the winch with electric drive (1.) and the holder for the coolant tank (2.) on the rear of the carrier with the lifting eyes.
- $\Rightarrow$  Now screw the two parts to the carrier using 2 hexagon screws (M10x50), snap rings (10 mm) and nuts.

**NOTICE:** Observe the order when fitting the nuts.



Fig.: Assembly: Winch with electric drive and coolant tank holder BSW 76GLPRO





Fig.: Assembly: Winch with electric drive and coolant tank holder BSW 76EPRO



### 10.3.7 Assembly: Steel cables

### Preparation

- 1. Move the saw head to the lowest position.
- 2. The saw head should be levelled before you continue.
- 3. Make sure that the locking levers on both sides are actuated before attempting to connect the cables.
- 4. Install the steel cables A and B as shown on the next page.
- 5. The steel cable B can be adjusted using the two lock nuts on the eyebolt.
- 6. Before lifting the saw head, release the locking levers on the left and right of the saw head.

### Route the steel cable A (short 1.7 m)

Follow the red steel cable marking (A) as shown on the next page. Both cable ends are fitted with a cable sling. One end of the cable is already attached to the rear left of the saw head as seen from the operator side. Use the other end of the cable to secure the steel cable to the front right of the winch with electric drive.

NOTICE: Observe the cable routing on the guide rollers.

### Route the steel cable B (long 2.0 m)

Follow the green steel cable marking (B) as shown on the next page. One end of the cable is fitted with a cable sling and the other end has an eyebolt with two lock nuts.

This end is already attached to the rear right of the saw head as seen from the operator side. Use the other end of the cable to secure the steel cable to the front left of the winch with electric drive.

NOTICE: Observe the cable routing on the guide rollers.

#### Tensioning steel cables B

Use a tape measure to measure the vertical distance (2 measuring points, left and right) between the bandsaw blade and the log support (cross strut). The distance must be the same on both sides. If this is not the case, even if the steel cable is already tensioned, the steel cable must be correctly adjusted using the two lock nuts on the eyebolt until the measurement result is the same on both sides.







Fig.: Assembly: Steel cables BSW 76GLPRO (BSW 76EPRO not shown)


#### 10.3.8 Assembly: Coolant tank

- Now insert the coolant tank (a) into the holder.  $\Rightarrow$
- Connect the line to the plug connection (b) on the coolant tank.  $\Rightarrow$
- With the screw (c) on the plug connection the flow (+/-) can be adjusted by turning the screw to the left (+)  $\Rightarrow$ or right (-).
- Guide the line of the coolant tank to the underside of the saw head as shown below. Fix the copper end of  $\Rightarrow$ the line to the movable blade guide using the shaft washer and screw (d). Use a 16 mm wrench.

*Notice:* Do not overtighten the screw (d) to prevent the copper end from being crushed.



Fig.: Assembly: Coolant tank BSW 76GLPRO (BSW 76EPRO not shown)



ATTENTION!

If the temperature falls below freezing, empty the tank and the hoses if there is water in them. Add antifreeze at temperatures below 0 °C. Do not use glycol or flammable liquids as coolants.



### 10.3.9 Assembly: Push handle assembly (BSW 76GLPRO)

Fit the push handle assembly to the saw carriage frame as shown below.



Fig.: Assembly: Push handle assembly BSW 76GLPRO



- $\Rightarrow$  Insert the holder (a). To do this, push the holder (as far as it will go) into the saw carriage frame on the right (as seen from the operator position) and connect the two parts with the hexagon screw (M10x40). Firmly tighten the screw.
- $\Rightarrow$  Fit the handle bar (b) to the holder (a) using the hexagon screw (M10x40).
- $\Rightarrow$  Fit the locking brake handle (c) on the right-hand side of the handle bar using 2 hexagon screws (M6x55 + M6x50m), washers and nuts.
- $\Rightarrow$  Connect the Bowden cable to the locking brake handle. Adjust the Bowden cable of the locking brake so that the handle returns completely to its original position after being released.

**NOTICE**: Actuating the locking brake prevents the saw carriage from moving when stationary. The wheels are locked when the locking brake is applied.



Fig.: Bowden cable on locking brake handle, right



Fig.: Locking brake on chassis, right

- $\Rightarrow$  Fit the throttle lever (d) on the left-hand side of the handle bar using 2 hexagon screws (M6x55 + M6x50), washers and nuts.
- ⇒ Connect the Bowden cable to the throttle lever. Make sure that the machine can run at maximum speed when the throttle lever is pushed all the way down. Adjust the Bowden cable so that the machine quickly returns to the idle position when the throttle lever is released.



Fig.: Attaching the Bowden cable to the throttle lever

 $\Rightarrow$  Slide the handles (e) all the way onto the handle bar (b).



#### 10.3.10 Assembly: Electric connection of battery and height adjustment and limit switch (BSW 76GLPRO)

Connect the 12V starter battery (1.) and the electric height adjustment (2.) as shown below.



## WARNING!

Before connecting the battery, the key on the E-starter must be turned to OFF position and removed.

- $\Rightarrow$  When connecting the battery, always attach the positive cable (RED) to the positive terminal first. Then connect the negative cable (BLACK) to the negative pole.
- $\Rightarrow$  Connect the black battery cable to the negative terminal of the battery and the red battery cable to the positive terminal of the battery.
- $\Rightarrow$  Screw the limit switch (2.) into the pre-drilled holes on the right-hand side of the chassis (as seen from the operator position) using the 2 hexagon head screws (M4x35) supplied.
- $\Rightarrow$  The limit switch on the height adjustment (3.) is already pre-assembled.

**NOTICE:** Adjust the limit switch so that the band guard does not get into contact with the log supports.



Fig.: Assembly: Electric connection of battery and height adjustment and limit switch BSW 76GLPRO



10.3.11 Assembly: Push handle assembly with electric box, switch box for height adjustment and limit switch (BSW 76EPRO)



Fig.: Assembly: Push handle assembly with electric box, switch box for height adjustment and limit switch BSW 76EPRO



Fit the push handle assembly (1.) to the saw carriage frame as shown below.



- $\Rightarrow$  Insert the holder (a). To do this, push the holder (as far as it will go) into the saw carriage frame on the right (as seen from the operator position) and connect the two parts with the hexagon screw (M10x40). Firmly tighten the screw.
- $\Rightarrow$  Fit the handle bar (b) together with the electric box (V) to the holder (a) using the hexagon screw (M10x40).

**NOTICE:** There is a safety lever (d) on the left-hand side of the electric box. The safety lever is crucial for operation. It overrides all possible movements of the machine.

- $\Rightarrow$  Fit the locking brake handle (c) on the right-hand side of the handle bar using 2 hexagon screws (M6x55 + M6x50), washers and nuts.
- ⇒ Connect the Bowden cable to the locking brake handle. Adjust the Bowden cable of the locking brake so that the handle returns completely to its original position after being released.

**NOTICE**: Actuating the locking brake prevents the saw carriage from moving when stationary. The wheels are locked when the locking brake is applied.



Fig.: Bowden cable on locking brake handle



Fig.: Locking brake on chassis, right

 $\Rightarrow$  Slide the handles (e) all the way onto the handle bar (b).



Fig.: Push handle with electric box BSW 76EPRO



Fit the switch box for height adjustment (2.) as shown below.



- $\Rightarrow$  Loosen the 4 screw plugs on the switch box (2.) and remove the cover.
- $\Rightarrow$  Now attach the switch box (2.) to the bracket of the electric height adjustment drive using the provided 4 Phillips screws (M4x16) and nuts.
- $\Rightarrow$  Screw the cover back on after fitting and connect the switch box and the electric drive of the height adjustment with the connector (3.)



Fig.: Switch box for height adjustment BSW 76EPRO



Fit the limit switches (4. + 5.) as shown below.



- $\Rightarrow$  Screw the limit switch (4.) into the pre-drilled holes on the holder of the electric height adjustment drive using the provided 2 hexagon head screws (M4x35).
- $\Rightarrow$  Screw the limit switch (5.) into the pre-drilled holes on the right-hand side of the chassis (as seen from the operator position) using the 2 hexagon head screws (M4x35) supplied.

**NOTICE:** Adjust the limit switch so that the band guard does not get into contact with the log supports.



Fig.: Limit switch BSW 76EPRO



## 10.4 PLACE THE SAW CARRIAGE ON THE RAIL TRACK



#### Danger of death during lifting and transport operations!

- Falling loads or parts can kill people.
- Only use lifting and transport equipment and stop, holding and securing devices that are in perfect technical condition and have sufficient load-bearing capacity.
- Before starting any lifting and transport operations, make sure that the attached load is securely fastened and that the holding and securing devices are fully functional and reliable.
- Only ever carry out lifting and transport operations under the guidance and instruction of a supervisor.
- Lifting and transport operations may only be carried out by qualified and authorised personnel.
- Do not stand under suspended loads.
- During lifting and transport operations, always wear a safety helmet.

#### The saw head must be locked! See also... Assembly: Saw head (10.3.3)

The total weight of the saw carriage (saw head with chassis) is approx. 280 kg. Use approved straps and attach them to the lifting eyes on top of the saw head. Only lift the saw carriage using a lifting device suitable for this situation.

⇒ Lift the saw carriage using a forklift truck or crane that is suitable for picking up the load and slowly place the component on the installed rail track.





Fig.: Placing the saw carriage on the rail track BSW 76EPRO (BSW 76GLPRO not shown)



#### ATTENTION!

Do not press too hard or tilt when fitting the rollers. The V-groove on the rollers must be in contact with the rail.



## 11 5.5 KW ELECTRIC MOTOR BSW 76EPRO

## 11.1 POWER CONNECTION



Work on the electrical installation and electrical equipment may only be carried out by qualified electricians. Three-phase motors must be checked for their direction of rotation when newly connected or relocated. If necessary, the polarity must be reversed (switching of phase inverter).

- Due to the 400 V / 50 Hz three-phase motor, the machine must be connected to a standard 400 V / 50 Hz power supply. The electrical supply must be equipped with protective devices against undervoltage, overvoltage, overcurrent, as well as a residual current circuit breaker (RCD) with a maximum residual current of 0.03 A. Power supply tolerances: 400 V ± 5 %, 50 ± 1 % Hz
- Mains connection and extension cables must have 5 cores = 3P + N + PE (3/N/PE) and a minimum cable cross-section of 2.5 mm<sup>2</sup>. In addition, the cable extension for 400 V machines should not exceed 25 m and should also have a cable cross-section of at least 2.5 mm<sup>2</sup>. The cable extension must be completely unwound.
- 3. The mains connection must be fused with 16 A. Rubber cables for electrical connection must comply with EN60245 and be marked with the symbol H07RN. The labelling of cables is required by law.

**NOTICE:** During operation, no other consumers may be connected to the same circuit, as this may cause the fuse to blow and the circuit breaker to trip. If the machine becomes too hot due to overload, it switches off automatically due to the built-in overload protection. The machine must not be switched on again until it has cooled down to a surface temperature of approx. 30°C (lukewarm).

## 11.2 CONTROL PANEL

- (a) Main switch
- (b) Safety circuit
- (c) Control indicator
- (d) Start button
- (e) Stop button



Fig.: Control panel





## 11.3 BANDSAW BLADE DRIVE

The bandsaw blade is driven by an electric motor via a drive wheel and a belt drive. The band stops within 10 seconds of the drive being switched off.



<u>Main switch (a)</u> – Used to switch the power supply to the machine on and off. Operated by turning: Position "I" ON; position "0" OFF.

**<u>Safety switch (b)</u>** – Is positioned and connected on the left of the control panel in such a way that the operator must keep this switch pressed during the entire operation.

NOTICE: When the safety switch is released, the bandsaw blade stops.

**<u>Start button (d)</u>** – The saw band drive is started by switching on the green button. Activated by pressing.

**<u>Stop button (e)</u>** – if an EMERGENCY STOP of the machine is required.

<u>Control indicator (c)</u> – Only used to check the functionality. If the control indicator does not go out when the main switch (a) is switched off, there is a problem.

#### 11.3.1 Starting the machine

Before starting the machine, make sure that the bandsaw blade is not in contact with machine parts (log support, clamping fixture, log stop, etc.) at the cutting point.

- 1. Set the main switch (a) to position "I" ON.
- 2. Press and hold the safety switch (b).
- 3. Press the start button (d).

After starting the machine, you can release the start button (d). The machine now runs until the safety switch (b) is released.

#### 11.3.2 Switching off the machine

- 1. Release safety switch (b)
- 2. Set the main switch (a) to position "0"

After switching off the machine, trailing of the band wheels and the bandsaw blade must not be decelerated.



The operator may only move away from the machine when it has been switched off and the bandsaw blade has come to a complete standstill.

#### 11.3.3 EMERGENCY STOP function

Set the main switch (a) to position "0" or press the stop button (e).



## 12 6.7 KW PETROL ENGINE BSW 76GLPRO

The bandsaw blade is driven by a petrol engine via a drive wheel and a belt drive. The band stops within 10 seconds of the drive being switched off.

# Before the machine is started for the first time, it must be filled with oil and fuel. Lower the saw carriage to the lowest position to make work easier.

NOTICE: The machine is delivered without engine oil and fuel.

The machine is also equipped with an oil warning system. This means that if the oil level in the crankcase is low or there is no oil left, the power supply to the spark plug is interrupted and the machine will not start.





- 1 Engine switch (main switch) = Ignition switch on E-start
- 2 Starter grip
- 3 Recoil starter
- 4 Choke
- 5 Fuel switch
- 6 Air filter
- 7 Spark plug, spark plug connector
- 8 Muffler
- 9 Throttle lever
- 10 Fuel tank cap
- 11 Fuel tank
- 12 Oil drain plug
- 13 Oil filler bolt with dipstick



## 12.1 ELECTRICAL CONNECTION



### WARNING!

Work on the electrical installation and electrical equipment may only be carried out by qualified electricians.

#### 12.1.1 Electric start

The 12V starter battery is located on the right-hand side of petrol engine. When viewing, assume that you are standing at the workplace while sawing. See also... ASSEMBLY: Electric connection of battery and height adjustment and limit switch (10.3.10)



# WARNING!

Before connecting, the key on the E-starter must be turned to the OFF position and removed.

- $\Rightarrow$  When inserting the battery, ensure that it is securely fitted.
- $\Rightarrow$  Check the correct polarity of the wiring again before connecting.

#### **Connecting the battery**

First MINUS, then PLUS

- 1. Turn the ignition key on E-start (1) to the OFF position and remove.
- 2. First connect the red cable to the positive pole (+).
- 3. Then connect the black cable (earth cable) to the negative terminal (-).

#### **Disconnecting the battery**

First MINUS, then PLUS

- 1. Turn the ignition key on E-start (1) to the OFF position and remove.
- 2. Fist, disconnect the black cable (earth cable) from the negative terminal (-).
- 3. Only then disconnect the red cable from the positive terminal (+) of the battery.



Fig.: Starter battery



## 12.2 STARTING PROCESS

- 1. Set fuel switch (5) to ON position.
- 2. When the engine is cold, set the choke (4) to the left to CLOSE (=CHOKE). When the engine is hot, leave the choke (4) on the right in the OPEN position (= RUN), no choke.
- 3. Push the throttle lever (8) slightly to the left from the idle position LOW (= TURTLE), in the direction of HIGH (= RABBIT).
- 4. Insert ignition key at E-start (1) and turn to ON position.

#### → Manual start (HAND START)

5. Slowly pull out the starter grip (2) from the recoil starter until resistance is felt, then tighten with a quick but smooth movement and slowly return. The machine starts.

ATTENTION! Do not pull the starting rope all the way out and do not let the starter grip handle hit back on the engine.

#### $\rightarrow$ Start with electric starter (E-START)

5. Insert ignition key at E-start (1) and turn key to ON position.

Then turn the ignition key further to the START position and hold it in this position for max. 5 seconds. Release the ignition key as soon as the engine starts. This automatically turns back to the ON position. **ATTENTION!** If the engine does not start within 5 seconds, the starting procedure must be interrupted. Repeat this process a maximum of 8 times with a break of 5 seconds each time. Then wait at least 40 minutes to allow the starter motor to cool down. If the machine does not start after the next 8 attempts, consult a specialist workshop.

 If the choke (4) was set to CLOSE (=CHOKE) to start the engine, now gradually return it to OPEN (=RUN) while the engine is warming up. Open the throttle lever (8) fully for operation, slowly move it in the HIGH direction.



Manual start (HAND START)



Start with electric starter (E-START)



## 12.3 SWITCHING OFF THE MACHINE

- 1. Push the throttle lever (8) to the right to the idle position LOW (=TURTLE).
- 2. Turn the ignition key on E-start (1) to the OFF position and remove.
- 3. Then turn the fuel switch (5) to the left to the OFF position to close it.

When leaving the machine, remove the spark plug connector (9) = protection against unauthorised use! ATTENTION! Never set the choke to CLOSE to stop the engine. This can lead to re-ignition or engine damage.



Switching off the machine

NOTICE: Suddenly stopping the engine at full throttle can cause engine damage.

## 12.4 IDLE SPEED

When not cutting/sawing, move the throttle lever (8) to the LOW position to reduce the load on the engine. Reducing engine speed at idle extends the lifespan of the engine, saves fuel and reduces noise levels.



## **13 BEFORE COMMISSIONING**

Before commissioning, the rail track and the saw head must be properly set up to ensure smooth and precise sawing. Some settings affect other machine settings. It is important that the following order is observed.

## 13.1 RAIL TRACK ALIGNMENT

The rail track must be absolutely horizontal. Place a spirit level on a log support and adjust the levelling feet so that the rail path is level. Repeat this process on all log supports (cross struts). Also check the right angle between the rails and the log supports (cross struts). If the saw head is in the lower position, this can be checked by using an angle bar or an angle measuring device.

Make sure that the guide rollers with V-shaped groove are positioned at right angles on the rails. If the saw carriage does not move smoothly, adjust the width of the track accordingly.



Fig.: Rail track alignment BSW 76EPRO (BSW 76GLPRO not shown)



If the saw carriage continues to stall, the rails must be placed further apart or closer together in order to achieve a constant width over the entire rail path. If the desired width has been reached, all bolts and nuts of the log supports (cross struts) (K) can be tightened, as shown below.



Fig.: Tightening the screws and nuts of the log supports (cross struts)

## 13.2 GREASING THE T-HANDLES OF THE BAND TENSIONER, CLAMPING FIXTURES AND LOG STOPS

Before commissioning, treat the thread of the T-handle (S) for band tensioning and the surface of the washer on which it rests with waterproof grease. Use the 24 mm insert of a torque wrench to tighten the T-handle to 32 - 34 Nm to achieve the required saw band tension.



Fig.: T-handle lubrication and blade tightening



#### WARNING!

Always check the tension of the bandsaw blade before sawing.

**NOTICE:** Release the tension from the belt when the machine is not in operation (turn the T-handle for the band tension anti-clockwise). If this is not done, flat spots will occur on the V-belt. These flat spots cause the saw to vibrate strongly the next time it is used.



The threaded hole and the threads on the T-handle of the clamping fixtures and log stops should also be regularly lubricated with multi-purpose grease.



Fig: Lubrication of clamping fixtures and log stops

## 13.3 BANDSAW BLADE HORIZONTAL ALIGNMENT

The bandsaw blade must be parallel to the log supports (cross struts) for the machine to function optimally. Before each commissioning, check that the bandsaw blade runs parallel to the log support (cross strut) (K).

The bandsaw blade is fitted. See also ... CHANGING THE BANDSAW BLADE (16.1.)

#### ATTENTION! Keep the bandsaw blade under tension during this work step!

- 1. Move the saw carriage slightly forwards and place the bandsaw blade over a log support (cross strut).
- 2. Actuate the locking brake (W) to prevent the saw carriage from moving.
- 3. Measure the distance from the blade vertically downwards to the upper edge of the log support (cross strut).
- 4. Adjust the cable tension in case of different heights.

The lifting cable **B** controls the height of the right-hand side of the saw head (as seen from the operator side). Correct the measurement difference using the eyebolt and the lock nuts. See also... ASSEMBLY: Steel cables (10.3.7)



Fig.: Bandsaw blade horizontal alignment BSW 76EPRO (BSW 76GLPRO not shown)



## 13.4 RAISING AND LOWERING THE SAW HEAD

Electric height adjustment enables smooth raising and lowering of the saw head.

⇒ The saw head can be raised and lowered using the rocker switch. Fine adjustment of the cutting depth is set using the indicator scale.



Fig.: Raising and lowering the saw head

## 13.5 CHECKING THE BELT TENSION

The belt tension can be checked by hand. To do this, press against the belt in the longest free section. If the belt can be compressed by more than 10 mm, it is advisable to re-tension it. See also... ADJUSTING THE BELT TENSION (14.1.)

## 13.6 CHECKING THE BAND ALIGNMENT

The base of the tooth of the bandsaw blade must be flush with the outer edge of the tensioning wheel ( $\pm$  2 mm). If this is not the case, adjustment must be made.

See also... ADJUSTING THE BANDSAW BLADE / Adjusting the band run (14.2.1)

## 13.7 CHECKING THE BLADE GUIDE

#### Rear blade guide

The band guide roller should support the bandsaw blade from behind when it is pressed against it during cutting. That means: When idling, the band guide roller has no contact with the band. This minimises wear. The distance to the bandsaw blade is defined as a thin piece of cardboard the thickness of a business card.

#### Upper and lower blade guide

Make sure that the distance between the bandsaw blade and the guide blocks is approximately 0.5 mm. This is a piece of paper.

See also... ADJUSTING THE BANDSAW BLADE / Adjusting the blade guides (14.2.2)



## 13.8 CHECKING THE BAND TENSION

A bandsaw blade is correctly tensioned if the band cannot be bent more than 3-6 mm in the centre by hand. To tension the bandsaw blade, turn the T-handle to the right. Use the 24 mm insert of a torque wrench to tighten the T-handle to 32 - 34 Nm.

## **13.9 CHECKING THE COOLANT TANK**

Regularly check the coolant and top up if necessary. See also... COOLING THE BANDSAW BLADE (14.4.)

NOTICE: Only use water or a slightly aqueous solution of a cooling lubricant as a coolant.

## **13.10 SECURING THE MATERIAL**

- Logs that are contaminated with soil, sand or clay considerably shorten the service life of the bandsaw blade and increase the risk of saw band breakage. Keep the logs as clean as possible. Do not drag the logs across the ground.
- Do not stack the logs higher than 1 metre. We recommend using different types of wood in different stacks. Do
  not work between the wood stack and the machine.
- Place the logs to the left of the machine, i.e. opposite the operator workstation.



Risk of clamping between the wood stack and the bandsaw mill. Always stand next to the logs when working with and handling logs. Do not allow the logs to fall onto the machine.

- 1. Park the saw carriage in the rearmost position on the rail = <u>Stop zone</u>.
- 2. Use a log turner to lift a suitable log onto the log supports (cross struts) of the rail track.
- 3. Roll the log against the stops and adjust the clamping fixtures exactly in front of the stops on the opposite side of the log. Secure the log with the tips of the clamping fixtures.
- 4. The movable guide of the bandsaw blade must be adapted to the material to be sawn.

#### ATTENTION!

The stop and clamping tips should always be attached below the bandsaw blade.





## 13.11 SAWING

Always saw in the direction of the arrow, as shown below. The clamping fixtures (M+L) are always located on the right-hand side of the log and the log stops (I+J) on the left-hand side of the log (as seen from the operator side). If you saw in the other direction, the log may come loose and possibly even cause damage or injury.



Fig.: Sawing direction BSW 76EPRO (BSW 76GLPRO not shown)

Please follow the steps in the next section "MACHINE SETUP". Otherwise, poor sawing results, injuries or damage may occur.



## **14 MACHINE SETUP**





# DANGER!

Before all adjustment and installation work on the machine:

- Position the machine in the stop zone. **Saw head is locked.**
- Shut down the drive and secure it against restarting and unauthorised commissioning.
- Wait for the bandsaw blade to come to a standstill.
- In the case of electric motors, disconnect the machine from the power supply.
- At petrol engines, remove the key and the spark plug connector.
- Clean the machine of wood residues, chips and other contamination.



The bandsaw blade is extremely sharp. Wear protective gloves and safety goggles when working on the band.

## 14.1 ADJUSTING THE BELT TENSION

#### **Drive V-belt**

The drive V-belt (a) sits in the V-groove on the tensioning wheel (1). No adjustment is required for this belt.

#### **Drive belt**

The power of the engine is transmitted to the drive wheel (2) by means of a belt drive. The belt drive consists of the belt pulley (b) on the motor shaft, the drive wheel (2) and the drive belt (c). The drive belt is tensioned by the displacement of the machine.

To prevent the drive belt from slipping on the belt pulley, the belt must be correctly tensioned.

To check the tension of the drive belt, the belt should be pressed through with the thumb approximately in the centre of the longest side. If the belt can be pushed through more than 10 mm on average (max. 15 mm) with an applied force of approx. 2 - 4 kg, it must be re-tensioned. If the belt can be deflected further, the belt must be retightened. The drive belt is tensioned by adjusting a tensioning screw on the machine carrier.



#### 14.1.1 Tensioning the drive belt

- 1. Loosen the screw (f) of the protective cover and open the cover.
- 2. Check the tension of the belt (correct tension deflection of the belt in the centre 10 15 mm).
- 3. Loosen the four fastening screws (d) so that the machine can be moved during tensioning.
- 4. Now turn the hexagon nut (M10) on the tensioning screw (e) clockwise using a 17 mm spanner. This pulls the machine towards the tensioning screw and tensions the drive belt more.

NOTICE: Carry out this step slowly and check the correct deflection of the drive belt.

- 5. Then tighten the four fastening screws (d) again while maintaining the tension.
- 6. Close the protective cover and tighten the screw (f) of the cover.
- 7. Switch on the main switch and carry out a test cut.

#### ATTENTION!

However, if the drive belt is too tight, the nut can be turned anti-clockwise. Over-tightening can cause the machine carrier to twist, resulting in belt misalignment and excessive wear.



Fig.: Tensioning the drive belt (toothed belt) BSW 76EPRO (BSW 76GLPRO not shown)



## 14.2 ADJUSTING THE BANDSAW BLADE



## DANGER!

#### The bandsaw blade is not covered in the cutting area. Risk of injury!

The bandsaw blade runs on two band wheels (tensioning wheel 1 and drive wheel 2), which are cast from aluminium and balanced so that they run evenly. Two band guides (one movable blade guide and one fixed band support) ensure that the bandsaw blade remains in the correct position during sawing.

The **fixed blade support (b)** is located in front of the drive wheel (2). The **movable blade guide (c)** is always pushed as close as possible to the log and locked in place with two **T-handle or star knob screws (d)**. The part of the bandsaw blade that does not run through the log during sawing must be **protected** by the **band guard (a)**. The belt is tensioned using the **T-handle (S)**.



(a) Band guard (cover of bandsaw blade)



Fig.: Tensioning the bandsaw blade

Fig.: Loosening the bandsaw blade





Wear protective gloves and safety goggles when working on the bandsaw blade!

#### 14.2.1 Adjusting the band run

The base of the tooth of the bandsaw blade must be flush with the outer edge of the tensioning wheel (± 2 mm).



# Ensure that the bandsaw blade has the correct tension before adjusting it. See also... CHANGING THE BANDSAW BLADE (16.1)

The bandsaw blade position in the longitudinal direction via the tensioning wheel (1) is controlled by the laterally positioned

The adjusting screw (e) is set.

- $\Rightarrow$  If the bandsaw blade moves forwards on the band wheels, turn the screw (e) clockwise to compensate.
- $\Rightarrow$  If the bandsaw blade moves backwards on the band wheels, turn the screw (e) anti-clockwise.

Proceed in small steps when adjusting.

- (e) Adjustment bolt for belt run
- (S) T-handle for band tension



Fig.: Adjusting the cutting thickness





#### 14.2.2 Adjusting the blade guides

The fixed blade support and the movable blade guide must be adjusted so that the bandsaw blade runs without recoil. The saw blade should glide quietly and effortlessly through the guides when the band wheels are turned. If this is not the case, the band wheels are probably tilted.

- The bandsaw blade must not have any downward pressure.
- The bandsaw blade must run straight from band wheel to band wheel.
- The bandsaw blade must float in the upper and lower blade guides.
- The guides must be absolutely parallel to the belt.
- The rear part of the bandsaw blade must not touch the thrust bearing all the time, but only occasionally, e.g. when sawing very hard wood.
- The band clearance between the guides and the bandsaw blade should be approx. 0.5 mm. That is a sheet of paper.

# Ensure that the bandsaw blade has the correct tension before adjusting it. See also... CHANGING THE BANDSAW BLADE (16.1)

#### Adjusting the rear blade guide

 $\Rightarrow$  Loosen the clamping screw (f) on the guide block of the fixed blade support and on the movable blade guide.

The bandsaw blade can now be adjusted forwards and backwards. The back of the band should rest approx. 1 mm (i.e. a thick sheet of paper) in front of the edge of the band guide rollers (g). Now slowly turn the band wheel (drive wheel 2) a few turns by hand, check the position of the bandsaw blade and retighten the screws.



Fig: Adjusting the rear blade guide

#### Adjusting the upper and lower blade guide

The distance to the bandsaw blade can be adjusted using the hexagon screws (h).

- $\Rightarrow$  Loosen the screws (h) on the guide blocks with a 6 mm hexagon key.
- ⇒ Set the guide blocks as close as possible to the bandsaw blade. As a measuring aid, place a sheet of paper between the guide block and the bandsaw blade.





Fig: Adjusting the upper and lower blade guide

#### Adjusting the blade guard and band stopper

⇒ Loosen the two T-handles or star knob screws to release the movable blade guide (c). Then slide the guide to the left or right to adjust the blade guard (a) for sawing.



Fig. Adjusting the movable blade guide

 $\Rightarrow$  Set the band stopper (x) at the fixed blade support (b) in the correct position, as shown below.



Fig. Adjusting the band stopper at the fixed blade support



## 14.3 ADJUSTING THE CUTTING THICKNESS

The machine has two scales:

- A millimetre scale showing the distance between the log support and the bandsaw blade.
- A scale that takes the cutting kerf into account and indicates different board thicknesses in inches.

The measuring scale is fitted with a magnet on the rear. Place the scale on the holder so that it looks like a measuring tape. Use the adjustable pointer to adjust the cutting thickness on the vertical measuring scale.

**NOTICE:** Before the first cut, adjust the cutting thickness to ZERO.



Fig.: Adjusting the cutting thickness



After adjusting the cutting height, be sure to lock the saw head with the two locking levers (T) before starting the machine.



## 14.4 COOLING THE BANDSAW BLADE

The bandsaw blade must be rinsed with water or a slightly aqueous cooling lubricant solution. When processing wood with a high resin content, the concentration of the cooling lubricant must be increased.

Suitable cooling lubricant concentrate is available from qualified specialist dealers.

Fill the water tank (D) only before operation. The capacity of the tank is approx. 10 litres. The water flow to the bandsaw blade is adjusted via a valve on the tank. To do this, turn the screw (c) to the left (+) or right (-). To regulate the flow rate, the cooling hose is clamped under the shaft washer on the movable blade guide



Fig.: Cooling the bandsaw blade



The water flow (cooling) for the blade may only be adjusted in the stop zone – when the blade is stationary!

## **15 OPERATION**







Before commissioning the machine, ensure that all protective devices and covers are in place and properly secured. Non-compliance can result in serious injuries.

When working with the machine, ensure that there are no persons or animals in the work area. Noncompliance can result in serious injuries.

#### ATTENTION! Risk of injury.

The bandsaw blade has no protection in the cutting zone! Danger from the movement of the saw head in the working area!



## WARNING!

#### Before starting work, ensure that

- the correct adjustments have been made. See also... ADJUSTING THE BANDSAW MILL (14.)
- the chassis with the saw unit is in the stop zone and the main switch is in position "0".
- all safety measures have been taken, such as properly functioning safety devices and personal protective equipment (PPE) is used.

## 15.1 LOG STACKING

Do not stack the logs higher than 1 metre.

Logs can be loaded from both sides of the machine. If the wood stack is on the same side as the operator side, the wood stack must always be secured before using the saw.



## ATTENTION!

Make sure that the logs closest to the machine are secured with heavy-duty straps so that they cannot roll towards the saw mill during sawing.

## 15.2 LOADING LOGS



## WARNING!

#### Risk of crushing between log and bandsaw mill.

- Always stand to the side of the operator position when handling the logs.
- Avoid standing between the wood stack/log! If you are next to the rail track, the wood pile must always be secured with reliable straps.
- The logs should always be rolled out of the log support from the wood stack. Do not drop them on the bandsaw mill.



## 15.3 SAWING PROCESS

- 1. Position the saw unit in the rearmost position on the rails (stop zone).
- 2. Carefully roll the log against the log stops. Adjust the stops so that they hold the log but do not come into contact with the bandsaw blade during sawing.
- 3. Attach the clamping fixtures on the opposite side of the log. Adjust the height of the clamps to secure the log. Make sure that the clamping fixtures do not come into contact with the bandsaw blade during sawing.
- 4. Set the height of the saw head for the first cut by pressing the "arrow up" or "arrow down" button on the lift control.

#### ATTENTION! Then lock the saw head again using the two locking levers (F)!

- 5. Check again that the bandsaw blade does not come into contact with the stops and the clamps.
- 6. Adjust the movable blade guide, taking into account the widest part of the log.
- 7. Open the valve for water cooling of the bandsaw blade to place a small trickle of water on the band guide/blade.
- 8. Carry out all safety checks before each cut. See also ... SAFETY INSTRUCTIONS (4.)
- Stand behind the push handle (U) and start the machine. See also... PETROL ENGINE / Starting process (12.2) and Switching off the engine (12.3) or ELECTRIC MOTOR 400V / Starting the motor and Switching off the motor (11.3)
- 10. Hold the push handle (U) with both hands and
  - press the throttle lever to the end position on the push handle (BSW 76GLPRO).
  - Press and hold the safety switch and press the black START button (BSW 76EPRO).
- 11. This brings the machine up to its operating speed and the bandsaw blade begins to rotate.
- 12. Start the feed slowly until the blade is stable in the material. The feed can then be accelerated. Adjust the feed so that the cut is straight and fine. Reduce the feed rate when sawing through branches in the log and harder types of wood. Also reduce the feed rate as when approaching the end of the log.
- 13. When the saw carriage has reached the end of the log, release the throttle lever (BSW 76GLPRO) or safety switch (BSW 76EPRO) and wait until the bandsaw blade comes to a complete standstill.
- 14. Now remove the sawn timber from the log.
- 15. Raise the saw head slightly and move the saw carriage back to the starting position.
- 16. Now adjust the height for the next cut.

#### **ONLY SAW ONE LOG AT A TIME!**



## 15.4 RELEASING JAMMED BANDSAW BLADE





#### Before all work on the machine:

- Position the machine in the stop zone. **Saw head is locked.**
- Shut down the drive and secure it against restarting and unauthorised commissioning.
- Wait for the bandsaw blade to come to a standstill.
- In the case of electric motors, disconnect the machine from the power supply.
- At petrol engines, remove the key and the spark plug connector.
- Clean the machine of wood residues, chips and other contamination.



#### ATTENTION! Wear protective gloves to avoid injury to the hands.

 $\Rightarrow$  Insert a suitable wooden wedge into the cutting kerf to create more space for the saw band.



Keep hands away from gaps in the workpiece, as these can close quickly and crush or sever your hands. Do not remove jammed logs with your hands.



## **16 MAINTENANCE**





# DANGER!

#### Before all maintenance and repair work on the machine:

- Position the machine in the stop zone. Saw head is locked.
- Shut down the drive and secure it against restarting and unauthorised commissioning.
- Wait for the bandsaw blade to come to a standstill
- In the case of electric motors, disconnect the machine from the power supply.
- At petrol engines, remove the key and the spark plug connector.
- Clean the machine of wood residues, chips and other contamination.

#### Regularly check the movable blade guide.

Slide the guide to the left or right so that it is flush with the bandsaw blade. Replace the band guard if necessary.

#### Regularly check the bandsaw blade.

Readjust the bandsaw blade or replace it if necessary.

## 16.1 CHANGING THE BANDSAW BLADE



**WARNING!** Rolled-up bandsaw blades can suddenly unfold with considerable force in any direction. Always handle rolled-up bands with the utmost care.



**WARNING!** Cutting tool – Incorrect handling of bandsaw blades can lead to life-threatening injuries. **The bands are extremely sharp!** 



WARNING! Risk of cutting injuries when handling bandsaw blades:

Wear protective leather gloves to avoid injury to the hands.

Wear safety goggles or a visor.

Wear safety footwear with cut protection, steel toe caps and non-slip soles.

Wear trousers with cut protection.

Keep people and animals at a safe distance of at least 5 metres.



#### ATTENTION!

# New bandsaw blades are supplied rolled up and are under great mechanical tension. Unpack carefully to prevent the band from snapping out and causing cuts!

It is important to change the bandsaw blade regularly to ensure maximum performance. The use of blunt bands leads to wavy or imprecise cuts, reduces the service life of the bands and increases the risk of band breakage. Always wear protective gloves and safety goggles when handling bandsaw blades.

#### Changing the bandsaw blade:

- 1. Close the yellow band guard (a) as far as it will go.
- 2. Loosen the bandsaw blade by turning the T-handle (S) anti-clockwise. This loosens the tensioning wheel (1) and thus the entire bandsaw blade.
- 3. Loosen the screw (f) of the protective cover and open the cover.
- 4. Unscrew the yellow band guard (a) from the movable blade guide (c).
- 5. Loosen the screw on the band stopper (x) and turn the stopper upwards. It should now be possible to pull the band out loosely from the front.
- 6. Remove the bandsaw blade from the band wheels.





Fig.: Removing the bandsaw blade



- 7. Insert the new band into the guides first.
- 8. Then place the band on the band wheels and tension the bandsaw blade by turning the T-handle (S) clockwise.
  Pay attention to the sawing direction! The teeth must always point towards the chip ejection chute (G).
  Make sure that the band is correctly aligned on the band wheels and in the guides.
- 9. Now turn the drive wheel (2) by hand in sawing direction so that the bandsaw blade is centred on the band edges.

# Make sure that the bandsaw blade is not tightened too much, as this can cause the band to wander off the band wheels and jump off.

If the bandsaw blade is not correctly aligned on the band wheels, use the adjusting bolt (e) to adjust the guide of the band. See also... ADJUSTING THE BANDSAW MILL (14.2.)

- 10. Fit the band guard (a) to the movable blade guide (c).
- 11. Turn the belt stopper (x) downwards and secure it with the screw.
- 12. Close the protective cover and secure it with the screw (f).
- 13. Switch on the main switch and carry out a test run with the bandsaw blade.



Fig. Installing the bandsaw blade

ATTENTION! Correct tensioning of the blade is very important for operation of the machine and for the load on the blade support and guide. If the bandsaw blade is not set correctly, the saw blade will fly off the band wheels at high speed.

#### Tensioning the bandsaw blade

⇒ Use the 24 mm insert of a torque wrench to tighten the T-handle to 32 - 34 Nm to achieve the required saw band tension.


## 16.2 REPLACING THE DRIVE BELT

Regularly check the condition of the drive belt (c). Replace any worn and damaged parts. Also regularly check the tension of the drive belt and adjust it if necessary.

**To remove the drive belt, first remove the bandsaw blade.** See also... MAINTENANCE / Changing the bandsaw blade (16.1). Then slacken the drive belt by moving the machine and remove the belt. Fit and tension the new drive belt.

### Fitting a new drive belt:

- 1. Loosen the fastening screws (d) (2 on the left and 2 on the right) so that the machine can be moved when unclamping.
- 2. Turn the hexagon nut (M10) on the tensioning screw (e) anti-clockwise using a 17 mm spanner. This reduces the belt tension, which causes the drive belt to loosen.
- 3. Lift the belt off the belt pulley (b) and the drive wheel (2). Slowly turn the drive wheel in the opposite direction.
- 4. Now carefully remove the drive belt (c).





Fig.: Replacing the drive belt

⇒ Before fitting a new drive belt, clean the drive wheel and belt pulley and the band wheels of sawdust, as this makes it much easier to fit the belt. Installation is carried out in reverse order.

### ATTENTION!

Once the belt has been placed back on the belt pulley, it can be tensioned again. See also... ADJUSTING THE BANDSAW MILL / Adjusting the belt tension (14.1).

 $\Rightarrow$  You can now refit the bandsaw blade and close the protective cover of the band wheels (F). See also... CHANGING THE BANDSAW BLADE (16.1).



## 16.3 REPLACING THE DRIVE V-BELT

The drive V-belt (a) is replaced by simply pulling off and inserting a new belt by hand.

The belt sits loosely enough on the band to make this possible. There is no need to remove the band wheel (1) from the shaft.



Fig.: Replacing the drive V-belt

**NOTICE:** In some cases, the drive V-belt is very loose on the band wheel. This is normal and does not affect the performance of the machine.



Fig.: Loose drive V-belt

# **17 TROUBLESHOOTING**





WARNING!

Any faults on the machine or motor requiring major intervention must always be repaired by your LUMAG workshop or authorised specialist workshops. The warranty becomes void in the event of improper intervention.



## DANGER!

### Before you start with troubleshooting:

- Position the machine in the stop zone. Saw head is locked.
- Shut down the drive and secure it against restarting and unauthorised commissioning.
- Wait for the saw band to come to a standstill.
- In the case of electric motors, disconnect the machine from the power supply.
- At petrol engines, remove the key and the spark plug connector.
- Clean the machine of wood residues, chips and other contamination.

Fault/issue	Possible cause	Remedy/solution
Wave-shaped saw cuts	<ul> <li>Insufficient blade tension</li> <li>Incorrect blade guide adjustment</li> <li>Incorrect blade tracking</li> <li>Deposits on bandsaw blade</li> <li>Blunt bandsaw blade</li> <li>Saw pressed too fast</li> </ul>	<ul> <li>Tension the blade</li> <li>Incorrect distance between guide blocks and blade</li> <li>Adjust the blade tracking</li> <li>Install new blade, always lubricate bandsaw blade</li> <li>Install new blade</li> <li>Reduce feed rate</li> </ul>
Different thickness of sawn timber	<ul> <li>The saw bed springs due to insufficient support</li> </ul>	<ul> <li>Check the rail section for evenness and level it accordingly. Support the rails and log supports according to instructions.</li> </ul>
The bandsaw blade quickly becomes blunt	<ul> <li>Logs are not clean</li> <li>Foreign objects in wood</li> </ul>	<ul> <li>Do not pull logs over the ground, debark logs at the entry of the bandsaw blade</li> <li>Logs may contain nails, staples, old fences, etc., remove foreign objects before sawing</li> </ul>
The bandsaw blade does not run correctly on the band wheels or jumps off	<ul> <li>Insufficient blade tension</li> <li>Incorrect blade guide adjustment</li> <li>Incorrect blade tracking</li> <li>Belts are worn out</li> <li>Blunt blade</li> <li>Saw pressed too fast</li> </ul>	<ul> <li>Tension the blade</li> <li>Incorrect distance between guide blocks and blade</li> <li>Adjust the blade tracking</li> <li>Install new belts</li> <li>Install new blade</li> <li>Reduce feed rate</li> </ul>
Bandsaw blades break	<ul> <li>Blade sharpened too often</li> <li>Incorrect blade tension</li> <li>Incorrect blade guide adjustment</li> <li>Incorrect blade tracking</li> <li>Saw pressed too fast</li> </ul>	<ul> <li>Replace the blade</li> <li>Connection between guide block if blade is too loose. Tension the blade.</li> <li>Incorrect distance between guide blocks and blade</li> <li>Adjust the blade tracking</li> <li>Reduce feed rate</li> </ul>



Fault/issue	Possible cause	Remedy/solution
Blade slows down or	<ul> <li>Incorrect blade tension</li> </ul>	<ul> <li>Tension the blade</li> </ul>
stops when sawing.	<ul> <li>Incorrect drive belt tension</li> </ul>	<ul> <li>Belts are worn or loose, replace</li> </ul>
	<ul> <li>Saw pressed too fast</li> </ul>	<ul> <li>Reduce feed rate</li> </ul>
Saw does not cut /	– Blunt blade	<ul> <li>Install new blade</li> </ul>
cuts verv slowly	<ul> <li>Blade installed the wrong way</li> </ul>	<ul> <li>Remove blade and turn over. The teeth must point in</li> </ul>
, , , , , , , , , , , , , , , , , , ,	round	the direction of the stops
Saw vibrates strongly	<ul> <li>Wood is not clamped</li> </ul>	- Make sure that the wood is firmly clamped between the
		stops and clamping fixtures
	<ul> <li>Belts are deformed</li> </ul>	<ul> <li>Belts may show flat spots because the blade was</li> </ul>
	<ul> <li>Problem with wheel bearing</li> </ul>	tensioned when not in use. Replace belts
	<ul> <li>Saw pressed too fast</li> </ul>	<ul> <li>Check wheel bearings and replace if worn, reduce feed rate when sawing</li> </ul>
	<ul> <li>Loose bolts</li> </ul>	<ul> <li>Check all bolts to make sure they are tight</li> </ul>
The saw head makes	<ul> <li>The rail section is not level and</li> </ul>	<ul> <li>Level the rail section so that it is level according to</li> </ul>
a noise when	tilts in the saw carriage	instructions
lowered		

If these measures do not eliminate the fault or if faults occur which are not listed here, then have your machine checked by a specialist.



# 18 WARRANTY / GUARANTEE / CUSTOMER SERVICE

### WARRANTY

The statutory warranty period is given on the machine. The seller must be notified immediately of any defects that can be proven to be due to material or assembly faults. Proof of purchase of the machine must be provided by presenting the invoice and receipt when making a claim under the warranty.

The warranty is excluded with regard to parts if defects are caused by natural wear and tear, temperature, weather conditions, as well as defects resulting from negligent assembly, faulty connection, wrong fuel / fuel mixture, installation, operation, maintenance, lubrication or force.

Furthermore, no warranty is given for damage caused by unsuitable, abusive use of the machine, such as improper modifications or repair work carried out by the owner or third parties on his own responsibility, but also in the case of deliberate overloading of the machine.

Parts subject to wear and tear with a limited service life (e.g. V-belt, clutch, throttle cable, spark plug, air filter, battery, blades, hoses, wheels, tools and other aids), as well as all setting and adjustment work are excluded from the warranty.

#### **GUARANTEE**

LUMAG guarantees perfect quality and, without prejudice to the statutory warranty, provides a warranty in the event of material or manufacturing defects. The guarantee for LUMAG products is 24 months in the case of exclusively private use, and 12 months from the date of delivery in the case of commercial and / or professional use and / or leasing.

Guarantee claims must always be proven by the purchaser by means of the original purchase receipt. A copy of this must be enclosed with the guarantee application. Buyer's address and machine type must be clearly identifiable in the case of professional and / or commercial use. Without the original purchase receipt, we can only carry out the repair against payment.

Please do not return any machine to us without a SERVICE NUMBER that you have received from our service department. If we receive machines unsolicitedly, we cannot accept and process them. To request a SERVICE NUMBER, please contact our service team at: info@lumag-maschinen.de

Please label the shipping carton clearly with the SERVICE NUMBER to ensure quick allocation.



Guarantee work is carried out exclusively by our LUMAG service workshop. Defects occurring within the guarantee period due to material or manufacturing defects shall be rectified by means of a repair, provided that they occurred despite proper operation and care of the machine. We reserve the

right to rectify the defect twice in the case of the same defect. If rectification fails or is impossible, the machine can be exchanged for an equivalent machine. If the exchange is also unsuccessful or impossible, there is the possibility of conversion.

Normal wear and tear, natural aging, improper use, as well as cleaning, maintenance and adjustment work are generally not covered by the guarantee (e. g. cutting device, air and fuel filter, spark plug and recoil starter, drive belt and the like). Due to operation and use, some components are subject to normal wear and tear, even when used as intended, and may need to be replaced in good time.

#### **CUSTOMER SERVICE**

For technical questions, information about our products and for spare parts orders, our service team is at your disposal as follows:

Service time:	Monday to Thursday from 7.30 a.m 12.00 p.m. and 1.00 p.m 5.00 p.m.
	Friday from 7.30 a.m 12.30 p.m.
Phone:	+49 / 8571 92 556-0
Fax:	+49 / 8571 92 556-19
Email:	info@lumag-maschinen.de



# **19 TECHNICAL DATA**

	BSW 76EPRO	BSW 76GLPRO
Max. log diameter	760 mm	760 mm
Max. board width	750 mm	750 mm
Max. saw band stroke (height adjustment)	620 mm	500 mm
Min. height of the saw band	660 mm	660 mm
Min. stroke of the saw band	50 mm	50 mm
Max. cutting depth	180 mm	180 mm
Max. cutting length of basic version	5.0 m	5.0 m
Max. cutting length	unlimited	unlimited
Min. cutting length	1.0 m	1.0 m
Drive / power /	Electric motor 5.5 kW S1 400V ~50Hz, 16A IP54	4-stroke OHV petrol engine G300FA 6.8 kW, 302 cm <sup>3</sup> E-start 12V 30Ah, 330A
Cutting height adjustment	electric	electric
Feed of sawing unit	manually	manually
Diameter of band wheels	474 mm	474 mm
Width of band wheels	24 mm	24 mm
Saw band dimensions	4004 x 32 x 1.1 mm	4004 x 32 x 1.1 mm
Saw band speed	15 m/s	15 m/s
Cutting kerf	1.4 – 2.2 mm	1.4 – 2.2 mm
Coolant tank	10 litres	10 litres

### Dimensions of the basic version

Dimension (L)	6741 mm	6671 mm
Dimension (B)	2075 mm	2075 mm
Dimension (H)	2000 mm	1960 mm
Weight of the basic version	400 kg	377 kg
Packaging dimensions (LxWxH)	225 x 70 x 78 cm	225 x 70 x 78 cm

Dimensions of the optional roller track extension for BSW 76PRO series Art. no. 5BSWR2000PRO

Dimension (L)	2050 mm	
Dimension (L)	940 mm	
Weight of roller track extension	63 kg	
Packaging dimensions (LxWxH)	214 x 16 x 18 cm	

#### Noise emission explanation

Model BSW 76EPRO: L<sub>WA</sub> = 103.7 dB(A), L<sub>PA</sub>= 85.1 dB(A);

Model BSW 76GLPRO: L<sub>WA</sub> = 109.3 dB(A), L<sub>PA</sub>= 92.2 dB(A);

Uncertainty K = 4 dB

The measurement was carried out in accordance with EN ISO 3746:2010.

The operating conditions are described in Annex II, 6.3 t) of EN 1807-2.



The specified values are emission values and therefore do not necessarily also represent safe workplace values. Although there is a correlation between emission and immission levels, it cannot be reliably deduced from this whether additional precautionary measures are necessary or not. Factors that influence the current immission level at the workplace include the nature of the workspace, other noise sources, e.g. the number of machines and other neighbouring work processes. Permissible workplace values can also vary from country to country. However, this information should enable the user to make better assessment of the hazard and risk.

### 19.1 DIMENSIONS

The following figures provide an overview of the dimensions of the machines and the optional roller track extension.









### BSW 76GLPRO – without roller track extension





### BSW 76PRO series - roller track extension (optional)

Art. no. 5BSWR2000PRO





# 20 EC DECLARATION OF CONFORMITY

In accordance with the provisions of the EC Directives Machinery Directive 2006/42/EC EMC Directive 2014/30/EU

the company:

LUMAG GmbH, Rudolf-Diesel-Straße 1a, D-84375 Kirchdorf am Inn Phone: +49 8571 92556-0, Fax: +49 8571 92 556-19

declares that the product

Designation:Bandsaw mill (Saw mill)Type designation:BSW 76EPRO and BSW 76GLPRO

complies with the essential protection requirements of the above-mentioned EC directives. Conformity is based on the following standards:

EN 60204-01:2018 / Safety of machinery - Electrical equipment of machines - Part 1: General requirements EN 1807-2:2013 / Safety of woodworking machines - Band sawing machines - Part 2: Log band sawing machines EN IEC 55014-1:2021 / Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus

Part 1: Emission

EN IEC 55014-2:2021 / Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity / Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic currents (unit input current ≤ 16 A per conductor)

EN IEC 61000-3-2:2019+A1 / Electromagnetic compatibility (EMC) - Limits. Limits for harmonic currents (unit input current <= 16 A per conductor)

EN IEC 61000-3-11:2019 / Electromagnetic compatibility (EMC) - Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 75 A per phase and subject to conditional connection

EN ISO 14982:2009 / Agricultural and forestry machinery - Electromagnetic compatibility - Test methods and acceptance criteria

The bandsaw mill supplied corresponds to the machine that was subjected to an EC type examination. The test centre TÜV Rheinland No. 0197, has carried out the EC type-examination in accordance with Directive 2006/42/EC, Article 12, Paragraph 3b.

Authorised representative for the compilation of technical documentation: Christopher Weißenhorner

The declaration of conformity relates only to the machinery in the state in which it was placed on the market and does not take account of parts and / or operations carried out subsequently by the end user.

Kirchdorf a. Inn, 17/07/2024	Christopher Weißenhorner	6 atr
Place/date	(Managing Director)	Signature
		V

Manufacturer: LUMAG GmbH Rudolf-Diesel-Straße 1a, D-84375 Kirchdorf a. Inn www.lumag-maschinen.de Storage of the documents: LUMAG GmbH, Rudolf-Diesel-Straße 1a, D-84375 Kirchdorf a. Inn C. Weißenhorner, Managing Director



# APPENDIX A

## E-Schaltplan BSW 76EPRO Electrical circuit diagram BSW 76EPRO





# APPENDIX B

## E-Schaltplan BSW 76GLPRO





NOTES



# NOTES



NOTES

LUMAG GmbH

can be found at www.lumag-maschinen.de

LUMAG dealer

Rudolf-Diesel-Str. 1a D-84375 Kirchdorf a. Inn Germany Internet: www.lumag-maschinen.de



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