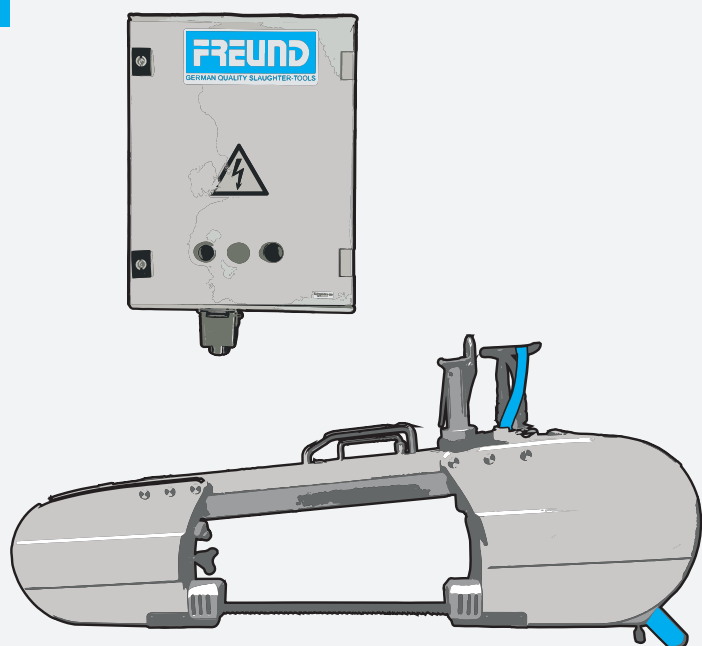
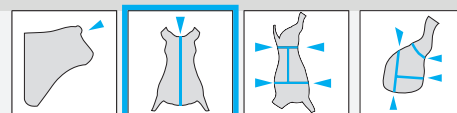


OPERATING MANUAL SPLITTER-BAND-SAW

Translation of original manual



SPLITTER-BAND-SAW MODELS

- SB46-24

CONTROL BOX MODELS

- SG SB46-24 42V



Imprint

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Technical changes reserved

This operating manual was compiled with the greatest care. However if you notice incompleteness and/or mistakes, please inform us.

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1 About this Manual

The operating manual also refers to the as the “machine”.

This operating manual was prepared to enable you to work quickly and safely with your machine.

The operating manual is a component of the machine and contains important recommendations, notes and information

- to install the machine safely and properly.
- to operate the machine safely.
- to rectify simple faults yourself.
- for maintenance and cleaning.

Before you start operating the machine, read this entire operating manual thoroughly and carefully. In particular, follow all written safety and warning information.

1.1 Target group

This operating manual is intended for operators of slaughtering facilities and the staff employed there, as well as for butchers and small businesses and their apprentices.

The operating manual is intended in particular for qualified personnel for assembly, installation, maintenance and repair and for the cleaning staff.

The target group must have basic technical knowledge of how to handle the machine described herein.

1.2 Liability and warranty

All information and instructions regarding the operation and maintenance of the machine contained in this manual are provided to the best of our knowledge, taking into account our experience and know-how.

We will accept no liability for claims that extend beyond the scope of the warranty agreed in the main contract.

The original version of this operating manual was written in German. The translation was created with the best care and knowledge, but we assume no liability for translation errors. In the event of inconsistency or conflict between the English and the German version, the German version shall prevail.

Exclusion of liability

We assume no liability and warranty:

- on spare parts.
- if damage occurs during slaughtering.

Furthermore, we expressly point out that we do not assume any liability for damages attributable to the following causes:

- not observing the information provided in this operating manual at all or to the necessary extent
- non-intended use
- unsuitable or improper handling
- using spare parts or parts which have not been approved by FREUND Maschinenfabrik GmbH & Co. KG
- changing functions or materials without prior approval
- operating the machine incorrectly or operation by unqualified personnel
- safety devices being removed or manipulated
- cleaning the machine incorrectly or unprofessionally
- chemical or mechanical overloads
- maintenance and repair work not being carried out according to instructions or maintenance intervals not being adhered to

Modifications and/or adjustments to the machine are possible in certain cases. In these cases, prior written approval must be obtained from FREUND Maschinenfabrik GmbH & Co. KG - subsequently referred to as FREUND Maschinenfabrik.

1.3 Storing the operating manual

This operating manual is part of the machine and must be accessible at all times to the operating, maintenance and cleaning staff during the entire service life of the machine.

Therefore, always keep the operating manual near the machine's place of use.

1.4 Symbols and layout elements

1.4.1 Layout elements

- Enumerations
 - Individual, independent instruction step
Result arising from the instruction step
 - 1. Step-by-step sequences in a specific order
 - 2. The numbers indicate that the instruction steps follow each other
 - 3. *Result arising from the instruction steps*
- References to another chapter



Important additional information or special details regarding the use of the machine



Embedded warning note - shows type and source of the danger and the measure to avoid the danger

1.4.2 Safety signs

Warning signs



Warning of a danger point

Caution! At this point there is an increased danger to your safety.



Warning of dangerous electrical voltage

Danger to life from electric shocks to the body.



Warning of sharp-edged machine parts

Danger to the fingers and hands from cutting and striking.

Danger to limbs from cutting or severing and injuries to the body.



Warning of hand injuries

Danger to the hands and fingers from crushing due to the sinking or downward movements of machine parts.



Warning of rotating cutting tools

Danger to limbs from cutting or severing.



Danger of entanglement of loose clothing, jewellery and long hair due to the rotational movement.



Warning of hot surfaces

There is a danger of burns or scalds to body parts at the marked areas particularly to hands and fingers.



Warning of substances harmful to health and irritants

The information on the packaging and containers must be observed.
Keep separate from food.



Warning of suspended load

Danger to the body from falling loads or machines.



Warning of hot water or steam

Danger to the hands and fingers from hot water or steam suddenly escaping.



Warning of cutting tools running-on or restarting

Danger to limbs from cutting or severing.

Danger of entanglement of loose clothing, jewellery and long hair due to the rotational movement.



Warning about horizontal rotary movements

Danger from unexpected machine impacts.

Danger to the fingers and hands from cutting or cutting off.

Prohibition signs



General prohibition signs

This sign is only used in connection with an additional sign or text, which describes the prohibition in greater detail.



High-pressure cleaners forbidden

Do not use high-pressure cleaners to clean the machine.
Parts of the machine could be damaged.



Avoid direct water contact

Avoid direct contact between the machine and water during cleaning. The machine is not waterproof.

Mandatory signs



Wear protective gloves

protect the hands against friction, abrasions, and cuts:

- during the changing of sharp or cutting tools,
- during cleaning,
- while touching hot surfaces.



Wear safety spectacles

protect the eyes against flying parts, fragments and squirting liquids:

- during operation,
- while the machine is cleaned.



Wear hearing protection

protect hearing during operation of the machine.



Wear safety shoes or rubber boots

protect the feet against crushing, falling objects and guarantee secure support:

- during operation,
- while the machine is cleaned.



Wear a hair net or use a blade guard

protect long hair against entanglement in the machine.



Wear a protective apron

protects the body against humidity, blood and other fluids.



Wear head protection

protect the head against injuries from contact with oscillating objects and machines and during work beneath suspended loads.



Pull out the power plug

disconnect the machine from the mains power supply before all servicing, maintenance and cleaning work.



Observe the assembly manual or spare parts lists

Further information can be found in the assembly manuals and spare parts lists.



Comply with the operating manual

Be sure to observe the information and notes in the operating manual.



Separate spare parts list available

There is a separate spare parts list for this spare part.



Assembly manual available There is an extra assembly manual for this spare part. In the assembly manual, work steps and required tools are shown.



Available as a set

The symbol indicates an article in a set. In a set, multiple related spare parts are available together. A plate clarifies which parts are included.



Tool set available

To install this spare part, a special tool is required which can be ordered from us.

2

The order of the work steps is marked with numbers in the grey field.



Lubrication

Information about the amount and properties of the lubricant can be found in the operating manual.



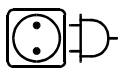
Glue

Parts must be glued; information about the type and properties of the glue can be found in the operating manual.



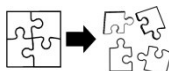
Cleaning

Instruction for an additional cleaning step.

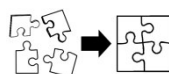


Power plug

symbolises the connection of the machine to the power network.



Disassembly of the machine or component



Assembly of the machine or component

symbolises the assembly of the machine after prior disassembly, carry out work steps in the reverse order.

2 For your safety

This chapter describes the safety procedures and safety equipment. It is intended to make you aware of safety issues relating to use of the machine.

Safety instructions are for occupational health and safety and the prevention of accidents. Follow all the safety instructions described here and in the introduction to each section.

Be sure to read the sections on safety and the instructions they contain carefully before starting and using the machine.

2.1 Warning notes

While you are using the machine, dangers may occur in certain situations or as a result of certain behaviours.

In this operating manual, warning information is given at the start of the respective chapter or life phase that involves danger of personal injury or property damage. It relates to all following actions of the chapter or life phase.

The precautions described must be observed to avoid the danger.

Structure of a
warning note



Signal word!

Type and source of the imminent danger.

Possible consequences of the danger.

➤ Measures to avoid the danger.

Signal word	Meaning
DANGER	indicates an imminently hazardous situation which, if not avoided, will result in danger to life or death.
WARNING	indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
Caution	indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.
Attention	indicates a potentially hazardous situation which, if not avoided, could result in damage to machine or environment.

2.2 Site Operator's Responsibilities

In accordance with the rules and regulations of the employers' liability insurance association relating to the safety and health when working for a business in the meat industry (BGR 229), the site operator may only allow insured persons who are 18 years old and are familiar with the equipment and the handling of the equipment to operate slaughter equipment.

Young people over 16 years may be employed only if this is required as part of their vocational training and if they have read and understood the safety instructions. Their safety must be ensured by a supervisor.

- | | |
|-------------------------------|---|
| Operating staff | <p>The site operator, as a higher level legal person, is responsible that the machine is used in accordance with its intended use and is responsible for training and for assigning authorized and qualified operating, maintenance and cleaning staff.</p> <p>The site operator is obliged to ensure that each employee is properly trained in the operation of the machine.</p> <p>Staff undergoing training may only work at the machine under the supervision of properly qualified staff.</p> |
| Safety of the machine | <p>The site operator must ensure that the machine is only operated and used in perfect and functional condition.</p> <p>The site operator must ensure that safety devices are regularly serviced and checked for proper function.</p> |
| Workplace | <p>The site operator must ensure that the lighting intensity is at least 500 lux.</p> <p>The workplaces must be designed so that clearance of 1.5 m in width and 1 m in depth per person is provided so that each person can move around freely. All persons working at these workplaces must be able to maintain an upright and neutral body posture.</p> <p>The material of the floor must be such that the risk of slipping on wet, greasy or soiled floors is reduced.</p> <p>The workplace must comply with the local hygiene and workplace regulations.</p> |
| Escape routes | <p>The site operator must ensure that sufficient escape routes are available for the staff and that these are clearly marked. The site operator must make sure that escape routes are not obstructed and that their function is not impaired (e.g. that doors open towards the escape route).</p> |
| Personal protective equipment | <p>The site operator must provide suitable personal protective equipment for operating staff and make sure this equipment is used.</p> <p>For hygienic reasons, each employee must have his/her own personal protective equipment.</p> |
| Cleaning | <p>The site operator must ensure that working equipment can be cleaned easily and without any risk. The site operator must provide suitable detergents and define suitable cleaning procedures.</p> |
| Instruction of staff | <p>The site operator is obliged to instruct employees regularly and in light of certain events (e.g. if an accident has occurred) in safe work procedures and occupational safety and health. We recommend that the instruction and the content covered should be documented by the employee's signature.</p> |

- Risk assessment The site operator must inform operators of possible dangers, symptoms and preventative measures. Relevant occupational safety conditions have to be complied with.
- Ensure eye and ear protection is worn at all times when operating the machine.

2.3 Employee Responsibilities

- Operating staff The operating staff must be properly instructed and trained by the employer. Staff who have read and understood the safety instructions and have been properly familiarized with the operation of the machine can be regarded as trained.
- Operating staff must be familiar with the operating manual and the applicable OHS and accident prevention regulations.
- Qualified personnel Qualified personnel are defined as skilled employees who, due to their vocational training, have the knowledge and experience required in their field of work.
- Assembly, maintenance and repair work as well as troubleshooting may only be carried out by qualified personnel.
- Qualified personnel must be familiar with the operating manual and the applicable OHS and accident prevention regulations.
- Safety at the workplace Maintain a stable upright position and keep your balance. Avoid awkward postures.
- Keep your workplace clean and tidy. Untidy workplaces can cause accidents.
- Always wear the personal protective equipment provided.
- Keep children, young persons and untrained staff away from the machine.
- Machine safety Before starting any work, carefully check the machine for proper function in accordance with the intended use.
- Do not set the machine into operation if it does not work correctly.
- Switch off the machine immediately if it no longer works correctly and have it checked.
- Have defective safety devices, switches or other defective machine parts repaired.
- Notify your employer or his authorized representative of any changes to the machine which may affect your safety.
- Emergency procedures In case of an accident provide first aid and call a doctor and emergency medical services.
- Notify your employer or his authorized representative of every accident.

2.4 Personal protective equipment

The staff must carry the customary personal protective equipment. The personal protective equipment is dependent on the respective field of work.

The personal protective equipment must be provided by the operator. For hygienic reasons, each employee gets his/her own personal protective equipment.

2.5 Electrical safety to DIN VDE 0701-0702/EN60204-1



Fig. 2-1

All our electrical equipment is checked by an electrician and an inspection sticker affixed before initial start-up and after a change or maintenance at our plant in accordance with electro-technical standards of DIN VDE 0701-0702/EN 60204-1 (Fig. 2-1).

The inspection sticker indicates the date of the next inspection.

The inspection period for plant and machinery used in abattoirs and cutting plants is six months.

2.6 Residual risks

The machine has been built according to the scientific and technological state of the art and complies with the basic occupational health and safety requirements of the European Union. The machine is operationally safe, assuming compliance with the operating manual, the company-specific instructions and the accident prevention regulations.

However, there are still hazards involved which cannot be eliminated by design measures:

- Danger to life from live machine parts in electrical machinery.
- Danger of injury from compressed air/overpressure in pneumatic machinery.
- Risk of injury from negligent handling of personal safety equipment while operating the machine, during maintenance and repair work and during cleaning and disinfection
- hearing damage from noise if noise emissions exceed 75 dB(A)
- danger of burning on hot surfaces

- danger of injury from breakage or ejection of fragments of the cutting tool.
- danger of injury from flying pieces of meat and bone fragments
- danger of crushing injuries to fingers and hands from getting caught when closing the cover.
- Cutting injuries from cutting tools

It should also be noted that, despite all precautionary measures, residual risks may remain which are not evident.

You can minimise these residual risks by observing the safety instructions given at the beginning of the individual chapters and observing the instructions in the entire operating manual.

2.7 Intended use

The splitter band saw

- is intended for halving pigs and sheep and for expansion brace slaughtering.
- is intended for use with low gambrels.
- is intended for high-throughput line slaughtering.
- may be operated only with the provided safety devices, which must be fully functional.
- may only be operated in combination with the control box SG SB46-24 and the transformer TR7-SB-M24.

Operating the machine within the limits of its intended use also involves:

- observing the safety instructions.
- proper execution of repair and maintenance work.
- regular cleaning of the machine.

Any other use is considered as contrary to the intended use and poses risks to the safety of operating staff.

Disclaimer of
liability

FREUND Maschinenfabrik does not accept liability for any damage resulting from improper use of the machine.

2.8 Improper use

Every use other than those described as → chapter *Intended use* is deemed to be non-intended and is thus inadmissible.

The operator is solely responsible for risks in the case of improper use. Consult the manufacturer in case of doubt.

The following are deemed as non-intended use of the machine:

- the cutting and sawing of other materials such as wood, plastic or stone.
- the use of the machine without the safety transformer TR7-SB-M24.
- the use of the machine without the control box SG SB46-24.
- the use of machines without functional safety devices.
- the extension of the cables and connecting lines attached to the machine.

3 Technical Description

3.1 Definitions

This operating manual uses a number of different abbreviations. The following table explains these abbreviations:

Abbreviation	Designation	Meaning
MAN	Manual	Manual blade tensioning system (butterfly screw) with voltage limitation
2HSSC	Two-hand synchronous safety circuit	Improved two-hand safety circuit, complies with DIN EN 574
EWV	Electrical water valve	Is used to automatically control the cold water supply (cooling, rinsing)
EWV Des	Electrical water valve	Is used to automatically control the hot water supply (disinfection)
MSS	Machine safety switch	Safety switch for cover sensor
DES-K04	Disinfection cabin	For the external cleaning and external disinfection of the machines between work processes
TR7-SB-M24	Safety transformer	Safeguards the power supply for the following devices: • Required safety extra-low voltage for 42 V machines, (complies with the requirements of EN 60204-1 and EN 61558-1) • Required safety extra-low voltage for 24 V control box SG SB46-24
SG SB46-24	Control box	Monitors the following safety devices: • Magnetic switch on cover flap • Two-hand synchronous safety circuit

Abbreviation	Designation	Meaning
		Controls the following functions and components: • Thermal motor monitoring • Transformer switch (transformer contactor) • Motor switch (motor contactor) • Electrical water valves (cooling, disinfection)

3.2 Overview of the machine

3.2.1 Splitter band saw SB46-24

Splitter band saw
SB46-24

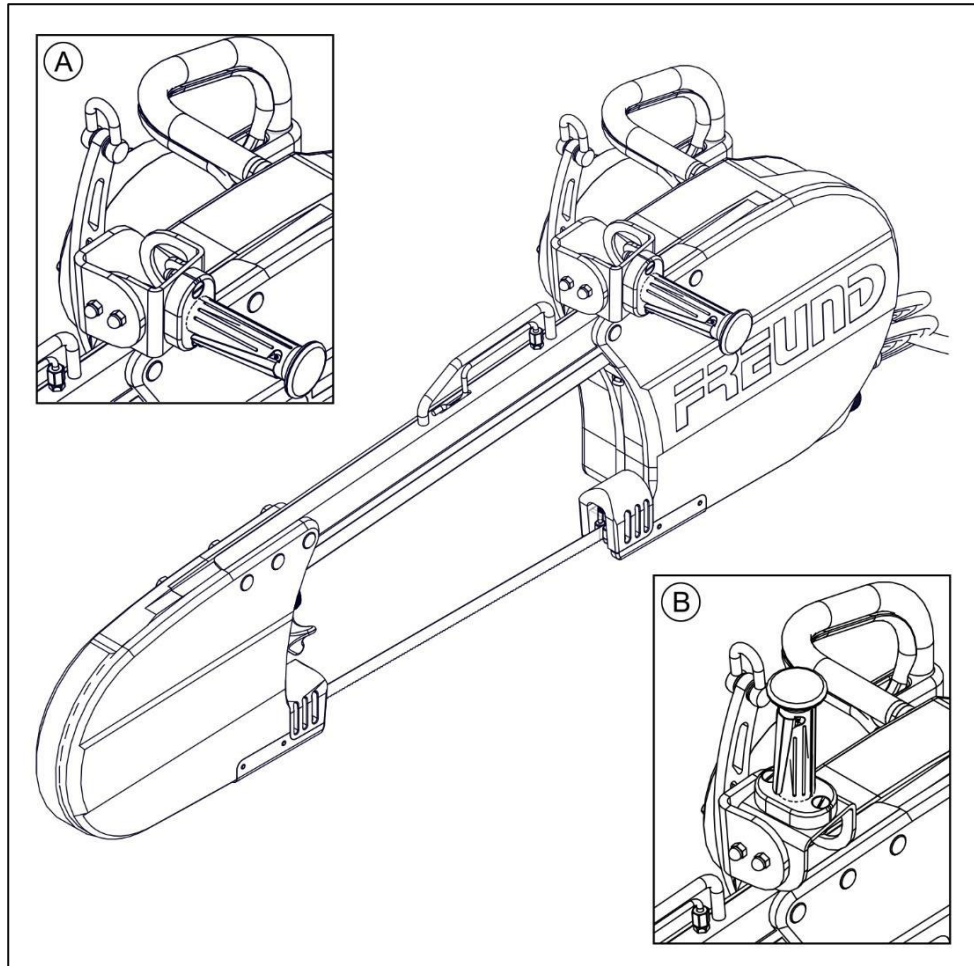


Fig. 3-1 View of SB46-24 with details of the adjustable alignment of the handle (A), (B)

- Equipment
- Power supply 42 V (via control box SG SB46-24)
 - Band saw blade replacement with voltage limitation (torque limit)
 - One-hand operation of the cover
 - Tool-free exchange of the blade guide elements
 - Two-hand safety switch
 - Ergonomically designed switching lever (can be switched in every hand position)
 - Second handle (can be swivelled by 90°)
 - Built-in interior disinfection

Equipment (optional) Further mains voltages

Splitter band saw
connections

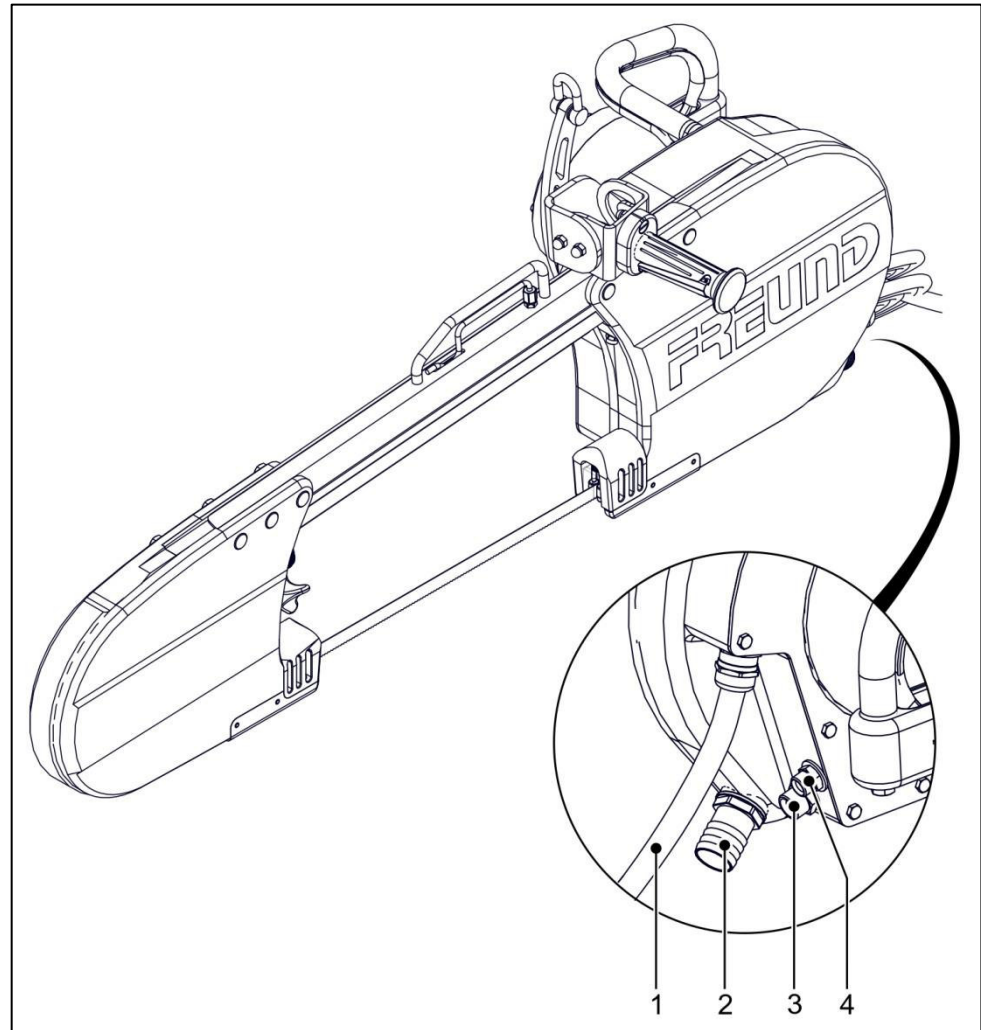


Fig. 3-2 Position of the connections

I	No	Designation
	.	
	1	Connection cable (power supply and control)
	2	Water outlet connection
	3	Water hose connection (cooling)
	4	Water hose connection (disinfection)

Splitter band saw
dimensions

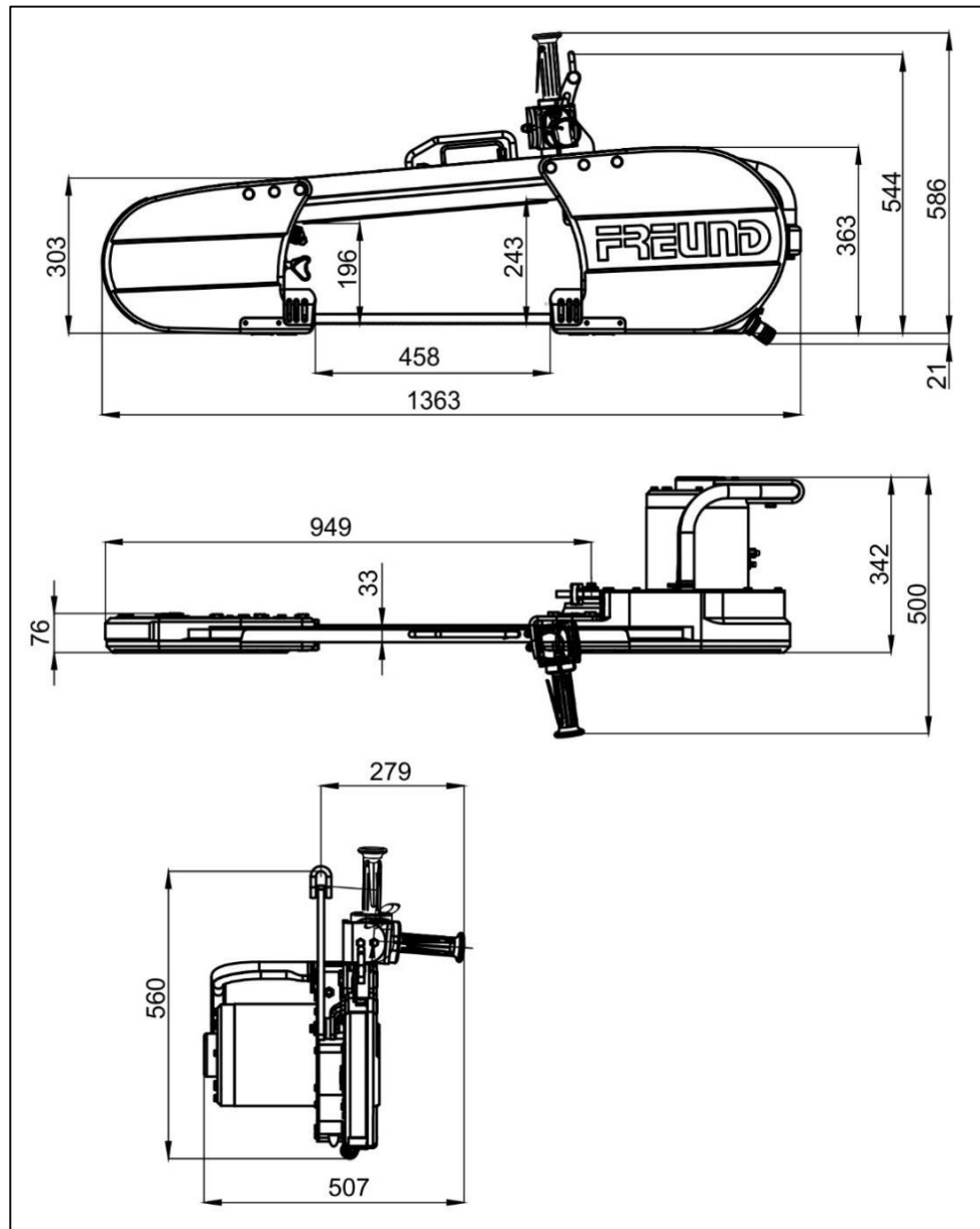


Fig. 3-3 Splitter band saw dimensions (specifications in mm)

Band saw blades	Type*	Toothing	Part No.
	BA46 GC	Hob tooth 10 mm	224-011-204
	BA46 GA	Standard 8 mm	224-011-004

* 5 per packaging unit

Accessories	Part No.	
	Transformer* TR7-SB-M24	912-030-400
	Control box SG SB46-24	148-203-010
	* See operating manual <i>Transformers</i>	

Optional accessories		Part No.
	Balancer F70-3	920-476-000
	Distributor box SB46-24	148-203-011
	Disinfection cabin DESK-04	913-505-002

3.2.2 Control box SG SB46-24

Use Monitoring of safety devices:

- Magnetic switch on cover flap
- Two-hand synchronous safety circuit

Control of functions:

- Thermal motor monitoring
- Transformer switch (transformer contactor)
- Motor switch (motor contactor)
- Electrical water valves (cooling, disinfection)

View

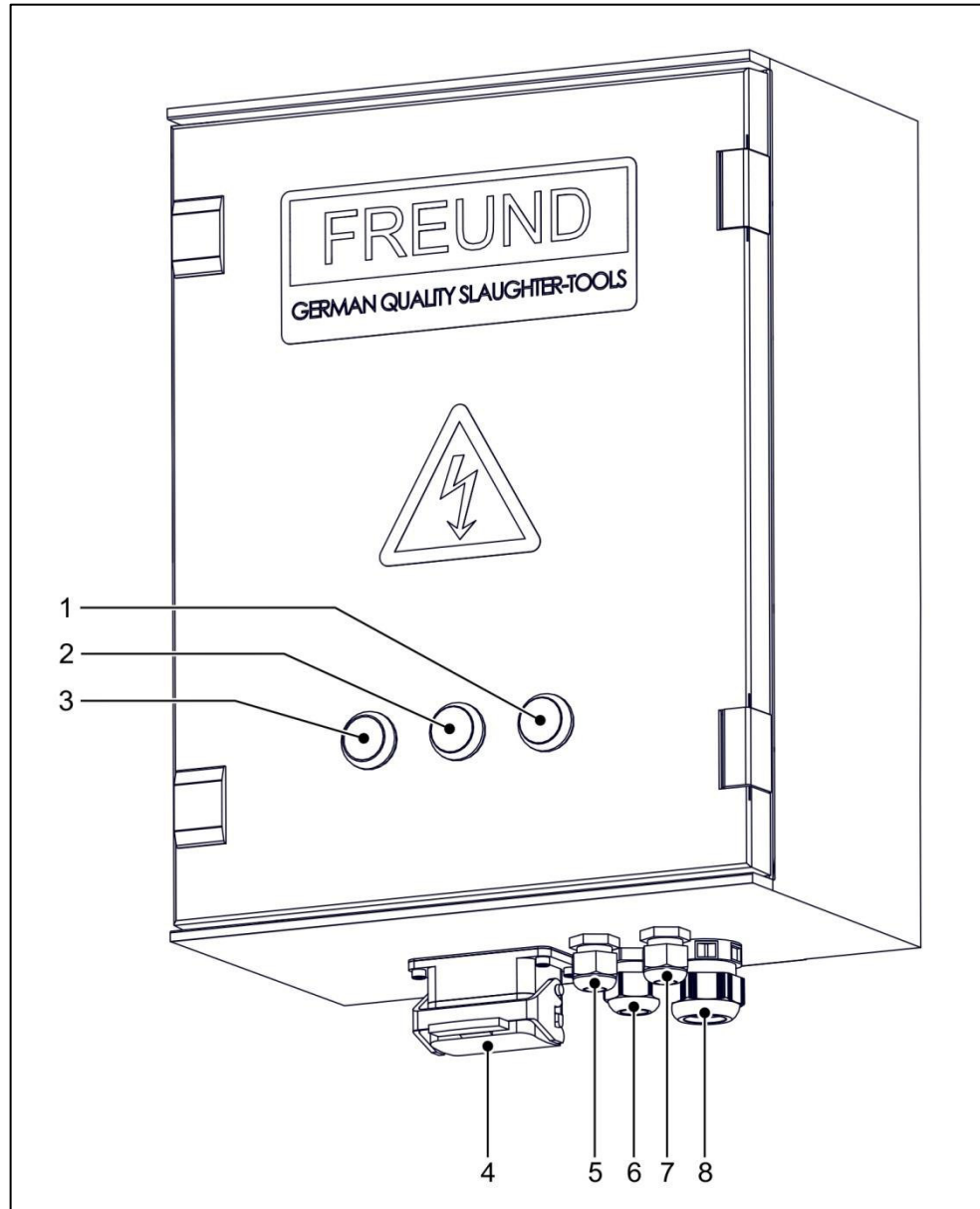


Fig. 3-4 View of control box SG SB46-24

No.	Designation
1	Signal lamp (red): transformer is in standby mode (following an interruption or automatic shutdown)
2	Signal lamp (yellow): there is a fault (Chapter → <i>Troubleshooting</i>)
3	Illuminated pushbutton (green): Pressing the button will take the transformer out of standby mode. The illuminated pushbutton lights up green in operating mode.
4	Power and control cable connection on the machine
5	Control connection:

No	Designation
	Electrical water valve (cooling)
6	Control connection: Control box <> Transformer (standby mode)
7	Control connection: Electrical water valve (disinfection)
8	Power cable connection: Control box <> Transformer

Dimensions

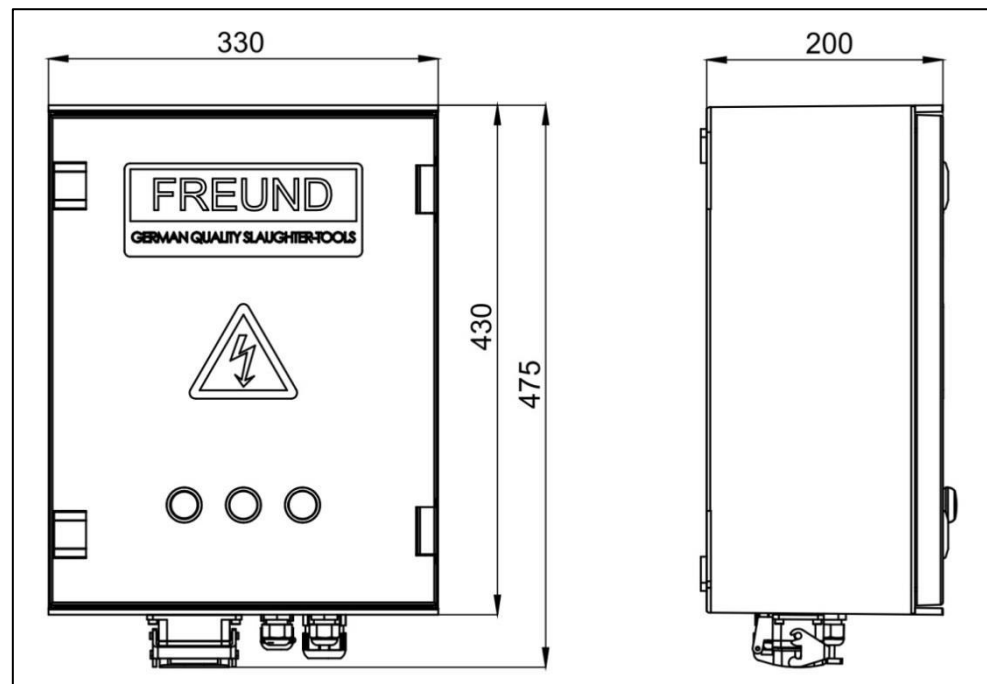


Fig. 3-5 Dimensions of the control box (specifications in mm)

3.3 Technical data

Splitter band saw		SB46-24		
	Weight [kg]	approx. 77		
	Length [mm]	1,363		
	Cutting depth [mm]	196 - 243		
	Cutting width [mm]	458		
	Drive type	Electric, 3-phase (alternating current)		
	Motor rating [kW]	2.2		
	Duty type	S1		
	Speed [rpm]	910		
	Operating voltage [V]	42		
	Current frequency [Hz]	50		
	Rated current [A]	55		
	Protection type (motor)	IP 67		
	Noise emission [dB (A)]	≤ 70*		
	Vibration [m/s ²]	< 2.5		
	Water connection ["]	3/8		
	* Can rise to 95 dB (A) during operation			
Control box		SG SB46-24		
	Weight [kg]	approx. 10		
	Height [mm]	475		
	Width [mm]	330		
	Depth [mm]	200		
	Operating voltage [V]	24/42		
	Current frequency [Hz]	50		
	Rated current [A]	55		

3.4 Rating plate

Splitter band saw The rating plate is attached to the front of the motor.

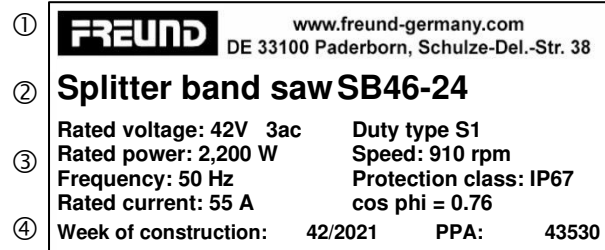


Fig. 3-6 Rating plate example

Description	
1	Company address
2	Machine type and designation
3	Machine performance data: Rated voltage [V] Rated output [W] Frequency [Hz] Rated current [A] Duty type Speed [rpm] Protection class cos phi factor [cos φ]
4	Week/year of construction and production order number

4 Transport und Storage

FREUND-machines are intended for shipment via motor truck, train, aircraft, or ship. The secure shipment will be separately or in multiple packages.

Trial run at
manufacturer

The machine has been thoroughly checked before shipping and has already undergone a trial run in the factory. This check ensures that the machine corresponds to the data specified and works correctly.

Despite all the care taken the machine can be damaged in transit.

4.1 Safety information



WARNING!

Danger due to falling or toppling load.

Death or very serious injuries are possible.

- Only use approved lifting gear and accessories appropriate for the total weight of the machine.
- Never stand under a suspended load.
- Secure the danger zone against unauthorized access.
- Wear a hard hat, protective footwear and gloves.

4.2 Personal protective equipment



4.3 Transporting the machine

All FREUND-machines can be transported using a fork-lift truck or lift truck. The length of the fork must at least correspond to the depth of the machine.

- Only use lifting equipment and gear that has been approved for the weight of the machine. This includes transporting using a crane, fork-lift truck or lift truck.
For the weight of the machine refer to → chapter *Technical data* on page 26.
- Secure the machine during transport to prevent it from tilting and slipping.
- Only use ropes and lifting appliances which ensure sufficient safety and load bearing capacity.

4.4 Unpacking the machine

Recycling and disposal

The original packaging of the machine is made of recyclable material and can be given to the system for collecting recyclables.

For details about recycling and disposal of the package refer to the → chapter *Disposal and Recycling* on page 56.

- Remove all packing materials and dispose of it properly and in an environmentally sound manner.
- Remove any accumulated condensate.
- Check the machine for transport damage.
- Watch the machine during the first hours of operation to check whether any malfunctions occur.

4.5 Storing the machine

To store the machine safely, be sure to observe the following notes:

- Only store the machine in dry and frost-free rooms.
- When storing the machine for a longer period, make sure it is dry.
- Store the machine so that damage to the machine is excluded.
- Protect the machine against corrosion.

5 Installation and Commissioning

The installation and connection of the machine is made by the operator.
For damages, which result from this, the manufacturer FREUND
Maschinenfabrik, is not liable.

5.1 Safety information

**DANGER!****Live machine parts.**

Danger to life.

- Before starting any work, disconnect the machine from the power supply and secure it against being inadvertently switched back on.

**WARNING!****Risk of accident caused by insufficiently qualified personnel**

Danger to Life and most severe injuries are possible.

- The machine may only be commissioned by instructed and authorized personnel.
- All works to live components may only be performed by approved electricians.

**WARNING!****Sharp-edged machine parts.**

Cutting hazard.

- Never put your hands near moving machine parts.
- Keep your hands away from the saw blade or blade.
- For your own safety, wear protective gloves.

5.2 Personal protective equipment



5.3 Installing and setting the balancer

The balancer is used for balancing and counterbalancing the weight of the machine attached to it. FREUND balancers are preset to the weight of the machine.

For safety reasons, the machine may only be operated with one balancer.

1. Secure the balancer in accordance with the manufacturer's operating manual.
2. Attach the balancer to a higher rail above the workstation or to the ceiling with a rail system.



When an overhead track is used, the distance between the centre of the overhead track or the point where the carcass is suspended and the balancer suspension must be between 350 and 400 mm.

3. Attach the machine to the balancer as top-heavy as possible.
The balancer must be set in such a way that the machine can be moved up and down without too much effort. The machine hanger offers a range of attachment options.
4. Readjust the balancer if necessary. Observe the operating manual for the balancer when doing so.

5.4 Setting up the work area

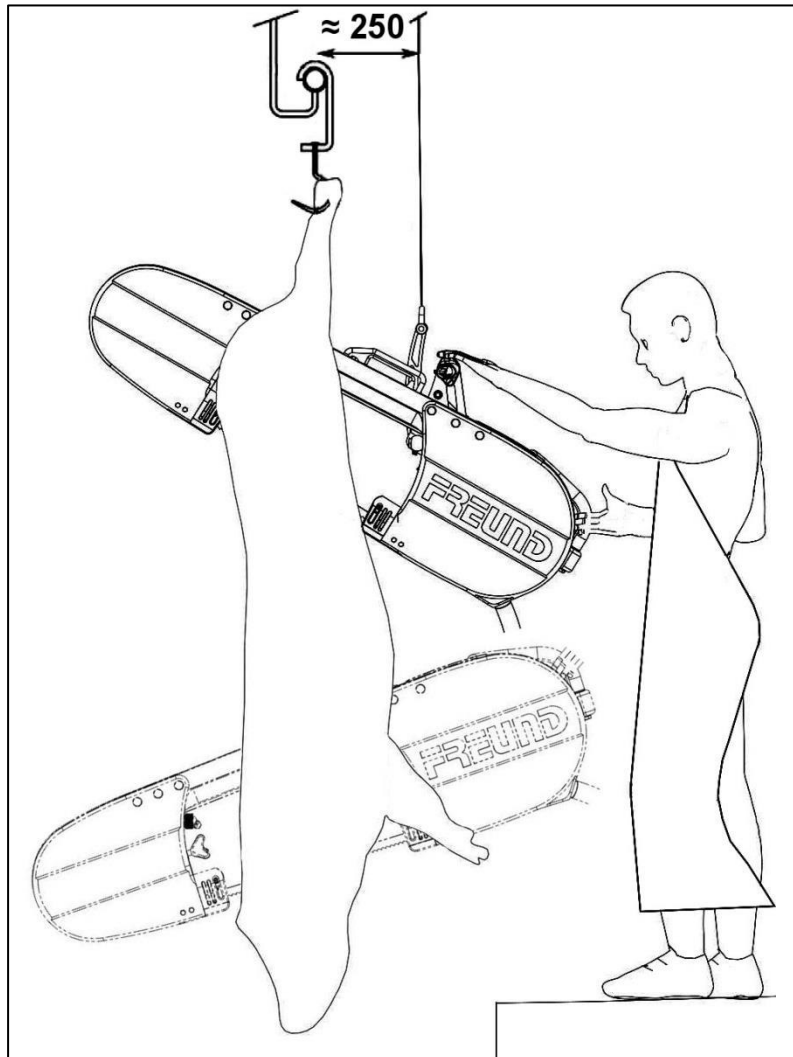


Fig. 5-1 Distance to slaughter line [all values in mm]

5.5 Aligning the machine



WARNING!

Heavy machine

Death and serious injuries due to falling machine

- Before starting to align the machine, place the machine on a surface with an adequate load capacity.

The relevant manual can be found in the appendix under the heading **TIN-013522**.

5.6 Fitting the saw blade

The relevant manual can be found in the appendix under the heading **TIN-013375**.

5.7 Installing the control box SG SB46-24

Control box The machine is operated with an external control box that is connected to the transformer. The control box houses the controller for the brake and the timer for internal disinfection.

Hole pattern

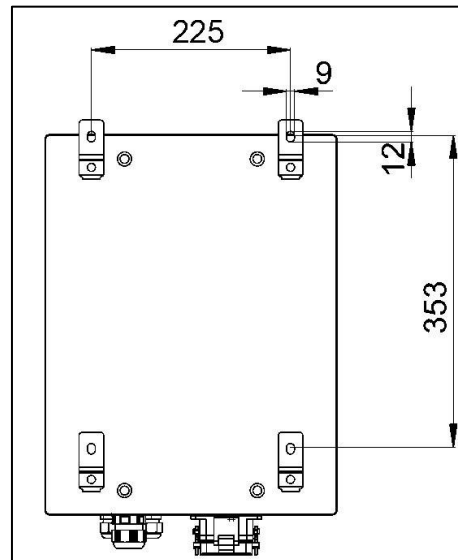


Fig. 5-2 Control box hole pattern
[specifications in mm]

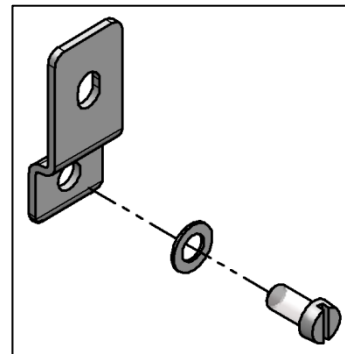


Fig. 5-3 Optionally available wall fastening set, article no. 100-022-069

5.8 Connecting the machine



DANGER!

Live machine parts.

Danger to life from electric current.

- Connection of the machine and maintenance work on live components may only be performed by trained electricians.



We recommend that a main switch is installed before the machine is connected to the power supply. This way, the machine can be easily disconnected from the power supply after finishing work.

Length of power cable The length of the power supply cable is 8 m and should not be extended.



Machines with a safety extra-low voltage (VLV) less than 50 V must be operated with a safety transformer.

The splitter band saw SB46-24 may only be operated with the transformer TR7-SB-M24 and the control box SG SB46-24. Detailed information on the attachment of the transformer can be found in the corresponding operating manual.

5.8.1 Operating voltage and control

Connection
diagram
(standard)
Electrical
connections

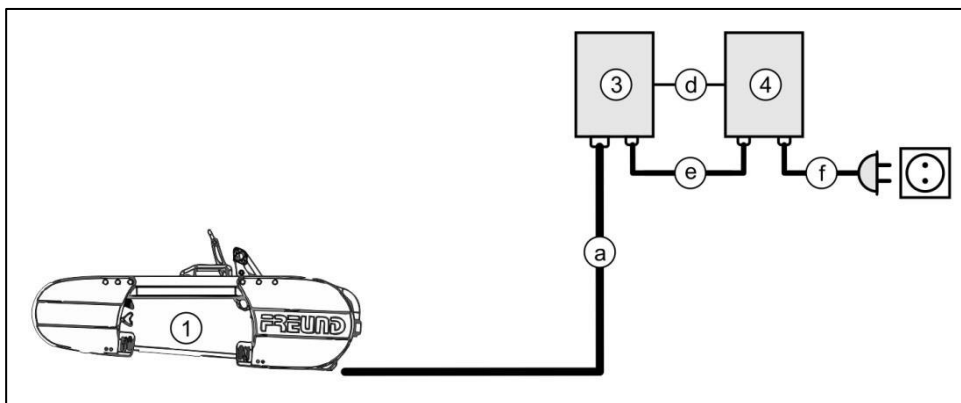


Fig. 5-4 Connection diagram

Pos.	Description
1	Splitter band saw 42 V
a	Connection cable for the splitter band saw (cable length: 8 m)
3	Control box SG SB46-24
d	Control and signal cable, 24 V (cable length: 3 m): Control box <-> Transformer
e	Power cable 42 V, (cable length: 3 m): Control box <-> Transformer
4	Transformer TR7-SB-M24
f	Mains cable 400 V

Connection
diagram (optional)

Electrical
connections

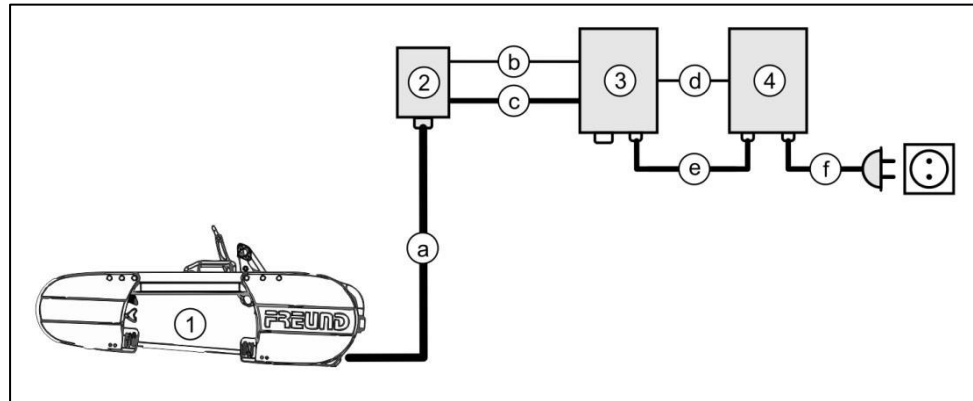


Fig. 5-5 Connection diagram with distributor box (optional)

Pos.	Description
1	Splitter band saw 42 V
a	Connection cable for the splitter band saw (cable length: 8 m)
2	Distributor box (optional): Extension of the connection cables for large distances between the splitter band saw and the control box
b	Control and signal cable, 24 V: Distributor box <> Control box
c	Power cable, 42 V (max. cable length: 15 m): Distributor box <> Control box
3	Control box SG SB46-24
d	Control and signal cable, 24 V (cable length: 3 m): Control box <> Transformer
e	Power cable 42 V, (cable length: 3 m): Control box <> Transformer
4	Transformer TR7-SB-M24
f	Mains cable 400 V

5.8.2 Water supply and control

Connection
diagram
(standard)
Interior
disinfection and
cooling

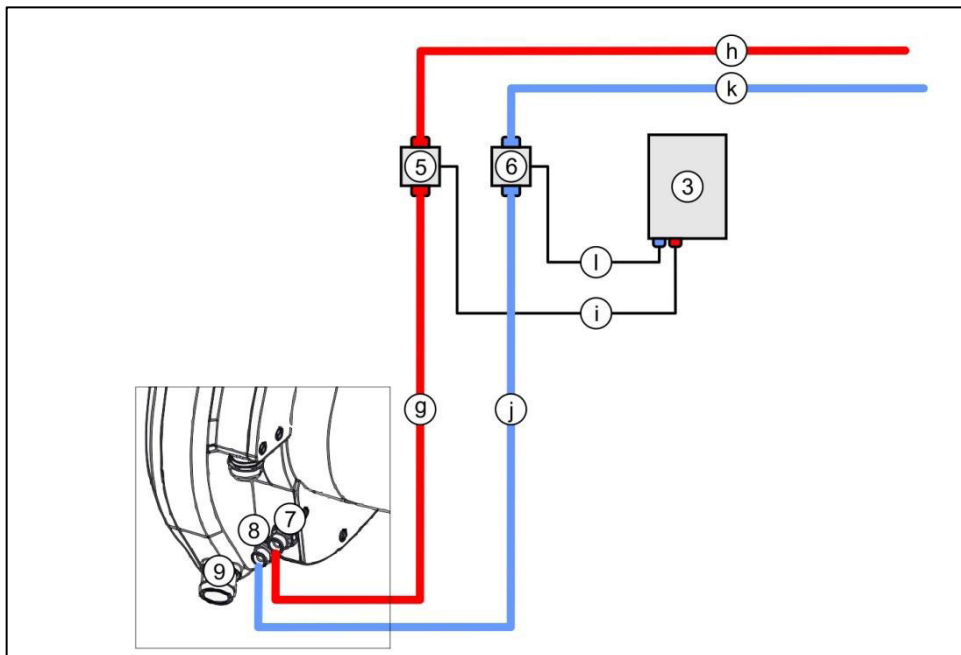


Fig. 5-6 Connection diagram

Pos.	Description
5	Solenoid valve for "interior disinfection" function
g	"Interior disinfection" water hose: Splitter band saw <> Solenoid valve
h	"Interior disinfection" water hose Solenoid valve <> On-site connection
i	"Interior disinfection" control cable solenoid valve: Solenoid valve <> Control box
6	Solenoid valve for "cooling" function
j	"Cooling" water hose: Splitter band saw <> Solenoid valve
k	"Cooling" water hose: Solenoid valve <> On-site connection
l	"Cooling" control cable solenoid valve: Solenoid valve <> Control box
3	Control box SG SB46-24
7	"Interior disinfection" connection on the splitter band saw
8	"Cooling" connection on the splitter band saw
9	Water outlet on the splitter band saw

Connection
diagram (optional)
Interior
disinfection and
cooling

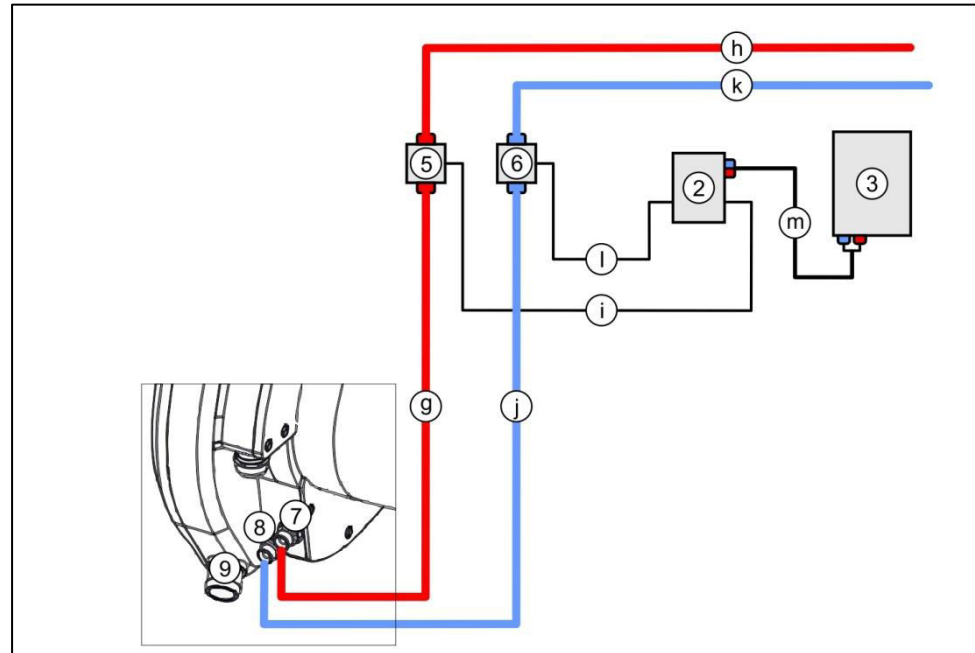


Fig. 5-7 Connection diagram with distributor box (optional)

Pos.	Description
2	Distributor box (optional): Extension of the connection cables for large distances between the splitter band saw and the control box
m	“Interior disinfection” and “cooling” control cable solenoid valves: Connection box <> Control box
3	Control box SG SB46-24
5	Solenoid valve for “interior disinfection” function
g	“Interior disinfection” water hose: Splitter band saw <> Solenoid valve
h	“Interior disinfection” water hose Solenoid valve <> On-site connection
i	“Interior disinfection” control cable solenoid valve: Solenoid valve <> Connection box
6	Solenoid valve for “cooling” function
j	“Cooling” water hose: Splitter band saw <> Solenoid valve
k	“Cooling” water hose: Solenoid valve <> On-site connection
l	“Cooling” control cable solenoid valve: Solenoid valve <> Distributor box
7	“Interior disinfection” connection on the splitter band saw
8	“Cooling” connection on the splitter band saw
9	Water outlet on the splitter band saw

5.9 Setting the disinfection cycle



The disinfection cycle for internal disinfection is set to 7 seconds in the factory. Please contact FREUND Maschinenfabrik GmbH & Co. KG to change the time value for the disinfection cycle.

6 Operating

6.1 Safety information



WARNING!

Risk of accident caused by insufficiently qualified personnel

Danger to Life and most severe injuries are possible.

- The machine may only be maintained, repaired and cleaned by qualified personnel.
- All works to live components may only be performed by approved electricians.



WARNING!

Sharp-edged machine parts.

Cutting hazard.

- Never put your hands near moving machine parts.
- Keep your hands away from the cutting tools.
- Always wear protective gloves for your own safety.



Caution!

The machine is very heavy.

Personal injury as a result of the machine falling down.

- Always attach the machine to a balancer.
- Do not position yourself under the machine.

6.2 Personal protective equipment



6.3 Daily safety check

Before starting operation, check the stunning device and the stunning system diligently for flawless and intended functioning.

Only use faultless and fully functional machines.

Check the

- machine for surface damages and loose machine parts.
- electrical and/or pneumatic connections and access lines for surface damages.

- seating of moving parts.
These must not lock and show any partial damages.
- saw blade / circular blade knife to be properly fixed.
- balancer and the balancer settings.

- Never use a machine with defective safety devices, switches or other defective machine parts.
- Have defective safety devices, switches or other parts repaired, and notify your employer.

6.4 Operating the machine

Operation

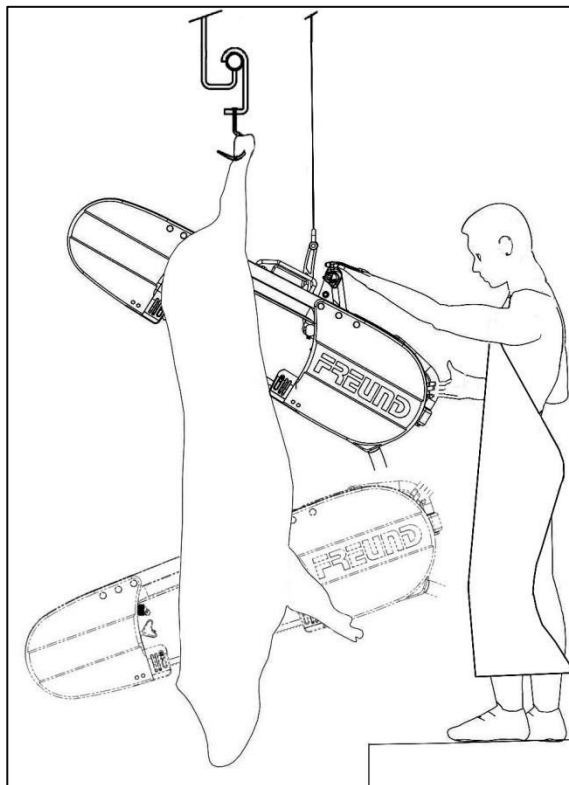


Fig. 6-1 Operating the machine

7 Cleaning and Disinfection

Cleaning is carried out in order to remove dirt, meat and fat particles from the machine.

For hygienic reasons, the machine must be thoroughly cleaned at least daily after each shift, and in between in case of heavy soiling. All surfaces must be visually clean after cleaning.

Thorough cleaning is a prerequisite for the subsequent disinfection to be effective.



Always take note of the safety instructions in the product data sheets issued for the relevant detergents or disinfectants.

7.1 Safety information



DANGER!

Live machine parts.

Danger to life from electric shock.

- Before starting any cleaning work, disconnect the machine from the power supply and secure it against being inadvertently switched back on.
- Do not use water or a high-pressure cleaner to clean live machine parts.



WARNING!

Risk of accident caused by insufficiently qualified personnel.

Danger to Life and most severe injuries are possible.

- The machine may only be maintained, repaired and cleaned by qualified personnel.



WARNING!

Sharp-edged machine parts.

Cutting hazard.

- Never put your hands near moving machine parts.
- Keep your hands away from the cutting tools.
- Always wear protective gloves for your own safety.

**WARNING!****Highly irritant or corrosive detergents and disinfectants.**

Breathing difficulties and other health damage is possible.

- Always take note of the hazardous substance symbols and the safety data sheets issued for the relevant detergent or disinfectants.
- Wear the personal protective equipment specified by the manufacturer of the detergents and disinfectants.

7.2 Personal protective equipment



7.3 Carrying out cleaning and disinfection

- Only use detergents and disinfectants approved for the food industry.
- Be sure to adhere to the specified, interdependent, parameters for detergents (concentration, dwell time, dwell temperature).
- Store detergents and disinfectants separately or in a special room. Make absolute sure those detergents and disinfectants do not come in contact with food.
- Only use cloths, brushes or other devices which are only used for cleaning and disinfection.

Notice!**Damage due to high water pressure.**

High water pressures will cause damage to seals and machine parts.

- Do not use high-pressure cleaners.
- Only work at water pressures of less $\leq$ 6 bar.

Work steps	Detergents and disinfectants	Auxiliary materials
		
Rough cleaning		
Removing product residue	Drinking water	Plastic scraper, brush
Removing small parts and assembly parts	Drinking water	Plastic scraper, brush; dishwasher if necessary
Intermediate rinsing		
	Drinking water, max. 60°C depending on fat melting temperature Low-pressure device, spray bottle	
Main cleaning		
Apply foam, allow to act for approx. 15 minutes	2 – 4% Somplex grease solvent 2 – 3% Ecolab P3-topax 19 2 – 3% Ecolab P3-topax 66 Ecolab P3-steril Powerfoam	Spray bottle, brush, tub, clean damp cleaning cloths
Rinse	Drinking water, max. 60°C	Low-pressure device, spray bottle
Check that machine is visibly clean		
Acid cleaning* ¹ (instead of main cleaning)		
Apply foam, allow to act for approx. 15 minutes	3 – 6% P3-topax 56 3 P3-riskan, Somplex foam, acidic	Spray bottle, brush for removing limescale deposits
Rinse	Drinking water at 50 – 60°C	Low-pressure device, water hose
Check that machine is visibly clean		
Intermediate rinsing		
	Drinking water, max. 60°C Low-pressure device, spray bottle	
Disinfection* ²		
Spray, apply foam Allow to act as per product data sheet Solution temperature approx. 15°C	1 – 2% Ecolab P3-topax 99 0.5 – 2% Ecolab P3-topax 91 1% TEGOL 2000 1% TEGOL IMC 1% Somplex	Spray bottle, spray gun, clean damp cloth
Final rinsing		
	Drinking water, max. 60°C depending on fat melting temperature Low-pressure device, spray bottle	
Check		
that machine is visibly clean; repeat cleaning and/or disinfection if necessary		

Work steps	Detergents and disinfectants	Auxiliary materials
Drying		
Rub dry or allow to dry in ambient air; allow disassembled parts to dry individually if possible		
Care		
Apply	Preservative oil, food grade oil	Spray bottle, clean cleaning cloth
Assembly		
Personnel must wash and disinfect hands		

- * 1 For materials sensitive to acids such as POM, PMMA (acrylates) and cast materials, we recommend limiting acid cleaning to around 1x every 2 to 6 weeks.
- * 2 The surfaces should, after cleaning and disinfection, simply be dried and protected from oxidation by a suitable preservative film.

8 Maintenance and Repair Work

To ensure a long service life and low wear, the machine must be regularly checked and maintained.

The work area on the workbench must be clean and free from foreign material for all maintenance or dismantling work.

Repair and maintenance must only be carried out by skilled and authorized qualified personnel.

Warranty If faults or defects are detected on the machine during the legal warranty period, contact our sales staff. Please refer to the company information at the imprint for address and telephone numbers.

Only use original spare parts or spare parts recommended by FREUND Maschinenfabrik.

8.1 Safety information



DANGER!

Live machine parts.

Danger to life.

- Before starting any installation, maintenance and repair work, disconnect the machine from the power supply.
- Secure the machine against being inadvertently switched back on.



WARNING!

Risk of accident caused by insufficiently qualified personnel

Danger to Life and most severe injuries are possible.

- The machine may only be maintained, repaired and cleaned by qualified personnel.
- All works to live components may only be performed by approved electricians.



WARNING!

Sharp-edged machine parts.

Cutting hazard.

- Never put your hands near moving machine parts.
- Keep your hands away from the cutting tools.
- Always wear protective gloves for your own safety.

8.2 Personal protective equipment



8.3 Recommended lubricants

Retail container	Part No.
1-kg can	171-500-010

Ensure compliance with the general occupational safety rules when handling lubricants.

8.4 Maintenance schedule

Some maintenance jobs must be carried out at regular intervals.

The following table gives you an overview of the maintenance work to be carried out and the corresponding maintenance interval. Adjust the maintenance intervals to your working conditions, if necessary.



You find further instructions to repair and assembly works in the spare parts lists.

Interval	Maintenance job	→ Chapter, page
Daily	Visual inspection before starting work	→ Chapter <i>Daily safety check</i> on page 39
	Check the balancer settings	→ Chapter <i>Installing and setting the balancer</i> on page 31
	Functional test	→ Chapter <i>Operating the machine</i> on page 40
Every 3 months	Replace the guide plates	→ Chapter <i>Replacing the guide plates</i> on page 47
Every 6 months	Electrical recurring inspection in accordance with VDE 0701/0702/EN60204-1	→ Chapter <i>Periodic inspection of electrical equipment</i> on page 47
As necessary	Replace the band saw blade	→ Chapter <i>Replacing the band saw blade</i> on page 47
	Replace the guide plates	→ Chapter <i>Replacing the guide plates</i> on page 47
	Replace the bearing	→ Separate assembly manual

8.5 Periodic inspection of electrical equipment



Periodic inspections of non-stationary electrical machinery and equipment that is used in slaughtering and cutting plants must be carried out at intervals of six months in accordance with EN 60204-1.

The electrical test must be carried out by an electrically skilled person in the sense of the accident prevention regulation "Electrical installations and equipment" or by an electrically instructed person.

Service package
SDL-003-004

We at FREUND Maschinenfabrik would like to give you the option to arrange for the next periodic inspection of your machinery or equipment to be carried out at our factory. We offer the service package SDL-003-004 including a complete inspection of the electrical system with inspection report and test sticker.

If you are interested in arranging for a periodic inspection at our factory or by a service technician on-site, please contact our sales department. Please refer to the company information in the imprint for address and telephone numbers.

8.6 Replacing the band saw blade



The band saw blade is a single-use tool and must not be resharpened.

The relevant manual can be found in the appendix under the heading **TIN-013375**.

8.7 Replacing the guide plates

The relevant installation manual can be found in the spare parts list under the heading **MTA-013423**.

9 Troubleshooting

If malfunction or faults occur during the operation, you can look for possible causes and remedies in this chapter.

If you do not find the malfunction or fault of your machine in the following table, contact our sales staff. Please refer to the company information at the imprint for address and telephone numbers or on our website www.freund-germany.com.

9.1 Safety information



DANGER!

Live machine parts.

Danger to life.

- Before starting any installation, maintenance and repair work, disconnect the machine from the power supply.
- Secure the machine against being inadvertently switched back on.



WARNING!

Risk of accident caused by insufficiently qualified personnel

Danger to Life and most severe injuries are possible.

- The machine may only be maintained, repaired and cleaned by qualified personnel.
- All works to live components may only be performed by approved electricians.



WARNING!

Sharp-edged machine parts.

Cutting hazard.

- Never put your hands near moving machine parts.
- Keep your hands away from the cutting tools.
- Always wear protective gloves for your own safety.

9.2 Personal protective equipment



9.3 Overview of possible faults

9.3.1 Faults/Machine

Fault	Possible cause	Remedy
Motor not running / stops during work.	The motor is not supplied with power.	Check whether the connection cable is plugged in.
		Check the connection cables for interruptions or damage.
		Check the main fuse.
		Check whether the current wires are terminated correctly and the screws on the terminals are firmly tightened.
	The fuse in the transformer is defective.	Replace the fuse.
Increase in force required for sawing.	Motor shutdown due to overheating (see also LED status displays in the control box):	Switch off the machine. Wait until the machine has cooled down.
	- LED 8 does not light up. - LED (Trip) lights up.	
Band saw blade slipping out of guide.	Band saw blade blunt.	Replace the band saw blade, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
	Incorrect balancer settings.	Adjust the balancer. Set the balancer so that the machine slowly slides down under its own weight.
Band saw blade slipping out of guide.	Machine was moved up abruptly.	Move the machine upwards in a smooth movement.
Saw not guided straight while cutting.	Band saw blade guide worn.	Turn or replace the guide plates, (→ Chapter <i>Replacing the guide plates</i> on page 47).
	Cutting alignment is not optimal.	Align the machine vertically. Change the position of the machine, (→ Chapter <i>Aligning the machine</i> on page 32). Prevent the machine from tipping over to the front or sideways at the rear when it moves.

Fault	Possible cause	Remedy
	Band saw blade tension too low.	Make sure that the knob audibly clicks into place when setting the blade tension, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
Unusual noises in the motor.	There is increased bearing clearance and/or a bearing is defective.	Check the bearings. If necessary, have the bearing replaced. When replacing a bearing, replace the grease as well, (→ Chapter <i>Recommended lubricants</i> on page 46).
	Fastening bolts loose.	Check the bolts/nuts to ensure they are tight.
	There has been a phase failure.	Have the electrical connections checked and rewired by a qualified electrician. If necessary, have the coil resistance checked.
Motor overheating (temperature > 70 °C).	Transformer output is not sufficient/not a FREUND transformer.	Only use the transformer TR7-SB-M24 recommended by FREUND.
	Incorrect connection cable: cross-section too small and/or connection cable too long.	Use only the original cable from FREUND. Do not extend the connection cable to more than 8 m.
	Loose contact in connection cable.	Have the electrical connections checked by a skilled electrician, and retighten the terminal if necessary.
	Moisture in electrical chamber.	Remove the moisture. If applicable, replace corroded terminals and connections. Replace the cover gasket.
	No water cooling.	Check the water supply.
	There has been a phase failure.	Have the electrical connections checked and rewired by a qualified electrician.
	Input voltage too low.	Measure the mains voltage. Select the suitable input at the transformer.

Fault	Possible cause	Remedy
Band saw blade moving in wrong direction.	Connection cable connected incorrectly.	Turn the plug-in connectors in the rotating disc of the phase inverter connector.
The machine saws poorly or does not saw at all.	Band saw blade fitted incorrectly.	Refit the band saw blade with the teeth facing in the direction of the housing, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
	Band saw blade blunt.	Replace the band saw blade, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
Band saw blade getting stuck in carcass.	Incorrect band saw blade type.	Switch off the machine.
	Incorrect free-cutting action due to changed tooth set.	Replace the band saw blade, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
	Band saw blade blunt.	
	Band saw blade bent.	Switch off the machine.
	Machine stuck in a bone.	Pull the machine out of the carcass. Increase the kerf.
Band saw blade jammed.	Band saw blade and/or saw blade guide soiled.	Clean the band saw blade and/or the saw blade guide.
Band saw blade slipping under load.	Band saw blade tension set incorrectly.	Readjust the blade tension, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
	Band saw blade soiled.	Clean the machine.
Premature band saw blade breakage.	Band saw blade guide worn.	Replace the guide plates, (→ Chapter <i>Replacing the guide plates</i> on page 47).
	Band saw blade tension set incorrectly.	Readjust the blade tension, (→ Chapter <i>Replacing the band saw blade</i> on page 47).
	Band saw blade constantly running against the upper guide plate.	Guide the machine through the carcass without applying too much force.
	Too much force used when guiding the machine.	
	Balancer is set for a different weight range.	Re-adjust the balancer. Use a balancer with the correct weight range and cable travel.

Fault	Possible cause	Remedy
	Cable travel for balancer jammed.	It must be possible to pull out the cable easily and without jamming it.
	Incorrect balancer settings.	Set the balancer so that the machine slowly slides down under its own weight.
	Upper guide plates are worn.	Turn the upper guide plates or replace them, → Chapter <i>Replacing the guide plates</i> on page 47.

9.3.2 LED status displays in the control box SG SB46-24

LED status
displays

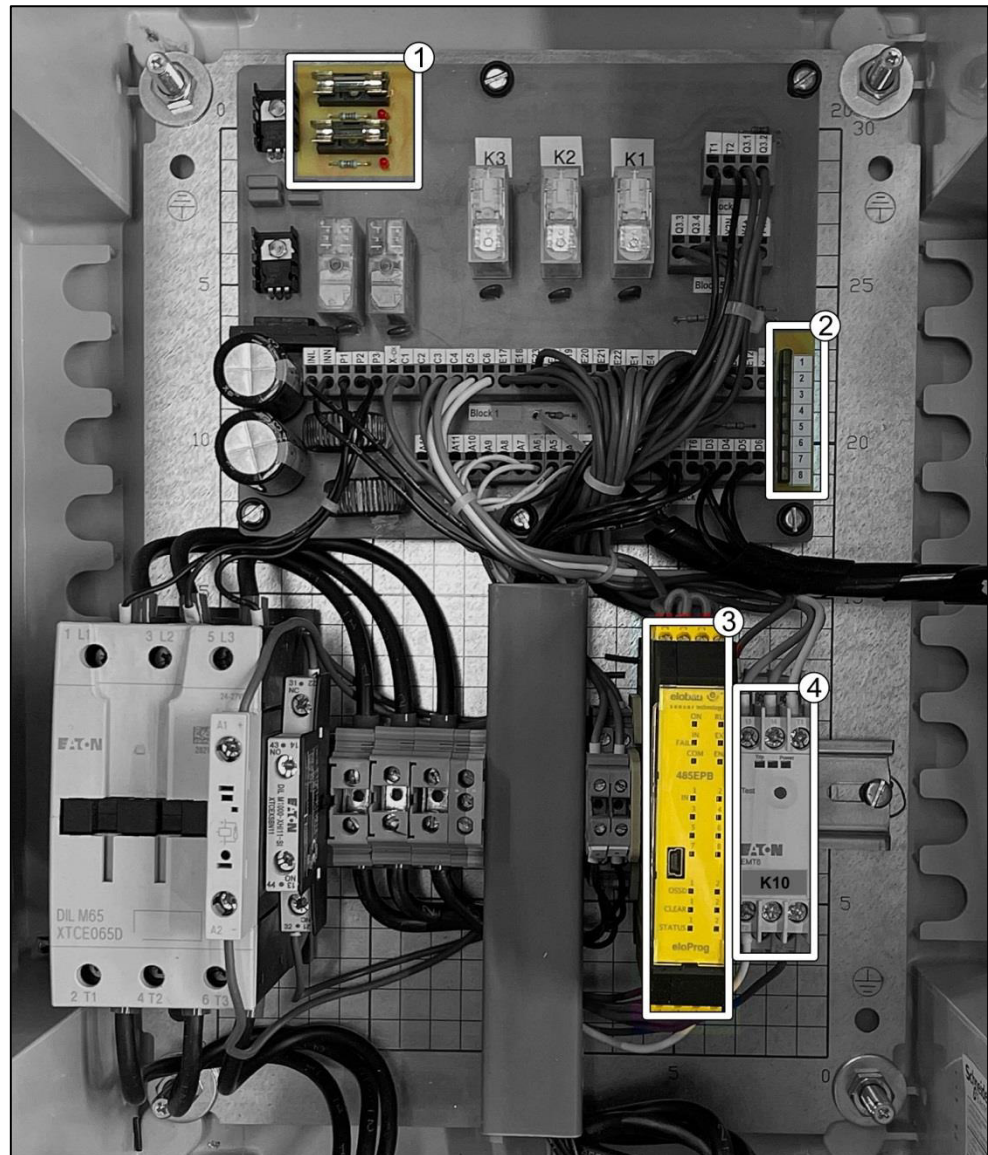


Fig. 9-1 LED status displays in the control box

Pos.	Description
1	Error display for power supply unit
2	Status display for splitter band saw, solenoid valves, transformer contactor
3	Status display for safety module
4	Status display for thermo-module

Error display for power supply unit (pos. 1)



LED lights up (LEDs light up) if a fuse was tripped.
The power supply and the control voltage are interrupted.

Status display for splitter band saw, solenoid valves, transformer contactor (pos. 2)



- | | |
|---|---|
| 1 | LED is on if an error has occurred in the safety module (two-hand synchronous safety circuit and cover flap switch)
The status display "Status 2" lights up on the safety module (see pos. 3). |
| 2 | LED is off if the "Disinfection" solenoid valve is not supplied with current. Warm water for disinfection purposes is not able to flow. |
| 3 | LED is off if the "Cooling" solenoid valve is not supplied with current. Cold water for disinfection purposes is not able to flow. |
| 4 | LED is off if there is no mains voltage applied to the primary coil of the transformer TR7-SB-M24. |
| 5 | No function |
| 6 | Continuous LED signal or optional phase control |
| 7 | LED is off if the cover flap is open on the splitter band saw. |
| 8 | LED is off if the motor of the splitter band saw has shut down due to overheating. |

Status display for safety module (pos. 3)



1	The mushroom head pushbutton ¹ has been pressed.
2	The mushroom head pushbutton ¹ has not been pressed.
3	The cover flap is closed.
4	The cover flap is open.
7	The bar switch ¹ has been pressed.
8	The bar switch ¹ has not been pressed.
Status 2	LED is on if the safety module has malfunctioned. (in conjunction with LED 1 of the status display "splitter band saw, solenoid valves, transformer contactor", pos. 2)

¹ Component of the two-hand synchronous safety circuit

Status display for thermo-module (pos. 4)



Trip	LED is on if the motor of the splitter band saw has shut down due to overheating. (in conjunction with LED 8 of the status display "splitter band saw, solenoid valves, transformer contactor", pos. 2)
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10 Disposal and Recycling

The machine must be disposed of in accordance with the pertinent national regulations.

10.1 Disassembling and disposing of the machine



Old machines contain recoverable materials which you can return for recycling.

When disposing of the machine, make sure to observe local environmental regulations.

1. Disconnect the machine from the power supply and/or the compressed air supply.
2. Disconnect all electrical connections and supply lines from the machine.
3. Completely disassemble the machine.
4. On oil-lubricated machines, drain all the oil from the machine and remove filter elements, if fitted.
5. Completely degrease the machine.
6. Dispose of waste oil and components and materials soiled with oil in accordance with the applicable environmental regulations.
7. Segregate all materials.
8. Send the individual materials to the appropriate recycling or disposal facilities.
9. Send hazardous waste to a local hazardous waste site.

10.2 Disposing packaging material



All packaging materials used by FREUND Maschinenfabrik are environmentally friendly and can be recycled.

You can safely dispose of the packaging materials through your local waste collection system or return them for recycling.

More Information For more information about our packaging materials and their disposal please contact our sales staff.
Please refer to the company information in the imprint for the address and telephone numbers.

11 Appendix

11.1 EC declaration of conformity

Sample

EG-Konformitätserklärung • EC-Declaration of Conformity • Declaración CE de conformidad • Déclaration CE conformité		 FREUND GERMAN QUALITY SLAUGHTER-TOOLS
im Sinne der EG-Richtlinie Maschinen 2006/42/EG, Anhang II, Nr.1 A <i>content according to 2006/42/EC, Annex II, No. 1 A</i> contenido según 2006/42/CE, anexo II, núm. 1 A <i>contenu conforme à la directive 2006/42/CE, annexe II, N° 1</i>		
Hersteller • <i>Manufacturer •</i> Constructor • <i>Constructeur</i>	FREUND Maschinenfabrik GmbH & Co. KG Schulze-Delitzsch-Str. 38 D-33100 Paderborn Germany	
Dokumentationsbevollmächtigter <i>Documentation manager</i> Responsable de la documentación <i>Mandataire de la documentation</i>	Claudia Voß	
Hiermit erklären wir, dass die Maschine • <i>We hereby declare that the machinery •</i> Por la presente declaramos que la máquina • <i>Nous déclarons par les presentes que la machine</i>		
Typ • <i>Model •</i> Modelo • <i>Type</i>	SB46-24 Spaltbandsäge	
Serien-Nummer • <i>Serial-Number •</i> Número de serie • <i>N° de série</i>		
mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG übereinstimmt. <i>fulfils all relevant provisions of Directive 2006/42/EC.</i> concuerdo con todas las disposiciones de la Directiva 2006/42/CE relativa a las máquinas. <i>satisfait à l'ensemble des dispositions pertinentes de la directive 2006/42/CE relative aux machine.</i>		
Die Maschine stimmt auch mit allen einschlägigen Bestimmungen der folgenden EG Richtlinien überein: <i>The machinery is also in compliance with all relevant provisions of the following EC-directives:</i> La máquina concuerda también con todas las disposiciones pertinentes de las siguientes directivas de la CE: <i>Cette machine satisfait également à toutes les dispositions pertinentes des directives CE suivantes:</i>		
2004/108/EG – EMV-Richtlinie EGV 1935/2004		
Folgende harmonisierte Normen (oder Teile dieser Normen) wurden angewendet: <i>The following harmonised standards (or parts thereof) were applied:</i> Se aplicaron las siguientes normas armonizadas (o partes de estas normas): <i>Les norms harmonisées suivantes (ou parties de ces normes) ont été utilisées:</i>		
DIN EN ISO 12100, EN 12984 DIN EN ISO 13850, EN 563, EN 60204-1 EN 60529, EN 61558, EN 1672-2, DIN 15112, EN 55022, DIN EN 61000-6-3/-6-4, EN 55081-2, EN 50082-1, EN 55014-1, EN 55014-2		
Name und Unterschrift <i>Name and Signature</i> Nombre y firma <i>Nom et signature</i>	 Robert Freund Paderborn Geschäftsführer • <i>Managing Director •</i> Director gerente • <i>Directeur</i>	
www.freund-germany.com		

Conformity

The company FREUND Maschinenfabrik GmbH & Co. KG hereby confirms, for articles and their materials that, when used as intended, come into contact with food comply with the following general requirements.

- Regulation (EC) No. 1935/2004 of 27 October 2004 for articles and materials that are intended to come into contact with food.
- Regulation (EC) No. 10/2011 of 14.01.2011 for plastic articles and materials that are intended to come into contact with food.
- Regulation (EC) No. 2023/2006 of 22 December 2006 for good manufacturing practices for articles and materials that are intended to come into contact with food.
- LFGB - Food, Articles of Daily Use and Feeding Stuff Law, as of 01.09.2005.

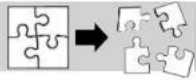
This applies to all the following machine types and their spare parts:

Splitter-Band-Saw

Machine parts that come into contact with food	Material designation	Groups of materials and articles	Notes
Bandsaw blades	C85 (1.0647)	Tool steel	
Machine casing, motor casing, cover	AlSi1MgMn (3.2315) AlMg4,5Mn0,7 (3.3547)	Aluminium	Anodized (black, natural)
Div. components (guide- and hydraulic bloc)	AlSi1MgMn (3.2315) AlMg4,5Mn0,7 (3.3547)	Aluminium	Anodized (natural)
Wheels	X5CrNi18-10 (1.4301)	Stainless steel	
Guide elements	H20, ceramik	Hard metal, ceramic	
Fasteners	A2 (1.4301)	Stainless steel	
Div. sealing elements	NBR70, Fybar PT50	Nitrile rubber	

Paderborn, 07.12.2021


Head of Development

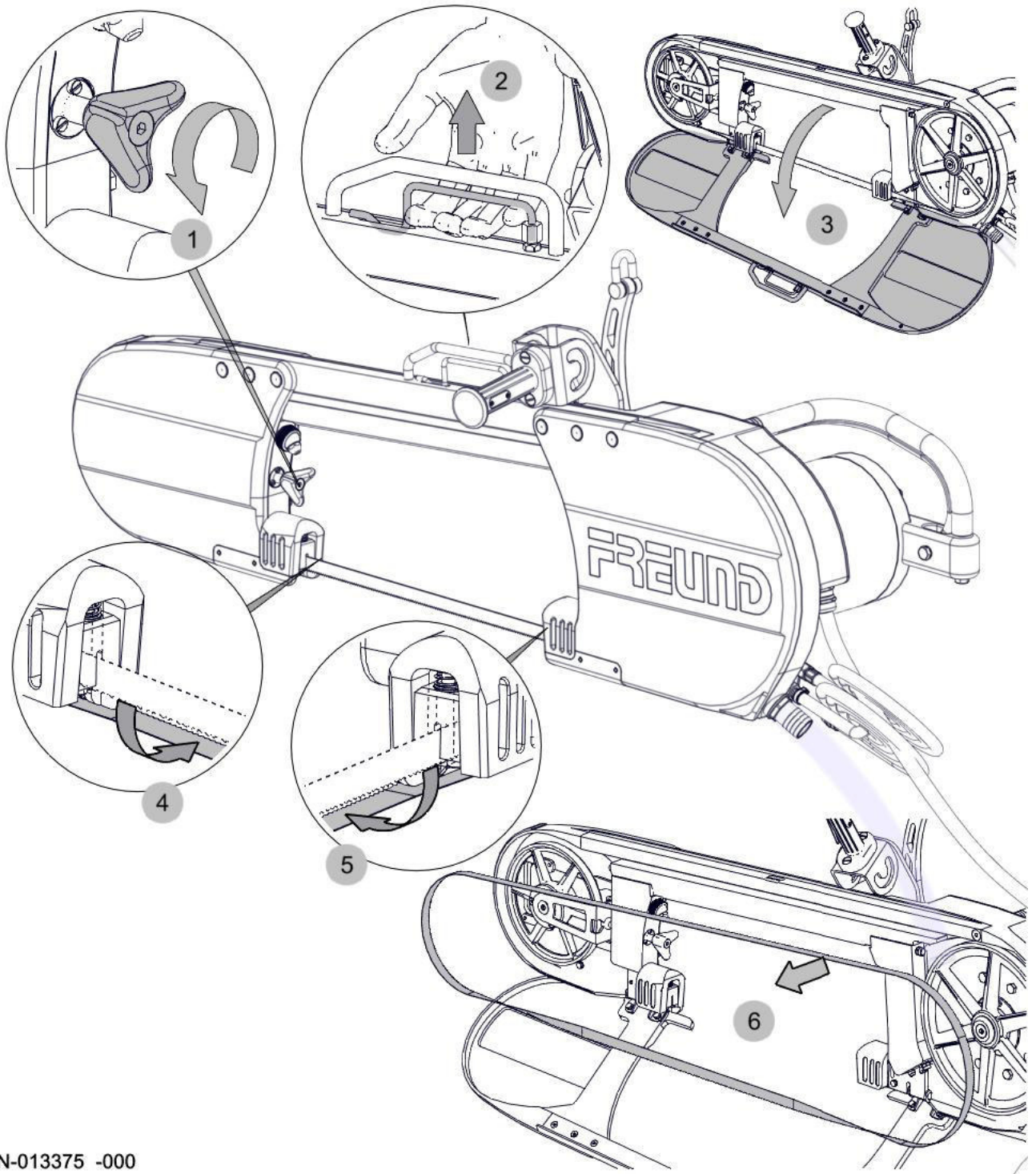


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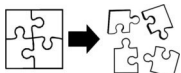


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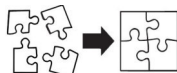


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Erklärung der Symbole siehe Betriebsanleitung Kap.1 / *Explanations of symbols see operating manual chp. 1*



Demontage
Disassembly



Montage
Assembly



Betriebsanleitung beachten
Pay attention to operating manual



Montageanleitung
Assembly instructions



Werkzeugsatz
Toolkit

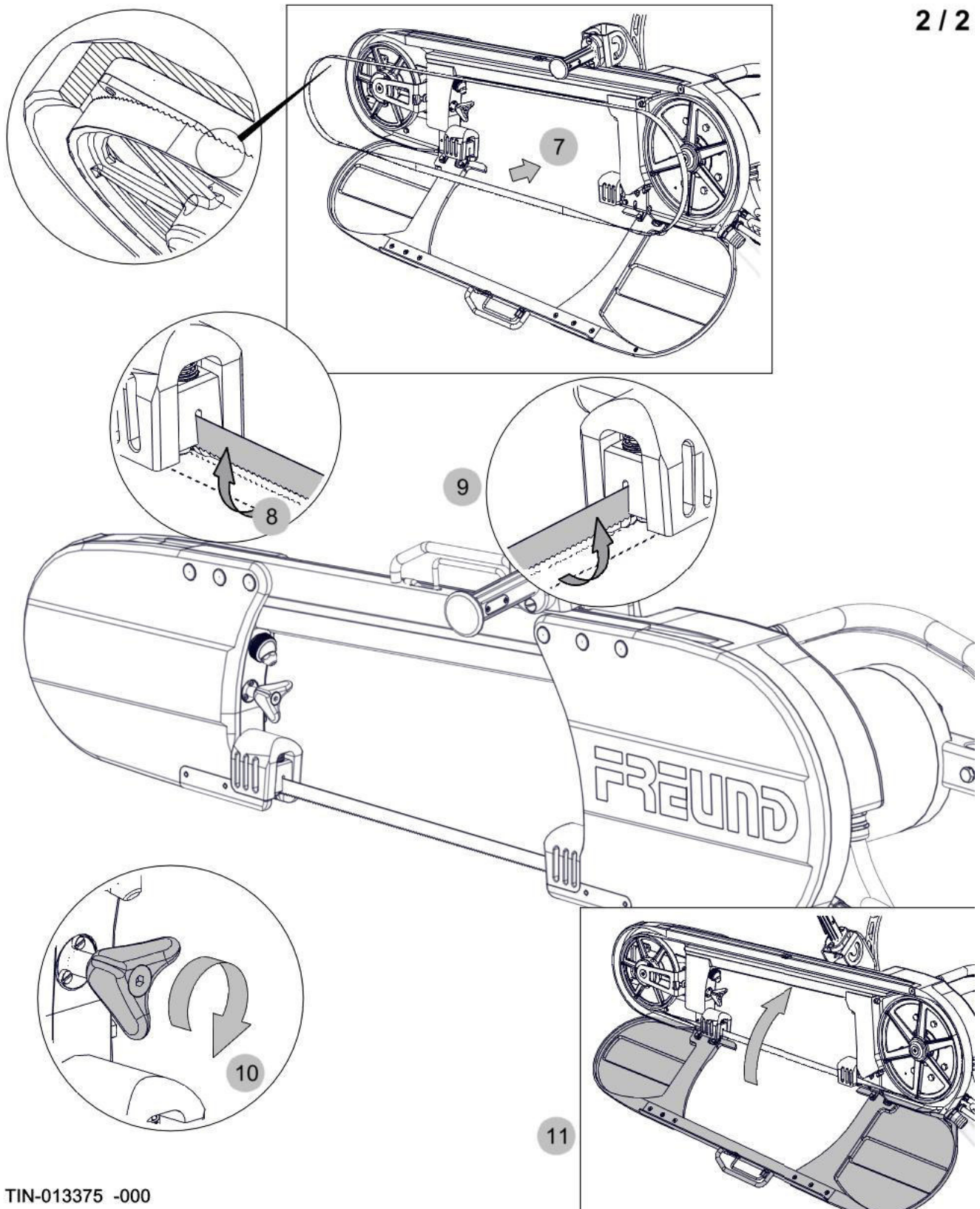


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7-11

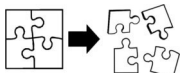


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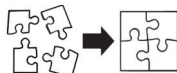


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Erklärung der Symbole siehe Betriebsanleitung Kap.1 / *Explanations of symbols see operating manual chp. 1*



Demontage
Disassembly



Montage
Assembly



Betriebsanleitung beachten
Pay attention to operating manual



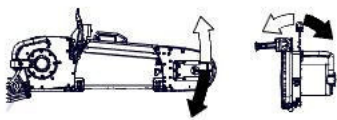
Montageanleitung
Assembly instructions



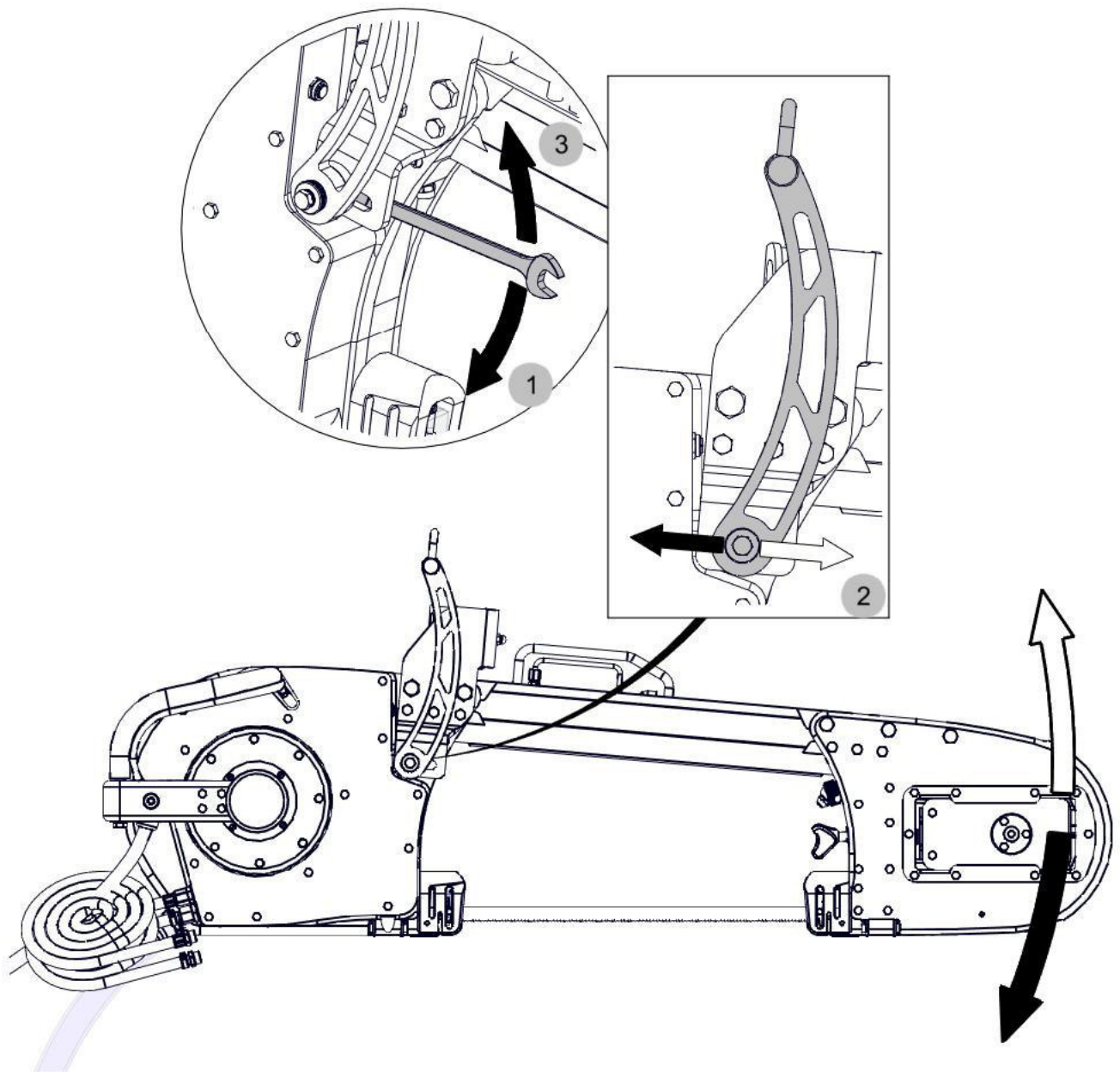
Werkzeugsatz
Toolkit



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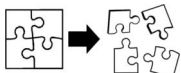


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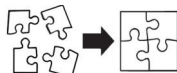


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Erklärung der Symbole siehe Betriebsanleitung Kap.1 / *Explanations of symbols see operating manual chp. 1*



Demontage
Disassembly



Montage
Assembly



Betriebsanleitung beachten
Pay attention to operating manual



Montageanleitung
Assembly instructions

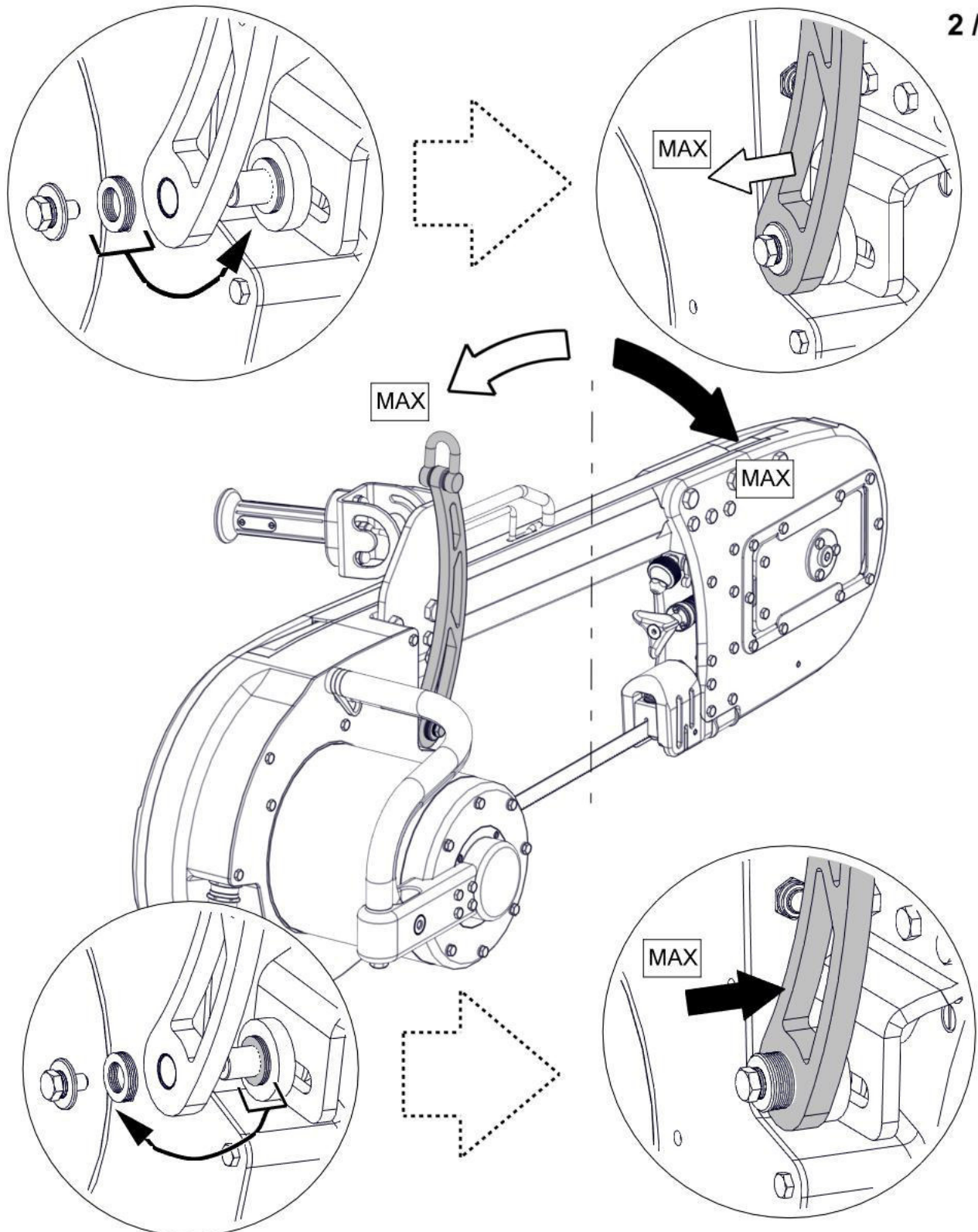


Werkzeugsatz
Toolkit



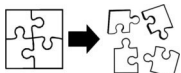
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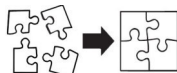


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Erklärung der Symbole siehe Betriebsanleitung Kap.1 / *Explanations of symbols see operating manual chp. 1*



Demontage
Disassembly



Montage
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Betriebsanleitung beachten
Pay attention to operating manual



Montageanleitung
Assembly instructions



Werkzeugsatz
Toolkit