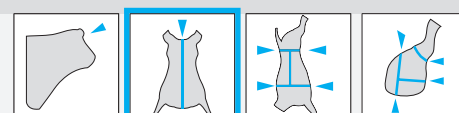


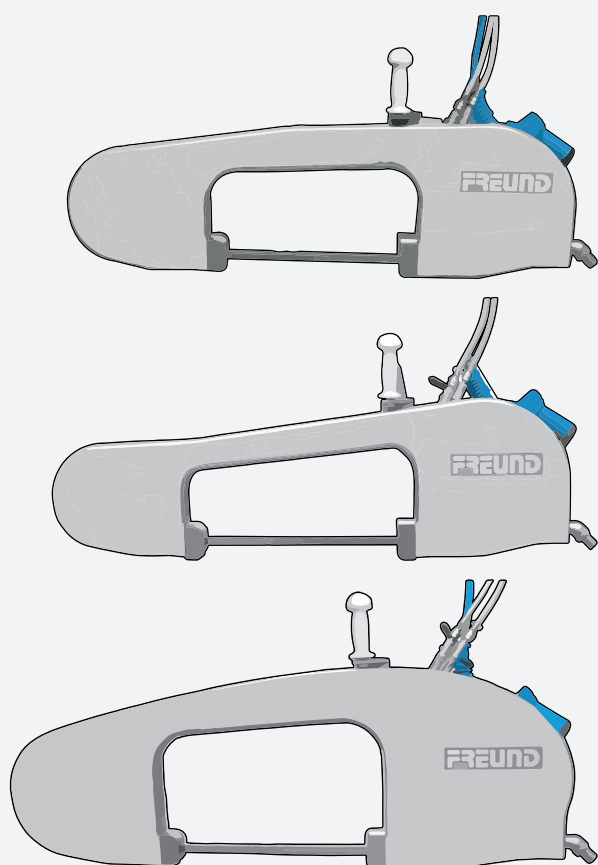
# OPERATING MANUAL SPLITTER-BAND-SAWS

Translation of original manual



## SPLITTER-BAND-SAW MODELS

- SB46-08
- SB49-08
- SB50-08





## Imprint

Home address    FREUND Maschinenfabrik GmbH & Co. KG  
                      Schulze-Delitzsch-Str. 38  
                      33100 Paderborn, GERMANY

Fon                +49 (5251) 1659-0

Fax                +49 (5251) 1659-77

E-Mail            mail@freund.eu

Internet          www.freund-germany.com

Sales             +49 (5251) 1659-0  
                      sales@freund.eu

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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 Splitter-Band-Saw 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.

### 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.

### 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.

### 1.4.3 Symbols



**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.



**Part of a spare parts kit**

This spare part is part of a spare parts kit, in which parts identified through experience as requiring replacement or being subject to wear are combined.



#### **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.



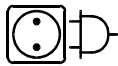
#### **Glue**

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



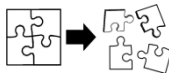
#### **Cleaning**

Instruction for an additional cleaning step.

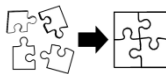


#### **Power plug**

symbolises the connection of the machine to the power network.

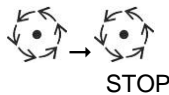


#### **Disassembly of the machine or component**



#### **Assembly of the machine or component**

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



#### **Braking time of the machine**

STOP

## 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 German DGUV Regel 110-008, the site operator may only allow insured persons who are over 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 information. 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>                                                                           |
| Risk assessment       | <p>The site operator must inform operators of possible dangers, symptoms and preventative measures. Relevant occupational safety conditions have to be complied with.</p> <p>Ensure eye and ear protection is worn at all times when operating the machine.</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 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 national and regional hygiene and workplace regulations.</p> |
| Escape routes         | <p>The operator must ensure that sufficient escape routes are available for the staff and that these are clearly marked. The operator must ensure that escape routes are not obstructed and that their function is not impaired (e.g. that doors open towards the escape route).</p>                                                                                                                                                                                                                                                                                         |
| Cleaning              | <p>The operator must ensure that machine and working equipment can be cleaned easily and without any risk. The operator must provide suitable detergents and define suitable cleaning procedures.</p>                                                                                                                                                                                                                                                                                                                                                                        |
| Instruction of staff  | <p>The 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>                                                                                                                                                                                                                                                                     |

## 2.3 Employee responsibilities

- Operating staff** The operating staff must be properly instructed and trained by the operator. Staff who have read and understood the safety information and have been properly familiarised themselves with the operation of the machine can be regarded as instructed.  
Operating staff must be familiar with the operating manual and the applicable OHS and accident prevention regulations.
- Qualified personnel** A technical expert is a person who, due to technical training and experience, possesses sufficient skills and knowledge.  
The technical expert must be familiar with the operating manual and the applicable OHS and accident prevention regulations, as well as the applicable animal welfare laws.
- 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 the operator or his authorised representative of any changes to the machine which may affect your safety.
- Competent personnel** Competent personnel are such persons who, due to technical training and experience, possess sufficient skills and knowledge.  
The technical expert must be familiar with the operating manual and the applicable OHS and accident prevention regulations as well as with the latest regulations of the protection of animals.
- 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.
- Emergency procedures** In the case of an accident, administer first aid and call a doctor and emergency medical services.  
Notify the operator or his authorised 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 in accordance with EN60204-1

All our electrical machinery and equipment is tested for electrical safety prior to commissioning and following modification or repair in our factory by an electrically skilled person in accordance with the electrical engineering rules as per DIN VDE 0701-0702 / EN60204-1. The inspection interval for machinery and equipment that is used in slaughtering and cutting plants is every 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 dangers involved which cannot be eliminated by design measures. These include:

- danger to life from live machine parts
- Cutting injuries from cutting tools
- risk of injury from negligent handling of personal safety equipment while operating the machine, during maintenance and repair work and during cleaning and disinfection
- danger of burning on hot surfaces
- danger of scalding because of hot water with temperatures higher than 65°C.
- danger of crushing injuries to fingers and hands from getting caught when closing the cover.
- hearing damage from noise if noise emissions exceed 75 dB(A)

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

FREUND splitter-band-saws are designed for halving pigs, sows and cattle in operations of all sizes.

The exact usage of individual machines is described in → chapter *Overview of the machines* from page 18.

## 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 machines with safety extra-low voltage less than 50 V (e.g. 42 V) without a safety transformer.
- the use of machines with an operating voltage of more than 50 V (e.g. 400 V) in slaughter rooms without a residual-current circuit breaker.
- 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
AUT	Automatic	Automatic (hydraulic) blade-tensioning-system
HF	Lever blade guide	Manual sawblade infeed
JF	Adjustable guide	Automatic sawblade infeed
DES-E	Inbuilt-disinfection-kit	Interior disinfection
IBK-P07	Inbuilt-disinfection-kit P07	Automatic, time-controlled interior disinfection
2HSSC	Two-hand synchronous safety circuit	Improved two-hand safety circuit, complies with DIN EN 574
EWV	Electrical water valve	Automatically controls the water supply
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	Safety transformer	Generates the required safety extra-low voltage for 42 V machines; complies with the requirements of EN 60204-1 and EN 61558-1

## 3.2 Overview of the machines



Exact details regarding the features of your machine are provided on the cover sheet for each machine.

### 3.2.1 Splitter-Band-Saw SB46-08

- Use
- For halving pigs and cattle
  - Restricted for the use of low gambrels to halve pigs.

View

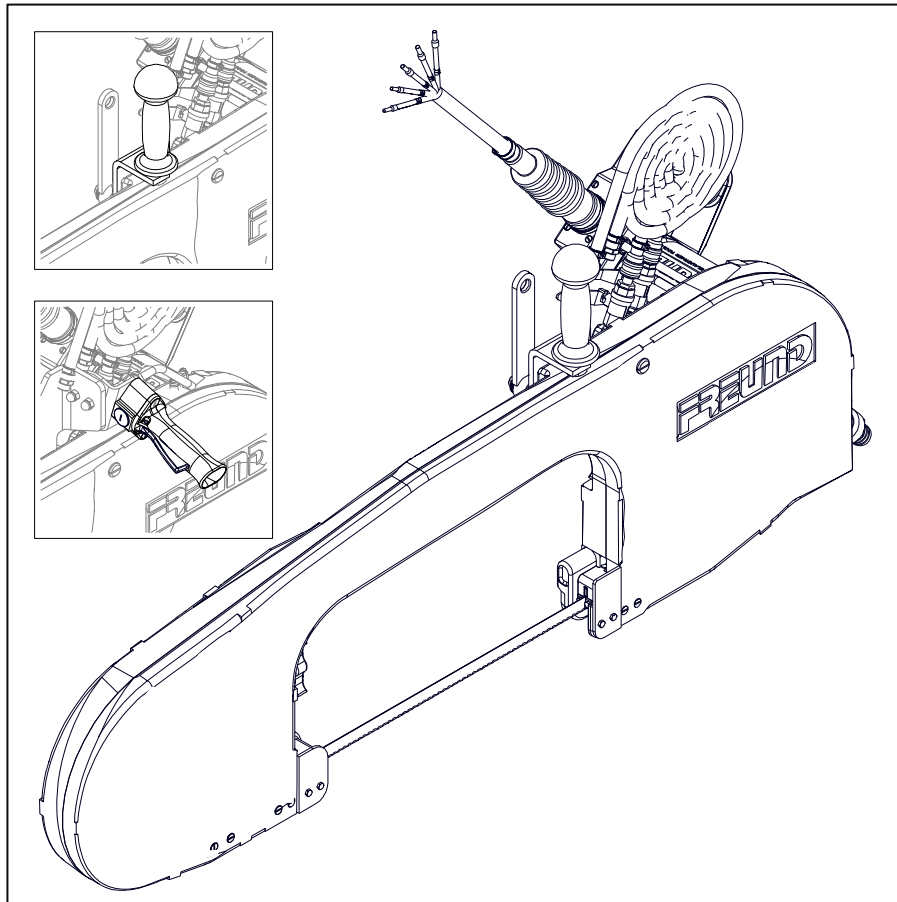


Fig. 3-1 View of standard machine SB46-08 with detailed view of handle  
Top: standard machine; bottom: two-hand machine

Equipment  
options

- Voltage choice\* 42 V, 400 V
- \* Special voltages available on request
- MAN – Manual blade-tensioning-system with lever blade guide
  - AUT – Automatic blade-tensioning-system with hydraulic bloc
  - EWV – Electrical water valve for cold water
  - 2HATDS – Two-hand synchronous safety circuit
  - Additional side handle (not in combination with 2HATDS)
  - Automatic interior disinfection program controller P07

Dimensions

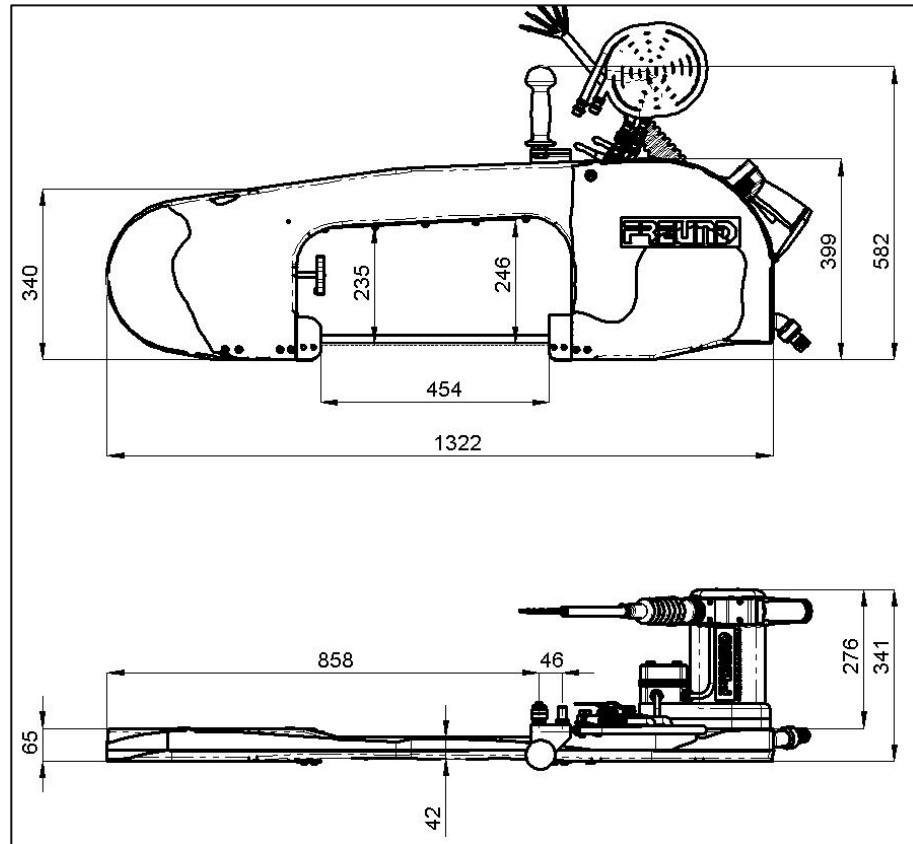


Fig. 3-2 Dimensions [mm]

Band saw blade selection

Type*	Toothing	Part-No.
BA46 FA	Standard 8 mm	224-010-004
BA46 GA	Standard 8 mm	224-011-004
BA46 GC	Cleaning tooth 10 mm	224-011-204

\* 5 per packaging unit

Optional accessories

	Part-No.
Balancer F65-2	920-440-000
Balancer F60-3	920-475-000
Transformer TR7-SG-SB	912-030-383
Transformer TR7-SG-SB-P07 360	912-030-384
Disinfection cabin DESK-04	913-505-002

### 3.2.2 Splitter-Band-Saw SB49-08

- Use
- Halving of pigs
  - Expansion brace slaughtering of pigs, light sows and sheep
  - Restricted for use to halve cattle

View

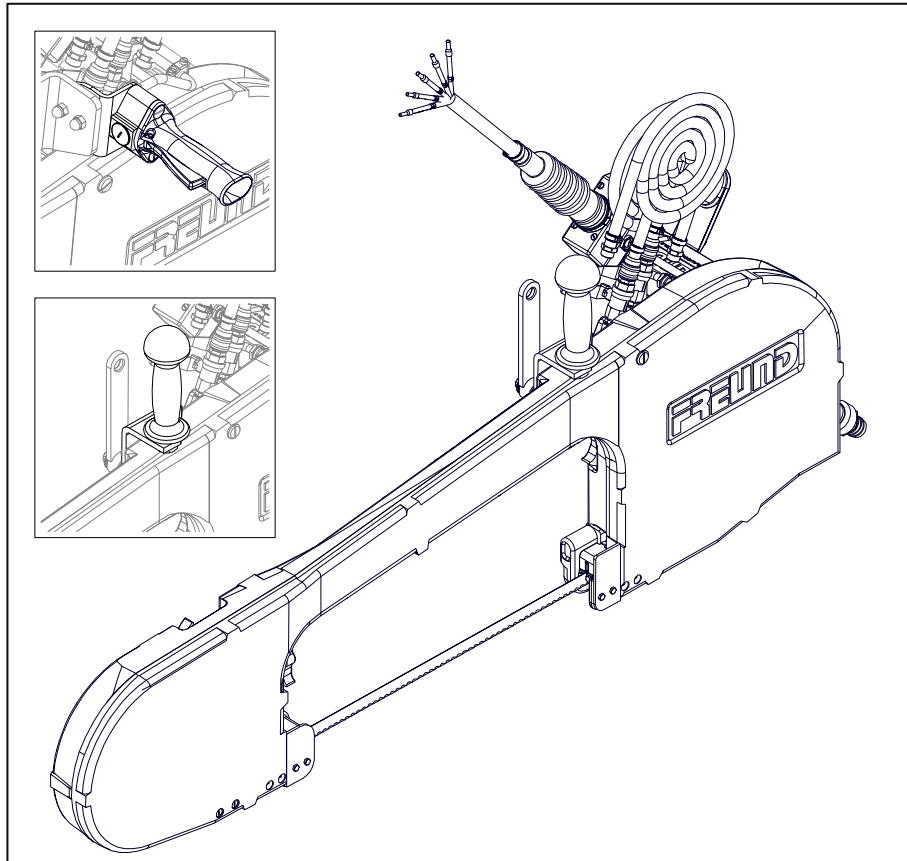


Fig. 3-3 View of standard machine SB49-08 with detailed view of handle  
Top: standard machine; bottom: two-hand machine

Equipment  
options

- Voltage choice\* 42 V, 400 V
- \* Special voltages available on request
- MAN – Manual blade-tensioning-system with lever blade guide
  - AUT – Automatic blade-tensioning-system with hydraulic bloc
  - EWV – Electrical water valve for cold water
  - 2HATDS – Two-hand synchronous safety circuit
  - Additional side handle (not in combination with 2HATDS)
  - Automatic interior disinfection program controller P07

Dimensions

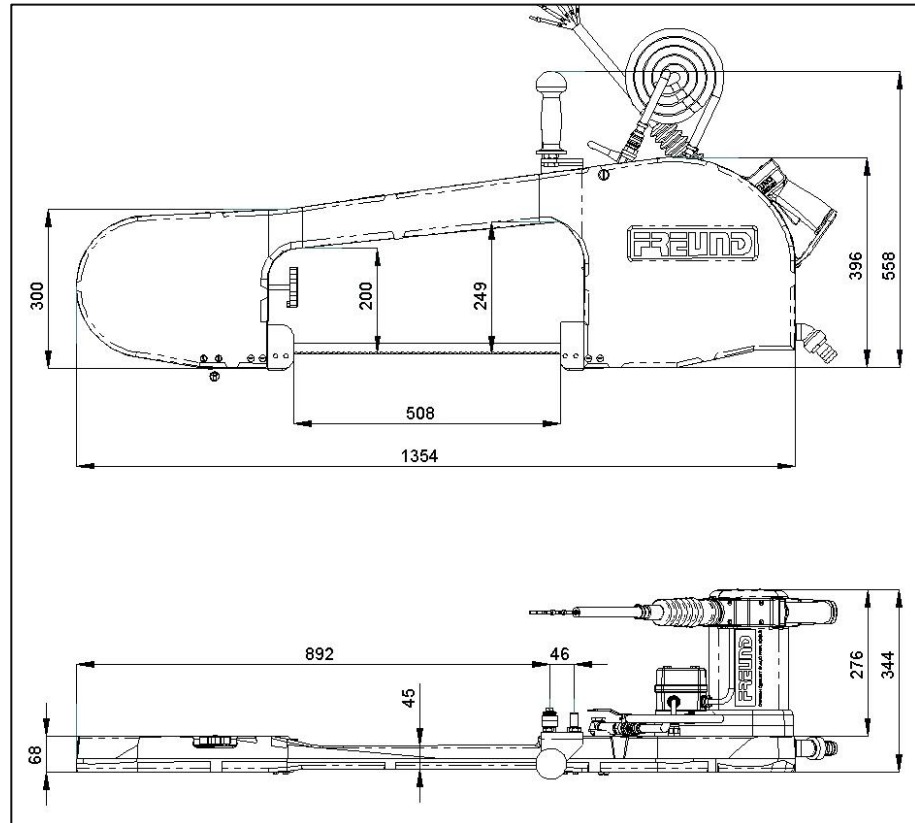


Fig. 3-4 Dimensions [in mm]

Saw blade  
selection

Type*	Toothing	Part-No.
BA49 FA	Standard 8 mm	224-010-006
BA49 FC	Cleaning tooth 10 mm	224-010-206
BA49 GA	Standard 8 mm	224-011-006
BA49 GC	Cleaning tooth 10 mm	224-011-206

\* 5 per packaging unit

Optional  
accessories

	Part-No.
Balancer F65-2	920-440-000
Balancer F60-3	920-475-000
Transformer TR7-SG-SB	912-030-383
Transformer TR7-SG-SB-P07 360	912-030-384
Disinfection cabin DESK-04	913-505-002

### 3.2.3 Splitter-Band-Saw SB50-08

Use • Halving of cattle

View

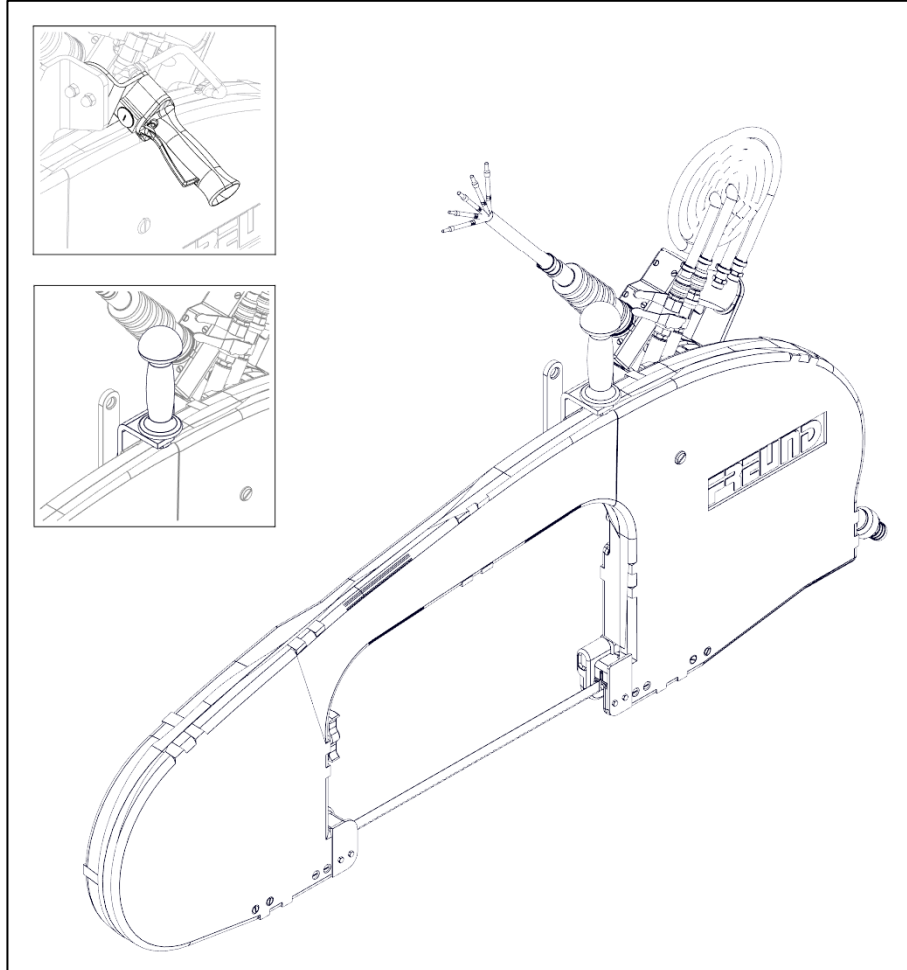


Fig. 3-5 View of standard machine SB50-08 with detailed view of handle  
Top: standard machine; bottom: two-hand machine

Equipment  
options

- Voltage choice\* 42 V, 400 V
  - \* Special voltages available on request
- MAN – Manual blade-tensioning-system with lever blade guide
- AUT – Automatic blade-tensioning-system with hydraulic bloc
- EWW – Electrical water valve for cold water
- 2HATDS – Two-hand synchronous safety circuit
- Additional side handle (not in combination with 2HATDS)
- Automatic interior disinfection program controller P07

Dimensions

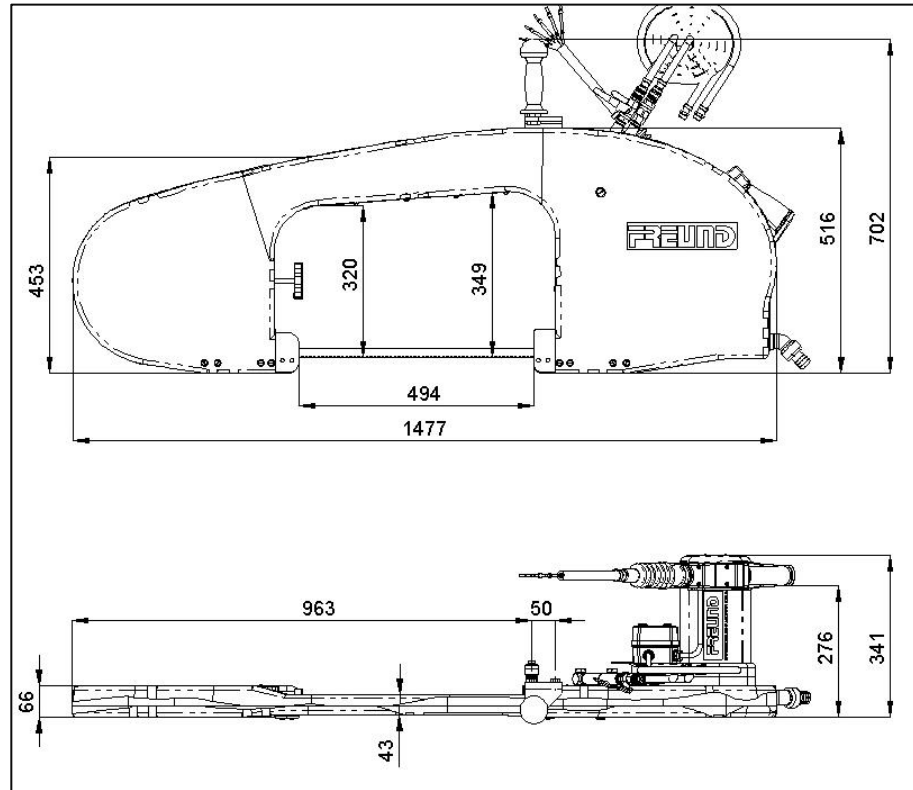


Fig. 3-6 Dimensions [mm]

Saw blade  
selection

Type*	Toothing	Part-No.
BA50 FA	Standard 8 mm	224-010-005
BA50 FC	Cleaning tooth 10 mm	224-010-205
BA50 GA	Standard 8 mm	224-011-005
BA50 GC	Cleaning tooth 10 mm	224-011-205

\* 5 per packaging unit

Optional  
accessories

	Part-No.
Balancer F70-3	920-476-000
Transformer TR7-SG-SB	912-030-383
Transformer TR7-SG-SB-P07 360	912-030-384
Disinfection cabin DESK-04	913-505-002

### 3.3 Technical data

	SB46-08	SB49-08	SB50-08
Weight [kg]	approx. 61	approx. 58	approx. 70
Total length [mm]	1400	1430	1550
Cutting depth [mm]			
Output side	230	195	320
Input side	250	250	350
Cutting width [mm]	460	490	500
Motor	Type 08	Type 08	Type 08
Motor rating [kW]	2300	2300	2300
Duty type	S6	S6	S6
Speed [rpm]	760	760	760
Operating voltage [V]	42/400	42/400	42/400
Rated current [A]	40/4.3	40/4.3	40/4.3
Current frequency [Hz]	50	50	50
Noise emission [dB(A)]	≤ 70 dB, can rise to 95 dB (A) during operation		
Vibration [m/s <sup>2</sup> ]	< 2.5	< 2.5	< 2.5
Water connection ["]	3/8	3/8	3/8
Protection class	IP 65	IP 65	IP 65

### 3.4 Rating plate


①	www.freund-germany.com D-33100 Paderborn, Schulze-Del.-Str. 38	
②	<b>Bandsäge</b>	<b>SB50-08</b>
③	Nennspannung: 42V 3ac Nennleistung: 2300W Frequenz: 50Hz Nennstrom: 40A	Betriebsart: S6-20% Drehzahl: 760 U/min Schutzart: IP65 cos phi = 0.78
④	Bauwoche: 29/2016	PPA: 50483

Fig. 3-7 Example of rating plate on front of motor

	Explanation
1	Company address
2	Machine type and designation



3	<p><i>Performance data:</i></p> <table> <tr> <td>Rated voltage [V]</td><td>Duty type</td></tr> <tr> <td>Rated power [W]</td><td>Speed [rpm]</td></tr> <tr> <td>Frequency [Hz]</td><td>Protection class</td></tr> <tr> <td>Rated current [A]</td><td>Displacement power factor [cos φ]</td></tr> </table>	Rated voltage [V]	Duty type	Rated power [W]	Speed [rpm]	Frequency [Hz]	Protection class	Rated current [A]	Displacement power factor [cos φ]
Rated voltage [V]	Duty type								
Rated power [W]	Speed [rpm]								
Frequency [Hz]	Protection class								
Rated current [A]	Displacement power factor [cos φ]								
4	Year of manufacture of the machine, production order no.								

### 3.5 Lubricants

The disturbance-free functioning and the efficiency of the equipment depend significantly on the quality of the lubricants used.

The H1 designation has been established as an international standard for food grade lubricants. The NSF-H1 standard describes products that must be used whenever accidental contact with foodstuffs is possible.

FREUND Maschinenfabrik uses lubricants that are in compliance with the H1 standard on all equipment where accidental contact between the lubricants and the animal carcass is possible.

**Safety data sheet** For further information refer to our safety data sheets. The safety data sheets are available from our sales. Please refer to the company information at the imprint for address and telephone numbers.

**Gearbox grease** FREUND-grease is high-performance transmission grease that is extremely resistant to high pressure loads and high temperatures. It is physiologically harmless and resistance to oxidation and ageing.

### 3.6 Synchronized two-hand safety switch (option)

Optionally you can operate the machine with a synchronized two-hand safety switch (2HATDS-M).

The 2HATDS-M is controlled by a magnetic sensor. This magnetic sensor doesn't need an extra switch housing, so that the hole switching is less susceptibility to faults.

The 2HATDS-M meets the requirements of Type III B of DIN EN 574. It is powered with an external control box.

- Features**
- Synchronised switching on:  
Both switch-on triggers must be pressed within 0.5 seconds. During work with the machine the operator must continuously and simultaneously press both triggers.
  - Recreating the output signal:  
The machine can only be switched on again, after both switch-on triggers have been released.
  - Manipulation of the 2HATDS-M is not possible.
  - Reduced susceptibility to interference from moisture and dirt because of a protected magnetic sensor.

### 3.7 Inbuilt-Disinfection-Kit DES-E

The Inbuilt-Disinfection-Kit DES-E disinfects the machine after an operation. It is operated using hot water.

The water is supplied to the machine via a spiral hose. The water quantity is adjusted manually via the ball valve.

The flat-jet nozzles disinfect the band saw blade and the interior of the machine.

- Features
- Hot water supply for Inbuilt-Disinfection-Kits
  - Electro-water-valves with complete piping with elbows, fittings and cabling
  - Three flat-jet nozzles with a water consumption of only 2½ l per minute and nozzle

### 3.8 Automatic internal sanitation-control DES-P07 (option)

The Internal Sanitation-Control DES-P07 controls the automatic execution of the disinfection cycle after each sawing operation.

The interior and the band saw blade of the machine are cleaned and disinfected with hot water after a preset time interval (default setting 5 seconds).

The automatic disinfection process can be manually interrupted at any time by switching on the machine.

- Features
- Variable time setting
  - Manual interruption of the disinfection process is possible
  - Flat-jet nozzles with a water consumption of only 2½ l per minute and nozzle

### 3.9 Scope of delivery

- Machine with operating manual
- 2 thickness gauges
- 1 set of 5 band saw blades

## 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 **Fehler!**  
**Verweisquelle konnte nicht gefunden werden.** on page **Fehler!**  
**Textmarke nicht definiert..**

- 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

After unpacking, the machine is ready for use.

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 50.

- 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 Connecting the machine



#### **DANGER!**

##### **Live machine parts.**

Risk of fatal injury due to electrical 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 once the work is complete.

Length of the connection cable

The machine's connection cable is 8 m long; the cable should not be extended.

#### 5.3.1 Machines with 42 volt operating voltage

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

We recommend FREUND transformers TR7-SG-SB (part-no. 912-030-383) or, for automatic control of the interior disinfection, TR7-SG-SB-P07 (part-no. 912-030-384).

Fasten the transformers in place using our optional wall fastening set, part-no. 100-022-069.

Detailed information on the attachment and operation of the transformer can be found in the corresponding operating manual.

Connection diagram for 42 V machines

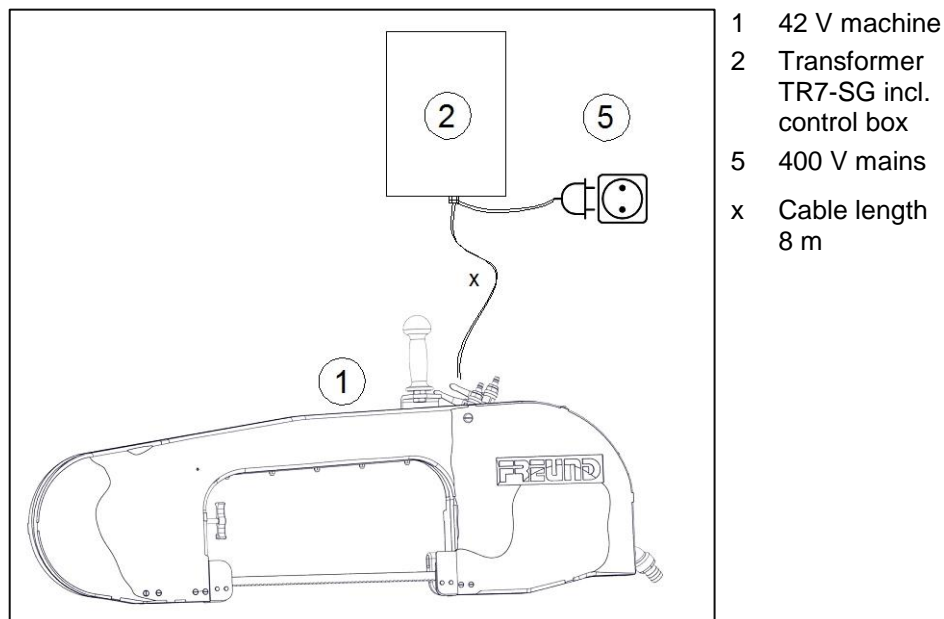


Fig. 5-1 Connection diagram for 42 V machines

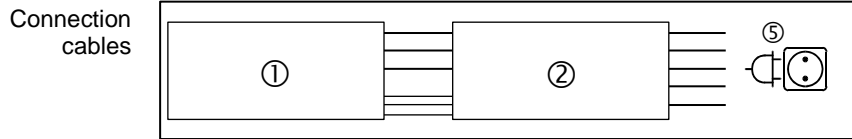


Fig. 5-2 Connection cables for 42 V machines

### 5.3.2 Machines with 400 volt operating voltage



Handheld machines with an operating voltage of more than 50 V (e.g. 400 V) that are used in the slaughter rooms **must** be secured on-site by the site operator using a residual-current circuit breaker (FI switch) smaller than or equal to 30 mA.

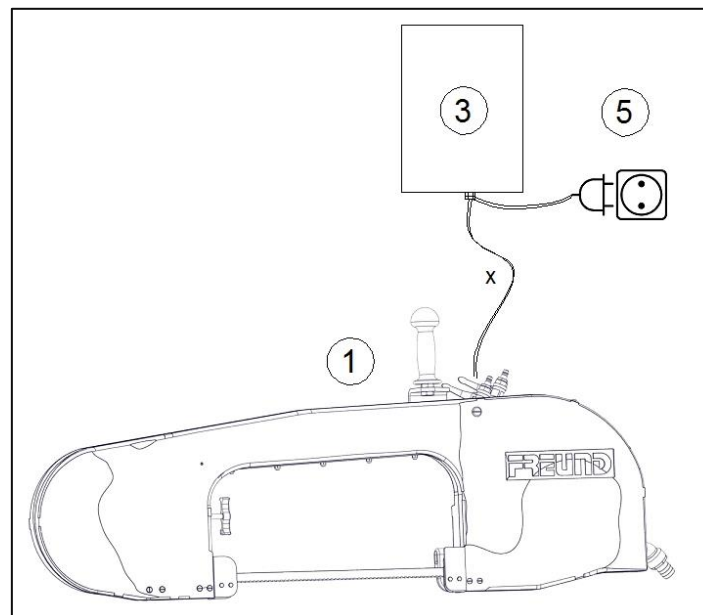
400 V FREUND machines can only be operated with an additional control box.

FREUND control box

We recommend FREUND control box SG-SB-MSS-P07 (part-no. 148-004-055)

Fasten the control box in place using our optional wall fastening set (part-no. 100-022-069).

Connection diagram for 400 V machines



- 1 400 V machine
- 3 Control box
- 5 400 V mains
- x Cable length 8 m

Fig. 5-3 Connection diagram for 400 V machines

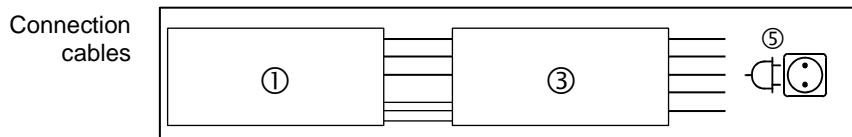
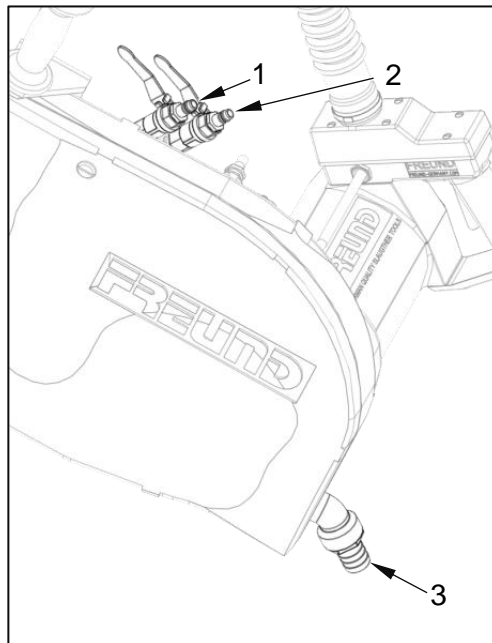


Fig. 5-4 Connection cables for 400 V machines

## 5.4 Connecting water hoses



- 1 Cold water connection
- 2 Hot water connection
- 3 Water outlet

Fig. 5-5 Workplace

## 5.5 Setting the disinfection cycle



The disinfection cycle for internal disinfection is set to 5 seconds in the factory. The disinfection cycle can be adjusted using the timer relay in the transformer or the control box.

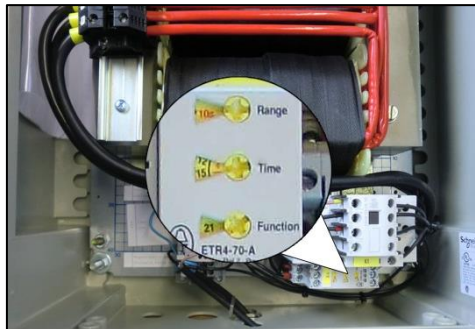


Fig. 5-6 Timer relay in transformer TR7

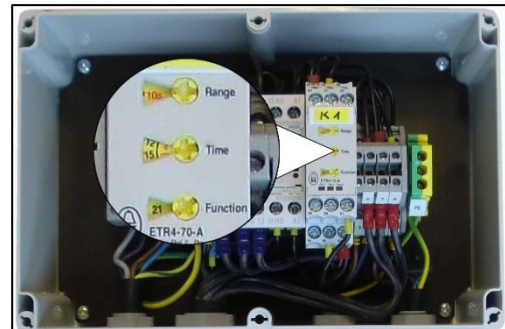


Fig. 5-7 Timer relay in control box

The “Range” value must be set to 10. The “Function” value must be set to 21.

You can check the setting for the duration of the interior disinfection using the “Time” value (red numbers).

We recommend setting this value to between 4 and 6 seconds.



## 5.6 Installing the balancer

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

For safety reasons, the machine may only be operated when a balancer is used.

1. Secure the balancer in accordance with the manufacturer's operating manual.
2. Attach the balancer to a sliding rail system to a beam above the workplace or at the ceiling.



The distance between the centre of the overhead track or the carcass suspension point and the balancer suspension should be between 350 - 400 mm.

3. Attach the machine to the balancer that the head section faces downwards.

The balancer must be set so that the machine can be moved up and down without too much effort. The suspension of the machine offers different possibilities for positioning.

4. Readjust the balancer if necessary. Observe the operating manual for the balancer when doing so.

## 6 Operating

### 6.1 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.

**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

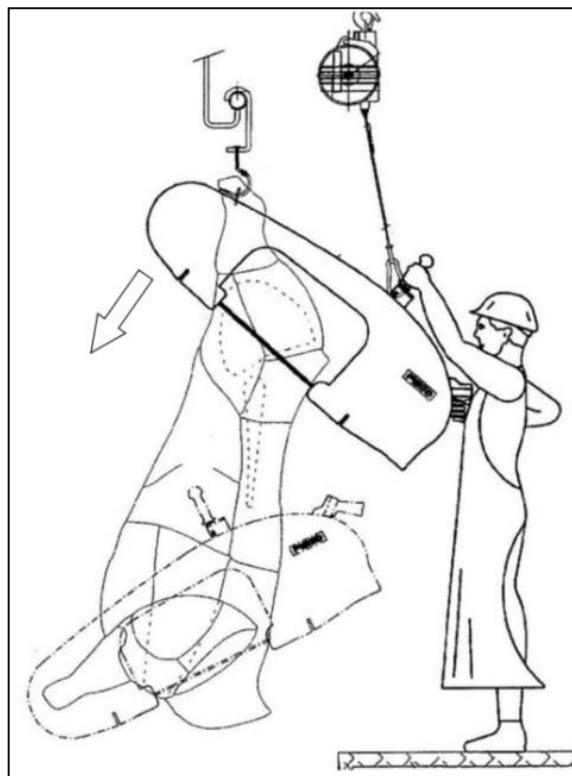


Fig. 6-1 Workplace

## 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* <sup>1</sup> (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* <sup>2</sup>		
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		

- \* <sup>1</sup> 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.
- \* <sup>2</sup> 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 Spare part kits

FREUND-spare part kits contain all common spare parts and parts subject to wear that, according to experience, must be replaced regularly. Downtime is kept to a minimum by the stocking of parts. The spare parts included in the package are significantly cheaper than the entire individual components. The quantity of single spare parts in the spare part kits can be larger than at the individual assembly.



Information about the content of the available spare part kits can be found in the spare parts list.

## 8.4 Recommended lubricants

For changing the gear motor of the machines SB46, SB49 and SB50 you need 750 g of gearbox grease.

Sales container	Part-No.
1kg box	171-500-010

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

## 8.5 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.

Interval	Maintenance job	→ chapter
Daily	Visual inspection before starting any work	→ chapter <i>Daily safety check</i> on page 35
	Check the balancer settings	→ chapter <i>Checking the Balancer Settings</i> on page 43
Once a week	Check the thrust plates for wear	→ chapter <i>Checking the Thrust Plates</i> on page 43
	Check the guiding gap and re-adjust if required	→ chapter <i>Adjusting the guide gap</i> on page 44
	Check the blade tension and re-adjust if required	→ chapter <i>Setting the band saw blade tension</i> on page 43

Interval	Maintenance job	→ chapter
If required but at least every 3 months	Replace the guiding plates	
Every 6 months	Periodic inspection in accordance with VDE 0701/0702/EN60204-1	→ chapter <i>Periodic inspection of electrical equipment</i> on page 42
If required	Replace the band saw blade	→ chapter <i>Replacing the band saw blade</i> on page 43
	Checking bearings and seals for signs of wear and replace	
	Adjust the output wheel	→ chapter <i>Adjusting the output wheel</i> on page 43

## 8.6 Periodic inspection of electrical equipment



Service package  
SDL-003-004

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.

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.

## 8.7 Eliminating the Causes of Band Saw Blade Breakage

Premature band saw blade breakage can have the following causes:

- Wrong band saw blade type
- Wrong balancer adjustment
- Worn thrust plates
- Band saw blade tension not set correctly (→ chapter "*Setting the band saw blade tension*" on page 43)
- Guiding gap setting too narrow (→ chapter "*Adjusting the guide gap*" on page 44)

### 8.7.1 Checking the Band Saw Blade Type

Not every type of band saw blade is suitable for every type of sawing work.

- Check whether the band saw blade type is suitable for your work.

### 8.7.2 Checking the Balancer Settings

The balancer must be set so that the machine can be moved up and down with almost no effort and slowly slides down through the carcass only due to its own weight.

The cutting force may not be applied by the operator but should be applied by the weight of the saw. The operator guides the machine through the carcass without applying too much force.

- Set the balancer so that the machine slides down only due to its own weight.

### 8.7.3 Checking the Thrust Plates

Friction between the band saw blade and the upper thrust plate causes score marks to be formed in the thrust plates.

As the number of operating hours increases, the score marks in the thrust plate become deeper. If the groove becomes too deep, this can cause the saw blade to jam during sawing and the back of the saw blade can break.

- Check the thrust plates when carrying out the first band saw blade replacement in a shift.
- Turn the thrust plates round or over if a distinct mark is visible. Turning the thrust plate allows it to be used up to 4 times.

## 8.8 Replacing the band saw blade

### 8.8.1 Manual blade-tensioning-system

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010843-C**.

### 8.8.2 Automatic blade-tensioning-system

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010846-C**.

## 8.9 Setting the band saw blade tension

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010843-C**.

## 8.10 Adjusting the output wheel

### 8.10.1 Manual blade-tensioning-system

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010844-C**.

### **8.10.2 Automatic blade-tensioning-system**

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010847-C**.

## **8.11 Adjusting the guide gap**

### **8.11.1 Manual blade-tensioning-system**

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010845-C**.

### **8.11.2 Automatic blade-tensioning-system**

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010848-C**.

## **8.12 Replacing the guide plates and thrust plates**

### **8.12.1 Manual blade-tensioning-system**

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010845-C**.

### **8.12.2 Automatic blade-tensioning-system**

You can find the corresponding installation manual in the spare parts list under the heading **MTA-010867-C**.

## 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](http://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

Fault	Possible cause	Remedy
Motor not running/stops during work.	No 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.
	Defective fuse in transformer.	Replace the fuse.
	Thermal contact in transformer tripped.	Switch off the machine. Wait until the machine has cooled down. Replace the switch if required.
Increase in force required for sawing.	Band saw blade blunt.	Replace the band saw blade; see → chapter <i>Replacing the band saw blade</i> on page 43.
	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.	Guide lever jammed or not running smoothly.	Clean the band saw blade guide.
Saw not guided straight while cutting.	Band saw blade teeth running on output wheel.	Readjust the band saw blade; see → chapter <i>Adjusting the output wheel</i> on page 43.
	Band saw blade guide worn.	Replace the guide plates.
	Machine not suspended correctly.	Align the machine vertically. Prevent the machine from tipping over to the front or sideways at the rear when it moves.
	Band saw blade tension too low.	Readjust the blade tension; see → chapter <i>Setting the band saw blade tension</i> on page 43.

Fault	Possible cause	Remedy
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 – see → chapter Recommended lubricants on page 41.
	Fastening bolts loose.	Check the bolts/nuts to ensure they are tight.
	There has been a phase failure.	Check the connections and, if necessary, the resistance of the coil.
Motor overheating (temperature > 70°C).	On 42 V machines: Transformer capacity is not sufficient/not a FREUND transformer.	Use the transformer recommended by FREUND.
	Incorrect connection cable: cross-section too small and/or connection cable too long.	Only use the original cable. Do not extend the connection cable to more than 8 m.
	Loose contact in connection cable.	Have the electrical connections checked by a qualified electrician, and retighten the terminal if necessary.
	Moisture in control handle control box.	Unscrew the cover. Remove the moisture. Replace any corroded terminals and connections. Replace the cover gasket. Check the bellow and replace it if required. Retighten the hose ties if required.
	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.
	Mains voltage incorrect or fluctuating.	Use a machine that is suitable for the mains voltage.

Fault	Possible cause	Remedy
Machine direction of rotation incorrect.	Connection cable connected incorrectly.	Have the connections checked and corrected by a qualified electrician.
Machine sawing poorly, or not at all.	Band saw blade fitted incorrectly.	Remove the band saw blade. Refit the band saw blade with the teeth facing in the direction of the housing; see → chapter <i>Replacing the band saw blade</i> on page 43.
	Band saw blade blunt.	Replace the band saw blade; see → chapter <i>Replacing the band saw blade</i> on page 43.
	Guide gap too narrow.	Readjust the guide gap; see → chapter <i>Adjusting the guide gap</i> on page 44.
Band saw blade getting stuck in carcass.	Incorrect band saw blade type.	Switch off the machine. Replace the band saw blade; see → chapter <i>Replacing the band saw blade</i> on page 43.
	Incorrect free-cutting action due to changed tooth set.	
	Band saw blade blunt.	
	Band saw blade bent.	Switch off the machine. Pull the machine out of the carcass. Increase the kerf.
	Machine stuck in a bone.	
Band saw blade jammed.	Band saw blade and/or saw blade guide soiled.	Clean the band saw blade and/or the saw blade guide.
	Guide gap too narrow.	Readjust the guide gap; see → chapter <i>Adjusting the guide gap</i> on page 44.
Band saw blade slipping under load.	Band saw blade tension set incorrectly.	Readjust the blade tension; see → chapter <i>Setting the band saw blade tension</i> on page 43.
	Band saw blade soiled.	Clean the machine.



Fault	Possible cause	Remedy
Premature band saw blade breakage.	Band saw blade guide worn.	Replace the guide plates.
	Band saw blade tension set incorrectly.	Readjust the blade tension; see → chapter <i>Setting the band saw blade tension</i> on page 43.
	Band saw blade constantly running against thrust plate.	Guide the machine through the carcass without applying too much force.
	Too much force used when guiding the machine.	
Premature band saw blade breakage.	Balancer set for different weight range.	Use a balancer with the correct weight range and cable travel; see → chapter "Overview of the machines" on page 18. It must be possible to pull out the cable easily and without jamming it.
	Cable travel for balancer jammed.	
	Incorrect balancer settings.	Adjust the balancer. Set the balancer so that the machine slowly slides down under its own weight; see → chapter <i>Checking the Balancer Settings</i> on page 43.
	Band saw blade teeth running on output wheel.	Readjust the band saw blade; see → chapter <i>Adjusting the output wheel</i> on page 43.
	Thrust plates worn.	Rotate the thrust plates by 90° or replace them; → chapter <i>Checking the Thrust Plates</i> on page 43).
Drive shaft not turning when motor running.	Broken connecting shaft between motor and gear unit.	Replace the defective parts.
	Keys sheared.	
	Coupler bushings defective.	

## 10 Disposal and Recycling

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

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

### 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 all connections and supply lines from the machine.
2. Completely disassemble the machine.
3. Segregate all materials.
4. Dispose of waste oil and components and materials soiled with oil in accordance with the applicable environmental regulations.
5. Send the individual materials to the appropriate recycling or disposal facilities.
6. Send hazardous waste to a local hazardous waste site.

### 10.2 Disposing of 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.

## 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	G-AISI 5 Mg	Cast aluminium	Partial grinding; black anodized
Div. components (guide- and hydraulic bloc)	AlCuMgPb (3.1645)	Aluminium	natural anodized
Wheels	X5CrNi18-10 (1.4301)	Stainless steel	
Guide plates	H520, K10	Hard metal	
Div. fasteners	A2 (1.4301)	Stainless steel	
Div. sealing elements	NBR70, NBR90	Nitrile rubber	

Paderborn, 18.01.2018

  
Head of Development