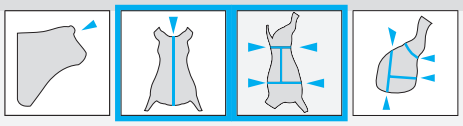
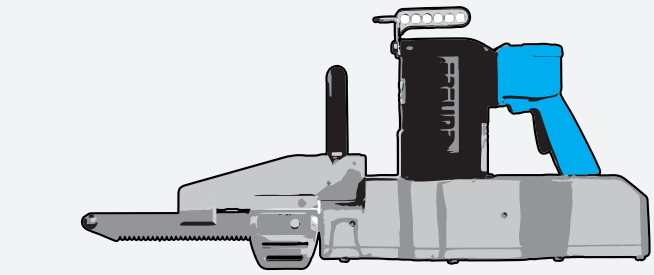
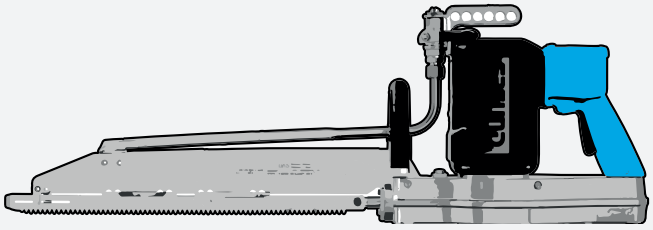
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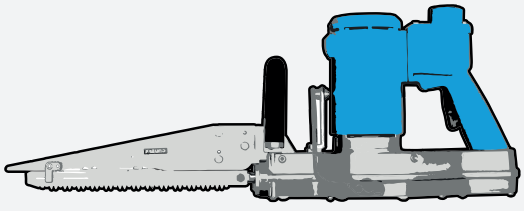
OPERATING MANUAL RECIPROCATING SAWS

Translation of original manual









RECIPROCATING SAW MODELS

- BBH30-03
- SH60-03
- BBST30-13
- SST50-13
- ST40-13
- ST40-11S
- ST40-11-115V
- ST30-11S

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 reciprocating saws as “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 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.

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.

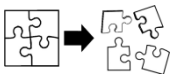


Cleaning

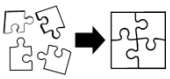
Instruction for an additional cleaning step.



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.

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

When using the machine, hazards can arise in certain situations or as a result of certain behaviour.

These operating instructions provide the safety instructions for a sequence of tasks in which there is a risk of personal injury or property damage.

The described safety measures must be observed.



Signal word!

Type and source of hazard.

Potential consequences of the hazard.

➢ Instructions to avoid the hazard.

Signal word	Meaning
DANGER	Indicates an immediate hazard which will lead to a danger to life or death unless avoided.
WARNING	Indicates a potential hazard which may lead to a severe injury or death unless avoided.
Caution	Indicates a potential hazard which may lead to a minor to moderate injury unless avoided.
Attention	Indicates a potential hazard which may lead to a harm to the machine or the environment unless avoided.

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	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. The site operator is obliged to ensure that each employee is properly trained in the operation of the machine. Staff undergoing training may only work at the machine under the supervision of properly qualified staff.
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.
Safety of the machine	The site operator must ensure that the machine is only operated and used in perfect and functional condition. The site operator must ensure that safety devices are regularly serviced and checked for proper function.
Safety of the machine	The site operator must ensure that the machine is only operated and used in perfect and functional condition. The site operator must ensure that safety devices are regularly serviced and checked for proper function.
Workplace	The operator must ensure that the lighting intensity is at least 500 lux. 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. The material of the floor must be such that the risk of slipping on wet, greasy or soiled floors is reduced. The workplace must comply with the national and regional hygiene and workplace regulations.
Escape routes	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).
Cleaning	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.
Instruction of staff	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.

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 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
- 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.

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 jigsaws are intended for a variety of cutting tasks in operations of all sizes.

The exact usage of individual machines is described in → chapter *Overview of the machines* from page 17.

Safety requirements

Machines with a safety extra-low voltage less than 50 V (e.g. 42 V) must be operated with a safety transformer.

Machines with an operating voltage of more than 50 V (e.g. 400 V) should be secured on the operating side with a residual-current circuit breaker of less than or equal to 30 mA.

Failure to observe this results in the risk of fatal injury.

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 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 Rating plate

The rating plate is attached to the front of the motor.

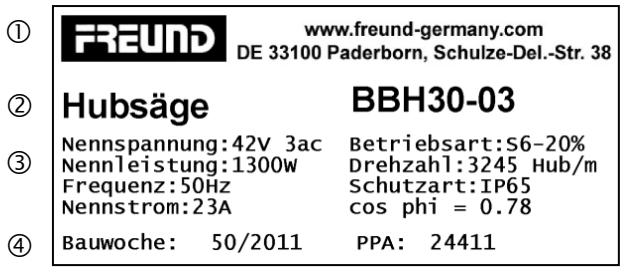


Fig. 3-1 Rating plate example

	Explanation
1	Company address
2	Machine type and designation
3	Performance data: 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.

3.2 Overview of the machines

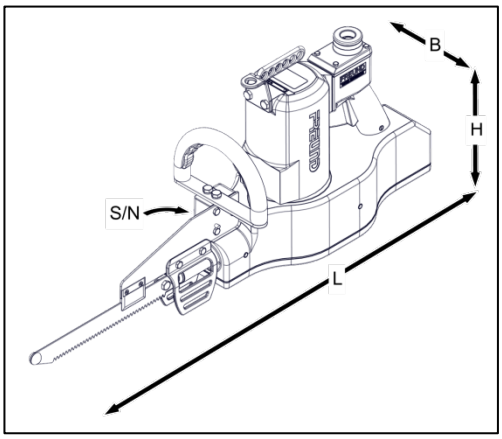
Exact details regarding the features of your machine are provided on the machine-related cover sheet.

Technical data can be found on the table in the → *Appendix*.

3.2.1 Reciprocating Breastbone Saw BBH30-03

Use
- Opening the breastbone
- >500 cattle or >5000 pigs per week
- High throughput plants

View



(S/N = serial number)

Fig. 3-2 Example of reciprocating breastbone saw

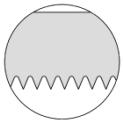
Dimensions

	BBH30-03
Weight [kg]	18.5
Saw blade length [mm]	300
Length L [mm]	824
Height H [mm]	330
Width B [mm]	190

Equipment options
- Voltage choice* 42 V, 400 V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	HUFZ 300BB	223-000-001
	HUGZ 300BB	223-005-007

Optional accessories

	Part-No.
Balancer F 18-2SK	920-430-100
Transformer TR3-SG	912-010-382
Disinfection cabin DES-K01	913-501-502

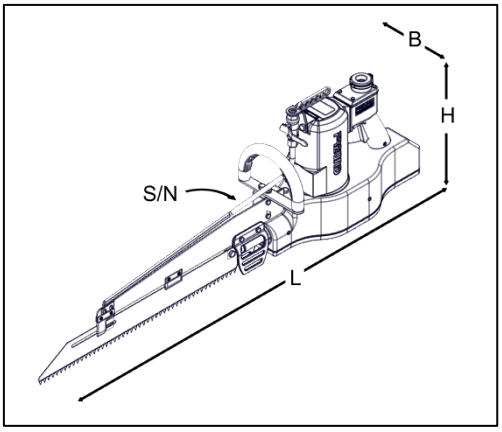
Wall socket

400 V – 16 A (red)	100-017-043

3.2.2 Reciprocating Splitter Saw SH60-03

Use
- Halving
- up to 200 sheep, 100 pigs or 20 cattle per week
- Small and medium plants

View



(S/N = serial number)

Fig. 3-3 Example of reciprocating splitter saw

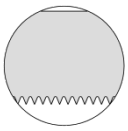
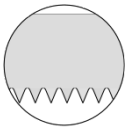
Dimensions

	SH60-03
Weight [kg]	20
Saw blade length [mm]	600
Length L [mm]	1120
Height H [mm]	350
Width B [mm]	190

Equipment options
- Voltage choice* 42 V, 400 V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	HUFZ 600SP	223-000-102
	HUGZ 600SP	223-005-102

Optional accessories

	Part-No.
Balancer F 22-2SK	920-431-100
Balancer F 20-3SK**	920-470-100
Transformer TR3-SG-KS	912-010-382
Disinfection cabin DES-K03	913-503-502

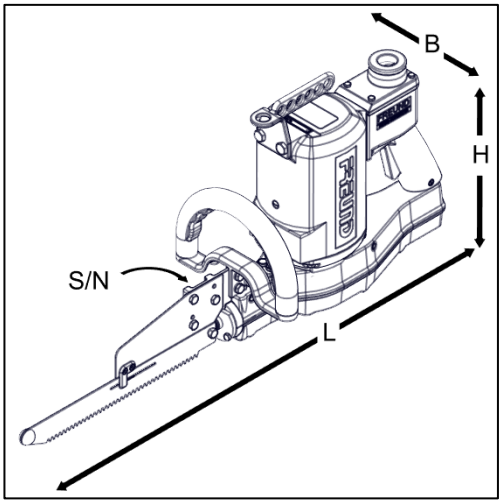
** for larger pigs weighing more than 120 kg and for cattle

Wall socket	400 V – 16 A (red)	100-017-043

3.2.3 Reciprocating Breastbone Saw BBST30-13

Use
- Opening the breastbone
- 500 cattle, 5000 pigs or 10,000 sheep per week
- Small and medium plants

View



(S/N = serial number)

Fig. 3-4 Example of reciprocating breastbone saw

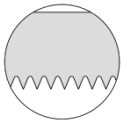
Dimensions

	BBST30-13
Weight [kg]	12
Saw blade length [mm]	300
Length L [mm]	824
Height H [mm]	330
Width B [mm]	190

Equipment options
- Voltage choice* 42 V, 400 V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	HUFZ 300BB	223-000-001
	HUGZ 300BB	223-005-007

Optional accessories

	Part-No.
Balancer F 14-2,5SK	920-418-101
Transformer TR3-SG360	912-010-382
Disinfection cabin DES-K02	913-506-003

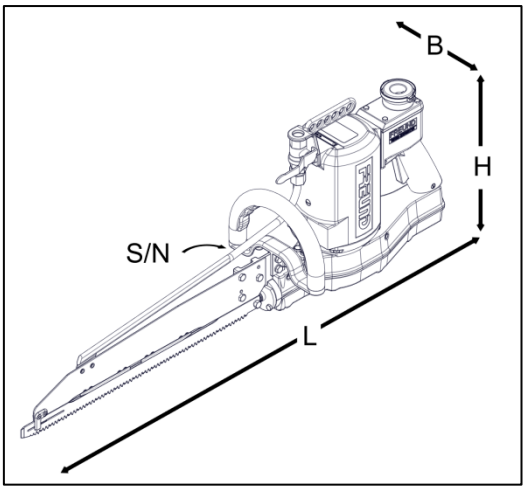
Wall socket

400 V – 16 A (red)	100-017-043

3.2.4 Reciprocating Splitting Saw SST50-13

Use
- Halving
- 20 cattle, 100 pigs or 200 sheep per week
- Small plants

View



(S/N = serial number)

Fig. 3-5 Example of reciprocating splitting saw

Dimensions

	SST50-13
Weight [kg]	13.5
Saw blade length [mm]	500
Length L [mm]	850
Height H [mm]	290
Width B [mm]	190

Equipment options
- Voltage choice* 42 V, 400 V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	STFZ 500	222-000-021

Optional accessories

	Part-No.
Balancer F14-2 SK	920-426-100

Optional accessories

	Part-No.
Balancer F14-2 SK	920-426-100
Transformer TR3-SG360	912-010-383
Disinfection cabin DES-K03	913-501-502

Wall socket

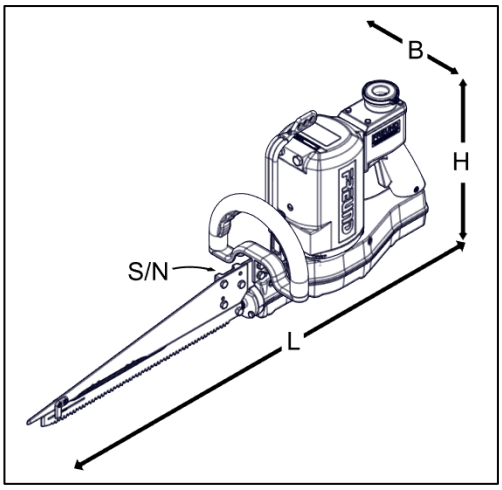
400 V – 16 A (red)	100-017-043

3.2.5 Reciprocating Breaking Saw ST40-13

Use

- Cutting up and quartering
- 500 cattle, 5000 pigs or 10,000 sheep per week
- Medium plants

View



(S/N = serial number)

Fig. 3-6 Example of reciprocating breaking saw

Dimensions

	SST40-13
Weight [kg]	12
Saw blade length [mm]	400
Length L [mm]	800
Height H [mm]	290
Width B [mm]	190

Equipment options

- Voltage choice* 42 V, 400 V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	STFZ 400	222-000-003

Optional accessories

	Part-No.
Balancer F14-2 SK	920-426-100
Transformer TR3-SG	912-010-382

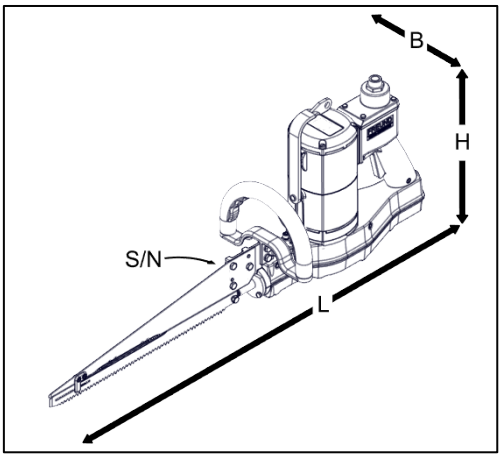
Wall socket

400 V – 16 A (red)	100-017-043

3.2.6 Reciprocating Breaking Saw ST40-11S

Use
- Cutting up and quartering
- 500 cattle, 5000 pigs or 10,000 sheep per week
- Medium plants

View



(S/N = serial number)

Fig. 3-7 Example of reciprocating breaking saw

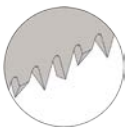
Dimensions

	ST40-11S
Weight [kg]	6.5
Saw blade length [mm]	400
Length L [mm]	800
Height H [mm]	290
Width B [mm]	190

Equipment options
- Voltage choice* 230V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	STFZ 400	222-000-003

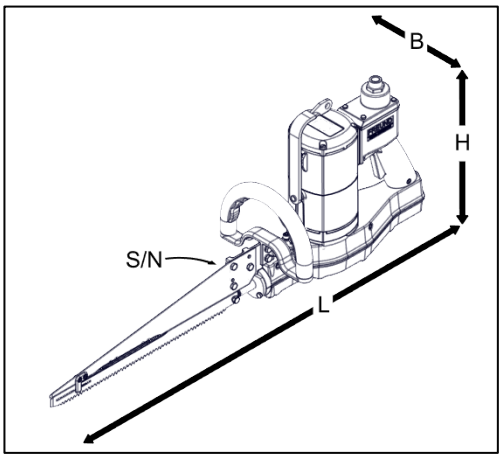
Optional accessories

	Part-No.
Balancer F6-2.5SK	920-415-102

3.2.7 Reciprocating Breaking Saw ST40-11-115V

Use
- Cutting up and quartering
- 20 cattle, 100 pigs or 200 sheep per week
- Small plants

View



(S/N = serial number)

Fig. 3-8 Example of reciprocating breaking saw

Dimensions

	ST40-11-115V
Weight [kg]	6.5
Saw blade length [mm]	400
Length L [mm]	800
Height H [mm]	290
Width B [mm]	190

Equipment options
- Voltage choice 115V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	STFZ 400	222-000-003

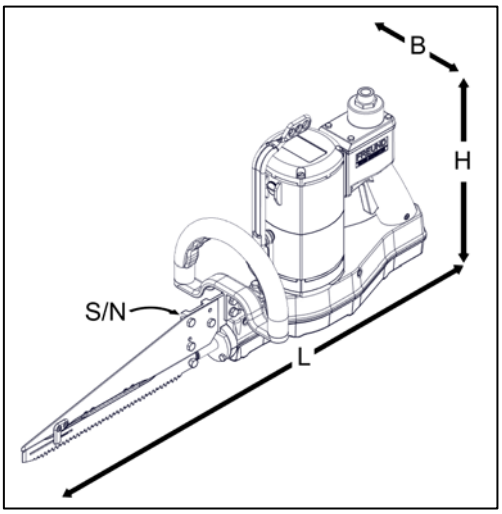
Optional accessories

	Part-No.
Balancer F6-2.5SK	920-415-102

3.2.8 Reciprocating Breaking Saw ST30-11S

Use
- Cutting up and quartering
- 500 cattle, 5000 pigs or 10,000 sheep per week
- Medium plants

View



(S/N = serial number)

Fig. 3-9 Example of reciprocating breaking saw

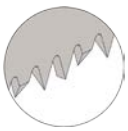
Dimensions

	ST30-11S
Weight [kg]	6.5
Saw blade length [mm]	300
Length L [mm]	700
Height H [mm]	290
Width B [mm]	190

Equipment options
- Voltage choice* 230V

* Special voltage on request

Saw blade selection

Tooth shape	Designation	Part-No.
	STFZ 300	222-000-002

Optional accessories

	Part-No.
Balancer F6-2.5SK	920-415-102

3.3 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.

Grease

FREUND gear grease is a high performance gear lubricant, which is a heavy-duty gear grease and extremely resistant against high pressure. It is physiologically safe and is NSF-H1 approved.

Lubricating grease

FREUND lubricating grease is based on highly refined paraffin oil and is tasteless and odourless. It is physiologically safe and is conforming to NSF-H1.

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 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 55.

- 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.

4.2 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.

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 56.

- 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.

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 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 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 cutting tools.
- Always wear protective gloves for your own safety.

5.2 Personal protective equipment



5.3 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 adapted to the performance of the machine. The power supply cable must not be extended.

5.4 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.

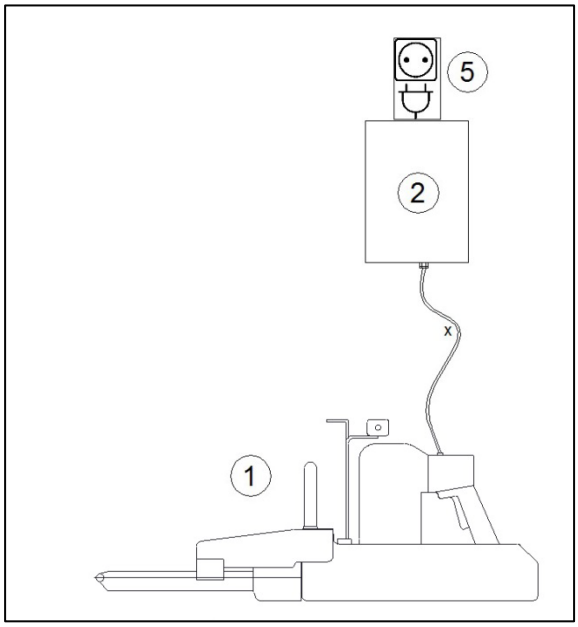
Transformers

We recommend the FREUND transformer TR3-SG.

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

5.4.1 Connection diagram for 42V machines with motor -03, -013

Connection diagram



1 Machine 42V
2 Transformer
5 Network 400 V
x Cable

Fig. 5-1 Connection diagram for machines with motor 03/13/11

EN

Connection cables

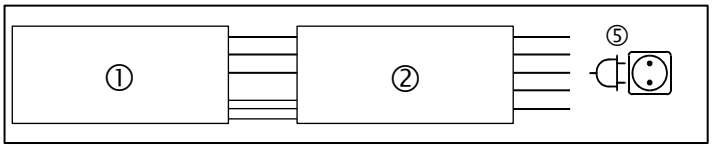


Fig. 5-2 Connecting lines for machines with motor 03/13/11

5.5 Machines with 400 Volt operating voltage

Machines in the slaughter rooms

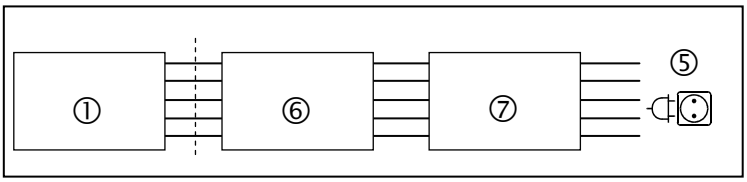
Handheld machines that are used in the slaughter rooms **must** be secured on-site with a residual-current circuit breaker (FI switch) less than or equal to 30 mA.

Machines in the cutting rooms

Handheld machines that are used in the cutting rooms should be secured on-site with a residual-current circuit breaker (FI switch) less than or equal to 30 mA.

Connection diagram

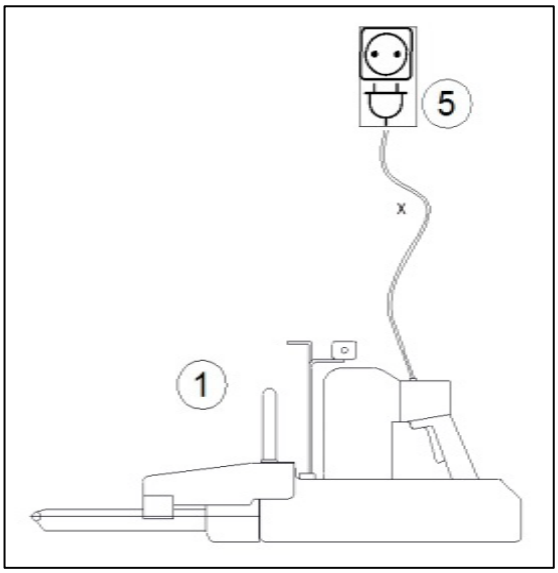
Delivery (①) Site operator - building fuse box (⑥⑦)



1 Machine 400V
6 Fuse
7 FI switch
5 Network 400V

5.5.1 Connection diagram for 400V machines with motor -03, -13

Connection diagram



1 Machine 400V
5 Network 400 V
x Cable

Fig. 5-3 Connection diagram for machines with motor 03/13

Connection cables

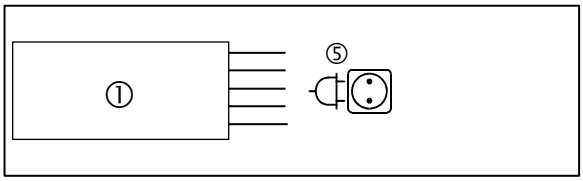
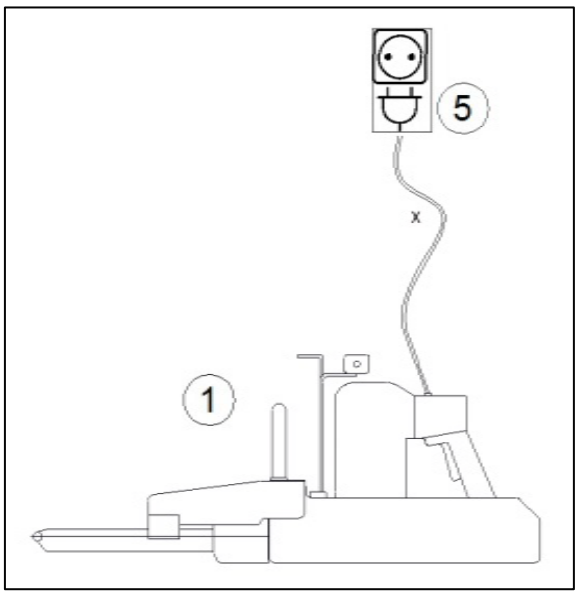


Fig. 5-4 Connecting lines for machines with motor 03/13

5.6 Machines with 230 / 115 Volt alternating currentmotor -11, -11S

Connection diagram



1 Machine 230V / 115V
5 Mains 230V / 115V
x Cable

Fig. 5-5 Connection diagram for machines with 230V / 115V alternating current

Connection cables

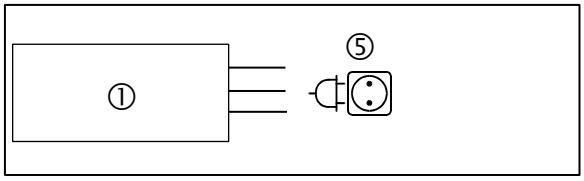


Fig. 5-6 Connecting lines for machines with 230V / 115V alternating current

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 operated 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.
- For your own safety, wear protective gloves.



WARNING!

Rotating saw blades.

Risk of being caught and drawn in due to wearing loose clothing, long hair and jewellery

- Wear only close-fitting clothes
- Do not wear jewellery while working.
- Protect long hair with a hair net.



Caution!

The machine is very heavy.

Personal injury as a result of the machine falling down.

- Always attach the machine to a balancer.



Caution!

Hot machine parts.

Danger of burns.

- Do not touch the machine while it is operating and immediately afterwards.
- Wear protective gloves.

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 machines

Always keep the trigger (1) in the rear handle depressed during the sawing operation, otherwise the power circuit will be interrupted.

Preparation

1. Attach the machine to the balancer.
2. Check the settings of the balancer.
3. Assume a stable position.
4. Switch on the main switch.
   The machine is ready for operation.
   (For machines with a water tube. Open the water supply.)

Production

1. Always hold the machine with both hands on the round handle and at the rear handle at all times.
2. Press and hold the trigger in the rear handle.
3. Feed the machine into the carcass with the saw blade running.
4. Guide the machine through the body of the animal during the sawing process without expenditure of energy.
   The machine saws by itself without expenditure of energy for the most part.

5. After completing your sawing work, remove the machine from the carcass with the saw blade still running.

Switching off

6. Release the trigger in the rear handle.
   The machine comes to a standstill within three seconds.

Final Work Steps

1. Disconnect the machine from the mains power supply.
2. Remove the machine from the balancer.
3. Check the machine for wear or damage.

Cleaning

4. Clean the machine (→ chapter *Cleaning* on page **37**).
5. Store the machine in a safe and dry place until the next use.

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.

Caution!

Damage due to high water pressure.

High water pressures cause damage to seals and machine parts / penetrating water damages the motor of the machine.

- ➢ Do not use high-pressure cleaners.
- ➢ Only work at water pressures ≤ 6 bar.

Caution!

Corrosion on the saw blade.

Unsuitable detergents and cleaning equipment may result in corrosion on the saw blade.

- Only clean the saw blade with the specified detergents.
- Apply the detergents in the specified concentrations.
- Do not exceed the application times for the detergents.
- Only clean the saw blade with a soft cloth or a brush with soft bristles.

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	

Work steps	Detergents and disinfectants	Auxiliary materials
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		
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 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.

Intervall	Wartungsarbeit	Kapitel
Daily	Visual inspection before starting work	→ Chapter *Daily safety check* on page 34
Approx. every 40 operating hours	Grease the gear unit	→ Chapter *Lubricating the gear unit* on page 43
Every 6 months	Electric in-service inspection	→ Chapter *Periodic inspection of* electrical equipment on page 42
	Maintenance of the gear unit	→ Chapter *Lubricating the gear unit* on page 43
	Check and clean bearings and seals for wear and grease them	
As necessary	Replace the saw blade	→ Chapter *Changing the saw blade* on page 43
	Sharpen the saw blade	→ Chapter *Sharpening the saw blade* on page 45
	Replace the switch	→ Chapter *Replacing the switch* on page 50
	Replace the motor	→ Chapter *Replacing the motor* on page 50
	Replace the guide bushing	→ Chapter *Replacing the guide bushing* on page 50

8.4 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.

8.5 Recommended lubricants

For lubricating the machine, we recommend the FREUND grease in the following container sizes:

	Retail container	Article number
ST, SST, BBST	Cartridge 0.4 kg	100-013-037
	Grease gun	151-002-039
SH, BBH	1kg box	100-013-007
	Grease gun	151-001-067

8.6 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 departement. Please refer to the company information in the imprint for address and telephone numbers.

8.7 Lubricating the gear unit

Lubricating the gear unit on a regular basis extends the service life of the bearing and impedes penetration of the gear unit by water and moisture.

Only use grease recommended by FREUND Maschinenfabrik (→ chapter ***Recommended lubricants*** on page 42).

Machines with motor 11(S) and 13 Machines with motor 03

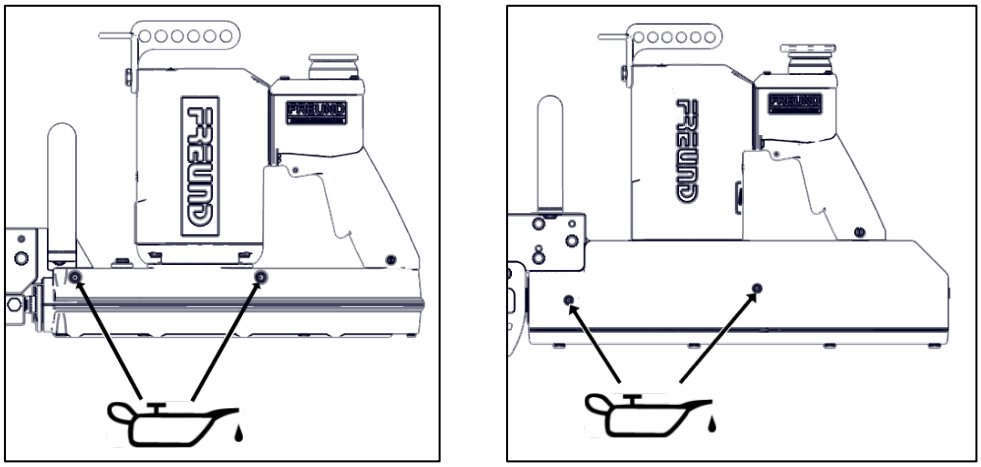


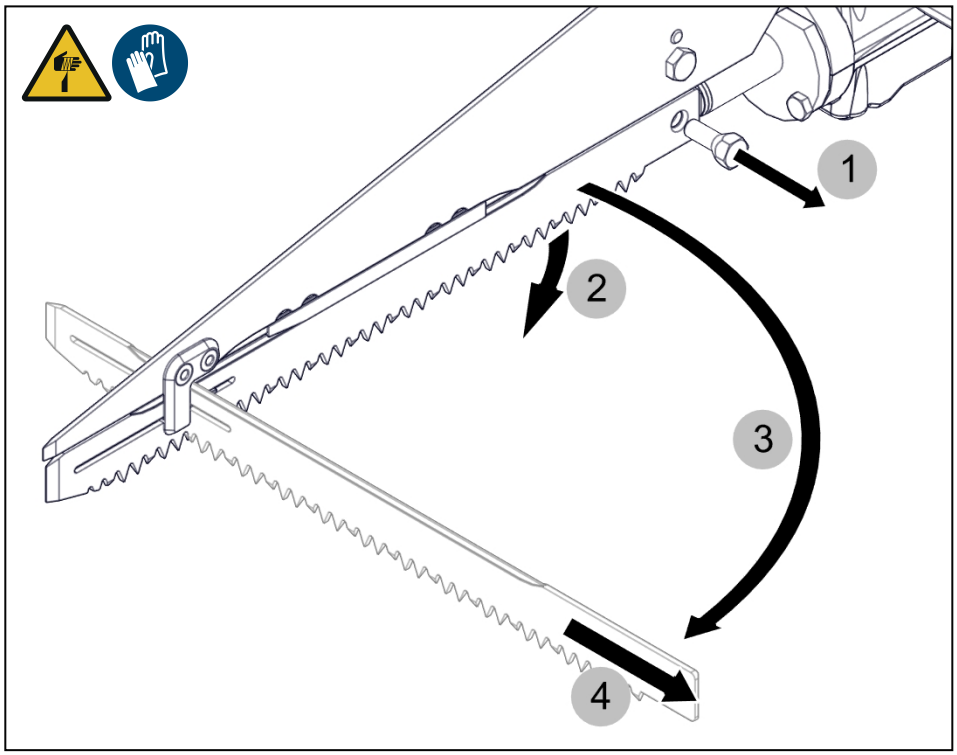
Fig. 8-1 Position of the grease fitting

1. After 40 operating hours, apply up to two strokes of grease to the grease fitting in the gear housing using the grease gun supplied.
2. Let the motor run a few seconds.

8.8 Changing the saw blade

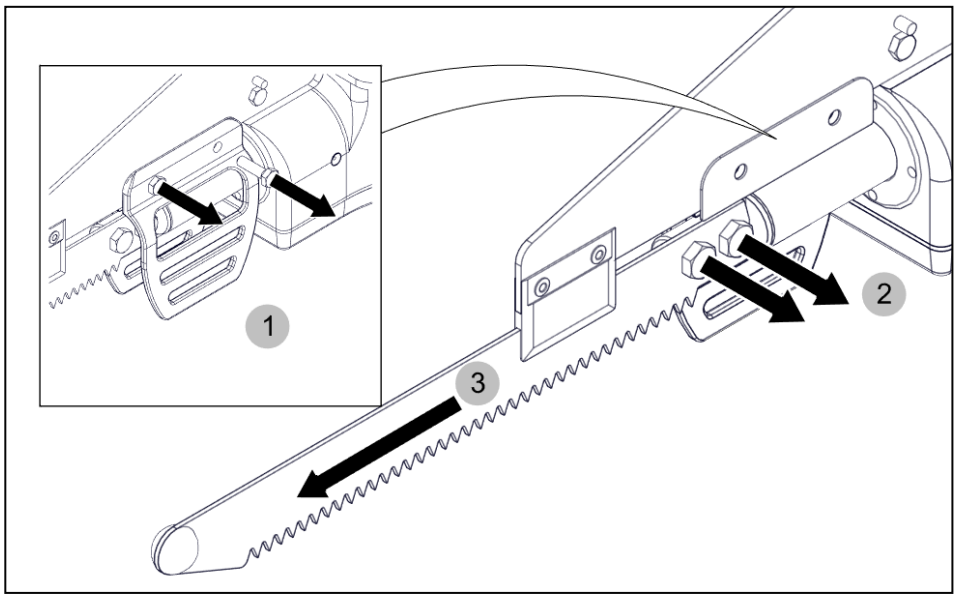
Only use the original screw to fasten the saw blade! Only use FREUND saw blades. Other saw blades can cause serious hazards and damage.

8.8.1 Changing the saw blade for models ST, SST, BBST



5. Install the new saw blade in the reverse order.
6. Tighten the saw blade screw firmly.

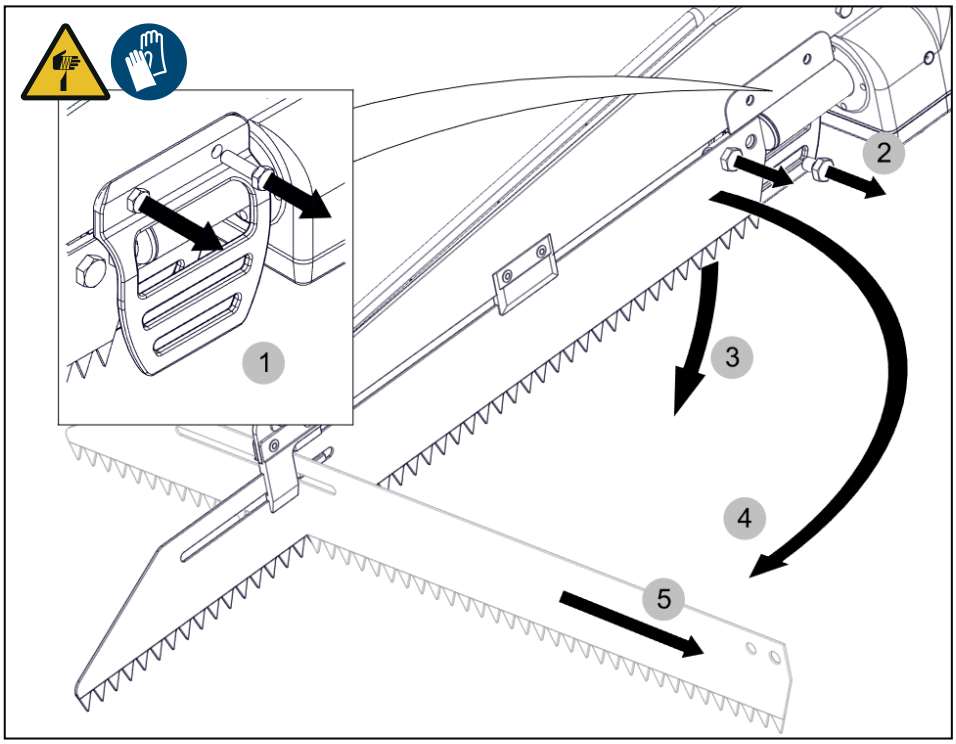
8.8.2 Changing the saw blade for model BBH



4. Install the new saw blade in the reverse order.
5. Tighten the saw blade screw firmly.

EN

8.8.3 Changing the saw blade for model SH



6. Install the new saw blade in the reverse order.
7. Tighten the saw blade screw firmly.

8.9 Sharpening the saw blade

The cutting result of the machine largely depends on the sharpness of the saw blade. Blunt saw blades will put the user at risk and result in poor work results.

Caution!

Improper resharpening can result in breaking off of the cutting edges or in breaking of the saw blade.

➢ Arrange the resharpening of the saw blades with FREUND Maschinenfabrik or a specialist company.

1. Disconnect the machine from the mains power supply.
2. Remove the saw blade (→ chapter ***Changing the saw blade*** from page 43).
3. Remove rust and other impurities from the saw blade using chemical cleaning agents.
4. Grind or file the individual tooth flanks until the tip of each tooth is sharp-edged.

   Make sure you observe the dimensions and angles specified below.

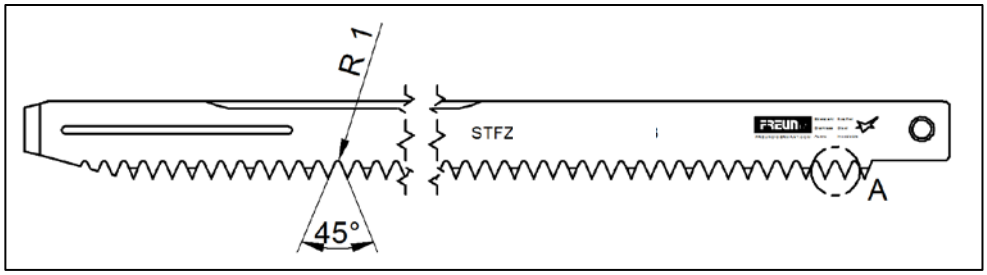
In order to select the right sharpening instructions for your saw blade, observe the information in chapter “*Overview of the machines*” on page 17

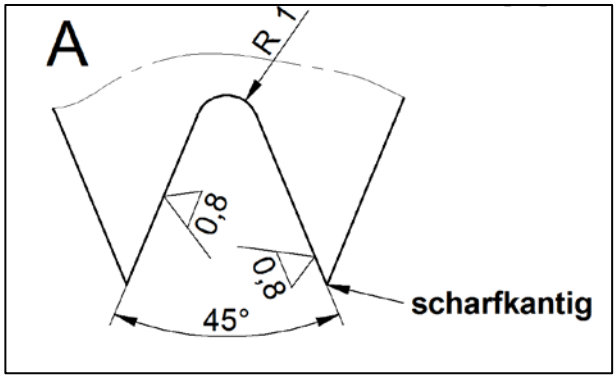
Provisional sharpening by hand

STFZ 300

STFZ 400

STFZ 500





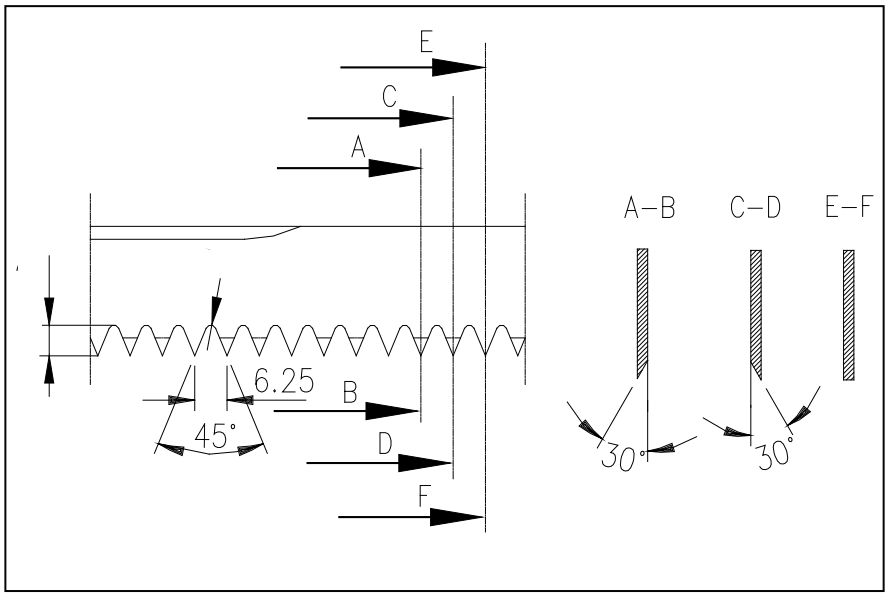


Fig. 8-2 – Fig. 8-4

Provisional sharpening by hand

HUFZ

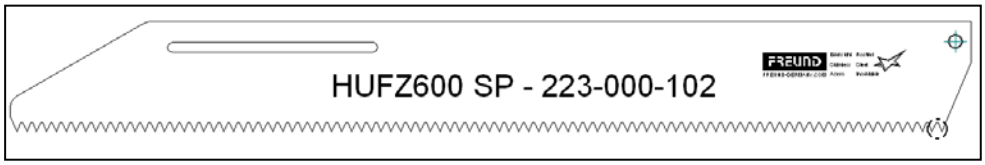
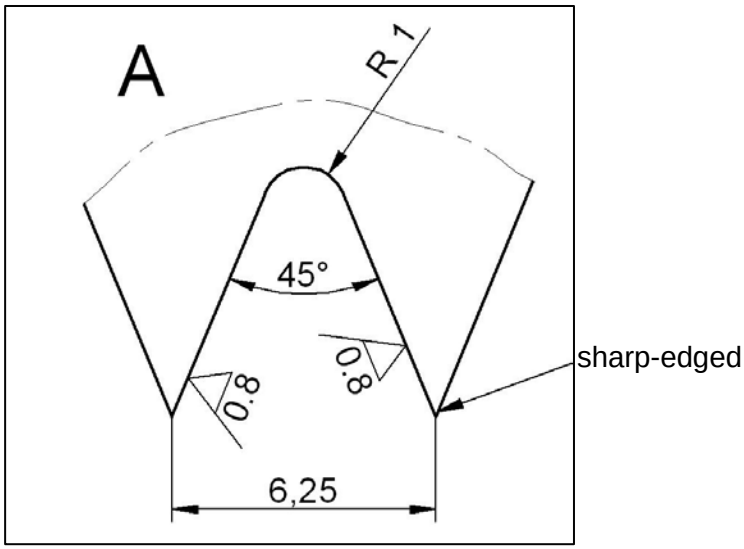


Fig. 8-5



Provisional sharpening by hand HUGZ

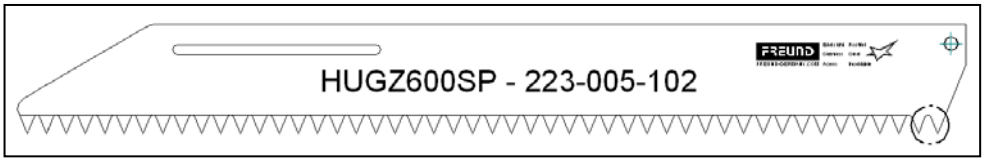
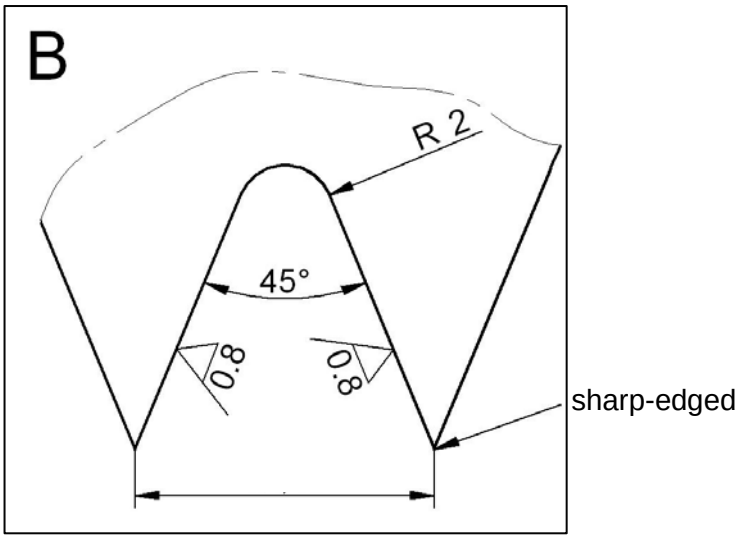


Fig. 8-6



Provisional sharpening by hand

HUFZ 300BB

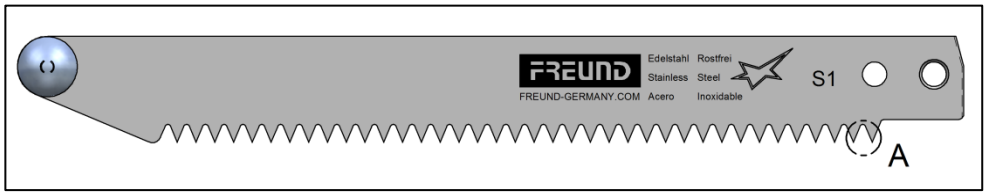
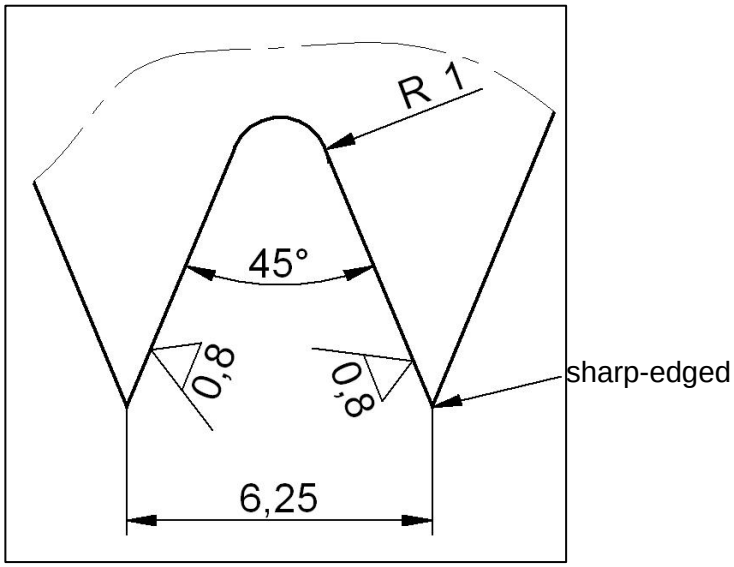


Fig. 8-7



Provisional sharpening by hand

HUGZ 300BB

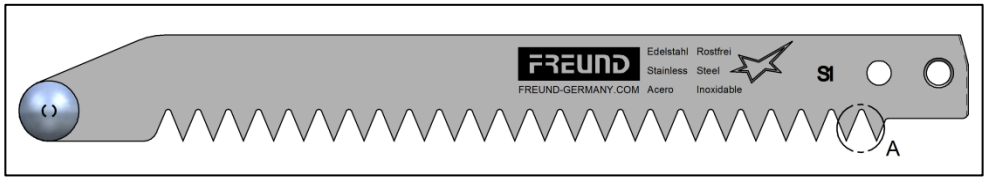
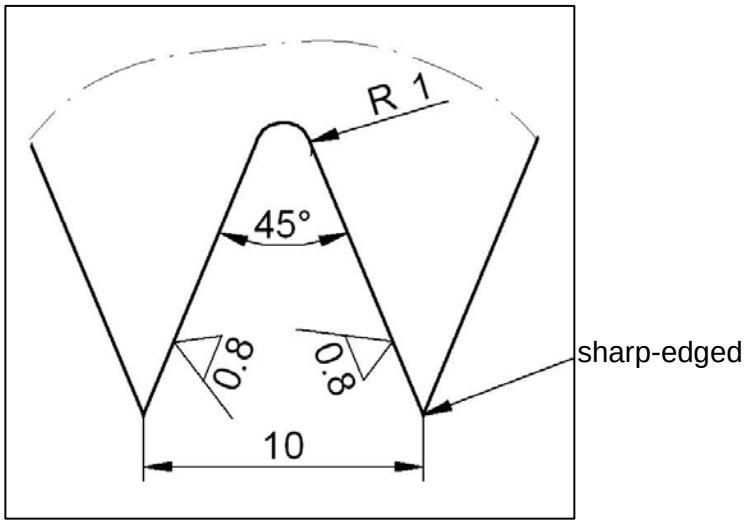


Fig. 8-8



8.10 Replacing the guide blade

The guide blade is available in two versions:

- pre-mounted with rivetet saw blade guide
- unmounted with separate guide blade, saw blade guide and rivets

EN

1. Disconnect the machine from the mains power supply.

3. Remove the saw blade (→ chapter ***Changing the saw blade*** on page 43).

Pre-mounted version

4.

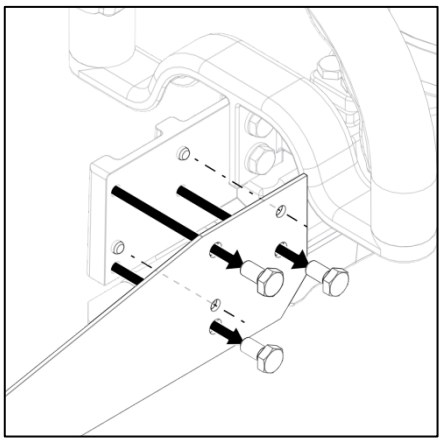


Fig. 8-9

5. Install the new guide blade in the reverse order.

Unmounted version

To connect the saw blade guide to the guide blade, you require a special riveting tool (Part No. 151-001-072E).

The riveting tool (Fig. 8-11) can be ordered from our sales department. Please refer to the company information in the imprint for the address and telephone numbers.

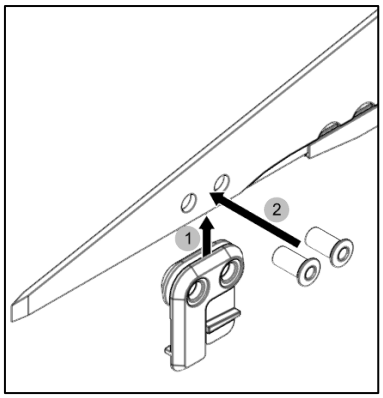


Fig. 8-10

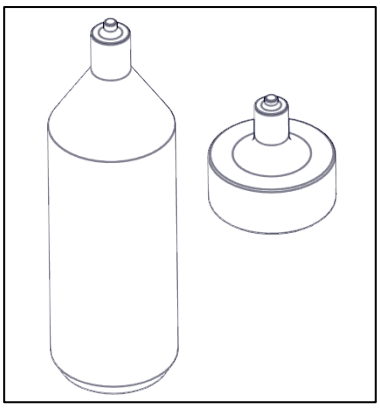


Fig. 8-11

8.11 Performing maintenance on the gear unit

Water and moisture may penetrate the gear unit of the machine via the seals during operation.

Regrease at least 2x year

Check the gear unit at regular intervals to determine penetration by water and moisture. Grease it at regular intervals and at least 2x per year.

1. Switch of the power supply for the machine.
   As a precaution, disconnect the 42V machine from the transformer. Disconnect the 400V machine from the mains power supply.
2. Remove the saw blade guide and the saw blade.
3. Loosen the screws from the cover of the gear unit.
4. Remove the cover of the gear unit.
5. Remove any water and moisture that is present.
6. Remove the old grease.
7. Clean the gear unit.
8. Check bearings and seals for signs of wear.
   Replace bearings and seals that are worn or damaged.
9. Regrease all moving parts and the big ball bearing.
10. Check the seal of the gear unit cover for wear.
    Replace seals that are worn or damaged.
11. Retighten the screws of the gear unit cover firmly.

8.12 Replacing the motor

motor 11(S) and 13 — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010767-C**.

motor 03 — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010742-C**.

8.13 Replacing the switch

motor 03 and 13 — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010749-C**.

motor 11(S) — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010920-C**.

8.14 Replacing the guide bushing

BBH — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010853-C**.

SH — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010876-C**.

BBST, SST and ST — You can find the corresponding installation manual in the spare parts list under the heading **MTA-010877-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.*

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 does not run/ stops working.	No power supply to the machine.	Check whether the power cable is plugged in. Check the power cable for interruptions or damage.
		Check the main fuse.
	Switch is defective.	Replace the switch.
	Fuse in the transformer is defective.	Replace the fuse.
Machine is overloaded.	Wrong use of the machine.	Use another machine with a higher power rating.
	Saw blade is blunt.	Replace or sharpen the saw blade.
More force required for sawing.	Saw blade is blunt.	Replace or sharpen the saw blade.
	Balancer is incorrectly set.	Set the correct weight range. Replace the balancer if necessary to another balancing range.
Unusual motor noise.	Increased gear play and/or bearing defective.	Check the bearings. Call somebody to replace defective parts.
	Fixing screws loose.	Check that screws and nuts are firmly secured.
	Failure of a phase.	Check the connections and the winding resistance if necessary.
Motor becomes too hot.	Wrong connecting cable, cross-section too small and/or connecting cable too long.	Only use the original cable. Do not extend the connecting cable.
	On 42V machines: Transformer with insufficient power rating. Not a FREUND transformer.	Use a transformer recommended by FREUND.
	Connecting cable has a loose contact.	Check the electrical connections.
	Input voltage too low.	Measure the mains voltage.
	Failure of a phase.	Check the connections and the winding resistance if necessary.

Fault	Possible Cause	Remedy
Motor becomes too hot.	Incorrect mains voltage or mains voltage fluctuations.	Use a machine suitable for the mains voltage.
Machine gives poor sawing results or does not saw at all.	Saw blade is blunt.	Replace or sharpen the saw blade.
Saw blade gets stuck in the carcass.	Wrong type of saw blade.	Switch off the machine immediately. Replace or sharpen the saw blade.
	Saw blade is blunt.	
	Saw blade is jammed.	Switch off the machine. Pull the machine out of the carcass.
	Machine is jammed in the bone.	
Unusual gear noise.	No or insufficient lubrication.	Check lubrication.
	Foreign particles in the grease.	Switch off the machine. Check the condition of the grease. Clean the gear unit. Change the grease.
	Increased gear play and/or bearing defective.	Check the bearings. Arrange for replacement of the bearings if necessary.
	Tooting is defective.	Check the tooting; replace the gear wheels if necessary.
	Fixing screws are loose.	Check that the screws and nuts are firmly secured.
	Transport damage.	Check the machine for transport damage.
Grease escaping.	Too much grease.	Check lubrication.
	Shaft sealing rings defective.	Replace the shaft sealing rings.
	Transport damage (e.g. hairline cracks).	Check the machine for transport damage.
Gear unit becoming too hot.	No or insufficient lubrication.	Check lubrication. Check the grease and change it if necessary. Change the grease.
	Increased gear play and/or bearing defective.	Check the bearings.

Fault	Possible Cause	Remedy
Saw blade does not run when the motor is running.	Shear on gears.	Replace defective parts.
	Pinion gear broken.	
	Con-rod broken.	
Motor not starting at all or only with difficulty.	No or insufficient lubrication	Check the grease level. Check the grease and replace it.
	No power supply to the motor.	Check the connections.
	Gear unit is defective.	Check the gear unit. Send the machine for maintenance to the manufacturer.

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.

Technical data

Machine	electric, 1-ph	electric, 3-ph	Weight [kg]	Length [mm]	Height [mm]	Width [mm]	Saw blade [mm]	stroke length [mm]	Type of motor	Motor power [W]	Stroke frequency 50 / 60HZ	Voltage [V] / Rated current [A]	Frequency [HZ]	Water connection ['']
BBH30-03		●	18,5	824	330	190	300	65	M03	1300	3245 / 3894	42 / 23 400 / 2,7	50/60	-
SH60-03		●	20	1120	350	190	600	65	M03	1300	3245 / 3894	42 / 23 400 / 2,7 230 / 4,3	50/60	3/8
BBST30-13		●	11,8	700	290	190	300	32	M13	950	8030 / 9632	42 / 17 400 / 1,8 230 / 3,1	50/60	-
SST50-13		●	13,5	850	290	190	500	32	M13	950	8030 / 9632	42 / 17 400 / 1,8 230 / 3,1	50/60	3/8
ST40-13		●	12	800	290	190	400	32	M13	950	8030 / 9632	42 / 17 400 / 1,8	50/60	-
ST40-11-115V	●		6,5	800	290	190	400	32	M11	700	8000 / 9600	115 / 6,8	50/60	-
ST40-11S	●		6,5	800	290	190	400	32	M11	860	9200 / 11040	230 / 4,1	50/60	-
ST30-11S	●		6,5	700	290	190	300	32	M11S	860	9200 / 11040	230 / 4,1	50/60	-

Noise level [dB(A)] ≤ 70, can increase at work up to 95 dB(A)

Vibration [m/s2] < 2,5

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:

Reciprocating Saw

Machine parts that come into contact with food	Material designation	Groups of materials and articles	Notes
Sawblade	1.4034	Stainless steel	
Push rod	1.5217	piston rod, chromed	
Ball (with rivet and drilled through)	1.4104	Stainless steel	
protective cap (BBH, SH)	1.4301	Stainless steel	
gear housing	G-AlSisMg (GAl 235)	Aluminium	
blade guide	CuSnSP (BBH, SH) 2.1020	Bronze	

Paderborn, 28.11.2018

Head of Development

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Ust. Nr.: 339-5720-0158

Amtsgericht Paderborn HRA 1865
Pers. Haft. Gesellschafterin:
Freund Maschinenfabrik Beteiligungs-GmbH
Amtsgericht Paderborn HRB 2048
Geschäftsführer: Robert Freund

VerbundVolksbank OWL eG
BIC: DGPBDE3MXXX
IBAN: DE 96 4726 0121 8600 0895 00
Sparkasse PB-DT, BIC: WELADE3LXXX
IBAN: DE 38 4765 0130 0001 0450 20

EG-Konformitätserklärung • EC-Declaration of Conformity • Declaración CE de conformidad • Déclaration CE conformité

im Sinne der EG-Richtlinie Maschinen 2006/42/EG, Anhang II, Nr.1 A
content according to 2006/42/EC, Annex II, No. 1 A
contendido según 2006/42/CE, anexonex II, núm. 1 A
contenu conforme à la directive 2006/42/CE, annexe II, N° 1

Hersteller • *Manufacturer* •
Constructor • *Constructeur*

FREUND Maschinenfabrik GmbH & Co. KG
Schulze-Delitzsch-Str. 38
D-33100 Paderborn
Germany

Dokumentationsbevollmächtigter
Documentation manager
Responable de la documentación
Mandataire de la documentation

Robert Penner

Hiermit erklären wir, dass **die Maschine** • *We hereby declare that the machinery* •
Por la presente declaramos que **la máquina** •*Nous déclarons par les presentes que la machine*

Typ • *Model* • Modelo • *Type*

Serien-Nummer • *Serial-Number* •
Número de série • *N° de série*

mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG übereinstimmt.
fulfils all relevant provisions of Directive 2006/42/EC.
concuerdo con todas las disposiciones de la Directiva 2006/42/CE relativa a las máquinas.
satisfait à la ensemble des dispositions pertinentes de la directive 2006/42/CE relative aux machine.

Die Maschine stimmt auch mit allen einschlägigen Bestimmungen der folgenden EG Richtlinien überein:
The machinery is also in compliance with all relevant provisions of the following EC-directives:
La máquina concuerda también con todas las disposiciones pertinentes de las siguientes directivas de la CE:
Cette machine satisfait également à toutes les dispositions pertinentes des directives CE surivantes:

2004/108/EG – EMV-Richtlinie
EGV 1935/2004

Folgende harmonisierte Normen (oder Teile dieser Normen) wurden angewendet:
The following harmonised standards (or parts thereof) were applied:
Se aplicaron las siguientes normas armonzidadas (o partes de estas normas):
Les norms harmonisées suivantes (ou parties de ces normas) ont été utilisées:

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
Name and Signature
Nombre y firma
Nom et signature

..... Paderborn
Robert Freund

Geschäftsführer • *Managing Director* • Director gerente • *Directeur*

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