

EFA band saws

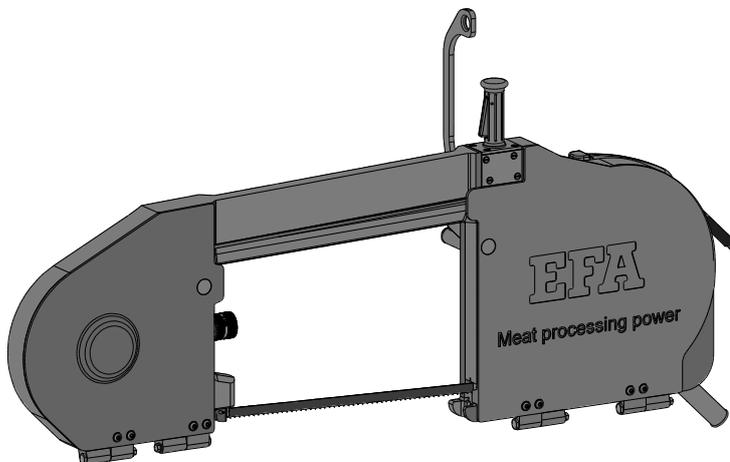
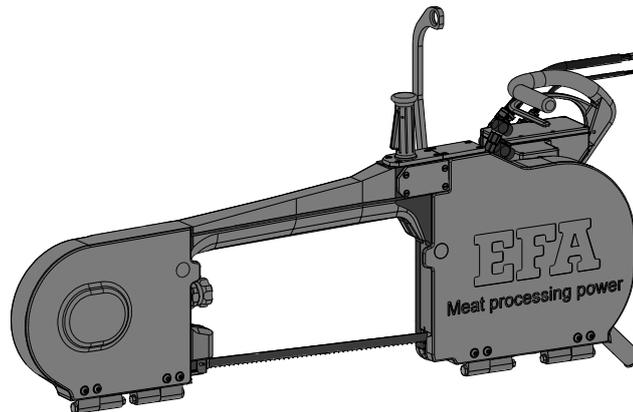
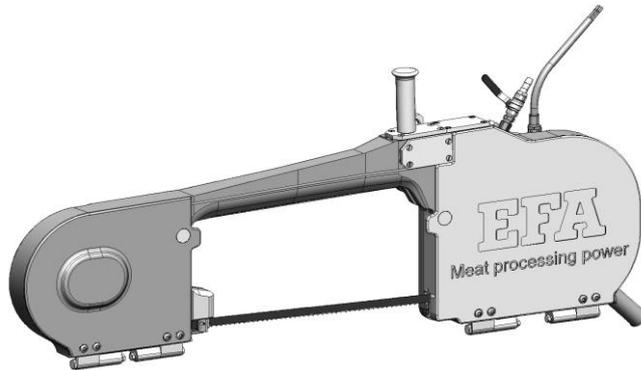
EFA SB 287 E

EFA SB 288 E

EFA SB 289 E

EFA SB 295 E

EFA SB 327 E



12.2022

Operating instructions

Schmid & Wezel GmbH. All rights reserved.
Printed in Germany.

These operating instructions must not be reproduced in whole or in part, used for competitive purposes without our authorisation, or made available to third parties without our consent.

Any changes or amendments to these operating instructions are only allowed to be made by us; otherwise any warranty claim against us will be void.

Schmid & Wezel GmbH Maschinenfabrik

Maybachstrasse 2
75433 Maulbronn / Germany

 +49 7043 1020

 +49 704 310 278

 efa-verkauf@efa-germany.de

Internet: <http://www.efa-germany.de>

Table of contents

1	Introduction and general information	2
1.1	Information on the operating instructions	2
1.2	User group	2
1.3	Scope of supply	3
1.4	Intended use	3
1.5	Claims for defects, liability, warranty	4
2	Safety	6
2.1	Safety instructions	6
2.1.1	Other safety signs	7
2.1.2	Warning signs	7
2.1.3	Mandatory instruction signs	7
2.1.4	Prohibition sign	8
2.2	Personal protective equipment	8
2.3	Conduct at the workplace	8
3	Technical description	9
3.1	Dimensions	11
3.2	Nameplate	12
4	Transport and storage	13
5	Connection and start-up	14
5.1	Initial start-up	14
5.1.1	Spring balancer	14
5.1.2	Adjustment of the suspension (EFA SB 327 E)	15
5.1.3	Electrical connection	15
5.1.4	Water connection	15
6	Handling	16
6.1	Switch operation	16
6.1.1	Switching on	16
6.1.2	Switching off	17
6.2	Working with the band saw	17
6.2.1	Operation	17
6.2.2	Operational safety	17
7	Assembly	18
7.1	Saw band change	18
7.1.1	Removal of saw band	18
7.1.2	Installation of saw band	18
7.2	Saw band guide	18
8	Cleaning	20
8.1	Daily cleaning after completion of the slaughtering	20
8.1.1	Cleaning the band saw	20
9	Maintenance and repair	21
9.1	Maintenance	21
9.1.1	Daily maintenance of the band saw	21
9.1.2	Extended maintenance	21
9.2	Repair by customer service	22
9.2.1	Return	22
10	Waste disposal – recycling	23
10.1	Disassembly and disposal	23

1 Introduction and general information

Important! **Operating instructions cannot prevent misuse in every case!**



1.1 Information on the operating instructions

These operating instructions are part of the technical documentation of the machine and comply with the Machinery Directive.

The machine has been designed and built according to the careful selection of the harmonising standards to be observed as well as other technical specifications.

The operating instructions are intended to describe the operation and handling of the EFA band saw and provide the necessary safety instructions.

These operating instructions are intended for the machine operator and contain the details of the intended use and important information:

- for safe handling of the machine,
- for maintenance,
- for cleaning.

If the instructions are followed, the EFA band saw will be operated safely, properly and economically and its operational capability will be maintained.

Observance of these instructions helps to avoid dangers, minimise repair costs and downtimes, and increase the reliability and service life of the machine.

A prerequisite for safe handling and trouble-free operation of the machine is observance of the following:

- the operating instructions,
- the company directives (safety signs and danger warnings),
- the legal provisions on occupational safety,
- the applicable laws and regulations.

These operating instructions must always be kept accessible at the machine for all work to be carried out.

Note!



If the existing operating instructions have been damaged or lost, you can request a replacement by stating: machine designation, part number, serial number and year of production, see *section 3.2 Nameplate*.

If you have any questions, or if you cannot solve a problem with the help of these operating instructions, please contact our Service department.

1.2 User group

Only instructed and/or trained personnel over 16 years of age are allowed to set up or operate the EFA band saw. Furthermore, it is imperative that everyone working with and on the machine has read and understood the operating instructions, and observes them.

The operation of the band saw by persons who are under the influence of alcohol, medication, or drugs is strictly prohibited.

Instructed person

Persons over 16 years of age who have been instructed and trained by a qualified person (specialist) in the tasks assigned to them and about possible dangers in the event of improper behaviour, as well as in the handling of the necessary protective devices and protective measures, are considered to be instructed persons.

Trained person (specialist personnel)

Persons who have obtained a professional qualification and have demonstrated this by checking the results or passing an examination are considered to be trained persons.

1.3 Scope of supply

Upon receipt of the delivery, check immediately whether the scope of supply corresponds to the accompanying documents.

Submit a complaint in the event of:

- apparent transport damage immediately to the supplier,
- apparent defects/missing items, to **Schmid & Wezel GmbH**.

These operating instructions describe the **EFA band saw** with all possible options.

Options are not necessarily included in the scope of supply and can only be retrofitted to a limited extent.

1.4 Intended use



Danger!

Never point the device at people!



Wear eye protection such as protective goggles when working!



Danger!

Never reach into the cutting edge area of the saw band, you could injure yourself!

Areas of application

- **EFA SB 287 E**
The splitting saws are used in small plants with max. 100 animals per week; suitable for splitting pigs and cattle.
- **EFA SB 288 E** and **EFA SB 289 E**
The splitting saw is used in medium-sized plants; suitable for splitting pigs and cattle.
- **EFA SB 295 E**
The splitting saws are used in an extended version in medium-sized plants; suitable for splitting pigs, heifers, cows, bullocks and calves.
- **EFA SB 327 E**
The splitting saw is used in large plants.

The machines are not equipped for a different type of use. Should the user desire to use the equipment for a different purpose than intended, please contact **Schmid & Wezel GmbH (S&W)**. For all other types of use, the user must be advised of the inherent accident hazard and increased wear. **In the event of non-compliance, the liability shall be borne by the user alone.**

The band saw is only allowed to be used:

- in a fully functional and perfect technical state, in line with the intended use, in consideration of all of the safety- and hazard-relevant aspects,
- with properly functioning safety devices,
- with the equipment approved by the manufacturer.

Do not use materials harmful to health.

If, contrary to the intended use, materials harmful to health are to be processed then **Schmid & Wezel GmbH** must be informed in writing about the planned use and the protective measures taken by the customer/ operating company.

The customer/operating company is solely responsible for suitable protective measures (e.g. extraction devices, respiratory protection, protective suits, etc.) and company directives.

If the EFA band saw is not used as intended or is modified without the approval of **Schmid & Wezel GmbH**, persons could be injured and the machine damaged.

The operating permit is invalidated.

The intended use includes in particular that you:

- Observe the operating instructions and company directives,
- Observe maintenance instructions and intervals,
- Immediately rectify any faults that impair safety,
- Do not operate the band saw if safe working with it is not possible,
- Do not make any structural changes to the band saw without authorisation.

Danger!



The band saws can be hazardous if they are used by untrained persons, in an improper manner, or for purposes that are not in line with the intended use.

Residual hazards

As the band saw is intended for industrial use on carcasses, there is a possibility of injury or, in case of gross misuse, of **fatal** injury. Therefore, in case of misuse, the possibility of immediate death or death by blood loss must be expected.

Consequently, always pay attention to the correct handling of the machine.

There is an injury hazard, especially in the uncovered area of the saw band. Remain focused and act with caution when working. Wear personal protective equipment.

1.5 Claims for defects, liability, warranty

Warranty and liability claims for personal injury and damage to property are excluded in particular in the following cases:

- Improper use or unsuitable use,
- Improper transport or storage,
- Improper assembly and/or initial start-up,
- Improper operation (operating errors),
- Disregarding of operating instructions/company directives,
- Faulty or negligent handling,
- Improper maintenance/repair,
- Unsuitable equipment or spare parts that are not approved by **Schmid & Wezel GmbH** Maschinenfabrik,
- Natural wear and tear,
- Improper or unprofessional rectification of defects by the customer/operating company or third parties,
- Unauthorised structural changes to the machine without written permission from **Schmid & Wezel GmbH**,
- Chemical, electrochemical or electrical influences – unless they are the responsibility of **Schmid & Wezel GmbH**.

Liability

The manufacturer accepts no liability for accidents, machine damage and consequences of machine failure resulting from failure to observe the operating instructions. In addition, the local accident prevention regulations and general safety regulations for the area of application of the machine apply.

Limitation of liability

All technical information, data and instructions for the operation of the machine contained in the operating instructions are up to date at the time of delivery. They are provided to the best of the manufacturer's knowledge, taking into account previous experience and knowledge. The manufacturer reserves the right to make technical modifications in the course of further development of the machine described in these operating instructions. No claims can therefore be derived from the information, figures and descriptions in these operating instructions. The manufacturer shall be liable for any errors or omissions within the scope of the warranty obligations entered into in the contract, to the exclusion of further claims.

Claims for damages are excluded, irrespective of the legal basis on which such claims are derived. Only the text of the **operating instructions** is authoritative.

The textual and graphical representation in the operating instructions does not necessarily correspond to the scope of supply or a spare parts order. Illustrations in these instructions are not to scale.

Technical changes

The manufacturer **Schmid & Wezel GmbH** reserves the right to make technical changes within the scope of improving the usage properties and further development without prior notice. Figures are for basic understanding and could differ from the actual design of the system.

Copyright

The manufacturer reserves the copyright to these operating instructions. These operating instructions are intended for assembly, operating, maintenance and monitoring personnel.

Transferring the operating instructions to third parties without the written consent of the manufacturer **Schmid & Wezel GmbH** is not permitted. Duplication in any kind and form – in whole or in part – as well as the use and/or communication of the contents are not permitted without written declaration of the manufacturer.

Note!



All content, texts, drawings, pictures and other representations are protected by copyright and are subject to industrial property rights.
Any improper use may be punishable!

2 Safety

Everyone who is involved in the installation, start-up, operation, set-up, equipping and maintenance of the machine in the operating company must have read and understood the operating instructions, in particular the "Safety" chapter.

Safe operation of the machine is only guaranteed if:

- Unauthorised persons are kept away from the working area of the machine,
- Safe working with awareness of the dangers involved is regularly checked in accordance with the operating instructions,
- No working methods are employed that could compromise safety,
- Malfunctions in the machine are eliminated immediately,
- Maintenance work is carried out regularly.

Important!



The operating instructions must be accessible at all times during the entire period of use of the machine for the operating, maintenance and cleaning personnel.
Therefore, always keep these operating instructions close to the machine.

First aid!

Important!



In the event of an accident, provide **FIRST AID!**

- Keep calm!
- Remove injured persons from the danger area without endangering yourself!
- Inform other employees (first-aiders, paramedics) or request help!

2.1 Safety instructions

During the use of the machine, dangers could arise in certain situations or through certain behaviour. The measures described to protect against dangers must be observed. The safety instructions are identified as shown in the following tables (pictograms).

Symbol/ pictogram	Signal word	Damage/ injury to . . .	Definition	Possible consequences of disregarding the safety instructions
	Danger	Persons	Imminent danger	Death, serious bodily injury or substantial damage to property
	Warning	Persons	Potentially dangerous situation	Death or serious bodily injury could occur
	Caution	Persons	Less dangerous situation	Slight or minor injuries
	Attention	Property	Potentially harmful situation	Damage to the product or its environment
	Information	-	Application tips and other important/useful information and notes	No dangerous/harmful situation

2.1.1 Other safety signs

Symbol	Meaning
	Mark of conformity! The machine complies with the applicable regulations of the EC Machinery Directive.
	Recyclable materials! Ensure that the materials are recycled properly!

2.1.2 Warning signs

Warnings and symbols used in the operating instructions and documentation are intended to help you to recognise and assess the dangers more easily.

Symbol	Meaning
	Warning: Dangerous electrical voltage! Touching live parts can result in immediate death. Covers or cabinets marked with this sign are only allowed to be opened by qualified electricians after the machine has been switched off.
	Warning: Sharp cutting tool! Contact with the running cutting tool will lead to extremely severe cutting injuries involving permanent or even fatal injury. Ensure that a sufficient safety distance is maintained. Contact with the stationary cutting tool could lead to severe cutting injuries involving permanent injury. Wear safety gloves. Ensure that a safety distance is maintained.
	Warning: Hand injuries! There is a danger of hands being pinched, pulled in or otherwise injured. Keep your hands away from places that bear this warning sign!
	Warning: Noise with high sound pressure level! If the sound pressure level at the workplace is above 85 dB(A). Remaining for a relatively long period can cause permanent hearing damage. Only enter the area if wearing the correct hearing protection.
	Warning of hot surface! It is not always possible to notice the presence of hot machine parts, containers or materials, as well as hot liquids. If such a safety sign is affixed to a component, care must be taken. Do not touch hot surfaces without protective gloves.

2.1.3 Mandatory instruction signs

Symbol	Meaning
	General mandatory instruction sign! Observe company directives, notes in operating instructions and generally applicable safety regulations.
	Wear cut-resistant gloves! Cutting injuries possible. Provide information about suitable cut-resistant gloves.
	Use safety shoes! Safety shoes form part of the personal protective equipment and provide protection for the health of the worker. They prevent accidents and injuries such as crushing by heavy objects.
	Wear a protective helmet! Head injuries are possible due to objects falling, tipping over or being thrown out, or due to swinging loads; bumping into obstacles also represents a danger. A suitable protective helmet must always be worn on the head when in the indicated area.
	Wear protective goggles! Eye injuries (loss of vision) possible when working due to flying solid objects.
	Wear hearing protection! If the continuous sound pressure level of the machine/system is above 85 dB(A), hearing protection must be worn to prevent permanent hearing damage.
	Wear protective clothing! Protection against contact with auxiliary or working equipment. Find out about suitable protective clothing.

2.1.4 Prohibition sign

Symbol	Meaning
	General prohibition sign! The red signal border/prohibition stripe indicates an immediate danger and is overlaid diagonally over the self-explanatory symbol. The general prohibition sign must always be used in conjunction with another sign.

2.2 Personal protective equipment

Some work requires protective equipment.

This protective equipment must be made available to the operator.

Lifecycle phase	Protective equipment
Transport	<ul style="list-style-type: none"> ▪ Protective gloves ▪ Safety shoes
Assembly, start-up & maintenance	<ul style="list-style-type: none"> ▪ Cut-resistant gloves ▪ Safety shoes ▪ Protective goggles ▪ Hearing protection ▪ Hairnet for long hair
Operation	<ul style="list-style-type: none"> ▪ Hairnet for long hair ▪ Cut-resistant gloves ▪ Protective goggles ▪ Hearing protection ▪ Safety shoes ▪ Protective clothing
Storage	<ul style="list-style-type: none"> ▪ Protective gloves ▪ Safety shoes
Disposal	<ul style="list-style-type: none"> ▪ Protective gloves ▪ Safety shoes

2.3 Conduct at the workplace

The workplaces must be designed in such a way that each employee has at least 1.5 m² of freedom of movement. Ensure proper lighting of the workplace (at least 500 lux).

No other workplace should protrude into this area, otherwise there is an injury hazard due to the actions carried out with band saw.

The floor must minimise the danger of slipping on wet, greasy or dirty surfaces.

The workplace must comply with local hygiene and workplace regulations.

- Keep your workplace tidy and in good working condition. A cluttered or messy workplace can lead to accidents.
- Take environmental influences into account.
- Keep other persons away from your workplace. Focus on the job in hand when working.
- Do not use the EFA band saw when you are tired and/or unfocused.
- Store the band saw in a safe manner. Store unused devices in a dry place.
- Avoid wearing loosely fitting items of clothing and jewellery that can be caught by moving parts. Wear sturdy shoes during your work. Always wear a hairnet!
- Ensure that your workplace has a correct, ergonomic set-up and make sure that you are standing securely.
- Only use original EFA saw bands. Follow the instructions listed under Saw band change. See also *section 7.1 Saw band change*.
- Do not leave any tool keys connected. Check that all keys have been removed before switching on.
- Look after your tools with care. Use only sharp and undamaged saw bands so that you can work better and more safely.
- Only use genuine EFA accessories/spare parts.
- Changes and modifications to the machine are not permitted and, if any such changes are made, **S&W's** guarantee and liability shall be invalidated.

The use of other equipment, accessories or spare parts can endanger you and other persons.

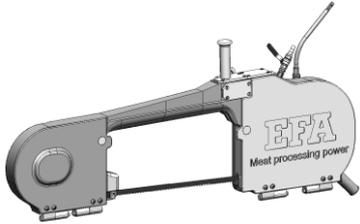
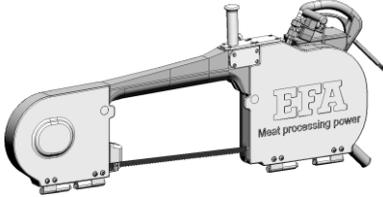
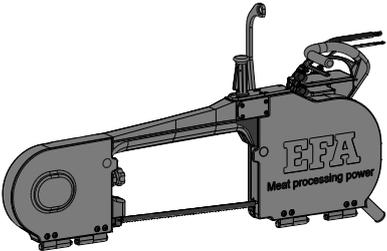
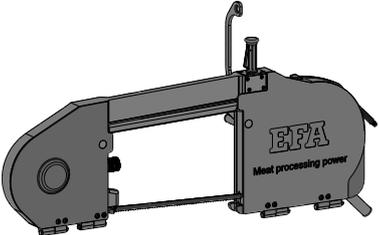
Non-compliance will void the warranty.

3 Technical description

Tab. 3.1 Technical data

EFA band saws	Operating voltage	Frequency	Current consumption	Motor power max.	Rotational speed	Anschluss-kabel	Protection Class	Type of protection	Saw band length x width	Cutting length	Cutting time x animal	Water connection	Operating pressure	Water consumption	Sound pressure level	Sound power level	Vibration characteristic value	K - correction factor	Weight	Machine No.
	V	Hz	A	W	min ⁻¹	m	-	-	mm	mm	s	Inch	bar	l/min	L _{PA} dB(A)	L _{WA} dB(A)	a _{hd} [m/s ²]	K [m/s ²]	kg	
EFA SB 287 E	42	50	33	1500	580	4	III	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	1,83	0,12	50	110890916
EFA SB 287 E	208	60	7,4	1500	580	4	I	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	1,83	0,12	49	110890919
EFA SB 287 E	400	50	3,5	1500	580	4	I	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	1,83	0,12	49	110890936
EFA SB 288 E	42	50	43	2200	580	4,5	III	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	0,96	0,1	58	110890900
EFA SB 288 E	400	50	4,5	2200	580	5	I	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	0,96	0,1	56	110890905
EFA SB 289 E	42	50	43	2200	580	4	III	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	0,96	0,1	57	110890945
EFA SB 289 E	208	60	8,7	2200	580	4	I	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	0,96	0,1	55	110890943
EFA SB 289 E	400	50	4,5	2200	580	4	I	IP 65	2904x19	460	20-25	1/2"	2-5	max.20	77	88	0,96	0,1	55	110890941
EFA SB 295 E	42	50	42	2300	580	5,5	III	IP 65	2904x19	460	10-15	1/2"	2-5	max.20	75	86	0,4	0,03	73	110890975
EFA SB 295 E	400	50	4,5	2300	580	5	I	IP 65	2904x19	460	10-15	1/2"	2-5	max.20	75	86	0,4	0,03	72	110890980
EFA SB 295 E since 01.2021	42	50	42	2300	580	5,5	III	IP 65	2904x19	460	10-15	1/2"	2-5	max.20	75	86	0,4	0,03	73	110891030
EFA SB 295 E since 01.2021	208	60	10,5	2300	580	5	I	IP 65	2904x19	460	10-15	1/2"	2-5	max.20	75	86	0,4	0,03	73	110891040
EFA SB 295 E since 01.2021	400	50	4,5	2300	580	5	I	IP 65	2904x19	460	10-15	1/2"	2-5	max.20	75	86	0,4	0,03	72	110891050
EFA SB 327 E	42	50	54,2	2500	520	6,5	III	IP 65	3226x19	500	15-25	1/2"	2-5	max.20	73	84	0,18	0,02	90	110891002
EFA SB 327 E	42	60	54,2	2500	520	6,5	III	IP 65	3226x19	500	15-25	1/2"	2-5	max.20	73	84	0,18	0,02	90	110891006
EFA SB 327 E	208	60	12,1	2500	520	6,5	I	IP 65	3226x19	500	15-25	1/2"	2-5	max.20	73	84	0,18	0,02	82	110891021
EFA SB 327 E	400	50	6	2500	520	6,5	I	IP 65	3226x19	500	15-25	1/2"	2-5	max.20	73	84	0,18	0,02	82	110891012
EFA SB 327 E	600	60	4	2500	520	6,5	I	IP 65	3226x19	500	15-25	1/2"	2-5	max.20	73	84	0,18	0,02	82	110891016

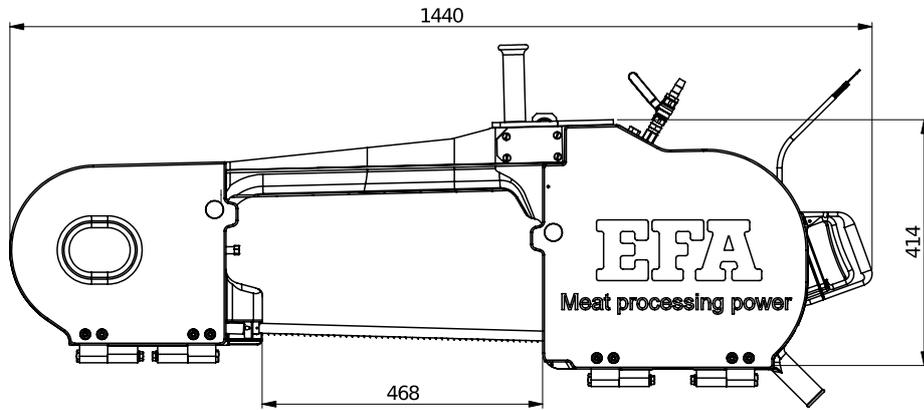
Tab. 3.2 – EFA band saw overview

EFA band saw	Usage	Application
<p style="text-align: center;">EFA SB 287 E</p> 		<p>The splitting saws are used in small plants with max. 100 animals per week; suitable for splitting pigs and cattle.</p>
<p style="text-align: center;">EFA SB 288 E / EFA SB 289 E</p> 		<p>The splitting saw is used in medium-sized plants; suitable for splitting pigs and cattle.</p>
<p style="text-align: center;">EFA SB 295 E</p> 		<p>The splitting saws are used in an extended version in medium-sized plants; suitable for splitting pigs, heifers, cows, bullocks and calves.</p>
<p style="text-align: center;">EFA SB 327 E</p> 		<p>The splitting saw is used in large plants.</p>

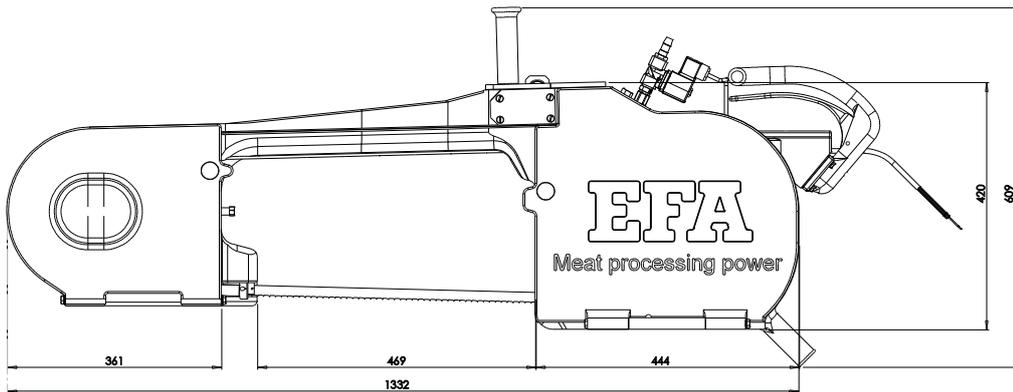
3.1 Dimensions

The following figures give you an overview of the dimensions of the EFA band saws.

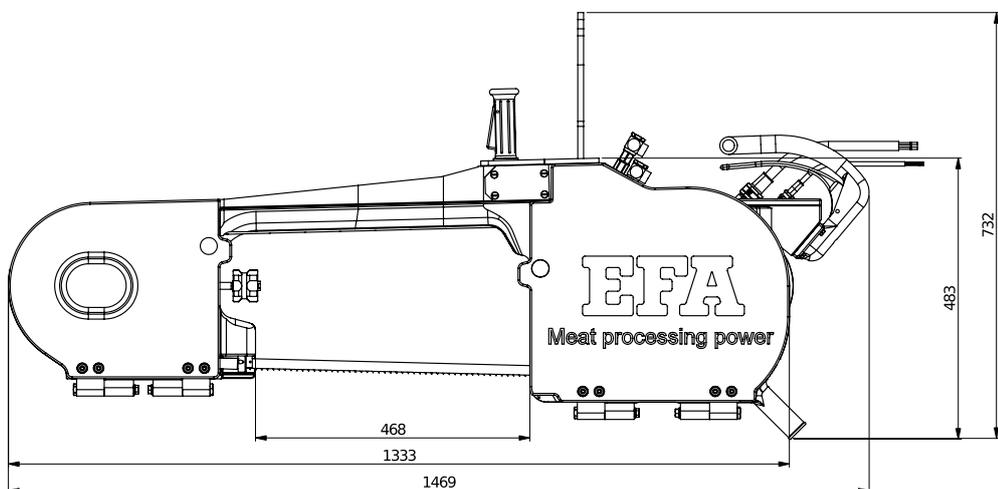
EFA SB 287 E



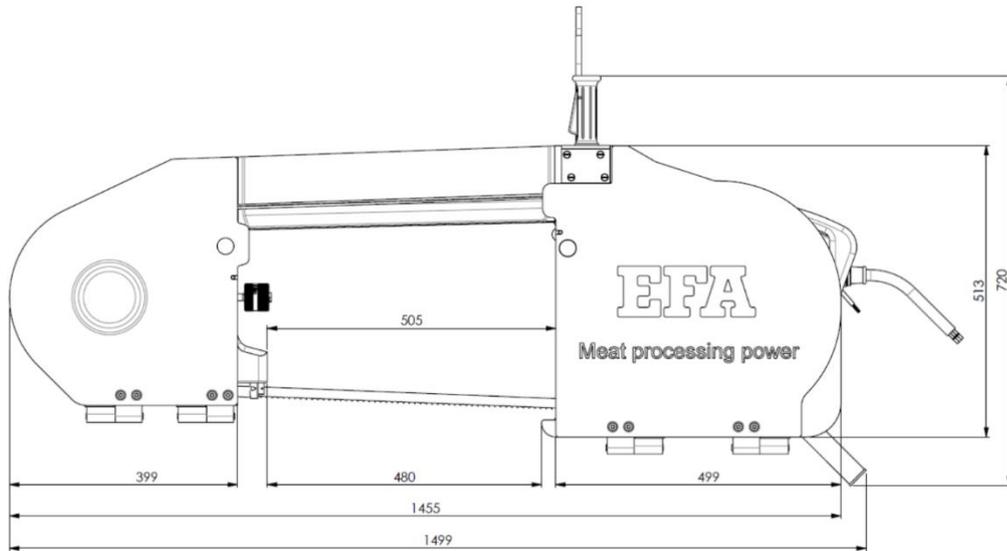
EFA SB 288 E and EFA SB 289 E



EFA SB 295 E

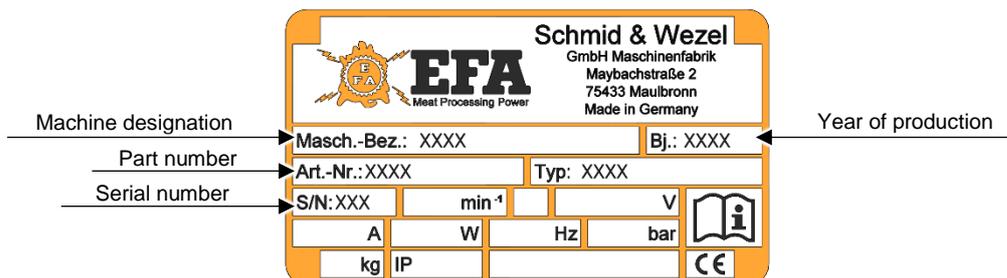


EFA SB 327 E



3.2 Nameplate

The nameplate is attached to the machine and contains information on the machine performance. The following figure shows an example of the nameplate for the EFA machines.



4 Transport and storage

The machine has been tested and carefully checked in our factory before shipment.
The test ensures that the machine is working properly.

Despite all care taken, there is a possibility that the machine could be damaged during transport.
Therefore, check the machine for possible transport damage when unpacking it.

Warning!



Safety instruction!

Do not remove the cutting edge guard
(if installed) until just before start-up.

Unpacking the machine

- Remove all packaging materials and dispose of them in a professional and environmentally friendly manner.
- Check the machine for possible transport damage.
- Information on *disposal and recycling* can be found in *chapter 10*.

Storage of the machine

For safe storage of the machine, it is essential to observe the following instructions:

- Only store the machine in a dry, ventilated room.
- Only store the machine in a clean and dry condition.
- Protect the machine from corrosion.

5 Connection and start-up

5.1 Initial start-up

Caution!



Voltage!
Installation work is only allowed to be carried out by authorised specialist personnel.
Only connect the saw to the mains when it is switched off!

Caution!



Tripping hazard!

We recommend that the lines are led upwards.
Lines that run along the floor can be a tripping hazard for the operator!

Warning!



Wear eye protection or protective goggles and safety shoes when working!

When the saw is not in use, place it in such a way that there is no accidental contact with the sharp saw band. This can lead to injuries.

5.1.1 Spring balancer

The machine must always be operated in combination with a weight relief device (spring balancer), see Fig. 5.1.

The spring balancer is secured with a safety chain (2), see Fig. 5.2 *Fine-tuning of the spring balancer*. This must be secured in a fixed position independent of the suspension of the spring balancer.

Use a trolley to attach the spring balancer to a higher element above the workplace or to the ceiling.

Danger!



Do not come into contact with the sharp saw band.

Danger!



Due to the weight, there could be a hazard due to the machine slipping or falling when the weight relief device is attached or detached.

Danger!



**When hooking in the cable of the spring balancer, the spring loaded rope can whip around if the snap hook is not properly hooked into the suspension.
Please note that if the rope rebounds when unloaded, it is very dangerous for people. The spring will also be irreparably damaged.
The maximum load specified on the nameplate must not be exceeded.**

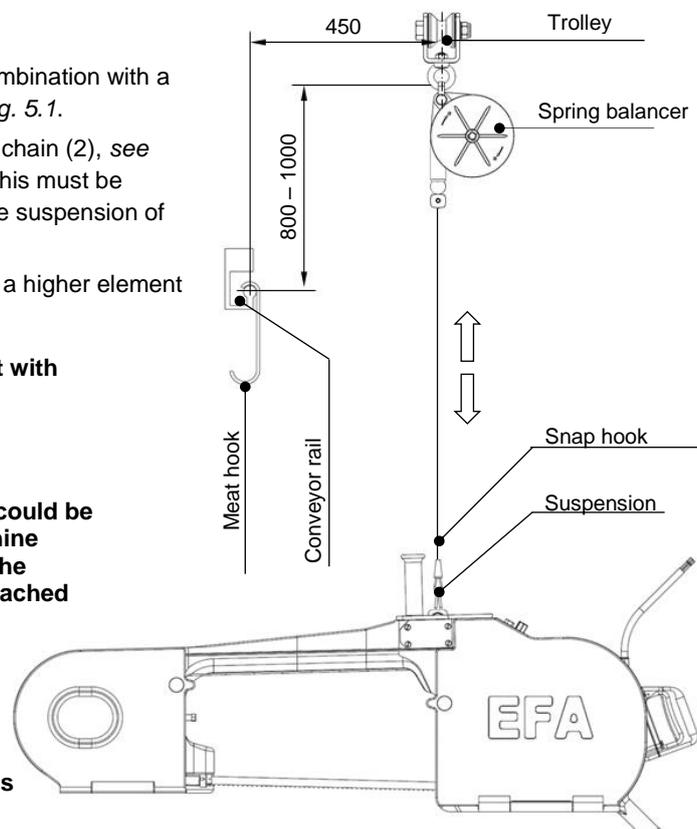


Fig. 5.1 – Weight relief system (spring balancer)

Also make sure that the machine does not jam either on the snap hook or on the suspension of the band saw. Be careful!

Adjustment of the spring balancer

The fine-tuning of the spring balancer is carried out via the plus/minus (+/-) screw on its housing (1).

- To do this, turn the screw in the direction of minus (-) until the device is freely suspended and balanced (with the tension spring) at working height.

If it is not possible to pull out, the spring balancer is blocked and a new adjustment is necessary.

- Turn the screw in the plus direction (+) until pulling out is possible and start the fine adjustment again.

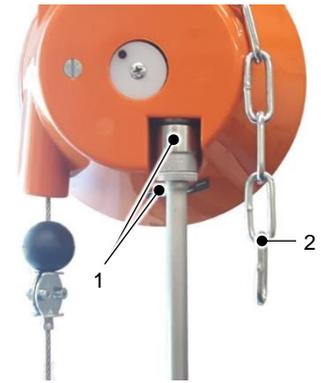


Fig. 5.2 – Fine-tuning of the spring balancer

5.1.2 Adjustment of the suspension (EFA SB 327 E)

The suspension can be mounted in a fixed position or free-swinging, see Fig. 5.3.

- To suspend the saw in a fixed position, mount both bolts (A and B) and secure them with the retaining rings.
- To suspend the saw so that it swings freely, remove the outer bolt (B).

5.1.3 Electrical connection

The saw is operated with electrical power. It must be connected by a qualified electrician in accordance with the legal regulations and those of the local energy supply companies.

- For electrical machines, a fuse must be provided on the operating side. If the operating voltage does not correspond to a safety extra-low voltage, a residual current circuit breaker (RCCB) must be installed on the operating side.
- Before connecting the safety isolating transformer on the primary side (only for safety extra-low voltage), the connection data of the transformer must be observed. Furthermore, the existing power system type must be taken into account. Fuse protection of the transformer must be provided on the operating side.
- The cable cross-sections must be dimensioned accordingly for the electrical connection of the connecting cable between the safety isolating transformer and the control (only with safety extra-low voltage).
- The connecting line of the saw must be connected according to the electrical circuit diagram supplied.
- When starting up the saw, check the direction of rotation of the motor.
- The saw has been designed and built according to the Machinery Directive 2006/42/EC. Unauthorised changes and modifications, especially to the safety devices of the saw, are not permitted for reasons of operational safety and, if any such changes are made, the manufacturer's guarantee and liability shall be invalidated.

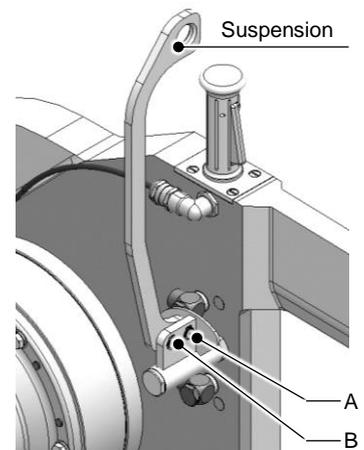


Fig. 5.3 – Suspension

5.1.4 Water connection

EFA SB 287 E

A cold water connection is available.

The saw band cooling/water rinsing is controlled by a manual valve.

EFA SB 288 E and EFA 289 E

A cold water connection is available.

The saw band cooling/water rinsing is controlled via a magnetic valve, directly with the motor circuit.

EFA SB 295 E and EFA SB 327 E

The machines are designed for automatic saw band cooling with cold water and saw band cleaning with hot water. The water connections are marked with "K" (cold water, blue) and "H" (hot water, red). The water is actuated by magnetic valves, which are switched via the control. The cleaning time is adjustable by a time relay. We recommend installing manually operated shut-off valves upstream of the magnetic valves.

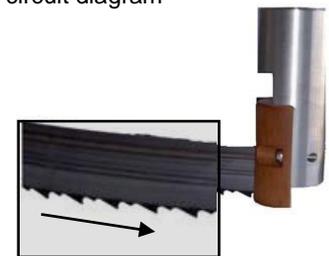


Fig. 5.4 – Running direction

6 Handling

6.1 Switch operation

Important!



The band saw must not be switched on before the operator has read these operating instructions and the band saw has been connected correctly!

Danger!



The saw band must be correctly mounted and firmly seated.

6.1.1 Switching on

Danger!



The saw is only allowed to be switched on when the saw band is correctly positioned on the drive and return wheel and in the two guides!

Before switching on, the following points must be checked without fail! An early failure of the saw band as well as problems in the slaughtering process can thus be avoided to a large extent.

Before switching on, check that:

- the band saw is operational;
- the saw band is correctly inserted;
- the water supply is correctly connected and switched on;
- the suspension (spring balancer) is correctly mounted and is operational;
- the guides are spring-loaded and not fixed;
- a sharp saw band was mounted directly before starting work, *see section 7.1.2 Mounting saw band*;
- the general safety instructions have been taken into account, *see chapter 2 Safety*.

To switch on, both covers (A) must be closed (switch-on safety device).

EFA SB 295 E and EFA SB 327 E – *see Fig. 6.1* –

The machines are equipped with two switching handles (B) (two-hand safety control).

- To switch on, operate both switches of the switching handles simultaneously.
- If one switch is released during operation, both switches must be released again and operated simultaneously.

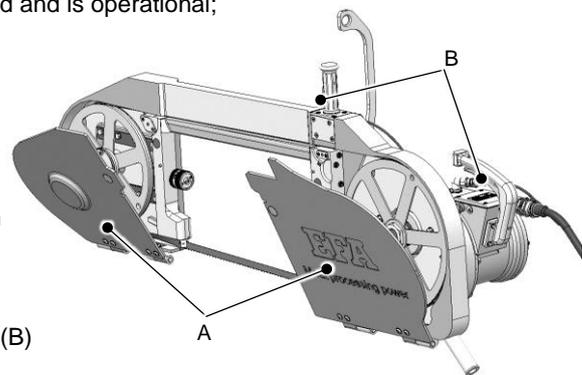


Fig. 6.1 – Switching on the band saw (two-handed)

EFA SB 287 E, EFA SB 288 E and EFA SB 289 E – *see Fig. 6.2* –

The machines are equipped with a switching handle (C) and a guide handle (D) (one-hand control).

- To switch on, operate the switch of the switching handle.
- If the switch is released during operation, the switch must be pressed again.

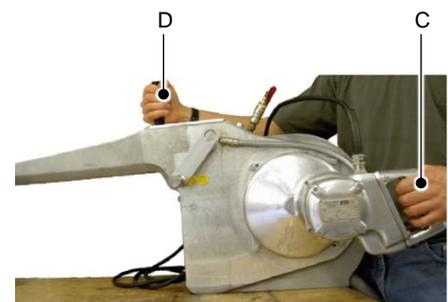


Fig. 6.2 – Switching on the band saw (one-handed)

Warning!



For safety reasons, EFA band saws must be held with two handles.

Never work one-handed!

6.1.2 Switching off

- Release the switch to switch off.
- The switch switches off automatically due to the return spring.

6.2 Working with the band saw

Danger!



Never reach into the cutting edge area of the running saw band, otherwise you could cut off limbs!

Warning!



Wear eye protection or protective goggles when working!

Hearing protection must be worn during continuous operation!

6.2.1 Operation

Before use, check that the operating data of the mains and the device match up.

- Hold the band saw securely by both handles and switch it on, *see section 6.1.1 Switching on.*
- Guide it into the piece of meat while it is running.
- Remove from the piece of meat while running and then switch off at the operating lever.

See also *section 6.1 Switch operation.*

6.2.2 Operational safety

For safety reasons, EFA band saws must be held with two handles.

Never work one-handed.

- Do not carry the saw by the switching handle, it could start unintentionally.
- Be especially careful when switched on.
- Do not remove the protective devices from the saw for breaking carcasses.
- Never reach into the area of the saw band when it is switched on.
- Do not operate the motor switch while inserting the saw band.
- For safer handling (guiding), the saw must be suspended from a spring balancer, *see section 5.1.1 Spring balancer.*
- Regularly check the suspension for damage.
- Observe general safety regulations, *see chapter 2 – Safety.*

7 Assembly



Danger! Assembly work is only allowed to be carried out by authorised specialist personnel.



Warning! Wear cut-resistant gloves and safety shoes during all assembly work.



Danger! Voltage! Disconnect the device from the mains prior to performing any assembly work!

7.1 Saw band change



Danger! Never reach into the cutting edge area of the running saw band, otherwise you could cut off limbs!



Important! Only use genuine EFA saw bands!

The band saws have a switch-on safety device, i.e. if one of the two covers (A) is open, the machine cannot be switched on.

7.1.1 Removal of saw band

- Open both covers (A) with tab (B) (covers have magnetic catch). Loosen the saw band by turning the torque wrench (C) anticlockwise. The saw band is now slackened.
- Lift up the guide with lever (D) and push the saw band out of the guides and take it out over the wheels, see section 7.2 Saw band guide.

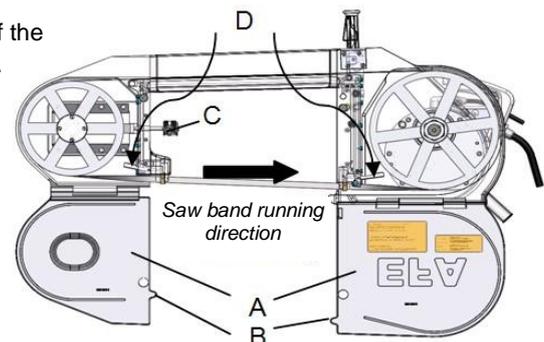


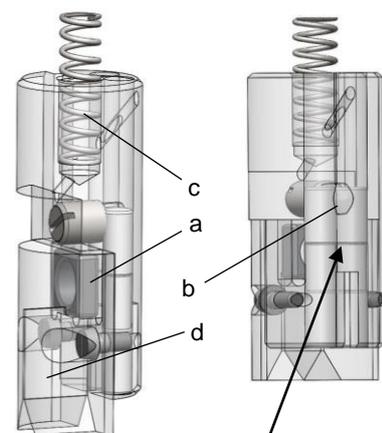
Fig. 7.1 – Saw band change

7.1.2 Installation of saw band

- Place the saw band flush over the wheels with the teeth against the housing; the teeth must be in the direction of the motor. The set of the teeth must be above the recessed diameter (indentation) of the wheels.
- Slightly pretension the saw band using the torque wrench (C).
- Push up guide with lever (D), position saw band upright by hand and insert into guides.
- Release lever (D) (automatic working position).
- Tension the saw band using the torque wrench (C) until the torque wrench clicks.
- Let the machine run for a short time, the saw band will pull itself to the correct position on the wheels.
- Then retighten the saw band with a torque wrench (C).
- The tooth tips of the saw band are hardened and therefore cannot be resharpened.

7.2 Saw band guide

The band saws have two identical saw band guides, these are an important part of the band saw and must be cleaned daily, checked and replaced in time when worn.



- Running-in marks on carbide
- Gap set ex-works 0.6 mm
- Turn rods (b) if there are running-in marks

Fig. 7.2 – Saw band guide

The saw band guides include the following parts, see Fig. 7.2 Saw band guide.

- Carbide plate (a) – Support of the sawing pressure
 - 2 carbide rods (b) – Deflection and guidance of the saw band
 - Compression spring (c) – Spring-loaded support of the sawing pressure
 - Fibre guide (d)
- Carbide plate (a) can be turned over after wear (scoring) (can be used on four sides). Timely turning prevents cracking of the saw band back.
 - The carbide rods (b) are not adjustable. They can be used by twisting around on the entire circumference at the bottom and top. If worn, install new rods. This prevents cracking and guarantees correct sawing.
 - The saw band guide must be movable.
 - The fibre guide (d) must be checked regularly for wear and replaced if necessary.

Guide change

Important! If the gap of the fibre guide is larger than 2 mm, it must be changed.



The following illustrations describe how to disassemble the complete guide unit, lever, holder and fibre guide, which is responsible for guiding the saw band, for possible maintenance work. For clarity, disassembly is shown only on the bar. The removal can also be carried out on the bar mounted on the saw.

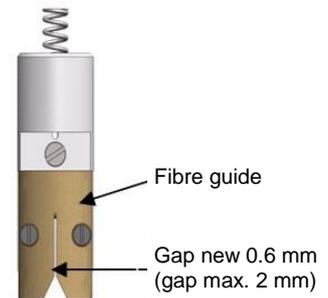
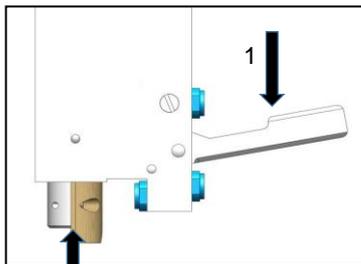


Fig. 7.3 – Changing guide

- Open the cover (A) and remove the saw band from the guide, see section 7.1.1 Removal of saw band.

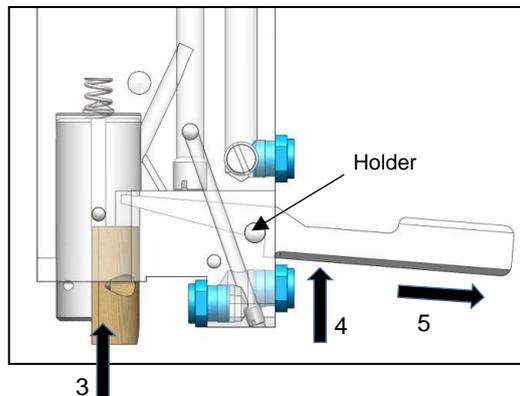
Step 1



Rear bar

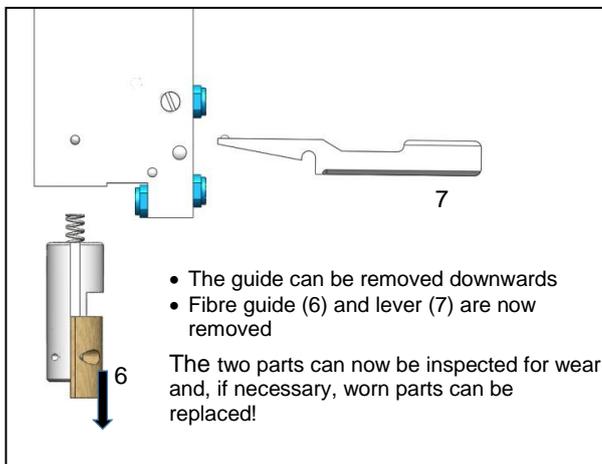
- Push lever down (1)
- Guide moves upwards (2)

Step 2



- Hold guide up (3)
- Remove lever upwards from holder (4)
- Remove lever from bar (5)

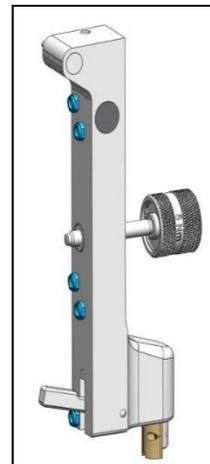
Step 3



- The guide can be removed downwards
- Fibre guide (6) and lever (7) are now removed

The two parts can now be inspected for wear and, if necessary, worn parts can be replaced!

Step 4



Front bar

The same work steps can be carried out on the front bar of the splitting saw to carry out any maintenance operations.

- Assembly is carried out in reverse order!

8 Cleaning

Danger!



Voltage!

Only carry out cleaning work when the device is disconnected from the mains.

Danger!



Observe the safety and hygiene requirements!

8.1 Daily cleaning after completion of the slaughtering

Trouble-free continuous operation can only be guaranteed if the EFA band saw is kept perfectly and hygienically clean at all times.



Also observe the safety instructions in the product data sheets of the cleaning agents.

Observe the applicable safety and hygiene requirements for this purpose!

Disinfectants must not come into direct or indirect contact with foodstuffs. Therefore, rinse the device with clear water after disinfection.



Do not use any aggressive solvents!
Do not use a steam blaster or high-pressure cleaner! Do not immerse the device in water!

8.1.1 Cleaning the band saw

Warning!



Cutting hazard!

Wear cut-resistant gloves and safety shoes when cleaning the band saw.

After work, slacken the saw band, *see section 7.1.1 Removal of saw band*, remove the saw band, clean it with hot water and dry it.

Also remove the guide after each use and clean the insert bore completely, *see section 7.2 Saw band guide*.

- 1) Bring the band saw to your tool point (workshop).
- 2) Remove coarse dirt with a brush and hot water (approx. 45 – 55 °C); tenacious or crusted residues must be soaked in order to be able to remove them.
- 3) Put a cleaning agent in hot water. Spread the solution over the surfaces to be cleaned and allow the cleaning agent to work for 15 – 20 minutes.
- 4) Wash off the dissolved dirt with hot water.
- 5) Wash and dry the entire band saw with clean water.

9 Maintenance and repair

9.1 Maintenance

Note

Observe all safety instructions

Warning!

Cutting hazard!
Before carrying out any maintenance work, switch off the device and disconnect it from the mains!

Danger!

Maintenance work is only allowed to be carried out by qualified and instructed personnel.

Danger!

Before any maintenance work is carried out, both covers must be open (switch-on safety device), so that unintentionally switching on is not possible!

9.1.1 Daily maintenance of the band saw

To ensure the longest possible service life and low wear and tear, the band saw must be checked and serviced regularly.

Service and maintenance work must only be carried out by instructed personnel.

Only use genuine spare parts or spare parts recommended by **Schmid & Wezel GmbH** Maschinenfabrik.

Lubrication

After each cleaning, lightly oil the saw band with acid-free EFA special oil.

Guide

Maintain the guide with particular care. In case of wear, readjust in good time or replace immediately. Check the guide for free movement by the spring and grease it.

Saw band

Regularly check the saw band, replace if worn.

Motor

Use a blunt, non-metallic object to keep the condensation holes on the underside of the motor clear. Greater accumulations of condensation lead to motor failure (corrosion of the winding) and high repair costs.

9.1.2 Extended maintenance (after approx. 50 operating hours)

Band saw

Check the ball bearings of the guide pulleys and regrease if necessary.

Guide

Lightly grease both guides.

Torque wrench

The torque wrench should be placed in an oil bath over the weekend, do not relubricate.

Gear unit

The gear units have fill-for-life lubrication. This only needs to be renewed in the event of repairs.

9.2 Repair by customer service

Danger!



Repairs are only allowed to be carried out by qualified and instructed personnel.

Danger!



Only use genuine spare parts.

Danger!



**Voltage!
Disconnect the band saw from the mains prior to performing any repair work.**

- The **EFA Service department of Schmid & Wezel GmbH** is at your disposal for repairs. If your equipment needs to be repaired, please contact the nearest authorised service centre or our head office.
- After repairs, the fill-for-life lubrication of the gear units must be restored each time!
- In the event of malfunctions that cannot be clearly localised, the device should be returned to **S&W** for repair.

9.2.1 Return

Return your waste electrical equipment to our head office.

**Schmid & Wezel GmbH
Maschinenfabrik**
Maybachstrasse 2
75433 Maulbronn / Germany
☎ +49 7043 / 1020
☎ +49 7043 / 10278
@ efa-verkauf@efa-germany.de
Internet: <http://www.efa-germany.de>

10 Waste disposal – recycling

The machine must be disposed of in accordance with the valid legal regulations of the respective countries.

10.1 Disassembly and disposal



Old and used machines contain reusable materials that can be recycled.

During disposal, it is essential to observe regional and local environmental protection regulations.

- 1) Disconnect the machine from the mains power and/or the pneumatic/hydraulic supply.
 - 2) Disassemble the machine completely.
 - 3) Degrease the machine completely.
 - 4) Dispose of used oil and components and materials contaminated with oil in accordance with the applicable environmental conditions.
 - 5) Separate all reusable materials according to type.

 - 6) Sort the individual reusable materials for recycling and disposal.
 - 7) Dispose of the hazardous waste at a local hazardous waste disposal site.
- Or
- 8) Return your waste electrical equipment to our head office.



Schmid & Wezel GmbH
Maschinenfabrik

Maybachstrasse 2
75433 Maulbronn / Germany

☎ +49 7043 1020

📠 +49 7043 10278

@ efa-verkauf@efa-germany.de

Internet: <http://www.efa-germany.de>