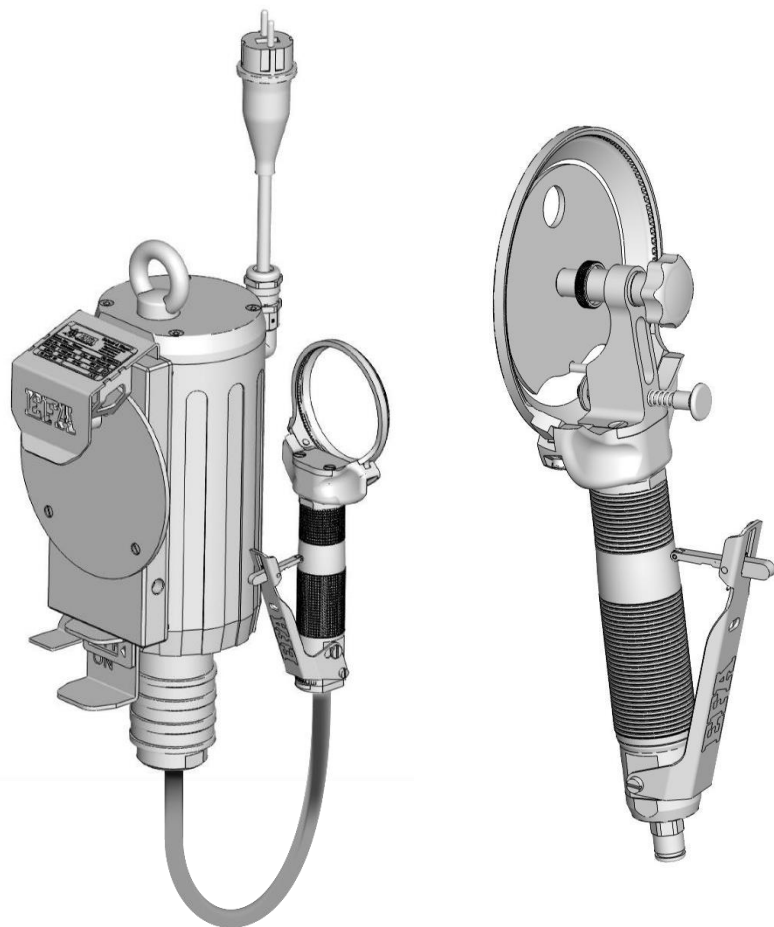


EFA trimmer

EFA trimmer 35 E
EFA trimmer 90 E
EFA trimmer 130 E
EFA trimmer 35 D
EFA trimmer 90 D
EFA trimmer 130 D
EFA RME D



Translation of the operating instructions

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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.

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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 trimmer for breaking in the butcher's shop and provide the necessary safety instructions.

They contain details for the intended use as well as important information:

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

If the instructions are followed, the EFA trimmer 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 3.3 – 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 trimmer. Furthermore, it is imperative that everyone working with and on the machine has read the operating instructions and observes them.

The operation of the trimmer 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 trimmer** 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

The EFA trimmer is used for processing pieces of meat and other foodstuffs.

Do **not** use the EFA trimmer on **frozen food**.

The EFA trimmers are only allowed to be used:

- in fully functional condition,
- 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 trimmer 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 EFA trimmer if safe working with it is not possible,
- Do not make any structural changes to the EFA trimmer without authorisation.

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 **original 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: 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 of 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 of noise with high sound pressure level If the sound pressure level at the workplace exceeds 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 in the following lifecycle phases

Some work requires protective equipment. This protective equipment must be made available to you.

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"> Protective gloves Safety shoes Protective goggles Hairnet for long hair
Operation	<ul style="list-style-type: none"> Hairnet for long hair Cut-resistant gloves Protective goggles Hearing protection Safety shoes
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.

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. Ensure proper lighting (at least 500 lux).
- Keep other persons away from your workplace. Focus on the job in hand when working.
- Do not use the EFA trimmer when you are tired and/or unfocused.
- 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.
- Store the EFA trimmer in a safe manner.
 - EFA trimmer 90E-130E electrical version:
When the device is not used, store it in the holder and secure it so that it cannot be switched on accidentally.
 - EFA trimmer 90D-130D pneumatic version:
Place the device in a protected place with the blade pointing downwards and secure it against unintentional restarting.
- Look after your equipment with care. Use only sharp and undamaged blades for safe work.
- Only use genuine EFA accessories/spare parts.
Non-compliance will void the warranty.
The use of other equipment, accessories or spare parts can endanger you and other persons.

3 Technical description

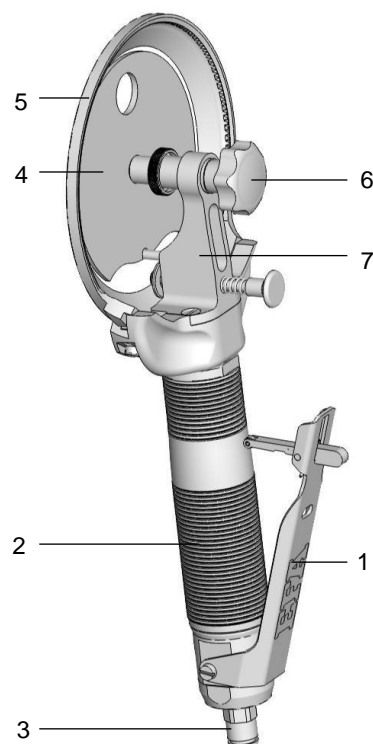
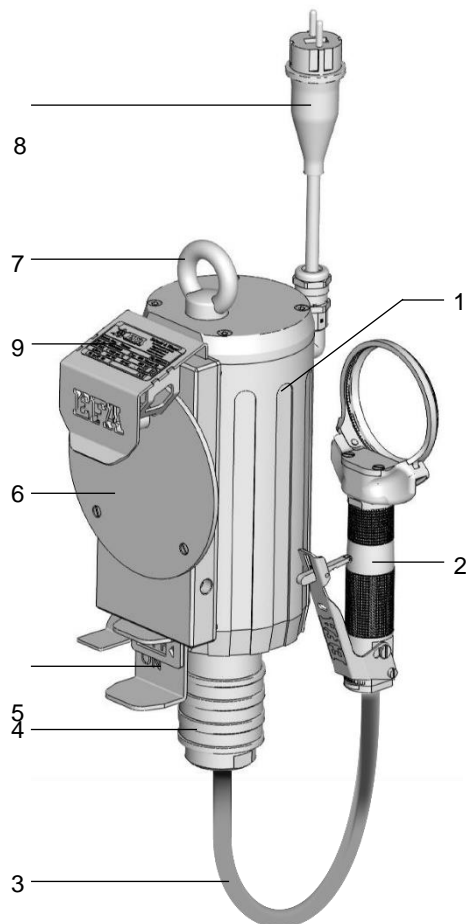
Tab. 3.1 – Technical data

Type \ Name	Operating pressure	Current consumption	Voltage	Frequency	Air consumption at full load	Power	Speed of blade	Blade (Ø)	Vibrations		Sound pressure level	Sound power level	Peak sound pressure level	Type of protection	Protection Class	Weight
	bar	A	V	Hz	l/min	watt	rpm	mm	m/s ²		dB(A)	dB(A)	dB(C)	IP	-	kg
EFA RME D 120005400	6	-	-	-	390	215	1400	35	$a_{hd} = 0.423$	$K = 0.029$	$L_{pA} = 80$	$L_{WA} = 91$	$L_{pCpeak} = 96.9$	-	-	1.5
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 35 E 100640200	-	2.1	230	50 / 60	-	390	1500	35	$a_{hd} = 0.69$	$K = 0.122$	$L_{pA} = 61$	$L_{WA} = 72$	$L_{pCpeak} = 86.0$	65	I	10
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 35 D 100610200	6	-	-	-	390	215	1400	35	$a_{hd} = 0.259$	$K = 0.019$	$L_{pA} = 80$	$L_{WA} = 91$	$L_{pCpeak} = 95.9$	-	-	1.2
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 90 E 100640000	-	2.1	230	50 / 60	-	390	1400	90	$a_{hd} = 0.61$	$K = 0.05$	$L_{pA} = 67$	$L_{WA} = 78$	$L_{pCpeak} = 88.0$	65	I	12
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 90 D 100610000	6	-	-	-	390	215	1400	90	$a_{hd} = 0.72$	$K = 0.08$	$L_{pA} = 85$	$L_{WA} = 96$	$L_{pCpeak} = 101.4$	-	-	0.8
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 130 E 100640100	-	2.1	230	50 / 60	-	390	900	130	$a_{hd} = 0.63$	$K = 0.07$	$L_{pA} = 73$	$L_{WA} = 84$	$L_{pCpeak} = 95.5$	65	I	12
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			
EFA trimmer 130 D 100610100	6	-	-	-	390	215	800	130	$a_{hd} = 0.73$	$K = 0.03$	$L_{pA} = 86$	$L_{WA} = 97$	$L_{pCpeak} = 101.9$	-	-	0.8
											$K_{pA}=3$	$K_{WA} = 3$	$K_{pCpeak} = 3$			

3.1 Machine overview














The following illustrations show the standard version of the EFA trimmer with electric/pneumatic drive.




EFA trimmer E electric drive	EFA trimmer D pneumatic drive
------------------------------	-------------------------------



No.	Part description	No.	Part description
1	Electric drive complete	1	Lever, complete
2	Handle circular knife complete	2	Grip sleeve, complete
3	Drive shaft	3	Pneumatic connection (hose unit)
4	Coupling slider	4	Depth stop (knife head 90-130)
5	ON/OFF switch	5	Blade
6	Knife suspension complete	6	Star screw for cutting depth adjustment
7	Eyebolt	7	Sharpening unit
8	Earthed plug	-	
9	Nameplate	-	

Tab. 3.2 – EFA trimmer overview

EFA trimmer	Usage	Application
EFA trimmer 35 E 100640200 	       	Trimmer with electric drive EFA trimmers are used for processing pieces of meat and other foodstuffs. Do not use EFA trimmers on frozen food.
EFA trimmer 90 E 100640000 		
EFA trimmer 130 E 100640100 		
EFA trimmer 35 D 100610200 		
EFA trimmer 90 D 100610000 		Trimmer with pneumatic drive EFA trimmers are used for processing pieces of meat and other foodstuffs. Do not use EFA trimmers on frozen food.

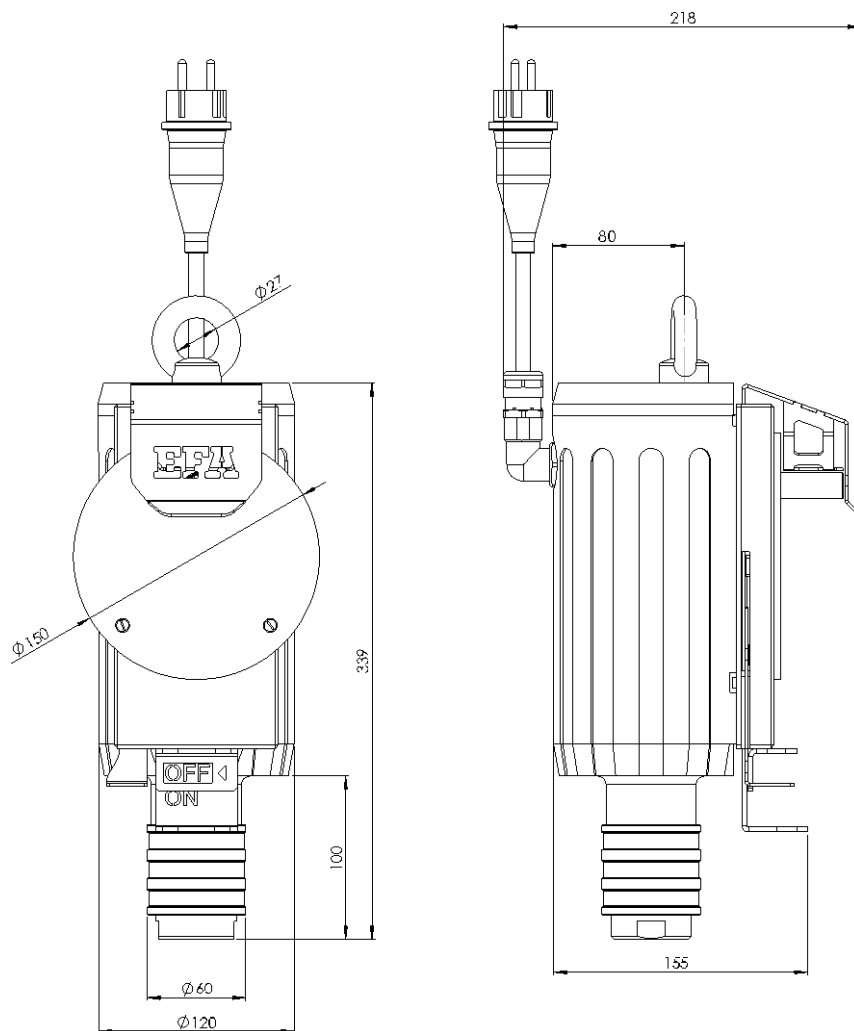
<p>EFA trimmer 130 D 100610100</p> 		
<p>EFA RME D 120005400</p> 		<p>Spinal cord remover with pneumatic drive</p> <p>The spinal cord remover is used to remove the spinal cord of cattle using a combination of cutting and vacuum.</p>

3.2 Dimensions

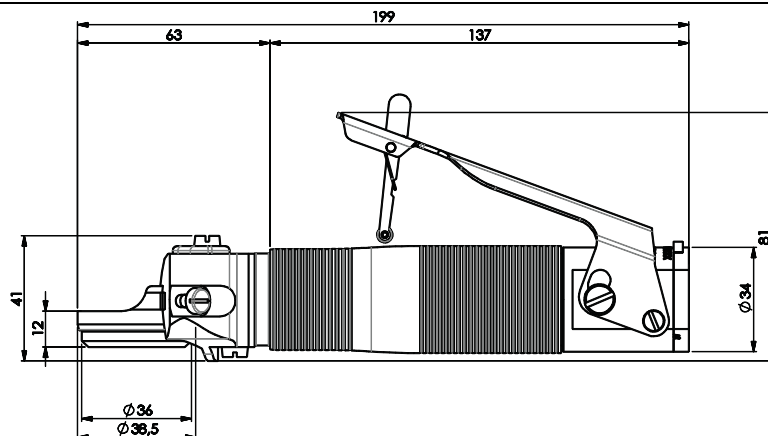
The following figures give you an overview of the dimensions of the machines.

EFA trimmer 35 E – part no. 100640200

Electric drive complete – part no. 008013806

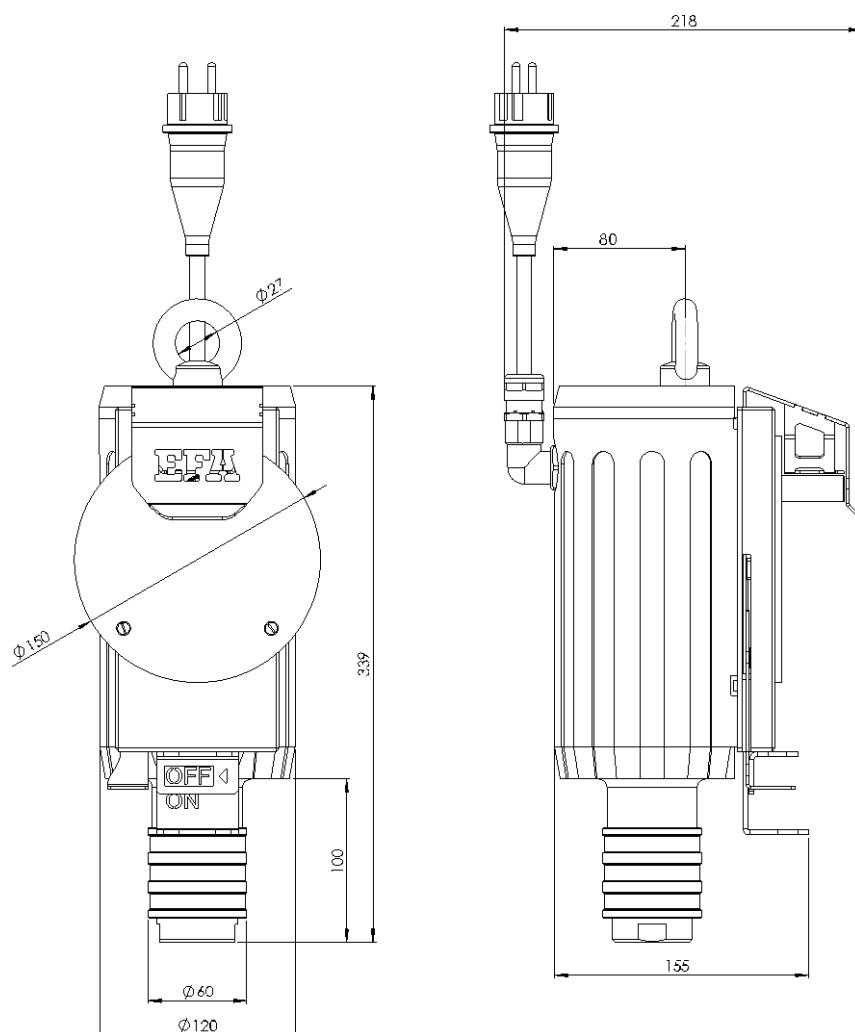


Handle complete – part no. 008015336

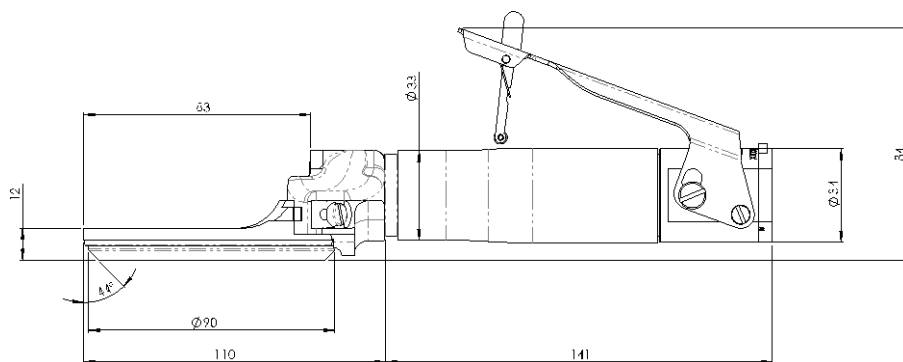


EFA trimmer 90 E – part no. 100640000

Electric drive complete – part no. 008013806

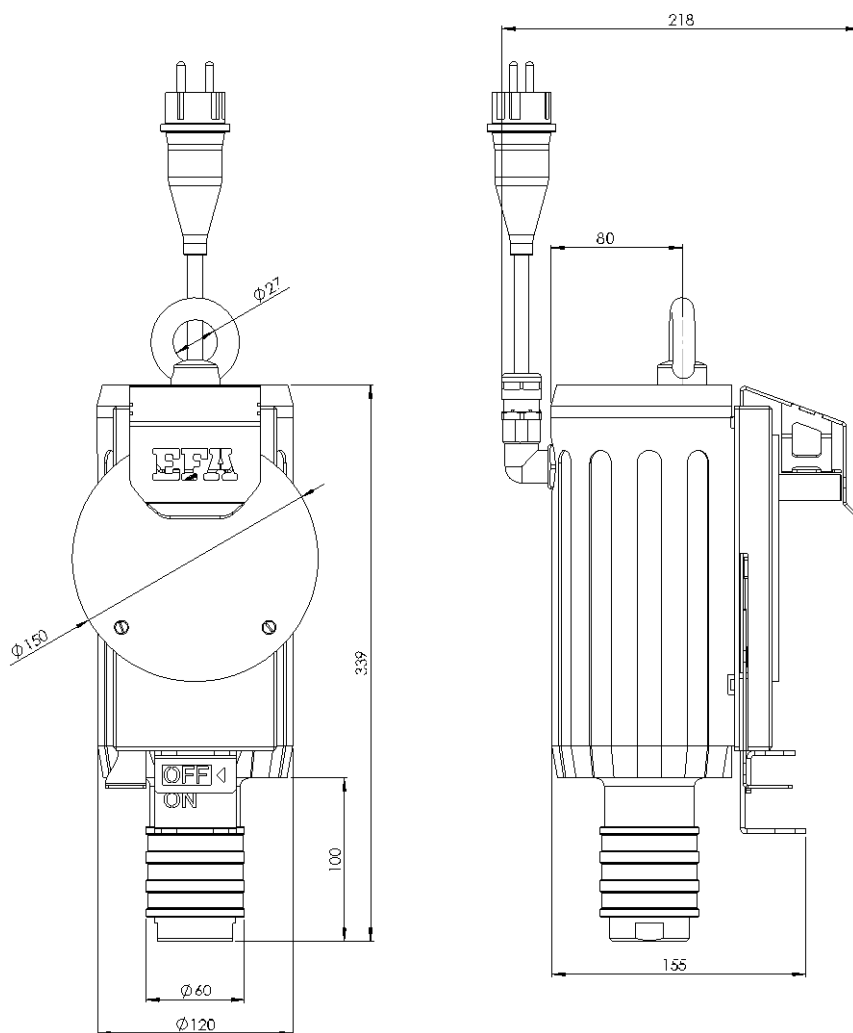


Handle complete – part no. 008013684

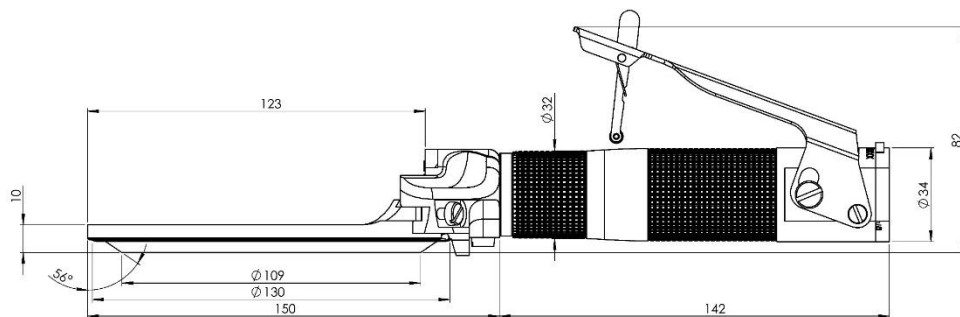


EFA trimmer 130 E – part no. 100640100

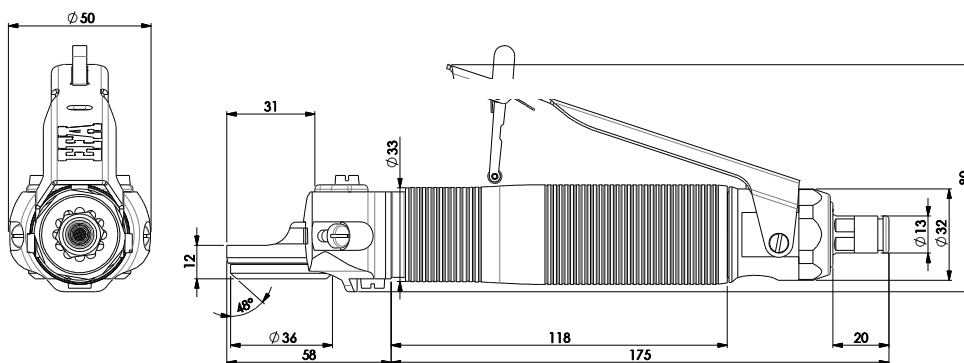
Electric drive complete – part no. 008013806



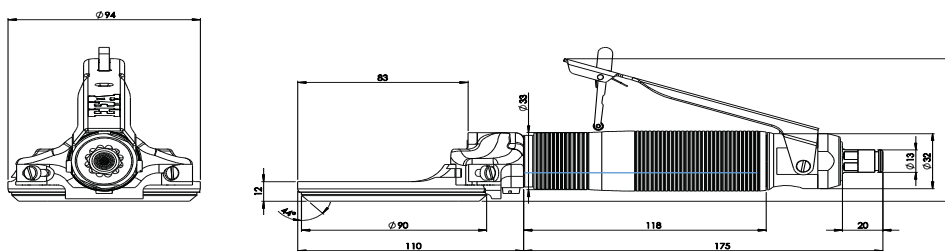
Handle complete – part no. 008014257



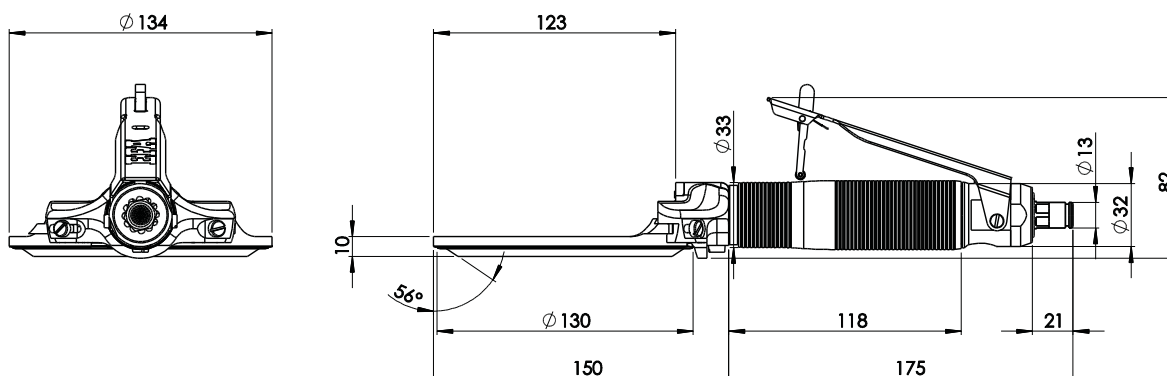
Pneumatic drive EFA trimmer 35 D – part no. 100610200



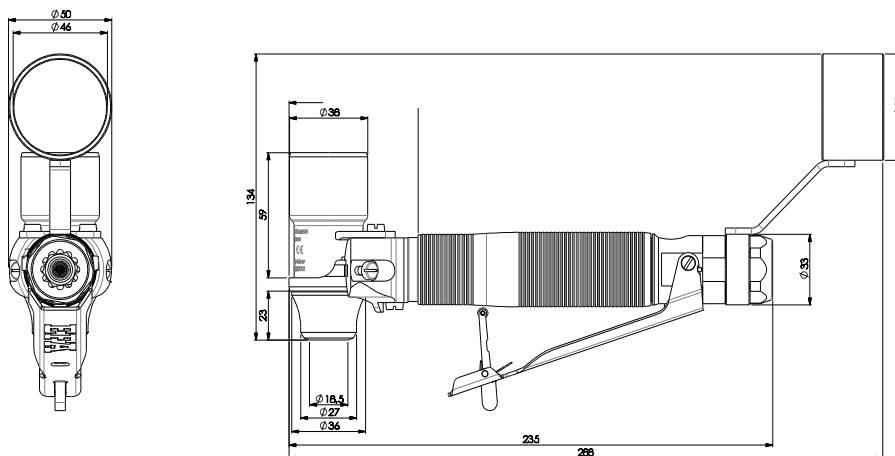
Pneumatic drive EFA trimmer 90 D – part no. 100610000



Pneumatic drive EFA trimmer 130 D – part no. 100610100

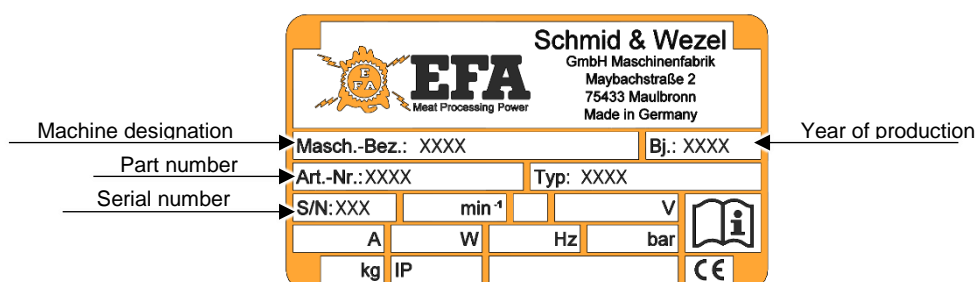


Pneumatic drive EFA RME D – part no. 120005400



3.3 Nameplate

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

The machine is ready for use immediately after unpacking.

- 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 9*.

Storage of the machine

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

- Only store the machine in dry rooms.
- Only store the machine in a dry condition.
- Protect the machine from corrosion.

5 Connection and start-up

Caution!



Danger from unintentional switch-on!

Only connect the EFA trimmer to the electrical or compressed air supply when it is switched off!

Caution!



Tripping hazard!

Lay the flexible shaft outside the traffic area.

Attach the electric motor to the overhead suspension system. Comply with the minimum load bearing capacity of 15 kg.

Lay compressed air lines outside the traffic area.

Lines that run along the floor can be a tripping hazard for the operator!

Caution!



Danger of malfunctions and injuries!

Installation work is only allowed to be carried out by authorised specialist personnel.

We recommend that the cables should run from top to bottom, see Fig. 5.1 – *Ergonomic workplace*.

The working area for the operator should be at least 1.5 m² in size.

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

The lighting of the workplace must be at least 500 lux.

The EFA trimmer is supplied by the factory in a state that it is immediately ready for use.

With the electric EFA trimmer, the electric motor also serves as a holder for the EFA trimmer when it is not in use.

5.1 Connecting the electric EFA trimmer

Select the location of use of the EFA trimmer so that the power cable of the electric motor can be laid upwards without any risk of kinking.

- 1) Attach the electric motor to the overhead suspension system.

Attention!



Device damage!

Comply with the minimum load bearing capacity of 15 kg.

- 2) Setting up an ergonomic workplace:

The following illustration shows the optimum distances as determined by **Schmid & Wezel GmbH**. It may be necessary to adapt these values to your specific workplace situation.

A	350 mm
B	900 mm
C	1050 mm

- 3) Check that the electric motor is switched off "OFF position".
- 4) Connect it to the power supply. See chapter 3 – *Technical data*.

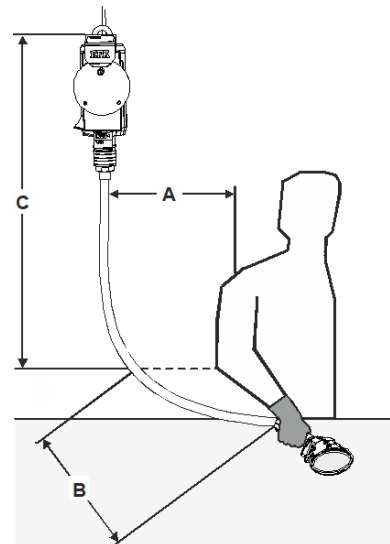


Fig. 5.1 – *Ergonomic workplace*

5.1.1 Connecting the shaft to the motor



- 1) Insert the hose sleeve (2) of the flexible shaft on the motor (1).
- 2) Pull the bushing (3) downwards until the hose sleeve (2) can be pushed in further.
- 3) Release the bushing (3).
- 4) Pull slightly in order to check whether the shaft is properly locked in place.

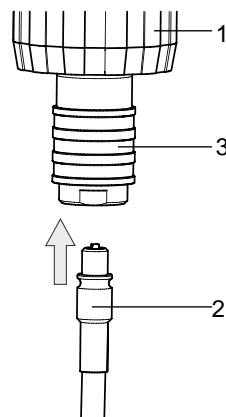
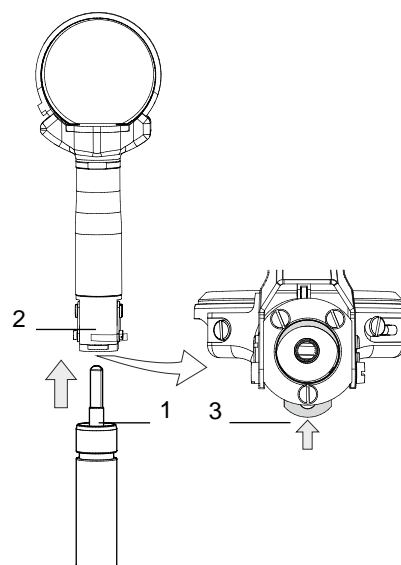


Fig. 5.2 – Connecting the shaft to the electric motor

5.1.2 Connecting the shaft to the EFA trimmer



- 1) Insert the tappet (1) of the flexible shaft into the EFA trimmer (2).
- 2) Push against the locking plate (3) and push the tappet (1) further in until the connector assembly locks in place.
- 3) Release the locking plate (3).
- 4) Pull slightly in order to check whether the shaft is properly locked and protected against accidental disconnection.



The EFA trimmer is now ready for use.

Fig. 5.3 – Connecting the trimmer

5.2 Connecting the pneumatic EFA trimmer

Attention!



Device damage!

Operate the EFA trimmer only with clean, water-free and oiled air!



- 1) Insert the air hose (1) as far as it will go into the screw-in fitting (2) on the valve housing (3) of the EFA trimmer.
- 2) Guide the air-outlet hose (4) through the union nut (5) and push it onto the valve housing of the EFA trimmer.
- 3) Screw the union nut onto the valve housing of the EFA trimmer.

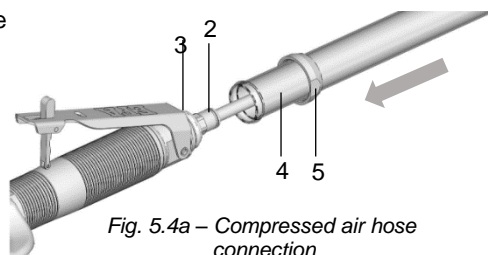


Fig. 5.4a – Compressed air hose connection



- 4) Screw the rapid action coupling (6) (with sealing ring) into the oil mist lubricator (7) (with filter pressure reducer). Make sure that the oil mist lubricator is assembled in the following sequence: water separator (8), pressure gauge (9), oil mist unit (10).

- 5) Insert the plug connection (11) into the coupling.

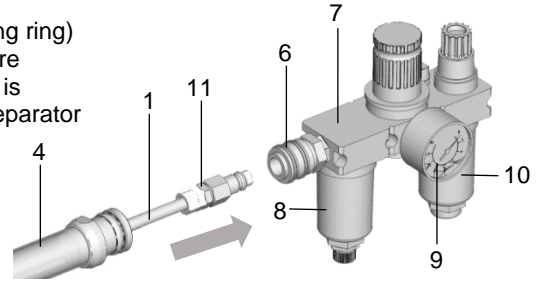


Fig. 5.4b – Compressed air hose connection

To ensure lubrication of the pneumatic motor, the oil mist lubricator must be set to 1 – 2 drops of oil per minute (or one drop of oil for approx. 15 cuts). If the compressed air connection is faulty and there is a high water content in the compressed air, water can escape at the connection point.

Therefore, make sure that the hose connection is correct and that compressed air with a low water content is used (the water separator must be emptied regularly).

If no dried air is available, a water absorber must be installed by the customer.

5.2.1 Filter pressure reducer

The air from pneumatic systems is usually contaminated and enriched with moisture.

A filter pressure reducer with water separator must therefore be installed between the pneumatic system and the tool. This not only regulates the operating pressure, but also cleans and dries the compressed air. The utility and service life of the pneumatic EFA trimmer are thus considerably increased.

The filter pressure reducer should be installed as close as possible to the pneumatic EFA trimmer.

- Set an operating pressure of max. 6 bar at the filter pressure reducer.

You can purchase a suitable filter pressure reducer from **Schmid & Wezel GmbH** on request, through our Sales department.

5.3 Preparing the EFA trimmer for use

5.3.1 Mounting the depth stop and sharpening unit

The depth stop and sharpening unit are special accessories and may need to be fitted to the EFA trimmer before use.



- 1) Remove the screws (1) of the gear unit cover (2) and keep them.

- 2) Remove the gear unit cover (2).

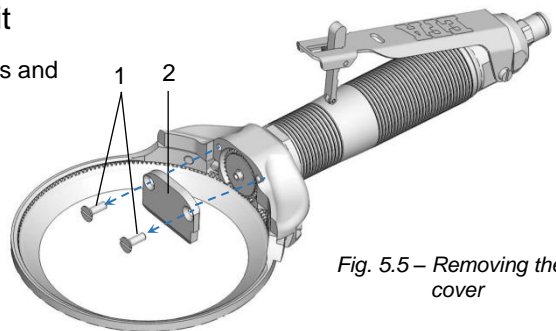


Fig. 5.5 – Removing the cover



The depth stop guarantees a uniform thickness of the material to be cut. The sharpening unit sharpens the blade during operation.



- 3) Mount the depth stop (3) and the sharpening unit (4) on the EFA trimmer in place of the gear unit cover using the screws (1).

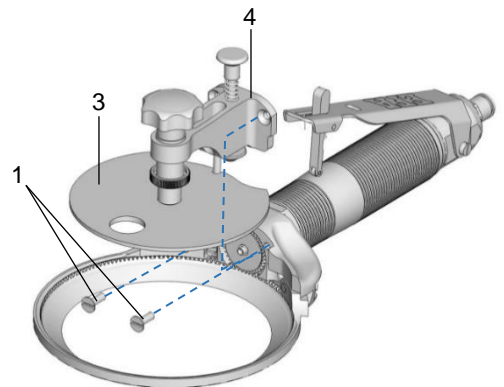


Fig. 5.6 – Mounting the depth stop and sharpening unit

5.3.2 Setting the depth stop



1) Loosen the locknut (1).



2) Set the desired depth of cut by turning the star screw (2).



“CCW – Counterclockwise”
 Counterclockwise rotation:
 decrease depth of cut.

“CW – Clockwise”
 Clockwise rotation: increase depth of cut.

3) Secure the setting by tightening the locknut (1).

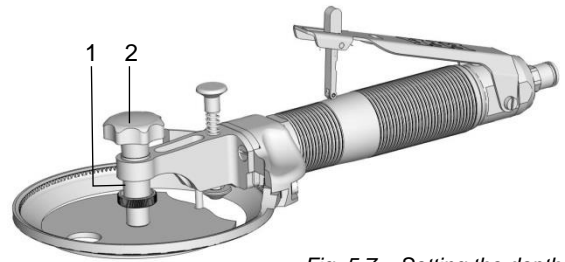


Fig. 5.7 – Setting the depth stop

5.3.3 Assembling the sharpening unit



The sharpening unit is also available without a depth stop.



1) Remove the cover, see Fig. 5.5.



2) Mount the sharpening unit (1) on the EFA trimmer in place of the gear unit cover using the screws (2).

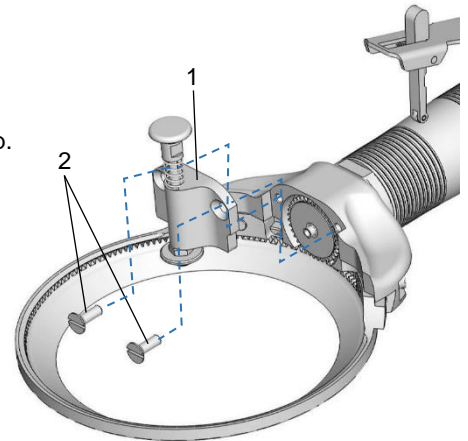


Fig. 5.8 – Mounting the sharpening unit

5.3.4 Installing the suction unit (EFA trimmer 35 only)



1) Remove the screws (1) of the gear unit cover (2) and keep them.



2) Remove the gear unit cover (2).



3) Mount the suction tube (3) on the EFA trimmer in place of the gear unit cover using the screws (1).

4) Unscrew the union nut (6) and pull the hose unit (7) off the valve housing (8).

5) Pull the hose guide (5) over the hose unit (7) and screw it to the valve housing (8) with the spacer sleeve (4).

6) Push the hose guide (5) onto the spacer sleeve (5) and clamp it to the spacer sleeve (4) with the union nut (6).

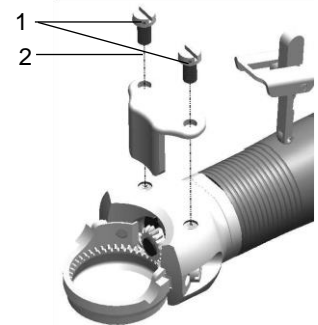


Fig. 5.8a – Removing gear unit cover



The EFA trimmer 35 can be converted to the EFA RME. In conjunction with a vacuum system (available as an accessory), the spinal ganglia can be separated without damaging the spinal meninges and the spinal cord can be sucked out.

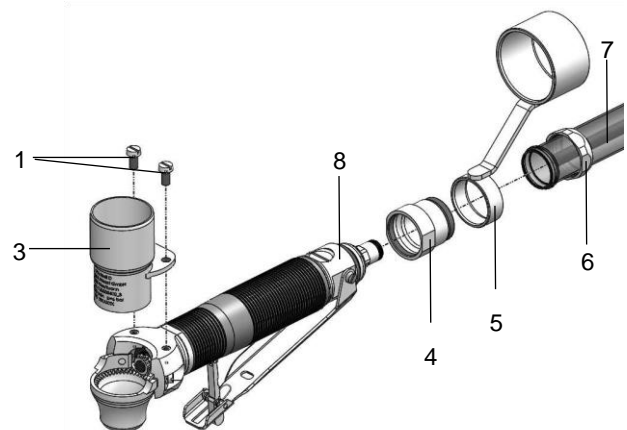


Fig. 5.8b – Mounting suction tube & hose guide

- 7) Push the suction hose (9) of the vacuum system through the hose guide (5) and push it onto the suction tube (3). Fasten the suction hose with a hose clip (10).

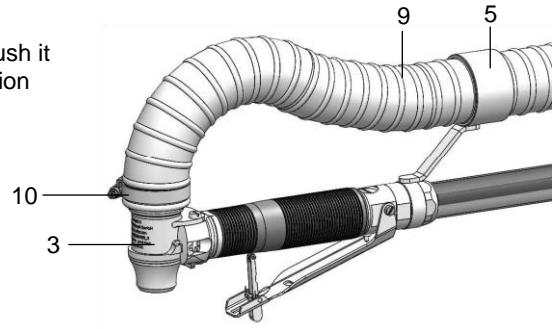


Fig. 5.8c – Mounting the suction hose

5.3.5 Adjusting the handle



The handle with the operating switch can be turned as required for better handling.

- 1) Remove blade and blade holder according to instructions, see section 8.1.1, Fig. 8.1 and Fig. 8.2.
- 2) Clamp the EFA trimmer on the gear unit cover (1) in the vice (2) so that the locknut (3) can be reached with the open-end spanner.
- 3) Loosen the locknut (3).
- 4) Turn the handle through max. 180°.
- 5) Tighten the locknut (3) again firmly.

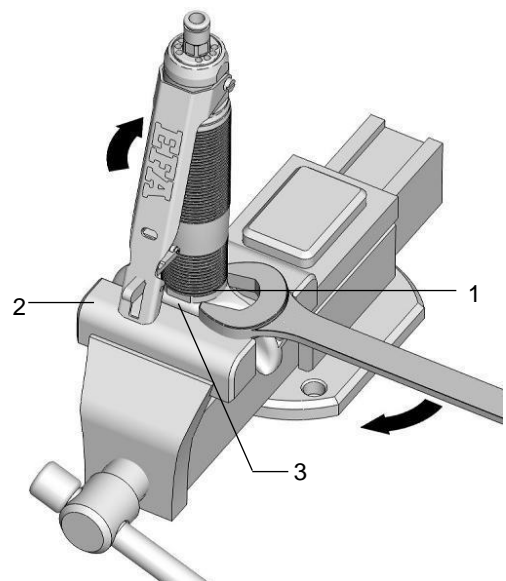


Fig. 5.9 – Adjusting the handle

6 Handling

The EFA trimmer must be guided over the piece of meat, started, and moved over the surface in a smooth, gliding movement. The other hand holds and supports the piece of meat.

The EFA trimmer must always be moved away from the supporting, holding hand.

The rotating blade cuts under the material to be cut and pulls it over the blade.

The EFA trimmer must not be switched on before the operator has read these operating instructions and it has been connected correctly, *see chapter 2 – Safety*.

6.1 Switching the electric motor on

The electric motor is ready for use and it has been correctly connected to the power supply. *See chapter 5 – Connection and start-up*.

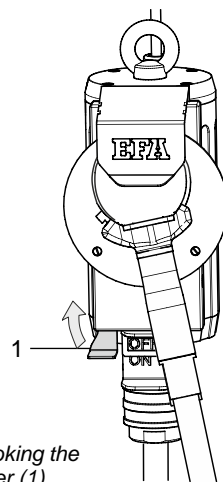


Fig. 6.1 – Unhooking the trimmer (1)

- 1) Push the locking lever (1) to the left and then upwards until the holding bar (2) is laid bare, *see Fig. 6.1*.
- 2) Hold the locking lever (1) in this position, *see Fig. 6.2*.
- 3) Take the EFA trimmer (3) off the holding bar (2), *see Fig. 6.2*.
- 4) Release the locking lever (1), *see Fig. 6.2*.

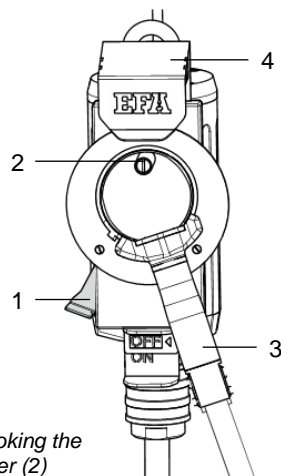


Fig. 6.2 – Unhooking the trimmer (2)

The cover plate (4) and locking lever (1) fall back into the base position, *see Fig. 6.3*.

- 5) Switch the electric motor (5) on, *see Fig. 6.3 "ON position"*.

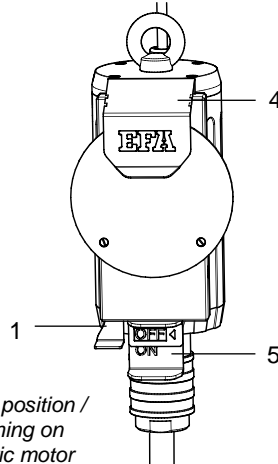


Fig. 6.3 – Base position / switching on electric motor

6.2 Switching on the EFA trimmer

- 1) Perform a function test before starting work.

Warning!



Risk of crushing!

Keep your fingers out of the space between the operating lever and handle when switching the trimmer on.

Cutting hazard!

When it starts, the EFA trimmer lashes out slightly due to the torque. Ensure a firm hold!

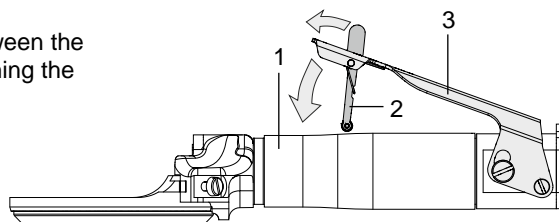


Fig. 6.4 – Actuating the switch

- 2) Hold the device firmly by its handle (1).
- 3) Push the locking lever (2) forward with your thumb.
- 4) This releases the operating lever (3).
- 5) Push the operating lever (3) downwards with your thumb.
- 6) The EFA trimmer starts.
- 7) At the end of the work step, lift the EFA trimmer upwards so that the blade can cut off the strip of meat.
- 8) The work step must be completed to a full extent until the cut-off meat separates from the EFA trimmer on its own.

The electric trimmer is protected against overloads.

The coupling will slip upon reaching harder materials, e.g. bones.

Warning!



Blocking hazard!

Do not stop the EFA trimmer during the cutting process.

Attention!



Improper handling will lead to increased wear!

6.3 Switching off

- Release the operating lever.

Because of its return spring, the locking lever automatically switches the EFA trimmer off, at the same time securing the trimmer so that it cannot be switched on accidentally.

6.4 Procedure for non-utilisation

The EFA trimmer is protected against accidental activation by various safety devices.

EFA trimmer E

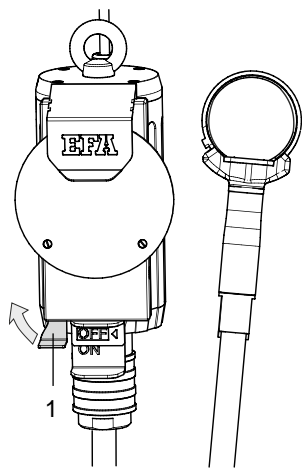


Fig. 6.5 – Securing the trimmer (1)

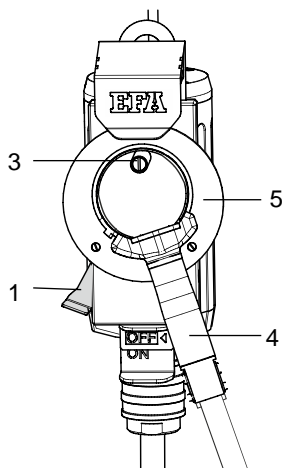


Fig. 6.6 – Securing the trimmer (2)

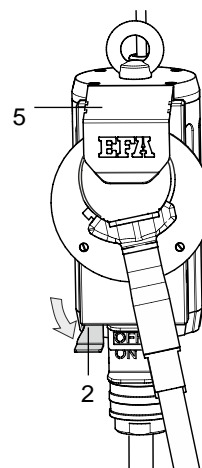


Fig. 6.7 – Securing the trimmer (3)

- 1) Check that the electric motor is switched off "OFF position".
- 2) Push the locking lever (1) to the left and then upwards until the holding bar (3) is laid bare, see Fig. 6.5 and Fig. 6.6.
- 3) Hold the locking lever (1) in this position, see Fig. 6.6.
- 4) Hook the EFA trimmer (4) onto the holding bar (3). The blade side of the EFA trimmer must be placed on the plate (5).
- 5) Release the locking lever (2).

The cover plate (5) and locking lever fall back into the base position, see Fig. 6.7.

The EFA trimmer has now been put out of service and secured.

EFA trimmer D & EFA RME D

The pneumatic EFA trimmers and the EFA spinal cord remover have no suspension attachment.

They are placed blade down in a protected location.

7 Assembly

Warning!



Unintentional switching on!

Before carrying out any assembly work, switch off the device and disconnect it from the electrical system or compressed air network!

7.1 Changing the blade

Attention!



Only use genuine spare parts!

This is the only way to ensure the proper functioning of the machine.

Attention!



Cutting hazard!

Wear cut-resistant safety gloves!

The EFA trimmer has a blade that is driven via a pinion.

7.1.1 Dismantle the blade



Cutting hazard!

Wear safety gloves!

- 1) Loosen the screw (1), see Fig. 7.1.

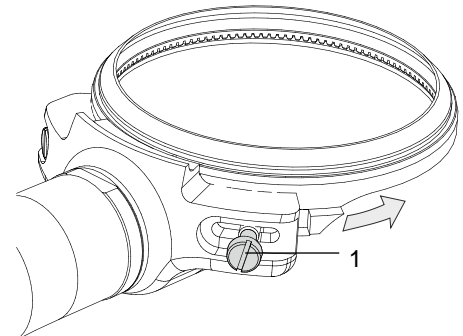


Fig. 7.1 – Loosening the screw



- 2) Insert the tool change key (2) between the screw and housing (3), see Fig. 7.2.
- 3) Pry the knife fixture (4) open with slight pressure and hold it, see Fig. 7.2.
- 4) Hold the tool change key (2) in position.

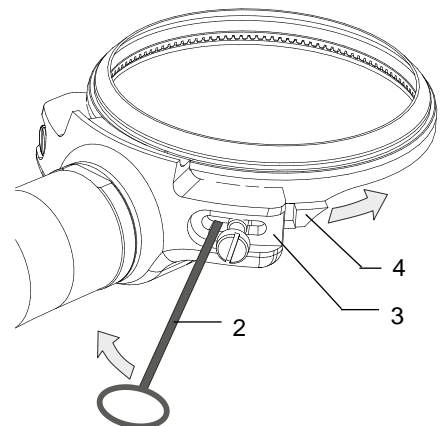


Fig. 7.2 – Lever open the blade fixture



Cutting hazard!

Wear cut-resistant safety gloves!

- 5) Incline the handle (5) until the knife (6) falls out, see Fig. 7.3.

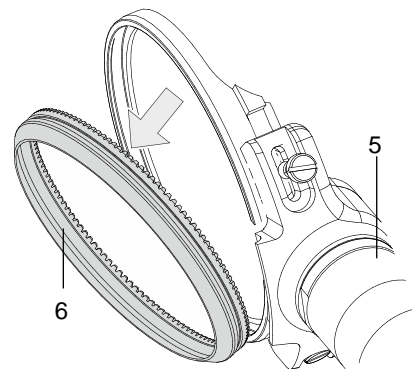


Fig. 7.3 – Removing the blade

7.1.2 Mounting the blade



Cutting hazard!

Wear cut-resistant safety gloves!

- 1) Pry the knife fixture (1) open with slight pressure and hold it, see Fig. 7.2.
- 2) Hold the tool change key (2) in position, see Fig. 7.2.
- 3) Insert the knife (1) in the knife fixture (2), see Fig. 7.4.
- 4) Remove tool change key (2), see Fig. 7.2.

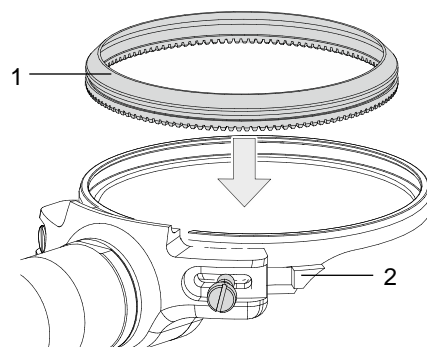


Fig. 7.4 – Inserting blade

7.1.3 Adjusting the blade play

Warning!



Risk of injury when the screw driver slips off!

Work carefully!



- 1) Compress the knife fixture (1) slightly with one hand and hold it, see Fig. 7.5.
- 2) Screw the screw (2) slightly in with the other hand until the knife fixture remains in this position.
- 3) Insert the screwdriver into the gap (3) between the housing and knife fixture (1) and slightly open the knife fixture with the screw (2) until the blade (4) can be moved freely over the entire angle of rotation, see Fig. 7.6.

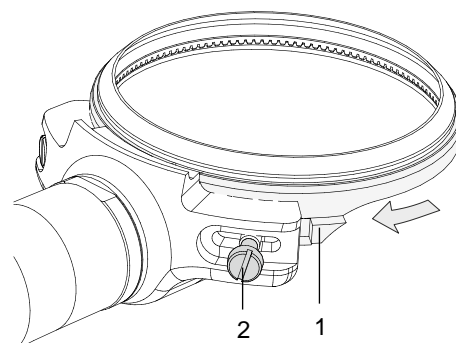


Fig. 7.5 – Adjusting the blade play (1)

Warning!



The blade will be blocked in the case of insufficient play!

Increased torque on the handle!

The handle will lash out!

Ensure a firm grip!

Attention!



Increased friction due to improper assembly.

Result: frictional heat!

- 4) Tighten the screw (2), see Fig. 7.6.
- 5) Check the adjustment once again and readjust the play, if necessary.

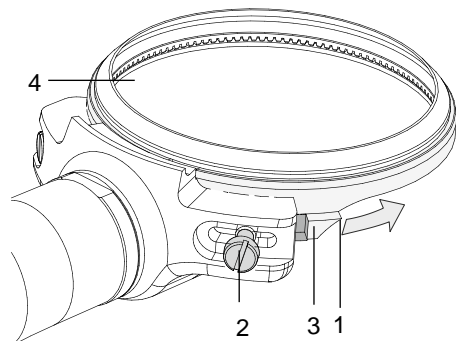


Fig. 7.6 – Adjusting the blade play (2)

8 Service and maintenance

Note!



Observe all safety instructions.

To ensure the longest possible service life and low wear and tear, the EFA trimmer 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**.

Warning!



Cutting hazard!

Before carrying out any maintenance work, switch off the device and disconnect it from the electrical system or compressed air network!

8.1 Daily cleaning

Trouble-free continuous operation can only be guaranteed if the EFA trimmer is kept perfectly and hygienically clean at all times. In the normal course of events, the device should be cleaned before each use.



Observe the safety instructions in the product data sheets of the cleaning agents.

8.1.1 Disassembly



Cutting hazard!

Wear cut-resistant safety gloves!



- 1) Remove both screws (1) of the gear unit cover (2) and retain them, see Fig. 8.1.
- 2) Removing the cover (2).
- 3) Dismantle the blade, see section 7.1 – *Changing the blade*.
- 4) Loosen both screws (3) on the blade fixture (4) until the blade fixture can be removed, see Fig. 8.2.

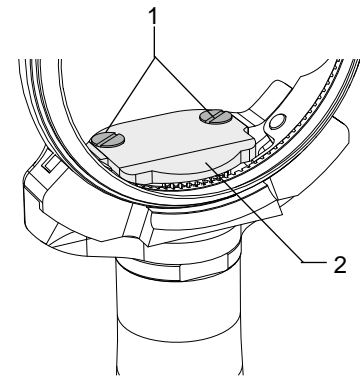


Fig. 8.1 – Removing the cover

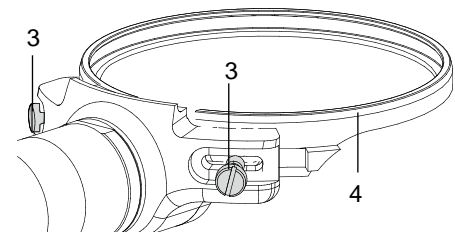


Fig. 8.2 – Removing the screws

- 5) Remove the pinion (5), see Fig. 8.3, if necessary use a screwdriver (6) for this purpose.

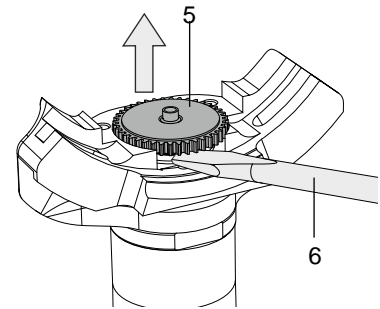


Fig. 8.3 – Removing the pinion

- 6) Seal the resulting opening with the sealing plug (7), see Fig. 8.4.

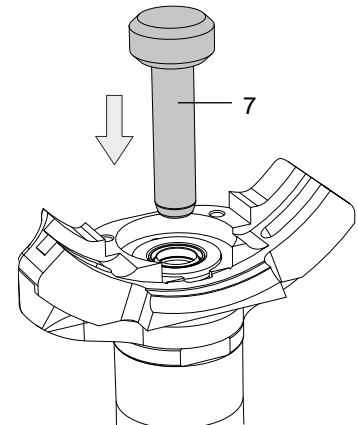


Fig. 8.4 – Inserting the sealing plug

8.1.2 Cleaning process

- 1) Clean the EFA trimmer after every shift with a brush and warm water (40 °C to 55 °C).

Attention!



Only clean the EFA trimmer when it has been dismantled, see section 8.1.1!

Only use cleaning agents that are compatible with materials and food-grade!

- 2) Tenacious or crusted residues must be soaked in order to be able to remove them.
- 3) Use cleaning agents (recommended: cleaning foam).
Contact time: 15 ... 20 minutes.
- 4) Rinse the EFA trimmer with warm water.
- 5) Check whether all of the residues have been removed. If necessary, repeat the cleaning process.

Attention!



Before using cleaning agents, the material compatibility must be tested at a suitable point.

Observe the manufacturer's instructions when handling the cleaning agent!

8.1.3 Reassembly



Cutting hazard!

Wear cut-resistant safety gloves!



- 1) Remove the sealing plug and ensure that no liquid has penetrated the opening.
The ingress of liquid may damage the bearing and coupling.
In this case, return the device for inspection.
- 2) Apply a thin layer of EFA special grease to all sliding surfaces and indentations of the blade, pinion, blade fixture, and plain bearings.
- 3) Install the pinion and screw on the cover.
- 4) Screw on the blade fixture together with the blade.

8.2 Sharpening the blade

Attention!



Blades that are not properly sharpened will result in loss of production and endanger the user.



Cutting hazard!

Wear cut-resistant safety gloves!

If the EFA trimmer is operated without a sharpening unit (special accessory), the blade is sharpened with a sharpening steel.

8.2.1 Whetting



- 1) Hold the trimmer (1) with the guiding hand.
- 2) Hold the sharpening steel (2) in a horizontal position with your free hand.
- 3) Start the EFA trimmer and move it with the rotating blade (3) carefully to and fro on the sharpening steel.

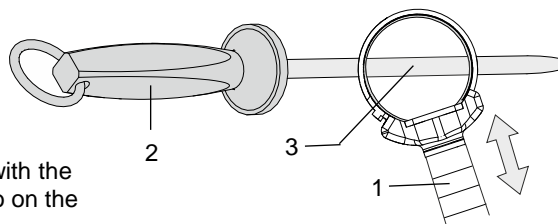


Fig. 8.5 – Sharpening the blade

During whetting, ensure that the blade has full contact with the sharpening steel.

Attention!



Do not use force, as parts could be damaged!

8.2.2 Resharpening

Strongly worn EFA trimmer blades can be resharpened by **Schmid & Wezel GmbH**.

We can also provide a quotation for a suitable grinding machine.

8.3 Extended maintenance

8.3.1 Lubricating the shaft

The flexible shaft is enclosed in a protective sleeve.

- 1) Pull the shaft core out of the protective sleeve.
- 2) Place the shaft core on a suitable surface and spray-lubricate it from all sides by turning it repeatedly. Use EFA special grease spray.
- 3) Let the grease set briefly and push the shaft back into the protective sleeve.

8.3.2 Lubricants

Accidental contact with the processed product (foodstuff) cannot be excluded with certainty. Therefore, only use suitable lubricants.

Suitable grease and oil for your machine can be purchased from **Schmid & Wezel GmbH** through our Sales department.

8.3.3 Oil mist lubricator

For proper functioning and to maintain the appropriate service life of the pneumatic trimmer, the oil mist lubricator (filter pressure reducer) must be checked at regular intervals (1 x per week).

- Remove any condensation and, if necessary, top up with special oil (available from **Schmid & Wezel GmbH**).
- Check the operating pressure (max. 6 bar) at regular intervals, see *Fig. 4*.

8.4 Maintenance

During operation, it is possible that the function can be disrupted, but in most cases, troubleshooting is relatively easy.

Attention!

All work must be carried out by qualified, instructed specialist personnel only.



In *Table 2 – Malfunction – Possible causes – Remedy*, these malfunctions are listed with possible causes and resulting remedies.

8.4.1 Repair by the customer service

Only qualified persons are authorised to perform repairs. The **EFA Service department of Schmid & Wezel GmbH** is at your disposal for repairs.

In the event of faults that cannot be clearly localised, the machine should always be returned to **Schmid & Wezel GmbH** for repair.



Do not repair defective devices on site (in the immediate vicinity of foodstuffs)!
Provide all of the necessary tools and ensure that the work environment is clean.

Warning!

Cutting hazard!



Before carrying out any maintenance work, switch off the device and disconnect it from the electrical system or compressed air network!

Tab. 8.1 – Malfunction – Possible causes – Remedy

Malfunction	Possible cause	Remedy
The device does not start when the operating lever is actuated.	No power supply	Ensure energy supply.
	Parts of the motor or gear are defective	Check the wear parts and replace them, if necessary.
	Loose hose connection	Check correct connection of the hoses.
	Rotor blade defective	Return to manufacturer for maintenance.
The operating lever cannot be pressed down or only with great difficulty.	The device is defective.	Return the device to the manufacturer.
The device becomes hot.	Blade play too small	Check blade setting according to <i>section 7.1.3</i> , increase blade play if necessary.
	Defective bearing	Return the device to the manufacturer.
	Blade guide not greased	Check and regrease if necessary.
The device does not start.	Parts of the motor or gear are defective	Return to manufacturer for maintenance.
The motor and shaft are running, but the blade does not rotate.	Worn coupling.	Return the device to the manufacturer.
Poor cutting result.	Blade blunt	Resharpen blade, see <i>section 8.2</i> .
The motor switch is set to "ON", but the shaft does not rotate.	No power supply	Check the power supply.
	The motor is defective.	Return the motor to the manufacturer.
The blade does not move smoothly.	Blade play too small	Check blade setting according to <i>chapter 7</i> , increase blade play if necessary.
	Blade guide not greased	Check and grease it, if necessary, see <i>chapter 8.1.3</i> .

9 Waste disposal – recycling

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

9.1 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.



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