

Translation of the original operating manual

Operating manual

Band-saw machine for plastic pipes Type BSM 630



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1. Important basic information

1.1 Operator evaluation

Dear operator,

Our operating instructions are updated on a regular basis. Your suggestions for improvement help us create an increasingly user-friendly operating manual. Please use the contact form for your suggestions (see Chap. 11 on p. 63).

1.2 Legal notice

Without explicit, written authorisation of the company Eugen Riexinger GmbH & Co. KG the operating manual may not be electronically or mechanically copied, distributed, changed, forwarded, translated into another language nor used in any other way.

The company Eugen Riexinger GmbH & Co. KG is not liable for damages resulting from non- or partial compliance with the operating manual.

1.3 Safety symbols

This operating manual uses the following designations and symbols for hazards:



Danger!

This symbol refers to an *immediate danger to the life and health* of a person.

Disregarding such notices results in severe harm to a person and may even cause fatal injuries.



Warning!

This symbol refers to a *potentially immediate danger to the life and health* of a person.

Disregarding such notices *may* result in severe harm to a person and may even cause fatal injuries.



Caution!

This symbol refers to a *potentially harmful situation*.

Disregarding such notices may result in minor harm to a person or material damage.

**Attention!**

This symbol gives important information for properly handling the machine. Disregarding such notices may result in malfunctions or material damage *of the machine or cause damage to the environment.*

**Information**

This symbol provides *instructions* and particularly useful information. Such information helps you use all functions of your machine optimally.

1.4 Used notation styles

This operating manual uses the following notation styles:

- Words or sentences with emphasised meaning are written in *italics*.
- **Control elements** on the control panel are written in blue font.
- The instructions, which the operator follows to perform specific functions, always begin with a number or a letter. Activities or notifications, which the machine uses as a response to executed instructions, are marked with a preceding full stop, e.g.:

1. Instruction
 - a. Instruction
 - Response or notification from machine

1.5 Used abbreviations

IndSafReg	Industry Safety Regulations (German implementation of Guideline 2009/104/EG)
DGUV	German Social Accident Insurance (electrical facilities and manufacturing equipment) of the Professional Association for Health and Social Welfare
Roule 3	
BSM	Band saw machine
PE	Polyethylene (thermo-plastic synthetics)
PP	Polypropylene (partial crystalline thermo-plastic synthetics)
PVDF	Polyvinylidene fluoride (opaque, partial crystalline thermo-plastic fluorine synthetics)
APR	Accident Prevention Regulations

1.6 Location of objects in the room

The spatial information about locations of objects in the room in relation to the BSM 630 always refer to the image below.

View from above

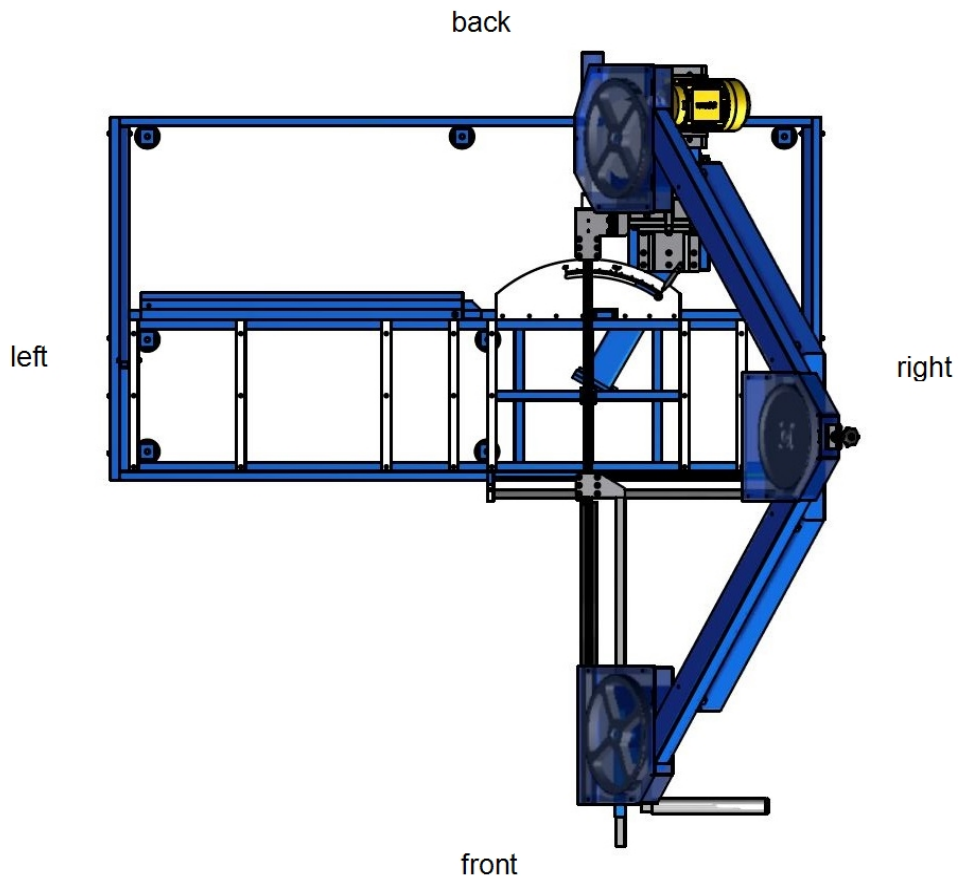






Fig. similar

1.7 Labelling on the machine

Symbol	Attachment location	Meaning
	Saw bow (near the saw band)	Warning of severance- and cut injury caused by saw band
	Switchboard cabinet Control panel	Warning of dangerous electrical voltage when opening the door of the switchboard cabinet or the control panel casing
<p>Eugen Riexinger GmbH & Co. KG Egartenring 2 D-75378 Bad Liebenzell Tel. +49/7052/93090-0 Fax +49/7052/93090-33 E-Mail: info@riex.de</p> <p>Typ BSM 630 Nennspannung 400V 50/60 Hz Vorsicherung : 16 A Anschlußleistung 3 kVA Bandlänge: 6140 X 25 X 0,9 mm Baujahr: 11/2015 Masch. Nr. 1511674</p>  	Saw frame	Type label and CE marking of the BSM 630

2. Basic safety instructions

This chapter contains basic safety instructions for operating the BSM 630 safely.

2.1 Behaviour in case of emergency



Warning!

Running saw band may injure the operator!

After releasing **push buttons** on the handle or deactivating the **main switch**, wait until the saw band has come to a complete stop before entering the saw-band area.

How to shutdown the machine in an emergency:

- 1) Release the **push buttons** on the handle immediately (see Chap. 4.3 on p. 20).
- 2) Turn the machine off with the **main switch** at the switch box (see Chap. 7.3 on p. 33).
- 3) Call for an authorised person who can discover the reason for the emergency and fix the problem.

2.2 Follow the operating manual

- Carefully read this operating manual before using the machine for the first time.
- Familiarize yourself well with all safety instructions contained therein and observe these at all times when working with the machine.
- Always keep the operating instructions on hand near the machine.
- If the machine is transported to a new location, give these instructions to the new operator.

2.3 Usage according to regulations

The BSM 630 is exclusively designed for sawing pipes with the properties and dimensions outlined in this operating manual (see Chap. 3.5 on p. 16). Proper usage also includes:

- Observing all guidelines from the operating manual and
- Adhering to maintenance intervals

The BSM 630 is exclusively intended for usage in industry, craft and trade. It is not intended for private usage.

2.4 Improper usage

The BSM 630 may not be -

- operated by more than one person (exceptions are described in the respective context);
- operated with deactivated safety button when the operator has not implemented the appropriate protective measures (e.g. safety fence) to keep the hazard area clear of people during operation;
- operated with deactivated safety button without operator supervision (with automatic saw feed);
- operated when not all protective equipment are available or fully functional;
- operated when malfunction and defects have not been repaired;
- modified or changed;
- operated in an explosive atmosphere;
- operated in a dusty environment without appropriate ventilation;
- be operated outdoors but only in inside rooms.

Furthermore, it is also not permissible to -

- modify the performance or the rotational speed of the motors;
- bypass the safety button, the end switch, the control elements or other control components;
- saw materials that are not intended for the machine BSM 630 as e.g. wood or metal;
- work on the machine without the personal protective gear prescribed in this operating manual.
- work on the machine with influence of alcohol, drugs and/or medicines.

2.5 Personnel requirements

The BSM 630 may only be operated by trained personnel whom the operator has authorised.

Personnel who are still learning how to work with the machine or apprentices may only operate it under the constant supervision of an instructed person.



Instructed person

A person who is at least 18 years old and has been sufficiently instructed or supervised by a trained employee and is therefore able to recognize risks and avoid hazards.



Authorised person

- Person who has a reliable understanding of safety-related technological issues due to professional expertise acquired through training, experience and recent professional activities
- The authorised person must have knowledge of state-of-the-art technology for the tasks to be executed and recognise hazards; he must also maintain this state of expertise.



Warning!

Electrocution hazard!

Only professional electricians may perform work on the machine's electrical equipment according to the electro-technological regulations.

The following table shows the personnel that is allowed to work with the machine in a particular life-phase the qualifications that this person must possess.

Life-phase	Instructed person	Authorised person
Transport	–	+
Installation	–	+
Activation	–	+
Operation	+	+
Malfunction search	+	+
Maintenance	+	+
Storage	–	+
Deactivation	–	+
Dismantling	–	+
Disposal	–	+

2.6 Informal safety measures

- Always keep the operating instructions on hand near the machine.
- In addition to this operating manual, adhere to general and local accident prevention- and environmental protection regulations.
- Ensure that all safety instructions and danger notices attached to the machine (see Chap. 1.7 on p. 8) are legible and replace them if necessary.

2.7 Properly functioning of protective devices

All protective devices must be installed and function properly before starting up the machine (see Chap. 7.2 on p. 33).

Protective devices may be removed for repair work -

- after the machine is idle and
- after the machine has been secured against re-activation (e.g. locking the main switch).

2.8 Organizational measures

The proprietor of the BSM 630 is obligated to provide the required personal protective equipment. The personal protective equipment includes:

- Work clothing
- Safety glasses
- Protective gloves
- Hearing protection
- Lifting device for loading and unloading of pipes to be sawed

Do not wear loose clothing, bracelets, necklaces or other objects that could get caught in the moving parts of the machine.

Furthermore, the proprietor must ensure the regular examination of all existing safety equipment (see Chap. 9.7 on p. 58).

2.9 Other hazards

In the following you will find the overridingly valid safety instructions that are relevant for several of the BSM 630 life phases. Specific safety instructions are listed in the relevant sections of this operating manual.

2.9.1 Fire hazard



Warning!

Fire hazard due to plastic waste

- Keep ignition sources away from the work area.
- Do not smoke in the work area.
- Ensure that no open fire ignites in the work area.

Fire protection

- Never use water to extinguish a fire source; always use sand, carbon dioxide or powder.
- It is imperative to turn off the machine at the main switch or disconnect the power supply before extinguishing a fire source.

2.9.2 Electrical hazards



Warning!

Directly or indirectly touching live parts may result in electrocution.

- Turn off the main switch before opening the door of the switchboard cabinet.
- Pull the power plug or deactivate the power supply before working on electrical components.
- Electrical components are not protected against spray water. The proprietor must implement appropriate protective measures.

2.9.3 Laser radiation (special equipment)



Information!

Important Informations about the Laser!

- The used laser is a laser class 1 according to DIN EN 60825-1:2008-05. The accessible laser radiation is harmless.

2.9.4 Mechanical hazards



Danger!

Running saw band may cause serious severance injury!

Descending saw bow may pinch the operator!

- If the machine is operated while the safety button is deactivated, the proprietor must implement appropriate protective measures (e.g. safety fence) to ensure that the hazard area is clear during operation.
- The machine may only be operated by one person.
- Before running the saw band or lowering the saw bow, the operator must ensure that the area behind the workpiece and the work area are clear.

***Danger!******Danger of crushing during operation of the machine!***

Crushing of limbs when pulling down the saw bow.

When starting the work process make absolutely sure that no body parts (arms, hands, etc.) are within the danger area.

2.9.5 Heat hazards***Attention!******After sawing the hot saw band may burn the operator!***

Wear protective gloves during repair work or allow the saw band to cool down before touching it.

2.9.6 Environmental hazards***Attention!******Plastic waste and used saw bands contaminate the environment!***

Dispose of all shavings, plastic waste and used saw bands according to locally applicable legal stipulations.

3. Technical data

3.1 General information

Machine construction

- Robust, torsion-resistant machine stand and saw frame made of steel
- Saw-band redirection with ball bearings
- Compensation for warmth-induced expansion of the saw band with band-tensioning device

Cut quality

- Precision guides for straight cuts
- High saw-band speed for optimal cut quality

Operation

- Exact adjustment of saw angle possible with angle scale at front
- Mitre area of 45 degrees on one side with swivel-mounted saw bow

Special Equipment (optional)

- Visual cutting indicator for quick positioning of workpiece

3.2 Delivery contents

The delivery contents consist of:

- BSM 630
- switch box
- 2 saw bands
- 9 screw feet
- 1 operating manual
- Laser (special equipment)
- 2 tension belts

3.3 Dimensions and weight

Length	3100 mm
Width	3150 mm
Minimal height	2150 mm
Maximum height (saw bow raised all the way)	3050 mm
Weight with / without V-Support, ca.	335 kg / 325 kg

Transport dimensions (demounted in a box)

Transport width	1800 mm
Transport length	2700 mm
Transport height, ca.	1350 mm

3.4 Equipment

Saw band

Dimensions	6140 x 25 x 0.9 mm
Tooth pitch (Tz)	4 or 6 ZpZ (depending on wall thickness of workpiece)



Caution!

Saw bands that jump off the spool may injure the operator or cause material damage.

Use original saw bands from the machine's manufacturer. Saw bands from other providers may jump off the spool and injure the operator or cause material damage to the machine or workpiece.

3.5 Workpieces

Type of material	PE, PP, PVDF plastics (other types of plastics after consultation with manufacturer)
Profile	Pipe with circular cross-section (deviations from circular cross-section permissible up to ca. 450 mm)
Min. diameter	200 mm (with special V-table to minimum of 50 mm possible - optional)
Max. diameter	630 mm (with special V-table to maximum of 200 mm possible - optional)
Min. length	The workpiece must be tensioned with both tension belts at two locations.

**Attention!**

The BSM 630 may not be used to saw transparent or perforated pipes!

The BSM 630 adapts the saw-band guide to the profile of the pipe while sawing. Malfunctions of the active optical sensors may occur when sawing transparent or perforated pipes and may result in damage to the workpiece or the machine.

3.6 Electrical connection

Operating voltage	3N-PE-AC 400 V
Frequency	50/60 Hz
Power rating	7,5 kVA
Connection type	CEE plug-in, 16 A, 400 V
Phase sequence	Field turning clockwise

Saw-band operation

- Mechanical output 2.5 kW
- With overload protection
- With electrical break

3.7 Emissions

Dust

**Caution!**

Sawing plastic materials releases fine dust into the air, which may harm the operator's health!

- Adhere to the respective legal regulations and determined workplace threshold values for dust.
- The proprietor is obligated to install a ventilation system and provide the operator with a respiratory mask if workplace threshold values are exceeded.

EMC

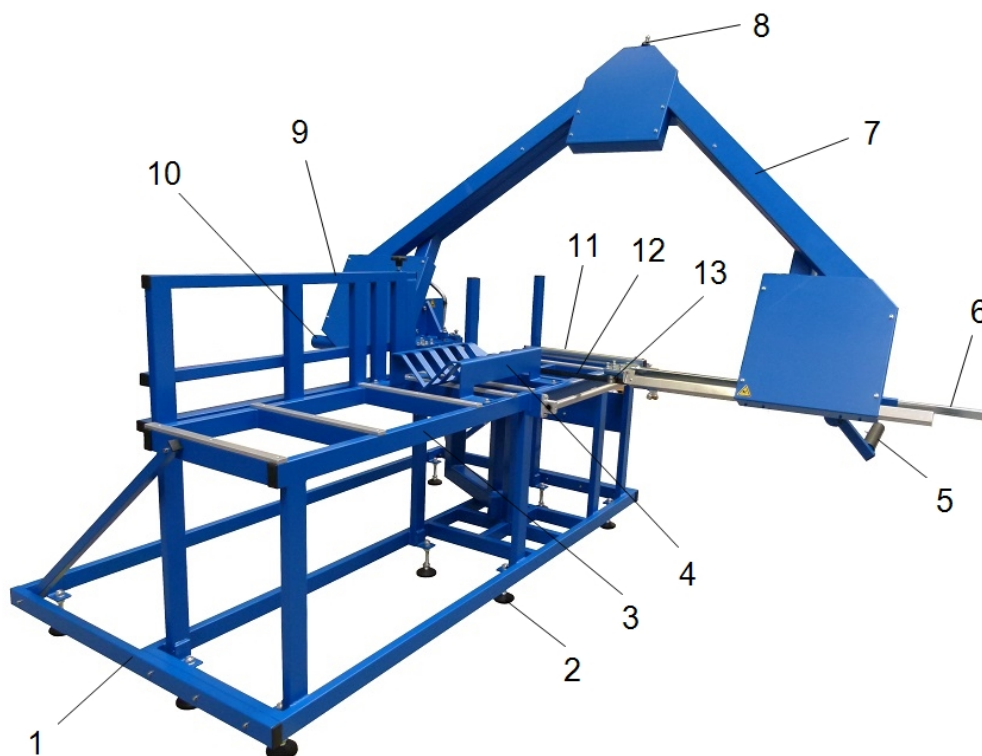
The BSM 630 complies with protection requirements in regard to interference immunity according to EN 61000-6-2:2005 (Interference immunity for industrial areas).

The BSM 630 complies with protection requirements in regard to interference emission according to EN 61000-6-3:2007 (Interference emission for living-, commercial- and trade areas as well as for small business).

Therefore, the machine may be operated in industrial- as well as in living- and commercial areas.

4. Setup and function

4.1 Overview



Pos.	Description
1	Machine base frame
2	Screw foot
3	Workpiece support
4	V table for workpiece (optional - available as special equipment)
5	Handle with safety push buttons (adjustable)
6	Slidable saw band cover
7	Saw bow
8	Tensioning device for saw band
9	extensible workpiece support
10	extraction nozzle
11	extensible stop for workpiece
12	Saw band
13	Saw band guide (2x)

4.2 Functionality

The BSM 630 saws plastic pipes -

- with varying diameters,
- made of various types of plastic,
- with an adjustable saw angle.

The saw process is executed as follows:

- The saw bow is placed in the rear position.
- The desired saw angle is set.
- The workpiece is inserted into the machine and clamped with min. two clamping belts
- Open saw band cover only in cross-sectional size of the workpiece.
- Switch on saw band and pull saw bow slowly forwards. The workpiece is sawed off.
- Push back saw bow
- The clamps on the workpiece are released, and the workpiece is removed from the machine.

4.3 Safety concept

4.3.1 Push buttons

According to valid APR the BSM 630 must operate in jogging mode during processes that are dangerous for the operator. This means that the operator must press the pressure switches of the hand grip with both hands while sawing. As soon as the buttons are released, the motor of the saw band stops.



Danger!

Running saw band may cause serious severance injury!

Risk of crushing by pulling down the saw bow!

- The machine may only be operated by one person.
- Before starting saw band or pulling down saw bow, the operator must ensure that in the area behind the work area there are no persons.
- When starting the work process, make absolutely sure that there are no parts of the body (arms, hands etc.) in the danger zone.

**Caution!**

Directly or indirectly touching live parts may result in electrocution.

The machine's power supply is *not* disconnected when the safety push buttons are released. The main switch remains in the position *On*.

**Warning!**

Crushing hazard during operating of machine!

- Crushing hazard of limbs during pulling down saw bow.
- When starting the work process, make absolutely sure that there are no parts of the body (arms, hands etc.) in the danger zone.

5. Delivery, in-company transport and storage

5.1 Delivery

- The BSM 630 is delivered by a transportation company and off-loaded at the customer's operating site.
- On delivery, the machine is assembled together or partially assembled. If the machine is delivered partially disassembled, note mounting instructions (see Chap. 6.4 on p. 27)
- The screwed-on feet of the BSM 630 have been removed for transportation. The machine is transported and delivered upright on wooden blocks.

1) Immediately check the off-loaded machine for visible transportation damages. If the machine has been damaged, document the details and promptly report this to the transportation company and manufacturer.

2) Check also if the delivery contents of the BSM 630 are complete (see Chap. 3.2 on p. 15).

5.2 Environmental conditions for storage and transport

Temperature	-10 to +40 degrees C
Relative humidity	15-55%, non-condensing



Attention!

Improper environmental conditions may cause damage to machine!

Protect the machine, and especially the electrical equipment, from moisture, rain and dust. The BSM 630 may not be set up or stored outside.

5.3 In-company transport



Warning!

Crushing hazard for arms and legs during transport and machine setup!

- Only authorised persons may carry out the in-company transport and setup of the machine (see Chap. 2.5 on p. 10) according to valid APR.
- Also ensure that no persons are in the transportation path or in the setup area and wear safety shoes with toe-protection caps.

***Attention!******Improper transport may cause damage to machine!***

The BSM 630 may not be lifted and transported with lifting devices that are attached to machine parts (e.g. the saw bow) but only with a suitable forklift that lifts the frame of the machine.

- 1) Provide a suitable forklift for the in-company transport of the machine.
- 2) Lift the machine frame centrally with the forklift.
- 3) Remove the underlying wooden blocks.
- 4) Transport the machine to the desired storage- or setup location.
- 5) Lay out the supplied wooden blocks at the storage- or setup location in such a manner so that the machine frame can rest securely on these.
- 6) With the forklift lower the machine onto the laid out wooden blocks. Ensure that the wooden blocks under the machine have been distributed evenly so the machine does not tip over.

6. Setup and activation

6.1 Setup location

6.1.1 Floor conditions



Warning!

Persons may be injured and the machine damaged if the floor in the setup room is not able to bear the machine's load!

Be aware of the following weights when determining the required load-bearing capacity:

- BSM 630 during operation
- Workpieces (pipes)
- Operating personnel
- Lifting equipment for pipes
- Transportation devices for transporting the BSM 630 to the setup location

The floor of the setup room for the BSM 630 must have the following characteristics:

- Hard, level, without slope
- Sufficient load-bearing capacity
- No disruptive vibrations

The surface of the floor must have the following characteristics:

- Easy to clean
- Skid resistant

6.1.2 Lighting

The nominal lighting power at the setup location of the BSM 630 must comply with valid workplace regulations.

6.2 Environmental operating conditions

Operating temperature	-10 - + 40 degrees C
Relative humidity	15-55%, non-condensing
Height a. s. l.	1000 m
Max. Dust concentration	Legal regulations for workplace threshold values

**Attention!**

Improper environmental conditions may cause damage to machine!

- Protect the machine, and especially the electrical equipment, from moisture, rain and dust. The BSM 630 may not be set up or stored outside.
- The proprietor is obligated to setup a properly dimensioned ventilation system at the setup side for sawing of glass fibre-reinforced plastics (GFP) or similar dusty work materials; in case of non-compliance, resulting machine damage is not covered under guarantee..

6.3 Setup plan

Bild 1. Setup plan: View from top

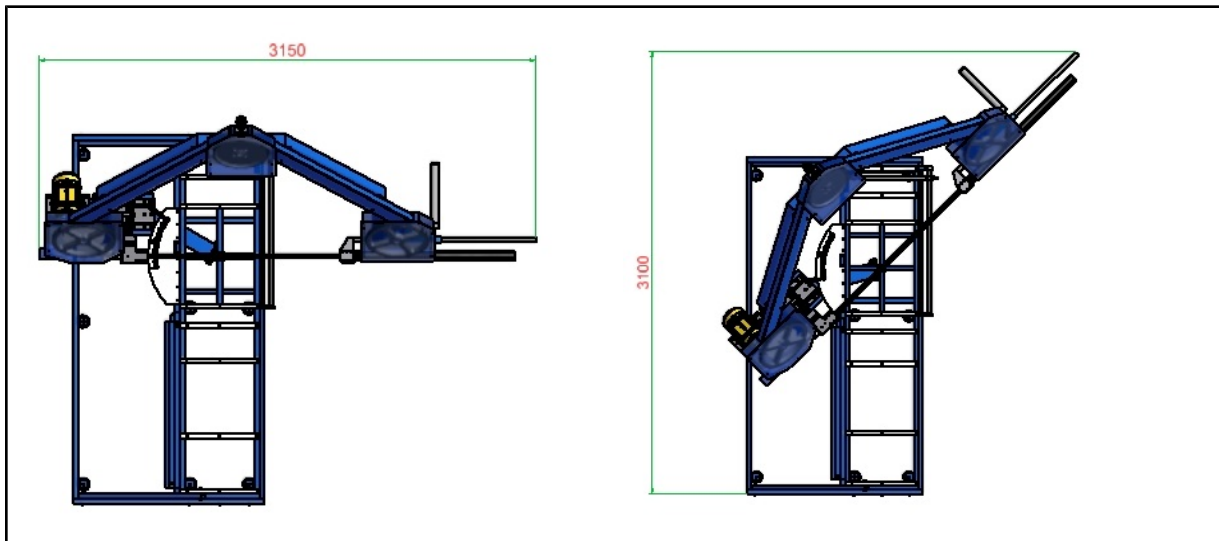
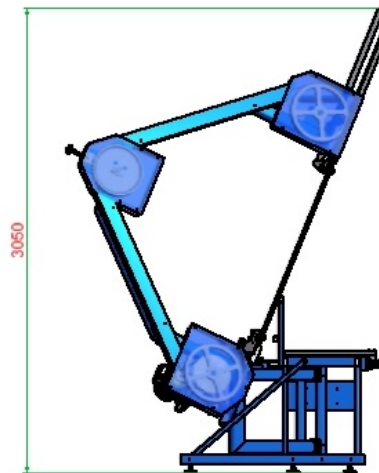


Bild 2. Setup plan: View from side

These are machine dimensions. The distances to the surroundings depends largely from the length and size of the workpieces to be machined.

6.4 Mounting and Setting up the machine



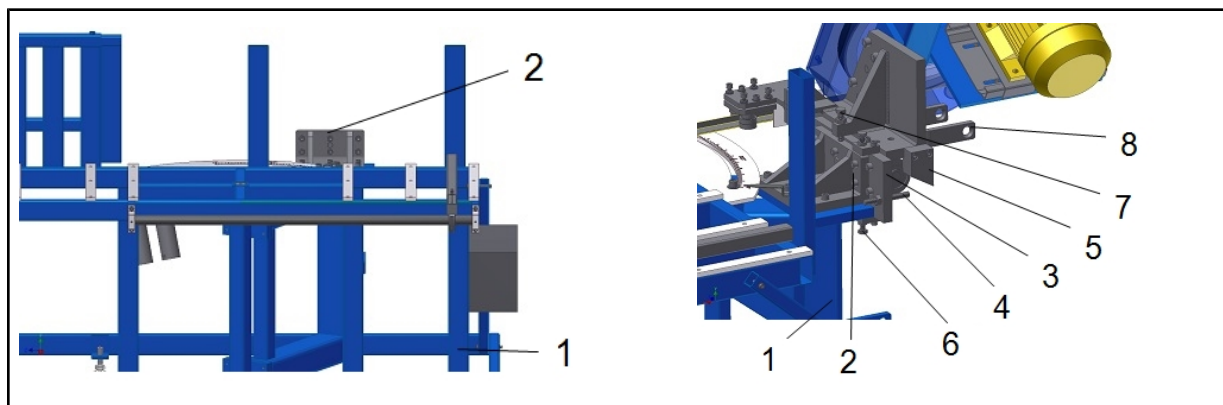
Warning!

Crushing hazard for arms and legs during transport and machine setup!

- Only authorised persons may carry out the in-company transport and setup of the machine (see Chap. 2.5 on p. 10) according to valid APR.
- Also ensure that no persons are in the transportation path or in the setup area and wear safety shoes with toe-protection caps.

6.4.1 Mounting saw bow

If the saw bow was removed for transportation, mount it as follows.



Pos.	Description
1	Machine base frame
2	Mounting plate at back side of swivel frame with 6 holes for mounting screws and one pin hole for pin
3	Mounting plate at saw bow with 6 holes for mounting screws and one pin for pin hole
4	Adjusting screw upper stop
5	Upper stop
6	Lower Adjusting screw saw bow
7	Upper Adjusting screw saw bow
8	Flap with hole to mount the springs

- 1) Lift and secure the saw bow with a suitable lifting gear or crane.
- 2) Place the saw bow with the mounting plate (2) carefully on the mounting plate (3) at swivel frame on the backside of the machine.
- 3) To secure the position you push the pin into the pin hole and insert the 6 bolts (M10) to. The pin also serves as a swivel joint.
- 4) With the upper and lower adjusting screw (6 + 7) the transverse inclination of the saw frame can be corrected. However, make sure first that the machine frame is aligned correctly.
- 5) If the position the saw bow correctly, tighten the 6 screws on professionally.
- 6) Hook the springs into the holes of the brackets (8).
- 7) Check the mobility of the bow. If necessary adjust the stops of the saw bow (see
- 8) Start machine as described in See "Initial operation" on page 30
- 9) Perform a test cut and check the result.
- 10) If necessary, correct your settings. Disconnect the machine from the power supply necessarily.

6.4.2 Place machine

- 1) Transport the BSM 630 to the setup location (see Chap. 5.3 on p. 23).
- 2) During setup pay attention to the required horizontal and vertical spacing (see Chap. 6.3 on p. 26).
- 3) Lift the BSM 630 with a suitable transportation device.
- 4) Screw all supplied screw feet from below about half-way into the threaded holes of the machine frame (see Chap. 4. on p. 19).
- 5) Remove the underlying wooden blocks.
- 6) Slowly place the BSM 630 on the ground until it fully rests on the screw feet.
- 7) Horizontally align the machine frame lengthwise and across with a water level. The slope of the machine frame can be adjusted by screwing the machine feet in or out.
- 8) Ensure that all screw feet are resting fully on the ground.
- 9) Secure the screw feet with the fitted locknut. This concludes machine setup.
- 10) If necessary mount saw bow.
- 11) Thus the installation of the machine is complete.

6.5 Connect to electrical power supply

Check the power supply before connecting. Incorrect connections can cause destruction of electrical equipment.



Warning!

Electrocution hazard!

Only professional electricians may connect the machine to the power supply according to the electro-technological regulations.

For longer unattended break from work or shutdown of the machine pull mains plug (main switch function).



Caution!

Loosely laid cables are a tripping hazard!

Lay the power cable to the machine so that it does not pose a tripping hazard. E.g. cable bridges or connections along the ceiling can be used.



Attention!

Faulty connection values may cause material damage to machine!

Therefore, observe the machine's connection values (see Chap. 3.6 on p. 17).

The specifications on the type label must agree with the data of the electricity grid.

Connect the electrical equipment only at a power supply which is adequately secured against overcurrent.



Attention!

No function of the electric brake in case of power failure!

In case of power failure, the electronic brake has no function. Here, the machine must not be run out unattended. Do not reach into the danger zone.



Attention!

Avoid short switching cycles!

Because of the enormous thermal stress during the frequent starting and braking the motor, the electrical box and the electronic brake can be damaged.

**Attention!****Machine can not be connected to:**

- electricity producers, emergency generator, generators
- voltage transformer
- static frequency converters
- mains voltage with a different sinusoidal form

The machine is intended for operation on a power supply with a system impedance smaller than 0.39 ohms at the house connection point. The user must ensure that the machine is operated on a network which satisfies the above requirements. If necessary, the system impedance can be requested from the local energy supply company.

- 1) Ensure that the cables that connect the BSM 630 are equipped with an appropriately dimensioned circuit breaker.
- 2) Ensure that the phase sequence of the outer cable turns clockwise in the receptacle.
- 3) Connect the BSM 630 to the power supply by connecting the machine's plug to a receptacle.

We assume no liability for damages resulting from failure to comply with the above points.

6.6 Initial operation

Do not operate the machine if the power cable, motor cable or the electrical box are visibly damaged!

**Attention!****Warning against damage to machine's electrical equipment caused by condensation!**

Wait several hours before turning on the main switch of the machine if there has been a sudden change in ambient temperature.

- 1) Set the machine up (see Chap. 6.4 on p. 27).
- 2) Remove the transport anchors at the saw bow respectively mount it (see Chap. 6.4 on p. 27)

**Danger!****Crushing Danger when removing transportation lock of saw bow!**

When removing the transport lock the saw bow can tip backwards.

- 3) Set the saw bow to 0 degrees (see Chap. 7.4 on p. 34).
- 4) Connect electrical power supply (see Chap. 6.5 on p. 29).
- 5) Grease all blank machine guides and lubricate the joints of the saw frame (see Chapter 1.1 on p.1).

- 6) Install a saw band if it has not yet been installed in the machine (see Chap. 9.4 on p. 51).
- 7) Check all safety equipment (see Chap. 9.7 on p. 58).
- 8) Check whether all protective equipment is installed and connected (see Chap. 7.2 on p. 33).
- 9) Activate the BSM 630 by turning the main switch on (see Chap. 7.3 on p. 33).

***Danger!******Running saw band may cause serious severance injury!***

- The machine may only be operated by one person.
- Before running the saw band, the operator must ensure that no persons are behind the workpiece or in the danger area.

10) Test to see whether the electrical connection is correct by observing the directional movement of the saw band:

- a) Switch on saw band by pressing **push buttons** on handle and determine its directional movement
- b) Release **push buttons**. Saw band stops
- c) The electrical connection is correct (see Chap. 1.6 on p. 7) if the saw band moves from the front of the machine to the back.
- d) If the saw band moves from the back to the front, the electrical connection must be re-configured (see Chap. 6.5 on p. 29).

11) Finally, make a test cut (see Chap. 7.6 on p. 38).

7. Operation

7.1 Before start-up

Before start-up, check whether -

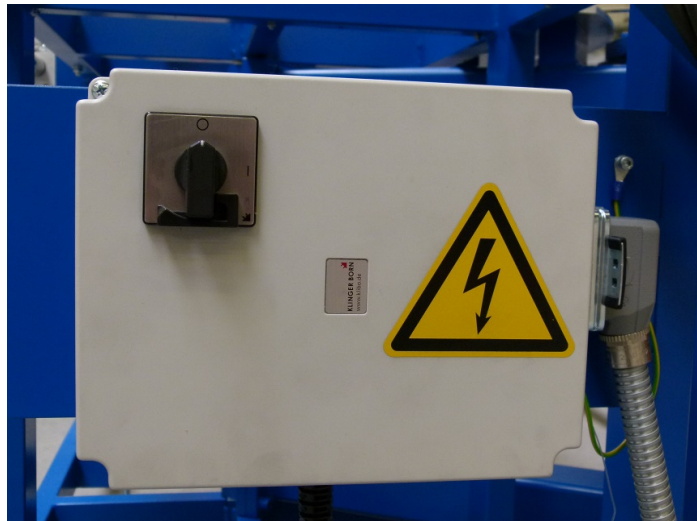
- 1) all protective equipment is properly installed and closed off (see Chap. 7.2 on p. 33);
- 2) all safety devices are functioning properly (see Chap. 9.7 on p. 58).

7.2 Protective equipment

How to check whether all protective equipment is properly installed and closed off:

- All saw-band covers mounted and fastened with screws? (see Chap. 9.3 on p. 50)

7.3 Turning the BSM 630 on and off



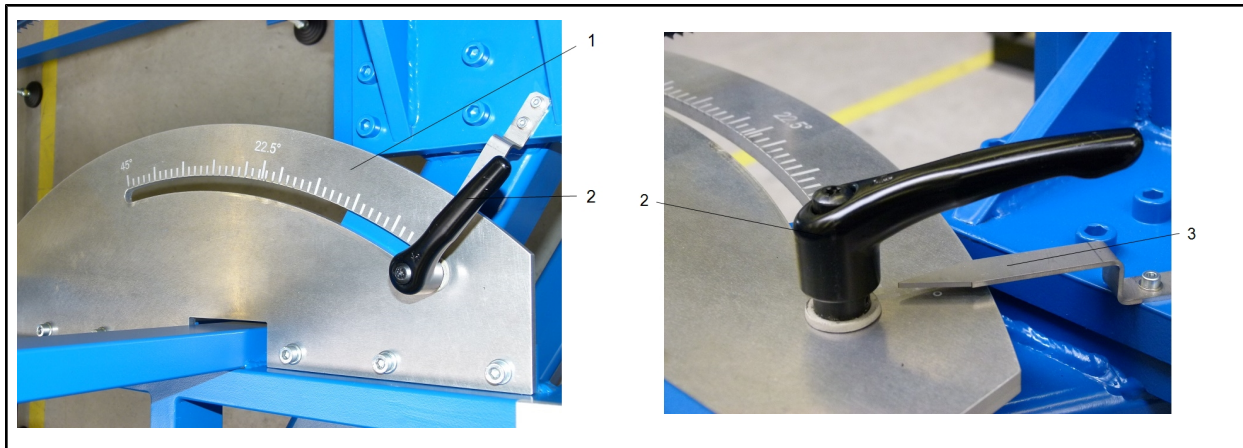
Turning the BSM 630 on

- 1) Turn the machine on by turning the [main switch](#) at switch box to "I"-position.

Turning the BSM 630 off

- 1) Turn the machine off by turning the [main switch](#) at switch box to "0"-position

7.4 Setting the sawing angle



Pos.	Description
1	Angle scale
2	Quick tensioning lever to fasten selected angle
3	Reference pointer



Danger!

Running saw band may cause serious severance injury!

The swivel-mounted saw bow may pose pinch point hazard!

- The machine may only be operated by one person.
- The sawing angle may only be adjusted when the machine motor is turned off.
- Before setting the sawing angle, the operator must ensure that the area behind the workpiece and the work area are clear.
- The Operator must ensure that saw bow is in the rear home position.



Mitre cuts

The BSM 630 has a mitre range of 45 degrees. on one side. This allows mitre cuts to one side.

- 1) If not yet done, push saw bow in its rear home position.
- 2) Ensure that there are no people or obstacles in the swivel range area of the saw frame.
- 3) Loosen the quick-tensioning lever on the saw-angle adjustment equipment.
- 4) Carefully and slowly swivel the saw frame in the appropriate direction until the reference pointer shows the desired angle value on the angle scale.
- 5) Secure the set angle position of the saw frame by tightening the quick-tensioning lever.

6) Depending on the set saw angle, a tension belt that is holding the workpiece in place may now be on the cutting line. If this is the case, reposition the tension belt (see Chap. 7.5 on p. 35).

7.5 Loading the machine

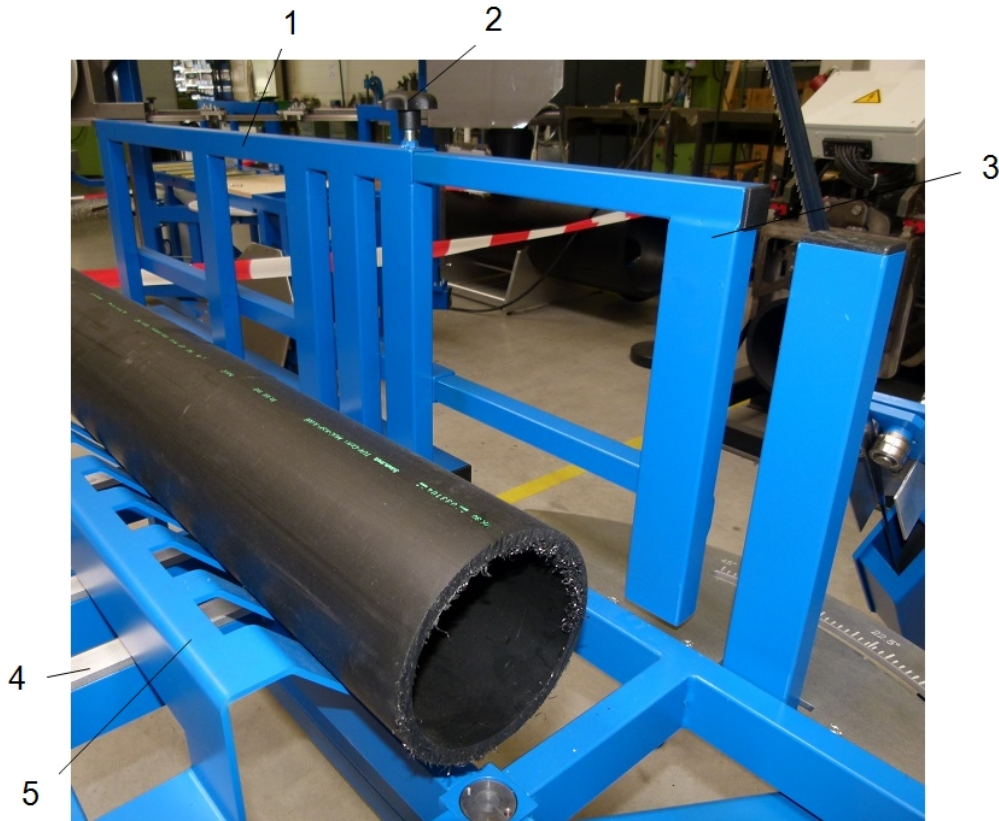


Fig. similar
(shows special equipment)

Pos.	Description
1	Workpiece support
2	Star grip to fasten extended workpiece support
3	Extended workpiece support
4	support table for workpiece
5	V-table for workpieces (special equipment)



Attention!

Tensioning the tension belt may cause pinch point injury!

While tensioning the tension belts, make sure that your hands or your assistant's hands are not pinched by the belts.

**Attention!*****Heavy workpieces may cause lifting injury!***

Use lifting gear such as a fork lift, hoisting crane, transport wagon etc. to load or remove workpieces into or from the machine.

**Attention!*****Falling, offcut workpieces may injure the operator!***

Secure workpiece offcuts that are not clamped in (e.g. with suitable lifting gear) so that these pieces do not fall from the table after sawing.

**Attention!*****Sharp pipe edges and saw band may injure the operator!***

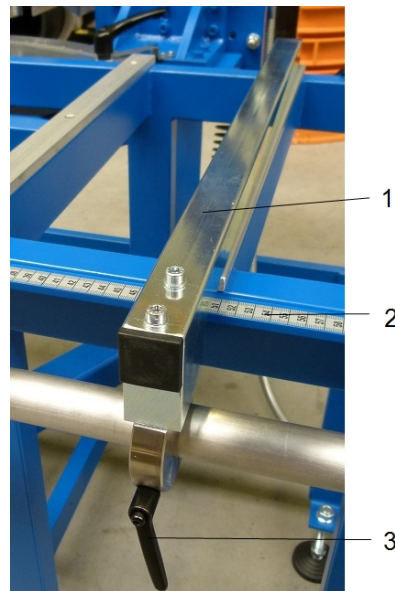
Always wear protective gloves when loading the machine.

**Attention!*****Before sawing the workpiece with the machine, it must be securely tensioned with two tension belts.***

Damage to the workpiece and the machine may result if the workpiece is not clamped in or clamped in insufficiently.

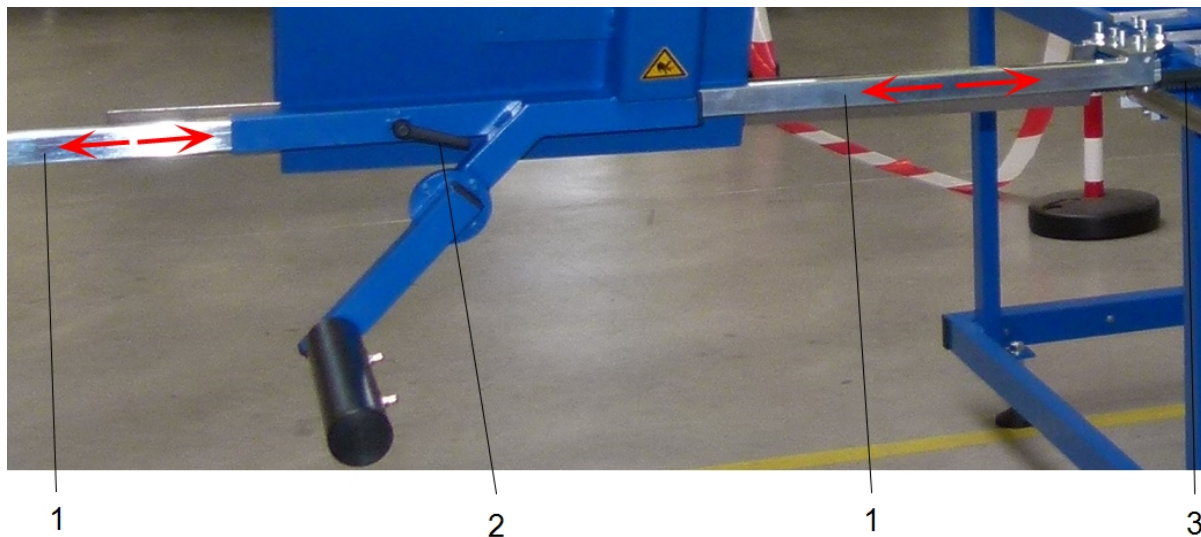
Loading a workpiece into the machine

- 1) If not yet done, push saw bow in its rear home position
- 2) Place the workpiece onto the support table of the machine with the help of a suitable lifting device and possibly another person.
- 3) Push the workpiece into the desired position.
- 4) To do this, use the sliding stop.



Pos.	Description
1	Stop for workpiece
2	Scale
3	Quick tension lever to fasten the stop

- 5) Support protruding ends of long workpieces that tip down when clamped in.
- 6) Bring tension belts in position and fasten workpiece. Tension the belts so that the workpiece is securely clamped in but not warped. Ensure that your or your assistant's hands are not pinched by the belts.
- 7) Secure workpiece offcut that is not clamped in (e.g. with suitable lifting gear) so that these pieces do not fall from the table after sawing.
- 8) Open saw bow cover only in cross-sectional size of the workpiece.



Pos.	Description
1	Saw band cover movable
2	Quick tension lever to fasten saw band cover
3	Saw band

Remove workpiece from the machine



Warning!

The shut-off delay of saw band can cause injury!!

Wait after releasing the push-buttons until saw band stands still. Then loosen the tension belts and remove workpiece.

- 1) Stop saw band by releasing push-buttons at the handle.
- 2) Push saw bow in the rear home position.
- 3) Release both tension belts and remove them from the workpiece.
- 4) Remove the workpiece and offcut from the machine with the help of a suitable lifting device and possibly another person.

7.6 Sawing



Danger!

Running saw band may cause serious severance injury!

- The machine may only be operated by one person.
- Before sawing, the operator must ensure that the area behind the workpiece and the work area are clear.



Attention!

Falling, offcut workpieces may injure the operator!

- Secure workpiece offcuts that are not clamped in (e.g. with suitable lifting gear) so that these pieces do not fall from the table after sawing.
- It is not permissible for the operator or the assisting person to hold or catch the offcut piece.

**Warning!**

Start sawing process only after engine has reached final speed!

- To avoid interference during sawing process wait after starting saw band until motor has reached full rotational speed. Then start with sawing process.

- 1) Push saw bow in it's rear home position.
- 2) If required, set the desired sawing angle (see Chap. 7.4 on p. 34).
- 3) Load the workpiece and fasten it (see Chap. 7.5 on p. 35).
- 4) Turn on machine at [main switch](#) (see Chap. 7.3 on p. 33)
- 5) Press [push buttons](#) at the handle of saw bow. Saw bow starts.

**Information**

If you want to interrupt the sawing process, just release the [push buttons](#) of the handle.

- The motor of saw band stops.

- 6) Pull saw bow forwards slowly.

**Info**

To reach a optimum cutting result, start cutting the workpiece slowly.

- Do not burden machine and sawband with excessive feed rate.
- Only use sharp saw bands.

- 7) If the workpiece is completely cut, release the [push buttons](#). The saw band drive stops.
- 8) Push saw bow back in rear home position.

8. Finding an repairing malfuncitons

8.1 Repair saw-band malfuncitons



Danger!

Running saw band may cause serious severance injury!

- Before repairing a malfunction, turn off machine with **main switch** so the motors are not accidentally turned on.
- The malfunctions may only be repaired by one person at a time.



Warning!

Running saw band may injure the operator!

After releasing **push buttons** on the handle or deactivating the **main switch**, wait until the saw band has come to a complete stop before entering the saw-band area.

Malfunctions associated with the saw band, usually occur during the sawing process. Go through the table from top to bottom when searching for the cause of the malfunction.

Malfunction	Cause	Corrective action
Saw band "displaced" or pushed up by the work-piece that is being sawed	Saw-band tension not properly adjusted	Set proper saw-band tension (see Chap. 9.2 on p. 49)
	Saw feed rate too high	Reduce saw feed rate (see Chapter 1.1 on p.1)
	Saw band dull	Exchange saw band (see Chap. 9.3 on p. 50)
	Saw band installed in wrong direction	Properly installing a saw band (see Chap. 9.4 on p. 51)
Saw band jumps off diversion-wheels	Defelction wheels or saw band guides are dirty	Clean deflection wheels and saw band guides (see Chap. 9.1 on p. 48)
Saw band torn	Deflection wheels or saw band guides are set incorrectly	Set deflection wheels and saw band guides (see Chap. 9.5 on p. 52)
	Saw band does not have necessary properties.	Use original saw-band from the manufacturer (see Chap. 3.4 on p. 16)
	Workpiece has unsuitable material type (see Chap. 3.5 on p. 16)	Consultation with the manufacturer (see Chap. 8.5 on p. 46)
Saw band jammed in workpiece	Used wrong saw-band type	Consultation with the manufacturer (see Chap. 8.5 on p. 46)

8.2 Repair electrical malfunctions



Warning!

Electrocution hazard!

Only an electrician may repair an electrical malfunction of the machine's electrical equipment if these activities differ from operating tasks. The repair must be conducted according to electro-technological regulations.



Danger!

Running saw band may cause serious severance injury!

- Before repairing a malfunction turn off machine at **main switch** so the motor is not accidentally turned on.
- The malfunction may only be repaired by one person at a time.

Go through the table from top to bottom when searching for the cause of the malfunction.

Malfunction	Cause	Corrective action
The saw-band motor cannot be activated, saw-band motor starts not to run	Main switch turned off	Turn on main switch (see Chap. 7.3 on p. 33)
	The machine is not connected to power supply.	Connect machine to power supply (see Chap. 6.5 on p. 29)
	Power failure	Re-establish power supply
	Circuit breaker triggered in supply cable	Determine cause and activate circuit breaker
	Power supply is defective.	Request service technician (see Chap. 8.5 on p. 46)
	Safety push buttons not pressed	Press and hold both push buttons at the handle
	Check phase rotation	If the rotating field is counter-clockwise turn phase inverter in the plug
	Rotating field monitoring has triggered	Check rotating field of power line
The motor is buzzing after switching on and does not come up to rated speed	Rotating field of power line is incorrectly	Turn phases by phase inverter in plug
	Missing phase in power supply, error motor connection, plug, supply line	Check power supply, check motor connection

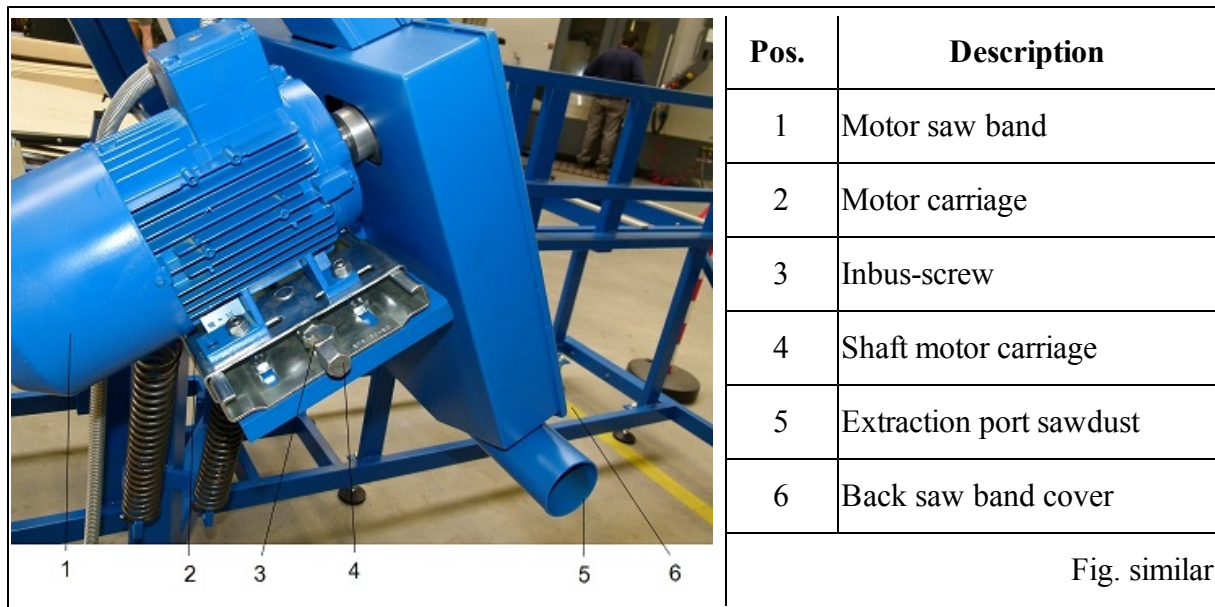
When plugging in the power supply line, the line fuse trips	Incorrect connection, phase and neutral connections swapped	Check connection; send electrical box for safety reasons
	Power semiconductor defecive (electrical box with electronical brake)	Send electrical box for safety reasons to check and repair
	Defective mains cable	Check cable
Device switches off suddenly during operation	Overload protection tripping	Start again after sufficient cooling down (motor no longer hot)
	Power failure	Check supply voltage, check the mains fuse protection
	Safety push button has been released	Activate safety push buttons
	Mechanical parts of the machine running heavily	Maintain according parts
	Turning off motor activates electronical brake about 10 to max. 15 seconds. Then electronical brake turns off.	Normal operating status (Buzzing is caused by electronic brake)
The brake does not switch off no more (continuous buzzing)	Component failure at electronical brake	Pull power plug so that the motor does not overheat. Send electrical box to repair.
No brake function	Failure of the electronic brake	Send electrical box to repair.
Other malfunctions	Please contact our customer service or send the defective electrical box (complete with all cables, without motor) with a short description of the error to us.	



Information

Repairs to electrical boxes older than 3 years is not economical. Please do not return in this case. Otherwise, electrical boxes are free to send in for repair.

8.3 Check saw-band motor



Danger!

Running saw band may cause serious injuries!

- Before checking the saw-band motor, turn off the machine at the [main switch](#) and secure it against re-activation.
- The malfunction may only be repaired by one person at a time.

- 1) If a workpiece is still in the machine, remove it (see Chap. 7.5 on p. 35).
- 2) Place the saw bow in the rear home position.
- 3) Turn the machine off at the main switch, and secure it against re-activation.
- 4) Remove the lower back saw-band cover.
- 5) Check the tension of the fan belt of the saw-band motor (see image in Chap. 9.4 on p. 51).
- 6) If necessary, tension the fan belt by loosening both Allen safety screws and turn the shaft of the motor carriage in the appropriate direction with a suitable socket wrench.
- 7) Re-tighten the Allen safety screws after performing the adjustment.
- 8) Mount the removed saw-band cover at the right location.
- 9) Turn on the machine with the main switch.

8.4 Guarantee

The manufacturer provides a guarantee for a 12-month term after the purchasing date according to legal and country-specific regulations. This means that damages to the machine that have resulted from material- or manufacturer errors are repaired free of charge. As a precondition for the guarantee, the machine must be cleaned and maintained on a regular basis.

The following issues are precluded from the guarantee:

- Damages to BSM 630 which are the result of natural wear, overloading or improper handling; this especially refers to an improper operating environment.
- Damages caused by water, falls or non-legitimate interference with the inner mechanisms of the machine
- Damages to workpieces that have resulted from working with the BSM 630
- Wearing parts such as drive belts, saw bands and carbon brushes of the motors

The manufacturer of the BSM 630 is not liable for the quality of manufactured parts. The proprietor alone is responsible for quality control and the quality of parts manufactured with the machine.

8.5 Error report

Dear customer,

Before you send in your complaint, please take some time to fill out this error report. You can copy this sheet, fill it out and either mail or fax it to us (see Chap. 11. on p. 63).

Complaint for machine type:.....

Serial number (on type label)

Please briefly describe the problem:

.....

.....

.....

.....

.....

.....

.....

.....

.....

Please briefly describe the setup location of the machine:

.....

.....

Please describe the environmental parameters in the table below:

Parameter	Minor	Average	High
Humidity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dust exposure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature range	from degrees C to degrees C		

Error occurs Constantly Seldom Only when

Probably lightning strike or surge damage

Date

Name / Technician

Phone number

9. Maintenance

***Danger!******Running saw band may cause serious severance injury!***

Only one person may perform maintenance while the machine is turned off (exceptions described in respective context).

***Warning!******Running saw band may injure the operator!***

After releasing **push buttons** on the handle or deactivating the **main switch**, wait until the saw band has come to a complete stop before entering the saw-band area.

***Attention!******Perform all maintenance work thoroughly and on time!***

All maintenance work in this manual must be performed thoroughly and on time to keep the machine operational with a high uptime.

***Attention!******Only use original spare parts!***

For reasons of personal safety and to ensure the proper functioning of the machine, you should only use original spare parts. It cannot be ensured that spare parts from other manufacturers are constructed with the necessary strain-bearing- and safety capabilities.

Activity	How often	Description
Clean the machine	Daily or after usage	(see Chap. 9.1 on p. 48)
Check saw-band tension	Weekly	(see Chap. 9.2 on p. 49)
Check safety equipment	Weekly	(see Chap. 9.7 on p. 58)
Grease machine	Weekly	Lubricate the hinge of the saw frame
DGUV Roule 3 examination (or applicable national regulation)	See DGUV Roule 3	Request service technician or authorised person
Examination according to IndSafReg §10 (2) (or according to national regulation)	Time limits according to § 3 Section 3 (Risk assessment)	Request service technician or authorised person


Before every maintenance activity (except for examination of safety equipment)

- 1) Push saw bos in the rear home position.
- 2) If a workpiece is still in the machine, remove it (see Chap. 7.5 on p. 35).
- 3) Turn the machine off at the [main switch](#), and ensure it is not activated again.


After every maintenance activity

Record performed activities (except cleaning) in the maintenance protocol (see Chap. 9.8 on p. 59).

9.1 Cleaning the machine



Attention!
Do not used compressed air to clean the machine!
 Compressed air blows shavings and dust into the machine guides, bearings and electrical equipment. The machine may be damaged as a result.



Attention!
Plastic waste contaminates the environment!
 Dispose of all shavings and plastic waste according to locally applicable legal stipulations.

How to clean the machine

- 1) If you have not already done so, execute the steps in Chap. 9. on p. 47 .
- 2) Remove shavings from machine parts with a hand broom, brush or vacuum cleaner.
- 3) Use a brush to remove the shavings in the guide rolls at the back saw-band guide.
- 4) Open the back saw band cover. Remove shavings with a hand broom, brush or vacuum cleaner.

5) Clean up the shavings and plastic waste on the ground with a broom or vacuum cleaner.

9.2 Tensioning the saw band



Danger!

If the saw band tears or jumps off, it may injure the operator!

- The saw band may only be tensioned while the machine is idle.
- If the saw band is tensioned improperly, it may tear or jump off the diversion-wheels during sawing. Adhere to the optimal tensioning values.
- Use original saw bands from the machine's manufacturer as it cannot be ensured that saw bands from other manufacturers are safe for usage or have the proper strain capability.



Attention!

Warning of material damage to machine or workpiece!

Ensure an optimal tensioning of the saw band as it might otherwise tear or jump off the guide wheels and damage either the machine or the workpiece.

How to tension the saw band

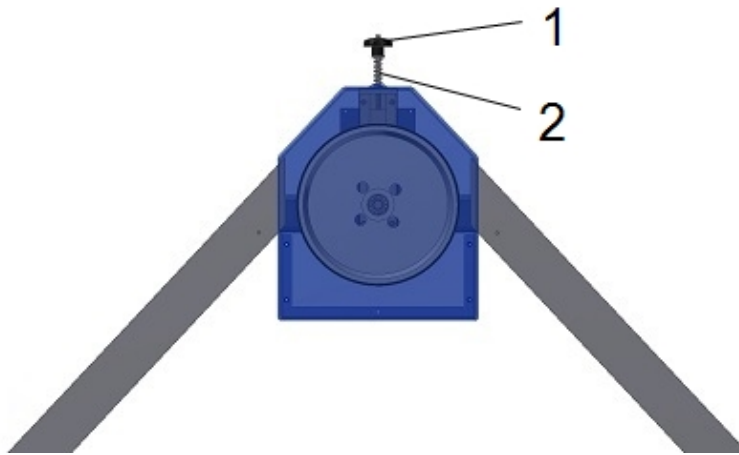
The saw band tensioning device has a spring return mechanism to compensate length variations of the saw band as a result of thermal expansion.



Information

- Since the length of the saw band varies due to manufacturing tolerances and temperature fluctuations, you must find the optimal tension for the saw band while working with the machine.
- The cutting quality depends largely from saw band tension.

- 1) If you have not already done so, execute the steps in Chap. 9. on p. 47.
- 2) If the saw band tension is too weak (bad saw cut quality, saw band jumps off of the diversion-wheels etc.), turn the star grip clockwise until it is tensioned optimally.
- 3) If the saw band tension is too strong (saw band tears), turn the star grip counter-clockwise until it is tensioned optimally.



Pos.	Description
1	Star grip
2	Spring

9.3 Removing the saw band



Danger!

Running saw band may cause serious severance injury!

The assisting person mentioned below may only enter the hazard- or working area after deactivating the machine with the main switch.



Danger!

Climbing onto the machine poses a fall- and injury risk due to sharp machine parts!

It is not permissible to climb onto the machine when performing maintenance- or any other kind of work. Use suitable climbing aids (e.g. stepladders or multi-purpose ladders, but no leaning ladders).



Attention!

After sawing the hot saw band may burn the operator!

The saw band poses an injury risk!

Wear protective gloves when working with the saw band and let the saw band cool down before touching it.

- 1) If you have not already done so, execute the steps in Chap. 9. on p. 47.
- 2) Relax the saw band.
- 3) Disassemble all covers and remove them.

- 4) Operator and assisting person are required to wear work gloves and safety glasses.
- 5) Carefully pull off the saw band from the diversion wheels (see image in Chap. 9.4).
- 6) Carefully pull off the saw band from the front and back saw-band guide and remove it.



Warning!

Coiling up the old saw band poses an injury risk - especially for the facial area!

Operator and assisting person must be especially careful and wear protective glasses.

- 7) Coil up the old saw band to safely dispose of it.
- 8) Remove all saw dust with a brush or vacuum cleaner from where the saw band used to run. The installation of a new saw band is explained in Chap. 9.4 .

9.4 Inserting the saw band



Danger!

Running saw band may cause serious severance injury!

The assisting person mentioned below may only enter the hazard- or working area after deactivating the machine with the main switch.



Danger!

Climbing onto the machine poses a fall- and injury risk due to sharp machine parts!

It is not permissible to climb onto the machine when performing maintenance- or any other kind of work. Use suitable climbing aids (e.g. stepladders or multi-purpose ladders, but no leaning ladders).



Attention!

After sawing the hot saw band may burn the operator!

The saw band poses an injury risk!

Always wear protective gloves when working on the saw band.

- 1) If you have not already done so, execute the steps in Chap. 9. on p. 47 .
- 2) If the covers of the saw band have not already been removed, do so (see Chap. 9.3 on p. 50).
- 3) Operator and assisting person are required to wear work gloves and safety glasses.

**Warning!**

Uncoiling the old saw band poses an injury risk - especially for the facial area!

Operator and assisting person must be especially careful and wear protective glasses.

- 4) Carefully uncoil the band.
- 5) Insert the saw band around the saw-band diversion-wheels. The teeth of the saw band must point to the rear and in the cutting direction. Make sure that the saw band lies centrally on the guide wheels.
- 6) Tension the saw band (see Chap. 9.2 on p. 49).
- 7) Check whether the saw band is placed centrally on all diversion-wheels and runs through the guide-roll pair.
- 8) Check whether the saw band runs properly by carefully spinning the diversion-wheel clockwise.
- 9) Mount the removed saw-band covers at the right location.
- 10) Perform a test cut (see Chap. 7.6 on p. 38) and adjust the saw-band tension if necessary.

9.5 Adjusting saw band

**Danger!**

Running saw band may cause serious severance injury!

The assisting person mentioned below may only enter the hazard- or working area after deactivating the machine with the main switch.

**Danger!**

Climbing onto the machine poses a fall- and injury risk due to sharp machine parts!

It is not permissible to climb onto the machine when performing maintenance- or any other kind of work. Use suitable climbing aids (e.g. stepladders or multi-purpose ladders, but no leaning ladders).

**Attention!**

After sawing the hot saw band may burn the operator!

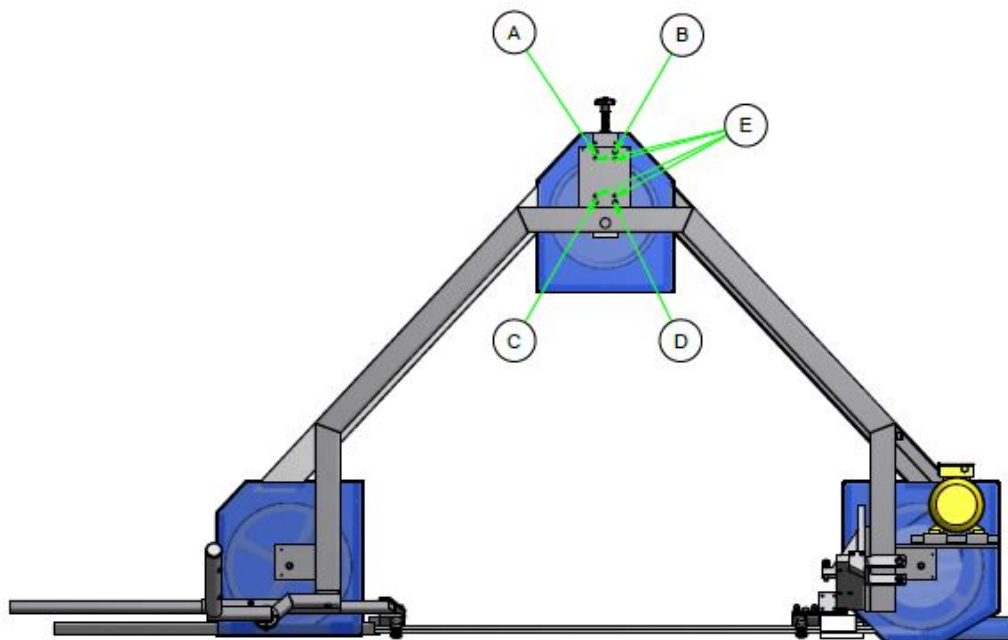
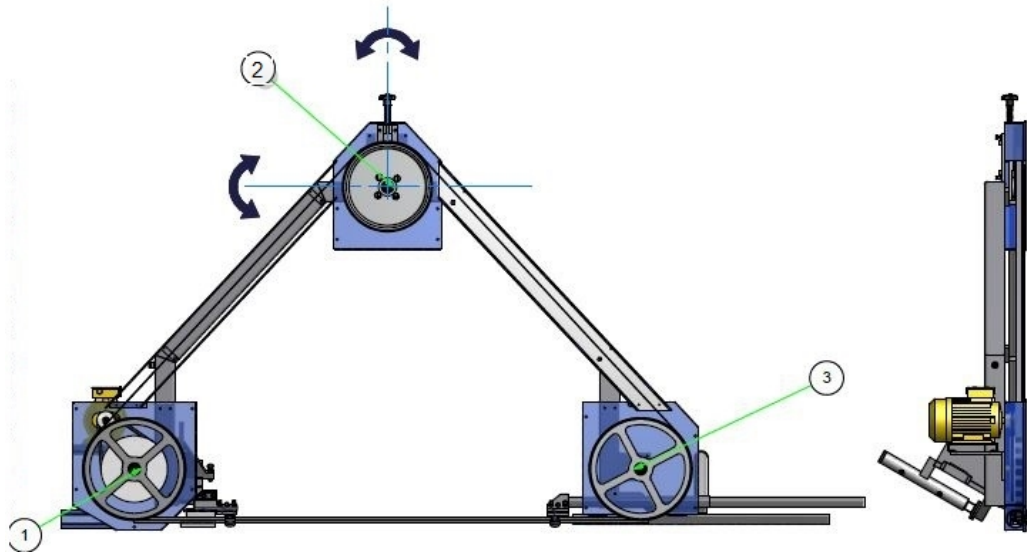
The saw band poses an injury risk!

Wear protective gloves when working with the saw band and let the saw band cool down before touching it.

First check the saw band tension (see Chap. 9.2 on p. 49)

9.5.1 Diversion wheels

Ideally, all three diversion wheels are in the same plane.



Saw band runs from diversion 1 wheel inwards

- 1) Loosen locking screws E
- 2) Turn the adjusting screws B and D a bit.
- 3) The plate tilts slightly.
- 4) Fasten locking screws E.
- 5) Turn diversion wheel 1 several times by hand to control the running behavior of the saw band.
- 6) If necessary repeat the steps 1 to 5.

Sawband runs from diversion wheel 1 outwards

- 1) Loosen locking screws E
- 2) Turn the adjusting screws A and C a bit.
- 3) The plate tilts slightly.
- 4) Fasten locking screws E.
- 5) Turn diversion wheel 1 several times by hand to control the running behavior of the saw band.
- 6) If necessary repeat the steps 1 to 5.

Sawband runs from diversion wheel 3 inwards

- 1) Adjust screws A and B.

Sawband runs from diversion wheel 3 outwards

- 1) Adjust screws C and D.

**Information**

- Please note that the adjustments always have an interaction with the other wheels. Most minimal changes are already successful.
- After completing the adjustments always counter set screws and tighten the fixing screws E.
- To protect your machine check the running behavior always initially by manually moving the saw blade.

9.5.2 Saw band guide rolls

The saw band guide rolls can be set on the motor and on the operating side.

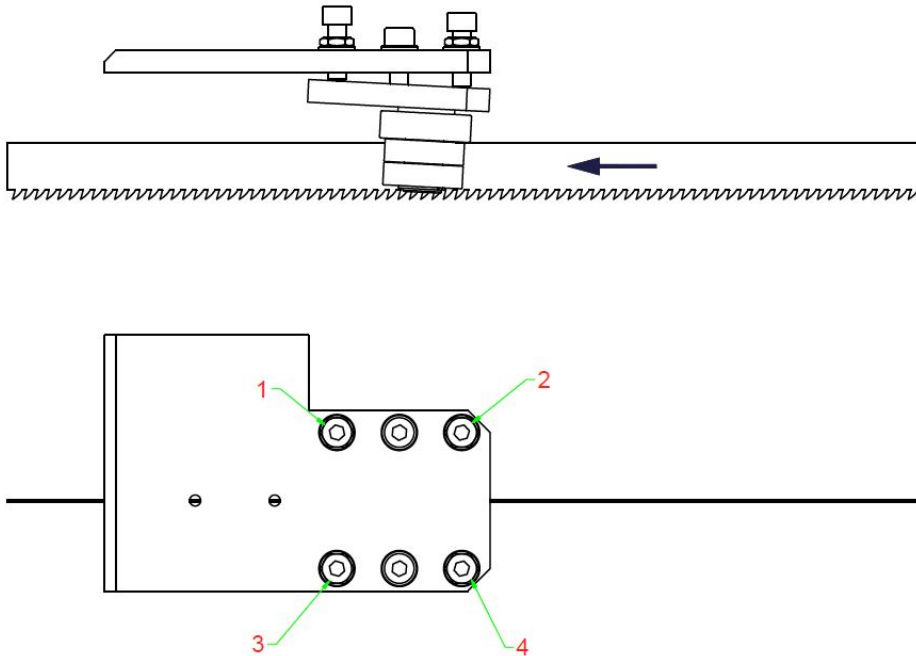


Fig. Motor side

- 1) Tilt the axis of the ball bearing by turning the screws 2 and 4 slightly forward.
- 2) The saw band runs so against the upper bearing and non jumps down
- 3) If saw band runs to the right or to the left, this can be adjusted with the screws 1 and 2 or 3 and 4.



Info

- Please note that the adjustments always have an interaction with the other wheels. Most minimal changes are already successful.
- Too strong inclination results in increased bearing pressure and thereby increased wear of bearings and saw band.
- To protect your machine check the running behavior always initially by manually moving the saw blade.

9.6 Adjust end stops and handle



Danger!

Running saw band may cause serious severance injury!

The assisting person mentioned below may only enter the hazard- or working area after deactivating the machine with the main switch.



Danger!

Climbing onto the machine poses a fall- and injury risk due to sharp machine parts!

It is not permissible to climb onto the machine when performing maintenance- or any other kind of work. Use suitable climbing aids (e.g. stepladders or multi-purpose ladders, but no leaning ladders).

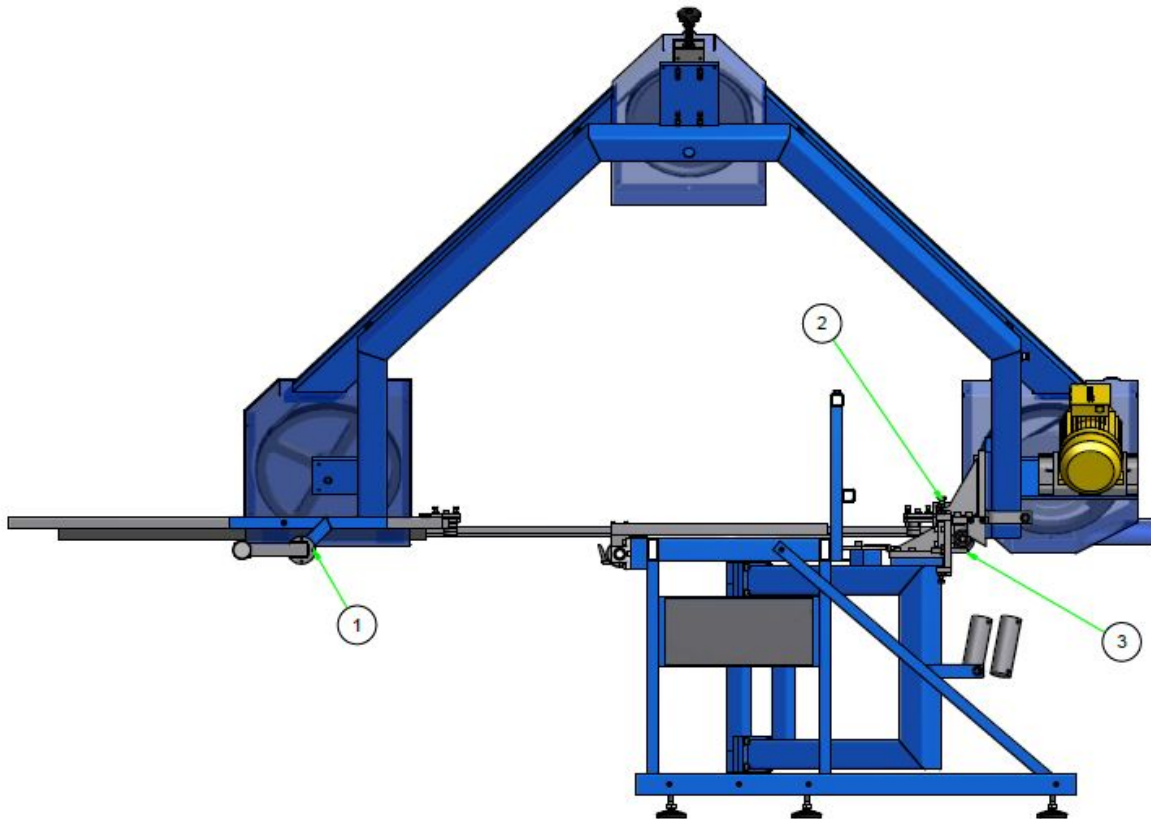


Attention!

After sawing the hot saw band may burn the operator!

The saw band poses an injury risk!

Wear protective gloves when working with the saw band and let the saw band cool down before touching it.



Pos.	Bezeichnung
1	Handle
2	stop saw bow LDC
3	stop saw bow TDC

Adjust handle position

For certain sections, it may be necessary to adjust the position of the handle. To do this, proceed as follows.

- 1) Loosen the three screws at the handle (1).
- 2) Turn handle in the desired position.
- 3) Tighten the three mounting screws.

Adjust lower saw bow stop

In certain cases, the bow stop must be readjusted.

- 1) Let off the saw bow gently on its LDC position.
- 2) Loosen with a suitable tool the locknut and turn the adjusting screw (2) to the desired direction and lock it with the nut.
- 3) Note that in lowest position saw band don't collide with the table.
- 4) Then perform a functional test.

Adjust upper saw bow stop

In certain cases, the bow stop must be readjusted.

- 1) Let back the saw bow gently on its TDC position.
- 2) Loosen with a suitable tool the locknut and turn the adjusting screw (3) to the desired direction and lock it with the nut.
- 3) Then perform a functional test.

9.7 Check safety equipment



Danger!

Running saw band may cause serious severance injury!

Only one person may check the machine's safety equipment.

How to check the main switch

- 1) Turn on the machine off with the main switch (see Chap. 7.3 on p. 33).
 - It should not be possible to activate the machine drives even when the [safety push buttons](#) are active.
- 2) If the machine does not respond as described above when the main switch is deactivated, it is not permissible to use the machine until this defect has been repaired by an electrician.

How to check the safety push button

- 1) Turn on the machine with the main switch (see Chap. 7.3 on p. 33).
- 2) Press and hold both [push buttons](#) at the handle.
 - Sawing begins.
- 3) Release the [safety push buttons](#) at the handle.
 - Sawing must stop immediately.
- 4) If sawing does not stop immediately or if sawing starts while the [push buttons](#) are not activated, turn off the machine with the main switch and contact the manufacturer's customer service (see Chap. 8.5 on p. 46).

9.8 BSM 630 maintenance

Serial number of BSM 630:

Please record the maintenance activities in the table according to the sample entry!

Date	Activity	Next maintenance	Name:
07-05-2012	Machine greased according to grease plan	07-06-2012	Maier

10. Dismantling and disposal

10.1 Deactivation



Danger!

Running saw band may cause serious severance injury!

Only an authorised person may deactivate the machine (see Chap. 2.5 on p. 10).

How to deactivate the BSM 630:

- 1) If a workpiece is still in the machine, remove it (see Chap. 7.5 on p. 35).
- 2) Place the saw bow in the lowest position.
- 3) Turn the machine off at the main switch, and ensure it is not activated again.
- 4) Pull the power plug-in out of the receptacle.
- 5) Disconnect the machine from the air pressure supply by pulling off the plug-in coupling from the machine's plug-in fitting (see Chapter 1.1 on p.1).
- 6) If the machine is transported to a different location, set the saw bow to 45 degrees (see Chap. 7.4 on p. 34).
- 7) Secure the saw bow and the swivel-mounted control panel with transport anchors before transport (e.g. appropriate cable straps).

10.2 Final shutdown

- 1) Execute the steps from the previous section.
- 2) Disconnect the power supply cable to the machine so that unauthorised persons cannot activate the machine.

10.3 Disposal



Danger!

Climbing onto the machine poses a fall- and injury risk due to sharp machine parts!

Workers may not climb onto the machine even when disposing of it. Use suitable climbing aids (e.g. stepladders or multi-purpose ladders, but no leaning ladders).

**Warning!****Crushing hazard for arms and legs during transport of machine!**

- The in-company transport may only be conducted by authorised persons (see Chap. 2.5 on p. 10) according to valid APR.
- Also ensure that no persons are in the transportation path or in the setup area and wear safety shoes with toe-protection caps.

**Attention!****According to EU regulations machine parts may not be discarded with unsorted household garbage!**

During disposal separate the individual types of materials and dispose of them in accordance with country-specific regulations.

**Information**

The BSM 630 does not contain dangerous materials

The following rules must be observed when disposing of the machine at the end of its lifecycle:

- Adhere to the country-specific regulations regarding disposal of industrial machines
- If unsure, contact a professional disposal company
- Separate plastics from metal and dispose of these materials separately
- Dispose of seals and rubber parts as special waste
- Also dispose of electrical motors and electrical components such as controls, switches and cables separately

11. Annex

11.1 Contact form

This is our contact address:
 Eugen Riexinger GmbH & Co. KG
 Egartenring 2
 75378 Bad Liebenzell-Unterhaugstett
 Germany
 Phone +49 (7052) 930 90-0
 Fax +49 (7052) 930 90-33
 Email info@riex.de
 Internet www.riex.de

Tell us about your experience with the BSM 630 or make some suggestions for improving either the BSM 630 or this operating manual. Copy, fill out and send us this contact form. We want to thank you in advance for your assistance!

- Serial number of deployed BSM 630.....
- We primarily use the BSM 630 for the following materials/workpieces:

.....

Experiences/Suggestions for improvement

.....

Date Name:

11.2 EC Conformity Declaration

according to EC Machine Guideline 2006/42/EG, Annex II A

We hereby declare that the machine distributed by us and described in the following conforms to the basic safety- and health requirements of the EC Guideline 2006/42/EG in regard to its conception and design. This declaration loses its validity if the machine is changed without our consent.

Manufacturer:

Eugen Riexinger GmbH & Co. KG
plasticconnectingsystems
Egartenring 2
75378 Bad Liebenzell / Germany

Person authorised to compile the technical file:

Markus Theobald (Business Manager), Eugen Riexinger GmbH & Co. KG, Egartenring 2, 75378 Bad Liebenzell

Description of machine:

Band-saw machine for plastic pipes of type BSM 630

A conformity declaration is also made for other valid product-relevant guidelines.

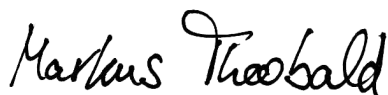
- Guideline 2004/108/EG (EMC guideline)
- Guideline 2011/65/EU (RoHS guideline)
- The safety objectives of European Directive 2006/95/EC (low voltage guideline) comply with machine guideline Annex I, Section 1.5.1

Applied and harmonised norms:

- DIN EN ISO 12100:2010 Machine safety - General design principles - Risk evaluation and risk reduction
- DIN EN ISO 13849-1:2008 Machine safety - Safety-relevant control parts - Part 1: General design principles
- DIN EN ISO 13857:2008 Machine safety - Safety spacing for hazardous proximity of arms and legs
- DIN EN 60204-1:2006 Machine safety - Electrical equipment of machines, Part 1: General requirements
- DIN EN 61000-6-2:2005 Interference stability for industrial areas
- DIN EN 61000-6-3:2007 Interference emission for living-, commercial- and trade areas as well as for small business

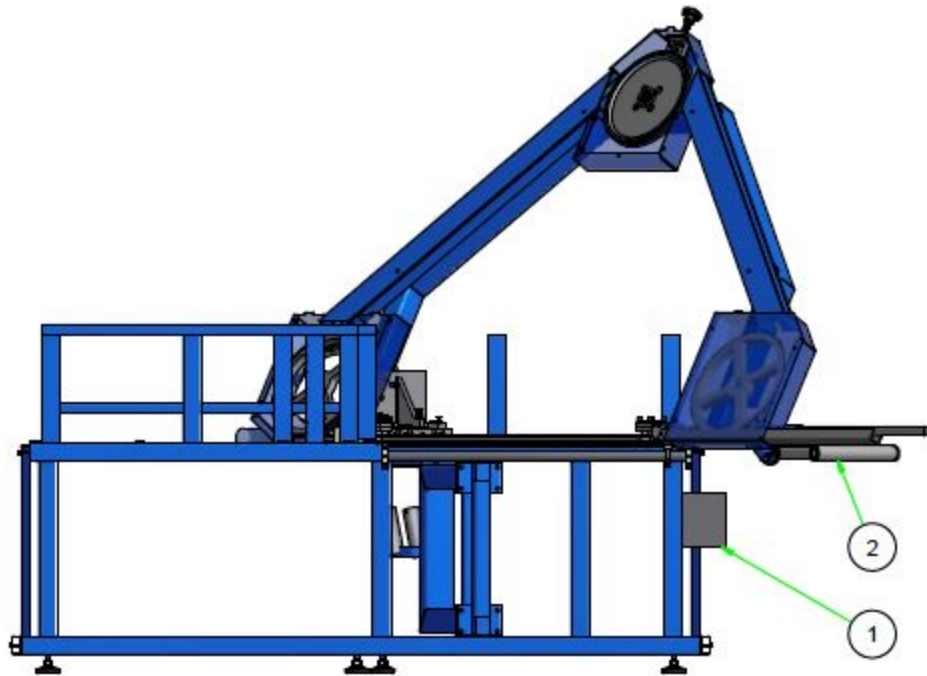
Bad Liebenzell, 12.11.2015

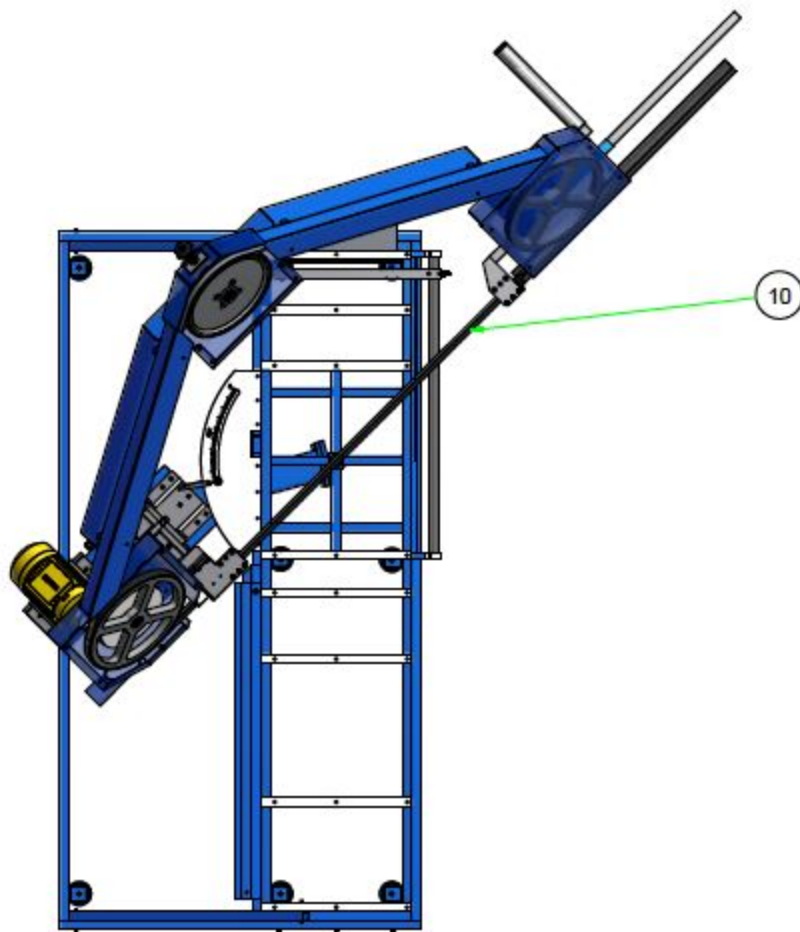
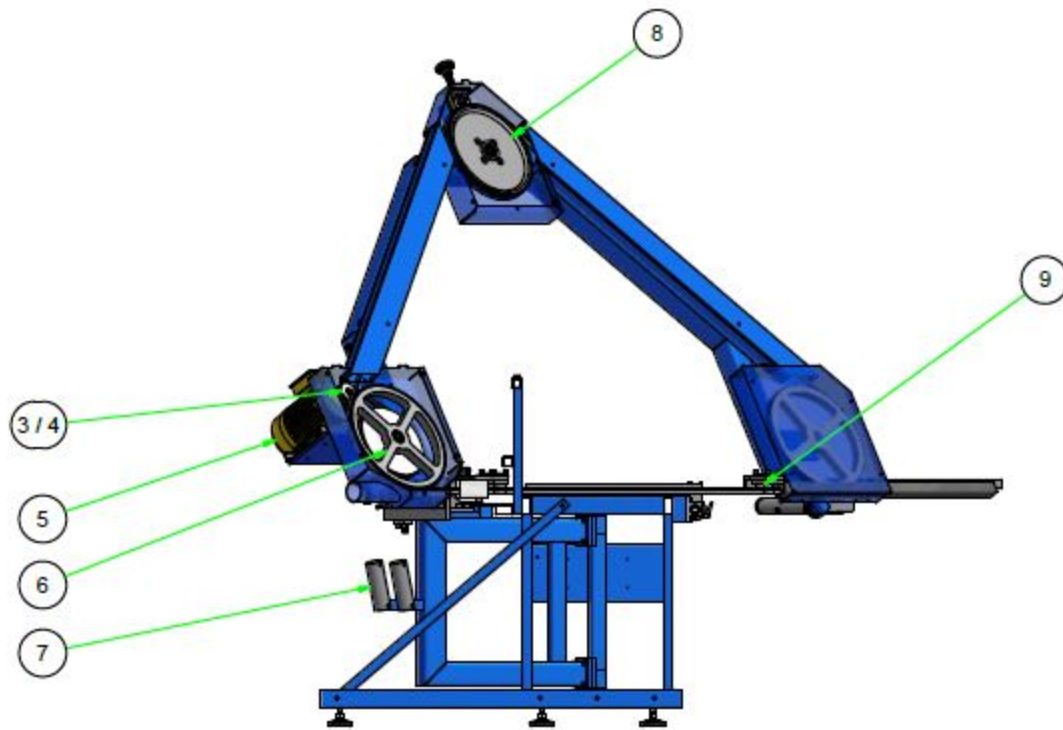
Markus Theobald (Business Manager)



11.3 Spare part list

Pos.	Description	pieces	Article number
1	Switch box	1	310184
2	Button	2	300399
3	Belt pulley Ø 70	1	300429
4	Fan belt	1	300425
5	Motor	1	300395
6	Drive wheel	1	306507
7	Tension spring	2	300397
8	Diversion wheel	1	306508
9	Saw band guide	2	313087
10	Saw band 0,9 x 25 x 6140 4Z		302443





11.4 Circuit diagram

