



Proline 520.450 ANC

Operating instructions

HARD SP.ZO.O

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Before transporting and using the machine,
please read the instructions thoroughly!

Serwis i informacje

SERWIS BOMAR GWARANCYJNY I POGWARANCYJNY

Zgłoszenia przyjmujemy od godziny 07:00-22:00.

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EC/EU Declaration of Conformity

1) 2) We:

BOMAR, spol. s r.o.
Těžební 1236/1
627 00 Brno, Czech Republic
Id. No: 48908827
declare herewith

that the following designated device based on its conception and construction as well as the design launched by us meets the relevant basic safety requirements of the decrees of the government.

This statement applies exclusively to the machine device in conditions in which it was brought to the market. It does not apply to parts subsequently added by the end user or to modifications performed subsequently by the end user.

In the event of any device modification not approved by us this declaration shall lose its validity

Name: Band Saw

Type : Proline 520.450 ANC

Serial number: 011-100 000

Manufacturer BOMAR, spol. s r.o., Těžební 1236/1, 627 00 Brno

Product data

Determination: for cross dividing and cutting of rolled and towed bars and profiles made of steel, stainless steel, non-ferrous metals and plastics

Description: Stand, table, cutting unit with the saw band and drive, clamping device, cooling system, el. switch board with control panel.

Technical data: Pneumatic ☒ NO ☐ YES ☐ Hydraulic ☐ NO ☒ YES ☐ Control system ☐ NO ☒ YES ☐
Cutting rate 20–120 m.min-1
Cutting angle 0°
Characteristic cutting range 520 x 450 mm

Documentation:

Technical documentation for this machine device was elaborated in compliance with Government regulation no. 176/2008, Annex 7, part A.

The device meets relevant requirements of the given directives: 2006/42/EC
2014/30/EU

The applied harmonized standards, National standards and technical specifications:

ČSN EN ISO 12100:2011	ČSN EN ISO 16093:2018	ČSN EN ISO 13857:2021
+ Opr.1:2020 + Opr.2 :2021		
ČSN EN ISO 4413:2011		ČSN EN 60204 -1 ed.3:2019
ČSN EN 55011 ed.4:2017	ČSN EN 61000-6-2 ed.4:2019	ČSN EN IEC 61000-6-4 ed.3:2019
+ A1: 2017+ A11:2020 + A2:2020		

The product is safe on condition of the common and determined usage.

The conformity judging was performed according to §12, art..3a), of the Law no. 22/1997 Coll. as amended.

BOMAR, spol. s r.o.
Těžební 1236/1, 627 00 Brno
Czech Republic
IČO: 48908827
DIČ: CZ48908827



Brno, 16.10.2022

Alfred Pichlmann, Managing Director

Point of issue, datum

Name and function of the responsible subject,
signature

1) Name, address and identification number of the subject issuing the conformity declaration (producer of importer)

2) Person authorized to complete the technical documentation

!

If the equipment is installed without safety equipment offered by BOMAR, spol. s ro or its agents and used by the customer (or buyer) then EC declaration loses validity.
EC Declaration of conformity is valid only if customer (buyer) installed the BOMAR safety equipment with the machine or with some other with equivalent safety device in accordance with current applicable regulations and standards.
All machine elements and components that were built into the device by BOMAR, spol. s ro have been declared "identical" to a safety device, as offered by BOMAR, spol. s ro or its agents.

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1. **Bezpečnostní pokyny / Sicherheitshinweise / Safety notes**

The operating instructions must be read by the person, who keeps in touch with the machine before transportation, installation, using, servicing, repair, stocking or removal!

The operating instructions include relevant information. The operator must familiarise himself with the install and operation, safety notes and machine servicing, because reliability and service life must be reached. The operating instructions must avoid risks, which are linked to work on the machine.

The machine operator must be familiar with the installation, operation and maintenance of machines and also with the safety instructions. Before transporting and using of the machine, please read the instructions thoroughly!

Attention!
The operating instructions must be available at the machine! Keep the operating instructions in good

1.1. Machine determination

The band saw **Proline 520.450 ANC** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **with no angle cutting**.

Combustible materials are excluded for cutting! Any other usage and operation outside this range are unauthorized and the manufacturer/supplier does not accept any responsibility for any damages resulting from such misuse. **The operator has full responsibility!**

The machine is equipped with safety and protective guarding for operator and machine protection. Nevertheless, this safety and protective guarding cannot prevent injury. Service personnel must read this chapter and comprehend it, before he starts to work on the machine. **Always keep instructions about work safety!** Service personnel must take into account other aspects of the risk, which refer to the ambient conditions and the material.

1.2. Protective suit and personal safety

Wear tight fitting overalls! Loose fitting clothes may be caught with machine parts and cause serious injury.

Wear protective gloves! Material cuts and saw band have sharp edges and may cause serious injuries.

Attention!
Gloves you can use only at working material replacement (saw band)! The machine and accessories must be inactive!
If the machine is running, you must not wear gloves! It is dangerous, because some parts of the machine can catch gloves!

Wear protective shoes with non-skid soles! The unsuitable shoes may cause balance loss and following injury. Falling work pieces may cause serious injuries too.

Wear protective goggles! Chips and cooling liquid may damage your eyes.

Always wear ear protections! Most of the machines emit up to 80 dB and may damage your hearing.

Do not wear jewellery and always tie back long hair! Moving machine parts can catch jewellery or loose hair and may cause serious injuries.

Bezpečnostní pokyny
Sicherheitshinweise
Safety notes

Operate the machine only when you are fit enough to work. Illnesses or injuries diminish concentration. Avoid machine work, which may compromise the safety of you and your colleagues!

Avoid machine work, which may compromise the safety of you and your colleagues!

Attention!
Consider the safety signs on the machine. Do not remove or damage them! Keep these labels still

1.3. Safety notes for machine operator

Attention!
Machine can be operated by person older than 18 years!
Machine can be operated only person physically and mentally fit for this activity

Machine can be operated only by one person.

Machine operator is responsible for presence of other persons by the machine.

The person, which is controlling the machine using control equipments of the machine (control panel or another control equipment) mustn't oneself or with help of another persons manipulate with the machine or with the cutted or another way processed material.

Keep instructions and orders about work safety!
Read the operating instructions, before you start to work on the machine! Keep the operating instructions in good condition!

Close covers before the machine starting and check, if the covers are not damaged. Damaged covers must be repaired or changed. Do not start the machine, if the cover is removed! Check, if the electric cables are not damaged.

Attention!
Do not connect the machine to electricity if the door or any covers are removed. Do not touch the high voltage electrical equipment (transformers, motors, terminals

- Check that the power cables are not damaged.
- Do not hold the material for clamping to the vice and for cutting!
- Do not operate with the buttons and the switches on the control panel, when you have gloves!
- For machine starting take care, that there is nobody in the working area of the machine (it means in the working area of the vice, the saw band, the saw arm etc.).
- In no circumstances touch the rotating elements.
- Work on the machine only when the machine is in good condition!

- Check at least once in a shift, if the machine is not damaged. If the machine is damaged, you must bring the machine in order and you must inform your superior!
- Keep your working area clean!
- Ensure sufficient lighting in the working area.
- Take off the spilt water or the oil from the floor and dry it.

- Do not touch the cooling liquid with bare hands!
- Do not set the nozzle of the cooling liquid, when the machine is started on!
- Do not remove the chips from the working area of the machine, when the machine is started on!
- Do not use the compressed air for the machine cleaning or for the chips removing!
- Use the protective instruments for chips removal!

1.4. Safety notes for the servicing and repairs

Attention!

Only a qualified professional can carry out the servicing and repairs of the electrical equipment (e.g. fuse replacement etc.)! Take special care during the work with electrical equipment. High voltage shock can have fatal consequences! Always follow the work safety instructions! Otherwise, there is possibility of heavy injury!

Switch off the main switch and lock it, before you start service work! If you have the Practix type of machine, disconnect it from electrical network. This way you eliminate a possibility of starting the machine accidentally.

Take care when manipulating the frequency converter. It is still energized for 20 minutes after machine shutdown.

Always adhere to the safety instructions!

Only an authorized professional can carry out the servicing and repairs.

For parts replacement, use only those, which are identical with the originals. Otherwise, there is possibility of health hazard.

Use only recommended types of hydraulic oils, oils and lubricants!

Do not remove or lock the limit switches or any other safety equipment!

Any use of the saw, accessories or machine parts other than that intended by BOMAR, spol. s r.o. company is not permitted. The guarantee on this product will be lost afterward and BOMAR, spol. s r.o. takes no responsibility for damage caused.

Do not turn the machine on if all covers are not in place!

1.4.1. Safety notes for the servicing and repairs on hydraulic unit

Caution!

Repairs and maintenance of the hydraulic system is allowed to be carried out only by a qualified person who was entrusted to make the maintenance, and who has sufficient knowledge of the hydraulic circuit to perform the specific tasks according to his or her entrustment. If you do not have sufficient knowledge, do not intervene in the hydraulic circuit, but contact the manufacturer or the manufacturer's authorized service.

Compliance with the principles of cleanliness is basic requirement for trouble-free operation of hydraulic equipment. Hydraulic components are products made with high accuracy, and any contamination leads to a reduction lifetime or even malfunction. The consequences are very difficult to remove and expensive.

Always use clean tools. Parts and fasteners, which are part of a hydraulic circuit, never put away the dirty surface. The best cleaning agent is crepe paper, because the fibers of the cleaning cloths can also cause malfunction.

Protective cap from the threaded chamber remove just before the assembly of the unit.

Hoses and pipes before mounting flush with gasoline or other cleaning agent and blow compressed air.

All fittings must be properly tightened. However, do not raw power.

1.5. Safety instructions for laser radiation sources

Laser radiation sources may be used on the machine.

Warning signs and information about the corresponding laser class are placed near each laser source.

It is forbidden to look into the laser beams!

Depending on the design and optional equipment of the saw, laser radiation sources can be located in particular:



- on the saw feeder
- before the main vice of the band saw
- on a safety fence (laser barrier)
- on the section line projection device

Commonly used laser safety classes:

1 (laser barriers)

1M (laser barriers)

3R (Laser-Liner)

Attention!

It is necessary for correct functionality of a laser to regularly check the patency of the laser ray on the sensor and to clean the laser from impurities (clean rag + spirit) after each shift. Be careful during the cleaning in order the laser was not been scratched and broken!.

1.6. Safety notes for the cooling

Attention!

- *When handling cooling agents always wear hazardous fluid-proof gloves!*
- *Wear impervious protective gloves when handling with a cooling liquid!*
- *Wear protective goggles!*
- *Cooling liquid can get in contact with your eyes and*

1.6.1. Instructions for first help

Pull off and safely remove polluted, soaked clothing.

For breathing, go out in the fresh air or look for first aid treatment.

Wash with water or use crèmes for contact with the skin.

Flush with water for eyes and look for first aid treatment.

For swallowing, drink a lot of water and induce vomiting. Look for medical help.

Bezpečnostní pokyny
Sicherheitshinweise
Safety notes

1.7. Safety notes for Swarf conveyor (optional accessories)

Swarf conveyor is an optional accessory of the machine, this article is valid just for the machine which is equipped with this device.



Attention!

It is forbidden to enter the swarf conveyor area if the saw is in operation. All maintenance and other works on the swarf conveyor could be done only on equipment which has been

For control of the swarf conveyor - see Chapter „Machine control“.

1.8. Safety machine accessories

The machine is equipped with safety accessories. It protects the operator from injuries and the machine before damage. The safety accessories are blocking accessories, emergency switches and covers.

Enhanced risk!

Do not come into or intervene in the cutting area. Otherwise, there is possibility of heavy injury.

Check once in a week the function of the safety accessories. If the safety accessories are functionless, you must stop work and repair or change the safety accessories.

1.8.1. Emergency Stop Switch

Emergency Stop Switch is used for emergency switching – off the machine in case defect or health hazard.

By pressing **Emergency Stop Switch** will immediately stop all dangerous machine movements.

If any damages or fault appears, immediately press **Emergency Stop Switch**!

It is possible to release the pressed button by twisting of the upper part of the button.



The **Emergency Stop Switch** is placed at the control panel of the machine.



1.8.2. Arm covers

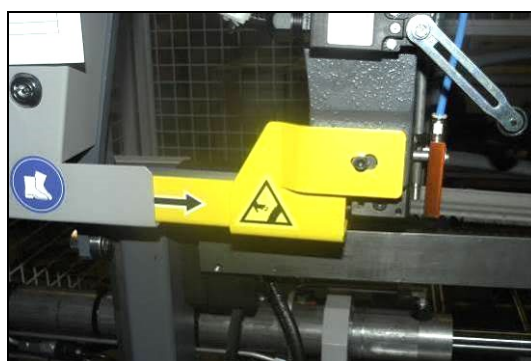
If the cover is opened during operation, the limit switch is opened and the band saw is stopped. The band saw is not possible to start in set mode.



The band saw is started to the operation, when the covers is closed!

1.8.3. Saw band cover

This protective cover envelops the saw band in the area from guiding cube to the arm.





Never switch on the saw band driver if this cover is not mounted!

1.8.4. Brush cover

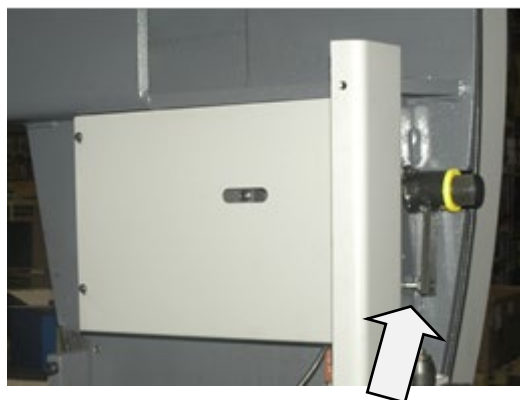
This cover covers the brush which is intended for cleaning of the saw band from impurities.



Never switch on the saw band driver if this cover is not mounted!

1.8.5. Saw band stretching and rupture inspection

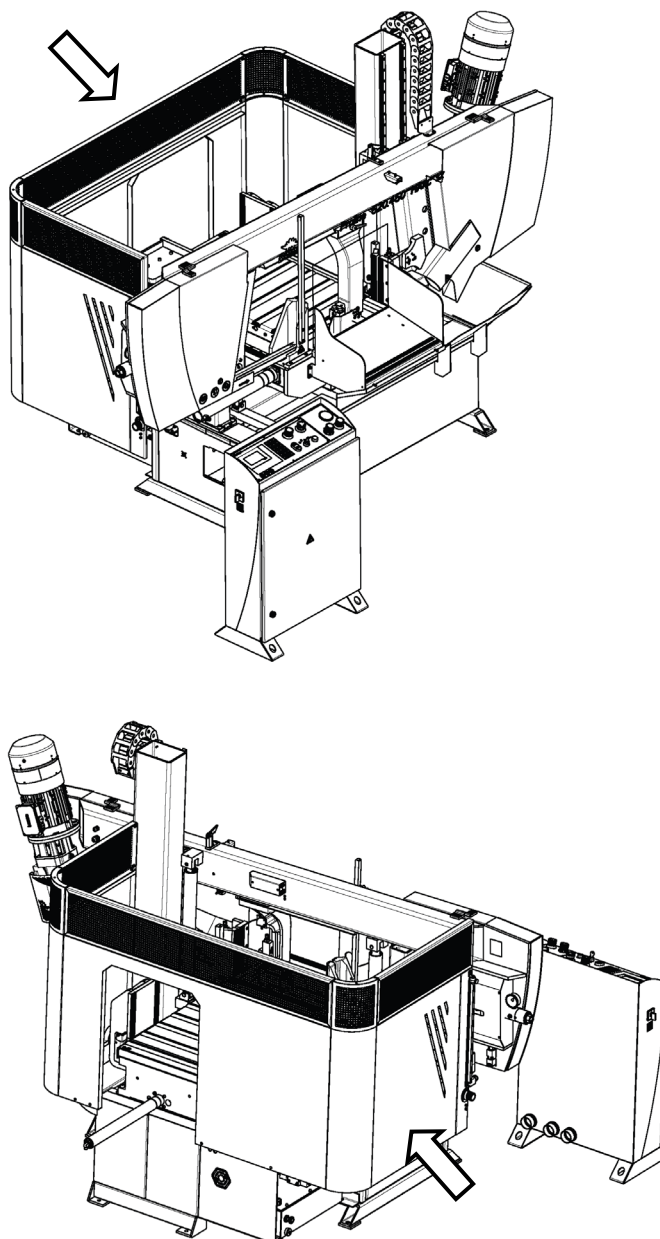
This device checks the saw band tension and causes immediate machine stop if the band incidentally ruptures.



The device includes a limit switch. Its adjustment is described in chapter „Servicing and adjusting“. Check the switch carefully and periodically – adjust it if necessary.

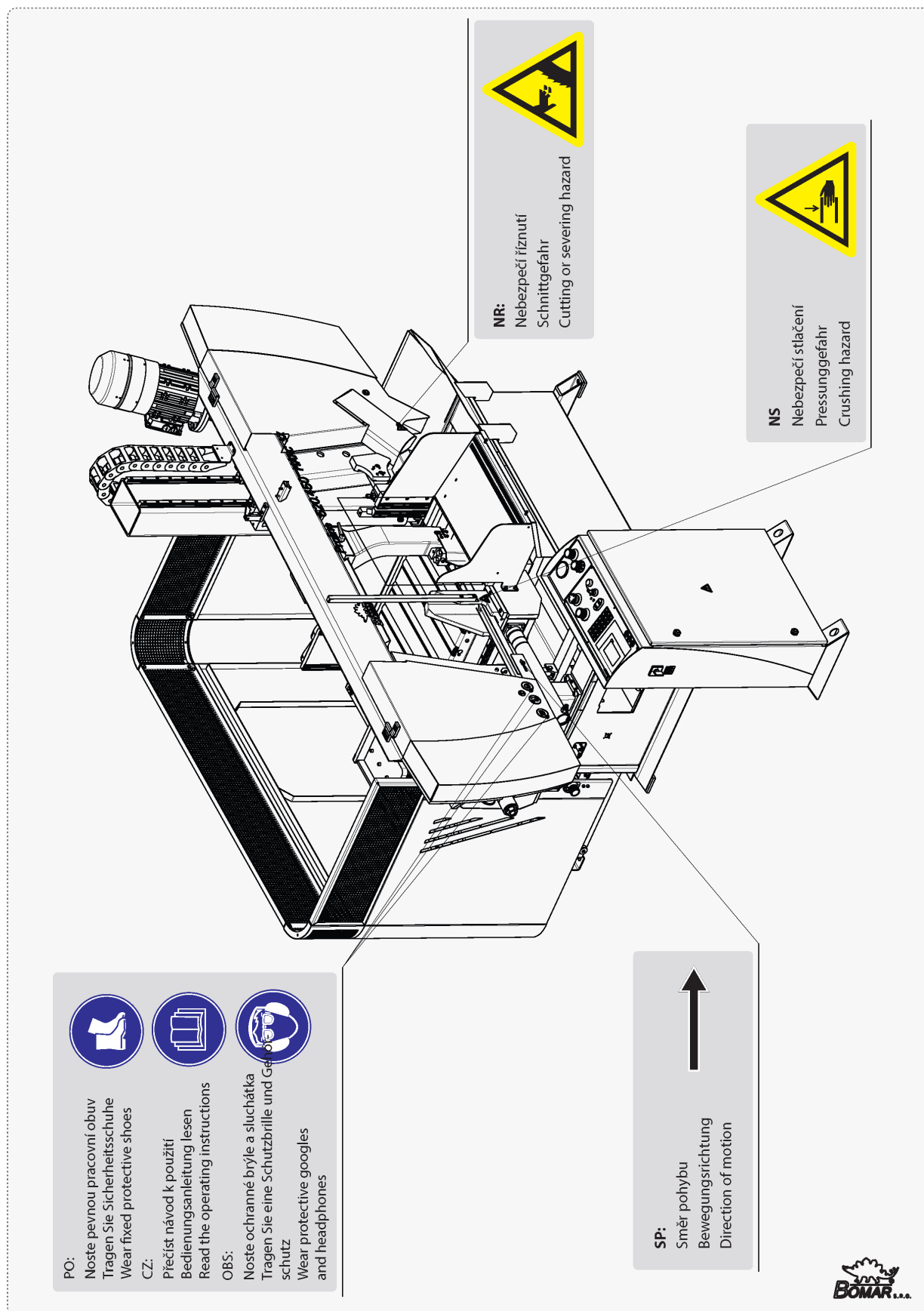
1.8.6. Protective fencing

The protective fencing prevents persons from entry and intervention in the device working area during the working cycle of the machine.

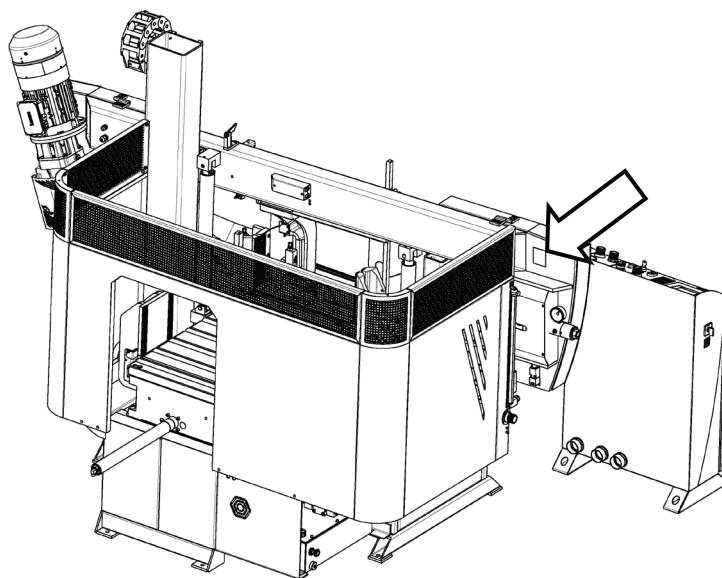


The doors of the protective fencing are protected with end (limit) switches. If any end switch is unconnected the machine is stopped.

1.9. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols

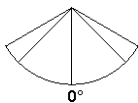


1.10. Umístění štítku stroje / Maschinenschild position /
Position of machine label



2. **Dokumentace stroje / Dokumentation der Maschine / Machine documentation**

2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:				
• Hmotnost / Gewicht / Weight	1700 kg			
Rozměry stroje / Maschinengröße / Machine size :				
• Délka / Länge / Lenght	2891 mm			
• Šířka / Breite / Width	2042 mm			
• Výška / Höhe / Height	2033 mm			
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:				
• Napájení / Versorgungsspannun / Supply voltage	~ 3 x 400 V, 50Hz, TN-S/TN-C-S			
• Příkon / Gesamtschlusswert / Total Input	6,8 kW			
• Max.jištění / Max. Vorschaltsicherung / Max. Fuse	20 A			
• Krytí / Schutzart / Protection	IP 54			
Akustický tlak / Schalldruckpegel / Acoustic pressure:				
• Proline 520.450 ANC	L _{Aeqv} = 76,3 dB			
Pohon / Atrieb / Drive:				
• Typ / Typ / Type	91.001.117 1LA7113-4AA11 IE2			
• Napájení / Versorgungsspannung / Supply voltage	~3 x 230/400V, 50Hz			
• Výkon / Leistung / Output	4 kW			
• Jmenovité otáčky / Motorenndrehzahl / Nominal speed	1440 min ⁻¹			
Hydraulické zařízení / Hydraulikeinrichtung / Hydraulic equipment:				
• Typ / Typ / Type	92.001.070 S001 058 2			
• Výkon / Leistung / Output	4 MPa / 1,1 kW			
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:				
• Typ / Typ / Type	91.020.032 PA70/120 + filter			
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	40 l			
Rozměr pásu / Sägebanddimension / Band size:				
6020x41x1,3 mm				
Jeden Zdvih / Vorschublänge Einfachhub / One Upstroak::				
600 mm / 440 mm (svazkovač / obere spannung / upper clamping)				
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:				
20–120 m/min.				
Nejmenší řezaná výška / Kleinste Schnitthöhe / Minimum cut height:				
10 mm				
Řezné rozsahy / Schnittbereiche / Cutting size:				
				
0°	Ø450 mm	520×450 mm	520×450 mm	450×450 mm

Warning:

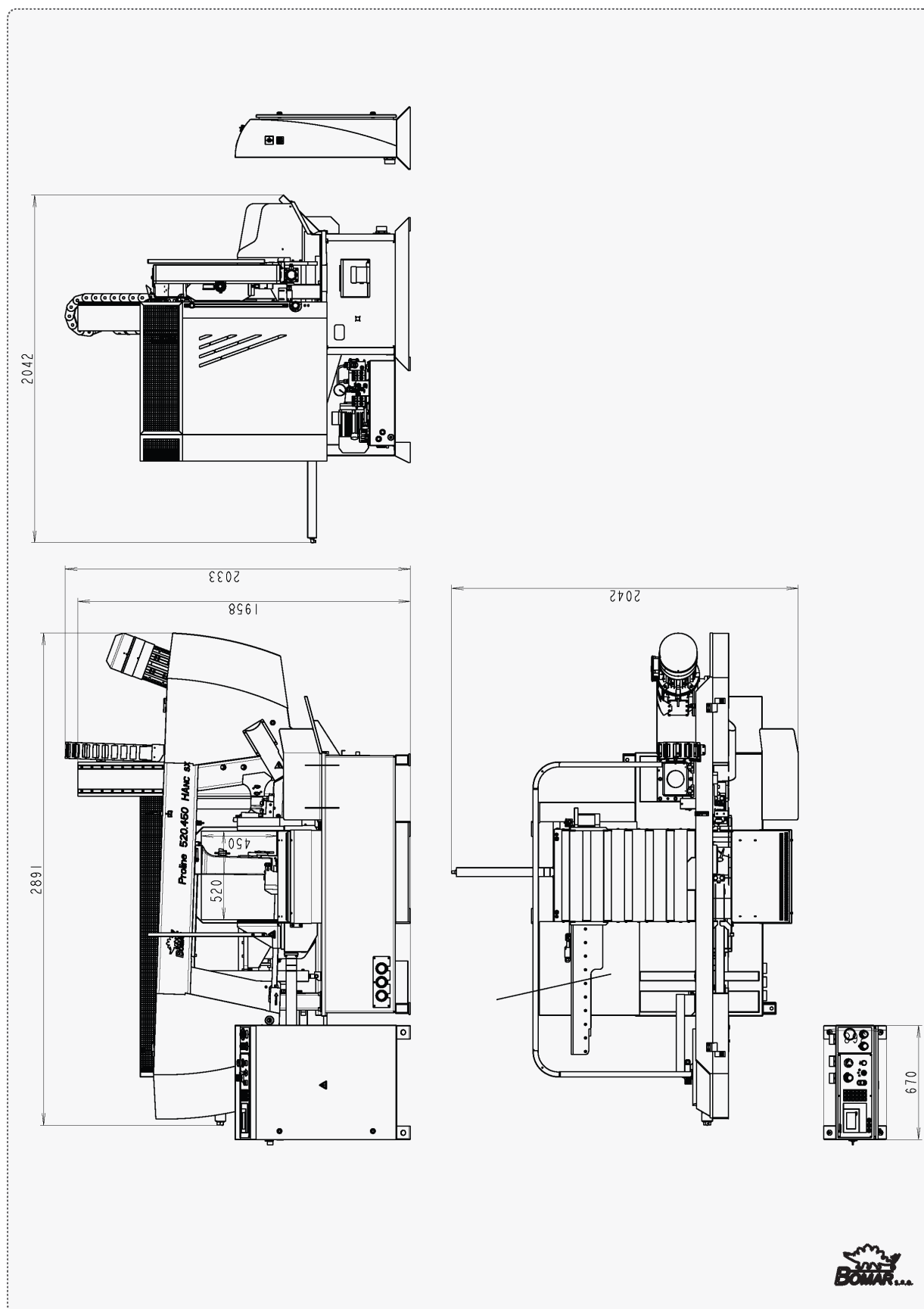
If the material detection device is installed on the machine then maximal workpiece height is 10 mm shorter.

If machine has bundle device then material maximal height is half.

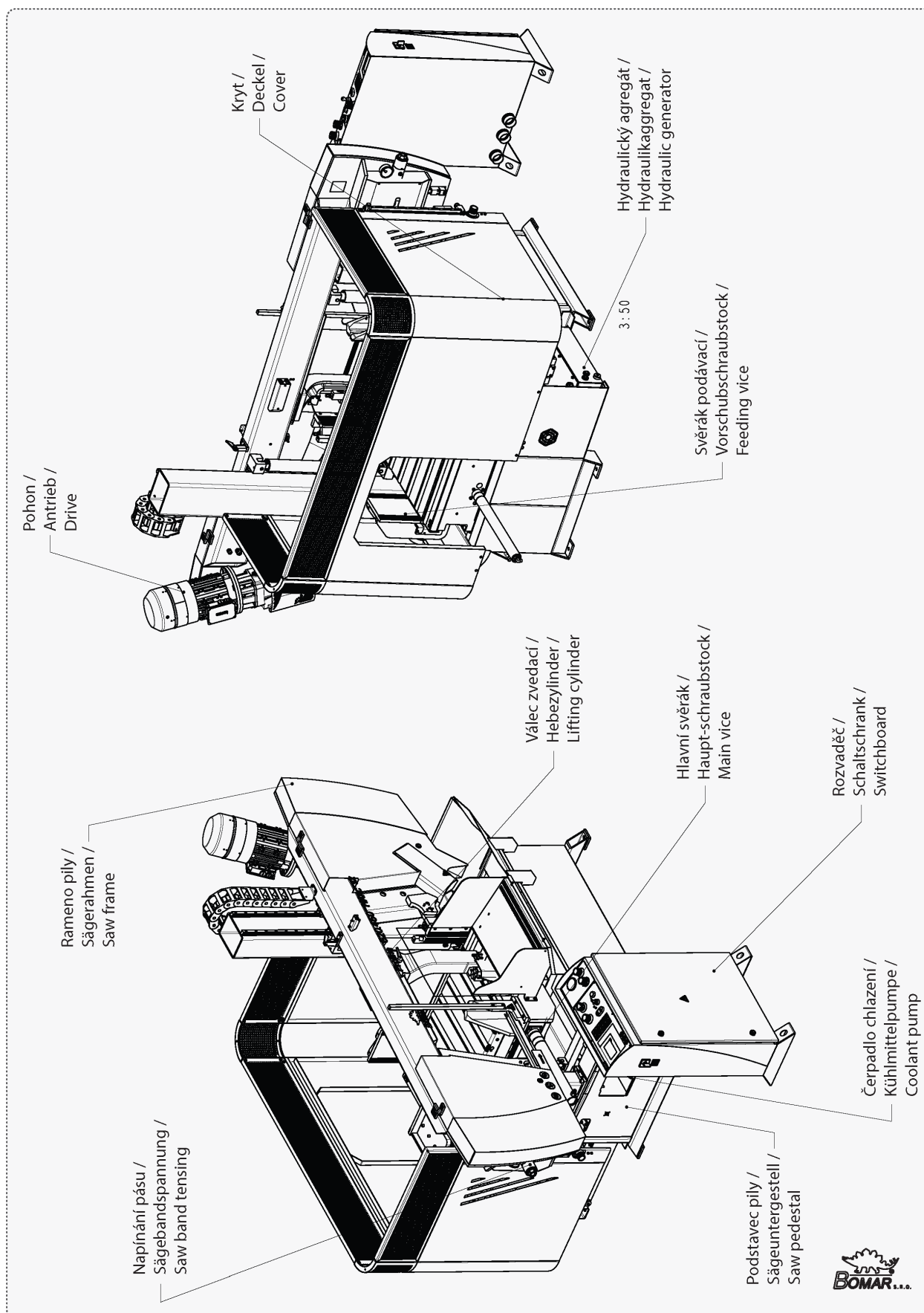
Level of acoustic pressure:

Equivalent level of acoustic pressure A (noise) at operator position are $L_{Aeqv}=76,3$ dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure.

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram



2.3. Popis / Beschreibung / Description



2.4. Transportation and stocking

2.4.1. Conditions for transportation and stocking

Keep recommendations for the manufacturers for transportation and stocking! If the recommendations are not kept, damage can occur to the machine.

- Don't use a forklift truck for handling the machine, if you do not have license for it!
- Don't move under suspended loads! Fault in lifting device may cause serious injury.
- Keep a safe distance from the machine during the transport.
- Temperature of the air from **-25°C to 55°C**, for a *short term* (max. 24 hours) temperature of the air until 70°C
- Do not expose the machine to radiation (for example microwave radiation, ultraviolet radiation, laser radiation, x-ray radiation). Radiation can cause problems with the machine function and deteriorating condition of the isolation.
- Take measures, to prevent damage by dampness, by vibrations and by shakes.

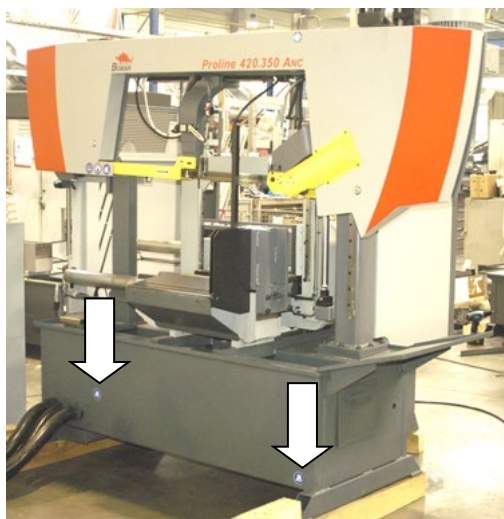
2.4.2. Transport and stocking preparations

- Close the vice and thoroughly oil all blank surfaces.
- Lower the saw frame to the lowest position.
- Make sure to empty the machine of all traces of the cooling agent.
- Fasten all loose parts securely to the machine.
- Pack and wrap the control desk securely to avoid damage during transport.
- To transport the machine must be absolutely bolted to a pallet! Ensure that the palette was strong enough to carry the machine!

2.4.3. Transport and stocking

- Handle the machine only with the hand pallet truck or the forklift truck! Use the lifters of the truck according to the Transport schema.
- Place the forks of a fork lift truck according to these marks!



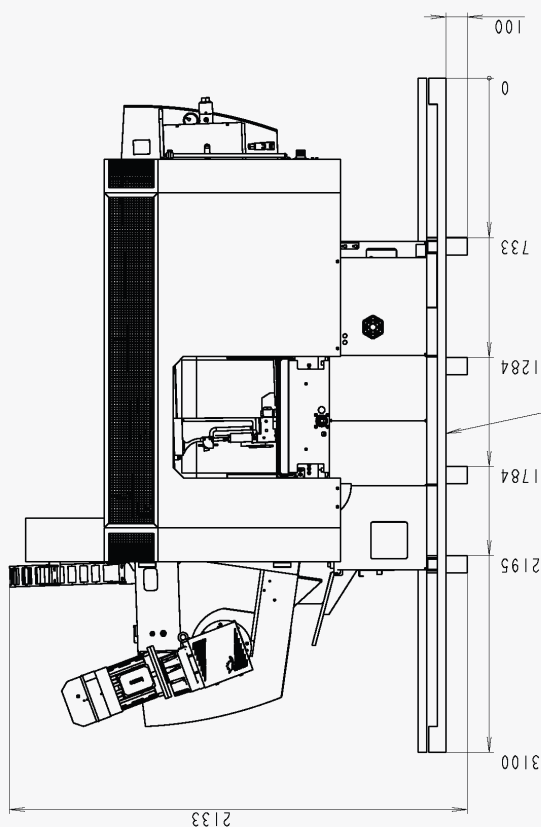
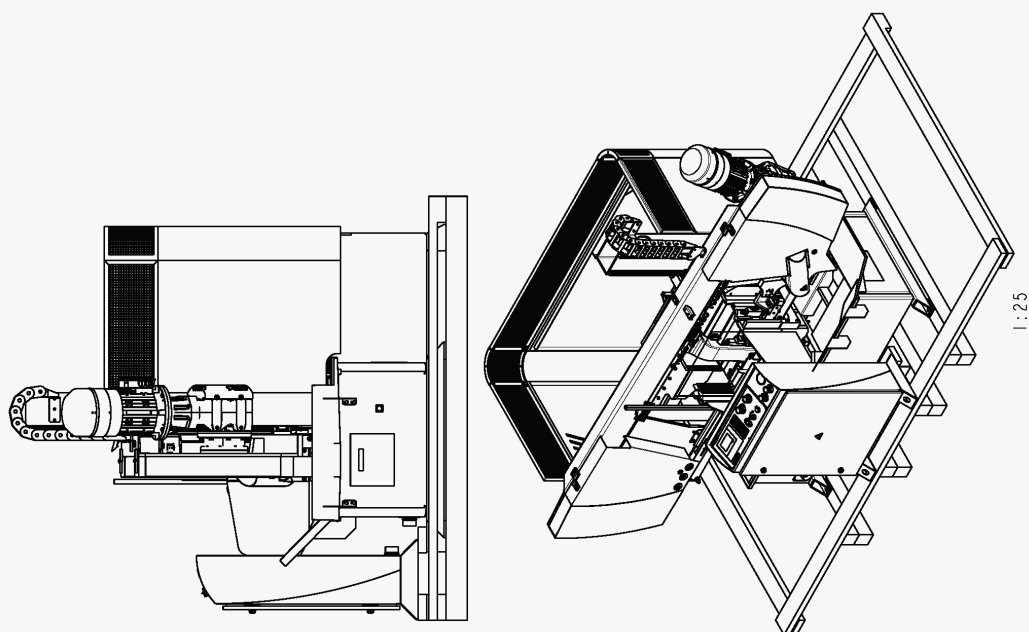


- If the hand pallet truck or the forklift truck is not available it is possible to use suspension cables and the crane. The machine is equipped with screw threads M16 for fixing the shackles.
- Make sure that the hand pallet truck; the forklift truck or the crane and the suspension cables had sufficient capacity. Use only shackles with appropriate capacity..
- Make sure that the van or the trailer had sufficient capacity.
- The machine must be properly secured during transport, to not tip over or fall from the transport vehicle.
- Screw on the palette to the floor of the van or the trailer.
- Be careful that the machine is not damaged during transportation.
- It is forbidden to handle the machine any other way (for example by, lifting by the saw frame of the band saw), than it is written in this operating instructions, the machine can be damaged!

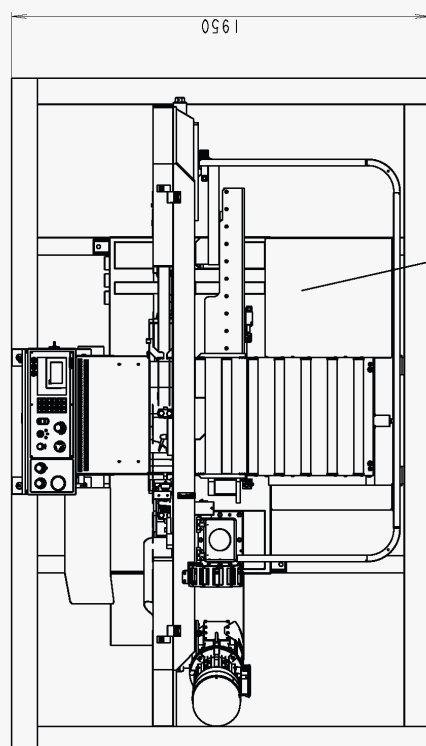
Store the machine only under the conditions specified in this manual to prevent damage to the machine

2.5. Transportní schéma / Transport schema / Transport scheme

Dokumentace stroje
Dokumentation der Maschine
Machine documentation



Místo pro lžiny vozíku
Die stelle für Greifen mit den
Gabeln des gabelstaplers
Place for forklift's skides



2.6. Activation

2.6.1. Machine working conditions

Attention!

If the ambient temperature drops below 15 °C is required before operating the machine to have switch on hydraulic unit around 10 minutes and then made several motion few times (for example, in manual mode) by all hydraulic cylinders. The reason is to heat hydraulic oil to the operating temperature for proper function of the pressure switches (and chokes)

Keep the conditions of the manufacturer for machine operating! If recommendations are not kept, damage can occur to the machine.

The manufacturer warrants the correct function of the machine for these conditions:

- At temperature air from *10°C to 40°C*, the temperature average during 24 hours must *not exceed over 35°C*.
- At relative dampness of the air in the extend from 30% to 95% (not concentrate). Altitude lower than 1000 metres.
- Do not expose the machine to the radiation (for example microwave radiation, ultra-violet radiation, laser radiation, x-ray radiation). Radiation can cause problems with the machine function and deteriorating condition of the isolation.

2.6.2. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.

Attention!

Switch off the main switch and lock it, before you start assembly! Otherwise, there is possibility of hazardous machine starting.

If the hydraulic unit is outside the machine (the machine only connected hoses and cables), it needs to be placed and mounted on a solid basis (floors, etc.). The mounting holes are used on the bottom (bases) of the tank.

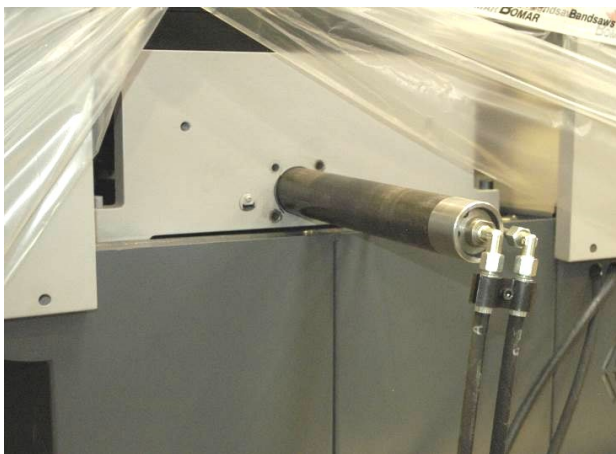
Attention!



The scale for setting of saw arm height may be misaligned during transport. Check the scale position and the correct operation of the limit switch in all positions before use.

Feeder drive cylinder assembly

For transport, the fixing screws of the feeder drive cylinder are dismantled and the cylinder is partly inserted in the machine.



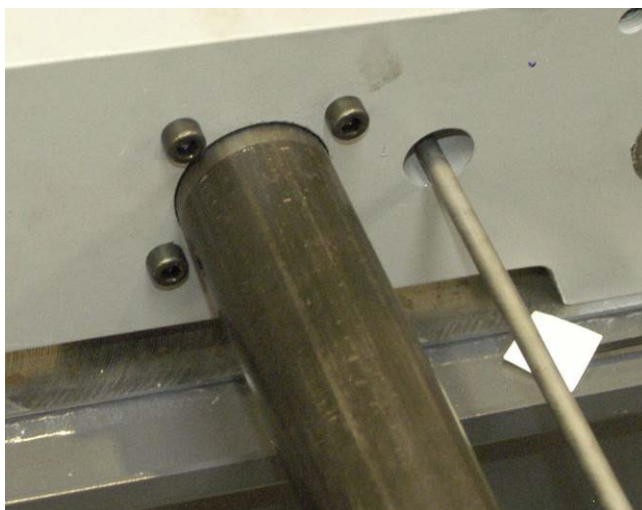
Before commissioning of the machine, the cylinder must be mounted again.

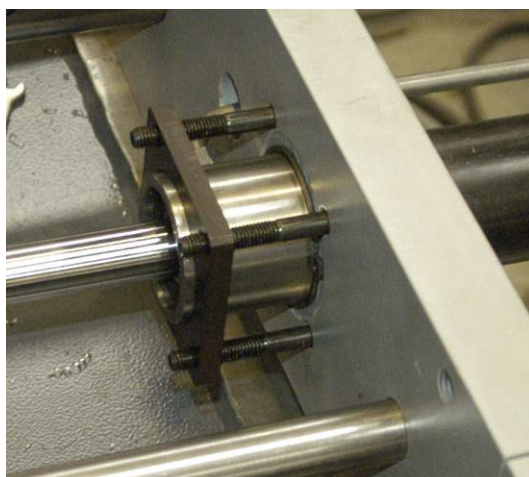
Procedure:

Manually (without using control elements) shift the carriage to the farthest position from the saw.

The cylinder moves out together with the carriage travel.

If the feeder carriage is in the farthest position from the saw, the cylinder can be fixed with four screws included in the packaging

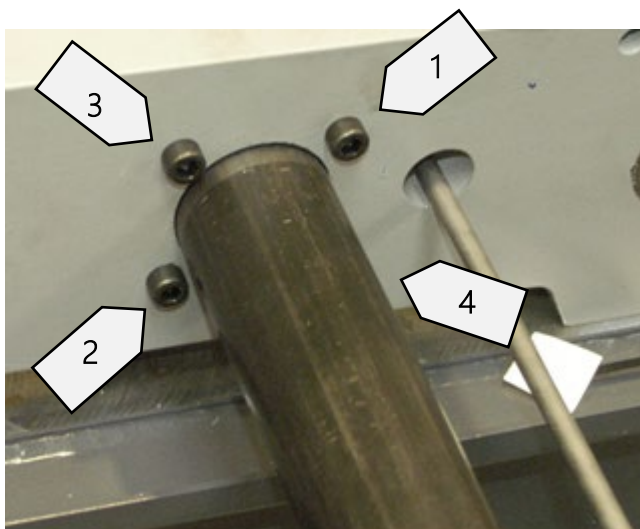




Caution!

To ensure correct position of the cylinder axis in relation to the feeder guide axis, it is necessary to:

- mount and tighten the installation screws for fixing the cylinder only if the feeder is in the farthest position from the saw;
- mount and tighten the individual screws diagonally (crosswise – for principle, see the picture) – not stepwise along the circle.



Otherwise there is a risk of the cylinder axis misalignment with the feeder guide axis, which may cause excessive wear or operational failures.

2.6.3. Machine installing and levelling

Check the floor supporting capacity before machine installing. If the floor capacity does not agree with requirements, you must prepare the necessary base for the machine.

Minimal requirement:

machine weight – Proline 520.450 ANC – 1700 kg

+ weight of accessories

+ maximum weight of material

- The machine must be levelled at the horizontal position. All feet of the machine must touch with the floor after levelling
- The machine must be levelled by means of the calibrated spirit level. Spirit level is put on the vice area. Set the roller conveyors according to the spirit level.
- For machine levelling, take care that there is sufficient available space for operation, repair work, servicing of the machine and handling the material..
- The machine including appended parts and accessories must be visible from the place of operation.

2.6.4. Putting into operation of the hydraulic unit

Before the first run check:

- the tank is filled with the prescribed oil to upper limit
- pump is not running in the opposite direction. Hydraulic generator must not be operated in opposite directions of rotation for longer than 5-10 seconds.
- connections are properly tightened, pipes assembled without internal stress
- wiring matches with electrical and hydraulic diagrams
- the electric motors (pump and cooler) are properly connected and have the prescribed rotation
- the hydraulic accumulator with nitrogen gas to the specified value
- aux. elements work right (thermometer, level gauge, heater)

First run (Attention – working pressure on securing valve is set by producer in accoring the hydraulic diagram):

- In the short intervals activate an electric pump
- check for leaks and noise
- Bleed the hydraulic circuit
- if possible, test the circuit function with minimum load
- test the electrical equipment
- during operation monitor measuring equipment, noise, height and temperature of oil in the tank
- Upon the first start-up, the devices and distribution system are filled up with oil, and therefore the oil level in the tank drops. If the level drops below the minimum value, you must refill the oil after switching off the device.
- After multiple start-up, the hydraulic unit is ready for operation.

2.6.5. Filling the reservoir with hydraulic oil

Oil regulations and recommendations of the manufacturer in the technical documentation (appendix) are to be carefully observed. For standard power packs we recommend the oiltype OH-HM32 (DIN 51524) of all known oil manufacturers.

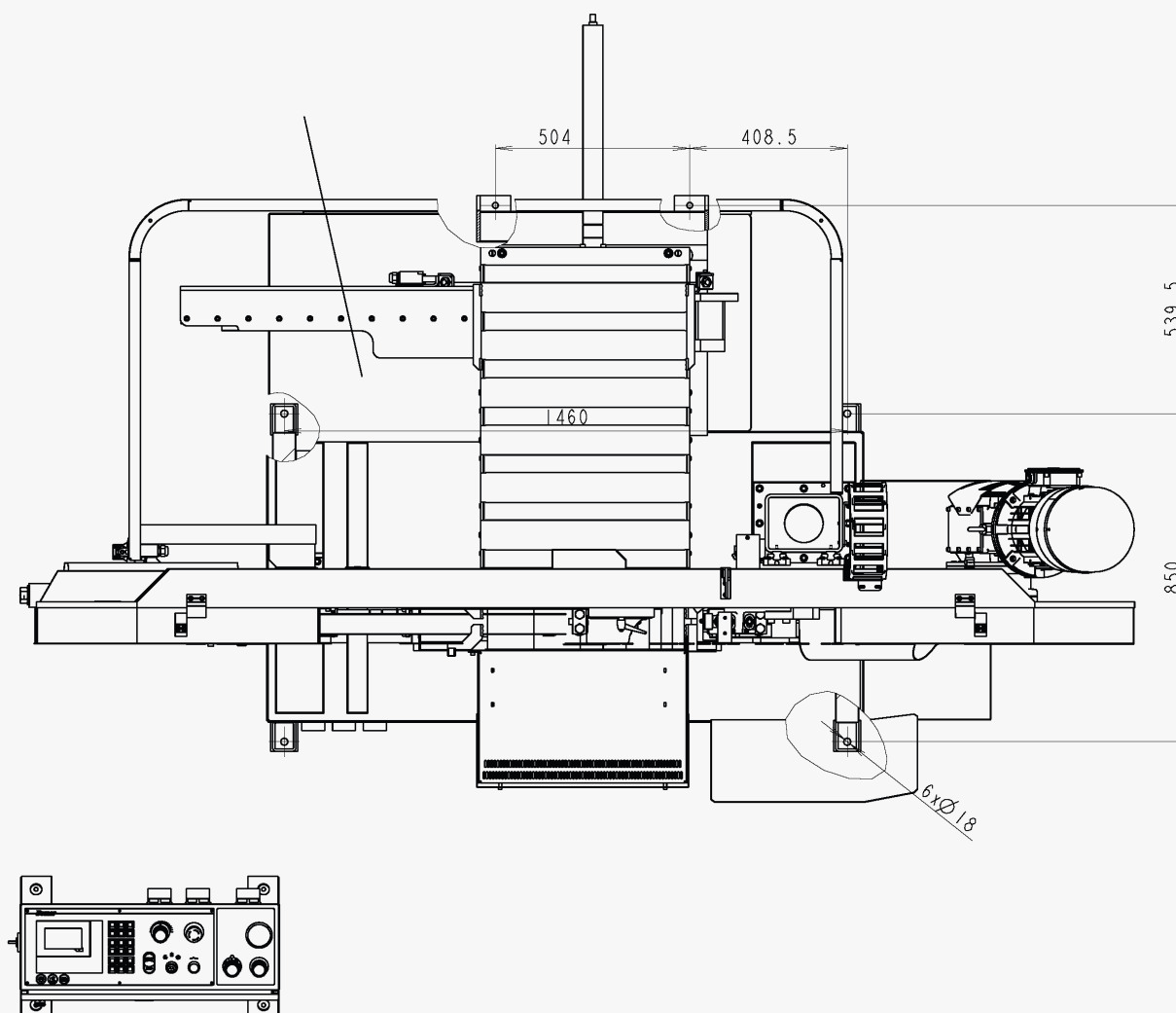
Power packs have to be filled up with clean, pre-filtered oil! The purity of the hydraulic fluid must correspond to the class 10 NAS 1638 (reachable with filter $\beta_{=75}$)!

Filling from container, such as barrels, buckets, etc. is not recommended or permitted!

The maximum oil level will be shown on the upper marking at the dipstick or the sight level glass. Overfilling has to be prevent. The maximum filling rate of 15 l/min shouldn't be exceed.

Oil type	Kinematic viscosity ν in mm^2/s in relationship to the fluid temperatur					Freezing point
	0°C	20°C	40°C	60°C	80°C	°C
OH-HM 32	220	100	32	15	7	-40
OH-HV 32	180	67	32	17	11	-40

2.6.6. Kotevní plan / Verankerungsplan / Grounding plan



Kotvící materiál / Verankerungsmaterial / Grounding material

- 6x Chemická kotva / Chemischer Anker / Chemical anchor – $\varnothing 14$ mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 950 mm
- Závitové tyče / Gewindestangen / Threaded rods – 6 x M12

Šrouby podložit deskami o min. rozměrech P10×100-100

- Die Schrauben mit Platten mit Minimaldimensionen P10×100-100 unterlegen
- Screw must be bottomed with plates (min. dimensions P10×100-100)

Požadavky na rovinnost podlahy / Anforderungen an die Bodenebenheit / Requirements for floor flatness

± 10 mm / 1 m

2.6.7. Electrical connection

Attention!

Only a qualified professional must carry out the servicing and repairs of the electric equipment! Take special care during work with electrical equipment. High voltage shock can have fatal consequences! Always keep notes about work safety.

Electrical parameters of the machine:

- Service voltage: ~ 3×400 V, 50 Hz, TN-C-S, TN-S
- Total input: 6,8 kW
- Max. fuse: 20 A

Before connecting switch off the main switch of the power supply circuit for the machine and ensure dry place when doing connecting works!

Service voltage must agree with the line voltage! Crosscut of the supply line must respond with rated current for max. machine load

Note:

The values of the crosscut of the conductor and the rated current are in the norms.

Note:

The socket with the fork can be used only at the machines with the rated current less than 16 A and total input less than 3 kVA.

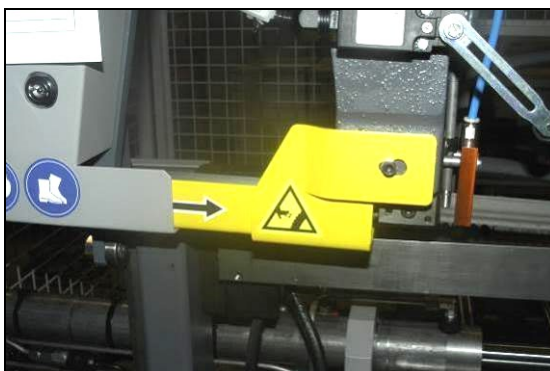
Supply is equipped with a end part 16 A for connection to power source.

In case the machine is connected with a direct connection, an extra main switch must be added which can be locked in zero position.

Attention!

In this case the extra main switch becomes primary and the main switch on the machine has only secondary

2.6.8. Check the direction of the saw band



After the machine has been successfully connected, briefly switch on the machine and put the driving engine of the band in the running position. The direction must be in accordance with the arrow direction on the saw band cover. In case the direction of the saw band does not match, two phases at the terminal strip must be switched.

2.6.9. Check machine connection into electrical network

Attention!

When you connect the machine to the electrical network observe correct connection of all phases!

ENGINE IN IN HYDRAULIC AGGREGATE CANNOT BE OPERATED WITH REVERSE TURNING MORE THEN 10 SECONDS!!!

2.6.10. Filling of the cooling system

Prepare the mixture of the water and the cooling liquid. Keep the concentration specified by manufacturer.

Fill the mixture of the water and the cooling liquid to the tank of the cooling system.

Filling the tank with the cooling liquid, take care that the liquid does not drip out of the tank and the tank does not overflowed.

Keep by manufacturer specified recommendation for adding the anticorrosive agents, the antifreezes or other agents! For mixture of two different mixes can produce toxic and aggressive mixes, which can threaten your health or damage cooling system of the machine!

Note:

If machine is equipped with microniser, fill microniser with prescribed cooling liquid. This made the Microniser ready for use.

2.6.11. Connecting to the compressed air supply (Micronizer, MicroBox)

Connect the machine to the compressed air supply by means of the G1/4 screwing.

Compressed air must satisfy conditions:

- Roughly cleaned and partly dry
- $p_{\min} = 0,4 \text{ MPa}$
- $p_{\max} = 0,6 \text{ MPa}$
- $P_{\text{řtok}} = 50 \text{ l/min.}$

2.7. Check machine function

Before starting the check machine functions, you must read the chapter „Machine operation“. Do not carry out check machine functions, if you do not comprehend meaning of all buttons and all machine functions.

Check, if the machine or some parts of the machine were not damaged during transport.

Check, if covers are installed and functional.

Check by means of the Tenzomat if the saw band is correctly stretched. If it is necessary, you can stretch the saw band according to chapter *Selection and replacement of the saw band*. Values of the saw band stretching are on the Tenzomat.

Switch on the main switch and check the motors and systems (saw band drive, hydraulic pump, cooling pump, chips conveyor).

Open and close the main vice and the feeding vice. Drive the front feeder from the front position to the rear position. Turn the saw frame of the band saw from one outer position to other outer position. Raise the saw frame to the top position and drop the saw frame to the lowest position

Start the machine with the cooling pump and let it run without load until the cooling system will be filled with cooling liquid. As soon as the cooling liquid starts to escape from the nozzles of the cooling system, the cooling system is ready for the operation.

Carry one cycle of cutting without material. Check, if the machine runs with no irregularities. If all machine functions are right, the machine is ready for operation.

2.8. Machine disposal after lifetime

Blown out all service fluids (cooling liquid, hydraulic oil) into designated reservoir. Dismantle machine into separate parts and dispose them in accordance with valid directives.

Packaging material Also dispose in accordance with valid directives.

Packaging and machine parts that contain secondary raw materials can be recycled.

2.9. Saw band

To reduce the risk of injury, refit the saw band cover only after you have installed and tightened the saw band.



2.9.1. Saw band size

6020x41x1,3 mm

2.9.2. Selection of the saw band tooth system

The manufacturers provide the saw bands with constant and variable tooth system. The important factor for selection of the tooth system is length of the cutting canal with respect to the size of the product.

BOMAR recommended Variable tooth system for band saw.

1. *Constant tooth system* – the saw band has parallel tooth pitch all over length. This way is suitable for cutting of solid material.
2. *Variable tooth system* – tooth pitch is variable. Variable tooth system is used for profiled materials and bundle cutting. Variable tooth pitch lowers vibration of the saw band, increases service life of the saw band and quality of the cutting area.

In tables, there are advised type of the tooth system depending on sizes and form of the cutting material.

Footnotes:

Z_pZ – teeth number on one inch

S – tooth with zero angle of the teeth

K – tooth with positive angle of the teeth

Examples of the tooth system marking:

32 S – number „32” means 32 teeth on one inch (that means constant tooth system), letter „S” marks teeth with zero angle of the tooth.

4–6 K – number „4–6” means 4 till 6 teeth on one inch (that means variable tooth system); letter „K” marks teeth with positive angle of the teeth.

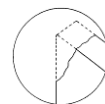
2.9.3. Saw band running-in

To achieve the full life of the blade is recommended to carry out its initial run.

Running-in: Cut the material with the frame lowering reduced to 50% only. When vibrations occur increase or decrease the band speed.

When cutting **large pieces** run the band for 15 minutes approximately.

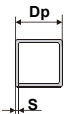
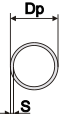
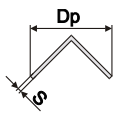
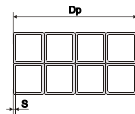
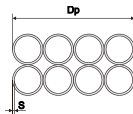
When the band has been run, increase the lowering-speed to normal speed.



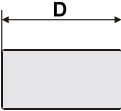
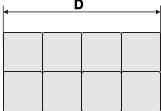
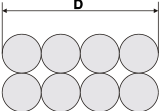
Note: Run regrounding saw bands too.

The running in of the saw band avoids micro-breaks on the cutting edges of new saw band ensuing from first excessive stress. This would decrease service life substantially.

2.9.4. Tables for teeth selection

SHAPED MATERIAL (D _p , S = mm)						
						
Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S“ equates to 2×S). In table, there are tooth systems constant and variable.						
Size of the wall S [mm]	Tooth system (Z _p Z) Outer diameter of the profile D _p [mm]					
	20	40	60	80	100	120
2	32 S	24 S	18 S	18 S	14 S	14 S
3	24 S	18 S	14 S	14 S	10–14 S	10–14 S
4	24 S	14 S	10–14 S	10–14 S	8–12 S	8–12 S
5	18 S	10–14 S	10–14 S	8–12 S	6–10 S	6–10 S
6	18 S	10–14 S	8–12 S	8–12 S	6–10 S	6–10 S
8	14 S	8–12 S	6–10 S	6–10 S	5–8 S	5–8 S
10	-	6–10 S	6–10 S	5–8 S	5–8 S	5–8 S
12	-	6–10 S	5–8 S	5–8 S	4–6 K	4–6 K
15	-	5–8 S	5–8 S	4–6 K	4–6 K	4–6 K
20	-	-	4–6 K	4–6 K	4–6 K	3–4 K
30	-	-	-	3–4 K	3–4 K	3–4 K
50	-	-	-	-	-	3–4 K

Size of the wall S [mm]	Tooth system (Z _p Z) Outer diameter of the profile D _p [mm]					
	150	200	300	500	750	1000
2	10–14 S	10–14 S	8–12 S	6–10 S	5–8 S	5–8 S
3	8–12 S	8–12 S	6–10 S	5–8 S	4–6 K	4–6 K
4	6–10 S	6–10 S	5–8 S	4–6 K	4–6 K	4–6 K
5	6–10 S	5–8 S	4–6 K	4–6 K	4–6 K	3–4 K
6	5–8 S	5–8 S	4–6 K	4–6 K	3–4 K	3–4 K
8	5–8 S	4–6 K	4–6 K	3–4 K	3–4 K	3–4 K
10	4–6 K	4–6 K	4–6 K	3–4 K	3–4 K	2–3 K
12	4–6 K	4–6 K	3–4 K	3–4 K	2–3 K	2–3 K
15	4–6 K	3–4 K	3–4 K	2–3 K	2–3 K	2–3 K
20	3–4 K	3–4 K	2–3 K	2–3 K	2–3 K	2–3 K
30	3–4 K	2–3 K	2–3 K	2–3 K	1,4–2 K	1,4–2 K
50	2–3 K	2–3 K	2–3 K	1,4–2 K	1,4–2 K	1,4–2 K
75	-	2–3 K	1,4–2 K	1,4–2 K	1,4–2 K	0,75–1,25 K

100	-	-	1,4–2 K	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K
150	-	-	-	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K
200	-	-	-	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K
SOLID MATERIAL (D = mm)						
						
Constant tooth system			Variable tooth system			
length of the cut D		tooth system (Z _p Z)	length of the cut D		tooth system (Z _p Z)	
to 3 mm		32	to 30 mm		10–14	
to 6 mm		24	20–50 mm		8–12	
to 10 mm		18	25–60 mm		6–10	
to 15 mm		14	35–80 mm		5–8	
15–30 mm		10	50–100 mm		4–6	
30–50 mm		8	70–120 mm		4–5	
50–80 mm		6	80–150 mm		3–4	
80–120 mm		4	120–350 mm		2–3	
120–200 mm		3	250–600 mm		1,4–2	
200–400 mm		2	500–3000 mm		0,75–1,25	
300–800 mm		1,25				
700–3000 mm		0,75				

In spite of the proposals above, consider your supplier's recommendations and ask him for professional advice although the manufacturers often recommend their own saw bands to you.

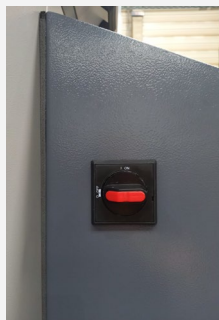
3. **Ovládání stroje / Bedienung der Maschine / Machine control**

Ovládání stroje
Bedienung der Maschine
Machine control

3.1. Starting the band saw

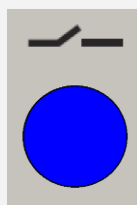
»

1. Switch on the main switch of the circular saw. The main switch is located on the side of the control panel.



After switch-on, the system is initialized and initialization screens appear.

2. When prompt appears activate the machine safety circuit with the button on the machine control panel.

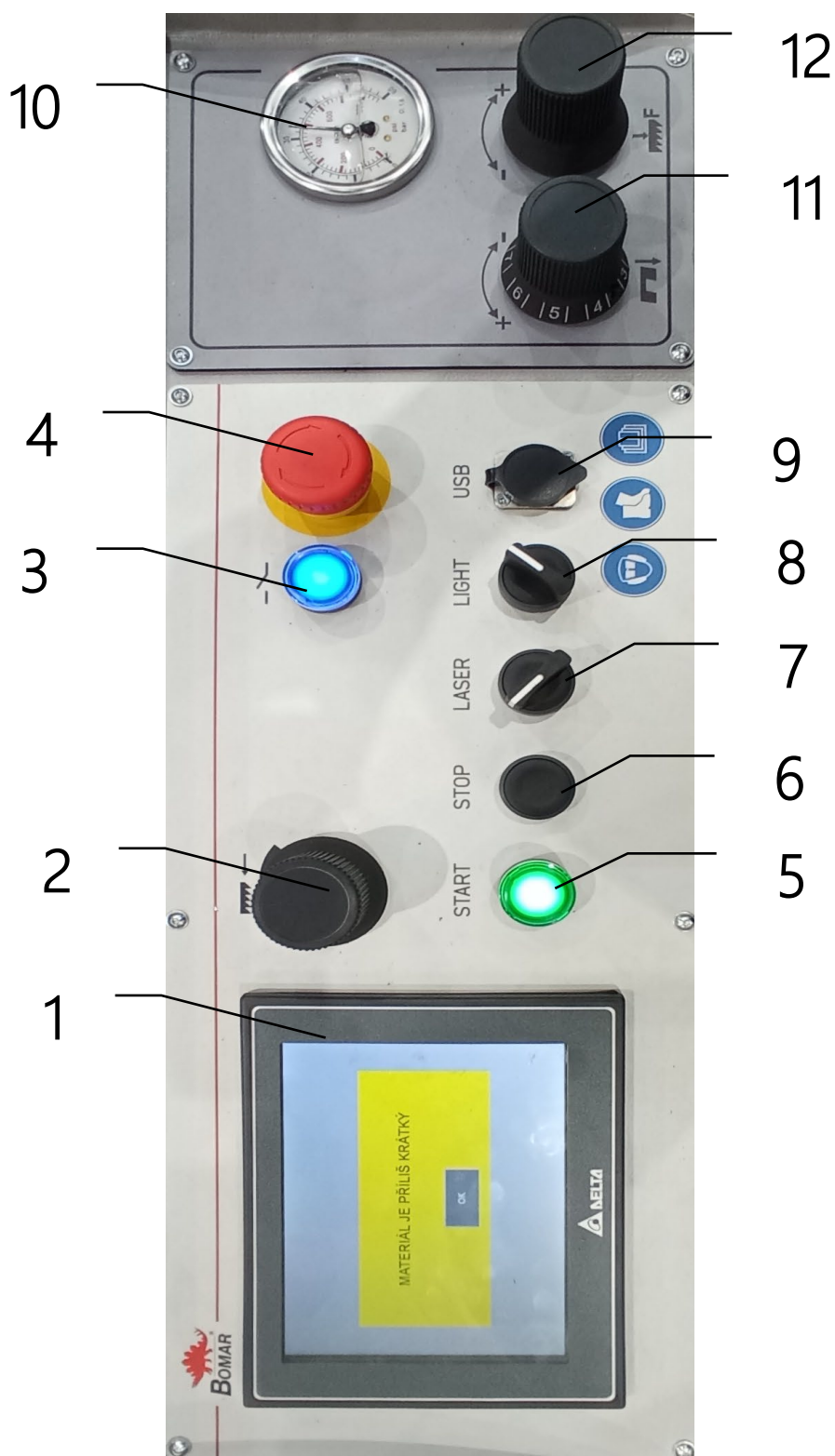


Unless the safety circuit is activated, the machine cannot be started.

If the safety circuit cannot be activated with the button on the machine control panel, check all safety elements.

3. After the safety circuit is activated, the first screen of the selected mode appears according to the mode selected (see the mode selector position).
4. Referring the machine – see the chapter on the machine referencing

3.2. Control panel

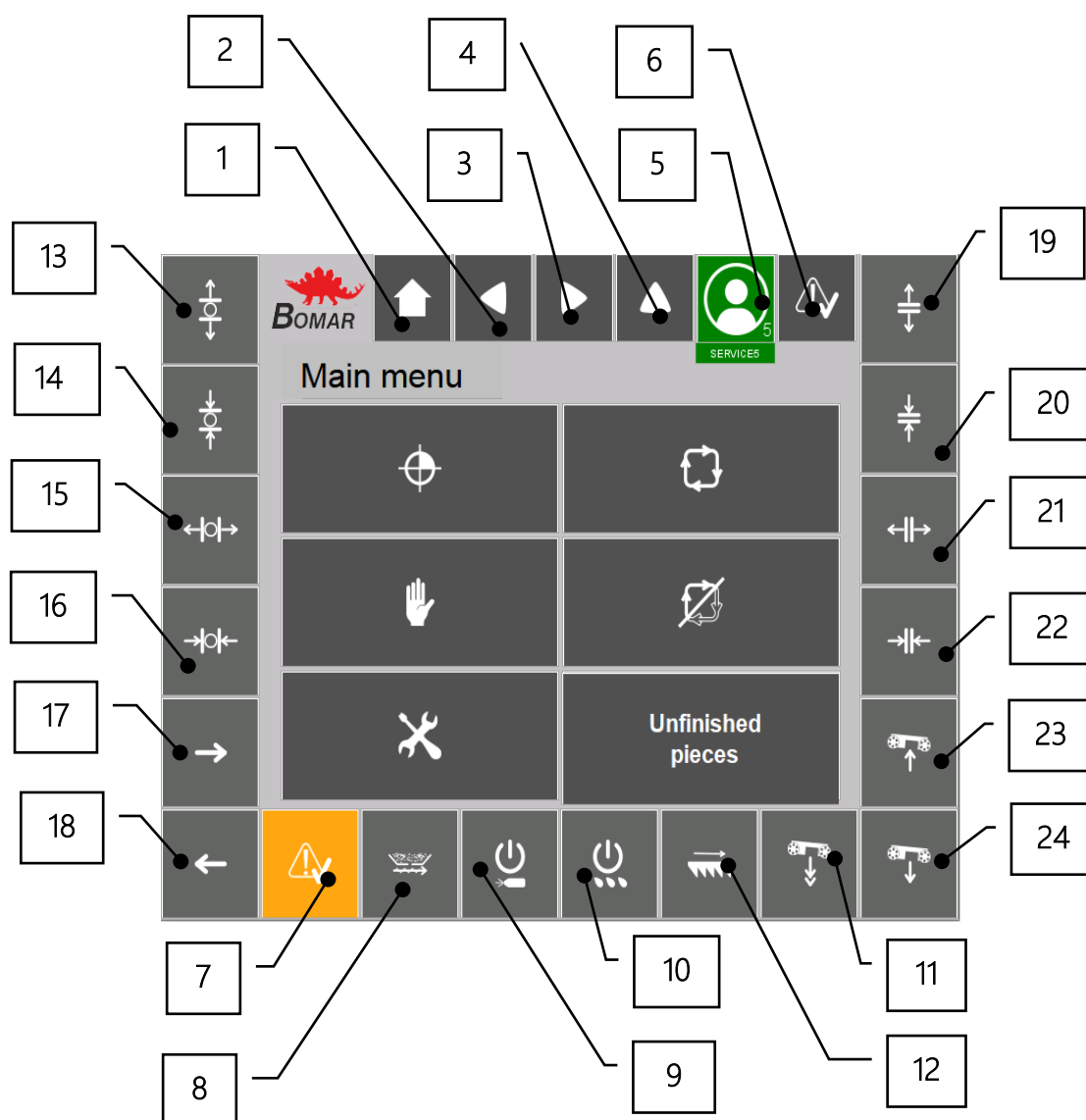


Ovládání stroje
Bedienung der Maschine
Machine control

1	Display It shows the operating mode and it allows dialogue with the service workers.
2	Frequency converter, selection of the saw bladespeed (optional accessory) Using the frequency converter you can adjust the saw band speed in a continuous range.
3	Safety circuit Press button to start the safety circuit
4	Emergency Stop Switch Immediately stops the machine in a case of emergency.
5	START button Switch on the automatic cycle.
6	STOP button Switch off the automatic cycle. START button
7	LASER Without function
8	LIGHT Halogen lighting of the work area. Illuminates the working area of the machine with natural light. Proper lighting of the work area significantly increases the ergonomics of the machine.
9	USB port (optional accessories) Can be used when retrieving or saving data.
10	Cutting pressure manometer
11	Control of the speed of lifting the arm into the cut The control wheel adjusts the speed at which the saw blade is raised into the cut.
12	Cutting pressure regulation Adjust the arm pressure to the cut.

3.3. Screen of the control software – general description

3.3.1. Control buttons on the control panel



The meaning of the icons on the touchscreen screens

1		Home Return to the main screen. The main screen can also be initialized by selecting from any control software screen.
2		Browsing between screens at the same hierarchical level (e.g., if parameter control or setting is divided into several screens or if there are more elements controlled or more units to set service parameters)
3		
4		Return to the nearest higher screen in the hierarchy
5		User login SERVICE1 heslo 1234 SERVICE2 heslo 3467 SERVICE3 heslo 2468 SERVICE4 heslo 135248
6		Icon indicating errors If this icon is lit on the display, an error has occurred on the machine. By touching the icon, you can hide the error message and activate control screens..
7		ACK Button Quoting – malfunction confirmation. If the malfunction is not confirmed, the operating cycle cannot be started
8		Chip extractor (optional accessory) Button on / off chip extractor. Notice: The chip extractor can also be switched on/off during the semi/automatic cycle. To turn off the chip extractor (at the moment of pressing the button on the touch panel), it is necessary to set a time of 0.1 s in the service parameters for the chip extractor.
9		Microniser (optional equipment) Press to start/stop cooling the band with micronisation
10		Liquid cooling (optional equipment) Button to turn on / off the cooling of the saw band using cooling emulsion.
11		Blowing (optional equipment) Button to turn on / off the machine's blowing

12		Saw blade drive Pressing the button switches the blade drive on/off.
13		Releasing the upper clamp on the feeder vise
14		Clamping the upper clamp on the feeder vise
15		Loosening of the feeder vice
16		Tightening of the feeder vice
17		Feeder movement - to the blade For the time the button is pressed, the feeder moves in the chosen direction
18		Feeder movement - away from the blade For the time the button is pressed, the feeder moves in the chosen direction
19		Release of the upper clamping at the main vice
20		Clamp of the upper clamping at the main vice
21		Release of the main vice
22		Clamp of the main vice
23		Movement of the arm upwards To move the arm, the button must be held down.
24		Downward movement of the arm To move the arm, the button must be held down.

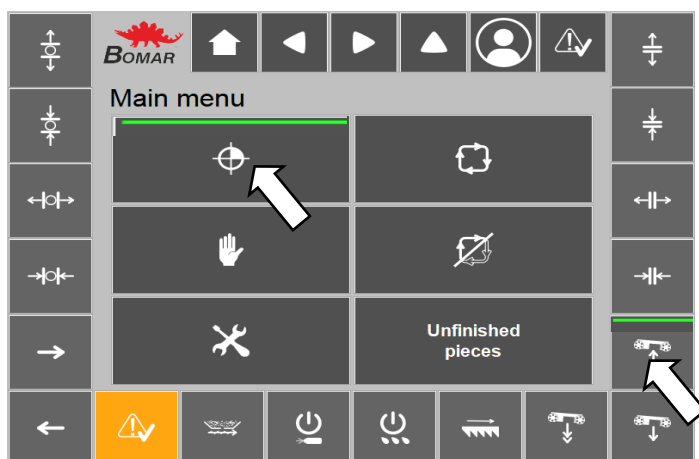
3.3.2. Touch display

Attention!

Take extra care when working with the touch panel. Make selections by lightly pressing the display with your bare finger or with a touch pen designed for touchscreen operation. Never use sharp objects or other tools for this!

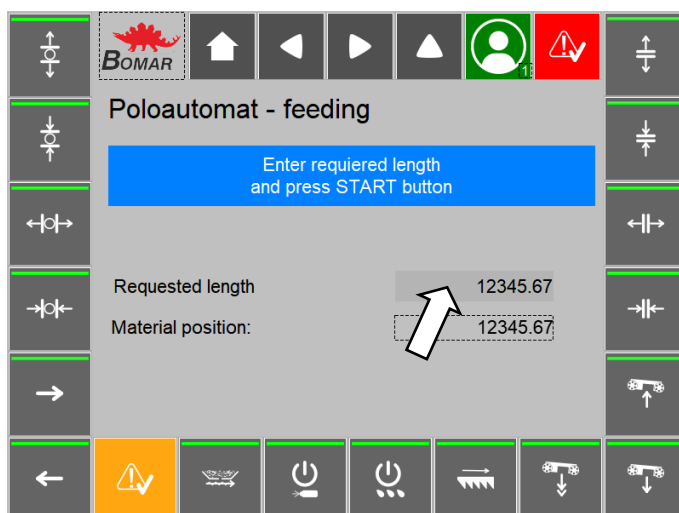
The individual options on the touch screen can be chosen by **direct touch on the pertinent icon**.

If the window is highlighted in green, the corresponding function is in progress (e.g. closing the vice) or the corresponding function is finished (e.g. reporting)



3.3.3. Touch screen keyboards

Touching of the parameter filling window activates a keyboard which appears on the display.

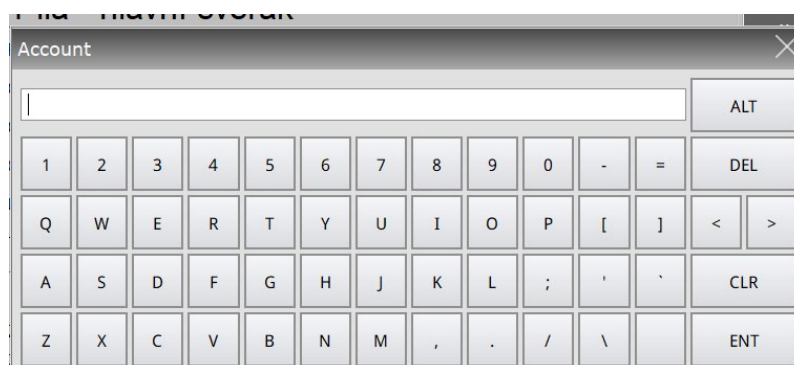


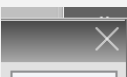
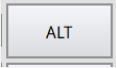
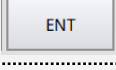
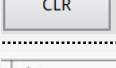
Keyboards types

- a) If only numeric values can be entered in the window, (such as in the window for recipe setting), only the **numeric keyboard** appears:



- b) If both figures and text can be entered in the window, the **combined keyboard** appears:

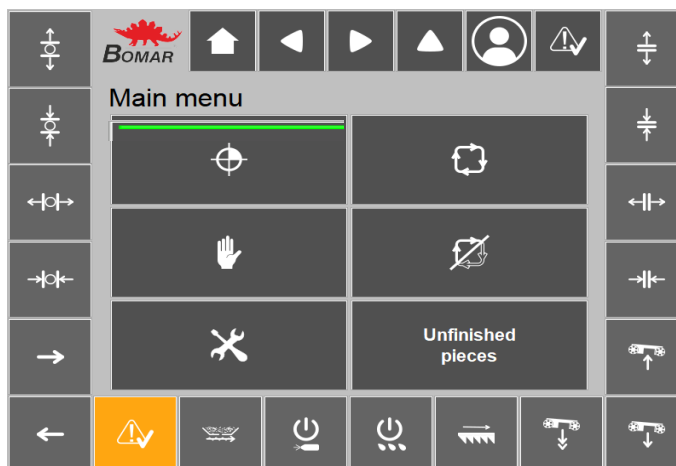


Position	Funktion
	Close the keyboard without saving the entered data
	Caps Lock function
	Deleting the last typed character
	Closing the keyboard with saving the entered data (confirmation of the entered value)
	Moving the cursor
	To delete the coments of the calculator display
	Shift function (uppercase letters and uppercase characters)

3.4. Main screen of the control software, machine modes

The main screen can be initialized by selecting  it from any screen of the control software.

The main screen of the control software displays a basic menu for selecting the operating modes, setup modes and machine refresh mode.



Working modes:



Manual mode— used to control the individual machine functions manually



Semiautomatic mode— used to execute one cut according to the given conditions (accessible from the manual mode).

The semiautomatic mode is recommended for cutting smaller number of pieces.



Automatic mode— used to execute the entire cutting cycle automatically according to the recipe entered or for cutting a single long piece.

Referencing mode:



Referencing — used to refering the machine — that is, after setting the machine in the operating state.

Service mode:



Servis — entry in the menu used for setting and modifications of the machine service parameters.

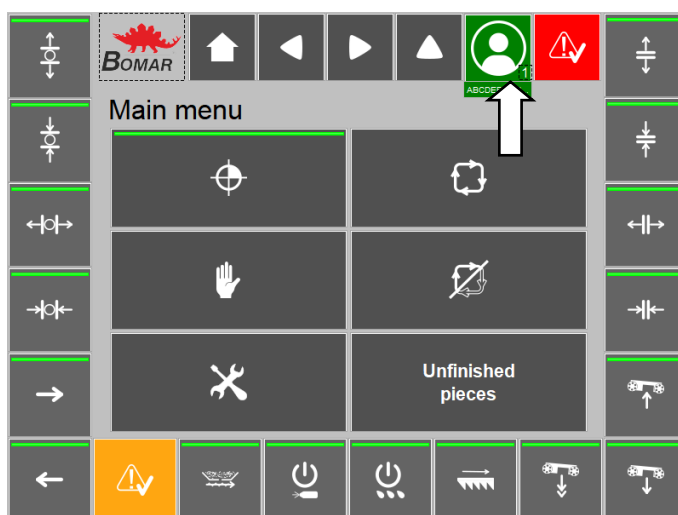
Mode for displaying unfinished pieces :

Unfinished
pieces

Unfinished (uncut) pieces – used to display unfinished pieces from the recipe „RODS”.

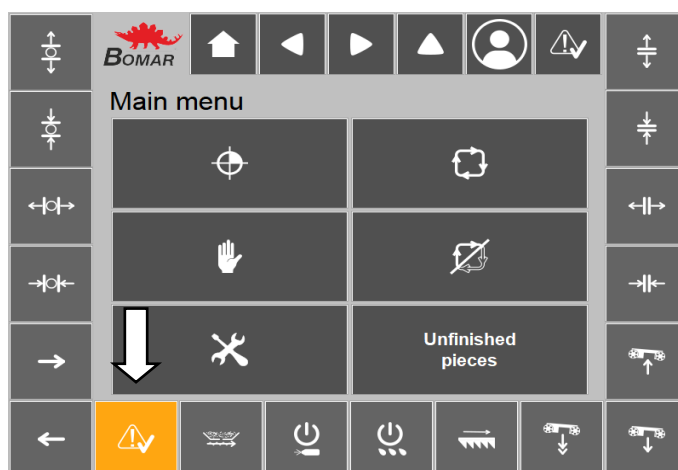
3.4.1. Warning (Error) messages

A red icon will light up in the header of the screen to signal an error - that alerts the operator to situations that prevent the continuation of an initiated operation or that prevent the continuation of a cycle.

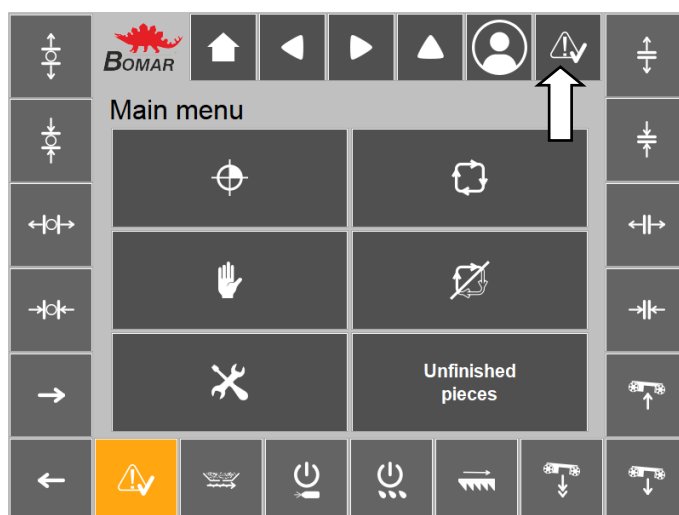


If a warning (error) message appears on the screen, eliminate the cause of the error condition and then always acknowledge (confirm) the error message.

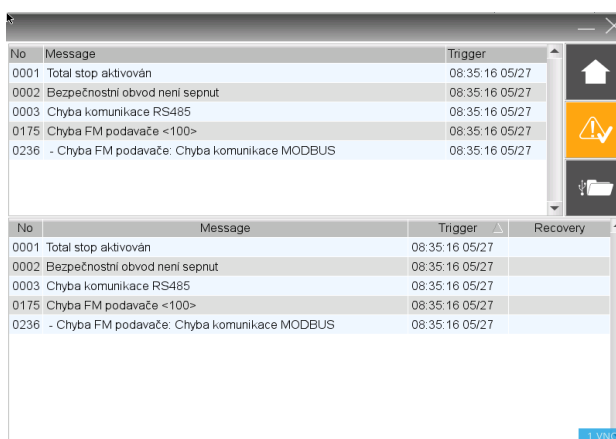
The **ACKNOWLEDGE (ACK)** icon is used to confirm the signaled error.



Once the cause of the error has been successfully resolved, the error message disappears from the screen after the confirmation.



After pressing the error message icon, a screen listing the error messages will appear.



The top of the screen shows the current error messages.

At the bottom of the screen is the history of error messages.

Position	Function
	Return to the main screen of the control software
	Icon to confirm the current error marked
	After pressing the icon, the error listing is saved to the inserted USB

3.5. Complete working cycle of the machine

The complete working cycle of the machine consists of the following steps:

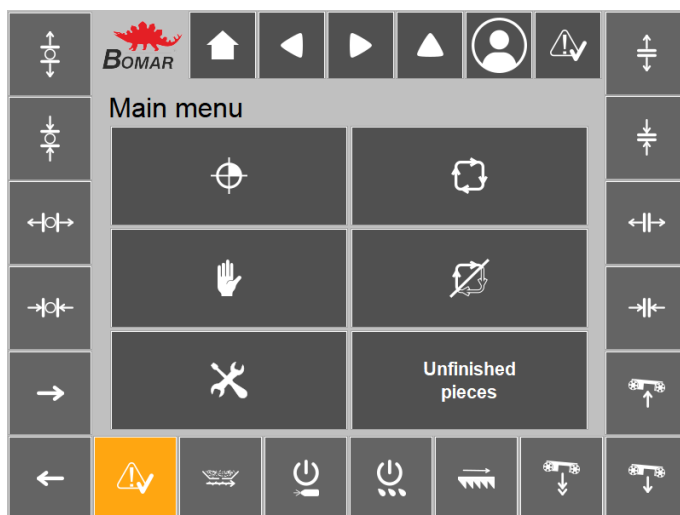
1. Switching on the machine and safety circuits (see chapter "Switching on the machine and safety circuits")
2. Refering the machine (see chapter "Referencing the machine")
3. Setting the service parameters (see chapter "Setting the service parameters")
4. Adjusting the band saw (see chapter "Adjusting the band saw")
5. Making a cut:
 - Cutting in semi-automatic mode (see chapter "Semi-automatic mode")
 - Cutting cycle in automatic mode (see chapter "Automatic mode" and chapter "Recipes")
6. Making another cut or cutting cycle or stopping the machining and switching off the machine
7. Manual control of individual machine elements - see chapter "Manual mode".

3.6. Machine refering

The machine must be referred:

- after each switching on of the machine by the main switch
- after pressing the emergency stop button
- after the safety circuits have been interrupted
- in other cases, whenever the machine's refering is disturbed (announced on the display by a message or if the sign indicating that the machine is refereeing disappears)

If the machine is refereed, there is a green line above the icon for initiating the referencing:



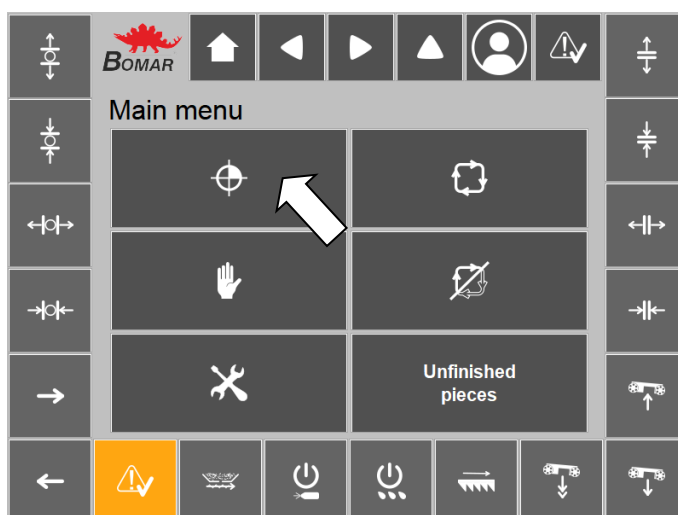
Attention!

Remove all material from the saw and the feeder before starting the resawing operation. Do not referee the machine with material clamped in one of the vises. If there is material on the feed track, open the feed vise in manual mode sufficiently before starting the resawing operation so that the material is not trapped by it.

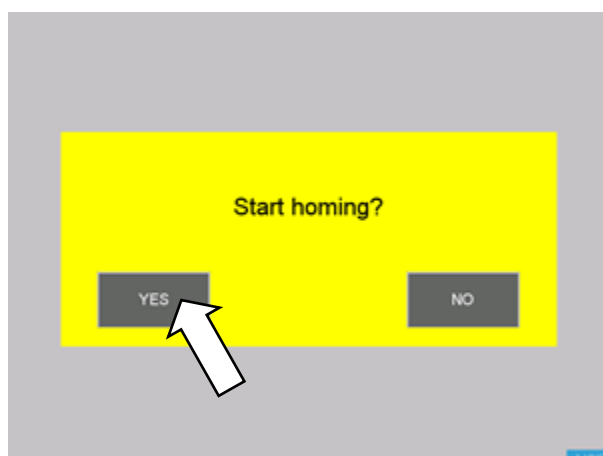
Attention!

The shoulder must be rotated to 0° before the start of the refereing!

1. Turn the saw arm to 0°.
2. On the main control menu screen, select the option for Referring

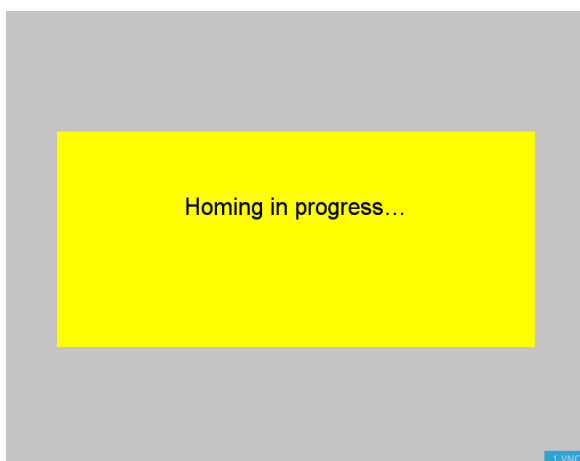


- 3- A screen appears asking if the operator wants to perform a refereing



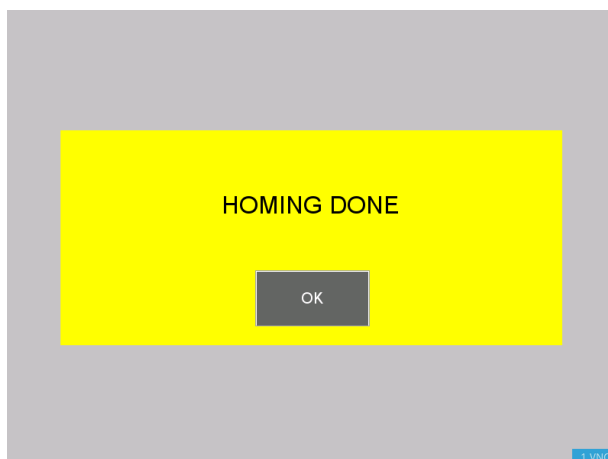
- 4- Press "YES" to start the referring process

5- A screen with information about **the rearing is in progress** will appear::



The referencing takes place as a sequence of movements of the individual saw units, which are set from their current positions to their refering positions.

Successful completion of the refering is indicated by a message on the control panel display



If the referencing of any unit fails, first check the status of the refering position limit switch and the switching counterpart.

3.7. Manual mode

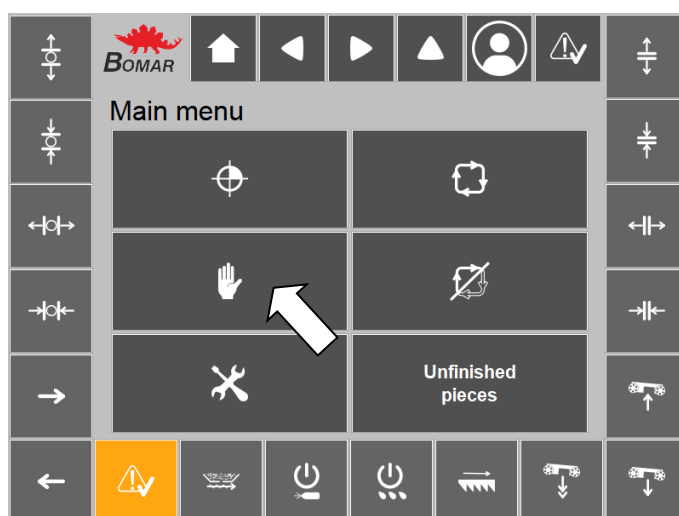
1. The manual mode is intended for manual control of the individual machine elements.

It isn't possible to make a cut using touch control.

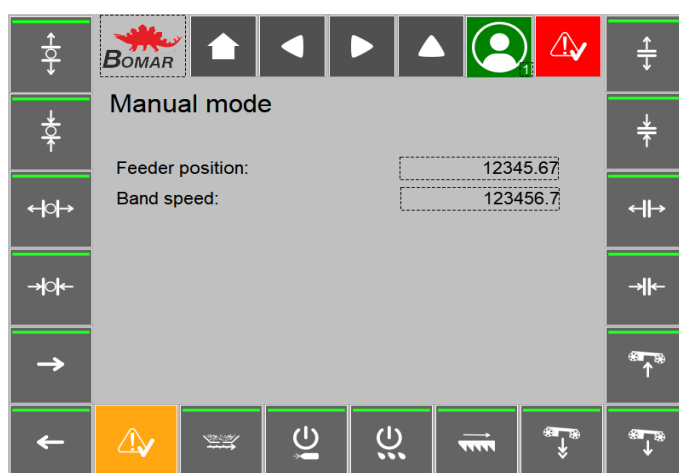
Caution!

Pay increased attention when moving the material towards the main vice, there is the risk of collisions particularly during manual operation!

2. To put the machine in manual mode, select the option to initialize **manual mode** on the main screen:



3. The following screen is used for **manual control of the saw**:



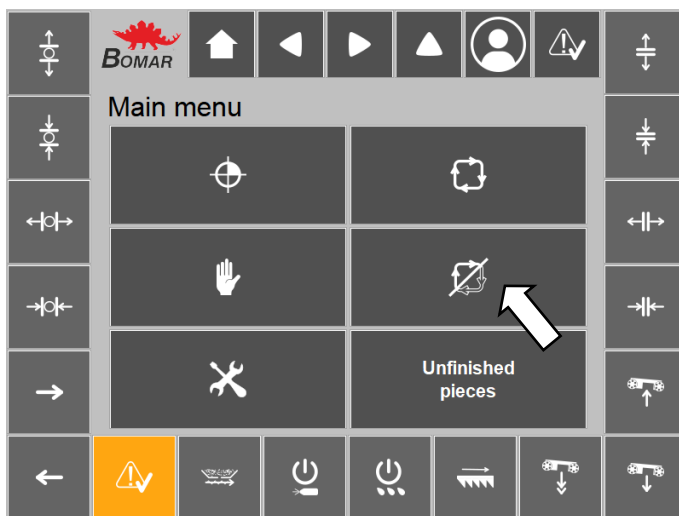
Position	Function
Feeder position	Actual feeder position
Belt speed	Actual belt speed

For manual control of the individual machine elements – see chapter "Control buttons on the control panel"

3.8. Semiautomatic mode

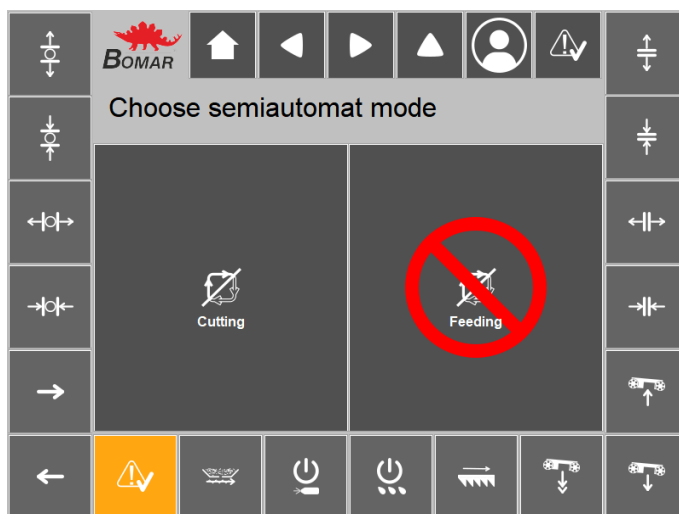
3.8.1. Initializing semi-automatic mode

1. To initiate semi-automatic mode, select **"Semi-automatic"** on this screen



2. The screen for operating the machine in semi-automatic mode appears, in either of the following options **a)** or **b)**:

- a) invalid material



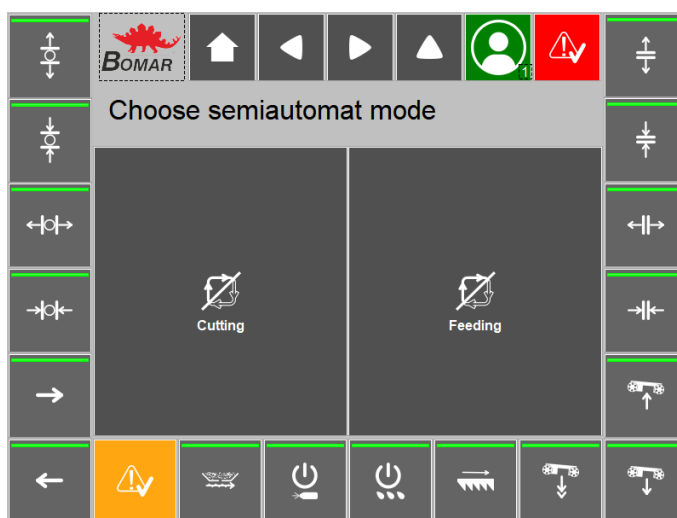
If the material is invalid - i.e. the machine has no information about the position of the front of the material, it is possible to select only the "Cutting" option.

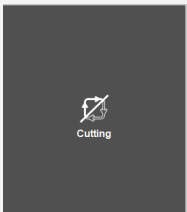
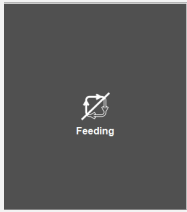
The "Material feeding" option cannot be selected.

Without a valid material, the semiautomatic mode enables:

- entry of parameters
- cutting of material without a length entered

b) valid material



Position	Function
	Option for setting and performing semi-automatic cutting
	Option for semi-automatic winding of the desired length by the feeder

3.8.2. Cutting in semi-automatic mode

1. In manual mode, drive the **arm all the way up**
2. In manual mode, **open the saw vise and the feeder vise sufficiently** for the width of the material to be loaded.
3. **Rotate the arm** to the desired angle.
4. **Insert the material**

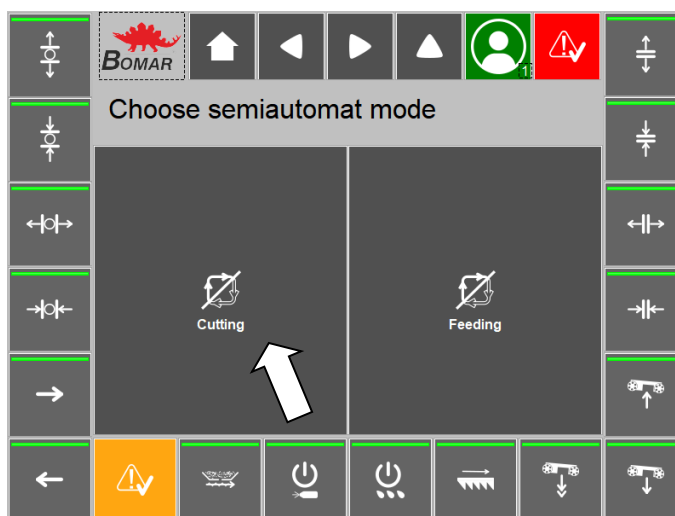
The material can be loaded

manually operated feeder - to the estimated length.

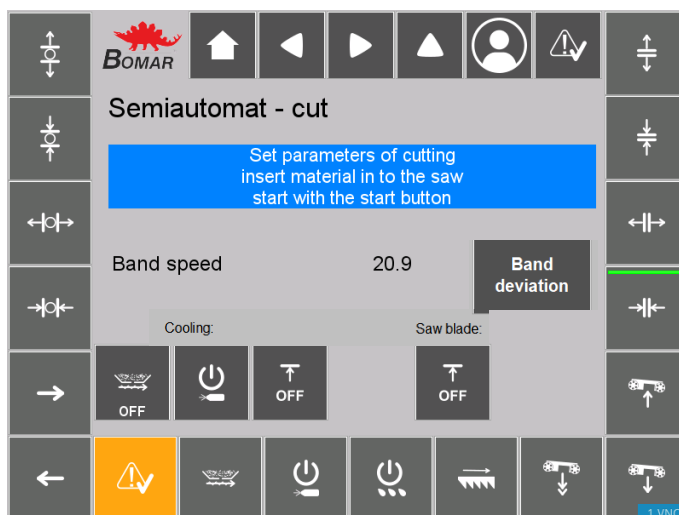
After loading, the material must be clamped with the main vise using the manual control.

automatically controlled feeder to the specified length - see chapter "Loading the desired length of material in semi-automatic mode".

5. Select the "Cutting" option.



6. On the following screen, set the semi-automatic cutting conditions

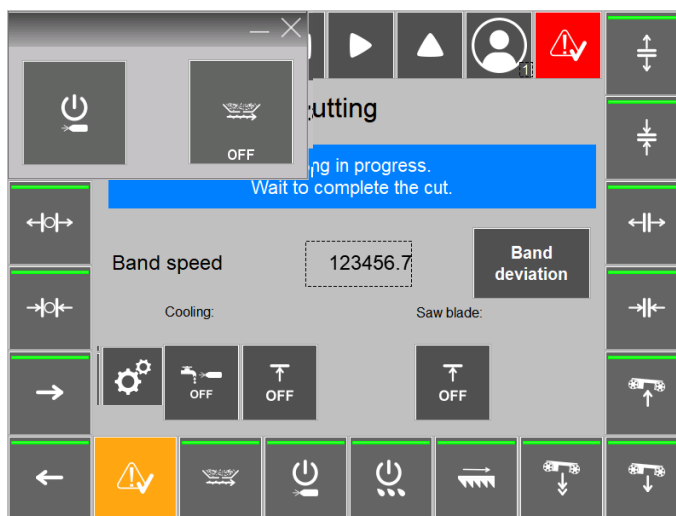


Position	Function
Cutting speed setting	
Belt speed	Set belt speed
Chip extractor	
 	Selecting on/off of the Chip extractor During the cycle it is possible to switch the chip extractor on/off. You can select the extractor over the start of the semi-automatic cycle. If the extractor is switched on, then it is switched on with the start of cutting. If the extractor option is disabled, then it does not start with the cut. If it is running and the operator deactivates the extractor option, then it is switched off.

Cooling	
	Cooling method Repeatedly press to select between cooling methods
	 - liquid cooling
	 - Micronizer cooling *
	 - without cooling
Switch off cooling after cutting	
	Option to switch off cooling after cutting By repeatedly pressing it is possible to select between the positions of the arm after the cut in which cooling will be stopped.
	 - cooling is switched off when the arm is down  - cooling is switched off when the arm is in the up position
Saw band	
	Option to stop the saw blade after cutting Press repeatedly to select between the following options
	 the saw blade stops in the down position after the cut  the saw blade stops in the up position after the cut

* Option is functional only for the machine with the given equipment

Semi-automatic cutting progress screen and changes in the status of the chip extractor and cooling:

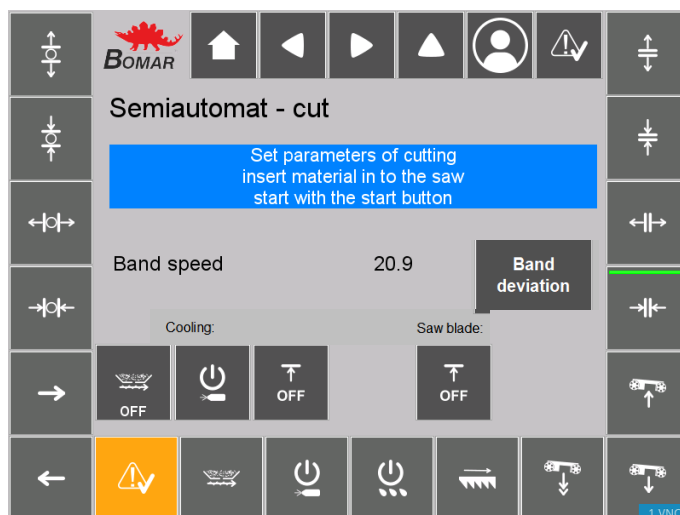


7. Setting the **starting position of the arm** above the material to start the cut

The machine is equipped as standard with a device for detecting the position of the arm above the material. In automatic mode, the arm starts above the material at a height determined by the setting of the device

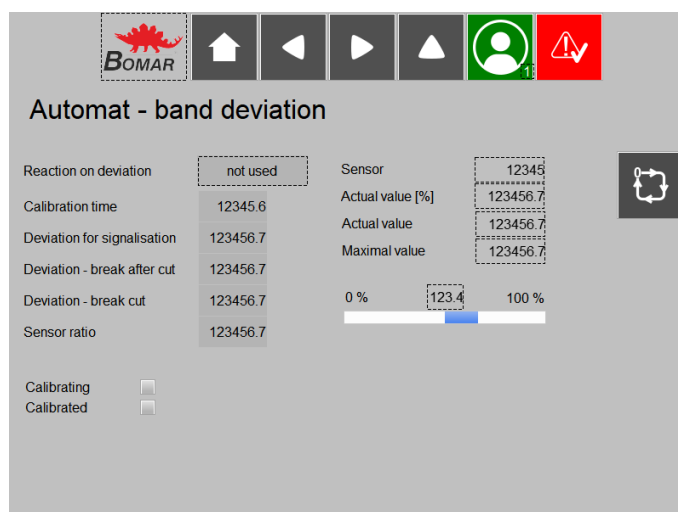
8. Use the potentiometer **on the saw control panel to set the desired cutting speed**
9. Adjust the speed of the arm's descent into the cut via the valve on the control panel.
10. Press the **START** button on the control panel to **start the cut**.
11. After pressing START:
 - a) The saw blade will start running and the arm will begin advancing into the cut.
 - b) During the descent of the arm into the cut, or even during the cut, you can adjust the speed of the saw blade and the speed of the arm descent into the cut via the controls on the machine control panel.
 - c) The display on the control panel will show a screen with information about the cutting progress.

Semi-automatic cutting progress screen



Position	Function
Belt speed	Set belt speed
	Option to display belt deflection A belt deflection monitoring device is an optional extra. If the device is not installed on the machine or if it is not functional, the option to display the belt deflection parameters will not be displayed. When the "Belt deflection" option is pressed on the automatic cycle progress display screen, the belt deflection parameter display screen appears To set the belt deflection parameters, see Service parameters

Belt deflection parameters display screen:



If the value for signalling is exceeded and any of the machine response options to belt deflection is selected except "Not used":

- a) If the permitted value is exceeded, the beacon flashes and the machine reacts according to the selected option.

A button for resetting the deviation appears on the screen displaying the belt



deflection parameters

- b) After eliminating the cause that led to exceeding the permissible deviation limit, the operator resets the measured deviation using the displayed reset button.

The deviation is cleared and the beacon stops flashing.

Resetting the beacon interrupts the deviation measurement until the cut is completed. When the next cut is started, the deviation measurement will start again

12. After finishing the cut in semi-automatic mode:

- The arm will automatically return to the position from which the cut was started or remain in the cut - depending on the selection made on the screen to start the semi-automatic cut, the belt drive will stop
- The end of the cut in semi-automatic mode is indicated by a message on the control panel display that the cut has been completed.

13. **Remove the crosscut.** Now you can repeat the whole procedure.

3.8.3. Loading the required material length in the semiautomatic mode

Attention!

To load the given length, the material must be valid – that is, the machine should have information on the material beginning position!

Information on the material beginning position is kept even if the semiautomatic cycle follows on the automatic cycle and the material has remained clamped in at least one of the vices.

For semi-automatic loading, the following applies:

- after starting the loading by pressing the START button, the feeder grabs material immediately at the point, where the jaw of its vice is currently located
- the feeder does not automatically re-grip the material

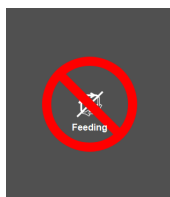
Therefore, it is necessary::

- either before starting the loading, to set the feeder to suitable distance from the main vice (maximum length of feeder travel is 500mm)
- or to load one or two pieces manually and then load automatically the last section of required length (see following text for respective procedure).

Note:

In the semiautomatic cycle the feeder performs multiple feedings automatically. Thus, cutting a material of a big length may be better with the use of the automatic cycle with a procedure programmed for a single piece.

If before starting to weigh the material to the desired length in the semi-automatic mode, the "feed" option is not available - i.e. that is not a valid material, cut the material!



To make trim cut before loading of the length in the semiautomatic mode, proceed as follows:

- a) load the material under the saw band manually
- b) start the cut in the semiautomatic mode

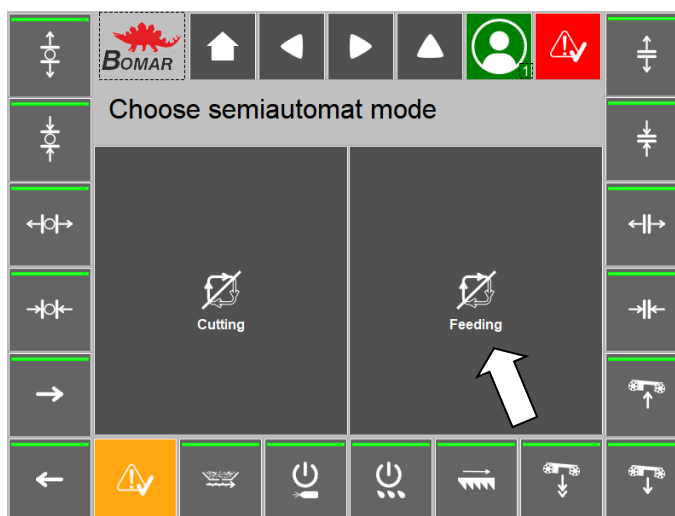
Attention!

To keep the information on the material position, the material must remain clamped in the feeder vice after the cut-in!

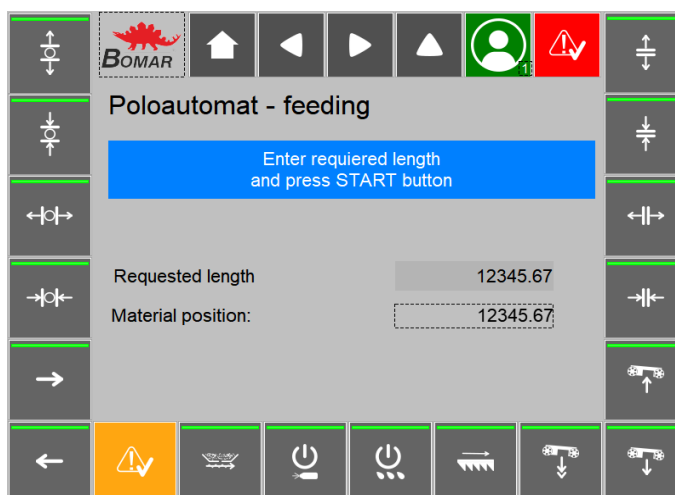
Attention!

After the cut-in, open the main vice manually so that the feeder can handle the material in order to load the length!

1. If the material is valid, select the length setting option and the **START** button will flash.



2. A screen appears to enter the desired length of material to be load



Position	Function
Required length	Window for entering the desired length for tying
Enter requiered lenght and press START button	Instructions for further action

3. In the parameter entry window on the screen for entering the desired length for the stringing, enter the desired length
4. The feeder clamps the material where it is and does not automatically perform multiple feeds in this mode.

If the required length of material cannot be loaded with one feed of the feeder :

- either set the feeder to a suitable position that allows the desired length to be threaded per feeder stroke (max. 500mm)
- or manually load the overhanging part of the material length via the auxiliary feeding

Attention!

During the auxiliary feeding, the machine must not lose information about the material in order to be able to correctly count the individual fed lengths - i.e. the material must be continuously clamped in at least one of the vises during the auxiliary feeding!

Auxiliary feeding procedure:

- a) Clamp the material in the main vise.
- b) Open the feeder vise sufficiently.
- c) Drive the open feeder to the beginning of the feeder path.
- d) Clamp the material through the feeder vise.
- e) Open the jaw of the main vise sufficiently.
- f) Manually drive the feeder with the clamped material towards the main vise.
- g) Check the length on the display (see Figure 1)

If the difference between the loaded length and the specified length for loading is still greater than the length of the feeder path, make another auxiliary feed.

5. Press the START button to start loading material

Attention!

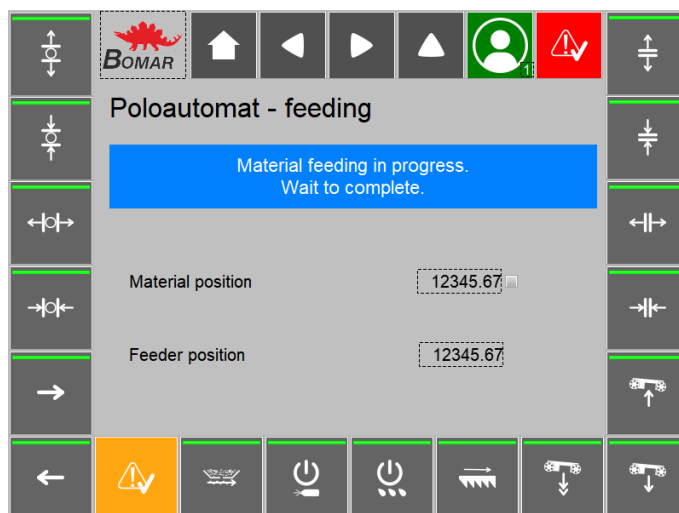
The main vise must be opened sufficiently before starting the loading process to avoid collision between the material to be loaded and the vise jaw!

Attention!

The upper clamp on the barrel vise can only be used with zero arm rotation!

6. If the length for loading is less than the length of the feeder track, press the **START** button to start automatic loading of the material.
7. Press the Start button to start loading material:

A screen will appear with information about the progress of the loading



- the feeder clamps the material and winds it to the desired length
- after the material is loaded, it is automatically clamped by the main vise

3.9. Semiautomatic sequence interruption

3.9.1. With the STOP button

- 1 x push - interruption of the executed sequence of the „pause” type
- This interruption is only possible if the cut has not been started.
- After the Start button is pushed, the interrupted sequence (material loading to the given length, arm rotation to the given angle) is resumed from the interruption place.
- 2 x pushes – complete stop and finish of the sequence or cut executed
- If cutting was started in the semiautomatic mode, the machine does not respond to 1 push; only after the 2nd push of the STOP button, the cut is stopped.
- Double-push of the STOP button can also be used to finish another sequence started in the semiautomatic mode.
- The interrupted sequence cannot be resumed; it must be restarted from the beginning.

3.9.2. With the Emergency Stop Switch button

- In emergency cases, push the **Emergency Stop Switch** on the control panel.
- 1 push
- interruption of safety circuits
 - complete stop and finish of the sequence executed
 - The interrupted sequence cannot be resumed; the safety circuits must be switched on again and the interrupted sequence restarted from the beginning.

3.9.3. Interruption of safety circuits

- The interrupted sequence cannot be resumed; you must restart the safety circuits and start the interrupted sequence again from the beginning.

3.10. Automatic mode

In the automatic mode on this machine:

- cutting is executed in automatic cycles
- cutting of required lengths of final pieces is controlled by predefined plans – called “recipes”.

Recipes are software plans controlling the cutting procedure for final pieces of various lengths in the automatic cycle;

- necessary intervention of operators within one automatic cycle are only limited to material handling – that is, loading semi-products and handling cut-up and residual pieces.

One automatic cycle is controlled by one recipe and used for cutting of final pieces from one or more bar semi-products or one or more bundles of bar semi-products.

All semi-products loaded to be cut within one automatic cycle:

- must have identical section parameters;
- can have identical or different length parameters.

This machine enables execution of the automatic cycle of two types:

1. **“PIECES” type automatic cycle (“Pieces” automat)**

In the “Pieces” type automatic cycle, final pieces are cut in continuous sequence by the recipe, **as long as further required length can be loaded.**

If the material is too short so that the next required length cannot be loaded any more, loading of another semi-product is required.

2. **“RODS” type automatic cycle (“Rods” automat)**

In the “RODS” type automatic cycle, final pieces are cut in batches precisely defined **by the recipe**, being specified in the recipe for every individual semi-product piece. By the customer’s requirements, batches of final pieces can be specified either individually for one semi-product piece or by means of a uniform specification common to the entire batch of semi-products.

Another semi-product must be loaded:

- either after cutting up the batch of final pieces specified for the given semi-product piece – if a semi-product is loaded in a defined length which must be sufficient to cut up all of the pieces specified;
- or after another required length cannot be loaded – if a semi-product is loaded in a length not sufficient for cutting of all specified pieces.

Cutting in the RODS type automatic cycle enables a residual piece of a predefined minimum length to be preserved from every standard length bar so that this residual piece can be utilized for further processing.

Note:

If in the “RODS” type automatic cycle a semi-product is loaded, being of insufficient length for cutting of all specified pieces, you are asked to load another semi-product according to laser detection – similarly to the “PIECES” automatic cycle.

However, uncut pieces from the short semi-product will not be cut from the next semi-product; they will just be registered in the table of unfinished pieces..





Automat - uncut pieces

	Length	Count		Length	Count		Length	Count		Length	Count
1	12345.67	1234	11	12345.67	1234	21	12345.67	1234	31	12345.67	1234
2	12345.67	1234	12	12345.67	1234	22	12345.67	1234	32	12345.67	1234
3	12345.67	1234	13	12345.67	1234	23	12345.67	1234	33	12345.67	1234
4	12345.67	1234	14	12345.67	1234	24	12345.67	1234	34	12345.67	1234
5	12345.67	1234	15	12345.67	1234	25	12345.67	1234	35	12345.67	1234
6	12345.67	1234	16	12345.67	1234	26	12345.67	1234	36	12345.67	1234
7	12345.67	1234	17	12345.67	1234	27	12345.67	1234	37	12345.67	1234
8	12345.67	1234	18	12345.67	1234	28	12345.67	1234	38	12345.67	1234
9	12345.67	1234	19	12345.67	1234	29	12345.67	1234	39	12345.67	1234
10	12345.67	1234	20	12345.67	1234	30	12345.67	1234	40	12345.67	1234

Another semi-product loaded within the same automatic cycle will be cut precisely according to the pertinent batch of final pieces specified, regardless of whether or not all pieces of the previous semi-product have been cut up according to its recipe.

The automatic cycle executed on this machine can be controlled:

- by means of a recipe created on this machine directly – that is, by the software included in this machine.
- for the "PIECES" type automatic cycle
- for the "RODS" type automatic cycle
- by means of an imported recipe created on a computer by the Saw Manager software (software for creation of recipes with optimized use of material, supplied by Bomar spol.s.r.o.)

From the Saw Manager software, recipes are imported:

- for the "RODS" type automatic cycle

Cooperation between the machine and Saw Manager software is subject to purchase of a Saw Manager software license. For information on purchase of the licensed software, please contact the sales department of the Bomar spol.s.r.o. company.

3.10.1. Preparing of cutting and cutting execution in automatic mode

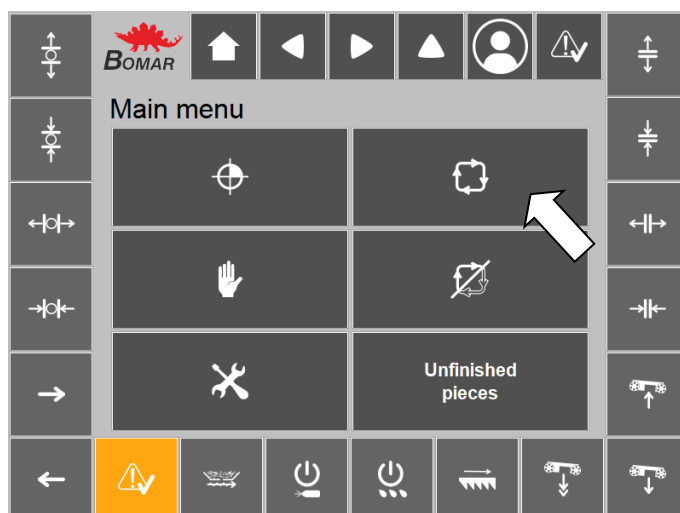
Attention!

*Short pieces that cannot be fed by the feeder to the main vise cannot be cut in automatic mode!
There is a risk of collisions!*

Attention!

The size of the burrs and unevenness of the material face affect the accuracy of the feed length!

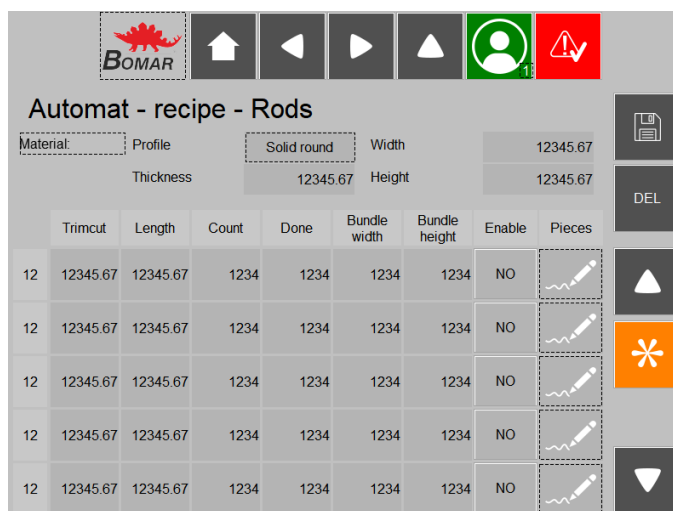
1. On this screen, select the option to initiate an automatic cycle:



2. After pressing the option to enter the automatic mode, the screen of the last loaded recipe will appear.

Recipe screen for automatic cycle type "PIECES"

Recipe screen for the automatic cycle type " RODS"



	Trimcut	Length	Count	Done	Bundle width	Bundle height	Enable	Pieces
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	

The recipe that is displayed in this step, i.e. The currently loaded recipe will control the automatic cycle that is set up by this procedure and which will be started via the START button. V tomto kroku je možné provést:

- modifications to an existing recipe without saving - touch in the parameter input window to make the desired modifications"

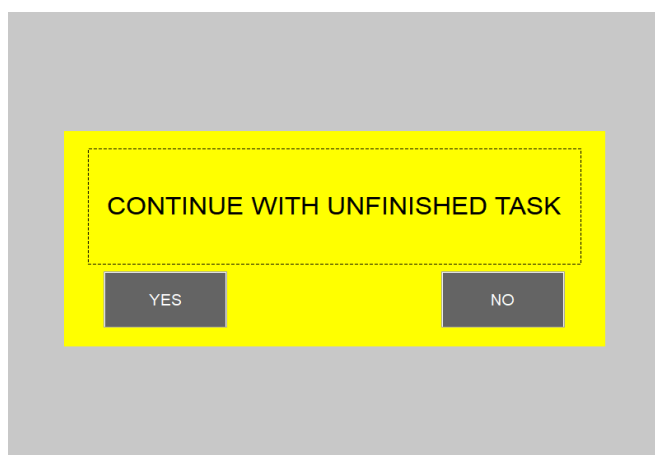
- saving of the recipe - through the icon 

- loading another current recipe through the icon 

For further work with recipes, see the chapter "Recipes".

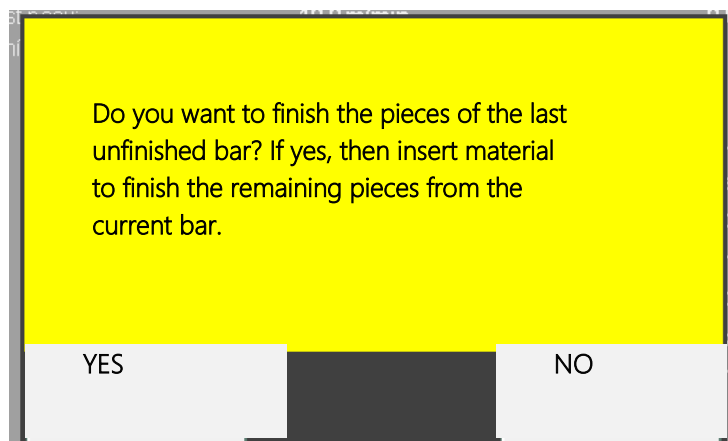
- Once you have set the recipe you need, scroll to the next screen using the scroll between screens option:
 - If the previous automatic cycle has not been completed, this step will first bring up a screen with options for continuing the incomplete automatic cycle..

On this screen, the operator selects whether to continue with the incomplete automatic cycle or to start another automatic.



For more details on the individual "YES" "NO" options, see also the section on ending and interrupting the automatic cycle.

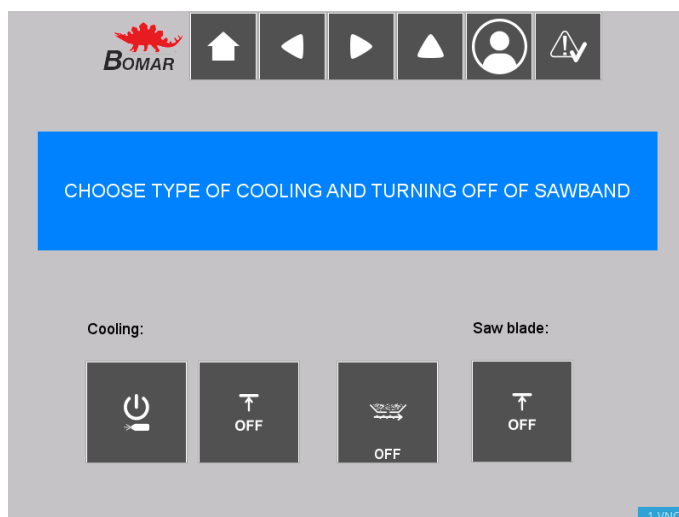
If the automatic cycle is interrupted while the entire blank is still unfinished, after selecting "YES", another screen will appear on the options screen for continuing the unfinished automatic cycle asking if the operator wants to continue cutting with the work in progress:



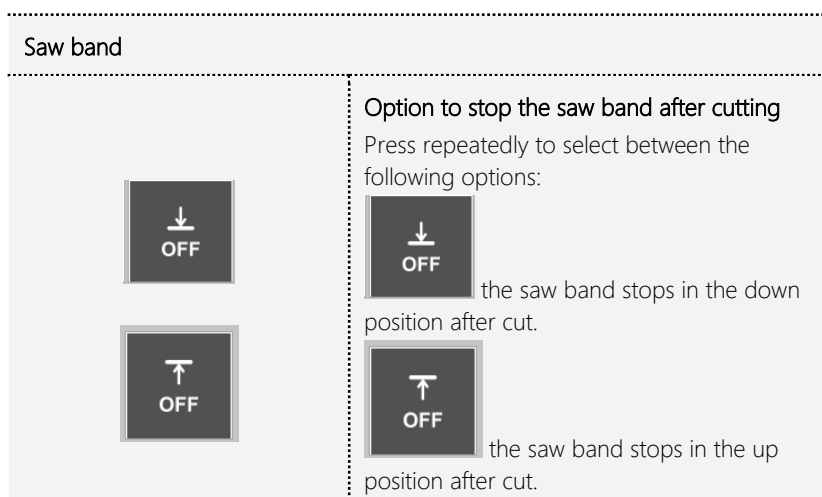
Attention!

The operator must consider the selection on this screen, especially if an automatic cycle of the TYPE TYPE has been interrupted! If the operator leaves the work in progress in the machine and starts to resume the automatic TYPE cycle, the work in progress will be cut as a new piece and may be unintentionally degraded.

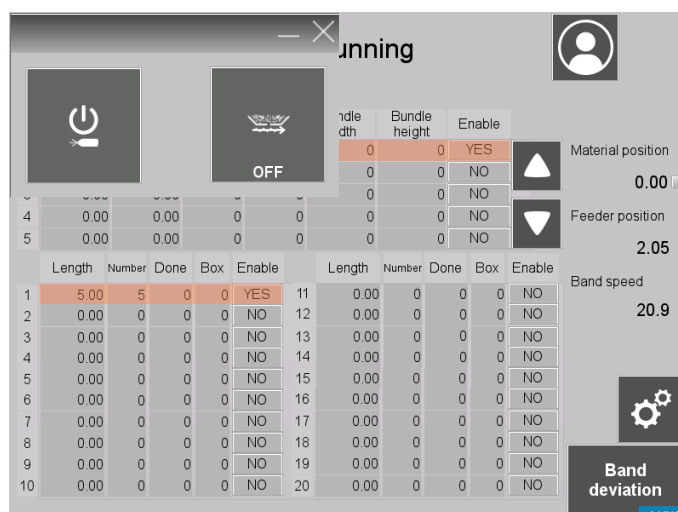
- b) If the previous automatic cycle has been properly completed, or after pressing one of the Yes/No options on the automatic cycle interrupt options screen, the belt cooling and shutdown **selection screen will appear**



Position	Function
Cooling	
  	Cooling method Repeatedly press to select between cooling methods  - liquid cooling  - Micronizer cooling* 
Switch off cooling after cutting	
	Option to switch off cooling after cutting By repeatedly pressing i tis to select between the position of the arm after the cut in which cooling will be stopped.  - cooling is switched off when the arm is down  - cooling is switched off when the arm is in the up position
Chip extractor	
 	Selecting on/off of the Chip extractor During the cycle it is possible to switch the chip extractor on/off. You can select the extractor over the start of the semi-automatic cycle. If the extractor is switched on, then it is switched on with the start of cutting. If the extractor option is disabled, then it does not start with the cut. If it is running and the operator deactivates the extractor option, then it is switched off.

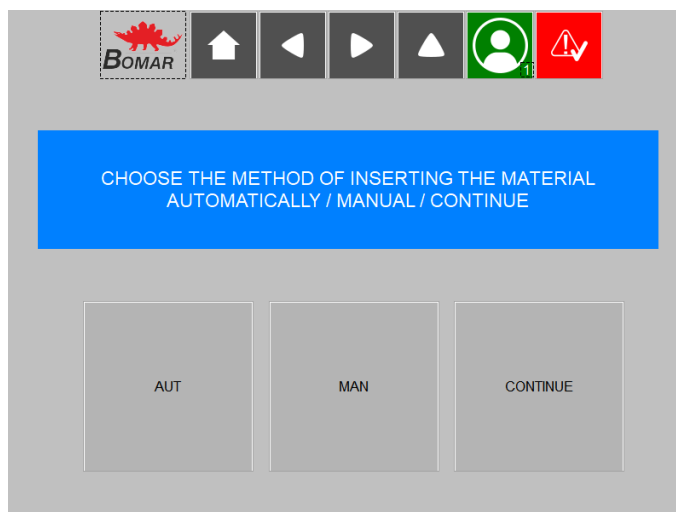


Automatic cutting progress screen and changes in the status of the chip extractor and cooling:



4. Use the scroll option  to move the screen for selecting the cooling and band shutdown to the screen for selecting how to feed material into the saw.

Complete screen for selecting the method of inserting material into the saw:



The screen can be displayed in different variations - according to the specific machine equipment and the specific state of the cutting process.

Positon	Function
AUT	Automatic material insertion - Material will be loaded into the feeder either manually by the operator or vis an external weighing system - The feeder feeds the material into the saw vice The cut length is set automatically according to the value entered in the recipe. See note 1
MAN	Manual insertion of material - Material will be loaded manually by the operator up to the saw vice The length of the cut is set manually by the operator, with an accuracy corresponding to the accuracy of the operator's estimation or measurement. It is optimal if the length of the cut corresponds to the value written in the recipe. Otherwise, there is a risk that the material will not be sufficient to cut all of the intended pieces.

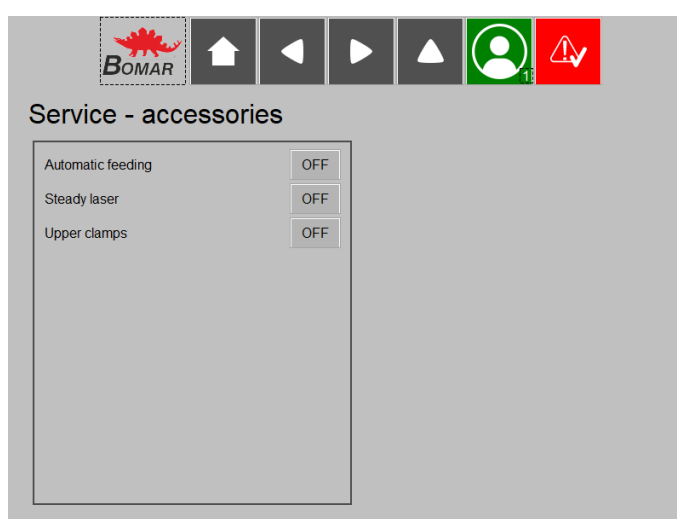
Positon	Function
CONTINUE	Familiar material is embedded in the saw This option is only displayed if the machine software has information about the position of the face of the material, i.e. if the material has remained clamped in at least one of the vices of the saw after the previous cut (known material). If this option is selected, the material is not automatically cut (even if it is prescribed in the prescription).

Note:

The automatic loading option (**AUT**) will only be displayed if the saw is equipped with an automatic loading device that will lock the feed float during automatic loading - this device is an option and must be ordered separately by the customer.

If the saw is equipped with an automatic loading device (feed float lock), then:

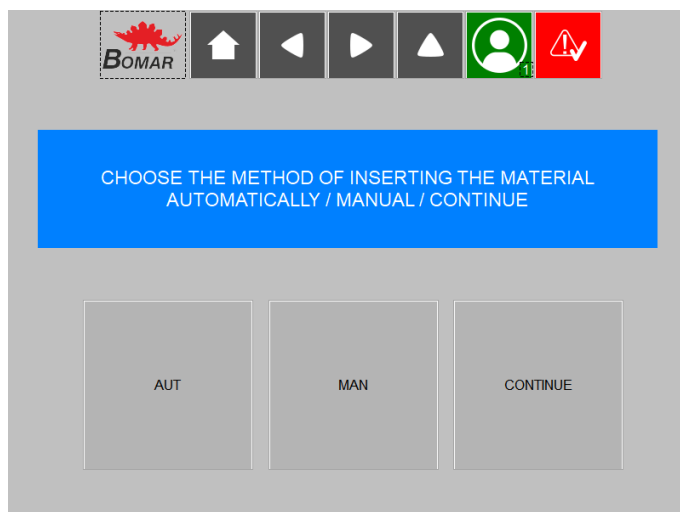
- on the screen for selecting the method of material loading, the option for automatic loading "AUT" is displayed (otherwise this option is not displayed at all)
- in the service parameters, the option for automatic weighing is checked on the screen for Accessories from the manufacturer



On the screen displayed for selecting the method of feeding material into the saw, select the method of feeding material into the saw.

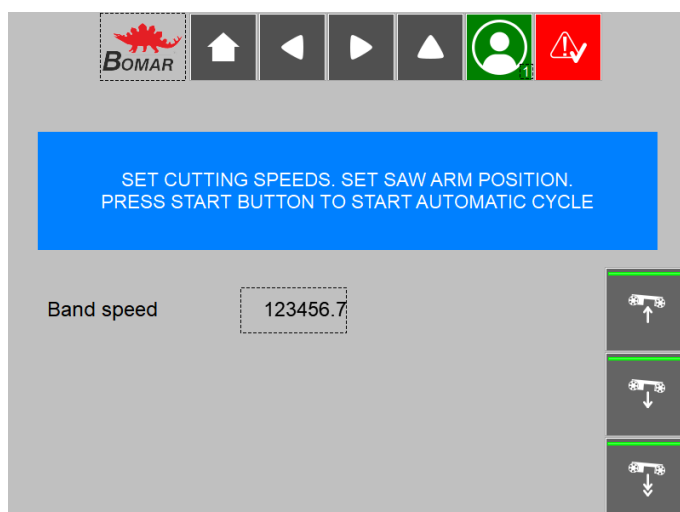
Select an option by touching the icon.

The highlighted icon will be coloured - e.g.:



5. Once all parameters have been set, go to the screen to **start the automatic cycle**.

Screen to start the automatic cycle



Position	Function
SET CUTTING SPEEDS. SET SAW ARM POSITION. PRESS START BUTTON TO START AUTOMATIC CYCLE	instruction for the further action
Band speed	Set band speed

When this screen is displayed, the START button will flash.

- Use the potentiometer on the saw control panel to **set the desired cutting speed**
- Adjust the speed of the arm's descent into the cut via the valve on the control panel.
- Adjust the height of the arm to start the cut

Set the starting position of the arm above the material to start the cut

To reduce the time required to cut a given blank profile, it is advisable if the arm is set at the optimum starting position (height) before cutting. The optimum starting position of the arm depends on the height of the profile of the blank to be inserted.

The machine is equipped as standard with a device for detecting the position of the arm above the material.

In automatic mode, the arm goes above the material to the height determined by the device setting (see chapter Arm position detection device above the material for more details).

9. **Press the START button**

10. **Insert the first piece of material before starting the automatic cycle**

The following actions of the operator and the machine during material insertion depend on the following:

- what is the currently selected material loading method
- and, if applicable, whether the saw is equipped with an external material loading

device  valid material is embedded in the saw

If the "CONTINUE" option is selected, then:

- if the known material remains clamped in the saw vice, the cut will start immediately after the first press of the **START button (see previous step)**

if the known material has remained clamped in the feeder's vice, then after the first press of the START button (see previous step) the feeder will load the first desired length of the final piece, which is next in line, the saw vice will clamp the material and the cut will start

The cut will be as follows:

- a new automatic cycle is started
- resumption of the interrupted automatic cycle

Warning!

If this option is selected the automatic material cut will not take place (even if it is prescribed in the recipe)

If you need to cut the face of a valid material:

- switch the machine to semi-auto mode
- clamp the material in the feeder vise
- then release the material from the main vise
- semi-automatically feed the material to the specified length of the cut
- make a semi-automatic cut

If this procedure is followed, the machine will not lose information about cut and

uncut pieces. 

If manual material insertion is selected, then:

After pressing the **START button** for the first time (see previous step), you will be prompted to insert the material into the saw vice:

**Insert material under the blade
and confirm by press START button:**

Trimcut:	12345.67		
Width:	12345.67	Bundle - horiz.	12345
Height:	12345.67	Bundle - vert.:	123
Thickness:	12345.67	Length:	12345.67

Manual material loading without external weighing equipment

- a) The operator manually inserts the material into the saw vice and presses the START button again
- b) After the second press of the START button, the saw vice clamps the material and starts cutting.
 - This cut will be, as the case may be:
 - new automatic cycle is initiated
 - resumption of the interrupted automatic cycle

Manual material loading with external weighing device

If the saw is equipped with an external weighing device, only the first piece can be manually inserted before starting a new automatic cycle.

The insertion of the first piece takes place in the same way as described in the previous paragraph.

All other pieces of blanks in the cycle will be weighed automatically.



Automatic material loading without external weighing equipment

If automatic material loading is selected and if the saw is NOT equipped with an external device for automatic material loading, then

- a) After the first press of the START button (see previous step), the feeder moves to the material loading position

- b) You will be prompted to insert material into the feeder vise

Insert material in to the feeder vise and confirm by press START button:			
Trimcut:	12345.67		
Width:	12345.67	Bundle - horiz.	12345
Height:	12345.67	Bundle - vert.:	123
Thickness:	12345.67	Length:	12345.67

- c) The operator manually inserts the material into the feeder vise and presses the START button again
- d) After the second press of the START button, the feeder locates the face of the material, then clamps the material and loads the material under the saw blade to the specified length
- e) The saw vise clamps the material, starting the cut.
- This cut will be, as the case may be:
 - a new automatic cycle is initiated
 - resumption of the interrupted automatic cycle

Automatic material loading with external weighing device

- a) If automatic material loading is selected **and if the saw IS equipped with an external device for automatic** material loading, then:
- b) After pressing the START button (see previous step), the feeder moves to the position for inserting the material
Externí zařízení pro navážení materiálu naveze materiál do podavače pily
- c) After the material is detected on the feeder's laser, the feeder locates the face of the material, then clamps the material and loads the material under the saw blade to the specified length
- d) The saw clamp clamps the material, starting the cut.
- This cut will be as follows:
 - a new automatic cycle is started
 - resumption of the interrupted automatic cycle
11. After starting a new automatic cycle or resuming an interrupted automatic cycle, a screen will appear showing the **progress of the automatic cycle**



Automat - running



Actual task:

	Trimcut	Length	Number	Done	Bundle width	Bundle height	Enable
12	12345.67	12345.67	1234	1234	1234	1234	NO
12	12345.67	12345.67	1234	1234	1234	1234	NO
12	12345.67	12345.67	1234	1234	1234	1234	NO
12	12345.67	12345.67	1234	1234	1234	1234	NO
12	12345.67	12345.67	1234	1234	1234	1234	NO



Material position
12345.67

Feeder position
12345.67

Band speed
123456.7

Band deviation

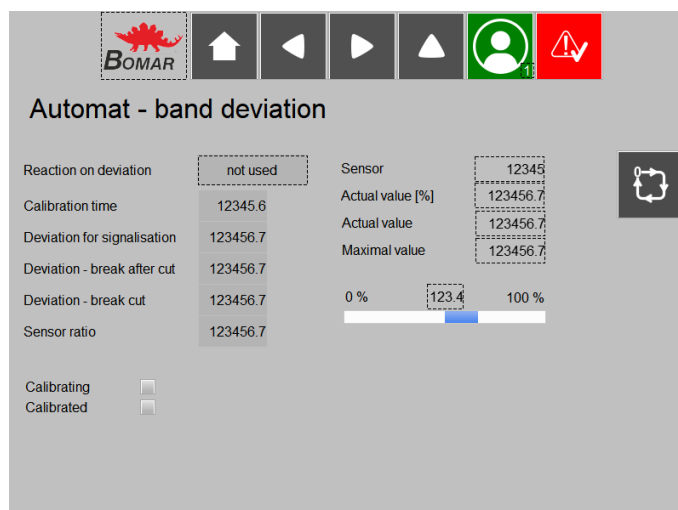
	Length	Number	Done	Box	Enable		Length	Number	Done	Box	Enable
1	12345.67	1234	1234	1234	NO	11	12345.67	1234	1234	1234	NO
2	12345.67	1234	1234	1234	NO	12	12345.67	1234	1234	1234	NO
3	12345.67	1234	1234	1234	NO	13	12345.67	1234	1234	1234	NO
4	12345.67	1234	1234	1234	NO	14	12345.67	1234	1234	1234	NO
5	12345.67	1234	1234	1234	NO	15	12345.67	1234	1234	1234	NO
6	12345.67	1234	1234	1234	NO	16	12345.67	1234	1234	1234	NO
7	12345.67	1234	1234	1234	NO	17	12345.67	1234	1234	1234	NO
8	12345.67	1234	1234	1234	NO	18	12345.67	1234	1234	1234	NO
9	12345.67	1234	1234	1234	NO	19	12345.67	1234	1234	1234	NO
10	12345.67	1234	1234	1234	NO	20	12345.67	1234	1234	1234	NO

The screen displays the status of the job in progress and other information:

Position	Funktion
Band deviation	Option for displaying belt deflection parameters The belt deflection monitoring device is an optional extra. If the device is not installed on the machine or if it is not functional, the option to display the belt deflection parameters will not be displayed. When the "Belt deflection" option is pressed on the automatic cycle progress display screen, the belt deflection parameter display screen appears To set the belt deflection parameters, see Service parameters
Material position	Information about the current position of the head of the material
Feeder position	Information about the current position of the feeder
Belt speed	Set belt speed

Ovládání stroje
Bedienung der Maschine
Machine control

Belt deflection parameters display screen



If the value for signalling is exceeded and any of the machine response options to belt deflection is selected except "Not used":

- If the permitted value is exceeded, the beacon flashes and the machine reacts according to the selected option

A button for resetting the deviation appears on the screen displaying the belt

deflection parameters .

- b) Once the cause that led to exceeding the permissible deviation limit has been eliminated, the operator resets the measured deviation using the displayed reset button.

The deviation is cleared and the beacon stops flashing.

By resetting, the deviation measurement is interrupted until the cut is completed. When the next cut is started, the deviation measurement will start again.

12. Material replenishment during the automatic cycle

The replenishment of material takes place from the moment of start until the end of the entire automatic cycle.

During the automatic cycle, the operator replenishes the material each time it is required by means of a message that is displayed on the display on the control panel

Invitation to insert material in an automatic "In Pieces" cycle



The prompt is displayed if the material is short and it is no longer possible to string the next length for cutting that is prescribed by the current recipe (automatic cycle of the "PIECES" type).

After pressing the "OK" option, the main screen of the control software appears and the operator goes through the screens for setting the automatic cycle only after confirming the insertion of the material with the OK button.

Invitation to insert material in an automatic "On Bars" cycle"

Remove all the remaining material from the saw.			
Select the method of inserting material.			
Width:	12345.67	Bundle - horiz.	12345
Height:	12345.67	Bundle - vert.:	123
Thickness:	12345.67	Length:	12345.67

The prompt is displayed if the prescribed batch for the inserted blank is finished or if the material is short and it is no longer possible to cut the next length prescribed by the current recipe (automatic cycle of the "TYPE" type)

After pressing the desired option, the recipe screen appears and then prompts you to insert the piece - according to the selected option:



Insert material in to the feeder vice
and confirm by press START button:

Trimcut:	12345.67		
Width:	12345.67	Bundle - horiz.	12345
Height:	12345.67	Bundle - vert.:	123
Thickness:	12345.67	Length:	12345.67



Insert material under the blade
and confirm by press START button:

Trimcut:	12345.67		
Width:	12345.67	Bundle - horiz.	12345
Height:	12345.67	Bundle - vert.:	123
Thickness:	12345.67	Length:	12345.67

The operator inserts a new piece of material and confirms the insertion with the START button.

Attention!

When handling the material, observe all safety regulations in this manual and other general regulations that apply to the production conditions at the specific workplace.

13- Termination of the automatic cycle:

Automatically the cycle is automatically terminated according to type:

- after all the final pieces specified in the recipe have been cut (automatic cycle of the "PIECES" type)
- after all the semi-finished pieces specified in the recipe have been cut (automatic cycle of type "BARS")

At the end of the automatic cycle:

- after all the final pieces specified in the recipe have been cut (automatic cycle of the "PIECES" type)
- after all the semi-finished pieces specified in the recipe have been cut (automatic cycle of type "BARS")



If it was not possible to cut all the final pieces according to the recipe for the automatic cycle of the "TYPE" type, then after pressing the OK option, a table with unfinished pieces appears on the screen with a message about the termination of the automatic cycle:

		Length	Count	Length	Count	Length	Count	Length	Count	Length	Count
1	12345.67	1234	11	12345.67	1234	21	12345.67	1234	31	12345.67	1234
2	12345.67	1234	12	12345.67	1234	22	12345.67	1234	32	12345.67	1234
3	12345.67	1234	13	12345.67	1234	23	12345.67	1234	33	12345.67	1234
4	12345.67	1234	14	12345.67	1234	24	12345.67	1234	34	12345.67	1234
5	12345.67	1234	15	12345.67	1234	25	12345.67	1234	35	12345.67	1234
6	12345.67	1234	16	12345.67	1234	26	12345.67	1234	36	12345.67	1234
7	12345.67	1234	17	12345.67	1234	27	12345.67	1234	37	12345.67	1234
8	12345.67	1234	18	12345.67	1234	28	12345.67	1234	38	12345.67	1234
9	12345.67	1234	19	12345.67	1234	29	12345.67	1234	39	12345.67	1234
10	12345.67	1234	20	12345.67	1234	30	12345.67	1234	40	12345.67	1234

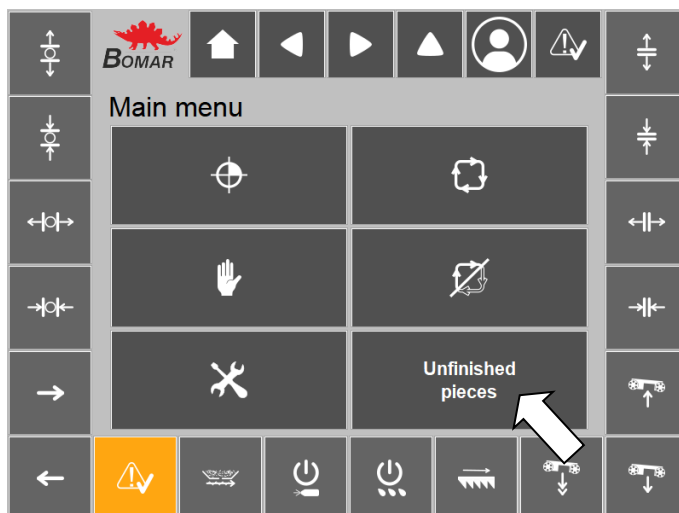
14. At the end of the automatic cycle, remove the last cut piece and remove the remaining piece from the machine if necessary.
15. Now you can repeat the whole procedure.

3.10.2. Unfinished pieces

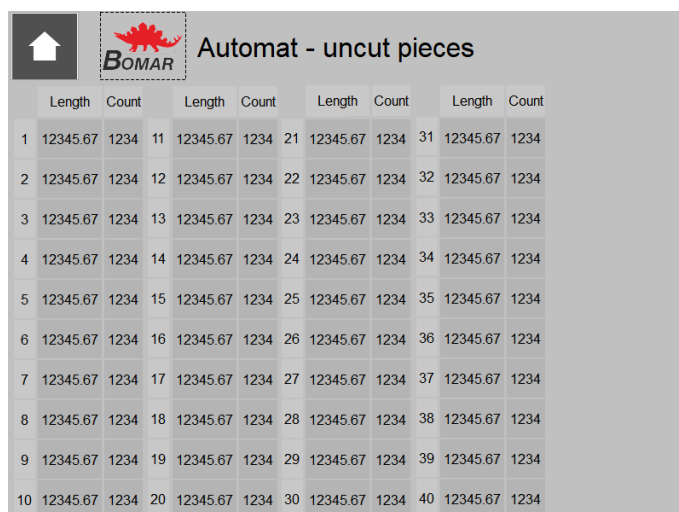
If a blank is inserted during the automatic cycle of the "TYPE" type, which is not long enough to cut all the prescribed pieces, the insertion of another blank is requested.

The unfinished pieces from the batch prescribed for the incorrectly inserted blank will not be re-cut from the next blank, they will only be recorded in the table of unfinished pieces.

The table of unfinished pieces can be viewed from the main screen of the control software:



A table of unfinished pieces will also be displayed at the end of an automatic "CUT" cycle in which not all pieces have been cut.



	Length	Count		Length	Count		Length	Count		Length	Count
1	12345.67	1234	11	12345.67	1234	21	12345.67	1234	31	12345.67	1234
2	12345.67	1234	12	12345.67	1234	22	12345.67	1234	32	12345.67	1234
3	12345.67	1234	13	12345.67	1234	23	12345.67	1234	33	12345.67	1234
4	12345.67	1234	14	12345.67	1234	24	12345.67	1234	34	12345.67	1234
5	12345.67	1234	15	12345.67	1234	25	12345.67	1234	35	12345.67	1234
6	12345.67	1234	16	12345.67	1234	26	12345.67	1234	36	12345.67	1234
7	12345.67	1234	17	12345.67	1234	27	12345.67	1234	37	12345.67	1234
8	12345.67	1234	18	12345.67	1234	28	12345.67	1234	38	12345.67	1234
9	12345.67	1234	19	12345.67	1234	29	12345.67	1234	39	12345.67	1234
10	12345.67	1234	20	12345.67	1234	30	12345.67	1234	40	12345.67	1234

If the operator continues the same automatic cycle after the interruption, the data in the uncut table will not be deleted.

The uncut table will be automatically cleared:

- if the preparation of the next automatic cycle will be started after the previous cycle has finished
- if the option NO is selected when an automatic cycle is interrupted - i.e. do not continue with an incomplete job

3.10.3. Interruption and termination of the automatic cycle

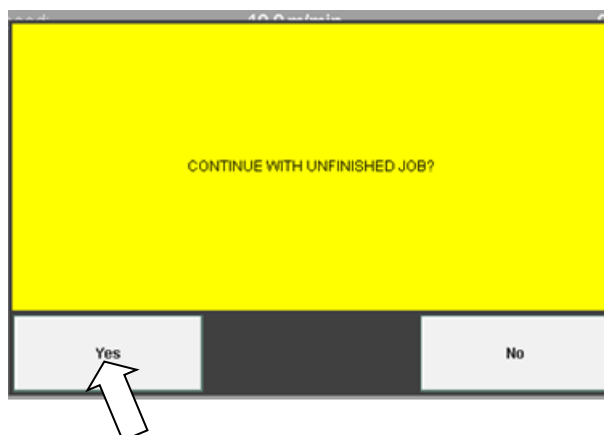
1. Interruption automatic cycle

When the automatic cycle is interrupted, it is always possible in a standard situation:

- to keep in the machine memory the information at which point in the recurrence the interrupted automatic cycle was at the time of the interruption (information about the number of pieces already cut), which allows the cycle to continue automatically from the last piece cut onwards
- retain the information archived in the table of uncut pieces for the automatic cycle of type TYPE, which allows to evaluate the status of uncut pieces after the automatic cycle has been automatically terminated
- to continue the interrupted cycle from the point at which the interruption occurred, either automatically (Pause type interruptions) or after checking and adjusting the automatic cycle settings (other types of interruptions).

If the operator wants to use the above mentioned option when interrupting a cycle, he must not terminate the automatic cycle at the same time during the interruption, i.e:

- must not open another recipe
- must select "YES" on the screen asking if he/she wants to continue the job in progress



Attention!

If the automatic cycle is interrupted and it is obvious that you want to continue the interrupted automatic cycle without cutting the currently inserted material, make sure that the machine does not lose information about the position of the material - i.e. the material must remain clamped, at least in one of the two vises ("known material")!

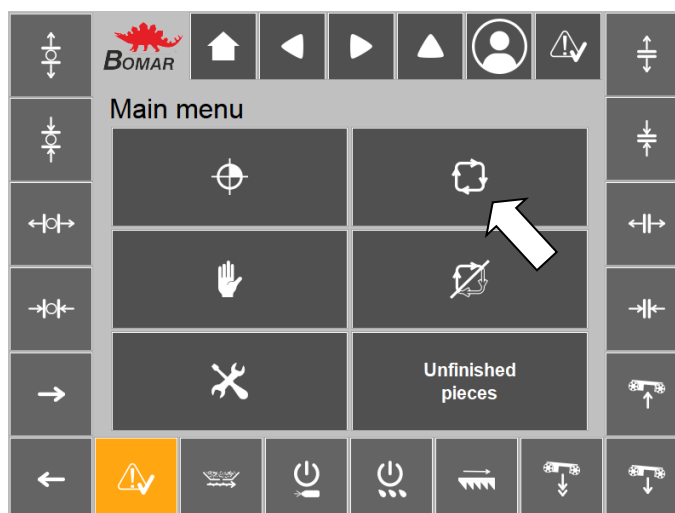
2. Standard procedure for resuming an interrupted automatic cycle

1. Remove the cause that interrupted the automatic cycle
2. Bring the machine back into operating condition

If the Emergency Stop Switch is pressed, release the button by turning it.

If the safety circuits are interrupted, switch on the safety circuits by pressing the button on the control panel.

3. Confirm the messages that appear on the control display.
4. After confirming the last message, the screen will appear:

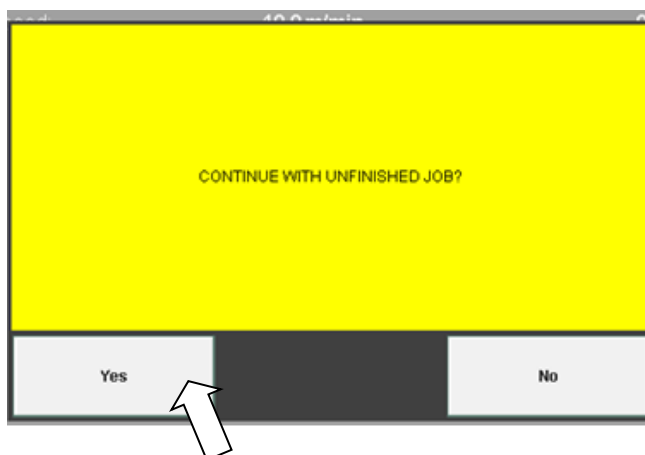


On this screen, select the option to enter the automatic cycle settings

5. Scroll through the automatic cycle settings to the step where pressing START initiates the continuation of the automatic cycle

Attention!

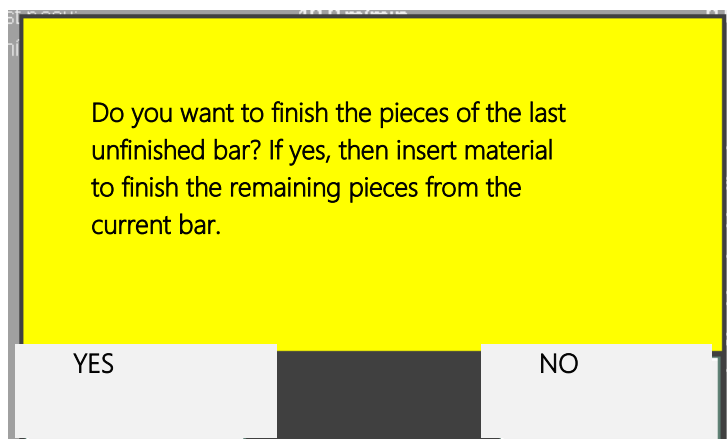
The operator must select "YES" on the screen asking if they want to continue with the job in progress.



Attention!

Before resuming an interrupted automatic cycle, pay special attention to the material status of the machine - i.e., consider next steps if material remains in the machine after the interruption

If the machine has information that the entire blank was not cut during the interruption, then after selecting YES/NO, another screen will appear on the options screen to continue the incomplete automatic cycle asking if the operator wants to continue cutting with the work in progress:



If the operator selects "YES", the material currently loaded in the machine will be cut.

Attention!

Inconsiderate initiation of the continuation of the automatic cycle may result in deterioration of the inserted material

If the cycle was interrupted by pressing the STOP button twice at the moment the cut was started, and if valid material remains in the machine, then the interrupted cut will be completed immediately after restarting the interrupted cycle - i.e. the next prescribed length will not be fed immediately.

If invalid material is inserted in the machine, it will be picked up by the feeder and fed to the first required length.

If the operator selects **NO**, the machine will request the material to be inserted in the next steps.

If the face of the material is damaged after interrupting the cut and you want to continue cutting this damaged material, consider whether it is necessary to trim the face before continuing cutting - the procedure for trimming the face for known material is described in the text about inserting the material, in the paragraph:

CONTINUE

valid material is embedded in the saw

3. Automatic cycle interruption methods

- Automatic interruption - material depleted

The machine control software evaluates that it has run out of material if all final pieces are not cut in the automatic "PIECES" cycle or if all blanks are not cut in the automatic "BARS" cycle and the saw cannot continue cutting more pieces.

The saw cannot continue cutting more pieces if any of these circumstances occur:

- a) it is not possible to cut the next required length from the remaining length of the piece clamped in the feeder, and it is not possible to feed another piece of material into the feeder for cutting using the external feeding system.
- b) the length of the remaining piece clamped in the feeder will not be sufficient to push the cut piece out of the saw

In case **ad a)**, the machine stops automatically and the ongoing automatic cycle is interrupted.

In case **ad b)**, depending on the circumstances and the operator's choices, either the rest can be cut further or the machine will also stop and the automatic cycle will be interrupted.

The procedure for continuing the interrupted cycle after material replenishment is described in the chapter on material replenishment in the automatic cycle of the type PIECES and in the automatic cycle of the type BARS.

- Button STOP

- 1x press – interrupt automatic cycle of „Pause“ type

If the operator presses 1x STOP when the cut has not yet started, the automatic cycle is interrupted immediately.

If the operator presses 1x STOP while the cut is in progress, the automatic cycle is interrupted only after the saw has finished cutting.

When the automatic cycle is interrupted by pressing 1x STOP, the machine is set to "Pause" mode.

The "Pause" mode can be terminated by pressing the **START** button and the cycle interrupted by the pause will immediately resume automatically from the point of interruption.

- 2x press – interrupt automatic cycle.

Pressing the STOP button twice can be used to interrupt the automatic cycle.

To resume the cycle, follow the **standard procedure for resuming an interrupted automatic cycle** - as described above.

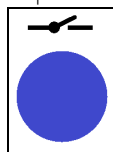
- Emergency stop switch .

The resume thy cycle follow the **standard procedur e**for resuming an interrupted **automatic cycle** as described above

Ovládání stroje
Bedienung der Maschine
Machine control

- By interrupting the safety circuits

Use the button on the saw's control panel to activate the saw's safety switches



To resume the cycle, follow **the standard procedure for resuming an interrupted automatic cycle** - as described above.

4. Automatic cycle ending

- It will no longer be possible to resume the ended automatic cycle from the step at which it was interrupted.

When the automatic cycle is ended, information on the number of cut up pieces is always deleted and the machine loses information on the step in which the system was before being ended.

If the operator wants to resume the interrupted cycle from the step in which it was interrupted, s/he must adapt the recipe so that the machine gets information on from where cutting should be resumed or s/he must compile a special recipe for the rest of the cycle.

If the operator wants to adapt the recipe, s/he can mark with cross the lines which you do not want to cut or modify the number of pieces in the line which has not been finished.

If the adapted recipe is not saved, the corrected data will only be entered until they are adapted again or until another recipe is opened.

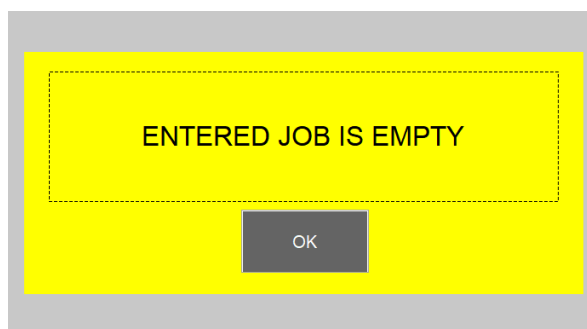
- If the BARS type automatic cycle is ended during the cycle, all information in the table of unfinished pieces will be deleted automatically.
- If the BARS type automatic cycle is ended automatically after the cycle has been completed, information in the table of unfinished pieces will be preserved.

5. Methods of automatic cycle ending

- Automatic ending – after the cycle is completed

The automatic cycle is terminated after its completion – i.e. after all dinal pieces have been cut in the automatic cycle type "PIECES" o rafter all blanks have been cut in the automatic cycle type "BARS"

When a completed automatic cycle is automatically terminated an automatic cycle termination message always appears on the control display.



- Opening a new recipe

If the operator, after interrupting the currently running automatic cycle, opens a different recipe than the one according to which the interrupted cycle was running.

After opening a new recipe, if the operator goes through the automatic cycle preparation and presses the **START** button – a according to the new recipe

By the "NO" option on the screen with enquiry whether s/he wants to continue in the unfinished job:



If the operator selects "NO":

- it will not be possible to continue the interrupted automatic cycle from the step in which the interruption occurred.
- If the operator goes through the automatic cycle preparation and presses the **START** button - then the interrupted automatic cycle will be restarted from the beginning - i.e. from the first non-zero checked recipe line

4. **Receptury/ Rezepturen/ Recipes**

4.1. Recipes

Recipes are software plans controlling the cutting procedure for final pieces of various lengths in the automatic cycle.

One automatic cycle is controlled by one recipe and used to cut final pieces from bar semi-products or bundles of semi-products which have:

- identical section parameters
- identical or different length parameters

If you need to cut material with different section parameters, it is necessary to create a specific recipe for every section and cut every section in a specific automatic cycle.

Note:

Everything stated below for "bar semi-products" also applies to "bundles of bar semi-products".

The machine software enables two types of recipes to be created on the machine directly:

- recipes for the "PIECES" type automatic cycle
- recipes for the "RODS" type automatic cycle

Another option for creation of recipes for this machine is use of the independent Saw Manager software (supplied by Bomar spol. s.r.o.).

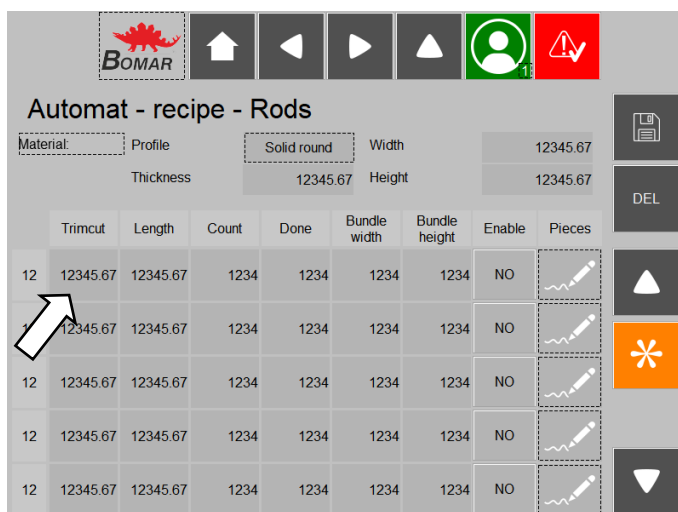
The Saw Manager software is used to create recipes with optimized material; recipes for the "RODS" type automat are created by means of it.

A recipe created in Saw Manager is put together on computer (independently of the machine) and can be imported to this machine memory via network connection or USB connector by the procedure described in the chapter on work with recipe files.

Cooperation between the machine and Saw Manager software is subject to purchase of a Saw Manager software license.

The machine software also enables the loaded (current) recipe to be modified and saved with the changes made.

To enter parameters on all recipe screens, you can touch the field in which you want to enter the parameter to activate a numeric keyboard with which you can enter and confirm the given value.

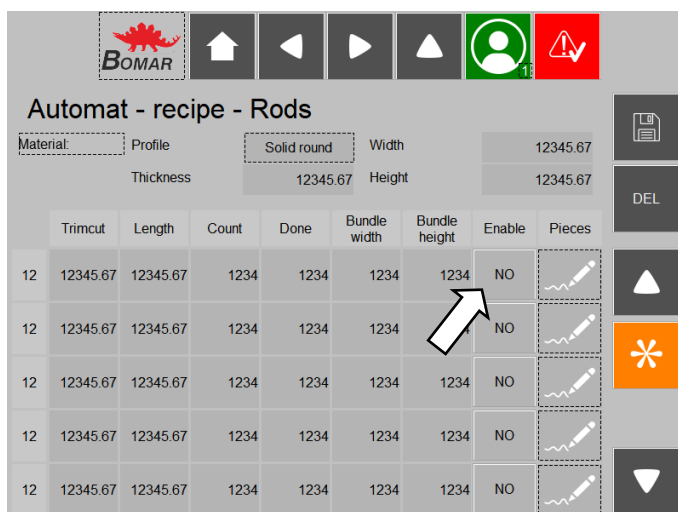


	Trimcut	Length	Count	Done	Bundle width	Bundle height	Enable	Pieces
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	

By means of ticks and crosses at the line ends, you can also operatively modify the given recipe configuration additionally:

Mark the lines to be executed in the given automatic cycle with "YES"

Mark the lines not to be executed in the given automatic cycle with "NO"



	Trimcut	Length	Count	Done	Bundle width	Bundle height	Enable	Pieces
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	
12	12345.67	12345.67	1234	1234	1234	1234	NO	

Procedures for working with recipe files – see chapter , Managing recipe files".

Attention!

If you do not save the changed or newly entered recipe according to the procedure described in the chapter "Managing recipe files":

- unsaved data written in the recipe will be automatically saved only in the machine cache after you select the icon on the edit screen to move to the



next screen

The machine will follow this data for each subsequent automatic cycle run, i.e. the cycle or cycles will run according to the modified but not properly stored current recipe.

- when another recipe is opened, the cached data will be lost and it will not be possible to return to the unsaved data

4.2. Modification of currently loaded recipe

On the screens of currently loaded recipes, the currently loaded recipes can be modified to any extent.

Unless these modifications are saved, they will only be valid until you choose the "New" option on any recipe screen.

If the modification should be kept, the modified recipe must be saved.

Modification procedure:

1. As necessary delete the entire display as needed by selecting



2. Adjust the required parameters in the individual fields of the recipe as required.
3. Through the „Enable“ option it is possible to modify the configuration of the current recipe so that:
 - non-zero rows confirmed via the "YES" option will be executed
 - non-zero rows rejected via the 'NO' option will not be executed.

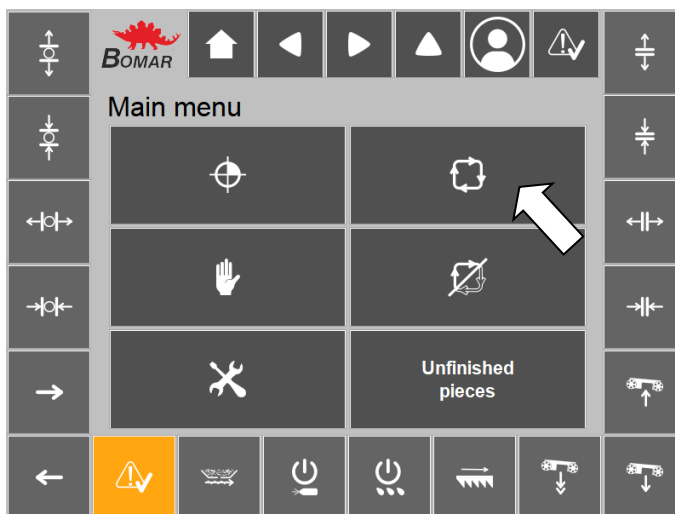
The automatic loop always starts with the first confirmed non – zero row and continues sequentially with all subsequent confirmed non – zero rows according to the numerical order in which the rows are marked.

4. If necessary, save the modified recipe - see the chapter on working with recipe files

4.3. Selecting the recipe type when creating a new recipe on the machine

Since the machine software reproduces the execution of the automatic cycle according to two different types of recipe, it is necessary to select the type of recipe to be created before a **new recipe is created**.

1. On the **main screen** of the control software, select the option to initialize **the automatic mode**



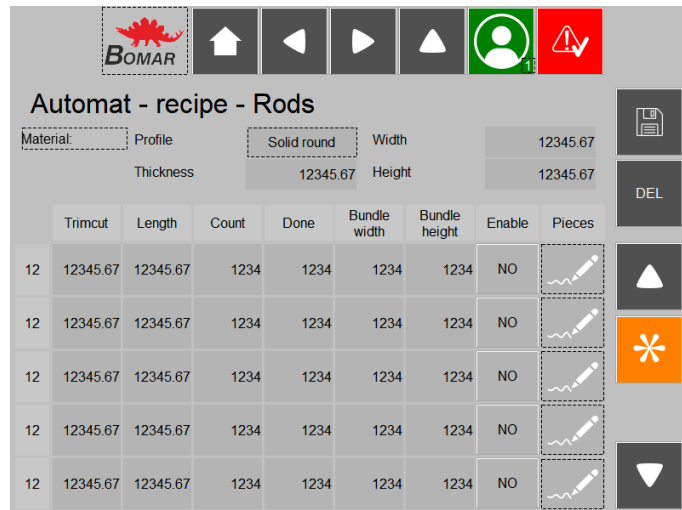
2. After pressing the option to enter the automatic mode, the **screen of the last**

loaded recipe will appear

Recipe screen for the "PIECES" type automatic cycle.

      													
	Length	Count	Done	Box	Enable		Length	Count	Done	Box	Enable		
1	12345.67	1234	1234	1234	NO	11	12345.67	1234	1234	1234	NO		
2	12345.67	1234	1234	1234	NO	12	12345.67	1234	1234	1234	NO	DEL	
3	12345.67	1234	1234	1234	NO	13	12345.67	1234	1234	1234	NO		
4	12345.67	1234	1234	1234	NO	14	12345.67	1234	1234	1234	NO		
5	12345.67	1234	1234	1234	NO	15	12345.67	1234	1234	1234	NO		
6	12345.67	1234	1234	1234	NO	16	12345.67	1234	1234	1234	NO		
7	12345.67	1234	1234	1234	NO	17	12345.67	1234	1234	1234	NO		
8	12345.67	1234	1234	1234	NO	18	12345.67	1234	1234	1234	NO		
9	12345.67	1234	1234	1234	NO	19	12345.67	1234	1234	1234	NO	Trimcut	
10	12345.67	1234	1234	1234	NO	20	12345.67	1234	1234	1234	NO	12345.67	

Recipe screen for the automatic cycle type „RODS“.



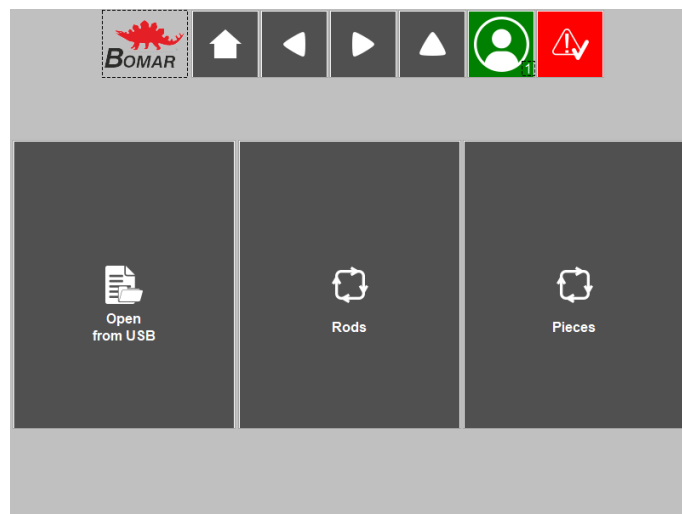
3. On the corresponding screen of the currently loaded recipe, select the



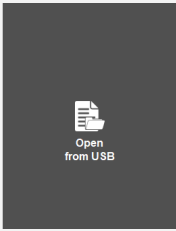
option to open a new recipe



4. After pressing the option to open a new recipe a screen will appear with the selection of type of new recipe and the option to open the recipe from USB:



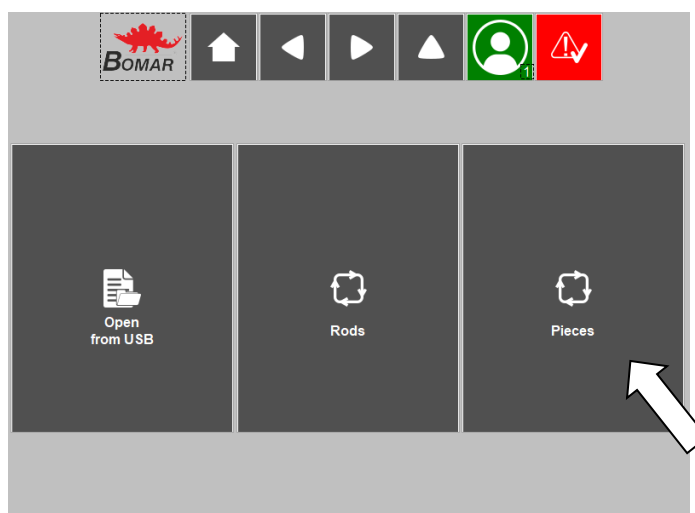
Position	Function
PIECES	Entry in the menu enabling creation of a recipe for the "PIECES" type automatic cycle.
RODS	Entry in the menu enabling creation of a recipe for the "RODS" type automatic cycle.

Position	Function
	Enter menu to load receptury from USB

4.4. Recipe creation on the machine for the "PIECES" type automatic cycle.

4.4.1. Entry in the menu for recipe creation for the "PIECES" type automat.

1. On the screen for selection of the automat types choose the "PIECES" automat type.



2. The first recipe screen appears

This screen is used to enter information on lengths quantities and cutting sequence of final pieces.

Length Count Done Box Enable						Length Count Done Box Enable						
1	12345.67	1234	1234	1234	NO	11	12345.67	1234	1234	1234	NO	
2	12345.67	1234	1234	1234	NO	12	12345.67	1234	1234	1234	NO	DEL
3	12345.67	1234	1234	1234	NO	13	12345.67	1234	1234	1234	NO	
4	12345.67	1234	1234	1234	NO	14	12345.67	1234	1234	1234	NO	
5	12345.67	1234	1234	1234	NO	15	12345.67	1234	1234	1234	NO	
6	12345.67	1234	1234	1234	NO	16	12345.67	1234	1234	1234	NO	
7	12345.67	1234	1234	1234	NO	17	12345.67	1234	1234	1234	NO	
8	12345.67	1234	1234	1234	NO	18	12345.67	1234	1234	1234	NO	
9	12345.67	1234	1234	1234	NO	19	12345.67	1234	1234	1234	NO	Trimcut
10	12345.67	1234	1234	1234	NO	20	12345.67	1234	1234	1234	NO	12345.67

Position	Funktion
	Scrolling between screens
	Line number number of the batch of final pieces, to which parameters entered in the given line apply. If more than 1 piece is entered in the field for the required number of pieces, all pieces of this batch will be cut in immediate succession
Length	Required length of the final piece
Number	Required number of pieces of a given length
Done	Number of final pieces of the given length already cut from the batch specified on the given line
Box	Option for sorting pieces The option is only functional if the machine is equipped with an external device for sorting the cut pieces.
Enable	YES - cut the specified recipe line NO - do not cut the specified recipe line
	Save recipe on USB
	Deleting the contents of a recipe
	Opening of a new recipe
Trimcut	Lenght if cut

4.4.2. Description of the recipe creation screen for the "PIECES" type automat

During recipe composition, the following rules must be taken into account:

The recipe for the automatic cycle type "PIECES" requires the input of information about:

- the required length of the final pieces
- the number of angles on the leading edge

- the values of the angles on the leading and trailing edges
- the required number of final pieces
- Enter the information on the individual lines **in the order in which the final pieces will be cut in sequence.**
- One or more pieces can be entered on one line on the recipe screen that have the same length and the same cutting angles
- Once the final piece parameters have been completely entered, it is possible to further adjust the configuration of the final pieces by checking the lines that are actually to be cut in the automatic cycle

On the recipe screen:

Mark **"YES"** for the pieces (lines) to be cut in the cycle.

Mark **"NO"** for the pieces (lines) that are not to be cut.

4.4.3. Cutting according to the recipe for the automatic cycle type "PIECES"

- The automatic cycle of type "PIECES" starts cutting according to the corresponding recipe of type "PIECES" from the first non-zero checked line.
- All pieces on the current line are always cut immediately after each other and only then the cycle continues with the next line.
- The insertion of additional material is requested whenever it is no longer possible to feed the next required length for cutting, which is prescribed by the current recipe.

4.5. Recipe creation on the machine for the "RODS" type automatic cycle

4.5.1. Cutting plan

Before creating a recipe for the automatic cycle of the "TYPE" type, it is necessary to prepare a cutting plan in which all the required final pieces on each semi-finished product will be lined up so that each semi-finished product will have a residue of the minimum length required by the machine user.

If the recipe for the automatic cycle of the "TYPE" type is created using the independent software Saw Manager (**recommended procedure**), then the above mentioned cutting plan is created automatically by this software and the output of the Saw Manager software is already a finished recipe for the control of the automatic cycle of the "TYPE" type on the machine.

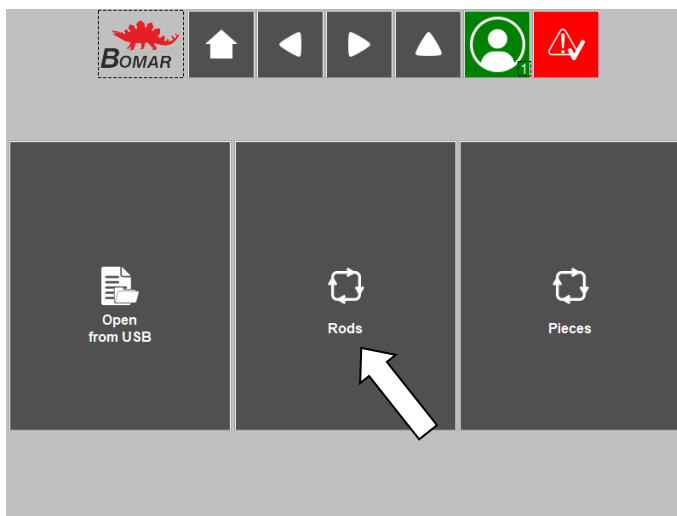
If the recipe for the automatic cycle of the "TYPE" type is created by the software on this machine, then the said plan must be created in advance by the user's authorised person and only on the basis of this plan is the recipe entered on the machine.

Attention!

The required length of the minimum residue must not be less than the length of the minimum technological residue for the machine with the given equipment (e.g. the upper clamping has an influence on the length of the technological residue).

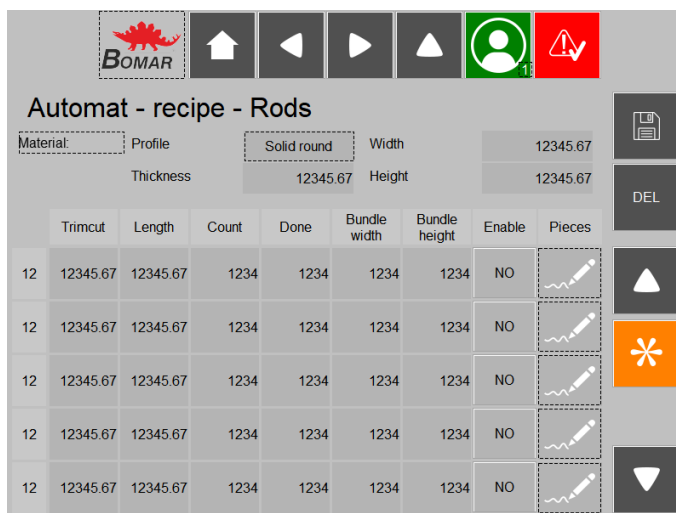
4.5.2. Entry to the menu for recipe creation for the "RODS" type machine.

1. On the recipe type selection screen „RODS”.



2. After pressing the „RODS” option, the first screen of the recipe appears first.

The first recipe screen is always used to enter information about the parameters and sequence of batches of bar blanks as they will be fed into the machine in succession during the automatic cycle:



Position	Funktion
Profile	Select the profile that matches the blank. If it is not possible to select a matching profile, select the most similar one.
Width Height	Enter the dimensions of the blank profile
Thickness	For hollow blanks, enter the wall thickness according to reality. If a solid wall blank is selected in the "Profile" field, no value entered will be taken into account

Position	Funktion
1 0.00 0.00	Line number identification number of the aggregate batch of bar stock in question
2 0.00 0.00 Trimcut	Length of incision
Lenght	Length of bar blanks in a given batch
Number	The total number of bars to be inserted in a given batch
Finished	The number of bars already cut from a given batch
Volume Width	Number of bars in the bundle per total width
Volume Height	Number of bars in the bundle über total height
Enable	YES – cut the specified recipe line NO – do not cut the specified recipe line
Pieces 	Go to the screen to specify the pieces that will be cut from a given bar
	Recipe storage on USB
DEL	Deleting the contents of a recipe
	Open a new recipe
	Scrolling between lines

Second screen for each of the rows - the "Pieces" screen

For each line of the initial "bars" screen, it is possible to display a toolbar that is used to enter information about the placement of the final pieces on the bars of the blanks (the "PIECES" screen).



Automat - recipe - Pieces

	Length	Count	Done	Box	Enable		Length	Count	Done	Box	Enable
1	12345.67	1234	1234	1234	NO	11	12345.67	1234	1234	1234	NO
2	12345.67	1234	1234	1234	NO	12	12345.67	1234	1234	1234	NO
3	12345.67	1234	1234	1234	NO	13	12345.67	1234	1234	1234	NO
4	12345.67	1234	1234	1234	NO	14	12345.67	1234	1234	1234	NO
5	12345.67	1234	1234	1234	NO	15	12345.67	1234	1234	1234	NO
6	12345.67	1234	1234	1234	NO	16	12345.67	1234	1234	1234	NO
7	12345.67	1234	1234	1234	NO	17	12345.67	1234	1234	1234	NO
8	12345.67	1234	1234	1234	NO	18	12345.67	1234	1234	1234	NO
9	12345.67	1234	1234	1234	NO	19	12345.67	1234	1234	1234	NO
10	12345.67	1234	1234	1234	NO	20	12345.67	1234	1234	1234	NO

Position	Funktion
Length	Length of bar blanks in a given batch
Number	Total number of bars to be inserted in a given batch
Done	The number of bars already cut from the batch
Box	Option for sorting pieces This option is only functional if the machine is equipped with an external device for sorting cut pieces.
Enable	YES - cut the specified recipe line NO- do not cut the specified recipe line

4.5.3. Procedure of recipe creation for the "RODS" type automatic cycle

- It is possible to insert blanks of different lengths in one automatic cycle, each different length must be indicated on a separate line on the TYPE home screen.
- One recipe line on the BAR screen lists one cutting batch of bar blanks of the same length.
- On each line of the recipe on the TYPE screen, enter the data for the batches of bar stock in the order in which these batches will be loaded into the machine in sequence.
- In addition, a separate recipe must be created for each line that is created on the "BARS" turnaround screen that specifies the placement of the final pieces on each of the bars of that batch.
- All bars from one line on the "BARS" screen will be cut according to this one prescription that is created specifically for that line.

- The prescription for the placement of the final pieces can be entered on the screen that you find by using the icon to move between the recipe



- Thus, one line on the screen that is used to enter information about the placement of the final pieces on the bars is used to enter information about one continuous series of final pieces which:
 - match in length
 - and are to be cut in immediate succession
 - Fill in the rows on the CUTS screen in the order in which the final pieces will be lined up and cut consecutively on each bar of the blank from a given cutting batch.

4.5.4. Cutting by a recipe for the "RODS" type automatic cycle

- The automatic cycle of the "RODS" type starts cutting by the pertinent recipe so that:
 - It starts from the first non-zero line ticked off on the "RODS" screen.
 - On the first bar in this line, it cuts all pieces entered on the pertinent "PIECES" screen created for this line.
 - If more bar semi-products are entered in the cutting batch of bar semi-products on the "RODS" screen, the same configuration of all final pieces is repeatedly cut on every bar according to the same "RODS" screen.
 - After all bar semi-products in the given line have been cut, the cycle passes on the next line on the "RODS" screen and again cuts the first and all the other rods in the given line according to the uniform specification created on the "PIECES" screen which belongs to this line.
- If bar semi-products of sufficient length are loaded, loading of another material is required any time when the whole configuration entered on the "PIECES" screen has been cut on one loaded bar.
- If a bar is loaded with insufficient length for cutting the whole entered batch, loading of another piece is required as soon as it is no longer possible to load another length for cutting.

Unfinished pieces of the given semi-product will then not be cut from the next semi-product; they will just be registered in the table of unfinished pieces (see chapter "Unfinished pieces").

The new loaded material will be cut from the beginning precisely according to the given semi-product specification created on the "PIECES" screen.

4.6. Administration of recipe files

4.6.1. Recipe file extensions

Recipe files saved in the machine memory have always the **.bcpl** extension.

The **.bcpl** extension will be assigned to any recipe file saved in the machine memory, even if the original file had another extension.

Recipes exported from the independent Saw Manager software have the **.csv** extension.

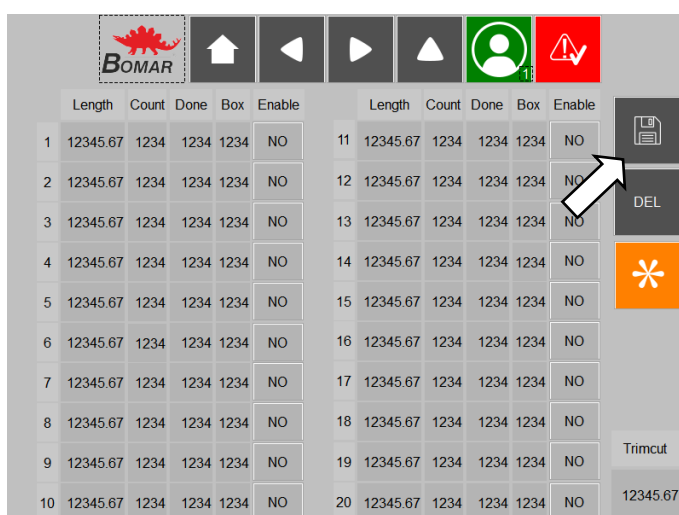
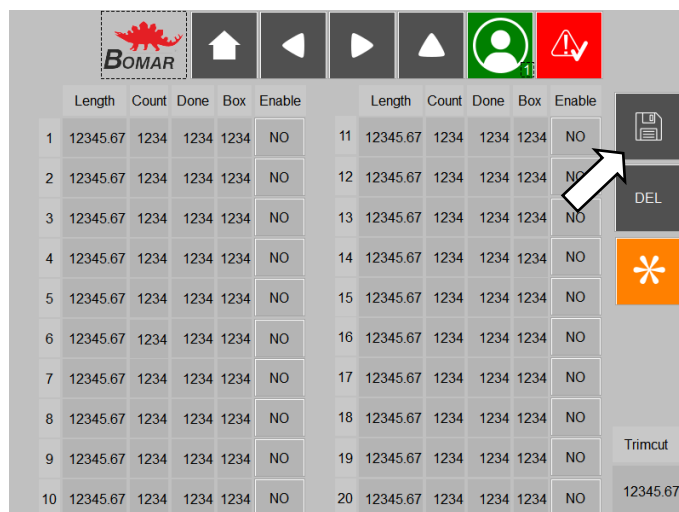
4.6.2. Administration of recipe files

Recipe file management includes:

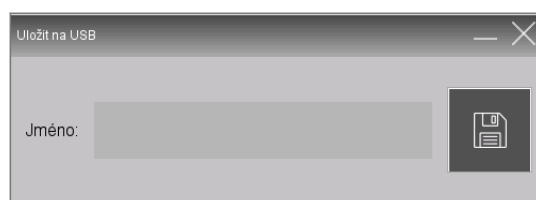
- saving newly created recipes
- opening already saved recipes

4.6.3. Saving the recipe on USB

1. On the relevant screen of the currently loaded recipe, select the option to save the recipe



2. The screen for **saving the recipe** appears:

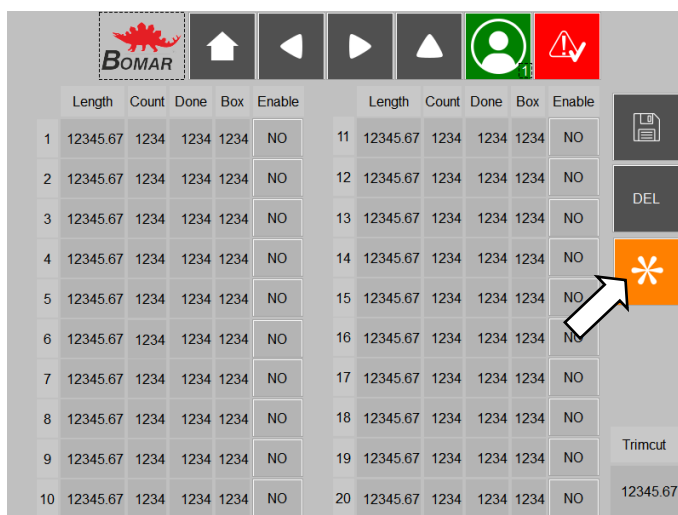
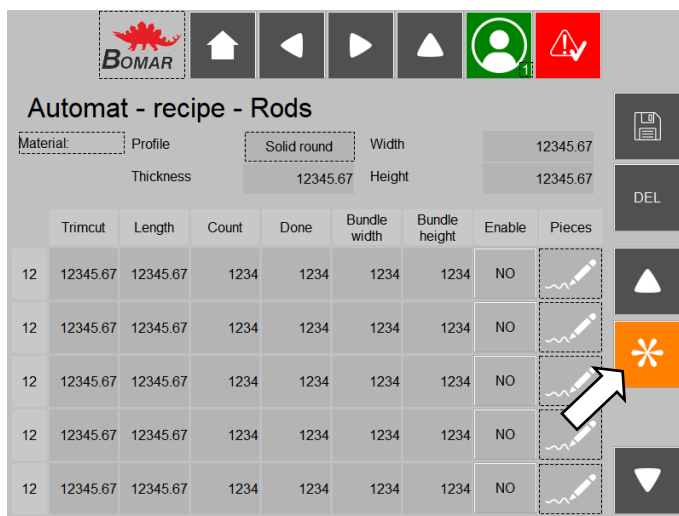


3. On this screen, enter the **name** of the recipe to be stored

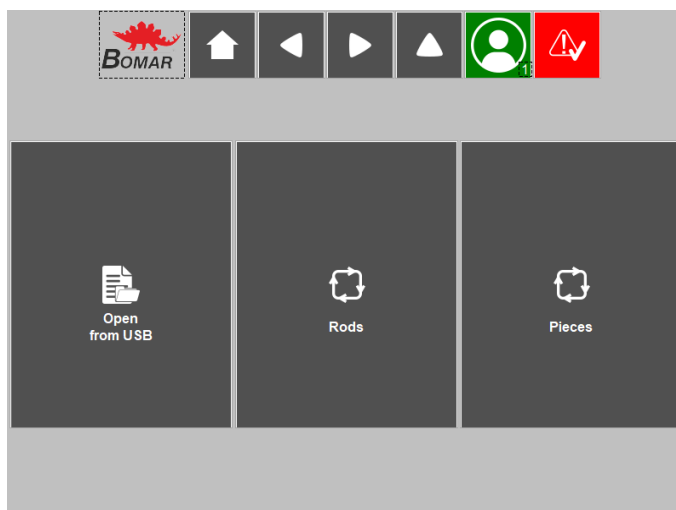
4.6.4. Loading a recipe from USB

1. On the corresponding screen of the currently loaded recipe, select the

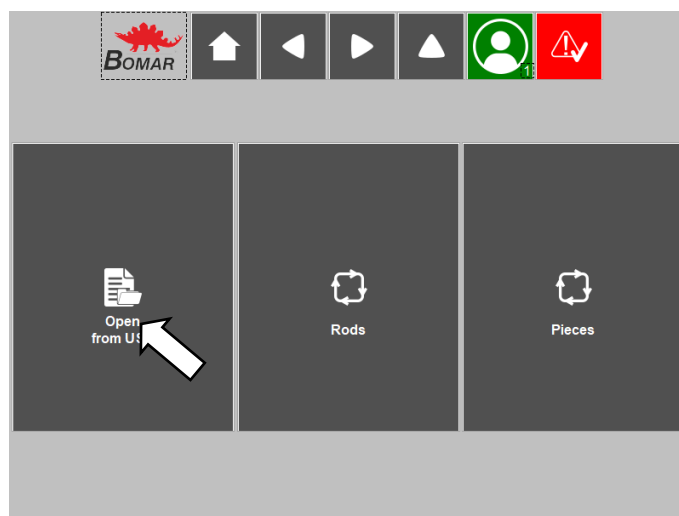
option to open a new recipe



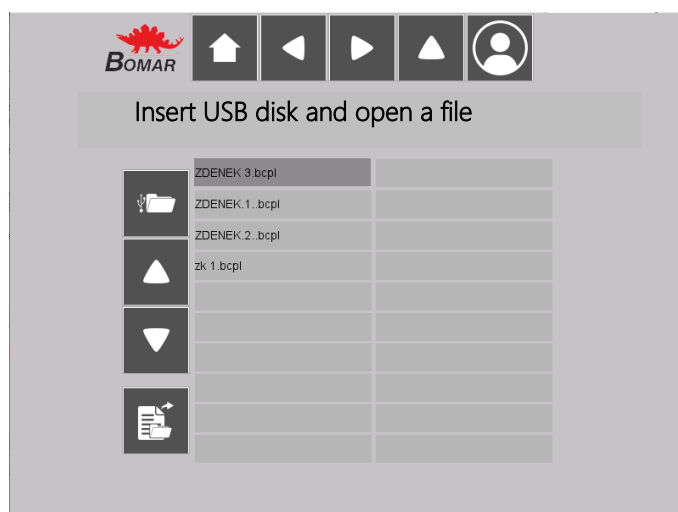
2. When you press the option to open a new recipe  a screen appears with selection of type of new recipe:

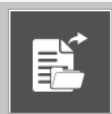


3. On the recipe type selection screen, select "Open from USB"



Screen for loading recipe from USB



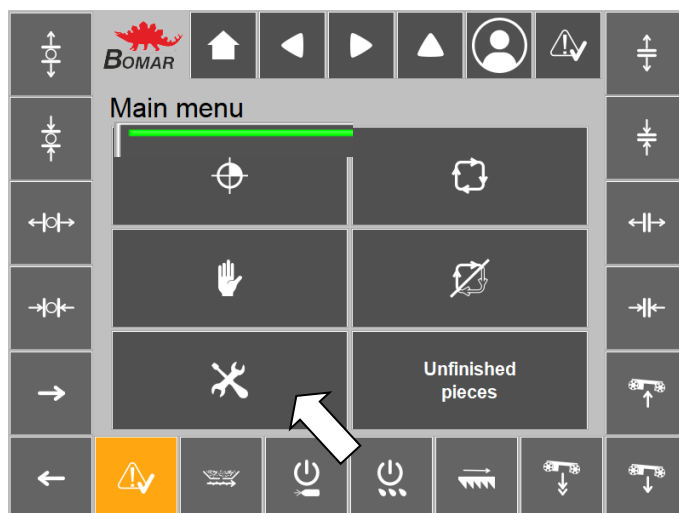
Position	Function
	Load USB Pressing this option will display the contents of the inserted USB drive. Caution! The files that are displayed on the screen may not correspond to the actual contents of the inserted USB! This option must therefore be pressed each time a new USB is inserted.
	Open the marked recipe file - once opened, the recipe is loaded into the machine's memory
	Listing/labelling a folder

5. **Nastavení servisních parametrů/ Einstellung der Serviceparameter/ Setting of service parameters**

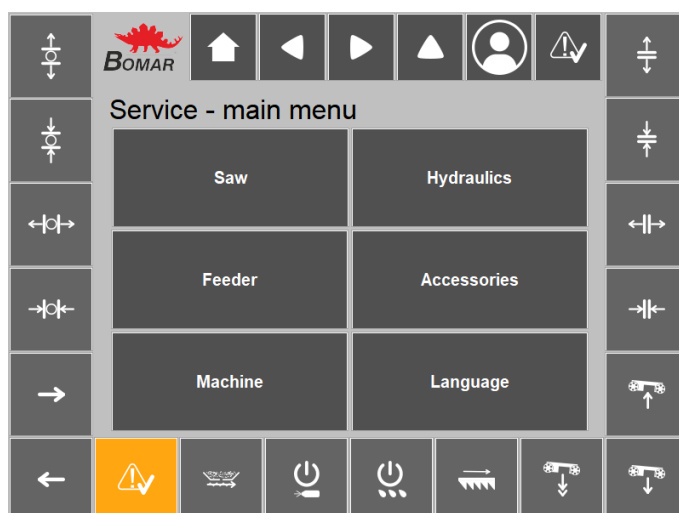
5.1. Setting of service parameters

1. Select the option for entering service parameters on the main screen of the

control software:



2. The options screen appears to select options for the settings



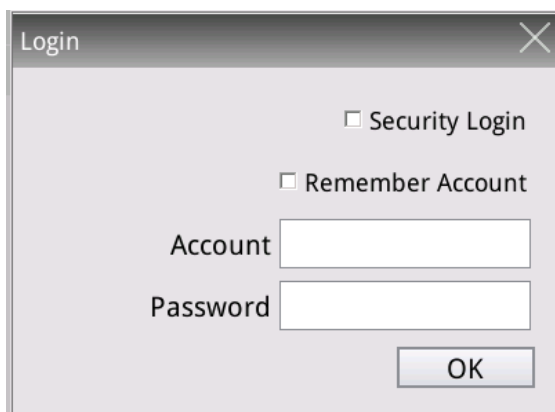
5.2. Entering a password to insert service parameters

In the individual screens, it is only possible to set the parameters which are coloured immediately or after the password at the certain hierarchical level is entered. Parameters the boxes of which remain uncoloured can only be set at a higher hierarchical level.

Parameter setting options are protected by passwords at several hierarchical levels.

Hierarchical level	Password
SERVICE1	1234
SERVICE2	3467
SERVICE3	2468
SERVICE4	135248

When you touch the user login icon  a menu for entering the password will pop up. The password can be entered at any time during parameter setting.



Login

☐ Security Login

☐ Remember Account

Account

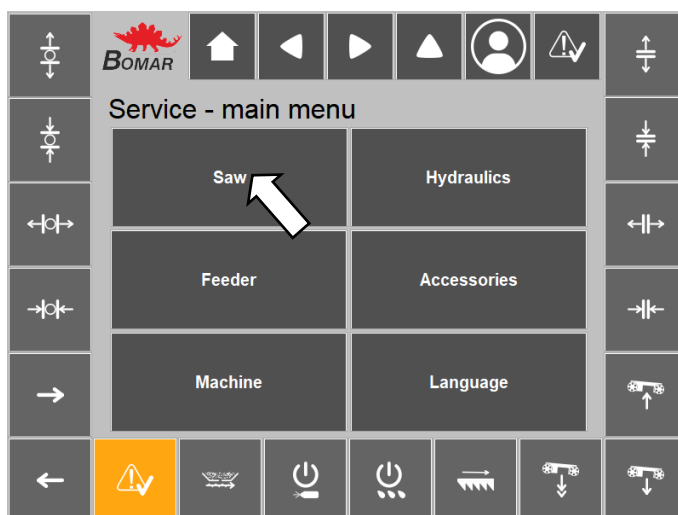
Password

OK

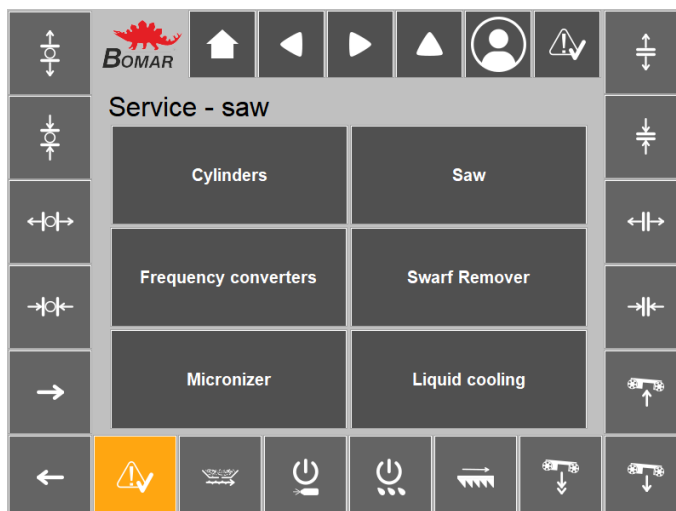
The password can again be set by activating the keypad after touching it in the password entry window.

5.3. Setting the service parameters of the saw

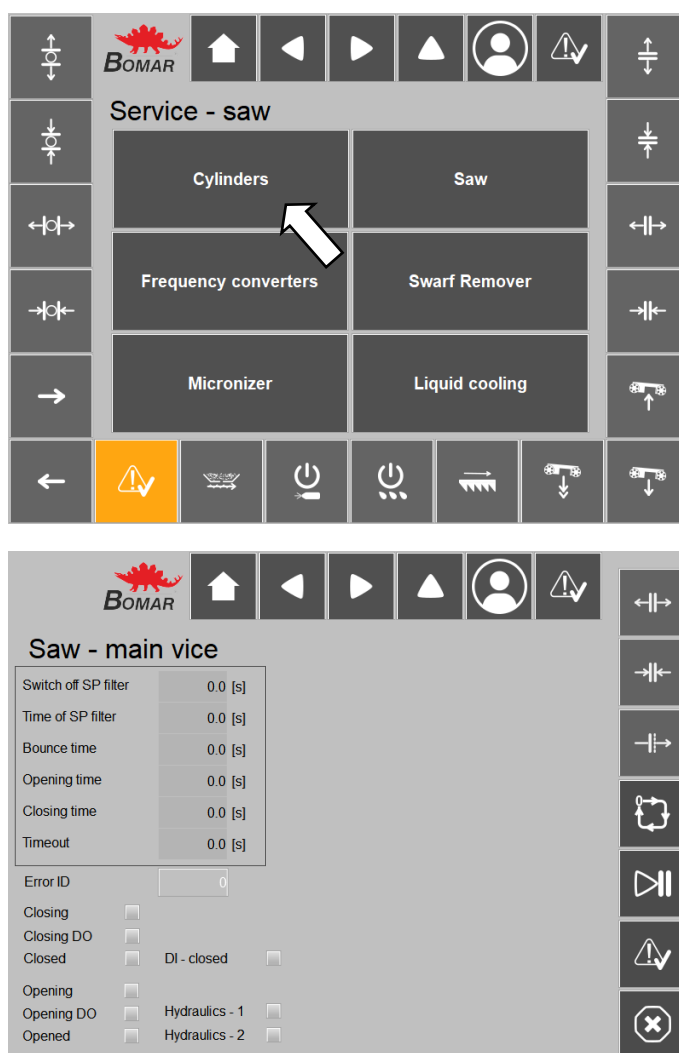
1. On the unit selection screen, select "Saw"



2. The following screen shows the options for setting the saw units:



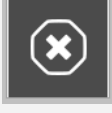
5.3.1. Service parameters of hydraulic cylinders of the saw



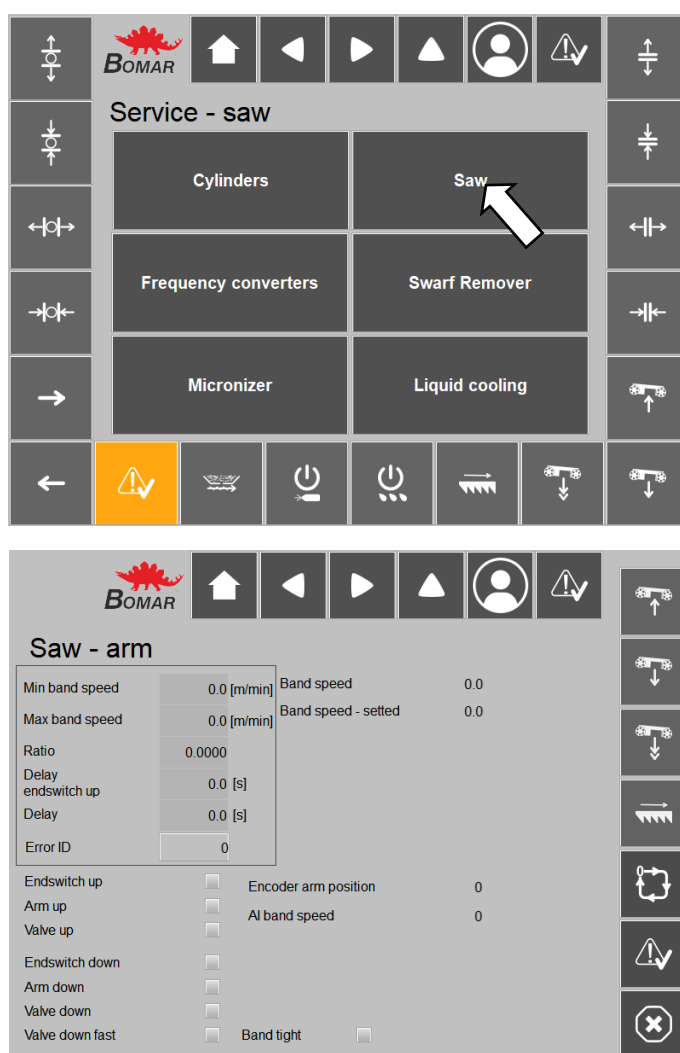
At the bottom of the screen is the **current status** indication.

The description of the cylinder screens applies to all cylinder service parameter setting screens:

Position	Funktion
Expandable SP filter	Switching filter time, filter to filter out oscillations on the end sensor when leaving the position
SP filter time	Switching filter time, filter for filtering out oscillations on the end encoder, when moving in the direction of the end encoder
Bounce time	Vise rebound time
Opening time	Vise opening time
Clamping time	Vise closing time
Timeout	Time limit for opening and closing the hydraulic cylinder

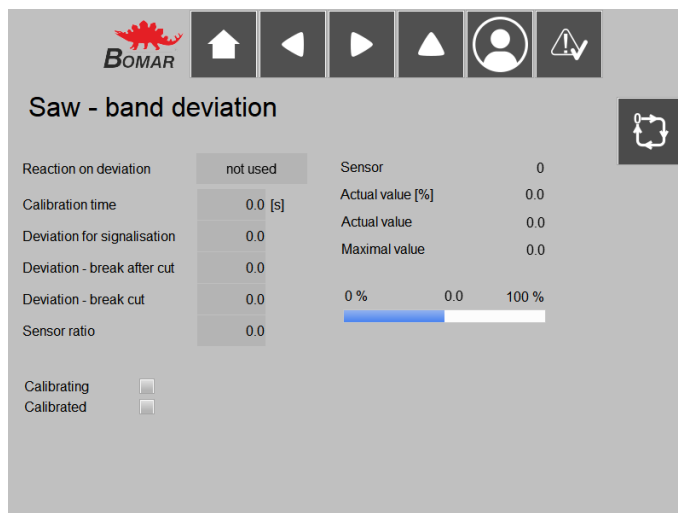
Position	Funktion
Error ID	If an error occurs, the error number is displayed (corresponds to the error listing)
	Icons for controlling the hydraulic cylinder  Open  Close  ...Bounce
	Restart, the values remain set.
	Interrupt and restart the line.
	Error message.
	Confirmation of error
	Stop unit movement

5.3.2. Setting the saw



At the bottom of the screen is the current status indication.

Position	Function
Minimum belt speed Maximum belt speed	Saw blade running speed limit values
Transfer	A constant that ensures that the displayed speed matches the actual speed
Delay Sensor on top Delay stroke limitation	Setting the deceleration of the unit in a given axis
Error ID	If an error occurs, the error number is displayed (matches the error listing)



Saw - band deviation

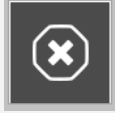
Reaction on deviation	not used	Sensor	0
Calibration time	0.0 [s]	Actual value [%]	0.0
Deviation for signalisation	0.0	Actual value	0.0
Deviation - break after cut	0.0	Maximal value	0.0
Deviation - break cut	0.0	0 % 0.0 100 %	
Sensor ratio	0.0		
Calibrating	☐		
Calibrated	☐		

Position	Function
Response to deflection	Select the desired machine response in case the set deviation limit is exceeded <i>Not used</i> – no reaction <i>Only to signal</i> – light signalling only <i>Finish the cut</i> – the started cut is completed and the machine stops when the cut is finished <i>Interrupt cut (Stop)</i> – the machine stops immediately
Calibration time	The time of the belt run to reset the deflection. It is recommended to keep the settings from the manufacturer.
Deviation for signalling Deviation - interruption after cut Deviation - interruption of cut	Deflection values for individual machine reactions
Sensor conversion ratio	Machine transmission constant. The parameter has been set by the manufacturer. Do not change the parameter value! The parameter affects the accuracy of the device.

The sensor for checking the deflection of the blade is located in the holder of the adjustable saw blade guide cube:

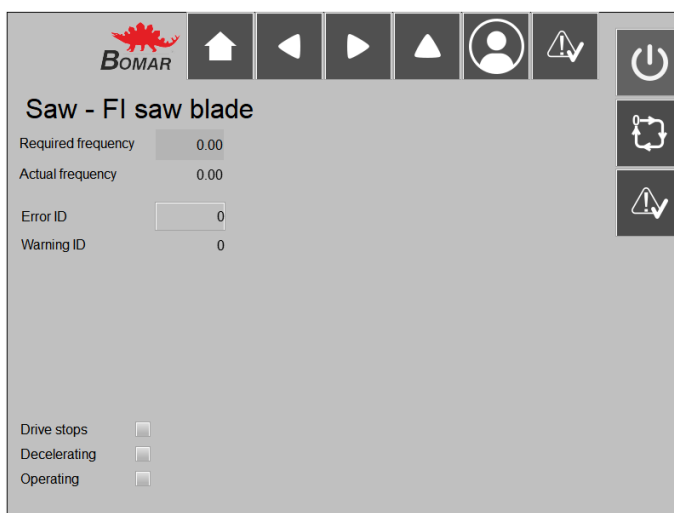
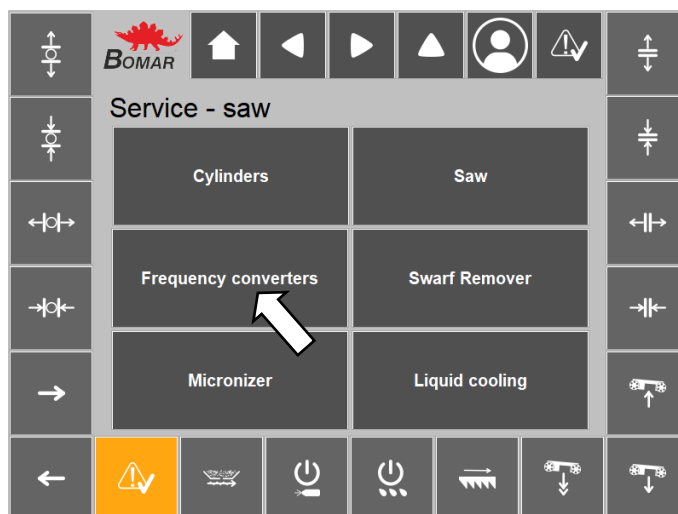
The signal light for indicating when the belt deflection is exceeded is located on the upper side of the arm.

The meaning of the symbols on the screens for setting up the saw:

Position	Function
	Arm upward movement. The button must be pushed continually during movement. If you release the button, the movement stops..
	Arm downward movement The button must be pushed continually during movement. If you release the button, the movement stops.
	Arm downward movement with fast feed The button must be pushed continually during movement. If you release the button, the movement stops.
	Start the saw band
	Restart, values remain set.
	Error message.
	Error confirmation
	Stop the belt

5.3.3. Service parameters of saw frequency converters

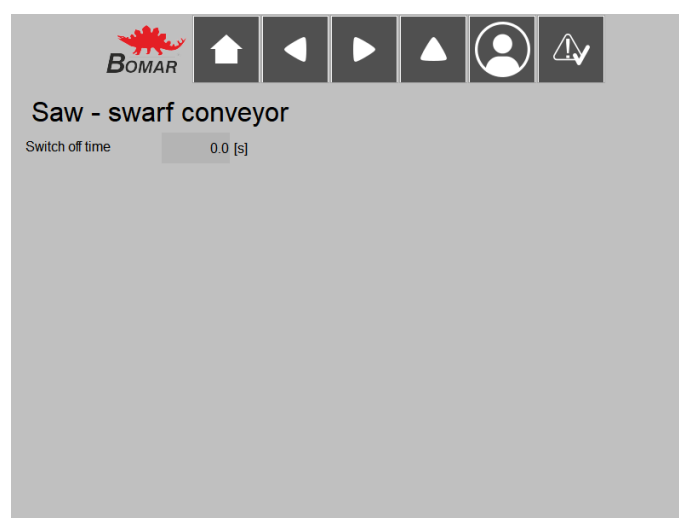
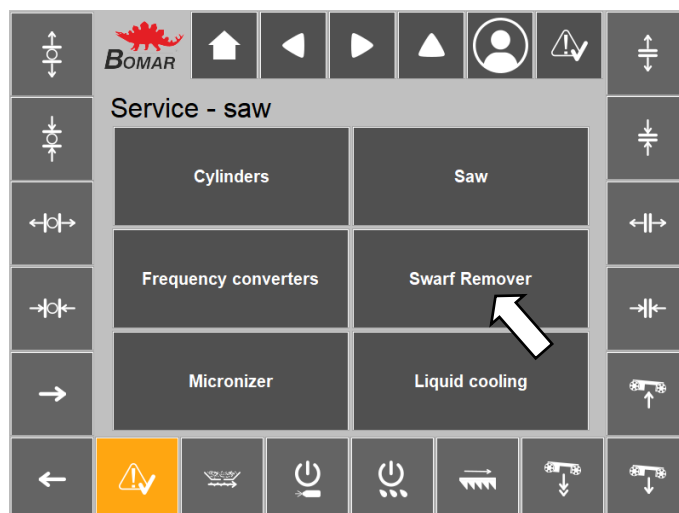
Nastavení servisních parametrů
Einstellung der Serviceparameter
Setting of service parameters



Position	Function
Required frequency	Frequency with which the controlled unit will move when the option is pressed 
Error ID	If an error occurs, the error number is displayed (matches the error listing)
Warning ID	If a warning message is issued, the ID of that message is displayed
	Switch the frequency converter on/off
	Restart, the values remain set.
	Error message.

Position	Function
	Error confirmation

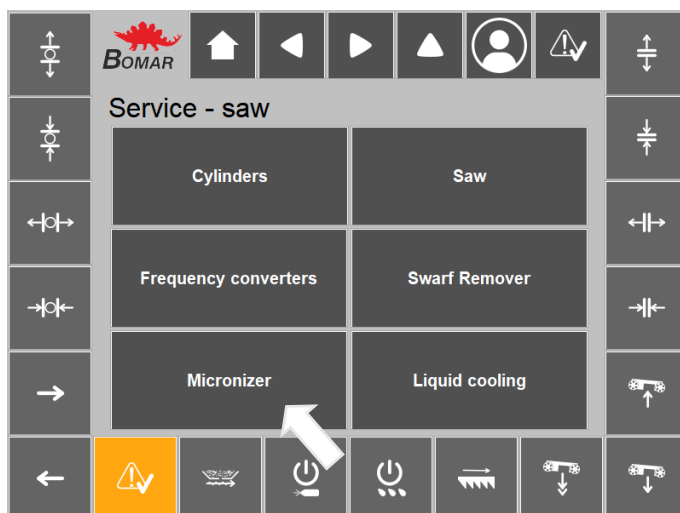
5.3.4. Setting up the chip ejector (optional equipment)



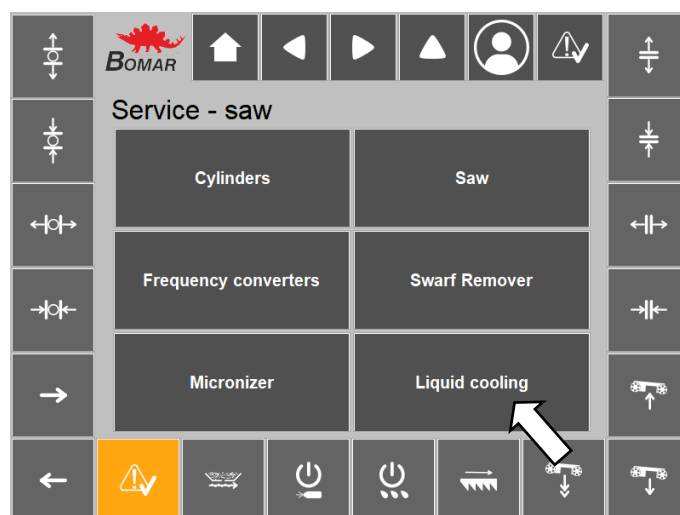
Position	Function
Cut-off time	The amount of time the chip ejector will continue to run after the saw blade is stopped. Notice: To turn off the chip extractor (at the moment of pressing the button on the touch panel), it is necessary to set a time of 0.1 s in the service parameters for the chip extractor.

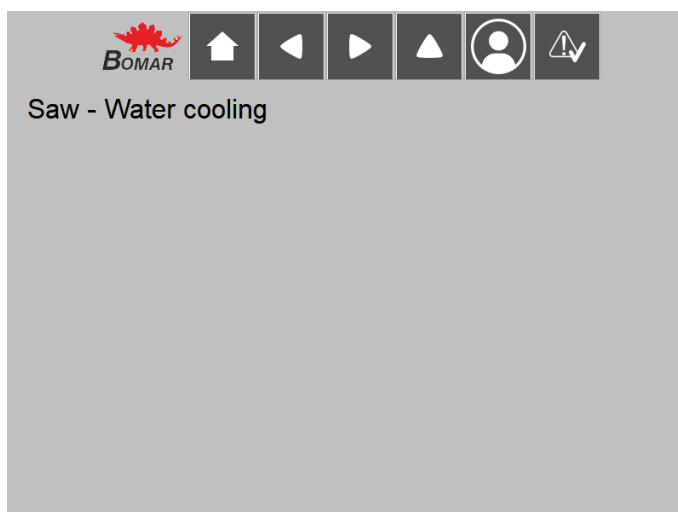
Nastavení servisních parametrů
Einstellung der Serviceparameter
Setting of service parameters

5.3.5. Micronizer setting (optional equipment)



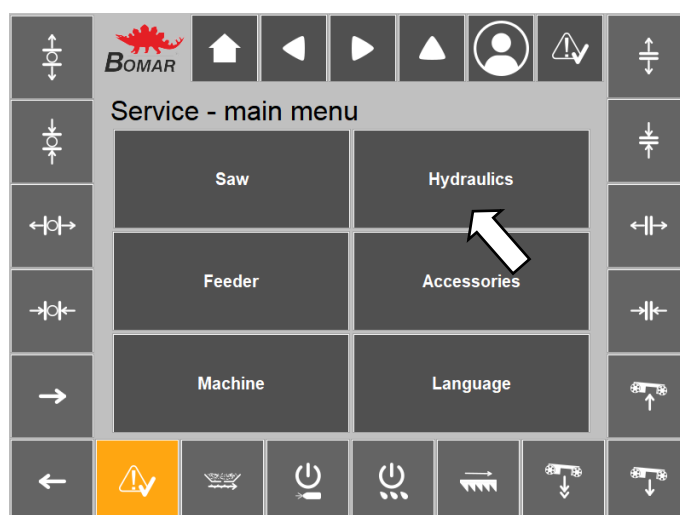
5.3.6. Cooling setting



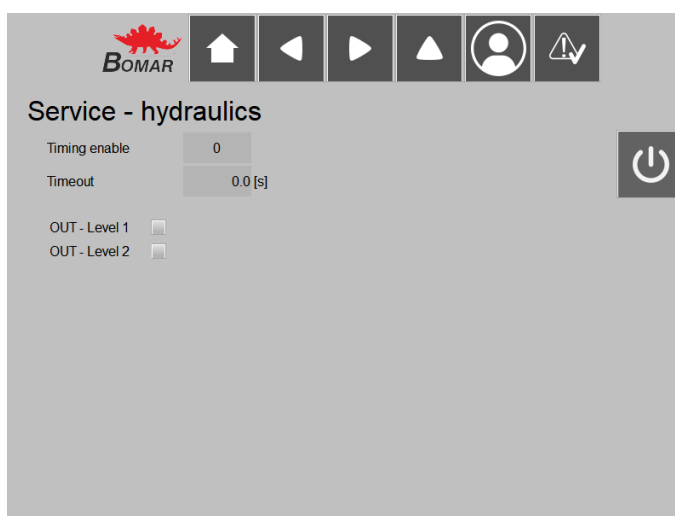


5.4. Setting hydraulic service parameters

1. On the setup options screen, select "Hydraulics"



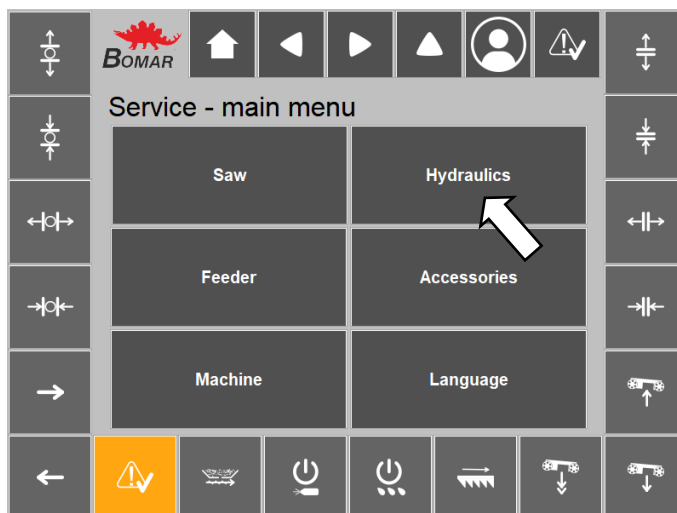
2. The following screen shows the options for setting the hydraulics options:



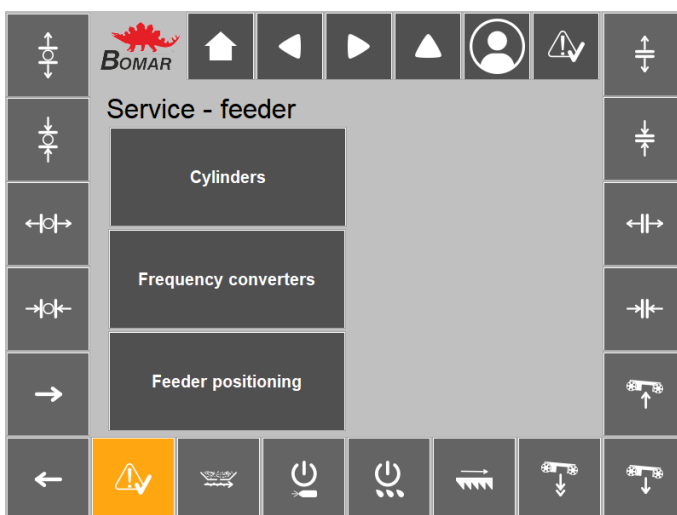
Position	Function
Enable timing Timeout	If the value "1" is entered, then after setting the controlled unit to the desired position, the hydraulic unit will still run for the time specified in the "Timeout" window.

5.5. Setting the service parameters of the feeder

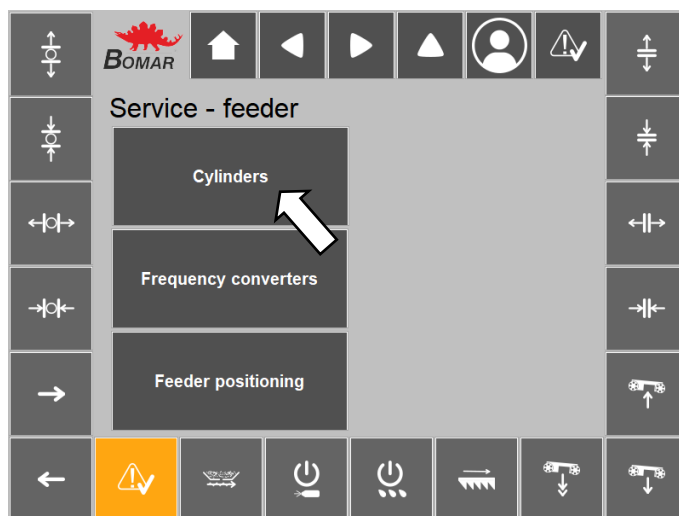
- From the setup options screen, select "Feeder"



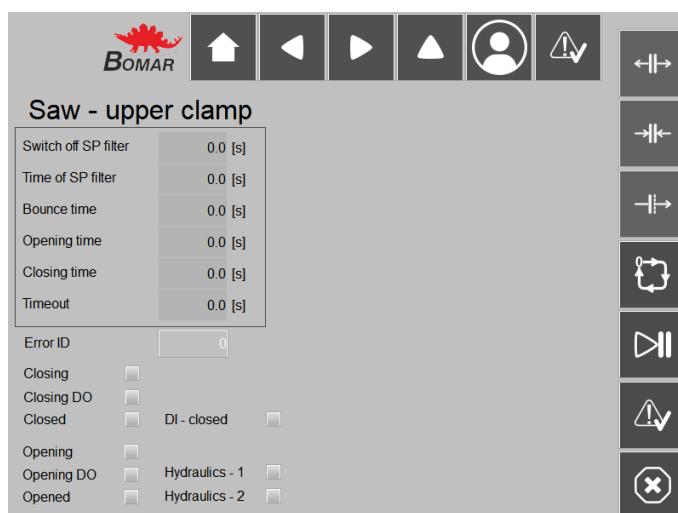
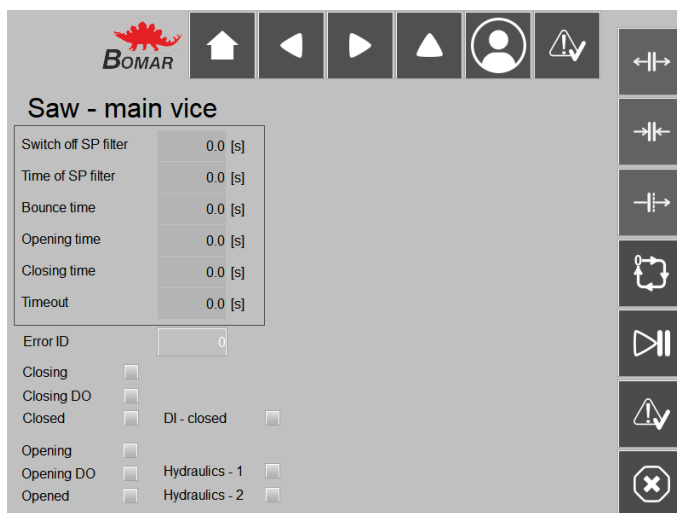
- The followin screen shows the options for **setting the feeder options**.



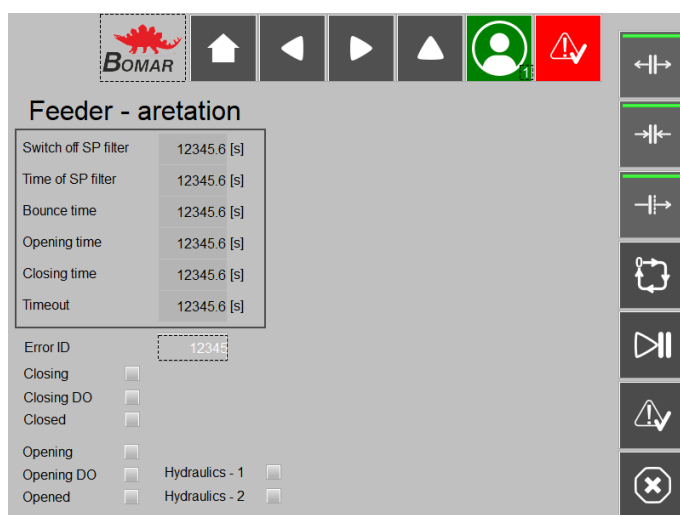
5.5.1. Service parameters of hydraulic cylinders on feeders



In the service parameter "Cylinders" under the setting of service parameters of the feeder i it is possible to set individual service parameters for hydraulic cylinders.



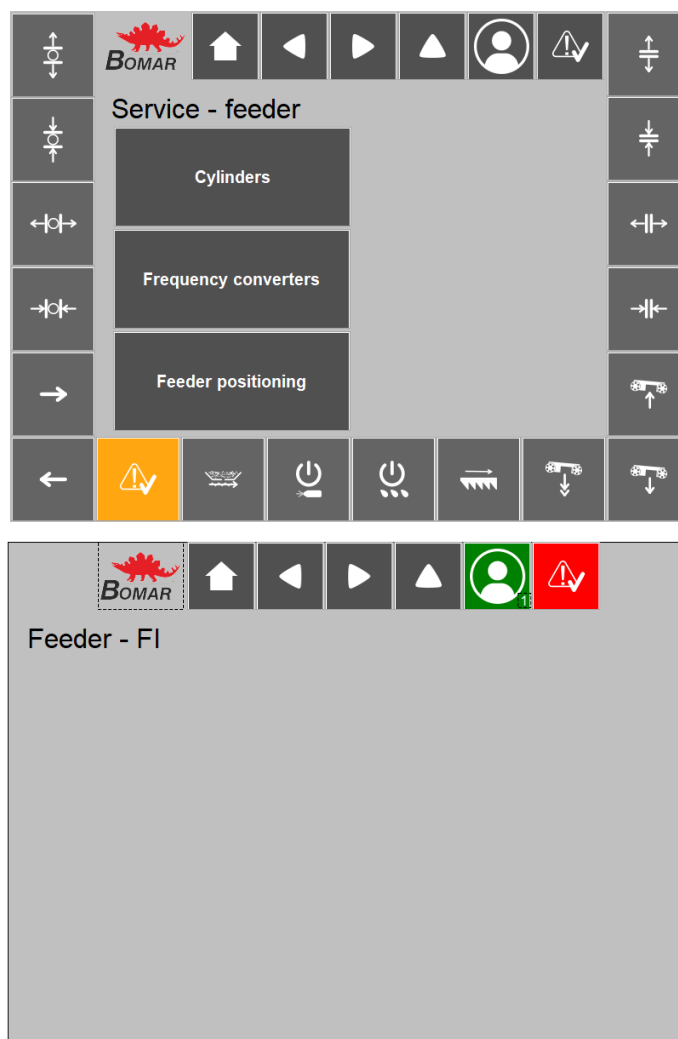
Nastavení servisních parametrů
 Einstellung der Serviceparameter
 Setting of service parameters



Position	Function
Expandable SP filter	Switching filter time, filter to filter out oscillations on the end sensor when leaving the position
SP filter time	Switching filter time, filter for filtering out oscillations on the end encoder, when moving in the direction of the end encoder
Rebound time	Vise rebound time
Opening time	Vise opening time
Clamping time	Vise closing time
Timeout	Time limit for opening and closing the hydraulic cylinder
	Icons for controlling the hydraulic cylinder  Open  Close  ... Bounce
	Restart, the values remain set.
	Interrupt and restart the line.

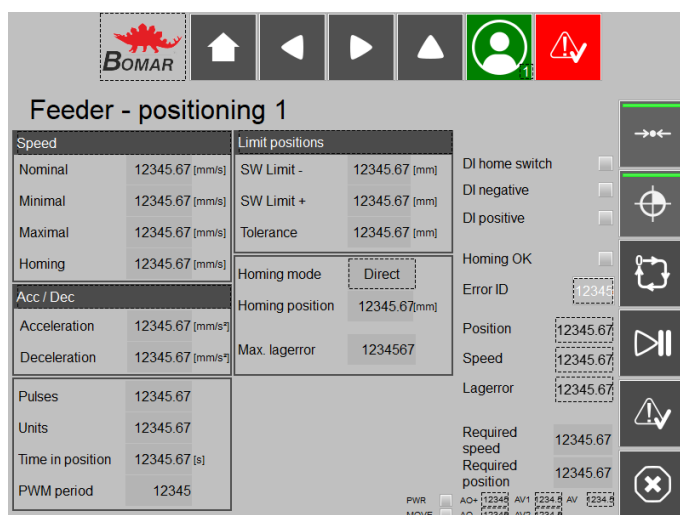
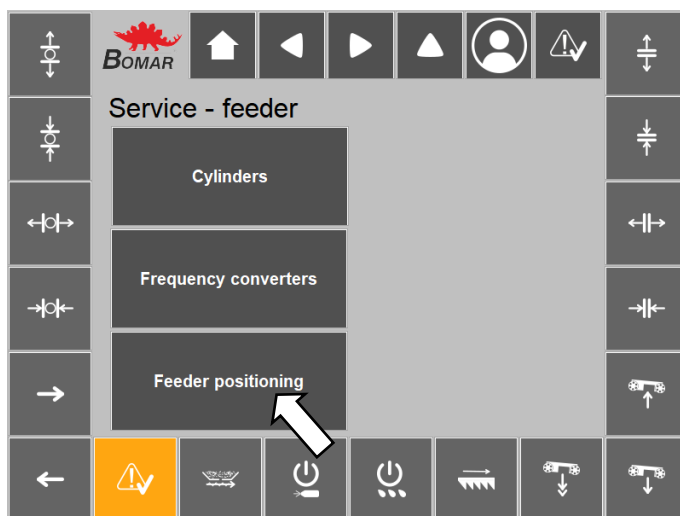
Position	Function
	Error message.
	Confirmation of error

5.5.2. Service parameters of the feeder frequency converters



5.5.3. Setting the feeder positioning parameters

Nastavení servisních parametrů
Einstellung der Serviceparameter
Setting of service parameters



Position	Function										
<table border="1"> <thead> <tr> <th colspan="2">Speed</th></tr> </thead> <tbody> <tr> <td>Nominal</td><td>12345.67 [mm/s]</td></tr> <tr> <td>Minimal</td><td>12345.67 [mm/s]</td></tr> <tr> <td>Maximal</td><td>12345.67 [mm/s]</td></tr> <tr> <td>Homing</td><td>12345.67 [mm/s]</td></tr> </tbody> </table>	Speed		Nominal	12345.67 [mm/s]	Minimal	12345.67 [mm/s]	Maximal	12345.67 [mm/s]	Homing	12345.67 [mm/s]	Setting speed parameters for positioning
Speed											
Nominal	12345.67 [mm/s]										
Minimal	12345.67 [mm/s]										
Maximal	12345.67 [mm/s]										
Homing	12345.67 [mm/s]										
<table border="1"> <thead> <tr> <th colspan="2">Acc / Dec</th></tr> </thead> <tbody> <tr> <td>Acceleration</td><td>12345.67 [mm/s²]</td></tr> <tr> <td>Deceleration</td><td>12345.67 [mm/s²]</td></tr> </tbody> </table>	Acc / Dec		Acceleration	12345.67 [mm/s²]	Deceleration	12345.67 [mm/s²]	Setting the acceleration / deceleration of the unit's movement				
Acc / Dec											
Acceleration	12345.67 [mm/s²]										
Deceleration	12345.67 [mm/s²]										
<table border="1"> <tbody> <tr> <td>Pulses</td><td>12345.67</td></tr> <tr> <td>Units</td><td>12345.67</td></tr> <tr> <td>Time in position</td><td>12345.67 [s]</td></tr> <tr> <td>PWM period</td><td>12345</td></tr> </tbody> </table>	Pulses	12345.67	Units	12345.67	Time in position	12345.67 [s]	PWM period	12345	- Pulses, Units - position measurement - used for correction of measurement - Time in position - the time the unit must be in position for the movement to be judged complete		
Pulses	12345.67										
Units	12345.67										
Time in position	12345.67 [s]										
PWM period	12345										

Position	Function								
<table border="1"> <thead> <tr> <th colspan="2">Limit positions</th></tr> </thead> <tbody> <tr> <td>SW Limit -</td><td>12345.67 [mm]</td></tr> <tr> <td>SW Limit +</td><td>12345.67 [mm]</td></tr> <tr> <td>Tolerance</td><td>12345.67 [mm]</td></tr> </tbody> </table>	Limit positions		SW Limit -	12345.67 [mm]	SW Limit +	12345.67 [mm]	Tolerance	12345.67 [mm]	Settings: • minimum permitted unit positions • maximum permitted unit positions • permitted tolerances of unit positions
Limit positions									
SW Limit -	12345.67 [mm]								
SW Limit +	12345.67 [mm]								
Tolerance	12345.67 [mm]								
<table border="1"> <tbody> <tr> <td>Homing mode</td><td>Direct</td></tr> <tr> <td>Homing position</td><td>12345.67[mm]</td></tr> <tr> <td>Max. lagerror</td><td>1234567</td></tr> </tbody> </table>	Homing mode	Direct	Homing position	12345.67[mm]	Max. lagerror	1234567	Referring mode – referring type • Directly • To referencing switch • To limit switch • Torque Reference position - setting the reference position of the unit Max. trailing error - if the requested parameter value differs by more than this specified value, the machine will declare an error.		
Homing mode	Direct								
Homing position	12345.67[mm]								
Max. lagerror	1234567								










Feeder - positioning 2

PID 1st		PID 2nd		
Kp	12345.67	Kp	12345.67	DI homing switch ☐
Ki	12345.67	Ki	12345.67	DI negative ☐
Min. Output	12345.67	Min. Output	12345.67	DI positive ☐
Max Output	12345.67	Max Output	12345.67	Homing OK ☐
Change PID A	12345.67 [mm]	Time in position	12345.67 [s]	Error ID 12345
Change PID B	12345.67 [mm]	Position tolerance	12345.67 [mm]	Position 12345.67
Pulses	12345.67	PWM period	12345	Speed 12345.67
Units	12345.67			Lagerror 12345.67
Insensitivity +	12345.67			Required speed 12345.67
Insensitivity -	12345.67			Required position 12345.67

PWR ☐ AD- AV1 AV

MOVE ☐ AD- AV2








Position	Function																				
<table border="1"> <thead> <tr> <th colspan="2">PID 1st</th></tr> </thead> <tbody> <tr> <td>Kp</td><td>12345.67</td></tr> <tr> <td>Ki</td><td>12345.67</td></tr> <tr> <td>Min. Output</td><td>12345.67</td></tr> <tr> <td>Max Output</td><td>12345.67</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">PID 2nd</th></tr> </thead> <tbody> <tr> <td>Kp</td><td>12345.67</td></tr> <tr> <td>Ki</td><td>12345.67</td></tr> <tr> <td>Min. Output</td><td>12345.67</td></tr> <tr> <td>Max Output</td><td>12345.67</td></tr> </tbody> </table>	PID 1st		Kp	12345.67	Ki	12345.67	Min. Output	12345.67	Max Output	12345.67	PID 2nd		Kp	12345.67	Ki	12345.67	Min. Output	12345.67	Max Output	12345.67	PID controller Switching - position tolerance after parameter switching KP1 - parameter , proportional component 1 • Tn1 - parameter, integration component
PID 1st																					
Kp	12345.67																				
Ki	12345.67																				
Min. Output	12345.67																				
Max Output	12345.67																				
PID 2nd																					
Kp	12345.67																				
Ki	12345.67																				
Min. Output	12345.67																				
Max Output	12345.67																				

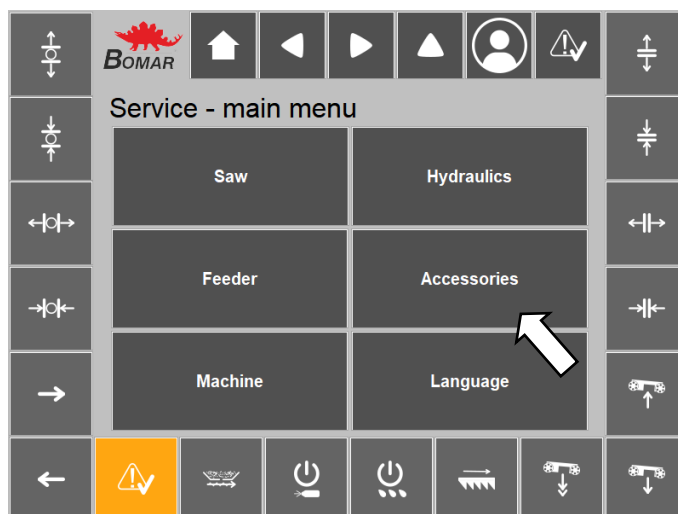
Position	Function
Change PID A 12345.67 [mm] Change PID B 12345.67 [mm] Pulses 12345.67 Units 12345.67	Position measurement - used for measurement correction
Insensitivity + 12345.67 Insensitivity - 12345.67	Max. allowed deviations from zero origin.
Time in position 12345.67 [s] Position tolerance 12345.67 [mm] PWM period 12345	Time in position - the time the unit must be in position for the movement to be judged complete Position tolerance - unit position tolerance

Meaning of other symbols on the positioning screens:

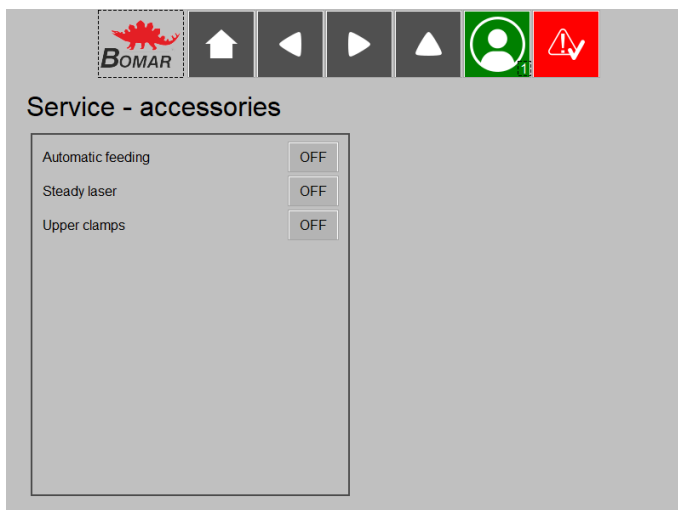
Position	Function
	Unit is/is not referring
	Unit is/is not in position
	Restart, the values remain set.
	Interrupt and restart the line.
	Error message.
	Error confirmation
	Stop unit movement

5.6. Accersories

1. On the setup options screen, select ,“Accessories”

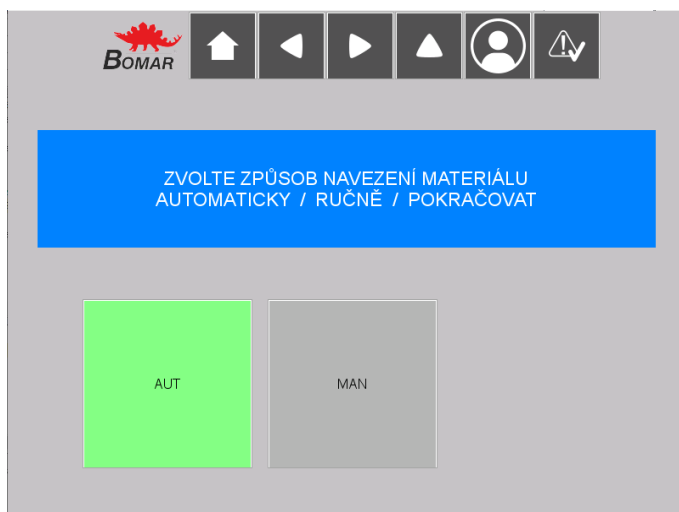


2. The following screen shows the options for setting accessory options:



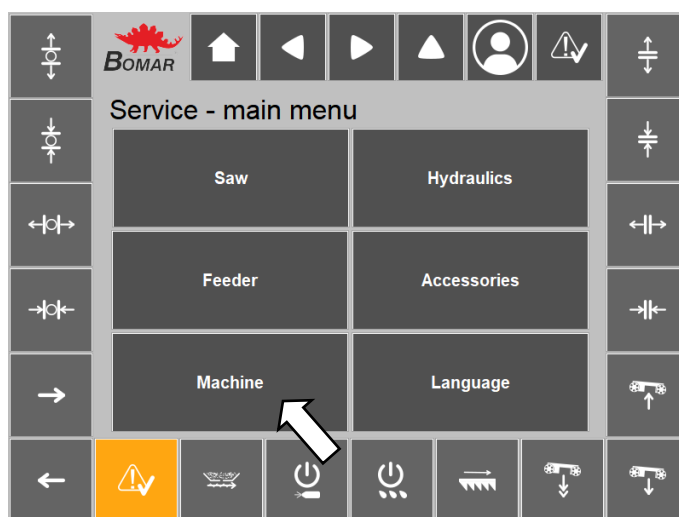
If the saw has an automatic loading device installed (feeder lock), then the option for automatic loading is checked in the service parameters on the Accessories screen from the manufacturer

On the screen for selecting the method of material loading, the option "AUT" is displayed (otherwise this option is not displayed at all)

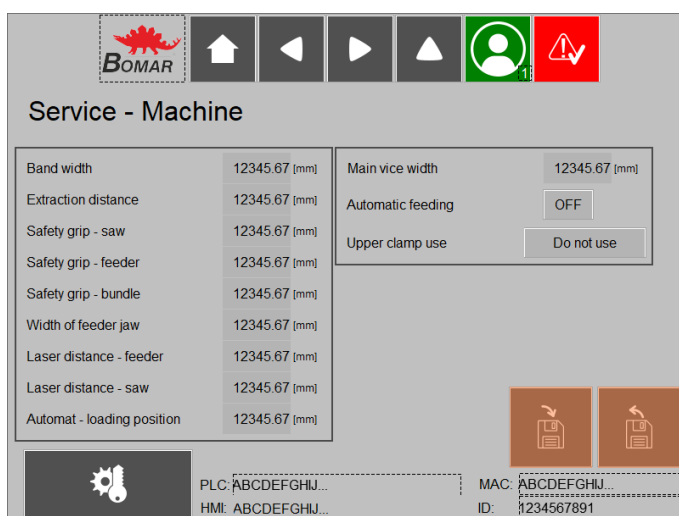


5.7. Setting machine service parameters

1. On the setup options screen, select "Machine"



2. The following screen shows the options for setting machine options:



Position	Function
Belt width	Specified actual belt width
Extrusion distance	Distance from the belt at 0° to the rear end of the material to be extruded.
Safe grip - saw	The minimum length beyond which the clamp will safely clamp the material.
Safe grip - feeder	The minimum length over which the clamp can safely clamp the material. If a smaller length for clamping is found on the cut piece, the piece will be evaluated as residue.
Safe grip - feeder	The minimum length over which the clamp can safely clamp the material. If a smaller length for clamping is found on the cut piece, the piece will be evaluated as residue.
Laser distance - feeder	Distance of the laser beam on the feeder from the nearest edge of the feeder jaw
Laser distance - saw	Distance of the laser beam on the saw from the nearest edge of the jaw of the vise on the saw
Feeding position of the machine	The position to which the feeder enters to grip the material in automatic mode with automatic material loading.
Width of the main vise	Vise width = width of the movable jaws of the vise
Automatic loading	The option is identical to the option on the "Accessories" screen
Application of pressure	Do not/do not use When using hydraulic material bundles (optional accessory)



The user management option  allows you to create, edit, and delete accounts of authorized users for software management.

When you press the option, the user management screen appears

Level 1

Add

Del

Se

	Account	Password	Status
1	SERVICE1	1234	-

Šířka

Vytlač

Bezpe

Bezpe

Bezpe

Šířka

Vzdál

Vzdál

Navá:



PLC:

HMI: 1.00.00

MAC: 98E7434A4623

ID: 87329

Position	Function
Level	Allowed user level
Add	Add account
Del	Delete selected account

When entering a new user, a table will appear in which you must enter the account name and password to enter the account:

Level 1

Add

Del

Se

	Account	Password	Status
1	SERVICE1	1234	-

Šířka

Vytlač

Bezpe

Bezpe

Bezpe

Šířka

Vzdál

Vzdál

Navá:



PLC:

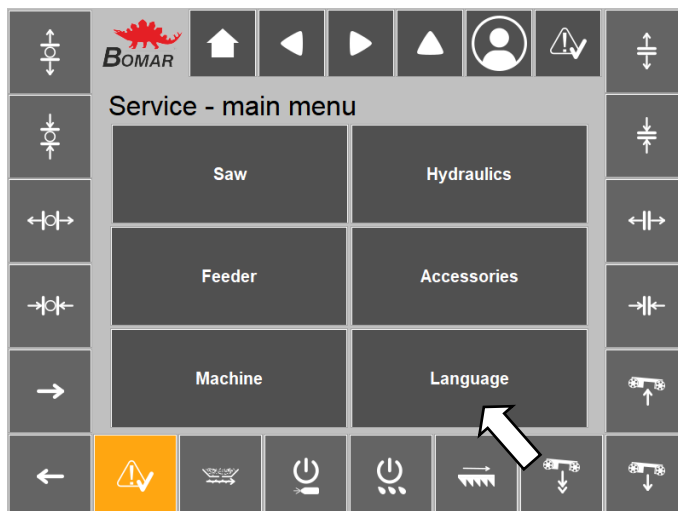
HMI: 1.00.00

MAC: 98E7434A4623

ID: 87329

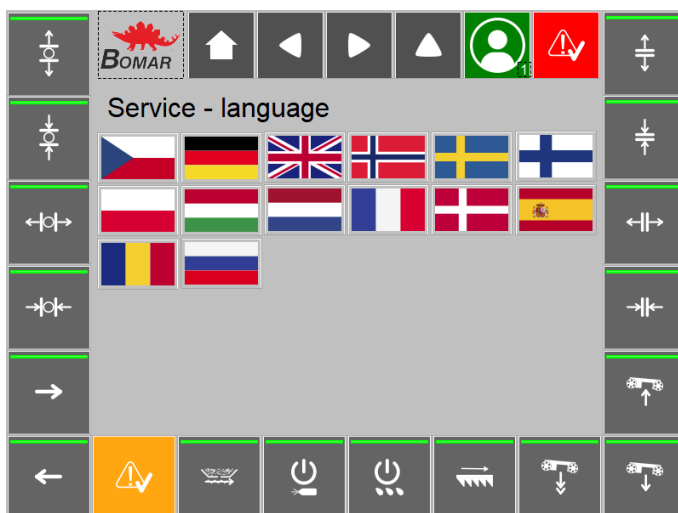
5.8. Choice of language

1. On the setup option screen select ,“Language”



2. The following screen shows the options for setting the language options:

In the service parameter ,“Language” it is possible to set the language version for controlling the device.



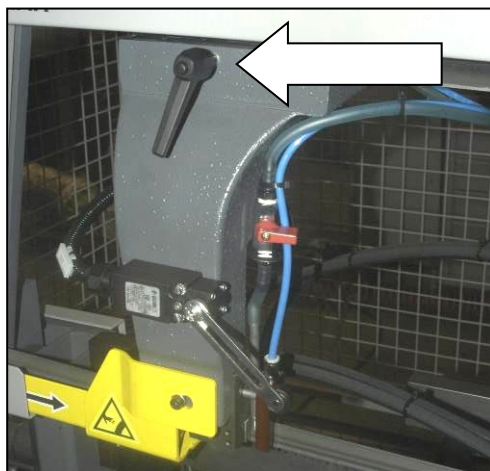
There is usually a menu on the specific machine for selecting the language:

- for communication with the manufacturer
- for communication with the operator - according to the customer's order

6. **Seřízení pásové pily/ Einstellung der Bandsäge/ Machine adjustment**

6.1. Adjusting band guides

If you want to achieve a smooth and precise cut, it is helpful to position the guide cube as close as possible to the material.



1. Release the stopping lever of the listel. Move the left part of the guide so that the left edge of the guide blocks is as close as possible cutted material.
2. Lower the frame to the lower position and check the position of the guide cube towards vice loading area. The guide cube must be a distance of at least 10 mm from the vice loading area.
3. Tighten the lever of the gib and check the guide cube setting once more for possible collision with binding table or vice jaw.

6.2. Cutting speed adjusting

Blade speed is possible adjusted continuously from 20 to 120 m / min.



Use the frequency convertor on control panel to adjust requested speed of the saw band.

6.3. Speed adjustment of the arm lowering

Speed of the arm lowering is adjusted by regulation valve on control panel.



- Set the *lower speed* of the arm lowering to the cut by turning the switch *clockwise*.
- Set the *higher speed* of the arm lowering to the cut by turning the switch *anti-clockwise*.

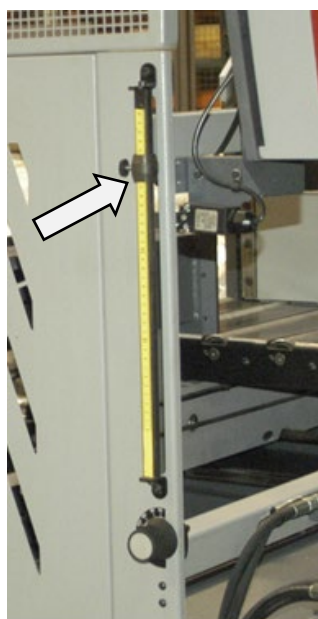
Notice:

If you keep closing the throttle valve too tightly, the valve seat may wear off which causes its leakage. Therefore, close the valve always gently.

6.4. Setting of start position of the saw frame before a cut

If you want to shorten the time of operations in automatic cycle, you have to adjust the height of the saw arm according to the height of the cutting material.

It is possible to set the start position of the saw frame before a cut using adjustable stop.



1. Using the button **Move saw frame up** lift the saw frame above the material to sufficient height.
2. Insert a material into the main vice.
3. Carefully lower the saw arm to the material using the button **Move saw frame down**. Stop the saw arm **5 -10mm** above the material.
4. Turn the locking bolt and release the adjustable stop. Move the stop so that it is in contact with a limit switch which controls the height of the boom.

Lock the stop in the set position by screwing of the locking screw.

When the cut is finished the frame automatically lifts, the limit switch gets into contact with the adjusted stop and the frame is stopped in this desired position.

6.5. Setting the arm height to start cutting by means of an electronic device (optional accessory)

If the saw is equipped with an electronic device for setting the arm position above the material, the arm position can be adjusted with the buttons on the control panel.

Setting procedure:

1. Using the button **Move saw frame up** lift the saw frame above the material to sufficient height.
2. Insert a material into the main vice.
3. Carefully lower the saw arm to the material using the button **Move saw frame down**. Stop the saw arm **5 -10mm** above the material..
4. **Start cutting by pushing START**

The saw start cutting from this position; after cutting is completed, the arm automatically returns to the position at which cutting was started with the START button (the machine remembers the position automatically).

6.6. Frame bottom stop position setting

The bottom stop position of the frame limits the lowest position of the frame. This position must be checked once per month. In case of wrong setting the vice may be cut or the material is not cut completely.

Setting of frame bottom stop position is made by adjustable excenter on the frame beam.



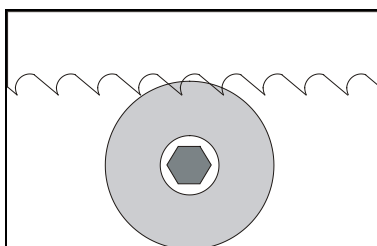
6.7. Brush adjustment

The brush for chip removal from the saw band influences cutting durability, saw band lifetime and wheels lifetime, hard metal guides and finally the cut accuracy. **Brush adjustment must be checked every shift.**

1. Open the cover of the band arm
2. Adjust the position of brush to the saw band by turning the adjusting screw(see arrow) of the brush.



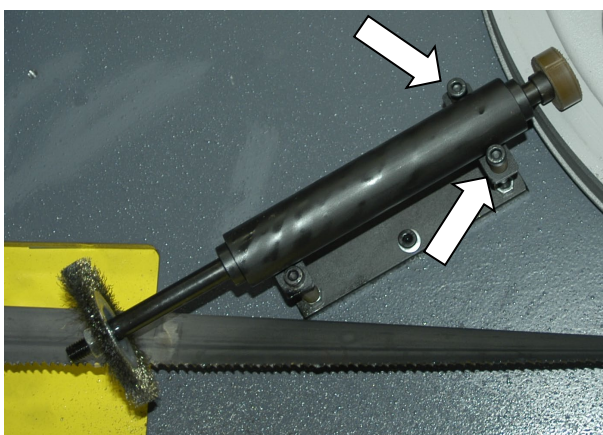
The brush must touch with teeth of the saw band.



Attention!

*The brush **must not** touch the bottom of the saw teeth!*

3. In case, that the brush is not turned right (driving wheel of the brush slips on the driving wheel of the saw band), push by means of the screws (see arrows) driving wheel of the brush to the driving wheel of the saw band.



Attention!

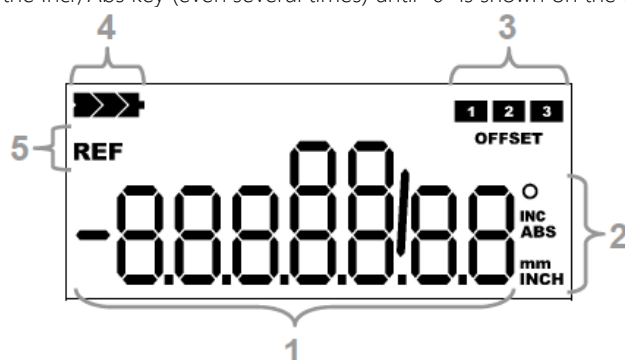
The screw must not be tightened with heavy force, because driving wheel of the brush can be damaged or the lifetime of the bearings of the driving wheel of the band can be lowered!

4. Mount the brush cover back to its place / Close saw arm cover

6.8. Electronic measuring device (optional accessory)

Zero position setting

Push the Incr/Abs key (even several times) until "0" is shown on the display.



Seřízení pásové pily
Einstellung der Bandsäge
Machine adjustment

Digital measuring adjustment

Position	Description
1	Current position
2	Unit, measuring mode
3	Active additional constant (* key)
4	Battery status
5	Referring record shall be made – after the apparatus is switched on.

Description of key functions:

Key	Stop mode	Setting mode
	Basic key	Entering parameters (3 sec) Saving parameters and returning (3 sec)
	Referring recording (P09 value)	-
	Change of displaying in inches	Selection of following decade
	Absolute and incremental measuring	Change of active decade o +1
	Selection of additional constant	Change of sign □

Description of key functions at measuring initialisation:

Key	Description
	Induces calibration of the apparatus when it is switched on (battery inserted).
	Induces calibration of the apparatus and sets default values when the apparatus is switched on.

Description of digital measuring parameters:

Parameter	Description	Default value
P01 A	Measuring configuration: A = 0: positive direction of measuring A = 1: negative direction of measuring	0

Parameter	Description	Default value
P02 A	Measuring unit: A = 0: mm / symbol "mm" A = 1: inch / symbol "Inch" A = 2: mm / symbol "m" A = 3: mm / symbol "°" A = 4: mm / no symbol	0
P03 A	Decimal point (0..4) > only for mm	2
P05 ABC	Key blocking: A: "Set" key (0 = active / 1 = inactive) B: "Incr/Abs" key (0 = active / 1 = inactive) C: "*" key (0 = active / 1 = inactive)	000
P08	Correction factor (0.0001...9.9999)	1.0000
P09	Refering (-9999999 ... +9999999)	0
P10	Additional constant 1 (-9999999 ... +9999999)	0
P11	Additional constant 2 (-9999999 ... +9999999)	0
P12	Additional constant 3 (-9999999 ... +9999999)	0
P13 A	Configuration of additional constants (0...3) A = 0: inactive (cannot be selected) A = 1: Additional constant 1 active A = 2: Additional constants 1 & 2 active A = 3: Additional constants 1 & 2 & 3 active	3
P90	No function	0
P99	Displaying firmware version	x.xx

6.9. Speed adjustment of the arm lowering (optional accessory)

The current speed of vertical movement of the arm is displayed on a digital display which is mounted on the saw arm.

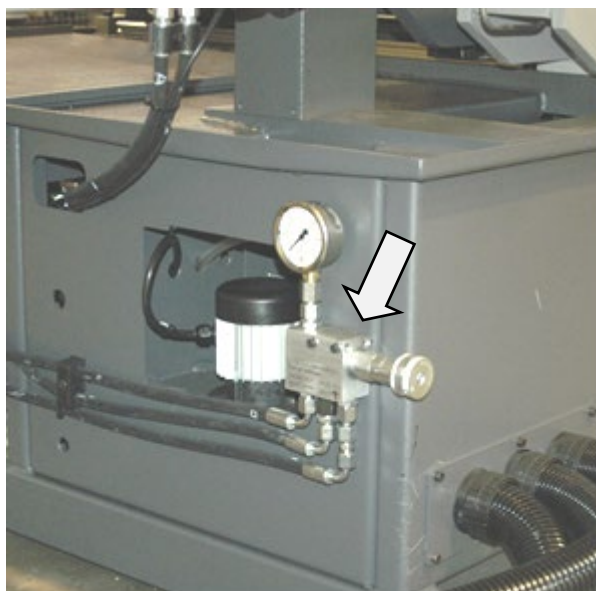




The measuring unit is set by the manufacture.

6.10. Device for regulation of clamping pressure (optional accessory)

The hydraulic pressure device is determined for pressure setting on the main vice and feed vise.

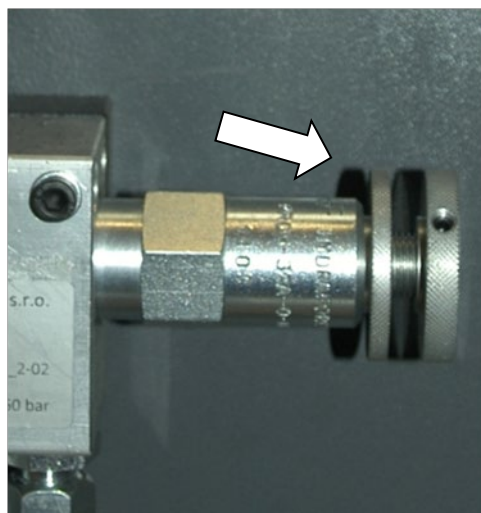


Warning !

Because the hydraulic pressure equipment pressure 2,2 – 4 MPa, loosen the screws with caution!

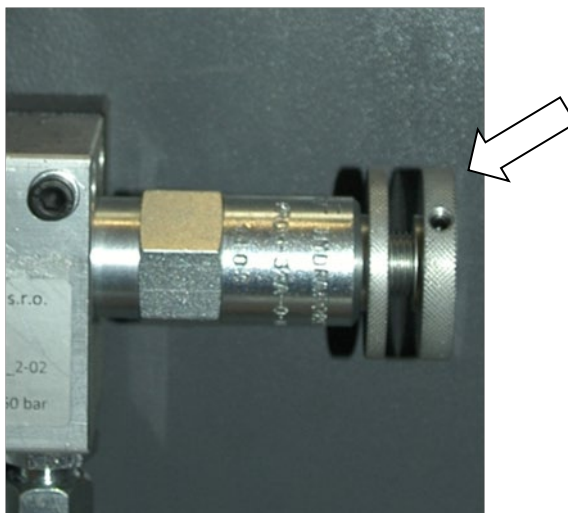
Instruction for adjustment of clamping pressure

1. Release the locknut of the control screw at the pressure valve



Seřízení pásové pily
Einstellung der Bandsäge
Machine adjustment

2. Adjust the clamping pressure to the required value using the control screw.



- When turning the pressure valve *clockwise the pressure increases.*
- When turning the pressure valve *counterclockwise lowers the pressure.*

The indicator at the manometer at the device for clamping pressure adjustment indicates the set value.

The recommended pressure value is between the values defined through the green arrows at the manometer at the device for controlling of the clamping pressure.



3. Tighten the locknut of the control screw at the pressure valve.

Attention:

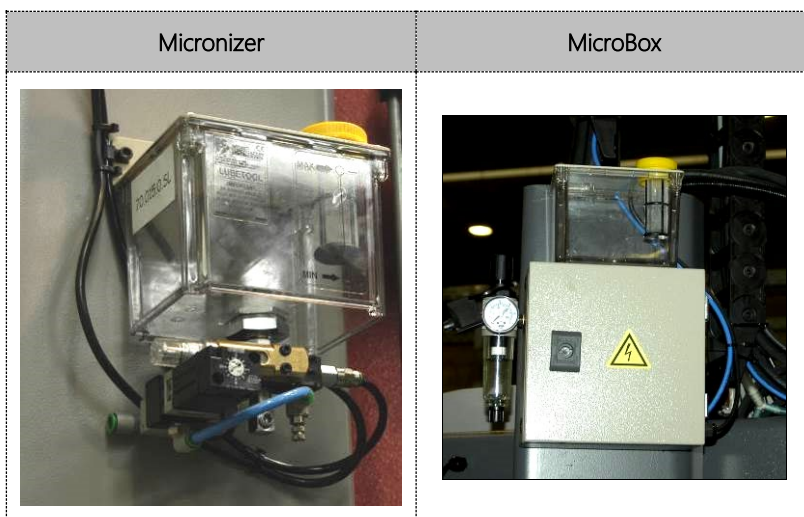
It isn't necessary to adjust the hydraulic pressure of the whole saw in order to adjust the clamping pressure

6.11. Mikroniser(box) – mist lubrication (optional accessory)

The placement of a Microniser at the machine is pursuant to this photo

Next photos are for illustrative purposes only.

Microniser and MicroBOX are devices used to create a lubricating oil mist in precise doses of oil and air mixture, which is then applied directly to the saw band.



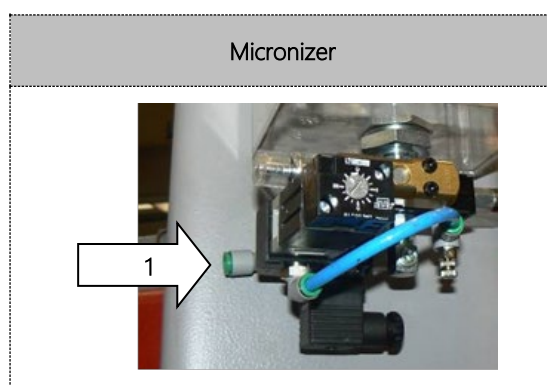
The device serves for ideal cooling and lubrication of the cutting blade when closed profiles are cut, and helps to maximize ease of cut.

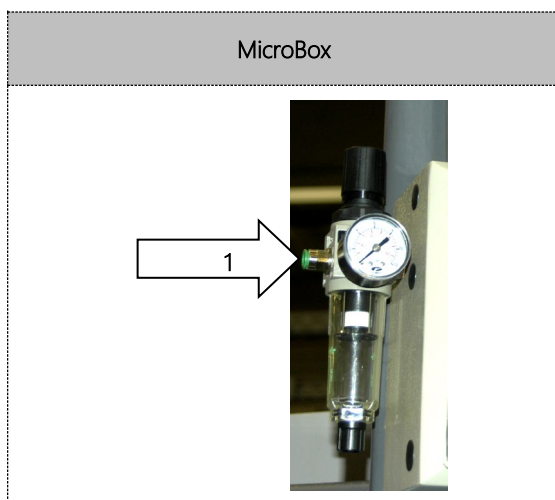


There is no leakage of coolant outside the work area of the saw when a profile material is cut.

.Microniser setting:

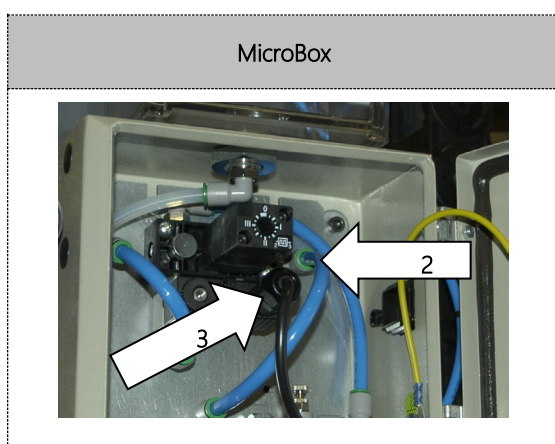
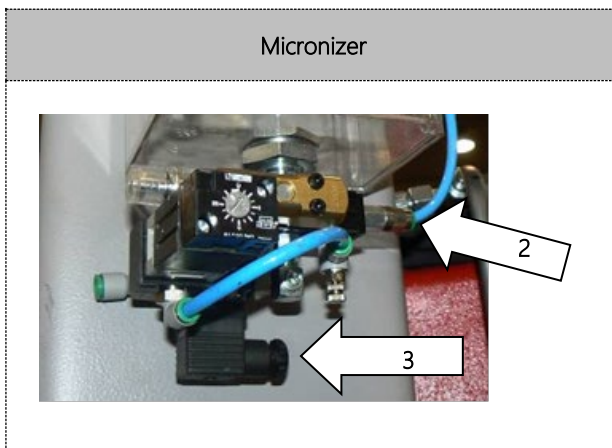
1. For proper function of the Microniser pressured air (in the range of 0.5 to 0.5 MPa (5-6 bar)) must supplied from the pneumatic system (dry, clean, free of particles) see - arrow 1



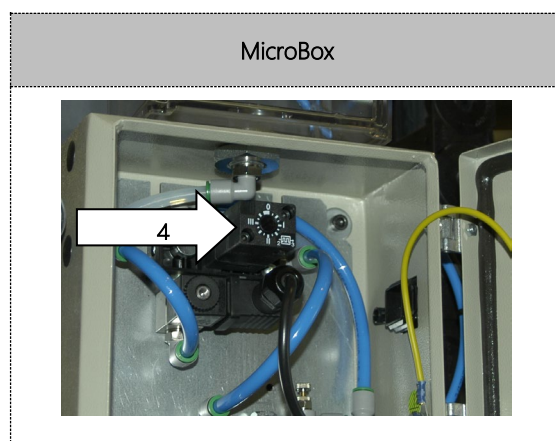
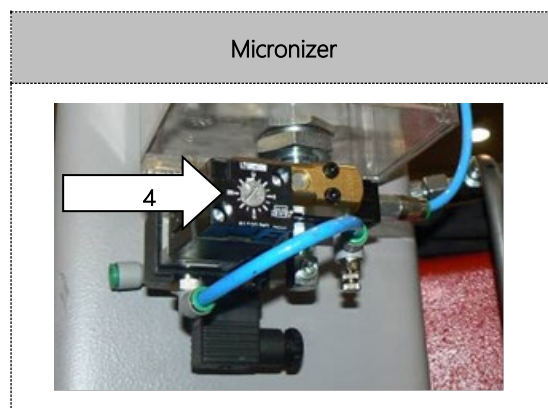


2. Arrow 2 - shows the output of the cooling medium (air + oil).

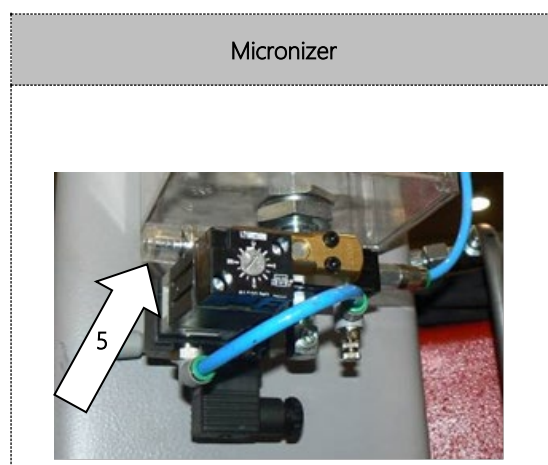
Arrow 3 - shows the inlet for the power supply cable.

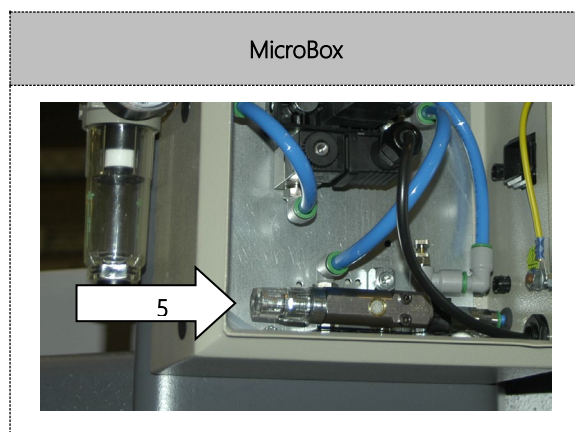


3. Set the interval of cutting oil dispersion on the Microniser- **arrow 4** (3-20 pulses / min.). Adjust this interval to the parameters of the saw band and cut material.

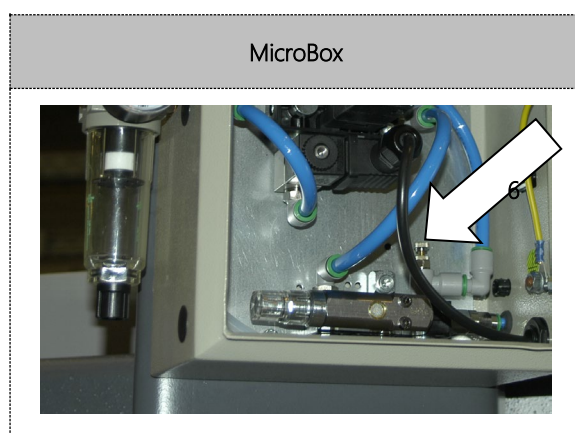
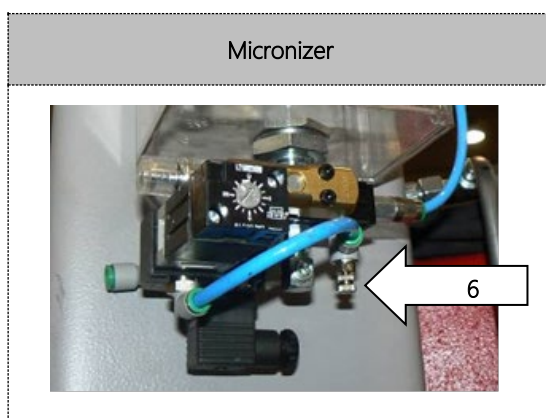


4. Adjust the amount of oil with a regulator - arrow 5





5. Setting the air quantity using another regulator - arrow 6



Switching on / off of the Microniser is depends on the control system of the machine it is installed on. See chapter "Machine control".

Recommended cutting oils for Micronisation:

Manufacturer	Cutting oil
Biona	Biocut
Paramo	Paramo cut 22

Featured are cutting oils with viscosity class 22.I

Adding of the coolant is possible after removing the filling cap. After the filing is finished the cap must be screwed in again.

Package Includes: a tank with regulators, connection 6m hose, diffuser.

6.12. Third cooling inflow (optional accessory)

Flexible coolant supply allows to bring the coolant to the desired location.

Third, easily routable and adjustable coolant supply with nozzle ensures sufficient lubrication and cooling of the strip in the middle of the cut material



Particularly suitable for cutting materials with a larger average, where the opening of the guide blocks larger blade and prevents proper lubrication and cooling of the entire length of the cut

For normal cutting off the third coolant inflow may be easily disconnected by closure



When adjusting the nozzle, pay increased attention that the inlet hose does not stand in the way of the saw band.

The third coolant inflow get in the package complete package including all jumpers and hoses - just connect to existing cooling divorce

Complete package includes: flexible hose (length 600 mm), shunt valve, inlet plastic hose (depending on the type of machine - min. 1m), interconnection schedule, holderto the machine screws (2xM5), transformer and wiring.



6.13. Halogen lighting of working area (optional accessory)

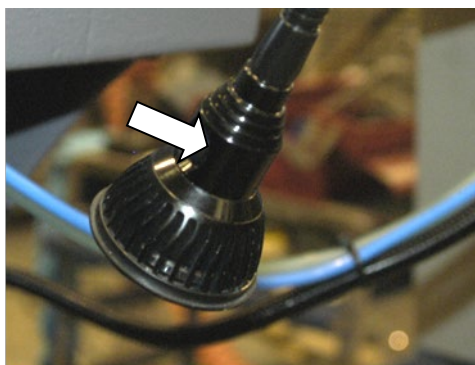
Light the working area of the machine with natural light and helps to facilitate cutting with a band saw.

Proper lighting in your work area greatly enhances ergonomics machines

Thanks flexible arm halogen light can accurately adjust to the desired location.



Turn on and off light switch is made directly to the halogen light.



Design lighting unit meets IP54 - Protection against water jets.

Technical data:

Supply voltage	230 V
Lenght flexible arm	300 mm
average	Ø 5,5 mm
lenght	80 m

6.14. Tool cleaning machines from chips after cutting. (optional accessory)

The tool can be used for cleaning of a machine from chips which were produced during cutting proces.

As a cleaning liquid is used coolant which spouts from the nozzle of the „gun“ when its handle is pushed down.



With custom pump (min. capacity 16 l / min.) The coolant gets into the rinsing pistol with the trigger lever.

Sufficient pressure to the chips and debris were eliminated from the bearing surfaces of the base material and the saw.

Gun cleaning machine from the chip is supplied with a sufficient supply hose for easy handling (diameter of 12/8 mm).

Package includes:

1. Ergonomic handle allows easy handling of the gun during cleaning machine.



2. Brass adjustable nozzle allows for smooth width rinse stream.



3. Valve for setting maximum coolant flow



4. Also included is a convenient holder for postponement gun after use



5. Connecting part equipped with a transparent tube with a connecting part for coupling the cleaning pistol to the pump.



6. Transparent inlet hose to couple the pistol to the connecting part.



Suitable for machine brand Bomar

6.15. Laserliner. (optional accessory)

The device is used to ascertain exact position of the material cut before cutting.

The cut is indicated by the laser beam projected on the surface of the prepared material..



The switch for Laserliner is located on the control board.



6.16. Chip remover installation

The chip remover can be installed in the place of the standard chip drawer in the saw base

Remove the chip reservoir and install the chip remover in its place.



On the side of the base, a connector is mounted for connecting the chip remover to the saw



The chip conveyor starts automatically with the saw

Running of the chip remover can be set in the saw service menu.

6.17. Saw manager

Saw Manager is independent software for creation of recipes with optimized use of material, supplied by Bomar spol.s.r.o.

Saw manager is software which, on the basis of entered parameters of input semi-products, required minimum length of residual pieces and required parameters of final pieces, compiles a **complete recipe for control of the "RODS" type automatic cycle**, optimally considering all of the given required parameters.

If using the Saw Manager software, you do not need to create a specific cutting plan as a basis for creation of a recipe for control of the "RODS" type automatic cycle created on the machine.

Optimization by means of Saw Manager enables division of the entire batch of pieces to be cut within a single automatic cycle into precisely specified partial batches, which will be cut from specific individual rods with regard to the required residual piece length.

By default, this machine is quipped for control of the automatic cycle by recipes created in the Saw Manager software; however, **cooperation between the machine and a recipe created in the Saw Manager software is subject to purchase of a Saw Manager software licence**. For detailed information, contact the sales department of the Bomar spol.s.r.o. company.

If you own the required licence for the Saw Manager software, you can import a recipe created in Saw Manager to the machine as a file with the .csv extension (for the procedure, see chapter "Recipes") and start the automatic cycle controlled by this recipe in a standard way.

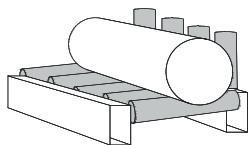
6.18. Material insertion

- Never walk under a suspended load!
- Never climb onto the gravity-roller conveyor!
- Do not hold the material for clamping material to the vice! The vice can cause injury!

6.18.1. Handling agent selection

- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

6.18.2. Insertion

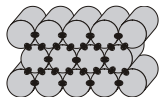


Insert material to the vice and ensure that the material cannot move in the vice or fall from the vice after the clamping. If you cut long pieces of the material (for example rod, tube), you must use the roller conveyors for material shifting to the band saw. Contact Bomar for more information about roller conveyors

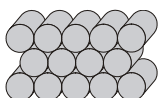
Make sure the conveyor is long enough and the material cannot tip off the conveyor.

Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!

6.18.3. Bundle material cutting



If you want to cut the material in the bundle, there are suggestions for the positioning of bundles



Round material bundle: Take care especially with round material that the bars are put according to the picture. If the bars are put differently, you may have problems with movement.

Always weld the material at the rear end of the bundle to secure it from moving.

Before welding always, switch the machine off at the main switch! The magnetic fields, which often occur during welding, may damage the controls!

Attention!

Manual bundle clamping device is not standard equipment. Without this device is a not possible cut bundle.

Attention!

If machine has bundle device then material maximal height is half.

Attention:

Not all material shapes are suitable for bundle cuts. Keep the recommendation of your supplier of the saw bands for material insertion to the bundle.

6.18.4. Hydraulic fixture bundles (auxiliary vice). (optional accessory)

To better maintain the workpiece in the vise we recommend using **hydraulic fixture bundles** of material that is not part of the standard equipment, optional accessories only. It is suitable especially in the case of uneven cutting material.



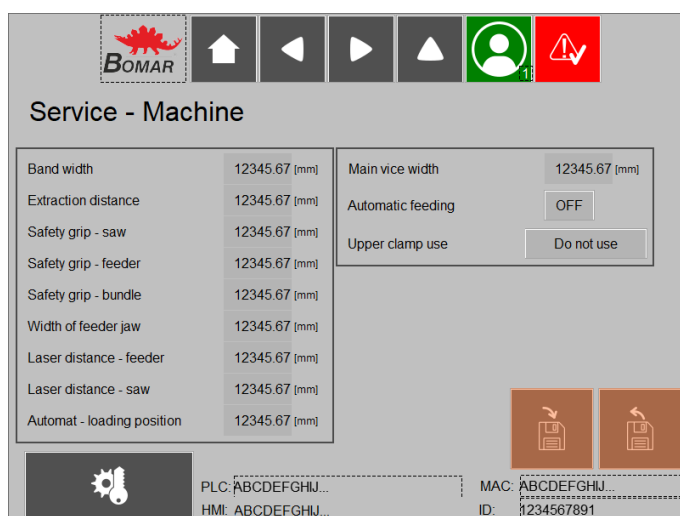
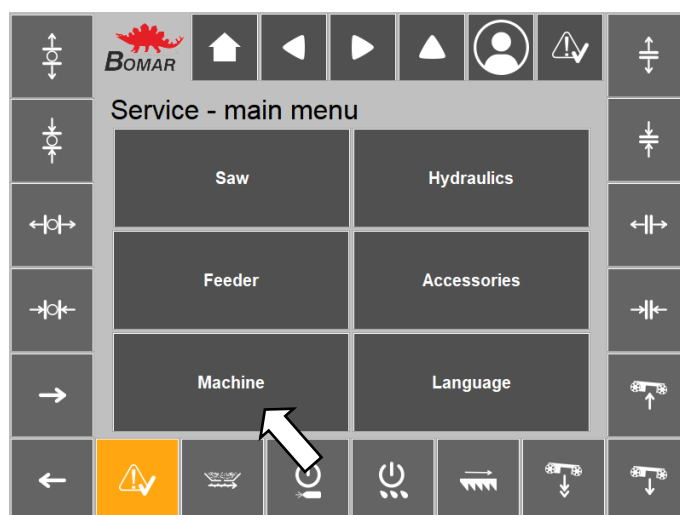
In manual mode it is possible to control the jtop clamping manually – by means of buttons at control panel.

In automatic cycle the jaws are controlled automatically.

Attention!

Do not leave the guide cube under the clamping jaw.
Otherwise the guide cube will be clamped by the jaw and damaged!

The process of clamping of horizontal and vertical vices is in accordance with preset which was made in service parameters."



7. **Údržba stroje / Wartung / Machine service**

7.1. Saw band dismantling

During the dismantling, take care that you do not damage the limit switch if the saw band stretching.

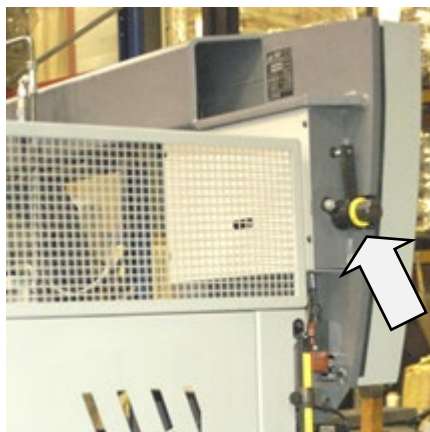
1. Lift the saw frame to the top position. Stop the saw frame in top position by control valve.



2. Dismantle yellow protective cover of the saw band. The cover is clamped with two screws.



3. Open the cover of the arm.



4. Turn by stretching star to the left side, release saw band stretching and pull saw band from blade wheels.



5. Remove the saw blade from the runner wheels



6. Pull up the saw band from the guiding cubes

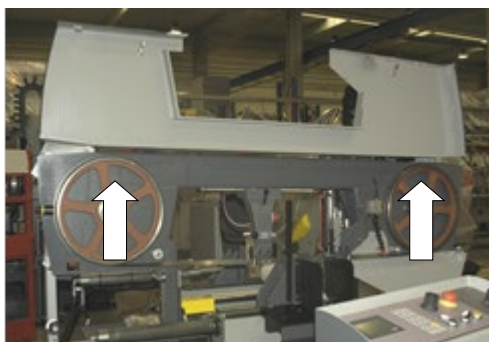
7.2. Saw band instalation

During the installation, take care that you do not damage the limit switch if the saw band stretching!

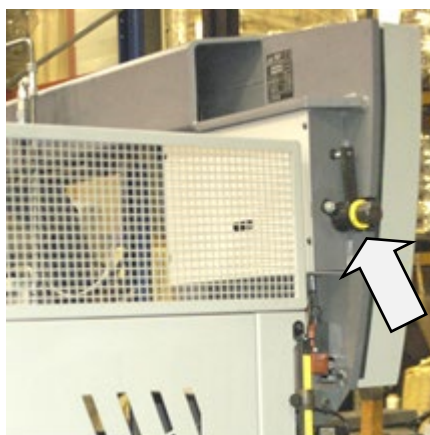
1. Prior to installation, clean all track wheels, guide cubes and inner side of the arm thoroughly of all traces of chips and dirt. ***Keep in mind the teeth direction when installing the saw band.***



2. Insert new saw band in the guide cubes. Make sure the saw band runs between both guide rollers and it is pushed all the way to the top.



3. Put the saw band on both guide wheels. Make sure that the saw band ridge fits tightly to the wheel rim. Then push the saw band as far back as possible.



4. By turning the stretching bolt into the right, you will stretch the saw band slightly. Remove the plastic cover of the saw band teeth.
5. Close the cover of the arm.



6. Install the yellow protective cover of the band.



Arrow on the cover must agree with the direction of the teeth. If it does not, you have to flip the saw band.

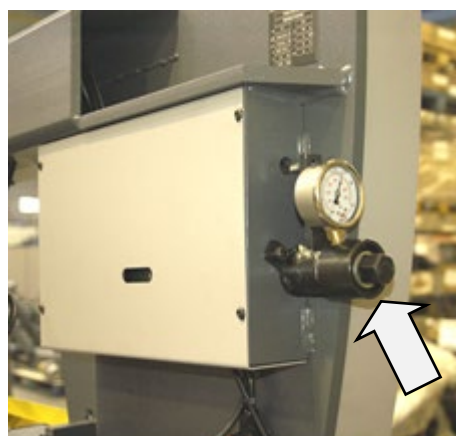
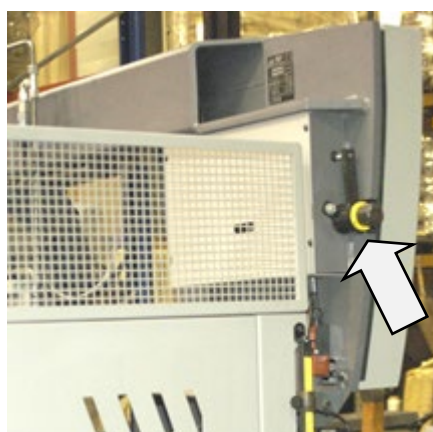
7.3. Saw band stretching and inspection

Right saw band stretching is one of the most important criteria's, which influents accuracy and saw band service life. Keep the recommendation of your manufacturer.

Pilový pás Sägeband Saw band	Napětí pilového pásu Sägebandspannung Blade tension	Napětí pilového pásu PSI (pro Tenzomat) Sägebandspannung PSI (für Tenzomat) Blade tension PSI (for Tenzomat)
20 x 0,9 mm	160 N.mm ⁻²	23 500
27 x 0,9 mm	180 N.mm ⁻²	26 500
34 x 1,1 mm	210 N.mm ⁻²	30 500
41 x 1,3 mm	240 N.mm ⁻²	35 000
54 x 1,3 mm	240 N.mm ⁻²	35 000
54 x 1,6 mm	280 N.mm ⁻²	40 600
67 x 1,6 mm	290 N.mm ⁻²	42 000
80 x 1,6 mm	300 N.mm ⁻²	43 500

7.3.1. Saw band stretching

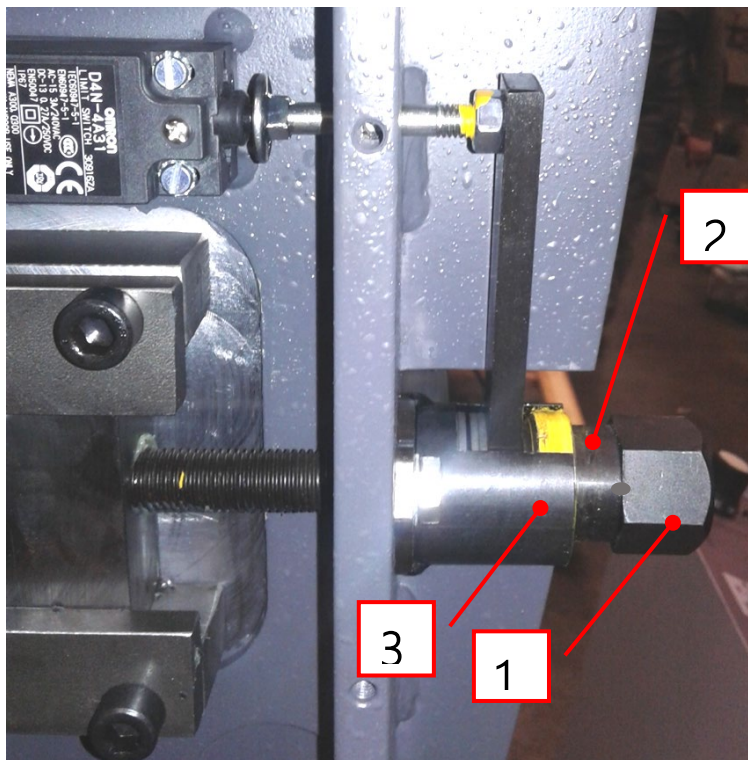
After putting on, tighten the saw band slightly so that it does not fall from the wheels



7.3.2. Mechanical indicator of belt tightening

To facilitate tightening of the belt, a mechanical indicator is installed on the machine by default, enabling the belt to be tightened to the optimum value easily and quickly.

Mechanical indicator of belt tightening

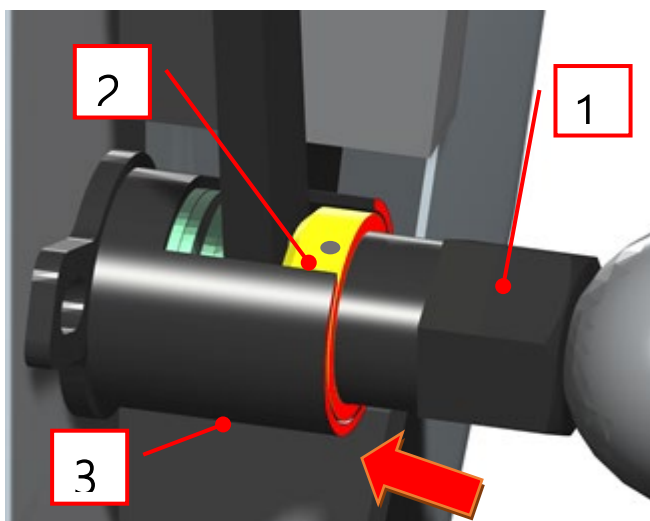


1	Tightening screw
2	Yellow ring – indicator of correct belt tightening
3	Bush

After the belt replacement, the tightening screw (Pos. 1) must be tightened so that the face of the yellow ring (Pos. 2) be aligned with the face of the bush (Pos.3)

The areas indicated in red in Fig. 1 must be aligned.

Fig.1



NOTE:

The belt length with deviations within normal tolerances has no influence on the method of the belt tightening indication!

If the belt length deviations fall within normal tolerances and the belt is tightened correctly, the face of the yellow ring (Pos. 2) is always aligned with the face of the bush (Pos. 3), regardless of the real dimension of the belt.

Belts with deviations outside the normal tolerances must not be mounted on the machine!

7.3.3. Hydraulic indicator of belt tightening (optional accessory)

If the machine is equipped with a hydraulic indicator of the belt tightening (optional accessory), the belt tightening value can be seen on the indicator gauge.

The optimum working tightening value of the belt is indicated with a green arrow.





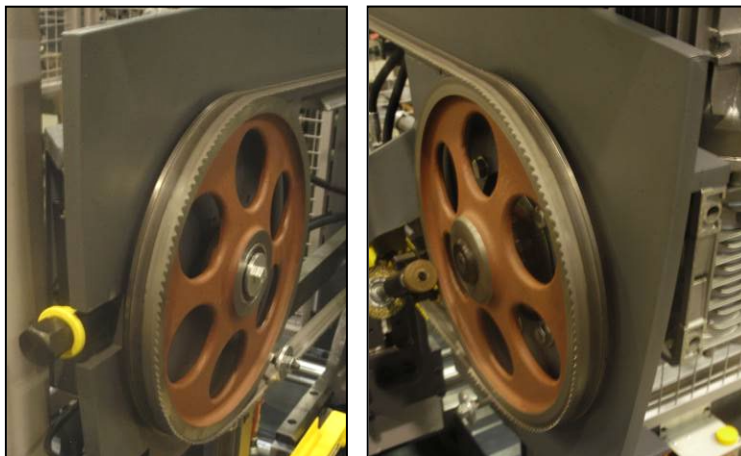
7.4. Saw band run adjustment on stretching wheel

Saw band run on the stretching wheel must be regularly inspected. The inspection has to follow every saw band replacement.

7.4.1. Saw band run inspection

If the run is not correct, the following problems may occur:

- **The saw band falls from the wheels** – The saw band and protective cover can be damaged.
- **The saw band runs on the wheel rim** – The saw band and wheel rim can be damaged



1. Start and stop saw band drive.
2. Stop the main switch!
3. Open rear cover of the saw frame.
4. Check saw band placing on the wheels.
 - If the distance of the rear part of the saw band from wheel rim is 1 – 3 mm, setting is right.
 - If the distance is bigger than 3 mm, or the saw band runs on the wheel rim, saw band run must be set.

7.4.2. Saw band setting



The saw band run is set with screw in the stretching cube on the saw frame.
Optimal distance has been determined at **1 – 3 mm**.

- Turn by screw to the right, the saw band approximates to the stretching wheel rim.
- Turn by screw to the left, the saw band departs from the stretching wheel rim.

Check saw band run again after setting.

7.5. Adjusting of the limit switch of the saw band stretching



After the saw band is replaced, the saw band stretching must be checked. If the limit switch is not adjusted correctly, the band is stretched too little or too much.

1. Dismantle the protective cover



2. Tighten the saw band on the optimal value using TENZOMAT (see table for TENZOMAT)
 - If the drive engine is switched on, but it is not running, turn with the screw clockwise, until the engine begins run..
 - If the drive engine is possible switched on, turn with the screw anticlockwise, until the engine is stopped and then turn with the screw clockwise, until the engine begins run.
3. Install the protective cover.

7.6. Cooling agents and chips disposal

The quality of the cooling agent will deteriorate due to:	If the solution is too weak:	If the solution is too strong:
• use of contaminated water • outside oil contamination (hydraulics, gears) • high operating temperatures • lack of air circulation	• corrosion protection is diminished • lubrication decreases • microbial attack is more likely	• the cooling ability is decreased • foam behavior increases • emulsions stability deteriorates

- wrong concentration
- sticky residue develops

7.6.1. Coolant device inspection

The state of the cooling agent has significant influence on the cutting quality and on the operational life of the machine. Lifetime of the cooling liquid is 1 year, after this time we recommend change the cooling liquid. This time is dependent on the degree of pollution cooling liquid (especially with oils) and on the other factors.

Check level of the cooling liquid and function of the pump periodically!

Note:

If the state of the cooling liquid is not satisfactory, the cooling liquid must be changed.

Check the state of the cooling agent according to the following table:

Testing	Interval	Method	Condition	Precaution
Liquid level	daily	visually	too low	after concentration check, refill with water or emulsion
Concentration	daily	refractometer densimeter	too high too low	refill water refill base emulsion
Smell	daily	by sense of smell	unpleasant smell	good ventilation, add biocides or renew coolant
Contamination	daily	by sense of smell	visible oil leaks, sludge fungi	surface cleaning, fix leaks, add biocides or fungicides, or coolant renewal after added system cleanser*
Corrosion-protection	when necessary	visually chip test Herbert-test	insufficient corrosion protection	test stability, if necessary – increase concentration or pH value
Stability	when necessary	refractometer	oiling	add concentrate, enquiries to supplier
Foam reaction	when necessary	shaking test	too much foam, foam disperses too slowly	avoid aeration, increase water hardness, ix with defoamer

* According to manufacturers' instructions

7.7. Chips disposal

Chips resulting from cutting operations must be disposed of in accordance with the relevant regulations.

- Let the chips drip excess fluid!.
- Fill a watertight container with the chips! Be careful that the container does not leak, because even after a long dripping time, they still contain coolant residue.
- *Place the container into the care of a disposal company equipped for the disposal of chips contaminated with cooling liquid.* In case the machine is equipped with micro-spray installation, the chips must also be handed over to a disposal company.

7.8. Hydraulic, Greases and oils

7.8.1. Gearbox oils

In gearboxes, oil is used for the whole lifetime of the gearbox. We recommend replacing of the filling oil in case of repair.

Use oils with specification DIN 51517 in the gearboxes. Select the viscosity grade ISO VG according to the original oil fill.

Attention:

When replacing use oils which has comparable parameters from the other manufacturers.

Do not forget, that mineral and synthetic oils must not be mixed!

Recommended oils and quantity according to the type of the band saw

Band saw	Gearbox oil	Capacity
Proline 520.450 ANC	Shell Tivela S 320	1,0 l
Swarf conveyor	Shell Tivela S 320	0,075 l

Comparative table of the gearbox oils

Manufacturer	Viscosity grade		
	ISO VG 100	ISO VG 220	ISO VG 320
BP	Energol GR-XP 100	Energol GR-XP 220	Energol GR-XP 320
Castrol	Alpha SP 100 Alpha MW 100	Alpha SP 220 Alpha MW 220	
Elf	Reductelf SP 100	Reductelf SP 220 Reductelf Synthese 220	Reductelf SP 320
Esso	Spartan EP 100	Spartan EP 220	Spartan EP 320
Mobil	Mobilgear 627	Mobilgear SHC 220 Mobilgear 630	Mobilgear 632
OMV		PG 220	
Paramo	PP 7	Paramo CLP 220	Paramo CLP 320
Shell	Shell Omala 100	Shell Omala 220 Shell Tivela S 220	Shell Omala 320 Shell Tivela S 320
Total	Carter EP 100	Carter EP 220	Carter EP 320

7.8.2. Greases

We recommend using lithium based saponified grease, class NGLI-2 for lubrication. Different greases are mixable, if their oil bases and consistence type are identical.

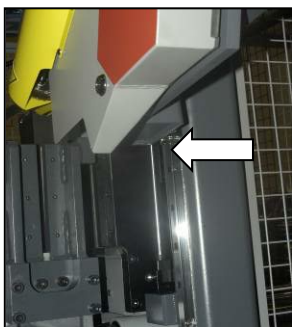
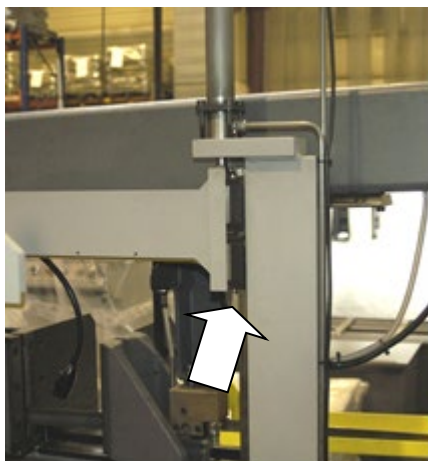
Comparative table of the lubricant greases:

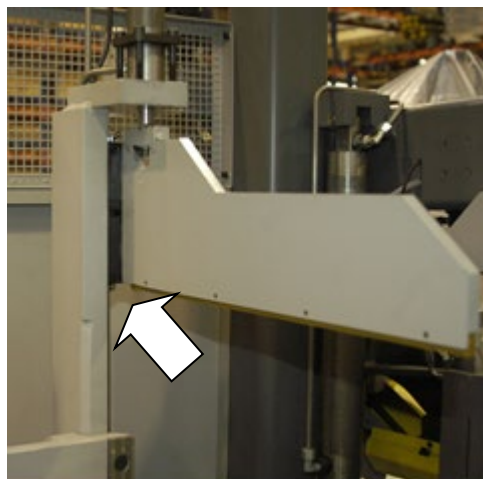
Manufacturer	Type of the lubricant grease
BP	Energ grease LS - EP
DEA	Paragon EP1
Esso	FETT EGL 3144
	Beacon EP 1
	Beacon EP 2
FINA	FINA LICAL M12
Klüber	Microlube GB0
	Staburags NBU8EP
	Isoflex Spezial

Manufacturer	Type of the lubricant grease
Optimol	Optimol Longtime PD 0, PD1, PD2
Shell Aseol AG	ASEOL Litea EP 806-077
Texaco	Multifak EP1

7.8.3. Lubrication

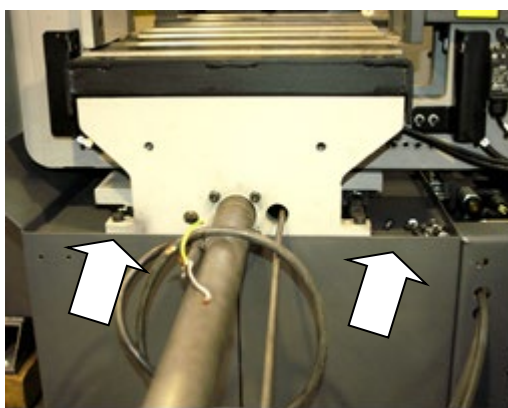
There are several places on the machine, which are necessary to grease periodically. It secures the right function of the machine.

Lubrication place	Lubrication
	The guiding cube leading Grease with oil from both sides once a week.
	Main vice leading Grease with oil from both sides once a week.
	The linear guiding of the saw arm Lubricate with grease once a three months (see chapter Lubricant greases). Use 3–5g grease on the every carriage of the linear guiding. Use the grease gun to the lubrication. Drive 3–5 times whole line of the linear guiding during lubrication.
	Linear guiding for the upper clamping at the main vice Lubricate with grease once a three months (see chapter Lubricant greases). Use 3–5g grease on the every carriage of the linear guiding. Use the grease gun to the lubrication. Drive 3–5 times whole line of the linear guiding during lubrication.



Linear guiding for the upper clamping at the feeder vice

Lubricate with grease once a three months (see chapter Lubricant greases).
Use 3–5g grease on the every carriage of the linear guiding.
Use the grease gun to the lubrication.
Drive 3–5 times whole line of the linear guiding during lubrication.

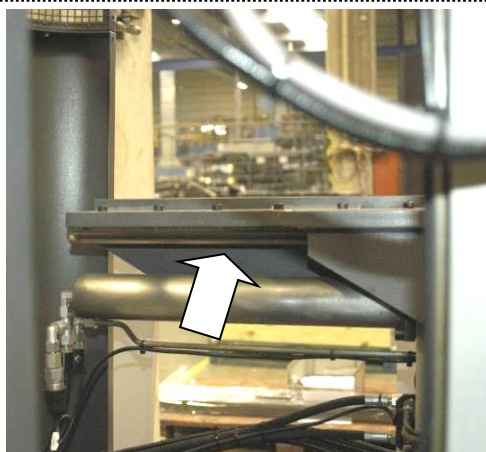


Linear guiding for feeder movement

Lubricate with grease once a three months (see chapter Lubricant greases).
Use 3–5g grease on the every carriage of the linear guiding.
Use the grease gun to the lubrication.
Drive 3–5 times whole line of the linear guiding during lubrication.

Lubrication place

Lubrication



Linear guide of the movable jaw of the feeder vice

Lubricate with grease once a three months (see chapter Lubricant greases).
Use 3–5g grease on the every carriage of the linear guiding.
Use the grease gun to the lubrication.
Drive 3–5 times whole line of the linear guiding during lubrication.

7.8.4. Hydraulic oils

Replace the hydraulic oil once in 2 years, because the oil can deteriorate its properties and cause problems the hydraulic equipment. If the hydraulic system is equipped with filter (2SF 56/48-0,063), replace the filter too.

Use oils with specification DIN 51524, ISO 6743-4 and viscosity grade ISO VG 32.

Note:

When replacing, use oils recommended by BOMAR or oils, which has comparable parameters from the other manufacturers. Do not forget, that mineral and synthetic oils may not be mixed!

Comparative table of the hydraulic oils

Manufacturer	Type	Manufacturer	Type
Agip	Oso 32	Ina	Hidraol 32 HD
Aral	Vitam GF 32	Klüber	Lamora HLP 32
Avia	Avilub RSL 32	Ungarn	Hidrokomol P 32
Benzina	OH-HM 32	Mobil	Mobil DTE 25
BP	Energol HLP 32	ÖMV	HLP 32
Bulgarien	MX-M/32	Polen	Hydrol 30
Castrol	Hyspin AWS 32	Rumänien	H 32 EP
Čepro	Mogul HM 32	Russland	IGP 30
DEA	Astron HLP 32	Shell	Tellus Oil 32
Elf	Elfolna 32	Sun	Sunvis 832 WR
Esso	Nuto H 32	Texaco	Rando HD B 32
Fam	HD 5040	Valvoline	Ultramax AW 32
Fina	Hydran 32		

7.8.5. Hydraulic unit service

After 50 hours working time, or the latest 3 months after the first run, the first service should be carried out. This includes:

- checking off all screws and connections, fixing points, tubes and hoses for leakage
- check function of signaling components (thermometer, level gauge, dirty filter indicator)



- Check hydraulic oil level



The oil level must be between the halves of both watermarks

- During time of duty the oil temperature shouldn't exceed 70°C
- Check the adjustment of working pressure



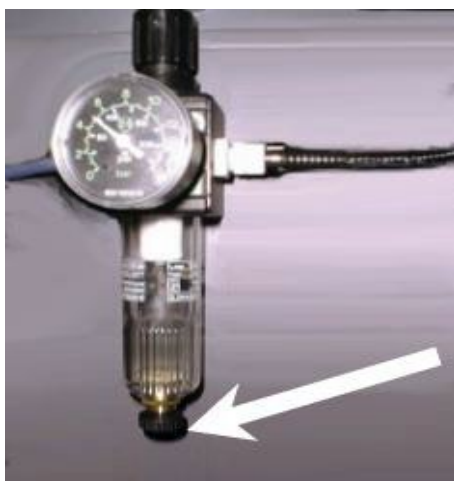
To realise a high reliability of the power pack, the manufacturer lays down following inspection intervals

Interval	daily	weekly	monthly	three monthly	six monthly	annually
Hydraulic fluid						
Level	-	•	-	-	-	-
Temperature	-	•	-	-	-	-
Condition	-	-	•	-	-	-
Change interval	-	-	•	-	-	-

Interval	daily	weekly	monthly	three monthly	six monthly	annually
	-	-	-	-	-	•
Filter	-	-	-	-	-	-
Change interval	-	-	-	-	-	-
Other checks						
External Leakages	•	-	-	-	-	-
Contamination	•	-	-	-	-	-
Damages	•	•	-	-	-	-
Noise-(level)	•	-	-	-	-	-
Gauges	-	-	•	-	-	-

7.9. Pressure system servicing (microBOX)

Filter of the pressure system is necessary to clean periodically, that means drain sediments and impurities from the reservoir.



Close the pressure air supply. Screw off the screw and let to drain sediments to the reservoir. Screw on the screw again.

WARNING!

There is the pressure 0,5 – 0,6 MPa in the pressure system, therefore you must release the screw very carefully!!

7.10. Machine cleaning

Clean the machine from the cooling liquid and impurities after every shift stopping. Conserve the guiding surfaces, mainly.

- Clamping jaws guiding of the vice.
- The guiding of the feeder.
- Loading surface of the vice.

7.11. Worn pieces replacement

7.11.1. Hard metal guides replacement

If the hard metal guides cannot be adjusted, they have to be replaced.

1. Dismantle the saw band. Remove the hosepipe leading the cooling agent.
Dismantle guide cube of the saw band.



2. Loosen the adjusting screws of the metal guide.



3. Loosen the binding screw of first metal guide. Remove adjustable hard metal guide.



4. Loosen the binding screw of second metal guide. Remove the hard metal guide
5. Insert new hard metal guides and fasten them tightly.
6. Mount the saw band. Adjust the hard metal guides.

7.11.2. Saw band guiding rollers replacement

ATTENTION!

Guiding pulleys must be replaced together on both guiding cubes!!

If the saw band is not sufficiently guided by guiding pulleys or if the pulleys are obviously worn, the pulleys should be replaced.

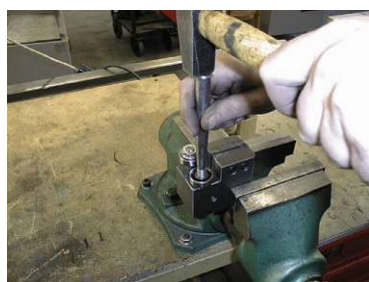
1. Dismantle the saw band.
2. Disconnect the hose from the cooling agent, screw off the pressure regulation. Let the pressure regulation connected to the hydraulic system. Dismantle the guiding cube of the saw band..



ATTENTION!

Mark both eccentrics placing and components on the eccentric! Eccentrics must not be replaced with each other!!

3. Tighten the guiding cube to the vice and dismantle both eccentrics with bearings following way.
4. Screw off nuts from eccentrics..



5. Remove eccentrics from bearings by means of the swager



6. Change all bearings and other worn parts.



ATTENTION!

Do not replace the eccentrics placing in the cube

7. Install eccentrics to the cubes. Install components on both eccentrics in given order. Put bearings by means of the preparation on eccentrics.



8. Screw on nuts on both eccentrics and tighten them.



9. Insert the saw band to the guiding cube (ca. 15 – 20 cm). Set the eccentrics by means of the wrenches, the saw band must run in the centre. Guide pulleys must not press too much on the band, but must spin freely during the band run.
10. Tighten nuts on both eccentrics.
11. Remove the testing piece of saw band from the cube lead. Install the guiding cube on the machine and connect the pressure regulation to the cut and cooling. Install the saw band.

7.11.3. Stretching wheel replacement

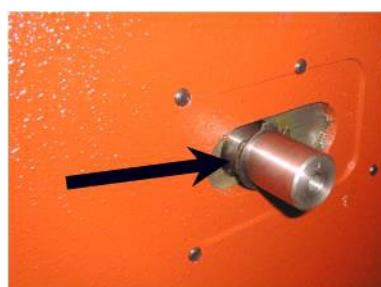
1. Dismantle the saw band.



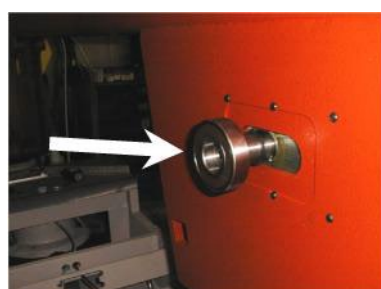
2. Screw off the screw and take down the washer.



3. Pull off the wheel from the shaft by means of the three-armed puller. If bearing stayed on the shaft, pull off it too
4. Check score of the bearings of the stretching wheel and replace them for new.



5. Clean the shaft and grease it with oil. Insert retaining ring to the groove.



6. Install bearing on the shaft and move it to the retaining ring. Insert the distance ring on the shaft and move it to the bearing.



7. Insert the retaining ring to the hole in the wheel.



8. Insert the bearing to the hole in the wheel and press it to the retaining ring.



9. Put the wheel on the shaft and screw on the preparation to the wheel stretching to the hole in the shaft.



10. Pull on the wheel on the shaft.



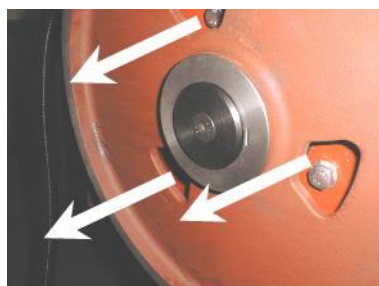
11. Screw on washer and screw back..
12. Install the saw band. Wheel replacement is ready.

7.11.4. Driving wheel replacement

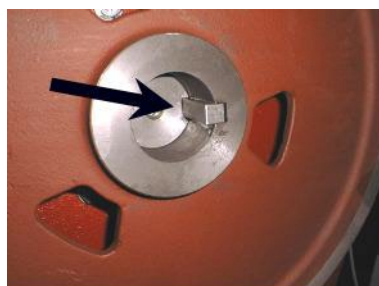
1. Dismantle the saw band



2. Screw off the screw and remove the washer.



3. Pull off the wheel from the shaft by means of the three-armed puller.



4. Install the wheel on the shaft. Insert the feather to the groove.



5. Screw on the preparation to the wheel stretching to the hole in the shaft. Pull on the wheel on the shaft.

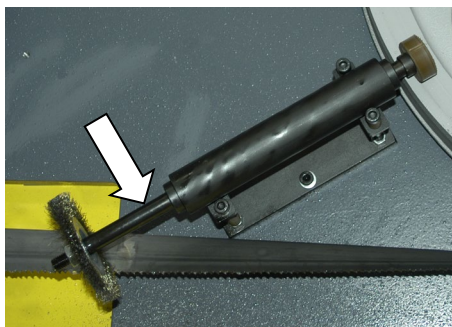


6. Screw on washer and screw back.
7. Install the saw band. Wheel replacement is ready.

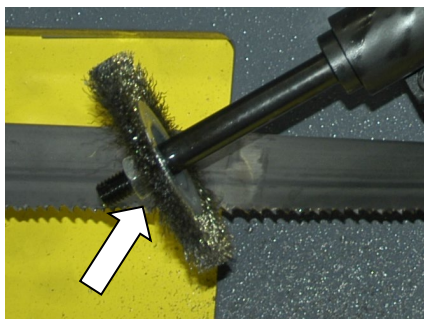
7.11.5. Round brush replacement

If the chip removing brush is not able to fulfil its function, it has to be replaced.

1. Open the cover of the saw arm
2. Hold shaft of the brush by wrench.



3. Release the nut on the brush, replace worn brush on the new brush, screw on the nut.



4. Adjust the brush to the saw band
5. Close saw arm cover

8. **Závady / Störungen / Troubleshooting**

8.1. Mechanical problems

Problem	Possible causes	Repair
1. Slanting cut	- Wrongly adjusted hard metal guides.	Set according to the chapter „Servicing and adjustment“
	- Worn hard metal guides.	Replace to the chapter „Worn pieces replacement“
	- Wrongly adjusted cubes of the saw band guiding.	Set according to the chapter „Servicing and adjustment“
	- Worn bearings of the saw band guiding.	Replace according to the chapter „Worn pieces replacement“
	- Wrongly adjusted swarf brush.	Set according to the chapter „Servicing and adjustment“
	- Worn swarf brush.	Replace according to the chapter „Worn pieces replacement“
	- Insufficient saw band stretching.	Rise the saw band stretching and set the limit switch.
	- Wrongly chosen tooth system of the saw band.	Replace the saw band and keep the instructions of manufacturer on new saw band choice.
	- Worn saw band.	Replace the saw band.
	- Wrongly balanced roller conveyor.	Set the roller conveyor.
	- Dirty feeding board.	Cleanse the feeding board from debris, chip and residue material.
	- Guiding arm and guiding cube are loosened.	Clamp the guiding arm.
	- Guiding arm and cube are too far from the material.	Set the guiding cube to the material.
	- Too fast cutting rate.	Lower the material feeding speed.
	- Unexpected oscillation in material quality.	Set the cut and feeding speed to the relevant material.
2. The cut is not cut upon desired angle	- Securing lever is loosened.	Check the securing lever efficiency and carry out its adjustment according to chapter „Servicing and adjustment“.
	- Set angle does not match the cut angle.	Check the angle adjustment with a protractor and possibly set it according to chapter „Servicing and adjustment“.
	- Insufficient saw band stretching.	Stretch the saw band and set the limit switch according to chapter „Servicing and adjustment“.
	- Guiding arm and guiding cube are loosened.	Fasten the guiding arm and the cube.
	- Dirt between material and clamping jaw.	Cleanse the material and mating jaw.
3. Short lifetime of the saw band	- Insufficient saw band stretching.	Raise the tightening of the saw band set the scanner of saw band tightening according to chapter „Servicing and adjustment“.
	- Worn swarf brush.	Check the swarf brush condition and replace it in case of excessive use as described in chapter „Worn pieces replacement“
	- Wrongly adjusted swarf brush.	Check swarf brush adjustment, set it according to chapter „Servicing and adjustment“

Problem	Possible causes	Repair
	- Over stretched saw band	Lower stretching of the saw band and set the limit switch of the saw band stretching according to chapter „Servicing and adjustment“
	- Wrongly adjusted hard metal guides.	Check the adjustment of the hard metal guides and carry out adjustment as described in chapter „Servicing and adjustment“
	- Worn hard metal guides of the saw band.	Check the condition of the hard metal guide and if it is too worn, replace hard metal guides according to chapter „Worn pieces replacement“
	- Worn saw band guide bearings.	Check guiding bearings and if you notice some sort of excessive damage, replace them according to chapter „Worn pieces replacement“
	- Wrongly adjusted guiding cubes of the saw band.	Set guiding cube according to chapter „Servicing and adjustment“
	- Wrongly adjusted down feed and saw band speed.	Adjust the feeding and speed of a saw band according to values published by saw band manufacturer.
	- Different material quality.	Adjust feeding and speed of a saw band according to desired material (try cut-test).
	- Low-class saw band	Replace the saw band (contact your local accessory supplier for more information)
	- Wrongly chosen saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly adjusted tracking.	Check the space between top of a saw band and driving wheel. Perhaps adjust the tracking as described in chapter „Servicing and adjustment“
4. Insufficient cut output.	- Worn saw band.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrong saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly set down feed and speed of a saw band.	Set feed and speed of a saw band according to values published by saw band manufacturer.
5. The cut is not finished.	- Wrongly adjusted lower stop point of the saw frame.	Check lower limit switch and screw.
	- Stop point surface is messed-up.	Cleanse stop point surface of the limit switch from debris and residue material.
6. By choke is not possible turn	- Metal clamps between valve and panel.	Clamps must be removed and put on the shaft O-Ring about 10x2 mm.
	- Metal clams are in body of valve.	Valve must be cleared or changed.
7. Saw band drive cannot be started.	- Pressure switch is adjusted wrong.	Set the pressure switch according to chapter „Servicing and adjustment“
	- Pressure switch is defective.	Replace defective parts of the pressure switch.
8. The saw bands are cracked.	- In stretching wheel is wrong adjusting geometry.	Adjust distance band from recess wheel c.2 mm according to operating instructions.
	- Hard metal plates of circuit saw band are not adjusting.	Hard metal plates of circuit saw band must be adjusting according to operating instructions.
	- Guiding cubes are not adjusting (bearings + hard metal circuit)	Guiding cubes must be adjusting (bearings + hard metal circuit) according to operating

Problem	Possible causes	Repair
		instructions.
	- Bearings of guiding cubes are used (rolling elements are damaged or outside ring of bearing has conical form).	Bearings of guiding cubes must be replaced. Bearings must be adjusting according to operating instructions.
9. Damage tooth system of the saw band	- In gripping the lifting cylinder is backlash.	
	- Squeezed pin upper or downer holder of the lifting cylinder.	Exchange complete upper or downer holder of lifting cylinder.
10. The saw is cut downing.	- Geometry of hardmetal guiding cubes is wrong adjusted.	Hardmetal guiding cubes must be adjusted.
	- Bearings of guiding cubes are used.	Bearings of guiding cubes must be replaced.
11. Cleansing of the saw band is not functional.	- Elastic wheel of the brush drive is worn-down.	Elastic wheel of the brush must be changed.
	- Knurling of the driving wheel is worn-down.	Driving wheel must be changed.
	- The shaft of the brush drive is rusted.	The shaft of the brush must be cleaned and oiled.
	- The brush position and the brush cover is adjusted wrong – with the brush cannot be turned.	The brush cover must be posed, in order to the brush can be turned.
12. The saw arm periodically rise and fall during the cut; this cause short lifetime of the saw band.	- Backlash in driving wheel lodgement on the shaft.	Change the driving shaft for a long one, new bearings, distance ring, new driving wheel, spring, two covers on the forehead of the shaft + screws.
	- Worn channel for spring.	

8.2. Electric problems

Problem	Possible causes	Repair
1. Machine is not possible start.	- In socket is not voltage	Line voltage must be checked.
	- Transfer relay is closed (thermal protector)	Each FA relay must be checked.
	- Limit switch of saw band stretching, cover of frame or cover of saw band is not started.	Check of saw band stretching and covers closing.
2. When cut is finished, the frame is not raising.	- Bottom limit switch is adjusted wrong.	Bottom limit switch must be adjusted according to chapter ADJUSTING.
	- In hydraulic (pneumatic) ring is error. HYTOS (BOSCH) is not acting to frame uplift.	Function of magnetic valve must be checked, valve must be closed, voltage of clamps and inductor must be checked.
3. Electric motor and pump are without voltage. Between contactor and thermal protector is not voltage.	- Wrong contactor.	Replace contactor of engine.

Problem	Possible causes	Repair
4. The indicator of speed saw band is not functional.	- Sensor of speed is not adjusted.	Sensor of speed must be adjusted.
	- Defective display	The display must be changed.
	- Wrong sensor – diode of indicator speed is not light.	Sensor must be changed and adjusted.
5. Protector is switched off from engine hydraulic aggregate MA3 sometimes.	- Into hydraulic system is high working pressure.	Service engineer must reduce the pressure in hydraulic system.
6. The hydraulic aggregate cannot be started	Auxiliary contact on thermo-relay FA1 is defective.	Replace the defective contact on motor starter FA1.
7. Hydraulic aggregate is switched on but the saw arm or the main vice is not functional	- Wrong connection of electrical supply. The electrical phases are connected conversely.	The phases must be switched. Only service engineer can do this.
8. Cooling is not active	Lack of cooling agent.	Fill the tank with cooling agent.
	- Thermal relay is defective	Change the thermal relay
	- Input hosepipe is broken or obstructed.	Check the cooling circuit and perhaps cleanse cooling system.
	- Cooling pump protection is defective	Check the protection of cooling pump if need change it.
	- Cooling pump is defective.	Replace the cooling pump.

8.3. Hydraulic problems

Problem	Possible causes	Repair
1. Hydrogenerator not supplying oil	• reverse rotation	Check the connections of each phase. Reconnect properly connection of the electrical phases.
	• shortage of oil in the tank	Add hydraulic oil
	• Oil viscosity does not correspond prescribed viscosity value	Change hydraulic oil.
	• Hydrogenerator malfunction	Call service
	• Wrong power supply connection.	Check the connections of each phase. Reconnect properly connection of the electrical phases.
2. Hydraulic oil contains bubbles	• Hydraulic circuit is not adequately deaerated	Make deaeration of hydraulic circuit.
	• Low oil level	Add hydraulic oil

	the pump shaft seals damaged	Call service
3. Increased mechanical noise	damaged joint drive	Call service
	damaged or destroyed motor bearings	Call service
	air intake	Check for leaks.
4. Low pressure, pump supplies oil	problem in the safety valve	Wrong settings. Check the settings and adjust the safety valve.
	pump wear	Call service
	external or internal leakage	Call service
5. Hydrogenerator is seized	damage by solid particles in oil	Make oil filtration, or call the service.
	non-prescribed oil	Change hydraulic oil.
	wrong type of oil	Change hydraulic oil.
	exceeding the life of the pump	Call service
6. Overheating oil	cooler malfunction	Check the cooler function or call service.
	wear the pump, the energy is converted into heat	Call service
7. Hydraulic valve can not be readjusted	electromagnet has no signal (voltage) - interrupted supply lines	Check again.
	Electromagnet coil burnt	Replace coil – Call service.
	spool valve sticking	Replace valve – Call service

Note:

Frequency converter

Connect the machine to electrical networks with corresponding technical parameters only.

We recommend protecting the machine with RCD protection with U characteristics, which is able to compensate changes of current escaping from the filter of the frequency converter, so that additional equipments will not be required. We don't recommend protecting the machine with a standard protection for currents smaller than 100 mA (the standard used is 30 mA) because of current escape in accordance to frequency converters used by machine. Alternative solution should be a current protection (FI) with sensitivity of 100 mA.

9. **Schémata / Schemas / Schematics**

9.1. Elektrické schéma / Elektroschema / Wiring diagrams

 Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic Proline 520.450 ANC Wiring diagram ES-101.266-B1/B2-V1.9.1 3x400V + PE, 50Hz					2		2	
					Verze / Version / Version:	ES-101.266-B1/B2-V1.9.1	Účel:	1
					Název / Power supply / Eingangsung:	3x400V + PE, 50Hz	Účel:	1
					Datum / Date / Datum:	13.09.2022	Účel:	1
					Zpracováno / Processed / Hat. verarbeitet:		Účel:	40



Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
+OP1.1-XUSB1.1	Konektor USB Connector USB Anschluss USB	CLIFF CP30110	CLIFF	91.141.110	1	/12.3
+OP1.1-XUSB1.1	Kryt zásuvky USB USB socket cover Abdeckung der USB-Buchse	CLIFF CP30112	CLIFF	91.141.111	1	/12.3
-A1.1.A	PLC řídicí jednotka PLC Control unit SPS Steuereinheit	DELAS228F-A	DELTA ELECTRONICS, INC.	91.995.929	1	/13.0
-A1.3.1	Modul analogových vstupů 4x Analog input module 4x Analoges Eingangsmodul 4x	DELAS04AD-A	DELTA ELECTRONICS, INC.	91.995.933	1	/18.0
-A1.7.1	Modul releových výstupů 8x Relay output module 8x Relais Ausgangsmodul 8x	DELAS08AN01R-A	DELTA ELECTRONICS, INC.	91.995.930	1	/19.0
-A1.9.1	Směšený modul 8xIN, 8xOUT Mixed module 8xIN, 8xOUT Gemischtes Modul 8xIN, 8xOUT	DELAS16AP11R-A	DELTA ELECTRONICS, INC.	91.995.934	1	/20.0
-BM1.1	Bezpečnostní relé 24VDC, 3NO/1NC Safety relay 24VDC, 3NO/1NC Sicherheitsrelais 24VDC, 3NO/1NC	ABB.2TLA010040R0000	ABB	91.051.076	1	/10.6
-BM10.10	Bezpečnostní spínací přístroj Safety switch Sicherheitsschalter	SICK.1085343	SICK	91.051.071	1	/11.6
-ENC1.1	Lineární inkrementální snímač - 10-30VDC/10-30VDC Linear Encoder - 10-30VDC / 10-30VDC Linearencoder - 10-30VDC / 10-30VDC	LMTX2-012-12,0-2N50-00	ELGO	91.270.029	1	/14.1
-ENC1.1	Magnetická páska Magnetic tape Magnetband	MB20.50	ELGO	91.271.002	1	/14.1
-ENC1.2	Lineární inkrementální snímač - 10-30VDC/10-30VDC Linear Encoder - 10-30VDC / 10-30VDC Linearencoder - 10-30VDC / 10-30VDC	LMTX2-026-08,0-1-00	ELGO	91.270.011	1	/14.3
-ENC1.2	Magnetická páska Magnetic tape Magnetband	MB20.50	ELGO	91.271.002	1	/14.3

The manufacturer reserves right to use an equivalent replacement device.



BOMAR, s.r.o.
Třezemní 1236/1
CZ 627 00, Brno

Stroj/Machine/Maschine:

Proline 520.450 ANC

Název stránky/Name page/Name section:

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Číslo dok./Doc.No./Anzahl der Dokumente.:

ES-101.266-61.02-V1.9.1

Napájení/Power supply/Erspeisung:

3x400V + PE, 50Hz

Zpracování/Processed /Hat vorbehandelt:

Datum/Date/Datum:

25.07.2022

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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-FA1.1	Motorový spouštěč - 0.4A Motor starter - 0.4A Motorstarter - 0.4A	MS116-0,4	ABB	91.045.017	1	/8.7
-FA1.1	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/8.7
-FA1.2	Motorový spouštěč - 4A Motor starter - 4A Motorstarter - 4A	MS116-4,0	ABB	91.045.022	1	/8.4
-FA1.2	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/8.4
-FA10.3	Motorový spouštěč - 1A Motor starter - 1A Motorstarter - 1A	MS116-1,00	ABB	91.045.019	1	/8.2
-FA10.3	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/8.2
-FM1.1	Frekvenční měnič - 3.7kW, 3x400VAC Frequency converter - 3.7kW, 3x400VAC Frequenzumrichter - 3.7kW, 3x400VAC	VFD9A0ME3AFMAA	DELTA ELECTRONICS, INC.	91.012.191	1	/7.1
-FU1.1	Pojistka trubičková - 6.3A/250V, pomalá, 5x20 Tube fuse - 6.3A/250V, slow, 5x20 Rohrsicherung - T6,3A / 250V, langsam, 5x20	T6,3A/250V	ESKA	91.230.002	1	/9.1
-FU1.1	Svorka pojistková Fuse terminal Sicherungsklemme	SK1 - 2.5D	SMS Technology	91.251.102	1	/9.1
-FU1.1	Svorka pojistková - koncové čelo Fuse terminal - termination Sicherungsklemme - Abschluss	SK1 - 2.5 RDG	SMS Technology	91.252.123	1	/9.1
-FU1.2	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/9.3
-FU1.2	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/9.3

The manufacturer reserves right to use an equivalent replacement device.

3.a	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Strýč/Machala/Maschale: Proline 520.450 ANC	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo soub./Doc.No./Anzahl der Dokumente.: Napájení/Power supply/Erspeisung: Zpracováno/Processed /Hat vorberbeitet: Datum/Date/Datum:	ES-101.266-01/02-V1.3.1 3x400V + PE, 50Hz 13.09.2022	Stránka/ Seite: 3.b Lůž/Pages/ Seiten: 40
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Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-FU1.3	Pojistka trubičková - 6,3A/250V, pomalá, 5x20 Tube fuse - 6,3A/250V, slow, 5x20 Rohrsicherung - T6,3A / 250V, langsam, 5x20	T6,3A/250V	ESKA	91.230.002	1	/9.3
-FU1.3	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/9.3
-FU1.4	Pojistka trubičková - 500mA/250V, pomalá, 5x20 Tube fuse - 500mA/250V, slow, 5x20 Rohrsicherung - 500 mA / 250 V, langsam, 5x20	T500mA/250V	ESKA	91.230.011	1	/9.3
-FU1.4	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/9.3
-FU1.5	Pojistka trubičková - 1A/250V, pomalá, 5x20 Tube fuse - 1A/250V, slow, 5x20 Rohrsicherung - 1A / 250V, langsam, 5x20	T1A/250V	ESKA	91.230.031	1	/9.3
-FU1.5	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/9.3
-FU1.7	Pojistka trubičková - 500mA/250V, pomalá, 5x20 Tube fuse - 500mA/250V, slow, 5x20 Rohrsicherung - 500 mA / 250 V, langsam, 5x20	T500mA/250V	ESKA	91.230.011	1	/24.1
-FU1.7	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/24.1
-FU1.8	Pojistka trubičková - 200mA/250V, pomalá, 5x20 Tube fuse - 200mA/250V, slow, 5x20 Rohrsicherung - 160mA / 250V, langsam, 5x20	T200mA/250V	ESKA	91.230.037	1	/24.4
-FU1.8	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS5U	WIELAND	91.251.102	1	/24.4
-FU1.8	Svorka pojistková - koncové čelo Fuse terminal - termination Sicherungsklemme - Abschluss	SK0 - 2,5 RDG	SMS Technology	91.252.123	1	/24.4
-H10.4B	Maják - modrá Lighthouse - Blue Leuchtturm - Blau	SL7-L-B	EATON	91.063.063	1	/16.7

The manufacturer reserves right to use an equivalent replacement device.



BOMAR, s.r.o.
Třeborní 1236/1
CZ 627 00, Brno

Stroj/Machine/Maschine:
Proline 520.450 ANC

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Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-H10.4B	Žárovka 24V Lamp 24V Lampe 24V	SL7-L24	EATON	91.063.061	1	/16.7
-H10.4G	Maják - zelená Lighthouse - green Leuchtturm - grün	SL7-L-G	EATON	91.063.060	1	/16.6
-H10.4G	Žárovka 24V Lamp 24V Lampe 24V	SL7-L24	EATON	91.063.061	1	/16.6
-H10.4R	Maják - červená Lighthouse - red Leuchtturm - rot	SL7-L-R	EATON	91.063.062	1	/16.6
-H10.4R	Žárovka 24V Lamp 24V Lampe 24V	SL7-L24	EATON	91.063.061	1	/16.6
-H10.4Y	Maják - základna Lighthouse - Base Leuchtturm - Basis	SL7-CB-100	EATON	91.063.058	1	/16.5
-H10.4Y	Maják - žlutý Lighthouse - yellow Leuchtturm - gelb	SL7-L-Y	EATON	91.063.059	1	/16.5
-H10.4Y	Žárovka 24V Lamp 24V Lampe 24V	SL7-L24	EATON	91.063.061	1	/16.5
-HM1.1	H-motor_driver H-motor_driver H-motor_driver	3121-082	BOMAR s.r.o.	91.995.288	1	/17.2
-HM11.1	HMI ovládací panel 7'' HMI control panel 7'' Bedienfeld 7''	DEL DOP-107EG	DELTA ELECTRONICS, INC.	91.995.932	1	/12.0
-HV1.1A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.1
-HV1.1B	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.2

The manufacturer reserves right to use an equivalent replacement device.

3.C	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stručný popis/Nachname: Proline 520.450 ANC	Název stránky/Name page/Name section: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: Napájení/Power supply/Einspeisung: Zpracováno/Processed /Hat vorr.bereit: Datum/Date/Datum:	Úd./Page/ Seite: Úd./Page/ Seite:
				ES-101.266-01/02-V1.3.1 3x400V + PE, 50Hz 25.07.2022	3.d 40



Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-HV1.2A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.3
-HV1.2B	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.4
-HV1.3	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.5
-HV1.4	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.6
-HV1.5A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.6
-HV1.5B	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.7
-HV1.17A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/21.1
-HV1.17B	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/21.2
-HV1.18A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/21.3
-HV1.18B	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/21.4
-HV10.8	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/19.0
-HV20A	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finecables Co., Ltd.	93.017.077	1	/17.5

The manufacturer reserves right to use an equivalent replacement device.

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-HV208	Ventilový konektor, LED Valve Plug, LED Ventilanschluss, LED	VCAFA0322-LED	Finccables Co.,Ltd.	93.017.077	1	/17.6
-KM1.1	Stykač - 4kW/400V, 3P Contactor - 4kW/400V, 3P Schütz - 4 kW / 400V, 3P	AF09-30-01-11	ABB	91.040.047	1	/16.1
-KM1.2	Stykač - 5.5kW/400V, 3P Contactor - 5.5kW/400V, 3P Schütz - 5.5kW/400V, 3P	AF12-30-10-11	ABB	91.040.050	1	/16.2
-KM1.11	Stykač 5.5kW/400V Contactor 5.5kW/400V Schütz 5.5kW/400V	AF12-30-01-11	ABB	91.040.051	1	/10.7
-KM1.11	Pomocný kontakt - 1xNO Auxiliary contact - 1xNO Hilfskontakt - 1xNO	CA4-10	ABB	91.041.044	1	/10.7
-KM1.12	Stykač 5.5kW/400V Contactor 5.5kW/400V Schütz 5.5kW/400V	AF12-30-01-11	ABB	91.040.051	1	/10.8
-KM1.12	Pomocný kontakt - 1xNO Auxiliary contact - 1xNO Hilfskontakt - 1xNO	CA4-10	ABB	91.041.044	1	/10.8
-KM10.3	Stykač - 4kW/400V, 3P Contactor - 4kW/400V, 3P Schütz - 4 kW / 400V, 3P	AF09-30-01-11	ABB	91.040.047	1	/7.8
-LP1	LED lamp LED lamp LED-Lampe	FL-T-24-1X3W	WIDECO	91.100.115	1	/24.1
-LP10.2	Laser Laser Laser	Laser 24AC/DC	HOFMAN SYSTEMS s.r.o.	91.100.109	1	/24.4
-LQ1.1a	Jednocestná světelná závora - vysílač; M12-konektor; 0,3 m Through-beam sensor transmitter; M12-male; 0,3 m Einweglichtschranke Sender; M12-male; 0,3 m	IFM.O6S701	IFM electronic	91.401.031	1	/14.7
-LQ1.1b	Jednocestná světelná závora - přijímač; M12-konektor; 0,3 m Through-beam sensor receiver; M12-male; 0,3 m Einweglichtschranke Empfänger; M12-male; 0,3 m	IFM.O6E701	IFM electronic	91.401.030	1	/14.8

The manufacturer reserves right to use an equivalent replacement device.

3.e	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stručný popis/Nachlässe: Proline 520.450 ANC	Název stránky/Name page/fName section: Kusovník artiklů / Parts list / Artikelstückliste	Číslo soub./Doc.No./Anzahl der Dokumente.: ES-101.266-01/02-V1.3.1 Napájení/Power supply/Erspeisung: 3x400V + PE, 50Hz Zpracováno/Processed /Hat verarbeitet: 13.09.2022	Úd./Page/ Seite: 3.4 Úd./Page/ Seite: 40
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Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-LQ10.8a	Jednocestná světelná závořa - vysílač; M12-konektor; 0,3 m Through-beam sensor transmitter; M12-male; 0,3 m Einweglichtschranke Sender; M12-male; 0,3 m	IFM.O6S701	IFM electronic	91.401.031	1	/20.1
-LQ10.8b	Jednocestná světelná závořa - přijímač; M12-konektor; 0,3 m Through-beam sensor receiver; M12-male; 0,3 m Einweglichtschranke Empfänger; M12-male; 0,3 m	IFM.O6E701	IFM electronic	91.401.030	1	/20.1
-M1.1	Čerpadlo chlazení 120W Cooling pump 120W Kühlpumpe 120W	PA70/120	SAP srl	91.020.032	1	/8.7
-M1.5	Ventilátor 24VDC, 154CFM Fan 24VDC, 154CFM	RDH1238 B2	Xinruilian Electronic Co.	91.015.126	1	/7.9
-M10.3	Asynchronní motor 3x230/400V, 50Hz, 0,25kW Asynchronous motor 3x230 / 400V, 50Hz, 0.25 kW Asynchronmotor 3x230 / 400V, 50Hz, 0.25 kW	BN71A4	BONFIGLIOLI	91.001.255	1	/8.2
-PA1.1	Pojistka válcová - 12A, 10x38, rychlá Tube fuse - 12A, 10x38, fast Rohrsicherung - 12A, 10x38, schnell	PV10 12A gG	OEZ	91.231.007	3	/7.1
-PA1.1	Pojistkový odpiřač pro válcové vložky - 3P Switch fuse for the cylinder inserts - 3P Schalter Sicherung für den Zylinderinsätze - 3P	E 93/32	ABB	91.241.014	1	/7.1
-QS1.1	3 pólový odpiřač, 25A Disconnector - 3P, 25A Trennschalter - 3P, 25A	OT25FT3	ABB	91.170.016	1	/6.1
-QS1.1	Kryt svorek Terminal shroud Klemmenabdeckung	OTS40T3	ABB	91.170.017	1	/6.1
-QS1.1	Rukojet' odpiřače - černá Handle switch - black Griffschalter - schwarz	OH852RJ	ABB	91.180.015	1	/6.1
-RE10.3	Patkové relé CR-P Plug-in relay CR-P Stecken Sie in Relais CR-P	CR-P0240C2	ABB	91.051.049	1	/7.7
-RE10.3	Patice pro relé Relay socket Relaissocket	CR-PSS	ABB	91.051.048	1	/7.7

The manufacturer reserves right to use an equivalent replacement device.

3.f		BOMAR, s.r.o. Třebíz 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Proline 520.450 ANC	Název stránky/Name page/Name section: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: Napájení/Power supply/Einspeisung: Zpracováno/Processed / Hat vorbearbeitet: Datum/Date/Datum:	ES-101.266-61.02-V1.9.1	3.9	40
						3x400V + PE, 50Hz	3.9	
						13.09.2022	40	

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-RE10.8	Patčové relé CR-P Plug-in relay CR-P Stecken Sie in Relais CR-P	CR-P024DC2	ABB	91.051.049	1	/16.3
-RE10.8	Patice pro relé Relay socket Relaissockel	CR-PSS	ABB	91.051.048	1	/16.3
-RT10.7	Modem-router eWON COSY 131, WAN Modem-router COSY 131, WAN Modem-router eWON COSY 131, WAN	ECG1330	eWon	91.990.034	1	/23.3
-RT10.7	Modem-router eWON COSY 131, WIFI Modem-router COSY 131, WIFI Modem-router eWON COSY 131, WIFI	ECG133C	eWon	91.990.035	1	/23.3
-RT10.7	Ethernet kabel 1m Ethernet cable 1m Ethernetkabel 1m	KEL-C6-S-010 KELine	Cables with connector	91.142.129	1	/23.3
-SQ1.1	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/15.7
-SQ1.1	Koncový spínač - 1NC+1NO, M20, pomalý Limit switch - 1NC+1NO, M20, slow Endschalter - 1NC+1NO, M20, langsam	D4N-4A32	OMRON	91.173.010	1	/15.7
-SQ1.1	Kabelová vývodka M20 Cable gland M20 Kabelverschraubung	KAMAT-AG-1545.20.13	Agro	91.070.012	1	/15.7
-SQ1.2	Koncový spínač - 1NO + 1NC, kládka, pomalá akce Limit switch - 1NO + 1NC, pulley, slow action Endschalter - 1NO + 1NC, rolle, langsame Einwirkung	FR 615-M2	PIZZATO	91.173.044	1	/14.6
-SQ1.2	Kabelová vývodka M20 Cable gland M20 Kabelverschraubung	KAMAT-AG-1545.20.13	Agro	91.070.012	1	/14.6
-SQ1.5	Koncový spínač - 1NO + 1NC, kládka, pomalá akce Limit switch - 1NO + 1NC, pulley, slow action Endschalter - 1NO + 1NC, rolle, langsame Einwirkung	FR 605-M2	PIZZATO	91.173.009	1	/14.1
-SQ1.5	Kabelová vývodka M20 Cable gland M20 Kabelverschraubung	KAMAT-AG-1545.20.13	Agro	91.070.012	1	/14.1

The manufacturer reserves right to use an equivalent replacement device.

3.9	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Strýk/Mechanic/Maschine: Proline 520.450 ANC	Název stránky/Name page/FName section: Kusovník artiklů / Parts list / Artikelstückliste	Číslo soub./Doc.No./Anzahl der Dokumente.: ES-101.266-01/02-V1.3.1 Napájení/Power supply/Erspeisung: 3x400V + PE, 50Hz Zpracováno/Processed /Hat vorberbeitet: 13.09.2022	Úd./Page/ Seite: 3.9 Úd./Page/ Seite: 40
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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SQ1.9	Koncový spínač - 1NO + 1NC, dlouhá nastavitelná kladka, M2, snap action Limit switch - 1NO + 1NC, long adjustable pulley, M2, snap action Endschalter - 1NO + 1NC, lange verstellbare rolle, M2, schnapp	FR 655-M2	PIZZATO	91.173.045	1	/15.5
-SQ1.9	Kabelová vývodka M20 Cable gland M20 Kabelverschraubung	KAMAT-AG-1545.20.13	Agro	91.070.012	1	/15.5
-SQ1.10	Induktivní senzor - 2mm, NO, 24V DC, 200mA, M8 Inductive sensor - 2mm NO, 24VDC, 200 mA, M8 Induktive Sensor - 2mm NO, 24VDC, 200 mA, M8	IME08-02BPSZT05	SICK	91.172.033	1	/14.5
-SQ1.11	Induktivní senzor - 2mm, NO, 24V DC, 200mA, M8 Inductive sensor - 2mm NO, 24VDC, 200 mA, M8 Induktive Sensor - 2mm NO, 24VDC, 200 mA, M8	IME08-02BPSZT05	SICK	91.172.033	1	/14.7
-SQ1.16	Koncový spínač - 1NO + 1NC, kladka, pomalá akce Limit switch - 1NO + 1NC, pulley, slow action Endschalter - 1NO + 1NC, rolle, langsame Einwirkung	FR 605-M2	PIZZATO	91.173.009	1	/22.3
-SQ1.16	V-BIMED M16x1,5 - černá V-BIMED M16x1,5 - black V-BIMED M16x1,5 - schwarz	AG-1545.17.10	KAMAT spol. s r.o.	91.070.011	1	/22.3
-SQ1.51	Bezpečnostní koncový spínač - 2NC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QX58	KEDU	91.173.012	1	/10.4
-SQ10.4	Indukční snímač vzdálenosti Inductive proximity sensor Induktive Näherungssensor	BAW R06AC-UMF20B-EP03	BALLUFF	91.172.016	1	/18.1
-SZ10.10A	Víceprásková bezpečnostní světelná závořa - přijímač Safety multi-beam light curtain - receiver Sicherheits-Mehrstrahl-Lichtvorhang - Empfänger	M40E-034020RR0	SICK	91.401.039	1	/11.3
-SZ10.10B	Víceprásková bezpečnostní světelná závořa - vysílač Safety multi-beam light curtain - transmitter Sicherheits-Mehrstrahl-Lichtvorhang - Sender	M40S-034000AR0	SICK	91.401.038	1	/11.0
-WETH1.1	Ethernet kabel 1m Ethernet cable 1m Ethernetkabel 1m	KEL-C6-S-010 Keline	Cables with connector	91.142.129	1	/12.4
-WH10.4	PVC, flexibilní, číslované značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	JZ-500 750.75	Cables	41.130.011	1	/16.5

The manufacturer reserves right to use an equivalent replacement device.



BOMAR, s.r.o.
Třeborní 1236/1
CZ 627 00, Brno

Stručný popis/Machine:

Proline 520.450 ANC

Název stránky/Name page/Name section:

Kusovník artiklů / Parts list / Artikelstückliste

Číslo dok./Doc.No./Anzahl der Dokumente.:

ES-101.266-61.02-V1.9.1

Název/Power supply/Erschließung:

3x400V + PE, 50Hz

Zpracováno/Processed /Hat vorbehandelt:

Datum/Date/Datum:

13.09.2022

Str./Page/

3.1

Str./Page/

40

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-WHV1.1A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.1
-WHV1.1B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.2
-WHV1.2A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.3
-WHV1.2B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.4
-WHV1.3	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.5
-WHV1.4	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.6
-WHV1.5A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.6
-WHV1.5B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.7
-WHV1.17A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/21.1
-WHV1.17B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/21.2
-WHV1.18A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/21.3
-WHV1.18B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/21.4

The manufacturer reserves right to use an equivalent replacement device.

3.i	 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stručný popis/Nacházet: Proline 520.450 ANC	Název stránky/Page name/seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: ES-101.266-01.02-V1.3.1 Napájení/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracováno/Processed / Hat verarbeitet: 13.09.2022	Lid/Page/ Seite: 3.i Lid/Page/ Seite: 40
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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednáací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-WHV10.8	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/19.0
-WHV20A	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/17.5
-WHV20B	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/17.6
-WLP10.1	PUR, zásuvka M8, 3-pin, nestíněný, LED, přímý, 10 m Cable with straight connector M8, 3pin Kabel mit geradem Stecker M8, 3pin	BOH-RK0W3-06/10M	Cables with connector	91.142.032	1	/24.1
-WLP10.2	PUR, zásuvka M8, 3-pin, nestíněný, LED, přímý, 10 m Cable with straight connector M8, 3pin Kabel mit geradem Stecker M8, 3pin	BOH-RK0W3-06/10M	Cables with connector	91.142.032	1	/24.4
-WLQ1.1a	PUR, zásuvka M12, 4-pin, přímý, 10 m PUR, M12 socket, 4-pin, straight, 10 m PUR, M12-Buchse, 4-polig, gerade, 10 m	MOD.15/4 M12 SL LC10	Cables with connector	91.142.002	1	/14.7
-WLQ1.1b	PUR, zásuvka M12, 4-pin, přímý, 10 m PUR, M12 socket, 4-pin, straight, 10 m PUR, M12-Buchse, 4-polig, gerade, 10 m	MOD.15/4 M12 SL LC10	Cables with connector	91.142.002	1	/14.7
-WLQ10.8a	PUR, zásuvka M12, 4-pin, nestíněný, přímý, 10 m Cable 10m with connector M12 4pin Kabel 10m mit Stecker M12 4-polig	DOL-1204-G10MC	Cables with connector	91.142.033	1	/20.1
-WLQ10.8b	PUR, zásuvka M12, 4-pin, nestíněný, přímý, 10 m Cable 10m with connector M12 4pin Kabel 10m mit Stecker M12 4-polig	DOL-1204-G10MC	Cables with connector	91.142.033	1	/20.1
-WM1.1	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 4G1,5 C černý	Cables	41.100.005	1	/8.7
-WM1.2	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 4G1,5 C černý	Cables	41.100.005	1	/8.4
-WM1.4	PVC, stíněný, barevné značení PVC, shielded, color marking PVC, geschlirmt, Farbmarkierung	CY-3Z 4Bx1,5	Cables	41.145.001	1	/7.1

The manufacturer reserves right to use an equivalent replacement device.



Kusovník artiklů / Parts list / Stückliste

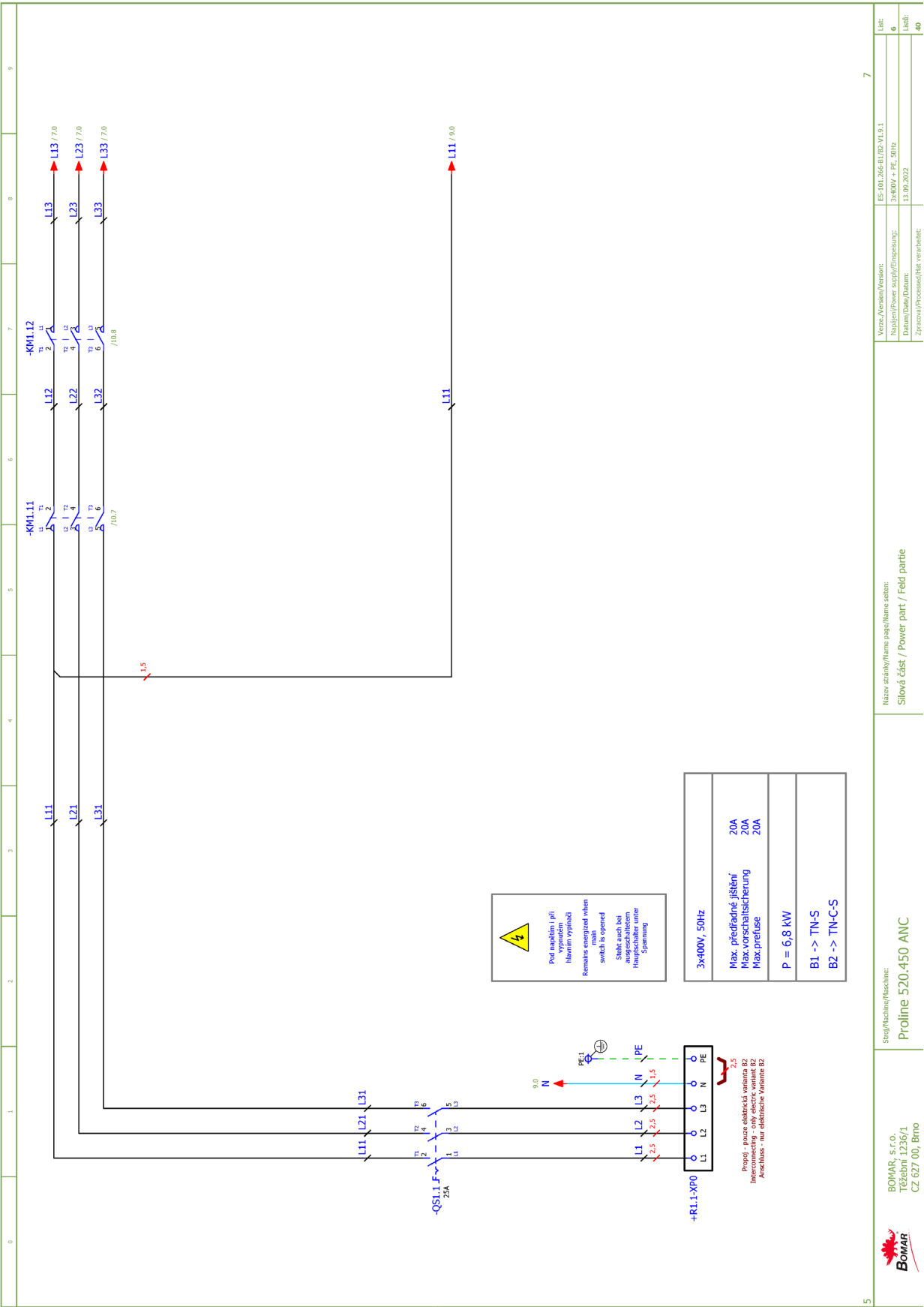
Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednací číslo Part number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-WSQ1.16	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/22.3
-WSQ1.18	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farbmarkierung	H05VV-F 2x0,75 C černý	Cables	41.100.002	1	/20.3
-WSQ1.51	PVC, flexibilní, barevné značení PVC, flexible, color marking PVC, flexibel, Farblich gekennzeichnet	H05VV-F 5G0,75 C černý	Cables	41.100.007	1	/10.4
-WSQ10.4	PVC, stíněný, barevné značení PVC, shielded, color marking PVC, geschlirmt, Farbkenntzeichnung	TRONIC-CY 3x0,34 (LCY)	Cables	41.145.022	1	/18.1
-WSYNC1	PVC, flexibilní, číslované značení PVC, flexible, numbered marking PVC, flexibel, Nummerierung	IZ-500 16G0,5	Cables	41.130.032	1	/25.2
-WSZ10.10A	PUR, zásuvka M12, 8-pin, stíněný, přímý, 15 m Cable with straight connector M12, 8pin Kabel mit geradem Stecker M12, 8pin	DOL-127SG15ME25KM0	Cables with connector	91.142.015	1	/11.3
-WSZ10.10B	PUR, zásuvka M12, 8-pin, stíněný, přímý, 15 m Cable with straight connector M12, 8pin Kabel mit geradem Stecker M12, 8pin	DOL-127SG15ME25KM0	Cables with connector	91.142.015	1	/11.0
-USB1.1	Kabel USB 0,5 m USB cable 0,5 m USB-Kabel 0,5 m	GOOBAY 93016	GOOBAY	91.142.133	1	/12.3
-X10.3	Zásuvka konektoru 7pin Connector socket 7 pin Anschlussbuchse 7-polig	SOS.211398-1	SOS Electronic, spol. s r.o.	91.141.001	1	/8.2
-X10.3	Zásrčka konektoru 7pin Connector plug 7pin Anschlussstecker 7pol	SOS.211400-1	SOS Electronic, spol. s r.o.	91.141.002	1	/8.2
-X10.3	Zásuvkový kontakt Multimate III+ F Contact Multimate III + F Buchsenkontakt Multimate III + F	SOS.163084-1	SOS Electronic, spol. s r.o.	91.141.006	4	/8.2
-X10.3	Redukce pro 7 pin konektor Reduction for 7 pin connector Reduzierung für 7-poligen Stecker	BOMAR.30.2806-103	BOMAR s.r.o.	30.2806-103	2	/8.2

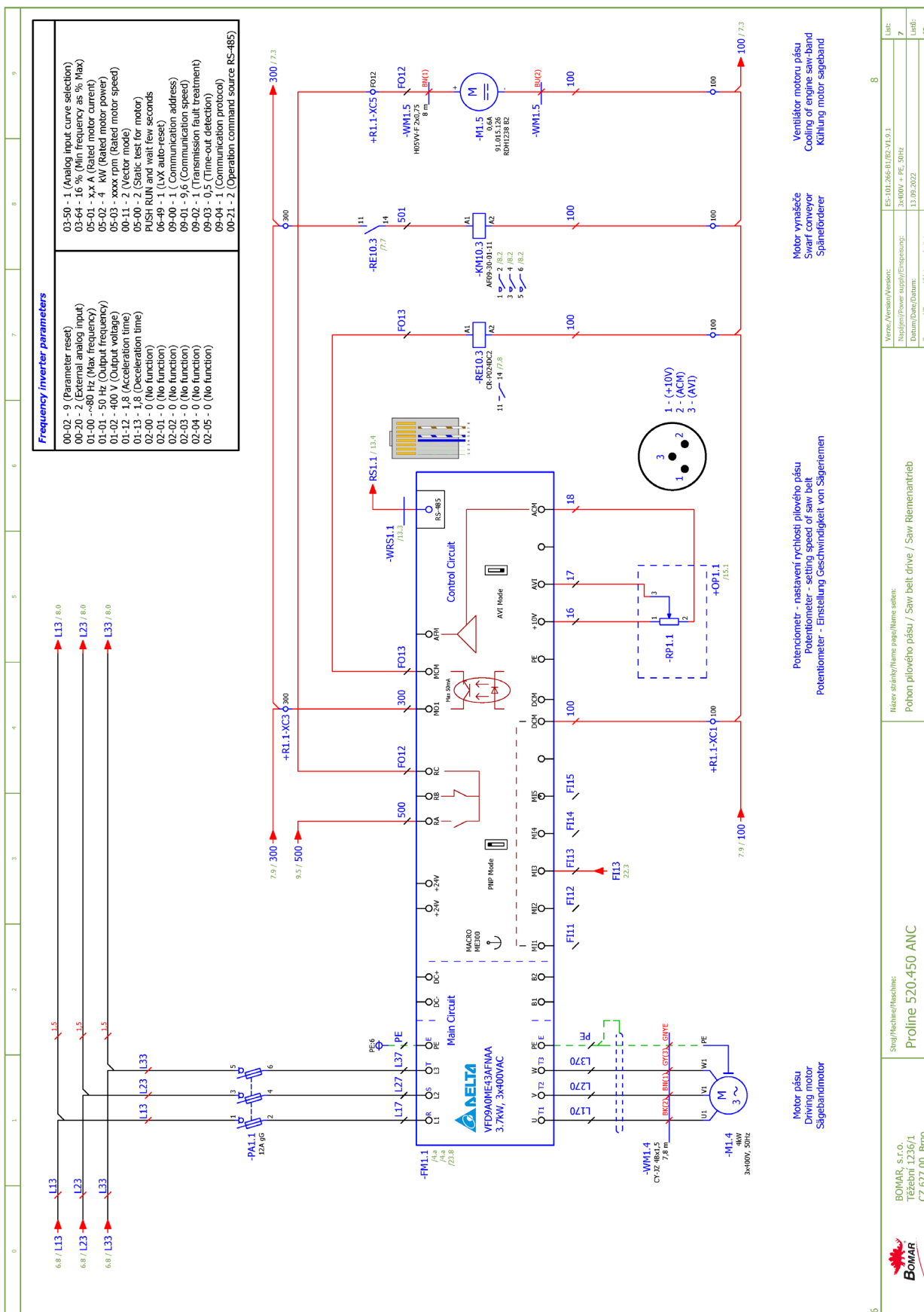
The manufacturer reserves right to use an equivalent replacement device.

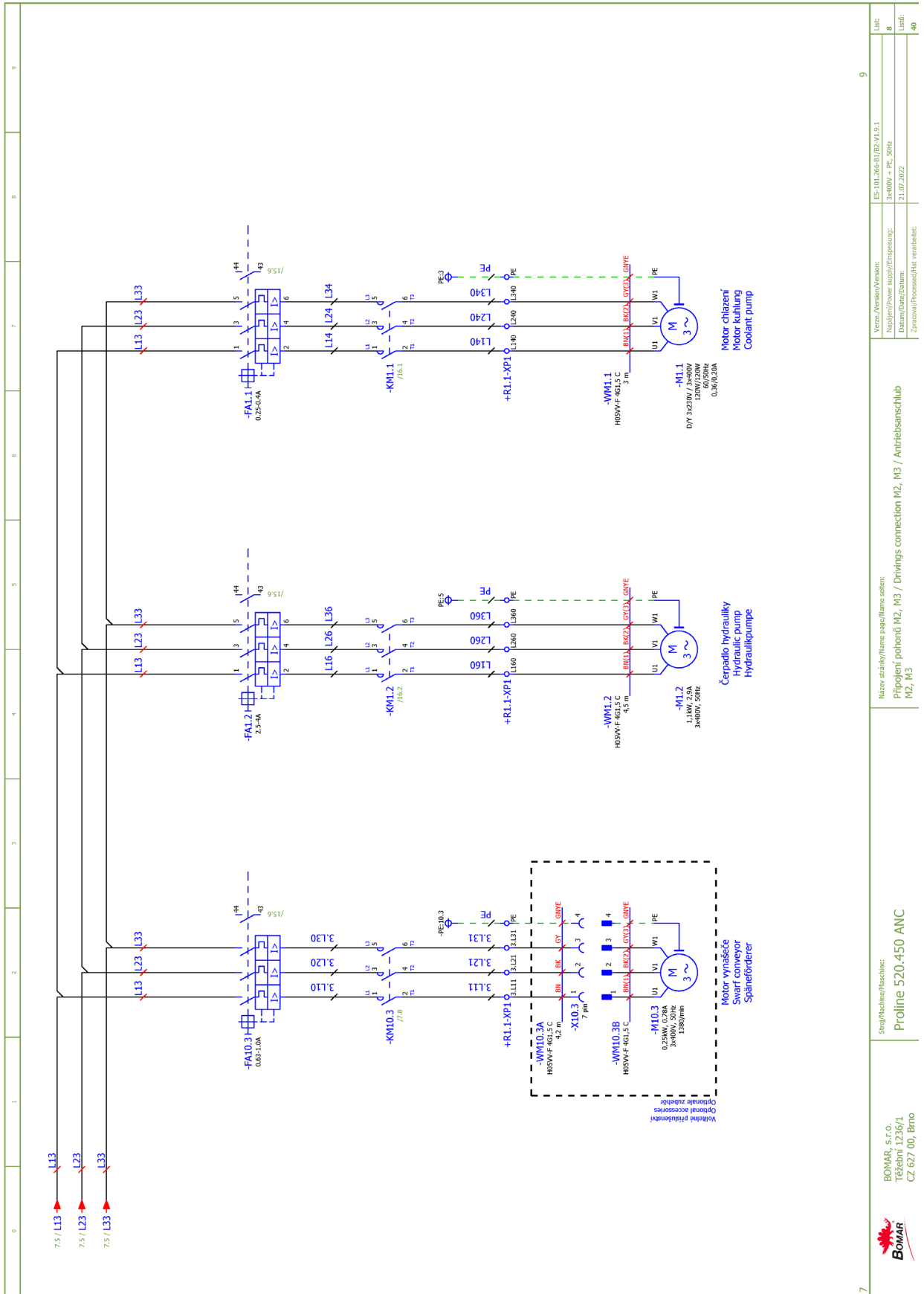
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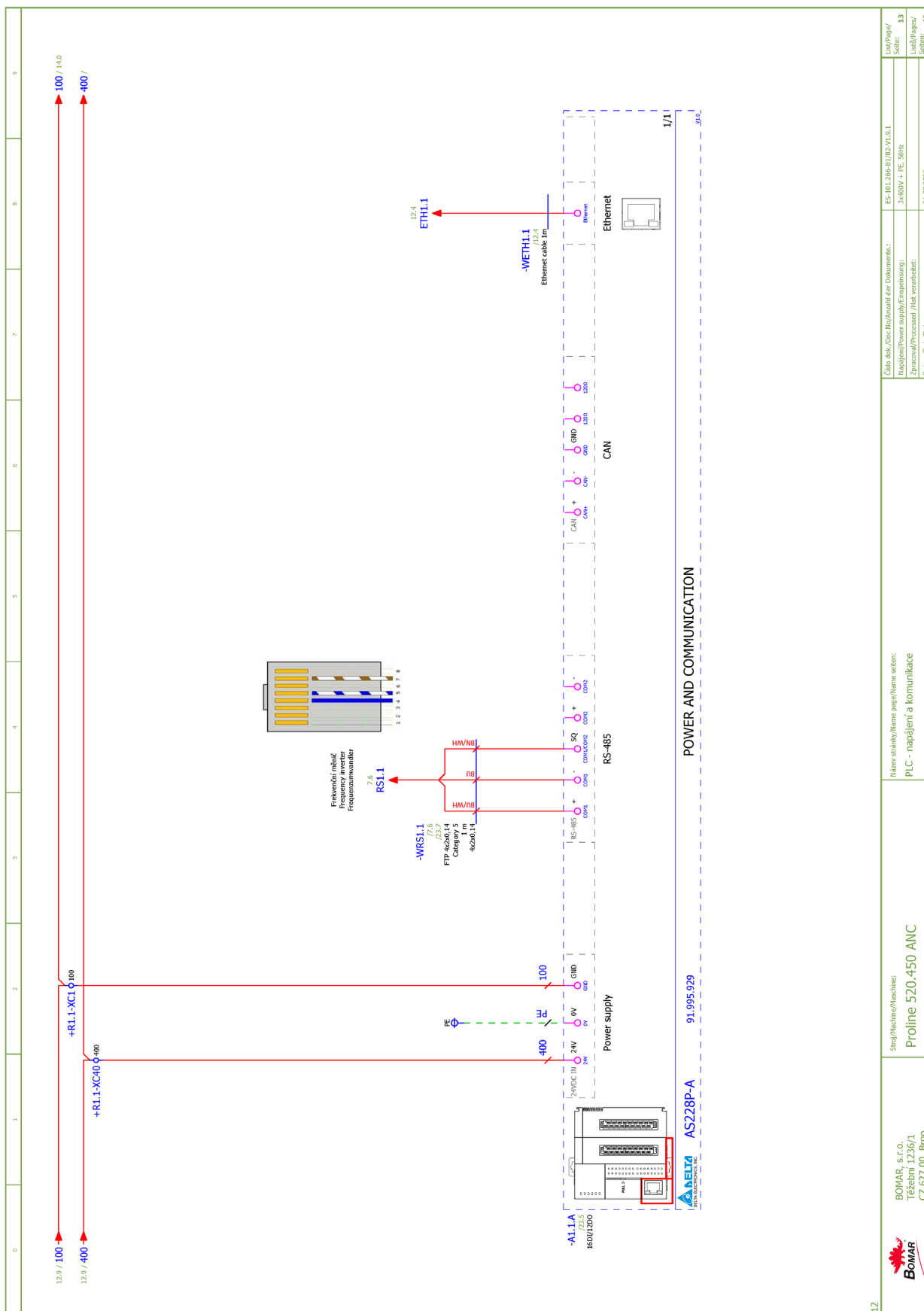


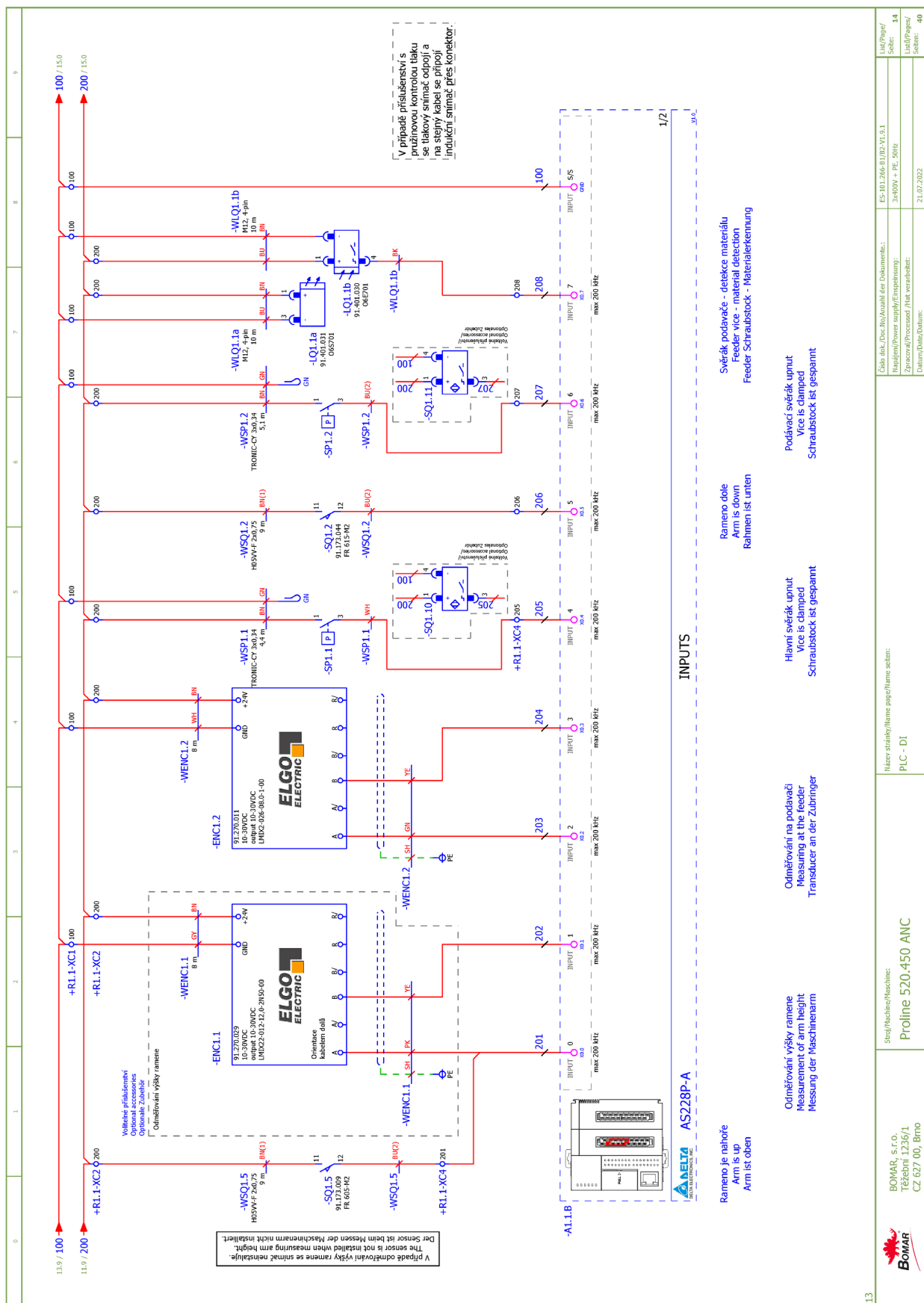








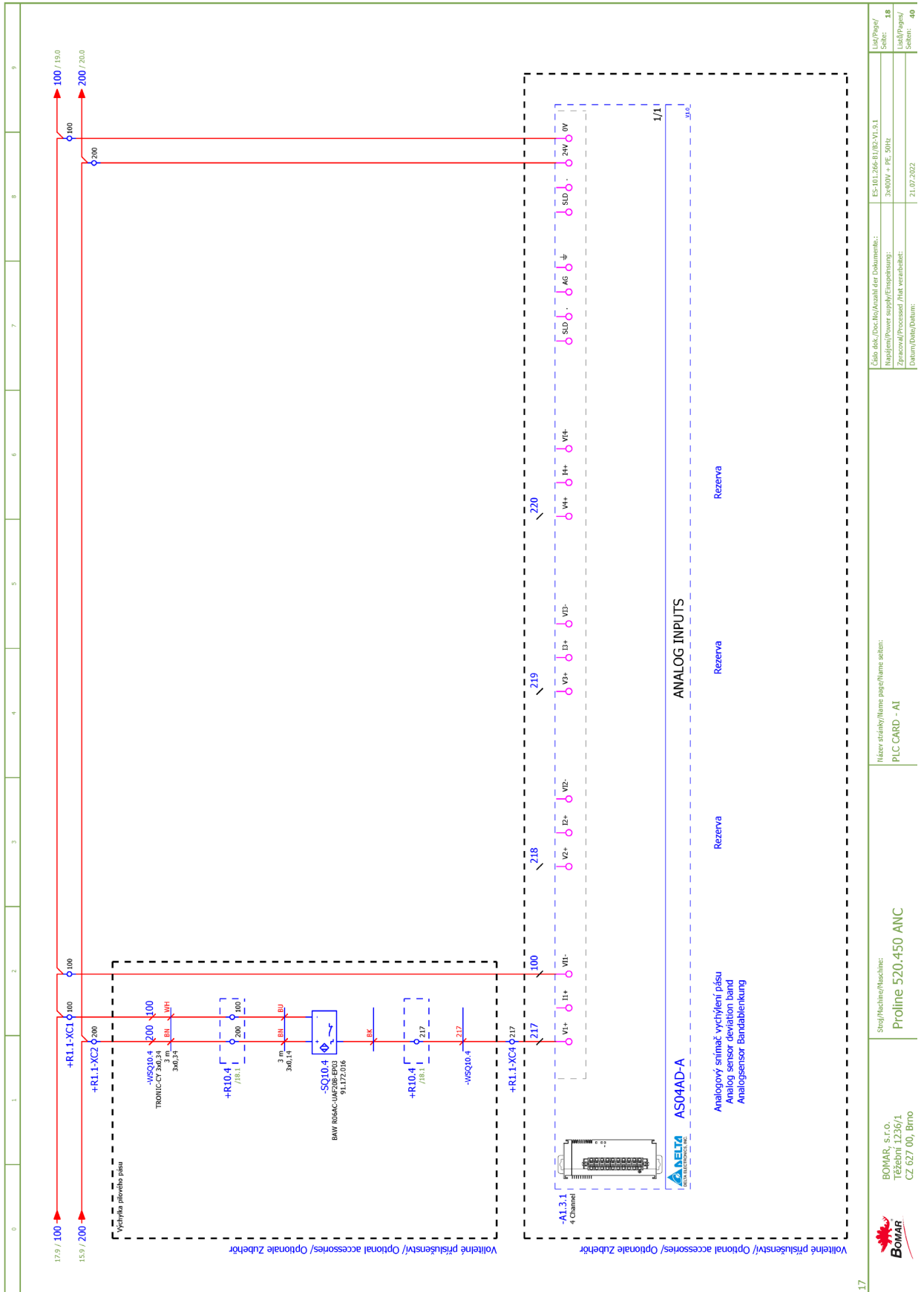


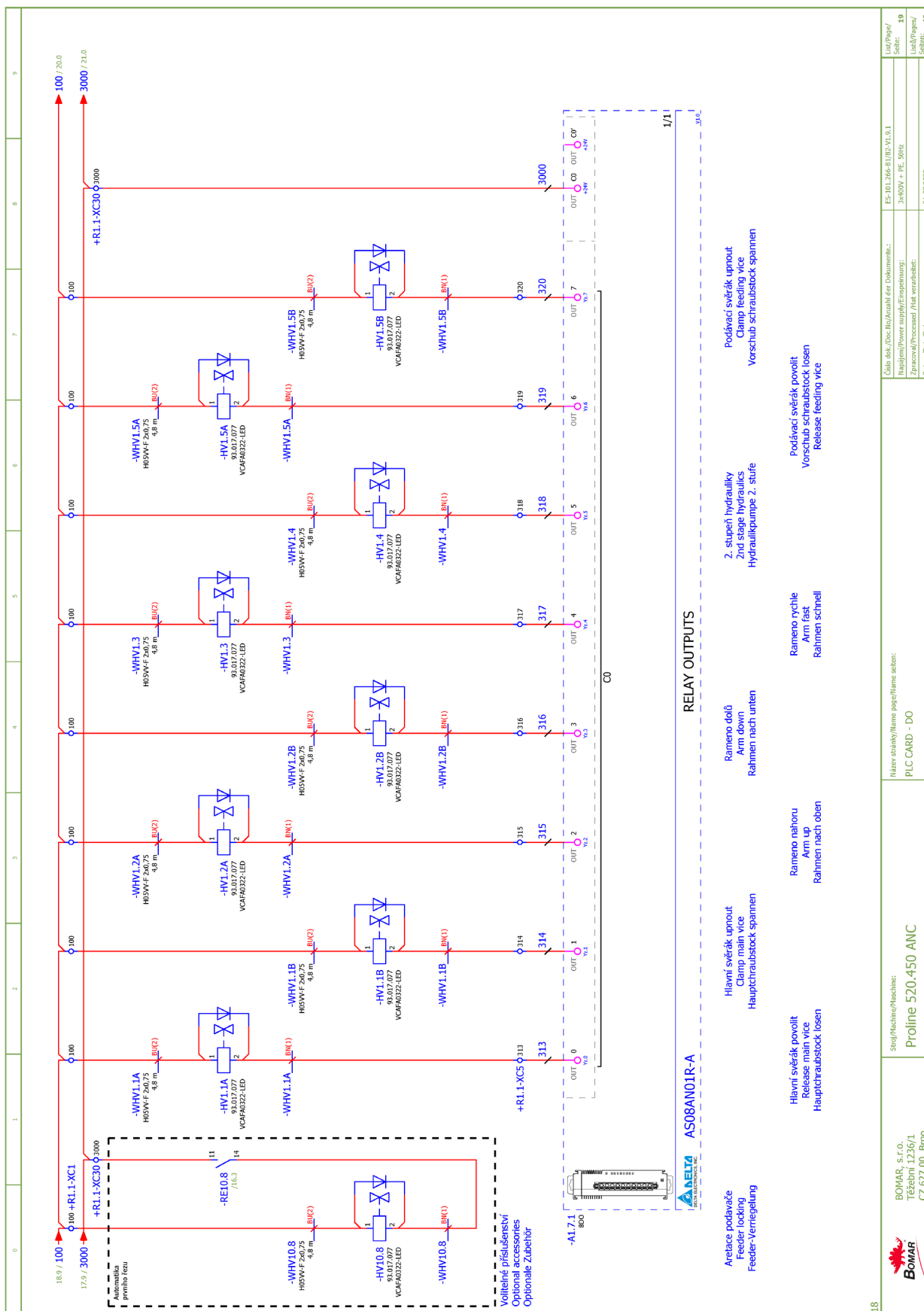




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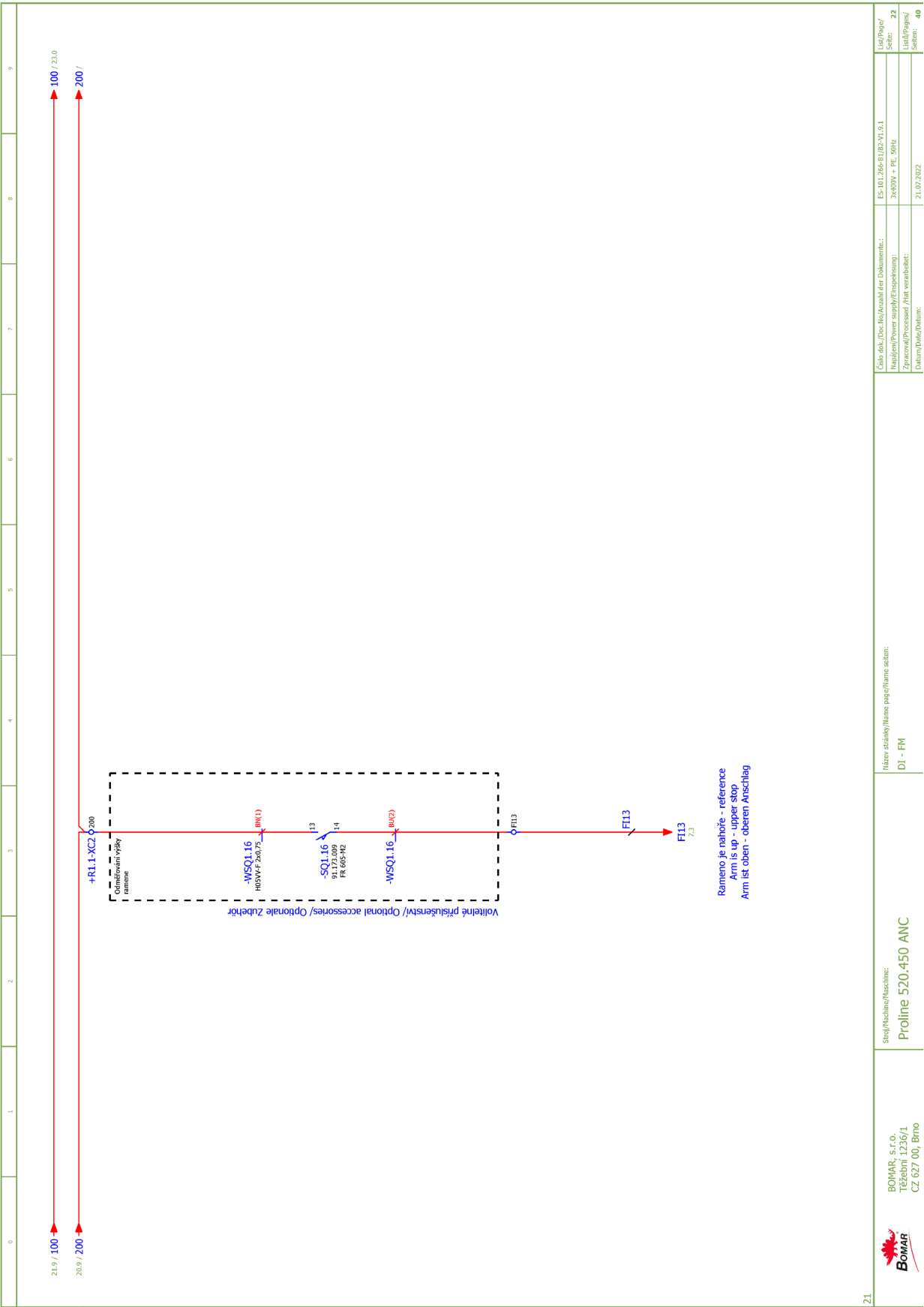


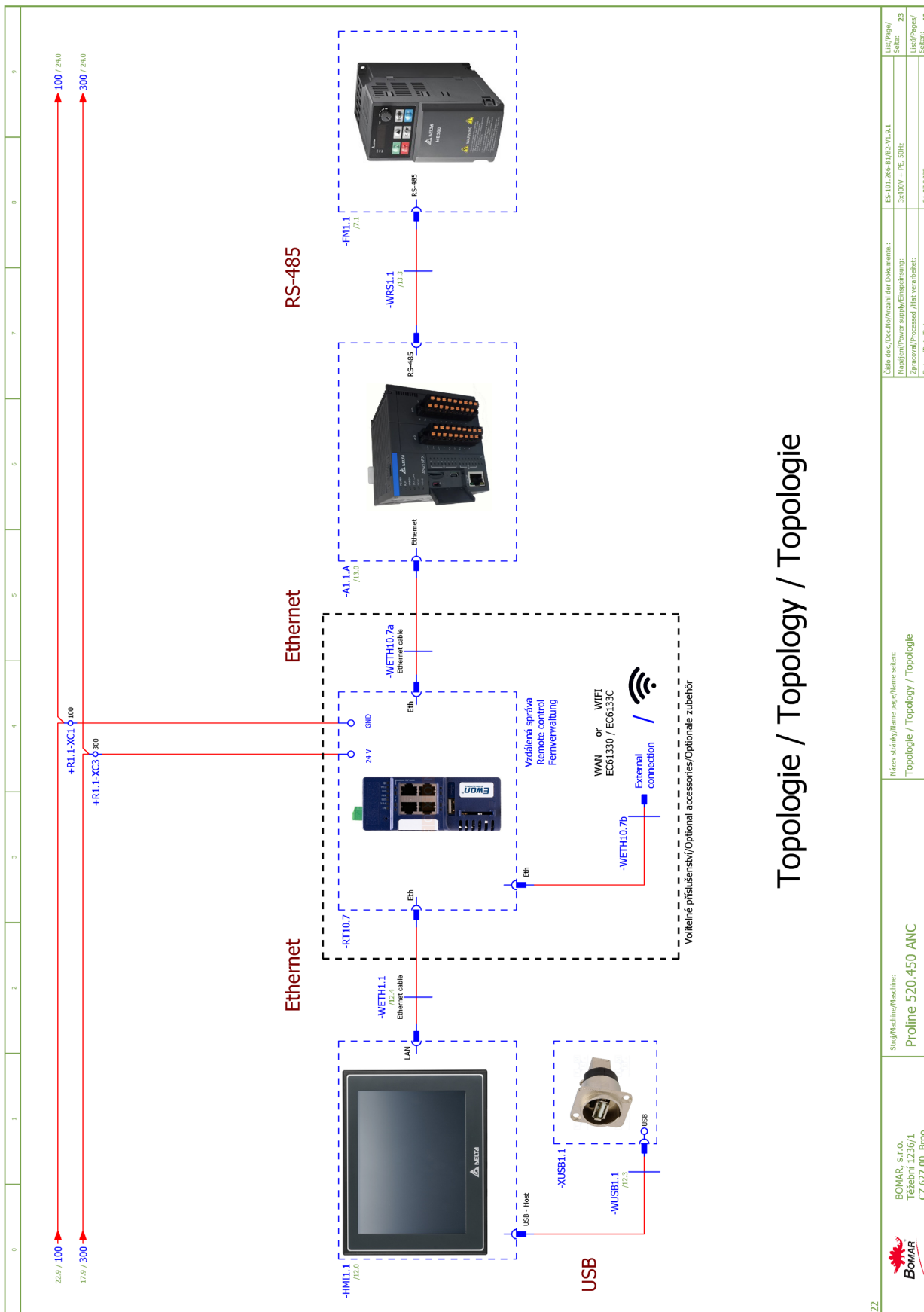




 BOMAR s.r.o. Těšební 1236/1 CZ 627 00, Brno	Step / Machine / Machine: Proline 520.450 ANC		Major redundancy / Name page / Name set: PLC CARD - DI/DO	Can. dir., Doc. No./Anzahl der Dokumente.: ES-101-266-B1/02-V1.0.1	List / Page / Seite: 20
	Navigation / Power supply / Empfehlung: 3x400V + PE, 50Hz				
	Znaczenie / Power supply / Empfehlung: 3x400V + PE, 50Hz			Datum / Date / Datum: 21.07.2022	List / Page / Seite: 40





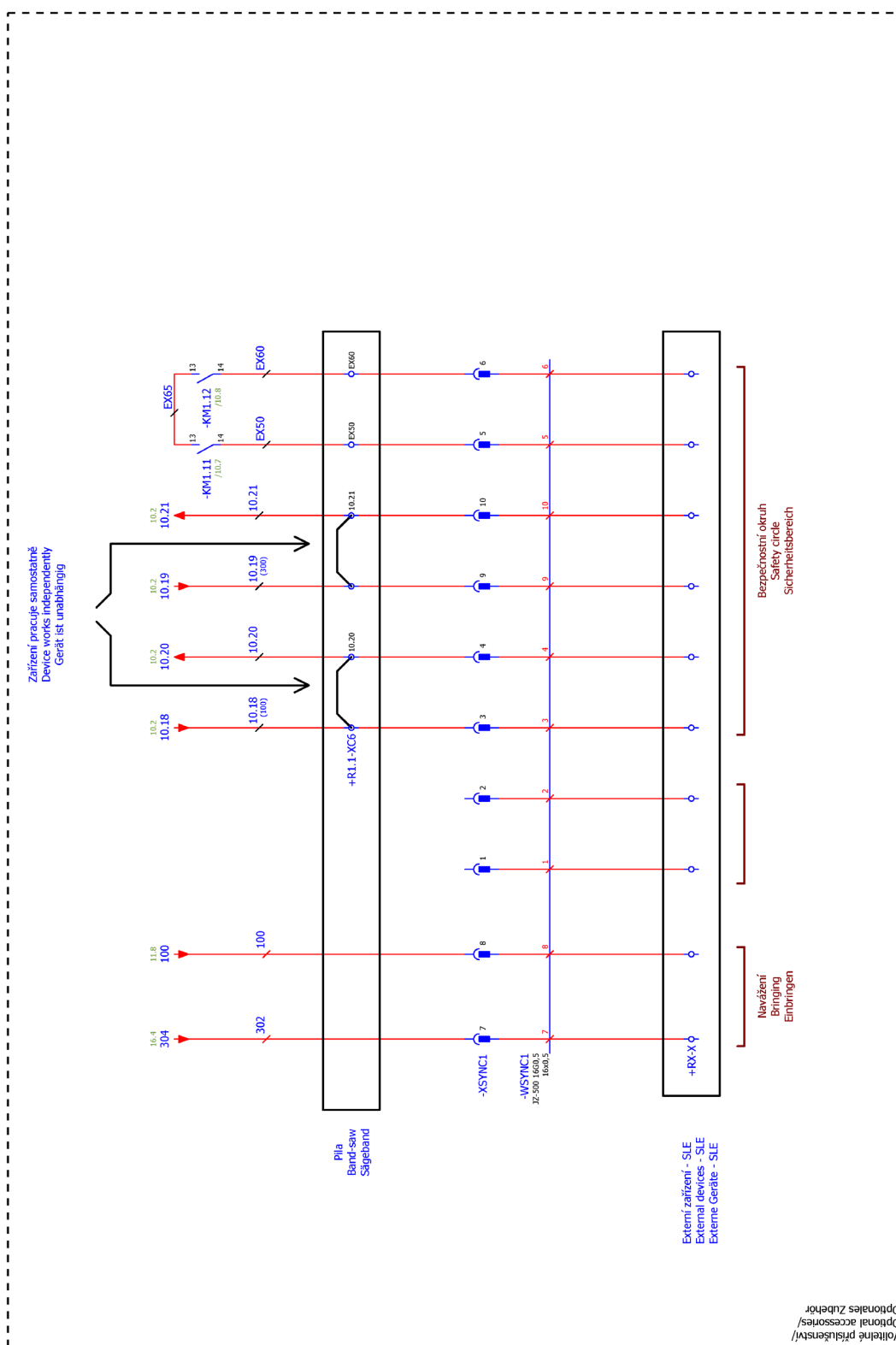


Topologie / Topology / Topologie

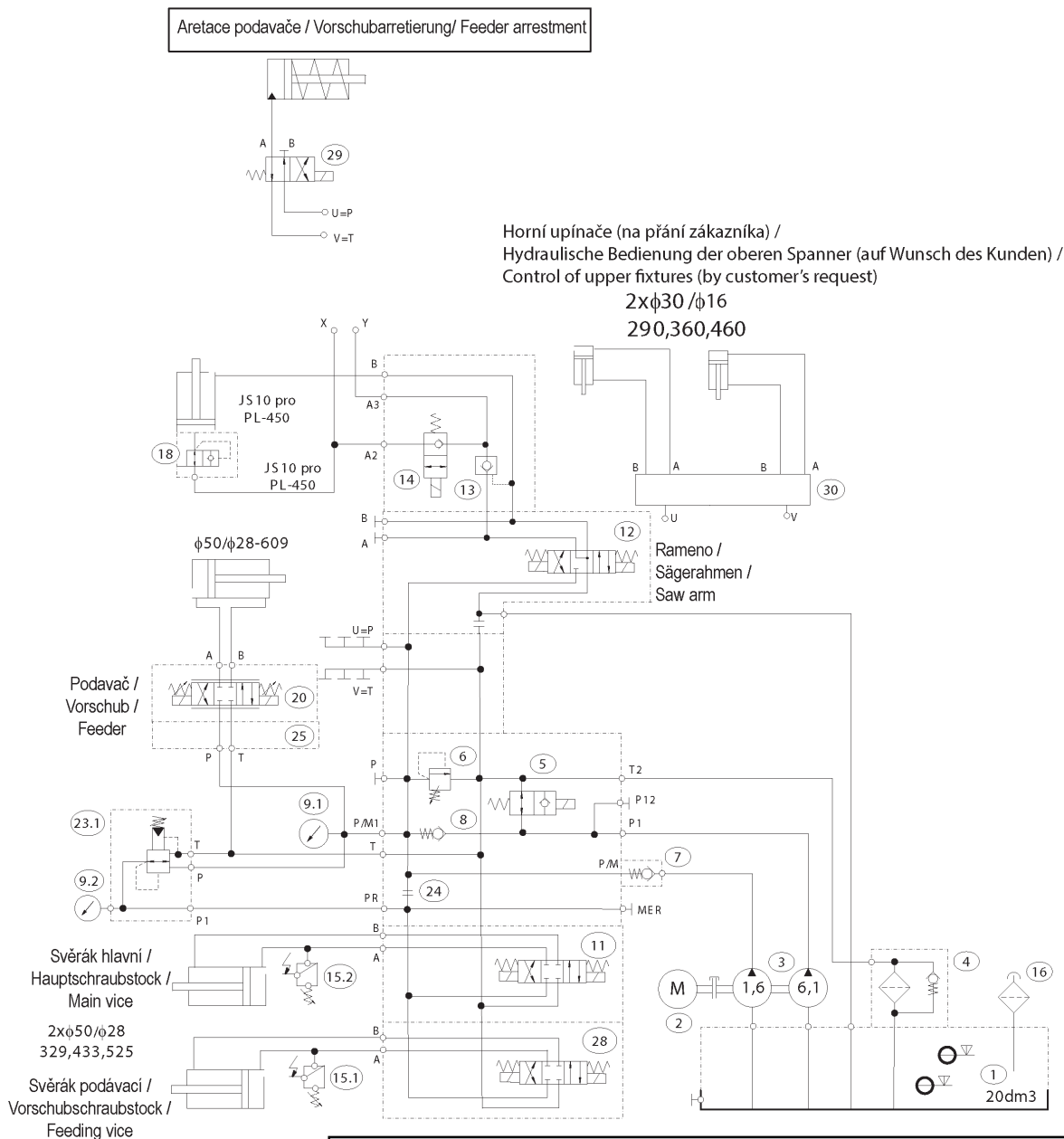
22	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Proline 520.450 ANC	Název schémky/plane page/plans section: Topologie / Topology / Topologie	Číslo sch./Doc.No./Anzahl der Dokumente.: ES-101.266-01/02-V1.3.1 Název/power supply/Einspeisung: 3x400V + PE, 50Hz Zpracoval/Processed /Hat verarbeitet: 21.07.2022	Úd./Page/ Seite: 23 Úd./Page/ Seite: 40
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 BOMAR	Stoff/Mechanismen:		Wissen und/oder Name page/Name setzen:		LiSt/Projekt/		
	Proline 520.450 ANC		Pflasterstülz/Accessories/Zubehör		Seiten:		
	BOMAR, s.r.o.,		Číslo dok./Doc.No./Anzahl der Dokumente:		35-101-266-B1/B2-V1.3-1		
	Těžiště 1236/1		Typ/Energie/Power supply/Empfehlung:		3x300W + PE, 50Hz		
	CZ 627 00, Brno		Zpracoval/Processed /Hst verarbeitet:		21.07.2022		
		Datum/Date/Datum:				Seiten: 40	



9.2. Hydraulické schéma / Hydraulikschema / Hydraulic diagram



Typ / Type / Type

Proline 280/350/450 ANC

Hydraulický agregát / Hydroaggregat / Hydro aggregat

92.001.070 (FMW), S001-058-2, PPM-AC13-PG11/61-1,6-TM20-CB03-FR

Neuvedené světlosti / Unerwähnt Lichtbreite / Unlisted inside diameters

JS6

Výstupní šroubení / Ausgangsschraubung / Output screwing

G1/4"

Pmax - PL-280; PL-350

4 MPa

Pmax - PL-450

5,5 MPa

Q

8+2,1 dm³/min

n

1400 ot./min

P

1,1 kW

205.M216-3501
(09.11.2018)

Proline 280/350/450 ANC

Ovládací panel /
Bedienpult /
Control panel

Vodící kostka /
Führungsklotz /
Guiding cub

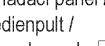
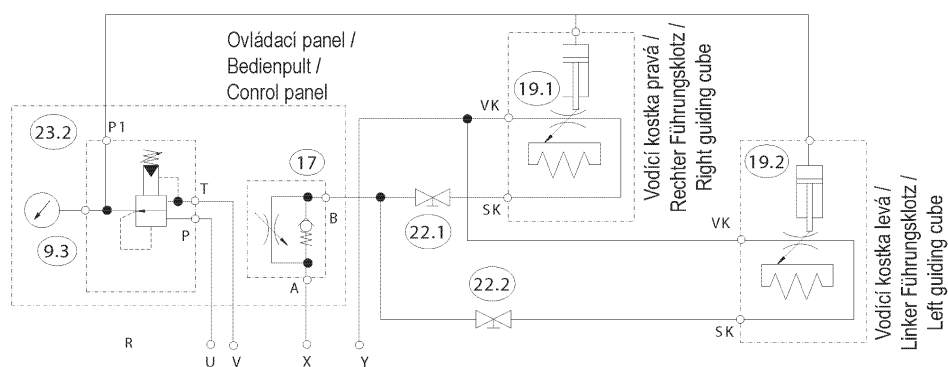


Diagram illustrating the control system for the guiding cube (Vodící kostka / Führungsklotz / Guiding cub). The system includes a control panel (Ovládací panel / Bedienpult / Control panel) and a guiding cube. The control panel contains a switch (SK) and a resistor (A). The guiding cube contains a switch (VK) and a resistor (B). The switch (SK) is connected to the switch (VK) via a wire. The resistor (A) is connected to the switch (SK) via a wire. The resistor (B) is connected to the switch (VK) via a wire. The switch (VK) is connected to a terminal (X) via a wire. The switch (SK) is connected to a terminal (Y) via a wire.

Regulační závek /
Regelungskreis der Anlage für Andruck in den Schnitt: /
Control circuit of the machine:
PL450



Poz.	Název položky		Obj. číslo	ks
Pos.	Bezeichnung		Bestellnum.	Menge
Pos.	Item		Order Nr.	Pcs.
1	Nádrž / Behälter / Tank	TM26		1
2	Elektromotor / Elektromotor / Electromotor	EM 90 1,1 kW/3 B34 400/230 V, 50 Hz		1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	11A10A6,1X181G/101, 6X182G, 1,6+6,1cm ³ /ot 92.153.148	92.153.148	1
4	Zpětný filtr / Filter / Filter	MPF0301AG1 P10NBP01	92.153.131	1
5	Rozvaděč / Verteilungsventil / Distributor	SV08-21-N-24EG	92.101.035	1
6	Přepouštěcí ventil / Bypassventil / By pass valve	MO-020/10	92.159.001	1
7	Ventil zpětný / Gegendruckventil / Clack-valve	RVZ-10LR		1
8	Ventil zpětný / Gegendruckventil / Clack-valve	CV08-20-0-N-4	92.160.001	1
9	Manometr / Manometer / Manometer	D68, s/ with /mit glycerinem	92.080.008	3/1
10	Neobsazeno	--	--	--
11	Rozváděč / Schaltschrank / Switchboard	DVE03-S01-B4-C24/20/T1-M1	92.101.039	1
12	Rozváděč / Schaltschrank / Switchboard	DVE03-S04-B5-C25/20/T1-M1	92.101.034	1
13	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	PC08-30-0-N 92.103.007	92.103.007	1
14	Rozváděč / Schaltschrank / Switchboard	SV08-20-N-24EG	92.101.035	1
15	Tlakový spínač / Druckschalter / Pressure switch	20-50bar	92.201.003	2
16	Nalévací zátka / Stopfen / Fill stopper	CPT-MD-FA/1"	92.019.007	1
17	Škrťací ventil / Drosselventil / Throttle-valve	VS01-04/R2,5-O	92.152.004 92.152.001	1
18	Pojistný ventil / Sicherungsventil / Safety valve	VPNH 1/4	92.151.001	2/1
19	Kostka regulace / Regulationklotz / Regulation cube	Manuální přítlak na pilový pás/Manuellen Druck auf dem Blade /Manual pressure on the saw band		1/0

		Hydraulický přitlak na pilový pás /Hydraulikdruck auf dem Blade /Hydraulic pressure on the saw band (Proline 450 pouze/ only/ lediglich)		2/0
20	Rozváděč / Schaltschrank / Switchboard	PRM2-043Z11/04-24 MIKRO	92.101.024	1
21	-	-		-
22	Kulový ventil /Kugelventil / Globe valve / Control valve			2/0
23	Redukční ventil / Reduktionventil /	VRN2-06/S-6R	92.154.001	2/0
24	Záslepka / Blanking/ Blanking	IMBUS M6×10 – upravený / adaptiert/ modified	30.M216-201	1
25	Deska / Platte / Platte	DP4-04/32-4 G1/4"	92.105.001	1
26	Neobsazeno	--	--	--
27	Neobsazeno	--	--	--
28	Rozváděč / Schaltschrank / Switchboard	DVE03-S01-B4-C24/20/T1-M1	92.101.041	
29	Hydraulický blok / Hydraulic block / Hydraulischr Block	S103:845_1	92.101.038	1
30	Hydraulický blok / Hydraulic block / Hydraulischr Block	S103_222_1	92.153.096	1

Pozor!

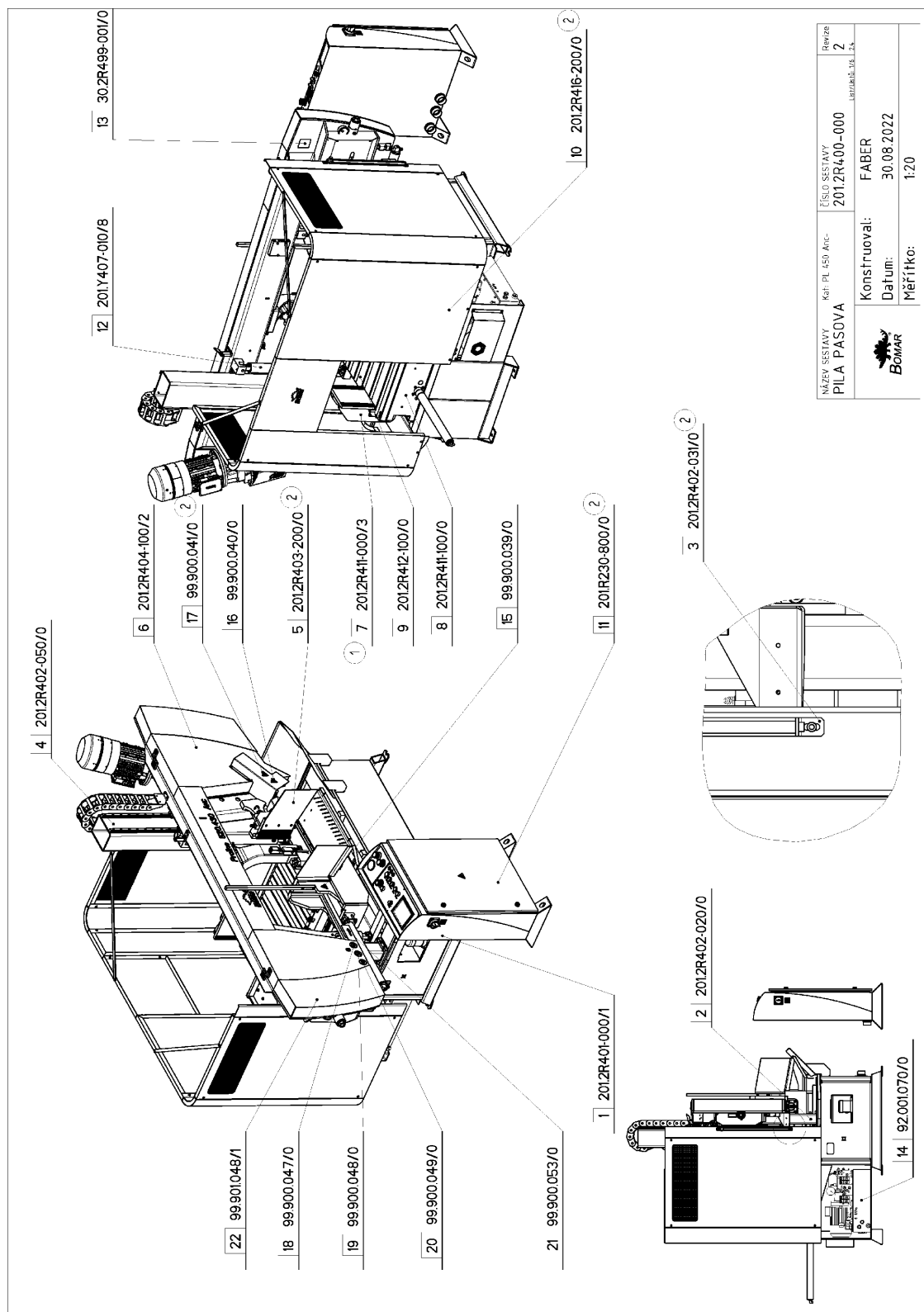
*After all work and cuts on the saw have been completed, the saw arm should **always remain in the lower position** (e.g. during a long break between cuts, during the saw's resting state or overnight). **If the arm remains in the upper position, the hydraulics of the saw arm can be expected to be loaded and overloaded, leading to damage.** (The saw arm will start to drop down spontaneously).*

It is also important that there is no material left on the saw that needs to be removed from the saw area.

10. **Výkresy sestav pro objednání náhradních dílů / Zeichnungen für Bestellung der Ersatzteile / Drawing assemblies for spare parts order**

- Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. Proline 520.450 ANC), výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Proline 520.450 ANC), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example Proline 520.450 ANC), serial number (for example 125, see cover page) and year of construction (for example 1999).

10.1. Proline 520.450 ANC



10.2. Kusovník / Piece list / Stückliste - Proline 520.450 ANC

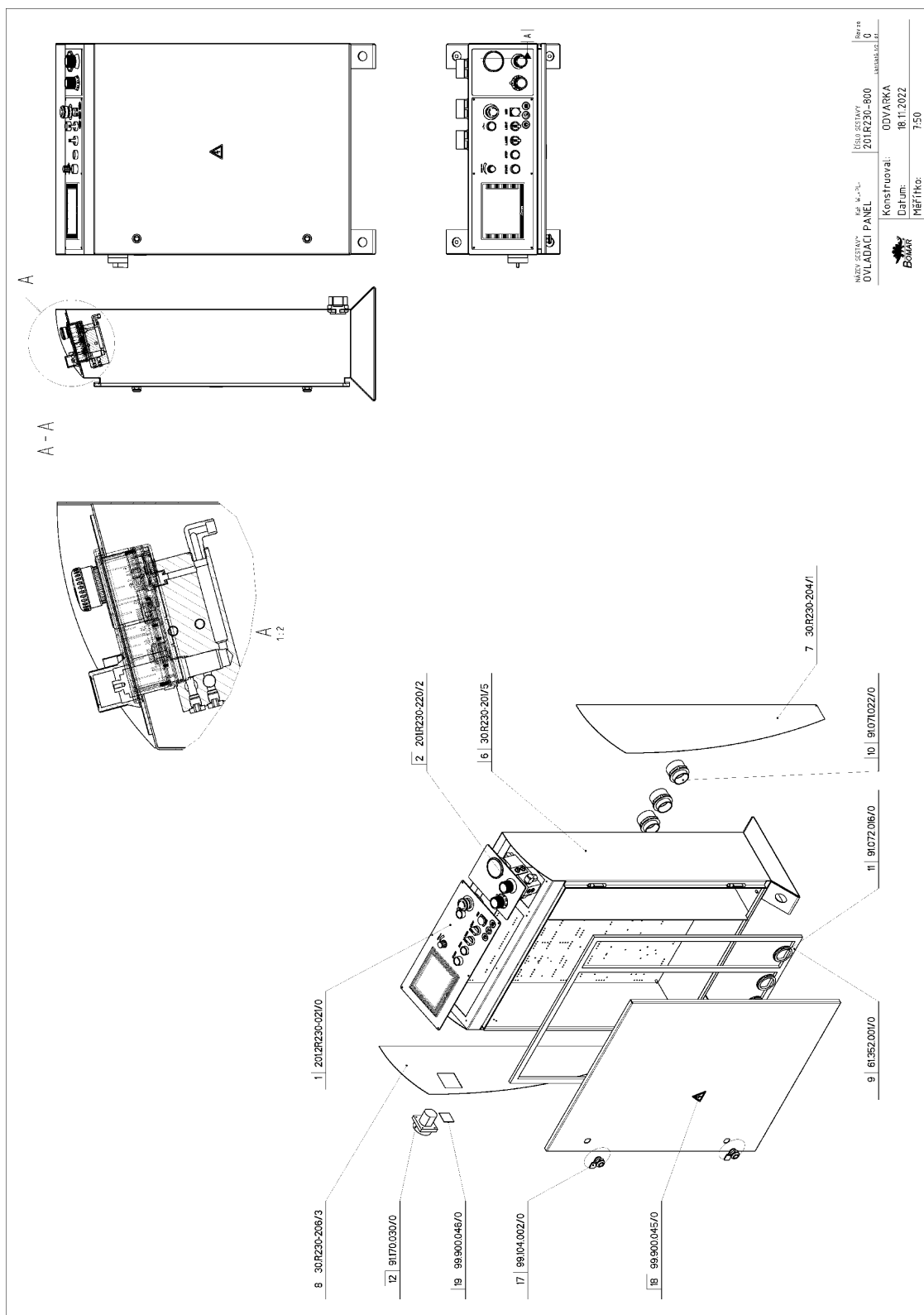
NÁZEV SESTAVY			ČÍSLO SESTAVY		REVIZE	Kategorie: PL 450 Anc-		Konstruktér: FABER		BOMAR	
PILA PASOVA			201.2R4-00-000		2	Datum: 30.08.2022					
					2,4						
pos.	číslo výkresu	verze	rozšíření	název	položka	SESTAVA	část	pov. upr.	váha	poznámka	
1	201.2R401-000	1	1	PODSTAVEC	SESTAVA				386.8		
2	201.2R402-020	0	1	SLOUP					20.4		
3	201.2R402-031	2	0	ODMEROVANI	SESTAVA	SESTAVA			1.3		
4	201.2R402-050	0	1	SLOUP					73.6		
5	201.2R403-200	2	0	SVERAK	SESTAVA	SESTAVA			182.6		
6	201.2R404-100	2	1	RAMENO					527.1		
7	201.2R411-000	3	1	PODAVAC					177.7		
8	201.2R411-100	0	1	TRAT					29.3		
9	201.2R412-100	1	0	TRAT	SESTAVA				75.4		
10	201.2R415-200	2	0	KRYTY	SESTAVA				66.2		
11	201.2R230-800	2	0	OVLADACI PANEL	SESTAVA				47.8		
12	201.2R407-010	8	2	VALEC ZVEDACI	SESTAVA				9.8		
13	30.2R499-001	0	1	STITEK TYPOVY	P 0.5x65 - 76 30M299-110				0.0		
14	92.001.070	0	1	AGREGAT HYDRAULICKY	S001_05B_2 * Proline 280.350.450 A, Asx, ANCA, erg 250/60N/60N/800-CE03-FR				0.0		
15	99.900.039	0	1	SAMOLEPKA	NS Nebezpečí silátení				0.0		
16	99.900.040	0	1	SAMOLEPKA	NR Nebezpečí třísní				0.0		
17	99.900.041	2	0	SAMOLEPKA	NN Nebezpečí nárazu				0.0		
18	99.900.047	0	1	SAMOLEPKA	OBS Nosle brýle sluchátka				0.0		
19	99.900.048	0	1	SAMOLEPKA	PO Noste pevnou prac.obuv				0.0		
20	99.900.049	0	1	SAMOLEPKA	CN Přechíst návod k použití				0.0		
21	99.900.053	0	1	SAMOLEPKA	SŠ - Směrová šipka				0.0		
22	99.901.048	1	1	SAMOLEPKA	PROLINE 520.450 HANC sx new od 3. 2013				4.5		

INDEX ZHĚNA

1. ZRUS. OVLADACI PANEL 201.2R230-200 A NAHR. OVLADACIM PANLEM 201.2R230-200; ZRUS. TRAT 201.2R412-000 A NAHR. TRAT 201.2R412-100. 237.306/ZM343 8.11.2021 KOVAR
2. ZRUS. ZVERAK 201.2R403-000 A NAHR. 201.2R403-200; ZRUS. KRYTY 201.2R416-000 A NAHR. 201.2R416-200; ZRUS. ODMERIVANIE 201.2R402-030 A NAHR. 201.2R402-031; PRID. NALEPKA 99.900.041; ZRUS. PANEL 201.2R230-200 A NAHR. 201.2R230-800. 250/ZM272 20.9.2022 NOVOSAD

Číslo sestavy/Number of assembly/Nummer der Baugruppe, Verze (Ver./Version/Version, Name der Baugruppe, Datum/Date/Datum, Konstruktor/Designer/Konstrukteur, Číslo výkresu/Drawing number/Zeichnung number, Název/Name, Položka/Semiproduct/Halbfabrikat; Vstupní materiál/Input material; Pov. úpr./Surface finish/Oberflächenangabe, váha/Weight/Gewicht; Poznámka/Note/Notiz

10.3. Ovládací panel / Control panel / Bedienpult



NAZEV SETAVY	Typ M.-L.	Číslo setavy	Rev. 0
OVLÁDACÍ PANEĽ	201R230-800	201R230-800	0
Konstruoval:	ODVARKA	Datum:	18.11.2022
Verifikoval:		Verifikoval:	7.50



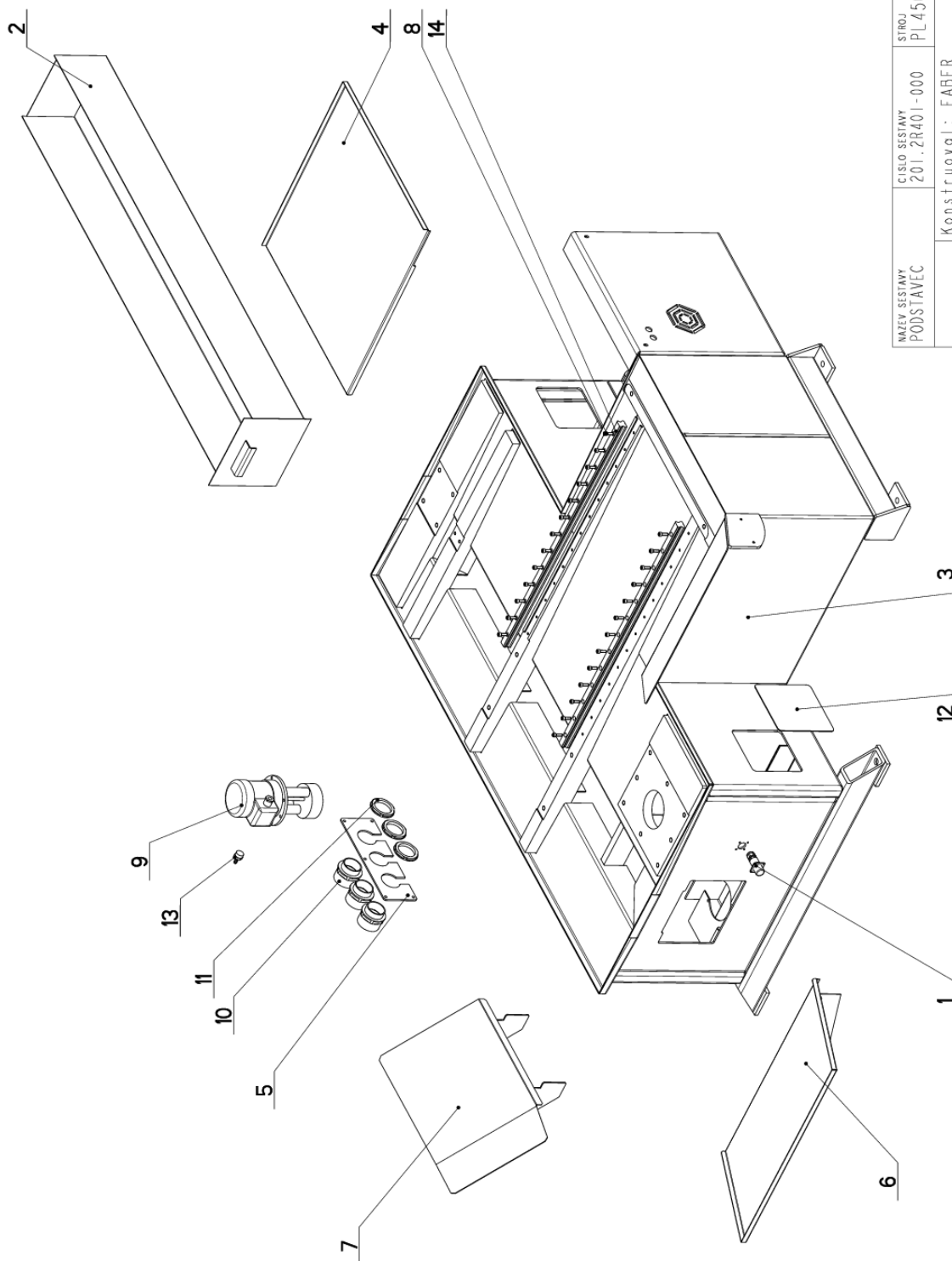
10.4. Kusovník / Piece list / Stückliste - Ovládací panel / Control panel / Bedienpult

NAZEV SESTAVY		ČÍSLO SESTAVY		REVIZE			
OVLADACÍ PANEL		201.R230-800		0			
Poz.	Objednáací číslo	Verze	Název CZ	Name EN	Name DE	Podtovar	Ks.
1	201.25230-021	0	PANEL ELEKTRO	ELECTRO PANEL	PANEL		1
2	201.R230-220	2	OVLADACÍ PANEL	CONTROL PANEL	BEDIENPULT		1
5	30.R230-201	5	SKRIN	BOX	KASTEN		1
7	30.R230-204	1	PLECH	SHEET METAL	BLECH	P1 - 220x950	1
8	30.R230-206	3	PLECH	SHEET METAL	BLECH	P1 - 220x950	1
9	61.352.001	0	TESNĚNÍ	SEALING	DICHTUNG	19x10 ZK21H5	1
10	91.071.022	0	VÝVODKA HADICE	OUTLET FOR HOSE	SCHLAUCHTÜLLE	MR-83602468 M50x1.5 / PG48hadice čer. MSV-M50x1.5/48	3
11	91.072.016	0	MATICE ČERNÁ	BLACK NUT	MUTTER ROH	AG-8245550 M50x1.5 -černá	3
12	91.170.030	0	VYPÍNAČ	SWITCH	SCHALTER	SAP25/03-M2 25A 64X64mm OFF-ON 3P vypínač 25A, se zámkem, základna	2
17	99.104.002	0	ZÁMEK	LOCK	SCHLOSS	zámek na krytí ramene zámeč + klíčka	2
18	99.900.045	0	SAMOLEPKA	STICKER	AUFKLEBER	NE Nebezpečí úrazu el.pro velká 4.3 mm	1
19	99.900.046	0	SAMOLEPKA	STICKER	AUFKLEBER	HV Hlavní vypínač	1

Číslo Sestavy/Number of assembly/Nummer der Baugruppe, Ver.-Verze/Version/Version, Název sestavy/Assembly name/Name der Baugruppe, Poz.-Position/Position/Position, Objednáací číslo/Order number/Bestellnummer, Podtovar/Component/Hubfabrikat: Vstupní materiál/Supply material/Default material/Einbaumassterial

Číslo Sestavy/Number of assembly/Nummer der Baugruppe, Ver.-Verze/Version/Version, Název sestavy/Assembly name/Name der Baugruppe, Poz.-Pozice/Position/Position, Objednávací číslo/Order number/Bestellnummer, Polotovár/Semiprodukt/Halbfabrikat, Vstupní materiál/Entry material/Default material/Eingangsmaterial;

10.5. Podstavec / Base / Untersatz



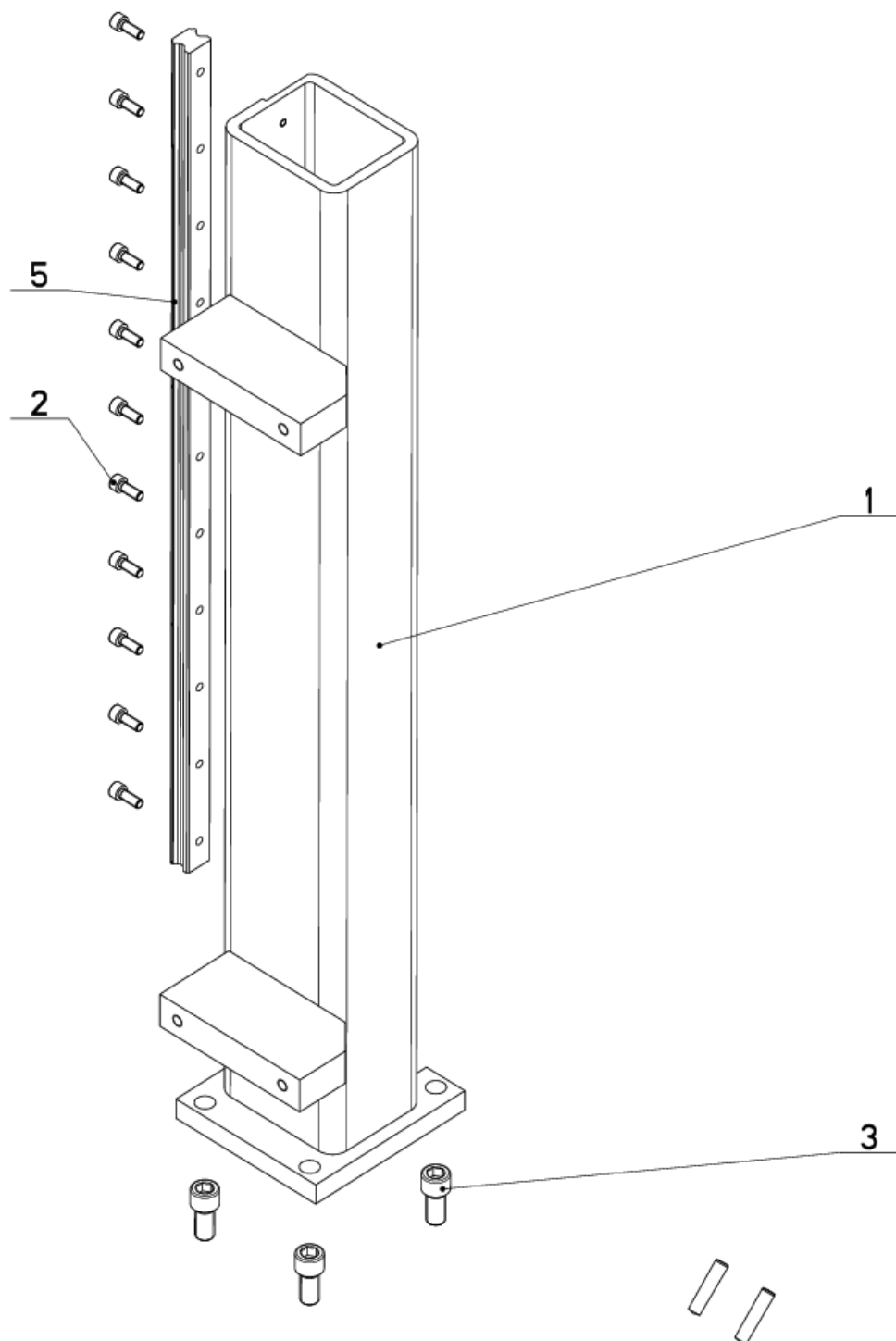
NAZEV SESTAVY PODSTAVEC	ČÍSLO SESTAVY 201.2R401-000	STROJ PL 450A
Konstruoval: FABER		
Datum: 12. 04. 2018		
Měřítko: 1:100		

10.6. Kusovník / Piece list / Stückliste - Podstavec / Base / Untersatz

Císlo Sestavy 201.2R401-000		Ver. 0	Název sestavy PODSTAVEC/BASE/UNTERSATZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	262.007	0	KONEKTOR / CONNECTOR / STECKVERBINDER		1
2	30.2R301-006	0	VANA / TANK / WANNE		1
3	30.2R401-101	0	PODSTAVEC / BASE / UNTERSATZ		1
4	30.2R401-102	0	DRŽÁK / HOLDER / HALTER		1
5	30.R201-056	1	VÍKO / COVER / DECKEL	P 4x100	1
6	30.R301-053	1	KRYT / COVER / ABDECKUNG		1
7	30.R314-260	0	KRYT / COVER / ABDECKUNG		1
8	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	26
9	91.020.032	0	CERPADLO CHLAZENÍ / COOLING PUMP / KÜHLMITTELPUMPE	230/400V	1
10	91.071.022	0	VÝVODKA / BUSHING / TÜLLE		3
11	91.072.016	0	MATICE / NUT / MUTTER		3
12	94.101.039	0	ZASLEPKA / PLUG / BLINDEFLANSCH	154x154x4	1
13	94.202.020	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	1/2" - 6	1
14	99.200.489	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA25R 790-35/35 N	2

Císlo Sestavy/Number of assembly/Nummer der Baugruppe: Verze (Ver./Version/Version); Název sestavy/Assembly title/Name der Baugruppe: Pozice (Poz./Position/Position);
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.7. Sloup / Pole / Säule



NAZEV SESTAVY SLOUP	CÍSLO SESTAVY 201.2R402-020	STROJ PL450
	Konstruoval: FABER	
	Datum: 31. 05.2016	
	Meritko: 3:10	

10.8. Kusovník / Piece list / Stückliste - Sloup / Pole / Säule

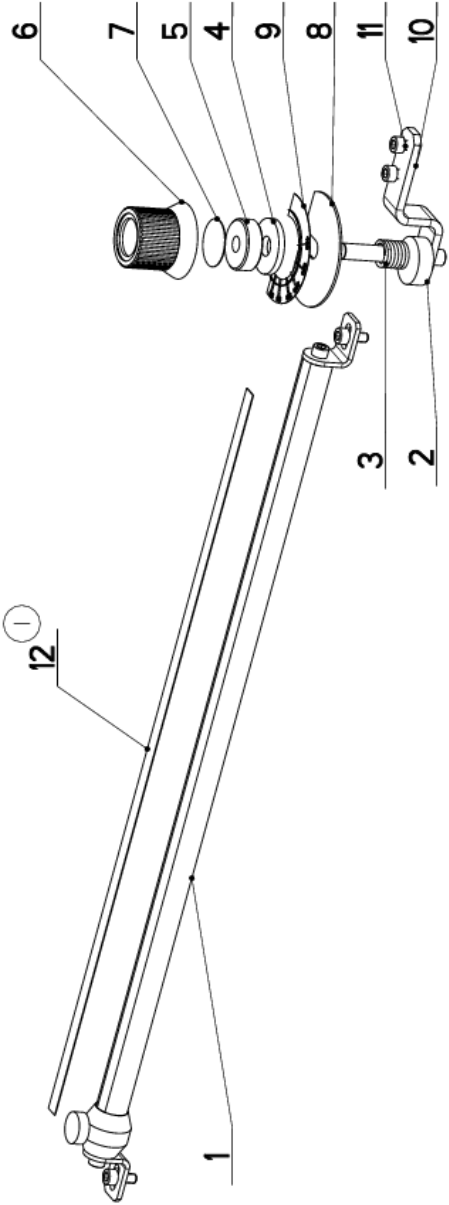
Cislo Sestavy 201.2R402-020		Ver. 0	Název sestavy SLOUP / POLE / SAULE	
Poz.	Objednací číslo	Ver.	Název položky	Měr
1	30.2R402-021	0	SLOUP / POLE / SAULE	1
2	90.001.25-017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16
3	90.001.25-057	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x25
4	90.302.02.003	0	KUZEL. KOLIK S ZAV. / TAPER PIN + THREAD / KEGELBOLZEN + GEWINDE	KOLIK 8X36
5	99.200.207	0	VEDENÍ LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA20R 640-20/20 N

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.9. Odměrování / Measuring / Gehrungsmessung

Císlo Sestavy 201.2R402-030		Ver. I	Název sestavy ODMEROVANÍ / POLE / SÁULE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2R402-031	0	ODMEROVANÍ / MEASURING / GEHRUNGSMESSUNG	SESTAVA	I
2	30.R202-033	I	OSA / AXLE / Achse	SVARENO	I
3	31.T302-054	0	PRUŽINA / SPRING / FEDER	d 2.24	I
4	31.K107-006	I	GUMA / RUBBER / GUMMI	d35	I
5	30.Y302-058	I	VLOŽKA / INSERT / EINLAGE	d 32	I
6	30.6130-020	0	OVLADANÍ / CONTROLS / STEUERUNG	VYLÍSEK	I
7	30.6130-012	0	VÍKO / COVER / DECKEL	P 0.5x30	I
8	30.Y302-153	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	P 1.5x12	I
9	30.R302-034	0	STUPNICE / SCALE / SKALA	P 1x41	I
10	30.R202-031	0	DRŽÁK / HOLDER / HALTER	HR 20x5	I
11	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
12	99.120.001 (1)	0	PRAVÍTKO / RULER / SKALENBANDMAß	0.5m	I

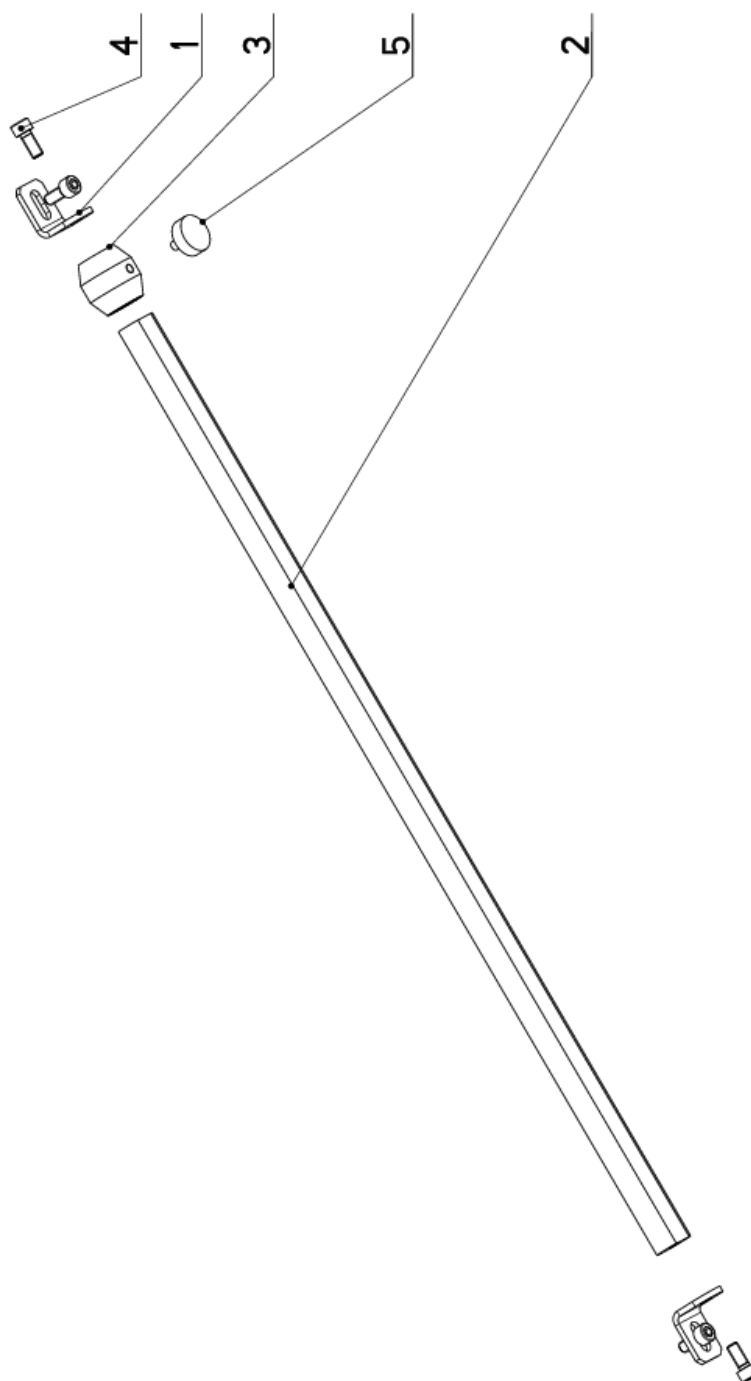
I. PR. PRAVÍTKO 99.120.001. 019/ZM025 15.01.2020 KOSYK



Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position; Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

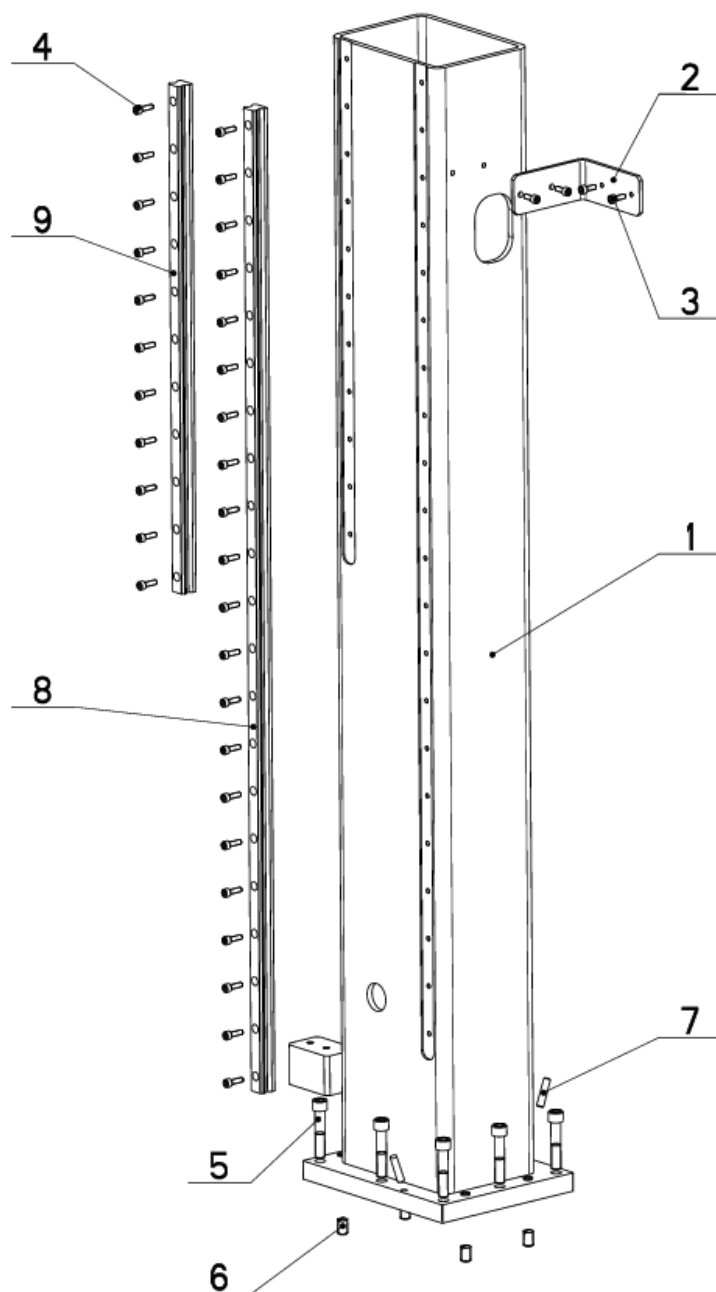
10.10. Odměrování / Measuring / Gehrungsmessung

Císlo Sestavy 201.2R402-031		Ver. 0	Název sestavy ODMEROVANÍ / MEASURING / GEHRUNGSMESSUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6114-323	0	DRŽÁK / HOLDER / HALTER	P 3x20	2
2	30.2R402-032	0	TYC / POLE / STANGE	d 20	1
3	30.2014-001	1	OBJÍMKA / CLAMP / KLAMMERSTÜCK	D 30	1
4	90.001.25.092	0	SROUB / IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x14	4
5	94.007.001	0	SROUB / BOLT / SCHRAUBE	M5x10	1



Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.11. Sloup / Pole / Säule



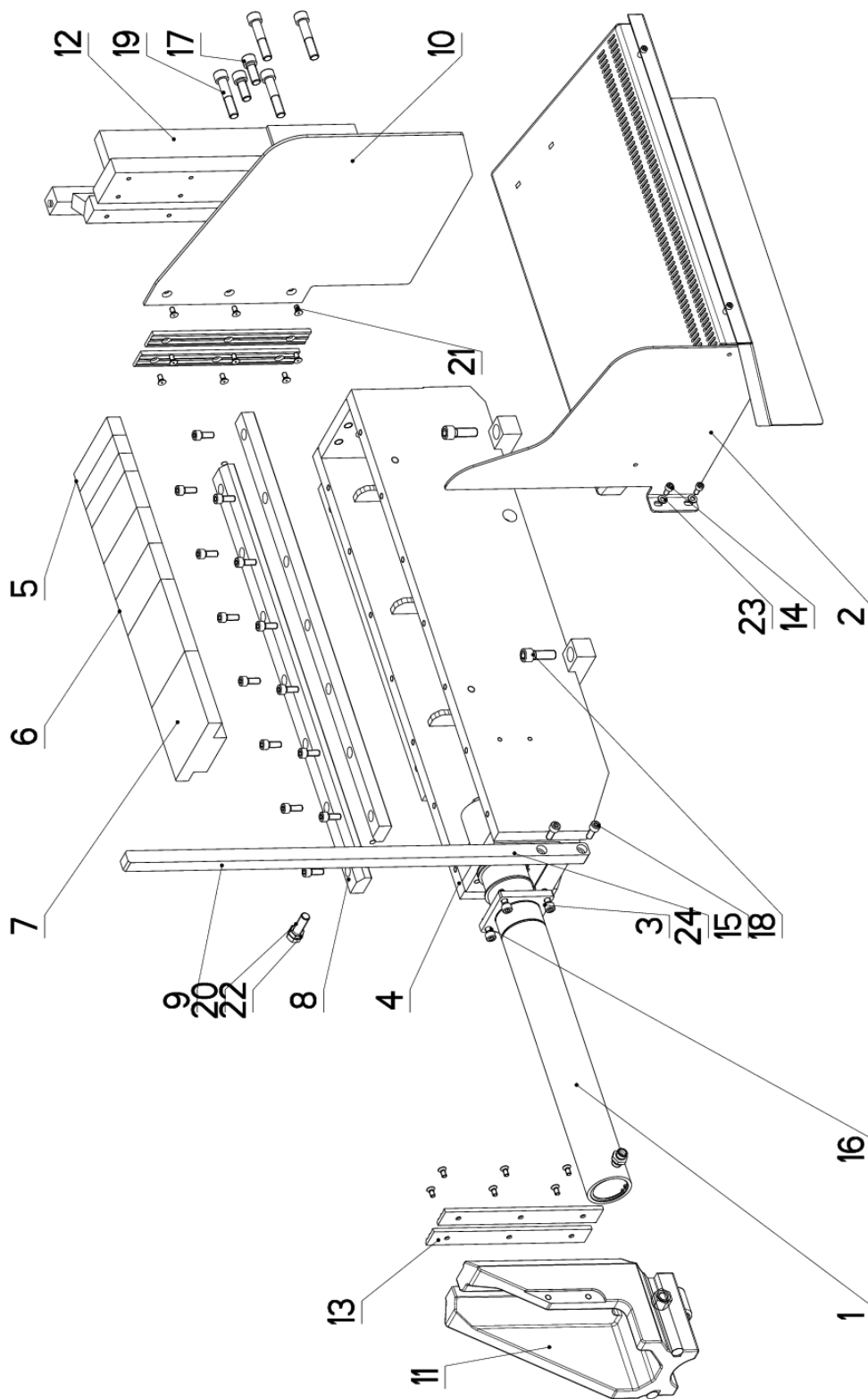
NAZEV SESTAVY SLOUP	CÍSLO SESTAVY 201.2R402-050	STROJ PL 450
	Konstruoval: FABER	
	Datum: 30. 05.2016	
	Meritko: 7:50	

10.12. Kusovník / Piece list / Stückliste - Sloup / Pole / Säule

Císlo Sestavy 201.2R402-050		Ver. 0	Název sestavy SLOUP / POLE / SAULE			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.2R402-051	0	SLOUP / POLE / SAULE		1	
2	30.7404-005	0	DRŽÁK / HOLDER / HALTER	P 5x50	1	
3	90.001.25-017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M6x16	4	
4	90.001.25-018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M6x20	32	
5	90.001.25-063	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M12x60	8	
6	90.002.20-018	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12x20	4	
7	90.302.02-003	0	KUŽEL. KOLÍK S ZAV. / TAPER PIN + THREAD / KEGELBOLZEN + GEWINDE	KOLÍK 8x36	2	
8	99.200.205	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA25R 1240-20/20 N	1	
9	99.200.206	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA25R 640-20/20 N	1	

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer, Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.13. Svěrák / Schraubstock / Vice



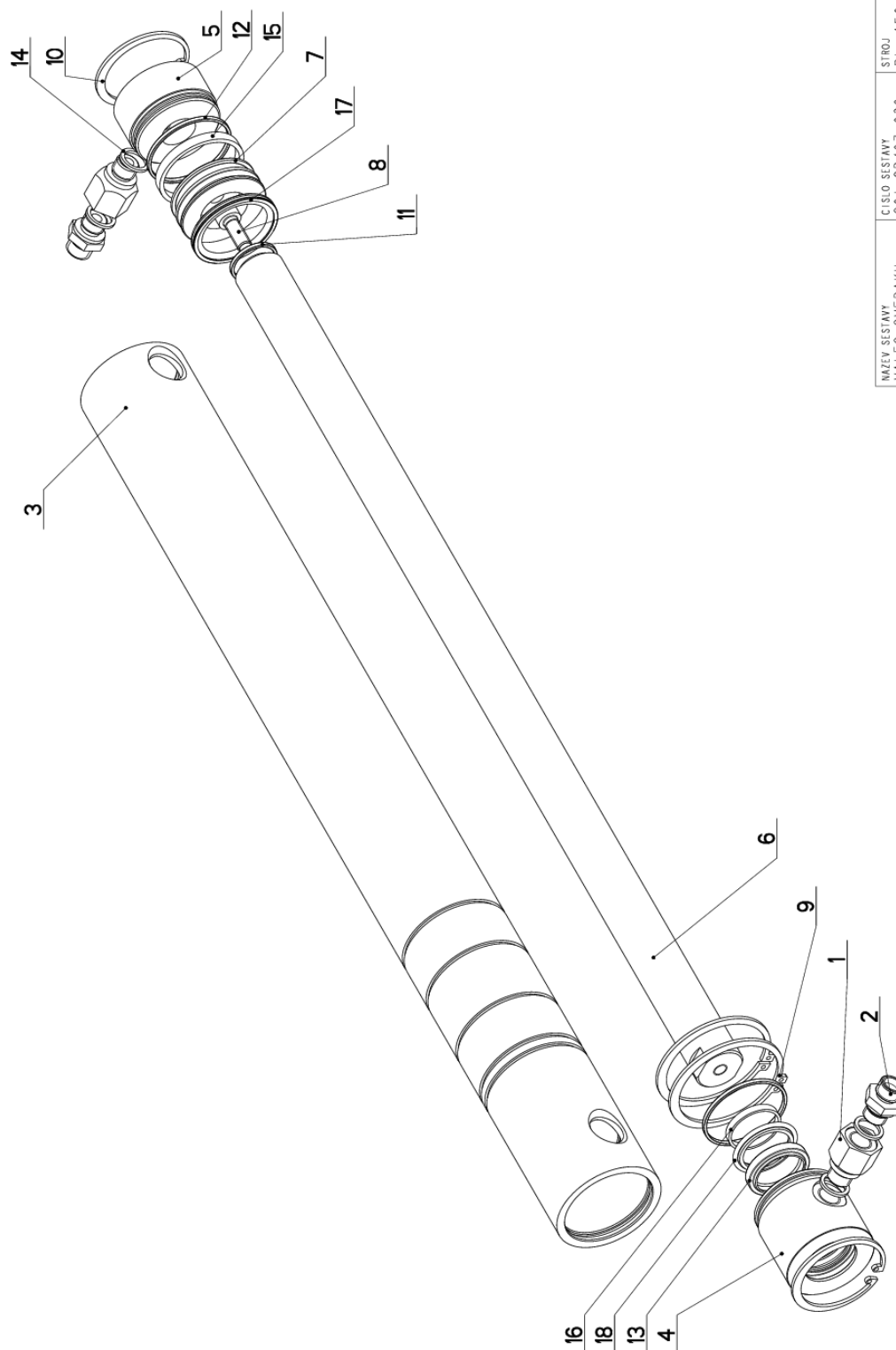
NAZEV SESTAVY SVĚRÁK	ČÍSLO SESTAVY 201.2R403-000	STROJ PRL450
Konstruoval: FABER		
Datum: 17. 04. 2018		
Měřítko: 1:5		

10.14. Kusovník / Piece list / Stückliste -
Svěrák / Schraubstock / Vice

Císlo Sestavy 201.2R403-000		Ver. 0	Název sestavy SVĚRAK/VICE/SCHRAUBSTOCK		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2R407-030	0	VALEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	201.R403-050	1	SKLÚZ / SLIDE / RUTSCH		1
3	30.2011-010	0	PŘÍLOŽKA / STRAP / LASCHE	HR 80x10	1
4	30.2R403-001	0	SVĚRAK / VICE / SCHRAUBSTOCK		1
5	30.R303-016	1	VLOŽKA / INSERT / EINLAGE	HR 40x30	3
6	30.R303-017	1	VLOŽKA / INSERT / EINLAGE	TYC 60x40	3
7	30.R303-018	1	VLOŽKA / INSERT / EINLAGE	HR 120x40	2
8	30.R403-004	1	VEDENÍ / GUIDE / BACKENFÜHRUNG	HR 40x25	2
9	30.R403-005	0	LISTA / TRIM / LEISTE	HR 20x20	1
10	30.R403-007	0	BOČNICE / /	P 4x380	1
11	30.R403-014	4	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE	ODLITEK	1
12	30.R403-018	2	CELIST PEVNÁ / /		1
13	30.R411-035	2	LISTA CELISTI / JAW TRIM / BACKENLEISTE	HR 30x10	4
14	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
15	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	16
16	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	4
17	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	2
18	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	4
19	90.001.25.063	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x60	4
20	90.005.55.034	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x40	1
21	90.011.27.005	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHEIBE	SROUB M6x12	15
22	90.101.55.006	0	MATICE / NUT / MUTTER	MATICE M12	1
23	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	PODLOŽKA 6,4	2
24	95.800.021	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.15. Válec / Vice cylinder / Schraubstockzylinder



NAZEV SESTAVY VÁLEC SVERAKU	CÍSLO SESTAVY 201.2R407-030	STROJ PL 450
Konstruoval: FABER		
Datum: 01. 06. 2016		
Měřítko: 1:2		

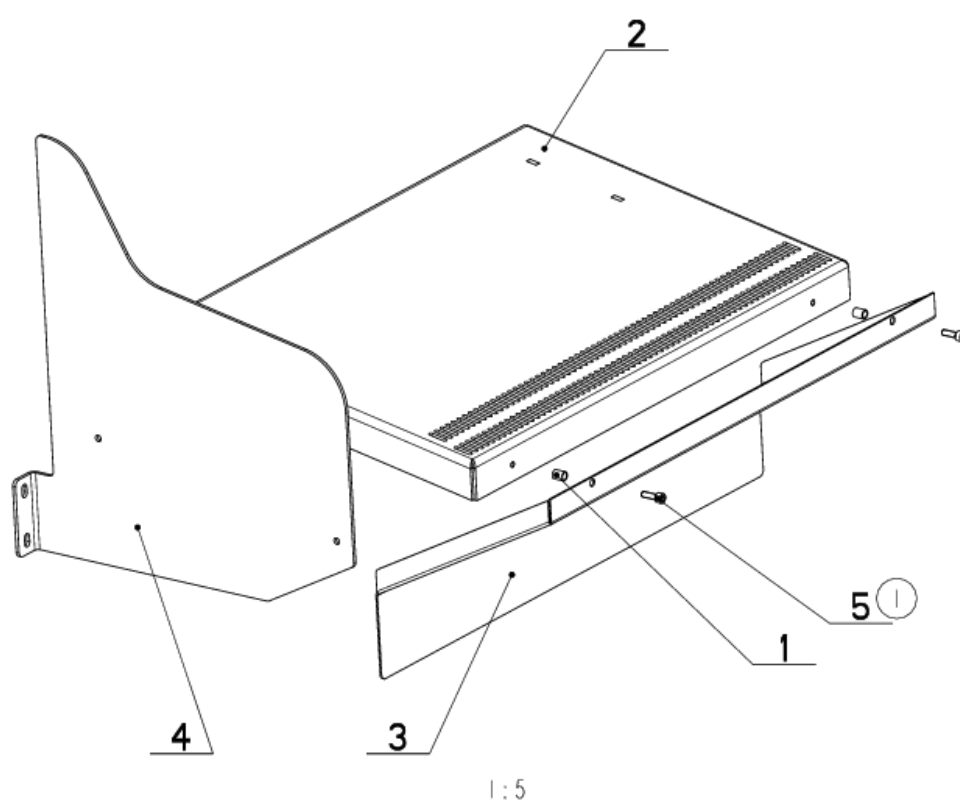
10.16. Kusovník / Piece list / Stückliste -
Válec / Vice cylinder / Schraubstockzylinder

Císlo Sestavy 201.2R407-030		Ver. 0	Název sestavy VÁLEC SVERAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1807-005	3	SROUBENÍ / BOLLING / VERSCHRAUBUNG	TYC BHR 22	2
2	30.2807-109	0	SROUBENÍ PRÍME / DIRECT BOLLING / GERADE VERSCHRAUBUNG		2
3	30.2R407-033	0	VÁLEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	TR 82/50	1
4	30.C407-012	2	VÍKO / COVER / DECKEL	d 55	1
5	30.C407-111	0	VÍKO / COVER / DECKEL	d 55	1
6	30.R407-034	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1
7	30.Y307-035	0	PIST / PISTON / KOLBEN	d 55	1
8	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCHEIBE	8x20	1
9	95.000.021	0	SEČR HŘÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POLISTNY KROUZEK 82	2
10	95.001.009	0	SEČR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POLISTNY KROUZEK 52	2
11	95.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
12	95.002.019	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	46x2 NBR 70SH	2
13	95.061.009	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	W02200280 Z201	1
14	95.082.002	0	TESNĚNÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	4
15	95.084.001	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	GH4500500-T47	1
16	95.084.006	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	GH4300280-T47	1
17	95.900.001	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PM4200500-Z20N	1
18	95.900.021	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-48N	1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position; Objednací číslo/Purchase order number/Basis/Lagermenge; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Versión; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.17. Skluz / Slide / Rutsch



NAZEV SESTAVY SKLUZ	CÍSLO SESTAVY 201.R403-050	STROJ PRL450
	Konstruoval: MUSIL	
	Datum: 10. 04.2018	
	Meritko: 3:10	

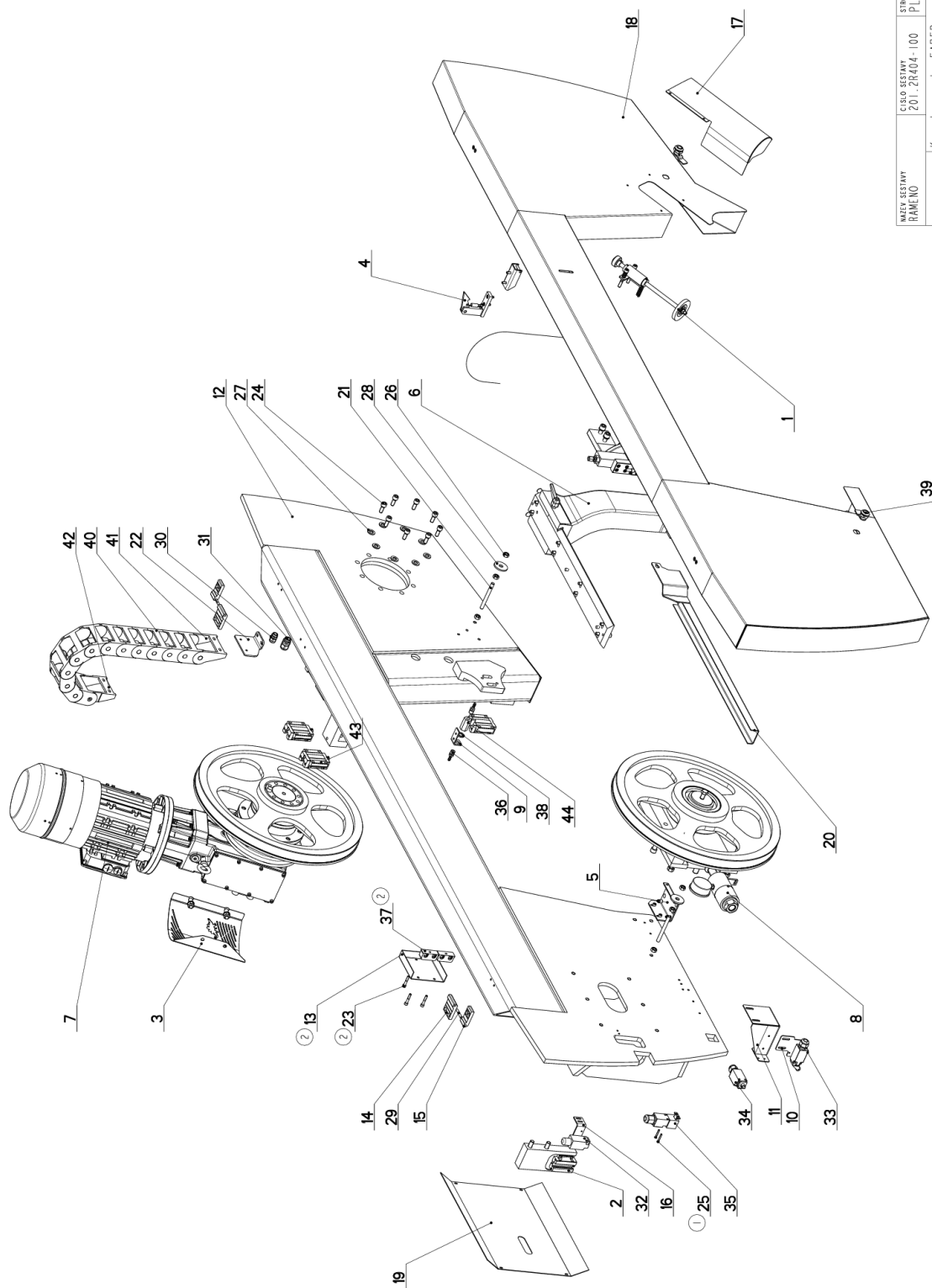
10.18. Kusovník / Piece list / Stückliste -
Skluz / Slide / Rutsch

Císlo Sestavy 201.R403-050		Ver. I	Název sestavy SKLUZ/SLIDE/RUTSCH		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.3509-015	2	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 8x1	2
2	30.R403-051	2	STUHL / TABLE / TISCH		1
3	30.R403-052	1	SKLUZ / SLIDE / RUTSCH	P 1.5x317	1
4	30.R403-053	2	BOČNICE / SIDE PLATE / SEITENTEIL	P 3x364	1
5	90.001.25.009 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M5x16	2
1.ZRUS.SROUB M6x16 (90.001.25.017) A NAHR.M5X16 (90.001.25.009). 191/ZM204 19.8.2011 SLEZACKOVA					

1.ZRUS.SROUB M6x16 (90.001.25.017) A NAHR.M5X16 (90.001.25.009). 191/ZM204 19.8.2011 SLEZACKOVA

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.19. Rameno / Saw arm / Sägerahmen



WYKŁ. SĘSIWY RAMENO	WYKŁ. SĘSIWY 201.28404-100	WYKŁ. SĘSIWY PL450
Konstruował: FABER		
Datum: 23. 03. 2020		
Meritko: 13:100		

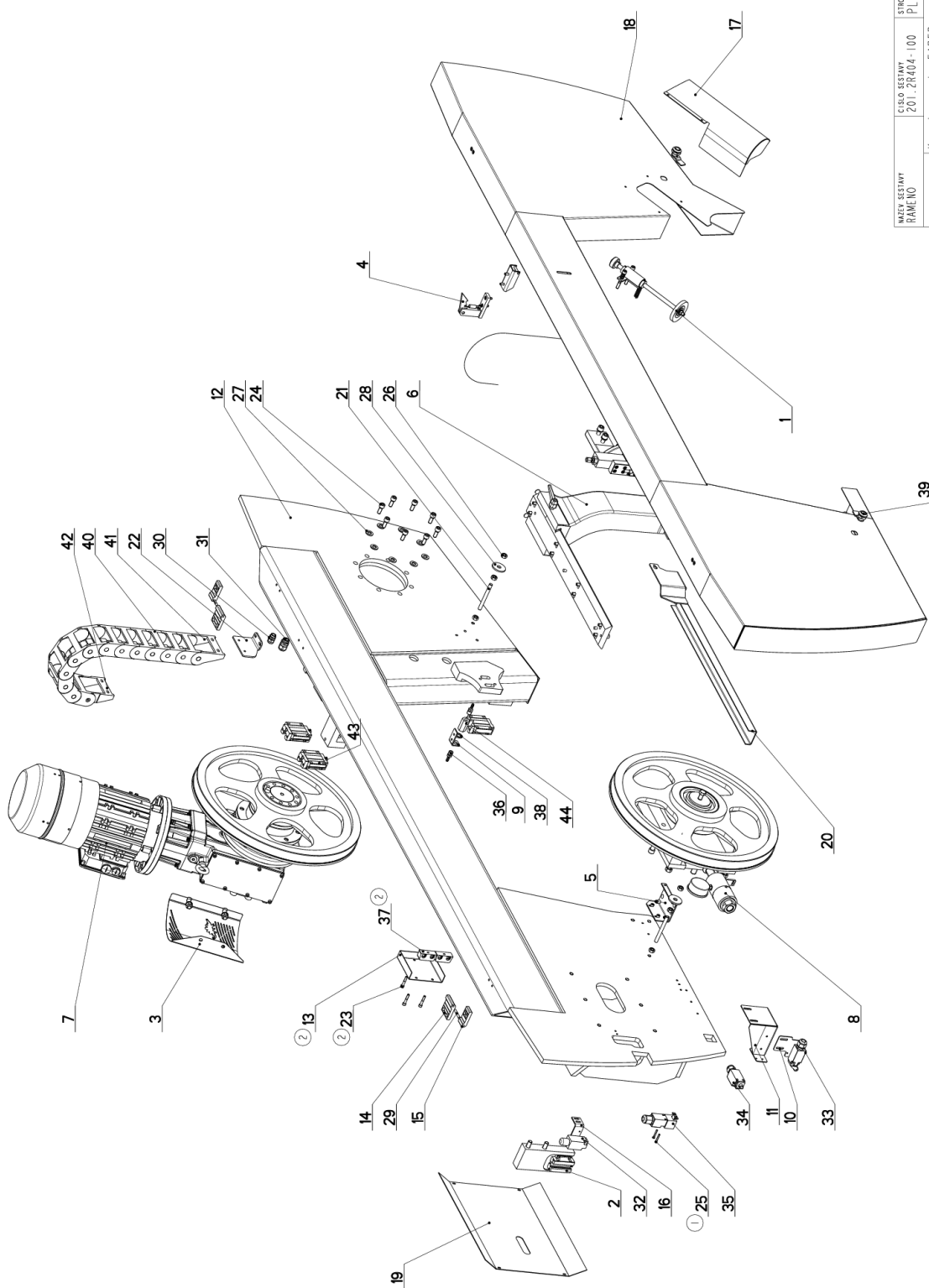
10.20. Kusovník / Piece list / Stückliste -
Rameno / Saw arm / Sägerahmen

Cislo sestavy 201.2R404-100		Ver. 2	Nazev sestavy RAMENO/SAW ARM/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozměr	Ks
1	201.9214-300	0	KARTAC / BRUSH / BÜRSTE		1
2	201.R404-020	0	KONZOLA / CONSOLE / KONSOLE		1
3	201.R404-022	0	KRYT / COVER / ABDECKUNG		1
4	201.R404-050	0	ZAMEK / LOCK / SCHLOSS		1
5	201.R404-070	0	DRŽAK / HOLDER / HALTER		1
6	201.R410-000	2	VEDENÍ PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
7	201.Y405-200	3	POHON / DRIVE / ANTRIEB		1
8	201.Y408-000	2	NAPÍNÁNÍ / TENSIONING / SPANNUNG		1
9	30.1814-011	2	DRŽAK / HOLDER / HALTER	P 3x76	1
10	30.2R304-022	1	DRŽAK / HOLDER / HALTER	P2x76	1
11	30.2R404-021	0	PLECH / PLATE / BLECH	P2x191	1
12	30.2R404-101	1	RAMENO / SAW ARM / SÄGERAHMEN		1
13	30.2R404-102 (2)	0	KRYT / COVER / ABDECKUNG	P 1.5x137	1
14	30.R304-006	3	PANT / BOARD / PLATTE	PROFIL	2
15	30.R304-007	2	PANT / BOARD / PLATTE	PROFIL	2
16	30.R404-003	0	DRŽAK / HOLDER / HALTER	P 3x30	1
17	30.R404-009	0	KRYT KARTACKU / BRUSH COVER / BÜRSTENABDECKUNG		1
18	30.R404-011	2	KRYT / COVER / ABDECKUNG		1
19	30.R404-017	1	KRYT NAPÍNÁNÍ / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P 1.5x381	1
20	30.R404-066	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
21	30.R404-102	0	TYC ZAVITOVÁ / THREADED POLE / GEWINDESTANGE	M10	2
22	30.T304-014	1	DRŽAK / HOLDER / HALTER	P 4x100	1
23	90.001.25.021 (2)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x35	3
24	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	8
25	90.013.92.104 (1)	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M4x30	2
26	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE - M10	6
27	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHNITT	PODLOŽKA 13	8
28	90.151.50.002	0	PODLOŽKA / WASHER / UNTERLEGSCHNITT	PODLOŽKA 12	2
29	90.307.02.001	0	KOLÍK / PIN / BOLZEN	D6	2
30	91.070.011	0	VÝVODKA / BUSHING / TÜLLE	M16x1.5	1
31	91.070.012	0	VÝVODKA / BUSHING / TÜLLE	M20x1.5	1
32	91.173.007	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER		1
33	91.173.009	0	SPINAC KONC.S KLADK. / END SWITCH WITH PULLEY / ENDSCHALTER MIT ROLLE	PZ-FR605-M2	1
34	91.173.010	0	SPINAC KONC.S KLADK. / END SWITCH WITH PULLEY / ENDSCHALTER MIT ROLLE	FR 615 (PIZZATO)	1

Cislo sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position; Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

Cislo sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.21. Rameno / Saw arm / Sägerahmen



NAZEV SESTAVY NÁZEV	CÍSLO SESTAVY 201.2R404-100	STROJ PL450
Konstruoval: FABER		
Datum: 23. 03.2020		
Měřička: 13.100		

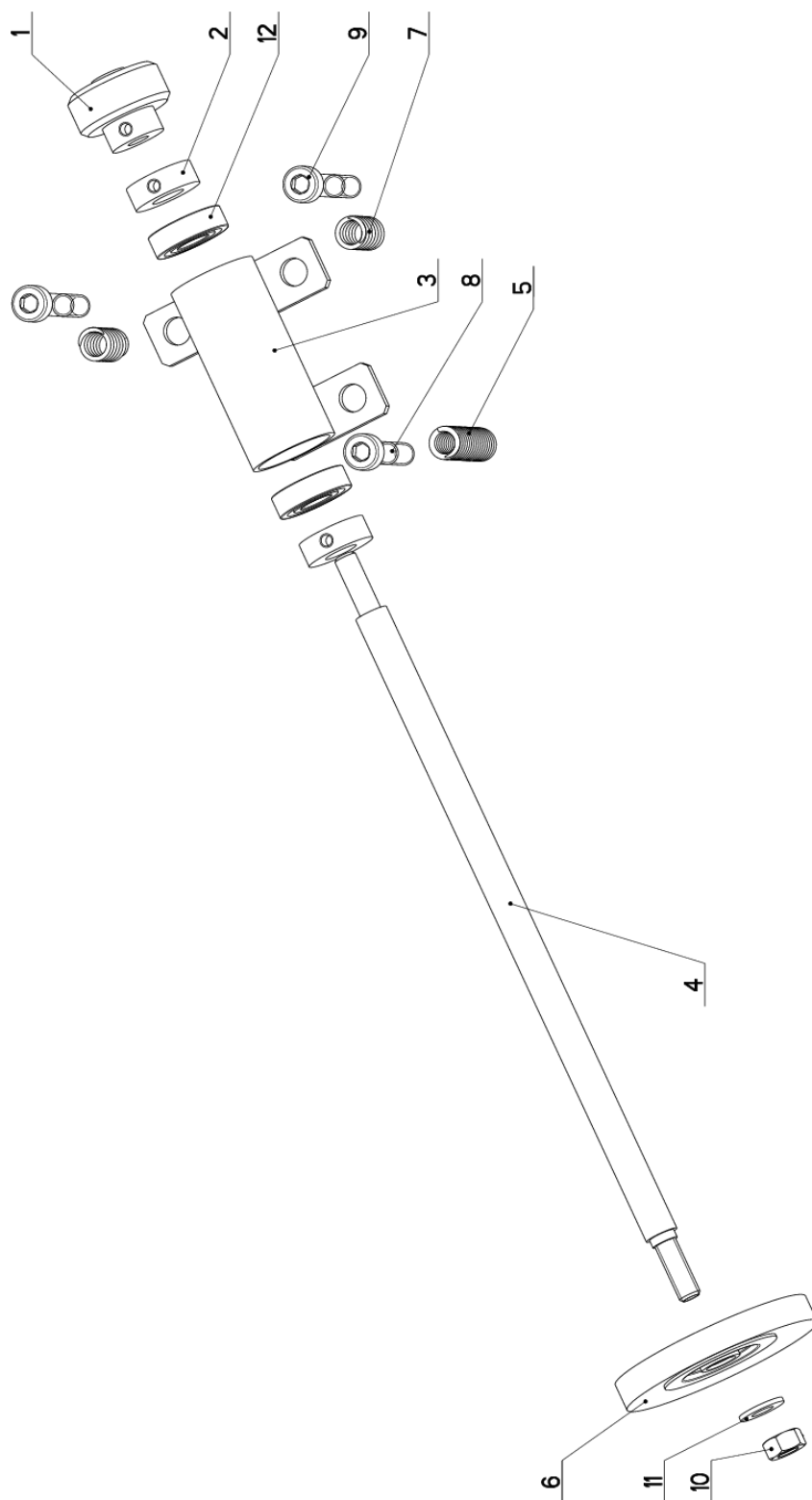
10.22. Kusovník / Piece list / Stückliste -
Rameno / Saw arm / Sägerahmen

35	91.173.012	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER			1
36	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION		REDUKCE 6/RI/4"	2
37	94.204.005 (2)	0	DRZAK / HOLDER / HALTER		LBG 14/14-PP	2
38	96.081.001	0	KROUZEK TESNICÍ / SEAL RING / DICHTRING		23x15x3	1
39	99.104.002	0	ZAMEK / LOCK / SCHLOSS		ZAMEK CÍNSKY	2
40	99.170.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE		0555.030.075.100	12
41	99.173.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE		KONCOVKA VNEJ	1
42	99.173.002	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE		KONCOVKA VNIT	1
43	99.201.046	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG		MSAZSE SS F0 N	3
44	99.260.003	0	VENTIL / VALVE / VENTIL		1/4"	1

1. PRID. 2xSROUB M4x30 90.013.9Z.104. 171/ZM311 5.9.2018 SZABARI
2. ZRUS. KRYT 30.8914-220 A NAHR. 30.2R404-102, PRIDAN 1xSROUB M6x35(90.001.25.021), ZM. POLOHY DRZAKU KABELU 94.204.005.
097/ZM137 23.3.2020 SLEZACKOVA

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.23. Kartáč/ Brush/ Bürste



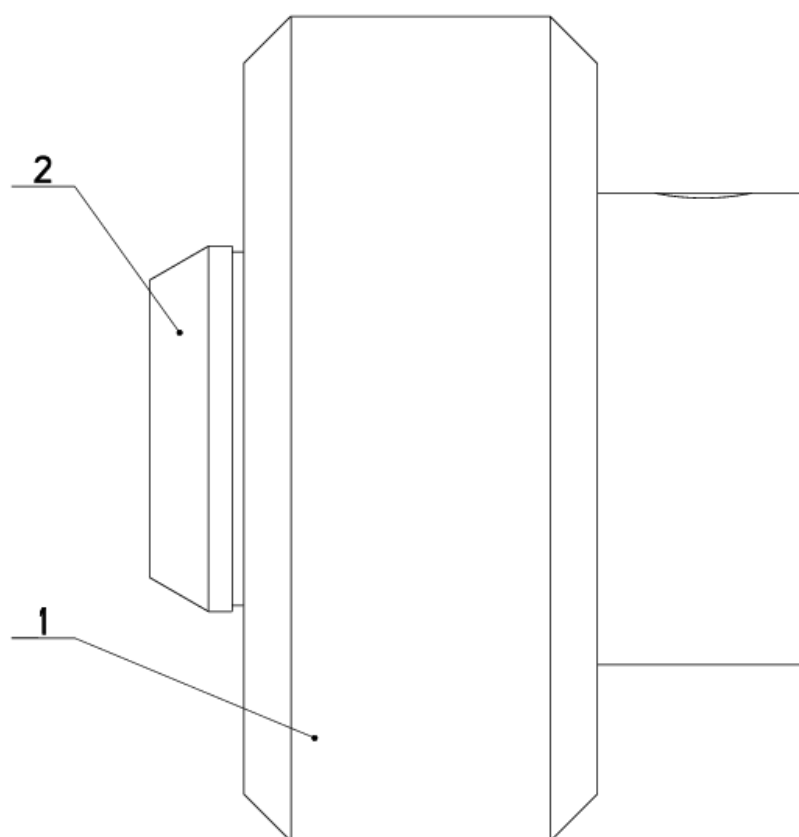
	NAZEV SESTAVY	CÍSLO SESTAVY	STROJ
	KARTAC	201.9214-300	ECO 320
	Konstruoval: VINOHRADSKÝ		
	Datum: 31. 07. 2015		
Meritko: 7:10			

10.24. Kusovník / Piece list / Stückliste - Kartáč/ Brush/ Bürste

Císlo Sestavy 201.9214-300		Ver. 0	Název sestavy KARTAC/BRUSH/BŮRSTE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0814-204	0	KOLEČKO / WHEEL / ROLLE	SESTAVA	1
2	30.0814-207	0	KROUZEK / RING / RING	d 25	2
3	30.9214-301	2	DRŽÁK / HOLDER / HALTER		1
4	30.9214-302	1	HRDEL / SHAFT / WELLE	D 12	1
5	31.0305-211	0	PRUŽINA / SPRING / FEDER	2x12x50x15,5	1
6	31.0814-208	0	KARTAC / BRUSH / BŮRSTE		1
7	31.1506-115	0	PRUŽINA / SPRING / FEDER	1.6x12x25x7.5	2
8	90.001.25.038	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x50	1
9	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x60	2
10	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
11	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	PODLOŽKA 8,4	1
12	95.001.005	0	LOŽISKO / BEARING / LAGER	6001 2RS	2

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer, Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.25. Kolečko / Wheel / Rolle



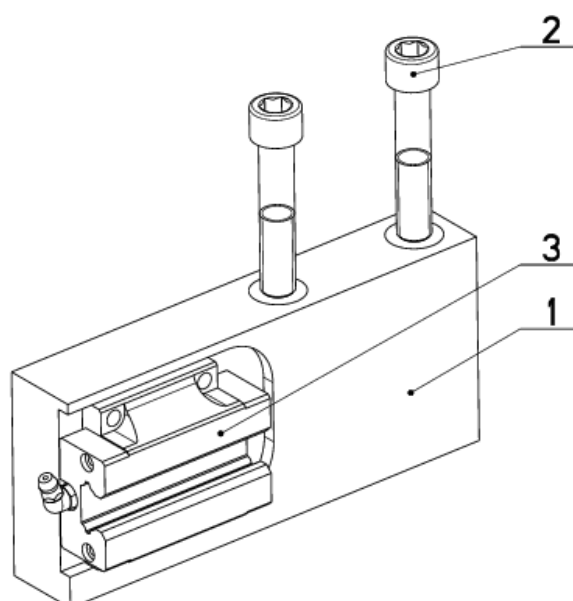
NAZEV SESTAVY KOLECKO	CÍSLO SESTAVY 201.0814-204	STROJ STG440
	Konstruoval:	
	Datum:	20. 04.2018
	Meritko:	4:1

10.26. Kusovník / Piece list / Stückliste -
Kolečko / Wheel / Rolle

Cislo Sestavy 201.0814-204		Ver. 0	Název sestavy KOLEČKO/WHEEL/ROLLE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.0814-204.1	0	KOLEČKO / /	d 35 1
2	30.0814-204.2	1	NABOJ / /	D 20 1

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer, Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.27. Konzola / Console / Konsole



NAZEV SESTAVY KONZOLA	ČÍSLO SESTAVY 201.R404-020	STROJ PL450
	Konstruoval: MUSIL	
	Datum: 10. 04.2018	
	Meritko: 1:2	

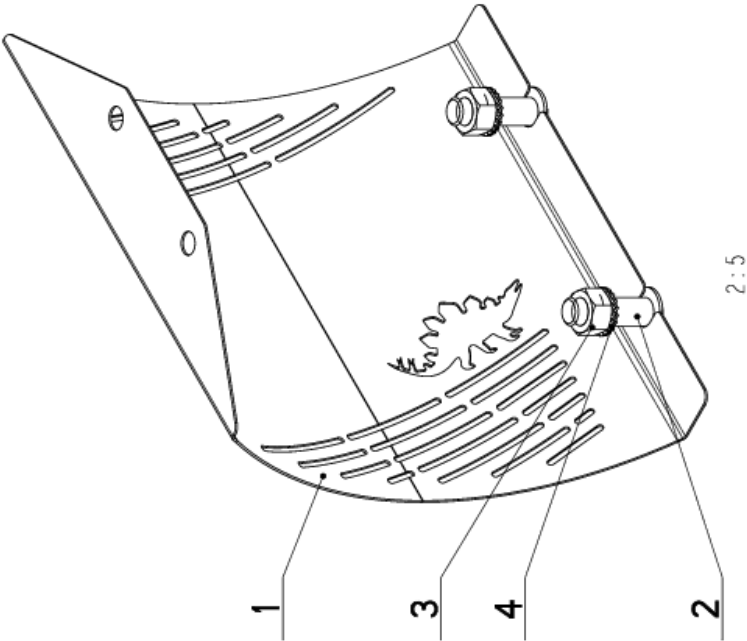
10.28. Kusovník / Piece list / Stückliste -
Konzola / Console / Konsole

Cislo Sestavy 201.R404-020		Ver. 0	Název sestavy KONZOLA/CONSOLE/KONSOLE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.R404-021	0	KONZOLA / CONSOLE / KONSOLE	1
2	90.001.25.063	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	2
3	99.201.045	0	VOZÍK LINEÁRNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	1

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer, Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

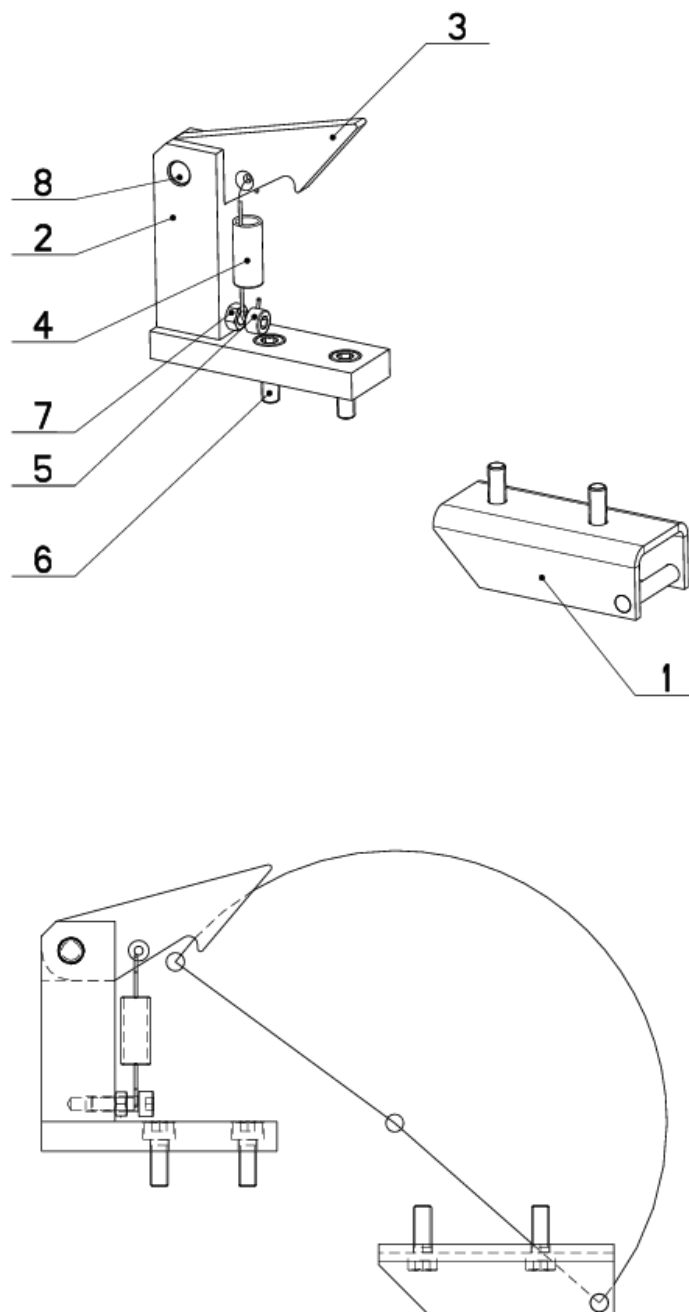
10.29. Kryt / Cover / Abdeckung

Cislo Sestavy 201.R404-022		Ver. 0	Nazev sestavy KRYT/COVER/ABDECKUNG	
Poz.	Objednací číslo	Ver.	Nazev položky	Rozměr
1	30.R404-023	0	PLECH / PLATE / BLECH	Plx238
2	90.013.27.29	0	ŠROUB / BOLT / SCHRAUBE	M12x40-ISO-7380
3	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE .. M12
4	90.152.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	M12 DIN6798
				Ks
				1
				2
				2
				2



Cislo Sestavy/Number of assembly/Nummer der Baugruppe: Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe: Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.30. Zámek / Lock / Schloss



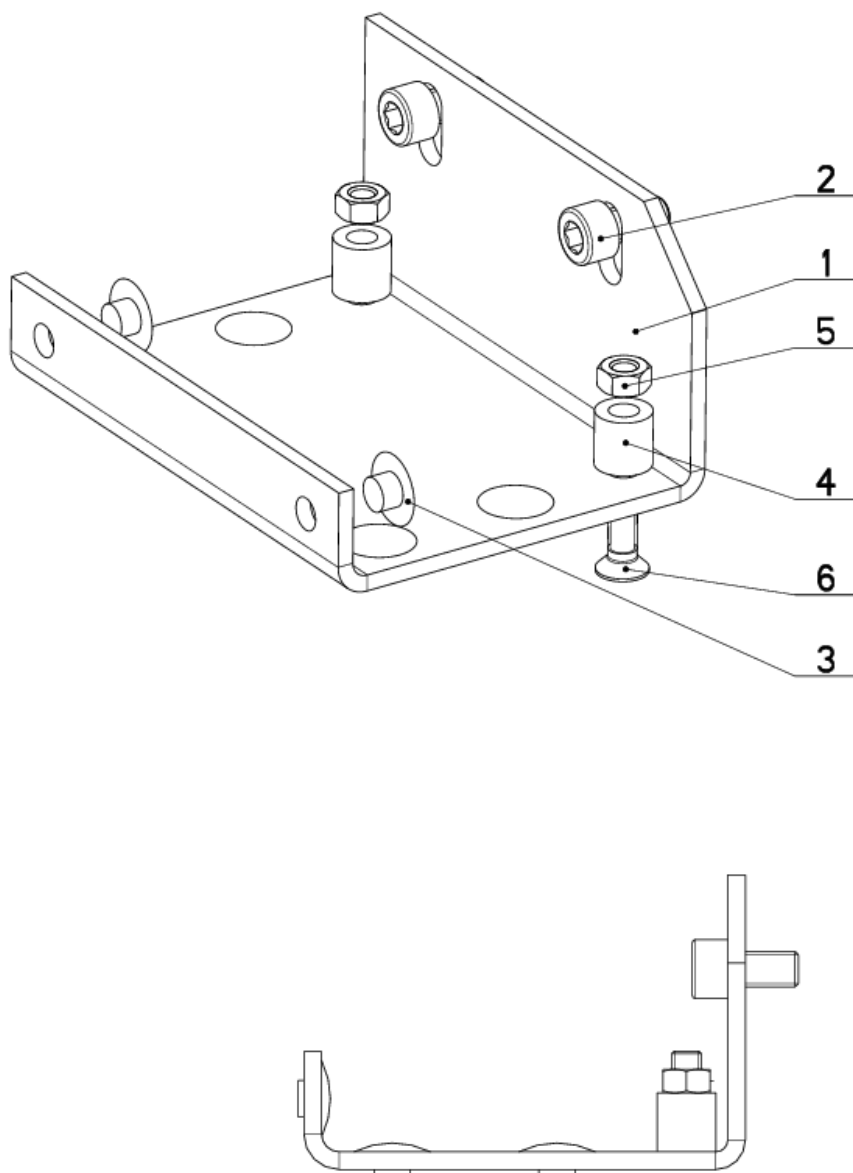
NAZEV SESTAVY ZAMEK	CÍSLO SESTAVY 201.R404-050	STROJ PL 450
	Konstruoval: ODVARKA	
	Datum: 10. 04.2018	
	Meritko: 1:2	

10.31. Kusovník / Piece list / Stückliste -
Zámek / Lock / Schloss

Cislo Sestavy 201.R404-050		Ver. 0	Název sestavy ZÁMEK/LOCK/SCHLOSS		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.R404-051	0	DRŽÁK / HOLDER / HALTER		1
2	30.R404-052	0	KONZOLA / CONSOLE / KONSOLE		1
3	30.R404-053	0	PAKA / LEVER / HEBEL	P 6x39	1
4	31.1605-128	0	PRŮŽINA TAŽNA / /	1x10x50x22	1
5	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X16	1
6	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X16	4
7	90.100.55.003	0	MATICE / NUT / MUTTER	MATICE - M5	1
8	90.301.02.007	0	KOLÍK VALCOVÝ / CYLINDRICAL PIN SOFT / ZYLINDERSTIFT WEICH	KOLIK BX16	1

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.32. Držák / Holder / Halter



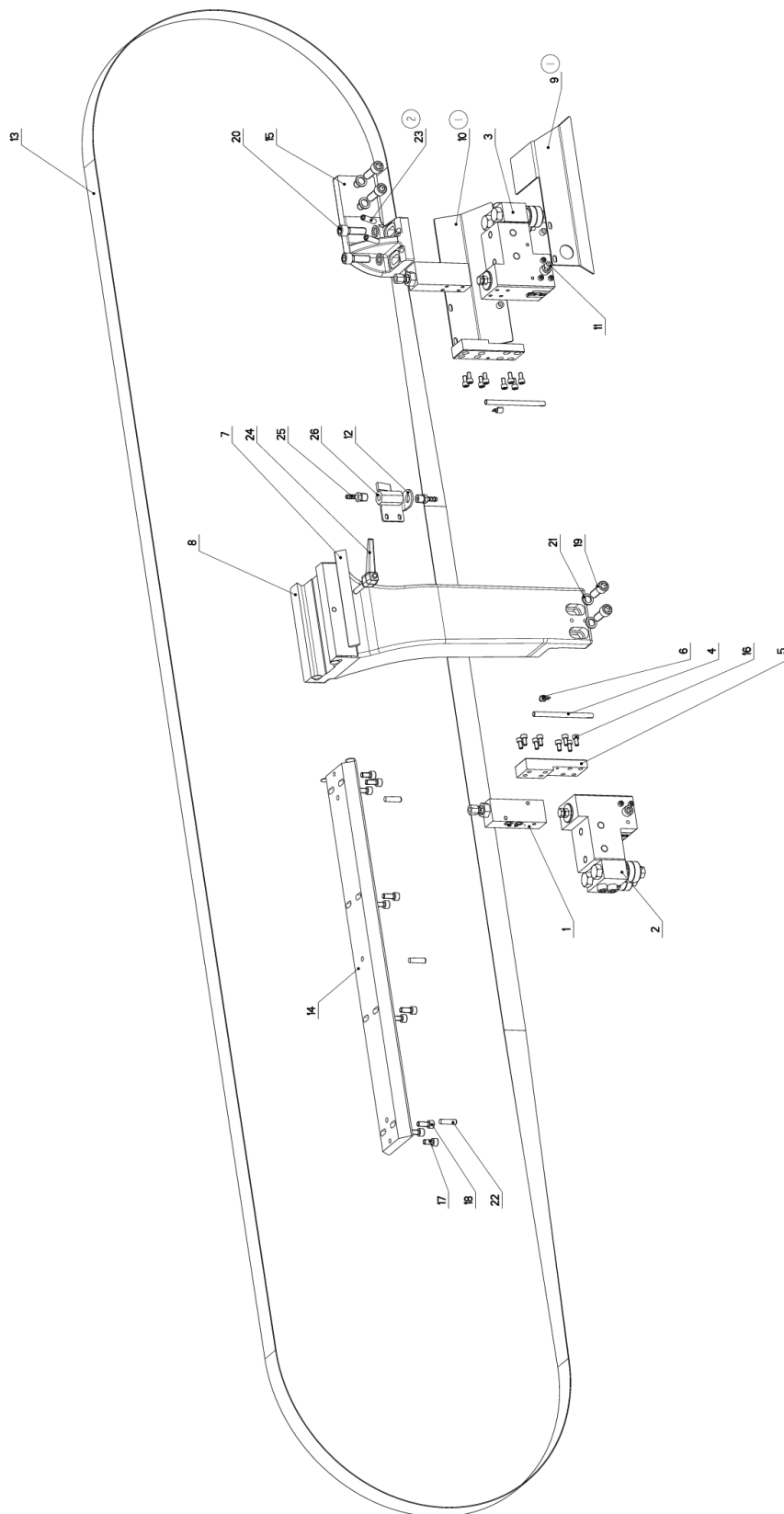
NAZEV SESTAVY DRŽÁK	ČÍSLO SESTAVY 201.R404-070	STROJ IN460DGH
	Konstruoval: HLADIL	
	Datum:	10. 04.2018
	Meritko:	1:1

10.33. Kusovník / Piece list / Stückliste - Držák / Holder / Halter

Císlo Sestavy 201.R404-070		Ver. 0	Název sestavy DRŽÁK/HOLDER/HALTER	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.R404-071	0	DRŽÁK / HOLDER / HALTER	1
2	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	2
3	94.101.029	0	ZATKA / PLUG / STOPFEN	6
4	90.163.00.006	0	DISTANC / DISTANCE / DISTANZ	2
5	90.100.55.003	0	MATICE / NUT / MUTTER	2
6	90.011.27.024	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	2

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.34. Vedení pásu / Belt guide / Sägebandführung



INTEK BISTAVY	CISLO BISTAVY	STROJ
VEDENÍ PÁSU	Z01.8410-000	PL450
Konstítuoval: MUSIL		
Datum: 13. 01. 2016		
Verzika: 11:50		

10.35. Kusovník / Piece list / Stückliste -
Vedení pásu / Belt guide / Sägebandführung

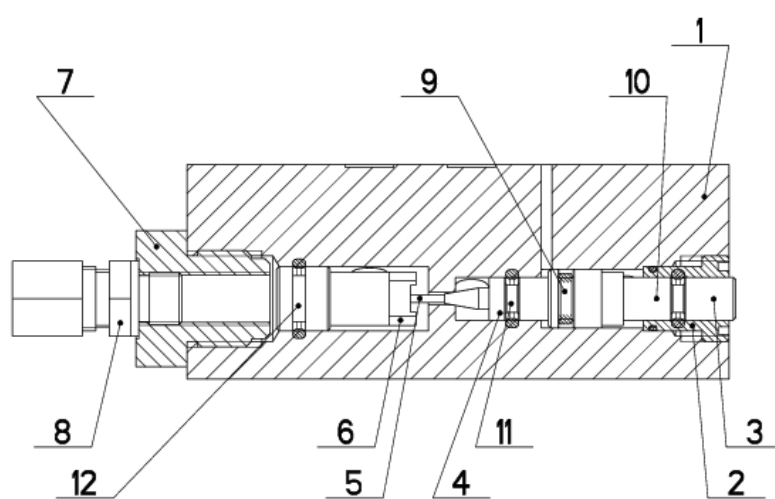
Císlo Sestavy 201.R410-000		Ver. 2	Název sestavy VEDENÍ PASU/BELT GUIDE/SÄGEBANDFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6816-100	0	KOSTKA REGULATE / REGULATION CUBE / REGELUNGSWÜRFEL		2
2	201.Y410-100	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	201.Y410-200	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	30.3510-004	0	TRUBKA / TUBE / ROHR	TR 8x 1	2
5	30.6016-002	0	DESKA / BOARD / PLATTE	HR 40x20	2
6	30.9010-003	0	DRŽAK / HOLDER / HALTER	PL 5x10	2
7	30.M410-008	0	LISTA / TRIM / LEISTE	HR 20x6	1
8	30.R410-004	1	KONZOLA / CONSOLE / KONSOLE		1
9	30.R410-006	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2x192	1
10	30.R410-007	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2x108	1
11	30.Y310-007	0	KROUZEK / RING / RING	TR 10x2,5	4
12	30.Y310-008	1	DRŽAK / HOLDER / HALTER	P 3x50	1
13	30.Y404-006	0	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	41x1,3	1
14	30.Y410-003	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLEISTE	HR 90x20	1
15	30.Y410-105	3	DRŽAK / HOLDER / HALTER		1
16	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	16
17	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	2
18	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	8
19	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	2
20	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	4
21	90.163.00.003	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	NORD-LOCK	6
22	90.302.02.002	0	KUŽEL. KOLÍK S ZAV. / TAPER PIN + THREAD / KEGELBOLZEN + GEWINDE	KOLÍK 8x30	3
23	90.302.02.003	0	KUŽEL. KOLÍK S ZAV. / TAPER PIN + THREAD / KEGELBOLZEN + GEWINDE	KOLÍK 8x36	2
24	94.008.003	0	PAKA UPÍNACÍ / ATTACHMENT LEVER / SPANNHEBEL	M8x40	1
25	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/R1/4"	2
26	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1

1.ZRUS.KRYT PASU 30.Y410-006 A NAHR.30.R410-006,PRIDAN KRYT PASU 30.R410-007. 090/ZM110 16.5.2014 SLEZACKOVA

2.PRIDAN 2xKOLÍK 8x36(90.302.02.003. 004/ZM009 12.1.2016 SLEZACKOVA

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.36. Kostka regulace / Regulation cube / Regelungswürfel



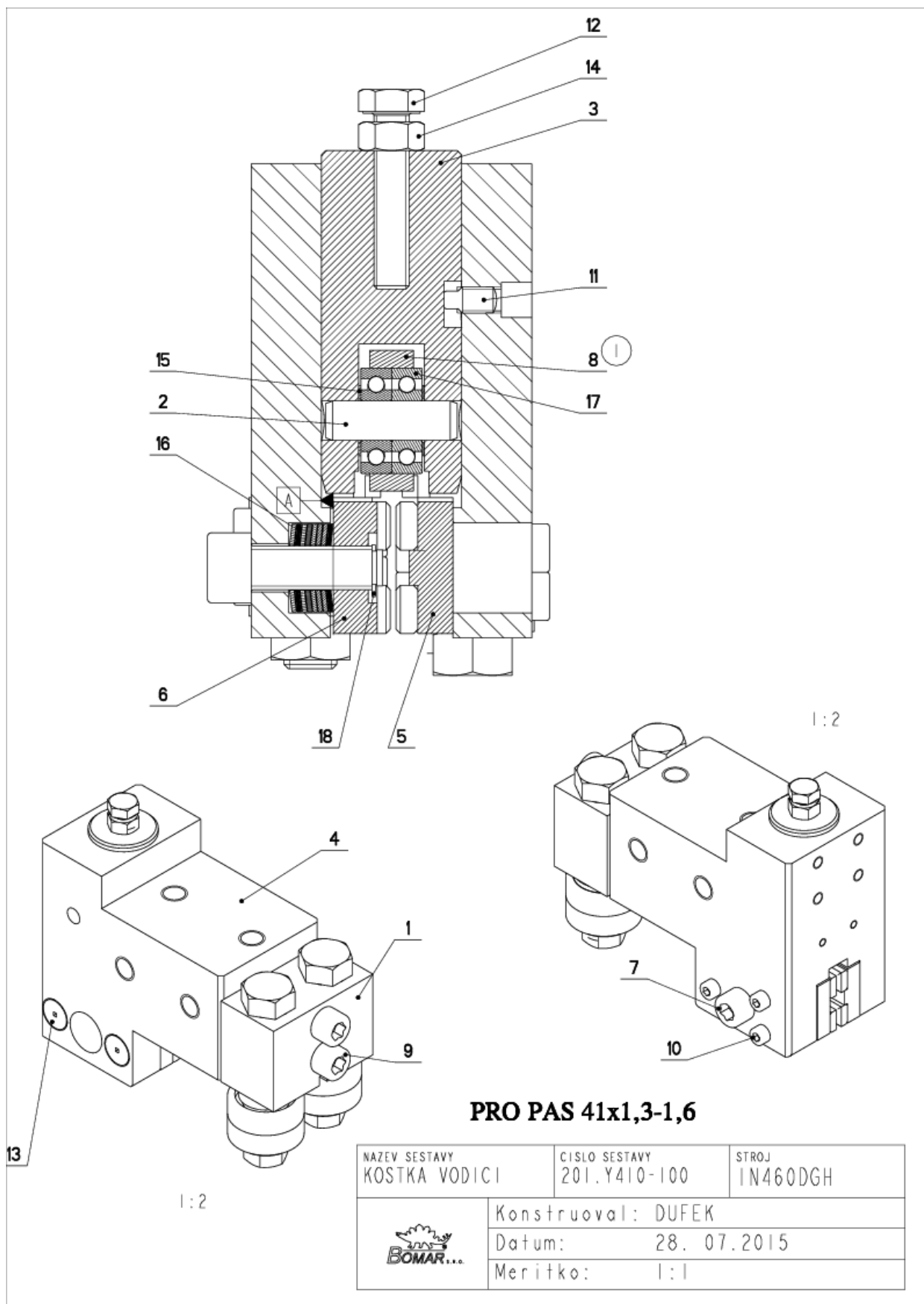
NAZEV SESTAVY KOSTKA REGULACE	CISLO SESTAVY 201.6816-100	STROJ SL-520
	Konstruoval: MARAK	
	Datum: 10. 04.2018	
	Meritko: 1:1	

10.37. Kusovník / Piece list / Stückliste -
Kostka regulace / Regulation cube / Regelungswürfel

Císlo Sestavy 201.6816-100		Ver. 0	Název sestavy KOSTKA REGULACE/REGULATION CUBE/REGELUNGSWÜRFEL		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6816-101	3	KOSTKA REGULACE / REGULATION CUBE / REGELUNGSWÜRFEL	TYC 40x40	1
2	30.6816-104	3	VÍKO / COVER / DECKEL	D 16	1
3	30.6816-103	1	PIST / PISTON / KOLBEN	D 12	1
4	30.6816-108	2	JEHLA / NEEDLE / NADEL	TYC 8	1
5	95.690.001	0	JEHLA / NEEDLE / NADEL	1.5x11.8	1
6	30.6816-106	3	PIST / PISTON / KOLBEN	TYC 12	1
7	30.6816-107	0	VÍKO / COVER / DECKEL	TYC 22	1
8	92.002.102	0	SROUBENÍ / BOLTING / VERSCHRAUBUNG	S-GEV-8LLR	1
9	96.001.019	0	KROUŽEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	6x2	1
10	96.002.041	0	KROUŽEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	10x1	1
11	96.001.001	0	O-KROUŽEK STATIC / STATIC O RING / O-RING STATISCH	4x1.8	2
12	96.001.003	0	O-KROUŽEK STATIC / STATIC O RING / O-RING STATISCH	8x2	1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.38. Kostka vodící / Lead cube / Führungsklotz



10.39. Kusovník / Piece list / Stückliste -
Kostka vodící / Lead cube / Führungsklotz

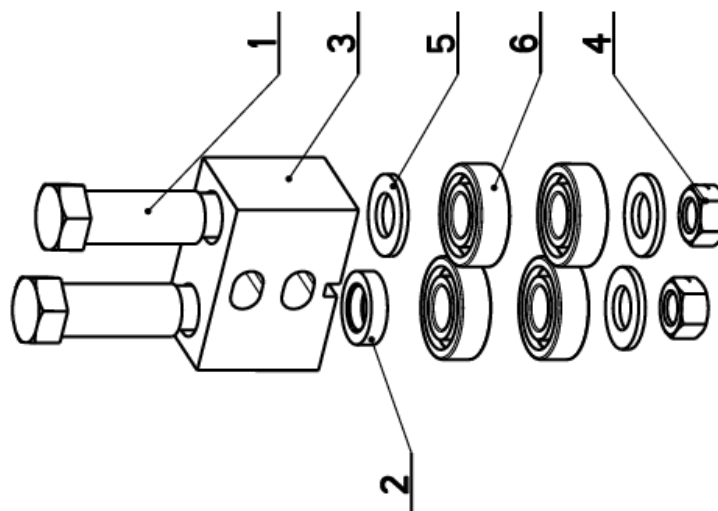
Cislo Sestavy 201.Y410-100	Ver. I	Nazev sestavy KOSTKA VODICÍ/LEAD CUBE/FÜHRUNGSKLOTZ			
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer	Ks
1	201.6110-510	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
3	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
4	30.Y410-101	1	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
5	30.Y410-110	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.Y410-120	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	30.Y610-503	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	1
8	31.6710-110	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X60	2
10	90.001.25.126	0	SROUB IMBUS / /	M5X25	3
11	90.004.20.002	0	SROUB STAVECÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X12	1
12	90.005.55.019	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8X40	1
13	90.011.27.016	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8X25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
15	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	10x16x0.50	2
16	90.350.02.005	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	20X10.2X1	8
17	95.001.044	0	LOŽISKO / BEARING / LAGER	609 ZRS	2
18	95.800.002	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTINÝ KROUZEK 8	1

I.ZRUS.SOUC.30.6710-110 A NAHR.31.6710-110. 175/ZM178 28.7.2015 SLEZACKOVA

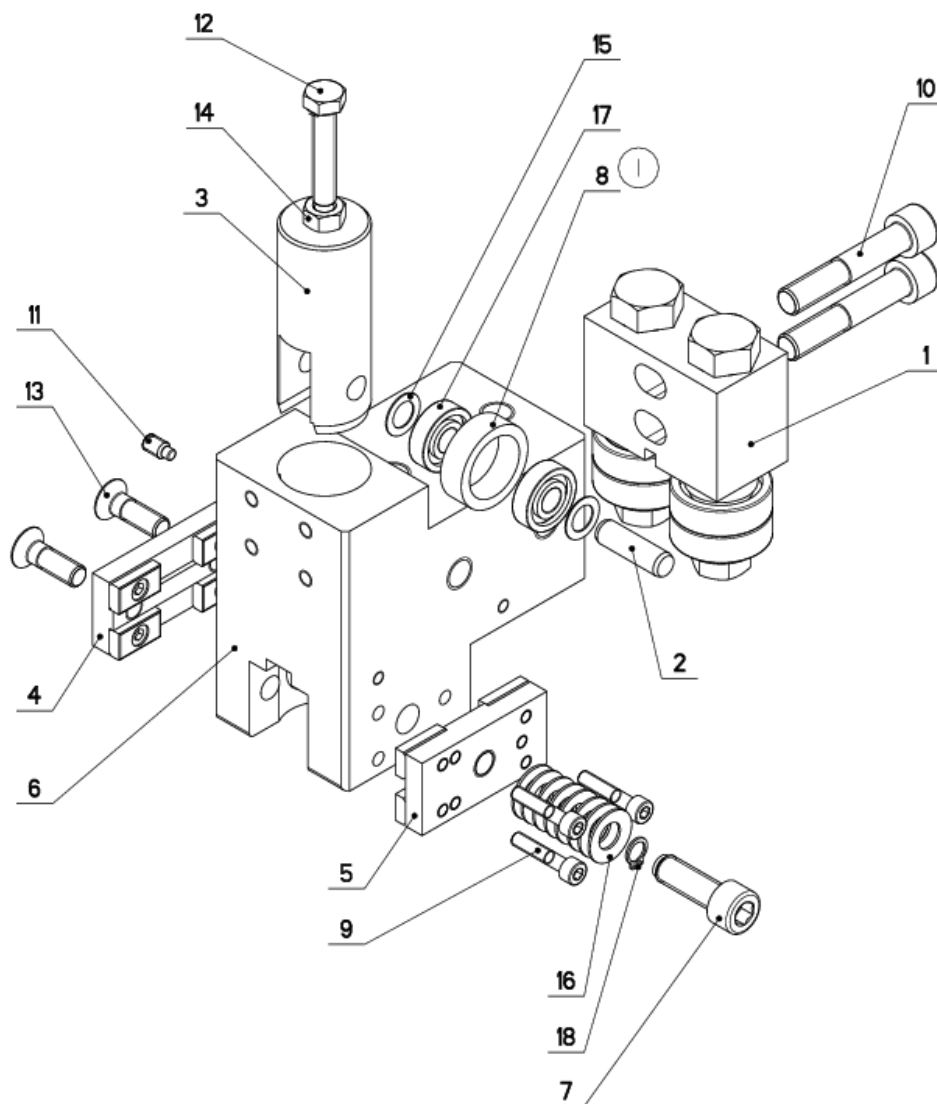
Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.40. Vedení / Guide / Backenführung

Císlo Sestavy 201.6110-510		Ver. 0	Název sestavy VEDENÍ/GUIDE/BACKENFÜHRUNG		Rozměr	Ks
Poz.	Objednáací číslo	Ver.	Název položky			
1	30.6010-104	1	EXCENTR / CAM / EXCENTER		SK 22	2
2	30.6010-108	0	KROUŽEK DISTANČNÍ / DISTANCE RING / DISTANZRING		Tr 25x5	1
3	30.6110-502	0	KOSTKA VODÍČÍ / LEAD CUBE / FÜHRUNGSKLOTZ		HR 80x50	1
4	90.100.55.007	0	MATICE / NUT / MUTTER		MATICE .. M12	2
5	90.150.50.008	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE		PODLOŽKA 15	3
6	95.001.015	0	LOŽISKO / BEARING / LAGER		6202 2RS	4



10.41. Kostka vodící / Lead cube / Führungsklotz



NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.Y410-200	STROJ IN460DGH
	Konstruoval: MUSIL	
	Datum: 28. 07.2015	
	Meritko: 1:2	

10.42. Kusovník / Piece list / Stückliste -
Kostka vodící / Lead cube / Führungsklotz

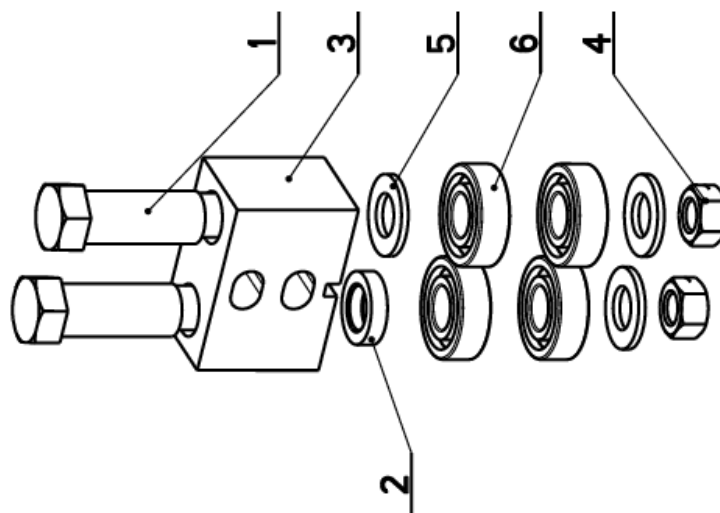
Cislo Sestavy 201.Y410-200		Ver. I	Nazev sestavy KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer	Ks
1	201.6110-510	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
3	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
4	30.Y410-110	0	DRŽAK TVRDOKOVU / POA HOLDER / HW-HALTER		1
5	30.Y410-120	0	DRŽAK TVRDOKOVU / POA HOLDER / HW-HALTER		1
6	30.Y410-201	1	KOSTKA VODICI LEVA / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
7	30.Y610-503	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	1
8	31.6710-110 (1)	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	3
10	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x55	2
11	90.004.20.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
12	90.005.55.019	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x40	1
13	90.011.27.016	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
15	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	10x16x0.50	2
16	90.350.02.005	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	20x10.2x1	8
17	95.001.044	0	LOŽISKO / BEARING / LAGER	609 ZRS	2
18	95.800.002	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTINÝ KROUZEK 8	1

I.ZRUS.SOUČ.30.6710-110 A NAHR.31.6710-110. 175/ZM178 28.7.2015 SLEZACKOVA

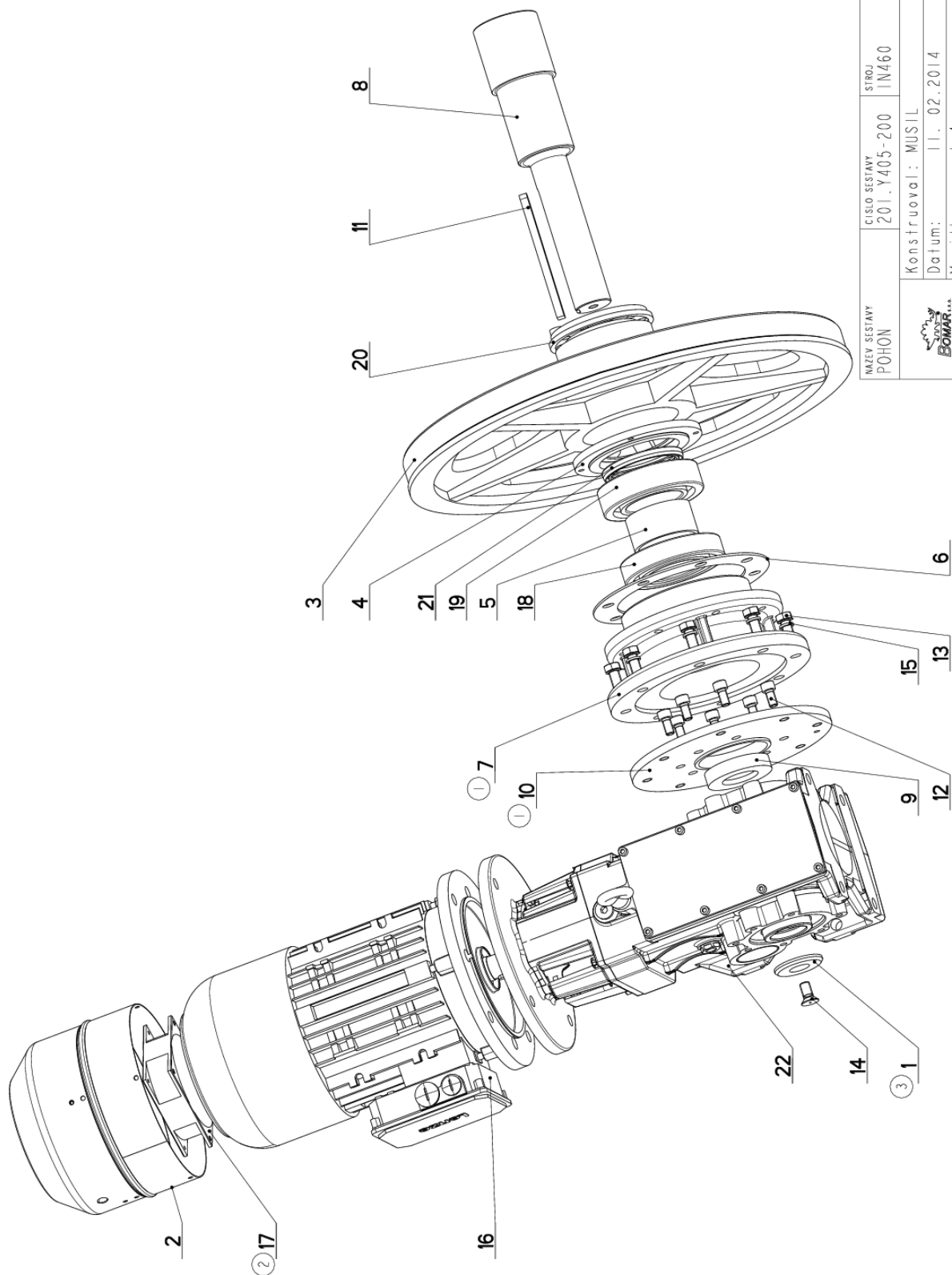
Cislo Sestavy/Number of assembly/Nummer der Baugruppe: Verze (Ver./Version/Version); Název sestavy/Assembly title/Name der Baugruppe: Pozice (Pos./Position/Position);
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.43. Vedení / Guide / Backenführung

Cislo Sestavy 201.6110-510		Ver. 0	Název sestavy VEDENÍ/GUIDE/BACKENFÜHRUNG			
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.6010-104	1	EXCENTR / CAM / EXCENTER	SK 22	2	
2	30.6010-108	0	KROUŽEK DISTANČNÍ / DISTANCE RING / DISTANZRING	Tr 25x5	1	
3	30.6110-502	0	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ	HR 80x50	1	
4	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE .. M12	2	
5	90.150.50.008	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 15	3	
6	95.001.015	0	LOŽISKO / BEARING / LAGER	6202 2RS	4	



10.44. Pohon / Drive / Antrieb



NAZEV SESTAVY POHON	CÍSLO SESTAVY 201.Y405-200	STROJ IN460
Konstruoval: MUSIL		
Datum: 11. 02. 2014		
Meritko: 1:4		

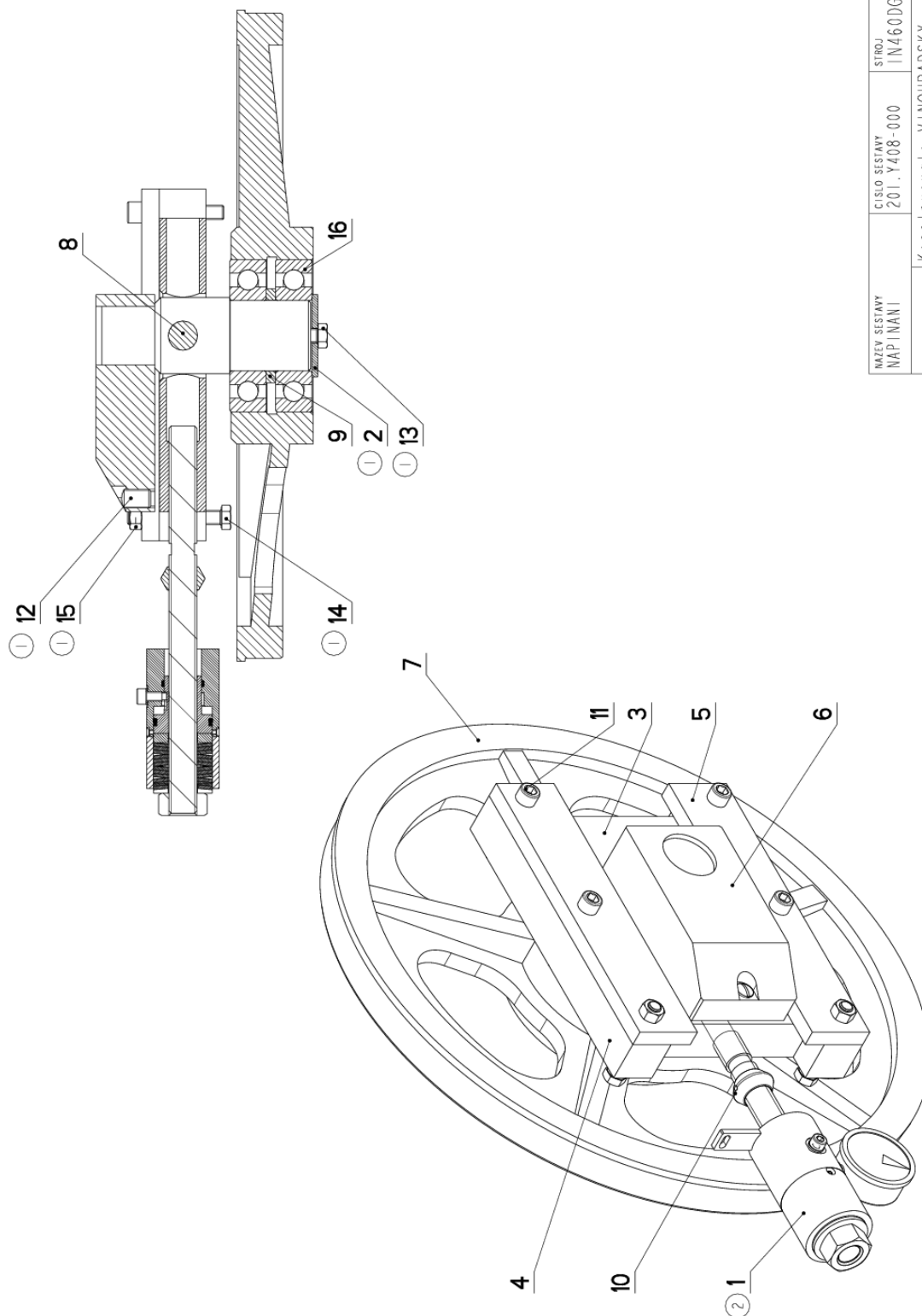
10.45. Kusovník / Piece list / Stückliste -
Pohon / Drive / Antrieb

Císlo Sestavy 201.Y405-200	Ver. 3	Název sestavy POHON/DRIVE / ANTRIEB				
Poz	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.0804-009 (3)	3	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	d 60	1	
2	30.4304-018	4	VENTILATOR / VENTILATOR / VENTILATOR		1	
3	30.6005-001	5	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD	ODLITEK	1	
4	30.6105-604	1	VÍKO / COVER / DECKEL	P 12x159	1	
5	30.6105-605	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 80x5	1	
6	30.6105-607	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	P 4x220	1	
7	30.R405-505 (1)	0	PRÍRUBA / FLANGE / FLANSCH	ODLITEK	1	
8	30.Y405-202	1	HRDEL / SHAFT / WELLE	d 90	1	
9	30.Y405-203	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	d 80	1	
10	30.Y405-205 (1)	0	PRÍRUBA / FLANGE / FLANSCH	P15x250	1	
11	30.Y605-002	0	PERO / SPRING / FEDER	HR. 14x9	1	
12	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x20	7	
13	90.005.55.033	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12X35	8	
14	90.011.27.025	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12X25	1	
15	90.158.50.009	0	PODLOŽKA PRUŽNÁ / SPRING WASHER / FEDERSCHNITT	PODLOŽKA 12	8	
16	91.001.117	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR	4kW 4P B5 112	1	
17	91.015.126 (2)	0	VENTILATOR / VENTILATOR / VENTILATOR	VENTILATOR RDH1238.B2	1	
18	95.001.064	0	LOŽISKO / BEARING / LAGER	6214A	1	
19	95.201.007	0	LOŽISKO / BEARING / LAGER	VALEČKOVÁ L. PRADA	1	
20	95.825.001	0	POUZDRO UPÍNACÍ / FIXING SLEEVE / SPANNHÜLSE	KTR210- 80x120	1	
21	95.830.052	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 80X100X10	1	
22	99.003.020	0	PREVODOVKA KUZELOCEL / CONICAL TRANSMISSION / KEGELRADGETRIEBE	MBH80C AM112	1	

1.ZRUS.PRIRUBA 30.6105-608,30.Y405-201 A NAHR.30.R405-505,30.Y405-205. 025/ZM029 8.2.2012 SLEZACKOVA
2.ZRUS.VENTILATOR 91.015.100 A NAHR.91.015.126. 074/ZM018 11.2.2014 SLEZACKOVA
3.ZRUS.PODLOŽKA 30.1804-010 A NAHR.30.0804-009. 100/ZM123 30.5.2014 SLEZACKOVA

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.46. Napínání / Tensioning / Spannung



NÁZEV SESTAVY NAPÍNÁNÍ	ČÍSLO SESTAVY 201.Y408-000	STROJ IN460DGH
Konstruoval: VINOHRADSKÝ		
Datum: 24. 08. 2015		
Měřítko: 33:100		

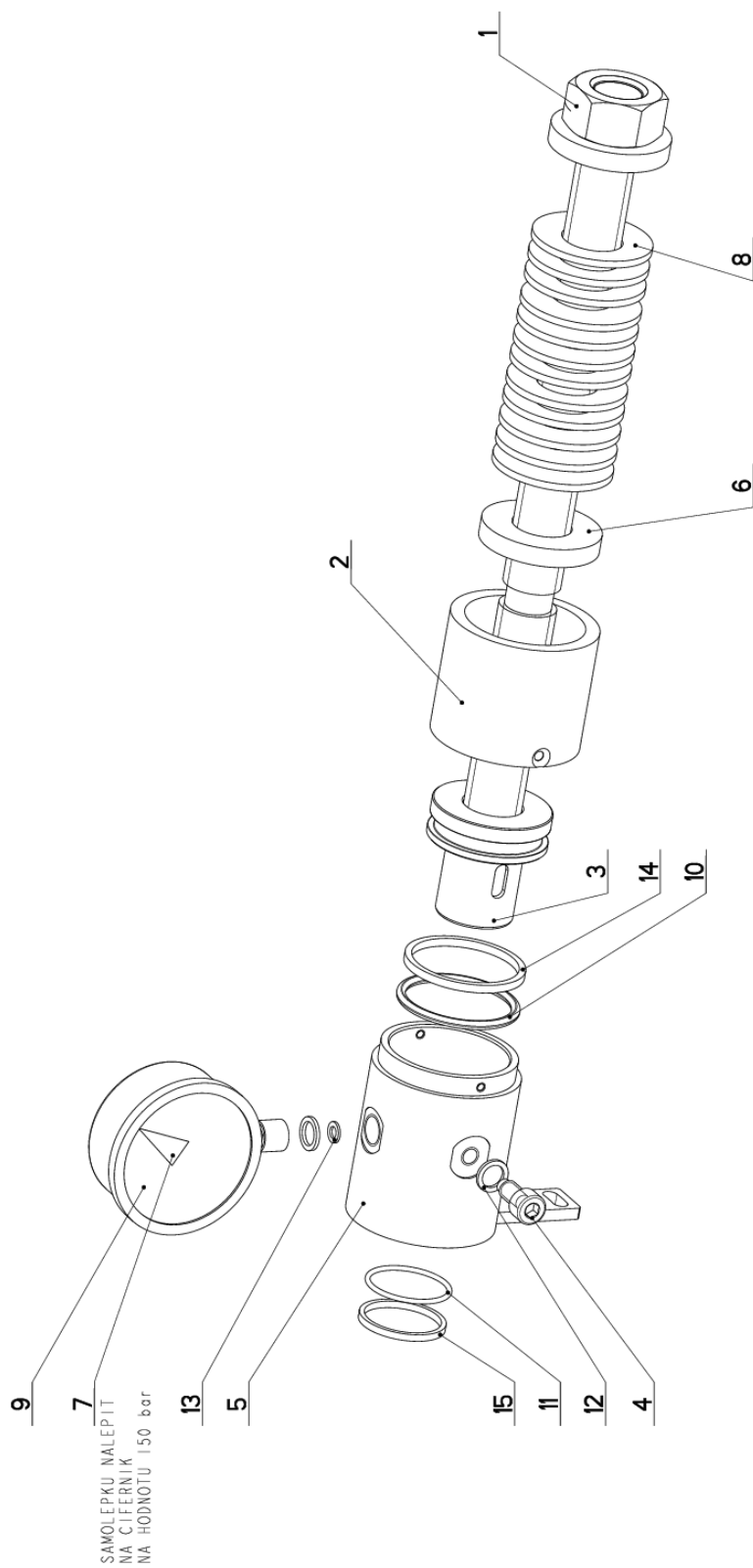
10.47. Kusovník / Piece list / Stückliste -
Napínání / Tensioning / Spannung

Císlo Sestavy 201. Y408-000		Ver. 2	Název sestavy NAPINANI / TENSIONING / SPANNUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6107-360 (2)	0	VALEC / ROLLER / ZYLINDER	SESTAVA	1
2	30.1804-014 (1)	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	P 5x70	1
3	30.6008-001	1	KOSTKA NAPINANI / TENSIONING CUBE / BANDSPANNUNGSWÜRFEL	HR 160x40	1
4	30.6008-002	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSEIESTE	HR 40x40	2
5	30.6008-003	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSEIESTE	HR 60x15	2
6	30.6008-004	2	NAPINANI / TENSIONING / SPANNUNG		1
7	30.6008-006	6	KOLO NAPINANI / TENSIONING WHEEL / UMLENKRAD		1
8	30.6008-014	1	ČEP NAPINANI / TENSIONING LUG / SPANNUNGSBOLZEN	d 25 h6	1
9	30.6708-002	1	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TRUBKA 82.5x12.5	1
10	30.7208-006	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 38	1
11	90.001.25.064	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x70	5
12	90.002.20.028 (1)	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x1,5x25	1
13	90.005.55.030 (1)	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x20	1
14	90.005.55.036 (1)	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x80	2
15	90.100.55.007 (1)	0	MATICE / NUT / MUTTER	MATICE - M12	2
16	95.001.041	0	LOŽISKO / BEARING / LAGER	6312A	2

1. ZRUS. 2xSROUB IMBUS M12x70(90.0001.25.064) A NAHR. 2xSROUB 6HR M12x80(90.005.55.036), PRID. 2xMATICE M12(90.100.55.007),
1xSTAVEČI SROUB M16x25(90.002.20.028), ZRUS. PODLOŽKA 30.1804-010 A NAHR. 30.1804-014, ZRUS. SROUB ZAPUSTNÝ M12x20
(90.011.27.009) A NAHR. SROUB 6HR M12x20(90.005.55.030 164/ZM187 24.8.2015 SLEZACKOVA
2. ZRUS. VALEC 201.6107-360 A NAHR. VALCEM 201.6107-360. 083/ZM137 31.3.2017 VLACH

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.48. Válec / Roller / Zylinder



NAZEV SESTAVY VÁLEC	ČÍSLO SESTAVY 201.6107-360	STROJ IND 460
Konstruoval: MAJZNER		
Datum: 31. 03. 2017		
Měřítko: 3:5		

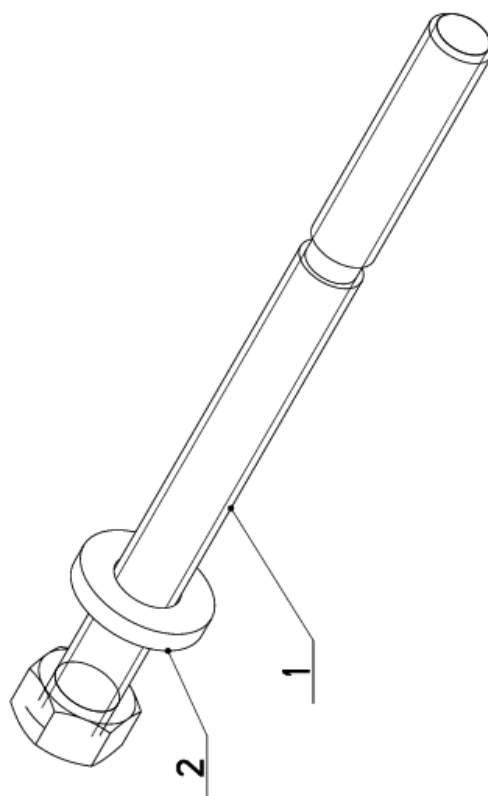
10.49. Kusovník / Piece list / Stückliste -
Válec / Roller / Zylinder

Císlo Sestavy 201.6107-360		Ver. 0	Název sestavy VALEC/ROLLER/ZYLINDER			
Poz.	Objednací číslo	Ver.	Název položky		Rozměr	Ks
1	201.6108-020	0	SROUB / BOLT / SCHRAUBE			1
2	30.6008-013	0	TRUBKA / TUBE / ROHR		TR 62x10	1
3	30.6107-352	0	PIST / PISTON / KOLBEN		d 55	1
4	30.6107-354	1	SROUB / BOLT / SCHRAUBE		M8x20	1
5	30.6107-358	0	VALEC / ROLLER / ZYLINDER			1
6	30.6107-359	1	DÍSTANČ / DISTANCE / DISTANZ		P 8x50	1
7	31.0899-004	0	SAMOLEPKA / STICKER / AUFKLEBER			1
8	90.350.02.004	0	TAL.PRUŽINA DIN 2093 A / DISC SPRING / TELLERFEDER		50X25.4X3	12
9	92.080.004	0	MANOMETR / MANOMETER / MANOMETER		d 63 - 250bar	1
10	96.001.033	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH		ORAR00224-N70	1
11	96.002.063	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH		ORAR00125-N70	1
12	96.082.001	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING		10/14x1.5 CU	2
13	96.082.005	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING		5x8.8x1	1
14	96.083.010	0	KROUZEK / RING / RING		BG2700446-PT00	1
15	96.083.011	0	KROUZEK / RING / RING		BU2000320-PT00	1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer, Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

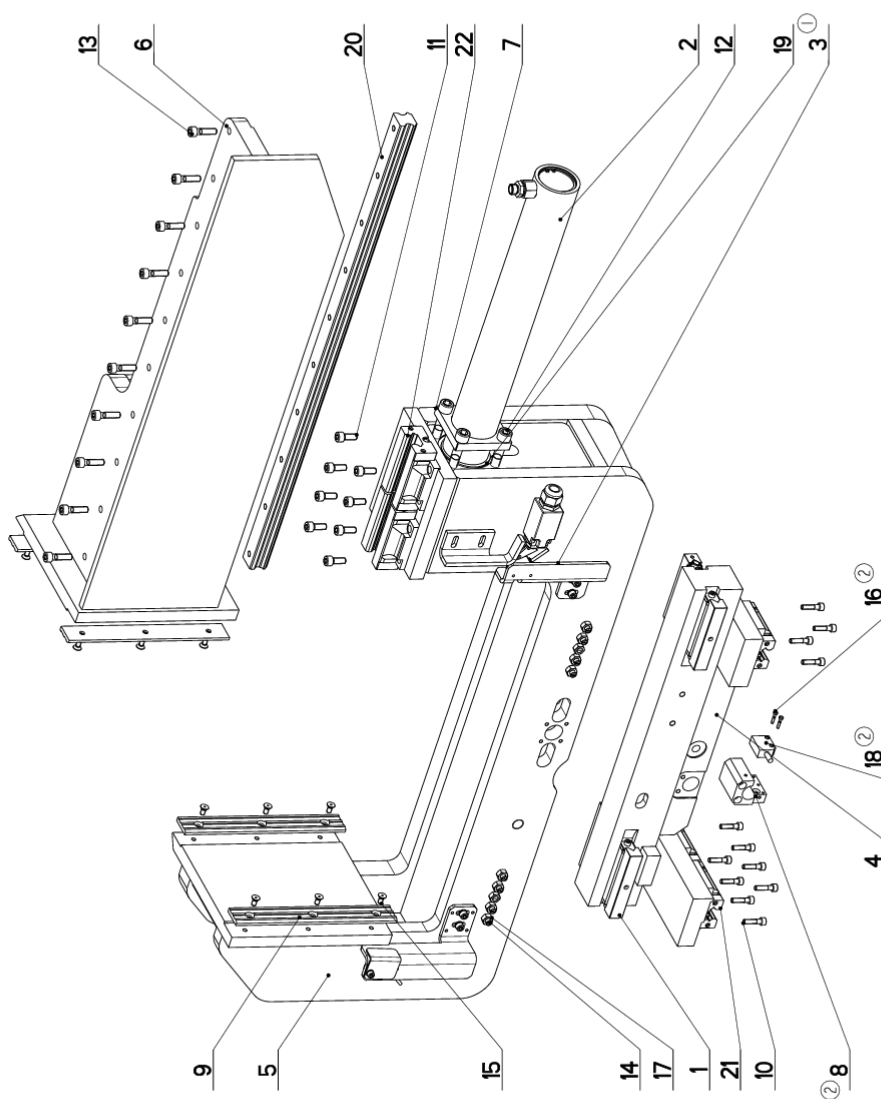
10.50. Šroub / Bolt / Schraube

Císlo Sestavy 201.6108-020		Ver. 0	Název sestavy ŠROUB/BOLT/SCHRAUBE	
Poz.	Objednací číslo	Ver.	Název položky	
1	30.6108-009	0	ŠROUB / BOLT / SCHRAUBE	
2	30.6107-359	1	DISTANC / DISTANCE / DISTANZ	
			Rozměr	Ks
			P 8x50	1



Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.51. Podavač / Feeder / Vorschub



NAZEV SESTAVY PODAVAC	ČÍSLO SESTAVY 201.28411-000	STROJ PL450
Konstruoval: FABER		
Datum: 19. 12. 2019		
Meritko: 1:5		

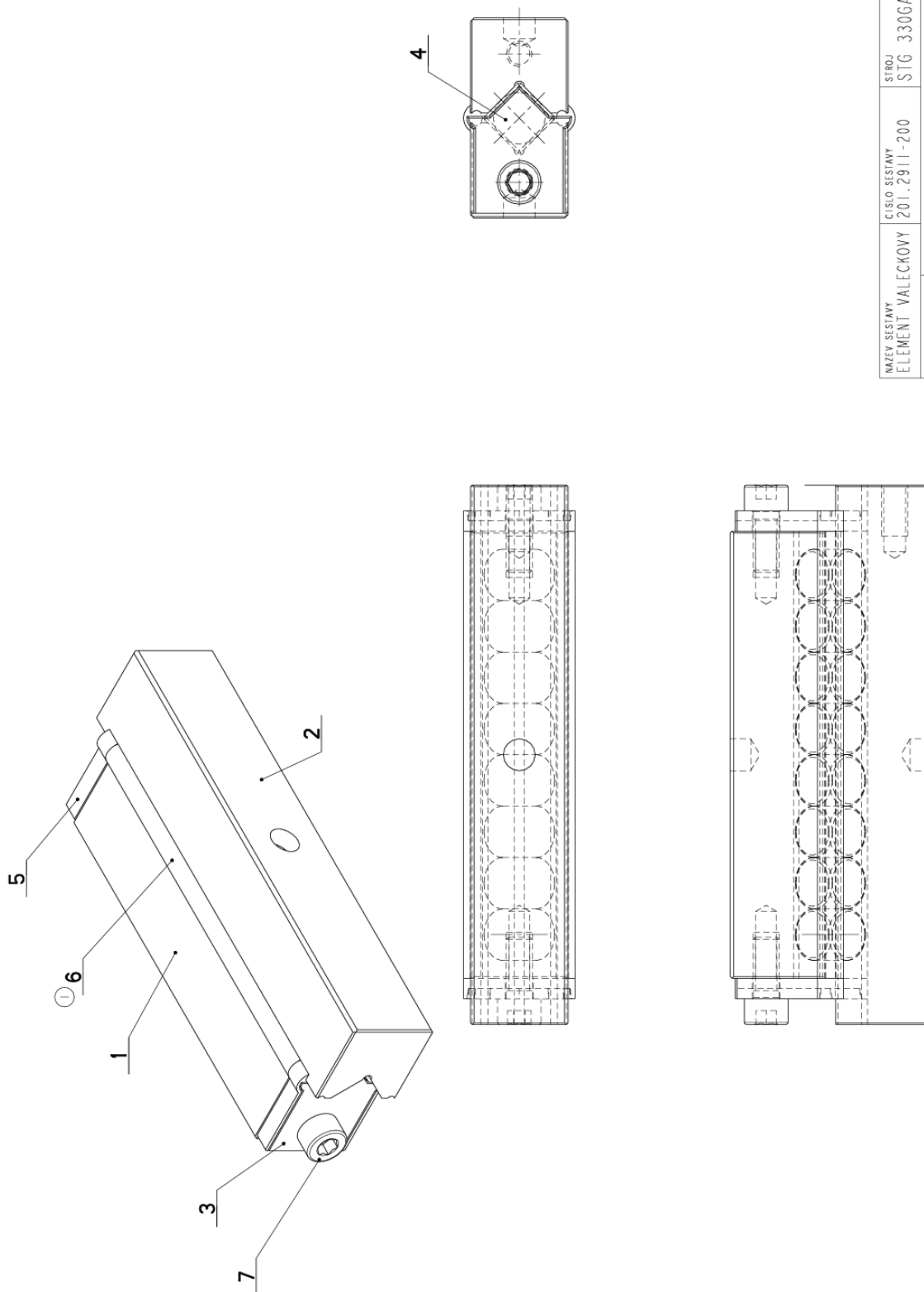
10.52. Kusovník / Piece list / Stückliste -
Podavač / Feeder / Vorschub

Císlo Sestavy 201.2R411-000		Ver. 2	Název sestavy PODAVAC/MOUNTING/LAGERUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2911-200	1	ELEMENT VALECKOVÝ / ROLLER ELEMENT / ROLLENELEMENT		4
2	201.2R407-030	0	VALEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
3	201.2R411-230	①	ZAVORA OPTICKÁ / OPTICAL GATE / LICHTSCHRANKE		1
4	30.2R411-001	2	PODAVAC / FEEDER / VORSCHUB		1
5	30.2R411-002	1	RAMENO PODAVACE / FEEDER SHOULDER / VORSCHUBARM		1
6	30.2R411-003	0	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE		1
7	30.6007-107	0	PRÍLOŽKA / STRAP / LASCHE	P 12x80	1
8	30.K511-110	②	DRŽAK / HOLDER / HALTER	HR 50x50	1
9	30.R411-035	2	LISTA CELISTI / JAW TRIM / BACKENLEISTE	HR 30x10	4
10	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	12
11	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	8
12	90.001.25.063	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x60	4
13	90.001.55.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	10
14	90.002.20.013	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x25	12
15	90.011.27.005	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x12	12
16	90.012.50.001	②	SROUB VALCOVÝ / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M3x16	2
17	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	12
18	91.270.011	②	SNIMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	LM1X2-026-08.0-1-00	1
19	95.800.021	0	SEGR HRDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	2
20	99.200.550	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA30T	1
21	99.201.046	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA25E SS FO N	3
22	99.201.058	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA30E SS FO N	2
1. ZRUSENA ZAVORA 201.2R411-130 A NAHRAZENA ZAVOROU 201.2R411-230. 246/ZM347 20.08.2019 BENDA					
2. PR. DRŽAK 30.K511-110, SNIMAC 91.270.011, SROUB 90.012.50.001 354/ZM500 19.12.2019 KOŠYK					

1. ZRUSENA ZAVORA 201.2R411-130 A NAHRÁZENA ZAVOROU 201.2R411-230. 246/ZM347 20.08.2019 BENDA
2. PR.DRŽAK 30.K511-110, SNIMAC 91.270.011, SROUB 90.012.50.001. 354/ZM500 19.12.2019 KOSYK

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version); Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position);
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.53. Element válečkový / Roller element / Rollenelement



NAZEV SESTAVY ELEMENT VALEČKOVÝ	ČÍSLO SESTAVY 201.2911-200	STROJ STG 330GA
Konstruoval: ***		
Datum: 22. 11. 2017		
Měřítko: 3:2		

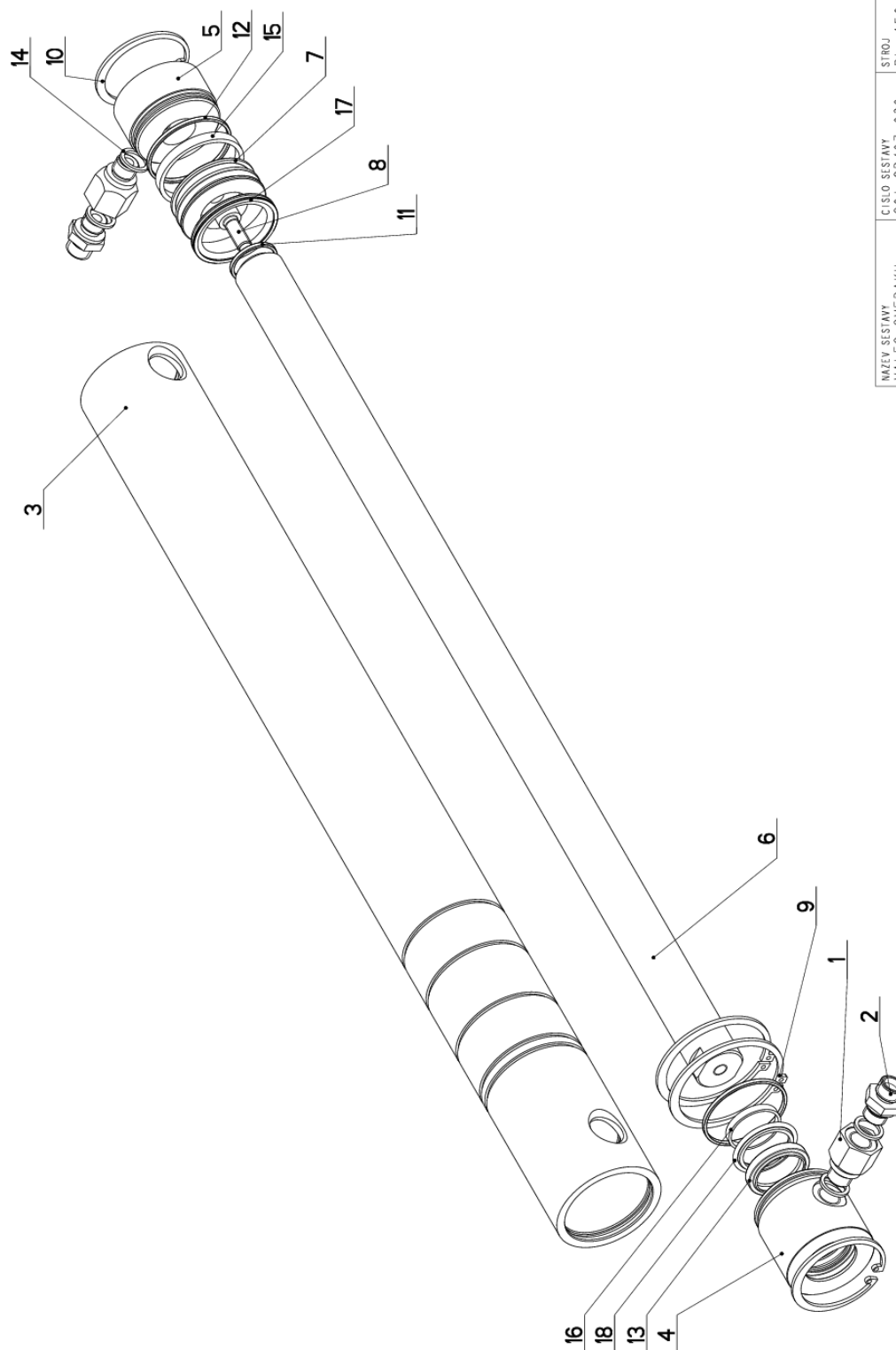
10.54. Kusovník / Piece list / Stückliste -
Element válečkový / Roller element / Rollenelement

Číslo Sestavy 201.2911-200		Ver. 0	Název sestavy ELEMENT VALEČKOVÝ/ROLLER ELEMENT/ROLLENELEMENT		
Poz.	Objednávací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2911-201	1	LISTA / TRIM / LEISTE	HR 20x20	1
2	30.2911-202	1	LISTA / TRIM / LEISTE	HR 20x20	1
3	30.2911-206	0	PRÍLOŽKA / STRAP / LASCHE	P 2x20	2
4	30.4311-203	0	VALEČEK / CYLINDER / ROLLE	d 10	8
5	31.2911-204	0	STERAC / WIPER / ABSTREIFER	PLAST. VYLISEK	2
6	89.2911-205	0	PRACHOVKA / DUST COVER / STAUBSCHUTZ	VYLISEK PLAST	2
7	90.001.25.008	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	2

I.ZM.CISLOVANI 31.2911-205 NA 89.2911-205; 129/ZM233 4.7.2018 SCERBA

Číslo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednávací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.55. Válec svěráku / Vice cylinder / Schraubstockzylinder



NAZEV SESTAVY VALEC SVĚRAKU	ČÍSLO SESTAVY 201.2R407-030	STROJ PL 450
Konstruoval: FABER		
Datum: 01. 06. 2016		
Měřítko: 1:2		

10.56. Kusovník / Piece list / Stückliste -
Válec svěráku / Vice cylinder / Schraubstockzylinder

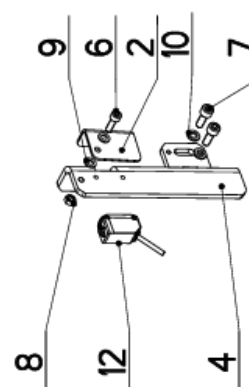
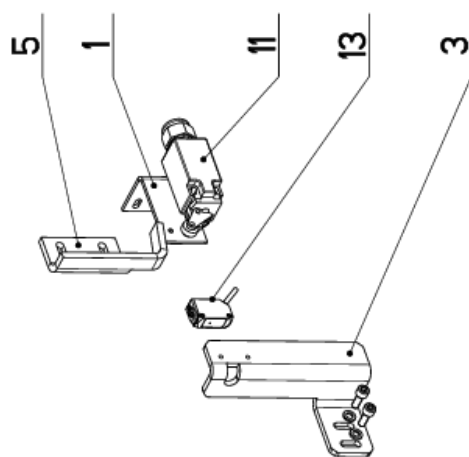
Císlo Sestavy 201.2R407-030		Ver. 0	Název sestavy VÁLEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1807-005	3	SROUBENÍ / BOLLING / VERSCHRAUBUNG	TYC BHR 22	2
2	30.2807-109	0	SROUBENÍ PRÍME / DIRECT BOLLING / GERADE VERSCHRAUBUNG		2
3	30.2R407-033	0	VÁLEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	TR 82/50	1
4	30.3407-012	2	VÍKO / COVER / DECKEL	d 55	1
5	30.3407-111	0	VÍKO / COVER / DECKEL	d 55	1
6	30.3R407-034	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1
7	30.3307-035	0	PIST / PISTON / KOLBEN	d 55	1
8	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCHEIBE	8x20	1
9	95.800.021	0	SEČR HŘÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POLISTNY KROUZEK 82	2
10	95.801.009	0	SEČR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POLISTNY KROUZEK 52	2
11	95.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
12	95.002.019	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	46x2 NBR 70SH	2
13	95.061.009	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	W02200280 2201	1
14	95.082.002	0	TESNĚNÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	4
15	95.084.001	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GH4500500-T47	1
16	95.084.006	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GH4300280-T47	1
17	95.900.001	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PM4200500-220N	1
18	95.900.021	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-48N	1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position; Objednací číslo/Purchase order number/Basis/Lagermenge; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Versión; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.57. Závora optická / Optical gate / Lichtschränke

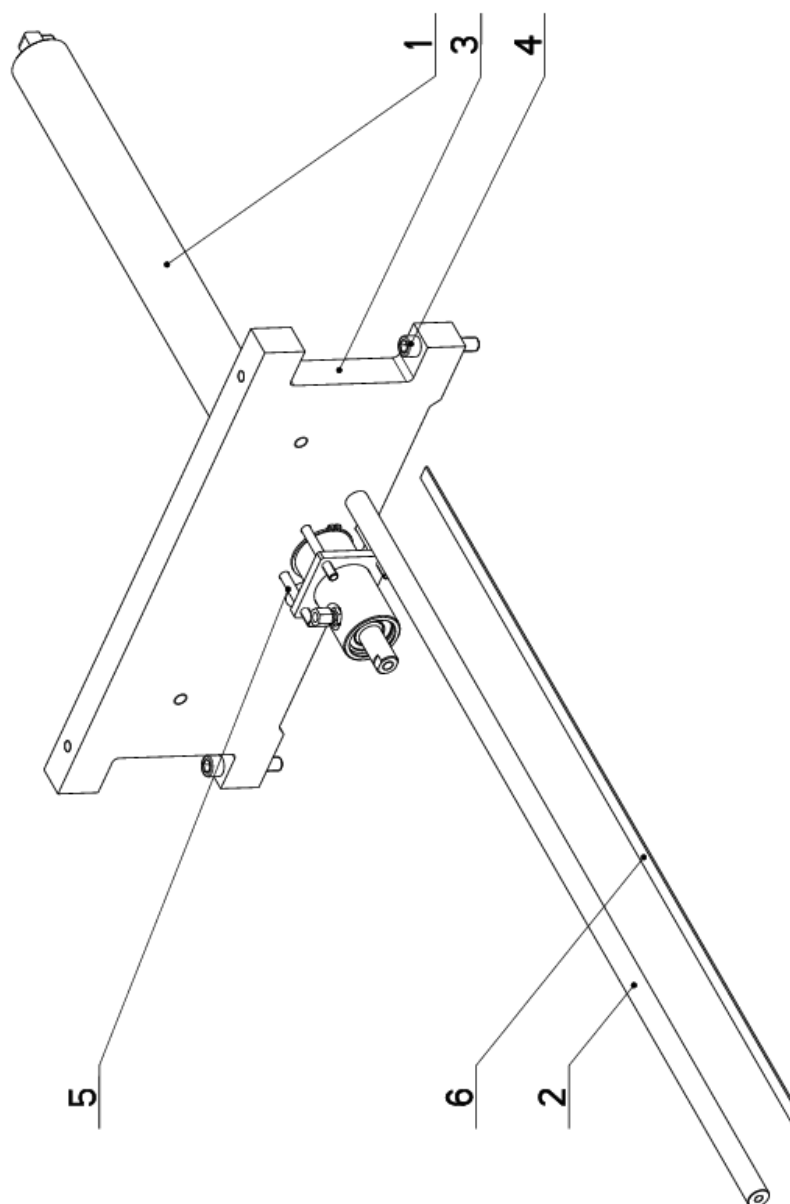
Císlo Sestavy 201.2R411-230		Ver. 0	Název sestavy ZÁVORA OPTICKÁ/OPTICAL GATE/LICHTSCHRANKE		Rozměr	Ks
Poz.	Objednací číslo	Ver.	Název položky			
1	30.2R311-031	0	DRŽÁK / HOLDER / HALTER		P 3x40	1
2	30.2R311-134	0	KRYT / HOLDER / HALTER		P 2x45	1
3	30.2R311-135	0	PLECH / HOLDER / HALTER		P 5x125	1
4	30.2R311-136	0	PLECH / HOLDER / HALTER		P 5x125	1
5	30.R311-033	0	DORAZ / HOLDER / HALTER		P 6x56	1
6	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE		M5X16	1
7	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE		M6X16	4
8	90.100.55.003	0	MATICE / NUT / MUTTER		MATICE - M5	1
9	90.150.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE		PODLOŽKA 5,3	2
10	90.163.00.012	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE		NORD-LOCK	4
11	91.173.010	0	SPINAC KONČ. S KLADK. / END SWITCH WITH PULLEY / ENDSCHALTER MIT ROLLE		PZ-FR605-M2	1
12	91.401.030	0	SNIMAC OPTICKÝ / OPTICAL SENSOR / OPTISCHER SENSOR		06E701	1
13	91.401.031	0	SNIMAC OPTICKÝ / OPTICAL SENSOR / OPTISCHER SENSOR		06S701	1



Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

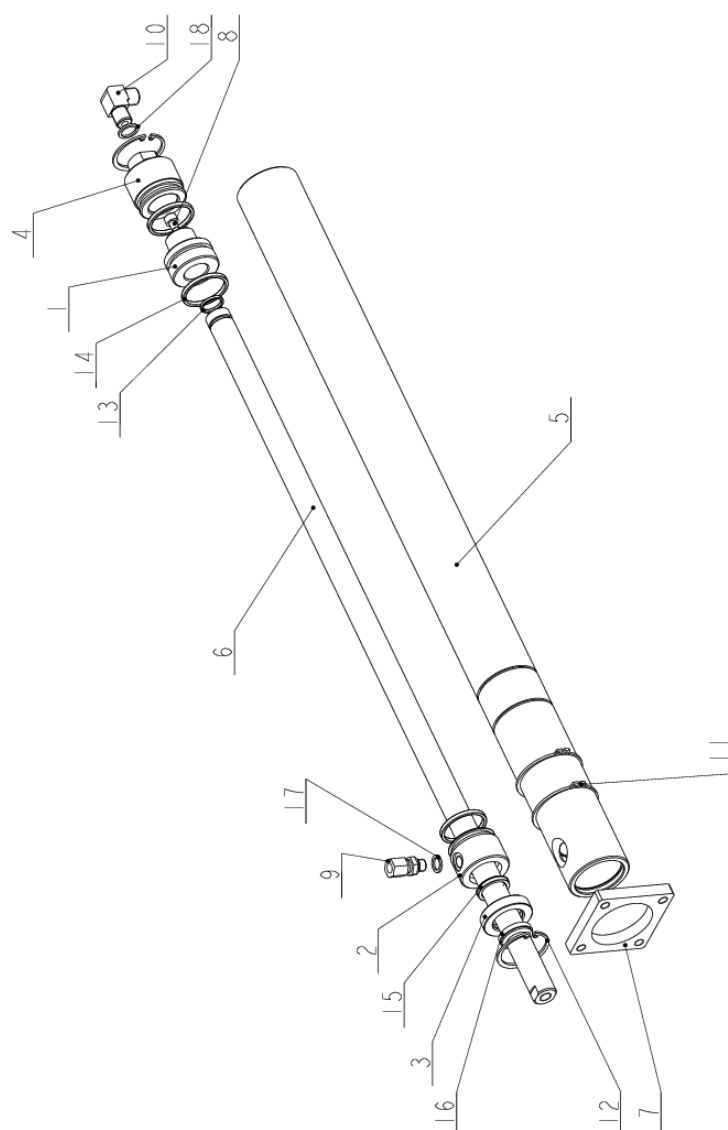
10.58. Trať / Track / Bahn

Císlo Sestavy 201.2R411-100		Ver. 0	Název sestavy TRAT/TRACK/BAHN	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	201.2R311-050	0	VÁLEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	1
2	30.2R311-103	0	JEDNOTKA ODMĚROVÁNÍ / MEASURING UNIT / MESSEINHEIT	1
3	30.2R411-102	0	DESKA / BOARD / PLATTE	1
4	90.001.25.063	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	2
5	90.001.25.078	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	4
6	91.271.002	0	PÁSKA MAGNETICKÁ / MAGNETIC TAPE / MAGNETBAND	1



Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.59. Válec svěráku / Vice cylinder / Schraubstockzylinder



NAZEV SESTAVY VALEC SVĚRAKU	CÍSLO SESTAVY 201.2R311-050	STROJ PL350
Konstruoval: FABER		
Datum: 14. 04. 2016		
Měřítko: 3:10		

10.60. Kusovník / Piece list / Stückliste -
Válec svěráku / Vice cylinder / Schraubstockzylinder

Císlo Sestavy 201.2R311-050		Ver. 0	Název sestavy VÁLEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2107-001	0	PIST / PISTON / KOLBEN	d 45	1
2	30.2107-002	0	PŘÍRUBA / FLANGE / FLANSCH	TYC 45	1
3	30.2107-003	0	VÍKO / COVER / DECKEL	d 45	1
4	30.2107-004	0	VÍKO / COVER / DECKEL	d45	1
5	30.20311-051	0	VÁLEC PODÁVACE / FEEDER CYLINDER / VORSCHUBWALZE	TRUBKA 52/40	1
6	30.20311-052	0	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 20	1
7	30.0311-109	0	PŘÍLOŽKA / STRAP / LASCH	HR 70x10	1
8	90.001.25.019	0	SHROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	1
9	92.002.102	0	SHROUBENÍ / BOLTING / VERSCHRAUBUNG	S-GEV-BLLH	1
10	92.004.001		SHROUBENÍ UHLIVĚ / ANGLE BOLTING / WINKELVERSCHRAUBUNG	37701	1
11	95.800.019	0	SEGR HŘÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 52	2
12	95.801.006	0	SEGR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 42	2
13	96.002.007	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	16x2 NBR 70SH	1
14	96.002.017	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	34x3 NBR 70SH	3
15	96.041.002	0	TESNĚNÍ / SEALING / DICHTUNG	20x28x4	1
16	96.040.002	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRAČI 20	1
17	96.002.001	0	KROUZEK TESNÍCÍ / SEAL RING / DICHTUNGSRING	107/4x11.5 CU	1
18	96.002.002	0	TESNĚNÍ / SEAL RING / DICHTUNGSRING	137/7x11.5 CU	1

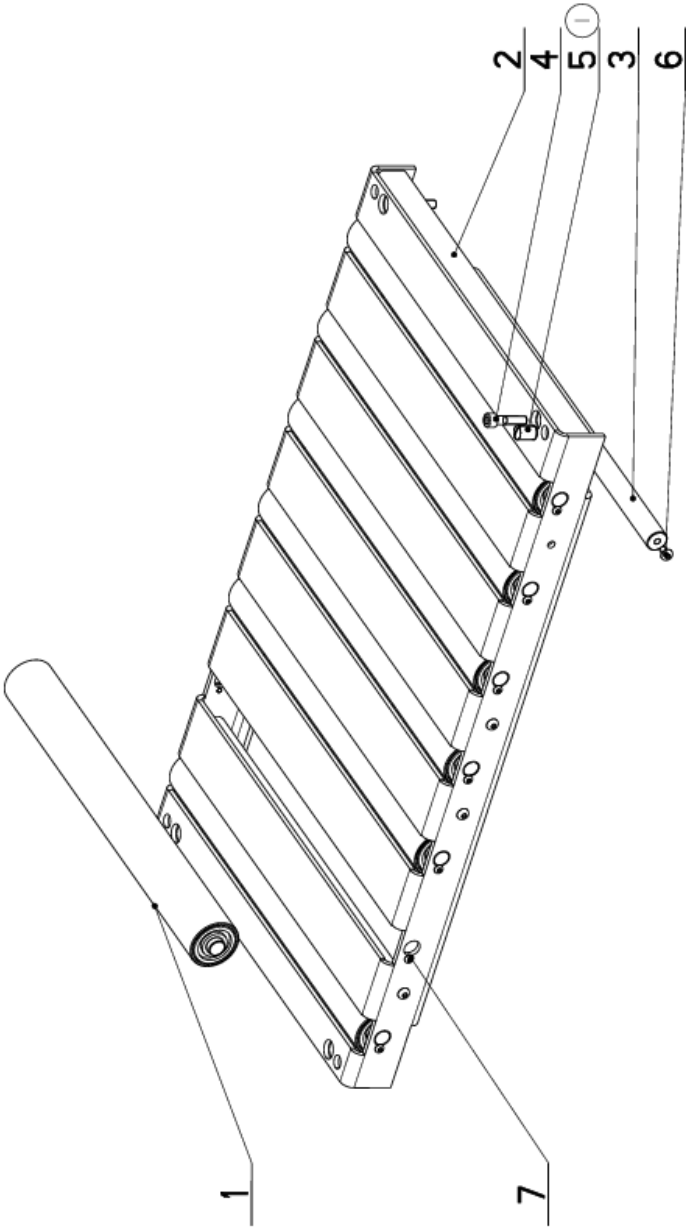
Císlo Sestavy/Number of assembly/Nummer der Baugruppe: Verze (Ver./Version/Version: Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position: Objednací číslo/Purchase order number/Basis/Launmer: Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Versión; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.61. Trať / Track / Bahn

Cislo Sestavy 201.2R412-000		Ver. I	Název sestavy TRAT/TRACK/BAHN			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	201.2R412-010	0	VALEČEK / CYLINDER / ROLLE		7	
2	30.2R412-001	0	TRAT / TRACK / BAHN		1	
3	30.2R412-007	0	TYC / POLE / STANGE	D 25	4	
4	90.001.25-050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x40	4	
5	90.002.2D.028	(1)	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x1,5x25	4	
6	90.013.27.011		SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M8x12	8	
7	90.013.27.024		SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M6x6	14	

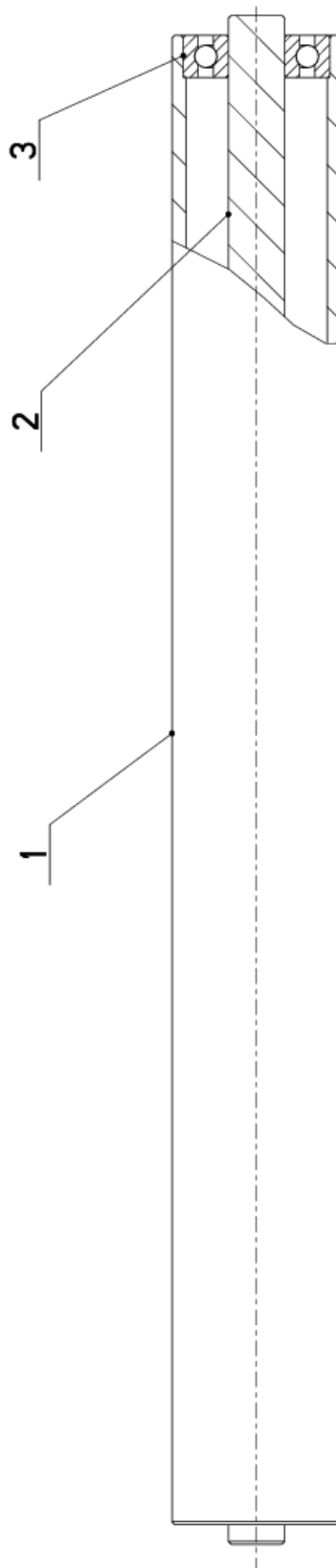
I. ZRUS. 90.002.2D.040 A NAHR. 90.002.2D.028; 255/ZM426 23.11.2018 SCERBA



Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

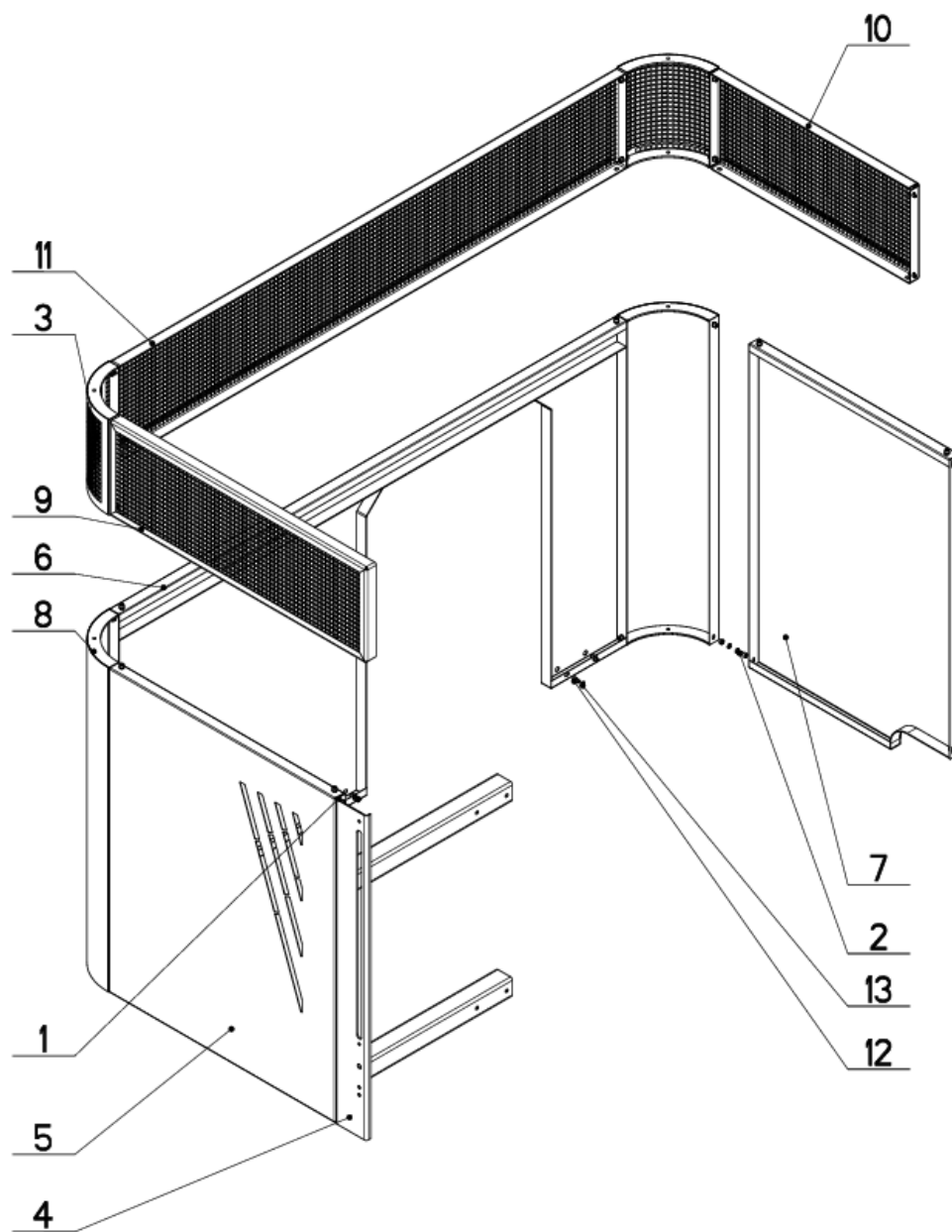
10.62. Váleček / Rolle / Cylinder

Císlo Sestavy 201.2R412-010		Ver. 0	Název sestavy VÁLEČEK/CYLINDER/ROLLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	30.2R412-011	0	TRUBKA / TUBE / ROHR	TR 60x5	1
2	30.2R412-012	0	ČEP / LUG / BOLZEN	d 20	1
3	95.001.024	0	LOŽISKO / BEARING / LAGER	6304 2RSA	2



Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.63. Kryty / Covers / Abdeckungen



NAZEV SESTAVY KRYTY	CÍSLO SESTAVY 201.2R416-000	STROJ PL450
	Konstruoval: FABER	
	Datum: 13. 04.2018	
	Meritko: 2:25	

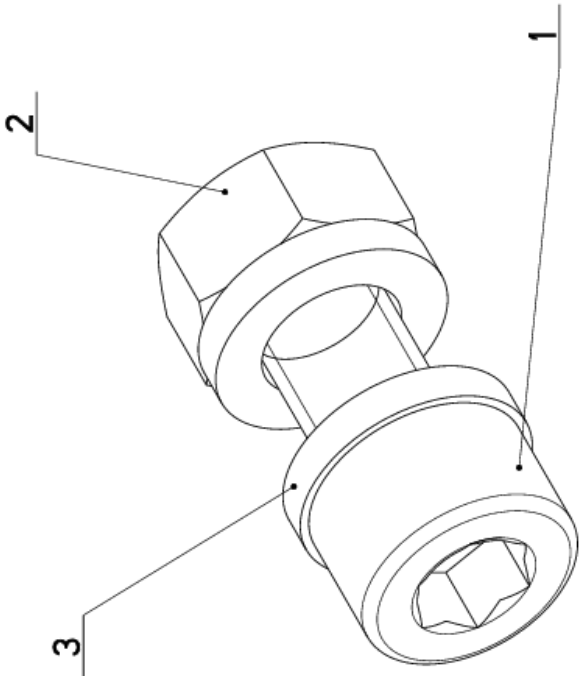
10.64. Kusovník / Piece list / Stückliste -
Kryty / Covers / Abdeckungen

Číslo Sestavy 201.2R416-000		Ver. 0	Název sestavy KRYTY/COVERS/ABDECKUNGEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2R316-010	0	SPOJKA / JOINT / KUPPLUNG		18
2	201.2R316-011	0	SPOJKA / JOINT / KUPPLUNG		8
3	30.2R316-007	0	SLOUP / POLE / SAULE		2
4	30.2R414-031	0	DRŽAK / HOLDER / HALTER		1
5	30.2R416-001	0	BOCNICE / SIDE PLATE / SEITENTEIL	Plx74l	1
6	30.2R416-003	0	BOCNICE / SIDE PLATE / SEITENTEIL		1
7	30.2R416-004	0	BOCNICE / SIDE PLATE / SEITENTEIL		1
8	30.2R416-005	0	SLOUP / POLE / SAULE		2
9	30.2R416-006	0	KRYT / COVER / ABDECKUNG		1
10	30.2R416-009	0	KRYT / COVER / ABDECKUNG		1
11	30.2R416-108	0	KRYT / COVER / ABDECKUNG		1
12	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	6
13	90.163.00.012	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE	NORD-LOCK	6

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.65. Spojka /Joint / Kupplung

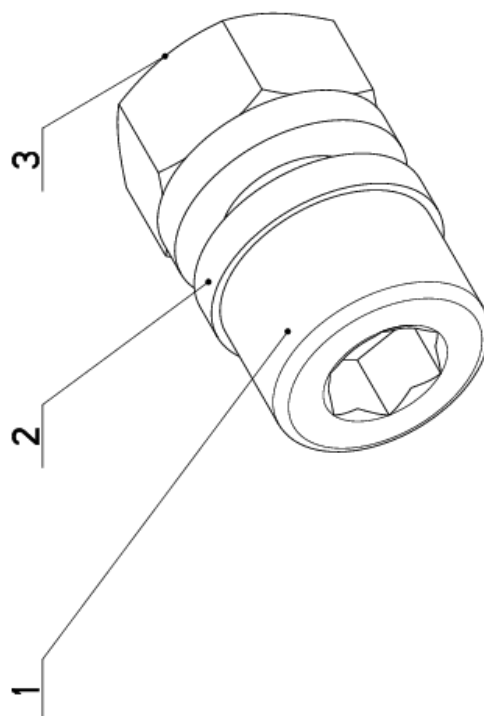
Cislo Sestavy 201.2R316-010		Ver. 0	Nazev sestavy SPOJKA / JOINT / KUPPLUNG		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozměr	Ks
1	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X16	1
2	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE - M6	1
3	90.163.00.012	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	NORD-LOCK	2



Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

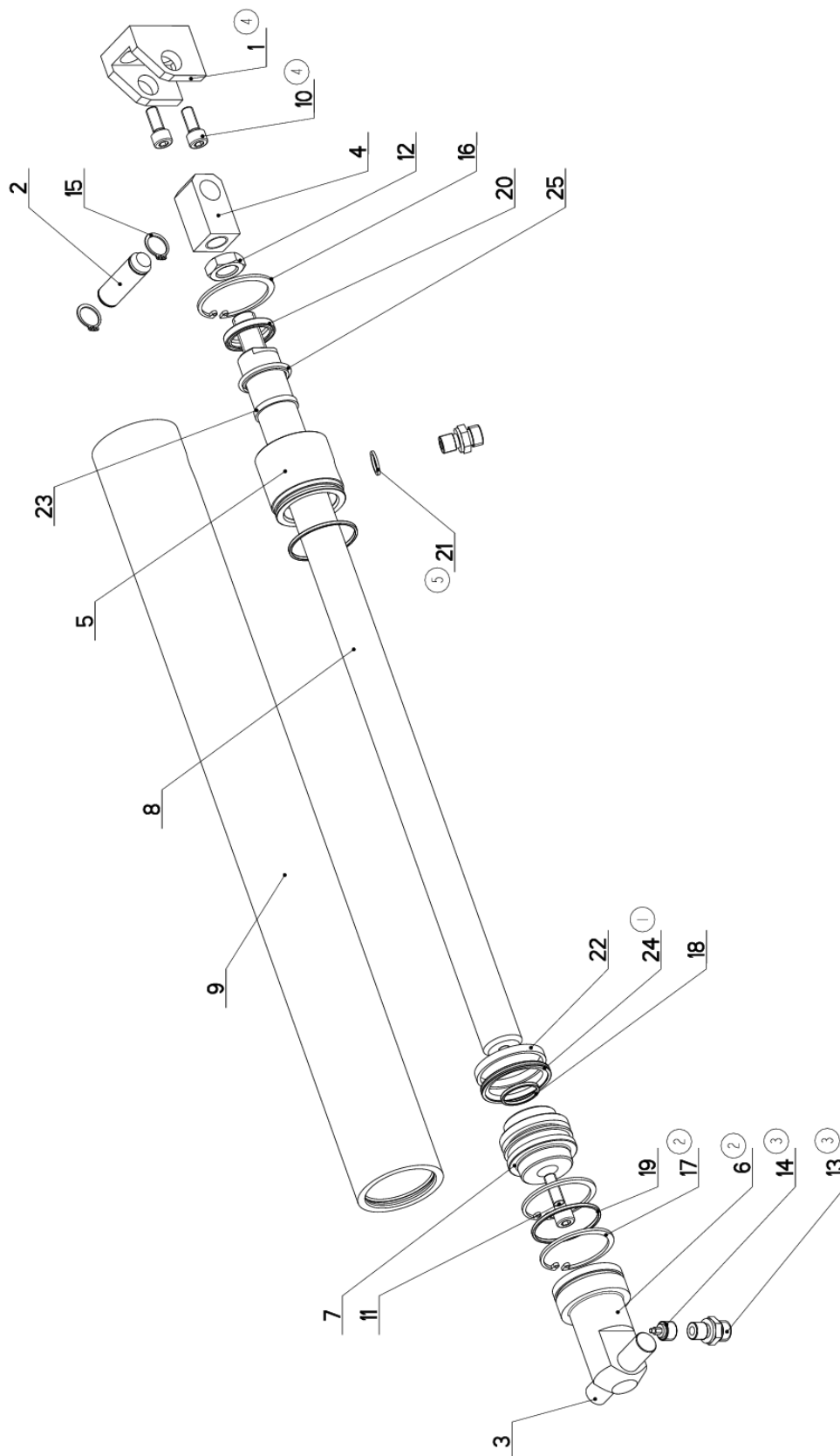
10.66. Spojka /Joint / Kupplung

Císlo Sestavy 201.2R316-011		Ver. 0	Nazev sestavy SPOJKA / JOINT / KUPPLUNG		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer	Ks
1	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X12	1
2	90.163.00.012	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	NORD-LOCK	2
3	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE M6	1



Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

10.67. Válec zvedací / Lifting cylinder / Hebezyylinder



NAZEV SESTAVY VALEC ZVEDACI	CÍSLO SESTAVY 201.Y407-010	STROJ IN460GH
Konstruoval: MUSIL		
Datum: 10. 04. 2014		
Měřítko: 2:5		

10.68. Kusovník / Piece list / Stückliste -
Válec zvedací / Lifting cylinder / Hebezyylinder

Císlo Sestavy 201.Y407-010		Ver. 5	Název sestavy VALEC ZVEDACÍ/LIFTING CYLINDER/HEBEZYLINDER		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0807-008 (4)	3	DRŽAK / HOLDER / HALTER	HR 40x40	1
2	30.0807-009	2	CEP / LUG / BOLZEN	d 16h9	1
3	30.8307-205	0	CEP / LUG / BOLZEN	d 16h9	1
4	30.8607-001	1	DRŽAK / HOLDER / HALTER	HR 25x25	1
5	30.C407-012	2	VÍKO / COVER / DECKEL	d 55	1
6	30.Y307-003 (2)	3	VÍKO / COVER / DECKEL	d 55	1
7	30.Y307-012 (2)	1	PIST / PISTON / KOLBEN	d 55	1
8	30.Y407-002	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1
9	30.Y407-011	4	VALEC / ROLLER / ZYLINDER	TR 62/50H8	1
10	90.001.25.032 (4)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	2
11	90.001.55.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X30	1
12	90.101.55.003	0	MATICE / NUT / MUTTER	MATICE M16	1
13	92.002.001 (2)	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	2
14	92.151.008 (3)	0	VENTIL POJISTNÝ / SAFETY VALVE / SICHERUNGSVENTIL	VPN-H 1/4"	1
15	95.800.007	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 16	2
16	95.801.009	0	SEGR DIRA. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 52	1
17	95.801.018 (2)	0	KROUZEK POJIST.VNITR. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 50	2
18	96.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
19	96.002.019	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	46x2 NBR 70SH	2
20	96.061.009	0	KROUZEK STRACÍ / SCRAPER RING / ABSTREIFRING	WD2200280 Z201	1
21	96.082.002 (5)	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	1
22	96.084.001	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GP6500500-T47	1
23	96.084.006	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GR4300280-T47	1
24	96.900.013 (1)	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PT0200500	1
25	96.900.021	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-46N	1

1.ZRUSENO TESNENÍ 96.900.001 A NAHRAZENO 96.900.013. 336/ZM006 10.1.2011 SLEZACKOVA
2.ZRUS.REDUKCE 30.9107-509,SROUBENÍ 30.30.1807-005,ZRUS.VÍKO 30.Y307-005 A NAHR.30.Y307-003,ZRUS.SROUBENÍ 92.003.001 A NAHR.92.002.001,ZRUS.PIST 30.LM07-504 A NAHR.30.Y307-012,ZRUS.1xPOJ.KROUZEK 95.801.009 A NAHR.95.801.018, PRID.1xKROUZEK 96.082.002. 026/ZM027 18.2.2011 SLEZACKOVA
3.VENTIL 92.151.001 PRECISLOVAN NA 92.151.008. 222/ZM212 30.7.2013 SLEZACKOVA
4.PRID.DRŽAK 30.0807-008,2xSROUB M8x20(90.001.25.032). 062/ZM50 10.4.2014 SLEZACKOVA
5.ZRUS. 2xTESNENÍ 96.082.002. 290/ZM003 8.1.2019 SZABARI

Císlo Sestavy/Number of assembly/Nummer der Baugruppe: Verze (Ver./j)/Version/Version: Název sestavy/Assembly title/Name der Baugruppe: Pozice (Poz./j)/Position/Position: Objednáací číslo/Order number/Bestellnummer: Název položky/Volume title/Name der Position: Rozměr/Size/Abmessung

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Versión; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednávací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

