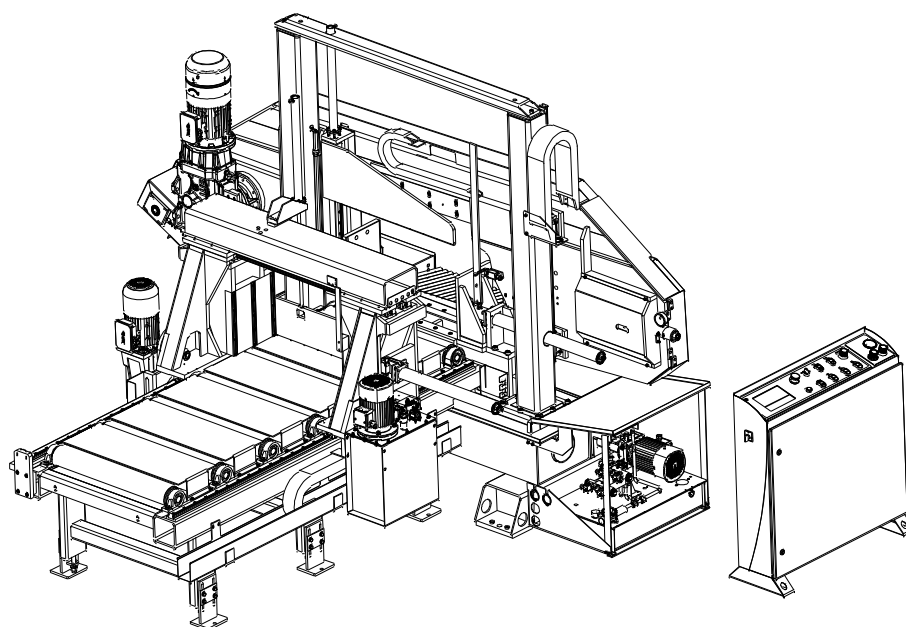




Extend 700.520 ANC LS-2500

Operating instructions

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

Service and information

Your BOMAR dealer:

Direct BOMAR contact:

BOMAR spol. s r.o.
Těžební 1236/1
62700 Brno
Czech Republic, EU

telefon: +420 – 533 426 100
fax: +420 – 533 426 109
e-mail: info@bomar.cz
www: <http://www.bomar.cz>

We are available:

Mondays to Fridays

7⁰⁰ – 16⁰⁰

Version:

1.01 / Nov. 2017
rev. 1

BOMAR, spol. s r.o. © – Subject to modifications and amendments.

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 : Extend 700.520 ANC

Serial number: 011-1000

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, feeder (variable lengths 1000 – 6000m)
Pneumatic NO ☒ YES ☐ Hydraulic NO ☐ YES ☐ Control system NO ☐ YES ☒

Technical data: Cutting rate 15-90 m.min-1
Cutting angle 0°
Total dimensions in mm (w×h×l) 18000x3855x22500
Total power requirement 15 kW
Weight 6000kg

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 13898+A1:2009	ČSN EN ISO 13857:2008
ČSN EN ISO 4413:2011		ČSN EN 60204 -1 ed.2+A1:2009
ČSN EN 55011 ed.3+A1:2011	ČSN EN 61000-6-2 ed.3:2006	ČSN EN 61000-6-4 ed.2+A1:2011

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

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

The declaration of conformity was carried out in the cooperation with the ³⁾ TÜV SÜD Czech s.r.o, Novodvorská 994, 142 21 Prague 4 – Czech Republic, Identification number: 63987121 - Inspection body no. 4002.

The inspection certificate no 08.188.741

was issued

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



Brno 1.11.2017

Point of issue, datum

Alfred Pichlmann, Managing Director

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

3) The authorized or accredited body co-operating on the conformity judging

!
•

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, reparation, stocking or removal!

Attention!

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

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

1.1. Machine determination

The band saw **Extend 700.520 ANC LS-2500** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **without cutting angle**.

Combustible materials are excepted 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!**

Attention!

Consider the safety signs on the machine. Do not remove or damage them!

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

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!

cause serious injuries.

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.

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!

Attention!

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

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!

1.3. Safety notes for machine operator

Machine can be operated only by one person. Machine operator is responsible for presence of other persons by the machine.

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.

- Do not hold the material for clamping to the vice and for cutting!

Attention!

Do not connect the machine to electricity if the covers are removed. Do not touch the electrical equipment.

- 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!

Attention!

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

1.4. Safety notes for the servicing and repairs

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

Only qualified person can do the servicing and repairs. For parts changing, use only parts, which are identical with the originals. Otherwise, there is possibility of health hazard. Use only recommended type of the hydraulic oils and oils and lubricants!

Do not remove or do not lock the limit switches or safety equipments! Any use of the saw, accessories or machine parts other than that intended by the BOMAR, spol. s r.o. company is not permitted. The guarantee on this product will be afterward lost and BOMAR, spol. s r.o. takes no responsibility for caused damages.

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

Compliance with the 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.

1.6. Safety notes for Swarf conveyor (optional accessories)

Swarf conveyor is an accessories the machine pays for standing with this device



When the machine is switched swarf conveyor only operate using the control panel (see Chapter 3. Machine control)

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 switched off.

1.7. Safety notes for the cooling

Attention!

- *When handling cooling agents always wear hazardous fluid-proof gloves!*
- *Wear protective goggles!*
- *Cooling liquid can get in contact with your eyes and may cause permanent severe injuries*

1.7.1. 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.

1.8. Safety instructions for laser barriers

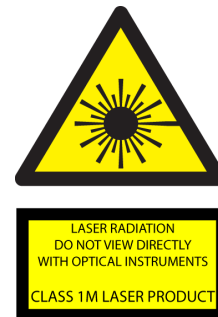
Machine for its function using laser sensors for control purposes.

Laser sensor for control purposes is located on the feeder.

In the vicinity of the laser ray source is installed security sticker.

It is forbidden to look to the laser ray!

The laser at this machine is 1M class.



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!

1.9. Safety machine accessories

Enhanced risk!

Do not come into or intervene in the cutting area.

Otherwise, there is possibility of heavy injury.

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. 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.

1.9.1. Total Stop

TOTAL STOP button is used for emergency switching – off the machine in case defect or health hazard. By pressing TOTAL STOP button all dangerous movements of the machine are interrupted.

If any damages or fault appears, immediately press TOTAL STOP button!!

Release the pressing button is possible by twisting of the upper part of the button.



The TOTAL STOP button is placed at the control panel of the machine.



1.9.2. Arm covers

Left cover – It covers tightening wheel. If the cover is opened during operation, the limit switch is opened and the band saw is stopped. The band saw is not possible start in set mode.

Right cover – It covers driving wheel. If the cover is opened during operation, the limit switch is opened and the band saw is stopped. The band saw is not possible start in set mode.



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

1.9.3. Band saw and brush covers

This cover protects the visible area of the saw band from left guiding cube to the frame.



These covers protect brush and the visible area of the saw band from right guiding cube to the frame – from the front and the back side.



Never switch on the saw band driver if theses covers are not installed!

1.9.4. Feeder cover

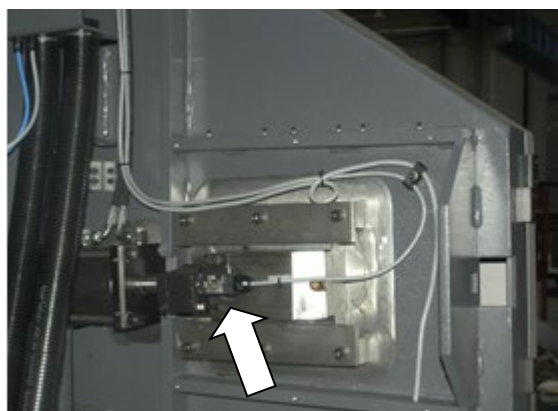
It covers tensioning pinion of feeder's.



1.9.5. Limit switch of the saw band stretching

The machine is equipped by the device for monitoring of saw band stretching.

If the saw band is broken, the limit switch stops the machine.



1.9.6. Protective fencing

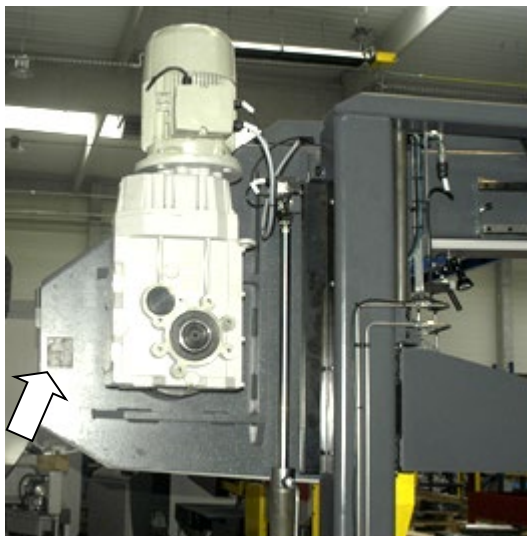
The protective fencing prevents persons from entry and intervention in the device working area during the working cycle of the machine.

Caution!

***The equipment operation can only be safe with the safety protective fencing according to EN ISO 13857!
Do not put the equipment in operation without the safety fencing according to EN ISO 13857!***

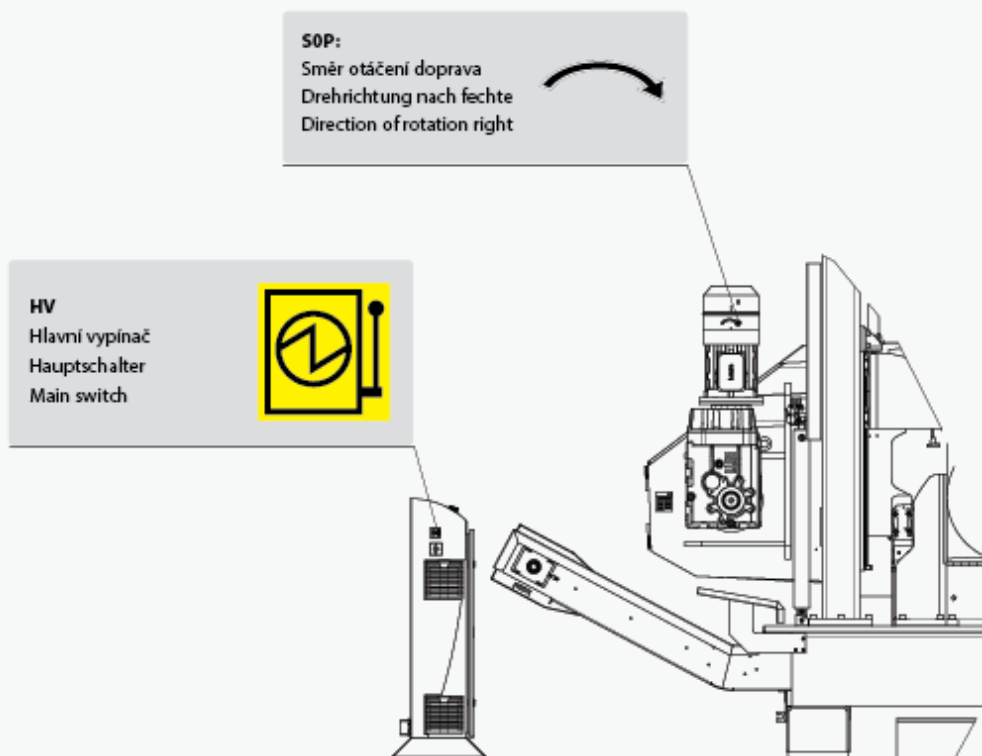
If the equipment is operated without the safety fencing according to EN ISO 13857, the submitted EC Declaration of Conformity expires!

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

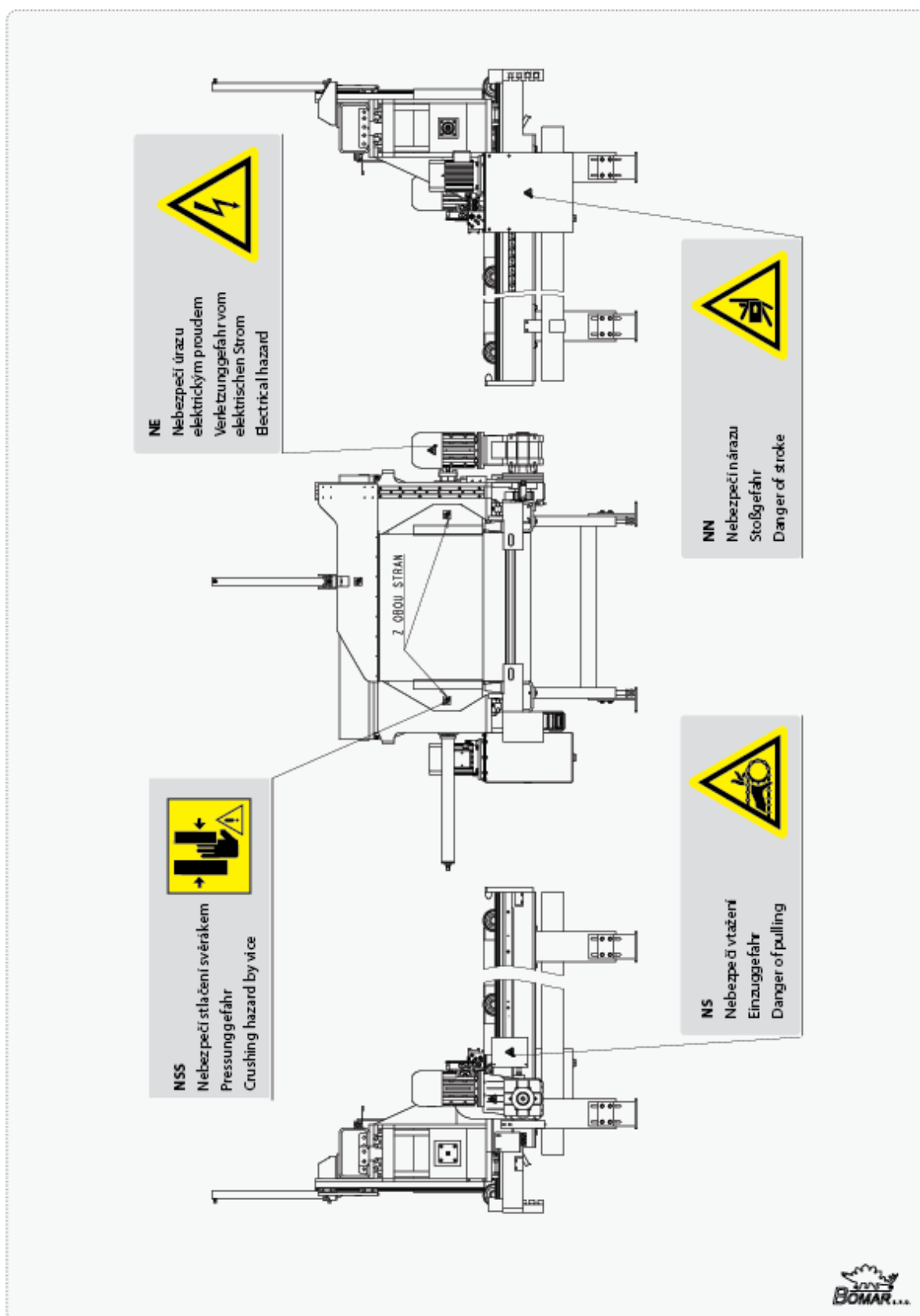


Machine label is placed on arm.

- 1.11. Umístění bezpečnostních značek /
Verteilung der Sicherheitszeichen /
Position of safety symbols
- 1.11.1. Band saw



1.11.2. Feeder



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

2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:	
• Hmotnost / Gewicht / Weight	6000 kg (4200 kg band saw, 1800 kg feeder)
Rozměry stroje / Maschinengröße / Machine size :	
• Délka / Länge / Length	18000 mm
• Šířka / Breite / Width	3855 mm
• Výška / Höhe / Height	2250 mm
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:	
• Napájení / Versorgungsspannung / Supply voltage	~3 x 400 V, 50Hz, TN-C-S
• Příkon / Gesamtschlusswert / Total Input	15 kW
• Max.jištění / Max. Vorschaltsicherung / Max. Fuse	32 A
• Krytí / Schutzart / Protection	IP 54
Akustický tlak / Schalldruckpegel / Acoustic pressure:	
• Extend 700.520 ANC LS-2500	$L_{Aeq} = 86$ dB
Pohon / Atrieb / Drive - Rameno/ Arm/ Arm:	
• Typ / Typ / Type	4P, B5, vel./size 112 (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
Pohon/ Atrieb / Drive - Podavač/ Vorschub/ Feeder:	
• Typ / Typ / Type	Převodovka s motorem/ Getriebe mit Motor/ Gear box with motor 4P, EBL C, KKL 2, brzda/brake 24V, vel./size 90 (GKR 06-2 MHAK 090C32; I=49,444)
• Napájení / Versorgungsspannung / Supply voltage	~3x400V, 50Hz
• Výkon / Leistung / Output	1,5 kW
• Jmenovité otáčky / Motorenndrehzahl / Nominal speed	1440 min ⁻¹
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment – Pila / Säge / Saw:	
• Typ / Typ / Type	731-0507, 24556100
• Výkon / Leistung / Output	2,2 kW/6,5 MPa
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment – Podavač/ Vorschub/ Feeder::	
• Typ / Typ / Type	S001 685 1
• Výkon / Leistung / Output	0,75 kW/15 MPa
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:	
• Typ / Typ / Type	4-COA4-14HP1, 3/2V, 50Hz
• Výkon / Leistung / Output	0,120 kW
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	50 l

Rozměr pásu / Sägebanddimension / Band size:

6660×41×1,3 mm

Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:

15–90 m/min.

Maximální podávaná hmotnost / Maximalgewicht / Maximal loading weight:

5000 kg

Délka podání / Vorschublänge / Feeding length:

2500 mm

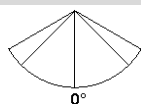
Zbytková délka - shorním přtlakem/ Restlänge – mit Obere Spannung / Rest lenght – with top clamping

220 mm

Minimální řezaná délka / Minimale Schnittlänge / Minimal cutted material size:

10 mm

Řezné rozsahy / Schnittbereiche / Cutting size:



0°



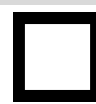
Ø520 mm



700×520 mm



700×520 mm



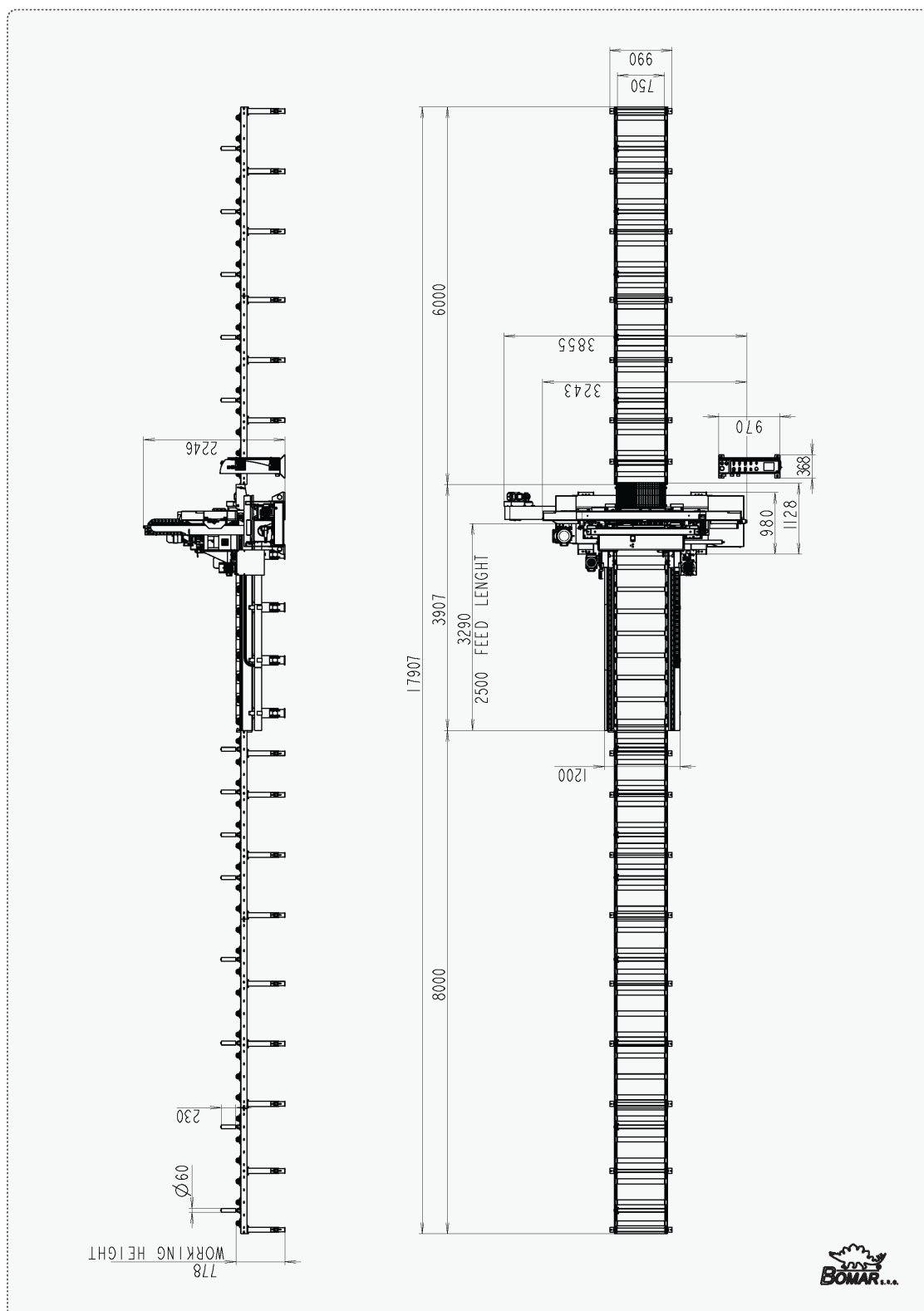
520×520 mm

Level of acoustic pressure:

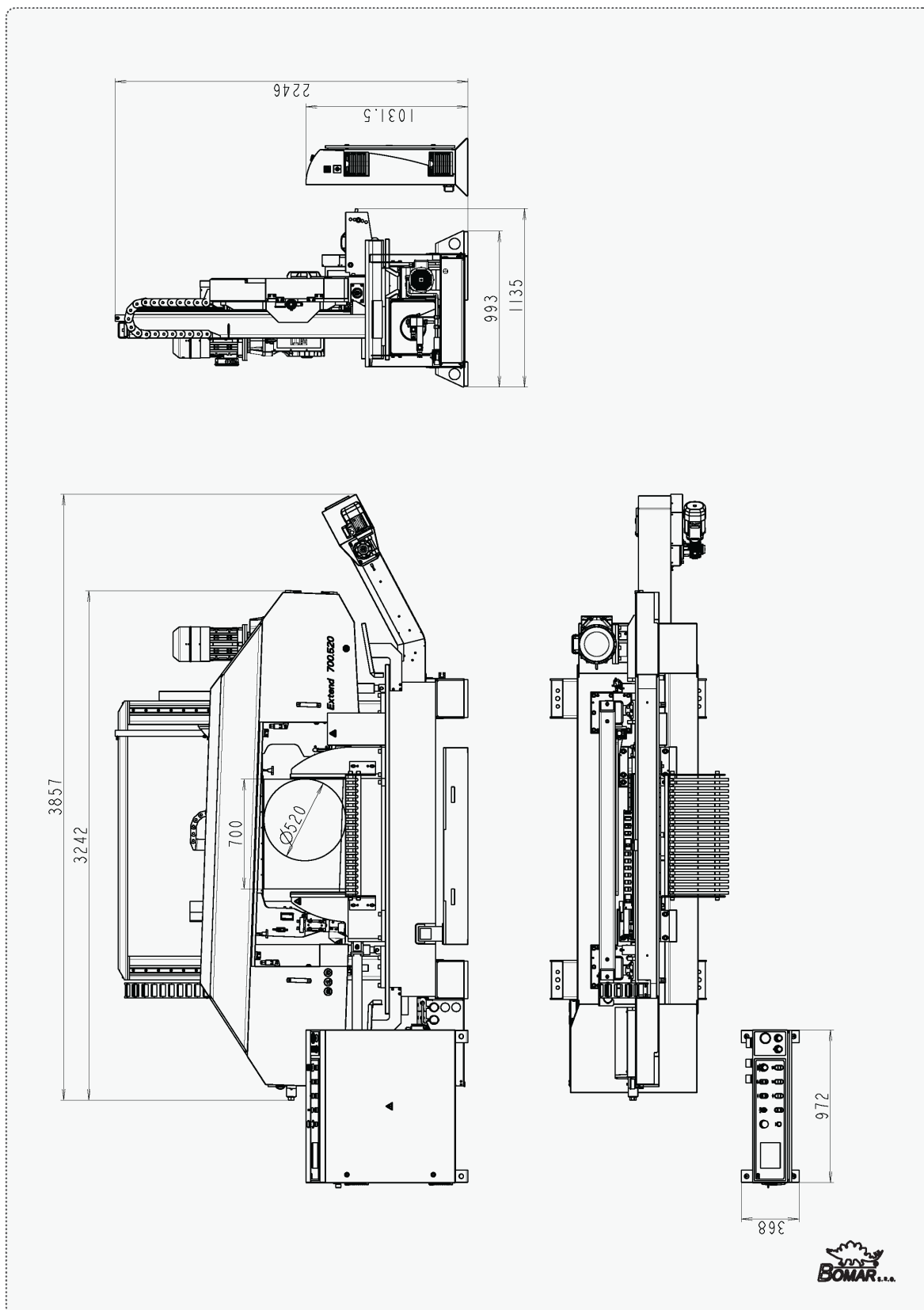
Equivalent level of acoustic pressure A (noise) at operator position are $L_{Aeqv}=76,3$ dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material,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

2.2. Rozměrové schéma /Aufstellzeichnung / Installation diagram

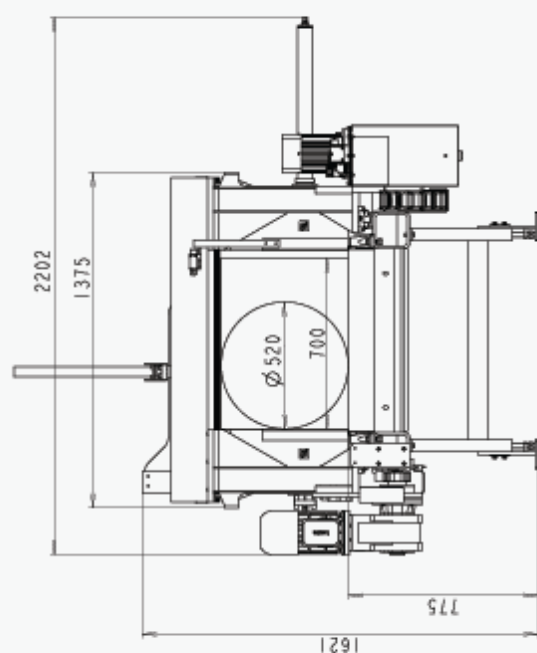
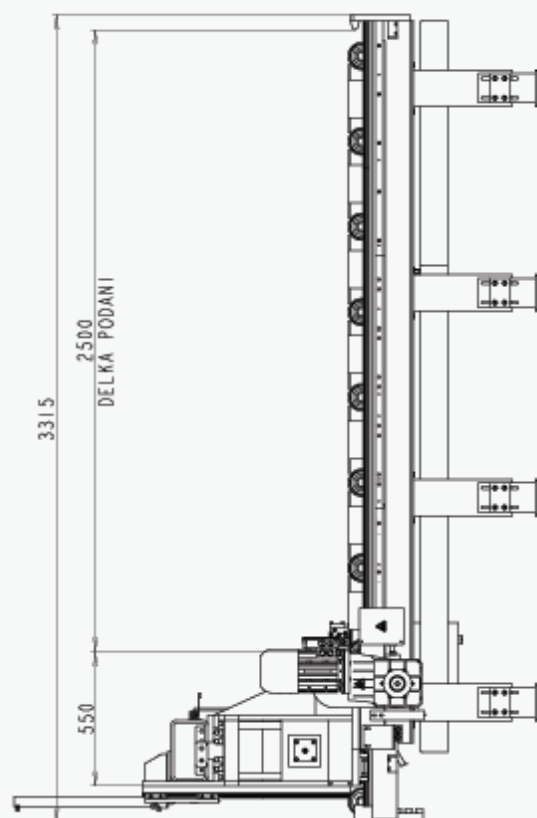
2.2.1. Cutting center



2.2.2. Band saw

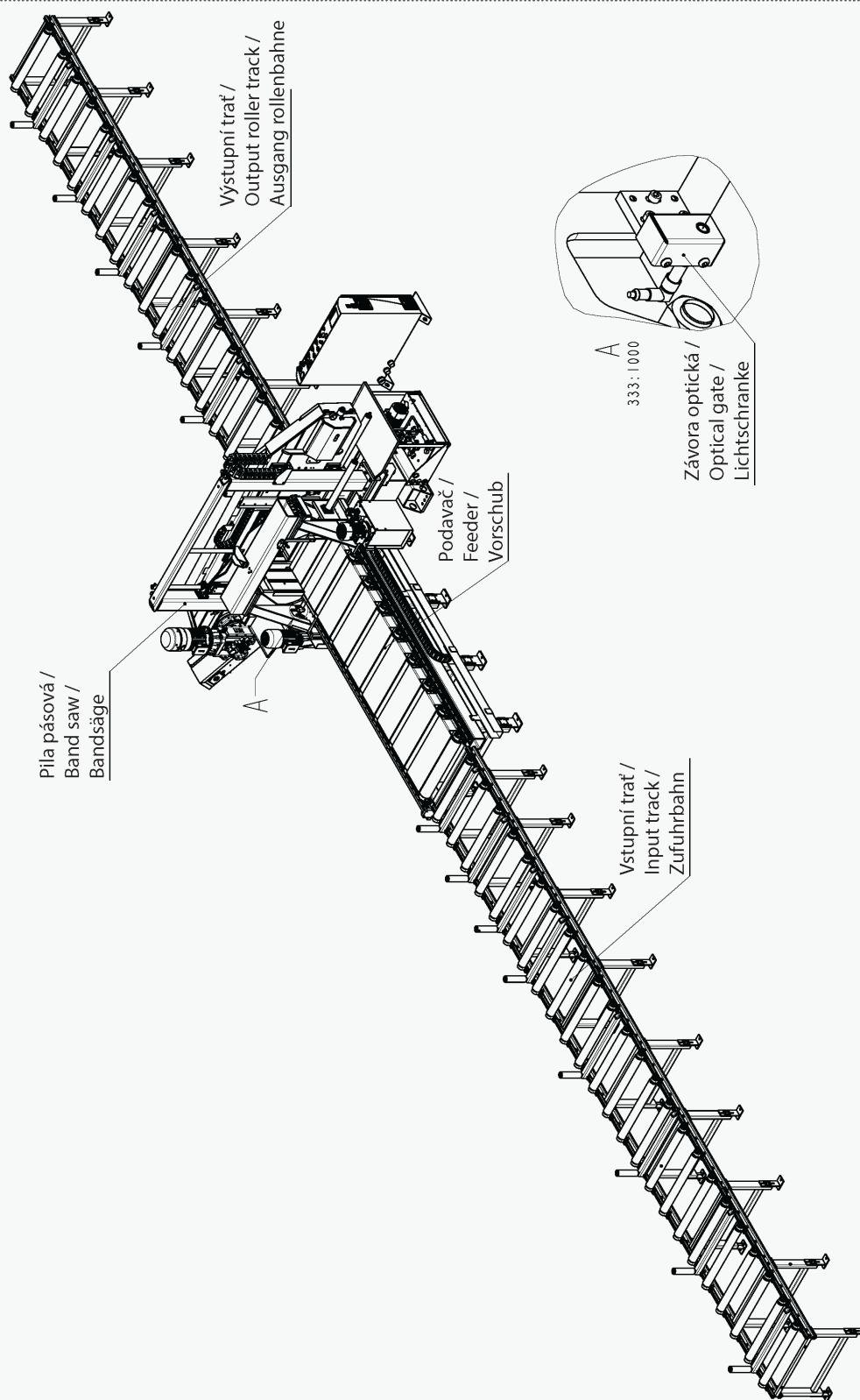


2.2.3. Feeder

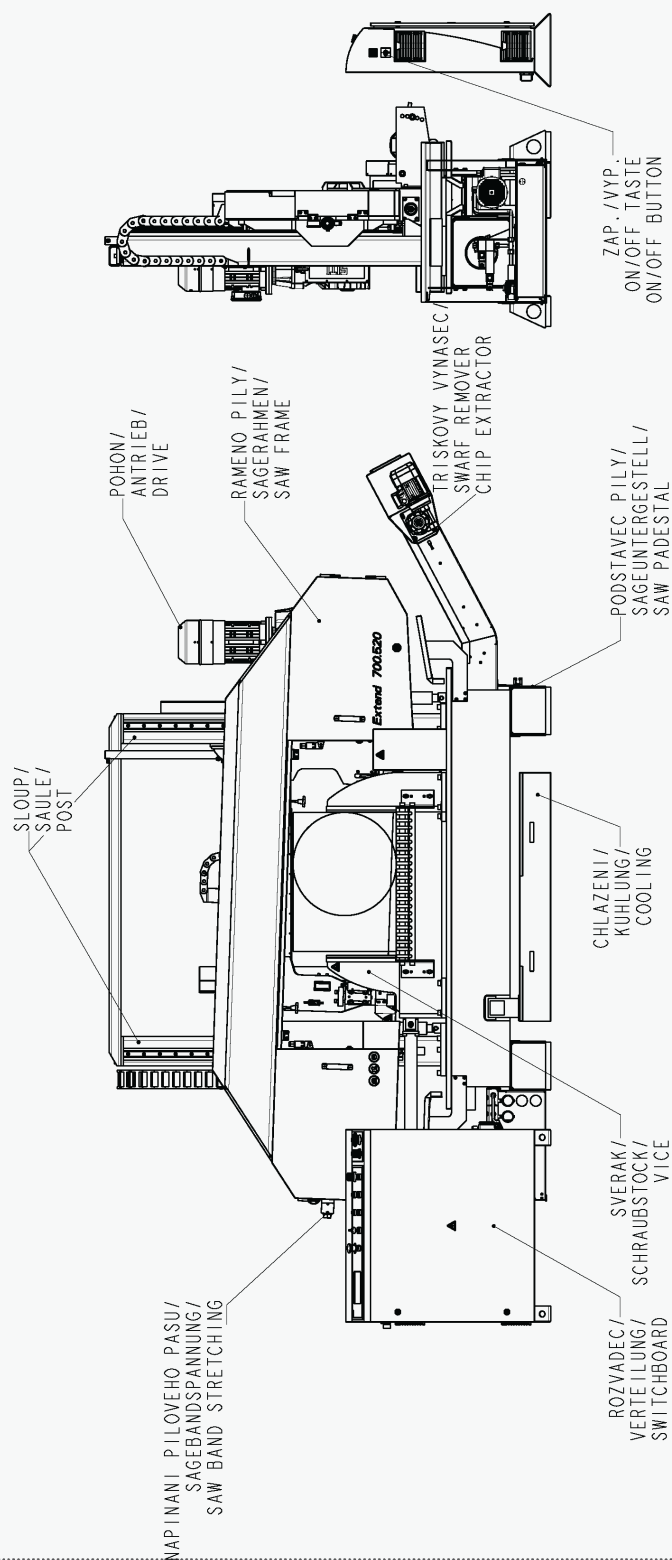


2.3. Popis /Beschreibung /Description

2.3.1. Cutting center



2.3.2. Band saw



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.

Fix the stickers stating the minimum approximate machine weight to at least five well visible places.

2.4.3. Transport and stocking

Handle the machine 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.

Stand of the machine is equipped with a holes with diameter of 70 mm. Insert into holes steel logs corresponding dimensions. It is possible to use four shorter or two longer rods so as to pass through all eight holes. Hanging cords with adequate strength for the weight machines attach to steel rods.

Required conditions for steel rods.

4 pieces

length : 400 mm

diameter : Ø 40 mm

material : 11 373

tensile strength : $R_m=340-440$ Mpa

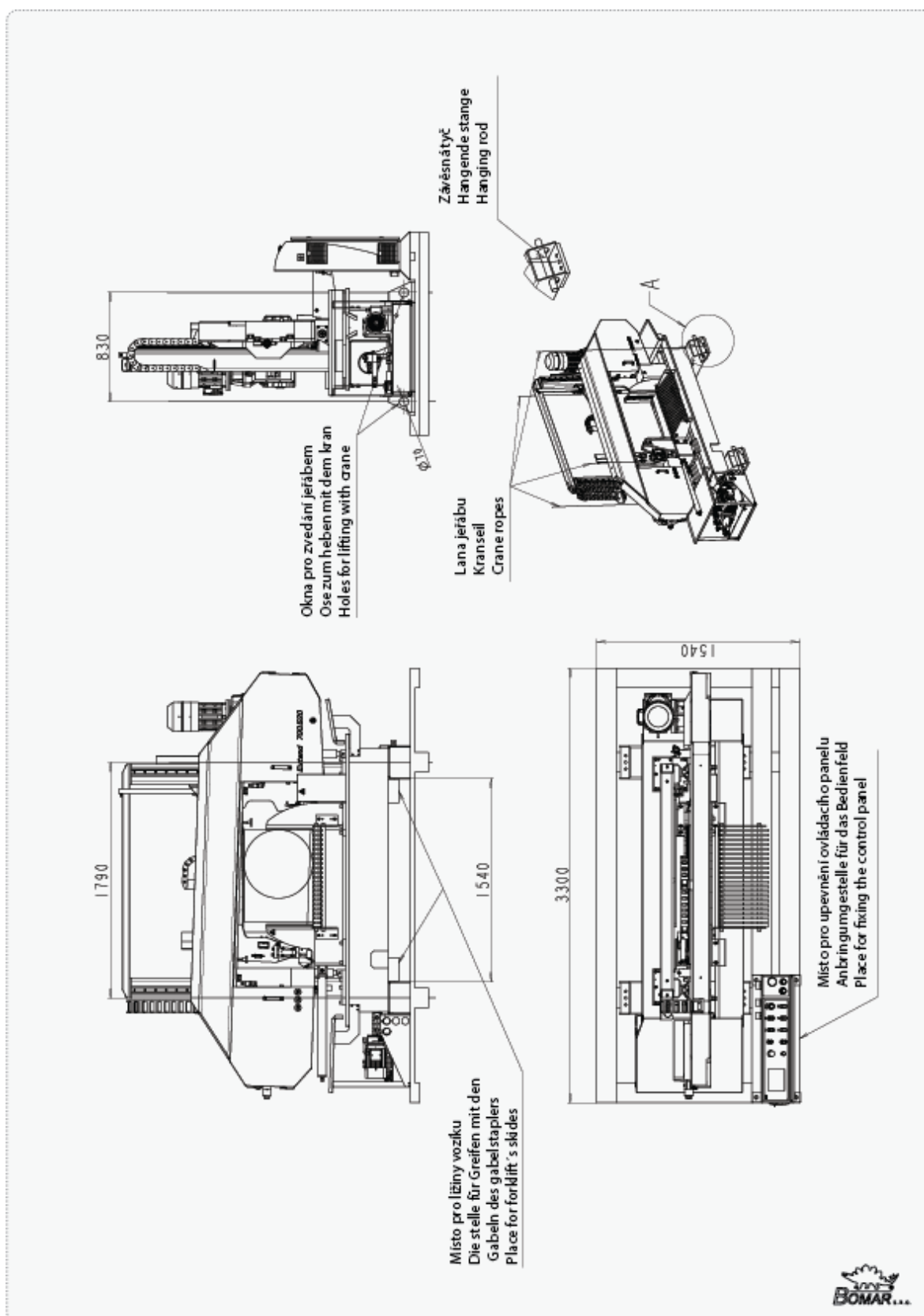
flexural strength : $0,7 \times$ tensile strength

It is necessary to observe the conditions:

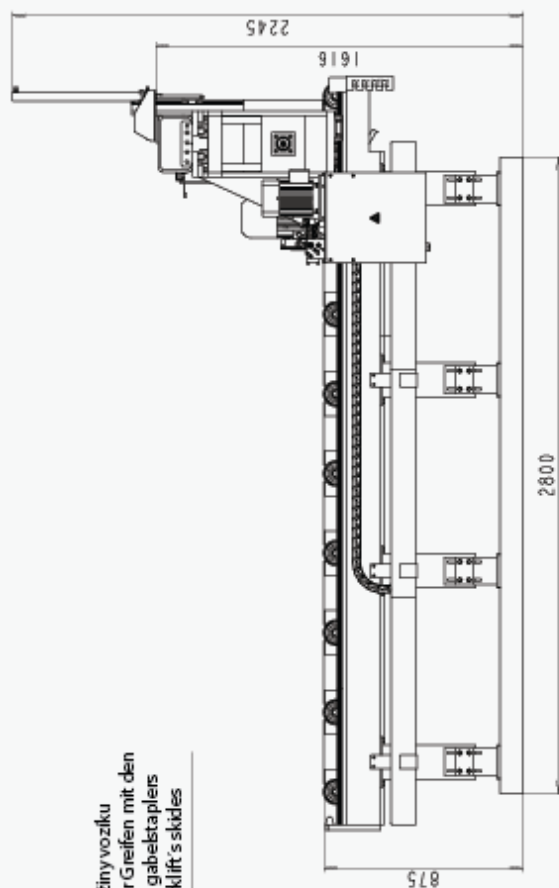
- Make sure to have sufficient crane capacity.
- Ensure that the truck or trailer had sufficient capacity.
- The machine must be secured during transportation, that it can not tip over or fall from the equipment ..
- If possible, attach the palette to the floor of the truck or trailer.
- Be careful that the machine is not damaged during
- It is forbidden to handle the machine any other way, than it is written in this operating instructions, the machine can be damaged

2.5. Transportní schéma / Transport schema / Transport diagram

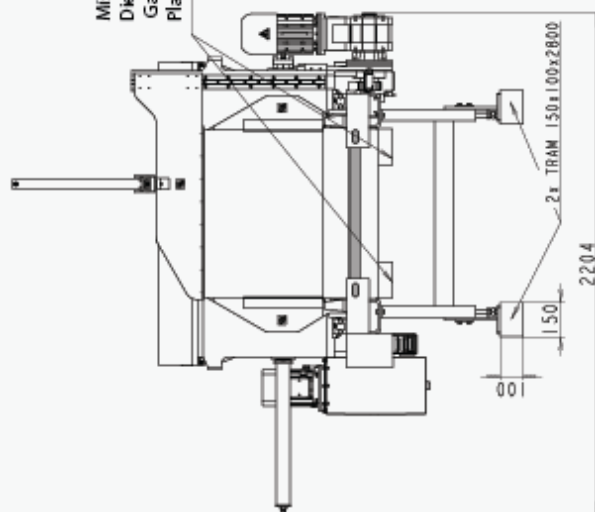
2.5.1. Band saw



2.5.2. Feeder



Misto pro liziny voziku
 Die stelle für Greifen mit den
 Gabeln des gabelstaplers
 Place for forklift's skides



2.6. Activation

2.6.1. Machine working conditions

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.

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 choke).

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.

2.7. Band saw unpacking and assembling

Attention!

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

Remove the packing from the machine and unpack all parts.

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.

2.7.1. 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 – Extend 700.520 ANC LS-2500 – 6000 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.

2.7.2. 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.

2.8. First run of the power pack

Before the first run check:

- The direction of the Pump, while run the power pack for max. 2seconds.
- The cooling fan of the motor has to rotate in the same direction as the arrow on the top of the motor cowling indicates.
- In case of wrong rotational direction, the electrical phase in the connection box is to be changed. This check is required after every disconnection from the power source
- 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
- During this time a careful bleeding off for the whole hydraulic system is necessary. In case there is no bleeder port, the power pack will bleed itself after a while via the air breather on the tank or the return line filter.
- After multiple start-up.

2.9. 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!

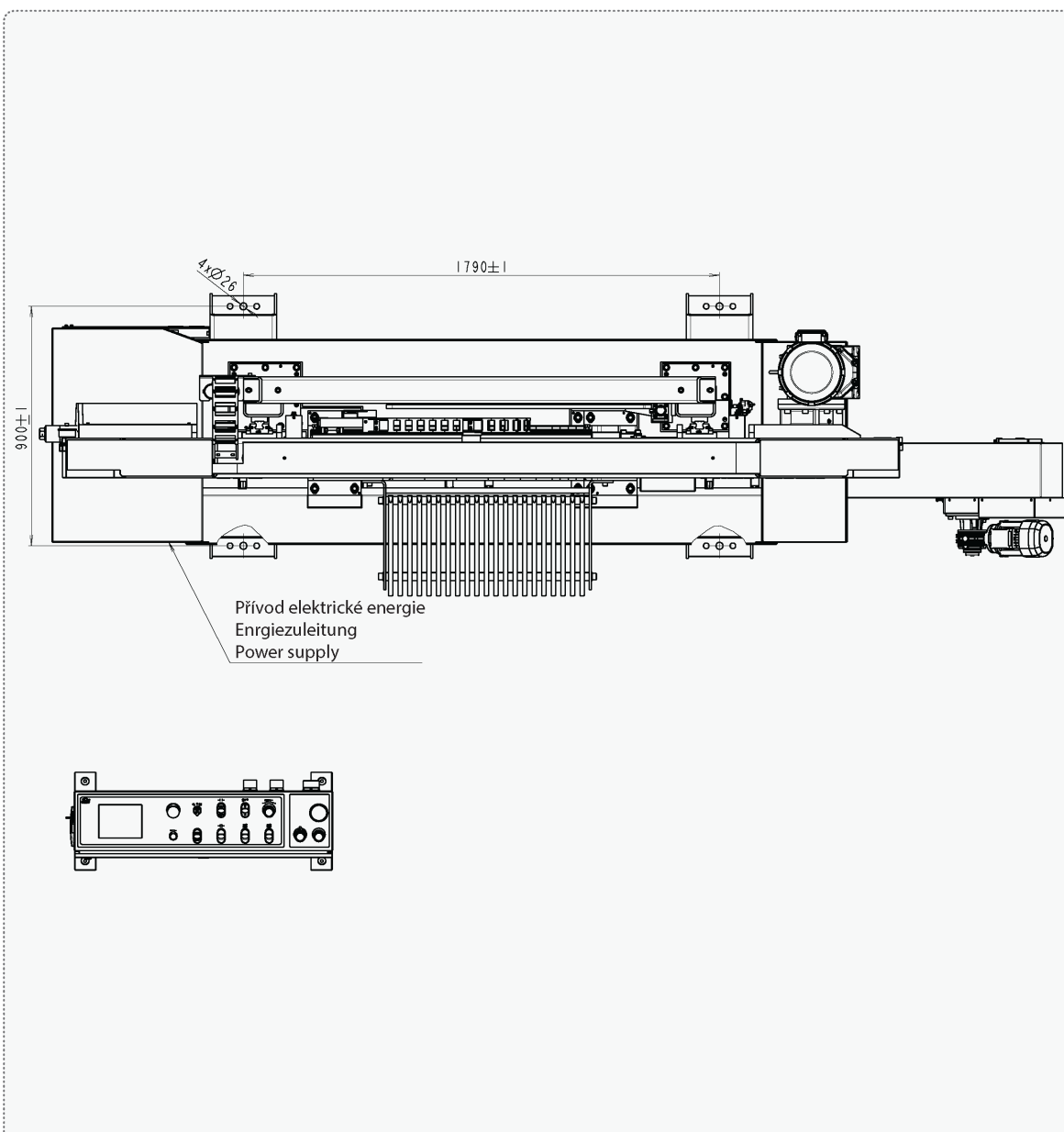
The maximum oil level will be shown on the upper marking at the dipstick or the sight level glass. Overfilling has to be prevent. The maximum filling rate of 15 l/min shouldn't be exceed.

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

Dokumentace stroje
 Dokumentation der Maschine
 Machine documentation

2.10. Kotevní plán /Verankerungsplan / Grounding plan

2.10.1. Band saw



Kotvicí materiál / Verankerungsmaterial / Grouding material

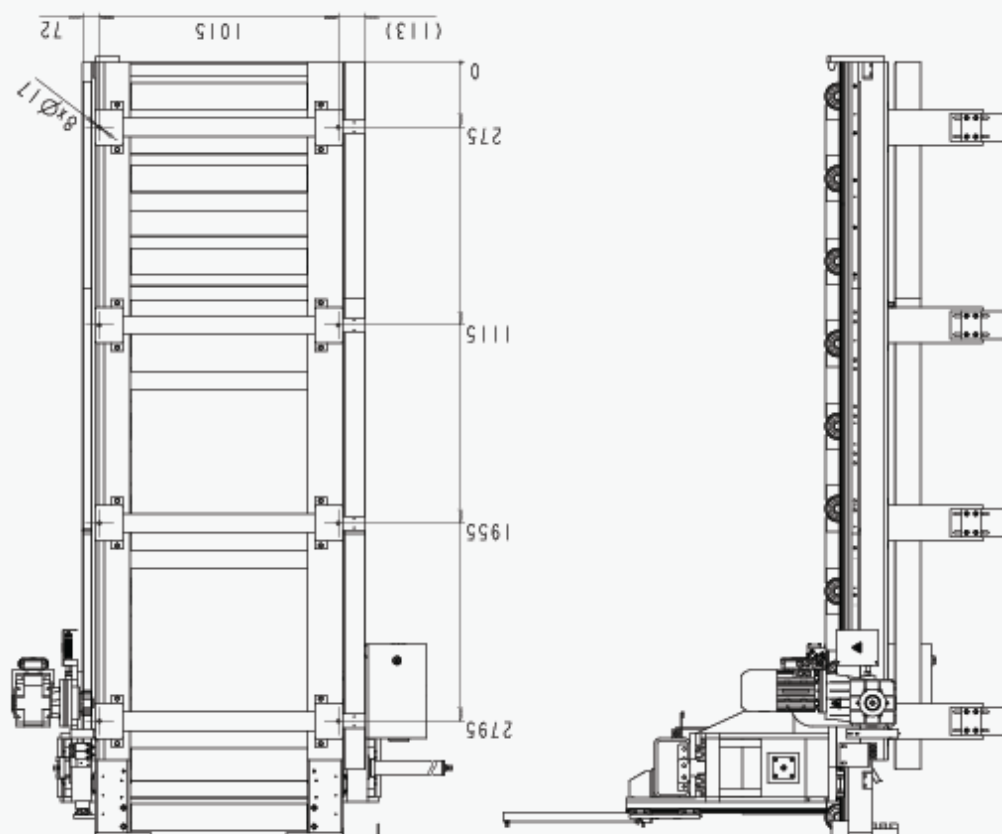
- 4x Závítová tyč / Gewindestange / Screwed bar M24, L = 240 mm + chemická kotva / chemische Anker / Chemical anchor
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 180 mm

- 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

2.10.2. Feeder



Kotvící materiál / Verankerungsmaterial / Grouding material

- 8x Kotva průvleková / Wedge anchor / Bolzenanker – M12x110
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 80 mm

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

± 10mm / 1 m

2.11. 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: $\sim 3 \times 400 \text{ V}$, 50 Hz, TN-C-S
- Total input / Max. fuse: 15 kW / 32 A

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

Note:

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

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

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 kW.

Attention!

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

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

2.11.1. 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.

2.11.2. Check machine connection into electrical network

2.12. Filling of the cooling system

Prepare the mixture of the water and the cooling liquid. Keep the concentration specified by manufacturer. Shift away the cover from the drainage hole. Fill the mixture of the water and the cooling liquid to the tank of the cooling system. Area of the tank for the cooling liquid is discovered from the chapter *Technical data*.

Let the drainage hole opened and with the sieve during operation, because it secures the right work 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.

2.13. Check machine function

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. 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..



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!!!



2.14. Saw band

Refit the saw band cover only after you have installed and tightened the saw band.



2.14.1. Saw band size

6660×41×1,3 mm

2.14.2. 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 for 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.

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:

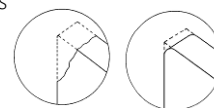
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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.

2.14.3. Saw band running-in

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

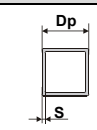
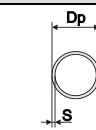
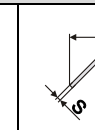
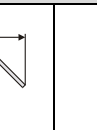
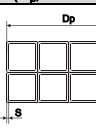
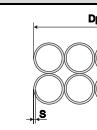
When cutting small pieces run the band until approximately 300 cm² of material has been cut. When cutting large pieces run the band for 15 minutes approximately. When the band has been run, increase the lowering-speed to normal speed. The running in of the saw band avoids micro-breaks on the cutting edges of new saw band ensuing from first excessive stress. This would decrease service life substantially. The optimal running in of the saw band produces ideal rounded



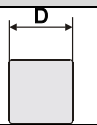
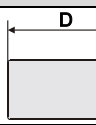
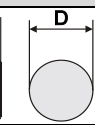
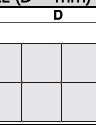
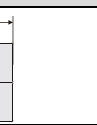
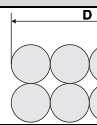
Note: Run regrounding saw bands too.

cutting edges and therefore the conditions for an optimal service life.

2.14.4. Tables for teeth selection

SHAPED MATERIAL ($D_p, S = \text{mm}$)						
						
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 $2 \times S$). 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 ($D = \text{mm}$)						
						
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					

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

3.1. Starting the machine and safety circuits

□

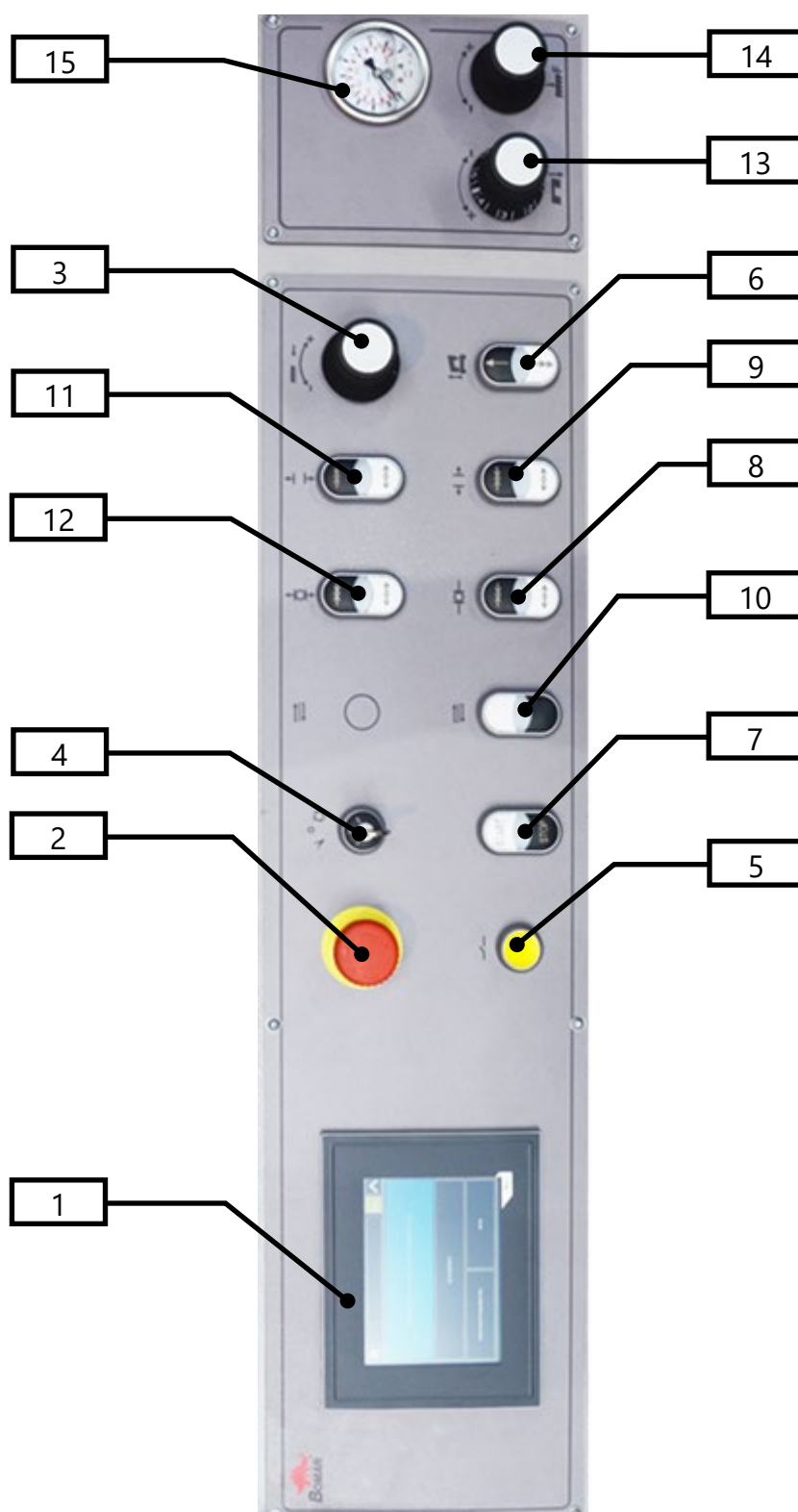


1. Turn the main switch into position 1 –ON.
The main switch is located on the side of the switchboard at the material input side (left side in respect to the control panel).
2. Switch on the safety circuit of the saw. The safety circuit will run a check on all safety switches.
Switching on of the safety circuit of the saw is signalized with orange light at the button for the safety circuits swiching on.



Unless the safety circuits have been activated, no mode of the machine can be started – except „Deblock“ (see Machine service – saw band installation, and saw band dismantling).

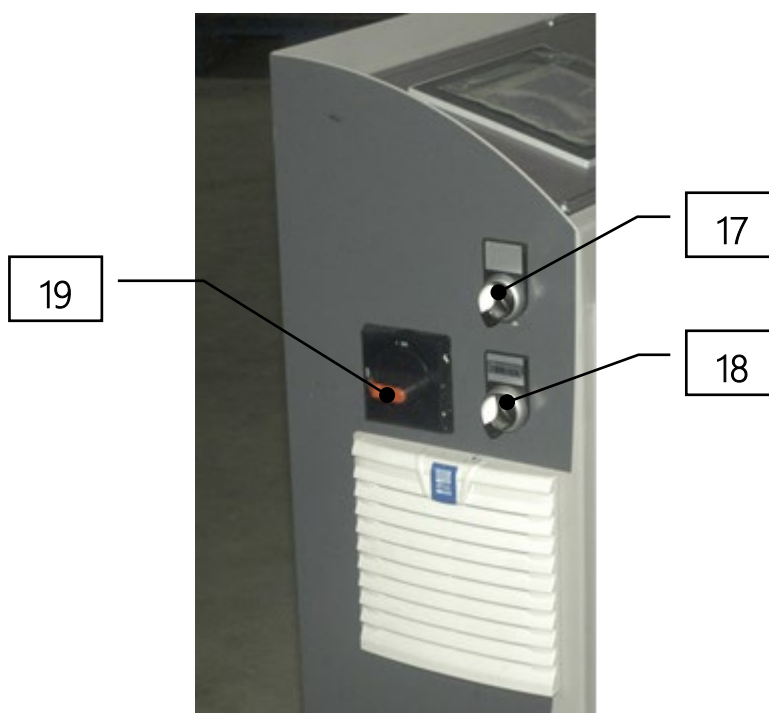
3.2. Control panel



1	Touch screen Displays current type of operation and enables a dialogue with the personnel.
2	TOTAL – STOP button Immediately stops the machine in emergency
3	Frequency converter - setting the speed of the saw band Turn to change to speed of the saw band. Speed can be set in interval 20–120 m/min.
4	Machine mode selection  Adjustment mode  Machine operation mode 0 -Machine setting mode
5	Safety circuit Press button to start the safety circuit
6	Arm movement By pressing the button the arm starts moving in the corresponding direction - upwards - downwards To move the arm it is necessary to keep the button pressed Pushing the button “downwards” and “upwards” together – the arm moves down with rapid speed.
7	STOP button Interrupts the cycle, to restart press START button. START button Press to start the work cycle. Press STOP to stop the cycle.
8	Controlling the feeder vice - fastening - loosening
9	Controlling the main vice - fastening - loosening
10	Feeder movement For the time the button is pressed, the feeder moves in the chosen direction - away from the saw - to the saw
11	Controlling the upper clamping at the main vice (optional equipment) - fasten - loosen
12	Controlling the upper clamping at the feeder vice (optional equipment) - fasten - loosen

13	Regulation valve Regulation valve sets the lowering speed of the frame into the cut. The speed is limited by the adjustment of the pressure regulation in the cut on the guiding cubes. <i>Note:</i> If the throttle valve is closed too tightly, the valve seat may be damaged and may start to leak. Tighten the valve lightly.
14	Regulation of pressure into cut Regulation valve sets pressure into cut. <i>Note:</i> If the throttle valve is closed too tightly, the valve seat may be damaged and may start to leak. Tighten the valve gently.
15	Manometer Shows value of pressure into cut

3.3. The buttons on the side of the switch board

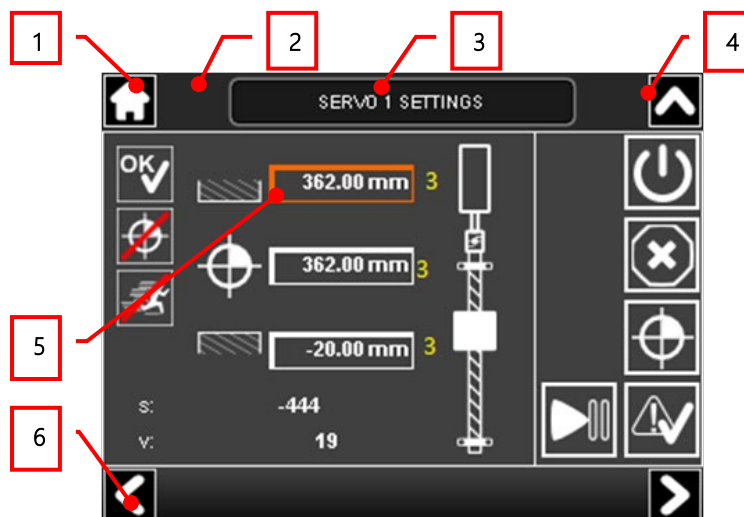


17	Deblock The switch for setting of the machine to the "Deblock" regime (see chapter about saw band mounting and dismantling)
18	Laserliner Switch for control of the laserliner
19	Main switch

3.4. Machine control elements

3.4.1. The basic description of the screens of the control software

Pay increased attention when operating the touch panel. Make your selection by slightly touching the display with a bare finger or stylus designed for touch screen control. By no means use sharp objects or other tools!



(Picture for information only)

Meaning of icons on the touch screens:

1 –return to the main screen

2 – 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..

3 –selected menu name

4 –return to the nearest higher screen in the hierarchy

5 –parameter setting window

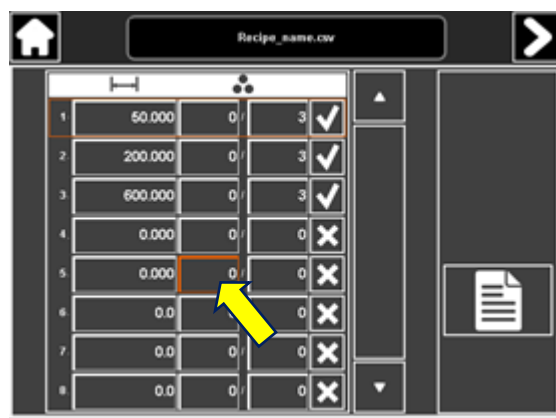
6– browsing between screens at the same hierarchical level (e.g., if parameter control or setting is divided into several screens or if there are more elements controlled or more units to set service parameters)

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

To fill in numeric values or letters, the parameter setting window is used – see, for example, No. 5.

If the window is coloured, it is active for entry of parameters.

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



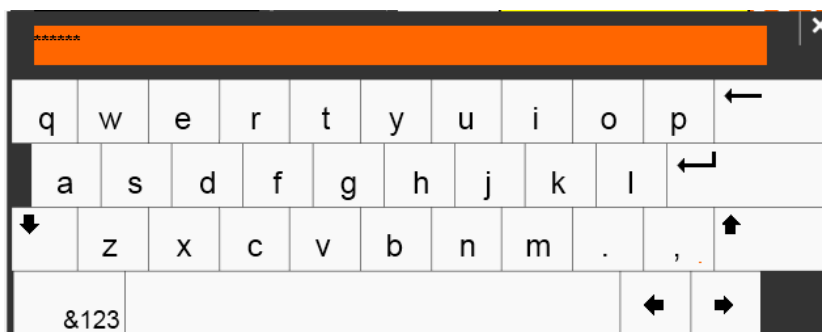
3.4.2. Touch screen keyboard

Keyboard 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:



The combined keyboard enables choice whether to display:

- numeric keyboard – selection 0-9



- or a pertinent part of the alphabetic keyboard (A-P or Q-Z)

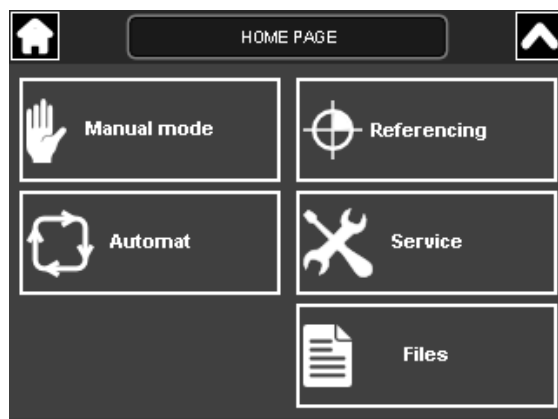


Pos.	Funkce
	Keyboard closing without saving the data entered
	Deletion of data entered in the keyboard window
	Keyboard closing with saving the data entered (confirmation of the value entered)
	Shift function (capital letters and upper case)
	Caps Lock function

3.4.3. Main screen of the control software, machine modes

It is possible to initialize the main screen using the selection  from any screen of control software.

The main screen of the control software shows the basic menu for selection of working modes, setting modes and machine referencing modes.



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)
- **Automatic mode** – used to execute the entire cutting cycle automatically according to the recipe entered

Referencing mode:

- **Referencing** – used to reference the machine – that is, after setting the machine in the operating state.

Setting modes:

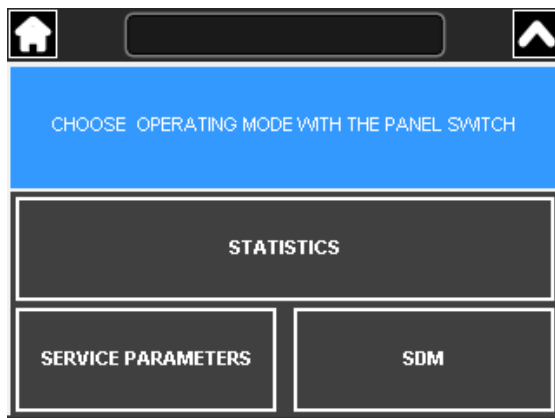
- **Service** – used to set the machine parameters
- **Files** – used to set the recipes for the course of the automatic mode

3.4.4. Auxiliary screen of the control software

The auxiliary screen appears after the machine start-up if the mode selector is in the "0" position.

This screen provides access to the machine diagnostics.

This screen also enables opening of the menu screen for setting of service parameters.



Pos.	Function
CHOOSE OPERATING MODE WITH THE PANEL SWITCH	Instructions for further procedure
STATISTICS	Statistic data of the machine
SERVICE PARAMETERS	Setting and modification of service parameters for the cutting process.
SDM	Management diagnostic system – system of the device diagnostics, used for service only

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. Referencing the machine (see chapter "Machine referencing")
3. Setting service parameters (see chapter "Setting service parameters")
4. Adjusting the band saw (see chapter "Adjusting the band saw")
5. Executing
 - the cut in the semiautomatic mode (see chapter "Semiautomatic mode")
 - or
 - the cutting cycle in the automatic mode (see chapter "Automatic mode" and the "Recipes" chapter)
6. Executing another cut or cutting cycle, or end of cutting and switching the machine off

Manual control of the individual machine elements – see chapter "Manual mode".

3.6. Machine referencing

Caution !

Before starting the referencing, remove all material from the saw and feeder. Do not reference the machine, if there is any material clamped in any of the vices.

If a material is laid on the feeder track, open the feeder vice sufficiently in the manual mode before starting the referencing, so that the material is not

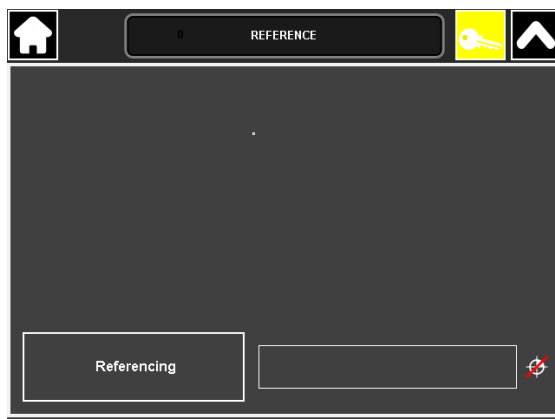
1. Turn the **mode selector** to the manual mode position  or to the automatic mode position. .

Referencing will not be done if the mode selector is in the "0" position!

2. In the main screen of the control menu, choose the **Referencing** option.



3. This screen appears to display the referencing process:



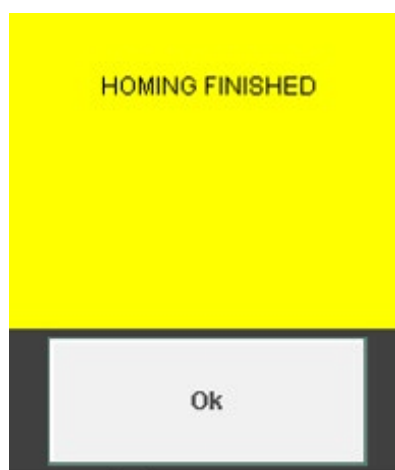
Pos.	Funkce
	Start of referencing process.
	Status bar Referencing process course initialization When referencing is completed, the status bar returns to the beginning.
	Referenced
	Not referenced

4. By pushing the **"Referencing"** option, start the referencing process.



Referencing will be executed as a sequence of movements of the individual saw units which will be set from the current positions to their reference ones.

Successful end of referencing is indicated by a notice on the control panel display



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

3.7. Manual mode

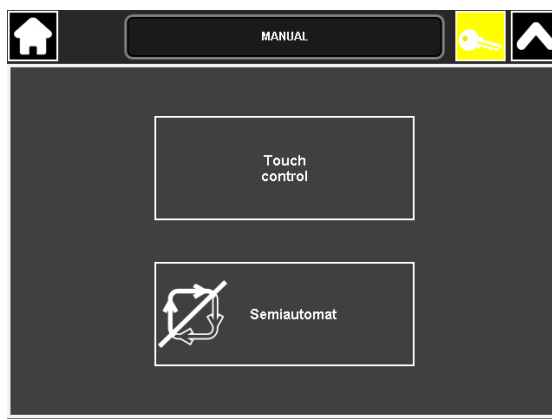
3.7.1. Machine control in the manual mode

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

Caution!

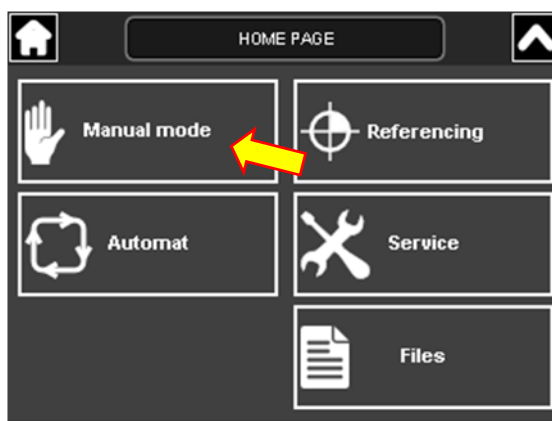
Pay increased attention when moving the material towards the saw, there is the risk of collisions particularly during manual operation!

1. To switch the machine into the manual mode, turn the mode selector to the manual mode position .
2. A screen with the options appears:
 - „Touch control” – to control the saw functions
 - „Semiautomatic” – to control the saw in the semiautomatic mode



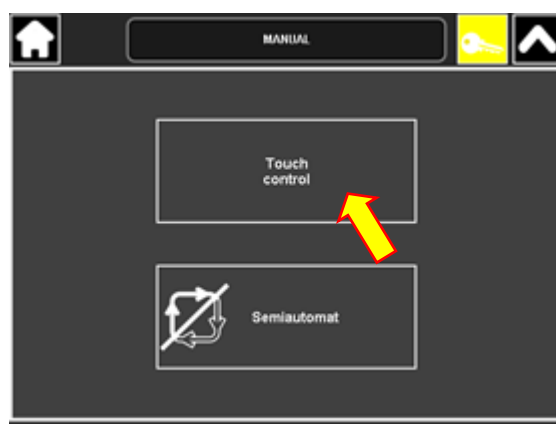
Note:

To display this screen, you can also choose the option for manual mode initiation on the main screen of the control software:

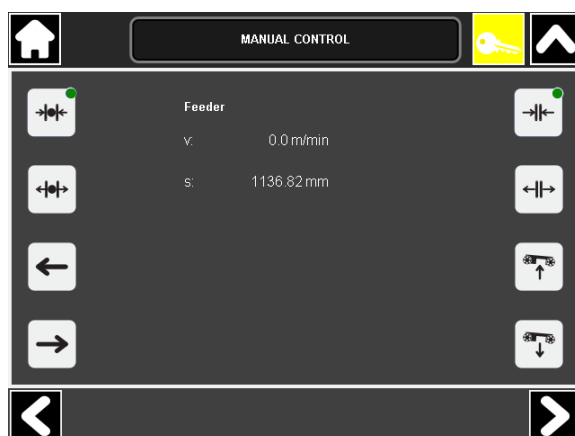


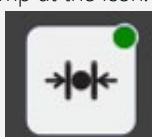
But control elements aren't functional if the mode selector isn't in manual mode position  !

- To control the machine manually, choose the „Touch control” option on this screen



- The following screen is used for manual control of the saw:



Pos.	Funkce
	Feeder vice open / close Vice clamping is indicated by lighting the green lamp at the icon. 
	Feeder movement from/to the saw

Pos.	Funkce
	Main vice open / close Vice clamping is indicated by lighting the green lamp at the icon. 
	Arm upward movement. The button must be pushed continually for the movement time. If the button is released, the movement stops.
	Arm downward movement The button must be pushed continually for the movement time. If the button is released, the movement stops.
Feeder v: 0.0 m/min s: 1136.82 mm	Course of feeder movement – current speed
Feeder v: 0.0 m/min s: 1136.82 mm	Course of feeder movement – current position

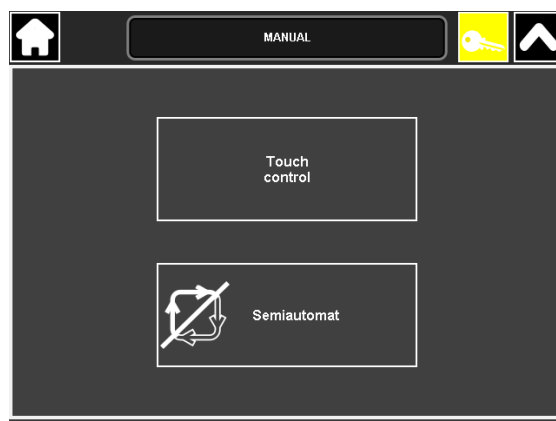
3.8. Semiautomatic mode

3.8.1. Cutting execution in semiautomatic mode:

1. In the manual mode, **move the arm all the way up**
2. In the manual mode, **open the saw vice and feeder vice sufficiently** with regard to the width of the material loaded.
3. To switch the machine to the semiautomatic mode, **turn the mode selector to the manual mode position** 

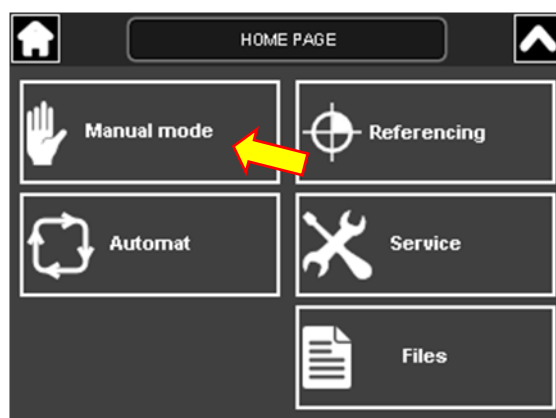
4. This screen with the options appears:

- „Touch control” – to control the saw functions
- „Semiautomatic” – to control the saw in the semiautomatic mode



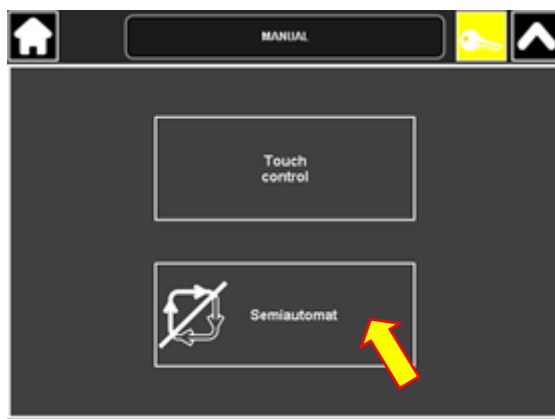
Note:

To display this screen, you can also choose the option for manual mode initiation on the main screen of the control software:



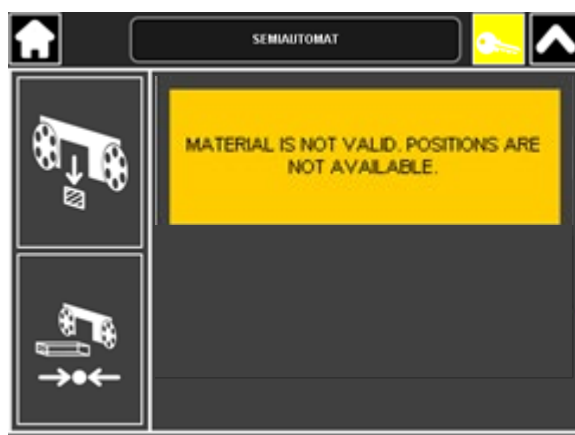
However control elements are not functional if the mode selector is not in the position for manual mode  !

5. To initiate the semiautomatic mode, choose the "Semiautomat" option in this screen



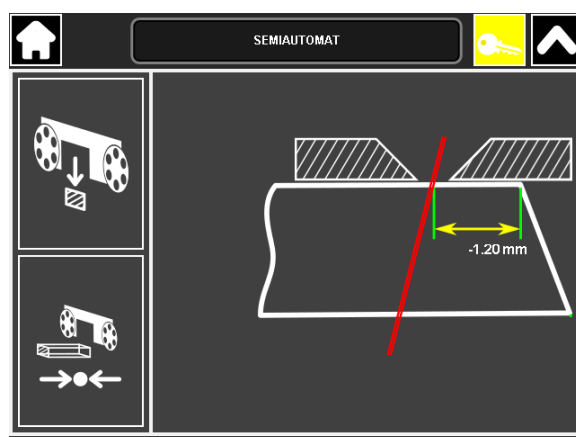
6. The screen appears for control of the machine in the semiautomatic mode, in one of the following variants, a) or b):

- a) Invalid material

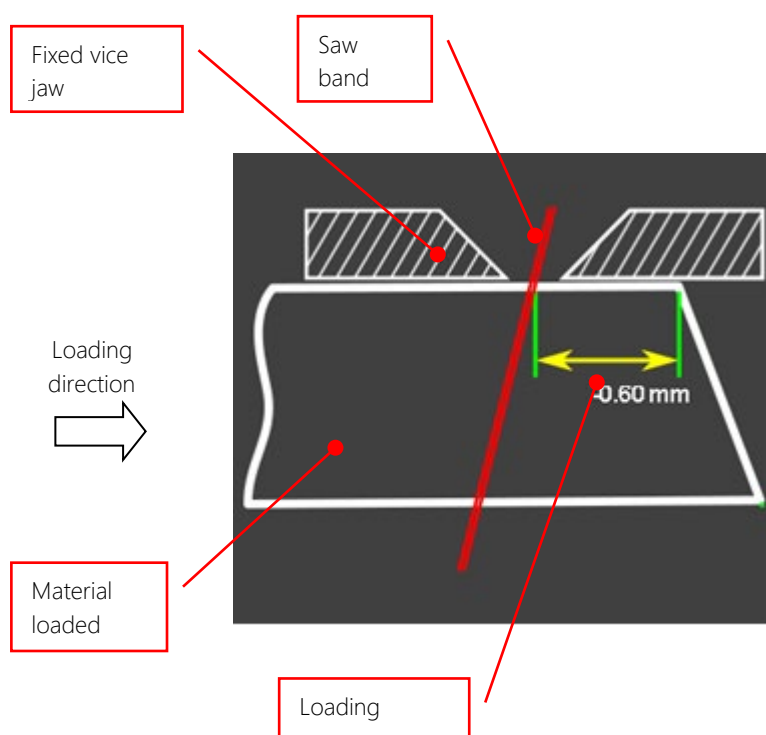


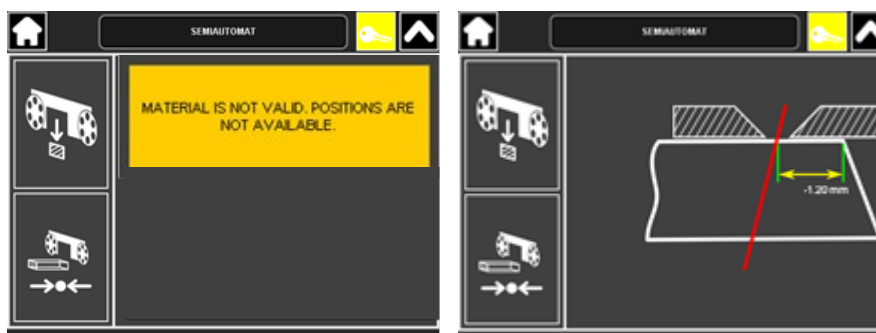
Pos.	Function
	Information that the machine has no information on the material face position.: Without a valid material, the semiautomatic mode enables: - entry of parameters - cutting of material without a length entered To load the given material length in the semiautomatic mode, the material must be valid. Before loading the required material length, cut the material in!

a) valid material



If the material is valid, a sketch of the current state is shown in the box on the right side of the screen





Pos.	Function
	Option for length loading
	Semiautomatic cut setting

Options in the left screen column – options for setting the length loading and initiation of the screen for cutting start – they are only accessible if the mode selector is in the manual mode position!

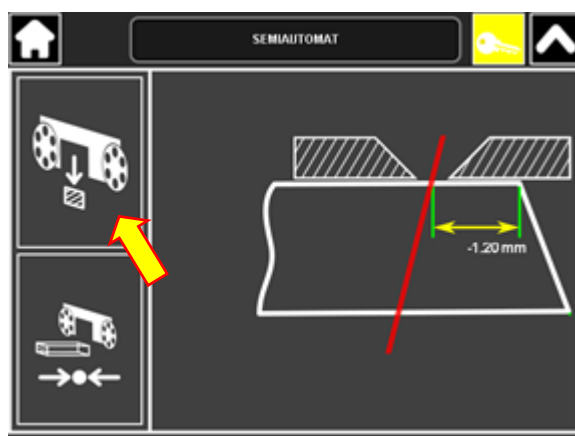
7. Insert material

The material can be loaded

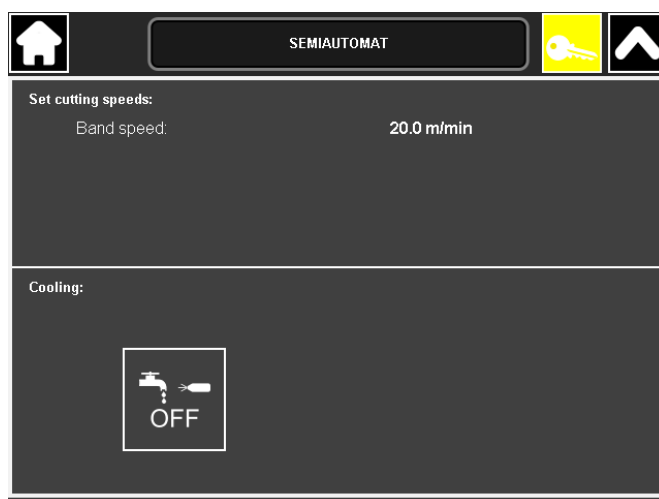
- with a manually controlled feeder – to the estimated length.
After loading, the material must be clamped in the main vice by means of the manual control
- with an automatically controlled feeder to the given length – see “Loading the required material length in the semiautomatic mode”

8. Set the cooling method

The material cooling method can be set in the semiautomatic-setting screen which appears after you choose the option for setting the semiautomatic cut in the screen for the machine control in the semiautomatic mode



Screen for setting the semiautomatic cut



Pos.	Function
Set cutting speeds	
Band speed	Set band speed
Cooling	

Pos.	Function
	Cooling method You can choose the cooling methods by repeatedly pushing.
	 - liquid cooling
	 - Micronizer cooling
	 - without cooling

9. **Set the arm starting position above the material to start the cut**

If the machine is equipped with a device for setting of height of the arm above material from control panel:

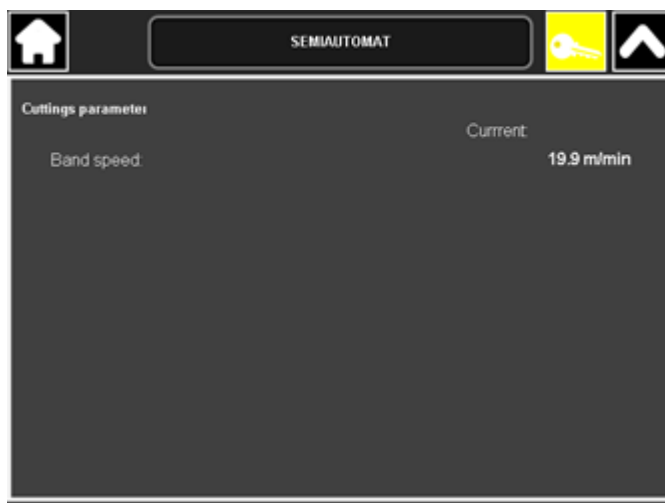
To set this position, move the arm (approx. 10 cm) above the material before starting cutting in the semiautomatic cycle by means of the manual control button on the control panel.

When the semiautomatic cycle is started with START button the machine commits the start position to memory.

After cutting in the semiautomatic mode is completed, the arm automatically returns to the position at which the cut was started. From this position, another cut can be started.

10. By means of the potentiometer on the saw control panel, **set the required cutting speed**
11. By means of the valves on the saw control panel, **set the speed of the arm descent to cut and pressure into cut.**
12. By pushing the **START** button on the control panel, **start cutting.**
13. **After pushing START – semiautomatic cut process:**
 - a) The saw band starts up and the arm starts feeding to cut.
 - b) While the arm is descending to cut or even during cutting, you can adjust the saw band speed, speed of arm descent to cut and pressure into cut by means of the control elements on the machine control panel
 - c) On the control panel display, a screen appears with information on the cutting process.

Screen with information on the semiautomatic cut process



Pos.	Funkce
Cutting parameters	
	Set
Band speed	Set band speed
	Current
Band speed	Current band speed

14. After cutting in the semiautomatic mode is completed:
 - the arm automatically returns to the position at which the cut was started.
 - Completion of cutting in the semiautomatic mode is indicated by a message on the control panel display that the cut has been completed.
15. Remove the cut-off. Now you can repeat the entire procedure.

3.8.2. Loading the required material length in the semiautomatic mode

The required material length cannot be loaded, unless the machine is referenced

If the saw arm is turned so that it intervenes to the path of the feeder, the feeder automatically stops before collision. In this case the shortest length of the material loaded is longer than the length of the material loaded if the arm is turned so that there is not collision.

Attention!

Size of burr and unevenness of the material face has an effect on the precision of the length loaded by the feeder!

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.

1. If the machine reports invalid material before starting to load material to the required length in the semiautomatic mode:



- Make trim cut of the material

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

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

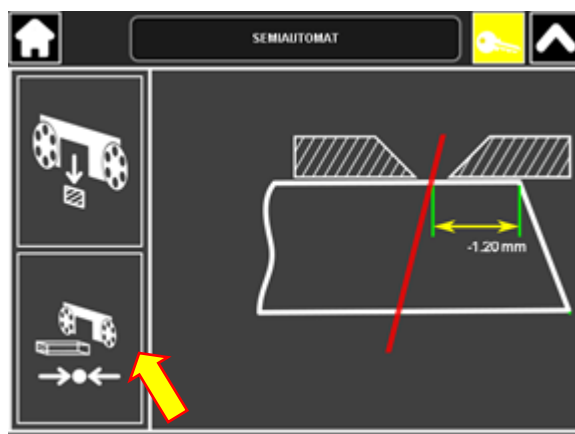
Attention!

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

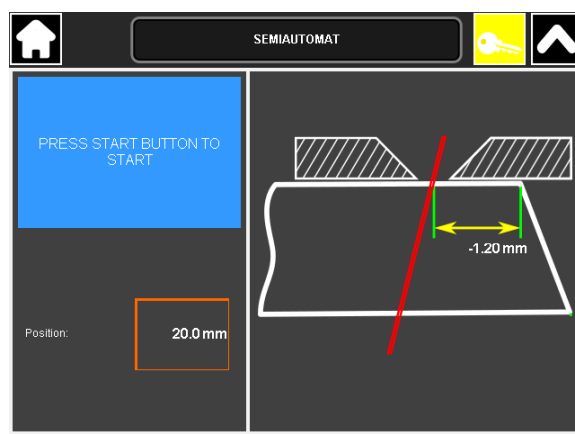
Attention!

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

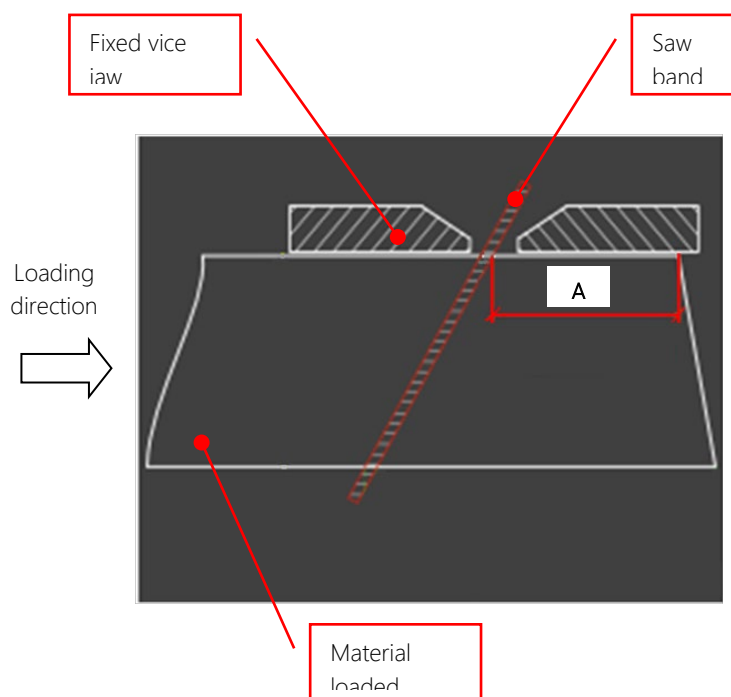
- If the material is valid, choose the option for length loading



- The screen appears for entry of the required material length to be loaded



Pos.	Function
Position: 0.0 mm	Window for entry of the required length to be loaded. The length will be measured from the inlet end of the material to the outlet edge of the band – see Fig. 1 - dimension A.
PRESS START BUTTON TO START	Instructions for further procedure



Picture no.1

4. Enter the required length in the window for setting parameters on the screen for entry of the desired length to be loaded.
5. Push the **START** button to start loading of the material.

Caution!

Before the loading starts, the main vice must be opened sufficiently so that the material loaded does not collide with the vice jaws!

6. After the Start button is pushed to start loading of the material :
 - The feeder makes a movement to find the end of the material (if the material is detected with laser beam of the feeder, the feeder moves away from the saw, if the material isn't detected with laser beam of the feeder, the feeder moves towards to the saw).
 - the feeder clamps the material and loads it to the desired length
 - After loading, the material is automatically clamped by the main vice

3.8.3. Semiautomatic sequence interruption

3.8.3.1. With the STOP button

- 1 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 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.

3.8.3.2. With the TOTAL STOP button

- In emergency cases, push the **TOTAL STOP** button 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.

3.8.3.3. 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.

- 3.9. Automatic mode
- 3.9.1. Cutting execution in automatic mode

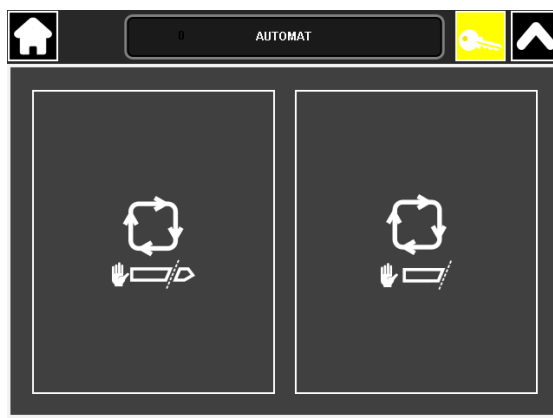
Caution!
Short pieces which the feeder cannot feed to the main vice cannot be cut in the automatic mode!
Imminent risk of collisions!

Caution!
Size of burr and unevenness of the material face has an effect on the precision of the length loaded by the feeder!

If the saw arm is turned so that it intervenes to the path of the feeder, the feeder automatically stops before collision. In this case the shortest length of the material loaded is longer than the length of the material loaded if the arm is turned so that there is not collision.

1. Turn the mode selector to the automatic mode position .

This screen appears with options for the material loading and cutting in



Pos.

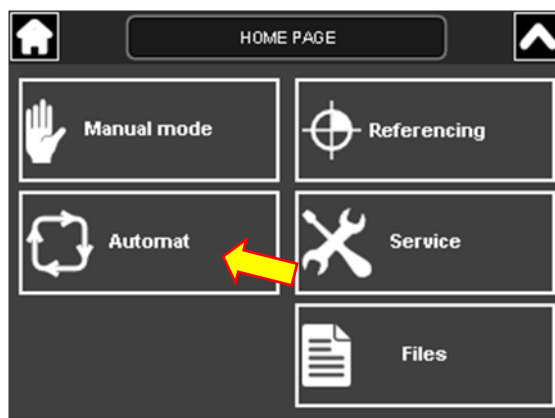
Funkce

Pos.	Funkce
	Manual loading of the material with cutting-in - the first piece is loaded under the saw band manually - the cut-in length set manually (by estimation or measurement) - after cut-in, the automatic cycle is started automatically according to the given recipe - if an external loading system is installed, other pieces are loaded automatically and cut or not cut in according to the setting – see below
	Manual loading of the material without cutting in-in This mode is only used: - if the automatic cycle has been interrupted and the operator wants to resume it - If an automatic cycle has been completed and the operator wants to continue in cutting the residual material, according to a different setting of the automatic cycle, however To continue in the interrupted cycle or cutting the same material without the necessity of cut-in, it is always necessary that the operator does not open the vices! (Spontaneous release if the hydraulics are switched off is not detrimental.)

Choose the method of material loading and material cutting in on this screen

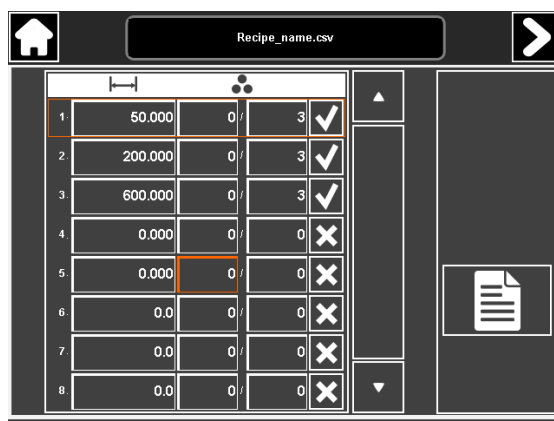
Note:

To display this screen, you can also choose the option for automatic mode initiation on the main screen of the control software.



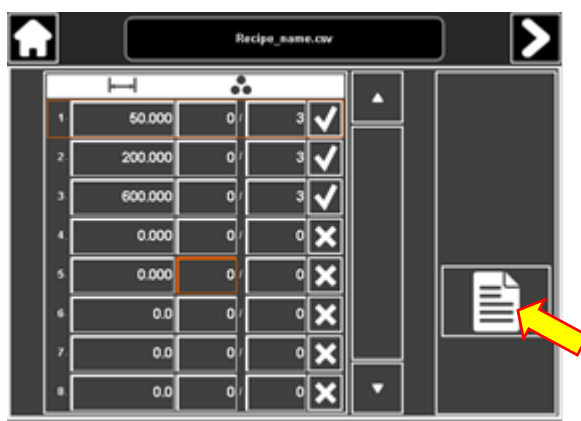
But control elements aren't functional if the mode selector isn't in **automatic mode**
position !

- After you choose the loading and cut-in method, a screen appears for loading a recipe or entry of a new recipe.

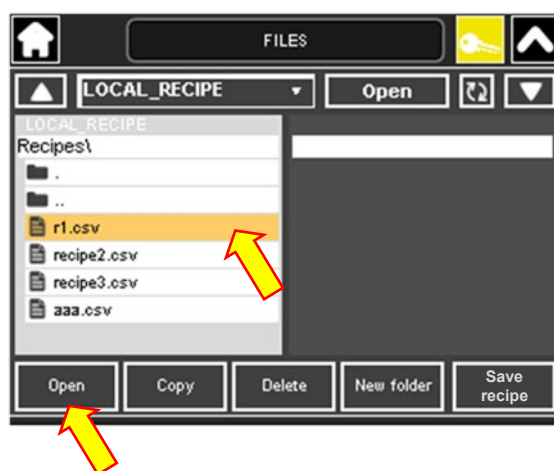


The selected recipe line is highlighted in an orange box.

To load a recipe or save the loaded recipe, choose the "Data" option



Further proceed in the way described in detail in the "Recipes" chapter – open and load the selected recipe by means of the "Load" option.



The recipe loading and modification screen also enables you to change the

selected recipe lines by checking   them after executing the automatic cycle analogically to the recipe entry procedure.

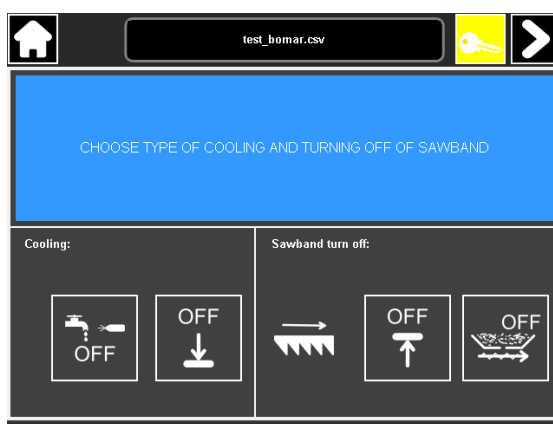
Attention!

If you do not save the modified or newly entered task (recipe) (see the "Recipes" chapter), the data entered will be lost the moment when you load another recipe.

The data entered after the last saving will not be lost if the machine is switched off or the cycle interrupted. (According to the operator's choice, only the information on the number of pieces cut may be lost – see information on cycle interruption).

The automatic cycle always starts with the first checked nonzero line, and continues stepwise with all of the following checked nonzero lines.

- By means of the browsing option , shift from the screen for recipe to the screen for **cooling selection and band switch-off**



Pos.	Funkce
	Cooling method You can choose the cooling methods by repeatedly pushing.
	 - liquid cooling
	 - Micronizer cooling
	 - without cooling

Pos.	Funkce
	Selection of the cooling switch-off method By repeated touch, you can choose the methods of cooling switch-off.  - switch-off if the arm is down  - switch-off if the arm is up
	State display  - band running  - band off
	Selection of the saw band switch-off method By repeated touch, you can choose the methods saw band switch-off.  - switch-off if the arm is down  - switch-off if the arm is up
	Swarf conveyer off/on

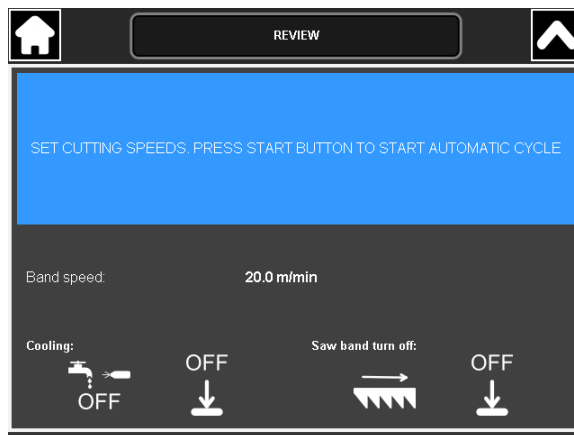
4. After setting all parameters, shift to the screen for the **automatic cycle start**.

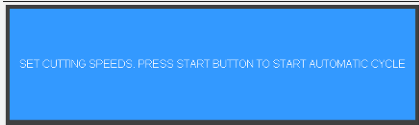
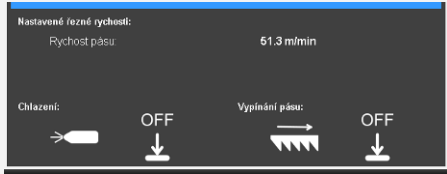
The screen for the automatic cycle start can be found by means of the browsing



option in the screen for cooling selection and band switch-off – if a mode without cut-in has been selected

The screen for start of automatic cycle:



Pos.	Funkce
	Instructions for further procedure
	Entered parameters display

5. Set the arm starting position above the material to initiate the cut

If the machine is equipped with a device for setting of height of the arm above material from control panel:

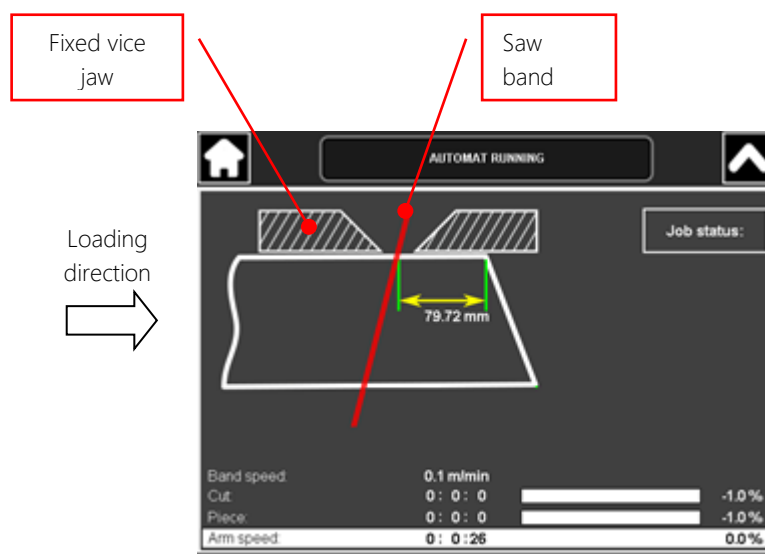
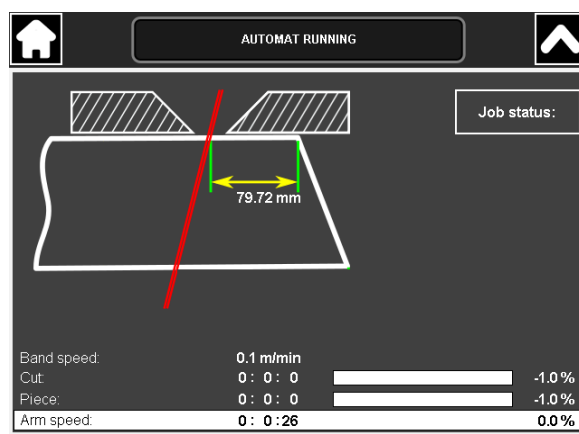
To set this position, move the arm (approx. 10 cm) above the material before starting of the automatic cycle by means of the manual control button on the control panel.

When the automatic cycle is started with START button the machine commits the start position to memory.

After each completed cut the arm automatically returns to the starting position.

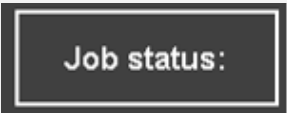
6. By means of the potentiometer on the saw control panel, **set the required cutting speed**
7. By means of the valves on the control panel, **set the speed of the arm descent to cut and the pressure into cut.**
8. Push the START button and start the automatic cycle

After the START button is pushed and the automatic cycle starts, a screen appears, showing the automatic cycle process

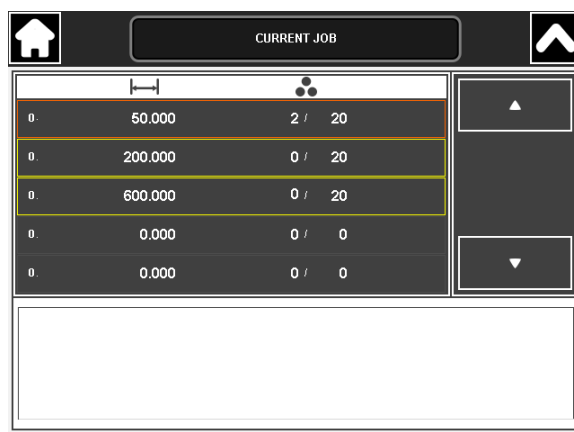


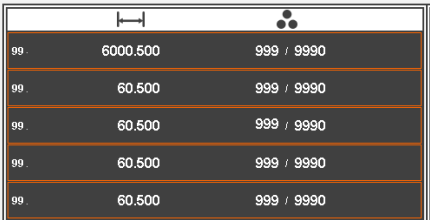
The horizontal dimension indicate the distance of the material edges from the band edges at the fixed and moving vice jaw – see the illustration in the screen.

Information on the course of cutting is at the bottom of the screen.

Pos.	Funkce
	Option for viewing the current order state After you push the "Material" option in the screen showing the automatic cycle process, a screen with the current order appears.

Screen showing the current order state



Pos.	Funkce
	Browsing between lines
	Currently loaded order Green line – currently cut Orange line – browsed up line
	Shape in the currently browsed up line (in orange box)

9. Automatic cycle process after pushing the START button

While the arm is descending to cut or even during cutting, you can modify the:

- saw band speed
- speed of the arm descent to cut

by means of control elements on the machine control panel.

• Automatic cycle with manual material loading with cut-in

After setting of the automatic cycle and its start with the START button:

- The operator is asked to insert the material.

INSERT MATERIAL IN THE SAW
A CONFIRM BY PUSHING THE START BUTTON

- b) By means of the manually controlled buttons on the control panel, the operator transfers the material under the saw band, in which the cut-in length is defined.
- c) After loading the material under the saw band, the operator confirms insertion of the material by pushing the START button – cut-in will be started at the manually loaded material length.
- d) After cut-in, the cycle continues automatically according to the settings in the loaded recipe.

Firstly, the piece from the first checked nonzero line of the recipe will be cut.

The cycle continues stepwise with all of the checked nonzero lines of the recipe (for the cut in pieces with an identical cut-in length).

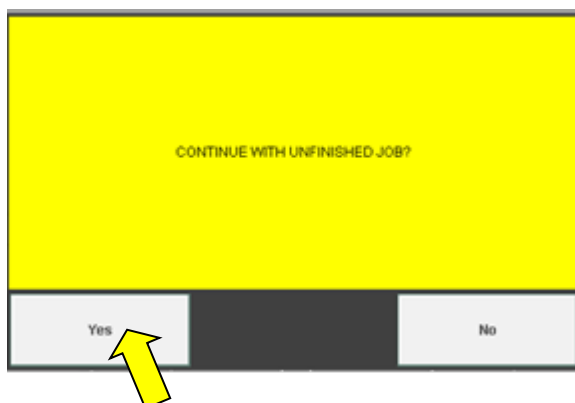
- **Automatic cycle with manual material loading without cut-in**

This mode is only used if the automatic cycle has been interrupted, not all of the pieces have been cut and the operator wants to resume the started cycle.

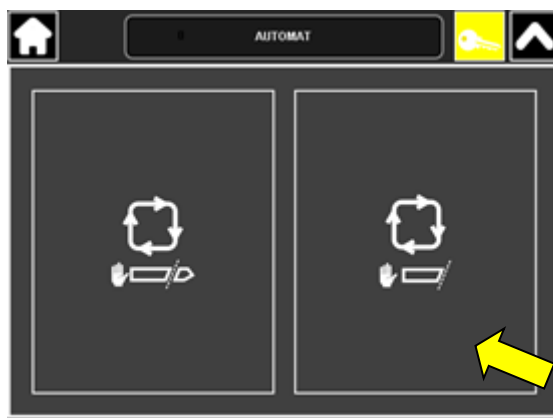
It is necessary for this mode that the material remains initiated (that is, the operator should not open the vices after the automatic cycle interruption).

- a) After the automatic cycle has been interrupted, the operator is asked whether to continue with the unfinished task:

To resume the started cycle, it is necessary to choose "Yes"



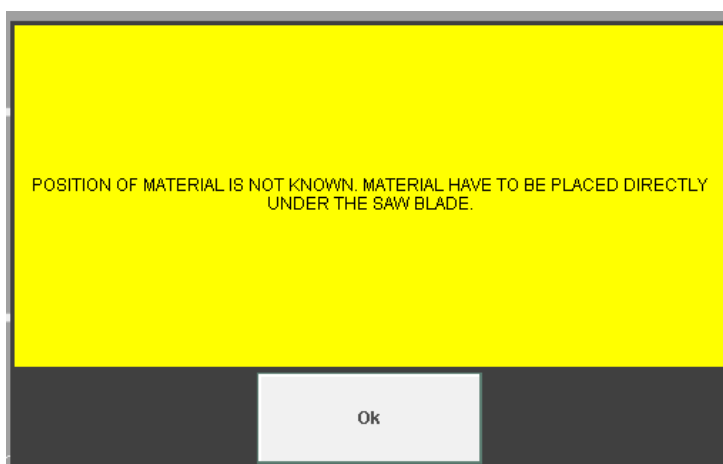
- b) After selection, the display shows a screen for selection of cut-in, in which the operator should choose **manual loading without cut-in**



- c) The screen with recipes appears, enabling the operator to:
- make alterations before the cycle continues
 - or directly, by means of the browsing options,  move on to the screen for starting the automatic cycle
 -
- d) Push START to initiate the automatic cycle – the cycle will proceed from the point at which it was interrupted.

NOTICE:

If the operator opened the vices after interruption of the automatic cycle and the machine lost information on the material, it will show a message after the START button is pushed to resume the cycle:



If you want to continue the cycle, confirm the message; the automatic cycle will start without cut-in of the material – this means that the saw feeds the material as if the cut-in had been done before feeding and the material had been aligned with the band before feeding.

If you do not want to continue with the cycle, shift to a mode other than automatic; thus you will cancel the unfinished cycle and be able to start a new cycle.

10. After completion of the cycle:
 - the arm automatically returns to the position at which the cut started
 - Finish of the cycle is announced on the display.
11. Remove the cut-off.
12. Now you can repeat the entire procedure.

3.9.2. Automatic cycle interruption

3.9.2.1. Procedure at the automatic cycle interruption (not „Pause“) if not all of the pieces have been cut through according to the task (recipe) set

1. After the automatic cycle interruption other than “Pause”, if not all of the pieces according to the task (recipe) set have been cut through by the moment when the automatic cycle was stopped; a screen appears with options for finishing the unfinished task or resuming the unfinished task.



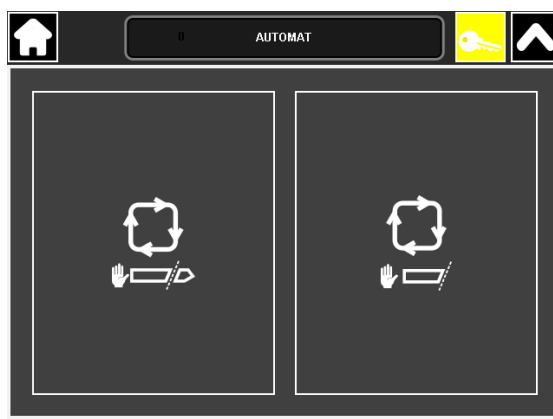
If you choose “Yes”

- the cycle can proceed from the point of interruption and the information on the number of cut pieces is kept.

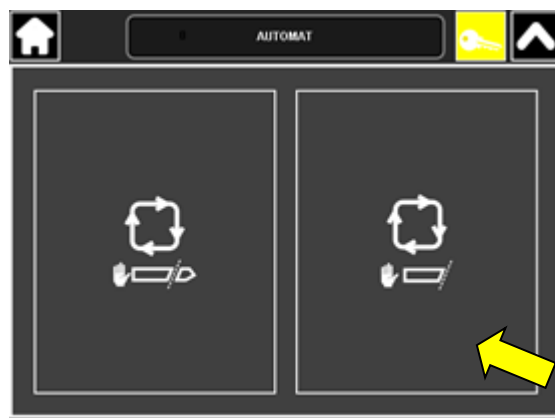
If you choose “No”

- the cycle can proceed from the point of interruption, but the information on the number of cut pieces is reset

2. If you choose Yes/No on the previous screen, a screen appears for starting the automatic cycle



3. If you want to resume the interrupted cycle, you should choose the option for the mode of manual loading without cut-in in this screen



- Further, see the Automatic cycle with manual loading without cut-in.
- In the mode of Automatic cycle with manual loading without cut-in, it is also possible to modify the recipe continuation.

If you do not want to resume the interrupted cycle, you can start another cycle in the screen for the automatic cycle start, move to another mode or switch off the machine.

3.9.2.2. Automatic cycle interruption with the STOP button

- **1 push - cycle interruption of the „Pause“ type**
- This interruption is only possible if the cut has not been started.
- After you push the Start button, the interrupted cycle will proceed from the point of interruption.
- **2 pushes – automatic cycle interruption**
- If the cut has been started, the machine does not respond to 1 push; the cut will be stopped only after the 2nd push of the STOP button.
- Double push of the STOP button can also be used to interrupt the automatic cycle at any other phase.
- After double push of the STOP button, if not all of the pieces have been cut through in the unfinished task, proceed according to the procedure above.

3.9.2.3. Automatic cycle interruption with the TOTAL STOP button

- In emergency cases, push the TOTAL STOP button on the control panel.
 - **1 push - interruption of safety circuits**
 - **- automatic cycle interruption**
1. Switch on the safety circuits again.
 2. If not all of the pieces have been cut through in the unfinished task, follow the procedure above.

3.9.2.4. Interruption of safety circuits

- Before the machine is restarted, the safety circuits must be switched on.
- Further, see the "Procedure of interruption (not the "Pause") of the automatic cycle if not all of the parts have been cut according to the given task (recipe)

3.9.2.5. Error

An error occurs during the automatic cycle and an error message appears on the control panel display.

- **To resume the interrupted cycle:**
 1. Remove the cause of the error.
 2. Confirm the error message.
 3. If not all of the pieces have been cut through in the unfinished task, and if it is enabled, follow the above procedure.
- If the screen for resuming the unfinished task does not appear after you have removed the error, you must start the cycle again.

3.10. Recipes

3.10.1. Creation of a new recipe and modification of an existing recipe

A new recipe can only be created by modification of the loaded recipe – that is, by creating a modified version of an existing recipe and saving this modified version under a different name.

An existing recipe can be modified in the same way (the modified recipe cannot be saved under the same name).

One recipe can only be entered for one material width.

If you cut more widths, you must gradually create and load a special recipe for every width.

In the recipe setting menu, you can set up to **21 lines**, each line corresponding to a series of pieces of the same shape, cut in sequence.

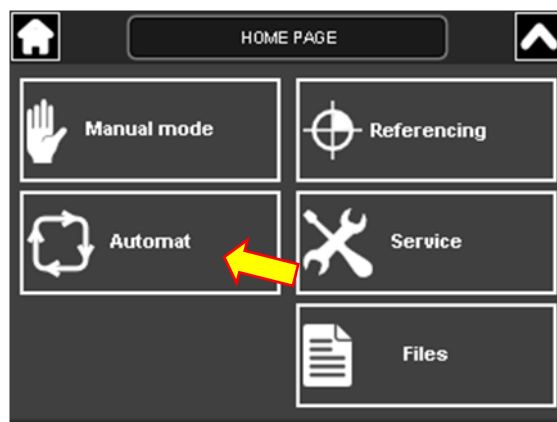
In this menu, you can also check the required lines to configure execution of a specific cutting cycle.

The created recipe can also be saved in the machine memory or an external memory – see below.

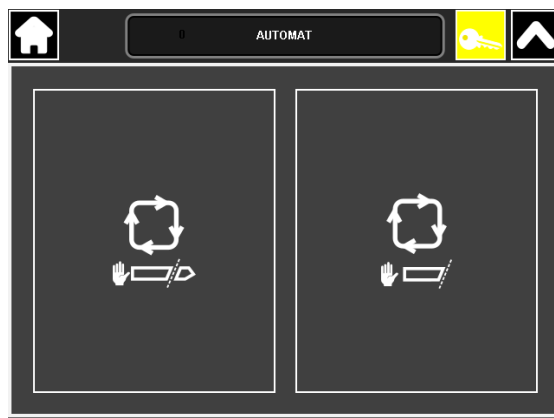
The automatic cycle always starts with the first checked nonzero line of the recipe, and proceeds stepwise by all of the following nonzero lines checked.

3.10.2. Procedure of a recipe creation (modification)

1. Switch the mode selector to the automatic mode position  and choose the option for the automatic cycle initiation on the main screen of the control software:



2. A screen appears with the options for material loading and cut-in

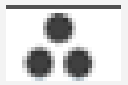


In this screen, choose the device, either as necessary or choose any option.

3. After you choose the loading and cut-in method, a screen appears for setting of a new recipe or modification of an existing one – loaded task (recipe)

Adjust either the currently loaded recipe on this screen or load a new recipe using the "Data" - see the procedure described in the section in the chapter about loading a saved recipe.



Pos.	Funkce
	Browsing between lines The browsed up line is highlighted in an orange box
	Data – icon for work with recipes (saving, loading, deleting...)
	Cut piece length
	Required number of pieces / Number of pieces already cut
	 – cut the given recipe line  – not cut the given recipe line

The values in the browsed up line can be modified directly in the line boxes.

- After setting the recipe lines, you must set the recipe configuration for the specific cutting cycle process by checking the lines which are to be executed in the cycle.

Check the lines which you want to execute in the given cycle.



Cross the lines which you do not want to execute.



- Save the created recipe – see the chapter about saving of the recipe.

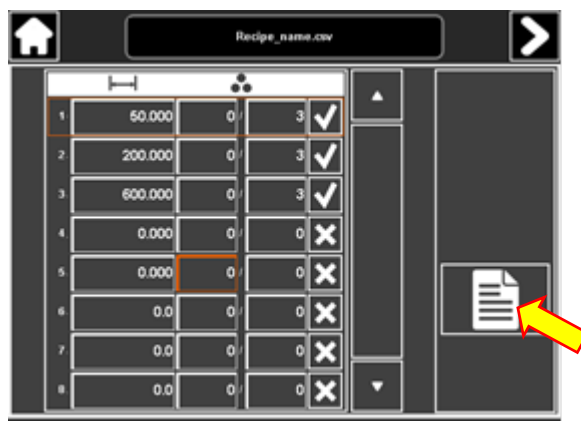
Attention!

If you do not save the modified or newly entered task (recipe), the data entered will be lost the moment when you load another recipe.

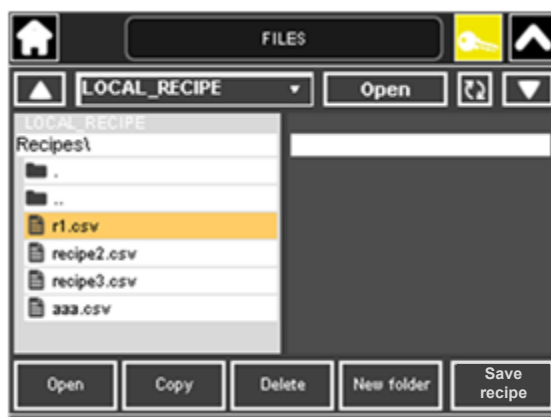
3.10.3. Saving the created recipe

If the created (modified) recipe is not saved, the entered data will be deleted when another recipe is loaded.

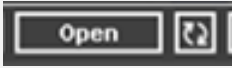
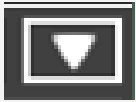
1. Compile a recipe by the procedure described in the chapter on the recipe creation.
2. In the screen with the created recipe, choose the Files option



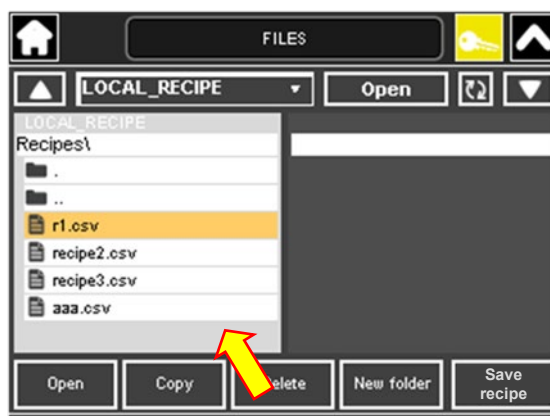
3. A screen appears for saving and loading of recipes.



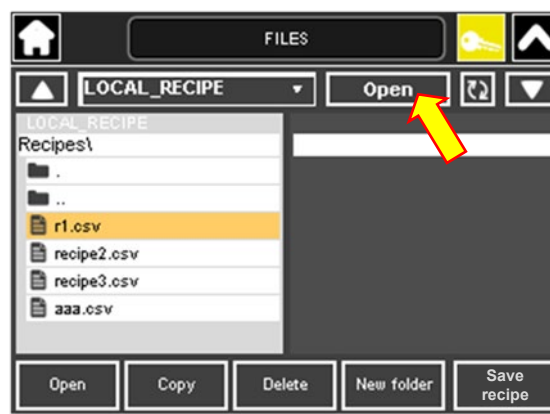
Pos.	Function
Open	open the marked folder or marked file
Copy	copy the marked folder or marked file
Delete	delete the marked folder or marked file
New folder	create a new folder
Export recipe	export the marked folder or marked file

Pos.	Function
	Pull-down menu for selection of disk (memory) for loading or saving By default, the Topline 510.350 DGANC machine only allows you to save in the internal memory of the machine.
	Open disk (memory) – selected in the pull-down menu
	Load USB By default, the Topline 510.350 DGANC machine only allows you to save in the internal memory of the machine.
	Browsing / marking a file / folder

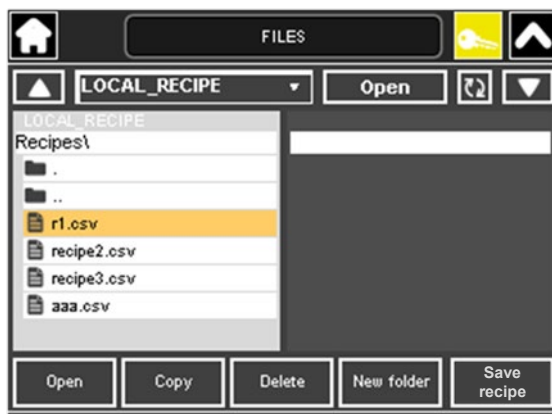
4. By touching, choose the active side of the window to view the memory in which you are to save – the screen is backlit in light grey.



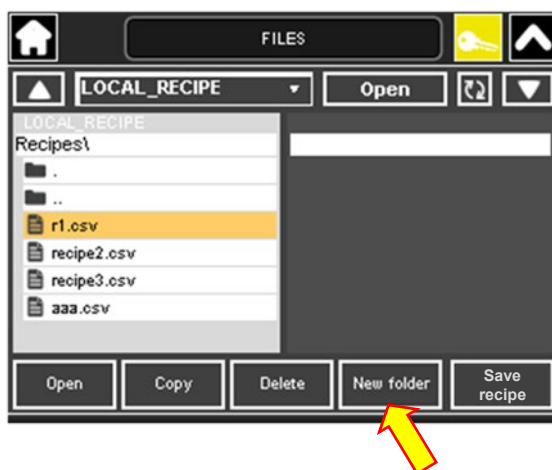
5. In the pull-down menu, choose LOCAL_RECIPE– option for saving in the machine memory.



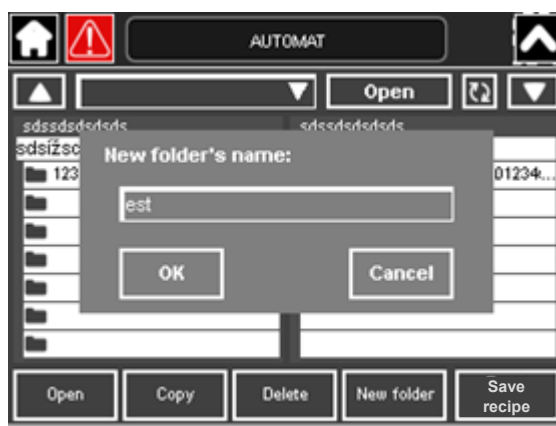
6. If the memory is not open, open it (Open – above) – its content will be displayed in the active (grey) window.



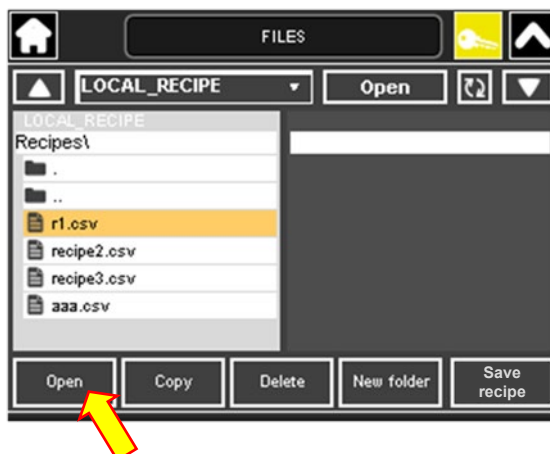
7. By means of the New folder option, you can create a folder in the memory to insert a file with a recipe sequence.



When creating a new folder, you will be asked to enter its name. The name can be entered after touching the coloured window with the keyboard on the display.

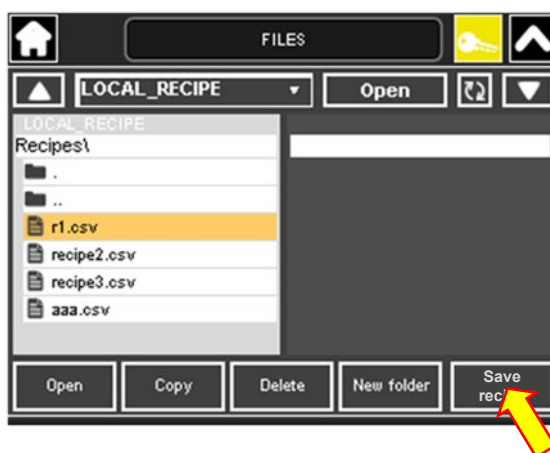


8. If saving in the folder, mark the pertinent folder; to open it, choose the Open option in the bottom left-hand corner.

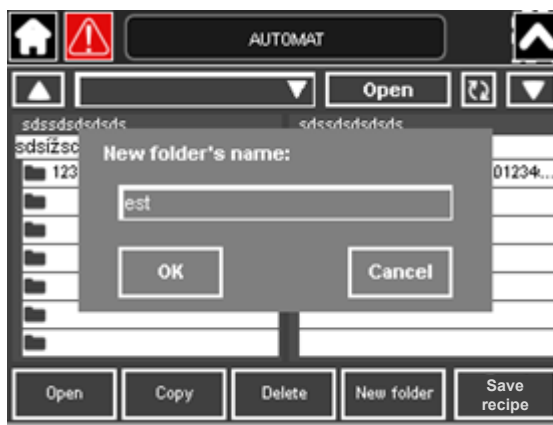


Otherwise the given sequence will be saved as a file in the memory directly.

9. Now you can save the prepared recipe in the pertinent open folder or memory by means of the Save recipe option.



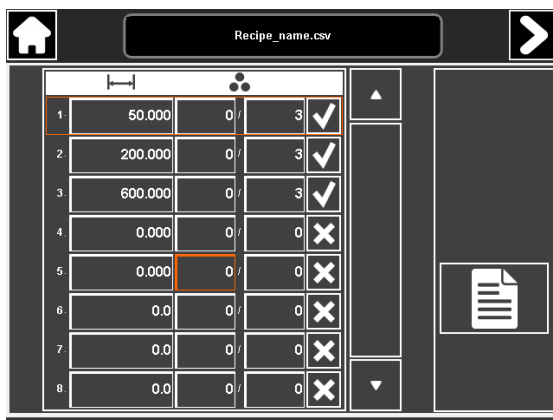
You will be asked to enter the file name under which the given recipe is to be saved.



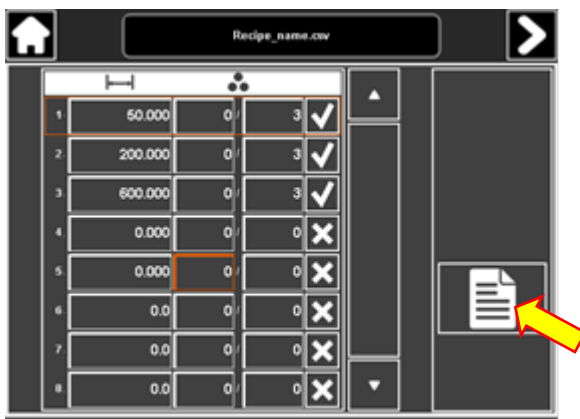
The prepared recipe will be saved in the selected place as a **file with the given name and the .csv extension**

3.10.4. Loading a saved recipe

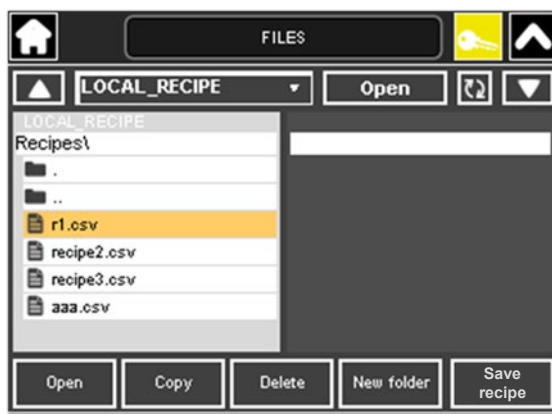
1. After the way of material loading and cut-in in the automatic cycle is chosen, a screen appears for loading a recipe, entering a new recipe or editing the loaded task (recipe)



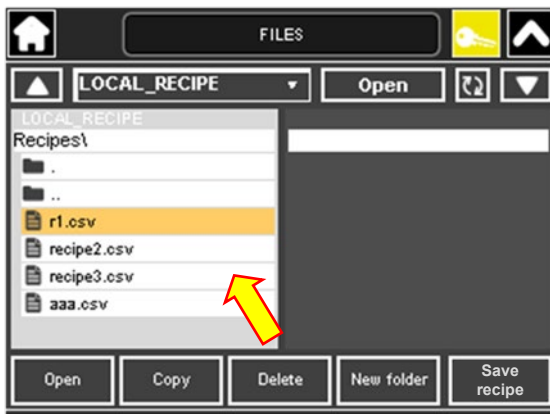
2. Choose the Files option on the screen showing the recipe



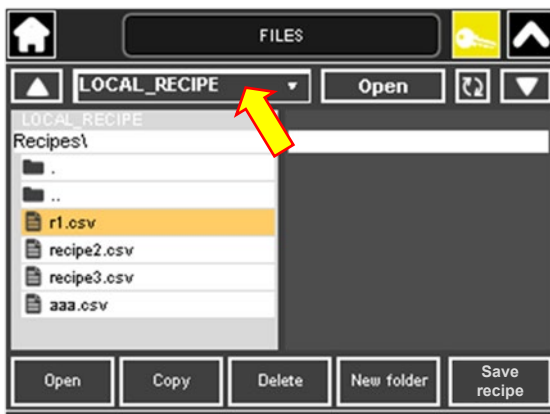
3. A screen appears for saving and loading of recipes



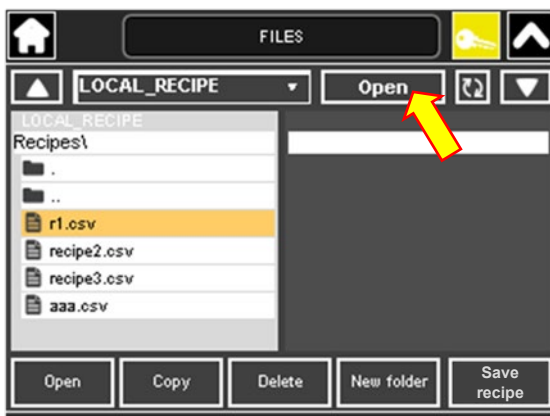
4. By touching, choose the window side which will be active to view the memory from which you want to load – the screen will be backlit in light grey



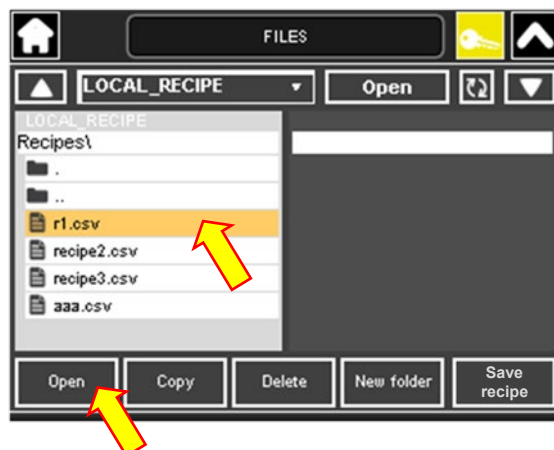
5. In the pull-down menu, choose LOCAL_RECIPE– to load from the machine memory.



6. If the memory is not opened, open it (Open – above) – its content will be displayed in the active (grey) window.

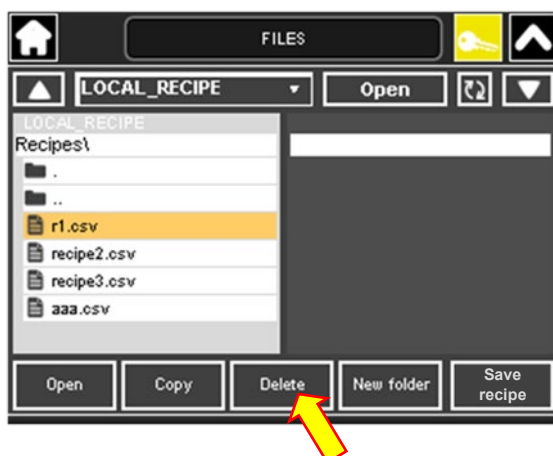


7. Browse up the pertinent recipe (.csv file) and open it with Open – left at the bottom.



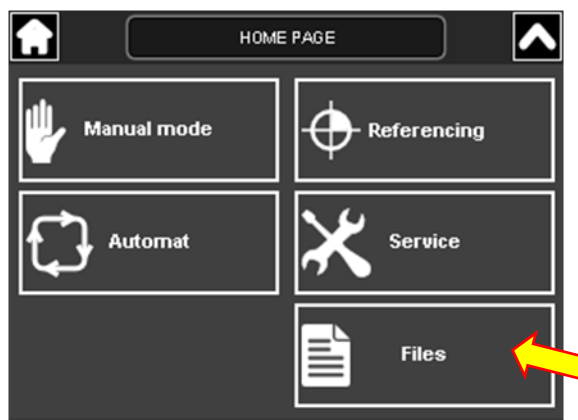
3.10.5. Deleting a recipe from the machine memory

1. Open the selected memory in which you want to delete by **analogical procedure** – see above.
2. Browse up the pertinent file or folder, mark and delete it with the “Delete” option.



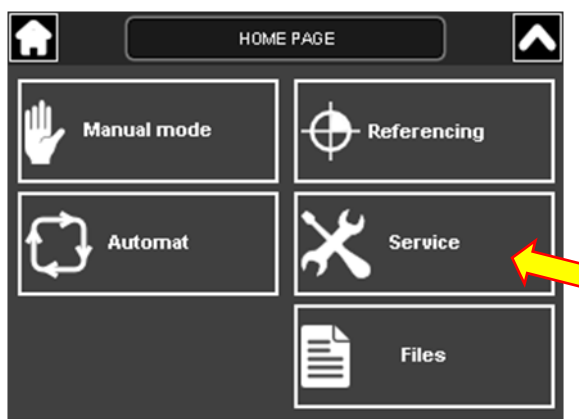
Note:

The recipe saving and loading screen can also be opened by means of the "Files" option on the main screen of the control software.

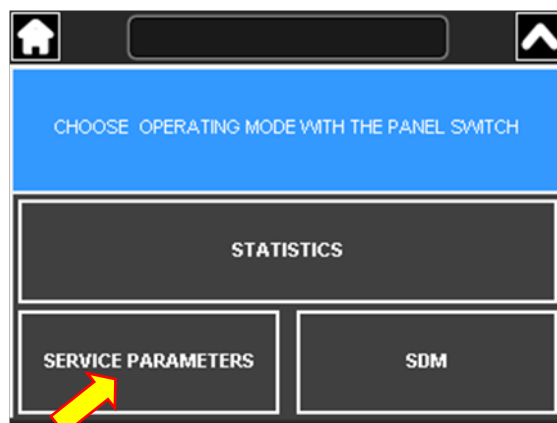


3.11. Setting of service parameters

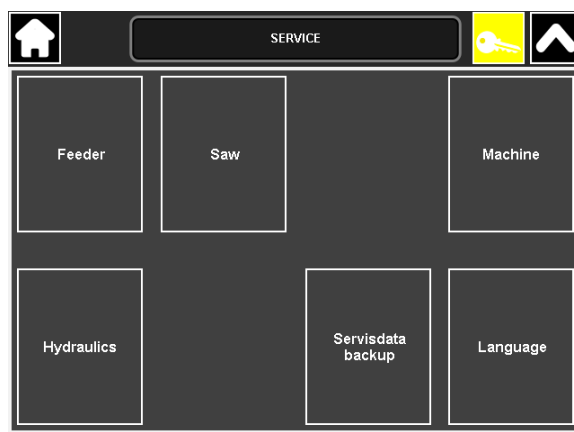
1. Choose the option for setting of service parameters.
 - in the main screen of the control software:



- or in the screen which appears on the touch display after you switch the mode selector to the "0" position.



2. A screen appears with options for selection of setting units.



3.11.1. 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.

The parameter setting options are protected by passwords at three hierarchical levels.

The password for the hierarchical level 1 is 1234

Parameters at the hierarchical level 2 can be set by a specially trained service engineer.

The password for the hierarchical level 2 is 2468

Caution! Don't modify service parameters of the hierarchical level 2 without sufficient training and sufficient knowledge or without consultation with producer! These parameters are very important for proper and safe function of the machine!

Parameters at the hierarchical level 3 can only be set by the manufacturer.

The icon for password entry appears at the top of the screen.

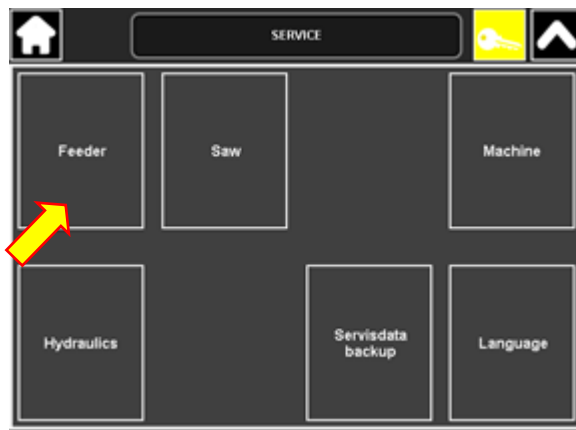


After touch, the menu for password entry opens up. The password can be entered any time during parameter setting.

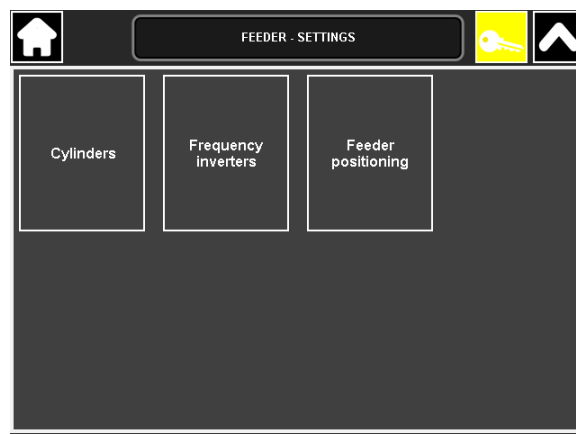
Again, you can enter the password with the keyboard activated by touching in the box for password entry.

3.11.2. Setting the feeder service parameters

1. In the screen for selection of setting units, choose the "Feeder" option.



2. The next screen contains options for setting the feeder units



3.11.2.1. Feeder cylinder

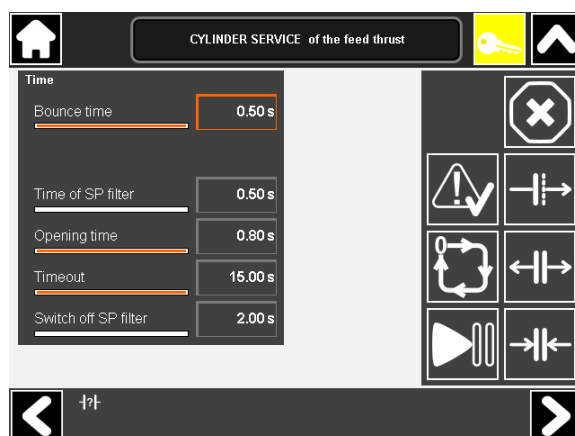


In the "Cylinders" service parameter under the service parameter settings, you can set the individual service parameters of hydraulic cylinders for:

- feeder clamping jaws (hierarchical level 2)



- upper thrust clamping jaws (hierarchical level 2)



- locking (hierarchical level 2)



Pozice	Function
Bounce time	Vice cylinder bounce-off time
Closing time	Vice closing time
Time of SP filter	Switching filter time, filter for attenuation of overswings at the limit switch during movement toward the limit switch.
Opening time	Vice opening time
Timeout	Time limit for opening and closing of the vice
Switch of SP filter	Switching filter time, filter for attenuation of overswings at the limit switch, when leaving position
	Current state display  - vice is opening  - vice is closing  - unknown state
	Error message. If no error occurs, the error message box is empty.
	Error confirmation
	Restart, value settings remain.

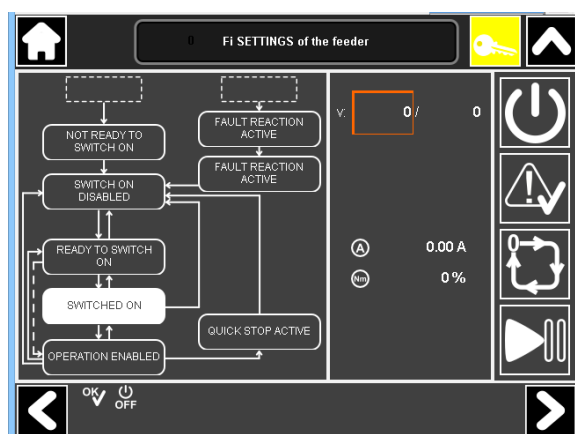
Pozice	Function
	Interruption and restarting the line.
	Stop
	Vice bounce-off
	Release vice
	Clamp vice

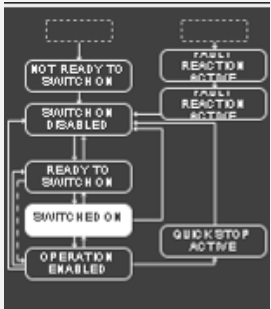
3.11.2.2. Feeder frequency converter diagnostics

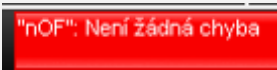


In the "Frequency converters" service parameter, parameters are displayed for diagnostics of the feeder frequency converter.

- Feeder frequency converter (hierarchical level 2)



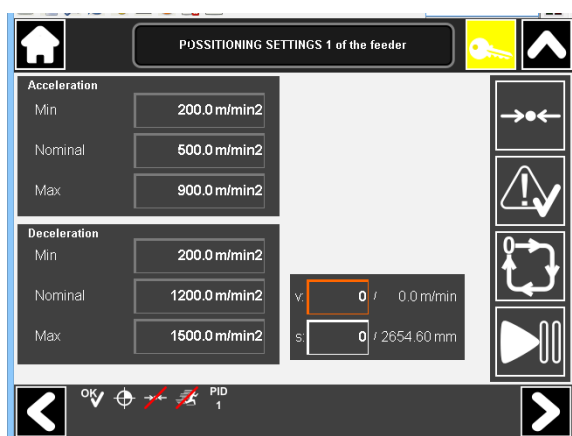
Pos.	Function
	State diagram of the current frequency converter
	• OK – start-up state of the frequency converter • Converter state: ON / OFF • Error message on the given frequency converter
	Entered / real converter speed 0.1 Hz or in rpm
	Current value of the current flowing to the motor

Pos.	Function
 100.0%	Current value of the motor torque, 0 to 100 %
	Error message. If no error occurs, the error message box is empty.
	Switch on / off the converter
	Error confirmation
	Restart, value settings remain
	Converter stop and restart

3.11.2.3. Feeder positioning parameters setting

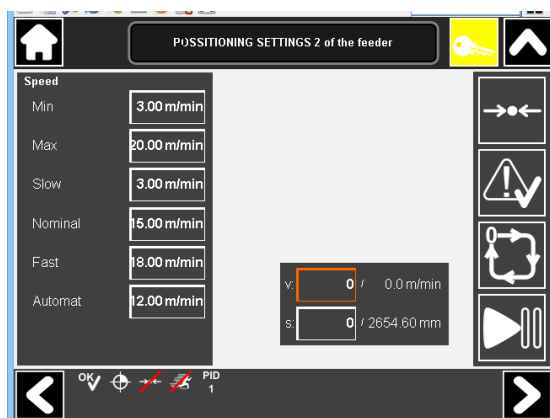


- Screen no.1 (hierarchical level 2)



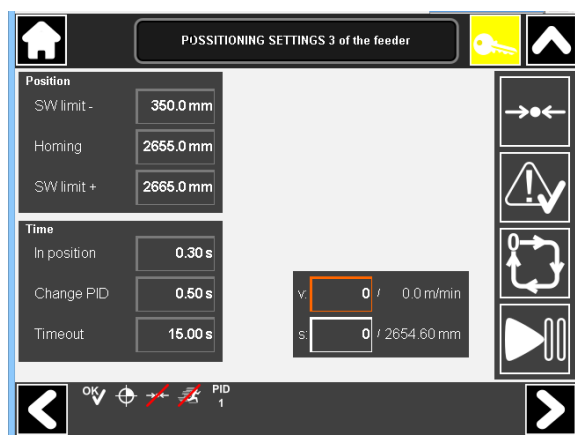
Pos.	Function
Acceleration Min 2 100.0 m/min² Nominal 2 1000.0 m/min² Max 2 2000.0 m/min²	Setting of unit movement acceleration in the given axis
Deceleration Min 2 100.0 m/min² Nominal 2 1000.0 m/min² Max 2 2000.0 m/min²	Setting of unit movement deceleration in the given axis

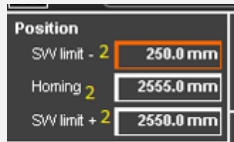
- Screen no. 2 (hierarchical level 2)



Pos.	Function
Speed Min 2 1.00 m/min Max 2 15.00 m/min Slow 2 5.00 m/min Nominal 2 15.00 m/min Fast 2 15.00 m/min Automat 2 10.00 m/min	Setting of positioning speed parameters - Minimum speed - Maximum speed - Low speed - Nominal speed - High speed - Speed in the automatic mod

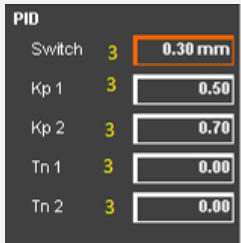
- Screen no. 3 (hierarchical level 2)



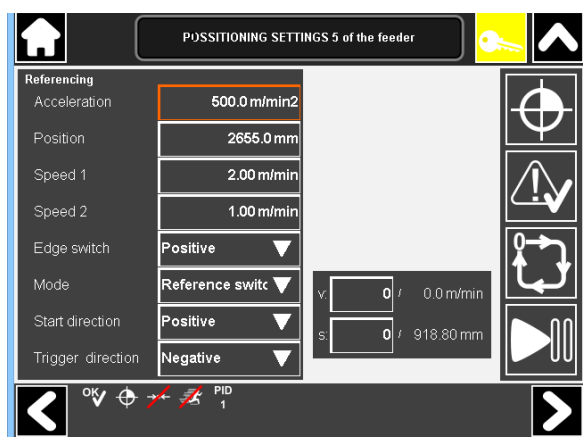
Pos.	Function
	Setting of minimum allowed unit position - Unit reference position - Maximum allowed unit position
	- The "in position" time value is the time for which the position must be in tolerance to finish the movement. - The "Change PID" time value is without function. - The "Timeout" time value is the time after which the regulator parameters are switched; after the double of the preset value, an error is reported, positioning is impossible.

- Screen no. 4 (hierarchical level 3)



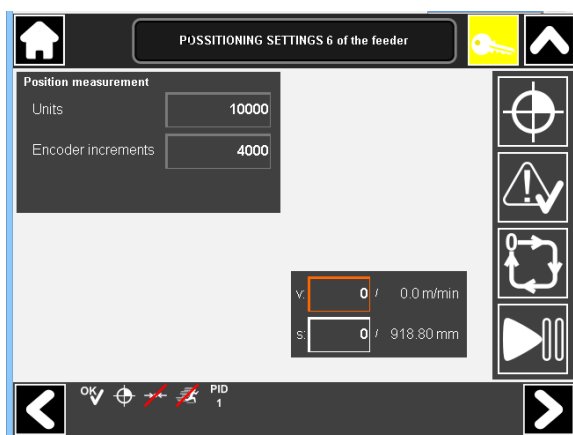
Pos.	Function
	PID regulator - Switch-over – position tolerance after switch-over of parameters - KP1 – parameter, proportional component 1 - Tn1 – parameter, integration component

- Screen no. 5



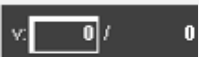
Pos.	Function
Acceleration (hierarchical level 2)	Unit acceleration at reference
Position (hierarchical level 2)	Unit reference position
Speed 1 (hierarchical level 2)	Speed at search for reference switch
Speed 2 (hierarchical level 2)	Speed of running from reference position
Edge switch (hierarchical level 3)	Edge at which movement stops during search for reference switch
Mode (hierarchical level 3)	Reference type • Directly to the reference switch • To the limit switch
Start direction (hierarchical level 3)	Feeder direction at referencing start • Positive – from the saw • Negative – to the saw
Trigger direction (hierarchical level 3)	Feeder starting direction • Positive – from the saw • Negative – to the saw

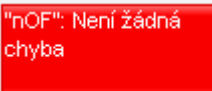
- Screen no. 6 (hierarchical level 3)



Pos.	Function
Units	Position measurement – used for measurement correction
Encoder increments	

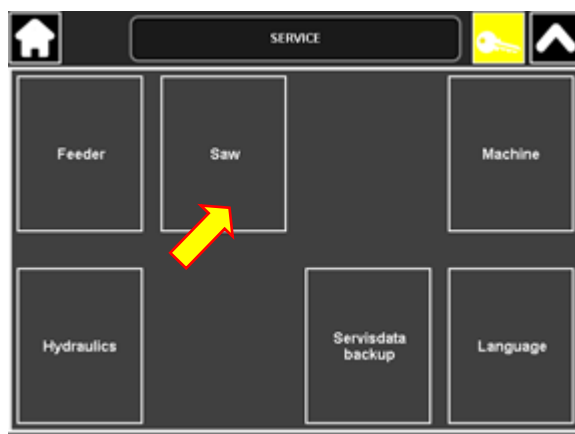
Meaning of other symbols on the screens for positioning:

Pos.	Function
	Unit prepared
	The unit is / is not referenced
	The unit is / is not in position
	Currently used PID regulator settings
	Entered / real unit speed
	Entered / real unit position
	Unit travel to position
	Error confirmation

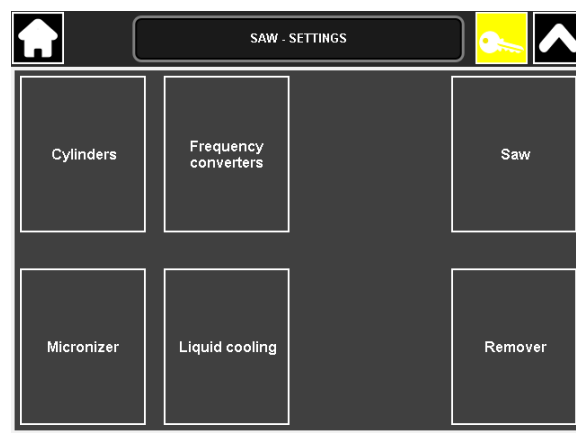
Pos.	Function
	Reset
	Stop and restart
	Error message. If no error occurs, the error message box is empty.

3.11.3. Setting of the saw service parameters

- In the screen for setting unit selection, choose the "Saw" option



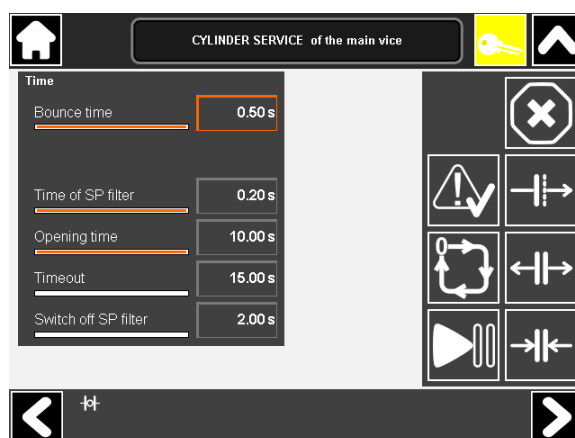
- The following screen contains options for the saw unit settings.



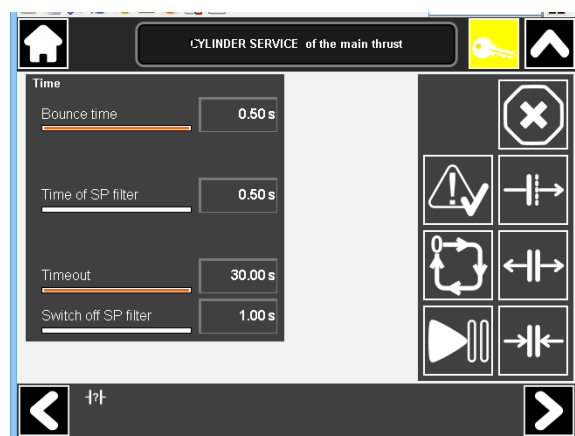
3.11.3.1. Service parameters of the saw hydraulic cylinders



- Screen no.1 – service of the cylinder of the main vice (hierarchical level 2)



- Screen no.2 - service of the cylinder of the main upper clamping (hierarchical level 2)



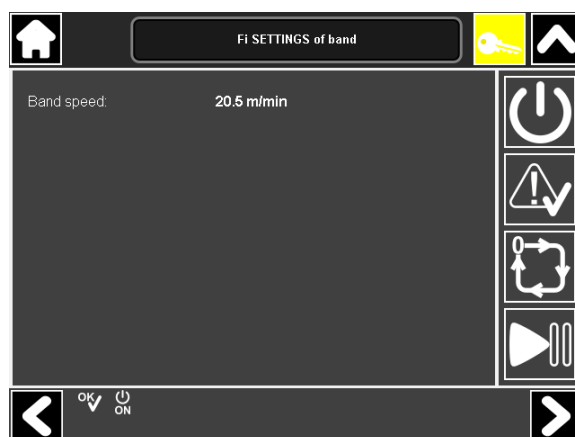
The description of the cylinder screens applies to all screens for setting of cylinder service parameters:

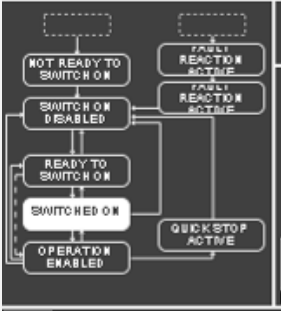
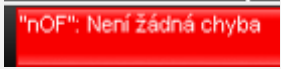
Pozice	Function
Bounce time	Vice bounce-off time
Time of SP filter	Switching filter time, filter for attenuation of overswings at the limit switch, during movement toward the limit switch
Opening time	Time limit for the vice opening
Timeout	Time limit for the vice opening and closing
Switch off SP filter	Switching filter time, filter for attenuation of overswings at the limit switch, during leaving position
	Current state display  - is opening  - vice is closing  - unknown state
	Error message. If no error occurs, the error message box is empty.
	Error confirmation
	Restart, value settings remain.
	Interruption and restarting the unit
	Stop
	Bounce-off
	Release
	Clamp

3.11.3.2. Diagnostics of the saw frequency converters (hierarchical level 2)

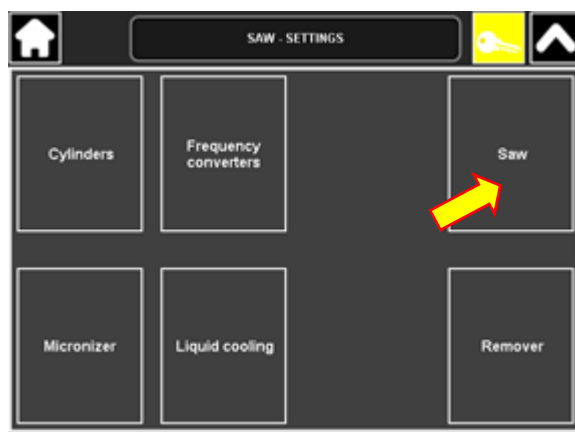


The "Frequency converters" service menu under the saw settings enables display of the individual service parameters of the frequency converters for setting the band speed and arm rotation speed.

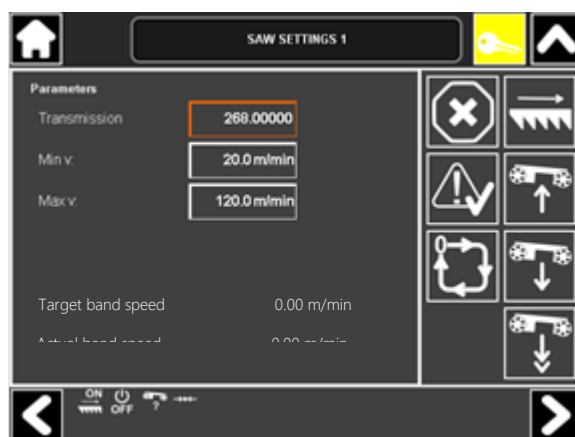


Pos.	Function
	State diagram of the current frequency converter.
	Converter state: ON / OFF OK – frequency converter start-up state Error message at the given frequency converter
	Entered and real speed of the frequency converter 0.1 Hz or in rpm
	Current value of the current flowing to the motor
	Current value of the motor torque, 0 to 100 %
	Error message. If no error occurs, the error message box is empty.
	Switch on / off the converter
	Error confirmation
	Restart, value settings remain.
	Converter stop and restart

3.11.3.3. Saw settings



- Screen No.1



Pos.	Funkce
Transmission (hierarchical level 3)	Value for conversion of the detected motor frequency to speed in m/min
Min.v: (hierarchical level 2)	Minimum band speed Minimum recommended value Min v = 15; at a lower speed, there is a risk of the band stopping in the material.
Max.v: (hierarchical level 2)	Maximum band speed Maximum recommended value Max v = 90
Target band speed	Requested (set) band speed
Actual band speed	Current band speed

- Screen no.2

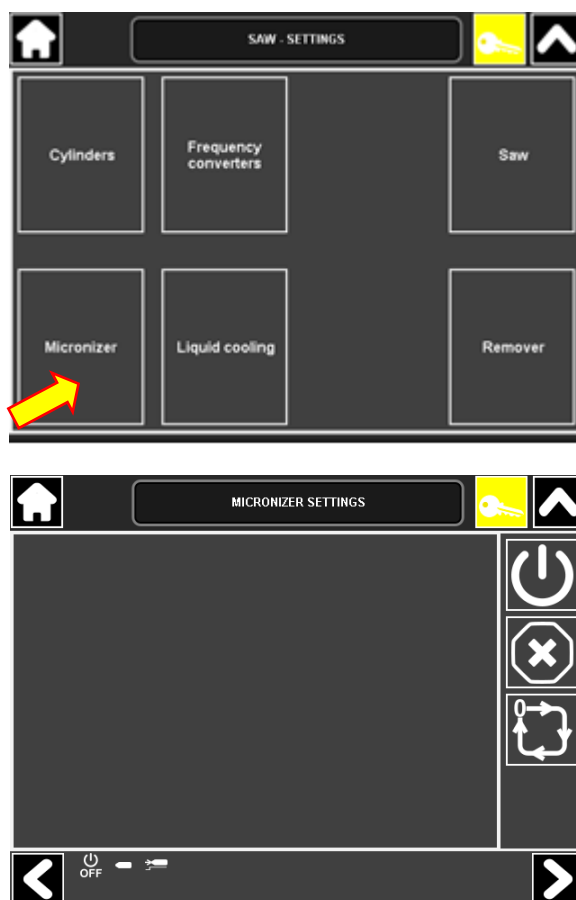


Pos.	Funkce
Min. (hierarchical level 3)	Minimum band speed Minimum recommended value Min v = 15; at a lower speed, there is a risk of the band stopping in the material.
Max. (hierarchical level 3)	Maximum band speed Maximum recommended value Max v = 90
Max. AI (hierarchical level 2)	Maximum range of the potentiometer for the band speed. Set by the manufacturer Change the given setting in consultation with the manufacturer only.

Meaning of other symbols in the screens for saw band settings:

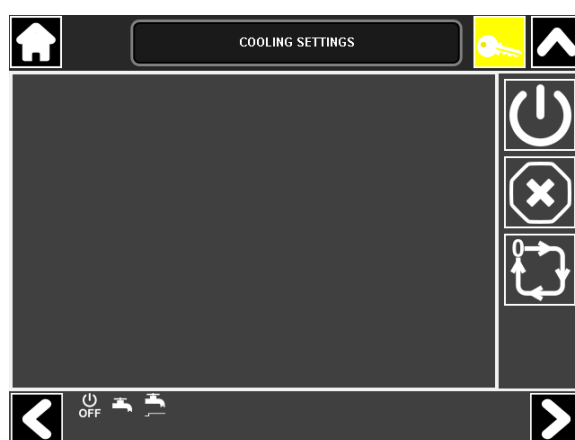
Pos.	Function
	The saw band is / is not rotating
	The unit is / is not in position
	Start the saw band
	Stop the band
	Error confirmation
	Restart, value settings remain
	Arm upward movement. The button must be pushed continually during movement. If you release the button, the movement stops..
	Arm downward 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.

3.11.3.4. Setting of Micronizer (hierarchical level 2)



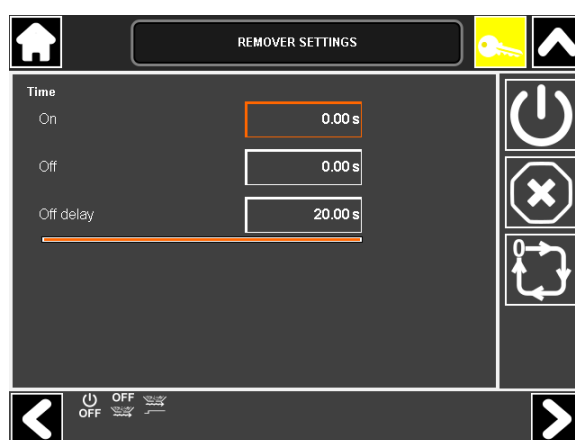
Pos.	Funkce
	Micronizer state: ON or OFF
	Micronizer is set without timing, continues to run.
	Switch on/off the Mikronizer
	Stop
	Restart, value settings remain.

3.11.3.5. Setting of the cooling (hierarchical level 2)



Pos.	Function
On	Cooling on + set timing
Off	Cooling off + set timing
	Cooling state: ON or OFF
	Cooling pump on state
	Cooling setting indication
	Switch on/off the cooling
	Stop
	Restart, value settings remain.

3.11.3.6. Chip remover settings - optional accessory (hierarchical level 2)

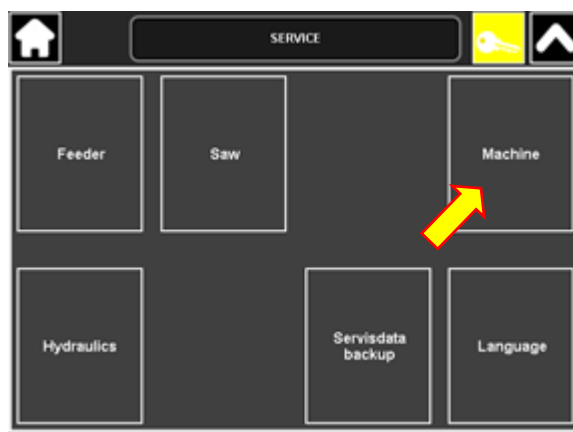


Pos.	Function
Pulse length	Time, for which the remover motor is on
Perioda	Time duration of the interrupted cycle of chip removal
Off delay	Time in which the chip removing process is finished after the last cut is completed
	Remover state: ON or OFF
	Remover on state
	Remover setting indication
	Switch on/off the cooling
	Stop

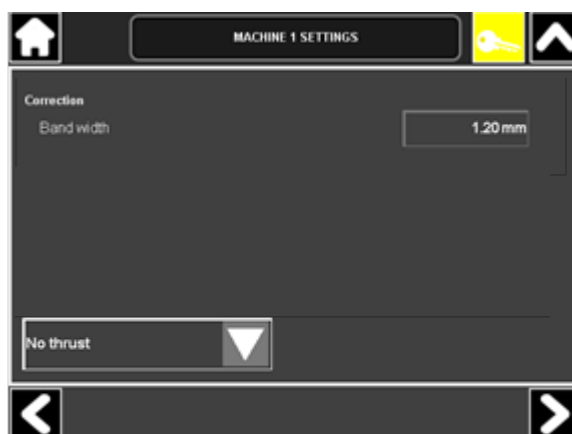
Pos.	Function
	Restart, value settings remain.

3.11.4. Setting of the machine service parameters

On the screen for selection of setting units, choose the "Machine" option"



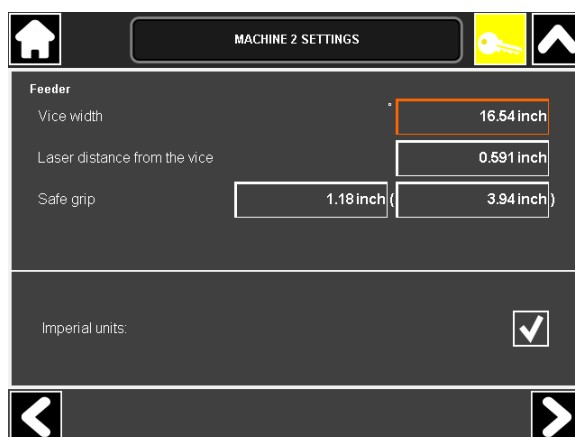
- Screen no.1



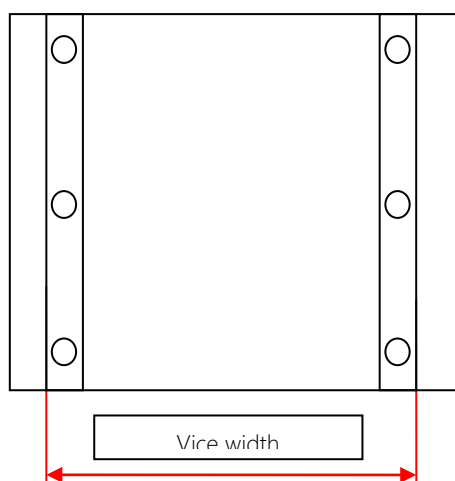
Pos.	Funkce
Correction	
Band width	Band width correction (cut-through correction) The parameter has an effect on the cut length precision! Enter the real cut-through width.
Pull-down menu (hierarch. level 1)	

Pos.	Funkce
No thrust	Upper thrust disabling
1.Vice 2. Thrust	First the main vice is clamped, then the thrust.
1. Thrust 2. Vice	First the upper thrust is clamped, then the main vice.
If the upper thrust is installed on both the feeder and the main vice, the option applies to both of the thrusts simultaneously.	

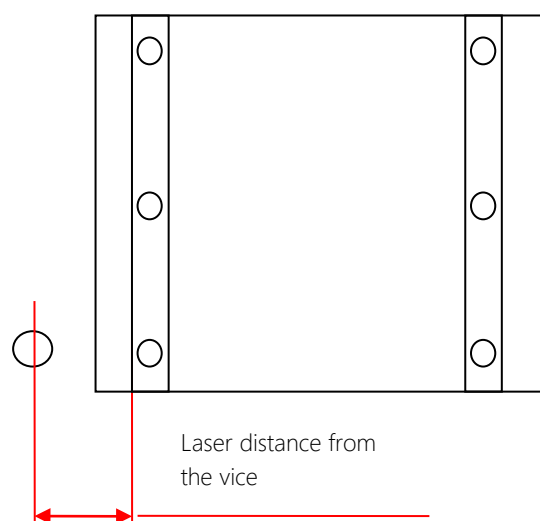
- Screen no.2



Pos.	Funkce
Feeder	
Vice width (hierarchical level 2)	Feeder vice jaw width See Pict. 1
Laser distance from the vice (hierarchical level 2)	Distance of the laser beam from the nearest edge of the feeder jaw See Pict. 2
Safe grip	Minimum length beyond which the feeder vice can clamp the material safely..
	30.0 mm - without upper clamping 100.0 mm - using upper clamping
Imperial units	Units selection - the selection is checked – Inches - the selection isn't checked - mm



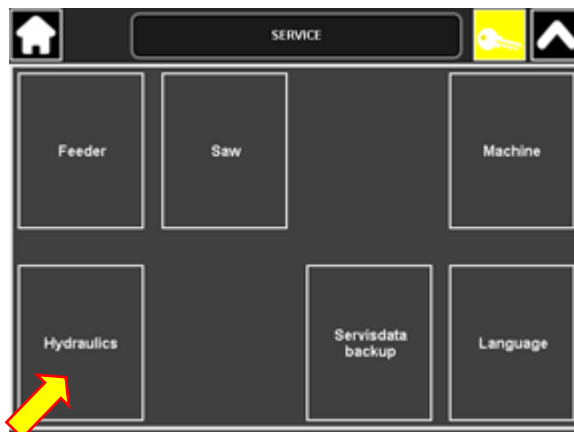
Picture 1
(for illustration)



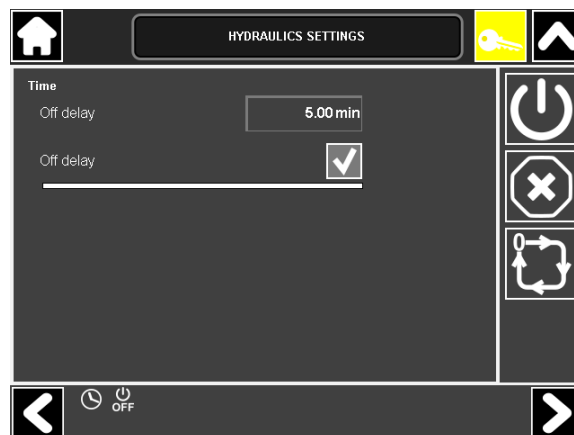
Picture 2
(for illustration)

3.11.5. Setting the hydraulic service parameters

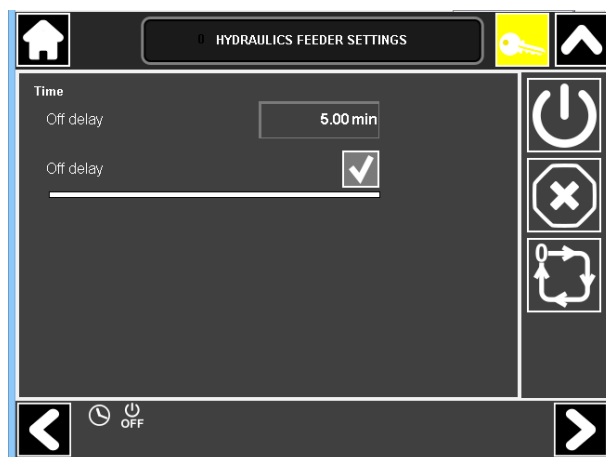
- In the screen for setting units selection, choose the "Hydraulics" option "



- The screen appears for setting of hydraulic parameters. (hierarchical level 2)
- Screen No. 1

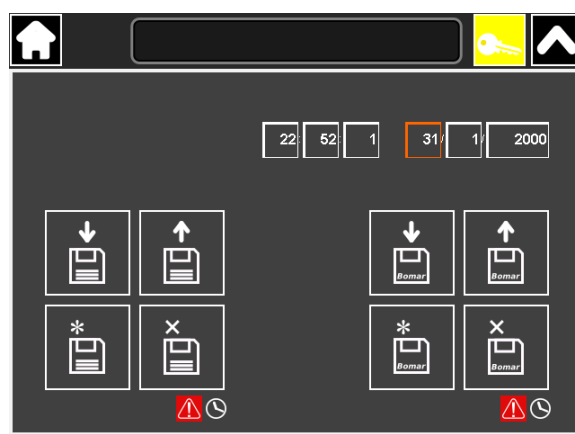
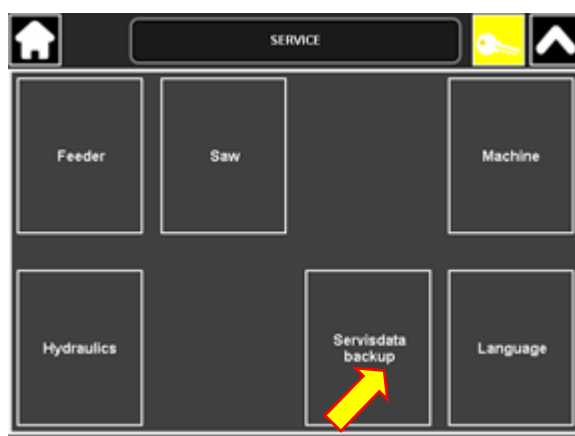


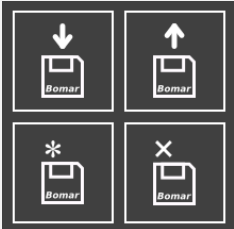
- Screen No. 2



Pos.	Function
Off delay	Switch-off time of the hydraulic unit. If none of the following operations is executed for the preset time: - hydraulic cylinder movement - cut - positioning The hydraulic unit is switched off automatically in any of the working modes (manual, semiautomatic, automatic). After the hydraulic unit is switched off, the vice jaws may be released – the saw evaluates the release of the jaws as an error. If the hydraulic unit is switched off during the automatic mode, the automatic cycle must be resumed after the error message. In as much as the machine still remembers the material position even after spontaneous release of the vices (the operator must not release the vices!), the automatic cycle can be resumed by starting of the automatic with manual loading without cut-in.

3.11.6. Saving of service settings

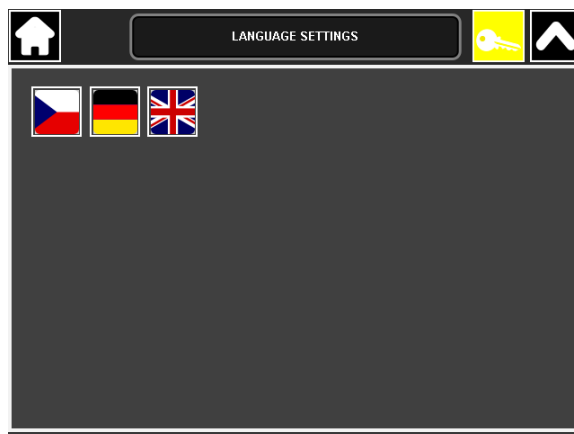


Pos.	Funkce
	Date and time
	Factory service data backup
	Free service data backup
	Save service parameters (hierarchical level 2)
	Load service parameters (hierarchical level 2)
	Create service parameters
	Delete service parameters

3.11.7. Language selection



In the "Language" service parameter, it is possible to set language mutations for the device control.



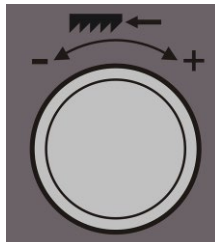
3.12. Band saw adjusting

3.12.1. Adjusting of the band guiding cube

It is helpful to position the guide cube as close as possible to the material.

The movable band guiding cube is connected with the movable jaw of the main vice so it is adjusted automatically.

3.12.2. Cutting speed adjusting



Speed of the saw band is possible change from **15 to 90 m/min**. You can effect to adjusting speed of the saw band following.

Use the frequency convertor (position on control panel) to adjust requested speed of the saw band. You can see the speed on display. Band speed is displayed on the screen on control panel) during one semi-automatic cycle.

3.12.3. Adjustment of pressure to the cut

The band saw is equipped with cutting pressure regulation on the both guiding cubes.

Pressure adjusting is performed with governing valve (position on control panel). The pressure to the cut is displayed on the cutting pressure manometer (position on control panel) .

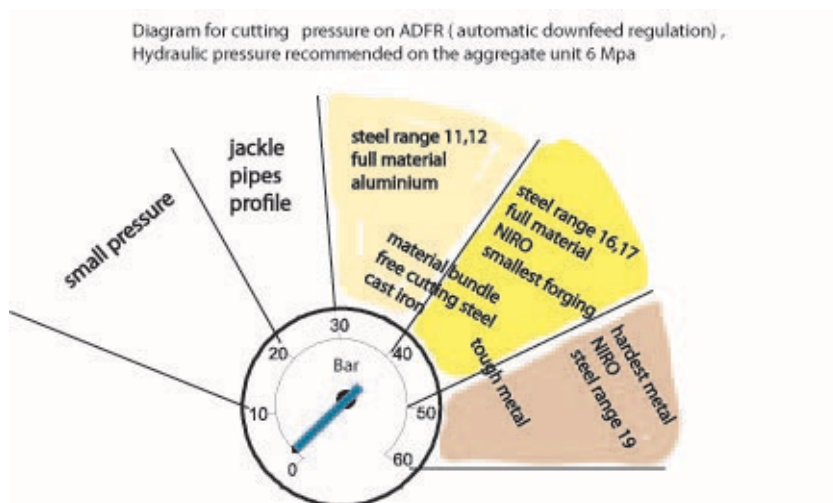


Notice:

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.

Lower pressure to the cut – turn the wheel against the clock's direction.

Higher pressure to the cut – turn the wheel to the clock's direction.



3.12.4. Speed adjustment of the arm lowering



Set the speed of the arm lowering to the cut by control 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.

Note:

Position of the guiding cubes is secure by the limit switch. The limit switch is activated after switch lever hits the listel.

2. Move the left part of the guide apparatus so that the left guide cube edge is as close to the cut material as possible.

3. Tighten the lever of the gib and check the guide cube setting for possible collision with binding table or vice jaw.

3.12.5. Saw arm upper position adjustment

It is possible to set a starting position of the arm above a material before a start of a cut using the device for measuring of the height of the arm.

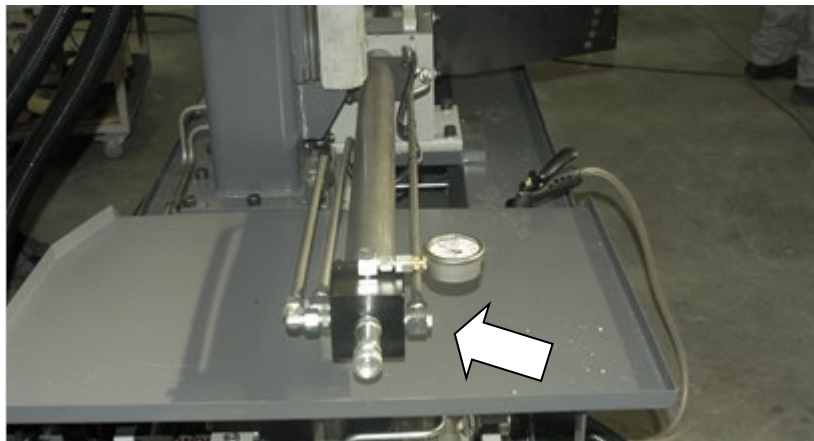
Process of setting:

1. Take the arm using the button **Arm up** into position over material.
2. Insert material in main vice
3. Carefully pull off to the arm of the material using the button **Arm down.**, or **Rapid stop** arm 5-10 mm above the cut material.
4. Pressing the **START** button to start cutting material
5. Band saw cut material to the lower position of the arm and returned the arm to the upper arm position in which the START button has been pressed (band saw the position programmatically remember - stop upper arm)



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

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

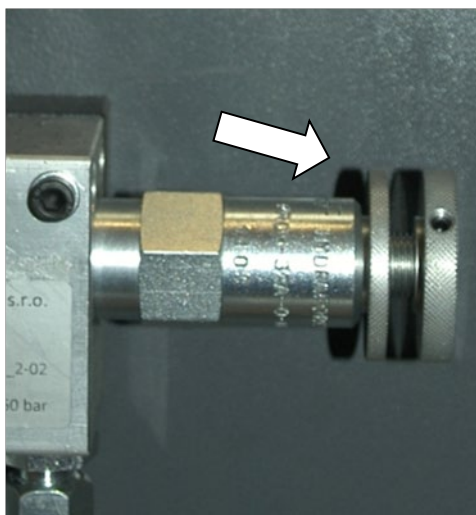


Warning !

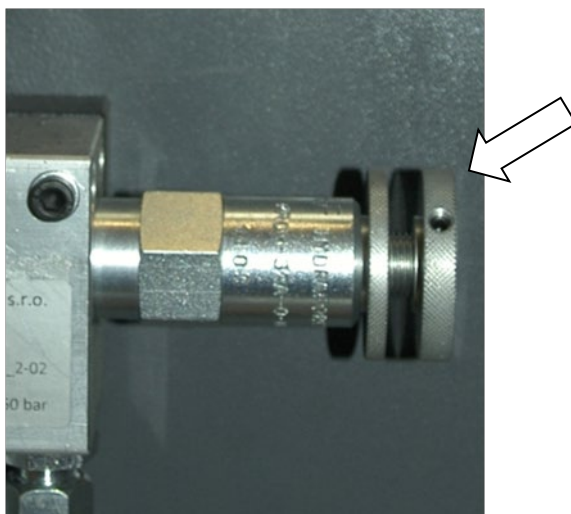
*Because the hydraulic pressure equipment pressure **2,2 – 4 MPa**, loosen the screws with caution!*

Instruction for adjustment of clamping pressure

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



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.

3.12.7. 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 side of switch board.



1.1.1. Halogen lighting of working area (optional accessory)

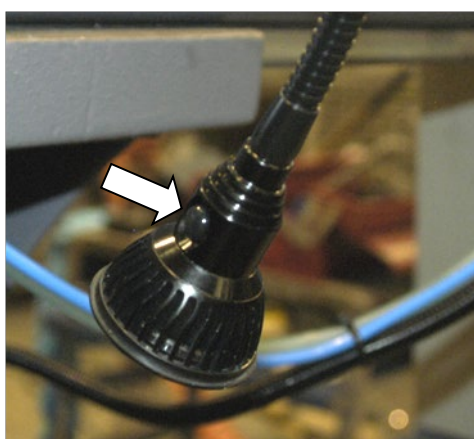
Light the working area of the machine with natural light and helps to facilitate cutting with a band saw.

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 halogen light :

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

Package includes: lighting unit, flexible arm, holder for attachment to the machine, transformer, wiring.

3.12.8. Brush adjustment

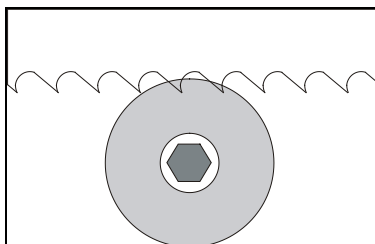
The brush for chip removal from the saw band influences cutting durability, saw band lifetime and wheels lifetime, hard metal guides and finally the cut accuracy. Brush adjustment must be checked every shift.

1. Dismount the cover of the brush.



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

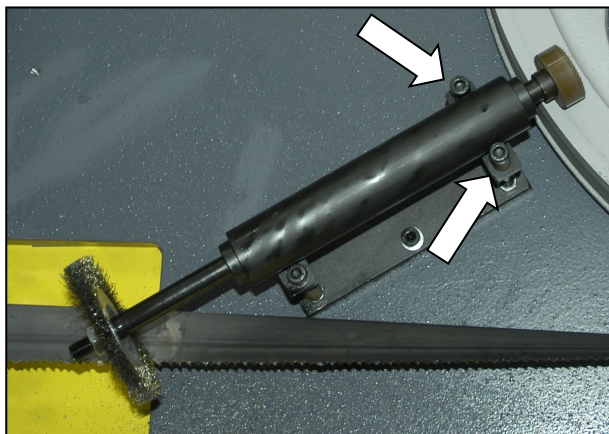
The brush must touch with teeth of the saw band.



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!

3.13. 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!

3.13.1. Handling agent selection

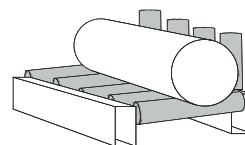
- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

3.13.2. 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!



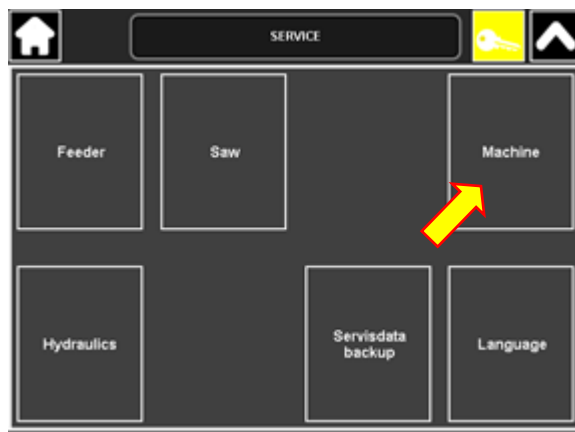
3.13.3. Hydraulic fixture bundles (Top clamping - auxiliary vice) – optional accessories

To better maintain the workpiece in the vise we recommend using of **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.

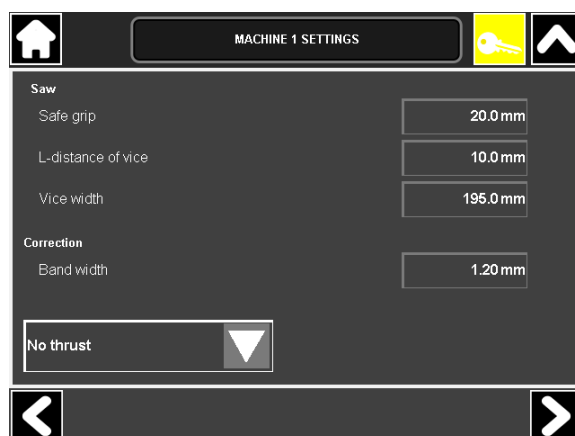
In manual mode it is possible to control the top clamping manually – by means of buttons at control panel.

In automatic cycle the jaws are controlled automatically.

The order for clamping of horizontal and vertical vices is in accordance with preset which was made in service parameters:



- Screen no.1



Pull-down menu (hierarch. level 1)		
No thrust		Upper thrust disabling
1.Vice	2. Thrust	First the main vice is clamped, then the thrust.
1. Thrust	2. Vice	First the upper thrust is clamped, then the main vice.
If the upper thrust is installed on both the feeder and the main vice, the option applies to both of the thrusts simultaneously.		

4. **Údržba stroje/ Wartung der Maschine/ Machine service**

4.1. Saw band dismantling

4.1.1. Saw band dismantling – mechanical saw band stretching

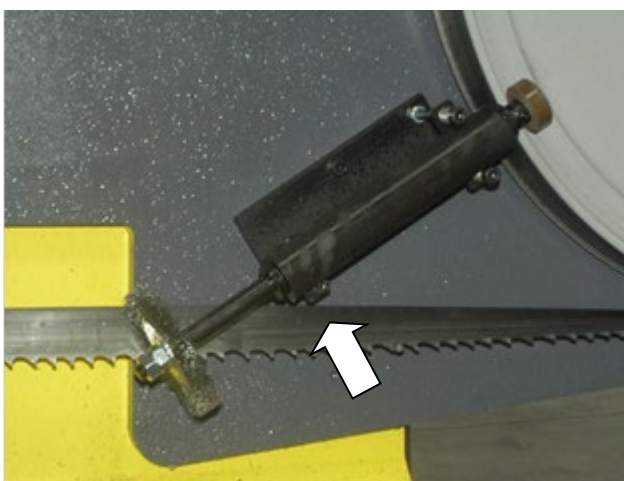
4. Lift the saw arm to maximum position.
5. Disconnect the machine from electricity, it secures, that the machine can't be switched on randomly



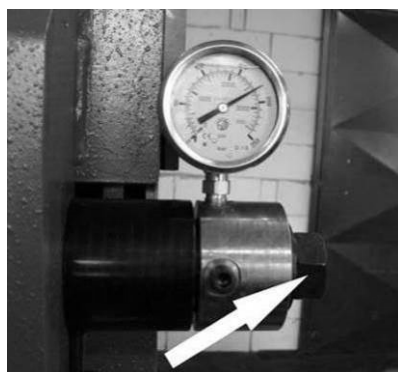
6. Open the covers of both driving wheels.



7. Dismantle left protective cover of the band (arrow). Cover is fastened by screws.



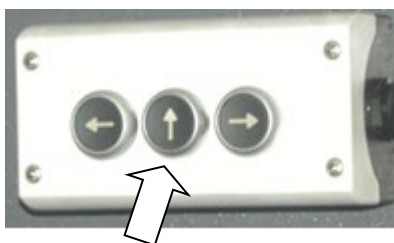
8. Release the screw holding the brush. Turn the brush to the side



9. Release the saw band stretching by means of screw (arrow), until it is possible to remove the band off the wheel.
10. Pull down the band from the wheels.
11. Pull up the saw band from the guiding cubes.

4.1.2. Saw band dismantling – hydraulic saw band stretching

12. Switch switcher DEBLOCK into position „1“ - the buttons for the saw band tensioning arms are active.



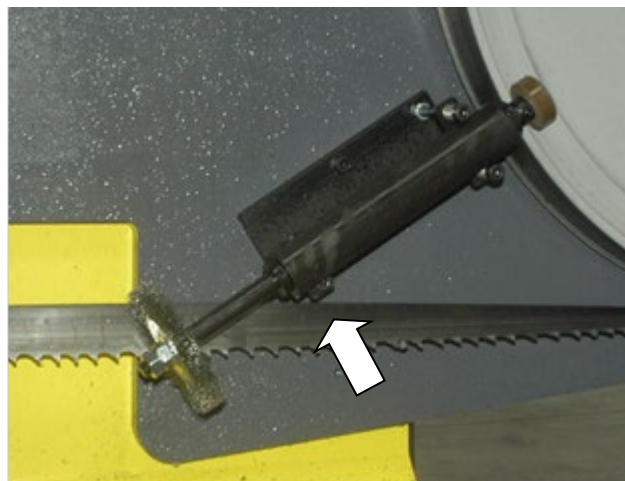
13. Raise the arm to the top position with the middle button.



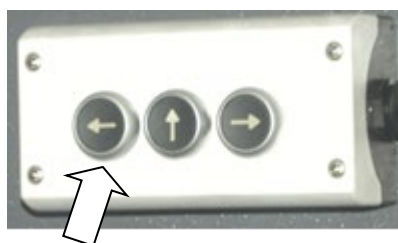
14. Open the covers of both driving wheels.



15. Dismantle left protective cover of the band (arrow). Cover is fastened by screws..



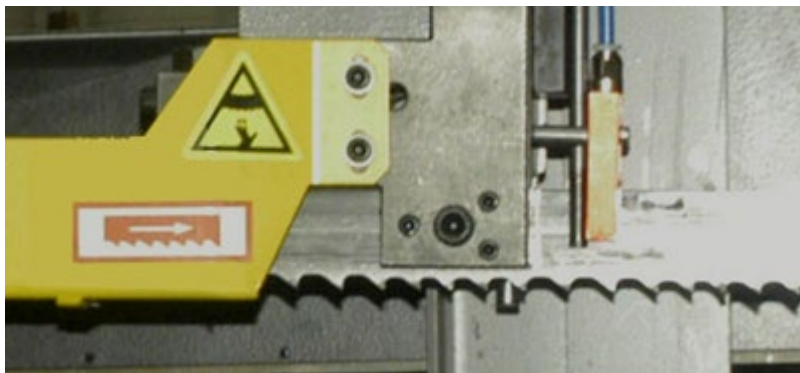
16. Release the screw holding the brush. Turn the brush to the side



17. Use the button on saw arm to loosen the saw belt.
18. Pull down the band from the wheels.
19. Pull up the saw band from the guiding cubes.

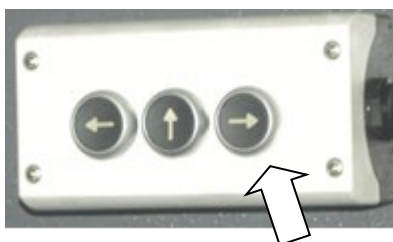
4.2. Saw band installation

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. Stretch the saw band by means of the screw, that the band did not falls from wheels.

If the machine is equipped with a hydraulic tensioning belt, stretch belt with button.



5. Install yellow protective cover of the band.
6. Move the brush to the saw band. Tighten the securing screw.
7. Close the covers of both driving wheels.
8. Saw band installation is finished.

4.3. 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. Stretch the saw bands according to the selected saw band and the band saw. Keep the recommendation of your manufacturer.

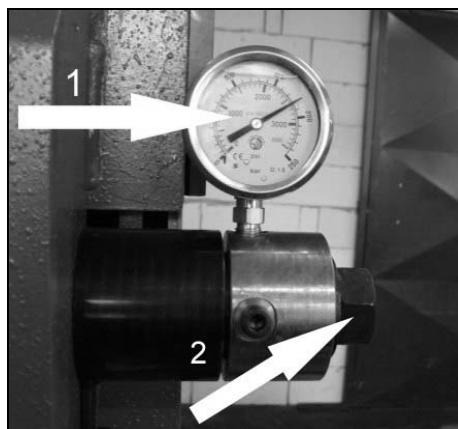
Pilový pás Sägeband Saw band	Napětí pilového pásu Sägebandspannung Blade tension	Napětí pilového pásu PSI (pro Tenzomat) Sägebandspannung PSI (für Tenzomat) Blade tension PSI (for Tenzomat)
20 x 0,9 mm	160 N.mm ⁻²	23 500
27 x 0,9 mm	180 N.mm ⁻²	26 500
34 x 1,1 mm	210 N.mm ⁻²	30 500
41 x 1,3 mm	240 N.mm ⁻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

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.

Tighten the saw band by means of the TENZOMAT on the optimal value (table is on the Tenzomat).

4.3.1. Mechanical saw band stretching

- Switch on the hydraulic aggregate after the saw band installation check the saw band stretching on the manometer (arrow 1).

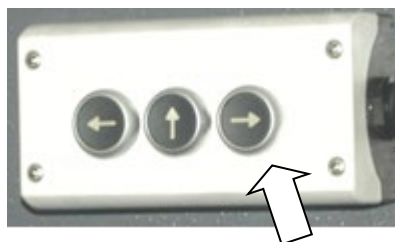
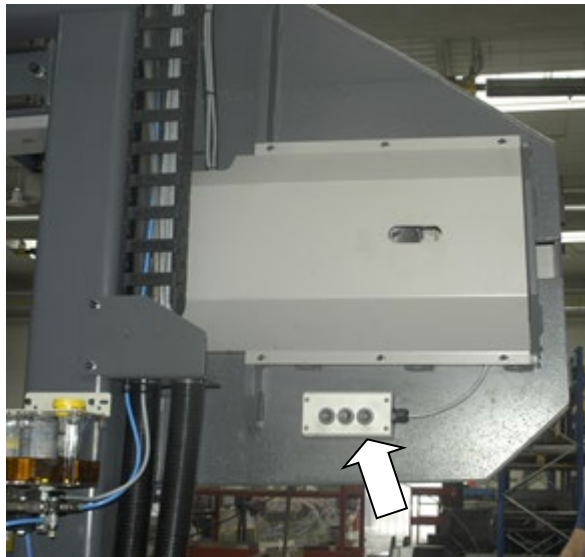


- Use the screw (arrow 2) to stretch the saw band until it is stretched to the recommended value.

4.3.2. Hydraulic tensioning of the saw band

If the band saw is equipped with hydraulic tightening of the saw band, the band tightening value is adjusted by the manufacturer directly.

Push the button for saw band stretching until the sawband isn't stretched.



4.3.3. Saw band run inspection

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

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

The saw band falls off the wheel – the saw band and protective cover can be damaged.

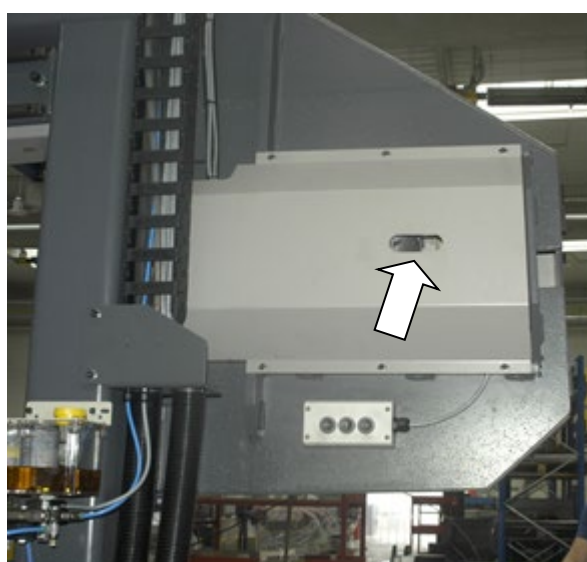
The saw band runs on the wheel rim – The saw band and wheel rim can be damaged



1. Check, if the saw band is right in the guiding cubes..
2. Switch on the saw band drive and then after 10 seconds switch off saw band drive. If the saw band drive is not possible to switch on, set the limit switch of the saw band stretching.
3. Switch off the main switch.
4. Open cover(s) of the wheels and check position of the saw band on the both wheels.
 - If the distance between backside of the saw band and the offset wheel is **1 mm**, setting is right.
 - If the distance is bigger than **1 mm**, or the saw band is on the offset of the wheel, set the saw band.
5. Close cover of the saw band.

4.3.4. Saw band run setting

Saw band run is set with screw (arrow) in the stretching cube on the saw arm. Right distance rear part of the saw band from wheel rim is **1 – 3 mm**.

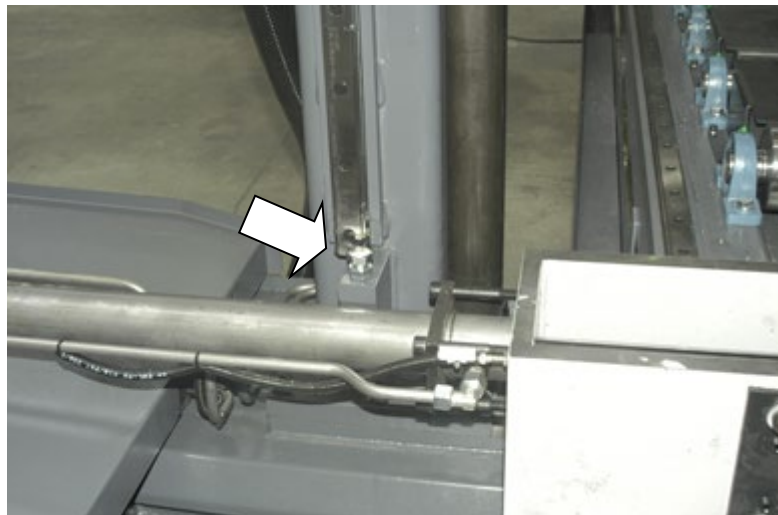


- Turn with the screw to the right, the saw band is closer to the stretching wheel rim.
- Turn with the screw to the left, the saw band is far from the stretching wheel rim

Check saw band run adjustment again.

4.4. Saw arm lower position stop adjustment

The lower stop limits the lowest position of the saw arm. This stop point has to be checked at least once a month. If the lower stop point is wrongly adjusted, the cutting table can be deeply cut or the material will not be cut completely.



1. Lift the saw frame to the top position.
2. Release the nut of the screw and set it on the desired value.
3. Secure the screw with nut again.
4. Set the limit switch of the saw frame lower position.

4.5. Check and adjustment of control elements of the machine

Warning!

All control elements, particularly those effecting the reference function, MUST regularly be checked, kept clean, or adjusted. Damage to these sensors, their incorrect position or contamination may result in MALFUNCTION of the machine!

The recommended check interval is less than 1x per month.

Check also the state of switches and counterparts in cases of the defects described below.

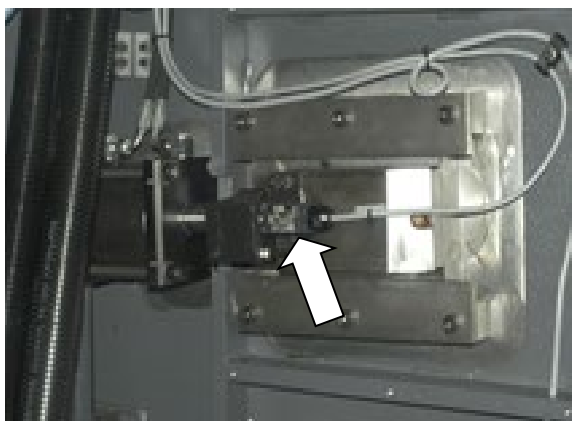
The switches and sensors have been primary adjusted by the manufacturer, don't adjust them without serious reason!

Bad adjustment of control elements may result in MALFUNCTION of the machine. The adjustment of these switches and sensors have to be done by trained person with special knowledge. If you aren't equipped with these knowledge, contact a special service!

4.5.1. Band saw

4.5.1.1. Setting of the limit switch monitoring the band tightening

It is necessary to check the setting of the limit switch for band tightening monitoring at every band exchange. If the limit switch is not adjusted correctly, the band is tightened too little or too much.



1. Dismount the protective cover.
2. Tighten the saw band by means of TENZOMAT to the optimum value (see table on Tenzomat).
 - If the drive motor is on, yet the band is not running, turn the tightening screw clockwise with a spanner until the motor starts running.
 - If the drive motor can be started, turn the tightening screw counter-clockwise until the motor stops; then again shortly clockwise until the motor starts running.
3. Mount the protective cover.

4.5.1.2. Limit switch adjustment of the saw arm lower position

The limit switch of the arm bottom position signals that the saw arm is in the bottom position so the saw arm is stopped in this position.

The counter part of the switch is the bolt situated at the base of the machine.



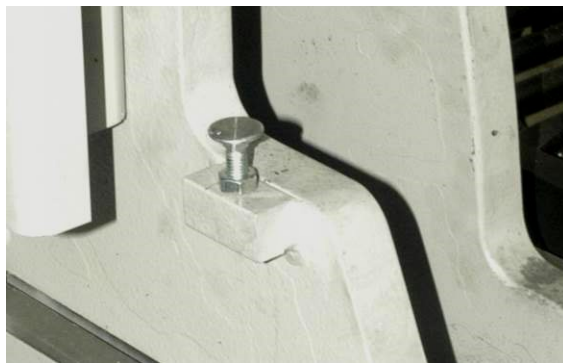
If we had adjusted lower stop point of the saw frame, the limit switch adjustment inspection is required.

If the limit switch of the arm bottom position is wrongly adjusted, the cutting table can be deeply cut or the material will not be cut completely.

If the off-cut is inaccurate, check this switch and counterpart!

Limit switch setting

Lower the saw frame to the lowest position. If the saw frame is on the lower stop and the limit switch responds, the limit switch adjustment is correct. Make the limit switch adjustment in opposite case.



1. Release the nut of the stop screw of the limit switch and screw the screw.
2. Lower the saw frame to the lower stop and switch on the saw band drive.
3. Screw out the stop screw of the limit switch, until the saw band drive is not stopped.

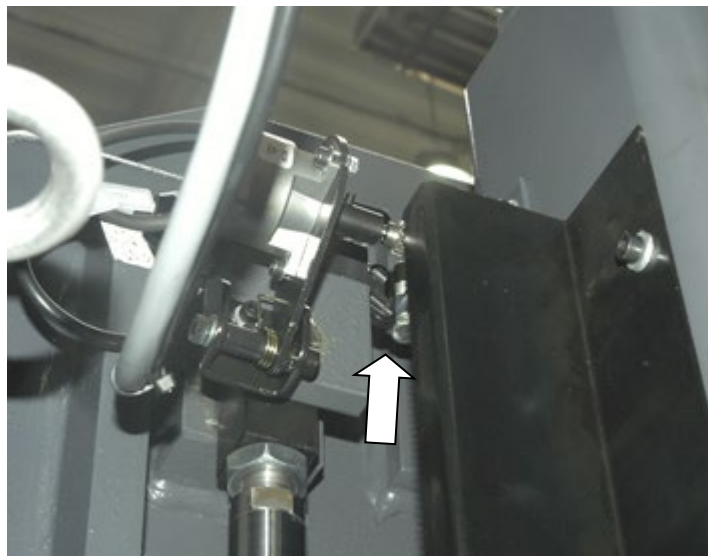
4. Secure the screw with nut and check limit switch adjustment again.

4.5.1.3. Limit switch of the arm upper position

The limit switch of the arm upper position:

- signals that the saw arm is in the top position, so the saw arm is stopped in this position.
- Has reference switch function – in the machine referencing mode, the arm runs to this limit switch, and its switching indicates reaching of the reference position.

If the arm upper position cannot be referenced, check the state of this switch and its counterpart.



The counterpart of the limit switch is the bolt situated at the saw arm frame.

4.5.1.4. Device for measuring of the height of the arm



The device is used for:

- measuring of the height of the saw arm
- setting of the saw arm start position above a material before start of a cut

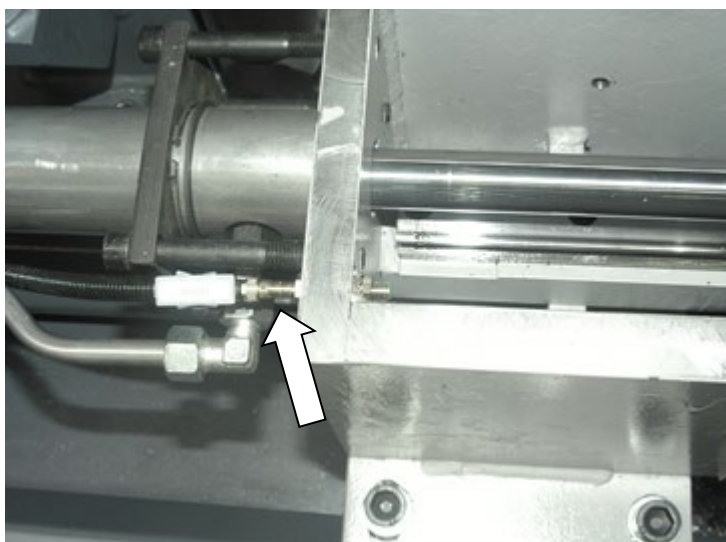
In case of failure of some of these functions check the state of this device.

4.5.1.5. Inductive sensor of the main vice opening

The inductive sensor of the vice opening is used to stop the moving jaw of the main vice in the extreme position of the vice opening and to indicate that the vice moving jaw has been reached (fully opened) during the machine referencing.

If the machine cannot be referenced because of a fault during the vice opening, check the state of the sensor and counterpart

The counterpart of the inductive sensor is the opposite side of the main vice movable jaw.

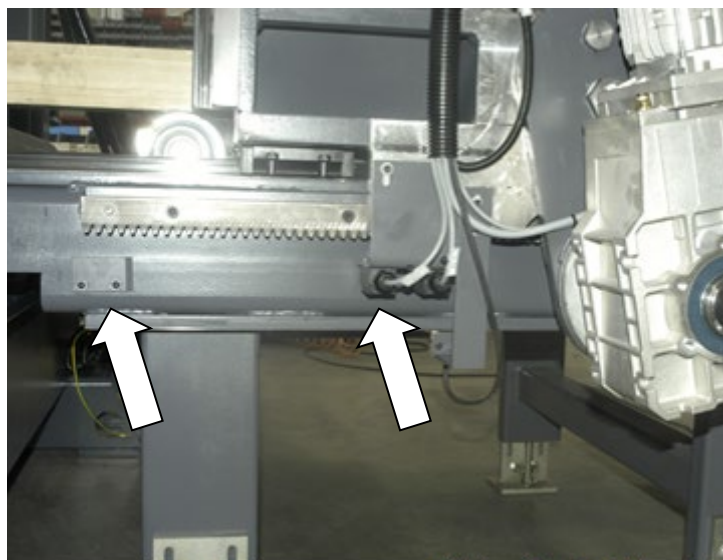


4.5.2. Feeder

4.5.2.1. Limit switch of the feeder extreme position near to saw

The limit switch of the feeder extreme position near to saw signalises the limit position of the feeder so the feeder is stopped.

If feeding is inaccurate, check this switch and counterpart.

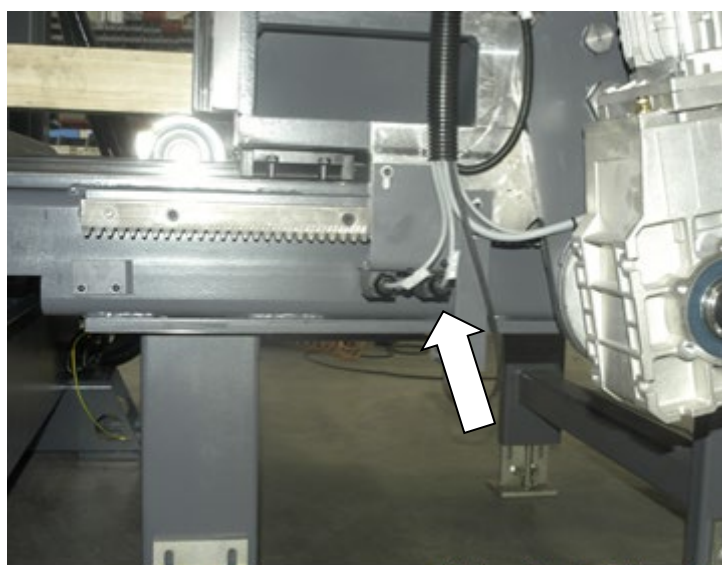


4.5.2.2. Limit switch of the feeder extreme position on the beginning of the feeder track

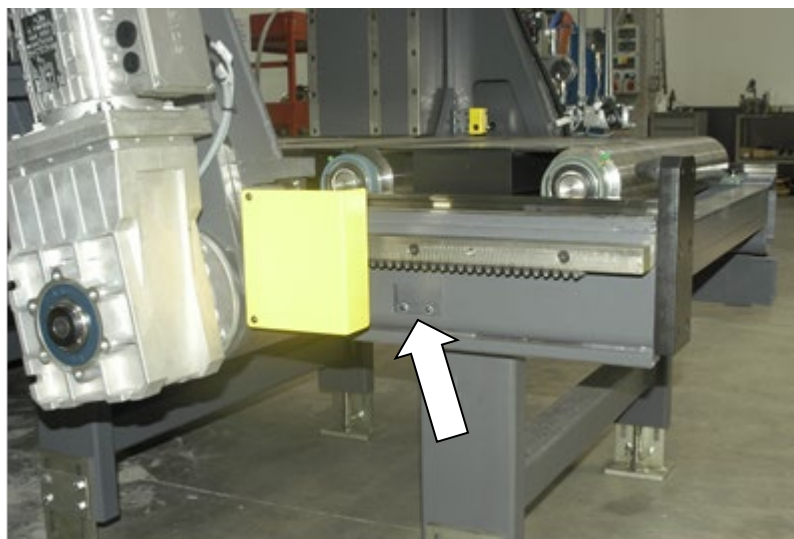
The limit switch of the feeder extreme position on the beginning of its track signalises the limit position of the feeder so the feeder is stopped.

The limit switch is also used to indicate that the feeder reference position has been reached during the machine referencing.

If feeding is inaccurate or if the feeder cannot be referenced, check the state of this switch and counterpart.



The counterpart of the switch is the stop plate which is placed at the beginning of the feeder track.



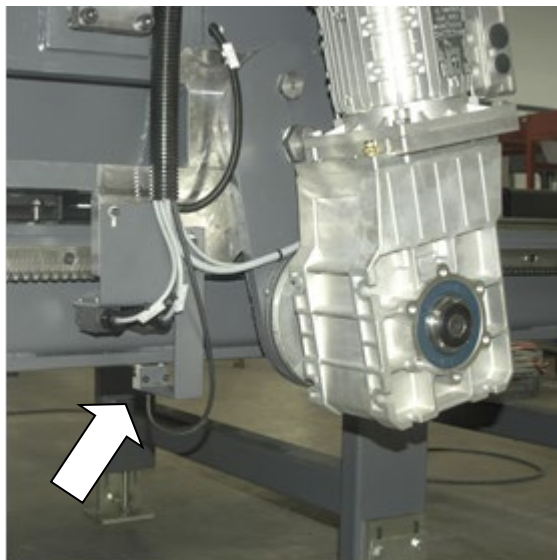
Údržba stroje
Wartung der Maschine
Machine service

4.5.2.3. Sensor for measuring of the feeder position

The feeder position sensor is used for detection of the position of the feeder.

It is important especially for loading of requested lengths of material during working process of the machine.

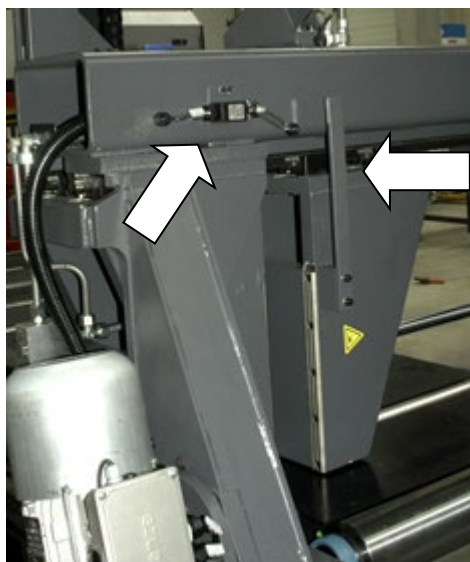
If the feeding of a material is inaccurate or check the state of this sensor and the magnetic tape which is used for measurement purposes.



4.5.2.4. Limit switch for clamping of the feeder vice without material

The limit switch of the vice clamping stops the movable jaw of the vice when the vice is clamped without material.

If there are any problems with clamping of the vice without materiál, check the switch and counterpart.



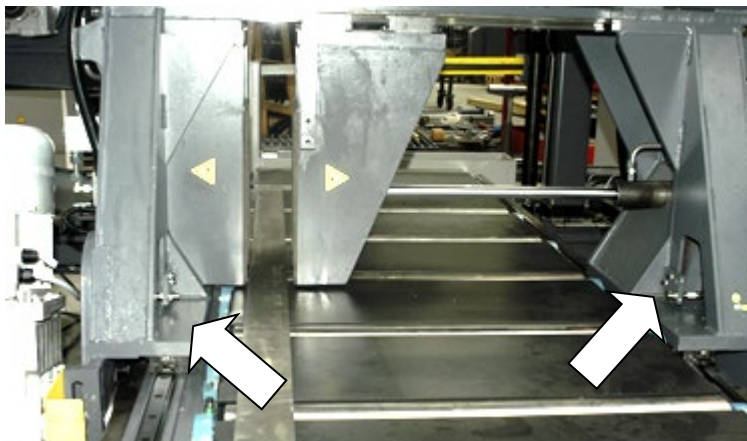
4.5.2.5. Laser barrier for detection of the material

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!

The laser barrier detects the presence of material between the jaws of the feeder.

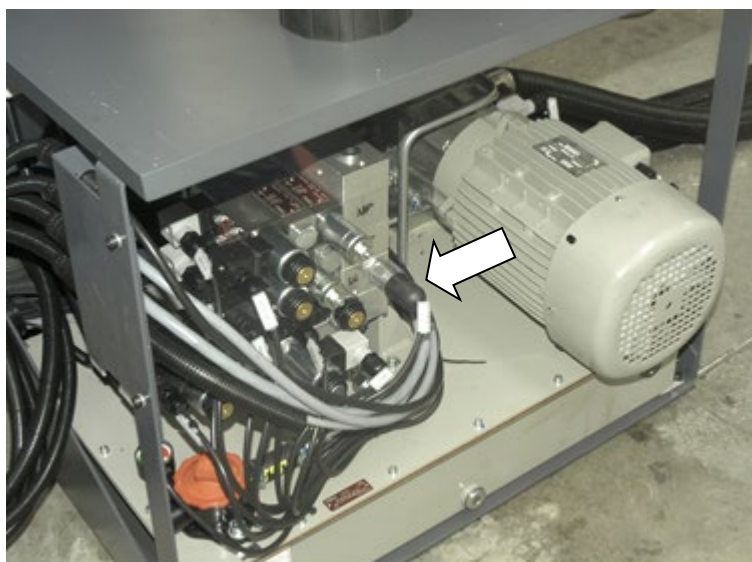
If problems during detection of material are occurred check the laser barrier.



4.5.3. Adjusting of pressure switches

These pressure switches are installed at the machine:

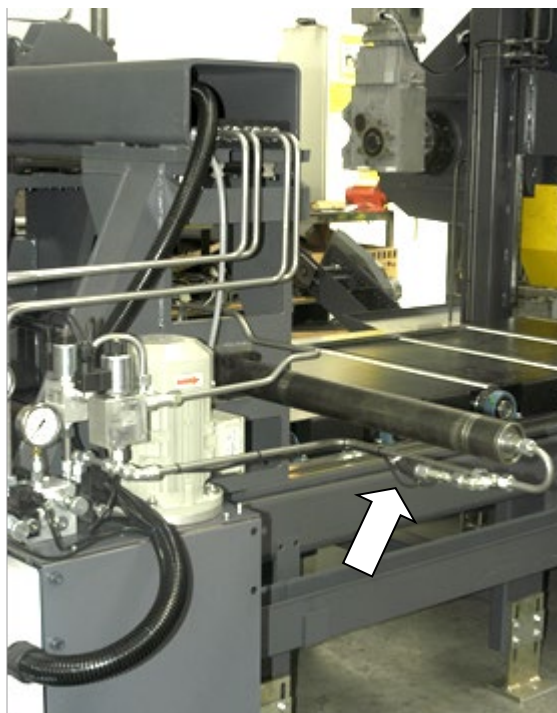
- the pressure switch for function of clamping of the main vice



- the pressure switch for function of clamping of the top clamping of the main vice



- the pressure switch for function of clamping feeder vice (with a material)

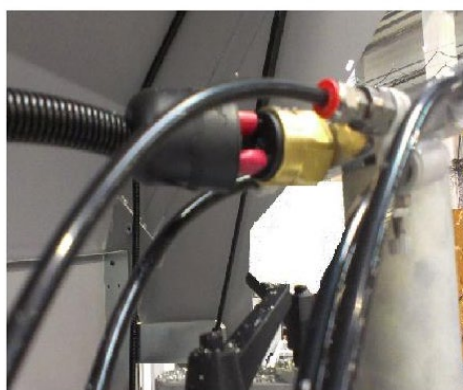


- the pressure switch for function of clamping of the top clamping of the feeder vice



Adjusting of pressure switches:

1. Pull off the elastic cover of the pressure switch (carefully – outlets must not be broken)



(Photo for demonstration only)

2. Set the sensitivity of the pressure switch by means the screwdriver.



(Photo for demonstration only)

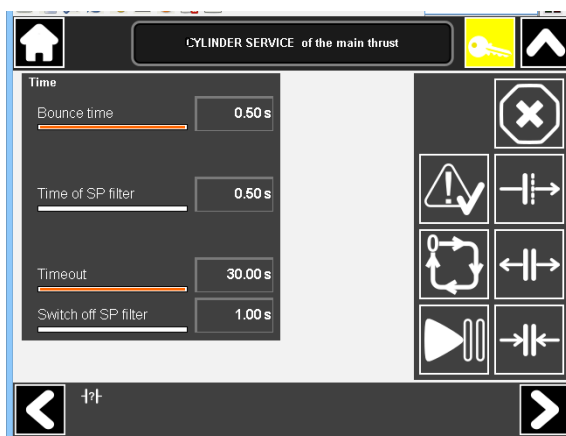
Turn by the screwdriver to the left, the sensitivity of the switcher is bigger.

Turn by the screwdriver to the right, the switch will be clip with higher pressure.

It is possible to check the actual state of a pressure switch through service parameters „Time of SP filter“ (the time is running when the switch is switched on) and „Switch of SP filter“ (the time is running when the switch is switched off).

These parameters are mentioned in screens of service menu where the service parameters of particular hydraulic cylinders are shown.

For example:



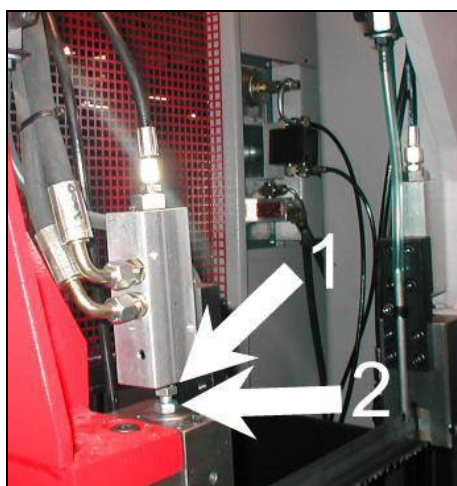
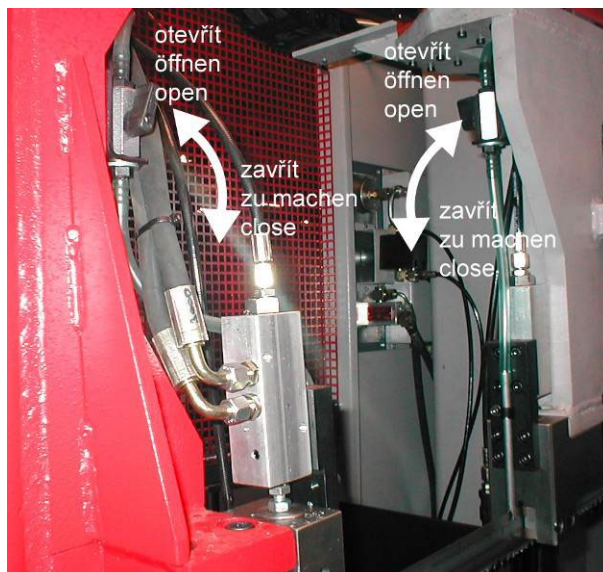
4.6. Adjustment of the cutting pressure regulation

This chapter describes the basic speed setting of arm sinking to the cut for idle run. Saw is equipped with cutting pressure regulation on both guiding cubes. Cutting pressure regulation is set separately on every guiding cube.

4.6.1. Setting on the right guiding cube

1. Close the tap on the left guiding cube. Let the tap opened on the right guiding cube.

Left guiding cube Right guiding cube



2. Screw off the set – screw on the right guiding cube to the stop, the valve is blocked (pos1). You can move by arm only up, because the arm movement down is blocked with pressure regulation valve.
3. Press button „Arm down“ and slowly screw on the set – screw on the right guiding cube. Screw by set – screw until the optimal speed of the arm sinking is not reached. The optimum speed of the arm sinking to the cut from maximum lift until lower stop is about 55 seconds.
4. Secure the set – screw with nut (pos. 2) for reaching of the optimum speed of the arm sinking.
5. Pressure regulation on the right guiding cube is set.

4.6.2. Setting on the left guiding cube

1. Open the tap on the left guiding cube. Close it on the right guiding cube.
2. Set the cutting pressure regulation on the left guiding cube in the same way.
3. Open taps on both guiding cubes after pressure regulation setting.

Attention! Both taps must be opened during operation!

4. Setting is ended.

4.7. 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 • impurity • outside oil contamination (hydraulics, gears) • high operating temperatures • lack of air circulation • wrong concentration	• corrosion protection is diminished • lubrication decreases • microbial attack is more likely	• the cooling ability is decreased • foam behaviour increases • emulsions stability deteriorates • sticky residue develops

4.7.1. 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

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4.7.2. 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.

4.7.3. Tool cleaning machines from chips after cutting. - optional accessory



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.

4.8. Hydraulic, Greases and oils

4.8.1. 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.

Attention:

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 must not be mixed!

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

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

Band saw	Gearbox oil	Capacity
Extend 700.520 ANC LS-2500	Shell Tivela S 320	3,3 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
ÖMV		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

4.8.2. Lubricant greases

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

Comparative table of the lubricant greases:

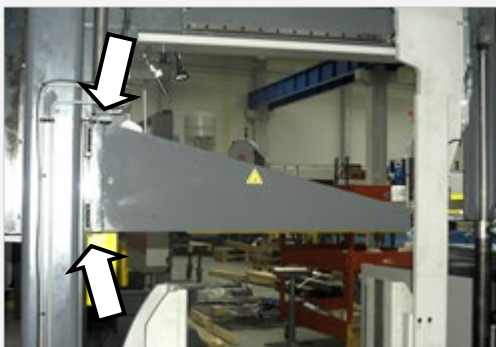
Manufacturer	Type of the lubricant grease
BP	Energrease LS - EP
DEA	Paragon EP1
Esso	FETT EGL 3144
	Beacon EP 1

Manufacturer	Type of the lubricant grease
	Beacon EP 2
FINA	FINA LICAL M12
	Microlube GB0
Klüber	Staburags NBU8EP
	Isoflex Spezial
Optimol	Optimol Longtime PD 0, PD1, PD2
Shell Aseol AG	ASEOL Litea EP 806-077
Texaco	Multifak EP1

4.8.3. 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 linear guiding of the saw arm 2 lubricators Lubricate with the grease once per 3 months Grease quantity – as required to fill the lubricator completely. Fill the lubricators with the use of a lubrication press. During lubrication, run the whole linear guide track 3-5 times
	The linear guiding of the main vice movable jaw 1 lubricator Lubricate with the grease once per 3 months Grease quantity – as required to fill the lubricator completely. Fill the lubricators with the use of a lubrication press. During lubrication, run the whole linear guide track 3-5 times



The linear guiding of the main vice upper clamp jaw

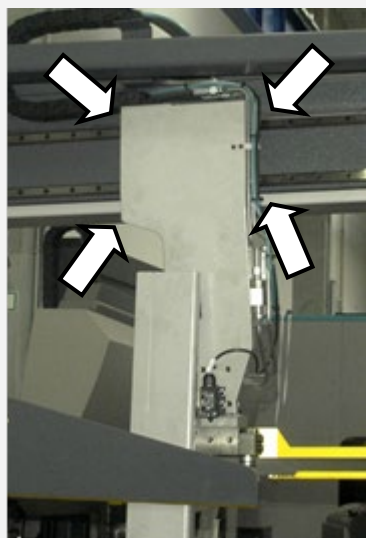
2 lubricators

Lubricate with the grease once per 3 months

Grease quantity – as required to fill the lubricator completely.

Fill the lubricators with the use of a lubrication press.

During lubrication, run the whole linear guide track 3-5 times



The linear guiding of the movable guiding cube

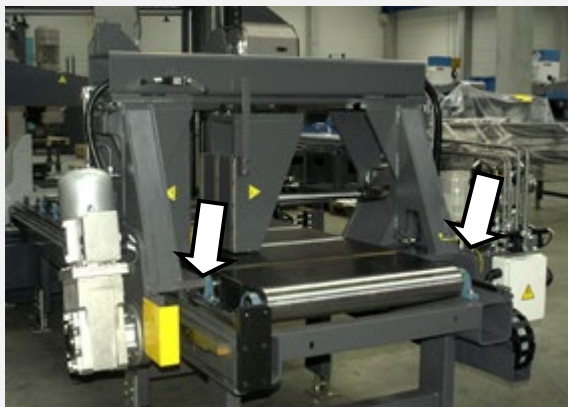
2x2 lubricators

Lubricate with the grease once per 3 months

Grease quantity – as required to fill the lubricator completely.

Fill the lubricators with the use of a lubrication press.

During lubrication, run the whole linear guide track 3-5 times



Linear guides of the feeder travel

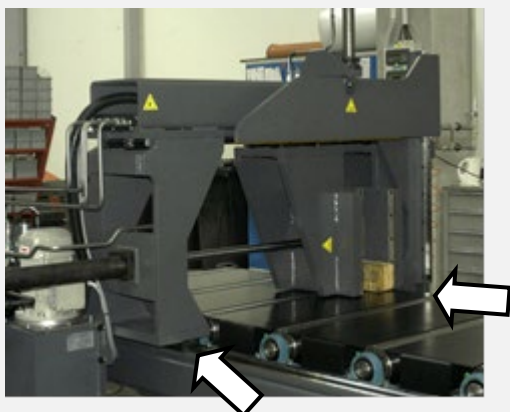
2+2 lubricators

Lubricate with the grease once per 3 months

Grease quantity – as required to fill the lubricator completely.

Fill the lubricators with the use of a lubrication press.

During lubrication, run the whole linear guide track 3-5 times



Linear guides of the feeder vice
movable jaws travel

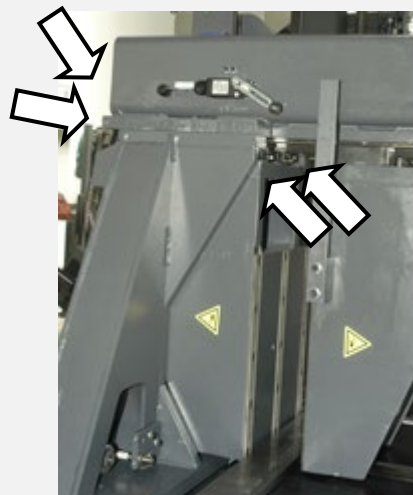
2+2 lubricators

Lubricate with the grease once
per 3 months

Grease quantity – as required to
fill the lubricator completely.

Fill the lubricators with the use of
a lubrication press.

During lubrication, run the whole
linear guide track 3-5 times



Linear guides of the feeder vice fixed jaws travel

2+2 lubricators

Lubricate with the grease once per 3 months

Grease quantity – as required to fill the lubricator completely.

Fill the lubricators with the use of a lubrication press.

During lubrication, run the whole linear guide track 3-5 times



Linear guide of the feeder vice upper clamping jaw

2 lubricators

Lubricate with the grease once per 3 months

Grease quantity – as required to fill the lubricator completely.

Fill the lubricators with the use of a lubrication press.

During lubrication, run the whole linear guide track 3-5 times

4.8.4. Hydraulic oils

Replace the hydraulic oil once in a year, 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.

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!

Use oils with specification DIN 51524-HLP, ISO 6743-4 and viscosity grade ISO VG 32 in hydraulic aggregates. Hydraulic oils quantity – see chapter **Hydraulic oil level check**.

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	Hungary	Hidrokomol P 32
Benzina	OH-HM 32	Mobil	Mobil DTE 25
BP	Energol HLP 32	OMV	HLP 32
Bulgaria	MX-M/32	Poland	Hydrol 30
Castrol	Hyspin AWS 32	Rumania	H 32 EP
Čepro	Mogul HM 32	Russia	IGP 30
DEA	Astron HLP 4hy6	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		

4.8.5. Hydraulic unit service

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

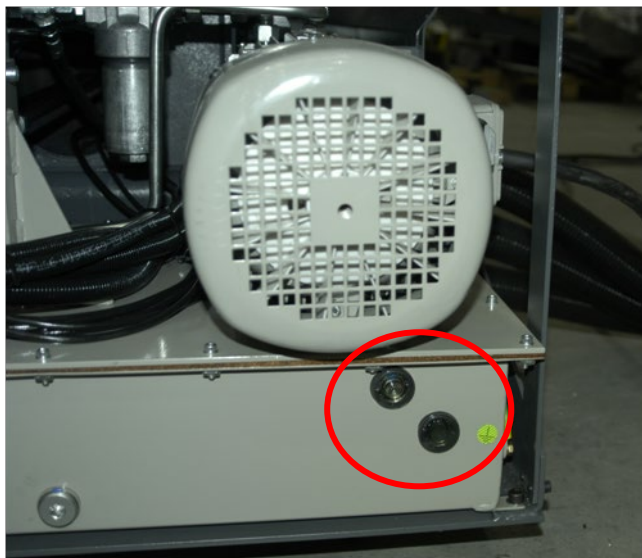


- checking off all screws and connections, fixing points, tubes and hoses for leakage
- Check hydraulic oil level
- During time of duty the oil temperature shouldn't exceed 60-70°C
- check function of signaling components (thermometer, level gauge, dirty filter indicator)
- Check the adjustment of working 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	-	-	-	-	-	•
Filter						
Change interval	-	-	-	-	-	-
Other checks						
External Leakages	•	-	-	-	-	-
Contamination	•	-	-	-	-	-
Damages	•	•	-	-	-	-
Noise-(level)	•	-	-	-	-	-
Gauges	-	-	•	-	-	-

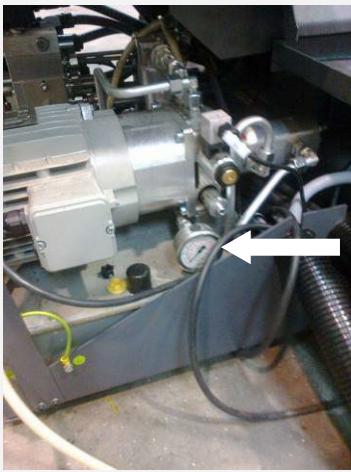
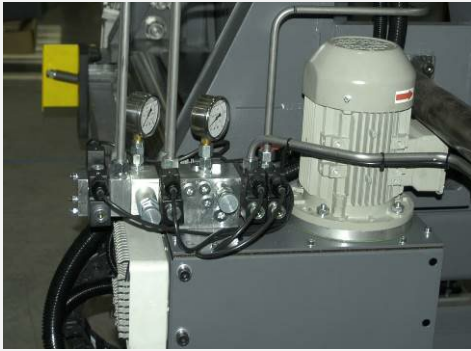
4.8.6. Hydraulic oil level check



Pull up the gauge and check the state of the oil. The oil level must be situated between water-glas.

Fill the hydraulic oil, if it is necessary. Use always the filter (10 μm or better) when you fill the oil. You avoid impurities penetration to the hydraulic system and troubles in hydraulic system.

4.8.7. Regulation of system pressure

Picture	Pressure regulation type, value
	Regulation of system pressure • Situated in the base of the band saw. • The value is set by manufacturer. It is forbidden to change it !
	Regulation of feeder system pressure • Situated in the base of the feeder.. • The value is set by manufacturer. It is forbidden to change it !

4.9. 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.
- Swarf remover

4.10. Adjusting of pressure switch

The next pressure switches are installed on the machine:

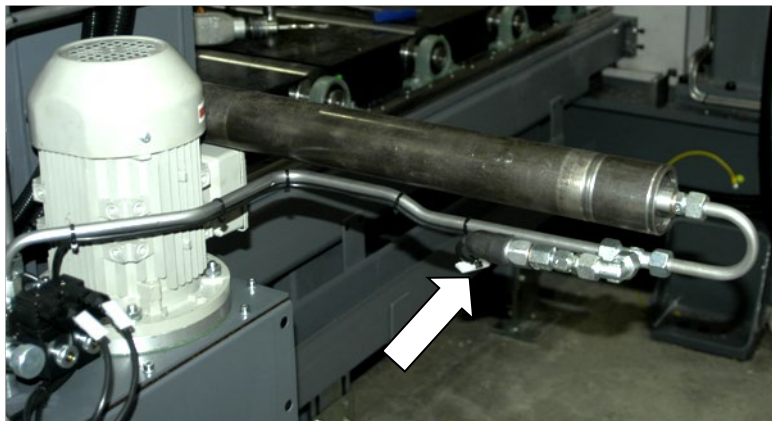
- the pressure switch for function of clamping of the main vice



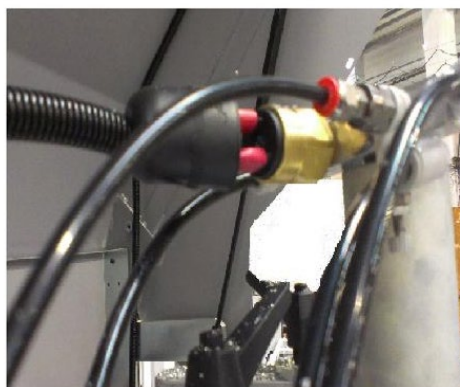
- the pressure switch for function of clamping of the feeder vice



- the pressure switch for function of clamping of the upper clamping

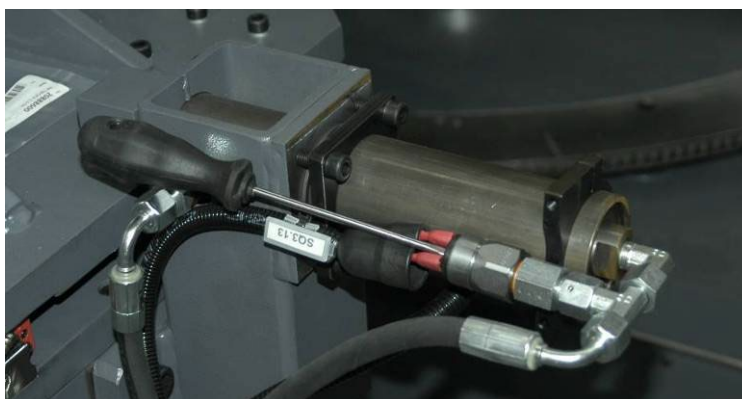


3. Pull off the elastic cover of the pressure switch (carefully – outlets must not be broken)



(Photo for demonstration only)

4. Set the sensitivity of the pressure switch by means the screwdriver.



(Photo for demonstration only)

Turn by the screwdriver to the left, the sensitivity of the switcher is bigger.

Turn by the screwdriver to the right, the switch will be clip with higher pressure.

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4.11. Worn pieces replacement

Attention!

The pictures in the next texts are designed for demonstration of described operations only. The parts at these photos could be rather different, than real parts at your machine.. But only dimensions and the details which are not important for described operations are different.

4.11.1. Pushing bearing replacement

If it is impossible to adjust the bundle gripping assembly and the pushing bearing is worn, it needs to be replaced.

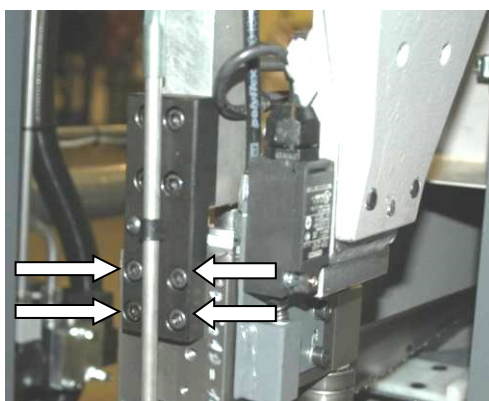


The bearing condition is possible discover, on the cube from the bottom side, for a better inspection is possible to put out the holder of the bearing from the cube.

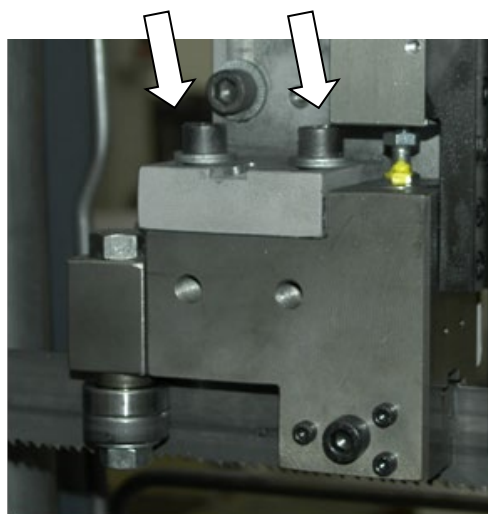
If the bearing is worn, there is a visible channel on it.

Bearing replacement:

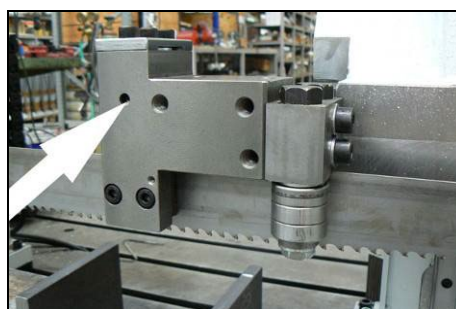
1. Dismantle the band saw
2. Remove the 4 screws from the holder of hose for the cooling agent and the device for pressure cutting regulation. Leave the pressure cutting regulation connected to the hydraulic system.



3. Dismantle the guide cube of the saw band from the machine.



4. Fasten the cube to a vice.
5. Dismantle the hard metal guides (see the chapter "Hard metal guides replacement")
6. By means of the Allen wrench release fixative screw of the bearing holder.



7. Choose bearing holder from cube



8. Insert the pivot to the vice.

Attention:

The vice has to have aluminium jaws, eventually, there has to be an aluminium agent to protect the bearing holder from damage.

9. Remove the bearing pivot from the bearing holder by means of the swager



10. Check, remove and change the worn bearing.
11. Insert the bearing and washers and return the pivot to its original place.
12. The complete bearing holder insert back into the cube and tighten loose screws.
13. Install the hard metal guides back to the guiding cube.
14. Mount the guiding cube on the machine and fasten accessories for cutting pressure regulation and cooling system.
15. Install the saw band and open supply. of coolant.
16. If it is necessary, adjust the hard metal guides. at the machine.

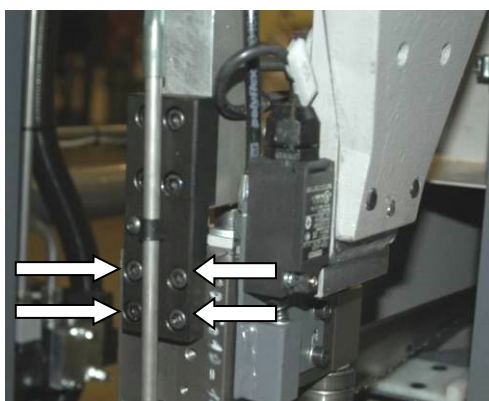
1.1.2. Hard metal guides replacement

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

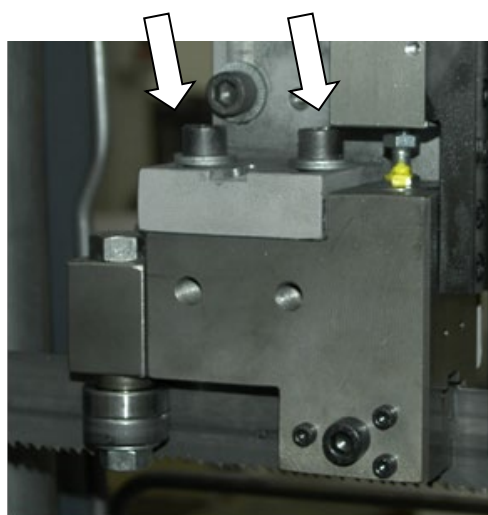
ATTENTION!

Hard metal guides must be replaced together on both guiding cubes!

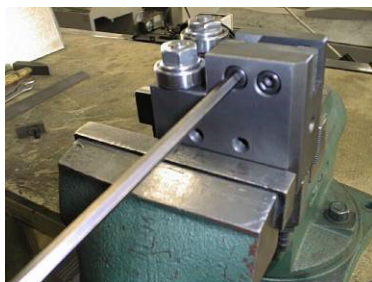
1. Dismantle the saw band.
2. Remove the 4 screws from the holder of hose for the cooling agent and the device for pressure cutting regulation. Leave the pressure cutting regulation connected to the hydraulic system.



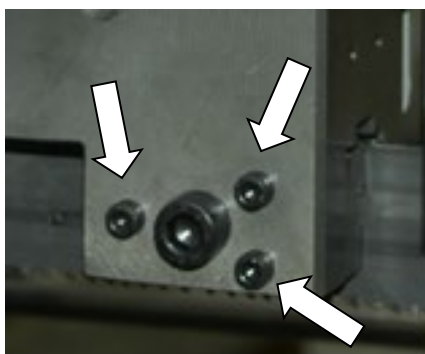
3. Dismantle the guide cube of the saw band from the machine and fasten the cube to a vice.



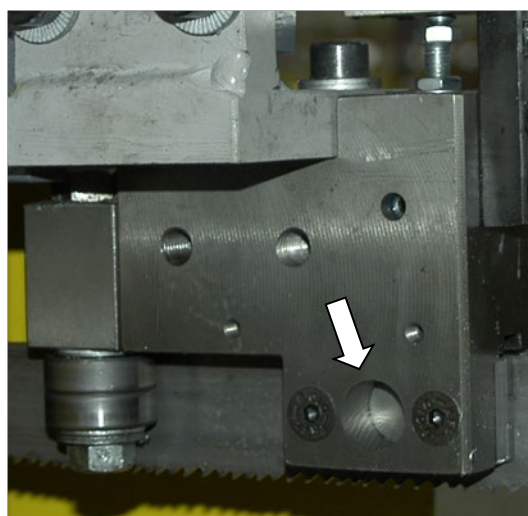
4. Loosen the 2 binding screw of fixed hard metal guide and remove the hard metal guide



5. Loosen the 3 binding screws of the adjustable hard metal guide.



6. Loosen the retaining ring (outside safety ring) which locks the adjusting screw of the adjustable hard metal guide , through the hole in the second jaw.



7. Loosen the adjusting screw of the adjustable metal guide and remove the adjustable hard metal guide.

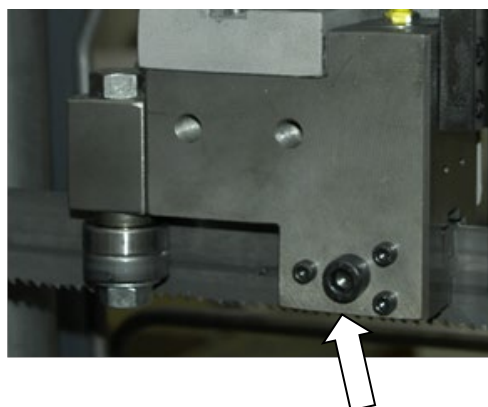


8. Insert new hard metal guides and complete the assembly in reverse order. Fasten the hard metal guides tightly.
9. Mount the guiding cube on the machine and fasten accessories for cutting pressure regulation and cooling system.
10. Install the saw band and open supply of coolant.
11. If it is necessary, adjust the hard metal guides at the machine.

4.12. Hard metal guides adjustment at the machine

Hard metal guides adjustment is one of the most important criterions which influences cutting accuracy and saw band life. Therefore, it is essential to check regularly that hard metal guides adjustment is correct.

5. Tighten the screw on the guiding cube; the band is released.



6. Loosen the screw and let the hard metal plate to sit on the saw band. The screw is turned slightly by hand.

Set the hard metal guides on the second cube.

4.12.1. Saw band guiding pulleys 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. Release 2 screws. Dismantle the guiding cube of the saw band.



2. Tighten the guiding cube to the vice and dismantle both eccentrics with bearings following way.



Attention:

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

3. Screw off nuts from eccentrics.



4. Remove eccentrics from bearings by means of the swager.



Change all bearings and other worn parts.

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

ATTENTION!

Do not replace the eccentrics placing in the cube.

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



7. Insert the saw band to the guiding cube (cca 15 – 20 cm). Secure the movable hard metal guide with scotch so, that the saw band is pressed with guides and it is possible to move with saw band.

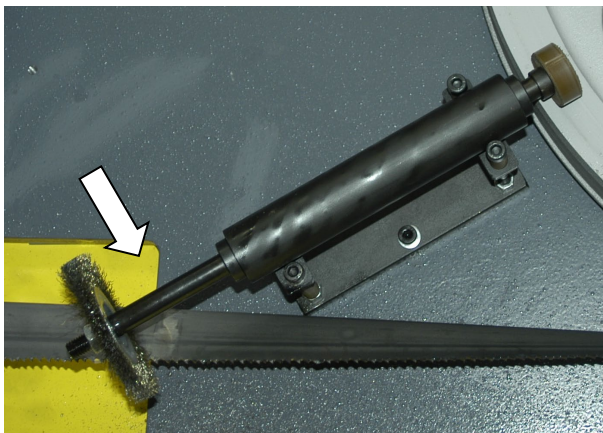


- Set the eccentrics by means of the wrenches, the saw band must run in the centre. Guide pulleys must not press too much on the band, but must spin freely during the band run.
 - Optimal distance between a sawband and the guiding pulley is 0,05 mm
8. Tighten nuts on both eccentrics.
 9. Remove the testing piece of saw band from the cube lead.
 10. Install the pulleys holder back on the guide cube..
 11. If it is necessary, adjust the hard metal guides on the machine.

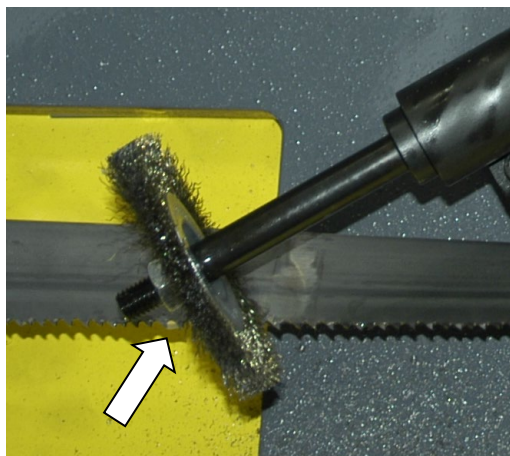
4.12.2. Brush replacement

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

1. Dismount the brush cover
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 again.



4. Adjust the brush to the saw band

4.12.3. Cooling pump replacement

Only a qualified worker can carry out the connection!

High-voltage shock may have fatal results

1. Pull the tank with the liquid from the pedestal..
2. Remove the hosepipe leading to the cooling agent from the plug on the pump. Screw off four screws from the cooling pump flange and pull out the pump from the sheet metal holder.



3. Remove the cover of the pump terminal switchboard. Disconnect 4 terminal connectors of the input cables. Cables are identified according to the red clamps..



4. Loosen the bushing and pull the cable out from the pump.



5. Dismantle new pump switchboard cover. Push the cable through the bushing and fasten it.



6. Screw on the cable bushing and cover of the terminal block. Do not forget the rubber gasket! Tighten the cooling liquid hose with non-stick tape and screw it again. Install cooling liquid hose, place the pump on the sheet metal holder and screw it.

5. **Závady / Störungen/ Troubleshooting**

5.1. Mechanical problems

Problem	Possible causes	Repair
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.
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.
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“
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.
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.
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.
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.
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.
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.
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.
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.
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.	

5.2. Electric problems

Problem	Possible causes	Repair
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.
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.
Electric motor and pump are without voltage. Between contactor and thermal protector is not voltage.	- Wrong contactor.	Replace contactor of engine.
The indicator of speed saw band is not	- Sensor of speed is not adjusted.	Sensor of speed must be adjusted.
	- Defective display	The display must be changed.

Problem	Possible causes	Repair
functional.	- Wrong sensor – diode of indicator speed is not light.	Sensor must be changed and adjusted.
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.
The hydraulic aggregate cannot be started	Auxiliary contact on thermo-relay FA1 is defective.	Replace the defective contact on motor starter FA1.
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.
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.

5.3. 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

6. Schéma / Schemas / Scheme

- 6.1. Elektrické schéma /
Elektroschema /
Electric schema – 3×400 V, PE+N

				Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic			
Extend 700.520 ANC LS 2500				ES-PR1604-201-V1.1			
Wiring diagram				3x400V + PE, 50Hz			
2				2			
1				1			
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2.a	Obsah / Contents / Inhaltsverzeichnis	15.7.2016
4	Kusovník artiklů / Parts list / Artikelstückliste	11.5.2016
4.a	Kusovník artiklů / Parts list / Artikelstückliste	11.5.2016
4.b	Kusovník artiklů / Parts list / Artikelstückliste	13.7.2016
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5	Plán konektoru = +XM1	11.5.2016
6	Plán konektoru = +XM2	11.5.2016
8	Plán konektoru = +X02.1	13.7.2016
9	Plán konektoru = +X02.2	13.7.2016
16	Rozmístění prvků na ovládacím panelu +OP1 / Deployment of elements of the control panel +OP1 / Einsatz der Elemente des Bedienfelds +OP1	11.7.2016
17	Rozmístění prvků na ovládacím panelu +OP2 / Deployment of elements of the control panel +OP2 / Einsatz der Elemente des Bedienfelds +OP2	3.5.2016
18	Rozmístění prvků v rozvaděči / Deployment of elements in the switchboard / Einsatz der Elemente in der Schalttafel	29.6.2016
19	Slová část / Power part / Netzteil	14.6.2016
20	Tráskový výměšec, hydraulika podavače, chlazení / Swarf conveyor, feeder hydraulics, cooling / Späneförderer, Feeder-Hydraulik, Kühl	14.6.2016
21	Hydraulika pily / Hydraulics of saw / Hydraulik Säge	14.6.2016
22	Pohon pokladače / Feeder drive / Feeder-Laufwerk	14.6.2016
23	Pohon plovákové pásu / Saw band drive / Sägeband-Laufwerk	29.6.2016
24	Napájecí zdroj / Power supply / Netzteil	27.6.2016

BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/Page name/Seitenname Obsah / Contents / Inhaltsverzeichnis	Verze /Version/Version: Napájecí zdroj /Feeder: Datum/Date/Datum: Zpracováno/processed/verarbeitet:	ES F11624 201_V0.1 3x800V + PE 50Hz 15.7.2016 Kc:804	Lst: 2 Lst: 44

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27	CPU - DI, RS232	8.7.2016
28	CPU - DI	29.6.2016
29	CPU - DI, FDI	13.7.2016
30	CPU - DI, DO	29.6.2016
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35	Výstupy / Outputs / Ausgänge	8.7.2016
36	Napájení pásu / Belt tensioning / Riemenstramm	11.5.2016
37	Display, klávesnice / Display, keyboard / Display, Tastatur	11.5.2016
38	Topologie / Topology / Topologie	29.6.2016
40	Příslušenství / Accessories / Zubehör	29.6.2016

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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-FA1	Motorový spouštěč - 1A Motor starter - 1A Motorstarter - 1A	MS116-1,00	ABB	91,045,019	1	/20.1
-FA1	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91,046,002	1	/20.1
-FA2	Motorový spouštěč - 2,5A Motor starter - 2,5A Motorstarter - 2,5A	MS116-2,5	ABB	91,045,021	1	/20.4
-FA2	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91,046,002	1	/20.4
-FA3	Motorový spouštěč - 0,63A Motor starter - 0,63A Motorstarter - 0,63A	MS116-0,63	ABB	91,045,018	1	/20.7
-FA3	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91,046,002	1	/20.7
-FA4	Motorový spouštěč - 6,3A Motor starter - 6,3A Motorstarter - 6,3A	MS116-6,3	ABB	91,045,023	1	/21.4
-FA4	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO+1xNC	HKF1-11	ABB	91,046,002	1	/21.4
-KM1	Minisýlač 4kW/400V Minicontactor 4kW/400V Minschutz 4kW/400V	B65-30-01-1,7-71	ABB	91,040,049	1	/33.1
-KM2	Minisýlač 4kW/400V Minicontactor 4kW/400V Minschutz 4kW/400V	B65-30-01-1,7-71	ABB	91,040,049	1	/33.2
-KM3	Minisýlač 4kW/400V Minicontactor 4kW/400V Minschutz 4kW/400V	B65-30-01-1,7-71	ABB	91,040,049	1	/30.2
-KM4	Minisýlač 4kW/400V Minicontactor 4kW/400V Minschutz 4kW/400V	B65-30-01-1,7-71	ABB	91,040,049	1	/33.2

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Těšební 1236/1 CZ 622 00, Brno	Stručný popis/Machine line: Extend 700,520 ANC LS 2500	Název stránky/Name page/Machine section: Kusovník artiklů / Parts list / Artikelstückliste	Verze /Version/Version: Návrh/Power supply/Erzeugung: Datum/Date/Datum: Zpracováno/processed/verarbeitet: 11.5.2016 Krcika	ES F1604 201 V1.1 3x400V + PE, 50Hz 11.5.2016 Krcika	List: 4 List: 44

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Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-KM11	Stýkač 7,5kW/400V Contacteur 7,5kW/400V Schütz 7,5kW/400V	AF16-30-10-11	ABB	91.040.056	1	/25.8
-KM11	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/25.8
-KM12	Stýkač 7,5kW/400V Contacteur 7,5kW/400V Schütz 7,5kW/400V	AF16-30-10-11	ABB	91.040.056	1	/25.8
-KM12	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/25.8
-PA1	Pojistkový odpiňáč pro válcové vložky - 3P Switch fuse for the cylinder inserts - 3P Schalter Sicherung für den Zylinderersatz - 3P	E 93/32	ABB	91.241.014	1	/22.1
-PA2	Pojistkový odpiňáč pro válcové vložky - 3P Switch fuse for the cylinder inserts - 3P Schalter Sicherung für den Zylinderersatz - 3P	E 93/32	ABB	91.241.014	1	/23.2
-PA3	Pojistkový odpiňáč pro válcové vložky - 3P Switch fuse for the cylinder inserts - 3P Schalter Sicherung für den Zylinderersatz - 3P	E 93/32	ABB	91.241.014	1	/24.1
-QS1	Rukojet' odpiňáče - černá Handle switch - black Griffschalter - schwarz	OHBS3RH	ABB	91.180.016	1	/19.1
-QS1	3 pólový odpiňáč - 40A Disconnecter - 3P, 40A Trennschalter - 3P, 40A	OT40FT3	ABB	91.170.019	1	/19.1
-QS1	Kryt svorek Terminal shroud Klemmenabdeckung	OTS63T3	ABB	91.170.024	1	/19.1
-M1	Převodovka s motorem 0,25kW Gearbox with motor 0,25 kW Getriebe mit Motor 0,25kW	BN 71A	ANPO s.r.o.	99.001.073	1	/20.1
-SP1	Hydraulický tlakový spínač 20-50bar Hydraulic pressure switch 20-50bar Hydraulische Druckschalter 20-50 bar	166415031059	ARGO HYTOS	92.201.003	1	/30.5

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Třebíz 1236/1 CZ 627 03, Brno	Stroj/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelockliste	Verz./Version/Version: Název/Power supply/Erzeugung: Datum/Date/Datum: Zpracováno/processed/verarbeitet: 11.5.2016 16:04	ES P11624 201 V1.1 3600V + PE 50Hz 11.5.2016 16:04	Lst: 4.a Lst: 44

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-SP2	Hydraulický tlakový spínač 20-50bar Hydraulic pressure switch 20-50bar Hydraulische Druckschalter 20-50 bar	16641.S031059	ARGO HYTOS	92.201.003	1	/30.6
-SP4	Hydraulický tlakový spínač 20-50bar Hydraulic pressure switch 20-50bar Hydraulische Druckschalter 20-50 bar	16641.S031059	ARGO HYTOS	92.201.003	1	/32.a.6
-SP6	Hydraulický tlakový spínač 20-50bar Hydraulic pressure switch 20-50bar Hydraulische Druckschalter 20-50 bar	16641.S031059	ARGO HYTOS	92.201.003	1	/32.a.8
-AS.1	Modul digitálních vstupů Digital input module Digitales Eingangsmodul	X20DI9371	B&R	91.995.212	1	/32.a.0
-AS.1	Šňálcový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/32.a.0
-AS.1	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/32.a.0
-AS.2	Modul digitálních vstupů Digital input module Digitales Eingangsmodul	X20DI9371	B&R	91.995.212	1	/32.b.0
-AS.2	Šňálcový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/32.b.0
-AS.2	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/32.b.0
-A7.1	Modul digitálních výstupů Digital output module Digitales Ausgangsmodul	X20DO8332	B&R	91.995.213	1	/33.1
-A7.1	Šňálcový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/33.1
-A7.1	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/33.1

The manufacturer reserves right to use an equivalent replacement device.

4.a	BOMAR, s.r.o. Třezní 1236/1 CZ 627 00, Brno	Stručná/Mechanical/Maxline: Extend 700.520 ANC LS 2500	Názor at linky/Name page/Name sellon: Kusovník artiklů / Parts list / Artikelstükliste	Verze /Version/Version: Název/Power supply/Erzeugung: Datum/Date/Datum: Zpracováno/Processed/Verarbeitet:	ES P1604 201 V1.1 3000V + PE 50Hz 13.7.2016 Kc:afu	4.c
						4.b
						4.a
						44

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-A7.2	Modul digitálních výstupů Digital output module Digitales Ausgangsmodul	X20DO8332	B&R	91.995.213	1	/34.1
-A7.2	Štěrnicový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/34.1
-A7.2	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/34.1
-A7.3	Modul digitálních výstupů Digital output module Digitales Ausgangsmodul	X20DO8332	B&R	91.995.213	1	/35.1
-A7.3	Štěrnicový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/35.1
-A7.3	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/35.1
-A8.1	Štěrnicový vysílač X2X link Bus transmitter X2X link Bus Sender X2X Link	X20BT9100	B&R	91.995.713	1	/38.4
-A8.1	Štěrnicový modul - 1xI/O Bus module - 1xI/O Bus module - 1xI/O	X20BM11	B&R	91.995.205	1	/38.4
-A8.1	Svorkovnice 12-pin Terminal block 12-pin Klemmenblock 12-pin	X20TB1.2	B&R	91.995.217	1	/38.4
-FM1	Frekvenční měnič - 3x 380-500 V, 1,5kW Frequency inverter - 3x 380-500V, 1,5kW Frequenzumrichter - 3x380-500V, 1,5kW	816-4T4001S0.00X-1	B&R	91.995.230	1	/22.1
-LQ2A	Laserová závara - vysílač Laser barrier - transmitter Laserschranke - Sender	BOS 12M-X-LS11-S4	BALLUFF	91.400.055	1	/32.a.9
-LQ2B	Snímač laserový - přijímač Laser sensor - receiver Laser sensor - receiver	BOS 12M-PA-LE10-S4	BALLUFF	91.400.018	1	/32.a.8

The manufacturer reserves right to use an equivalent replacement device.

4.5	BOMAR, s.r.o. Třezník 1236/1 CZ 627 00, Brno	Straj/Machine/Machine Extend 700.520 ANC LS 2500	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelzockliste	Verze /Version/Version: Název/Power supply/Erzeugung: Datum/Date/Datum: Zpracováno/Processed/Verarbeitet:	ES P11624 201 V1.1 3800V + PE 50Hz 13.7.2016 Kc:804	4.d Lit: 4.e Ua1d: 44
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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SQ4	Indukční snímač - Sn=1,5mm Inductive sensors - Sn = 1.5 mm Induktive Sensoren - Sn = 1,5 mm	JPS 30D 081.5 PNO1C	BALLUFF	91.172.009	1	/32.a.2
-FM2	Frekvenční měnič - 3,7kW, 3x400VAC Frequency converter - 3.7kW, 3x400VAC Frequenzumrichter - 3,7kW, 3x400VAC	VFD037E43A + KPFL02	DELTA ELECTRONICS, INC.	91.012.124	1	/23.1
-R1	Brzdový odpor 150Q Braking resistor 150Q Bremswiderstand 150Q	BR200W150	DELTA ELECTRONICS, INC.	91.012.120	1	/22.2
-H1	Signálka zelená na adaptér Green light for Eaton-Adapter Grünes Licht für Eaton-Adapter	M22-LED-G	EATON	91.061.023	1	/30.3
-SA1a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/28.7
-SA1a	Hlavice 3 položového přepínače, klíček Head of 3 positional key switch Leiter der 3 position Schlüsselschalter	M22-WRS3	EATON	91.060.058	1	/28.7
-SA1b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/28.8
-SA2	Hlavice tlačítka - černá Head button - black Kopfaste - schwarz	M22-D-S	EATON	91.060.035	1	/40.2
-SA2	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/40.2
-SA500	Hlavice 2 položového přepínače, klíček Head 2 position switch, key Head 2-Positionsschalter, Schlüssel	M22-WRS2	EATON	91.060.070	1	/36.3
-SA500	Upevňovací adaptér + 1NC Attaching adapter + 1NC Anbringen Adapter + 1NC	M22-AK01	EATON	91.061.020	1	/36.3
-SA500	Kontaktní blok - 1NC Contact block - 1NC Kontaktblock - 1NC	M22-K01	EATON	91.061.024	1	/36.3

The manufacturer reserves right to use an equivalent replacement device.

4.c	BOMAR, s.r.o. Třebíz 1236/1 CZ 627 03, Brno	Styl/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/Name page/Maschine seiten Kusovník artiklů / Parts list / Artikelstükliste	Verze /Version/Version: Heslo/Password/Passwort: Datum/Date/Datum: Zpracováno/Processed/Verarbeitet:	ES P11604 301 V1.1 3000V + PE 50Hz 13.7.2016 Kc:fla	4.c

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SAS00	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/36.3
-SB1a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/28.5
-SB1a	Hlavice dvoutlačítka bílá/černá start/stop Double button head white/black start/stop Doppelrundkopf weiß/schwarz Start/Stopp	M22-DDL-WS-GB10	EATON	91.060.034	1	/28.5
-SB1b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/28.6
-SB2a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.1
-SB2a	Hlavice dvoutlačítka bílá/černá, zavřít/otevřít Double button head white/black, arrow close/open Doppelrundkopf weiß / schwarz, Pfeil Schließen / Öffnen	M22-DDL-WS*	EATON	91.060.055	1	/32.b.1
-SB2b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.1
-SB3a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.2
-SB3a	Hlavice dvoutlačítka bílá/černá, zavřít/otevřít Double button head white/black, arrow close/open Doppelrundkopf weiß / schwarz, Pfeil Schließen / Öffnen	M22-DDL-WS*	EATON	91.060.055	1	/32.b.2
-SB3b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.3
-SB4a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.3
-SB4a	Hlavice dvoutlačítka bílá/černá, zavřít/otevřít Double button head white/black, arrow close/open Doppelrundkopf weiß / schwarz, Pfeil Schließen / Öffnen	M22-DDL-WS*	EATON	91.060.055	1	/32.b.3

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Třebatín 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Verze /Version/Version: Název/Power supply/Energieangabe: Datum/Date/Datum: Zpracováno/processed/verarbeitet:		ES P11624 201 V1.1 3600V + PE 50Hz 13.7.2016 Kc:864	4.f
			Lut:		4.e	
			Lut:			
			Lut:			

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SB4b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.4
-SB5a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.5
-SB5a	Hlavice dvoutlačítka bílá/černá, zavřít/otevřít Double button head white/black, arrow close/open Doppelrundkopf weiß / schwarz, Pfeil Schließen / Öffnen	M22-DDL-WS-*	EATON	91.060.055	1	/32.b.5
-SB5b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.6
-SB6a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.6
-SB6a	Hlavice dvoutlačítka bílá/černá šipka nahoru/dolů Double button head white/black, arrow up/down Doppelrundkopf weiß / schwarz, Pfeil nach oben / unten	M22-DDL-WS-*	EATON	91.060.054	1	/32.b.6
-SB6b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.7
-SB7a	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/32.b.8
-SB7a	Hlavice dvoutlačítka bílá/černá Double button head white/black Doppelrundkopf weiß/schwarz	M22-DDL-WS	EATON	91.060.033	1	/32.b.8
-SB7b	Kontaktní blok - 1NO Contact block - 1NO Kontaktblock - 1NO	M22-K10	EATON	91.061.022	1	/32.b.9
-SB10	Hlavice tlačítka - černá Head button - black Kopfaste - schwarz	M22-D-S	EATON	91.060.035	1	/36.3
-SB10	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/36.3

The manufacturer reserves right to use an equivalent replacement device.

4.e	BOMAR, s.r.o. Třebaň 1236/1 CZ 627 00, Brno	Stručný/Mechanical/Machline: Extend 700.520 ANC LS 2500	Názor at linky/Name page/Name sellen: Kusovník artiklů / Parts list / Artikelstükliste	Verze /Version/Version: Název/Power supply/Erzeugung: Datum/Date/Datum: Zpracováno/processed/verarbeitet:	ES P11624 201 V1.1 3600V + PE 50Hz 13.7.2016 Kc:84	4.g	Lst: 4.r Lst: 44

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SB10	Kontaktní blok - INO Contact block - INO Kontaktblock - INO	M22-K10	EATON	91.061.022	1	/36.3
-SB11	Hlavice tlačítka - černá Head button - black Kopfaste - schwarz	M22-D-S	EATON	91.060.035	1	/36.5
-SB11	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/36.5
-SB11	Kontaktní blok - INO Contact block - INO Kontaktblock - INO	M22-K10	EATON	91.061.022	1	/36.5
-SB12	Hlavice tlačítka - černá Head button - black Kopfaste - schwarz	M22-D-S	EATON	91.060.035	1	/36.7
-SB12	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/36.7
-SB12	Kontaktní blok - INO Contact block - INO Kontaktblock - INO	M22-K10	EATON	91.061.022	1	/36.7
-IRC2	Lineární inkrementální snímač - 10-30VDC/10-30VDC Linear Encoder - 10-30VDC / 10-30VDC Linear-Encoder - 10-30VDC / 10-30VDC	LM102-025-08.0-1-00-L	ELGO	92.270.018	1	/29.5
-FU1	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/24.5
-FU2	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	/24.5
-FU3	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/24.5
-FU4	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/19.4

The manufacturer reserves right to use an equivalent replacement device.

4.f	BOMAR, s.r.o. Přezdí 1236/1 CZ 627 00, Brno	Straj/Mechine/Machline Extend 700.520 ANC LS 2500	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstichliste	Verze /Version/Version: Název/Power supply/Energieung: Datum/Date/Datum: Zpracováno/Processed/Verarbeitet:	ES P11624 201 V1.1 3600V + PE 50Hz 13.7.2016 Kc-804	4.h Lit: 4.g Ua1: 44
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Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-RP1	Potenciometr 4K7 Potenciometer 4K7 Potentiometer 4K7	TP195 4K7/N20A	Elektronické součástky CZ, a.s	91.281.015	1	/23.5
-K3	Čerpadlo 3x230/400V, 50Hz, 120W Pump 3x230 / 400V, 50Hz, 120W Pumpe 3x230 / 400V, 50Hz, 120W	4CO44-14HP1	EmP s.r.o.	91.020.016	1	/20.7
-RP1	Hlavec potenciometru - 24mm Head of potentiometer 24mm Leiter Potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/23.5
-D1	Dioda 800V 3A Diode 800V 3A Diode 800V 3A	BY399 DO201	GM-electronics	91.280.009	1	/33.2
-D2	Dioda 800V 3A Diode 800V 3A Diode 800V 3A	BY399 DO201	GM-electronics	91.280.009	1	/33.4
-D3	Dioda 800V 3A Diode 800V 3A Diode 800V 3A	BY399 DO201	GM-electronics	91.280.009	1	/33.5
-D4	Dioda 800V 3A Diode 800V 3A Diode 800V 3A	BY399 DO201	GM-electronics	91.280.009	1	/33.6
+R2	Elektro krabice 240x190x90 Electro box 240x190x90 ElektroKasten 240x190x90	GW 44208	GW	91.190.003	1	/18
-SBS00	Kontakt - 1x NO Contact - 1x NO Kontakt - 1x NO	YWE10	IDEC	91.061.044	1	/25.3
-RCF1	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/20.1
-RCF2	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/20.4
-RCF3	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/20.6

The manufacturer reserves right to use an equivalent replacement device.

4.9	BOMAR, s.r.o. Třebání 1236/1 CZ 627 03, Brno	Stroj/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/náma page/nama seiten: Kusovník artiklů / Parts list / Artikelstükliste	Verze /Version/Version: Název/Power supply/Ernennung: Datum/Date/Datum: Zpracováno/processed/verarbeitet:	ES P1624 201 V1.1 3x400V + PE 50Hz 13.7.2016 Kc:afu	4.1	Lst: 4.1 Lst: 4.1

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
-RCF4	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/21.3
-RCF11	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/19.6
-RCF12	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/19.7
-SQS00	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/25.1
-SQS01	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/25.1
-MS	Asynchronní motor s převodovkou 1.5kW, 4p, s brzdou Asynchronous motor with gearbox 1.5kW, 4p with brake Asynchronmotor mit Getriebe 1.5kW, 4p, mit Bremse	GKR 06-2 MHAAC 090C32	Lenze	99.001.243	1	/22.1
-M6	Asynchronní motor - 4kW Asynchronous motor - 4kW Asynchronmotor - 4kW	MHERAXX 112-22 V1C	Lenze	91.001.117	1	/23.2
-HS10	Sonálka LED bílá na adaptér White LED light for adapter Wallas LED-Licht für Adapter	M22-LED-W	EATON	91.061.034	1	/25.9
-SBS00	Total stop - haviece + 3xNC Emergency-stop mushroom push - button + 3xNC Not-Aus-Platz - Taster + 3 xNC	YW1B-V4ED2R	IDEC	91.060.084	1	/25.3
-SBS10	Haviece prosvětleného tlačítka žlutá Yellow transparent switch Leiter beleuchtet gelbe Taste	M22-DL-Y	EATON	91.060.053	1	/25.5
-SBS10	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AKL0	EATON	91.061.021	1	/25.5
-PA1	Pojistka válcová - 8A, 10x38, rychlá Tube fuse - 8A, 10x38, fast Rohrsicherung - 8A, 10x38, schnell	PV10 8A gG	OEZ	91.231.003	3	/22.1

The manufacturer reserves right to use an equivalent replacement device.

4.1	BOMAR, s.r.o. Třebatín 1236/1 CZ 627 00, Brno	Straj/Mechine/Machine Extend 700.520 ANC LS 2500	Název at linky/home page/home sellion: Kusovník artiklů / Parts list / Artikelstücliste	Verze /Version/Version: Název/home supply/Erzeugung: Datum/Date/Datum: Zpracováno/processed/verarbeitet: ES P11624 201 V1.1 3680V + PE 50Hz 13.7.2016 Ksrfca	4.1 4.1 4.1 4.1
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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
-PA2	Pojistka válcová - 12A, 10x38, rychlá Tube fuse - 12A, 10x38, fast Rohrsicherung - 12A, 10x38, schnell	PV10 12A gG	OEZ	91.131.007	3	/23.2
-PA3	Pojistka válcová - 2A, 10x38, pomalá Tube fuse - 2A, 10x38, slow Rohrsicherung - 2A, 10x38, langsam	PV10 2A gG	OEZ	91.130.034	3	/24.1
-SQ1	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/32.a.0
-SQ2	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/32.a.1
-SQ3	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/32.a.2
-SQ9	Koncový spínač - 1NC+1NO, M20, pomalý Limit switch - 1NC+1NO, M20, slow Endschalter - 1NC+1NO, M20, langsam	D4N-4A32	OMRON	91.173.010	1	/32.a.5
-SQ10	Koncový spínač - 1NC+1NO, M20, pomalý Limit switch - 1NC+1NO, M20, slow Endschalter - 1NC+1NO, M20, langsam	D4N-4A32	OMRON	91.173.010	1	/32.a.5
-SQ8	Koncový spínač - 1NO + 1NC Limit switch - 1NO + 1NC Endschalter - 1NO + 1NC	FR 555-M2	PIZZATO	91.173.018	1	/32.a.4
-M8	Ventilátor s filtrační vložkou 105x120m3/h The fan with filter insert Der Lüfter mit Filtereinsatz	3239.100	Rittal	91.015.131	1	/19.4
-M8	Mřížka ventilátoru Fan louvers Lüftungsschlitze	3239.200	Rittal	91.015.132	1	/19.4
-IRC1	Inkrementální snímač - 24V, 40mA, IP64, M12 Incremental encoder - 24V, 40mA, IP64, M12 Inkrementalgeber - 24V, 40mA, IP64, M12	DKS40-ES001000	SICK	91.103.103	1	/29.3
-KA1	Termostat - 0-60 ° C, 6A / 250VAC Thermostat - 0-60 ° C, 6A / 250VAC Thermostat - 0-60 ° C, 6A / 250VAC	8MR2170-1BB	SIEMENS	91.030.104	1	/19.4

The manufacturer reserves right to use an equivalent replacement device.

4.1.	BOMAR, s.r.o. Třezbání 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine Extend 700.520 ANC LS 2500	Název stránky/Name page/Name sheet Kusovník artiklů / Parts list / Artikelstükliste	Verze / Version / Version Hlavní / Lower supply / Energieung: Datum / Date / Datum: Zpracováno / Created / Bearbeitet:	ES P1604 201 V1.1 3600V + PE 50Hz 13.7.2016 Kc:efu	4.k

Kusovník artiklů / Parts list / Stückliste

Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-BM1	Bezpečnostní relé - 3xNO, 24VDC Safety circuit relay - 3xNO, 24VDC Sicherheitskreis-Relais - 3xNO, 24VDC	RT6	ABB	91.051.056	1	/25.5
-ZD1	Náboje zdroj - 3x400VAC/24VDC, 10A Power supply - 3x400VAC/24VDC, 10A Stromversorgung - 3x400VAC/24VDC, 10A	CP-T 24/10	ABB	91.085.030	1	/24.2
-RP1	Svorka rychloupínací Fast connect clamp Fast Connect Klemm	WAGO 224-112	WAGO	91.250.009	3	/23.5
-RCF0	Odrážecí filtr 32A Noise filter 32A Rauschfilter 32A	32EB15/S0/C2	WIDECON TECHNOLOGY s.r.o.	91.041.066	1	/19.2
-FU1	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSSU	WIELAND	91.251.102	1	/24.5
-FU2	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSSU	WIELAND	91.251.102	1	/24.5
-FU3	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSSU	WIELAND	91.251.102	1	/24.5
-FU4	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSSU	WIELAND	91.251.102	1	/19.4
-M7	Ventilátor 24VDC, 154CFM Fan 24VDC, 154CFM Fan 24VDC, 154CFM	RDH1238 B2	Xinrullian Electronic Co.	91.015.126	1	/23.8

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. třezábní 1236/1 CZ 627 00, Brno	Straj/Machine/Maschine Extend 700.520 ANC LS 2500	Název stránky/Name page/Hame seiten Kusovník artiklů / Parts list / Artikelstückliste	Verze /Version/Version:	ES P11624 201 V1.1	Let:
			Název/power supply/Energieung:	3x800V + PE 50Hz	4.k
			Datum/Date/Datum:	13.7.2016	Uač:
			Zpracováno/processed/verarbeitet:	13.7.2016	44
5					

-XM1

Plán konektoru / Connector schedule / Stecker Zeitplan

Plan konektoru_CZ-ENG-DE

Označení Label Bezeichnung	Cíl konektoru Connector target Steckerbindestziel	Kontakt konektoru Connector contact Steckerkontakt	Cíl zásuvky Socket's destination Sockets Ziel	Stránka / sloupec Page / column Seite / Spalte
Třískový vlnáčeč - U1 Swarf conveyor - U1 Späneförderer - U1	-M1:U1	1	+R1:XP1:L1:40	/20.1
Třískový vlnáčeč - V1 Swarf conveyor - V1 Späneförderer - V1	-M1:V1	2	+R1:XP1:L2:40	/20.2
Třískový vlnáčeč - W1 Swarf conveyor - W1 Späneförderer - W1	-M1:W1	3	+R1:XP1:L3:40	/20.2
Třískový vlnáčeč - PE Swarf conveyor - PE Späneförderer - PE	-M1:PE	4	+R1:XP1:PE	/20.2

4.k

6

 BOMAR, s.r.o. Třebenín 1236/1 CZ 627 00, Brno	Stručný/Machinel/Machline: Extend 700.520 ANC LS 2500	Název stránky/Name page/Name seiten: Plán konektoru = -XM1	Verze /Version/Version: Napájení/Power supply/Energieung: Datum/Date/Datum: Zpracoval/Processed/et verarbeitet: Iscatka	ES P11604_201_V1.1	Let:
				3x400V + PE, 50Hz	S
				11.5.2016	Ua10:
				10.000	44



Plán konektoru / Connector schedule / Stecker Zeitplan -XM2

Plan konektoru_CZ-ENG-DE

Označení Label Bezeichnung	Cíl konektoru Connector target Steckverbindungsziel	Kontakt konektoru Connector contact Steckerkontakt	Cíl zásuvky Sockets destination Sockets Ziel	Stránka / sloupec Page / column Seite / Spalte
Hydraulika podavače - U1 Hydraulic pump of feeder - U1 Hydraulikpumpe von Feeder - U1	+R2-XP1:1L1S0	1	+R1-XP1:1L1S0	/20.4
Hydraulika podavače - V1 Hydraulic pump of feeder - V1 Hydraulikpumpe von Feeder - V1	+R2-XP1:1L2S0	2	+R1-XP1:1L2S0	/20.4
Hydraulika podavače - W1 Hydraulic pump of feeder - W1 Hydraulikpumpe von Feeder - W1	+R2-XP1:1L3S0	3	+R1-XP1:1L3S0	/20.5
Hydraulika podavače - PE Hydraulic pump of feeder - PE Hydraulikpumpe von Feeder - PE	+R2-XP1:1PE	4	+R1-XP1:1PE	/20.5

 BOMAR, s.r.o. Předměstí 1238/1 CZ 627 00, Brno	Stroj/Machine/Machine: Extend 700.520 ANC LS 2500	Název at linky/Name page/Name sheet: Plán konektoru = -XM2	Verze /Version/Version: Napájení/power supply/Ernennung: Datum/Date/Date: Zpracováno/processed/Verarbeitet: Kc:804	ES P11604 201 V1.1	8
				6	6
				11.5.2016	44
				11.5.2016	44

-XR2.1

Plán konektoru / Connector schedule / Stecker Zeitplan

Plan konektoru_CZ-ENG-DE

Označení Label Bezeichnung	Cíl konektoru Connector target Steckverbinderziel	Kontakt konektoru Connector contact Steckerkontakt	Cíl zásuvky Sockets destination Sockets Ziel	Stránka / sloupec Page / column Seite / Spalte
+24V	+R2-XC2:200	1	-FU3	/24.6
0V	+R2-XC1:100	2	-ZD1	/24.6
Světlák podavače upnut naprázdno Feeder vice clamped idle Feeder Schraubstock geklemmt Leerlauf	+R2-XC4:226	3	+R1-XC4:226	/32.a.4
Podavač - krajní poloha vpředu Feeder - front limit position Feeder - Grenzstellung vor	+R2-XC4:227	4	+R1-XC4:227	/32.a.5
Podavač - krajní poloha vzadu Feeder - rear limit position Feeder - Hinter Endlage	+R2-XC4:228	5	+R1-XC4:228	/32.a.5
Světlák podavače upnut Feeder vice clamped Feeder Schraubstock eingespannt	+R2-XC4:229	6	+R1-XC4:229	/32.a.6
Horní přítlak podavače upnut Feeder upper pressure clamped Feeder obere Druckklamme	+R2-XC4:231	7	+R1-XC4:231	/32.a.8
Světlák podavače - detekce materiálu Feeder vice- material detection Feeder VZamaterialerkennung	+R2-XC4:232	9	+R1-XC4:232	/32.a.8
Brzda motoru podavače Feeder motor brake Feeder Motorbremse	+R2-XC5:113	10	+R1-XC5:113	/22.4

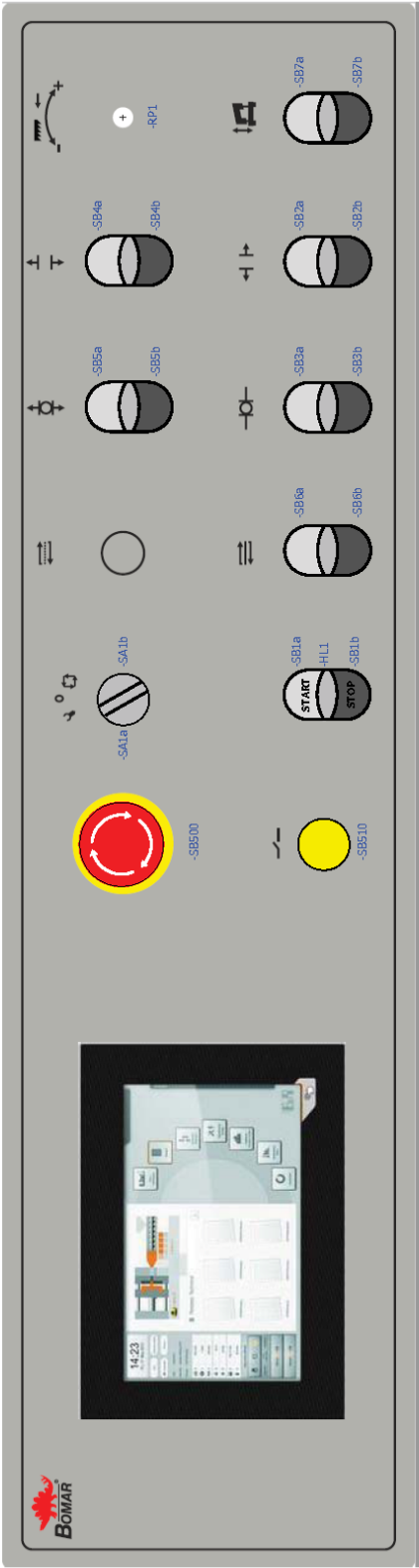
 BOMAR, s.r.o. Třesání 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine Extend 700.520 ANC LS 2500	Název at linky/Name page/Name sheet: Plán konektoru = +XR2.1	Verze /Version/Version: Napájení/Power supply/Ernennung: Datum/Date/Datum: Zpracováno/Processed/Verarbeitet: Kč/ku	ES P11604_X01_V1.1	Let: 8
				3000V + PE 50Hz	Uač: 13.7.2016
					Uač: 13.7.2016
					Uač: 44

Plán konektoru / Connector schedule / Stecker Zeitplan

plan konektorů_CZ-ENG-DE

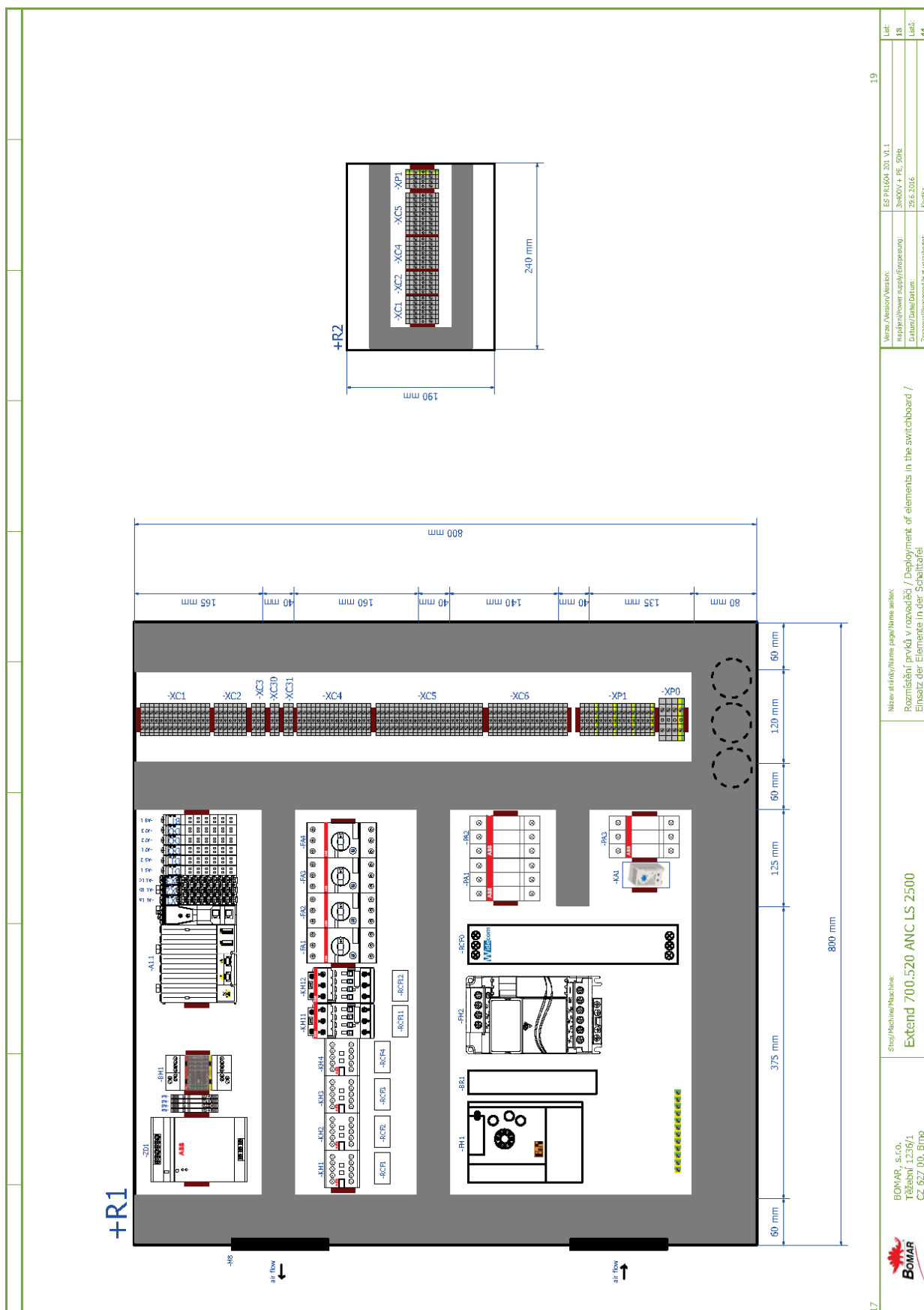
Označení Label Bezeichnung	Cíl konektoru Connector target Steckverbinderziel	Kontakt konektoru Connector contact Steckerkontakt	Cíl zásuvek Sockets destination Sockets Ziel	Stránka / sloupec Page / column Seite / Spalte
Přítlak podavače upnutí Feeder upper pressure clamp Feeder obere Druckklemme	+R2-XCS-329	1	+R1-XCS-329	/35.1
Přítlak podavače povolit Feeder upper pressure release Feeder obere Druckentlastung	+R2-XCS-330	2	+R1-XCS-330	/35.2
Druhý stupeň čerpadla Second level of hydraulic pump Zweite Stufe Pumpen	+R2-XCS-331	3	+R1-XCS-331	/35.2
Svářák podavače Feeder vice Zubringer Schraubstock	+R2-XCS-332	4	+R1-XCS-332	/35.3
Přepřačování 1 Overflowed 1 Überflutete 1	+R2-XCS-333	5	+R1-XCS-333	/35.4
Přepřačování 2 Overflowed 2 Überflutete 2	+R2-XCS-334	6	+R1-XCS-334	/35.4
Odkovácí pákna Bouncing rebound Hüpfenden Abpraller	+R2-XCS-335	7	+R1-XCS-335	/35.5

+OP1

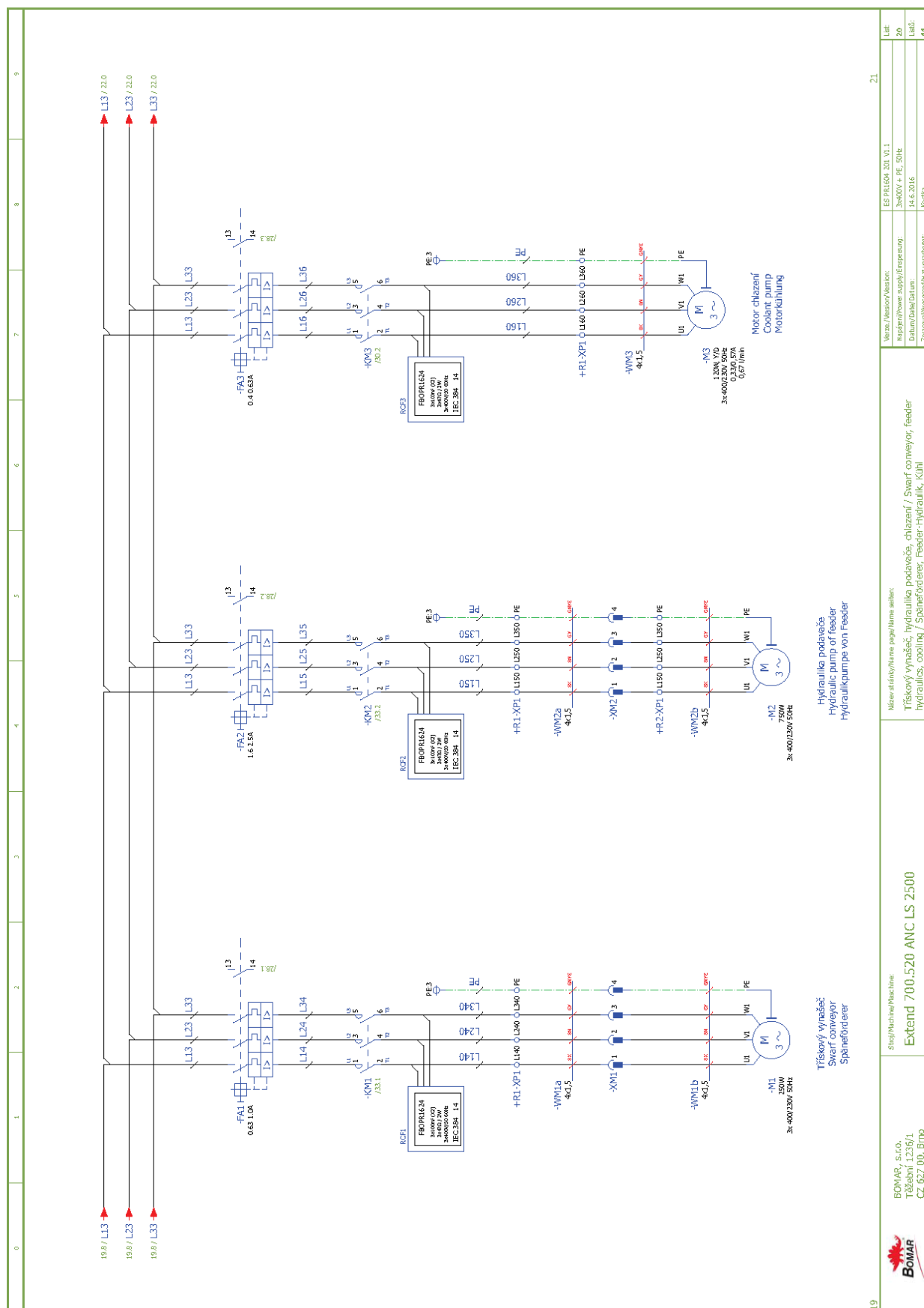


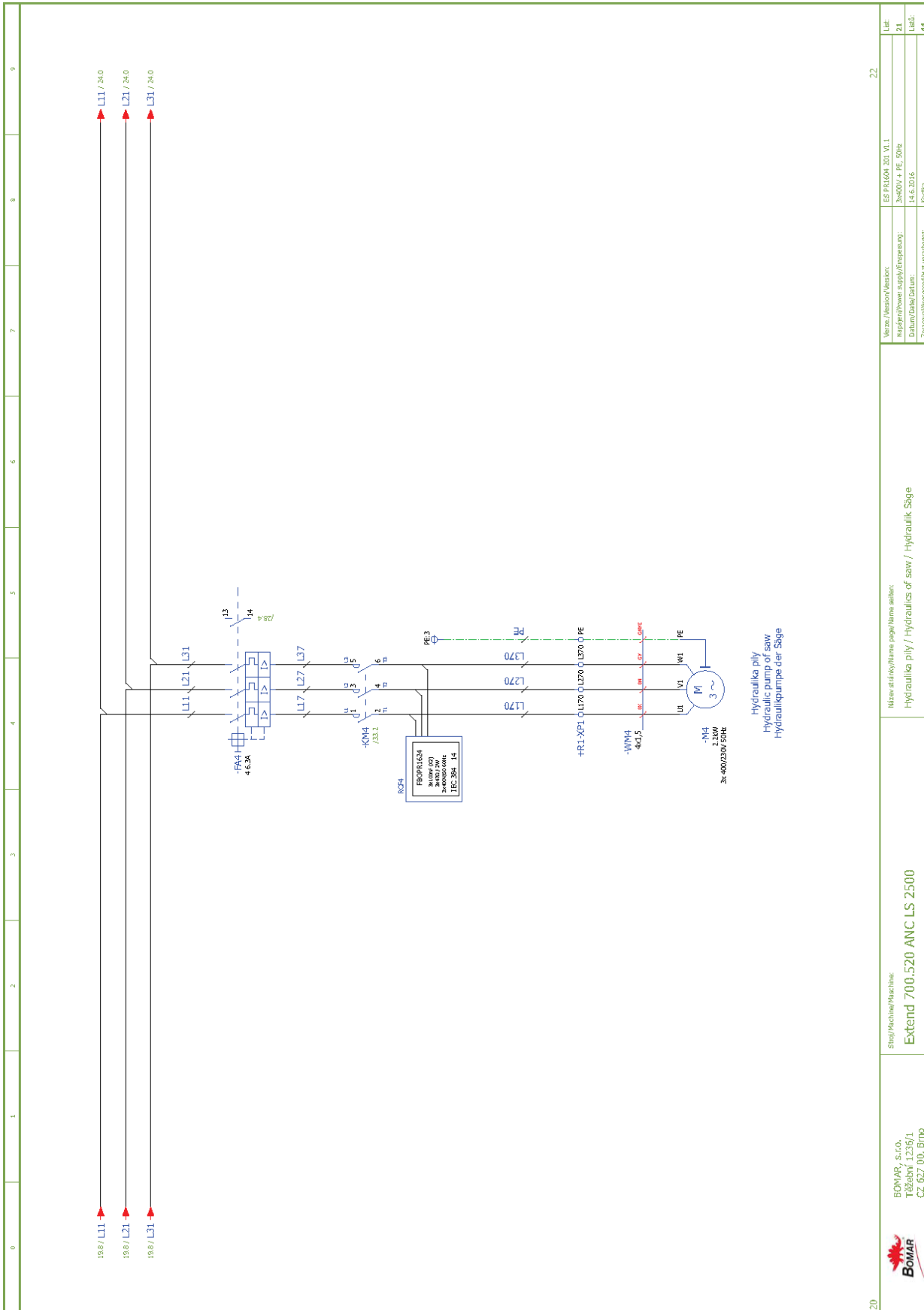
	BOMAR, s.r.o. Telčanská 1238/1 CZ 627 00, Brno	Stroj/Machine/Machine Extend 700.520 ANC LS 2500	Názov a funkcia/Name page/Name section: Rozmístění prvků na ovládacím panelu +OP1 / Deployment of elements of the control panel +OP1 / Einplatz der Elemente des Bedienfelds +OP1	Verze /Version/Version: Napájení/Power supply/Power supply: Datum/Date/Date: Zpracováno/Processed/Processed:	ES F1604 201 V1.1 3x400V + PE 50Hz 11.7.2016 Kc-80a	17

229



Verz./Version/Version: Návrh/Power supply/Ensempung: Datum/Date/Date: Zpracoval/Processed/Verarbeitet:	ES P11604 301 V1.1 3000V + PE 50Hz 29.6.2016 KcRfka	Název a funkce/Name page/Name section: Rozmístění prvků v rozvaděči / Deployment of elements in the switchboard / Einplatz der Elemente in der Schalttafel	Stroj/Machine/Machine: Extend 700.520 ANC LS 2500	BOMAR, s.r.o. Třezant 1236/1 CZ 627 00, Brno
17	19	18	44	44





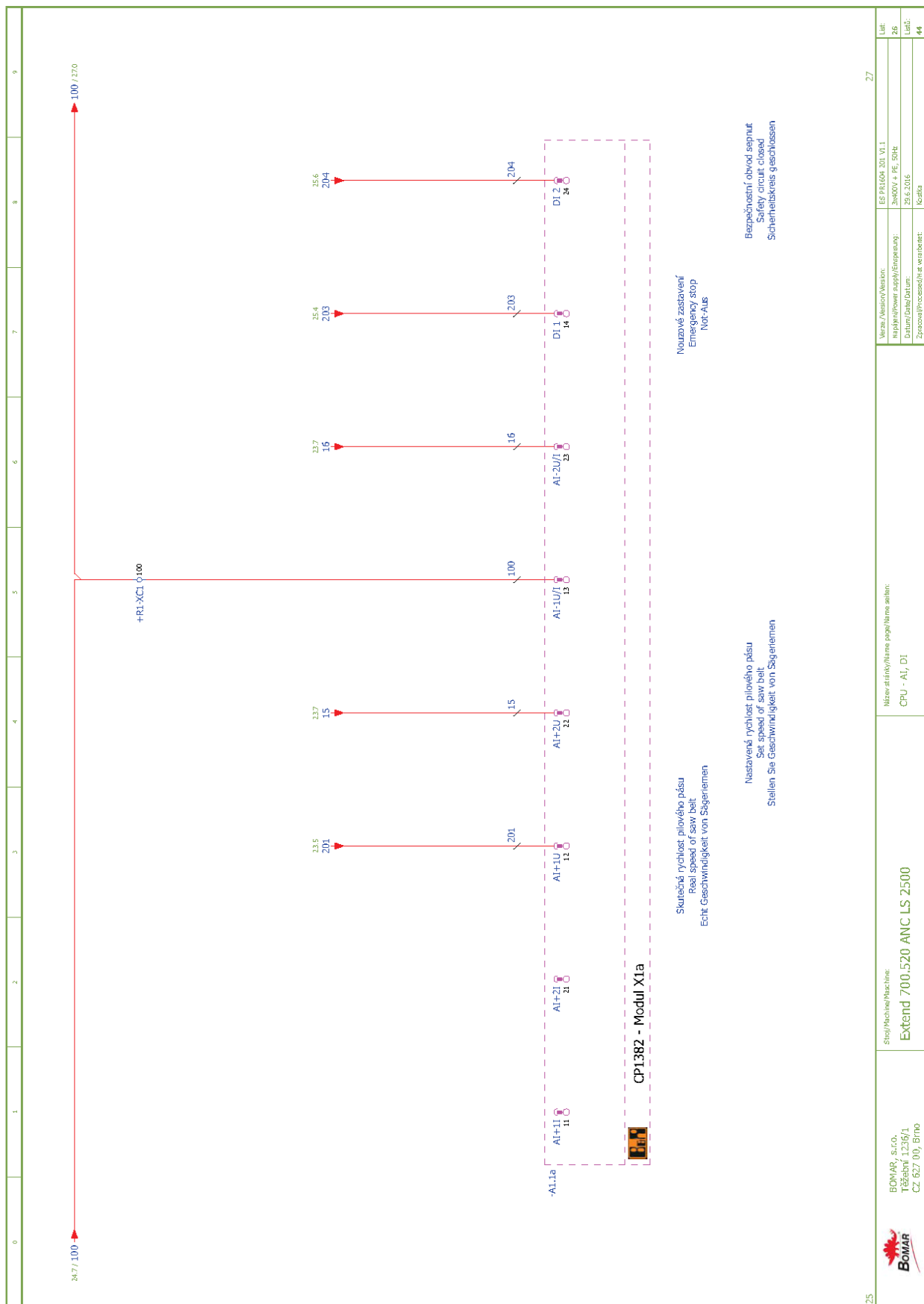




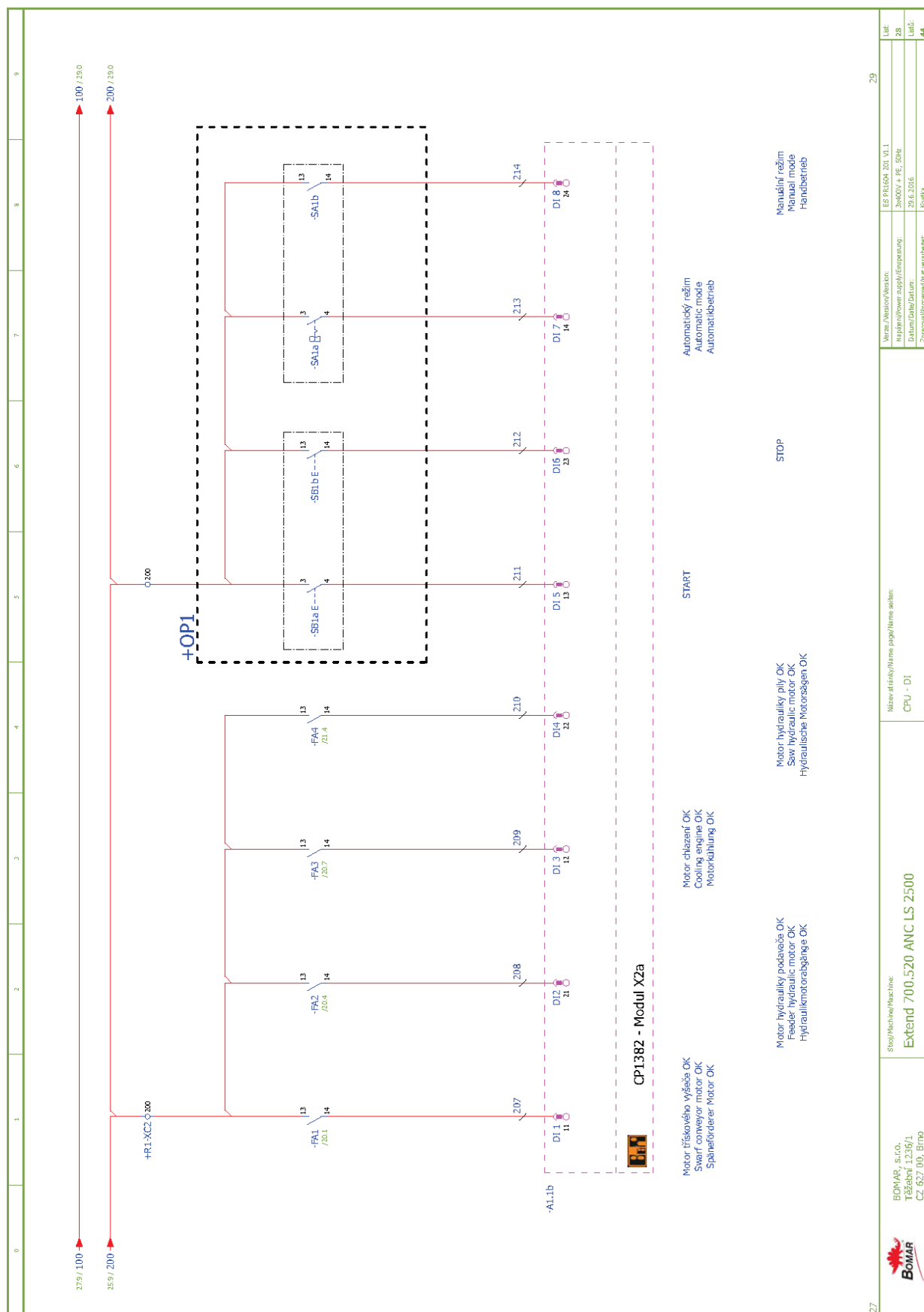
 BOMAR s.r.o., tř. 28. října 1236/1 CZ 632 00, Brno	Stroj/Machine/Machine Extend 700.520 ANC LS 2500	Název artiklu/Název typu/Název zařízení Pohon plovákového pásu / Saw band drive / Stagesband-laufwerk	Verze/Verzión/Version ES PR1604 201_V1.1	List: 23
				Výkon/Power/Leistung 3ac300V + PE, 50Hz
				Datum/Datum/Datum 29.5.2016
				List: 24











 BOMAR, s.r.o. Třeben 1236/1 CZ 627 09, Brno	Stop/Machine/Machine Extend 700.520 ANC LS 2500	Název atřizky/Name page/Name section: CPU - DI	Název Modulu/Modul: CP1382-20, V1.1	Ust. 25

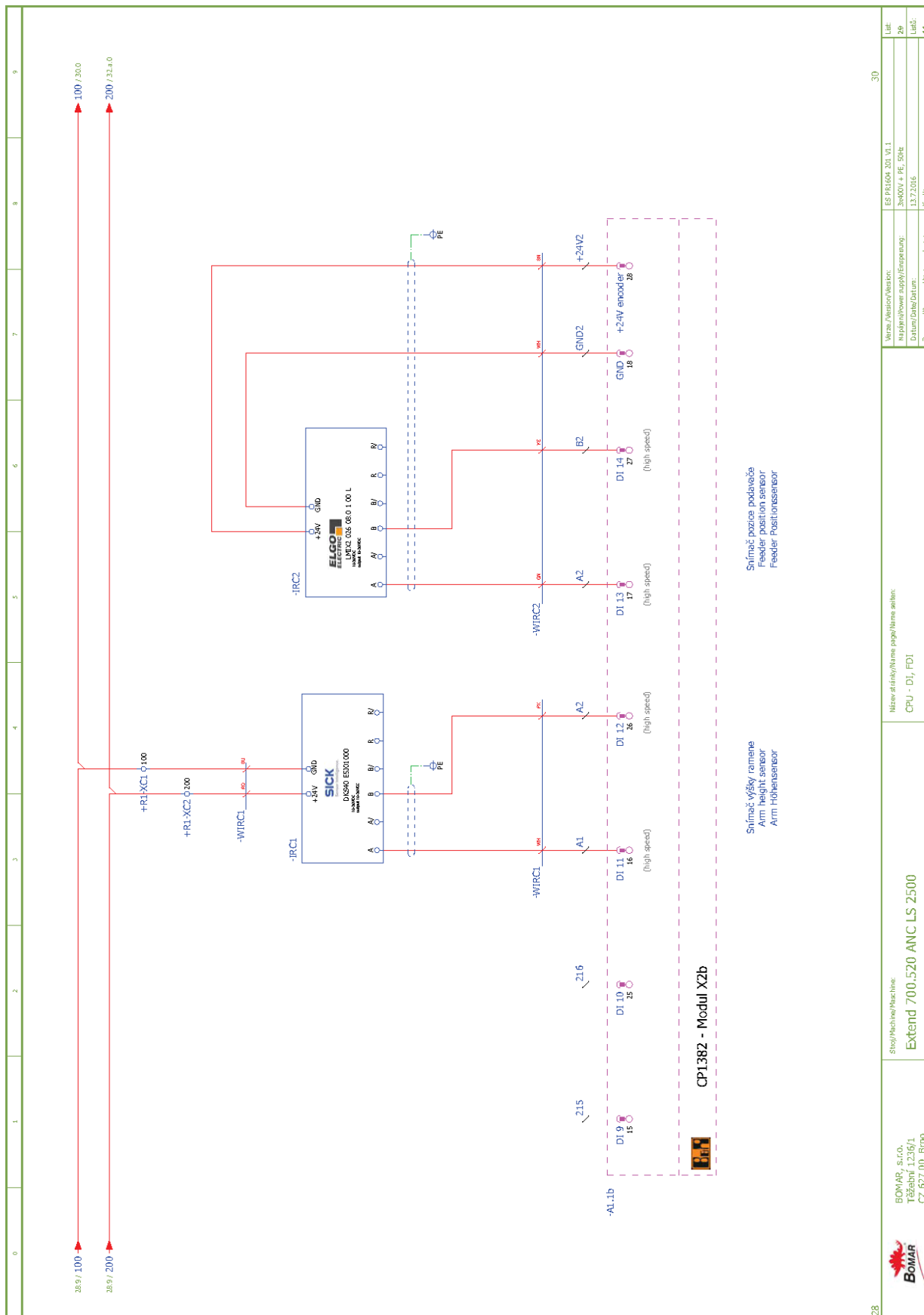
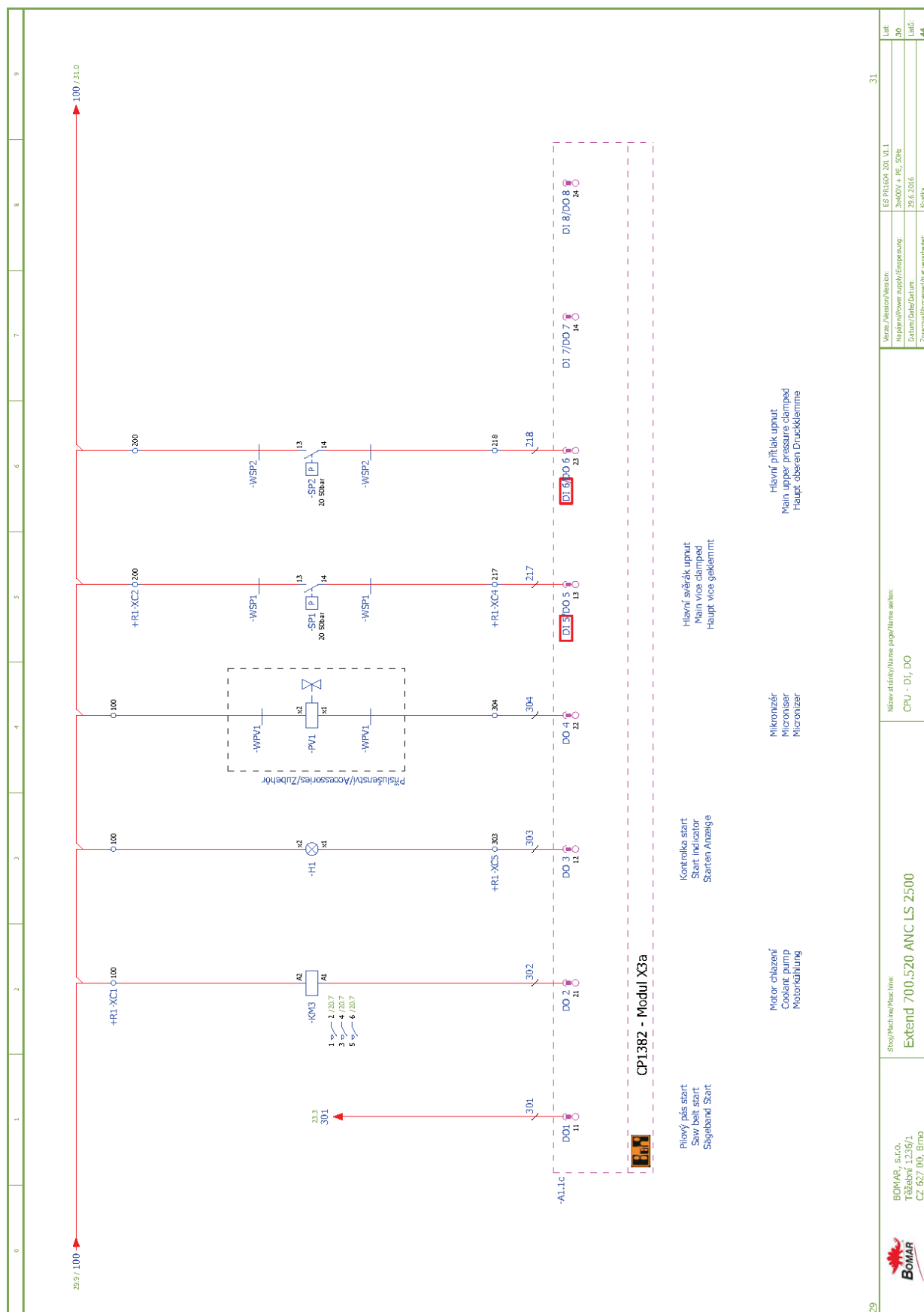


Schéma
Schemas
Schema



	BOMAR, s.r.o. Třebatín 1236/1 CZ 627 09, Brno	Shop/Machine/Machine: Extend 700.520 ANC LS 2500	Názov stroj/Name page/Name section: CPU - DI, DO	Názov Modulu/Modul: Injektor/Injekt Drum/Drum Zpracovávacia jednotka	ES P1382 20.11.1 SMDV + PE, 30Hz 20.6.2016 Nodex	List: 30 Total: 44

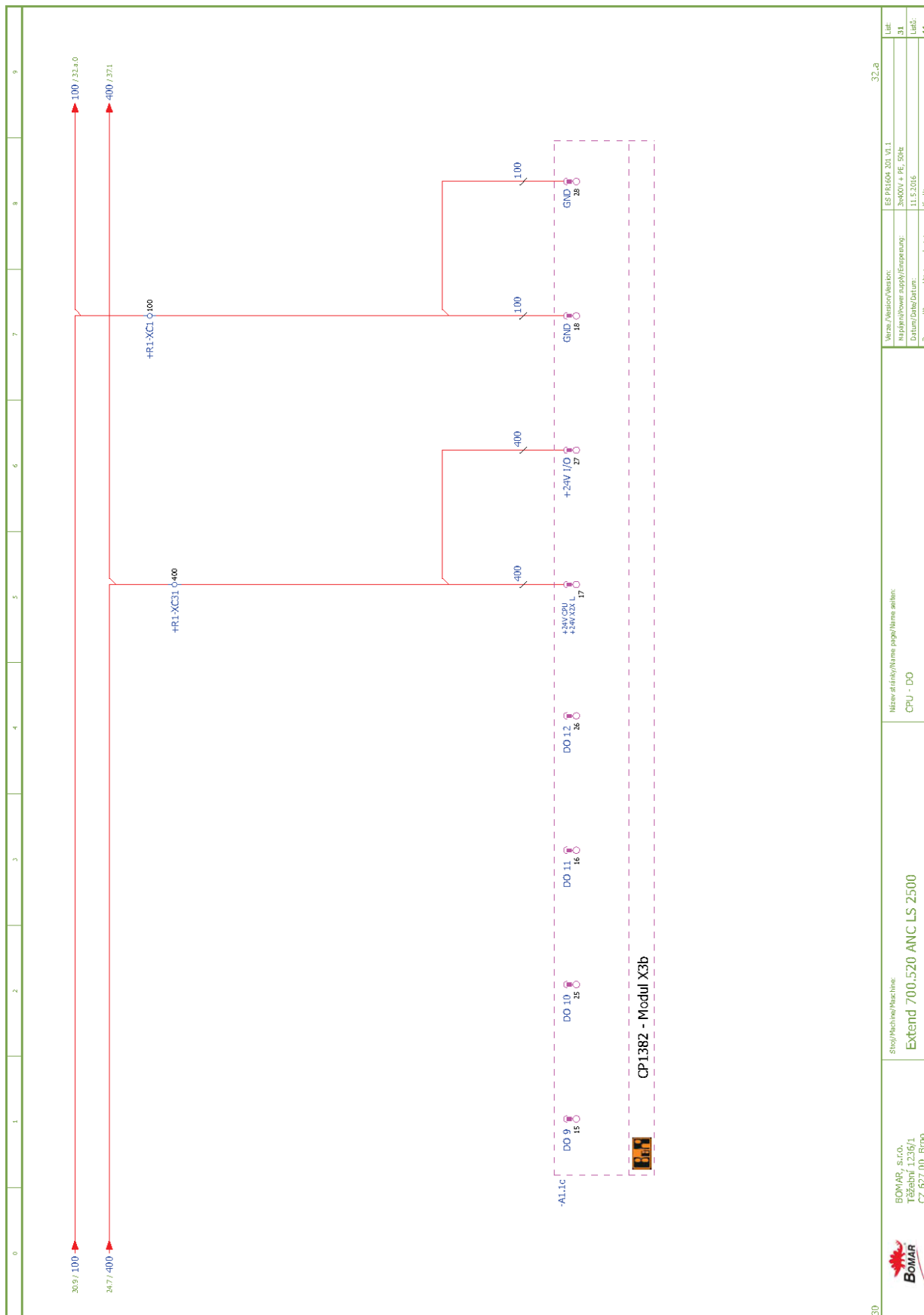
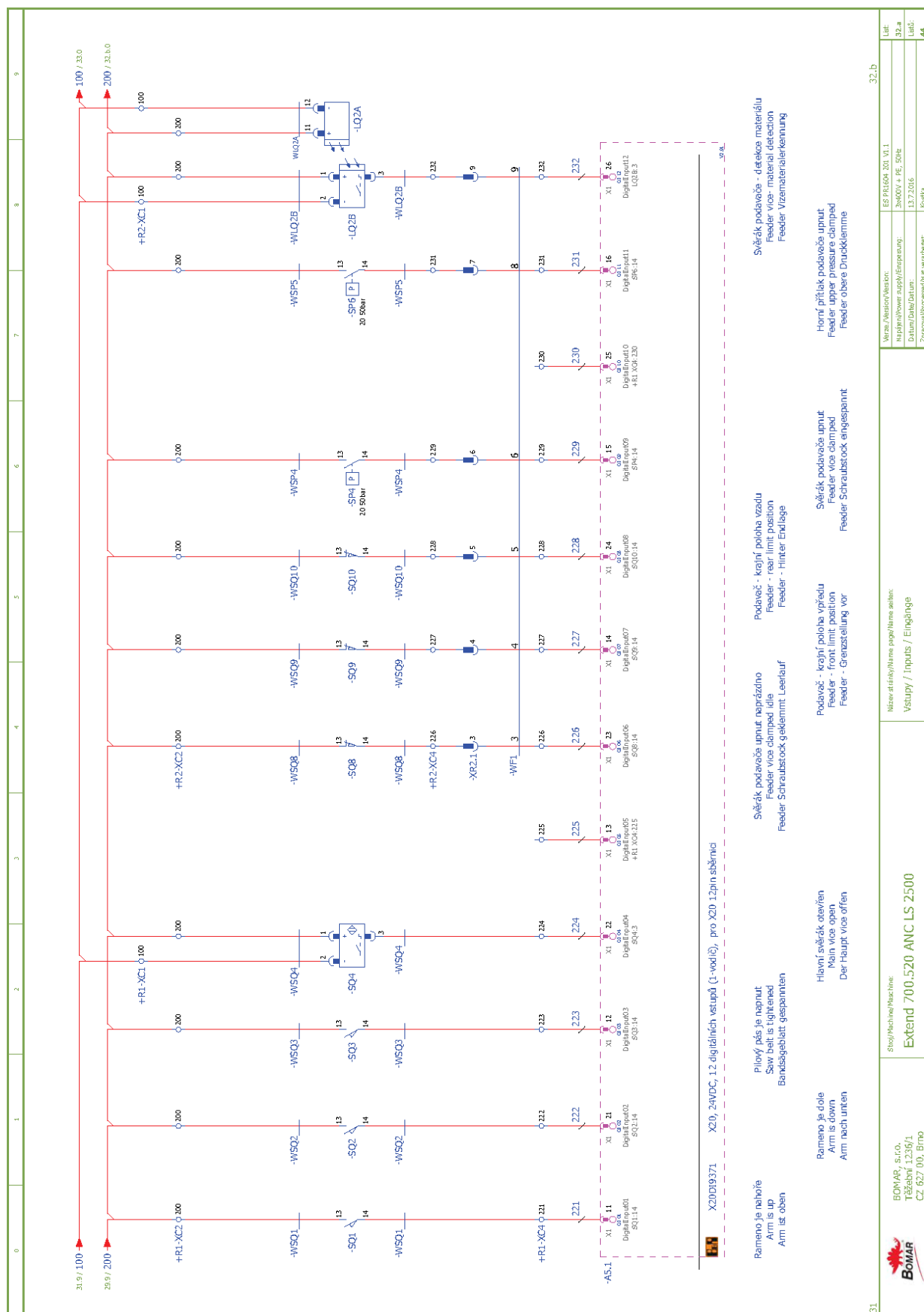
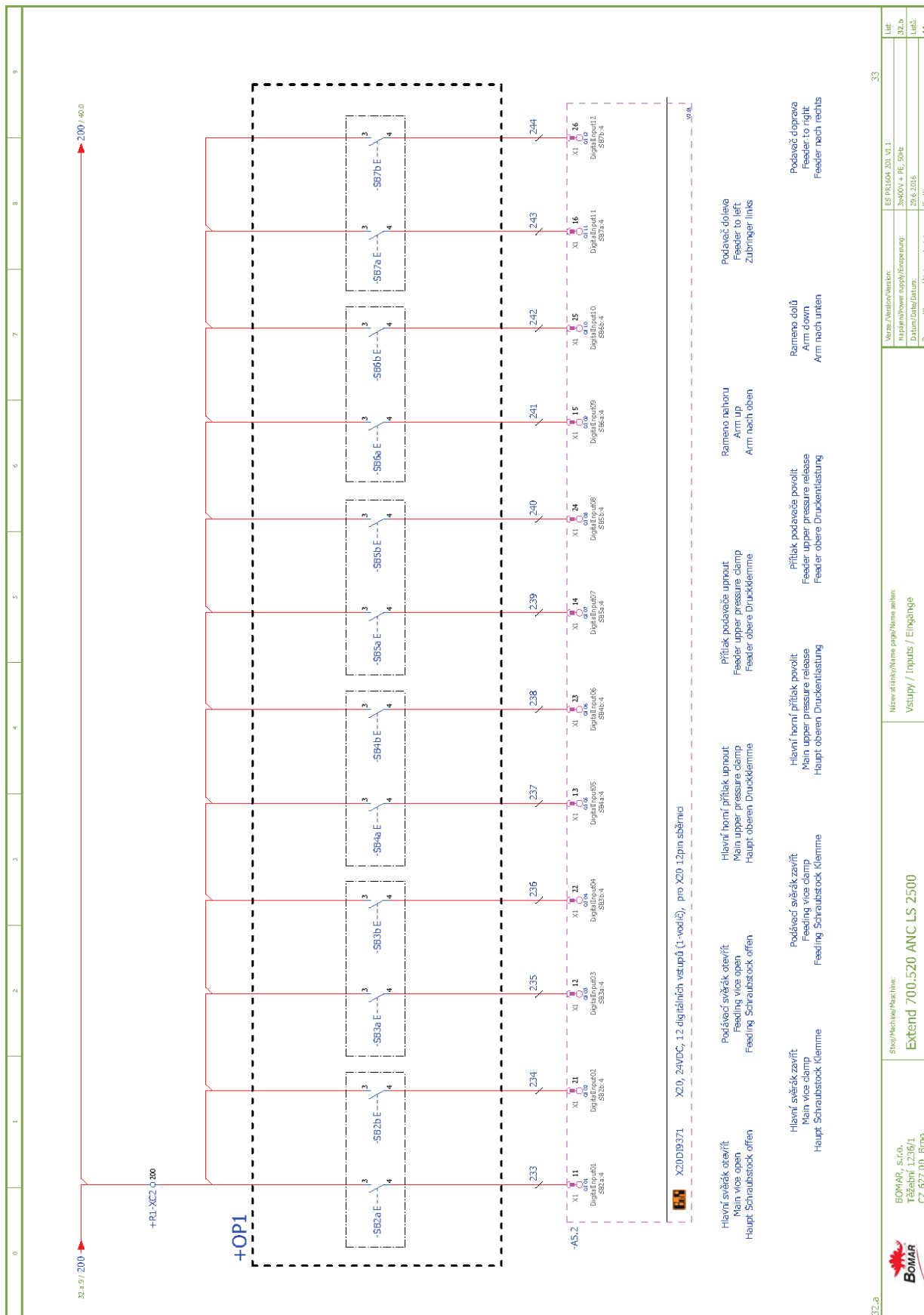


Schéma
Schemas
Схема



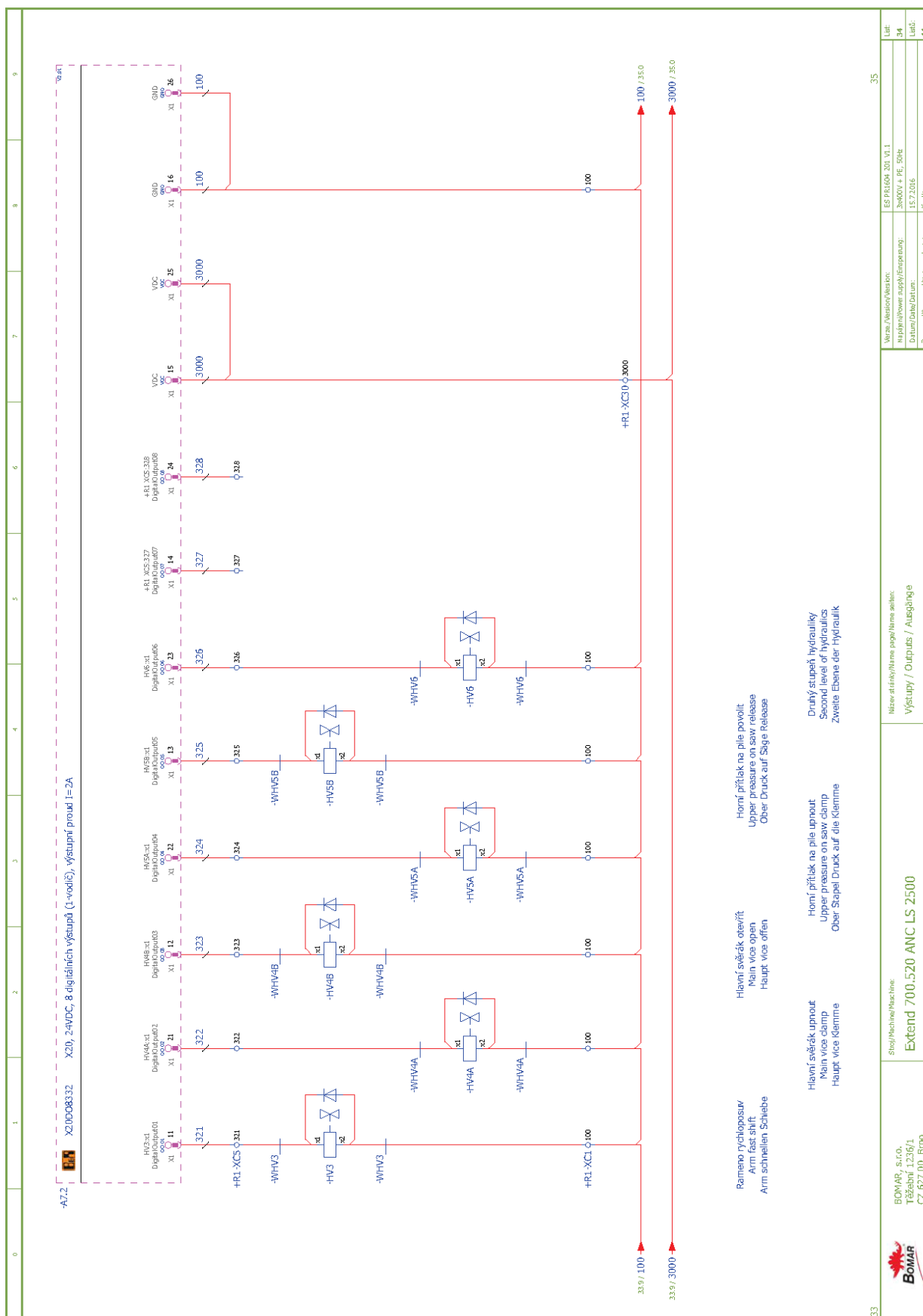


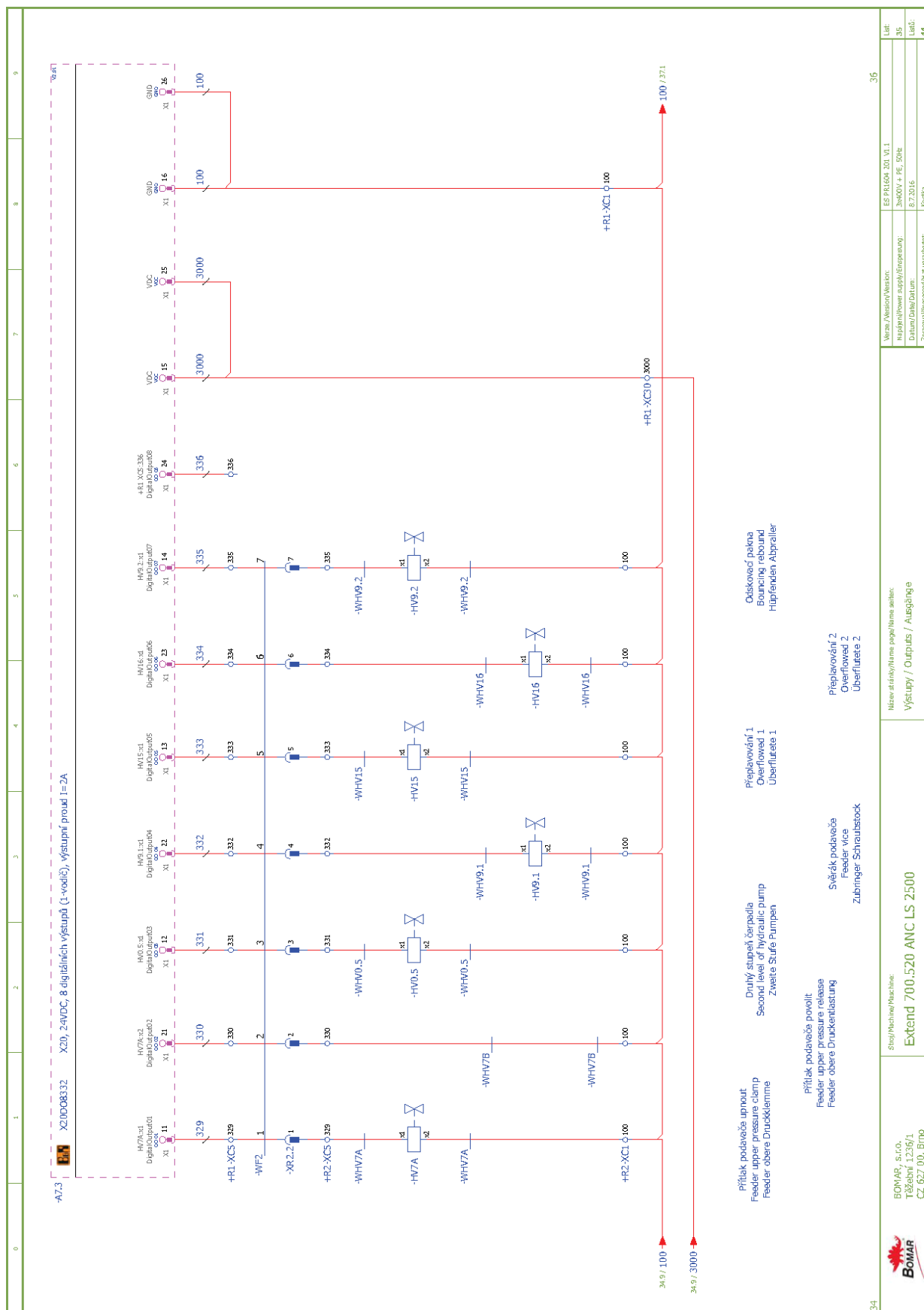
32.a

33

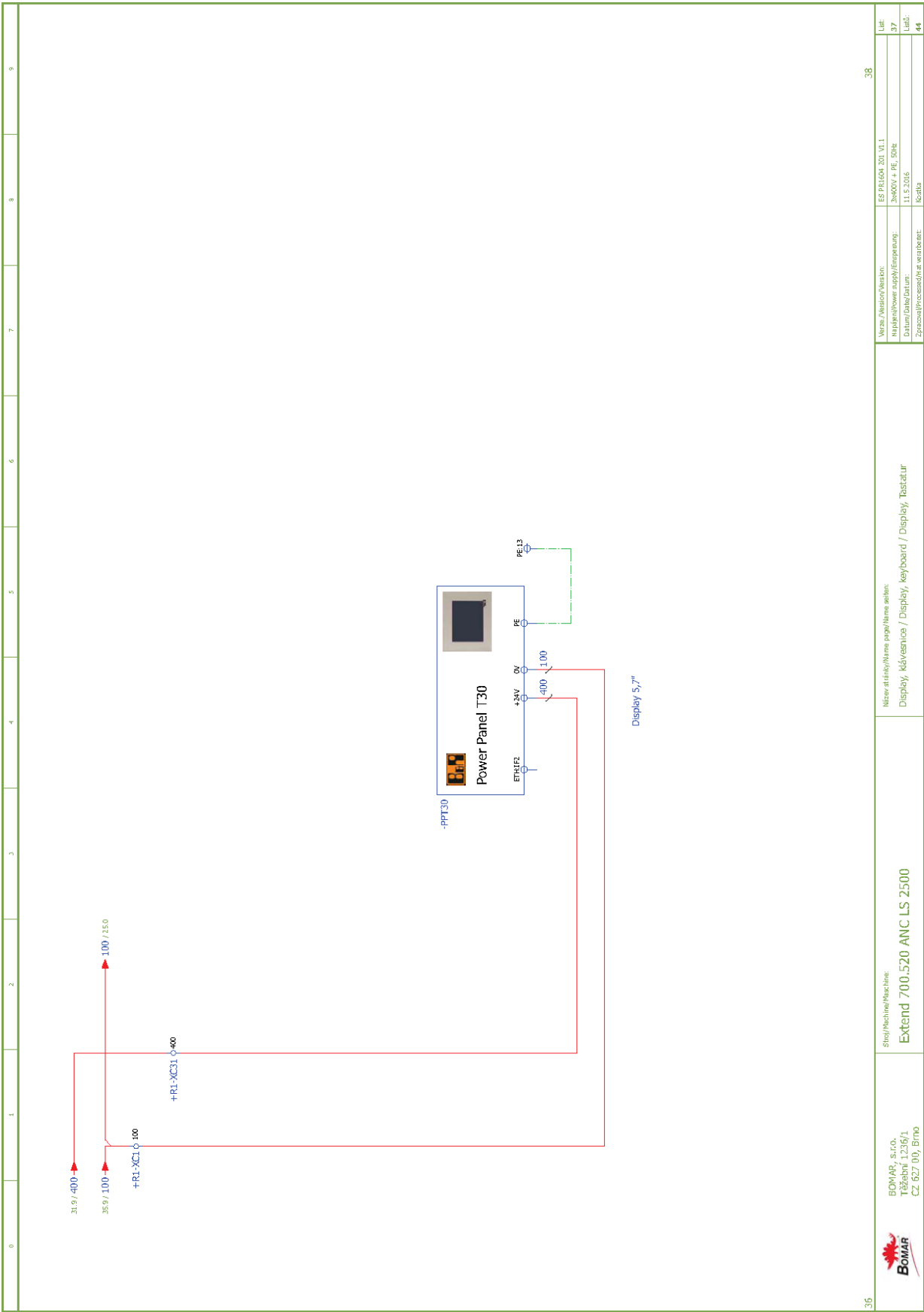
	BOMAR, s.r.o. Třelav 1236/1 CZ 627 09, Brno	Shop/Machine/Machine Extend 700.520 ANC LS 2500	Název stránky/Name page/Name sheet: Vstupy / Inputs / Eingänge	Název Klienta/Klient: Inženýrský ústav/Engineering Datum/Datum: Zpracoval/Processed by:	List: 32.a 32.b 32.c 32.d 32.e 32.f 32.g 32.h 32.i 32.j 32.k 32.l 32.m 32.n 32.o 32.p 32.q 32.r 32.s 32.t 32.u 32.v 32.w 32.x 32.y 32.z 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
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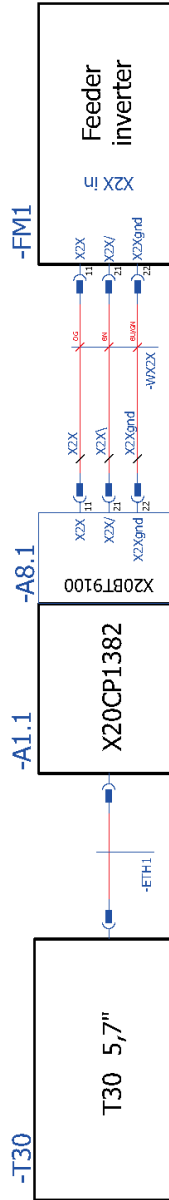
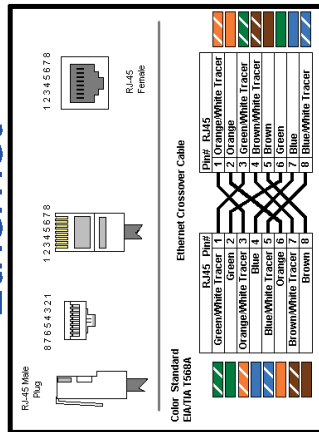


316

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	BOMAR, s.r.o. Třávní 1236/1 CZ 627 09, Brno	Shop/Machine/Machine: Extend 700.520 ANIC LS 2500	Název atřiny/Name page/Name sellen: Display, klávesnice / Display, Tastatur	Verze /Version/Version: Injektion/Injektion supply/Injektion Drum/Drum/Drum: Zpracování/Processing at work/Work	EC PRS60 20, V. 1.1	Ud.
					3000V + PE, 30Hz	37
					11.3.2016	Ud.
					Noted	44

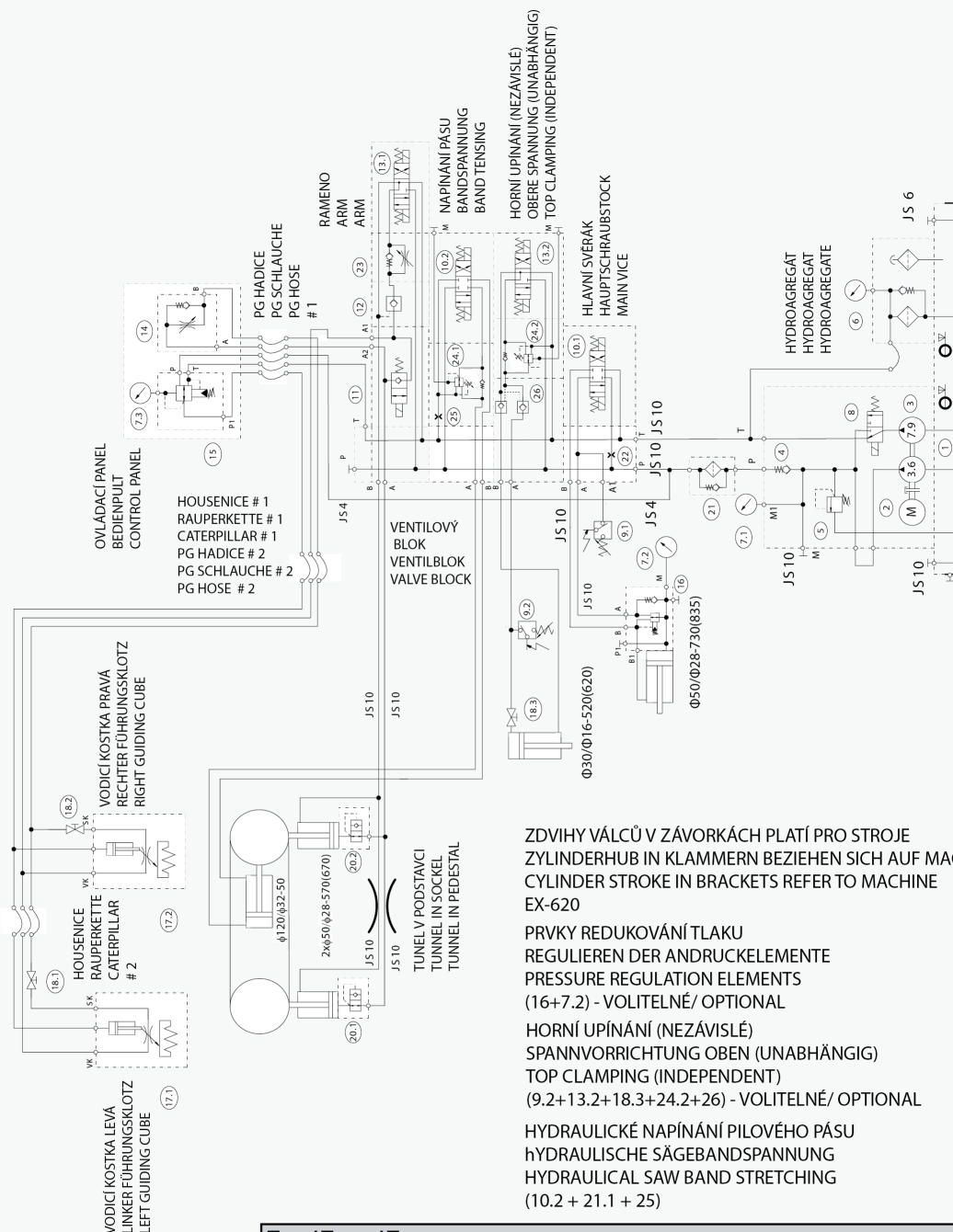
Ethernet



	BOMAR, s.r.o. Těšební 1236/1 CZ 627 00, Brno	Svoj/Machine/Modul: Extend 700.520 ANC LS 2500	Název stránky/název page/název section: Topologie / Topology / Topology	Verze / Version / Version: Instal./Power supply/Emplacement Datum/Dat./Datum: Zpracoval/Processed/Has verified:	SE-40150A-300-10-1	Let:
					3x300V + PG 30Hz	38
					20.6.2018	Let:
					Koska	44



- 6.2. Hydraulické schema /
 Hydraulikschema /
 Hydraulic diagrams – Pila / Säge / Saw



Typ / Type / Type

Extend 520, 520 ANC, Extend 620 (ANC)

Hydraulický agregát / Hydroaggregat / Hydro aggregat

92.001.048(731-0507)

Neuvedené světlosti / Unerwähnt Lichtbreite / Unlisted inside diameters

JS6

Výstupní šroubení / Ausgangsschraubung / Output screwing

Pmax	6, 5 MPa
Q	10, 6 + 4, 9 dm ³ /min
n	1425 rpm
P	2,2 kW

Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Nádrž / Behälter / Tank	N30-BO 30l	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL100L 2,2 kW 400/230V / 5,07A 50Hz	1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	P23-7,9/3,6 L65334 7,9/3,6 cm ³ /ot. Dvoustupňový/ Zweistufige/ Two-stage	1
4	Jednosměrný ventil / Einwegventil / One-way valve	VJ01-06/SG-1	1
5	Přepouštěcí ventil / Bypassventil / By pass valve	VPN1-06/S-10S 92.151.006 Seříditi na/Einstellen Adjust to/ 6MPa	1
6	Zpětný filtr / Filter / Filter	FR 043-166/0 10um 92.153.101 / .039 +Vložka / Einlage / Inset V3.0510-56	1
7	Manometr / Manometer / Manometer	Ø68 0-10/6MPa S/mit/with GLICERINEM	3
8	Rozváděč / Schaltschrank / Switchboard	SD2E-A3/H2D21	1
9	Tlakový spínač / Druckschalter / Pressure switch 92.201.001	166415031059 20-50bar	2(1)
10	Rozváděč / Schaltschrank / Switchboard	RPE3- 043Z11/02400E1K1 92.101.010	2
11	Blok rychloposuvu / Eilgangsblock / Speed shift block	729-0084 92.153.006	1
12	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MA 92.103.002	1
13	Rozváděč / Schaltschrank / Switchboard	RPE3- 043Y11/02400E1K1 92.101.005	2
14	Škrťací ventil / Drosselventil / Throttle-valve	VS01-04/R2,5-0 92.152.001	1
15	Redukční ventil / Reduktionventil / Reduce ventil	VRN2-06/S-6R	1
16	Redukční ventil / Reduktionventil / Reduce ventil	VRN2-06/S-6R, 252.460	1(0)
17	Kostka regulace / Regulationklotz / Regulation cube	201.6816-100	2
18	Kulový ventil / Kugelventil / Globe valve	99.260.007	3
19	Krycí deska / Abdeckung Platte / Covering plate	DK1-04/32-2 92.105.008	1

20	Pojistný ventil / Sicherungsventil / Safety valve	VPNH 1/4'92.151.001 Seřídit na/Einstellen Adjust to s=0,5mm	2
21	Tlakový filtr / Druckfilter / Pressure filter	D 042-153 (3 µm) 92.153.102/.055 + Vložka / Einlage / Inset V3.0510-03	1
22	Clona / Blende / Schield	Ø1,5 / 92.153.022	1
23	Škrticí ventil / Drosselventil / Throttle valve	VS01-04/ME S 92.150.016	1
24	Redukční ventil / Reduktionventil / Reduce ventil	VRP2-04-AS/6 92.154.010	
25	Clona / Blende / Schield	Ø1,2 / 92.153.023	1
26	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MC 92.103.001	1

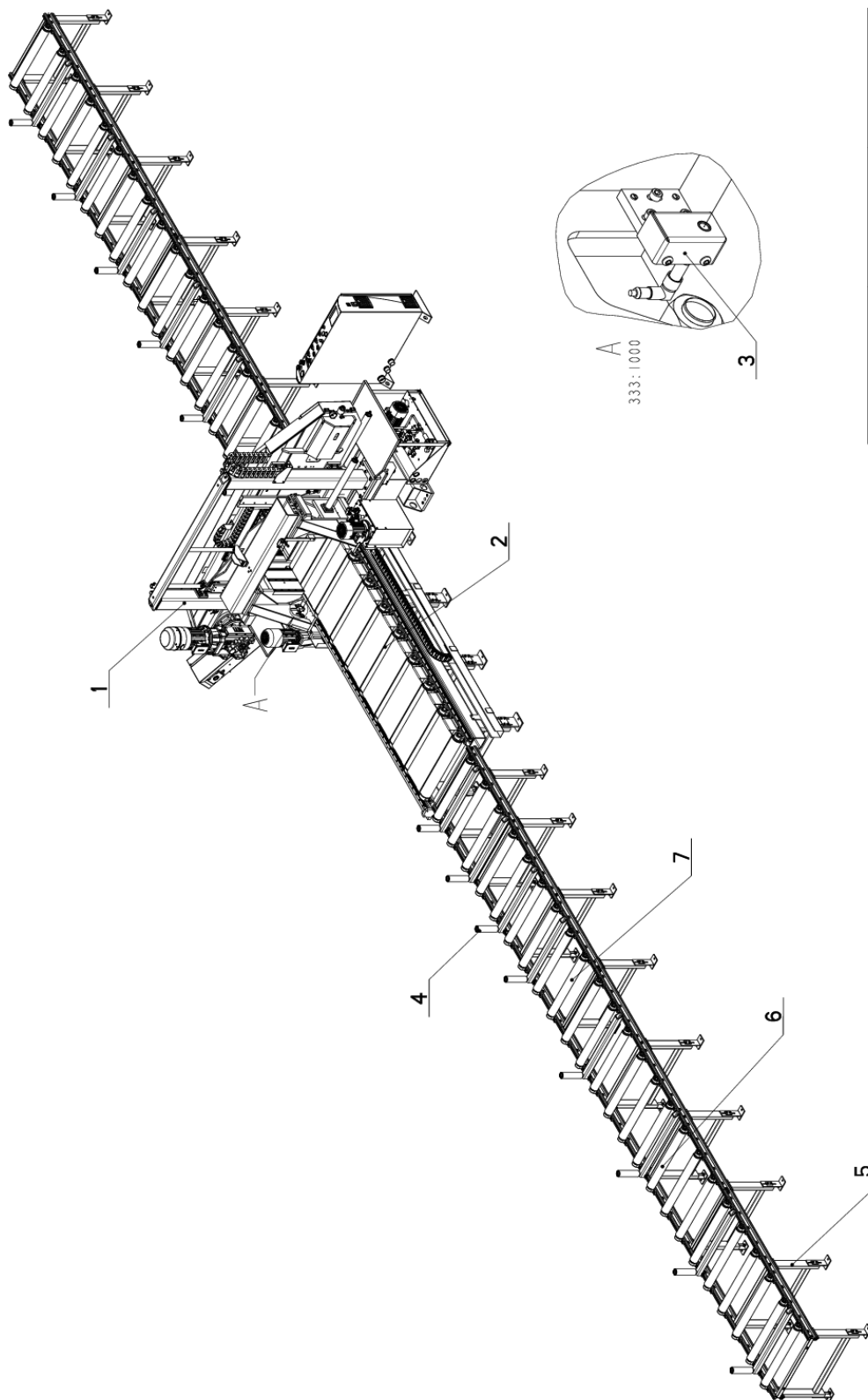
Pos.	Item	Type	Pcs
1	Nádrž / Behälter / Tank	TM30/S 30 l	1
2	Elektromotor / Elektromotor / Electromotor	EM80-0,75 kW / 3- B34-L 400/230V / 50Hz / 1A	1
3	Hydrogenerátor / Hydraulikaggregat / Hydrogenerator	11A5X181G/A1X182G 5/1 cm ³ /ot. Dvoustupňové zubové/ Zweistufige, Zahn/ Two-stage, gear	1
4	Sací filtr / Filter / Suction filter	AS010-00	2
5	Rozváděč / Verteilungsventil / Distributor	SD2E -A2/S2I11M9	1
6	Přepouštěcí ventil / Bypassventil / By pass valve	SR1A-A2/S25 Seřadit na/Einstellen Adjust to/ 150bar MAX	1
7	Jednosměrný ventil / Einwegventil / One-way valve	SC1F-A2/H005	1
8	Jednosměrný ventil / Einwegventil / One-way valve	XRVV-12LR	1
9	Rozváděč / Verteilungsventil / Distributor	RPEK- 03G2R11/02400E1 92.101.031	2
10	Manometr / Manometer / Manometer	Ø68 S G LY CE RINE M 0-25 MP a 92.080.004	2/1
11	Zavzdušňovací filtr / BelüftungsfILTER / Aeration filter	CPT-MD-FA/1"	1
12	Přepouštěcí ventil / Bypassventil / By pass valve	SR1A-A2/S06 4 MPa	1
13	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	FMV	1
14	Rozváděč / Verteilungsventil / Distributor	SD2E/H2I11/02400E1	1
15	Rozváděč / Verteilungsventil / Distributor	SD2E-B2/H2I12/C22B- 02400E1	1
16	-		
17	-		
18	-		
19	-		
20	Kulový ventil / Kugelventil / Globe valve		1/0
21	Tlakový spínač / Druckschalter / Pressure switch	KÓD: 166415031059 20-50 bar 92.201.003	2/1
22	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	FMV	1/0

23	Redukční ventil / Reduktionventil / Reduce ventil	FMV	1/0
24	Rozváděč / Verteilungsventil / Distributor	FMV / $\frac{3}{4}$ -Y	1/0
25	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	FMV	1/0

7. **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. Extend 700.520 ANC LS-2500) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Extend 700.520 ANC LS-2500), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example Extend 700.520 ANC LS-2500), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Extend 700.520 ANC LS-2500



NAZEV SESTAVY PILA PASOVA	CISLO SESTAVY 201.PRI1604_SESTAV 520	STROJ 700.520
Konstruoval: KOHUT		
Datum: 12. 07.2016		
Meritko: 3:100		

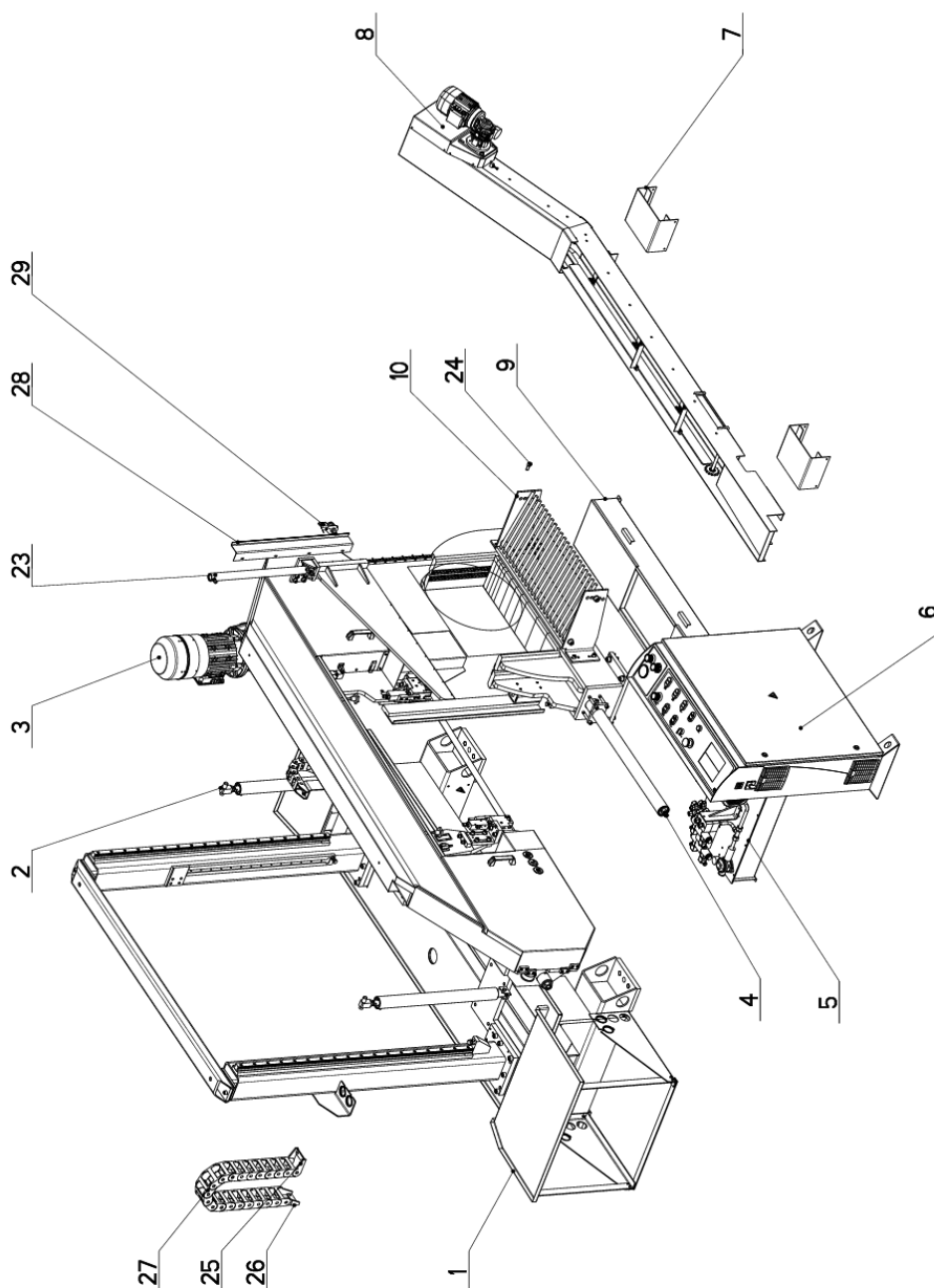
7.2. Extend 700.520 ANC LS-1500

Cislo Sestavy 201.PR1604_SESTAVA		Ver. 0	Nazev sestavy PILA PASOVA/BAND SAW/BANDSAGE		
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6000-050	0	PILA PASOVA / BAND SAW / BANDSÄGE		1
2	201.6011-040	0	PODAVAC / FEEDER / VORSCHUB		1
3	201.6311-010	0	ZAVORA OPTICKA / OPTICAL GATE / LICHTSCHRANKE		1
4	203.X107-800	0	VALEC VERTIKALNI / VERTICAL CYLINDER / VERTIKALZYLINDER		14
5	253.X752-15-6C2	0	TRAT / TRACK / BAHN		1
6	253.X753-15-9C3	0	TRAT / TRACK / BAHN		2
7	253.X753-15-9C4	0	TRAT / TRACK / BAHN		2

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednaci cislo/Purchase order number/Bestellnummer; Nazev polozky/Volume title/Name der Position; Rozmer/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

7.3. Pásová pila / Bandsäge / Band saw



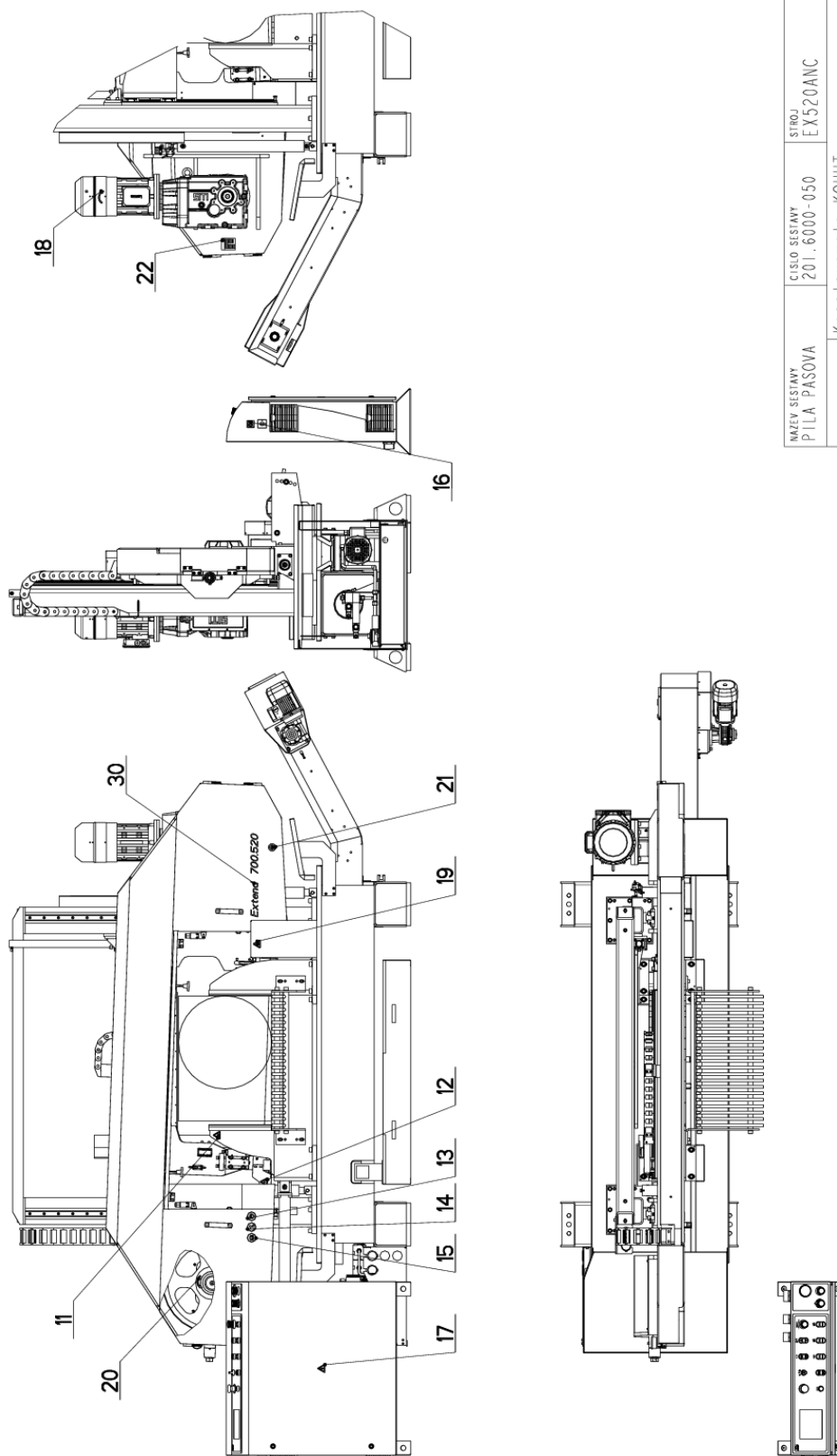
NAZEV SYSTAVY PILA PÁSOVÁ	ČÍSLO SYSTAVY 201.6000-050	STROJ EX520ANC
Konstruoval: KOHUT		
Datum: 03. 09. 2015		
Meritko: 7:500		

7.4. Kusovník / Stückliste / Piece list – Pásová pila / Bandsäge / Band saw

Císlo Sestavy 201.6000-050		Ver. 0	Název sestavy PILA PASOVA/BAND SAW/BANDSÄGE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6001-650	0	PODSTAVEC / BASE / UNTERSATZ		1
2	201.6007-700	2	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		2
3	201.6004-550	0	RAMENO / SHOULDER / SÄGERAHMEN		1
4	201.6003-150	0	SVERAK / VICE / SCHRAUBSTOCK		1
5	92.001.048	0	AGREGAT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
6	201.W430-330	0	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
7	30.6014-139	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE		2
8	201.6117-100	4	VYNASEC TRISKOVÝ / CHIP EXTRACTOR / SPANABFÜHRUNG		1
9	201.6106-000	1	CHLAZENÍ / COOLING / KÜHLUNG		1
10	201.6018-400	2	ROST / GRILL / GITTER		1
11	99.900.039	0	SAMOLEPKA / STICKER / AUFLEBER	NEBEZP.STLACENI	1
12	99.900.040	0	SAMOLEPKA / STICKER / AUFLEBER		1
13	99.900.047	0	SAMOLEPKA / STICKER / AUFLEBER		1
14	99.900.048	0	SAMOLEPKA / STICKER / AUFLEBER		1
15	99.900.049	0	SAMOLEPKA / STICKER / AUFLEBER		1
16	99.900.046	0	SAMOLEPKA / STICKER / AUFLEBER		1
17	99.900.045	0	SAMOLEPKA / STICKER / AUFLEBER		1
18	99.900.051		SAMOLEPKA / STICKER / AUFLEBER		1
19	99.900.043	0	SAMOLEPKA / STICKER / AUFLEBER		1
20	99.900.050	0	SAMOLEPKA / STICKER / AUFLEBER		2
21	99.901.032	0	SAMOLEPKA / STICKER / AUFLEBER	CETIFIKACNI SAMOLEPKA P 0.5x65	1
22	30.6099-403	0	STÍTEK TYPOVÝ / /		1
23	201.6014-040	0	UPÍNACÍ HORNÍ / TOP CLAMP / SPANNVORRICHTUNG OBEN		1
24	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M12X30	4
25	99.173.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNEJ	1
26	99.173.002	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNIT	1
27	99.170.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	Q555.030.075.100	20
28	30.6104-019	1	HŘEBEN / /	P 2x129	1
29	201.P304-190	1	ODMĚROVÁNÍ / MEASURING / GEHRUNGSMESSUNG		1
30	99.901.019	0	SAMOLEPKA / STICKER / AUFLEBER		1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version); 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

7.5. Pásová pila / Bandsäge / Band saw



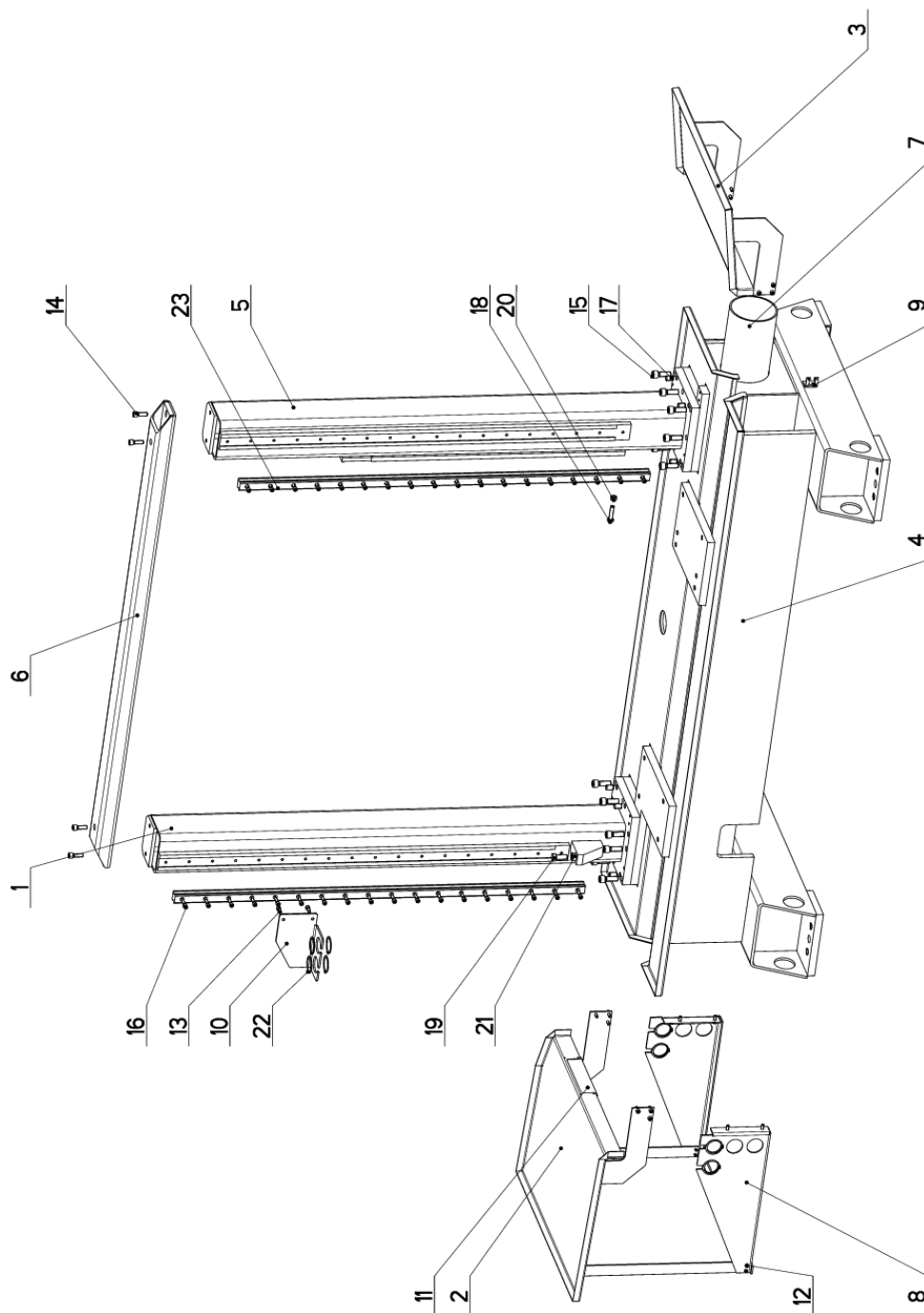
	ZNAEV SESTAVY PILA PASOVA	CISLO SESTAVY 201.6000-050	STROJ EX520ANC
Konstruktor: KOHUT			
Datum: 03. 09.2015		Meritko: 1-20	

7.6. Kusovník / Stückliste / Piece list – Pásová pila / Bandsäge / Band saw

Císlo Sestavy 201.6000-050		Ver. 0	Název sestavy PILA PASOVA/BAND SAW/BANDSÁGE		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	201.6001-650	0	PODSTAVEC / BASE / UNTERSATZ		1
2	201.6007-700	2	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLYNDER		2
3	201.6004-550	0	RAMENO / SHOULDER / SÁGERAHMEN		1
4	201.6003-150	0	SVERAK / VICE / SCHRAUBSTOCK		1
5	92.001.048	0	AGREGAT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
6	201.W430-330	0	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
7	30.6014-139	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE		2
8	201.6117-100	4	VYNASEC TRISKOVÝ / CHIP EXTRACTOR / SPANABFÜHRUNG		1
9	201.6106-000	1	CHLAZENÍ / COOLING / KÜHLUNG		1
10	201.6018-400	2	ROST / GRILL / GITTER		1
11	99.900.039	0	SAMOLEPKA / STICKER / AUFLEBER	NEBEZP.STLACENI	1
12	99.900.040	0	SAMOLEPKA / STICKER / AUFLEBER		1
13	99.900.047	0	SAMOLEPKA / STICKER / AUFLEBER		1
14	99.900.048	0	SAMOLEPKA / STICKER / AUFLEBER		1
15	99.900.049	0	SAMOLEPKA / STICKER / AUFLEBER		1
16	99.900.046	0	SAMOLEPKA / STICKER / AUFLEBER		1
17	99.900.045	0	SAMOLEPKA / STICKER / AUFLEBER		1
18	99.900.051		SAMOLEPKA / STICKER / AUFLEBER		1
19	99.900.043	0	SAMOLEPKA / STICKER / AUFLEBER		1
20	99.900.050	0	SAMOLEPKA / STICKER / AUFLEBER		2
21	99.901.032	0	SAMOLEPKA / STICKER / AUFLEBER	CETIFIKACNI SAMOLEPKA	1
22	30.6099-403	0	STITEK TYPOVÝ / /	P 0.5x65	1
23	201.6014-040	0	UPINANI HORNÍ / TOP CLAMP / SPANNVORRICHTUNG OBEN		1
24	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X30	4
25	99.173.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNEJ	1
26	99.173.002	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNI	1
27	99.170.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	0555.030.075.100	20
28	30.6104-019	1	HREBNÍ / /	P 2x129	1
29	201.P304-190	1	ODMEROVANI / MEASURING / GEHRUNGSMESSUNG		1
30	99.901.019	0	SAMOLEPKA / STICKER / AUFLEBER		1

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednáací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.7. Podstavec / Untergestell / Pedestal



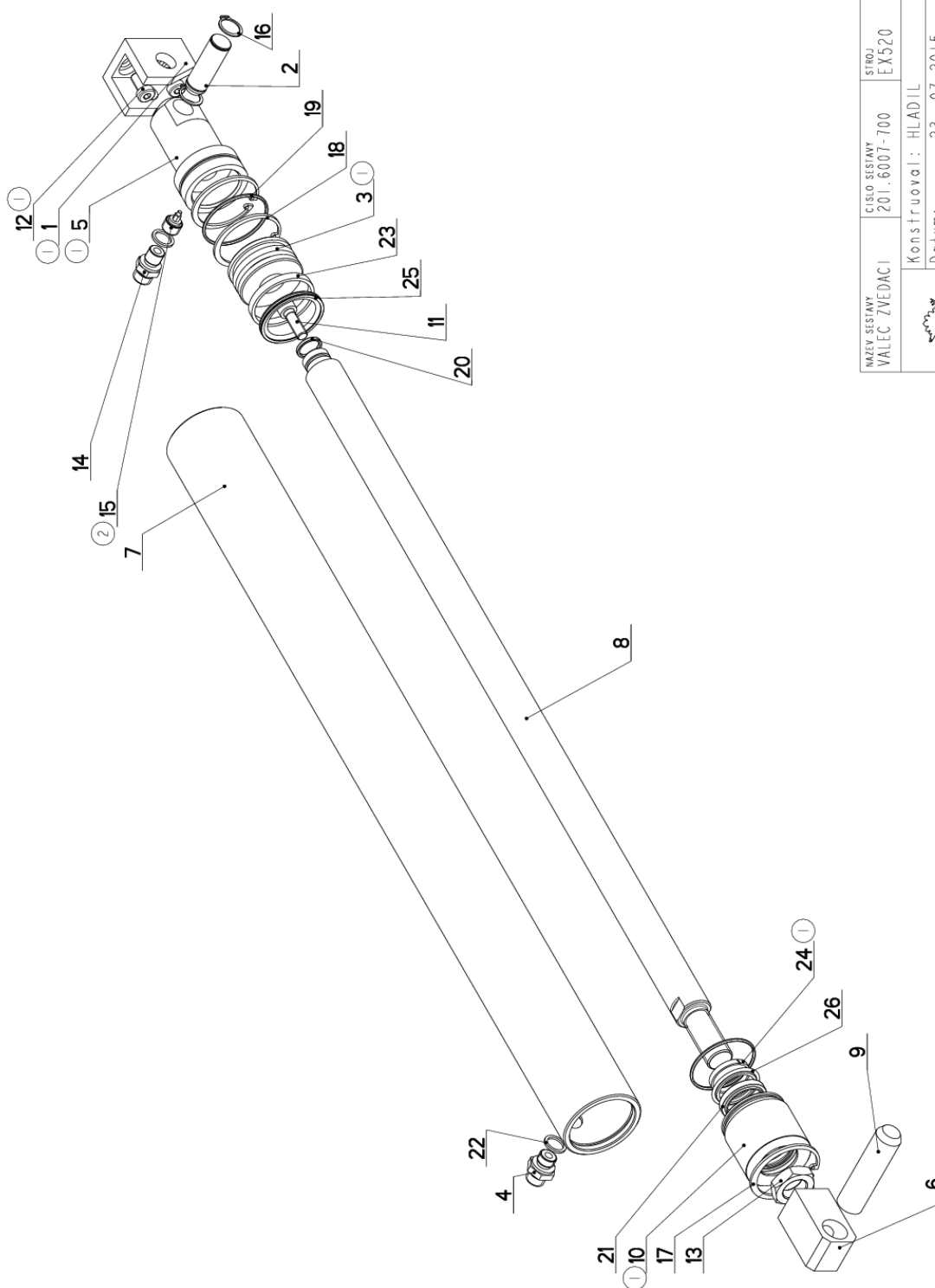
NAZEV SOUSTAVY PODSTAVEC	ČÍSLO SOUSTAVY 201.6001-650	STROJ EX520ANC
Konstruoval: KOHUT		
Datum: 17. 08.2015		
Měřítko: 2:25		

7.8. Kusovník / Stückliste / Piece list – Podstavec / Untergestell / Pedestal

Číslo Sestavy 201.6001-650		Ver. 0	Název sestavy PODSTAVEC/BASE/UNTERSATZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6001-607	0	SLOUP / POLE / SAULE		1
2	30.6001-610	0	KRYT / COVER / ABDECKUNG		1
3	30.6001-611	0	KRYT / COVER / ABDECKUNG		1
4	30.6001-651	0	PODSTAVEC / BASE / UNTERSATZ		1
5	30.6001-652	0	SLOUP / POLE / SAULE		1
6	30.6001-653	0	VYZTUHA / REINFORCEMENT / VERSTEIFUNG		1
7	30.6101-109	1	TRUBKA / TUBE / ROHR	D 150	1
8	30.6101-110	0	DRZAK / HOLDER / HALTER		1
9	30.6101-111	3	DRZAK / HOLDER / HALTER	P 4x40	1
10	30.6114-136	2	DRZAK / HOLDER / HALTER	P 5x210	1
11	31.6114-129	0	DESKA / BOARD / PLATTE	2x81	2
12	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	4
13	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	18
14	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	4
15	90.001.25.074	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x45	16
16	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	36
17	90.002.20.028	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x1,5x25	8
18	90.005.55.045	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x50	1
19	90.005.55.049	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M16x40	1
20	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE _ M12	1
21	90.100.55.008	0	MATICE / NUT / MUTTER	MATICE _ M16	1
22	95.800.019	0	SEGR HRIDEL / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNY KROUZEK 52	12
23	99.200.262	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA 35R 1410 25/25N	2

Číslo 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

7.9. Válec zvedací / Hebezyylinder / Lifting cylinder



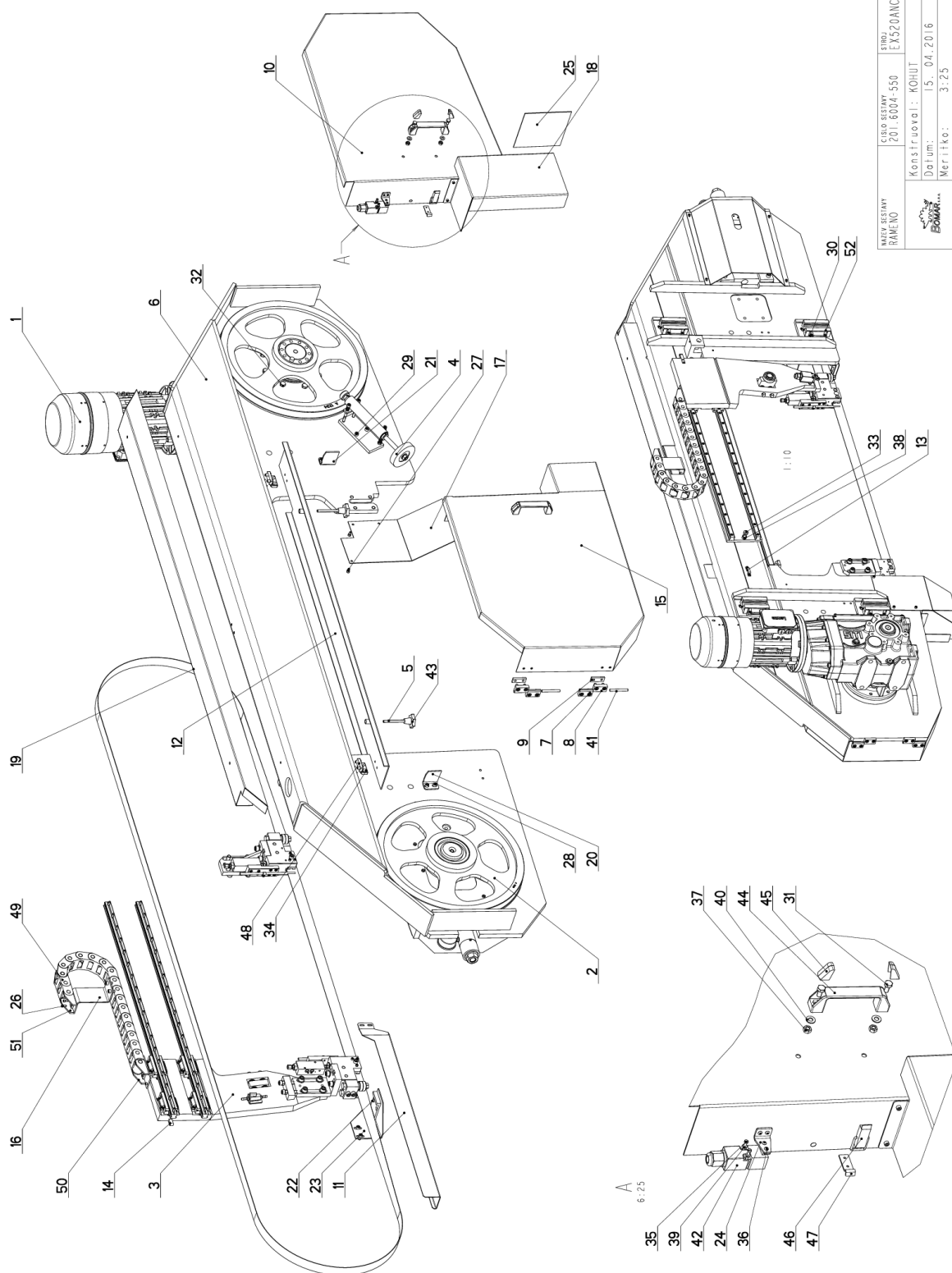
NAZEV SOUSTAVY VALEC ZVEDACI	CISLO SOUSTAVY 201.6007-700	STROJ EX520
Konstruoval: HLADIL		
Datum: 23. 07.2015		
Měřítko: 3:4		

7.10. Kusovník / Stückliste / Piece list –
Válec zvedací / Hebezylinder / Lifting cylinder

Císlo Sestavy 201.6007-700		Ver. 2	Název sestavy VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0807-005 (1)	0	DRŽÁK / HOLDER / HALTER	HR 40x40	1
2	30.0807-009	2	CEP / LUG / BOLZEN	d 16h9	1
3	30.2807-004 (1)	0	PIST / PISTON / KOLBEN	d 55	1
4	30.2807-109	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
5	30.4107-012 (1)	3	VÍKLO / COVER / DECKEL	TYC 55	1
6	30.4707-206	0	DRŽÁK / HOLDER / HALTER	HR 30x30	1
7	30.6007-601	3	VALEC / ROLLER / ZYLINDER	TRUBKA 62/50	1
8	30.6007-602	1	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 28	1
9	30.6107-505	0	CEP / LUG / BOLZEN	d 20	1
10	30.6407-012 (1)	2	VÍKLO / COVER / DECKEL	d 55	1
11	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	
12	90.015.25.009 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x16	2
13	90.101.55.007	0	MATICE / NUT / MUTTER	MATICE M20x1,5	1
14	92.002.001	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	1
15	92.151.008 (2)	0	VENTIL POJISTNÝ / SAFETY VALVE / SICHERUNGSVENTIL	VPN-H 1/4"	1
16	95.800.007	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 16	2
17	95.801.009	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 52	1
18	95.801.018	0	KROUZEK POJIST. VNÍTR. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 50	2
19	96.001.013	0	O-KROUZEK STATICKÝ / STATIC O-RING / O-RING STATISCH	45x2	2
20	96.002.007	0	KROUZEK O DYNAMICKÝ / DYNAMIC O-RING / O-RING DYNAMISCH	16x2 NBR 70SH	1
21	96.061.009	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	WD2200280 2201	1
22	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1,5 CU	2
23	96.084.001	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GP6500500-T47	1
24	96.084.006 (1)	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GR4300280-T47	1
25	96.900.013	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PT0200500	1
26	96.900.021	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-46N	1

1. ZRUS.VÍKLO 30.4107-011 A NAHR. 30.4107-012, 30.6107-502 A NAHR. 30.C407-012, ZRUS.DRŽÁK 30.0807-008 A NAHR. 30.0807-005,
ZRUS.SROUB 90.001.55.083 A NAHR. 90.015.25.009, ZRUS.REDUKCE 30.9107-509, PRÍDAN KROUZEK VODICÍ 96.084.006,
ZRUS.PIST 30.6107-504 A NAHR. 30.2807-004, 026/ZM035 21.3.2011 SLEZACKOVA
2. VENTIL 92.151.001 PRECISLOVAN NA 92.151.008, 222/ZM211 29.7.2013 SLEZACKOVA

7.11. Rameno / Sägerahmen / Saw arm

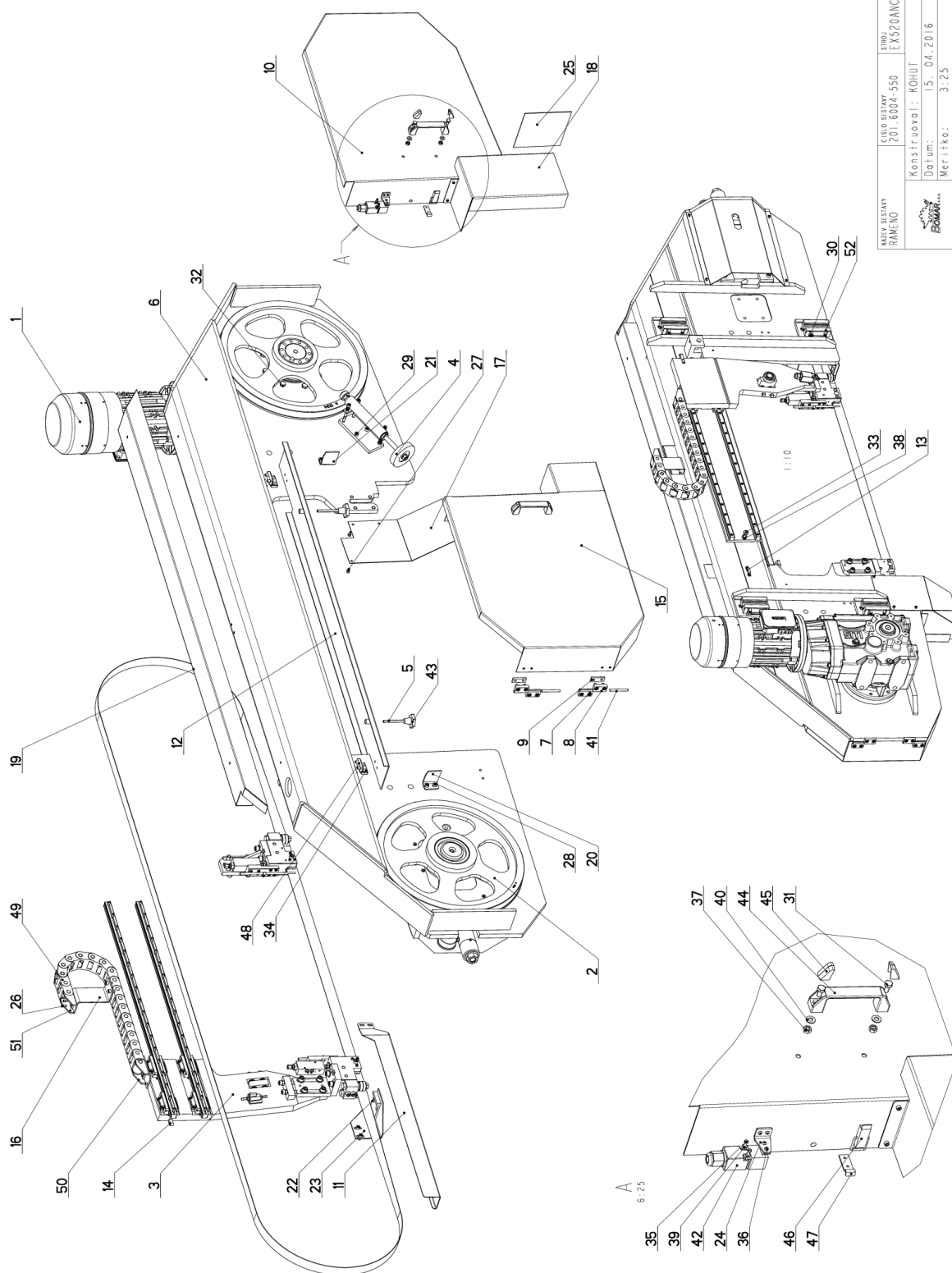


7.12. Kusovník / Stückliste / Piece list –
Rameno / Sägerahmen / Saw arm

Císlo Sestavy 201.6004-550	Ver. 0	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6005-430	1	POHON / DRIVE / ANTRIEB		1
2	201.6008-450	0	NAPÍNÁNÍ / TENSIONING / SPANNUNG		1
3	201.6010-800	0	VEDENÍ PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
4	201.6114-100	0	KARTAC / BRUSH / BÜRSTE		1
5	30.0203-005	0	SROUB / BOLT / SCHRAUBE	M8	2
6	30.6004-551	0	RAMENO / SHOULDER / SÄGERAHMEN		1
7	30.6014-109.1	1	DESKA / /	HR 30x12	4
8	30.6014-110	1	PANT / HINGE / TÜRBAND	HR 30x12	4
9	30.6014-111	0	DESKA / BOARD / PLATTE	HR 20x6	4
10	30.6014-435	2	DVERE / DOOR / TÜR		1
11	30.6014-450	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2x178	1
12	30.6014-451	1	KRYT PASU / BELT COVER / BANDABDECKUNG		1
13	30.6014-456	0	DRŽAK / HOLDER / HALTER	P 1x12	1
14	30.6014-457	0	DRŽAK / HOLDER / HALTER	P 1x12	1
15	30.6014-540	0	DVERE / DOOR / TUR		1
16	30.6014-541	0	DRŽAK / HOLDER / HALTER	P 4x70	1
17	30.6014-543	0	KRYT / COVER / ABDECKUNG	P 2x203	1
18	30.6014-544	0	KRYT KARTACKU / BRUSH COVER / BURSTENABDECKUNG	P 2x546	1
19	30.6014-545	0	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG	P 1.5x244	1
20	30.6114-123	0	DRŽAK / HOLDER / HALTER	P 4x55	1
21	30.6114-124	1	DRŽAK / HOLDER / HALTER	P 4x55	1
22	30.6114-145	0	KLUZAK / GLIDER / GLEITER	TYC 60x15	1
23	30.6114-146	2	DRŽAK / HOLDER / HALTER	P 3x150	1
24	30.6114-147	0	DRŽAK / HOLDER / HALTER	P 3x30x60	2
25	30.6114-160	0	CLONA / CURTAIN / SCHÜRZE	2x180	1
26	90.001.25.008	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	6
27	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	3
28	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	24
29	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	2
30	90.001.25.035	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x35	16
31	90.005.55.014	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x16	4
32	90.005.55.043	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x65	8
33	90.005.55.045	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x50	2
34	90.011.27.027	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x20	8

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

7.13. Rameno / Sägerahmen / Saw arm

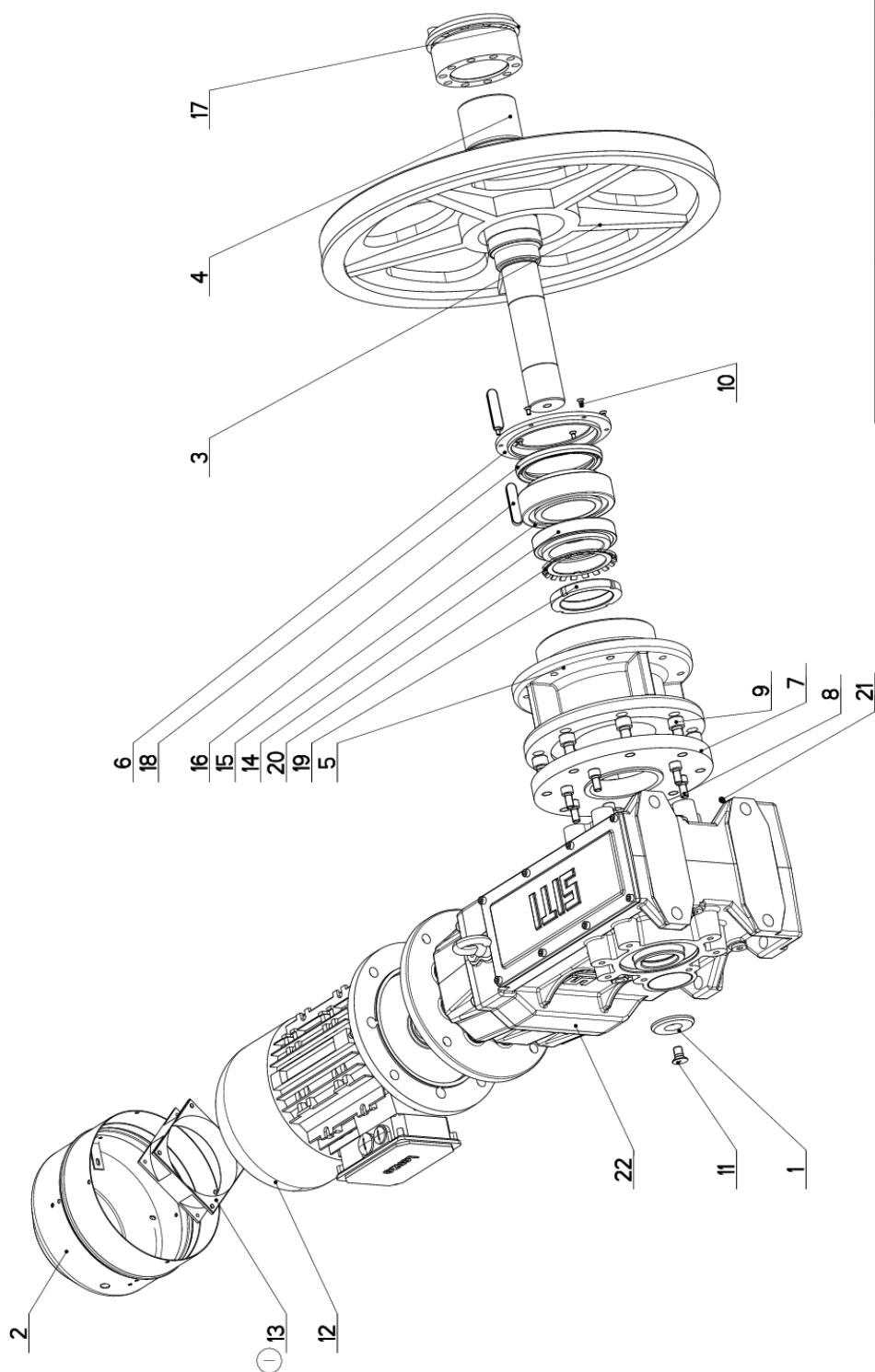


WATK. SZÁM RAMENO	CÍRÓ SZÁM 201.6004-550	STBÚ EX520ANC
Konstruoval: KOHUT		
Datum: 15. 04. 2016		
Verzió: 3:25		

7.14. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm

35	90.012.50.007	0	SROUB / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB MAX30	4
36	90.013.21.001	0	SROUB / BOLT / SCHRAUBE	M4x8	8
37	90.100.55.005	0	MATICE / NUT / MÜTTER	MATICE - M8	4
38	90.100.55.007	0	MATICE / NUT / MÜTTER	MATICE - M12	2
39	90.150.50.002	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	PODLOZKA 4,3	4
40	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	PODLOZKA 8,4	4
41	90.300.02.017	0	KOLIK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLIK 8x70	4
42	91.173.012	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	QMS8-2xNC	2
43	94.003.001	0	HLAVICE / HEAD / KOPF		2
44	94.012.001	0	RUKOJET / HANDLE / GRIFF		2
45	94.012.002	0	KRYT / COVER / ABDECKUNG		4
46	99.100.003	0	ZAMEK / LOCK / SCHLOSS		2
47	99.100.004	0	ZAMEK / LOCK / SCHLOSS	D13-00	2
48	99.100.007	0	PANT / HINGE / TÜRBAND		2
49	99.170.015	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	MP 3002	18
50	99.171.021	0	KONCOVKA / END / ENDSTÜCK		1
51	99.171.022	0	KONCOVKA / END / ENDSTÜCK		1
52	99.201.056	0	VOZIK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA3SESSON	4

7.15. Pohon / Antrieb / Drive



NAZEV SESTAVY POHON	ČÍSLO SESTAVY 201.6005-430	STROJ EX520
Konstruoval: RYSAVY		
Datum: 10. 02. 2014		
Meritko: 1:5		

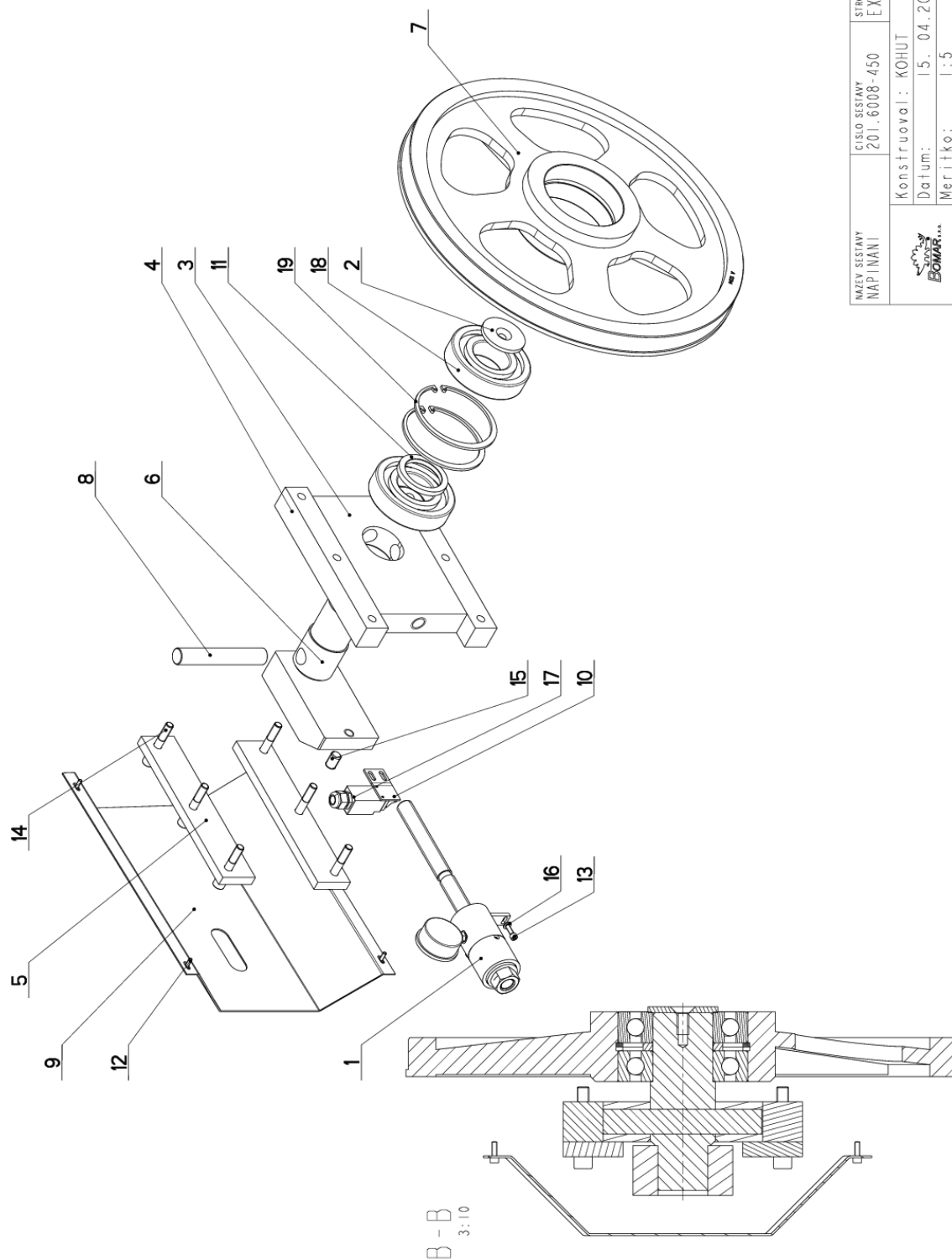
7.16. Kusovník / Stückliste / Piece list – Pohon / Antrieb / Drive

Číslo Sestavy 201.6005-430		Ver. 1	Název sestavy POHON/DRIVE / ANTRIEB		
Poz	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0804-009	2	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	d 60	1
2	30.4304-018	4	VENTILATOR / VENTILATOR / VENTILATOR		1
3	30.6005-001	4	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD	ODLITEK	1
4	30.6105-251	0	HRDEL / SHAFT / WELLE	d 100	1
5	30.7605-001	1	PŘÍRUBA / FLANGE / FLANSCH		1
6	30.7605-006	0	VÍKO / COVER / DECKEL	P 15 -160	1
7	30.7605-103	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	P 25x250	1
8	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X20	7
9	90.001.25.107	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M14X35	8
10	90.011.27.003	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M5X10	6
11	90.011.27.009	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12X20	1
12	91.001.117	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR	4KW 4P B5 112	1
13	91.015.126 (1)	0	VENTILATOR / VENTILATOR / VENTILATOR	VENTILATOR RDH1238,B2	1
14	95.300.028	0	LOŽISKO KUŽELÍK / BEARING / LAGER	32015AX	1
15	95.300.029	0	LOŽISKO KUŽELÍK / BEARING / LAGER	33215A	1
16	95.810.032	0	PERO TESNE / SPRING / FEDER	PERO 14X9X60	2
17	95.825.001	0	POUZDRO UPÍNACÍ / FIXING SLEEVE / SPANNHÜLSE	KTR210- 80x120	1
18	95.830.047	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 95X120X12	1
19	95.850.015	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM15	1
20	95.855.016	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	POJISTNÁ PODLOŽKA MB15	1
21	95.860.001	0	HLAVICE MAZACÍ / HEAD / KOPF	KM5	1
22	99.003.022	0	PŘEVODOVKA KUŽELOVÉ / CONICAL TRANSMISSION / KEGLRADGETRIEBE	MBH100C/PAM112	1

I. ZRUS. VENTILATOR 91.015.100 A NAHR. 91.015.126. 074/ZM018 10.2.2014 SLEZACKOVA

Číslo sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version); 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

7.17. Napínání / Spannung / Stretching



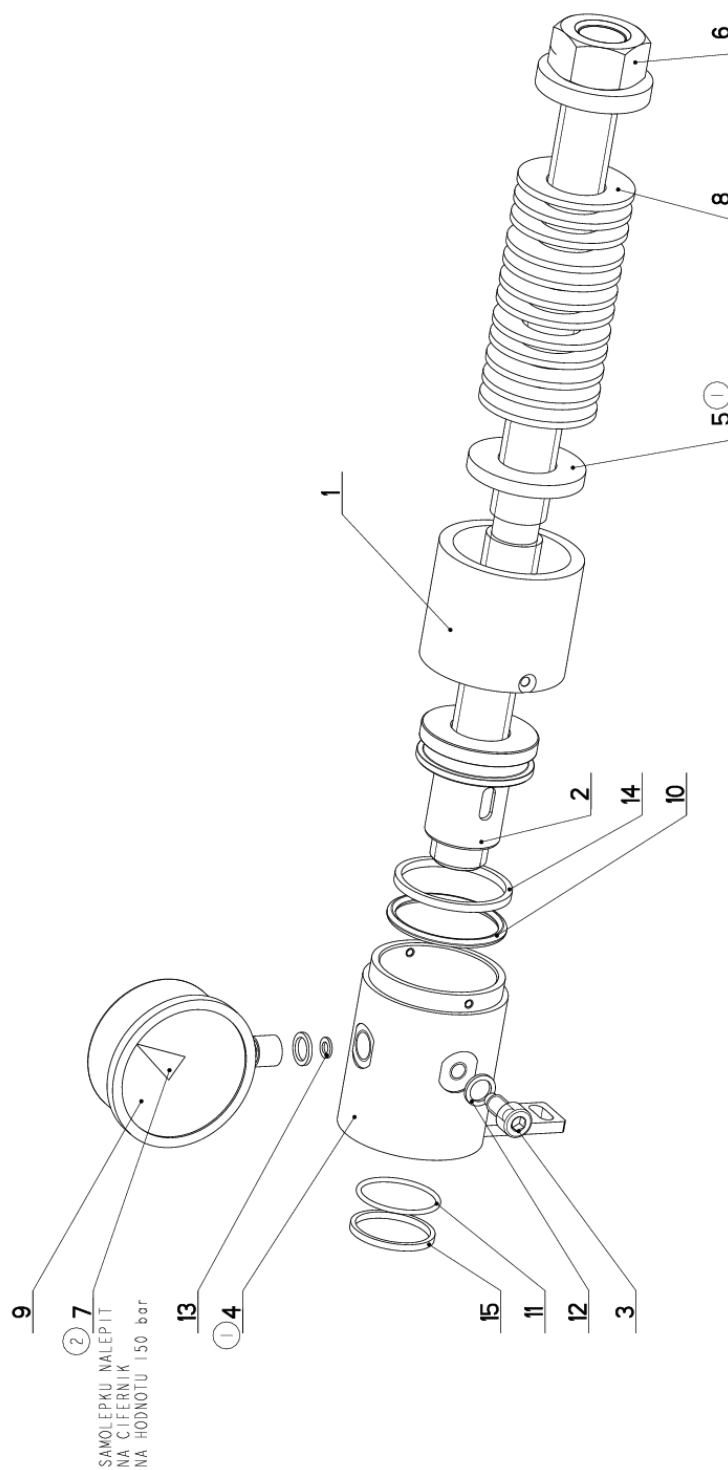
NAZEV SOUSTAVY NAPÍNÁNÍ	ČÍSLO SOUSTAVY 201.6008-450	STROJ EX520
Konstruoval: KOHUT		
Datum: 15. 04.2016		
Měřítko: 1:5		

7.18. Kusovník / Stückliste / Piece list –
Napínání / Spannung / Stretching

Císlo Sestavy 201.6008-450		Ver. 0	Název sestavy NAPÍNÁNÍ / TENSIONING / SPANNUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6107-350	2	VALEC / ROLLER / ZYLINDER	SESTAVA	1
2	30.1804-010	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	P 6x70	1
3	30.6008-001	1	KOSTKA NAPÍNÁNÍ / TENSIONING CUBE / BANDSPANNUNGSWÜRFEL	HR 160x40	1
4	30.6008-002	0	LISTA VODÍČÍ / LEAD TRIM / FÜHRUNGSEIESTE	HR 40x40	2
5	30.6008-003	0	LISTA VODÍČÍ / LEAD TRIM / FÜHRUNGSEIESTE	HR 60x15	2
6	30.6008-004	2	NAPÍNÁNÍ / TENSIONING / SPANNUNG		1
7	30.6008-006	6	KOLO NAPÍNÁNÍ / TENSIONING WHEEL / UMLENKRAD		1
8	30.6008-014	1	CEP NAPÍNÁNÍ / TENSIONING LUG / SPANNUNGSBOLZEN	d 25 h6	1
9	30.6014-542	0	KRYT NAPÍNÁNÍ / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P 2x441	1
10	30.6114-143	1	DRŽÁK / HOLDER / HALTER	P 3x35	1
11	30.6708-002	1	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TRUBKA 82.5x12.5	1
12	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x16	4
13	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	1
14	90.001.25.064	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x70	6
15	90.002.20.028	0	SROUB STAVEČÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x1,5x25	1
16	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 6,4	1
17	91.173.009	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER		1
18	95.001.041	0	LOŽISKO / BEARING / LAGER	63/2A	2
19	95.801.025	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 130	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

7.19. Válec / Zylinder / Cylinder



NAZEV SESTAVY VÁLEC	CÍSLO SESTAVY 201.6107-350	STROJ EX-620
Konstruoval: MAJZNER		
Datum: 08. 02. 2016		
Měřítko: 3:5		

7.20. Kusovník / Stückliste / Piece list –
Válec / Zylinder / Cylinder

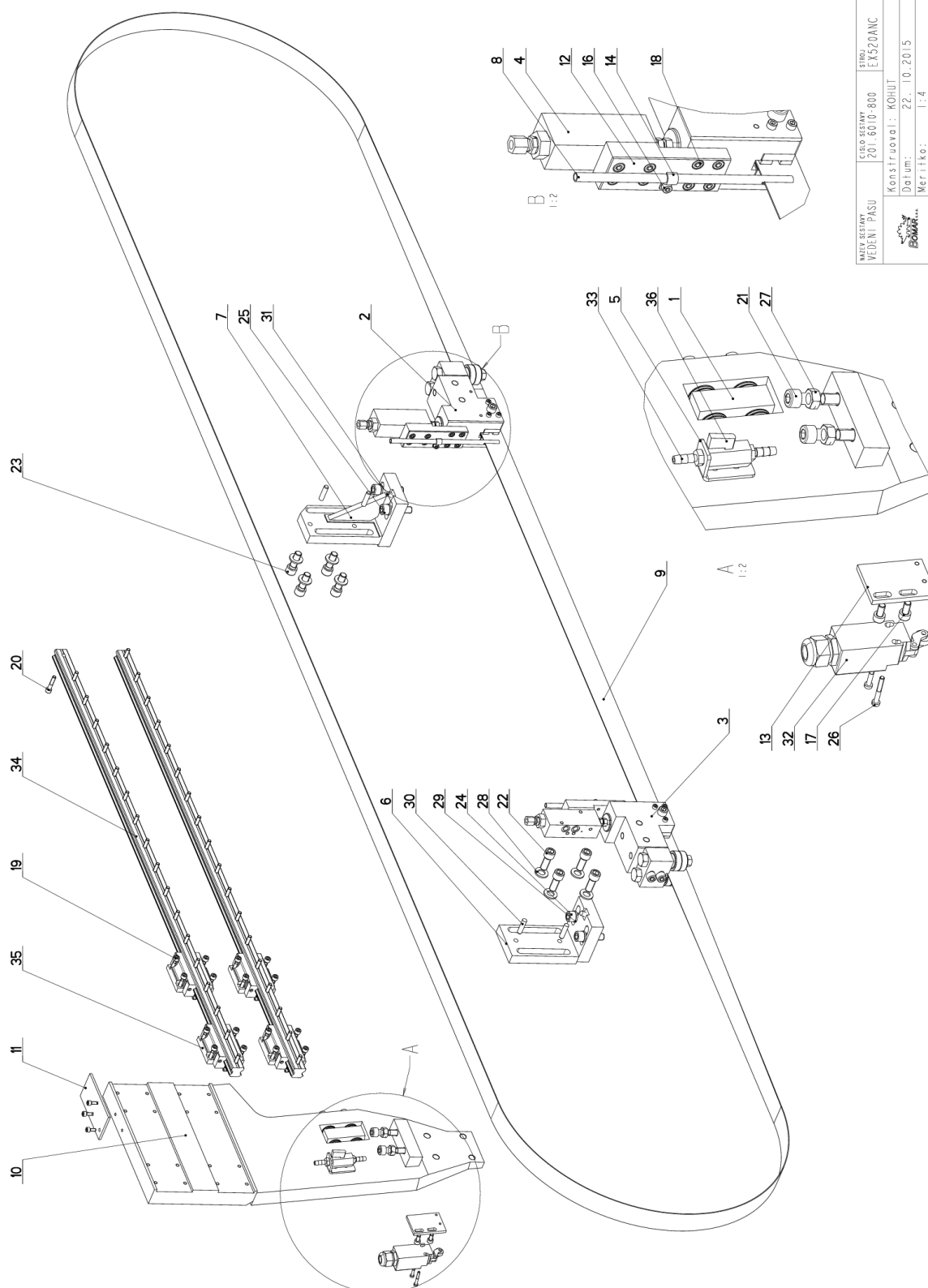
Císlo Sestavy 201.6107-350		Ver. 2	Název sestavy VALEC/ROLLER/ZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6008-013	0	TRUBKA / TUBE / ROHR	TR 62x10	1
2	30.6107-352	0	PIST / PISTON / KOLBEN	d 55	1
3	30.6107-354	1	SROUB / BOLT / SCHRAUBE	M8x20	1
4	30.6107-358 (1)	0	VALEC / ROLLER / ZYLINDER		1
5	30.6107-359 (1)	1	DISTANC / DISTANCE / DISTANZ	P 8x50	1
6	30.6108-008	2	SROUB / BOLT / SCHRAUBE		1
7	31.0899-004 (2)	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

1. ZRUSENY SOUCASTI 30.6008-355, 30.6008-351, 95.750.003, 30.6008-352, 90100.55.010, NOVA SOUCAST 30.6107-358,
30.6107-359, 29.3.2007 RYSAVY ZM 133

2. PRIDANA SAMOLEPKA SÍPKA 31.0899-004. 101/ZM131 29.5.2009 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

7.21. Vedení pásu / Sägebandführung / Belt guide

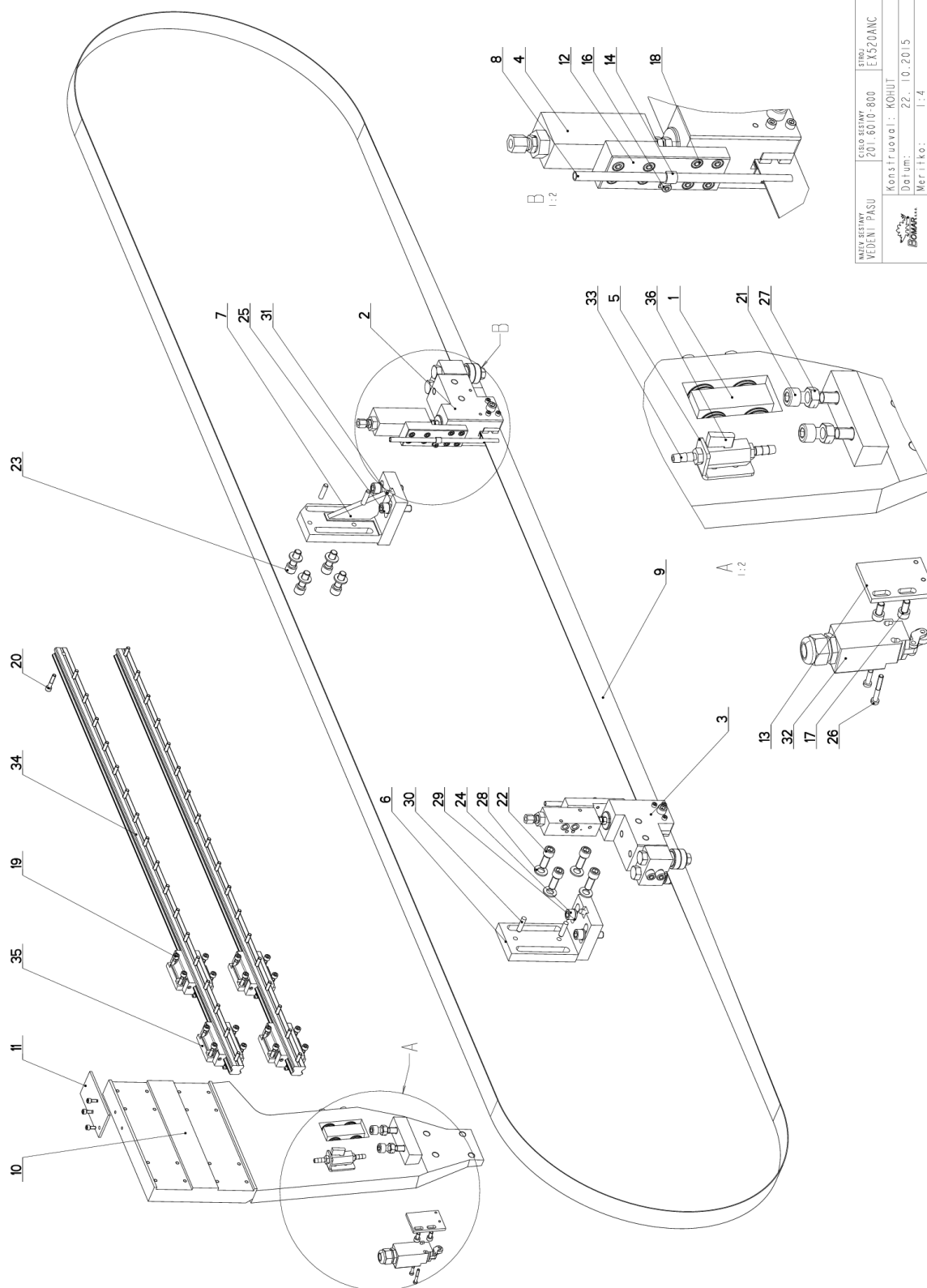


7.22. Kusovník / Stückliste / Piece list –
Vedení pásu / Sägebandführung / Belt guide

Císlo Sestavy 201.6010-800		Ver. 0	Název sestavy VEDENÍ PASU/BELT GUIDE / SÄGEBANDFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6010-810	0	UNASEC / CARRIER / GREIFER		1
2	201.6110-550	4	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	201.6110-610	4	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	201.6816-100	0	KOSTKA REGULACE / REGULATION CUBE / REGULUNGSWÜRFEL		2
5	30.1814-011	2	DRŽAK / HOLDER / HALTER	P 3x76	1
6	30.6010-135	1	DRŽAK / HOLDER / HALTER		1
7	30.6010-136	3	DRŽAK / HOLDER / HALTER		1
8	30.6010-315	0	TRUBKA / TUBE / ROHR	TR 8x 1	2
9	30.6010-408	1	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	41x1,3	1
10	30.6010-801	0	DRŽAK / HOLDER / HALTER		1
11	30.6010-802	0	DRŽAK / HOLDER / HALTER	P 4x55	1
12	30.6016-002	0	DESKA / BOARD / PLATTE	HR 40x20	2
13	30.6803-015	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	P 5x45	1
14	30.9010-003	0	DRŽAK / HOLDER / HALTER	Pl. 5x10	2
15	90.001.25.008	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	3
16	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x16	2
17	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
18	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	16
19	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	16
20	90.001.25.020	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x30	36
21	90.001.25.052	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x50	2
22	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	4
23	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	4
24	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x40	2
25	90.001.25.061	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x45	2
26	90.012.50.007	0	SROUB / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M4x30	2
27	90.100.55.006	0	MATICE / NUT / MÜTTER	MATICE _ M10	2
28	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	PODLOŽKA 13	8
29	90.163.00.003	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	NORD-LOCK	4
30	90.300.02.010	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 8x32	4
31	90.300.02.011	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 8x40	2
32	91.173.008	0	SPINAC KONC.S KLADK. / END SWITCH WITH PULLEY / ENDSCHALTER MIT ROLLE	D4N-4A62	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

7.23. Vedení pásu / Sägebandführung / Belt guide



NAZEV SOUSTAVY VEDENÍ PÁSU	ČÍSLO SOUSTAVY 201.6010-800	STYL EX520ANC
Konstruoval: KOHUT	Datum: 22. 10. 2015	Meritko: 1:4

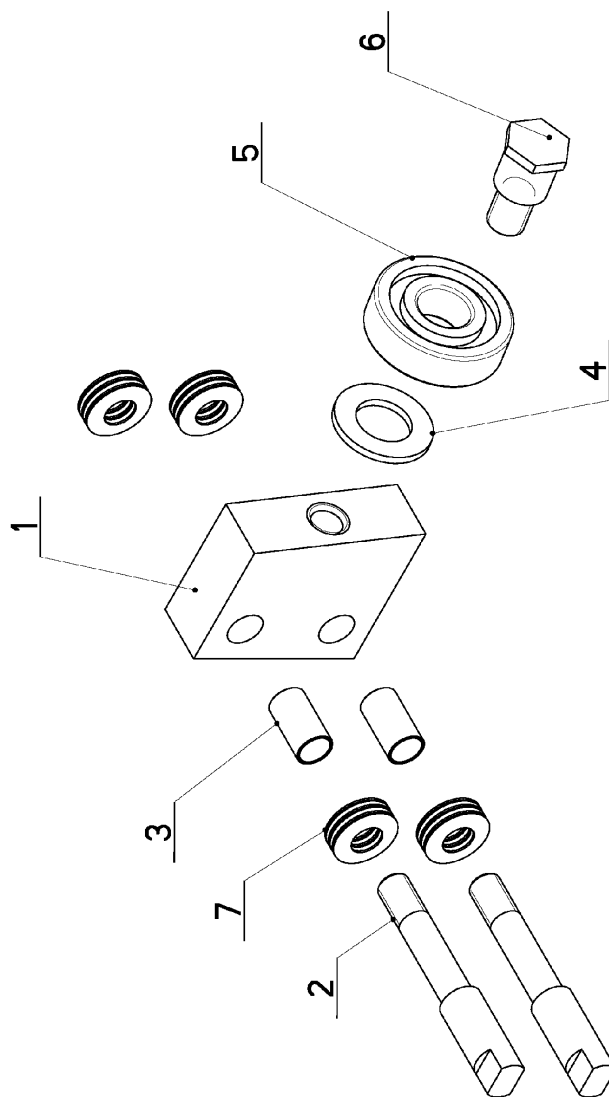
7.24. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide

33	94.202.002	0	REDUCE / REDUCTION / ADAPTOR / REDUKTION	GES 6/R1/4"	2
34	99.200.385	0	VEDENÍ LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 25R 900 15/15N	2
35	99.201.046	0	VOZÍK LINEARNIHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA25ESSFIN	4
36	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1

Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Name sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Name položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

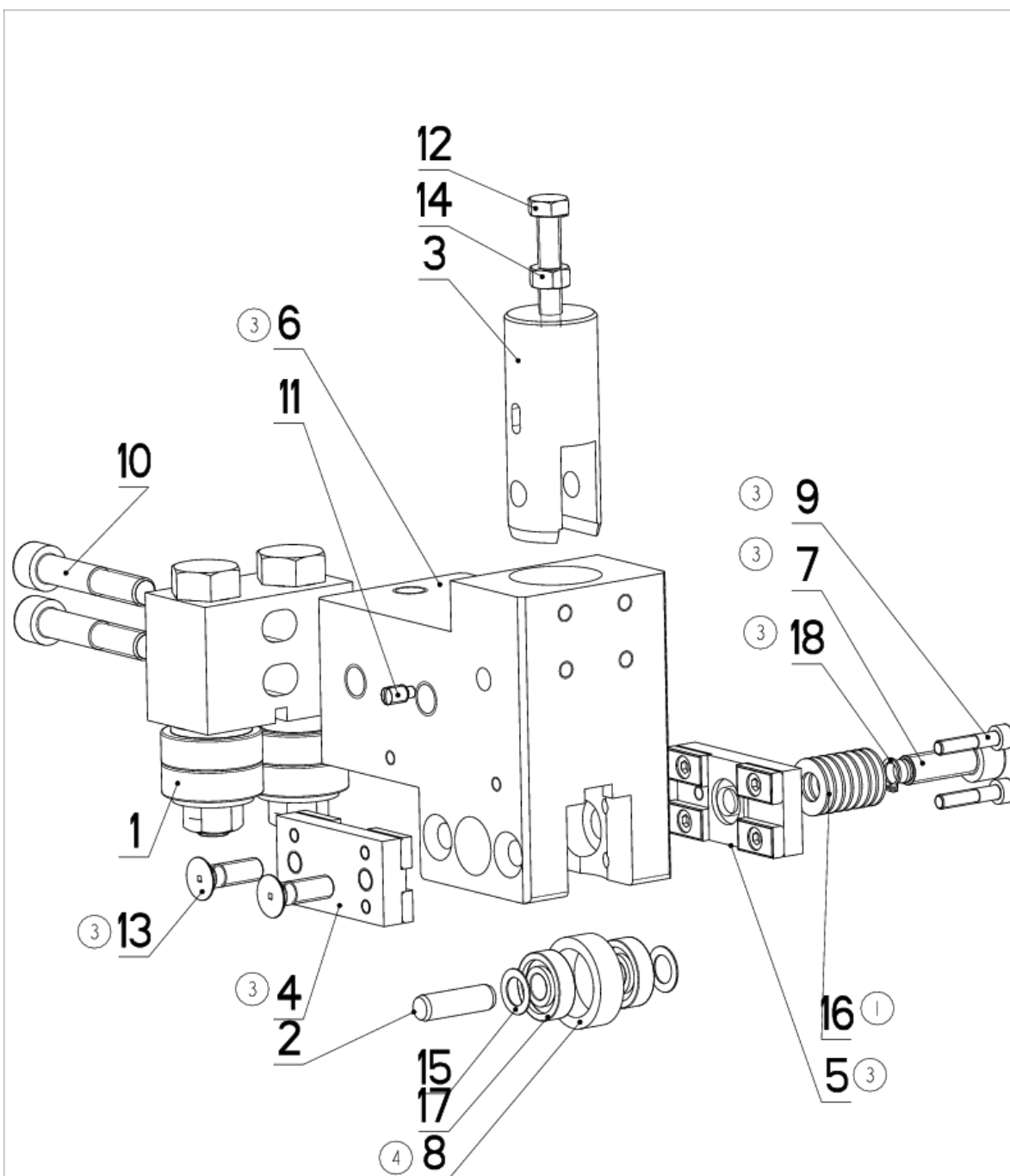
7.25. Unašeč / Carrier / Greifer

Cislo sestavy 201.6010-810		Ver. 0	Název sestavy UNASEČ/CARRIER/GREIFER	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.6010-812	0	KOSTKA / CUBE / WÜRFEL	1
2	30.6010-811	0	HRDEL / SHAFT / WELLE	2
3	95.700.029	0	POUZDRO / SLEEVE / BUCHSE	2
4	90.150.50.011	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	1
5	95.001.024	0	LOŽISKO / BEARING / LAGER	1
6	30.6010-163	0	DOHAZ / STOP PIECE / ANSCHLAG	1
7	90.350.02.021	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	24



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

7.26. Vodící kostka / Führungsklotz / Guiding cube



NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6110-550	STROJ EXTEND 520
	Konstruoval: HLADIL	
	Datum: 27. 07.2015	
	Meritko: 3:5	

7.27. Kusovník / Stückliste / Piece list –
Vodící kostka / Führungsklotz / Guiding cube

Císlo Sestavy 201.6110-550	Ver. 4	Název sestavy KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	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	30.7410-110 (3)	0	DRŽÁK TVRDOKOVU / POA HOLDER / HW-HALTER		1
5	30.7410-120 (3)	0	DRŽÁK TVRDOKOVU / POA HOLDER / HW-HALTER		1
6	30.7410-201 (3)	1	KOSTKA VODICI LEVA / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
7	30.7610-503 (3)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	1
8	31.6710-110 (4)	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011 (3)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	3
10	90.001.25.053	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x55	2
11	90.004.20.002	0	SROUB STAVEČI / 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 (3)	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKTSCHRAUBE	SROUB M8x25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
15	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	10x16x0.50	2
16	90.350.07.005 (1)	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	20x10.2x1	8
17	95.001.044	0	LOŽISKO / BEARING / LAGER	609 ZRS	2
18	95.800.002 (3)	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 8	1

1. VÝMENA TALIROVÝCH PRUŽIN, ZRUS. SOUC. 90.350.07.004 A NAHR. 90.350.07.005. 075/ZM091 6.3.2007 SLEZACKOVA

2. ZRUS. SROUB IMBUS M10x25 DIN7984 A NAHR. SROUBEM M10x25 DIN6912 90.015.30.003. 153/ZM166 20.4.2007 SLEZACKOVA

3. ZRUS. DRŽÁK TVRDOKOVU 30.6010-105 A NAHR. 30.7410-110, 30.6010-214 A NAHR. 30.410-120, ZRUS. KOSTKA 30.6110-501 A NAHR. 30.7410-201, ZRUS. SOUC. 30.6010-218, 90.001.25.009, 90.001.25.032, 90.015.30.003, 95.801.035, PRID. SOUC. 30.7610-503, 90.001.25.011, 90.011.27.016, 95.800.002. 142/ZM192 23.9.2008 SLEZACKOVA

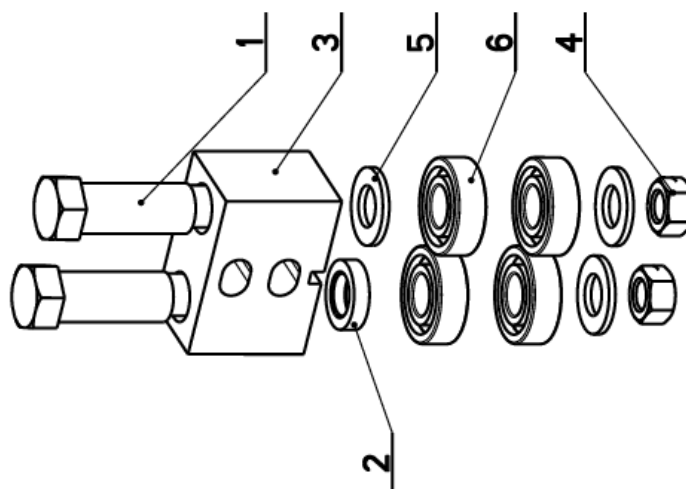
4. ZRUS. SOUC. 30.6710-110 A NAHR. 31.6710-110. 175/ZM178 27.7.2015 SLEZACKOVA

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; Verze položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

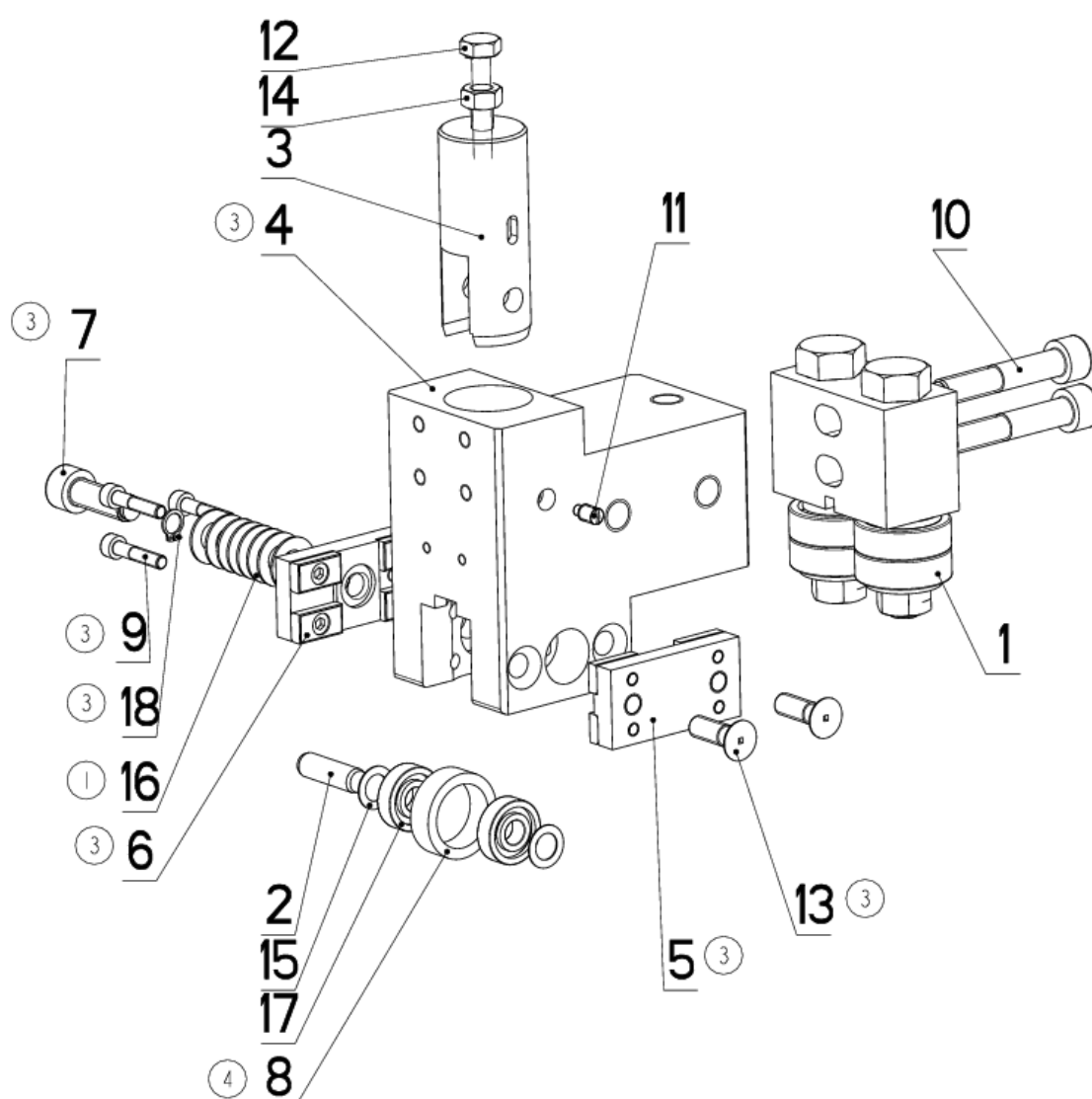
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version); Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position);
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.28. Vedení / Führung / Guide

Císlo Sestavy 201.6110-510		Ver. 0	Název sestavy VEDENÍ/GUIDE/BACKENFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6010-104	1	EXCENTR / CAM / EXZENTER	SK 22	2
2	30.6010-108	0	KROUZEK 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 / UNTERLEGSCHIEBE	PODLOŽKA 15	3
6	95.001.015	0	LOŽISKO / BEARING / LAGER	6202 2RS	4



7.29. Vodící kostka / Führungsklotz / Guiding cube



NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6110-610	STROJ EX520
	Konstruoval: HLADIL	
	Datum: 27. 07.2015	
	Meritko: 1:2	

7.30. Kusovník / Stückliste / Piece list –
Vodící kostka / Führungsklotz / Guiding cube

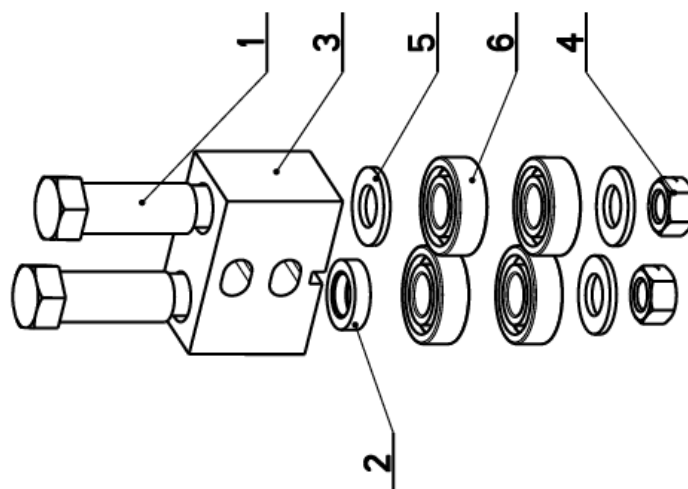
Císlo Sestavy 201.6110-610		Ver. 4	Název sestavy KOSTKA VODICÍ/LEAD CUBE/FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6110-510	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
3	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
4	30.7410-101	3	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
5	30.7410-110	3	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.7410-120	3	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	30.7610-503	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	1
8	31.6710-110	4	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X25	3
10	90.001.25.053	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X55	2
11	90.004.20.002	0	SROUB STAVEČÍ / 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	3	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKTSCHRAUBE	SROUB M8X25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
15	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE	10x16x0.50	2
16	90.350.07.005	1	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	20X10.2X1	8
17	95.001.044	0	LOŽISKO / BEARING / LAGER	609 ZRS	2
18	95.900.002	3	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 8	1

1. VÝMENA TALIROVÝCH PRUŽIN. ZRUŠENA SOUČAST 90.350.07.004 A NAHR. 90.350.07.005. 075/ZM091 6.3.2007 SLEZACKOVA
2. ZRUS. SROUB M10x25 DIN7984 A NAHR. SROUBEM M10x25 DIN 6912 90.015.30.003. 153/ZM166 20.4.2007 SLEZACKOVA
3. ZRUS. SOUC. DESKA VODICÍ 30.6010-105 A NAHR. 30.7410-110, 30.6010-214 A NAHR. 30.7410-120, ZRUS. KOSTKA 30.6110-601 A NAHR. 30.7410-101, ZRUS. SOUČASTI 30.6010-218, 90.001.25.009, 90.001.25.032, 90.015.30.003, 95.801.035, PRIDANÝ SOUČASTI 30.7610-503, 90.001.25.011, 90.001.25.053, 90.011.27.016, 95.800.002. 142/ZM192 23.9.2009 SLEZACKOVA
4. ZRUS. SOUC. 30.6710-110 A NAHR. 31.6710-110. 175/ZM178 27.7.2015 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

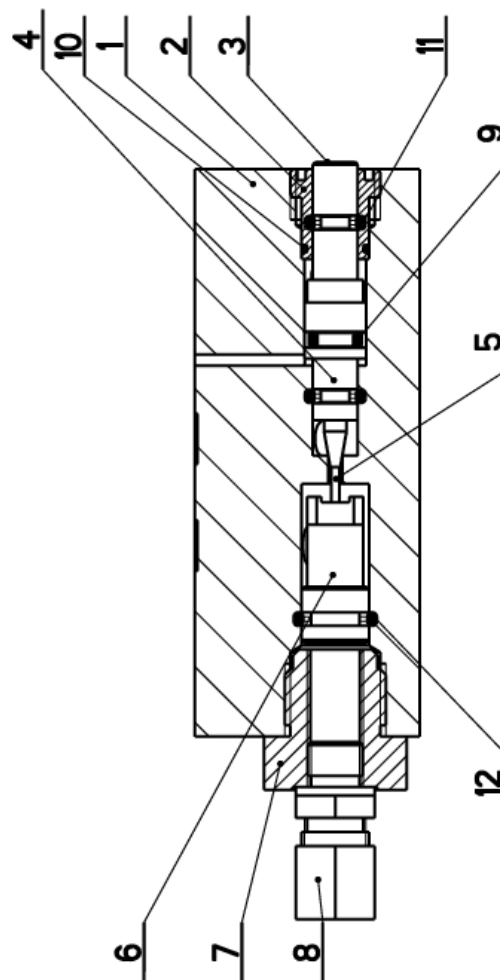
7.31. Vedení / Führung / Guide

Cislo Sestavy 201.6110-510		Ver. 0	Název sestavy VEDENÍ / GUIDE / BACKENFÜHRUNG			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.6010-104	1	EXCETER / CAM / EXCETER	SK 22	2	
2	30.6010-108	0	KROUZEK 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 / UNTERLEGSCHIEBE	PODLOŽKA 15	3	
6	95.001.015	0	LOŽISKO / BEARING / LAGER	6202 2RS	4	

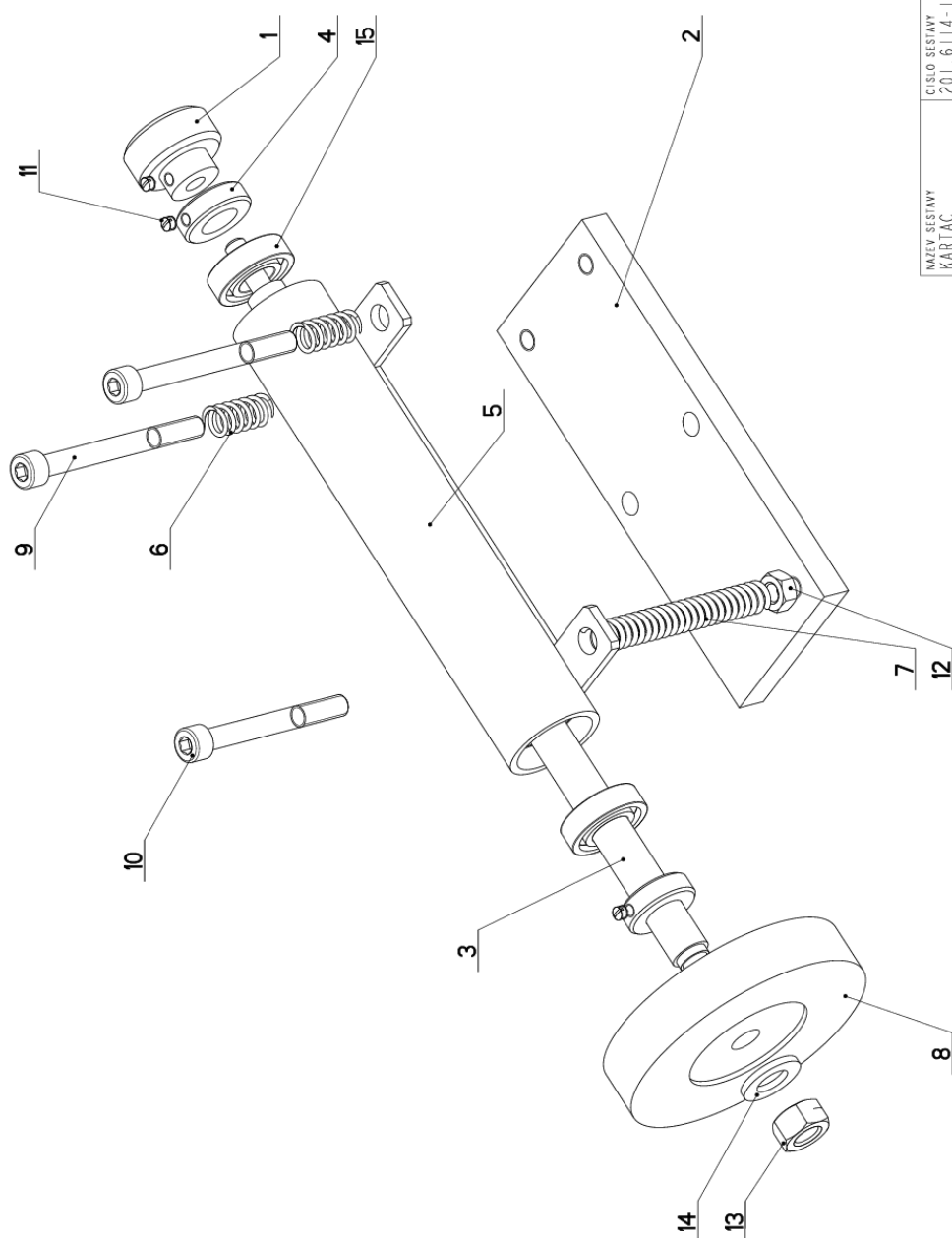


7.32. Kostka regulace/ Regelungswürfel/ Regulation cube

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	1	KOSTKA REGULACE / REGULATION CUBE / REGELUNGSWÜRFEL	TYC 40x40	1
2	30.6816-104	2	VÍKO / COVER / DECKEL	TYC 16	1
3	30.6816-103	0	PIST / PISTON / KOLBEN	TYC 12	1
4	30.6816-108	1	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	96.002.003	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	6x2	1
10	96.002.041	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	10x1	1
11	96.001.001	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	4x1,8	2
12	96.001.003	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	8x2	1



7.33. Kartáč / Bürste / Brush



NAZEV SOUSTAVY KARTÁČ	ČÍSLO SOUSTAVY 201.6114-100	STROJ STG 330,440
Konstruoval: PROCHÁZKA		
Datum: 13. 08.2015		
Verze: 7:10		

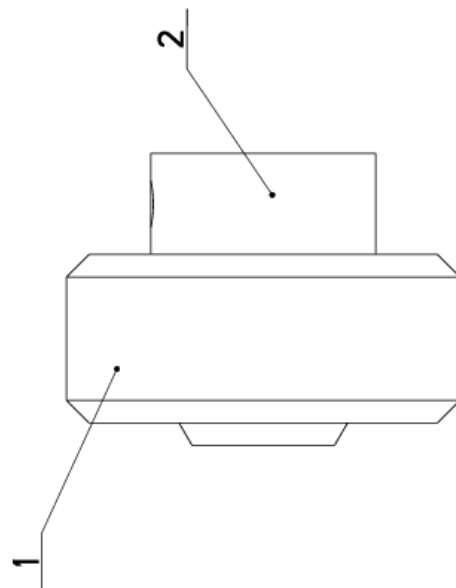
7.34. Kusovník / Stückliste / Piece list – Kartáč / Bürste / Brush

Cislo Sestavy 201.6114-100		Ver. 0	Nazev sestavy KARTAC/BRUSH/BÜRSTE			
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer	Ks	
1	201.0814-204	0	KOLEČKO / WHEEL / ROLLE	SESTAVA	1	
2	30.6114-105	0	DESKA / BOARD / PLATTE	HR. 70x12	1	
3	30.6114-116	0	HRDEL / SHAFT / WELLE	D 15	1	
4	30.6114-119	1	KROUZEK / RING / RING	d 28	2	
5	30.6114-128	1	DRŽAK / HOLDER / HALTER		1	
6	31.1506-115	0	PRUŽINA / SPRING / FEDER	1.6x12x25x7.5	2	
7	31.2107-206	0	PRUŽINA / SPRING / FEDER	2x12x84x25.5	1	
8	49.250.017	0	KARTAC / BRUSH / BÜRSTE	SPB 100x12	1	
9	90.001.25.067	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x80	2	
10	90.001.25.095	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x70	1	
11	90.003.20.001	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x6	3	
12	90.100.55.005	0	MATICE / NUT / MÜTTER	MATICE _ M8	1	
13	90.100.55.007	0	MATICE / NUT / MÜTTER	MATICE _ M12	1	
14	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 13	1	
15	95.001.006	0	LOŽISKO / BEARING / LAGER	6002 ZRS	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

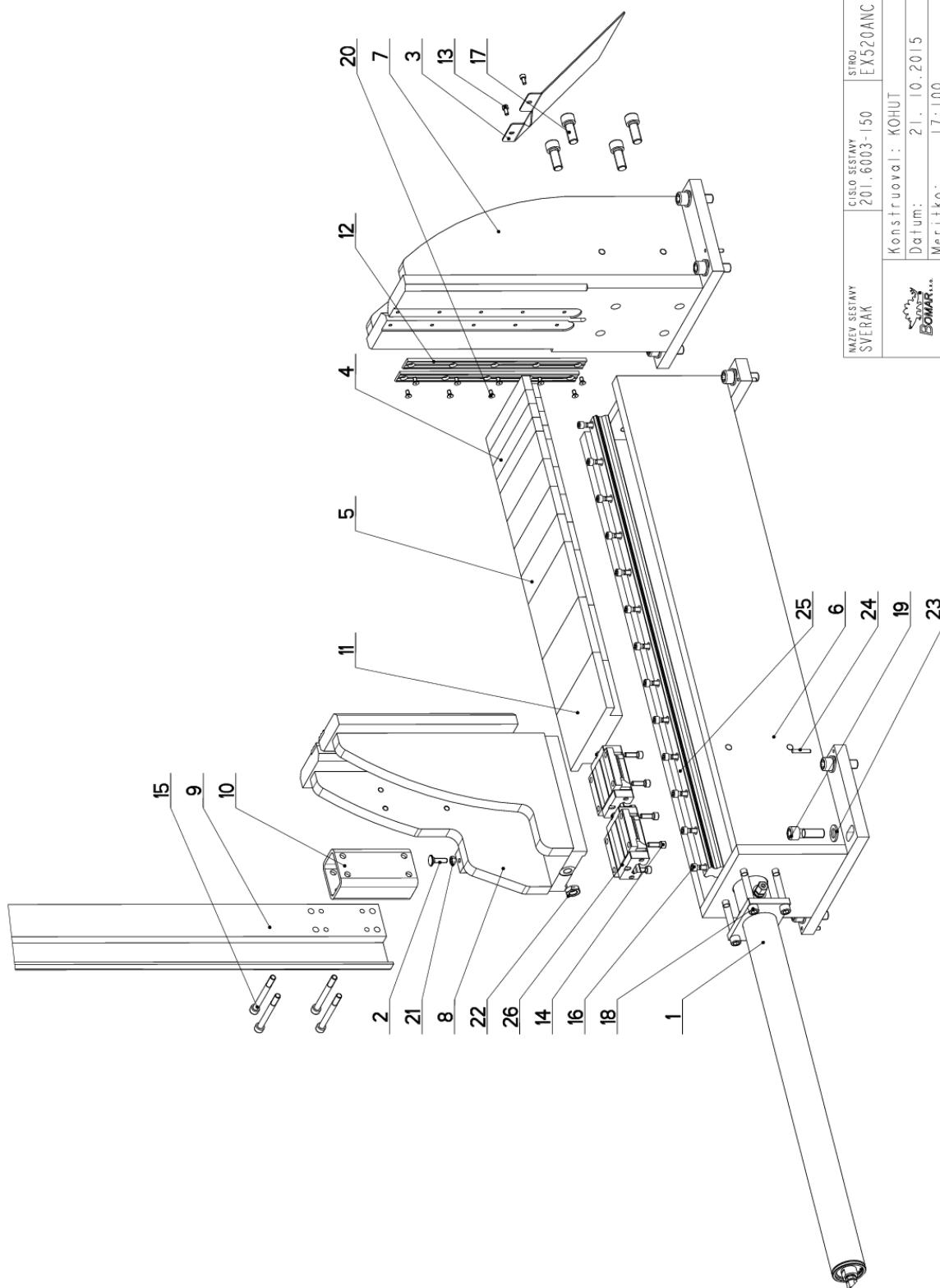
7.35. Kolečko / Rolle / Wheel

Císlo Sestavy 201.0814-204		Ver. 0	Název sestavy KOLECKO/WHEEL/ROLLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0814-204,1	0	KOLECKO / /	d 35	1
2	30.0814-204,2	0	NABOJ / /	d 20	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

7.36. Svěrák / Schraubstock / Vice

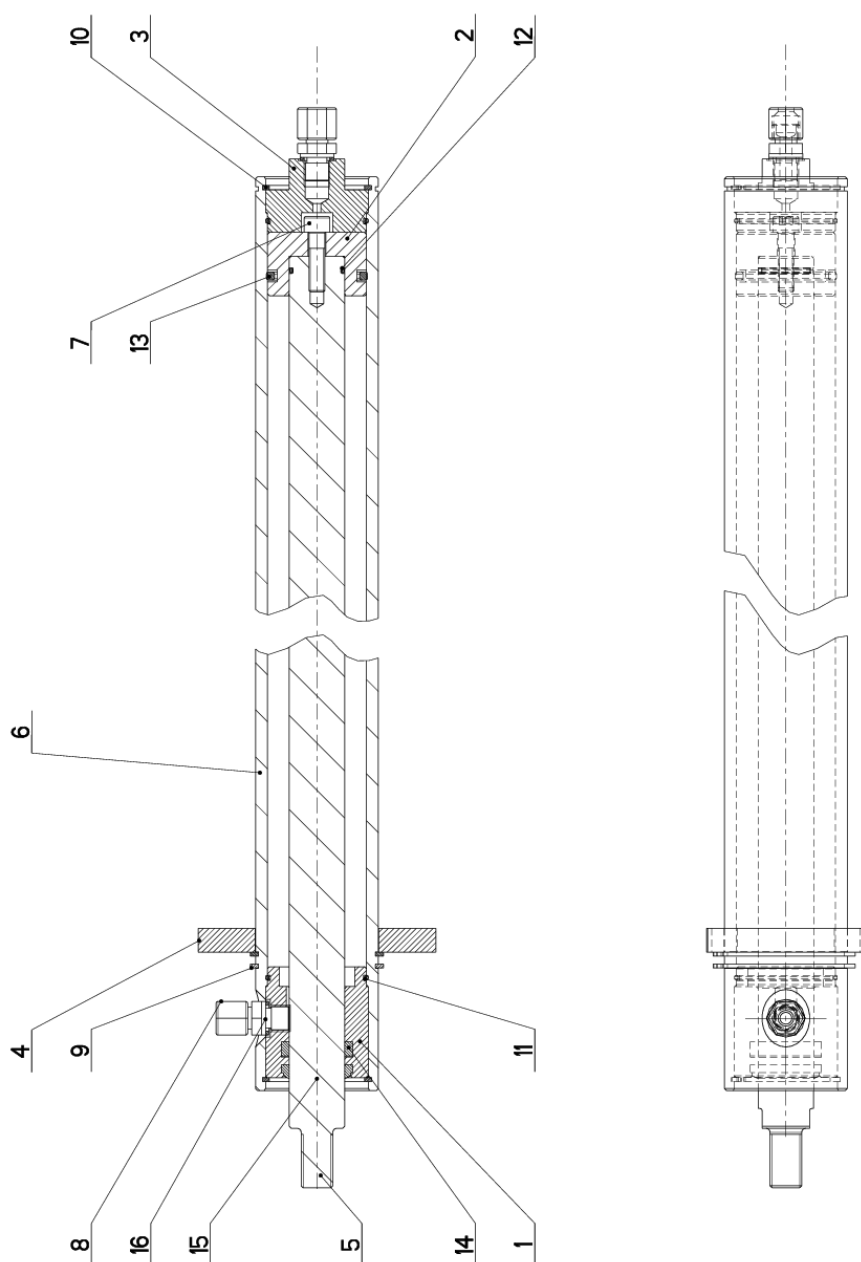


7.37. Kusovník / Stückliste / Piece list –
Svěrák / Schraubstock / Vice

Císlo Sestavy 201.6003-150		Ver. 0	Název sestavy SVERÁK/VICE/SCHRAUBSTOCK		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6007-150	0	VALEC SVERÁKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	30.0702-013	0	SROUB / BOLT / SCHRAUBE	M8	1
3	30.6003-103	0	SKLÚZ / SLIDE / RUTSCH	P2x155	1
4	30.6003-111	0	VLOŽKA / INSERT / EINLAGE	HR 40x30	4
5	30.6003-112	0	VLOŽKA / INSERT / EINLAGE	HR 60x40	4
6	30.6003-151	0	TELESO SVERÁKU / VICE BODY / SCHRAUBSTOCKKÖRPER		1
7	30.6003-152	0	CELIST PEVNÁ / SOLID JAW / FESTE BACKE		1
8	30.6003-153	0	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE		1
9	30.6003-154	0	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSLISTE		1
10	30.6003-155	0	JACKL / STEEL BAR / FORMROHR	J 80x60x6	1
11	30.6006-113	0	VLOŽKA / INSERT / EINLAGE	HR 120x40	3
12	30.6111-609	1	LISTA SVERÁKU / VICE TRIM / SCHRAUBSTOCKLEISTE	HR 30x10	4
13	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
14	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	8
15	90.001.25.069	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x100	4
16	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	13
17	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x40	4
18	90.001.25.088	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x100	4
19	90.001.25.138	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x50	10
20	90.011.27.005	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x12	20
21	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
22	90.101.55.003	0	MATICE / NUT / MUTTER	MATICE M16	1
23	90.150.00.013	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 16	10
24	90.300.02.007	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLÍK 8x36	6
25	99.200.295	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 35R 980 10/10N	1
26	99.201.056	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA35SESSON	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

7.38. Válec svěráku / Schraubstockzylinder / Vice cylinder



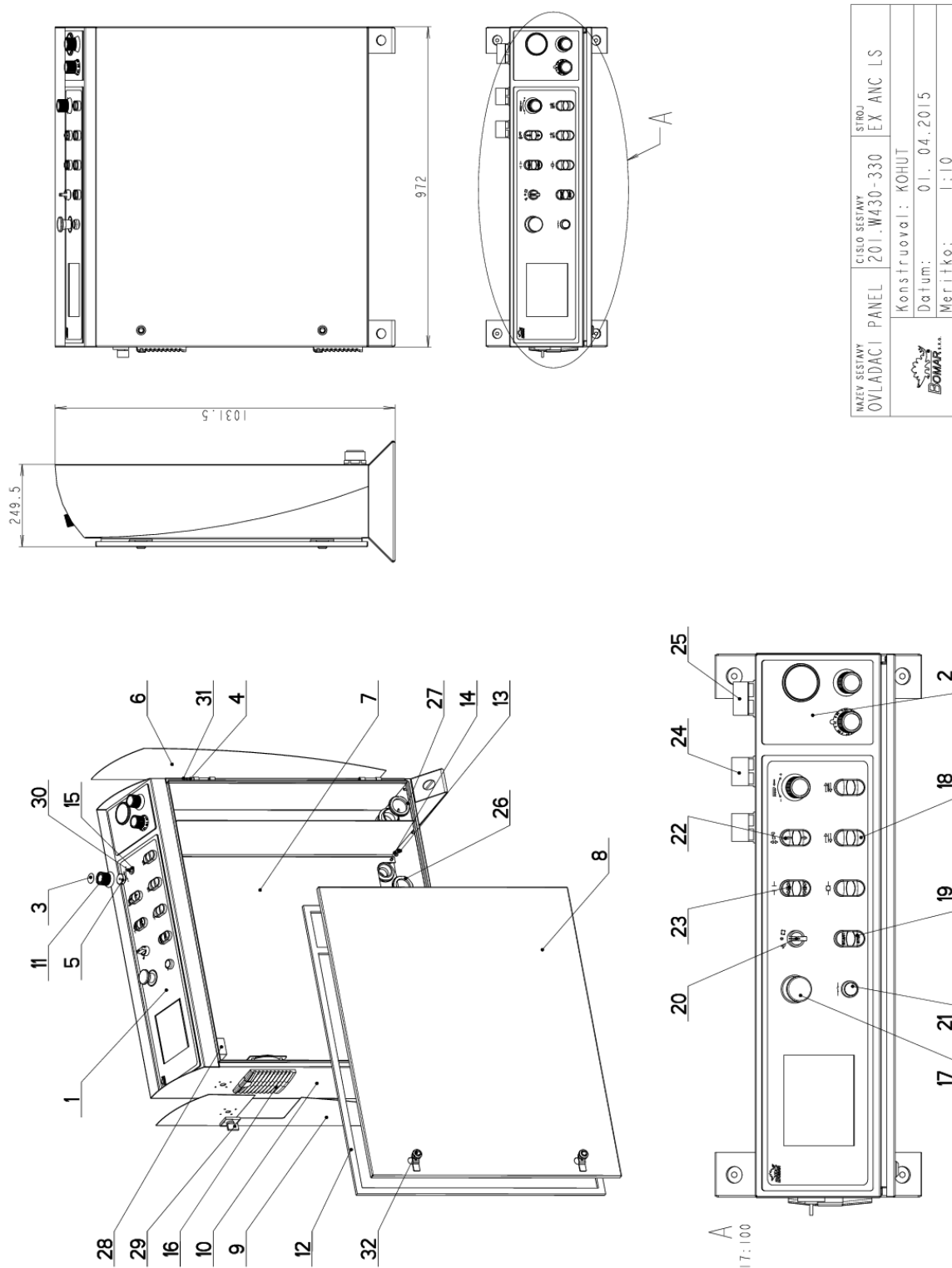
NAZEV SOUSTAVY VALEC SVĚRAKU	ČÍSLO SOUSTAVY 201.6007-150	STROJ EX520ANC
	Konstruoval: KOHUT	
	Datum: 20. 08.2015	
	Měřítko: 1:2	

7.39. Kusovník / Stückliste / Piece list –
Válec svěráku / Schraubstockzylinder / Vice cylinder

Číslo Sestavy 201.6007-150		Ver. 0	Název sestavy VÁLEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1807-104	2	VÍKO / COVER / DECKEL	TYC 55	1
2	30.2007-302	0	PIST / PISTON / KOLBEN	d 55	1
3	30.2007-304	1	VÍKO / COVER / DECKEL	d 55	1
4	30.6003-508	0	PRÍLOŽKA / STRAP / LASCHE	HR 80x12	1
5	30.6007-151	0	PISTNICE / PISTON ROD / KOLBENSTANGE	D 28	1
6	30.6007-152	0	VÁLEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	TR 62/50	1
7	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	1
8	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
9	95.800.021	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	2
10	95.801.009	0	SEGR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 52	2
11	96.001.013	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	45x2	2
12	96.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
13	96.020.005	0	KROUZEK TESNICÍ / SEAL RING / DICHTUNGSRING	39.2x5.33	1
14	96.041.003	0	TESNĚNÍ / SEALING / DICHTUNG	601-28x36x7.1	1
15	96.060.003	0	KROUZEK STÍRACÍ / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRACÍ 28	1
16	96.082.002	0	TESNĚNÍ / SEAL RING / DICHTUNGSRING	13/17x 5 CU	2

Číslo sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; 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

7.40. Ovládací panel / Bedienpult / Control panel

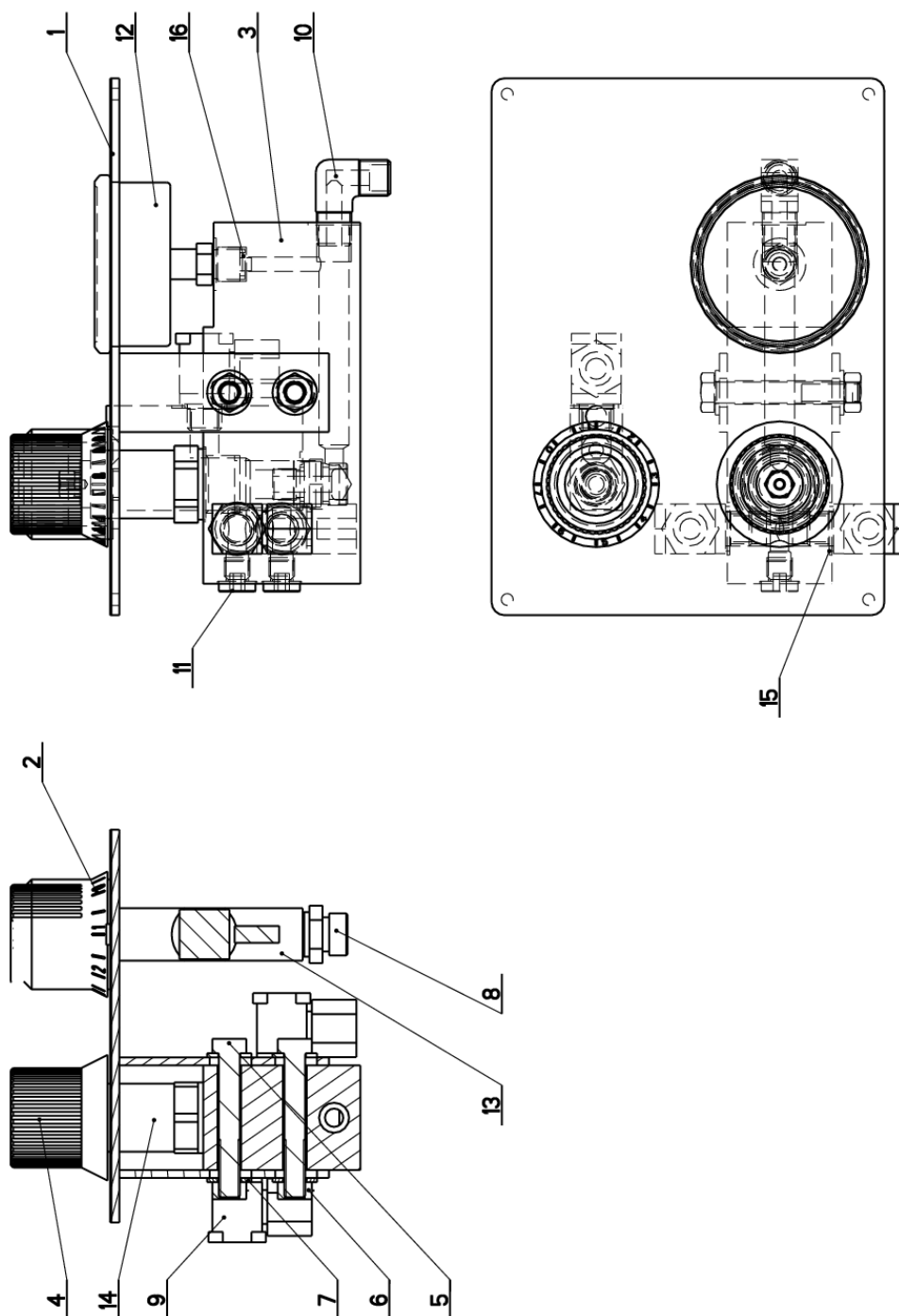


7.41. Kusovník / Stückliste / Piece list –
Ovládací panel / Bedienpult / Control panel

Císlo Sestavy 201.W430-330	Ver. 0	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT			
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	251.559	0	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
2	201.R230-220	1	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
3	30.6130-012	0	VÍKO / COVER / DECKEL	P 0.5x 30x30	3
4	30.7217-028	1	CEP / LUG / BOLZEN	7h9	2
5	30.R230-010	0	MEZIKUS / INTERMEDIATE PIECE / PASSTÜCK	d 32	1
6	30.R230-204	0	PLECH / PLATE / BLECH	P 1x220	1
7	30.W430-102	0	PANEL / PANEL / PANEL	P 1.5x825	1
8	30.W430-103	0	VÍKO / COVER / DECKEL		1
9	30.W430-312	0	PLECH / PLATE / BLECH	P 1x220	1
10	30.W430-321	0	SKRIN / BOX / KASTEN		1
11	31.6130-008	0	HLAVICE / HEAD / KOPF		1
12	61.352.001	0	TESNĚNÍ / SEALING / DICHTUNG	TESNĚNÍ 19x10	1
13	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE - M6	4
14	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 6,4	4
15	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 10,5	1
16	91.015.134	0	VENTILATOR / VENTILATOR / VENTILATOR	3238.100	2
17	91.060.030	0	HLAVICE TOTAL STOP / TOTAL STOP HEAD / TASTE TOTAL STOP		1
18	91.060.033	0	HLAVICE / HEAD / KOPF		3
19	91.060.034	0	HLAVICE / HEAD / KOPF	START/STOP	1
20	91.060.051	0	PREPINAC / SWITCH / UMSCHALTER		1
21	91.060.053	0	HLAVICE / HEAD / KOPF		1
22	91.060.054	0	HLAVICE / HEAD / KOPF	NAHORU/DOLU	1
23	91.060.055	0	HLAVICE / HEAD / KOPF	SV. ZAVR/OTEV	1
24	91.071.005	0	PRŮCHODKA / LEADTHROUGH / DURCHFÜHRUNG		2
25	91.071.022	0	VÝVODKA / BUSHING / TÜLLE		1
26	91.072.008	0	MATICE / NUT / MUTTER		2
27	91.072.016	0	MATICE / NUT / MUTTER		1
28	91.170.003	0	SPINAC VÁKOVÝ / CAM SWITCH / SCHALTER	LE2-12-1763	1
29	91.180.001	0	DESKA SPINACE / ELECTRIC BOARD / PLATINE		1
30	91.283.015	0	POTENCIOMETR / POTENTIOMETER / POTENTIOMETER	TP 195 4K7/N 20A	1
31	95.802.003	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTINY KROUZEK 5	2
32	99.104.002	0	ZAMEK / LOCK / SCHLOSS	ZAMEK ČÍNSKÝ	2

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednáací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.42. Ovládací panel / Bedienpult / Control panel



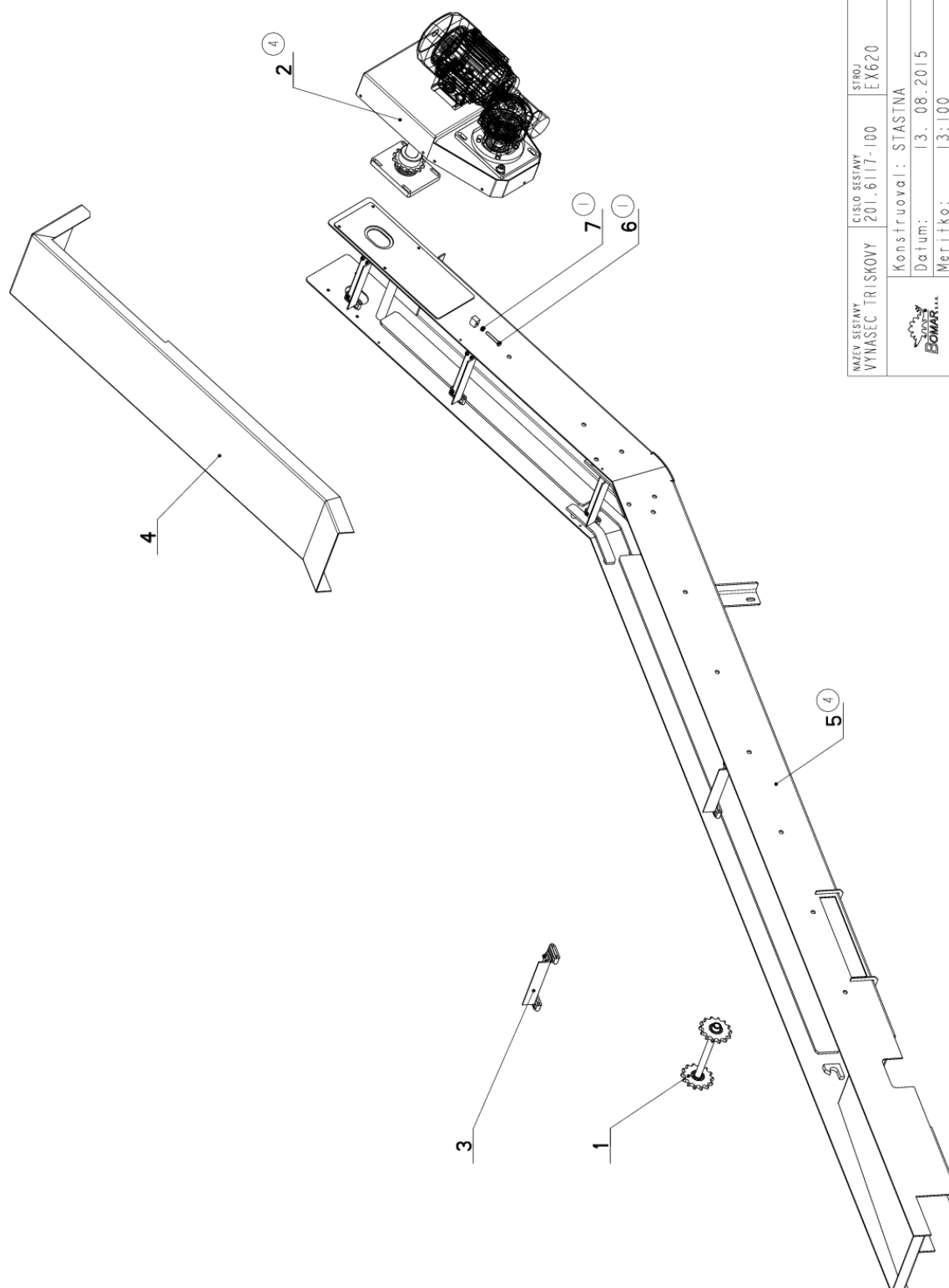
NAZEV SESTAVY OVLÁDACÍ PANEL	ČÍSLO SESTAVY 201.R230-220	STROJ PL, EX, IN
	Konstruoval: ODVARKA	
	Datum: 05. 04. 2012	
	Meritko: 7:10	

7.43. Kusovník / Stückliste / Piece list –
Ovládací panel / Bedienpult / Control panel

Císlo Sestavy 201. R230-220		Ver. I	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT			
Poz.	Objednací číslo	Ver.	Název položky		Rozměr	Ks
1	251.652	0	PANEL / PANEL / PANEL			1
2	30.6130-018	0	HLAVICE / HEAD / KOPF		VYLÍSEK	1
3	30.6130-103	2	KOSTKA REGULACE / REGULATION CUBE / REGELUNGSWÜRFEL		TYC 60x40	1
4	31.6130-008	0	HLAVICE / HEAD / KOPF			1
5	90.005.55.064	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE		SROUB M8x55	2
6	90.100.55.005	0	MATICE / NUT / MUTTER		MATICE - M8	2
7	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE		PODLOŽKA 8,4	4
8	92.002.103	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		G 1/4" 1r12	1
9	92.003.001	0	SROUBENÍ UHLÖVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG		P-RSWS-08LR	3
10	92.004.001	0	SROUBENÍ UHLÖVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG		37701	1
11	92.019.003	0	ZATKA / PLUG / STOPFEN		G1/4" VNITRNI IMBUS	2
12	92.080.002	0	MANOMETR / MANOMETER / MANOMETER		d 63 - 60bar	1
13	92.152.001	0	VENTIL SKRTICI / CHOKE VALVE / DROSSELVENTIL		VS01-04/R 2.5-0	1
14	92.154.001	0	VENTIL REDUKCNI / REDUCTION VALVE / DRUCKMINDERUNGSVENTIL			1
15	96.082.002	0	TESNENÍ / SEALING / DICHTUNG		KROUZEK CU 13/17	4
16	96.082.005	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING		5x8.8x1	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

7.44. Třískový vynašeč / Spanastrager / Swarf conveyor



7.45. Kusovník / Stückliste / Piece list –
Třískový vynašeč / Spanastrager / Swarf conveyor

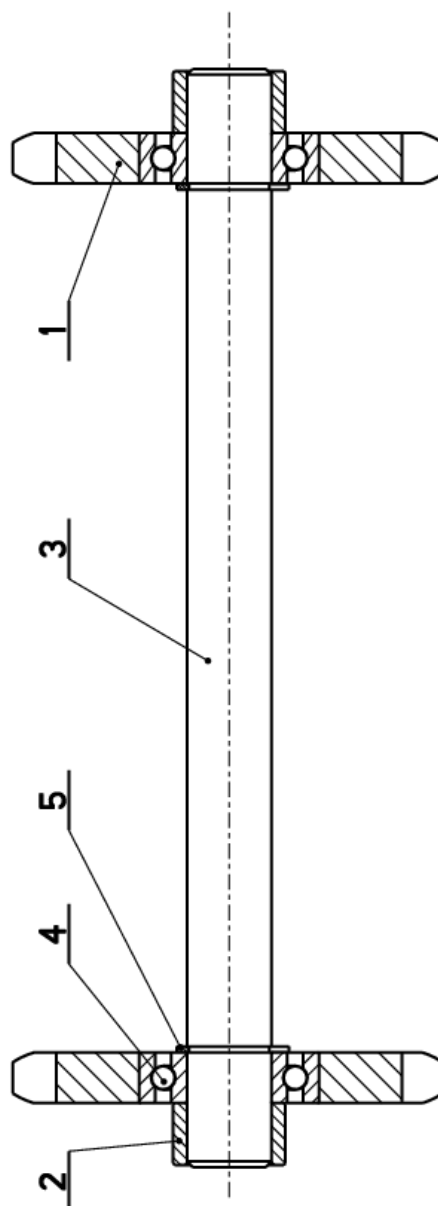
Císlo Sestavy 201.6117-100		Ver. 4	Název sestavy VYNAŠEČ TRÍSKOVÝ/CHIP EXTRACTOR/SPANABFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6017-103	0	KOLO NAPÍNAČÍ / TENSIONING WHEEL / UMLENNRAD		1
2	201.6017-250 (4)	1	POHON / DRIVE / ANTRIEB		1
3	201.6717-304	1	RETEZ / CHAIN / KETTE		8
4	30.6117-103	2	KRYT / COVER / ABDECKUNG		1
5	30.6117-201 (4)	3	KORYTO / CHANNEL / Rinne		1
6	90.005.55.012 (1)	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M6x40	2
7	90.100.55.004 (1)	0	MATICE / NUT / MUTTER	MATICE _ M6	2

1. PRIDANO 2x6HR SROUB M6x40 90.005.55.012, 2xMATICE M6 90.100.55.004. 102/ZMI07 21.3.2007 SLEZACKOVA
2. ZRUSENO TRECÍ PLECH 30.6117-104, 2xSROUB M6x12, 2x MATICE M6. 163/ZM202 24.5.2007 SLEZACKOVA
3. NOVA SESTAVA POHONU; UPRAVEN KRYT 30.6117-103 ZM.314-2007 24.7.2007 JANCA
4. ZRUSEN POHON 201.6017-150 A NAHR. POHONEM 201.6017-250, ZRUSENO KORYTO 30.6117-101 A NAHR. 30.6117-201. 192/ZMI80 10.6.2008 SLEZACKOVA

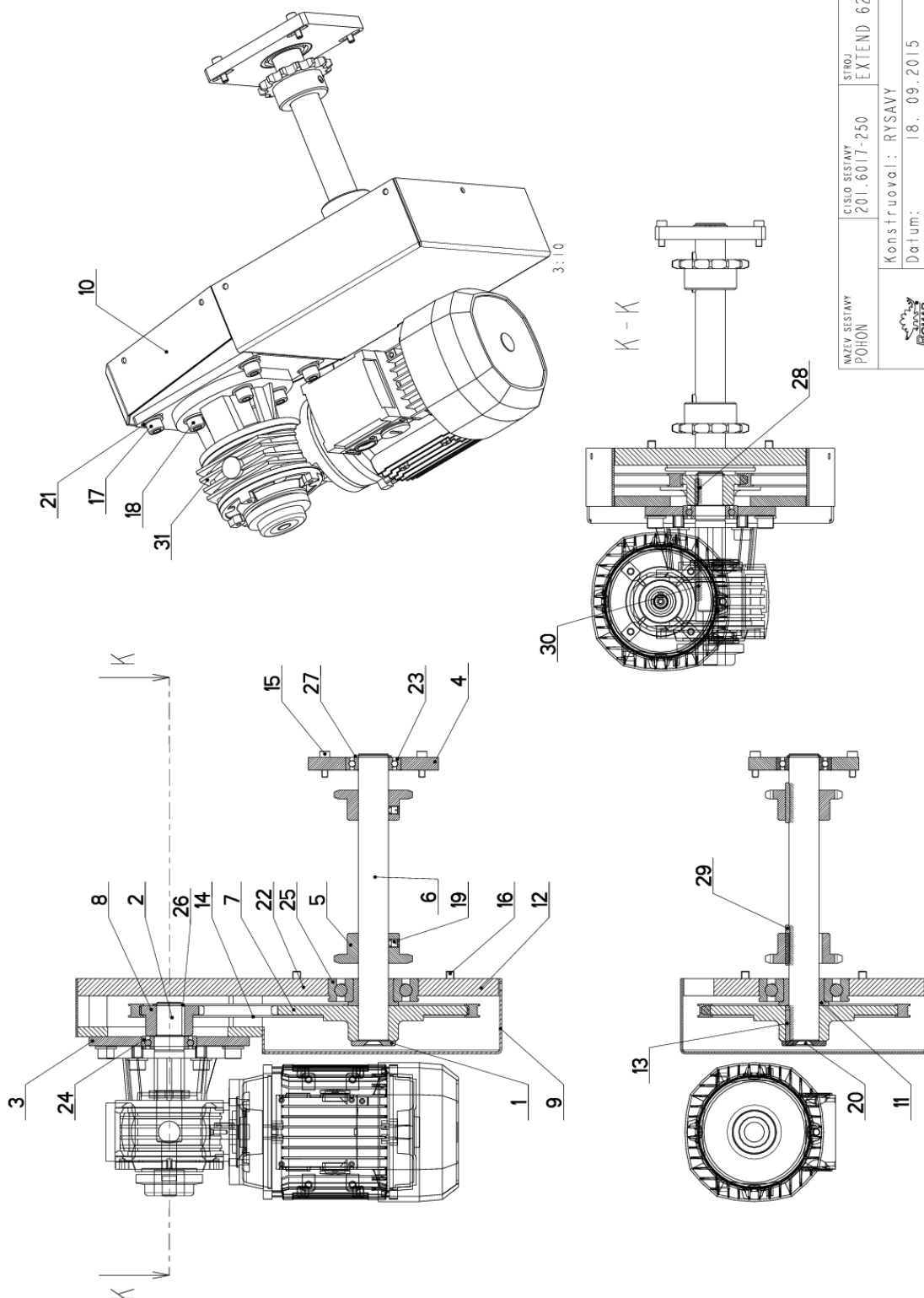
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.46. Kolo napínací / Umlenkrad / Stretching wheel

Cislo sestavy 201.6017-103		Ver. 0	Název sestavy KOLO NAPÍNACÍ / TENSIONING WHEEL / UMLENKRAD	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.6017-111	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD	2
2	30.6017-114	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	2
3	30.6017-117	0	HRDEL / SHAFT / WELLE	1
4	95.001.006	0	LOŽISKO KULÍKOVÉ / BEARING / LAGER	2
5	95.800.006	0	KROUZEK POJIST. VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	2



7.47. Pohon / Antrieb / Drive



NAZEV SOUSTAVY POHON	ČÍSLO SOUSTAVY 201.6017-250	STROJ EXTEND 620
Konstruoval: RYSAVÝ		
Datum: 18. 09. 2015		
Meritko: 3:10		

7.48. Kusovník / Stückliste / Piece list –
Pohon / Antrieb / Drive

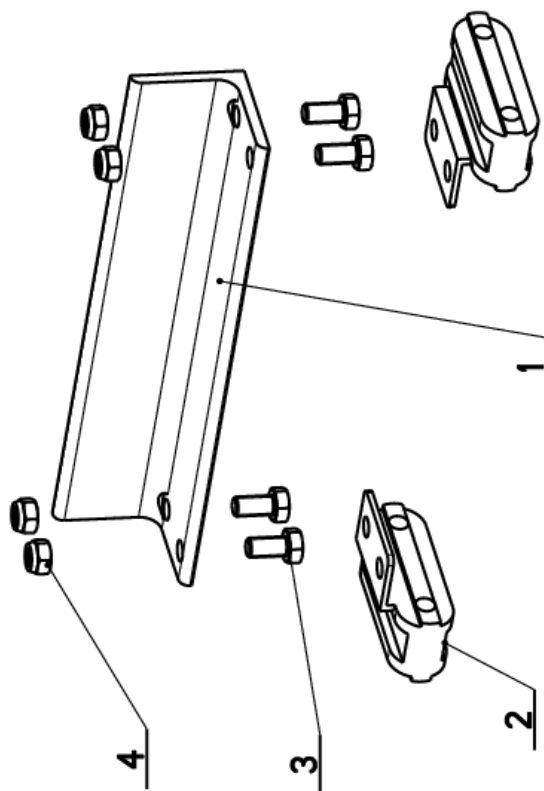
Císlo Sestavy 201.6017-250		Ver. I	Název sestavy POHON/DRIVE / ANTRIEB		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1502-465	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	d 45	1
2	30.6017-203	1	HRIDEL / SHAFT / WELLE	D 32	1
3	30.6017-206	0	DESKA / BOARD / PLATTE	HR 130x10	1
4	30.6017-207	0	DESKA / BOARD / PLATTE	HR 130x15	1
5	30.6017-208	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD	RET.KOLO z=14	2
6	30.6017-209	0	HRIDEL / SHAFT / WELLE	D 30	1
7	30.6017-211	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD	10B-I	1
8	30.6017-212	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD		1
9	30.6017-213	0	KRYT / COVER / ABDECKUNG	P 2x334	1
10	30.6017-214	0	KRYT / COVER / ABDECKUNG	P 2x58	1
11	30.6017-215	1	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	D 50	1
12	30.6017-216	0	DRŽÁK / HOLDER / HALTER	SVARENO	1
13	30.6017-218	0	PERO / SPRING / FEDER	PERO 8x10	1
14	49.200.027	0	RETEZ / CHAIN / KETTE	10B-I	1
15	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	4
16	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	4
17	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x20	4
18	90.001.25.106	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x22	4
19	90.003.20.010	0	SROUB STAVEČNÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x10	2
20	90.011.27.008	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M10x20	1
21	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	8
22	90.163.00.002	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 8	4
23	95.001.009	0	LOŽISKO / BEARING / LAGER	6006 2RS	1
24	95.003.005	0	LOŽISKO / BEARING / LAGER	6006AN	1
25	95.003.006	0	LOŽISKO / BEARING / LAGER	6308AN	1
26	95.800.012	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 25	1
27	95.800.013	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 30	1
28	95.810.007	1	PERO TESNÉ / TIGHT SPRING / PASSEFEDER	PERO 8x7x25	1
29	95.810.010	0	PERO TESNÉ / TIGHT SPRING / PASSEFEDER	PERO 10x8x40	3
30	95.810.016	0	PERO TESNÉ / TIGHT SPRING / PASSEFEDER	PERO 8x7x40	1
31	99.001.073	0	PREVODOVKA / TRANSMISSION / GETRIEBE	VF 49 L2 F2 60 P71 B14 B8	1

I. PRIDANO 1xPERO 8x7x25 95.810.007, 228/ZM223 9.8.2008 SLEZACKOVA

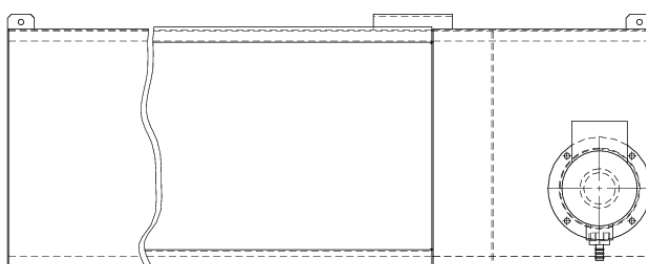
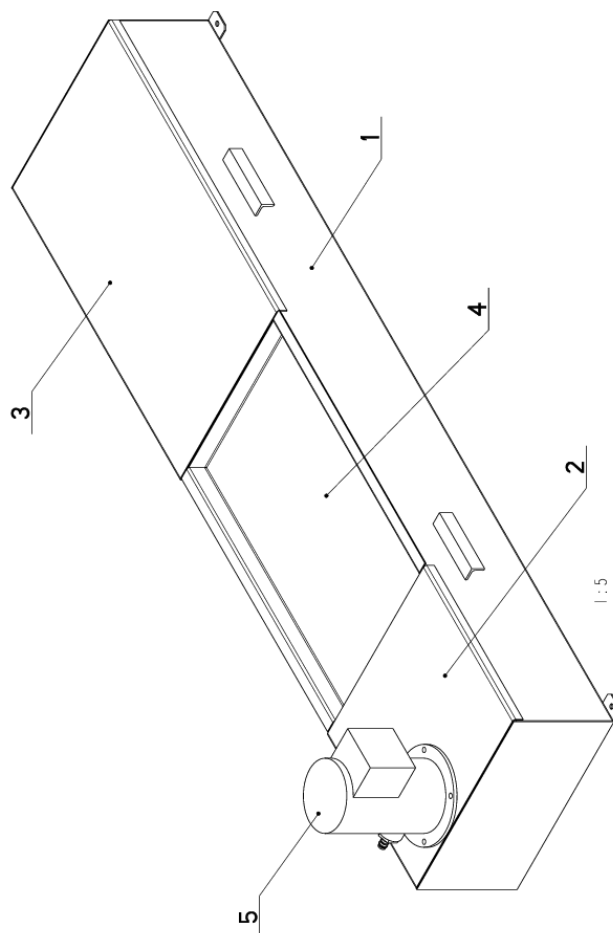
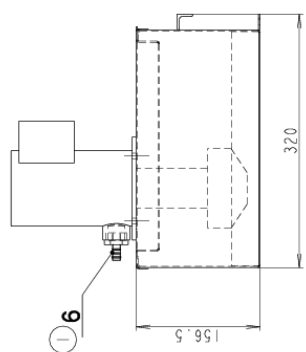
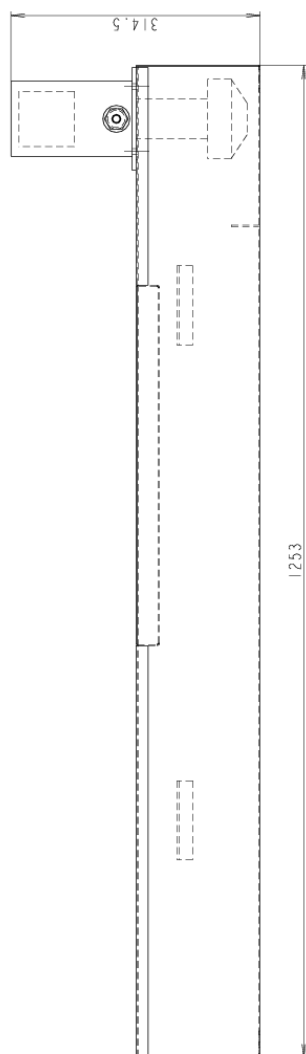
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version); Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position);
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.49. Řetěz / Kette / Chain

Cislo Sestavy 201.6717-304		Ver. 1	Název sestavy RETEZ/CHAIN/KETTE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6017-115	0	STERAC / WIPER / ABSTREIFER	PROFIL 30x30x3	1
2	30.6717-305	0	RETEZ POHONOVÝ / DRIVE BELT / ANTRIEBSKETTE	210BK3 (1 1/4x3/8)+un	2
3	90.005.55.002	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5X10	4
4	90.100.08.005	0	MATICE / NUT / MUTTER	M5	4



7.50. Chlazení / Kühlung / Cooling



NAZEV SYSTAVY CHLAZENÍ	ČÍSLO SYSTAVY 201.6106-000	STROJ SL 620
Konstruoval: RYŠAVÝ		
Datum: 23. 09. 2015		
Měřítko: 1:5		

7.51. Kusovník / Stückliste / Piece list –
Chlazení / Kühlung / Cooling

Císlu Sestavy 201.6106-000		Ver. I	Název sestavy CHLAZENÍ / COOLING / KÜHLUNG	
Poz.	Objednáci číslo	Ver.	Název položky	Ks
1	30.6106-001	I	VANA / TANK / WANNE	I
2	30.6106-002	I	PLECH / PLATE / BLECH	P I-5x327
3	30.6106-003	0	PLECH / PLATE / BLECH	P I-5 - 519
4	30.6106-004	0	SÍTO / SIEVE / GITTERWERK	P I x352
5	91.020.016	0	CERPADLO / PUMP / PUMPE	3 COA 4-14
6	94.202.014	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	3/4"-10

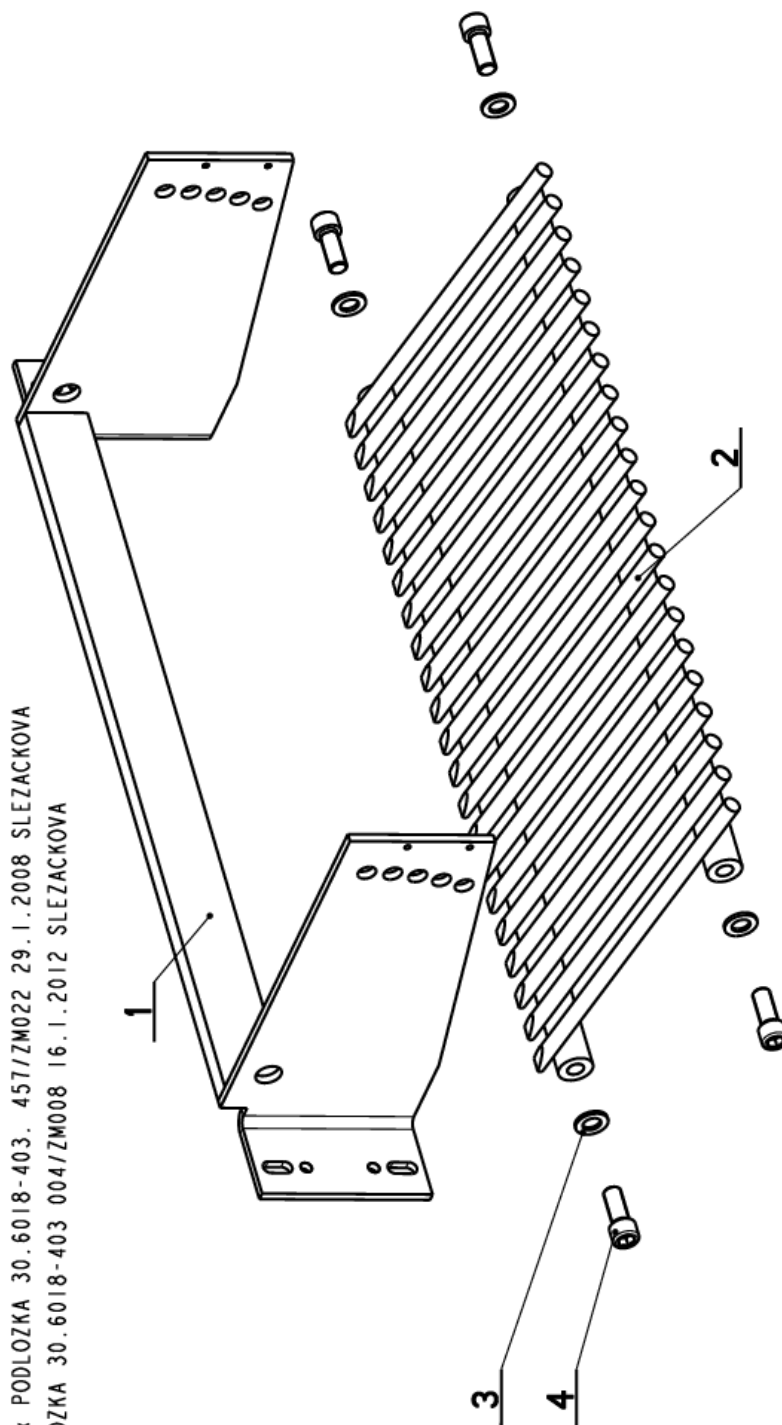
I. ZRUS. REDUKCE 94.202.005 A NAHR. REDUKCI 94.202.014. 202/ZM238 8.6.2007 SLEZACKOVA

Císlu Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednáci číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.52. Rošt / Gitter / Hake

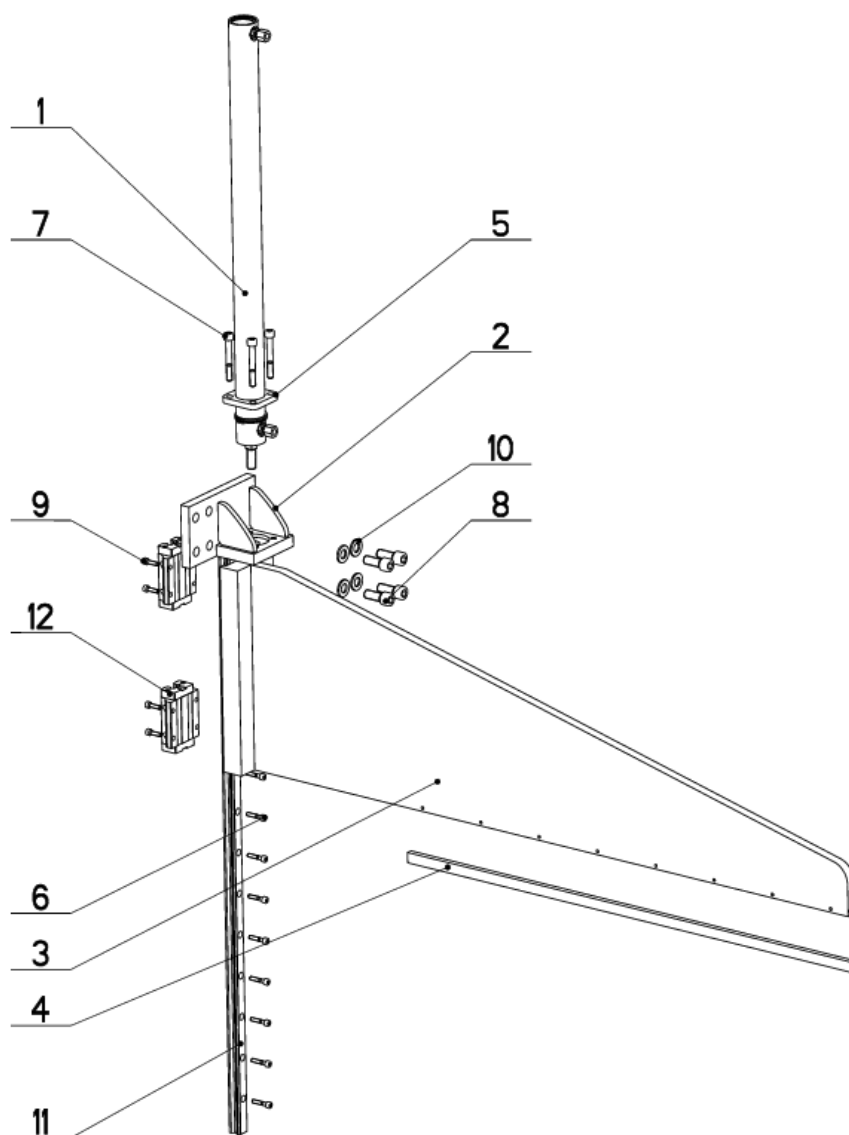
Cislo Sestavy 201.6018-400		Ver.	Název sestavy ROST/GRILL/GITTER	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.6018-401	2	DRŽAK / HOLDER / HALTER	1
2	30.6018-402	1	ROST / GRILL / GITTER	1
3	90.150.50.009	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	4
4	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	4

1. PRIDANA 2x PODLOŽKA 30.6018-403. 457/ZM022 29.1.2008 SLEZACKOVA
2. ZRUS. PODLOŽKA 30.6018-403 004/ZM008 16.1.2012 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

7.53. Upínání horní / Spannvorrichtung oben / Top clamping



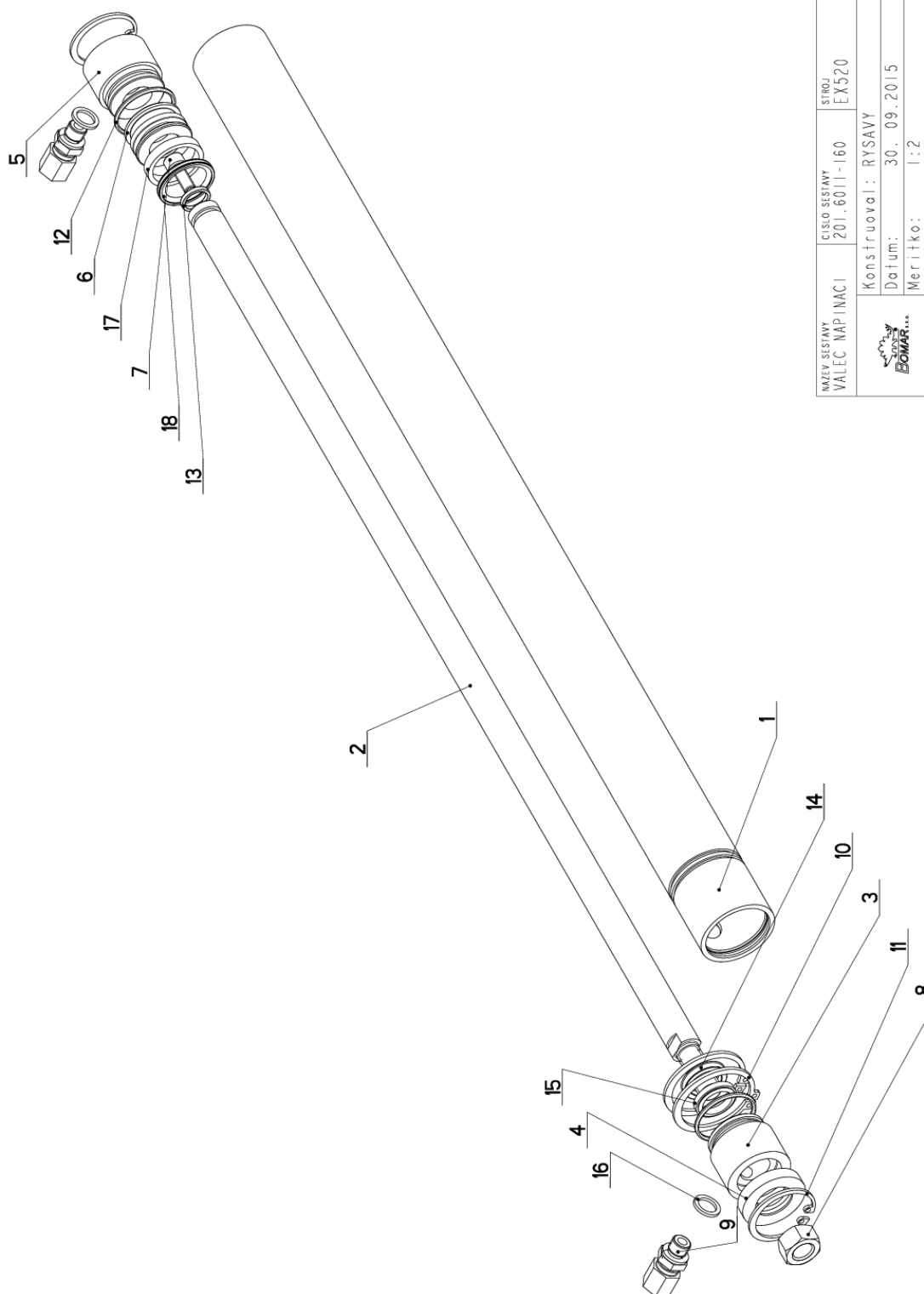
NAZEV SESTAVY UPINANI HORNÍ	CISLO SESTAVY 201.6014-040	STROJ EX520ANC
	Konstruoval: KOHUT	
	Datum: 13. 04.2016	
	Meritko: 13:100	

7.54. Kusovník / Stückliste / Piece list –
Upínání horní / Spannvorrichtung oben / Top clamping

Císlo Sestavy 201.6014-040		Ver. 0	Název sestavy UPÍNÁNÍ HORNÍ / TOP CLAM/SPANNVORRICHTUNG OBEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6011-160	0	VALEC NAPÍNACÍ / TENSIONING CYLINDER / SPANNZYLINDER	D30 / 16	1
2	30.6014-031	0	DRŽÁK / HOLDER / HALTER		1
3	30.6014-042	0	KONZOLA / CONSOLE / KONSOLE		1
4	30.6014-043	0	LISTA / TRIM / LEISTE	HR 15x8	1
5	30.0311-126	0	DRŽÁK / HOLDER / HALTER	P 8x58	1
6	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X25	14
7	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X60	4
8	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X30	4
9	90.001.25.143	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X18	8
10	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE	PODLOŽKA 13	4
11	99.200.268	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 20R 850 E=20	1
12	99.201.062	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA20LE SS F0 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

7.55. Válec napínací / Spannzylinder / Tensioning cylinder



NAZEV SOUSTAVY VÁLEC NAPÍNACÍ	ČÍSLO SOUSTAVY 201.6011-160	STROJ EX520
Konstruoval: RYŠAVÝ		
Datum: 30. 09. 2015		
Měřítko: 1:2		

7.56. Kusovník / Stückliste / Piece list –
Válec napínací / Spannzylinder / Tensioning cylinder

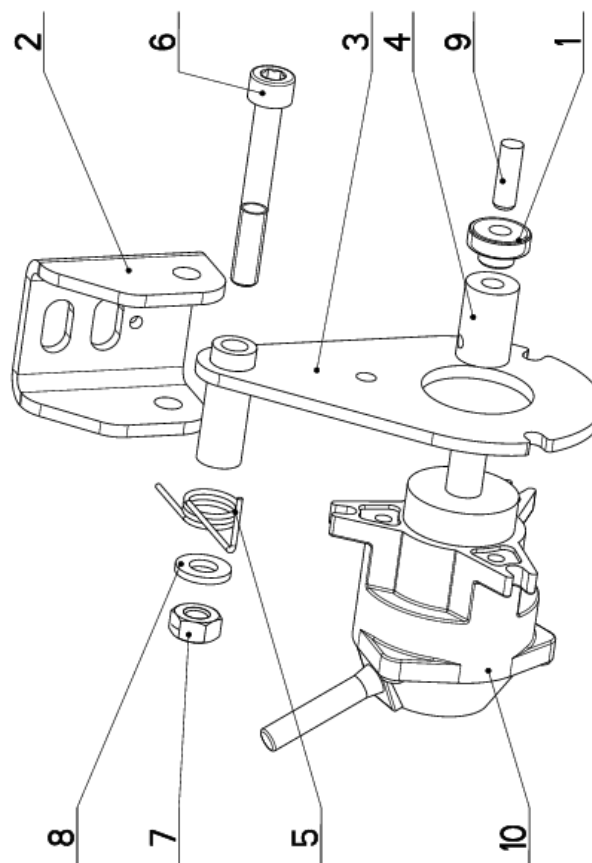
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Poz.	Objednávací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6011-142	0	VALEC / ROLLER / ZYLINDER	TR 40/30H8	1
2	30.6011-143	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 16	1
3	30.6807-103	2	VÍKO / COVER / DECKEL	TYC 35	1
4	30.6807-104	1	VÍKO / COVER / DECKEL	TYC 35	1
5	30.6807-105	0	VÍKO / COVER / DECKEL	TYC 35	1
6	30.6807-106	0	PIST / PISTON / KOLBEN	TYC 32	1
7	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	1
8	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE - M12	1
9	92.002.102	0	SROUBENÍ / BOLTING / VERSCHRAUBUNG	S-GEV-8LLR	2
10	95.800.015	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 40	2
11	95.801.026	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 34	2
12	96.001.008	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	26x2 NBR 70SH	2
13	96.002.006	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	12x2 NBR 70SH	1
14	96.041.001	0	TESNĚNÍ / SEALING / DICHTUNG	16x24x4 UN	1
15	96.060.001	0	KROUZEK STÍRACÍ / SCRAPER RING / ABSTREIFRING	16x22 NBR 70	1
16	96.082.001	0	KROUZEK TESNÍCÍ / SEAL RING / DICHTUNGSRING	10/14x1.5 CU	2
17	96.084.005	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GP6500300-T47	1
18	96.900.007	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PW4100300-Z20	1

Číslo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; 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

7.57. Odměrování / Abmessung / Admeasurement

Císlo Sestavy 201.P304-190		Ver. 1		Název sestavy ODMEROVÁNÍ / &NAZEV_EN / &NAZEV_DE	
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6702-214	0	PASTOREK / PINION / RITZEL	z=12	1
2	30.P304-191	1	DRŽÁK / HOLDER / HALTER	P 3x40	1
3	30.P304-192	1	DRŽÁK / HOLDER / HALTER		1
4	30.P304-194	0	HRDEL / SHAFT / WELLE	d 12	1
5	31.2902-113	0	PRUŽINA / SPRING / FEDER	d 1.2	1
6	90.001.55.076 (1)	0	SROUB IMBUS ZINEK / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x45	1
7	90.100.55.004 (1)	0	MATICE / NUT / MUTTER	MATICE - M6	1
8	90.150.50.004 (1)	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 6,4	1
9	90.301.02.002	0	KOLÍK VALCOVÝ / CYLINDRICAL PIN SOFT / ZYLINDERSTIFT WEICH	KOLÍK 5x16	1
10	91.103.103	0	CÍDLO / SENSOR / SENSOR	DKS 40	1

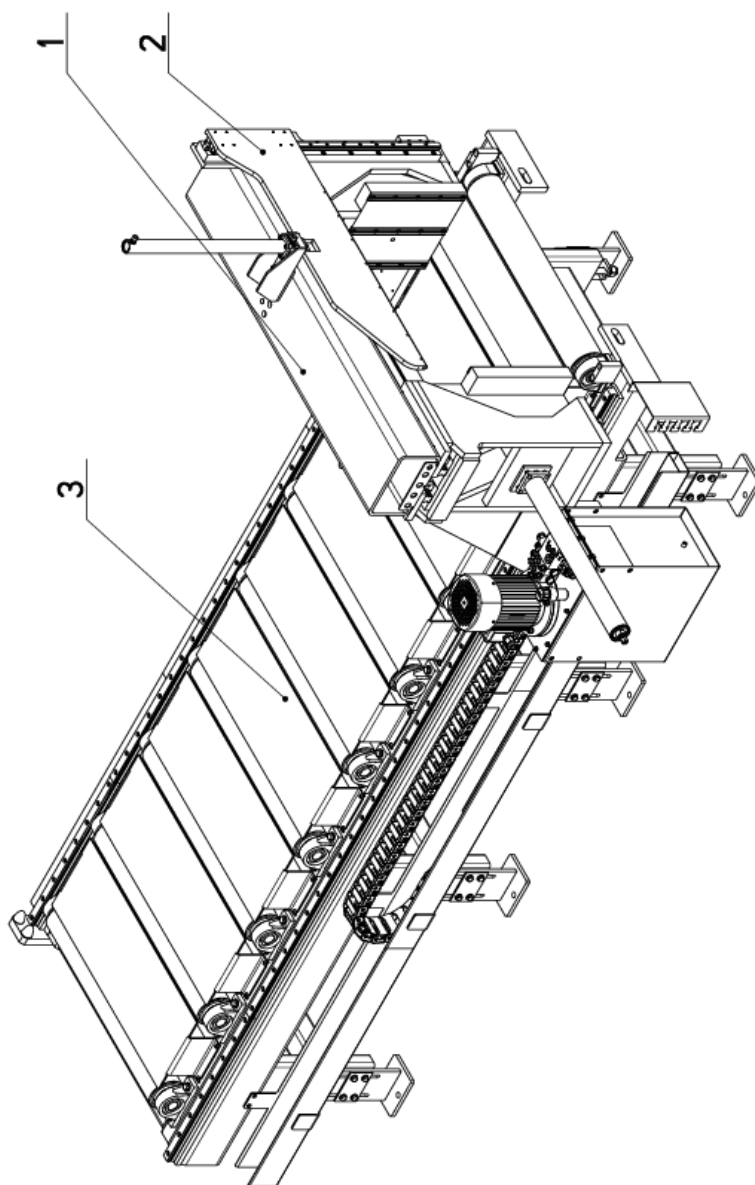
1. ZRUS. SROUB M8x45(90.001.25.037) A NAHR. M6x45(90.001.55.076), ZRUS. PODLOŽKA 8.4(90.150.50.005) A NAHR. PODLOŽKOU 6.4(90.150.50.004), ZRUS. MATICE M8(90.100.55.005) A NAHR. MATICI M6(90.100.55.004). 133/ZMI55 30.4.2013 SLEZACKOVA



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

7.58. Podavač / Vorschub / Feeder

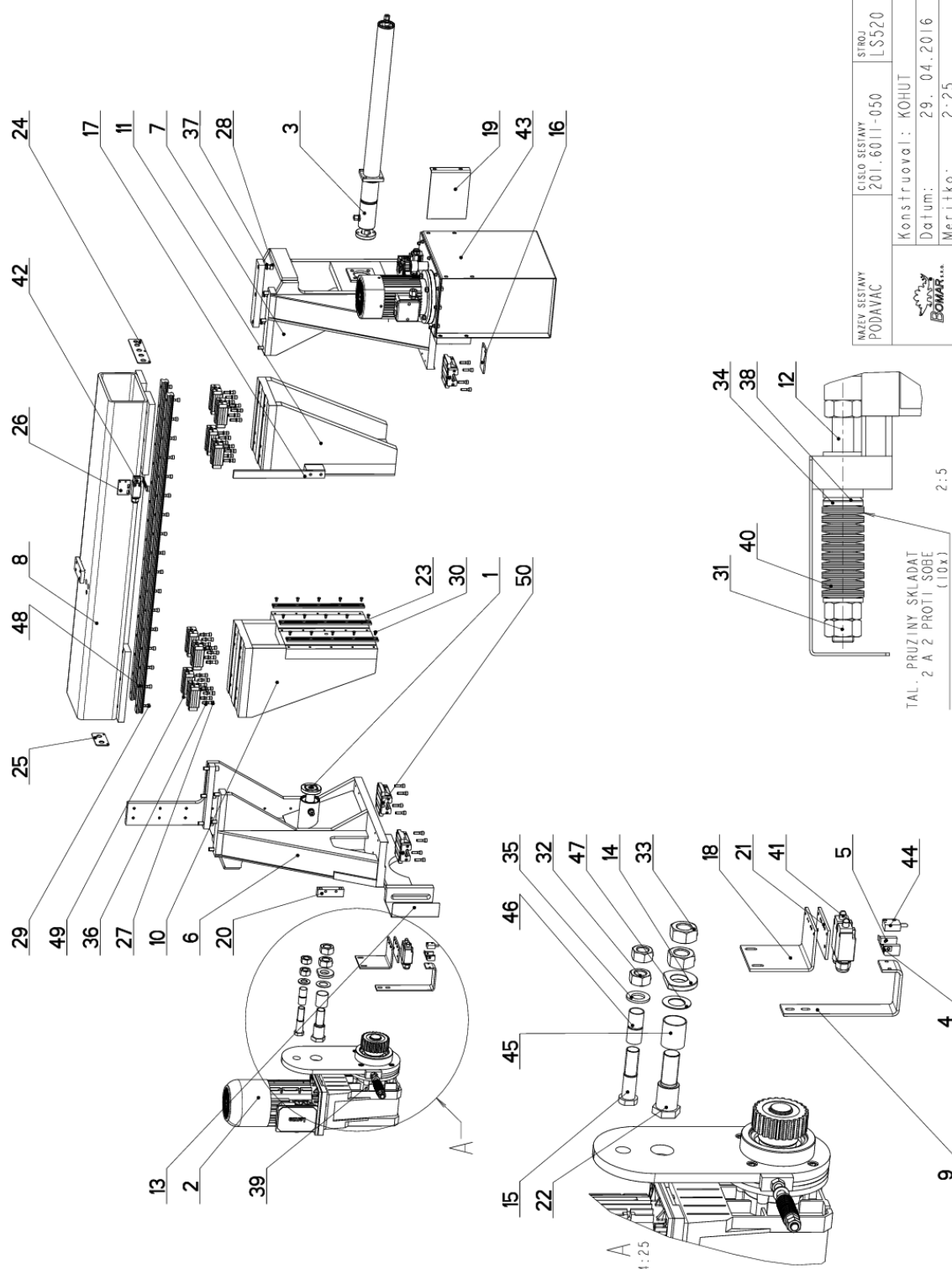
Cislo Sestavy 201.6011-040		Ver. 0	Název sestavy PODAVAC / FEEDER / VORSCHUB	
Poz.	Objednací číslo	Ver.	Název položky	Rozměr
1	201.6011-050	0	PODAVAC / FEEDER / VORSCHUB	I
2	201.6011-070	0	UPINANI HORNÍ / TOP CLAM / SPANNVORRICHTUNG OBEN	I
3	201.6011-090	0	TRAT / TRACK / BAHN	I



LONG STROKE MIDDLE - EX520
 -DELKA PODANI 2500 mm
 -NOSNOST 5000 kg
 -HMOTNOST 1800 kg

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

7.59. Podavač / Vorschub / Feeder

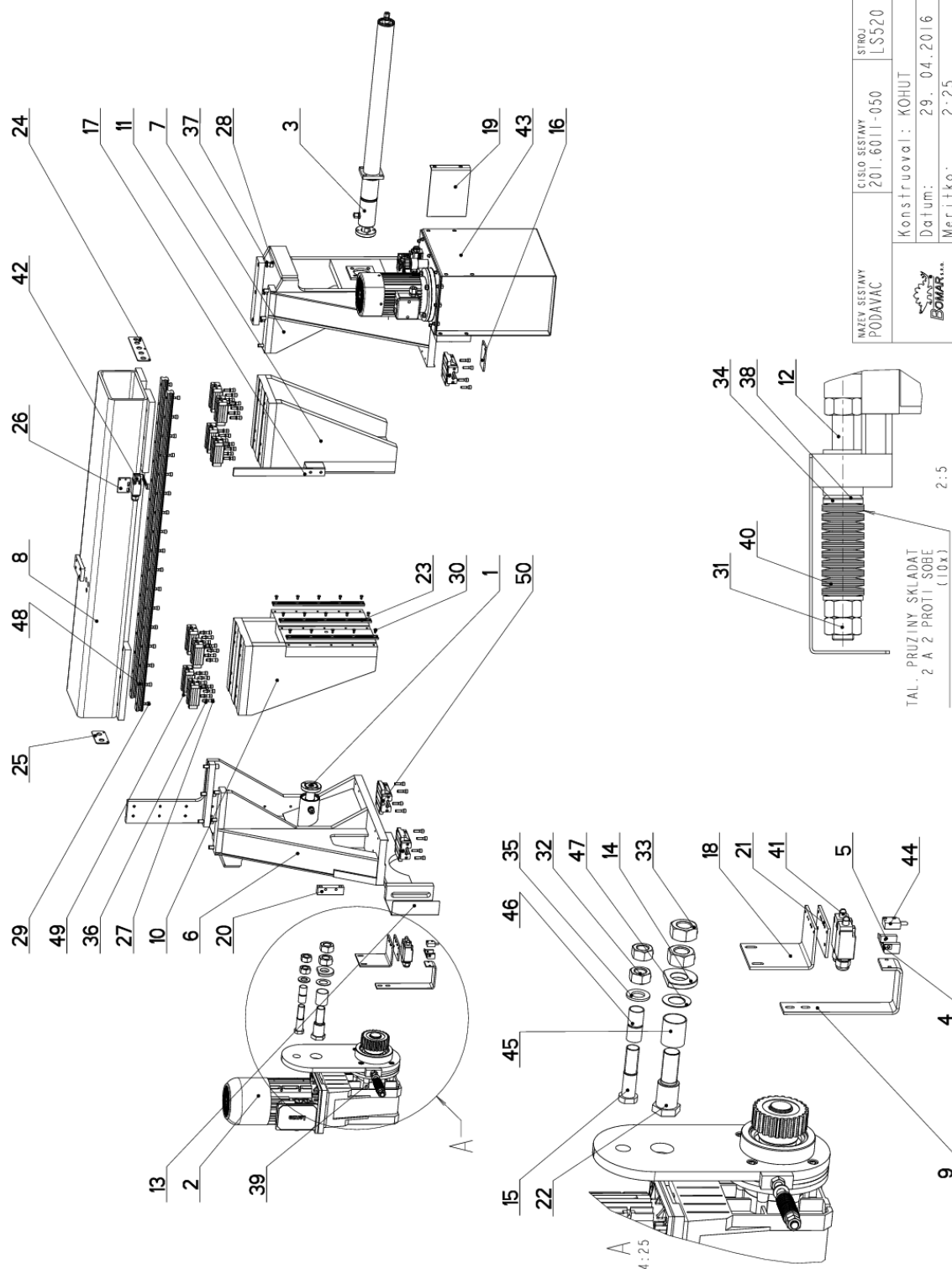


7.60. Kusovník / Stückliste / Piece list –
Podavač / Vorschub / Feeder

Císlo Sestavy 201.6011-050	Ver. 0	Název sestavy PODAVAC/FEEDER/VORSCHUB			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6011-060	0	VALEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	201.6011-120	1	POHON / DRIVE / ANTRIEB		1
3	201.6011-140	1	VALEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
4	30.1504-017	0	STERAC / WIPER / ABSTREIFER	P 0,3x11	2
5	30.1504-024	0	DRŽAK / HOLDER / HALTER	HR 40x20	1
6	30.6011-053	0	SLOUP / BRACE / QUERLATTE		1
7	30.6011-054	0	SLOUP / BRACE / QUERLATTE		1
8	30.6011-055	0	PRICKA / BRACE / QUERLATTE		1
9	30.6011-056	0	DRŽAK / HOLDER / HALTER	P 5x40	1
10	30.6011-104	1	CELIST / FEEDER / VORSCHUB		1
11	30.6011-107	1	CELIST / FEEDER / VORSCHUB		1
12	30.6011-109	0	CEP / LUG / BOLZEN	D16	1
13	30.6011-111	0	KRYT / COVER / ABDECKUNG	P 2x180	1
14	30.6011-113	0	VÍKO / COVER / DECKEL	D 70	1
15	30.6011-115	0	CEP / LUG / BOLZEN	TYC D35	1
16	30.6011-739	0	DRŽAK / HOLDER / HALTER	HR 60x5	1
17	30.6011-749	0	LISTA / TRIM / LEISTE		1
18	30.6011-752	0	DRŽAK / HOLDER / HALTER	P 5x100	1
19	30.6011-754	0	DRŽAK / HOLDER / HALTER	P 3x150	1
20	30.6011-755	0	DRŽAK / HOLDER / HALTER	HR 30x20	1
21	30.6111-583	0	DRŽAK / HOLDER / HALTER	HR 60x5	1
22	30.6111-606	0	CEP / LUG / BOLZEN	TYC 6HR 46	1
23	30.6111-609	1	LISTA SVERAKU / VICE TRIM / SCHRAUBSTOCKLEISTE	HR 30x10	6
24	30.6311-656	0	DRŽAK / HOLDER / HALTER	P 3x50	1
25	30.6311-657	0	DRŽAK / HOLDER / HALTER	P 3x50	1
26	30.6803-015	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	P 5x45	1
27	90.001.25.035	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x35	32
28	90.001.25.061	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x45	12
29	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	50
30	90.011.21.005	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x12	30
31	90.100.55.008	0	MATICE / NUT / MUTTER	MATICE _ M16	3
32	90.100.55.010	0	MATICE / NUT / MUTTER	MATICE _ M24	2
33	90.100.55.014	0	MATICE / NUT / MUTTER	MATICE M30 ZN	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

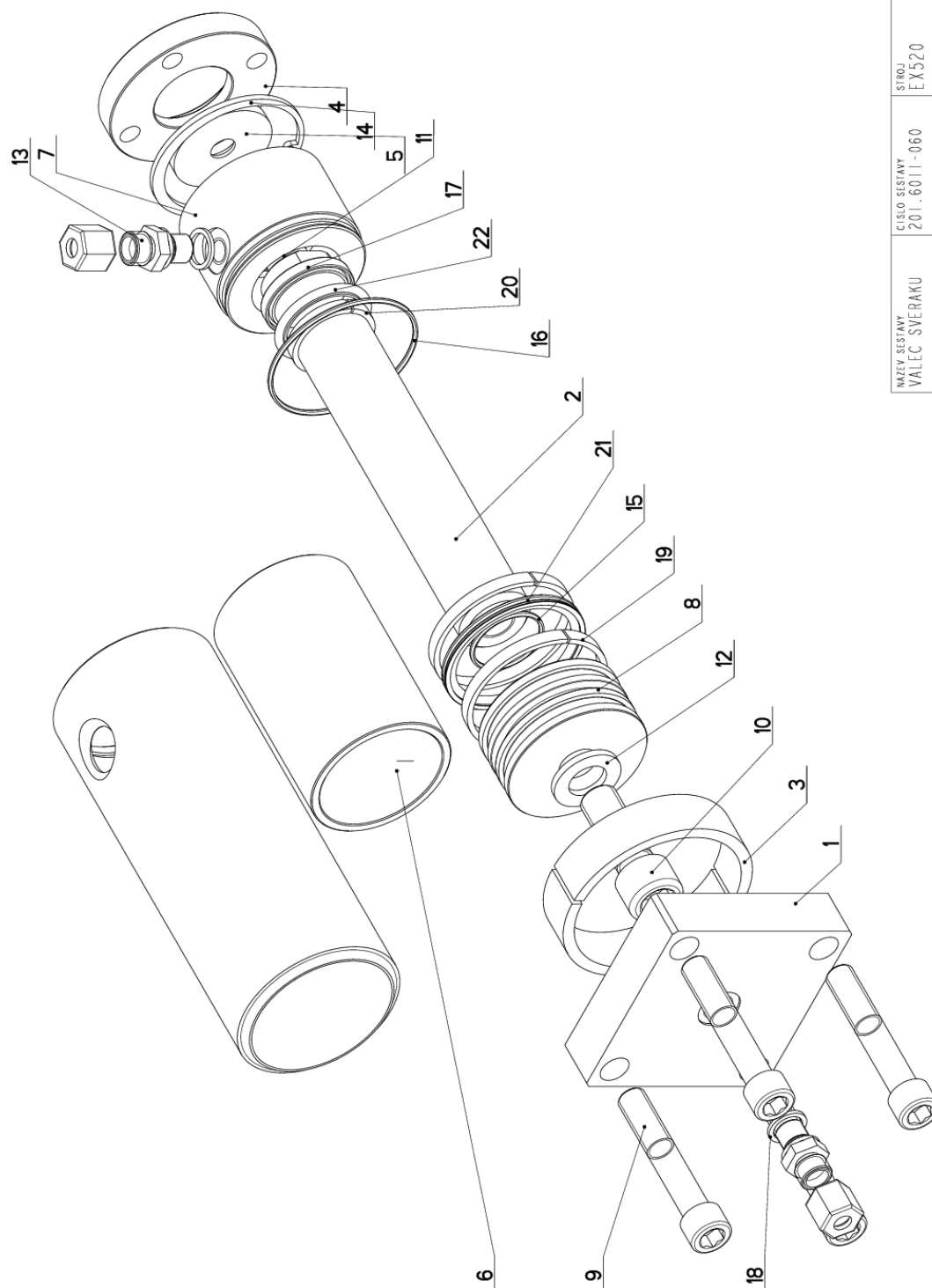
7.61. Podavač / Vorschub / Feeder



7.62. Kusovník / Stückliste / Piece list –
Podavač / Vorschub / Feeder

34	90.150.50.009	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	PODLOZKA 17	3
35	90.150.50.016	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	25 (ZN)	1
36	90.163.00.002	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	PODLOZKA 8	32
37	90.163.00.003	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	NORD-LOCK	12
38	90.166.02.007	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	CIT (M16)	1
39	90.166.02.008	0	PODLOZKA / WASHER / UNTERLEGSCHETBE	D19 (M16)	1
40	90.350.02.007	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	31.5x16.3x1.25	40
41	91.173.010	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER		2
42	91.173.018	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	PZ-FR55-M2	1
43	92.001.119	0	AGREGAT HYDRAULICKY / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
44	92.270.018	0	SNIMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	ELGO	1
45	95.760.007	0	POUZDHO / SLEEVE / BÜCHSE	40x50	1
46	95.760.010	0	POUZDHO / SLEEVE / BÜCHSE	25x30	2
47	95.750.007	0	PODLOZKA / WASHER / UNTERLEGSCHETBE		1
48	99.200.300	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 30R 1330 25/25N	2
49	99.201.055	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA30S	8
50	99.201.056	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA35SEFFON	4

7.63. Válec svěráku / Schraubstockzylinder / Vice cylinder



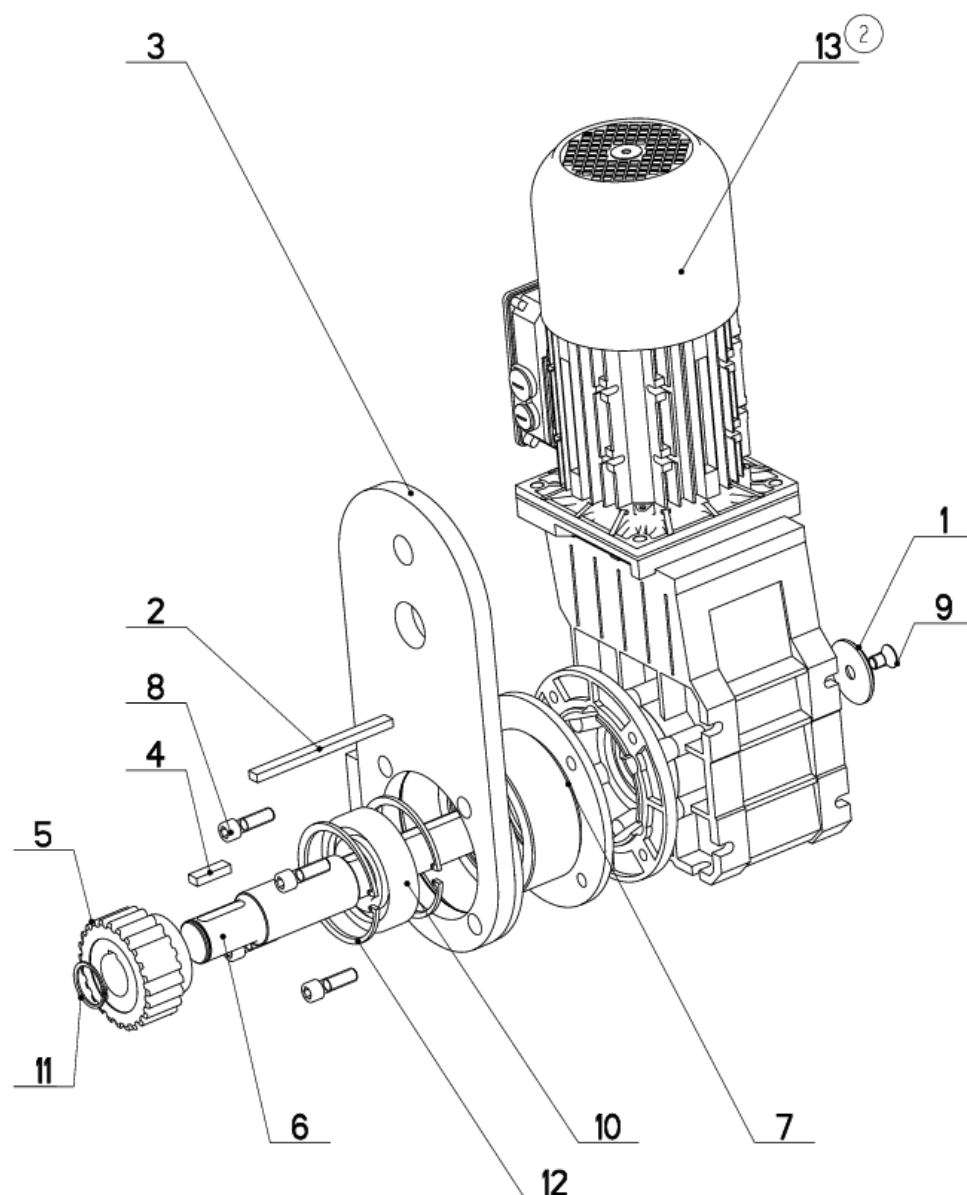
NAZEV SOUSTAVY VÁLEC SVĚŘÁKU	ČÍSLO SOUSTAVY 201.6011-060	STROJ EX520
Konstruoval: KOHUT		
Datum: 30. 09. 2015		
Měřítko: 3:10		

7.64. Kusovník / Stückliste / Piece list –
Válec svěráku / Schraubstockzylinder / Vice cylinder

Císlo Sestavy 201.6011-060		Ver. 0	Název sestavy VALEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6011-061	0	VALEC / ROLLER / ZYLINDER		1
2	30.6011-062	0	PISTNICE / PISTON ROD / KOLBENSTANGE	D 32	1
3	30.6011-064	0	DISTANC / DISTANCE / DISTANZ	TR 89x8	1
4	30.6011-132	0	PŘÍRUBA / FLANGE / FLANSCH	D 75	1
5	30.6011-144	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	d 45	1
6	30.6011-587	0	DORAZ / STOP PIECE / ANSCHLAG	TR 65x5	1
7	30.6111-656	0	VÍKO / COVER / DECKEL	D 70	1
8	30.E466-002	0	PIST / PISTON / KOLBEN	TYC 65	1
9	90.001.25.064	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X70	4
10	90.001.25.074	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X45	1
11	90.011.27.036	0	ZAPUSTNÝ IMBUS / /	SROUB M10X25	1
12	90.150.50.009	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 17	1
13	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
14	95.801.012	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 65	1
15	96.001.008	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	26x2 NBR 70SH	1
16	96.001.016	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	60X2	1
17	96.060.012	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	W02200320-Z201	1
18	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	2
19	96.084.002	0	KROUZEK VODIČI / LEAD RING / FÜHRUNGSRING	GP6500630-T47	2
20	96.084.003	0	KROUZEK VODIČI / LEAD RING / FÜHRUNGSRING	GR 6500320	1
21	96.900.005	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PW4200630-Z20N	1
22	96.900.026	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200320-T46N	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

7.65. Pohon / Antrieb / Drive



I.: NAHRADA PREVODOVKY S MOTOREM

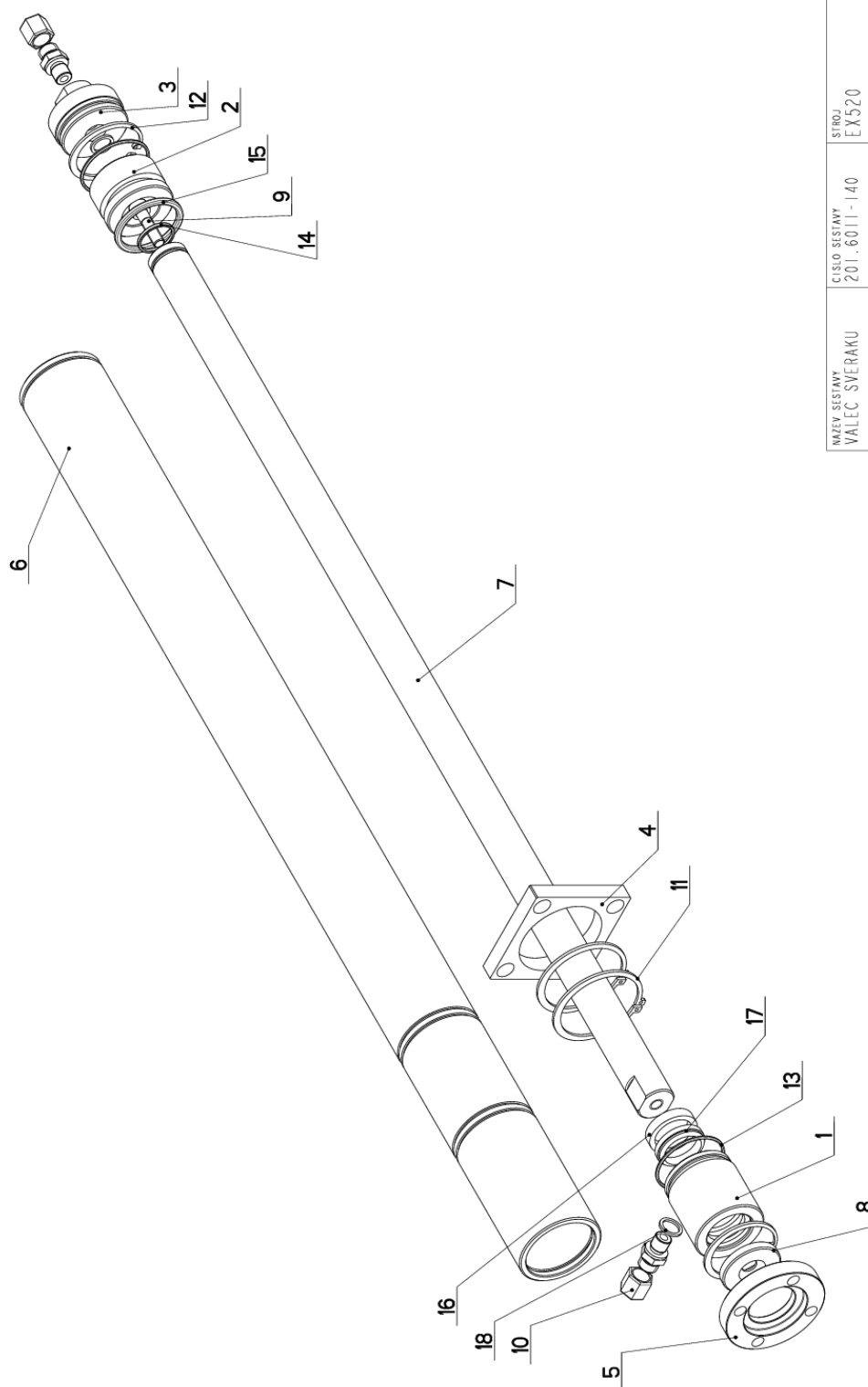
NAZEV SESTAVY POHON	CISLO SESTAVY 201.6011-120	STROJ EX520
	Konstruoval: RYSAVY	
	Datum: 05. 04.2013	
	Meritko: 1:5	

7.66. Kusovník / Stückliste / Piece list –
Pohon / Antrieb / Drive

Číslo Sestavy 201.6011-120		Ver. 2	Název sestavy POHON/DRIVE / ANTRIEB		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0804-009	2	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	d 60	1
2	30.2904-008	1	PERO / SPRING / FEDER	HR 12x8	1
3	30.6011-118	0	BOČNICE / SIDE PLATE / SEITENTEIL		1
4	30.6011-122	0	PERO / SPRING / FEDER	HR 12x8	1
5	30.6011-160	0	PASTOREK / PINION / RITZEL	m4, z24	1
6	30.6111-626	0	HRIDEL / SHAFT / WELLE	d55	1
7	30.6111-627	0	PŘÍRUBA / FLANGE / FLANSCH	SVARENÝ	1
8	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x40	4
9	90.011.21.009	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12x20	1
10	95.001.057	0	LOŽISKO / BEARING / LAGER	6310A	1
11	95.800.015	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 40	1
12	95.801.022	0	SEGR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 110	2
13	99.001.243 (2)	0	PREVODOVKA S MOTOREM / TRANSMISSION WITH MOTOR / GETRIEBE MIT MOTOR	GKS06-2 WHAK	1

1. ZRUS. PREVODOVKA 99.001.127 A NAHR. 99.001.205. 102/ZM116 5.4.2013 SLEZACKOVA
2. ZRUSENA PREVODOVKA 99.001.205 A NAHR. 049/ZM104 29.4.2016 SLEZACKOVA

7.67. Válec svěráku / Schraubstockzylinder / Vice cylinder



NAZEV SOUSTAVY VALEC SVĚRAKU	ČÍSLO SOUSTAVY 201.60111-140	STROJ EX520
Konstruoval: RYSAVÝ		
Datum: 30. 09. 2015		
Měřítko: 1:2		

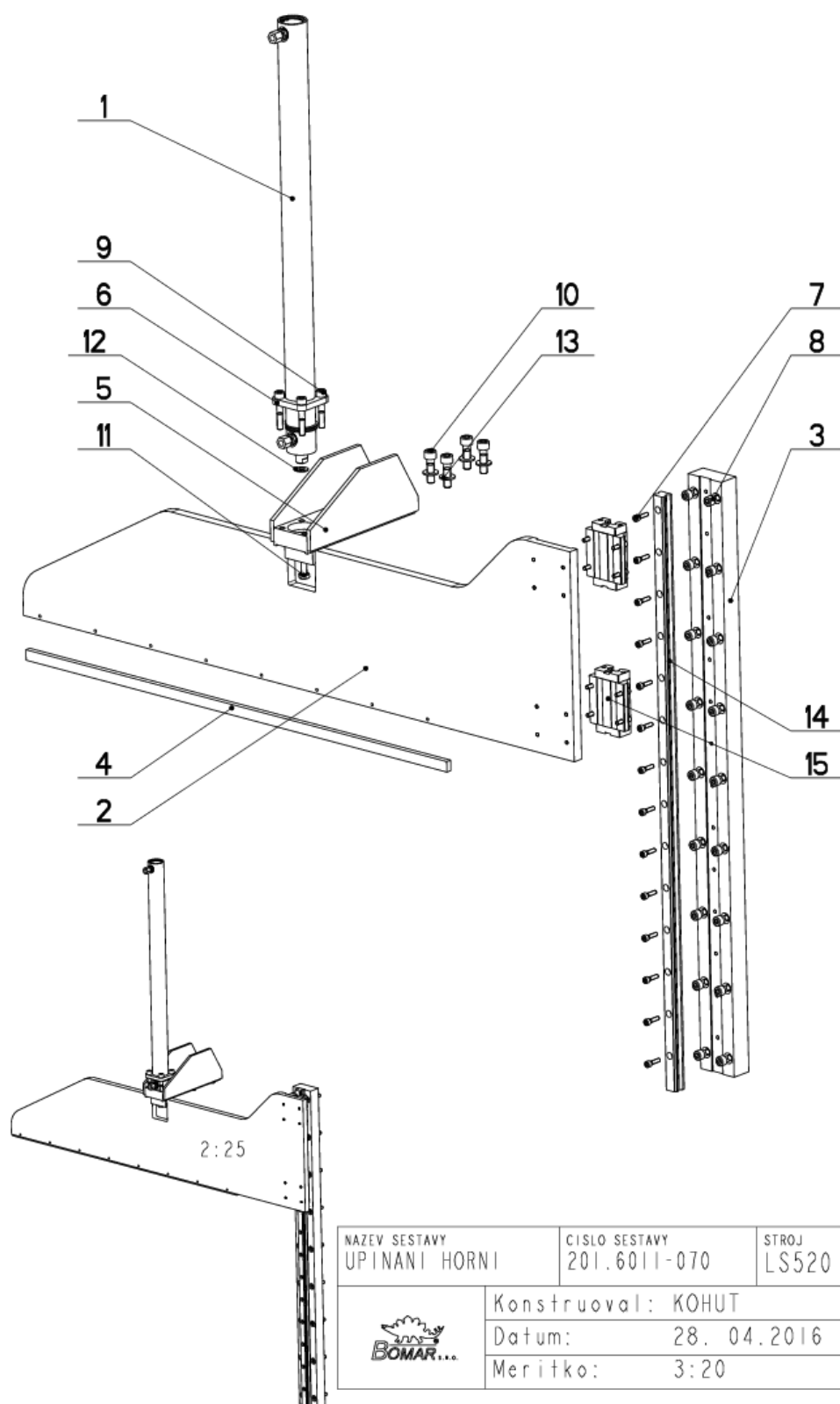
7.68. Kusovník / Stückliste / Piece list –
Válec svěráku / Schraubstockzylinder / Vice cylinder

Číslo Sestavy 201.6011-140		Ver. 1	Název sestavy VÁLEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1807-104	2	VÍKO / COVER / DECKEL	TYC 55	1
2	30.2007-302	0	PIST / PISTON / KOLBEN	ø 55	1
3	30.2007-304	1	VÍKO / COVER / DECKEL	ø 55	1
4	30.6007-107	0	PŘÍLOŽKA / STRAP / LASCHE	HR 80x12	1
5	30.6011-132	0	PŘÍRUBA / FLANGE / FLANSCH	D 75	1
6	30.6011-134	0	VÁLEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	TR 62/50	1
7	30.6011-135	0	PISTNICE / PISTON ROD / KOLBENSTANGE	D 28	1
8	30.6011-144 ①	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	ø 45	1
9	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	1
10	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
11	95.800.021	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	2
12	95.801.009	0	SEGR DÍRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 52	2
13	96.001.013	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	45x2	2
14	96.002.011	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
15	96.020.005	0	KROUZEK TESNICÍ / SEAL RING / DICHTUNGSRING	39.2x5.33	1
16	96.041.003	0	TESNĚNÍ / SEALING / DICHTUNG	601-28x36x7.1	1
17	96.060.003	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRAČI 28	1
18	96.082.002	0	TESNĚNÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	2

I. ZRUS. PODLOŽKA 30.1502-465 A NAHR. 30.6011-144. 22/ZM286 3.10.2012 SLEZACKOVA

Číslo 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

7.69. Upínání horní/ Spannung oben/ Upper clamping

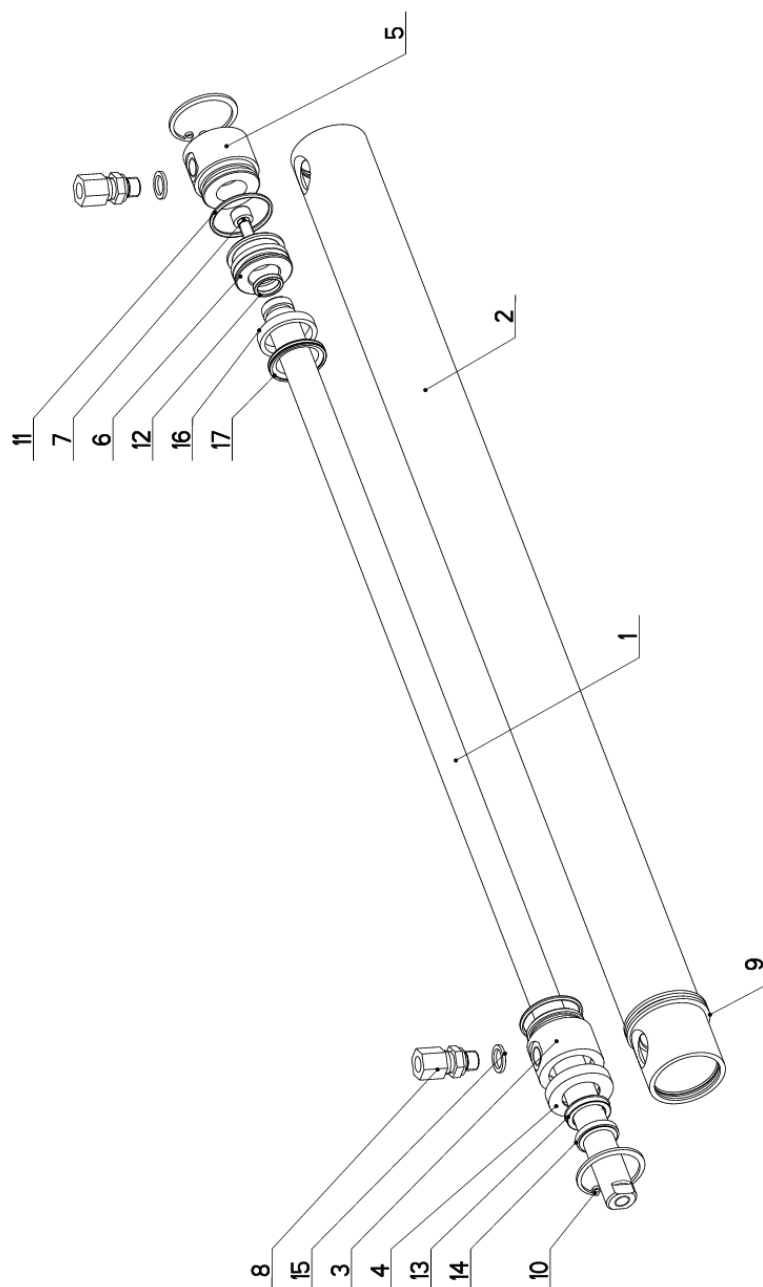


7.70. Kusovník / Stückliste / Piece list –
Upínání horní/ Spannung oben/ Upper clamping

Císlo Sestavy 201.6011-070		Ver. 0	Název sestavy UPÍNÁNÍ HORNÍ / TOP CLAM/SPANNVORRICHTUNG OBEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6011-145	0	VALEC NAPINACÍ / TENSIONING CYLINDER / SPANNZYLINDER	D30/16	1
2	30.6011-071	0	KONZOLA / CONSOLE / KONSOLE		1
3	30.6011-961	0	LISTA / TRIM / LEISTE	HR 60x30	1
4	30.6014-043	0	LISTA / TRIM / LEISTE	HR 15x8	1
5	30.6014-554	0	DRŽÁK / HOLDER / HALTER		1
6	30.0311-126	0	DRŽÁK / HOLDER / HALTER	P 8x58	1
7	90.001.25.010	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x20	22
8	90.001.25.035	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x35	18
9	90.001.25.037	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x45	4
10	90.001.25.049	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	4
11	90.005.55.017	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x30	1
12	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 8,4	1
13	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 10,5	4
14	99.200.268	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 20R 850 E=20	1
15	99.201.062	0	VOZÍK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFUHRUNGSWAGEN	MSA20SS F0 N	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

7.71. Válec napínací/ Spannrolle/ Stretching cylinder



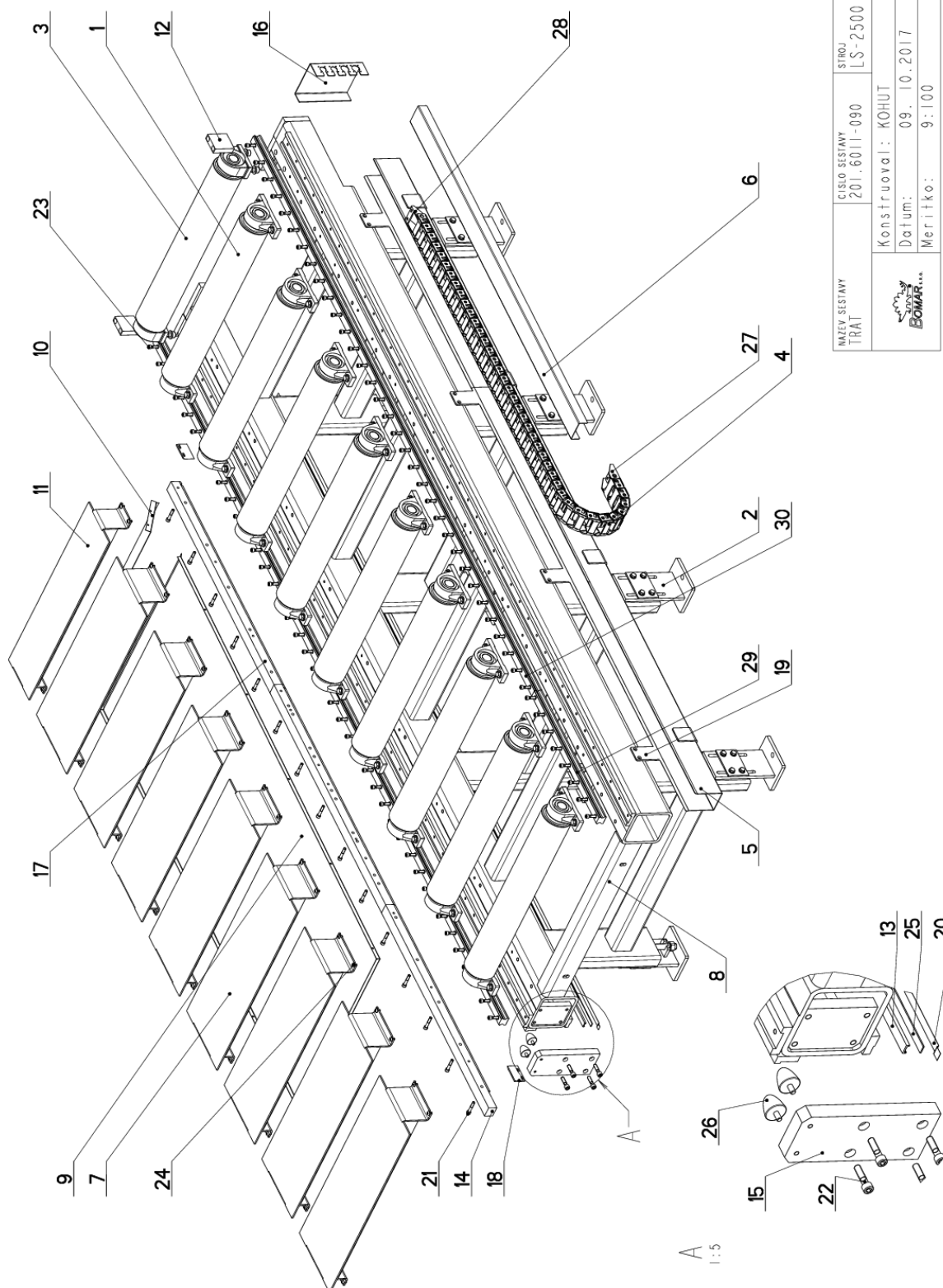
NAZEV SESTAVY VALEC NAPÍNACÍ	ČÍSLO SESTAVY 201.6011-145	STROJ EX520
Konstruoval: RYŠAVÝ		
Datum: 14. 07.2016		
Měřítko: 1:2		

7.72. Kusovník / Stückliste / Piece list –
Válec napínací/ Spannrolle/ Stretching cylinder

Císlo Sestavy		Ver.	Název sestavy		201.6011-145		VALEC NAPÍNACÍ / TENSIONING CYLINDER / SPANNZYLINDER	
Poz.	Objednací číslo	Ver.	Název položky		Rozměr		Ks	
1	30.6011-141	0	PISTNICE / PISTON ROD / KOLBENSTANGE		d 16		1	
2	30.6011-142	0	VALEC / ROLLER / ZYLINDER		TR 40/30H8		1	
3	30.6807-103	2	VIKO / COVER / DECKEL		TYC 35		1	
4	30.6807-104	1	VIKO / COVER / DECKEL		TYC 35		1	
5	30.6807-105	0	VIKO / COVER / DECKEL		TYC 35		1	
6	30.6807-106	0	PIST / PISTON / KOLBEN		TYC 32		1	
7	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE		M6X16		1	
8	92.002.102	0	SROUBENÍ / BOLTING / VERSCHRAUBUNG		S-GEV-8LLR		2	
9	95.800.015	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN		POJISTNY KROUZEK 40		2	
10	95.801.026	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN		POJISTNY KROUZEK 34		2	
11	96.001.008	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH		26x2 NBR 70SH		2	
12	96.002.006	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH		12x2 NBR 70SH		1	
13	96.041.001	0	TESNENÍ / SEALING / DICHTUNG		16x24x4 UN		1	
14	96.060.001	0	KROUZEK STIRACÍ / SCRAPER RING / ABSTREIFRING		16x22 NBR 70		1	
15	96.082.001	0	KROUZEK TESNÍCÍ / SEAL RING / DICHTUNGSRING		10/14x1.5 CU		2	
16	96.084.005	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING		GP6500300-T47		1	
17	96.900.007	0	TESNENÍ KOMBINOVANE / COMBINATION SEALING / KOMBIDICHTUNG		PW4100300-Z20		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

7.73. Trať / Bahn / Conveyor



NAZEV ŠESTINY TRAŤ	CÍSLO ŠESTINY 201.6011-090	STROJ LS-2500
Konstruoval: KOHUT		
Datum: 09. 10.2017		
Meritko: 9:100		

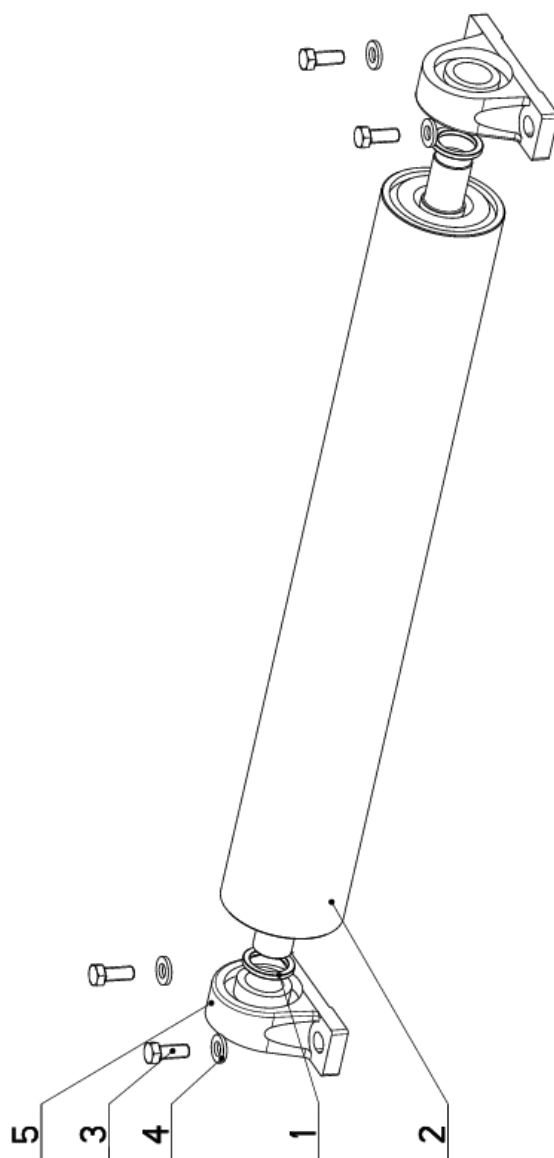
7.74. Kusovník / Stückliste / Piece list –
Trať / Bahn / Conveyor

Císlo Sestavy 201.6011-090		Ver. 1	Název sestavy TRAT/TRACK/BAHN			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	201.6011-010	0	VALEČEK / CYLINDER / ROLLE		9	
2	201.6011-020	0	NOHA / LEG / STÄNDER		4	
3	201.6011-110	0	VALEČEK / CYLINDER / ROLLE		1	
4	201.XVS15-012	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE		39	
5	30.1503-512	2	KORYTO / CHANNEL / RINNE	P 1.5x297	2	
6	30.1503-513	1	KRYT RETEZU / CHAIN COVER / KETTENABDECKUNG	P 1.5x143	1	
7	30.6011-006	0	KRYT / COVER / ABDECKUNG	SVARENO	8	
8	30.6011-091	0	RAM / FRAME / RAHMEN		1	
9	30.6011-093	0	OKAP / GUTTER CHANNEL / BLECH	P 1x778	1	
10	30.6011-094	0	PLECH / PLATE / BLECH	P 1x169	1	
11	30.6011-095	0	KRYT / COVER / ABDECKUNG	SVARENO	1	
12	30.6011-096	0	DORAZ / STOP PIECE / ANSCHLAG	HR 70x20	2	
13	30.6011-099	1	PROFIL / PROFILE / PROFIL		1	
14	30.6011-737	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	OZ TYC 40x40	1	
15	30.6011-803	0	TELESO DORAZU / STOP BODY / ANSCHLAGKÖRPER	HR 100x25	1	
16	30.6014-565	2	PLECH / PLATE / BLECH	P 2x205	1	
17	30.6111-259	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	HR 40x40	1	
18	30.6111-311	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 40x5	2	
19	30.6111-612	0	DRZAK / HOLDER / HALTER	P 6x60	4	
20	55.800.009	1	PLECH / PLATE / BLECH	P 0.3x15	1	
21	90.001.25.037	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x45	15	
22	90.001.25.050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x40	4	
23	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	82	
24	90.013.27.011	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M8x12	36	
25	91.271.002	0	PASKA MAGNETICKA / MAGNETIC TAPE / MAGNETBAND	ELGO PASKA	1	
26	94.700.001	0	SILENTBLOK / SILENT BLOCK / SCHWINGUNGSDÄMPFER		2	
27	99.171.013	0	KONCOVKA / END / ENDSTÜCK		1	
28	99.171.014	0	KONCOVKA / END / ENDSTÜCK		1	
29	99.200.298	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 35R 600 E=20	2	
30	99.200.322	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 35R 2620 30/30N	2	
1. DOPLENĚNÍ PROFILU 30.6011-099 A PLECHU KRYCÍHO 55.800.009 PRO MAG. PASKU 91.271.002; ZMENA UCHYCNĚNÍ MAG. PASKY 199/ZM279/7.09.2017 SCERBA						

I. DOPLNENÍ PROFILU 30.6011-099 A PLECHU KRYCIHO 55.800.009 PRO MAG. PASKU 91.271.002; ZMENA UCHYCNÍ MAG. PASKY 99/2M279 7.09.2017 SCERBA

7.75. Váleček / Rolle / Roller

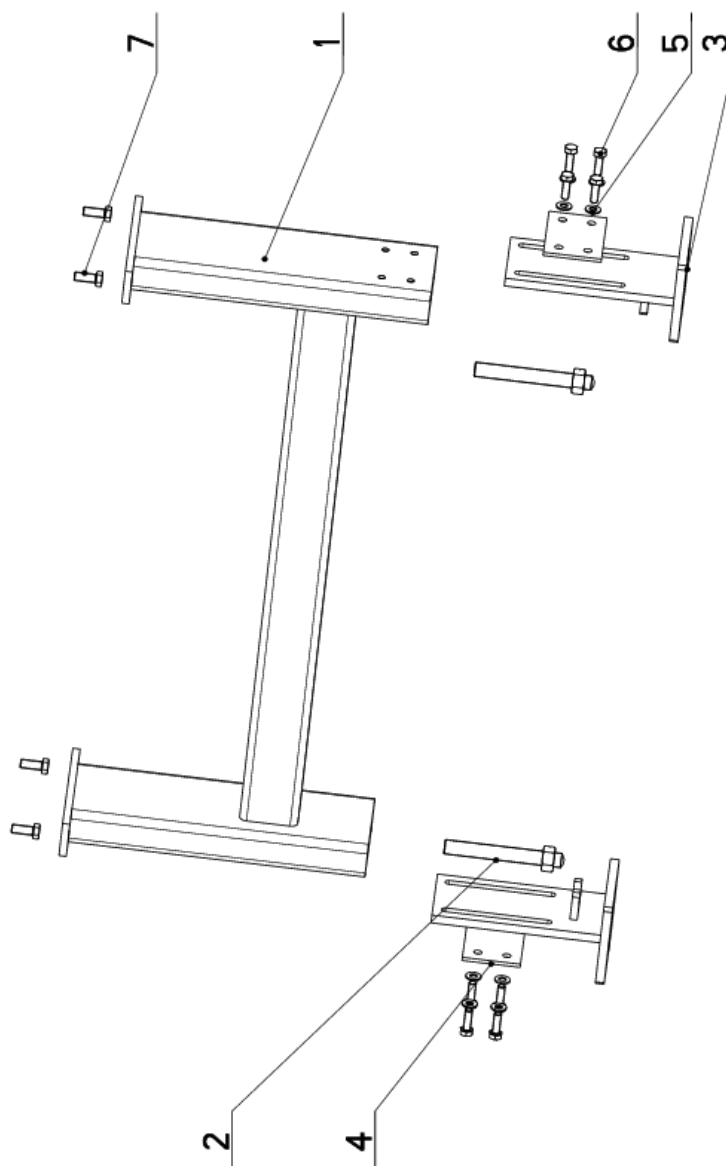
Císlo Sestavy 201.6011-010		Ver. 0	Název sestavy VALEČEK/CYLINDER/ROLLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6111-623	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 50x12,5	2
2	30.X107-631	0	VALEČ / ROLLER / ZYLINDER		1
3	90.005.55.032	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x30	4
4	90.163.00.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	NORD-LOCK	4
5	95.160.003	0	LOŽISKO / BEARING / LAGER	UCP 207	2



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Objednávací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

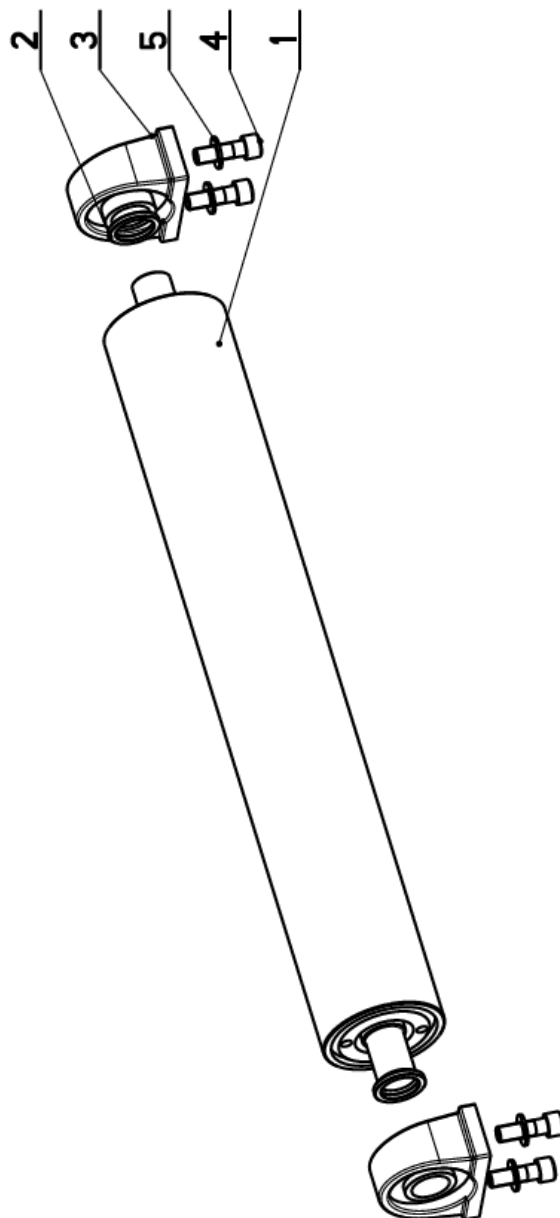
7.76. Noha / Ständer / Leg

Číslo Sestavy 201.6011-020		Ver. 0	Název sestavy NOHA/LEG/STÄNDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6011-021	0	RAM / FRAME / RAHMEN		1
2	30.1201-122	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE		2
3	30.UT06-002	2	NOHA / LEG / STANDER		2
4	30.UT06-003	0	PŘÍLOŽKA / STRAP / LASCHE	TYX 80x5	2
5	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	8
6	90.005.55.025	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10X30	8
7	90.005.55.032	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12X30	4



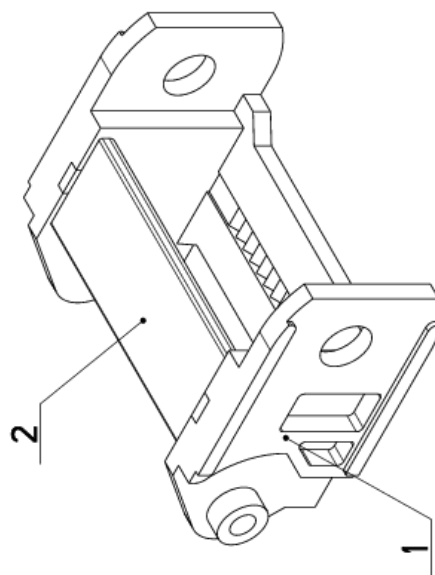
7.77. Váleček / Rolle / Roller

Císlo Sestavy		Ver.		Název sestavy	
201.6011-110		0		VALEČEK / CYLINDER / ROLLE	
Poz.	Objednací číslo	Ver.	Název položky	Rožmer	Ks
1	30.X107-631	0	VALEC / ROLLER / ZYLINDER		1
2	30.6111-623	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 50x12,5	2
3	95.163.003	0	LOŽISKO / BEARING / LAGER	UCPA 207	2
4	90.001.25.145	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M14x45	4
5	90.150.50.008	0	PODLOŽKA / WASHER / UNTERLEGSCHNEIBE	PODLOŽKA 15	4



7.78. Řetěz energií / Energiekette / Cables leading

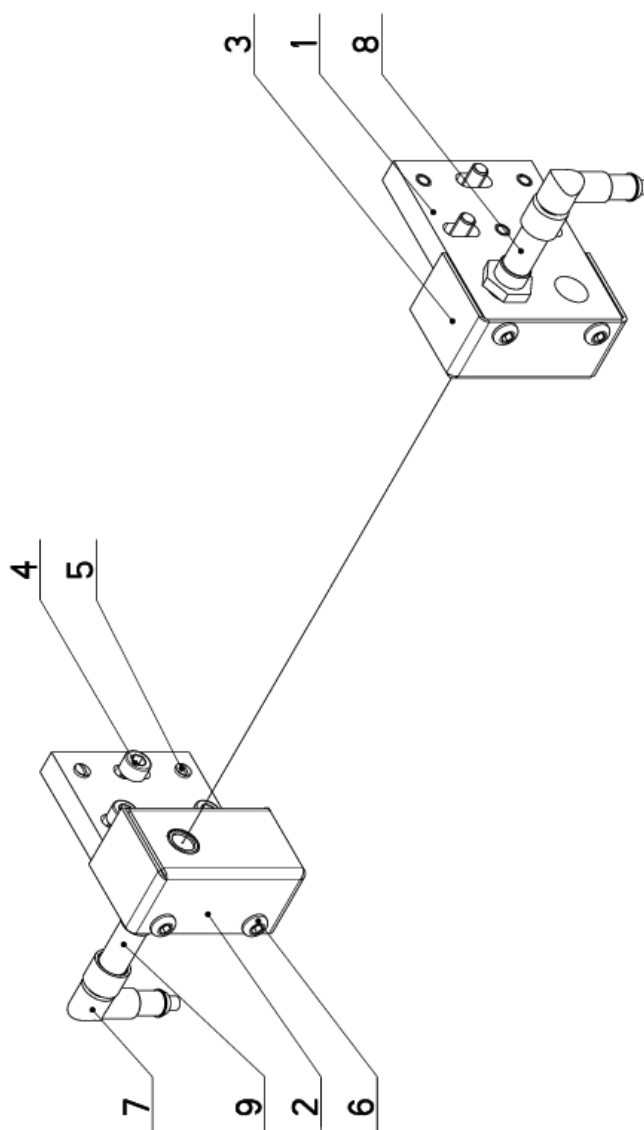
Cislo Sestavy 201.XVS15-012		Ver. 0	Název sestavy RETEZ ENERGIÍ / ENERGY BELT/ENERGIEKETTE	
Poz.	Objednací číslo	Ver.	Název položky	Rozměr
1	99.170.069	0	RETEZ ENERGIÍ / ENERGY BELT / ENERGIEKETTE	MP 3002.5 R 095
2	99.170.070	0	RETEZ ENERGIÍ / ENERGY BELT / ENERGIEKETTE	DE 3002.5
				Ks
				1
				1



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

7.79. Závora optická / Lichtsperre / Laser beam

Císlo Sestavy 201.6311-010		Ver. 0	Název sestavy ZAVORA OPTICKA/OPTICAL GATE/LICHTSCHRANKE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6311-011	0	DRŽAK / HOLDER / HALTER	HR 60x10	2
2	30.6311-012	0	KRYT / COVER / ABDECKUNG	P 1,5x79	1
3	30.6311-013	0	KRYT / COVER / ABDECKUNG	P 1,5x79	1
4	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	6
5	90.002.20.039	0	SROUB STAVEČ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	6
6	90.013.27.002	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M5x6	4
7	91.142.001	0	KONEKTOR / CONNECTOR / STECKVERBINDER		2
8	91.400.018	0	SNIMAC / SENSOR / SENSOR	BOS 12M	1
9	91.400.055	0	SNIMAC / SENSOR / SENSOR	BOS	1



Císlu 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