

Serie **Extend**



Extend 1120.1120

Operating instructions

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

Seriové číslo / Serien Nummer / Serial Number _____

Service and information

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We are available:

Mondays to Fridays

7⁰⁰ – 16⁰⁰

Version:

1.13 / June 2021
rev. 1

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

EC Declaration of Conformity

1) 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 1000.820
Serial number: 011 – 100 000
Manufacturer BOMAR, spol. s r.o., Těžební 1236/1, 627 00 Brno
Product data
Determination: for cross dividing and cutting of rolled and towed bars and profiles made of steel, stainless steel, non-ferrous metals and plastics
Description: Stand, table, cutting unit with the arm, saw band and drive, hand clamping device, cooling system, machine control
 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 (l×w×h) ~3x400 (230) V, 50Hz, TN-C-S/TN-C
 Supply voltage 3x400 (230) V
 Total power requirement 21,5 kW
 Weight 12000 kg

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/ES**
2014/30/EU

The applied harmonized standards, National standards and technical specifications:

ČSN EN ISO 12100:2011	ČSN EN ISO 16093:2018	ČSN EN ISO 13857:2021
ČSN EN ISO 4413:2011		ČSN EN 60204-1 ed.3:2019
ČSN EN 55011 ed.4+A1:2017	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, art.3a), of the Law no. 22/1997 Coll. as amended.

Brno, 08.06.2021

Point of issue, datum

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

Alfred Pichlmann, Managing Director

Name and function of the responsible subject, signature

Person authorized to complete the technical documentation:: BOMAR, spol. s r. o., Těžební 1236/1, 627 00 Brno

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

2) 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. **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!

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!

Attention!

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

1.1. Machine determination

The band saw **Extend 1120.1120** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **with zero 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!**

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.

Attention!

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

1.2. Protective suit and personal safety

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

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

Attention!

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

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

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

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

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

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!

1.3. Safety notes for machine operator

Attention!

Machine can be operated by person older than 18 years!

Machine can be operated only person physically and mentally fit for this activity

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!

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!
- 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.

Attention!

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

- Work on the machine only when the machine is in good condition!
- Check at least once in a shift, if the machine is not damaged. If the machine is damaged, you must bring the machine in order and you must inform your superior!
- Keep your working area clean! Ensure sufficient lighting in the working area.
- Take off the spilt water or the oil from the floor and dry it. Do not touch the cooling liquid with bare hands! Do not set the nozzle of the cooling liquid, when the machine is started on
- Do not remove the chips from the working area of the machine, when the machine is started on!
- Do not use the compressed air for the machine cleaning or for the chips removing!
- Use the protective instruments for chips removal!

1.4. Safety notes for the servicing and repairs

Attention!

Only a qualified professional can carry out the servicing and repairs of the 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!

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.

1.4.1. 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.

1.5. Safety machine accessories

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

Enhanced risk!

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

1.5.1. Emergency Stop Switch

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

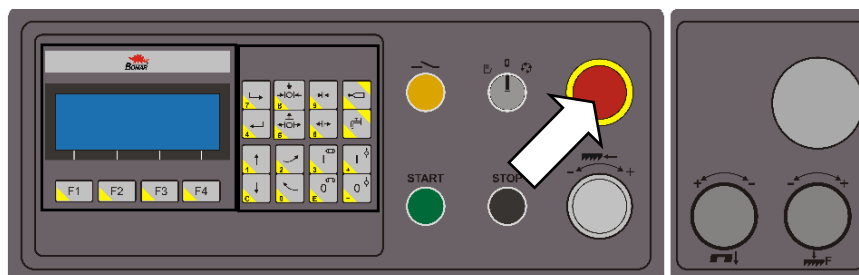
By pressing **Emergency Stop Switch** will immediately stop all dangerous machine movements.

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

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



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



1.5.2. 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 started to the operation, when the covers are closed!

1.5.3. Band saw cover

It covers the visible area of the saw band from left guiding cube to the frame.



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

1.5.4. Saw band stretching and rupture inspection

This device checks the saw band stretching and causes immediate machine shut – down in the event the band ruptures.



The device contains limit switch. Check the stretching carefully and periodically – eventually adjust. Release the saw band by pressing left button. Press the right button to stretch the saw band.

1.6. 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***

1.6.1. Instructions for first help

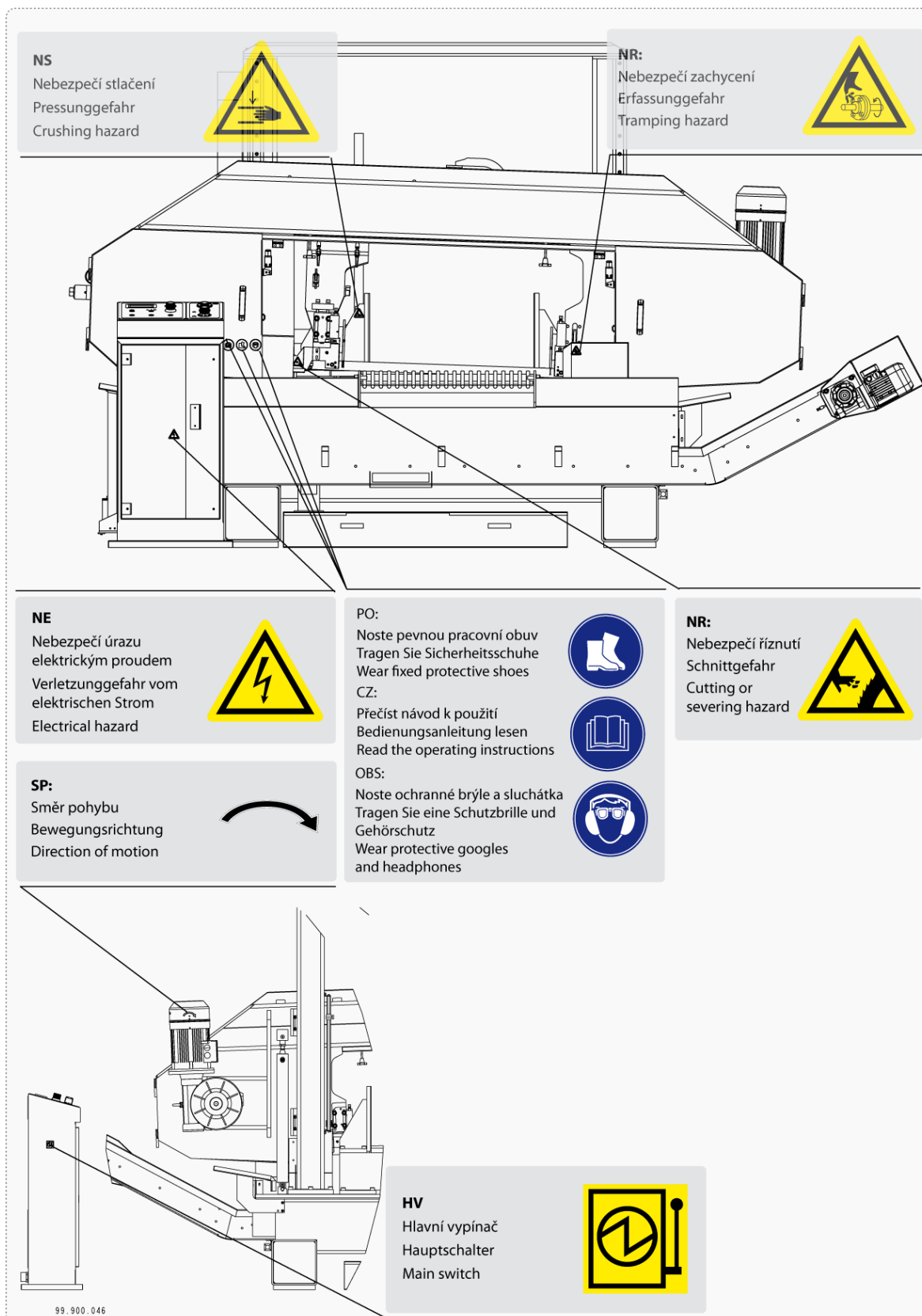
1. Pull off and safely remove polluted, soaked clothing.
2. For breathing, go out in the fresh air or look for first aid treatment.
3. Wash with water or use crèmes for contact with the skin.
4. Flush with water for eyes and look for first aid treatment.
5. For swallowing, drink a lot of water and induce vomiting. Look for medical help.

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



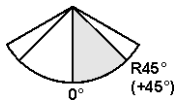
Machine label is placed on base.

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



2. **Machine documentation**

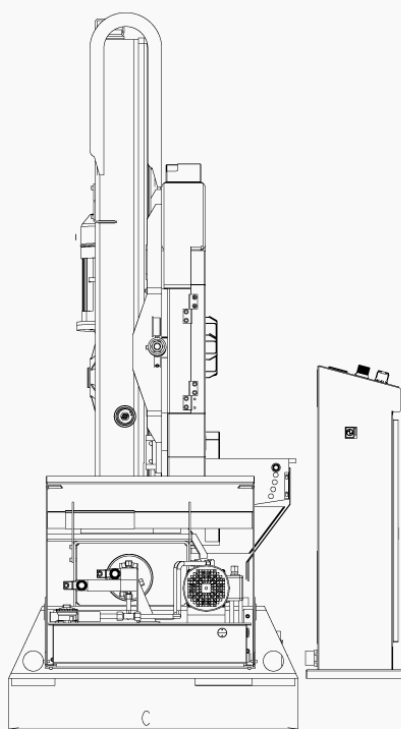
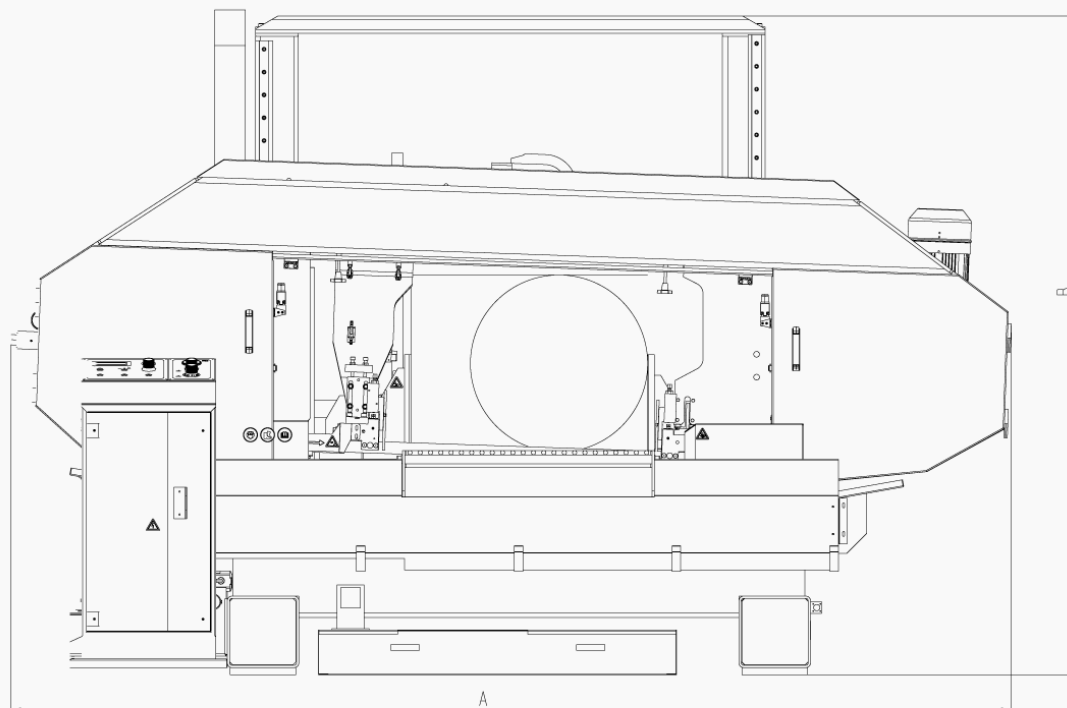
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:				
Hmotnost / Gewicht / Weight	12 000 kg			
Rozměry stroje / Maschinengröße / Machine size :				
- Délka / Länge / Lenght - Šířka / Breite / Width - Výška / Höhe / Height	5120 mm 1700 mm 3280 mm			
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:				
- Napájení / Versorgungsspannun / Supply voltage - Příkon / Gesamtschlusswert / Total Input - Max.jištění / Max. Vorschaltsicherung / Max. Fuse - Krytí / Schutzart / Protection	~3 x 400V, 50Hz, TN-C-S/TN-C 21,5 kW 63 A IP 54			
Akustický tlak / Schalldruckpegel / Acoustic pressure:				
Extend 1120.1120	L _{Aeqv} =86 dB			
Pohon / Atrieb / Drive:				
- Typ / Typ / Type - Napájení / Versorgungsspannung / Supply voltage - Výkon / Leistung / Output - Jmenovité otáčky / Motornenndrehzahl / Nominal speed	MDRA 160-22J ~3 x 400V, 50Hz 11 kW 1440 min⁻¹			
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment:				
- Typ / Typ / Type - Výkon / Leistung / Output	SA4-60U-871-1699 5,5 kW			
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:				
- Typ / Typ / Type - Výkon / Leistung / Output - Obsah nádrže / Volumen vom Kühlmittel / Capacity	3-COA2-14 0,05 kW 80 l			
Rozměr pásu / Sägebanddimension / Band size:				
11120×67×1,6 mm				
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:				
15–90 m/min. (special 10-70 m.min ⁻¹ , 20-120 m.min ⁻¹)				
Řezné rozsahy / Schnittbereiche / Cutting size:				
				
0°	Ø1120 mm			1120×1120 mm

Level of acoustic pressure:

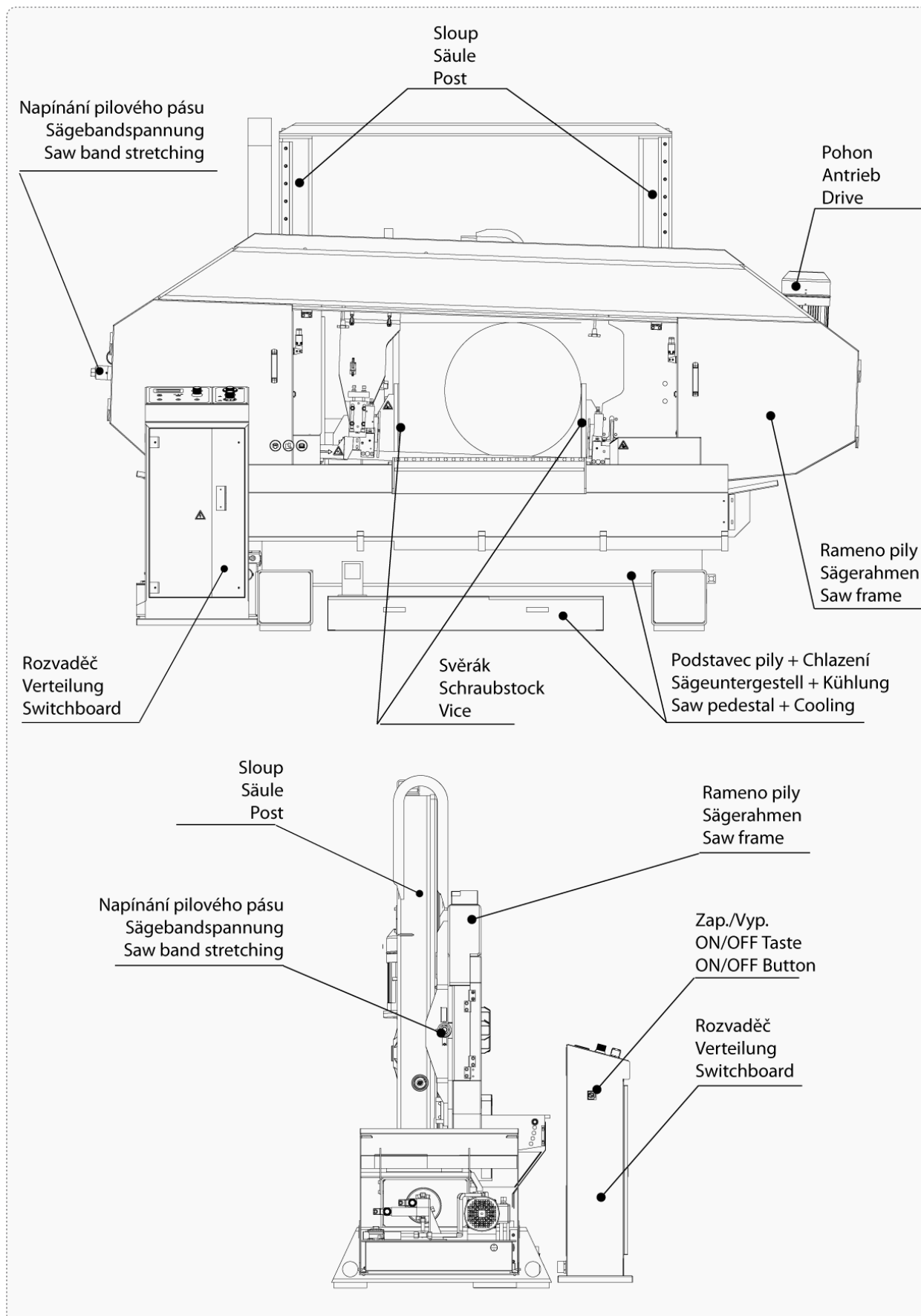
Equivalent level of acoustic pressure A (noise) at operator position are $L_{Aeqv}=86$ dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure.

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram



	A	B	C
Extend 700.520	3250	2230	1000
Extend 800.620	3500	2330	1000
Extend 900.720	4000	2600	1250
Extend1000.820	4350	3000	1400
Extend1120.1120	5120	3280	1700

2.3. Popis / Beschreibung / Description



2.4. Transportation and stocking

2.4.1. Conditions for transportation and stocking

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

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

2.4.2. Transport and stocking preparations

Close the vice and thoroughly oil all blank surfaces.

Lower the saw frame to the lowest position.

Make sure to empty the machine of all traces of the cooling agent.

Fasten all loose parts securely to the machine.

Pack and wrap the control desk securely to avoid damage during transport.

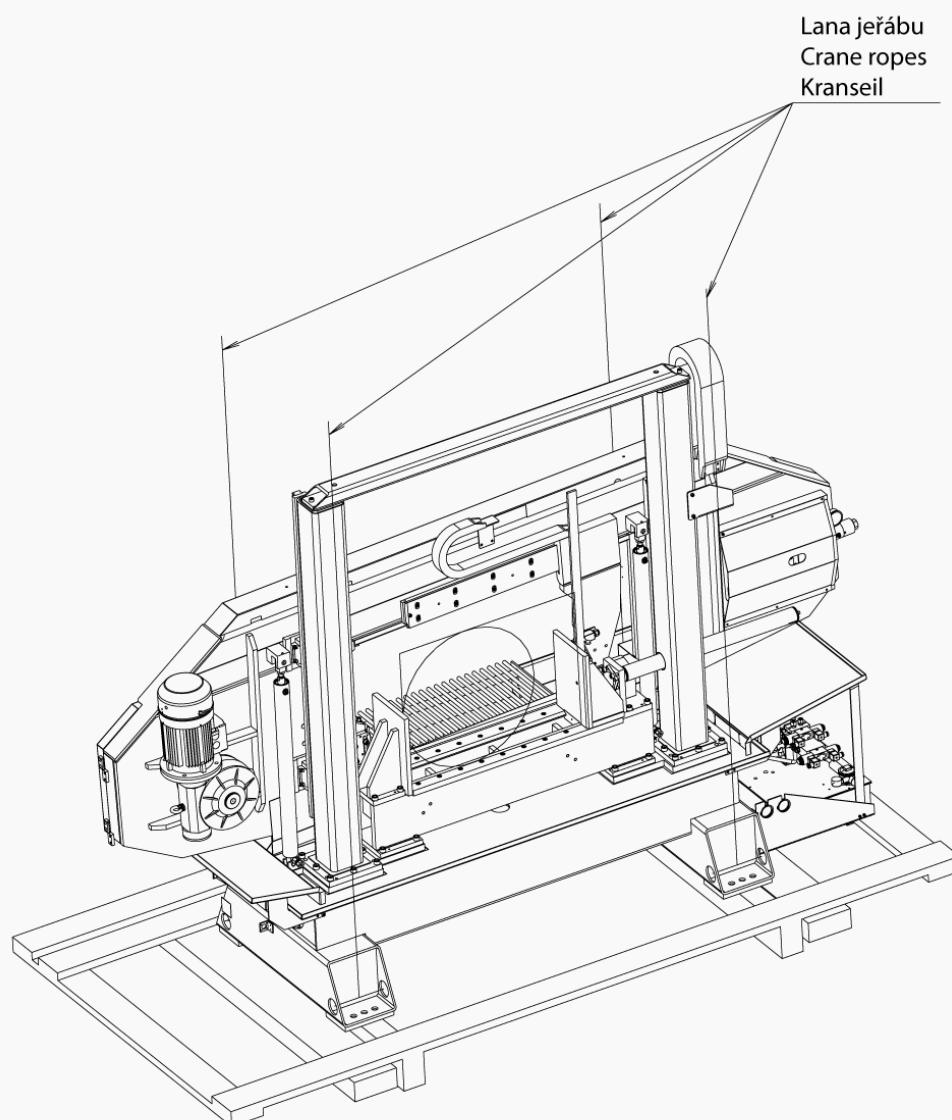
Fix the stickers stating the minimum approximate machine weight to at least five well visible places.

2.4.3. Transport and stocking

The machine must be secured during transportation. Screw on the palette to the floor of the van or the trailer. Be careful that the machine is not damaged during transportation. Store the machine only under conditions mentioned in the manual, to avoid damage of the machine.

It is forbidden to handle the machine any other way, than it is written in this operating instructions, the machine can be damaged.

2.4.4. Transportní schéma /
Transport schema /
Transport scheme



Extend 1120.1120

Lze transportovat pouze jeřábem
You can transport It only by crane
Sie können nur den Transport eines Kranes

2.5. Activation

2.5.1. 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 interval from 30% to 95% (not concentrate). Altitude must be lower than 1000 metres.
- Do not expose the machine to the radiation (for example microwave radiation, ultra-violet radiation, laser radiation, x-ray radiation). Radiation can cause problems with the machine function and deteriorating condition of the isolation.

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).

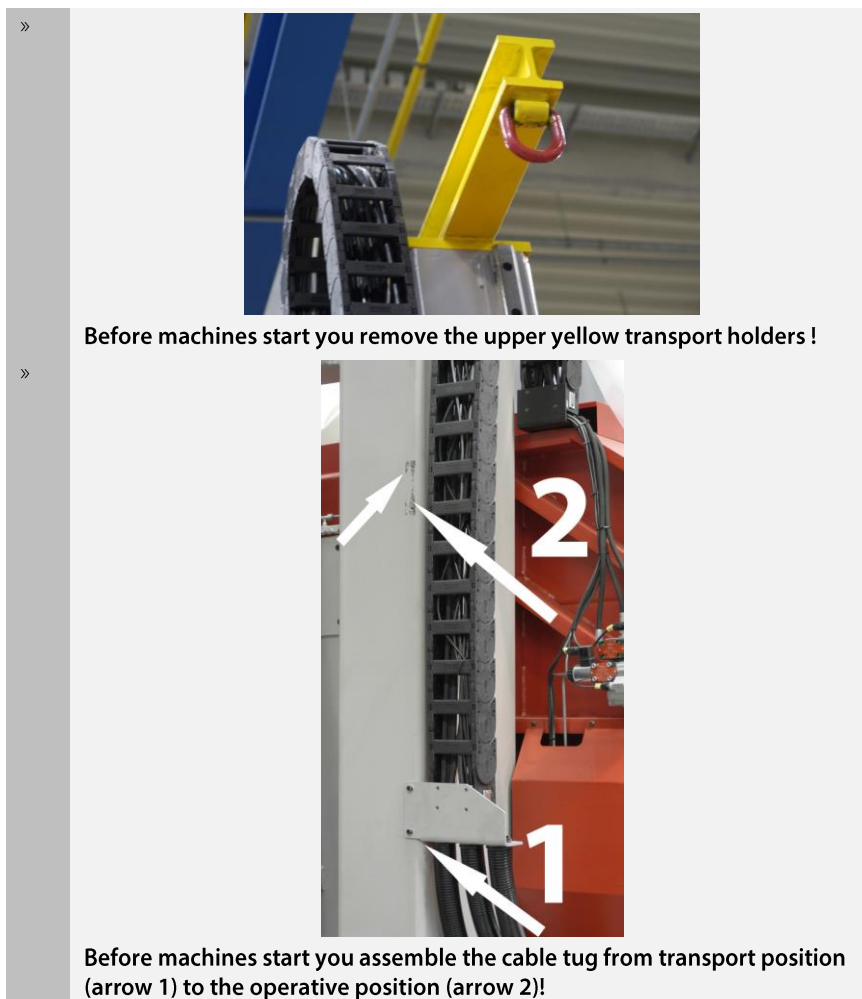
2.6. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.

Attention!

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

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



2.6.1. 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 1120.1120 – 12 000 kg

+ weight of accessories

+ maximum weight of material

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

2.6.2. 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.

2.6.3. 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.

2.6.4. Filling the reservoir with hydraulic oil

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

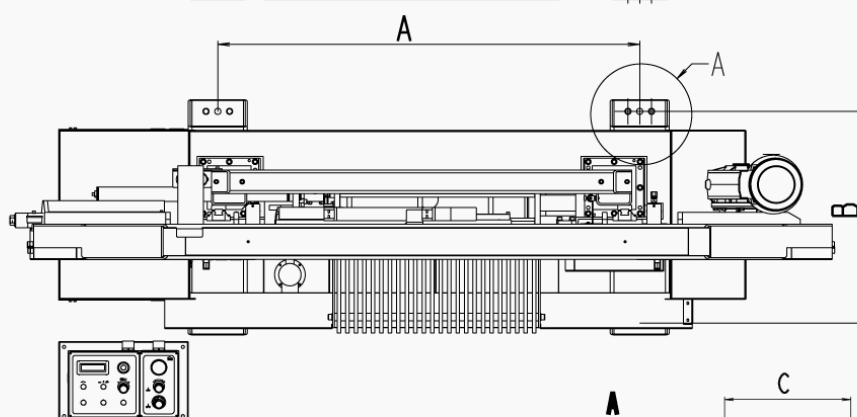
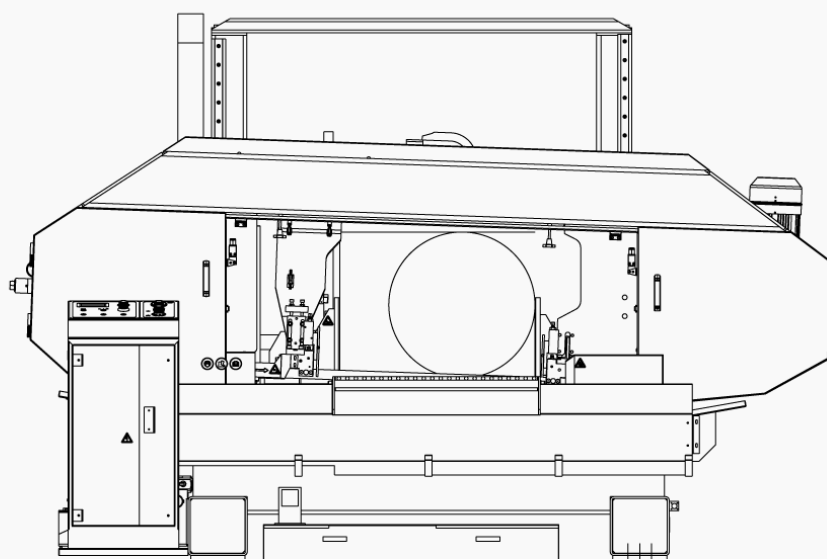
Power packs have to be filled up with clean, pre-filtered oil! The purity of the hydraulic fluid must correspond to the class 10 NAS 1638 (reachable with filter $\beta = 75$)!

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

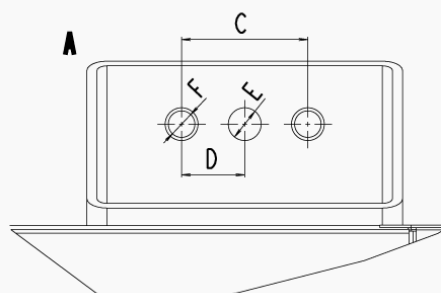
The maximum oil level will be shown on the upper marking at the dipstick or the sight level glass. Overfilling has to be prevent. The maximum filling rate of 15 l/min shouldn't be exceed.

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

2.6.5. Kotevní plan / Verankerungsplan / Grounding plan



	A	B	C	D	E	F
Extend 700.520	1665	900	100	50	ø26	2× M24
Extend 800.620	1790	900	100	50	ø26	2× M24
Extend 900.720	1950	1150	100	50	ø26	2× M24
Extend1000.820	2275	1300	100	50	ø26	2× M24
Extend1120.1120	2565	1600	100	50	ø26	2× M24



Kotvící materiál / Verankerungsmaterial / Grouding material

- 4× Kotvící šroub / Verankerungsschraube / Grounding screw M24, pos. E
- 8× Stavěcí šroub / Stellschraube / Set-screw M24, pos. F
- Do hloubky / In die Tiefe / Into deep 150 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 (minimal dimensions P10×100-100)

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

± 10 mm / 1 m

2.7. Electrical connection

Attention!

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

Electrical parameters of the machine:

- Service voltage: $\sim 3 \times 400 \text{ V}$, 50 Hz, TN-C-S
- Total input / Max. fuse: 21,5 kW / 63 A

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

Service voltage must agree with the line voltage!

Crosscut of the supply line must respond with rated current for max. machine load.

Note:

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

Attention!

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

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.

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

2.7.1. 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.

2.7.2. Check machine connection into electrical network



Attention!

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

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



2.8. 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.

2.9. 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..

2.10. Saw band

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



2.10.1. Saw band size

11120x67x1,6 mm

2.10.2. 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

1. *Constant tooth system* – the saw band has parallel tooth pitch all over length. This way is suitable for cutting of solid material.

BOMAR for recommended Variable tooth system for band saw.

2. *Variable tooth system* – tooth pitch is variable. Variable tooth system is used for profiled materials and bundle cutting. Variable tooth pitch lowers vibration of the saw band, increases service life of the saw band and quality of the cutting area.

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

Footnotes:

Z_pZ – teeth number on one inch S – tooth with zero angle of the teeth K – tooth with positive angle of the teeth

Examples of the tooth system marking:

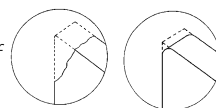
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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

2.10.3. Saw band running-in

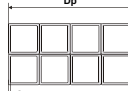
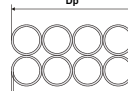
Running-in: Cut the material with the frame lowering reduced to 50% only. When vibrations occur increase or decrease the band speed.

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

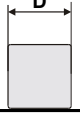
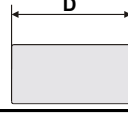
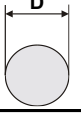
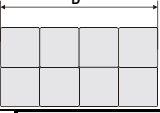
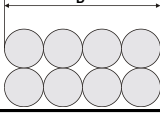


Note: Run regrinding saw bands too.

2.10.4. 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 2xS). In table, there are tooth systems constant and variable.						
Size of the wall $S [\text{mm}]$	Tooth system ($Z_p Z$) Outer diameter of the profile $D_p [\text{mm}]$					
	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 $S [\text{mm}]$	Tooth system ($Z_p Z$) Outer diameter of the profile $D_p [\text{mm}]$					
	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**

3.1. Starting the band saw

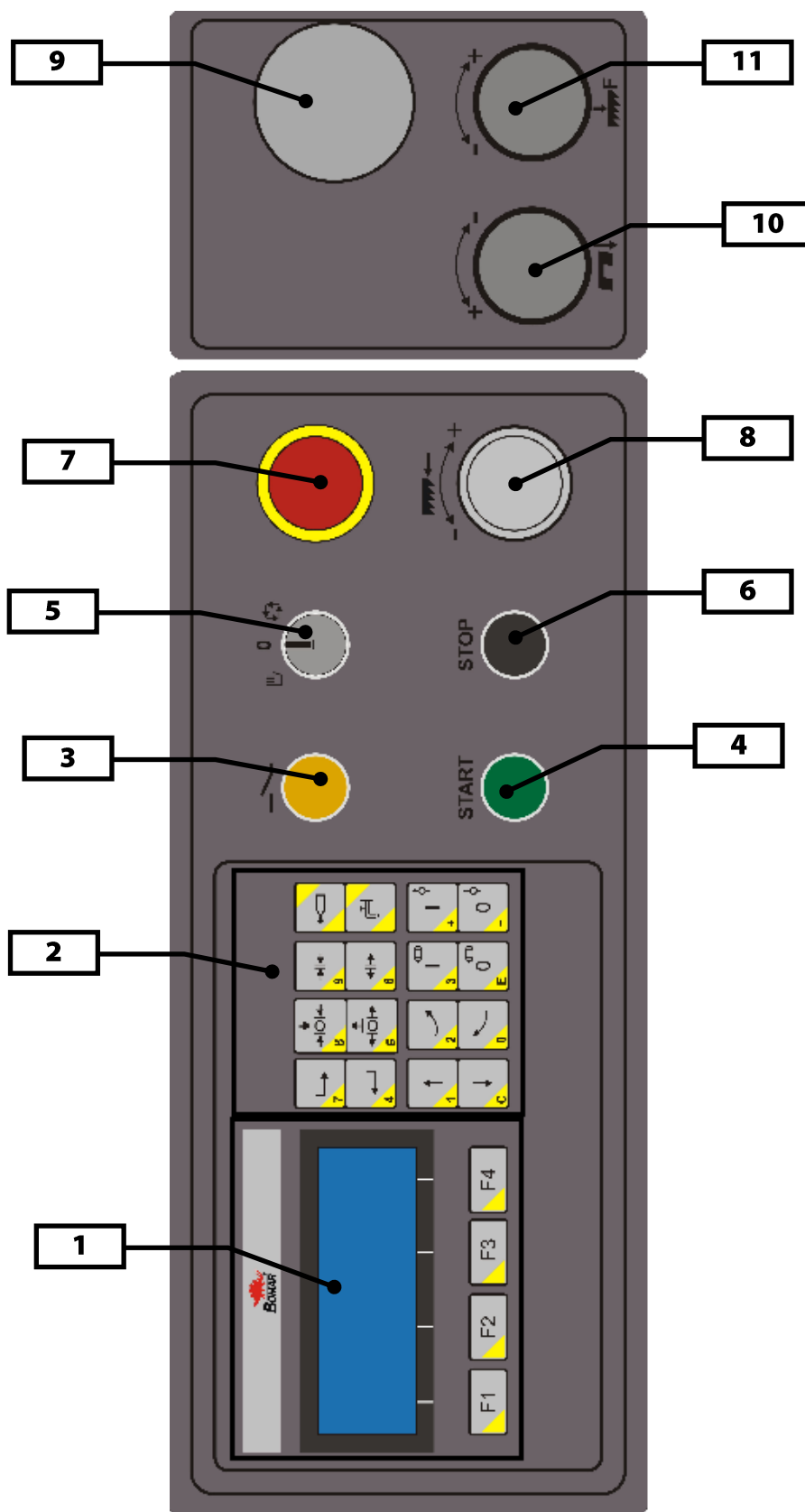
- » 1. Switch on the main switch of the band saw. The main switch is situated on the side of the switchboard.



2. Switch on the safety circuit of the band saw (button **5** – control panel of the band saw).



3.2. Control panel



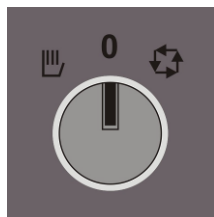
3.2.1. Control panel description

1	LCD Display On to display are described all running processes, control with functional buttons F1-F4
2	Control buttons / numeric keypad
	No function
	No function
	Clamp / release vice In manual cycle pressing and holding the button allows you to release pressure or clamping vise. The upper clamping operates automatically with the main vice
	Cooling system selection Cooling with Microniser (optional accessories) Cooling with water cooling pump runs even when the saw band drive is switch off.
	Movement of the arm Pressing and holding a button or trigger arm lifts the lifting hydraulic cylinder. When lifting the arm using the arm can be lifted in its entirety lifting cylinder. On the down can be activated by simultaneously pressing the rapid move functional button F1.
	No function
	Turn on / off the band drive In manual mode the button is displayed "I" switched band drive, the button with the symbol "0" switch off
	Turn on / off the hydraulic circuit Button with the symbol "+" turns the hydraulic circuit, the button with the symbol "-" disables the hydraulic circuit. The hydraulic circuit is automatically switched on when needed.
3	Safety circuit Switch on the safety circuit by pressing button.
4	Button START - Switch on the semi-automatic cycle After pressing the button will start the cutting cycle

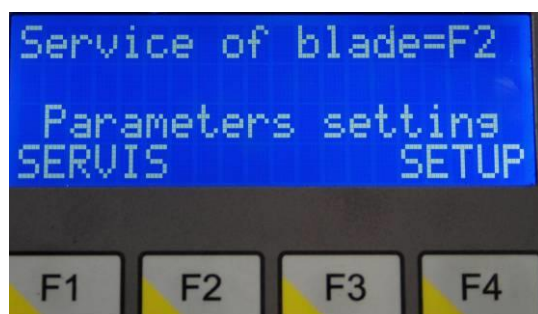
5	Selecting a mode machines  for servicing and settings  manual mode  semi-automatic mode
	Note: The functions performed in both manual and semi-automatic mode are the same, but only in semi-automatic cycle it is possible to use the START / STOP (ie start / off cycle)
6	Button STOP - Switch off on the semi-automatic cycle After pressing the button will turn off the interruption or of cutting cycle
7	Emergency Stop Switch In emergency causes the machine must be immediately switched off.
8	Frequency convertor Turn to change the speed of the saw band in the range of 20-120 m / min
9	Cutting pressure manometer Pointer to cut pressure adjustment
10	Cutting pressure regulation Adjust the arm pressure to the cut. 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.
11	Governing valve Adjust the speed of the arm sinking to the cut by governing valve. 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.

3.3. Machine setup

Machine setup mode is activated by switch on control panel. Switch must be in "0" position.

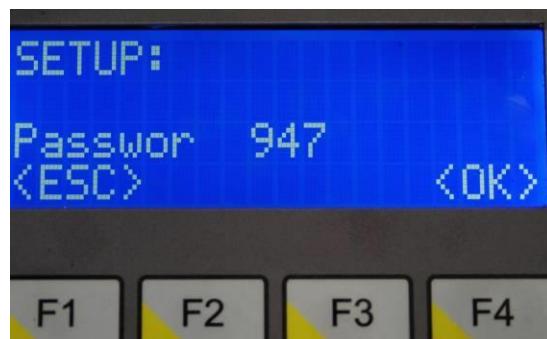


After switching into position "0" is displayed on LCD this screen.

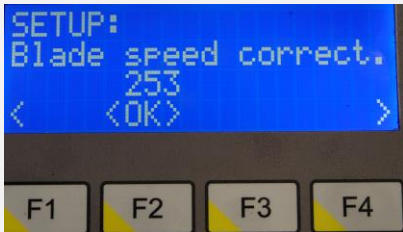
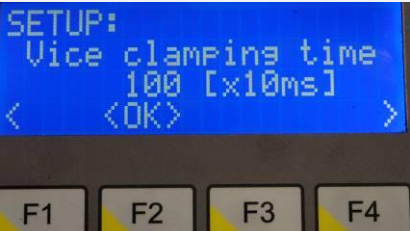


3.3.1. SERVIS

After pressing the **F1** functional key can be set servis parameters that are password protected (947).

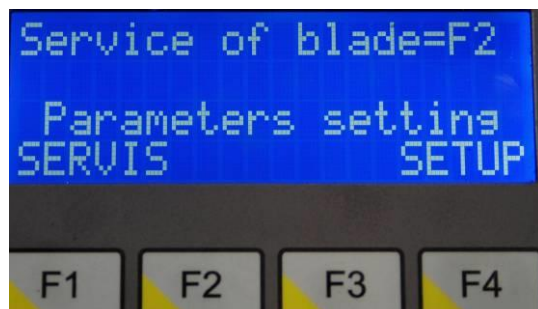


Control and movement in SERVIS can be set using the function keys **F1 - F4**.

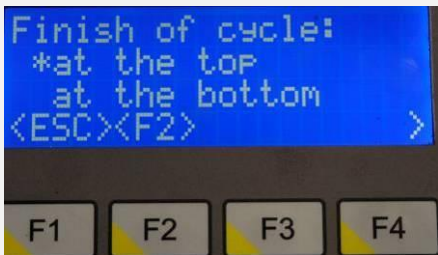
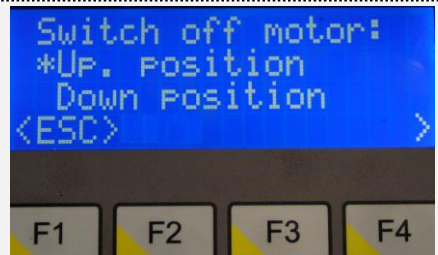
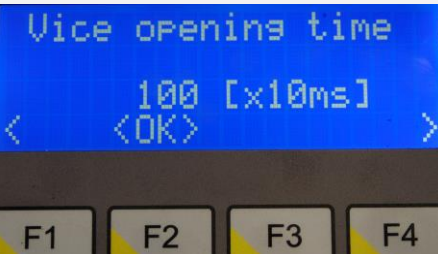
On display	Description
	Blade speed correction - Constant for calculation of blade speed display values from analog input. F1 go back, F4 next menu screen, F2 enter value
	Sensor - Display variable sensor arm (optional accessories) - Use to check the functionality of the sensor on the arm - Read only F1 go back, F4 next menu screen
	Vice clamping time - Watch vice clamping time in ms. F1 go back, F4 next menu screen, F2 enter value
	The type of machine. - Display the machine type (the value set by the manufacturer) - Read only

3.3.2. SETUP

After pressing the **F4** functional key can be set setup parameters that are not password protected.



Control and movement in SETUP can be set using the function keys **F1 - F4**.

On display	Description
	Finish of cycle - At the top – arm after cut starts above the material and cutting cycle ends - At the bottom – arm after cut remains in the lower position, the above material does not exit F1 go back, F4 next menu screen, F2 enter value
	Turn off motor after cut - Up position – saw arm move up after cut and then turn off drive of saw blade. - Down position – drive of saw band turn off immediately after cut. F1 go back, F4 next menu screen
	Upper vice - Allows to able / disable the upper vice in the cutting process F1 go back, F4 next menu screen, F2 enter value
	Vice opening time - Watch vice opening time in ms. F1 go back, F4 next menu screen, F2 enter value



Upper vice opening time

- Watch upper vice opening time in ms.
- **F1** go back, **F4** next menu screen, **F2** enter value



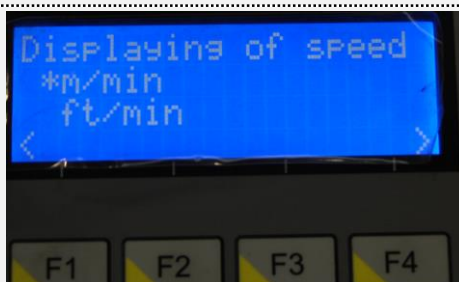
Switch off hydraulic

- Setting the hydraulic unit off when idle machines
- **F1** go back, **F4** next menu screen, **F2** enter value



Language

- Choose menu language
- **F1** go back, **F4** next menu screen, **F2** enter value



Displaying of speed

- Displaying of band speed according to the selected units (m / min or ft / min)
- **F1** go back, **F4** next menu screen, **F2** enter value

3.4. Machine error messages

Error	Information
SAFETY BUTTON is OFF F1 F2 F3 F4	Safety button (pos. 2 on control panel) is not ON. Press F4 to confirm error.
TOTALSTOP pressed F1 F2 F3 F4	Emergency Stop Switch is active. Turn Emergency Stop Switch according to the arrows. Press F4 to confirm error.
Blade tension faulty F1 F2 F3 F4	Saw blade in properly tensioned. Press F4 to confirm error.
Faulty motor protec. F1 F2 F3 F4	Engine temperature protection is active. Do not overload saw! Press F4 to confirm error.

3.5. Machine control

3.5.1. Semi-automatic cycle - – standard type

1. Turn the switch to position for semi-automatic mode



2. Lift the saw arm to the top position by pressing button



3. Open the vice by pressing button



4. Clamp material to the vice by pressing button



5. Lower the frame about 10 mm above the material by button



Attention!

Do not move the saw frame to the material, when the saw band driving is not running! Do not move the saw frame to the material with accelerated motion! The saw band can be damaged!

6. Select the max. height of the arm with limit switch.

You can clear the register of the performed cycles by button  and stop on 5 seconds.

7. Press button **START** (position **4**) of semi-automatic cycle.

Set the saw band speed according to the kind of the cutting material.

Set the speed of the arm sinking by adjust governing valve (position **10**).

Attention!

Press button „5“ (STOP of semi-automatic cycle). In risk of injury or damage of the band saw, press the emergency Emergency Stop Switch „10“!

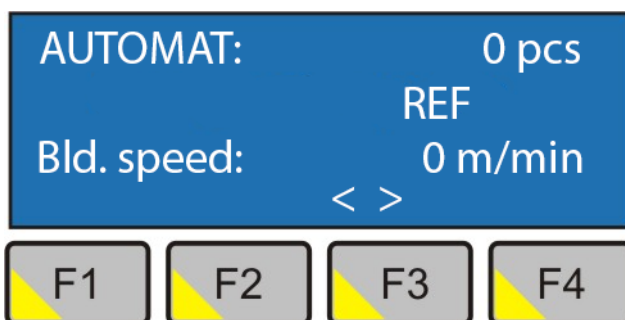
8. The band saw clamps the material to the vice and it makes the cut.

9. Open the vice. If the vice is not opened, you can open it by button  Remove the blank ((cut off a piece of material).

10. You can repeat whole process.

3.5.2. Semi-automatic cycle - with possibility of saw frame lift stop setting using an encoder (optional accessory)

1. Turn the switch to position for semi-automatic mode



2. Lift the saw arm to the maximal top position by pressing button



3. Open the vice by pressing button

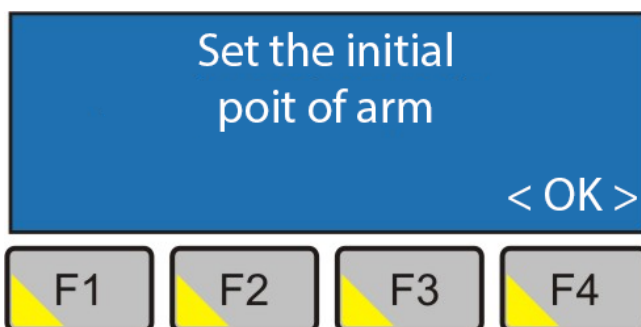


4. Clamp material to the vice by pressing button



5. Press button **START** (position 4).

6. The screen appears with instruction for setting of the saw arm into start position above material.



Confirm by pressing the button F4 <OK>.

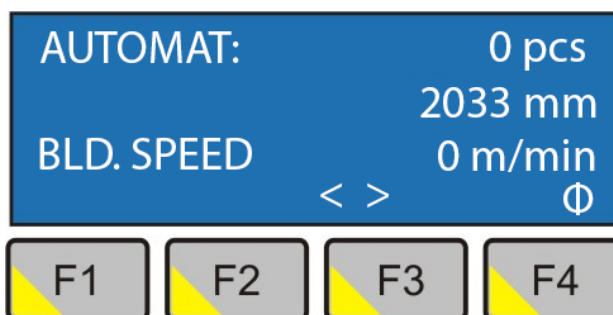
7. Now lower the frame about 10 mm above the material by button .

Attention!

Do not move the saw frame to the material, when the saw band driving is not running! Do not move the saw frame to the material with accelerated motion! The saw band can be damaged!

When the saw arm is set in start position above material confirm the state with button F1.

8. The screen appears for start of semiautomatic cycle.



It is possible to reset the register of finished pieces by pushing the button



for cca 5 sec.

9. Press button **START** (position 4).

Set the saw band speed according to the kind of the cutting material.

Set the speed of the arm sinking by adjust governing valve (position 10).

Attention!

Press button „5“ (STOP of semi-automatic cycle). In risk of injury or damage of the band saw, press the emergency Emergency Stop Switch „10“!

10. The band saw clamps the material to the vice and it makes the cut.
11. If the the possibility for finishing of the cut with the position of the saw arm above material was set in menu SETUP, arm automatically returns to a position that was set as the starting position above the material.



12. Open the vice. If the vice is not opened, you can open it by button 
Remove the blank ((cut off a piece of material).
13. You can repeat whole process.

3.6. Cycle breaking

»

- **STOP button**

Semi-automatic cycle is interrupted by pressing button **STOP** (position **6**) of the semi-automatic cycle.

The arm is lifted to the top position and the saw band drive is stopped..

By pressing button **START** (position **4**) of the semi-automatic cycle, you can start the cycle.

- **Emergency Stop Switch**

In case of the risk, press **Emergency Stop Switch** (position **7**).

After pressing **Emergency Stop Switch**, saw band drive is immediately broken and the arm sinking is stopped.

- **Reactivation**

1. Turn **Emergency Stop Switch** according to the arrows (on the button).
2. Switch on the **Safety circuit** by button (position **3**).
3. By pressing button **START** (position **4**) of the semi-automatic cycle, you can start the cycle. The arm is lifted to the top position and the saw band starts the cycle.

3.7. Band saw adjusting

3.7.1. Adjusting band guides

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



1. Press button **8** to switch off the hydraulics – **2 second stop on**.
2. Release the stopping lever of the listel (see picture).



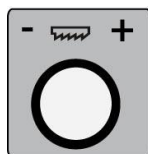
3. Move the left part of the guide apparatus so that the left guide cube edge is as close to the cut material as possible.

Note:

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

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

3.7.2. 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 **15** to adjust requested speed of the saw band. You can see the speed on display.

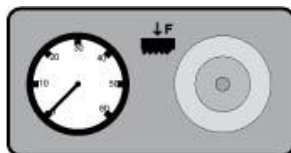
Attention!

At least once a week set the saw band speed from the lowest up to the highest speed.

3.7.3. Adjustment of pressure to the cut

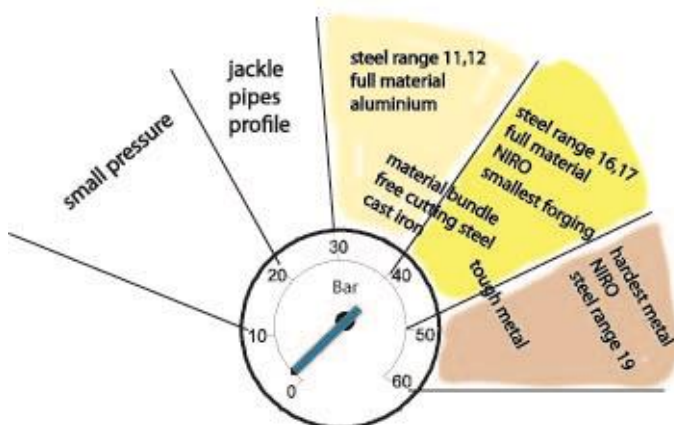
The band saw **Extend 1120.1120** is equipped with cutting pressure regulation on the both guiding cubes.

Pressure adjusting is performed with regulating wheel (position **17** – control panel). The pressure to the cut is displayed on the cutting pressure manometer **16**.



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

Diagram for cutting pressure on ADFR (automatic downfeed regulation). Hydraulic pressure recommended on the aggregate unit 6 Mpa



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

Pressure into cut is set by regulation, pos. **17**.

3.7.4. Speed adjustment of the arm lowering

Set the speed of the arm lowering to the cut by control valve (position **18** – 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.

3.7.5. Saw frame lift stop setting – standard type

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



1. Press button **11**. Lift the saw arm to the upper position.
2. Insert a material into the vice. Carefully lower the saw arm button **12** to the material (**11+12** accelerated shift)..
3. Stop the saw arm 10mm above the material.
4. Saw arm adjusting is sensed by the sensor.

3.7.6. Saw frame lift stop setting - using encoder (optional accessory)

To shorten cycle times in automatic mode, you can adjust the height of the lift arm according to the height of the material.

If the band saw is equipped with an encoder for positioning of the arm above the material, it is possible to adjust the position of the arm using the way which is described in the machine control (see Semi-automatic cycle - with possibility of saw frame lift stop setting using an encoder (optional accessory).



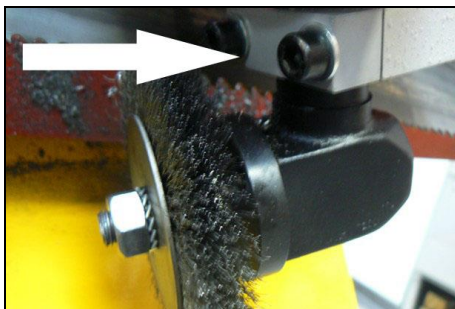
3.7.7. Setting the upper clamping

The band saw **Extend 1120.1120** is equipped with upper clamping on the main vice of the band saw.

The upper clamping operates automatically with the main vice. Use the valve (see arrow) to switch off the upper clamping.

3.7.8. 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. Release the fixative screw of the brush. It is possible to move with the brush.

Chyba! Objekty nemohou být vytvořeny úpravami kódů polí.

2. Set the brush to the saw band according to the picture.

Attention!

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

3. Tighten the fixative screw.
4. In case, that the brush is not turned right (driving wheel slips on the driving wheels of the saw band), push by means of the screw (see arrow) 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!

3.8. 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!

3.8.1. Handling agent selection

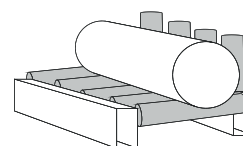
- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

3.8.2. 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.

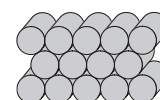
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!



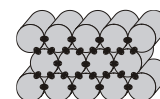
3.8.3. Bundle material cutting

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

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

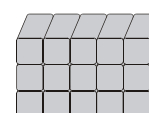


Always weld the material at the rear end of the bundle to secure it from moving.



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

Square material bundle:



Attention:

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

4. **Machine service**

4.1. Saw band dismantling

1. Press button **11** to lift the saw arm to maximum position.
2. **STOP hydraulic** with button **8**.
3. Switch Deblock **16** to position 1.



4. Open the covers of both driving wheels.



5. Dismantle left protective cover of the band (arrow). Cover is fastened by screws.
6. Release screw tightening brush position.



7. Release the saw band by pressing left button.
8. Pull down the band from the wheels.
9. 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.
5. Press the right button to stretch the saw band.

6. Install yellow protective cover of the band.
7. Move the brush to the saw band. Tighten the securing screw.
8. Close the covers of both driving wheels.
9. Turn the deblock **16** to position **0**.
10. 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.

4.3.1. Saw band stretching

- Switch on the hydraulic aggregate after the saw band installation check the saw band stretching on the tenzomat.
- Use the screw to stretch the saw band until it is stretched to the recommended value.

4.3.2. Saw band inspection

Check the saw band in the guiding cubes and on the wheels.



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.

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

After the saw band is replaced, the limit switch setting must be checked out. If the limit switch is not set correctly, the band is stretch too much or it is to loose.



- Release 2 screws and check the limit switch setting -on-state.



- Manometer indicants the pressure at cylinder of band tensing (60 Bar).

4.5. 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.

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

The limit switch of the saw band stretching is set from the manufacturer. Is not necessary to set it.

4.7. Limit switch adjustment of the saw frame lower positron

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

4.7.1. Setting inspection

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 failing which.

4.7.2. Limit switch setting



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 (**button 7**).
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.

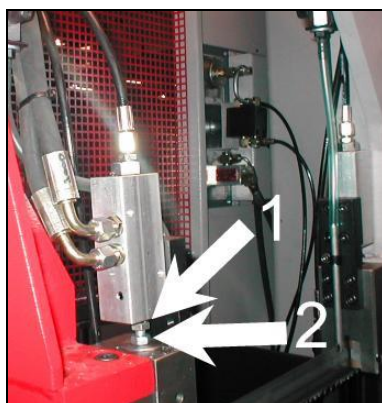
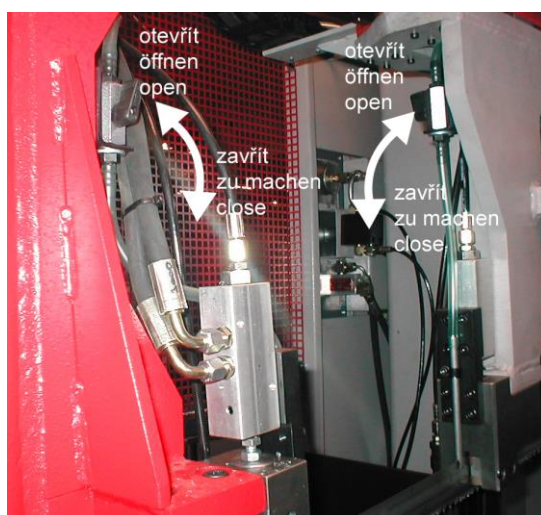
4.8. Adjustment of the cutting pressure regulation

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.

4.8.1. 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.

4.8.2. 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.

4.9. 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

4.9.1. 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

4.9.2. 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.

4.10. Hydraulic, Greases and oils

4.10.1. Gearbox oils

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

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

Attention:

When replacing, use oils 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!

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

Band saw	Gearbox oil	Capacity
Extend 1120.1120	Shell Tivela S 320	1 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

4.10.2. Lubricant greases

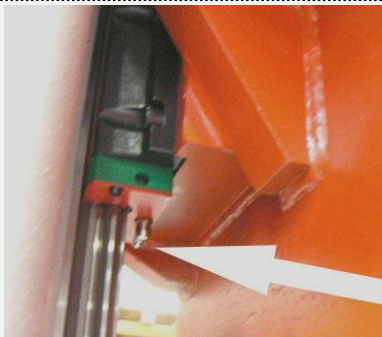
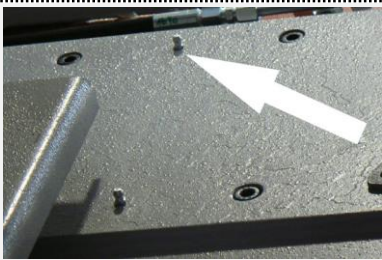
We recommend using lithium based saponified grease, class NGLI-2 for lubrication. Different greases are mixable, if their oil bases and consistence type are identical.

Comparative table of the lubricant greases:

Manufacturer	Type of the lubricant grease
BP	Energrease LS - EP
DEA	Paragon EP1
Esso	FETT EGL 3144
	Beacon EP 1
	Beacon EP 2
FINA	FINA LICAL M12
Klüber	Microlube GB0
	Staburags NBU8EP
	Isoflex Spezial
Optimol	Optimol Longtime PD 0, PD1, PD2
Shell Aseol AG	ASEOL Litea EP 806-077
Texaco	Multifak EP1

4.10.3. 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 – lubricate with grease once a three months (see chapter Lubricant greases). Use 3-5g grease on the every carriage of the linear guiding. Use the grease gun to the lubrication. Drive 3-5 times whole line of the linear guiding during lubrication.
	The guiding cubes leading – grease with oil from both sides once a week.

4.10.4. Hydraulic oils

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

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

Note:

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

Comparative table of the hydraulic oils

Manufacturer	Type	Manufacturer	Type
Agip	Oso 32	Ina	Hidraol 32 HD
Aral	Vitam GF 32	Klüber	Lamora HLP 32
Avia	Avilub RSL 32	Hungary	Hidrokomol P 32
Benzina	OH-HM 32	Mobil	Mobil DTE 25
BP	Energol HLP 32	ÖMV	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 846 WR
Esso	Nuto H 32	Texaco	Rando HD B 32
Fam	HD 5040	Valvoline	Ultramax AW 32
Fina	Hydran 32		

4.10.5. 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 μ m or better) when you fill the oil. You avoid impurities penetration to the hydraulic system and troubles in hydraulic system.

4.10.6. 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	-	-	•	-	-	-

4.11. 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.

4.12. Worn pieces replacement

4.12.1. Seznam opotřebených dílů Verschleißteileliste Worn parts list

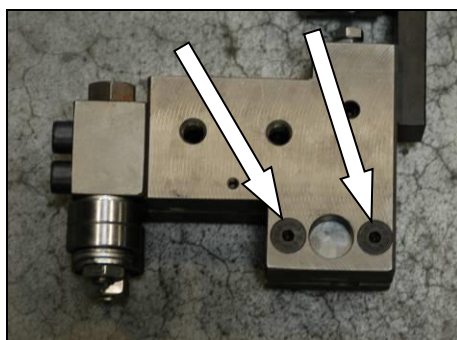
Objednací číslo	Název položky	ks
Bestell- Nr.	Bezeichnung	Menge
Reference No.	Item	Pcs.
30.6405-007	Kolo hnací / Antriebsrad / Driving wheel	1
30.6206-104	Síto / Sieb / Pump screen	1
49.250.017	Kartáček / Bürste / Brush	1
91.020.016	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump 12 M2	1
91.173-007	Koncový spínač / Endschalter / Limit switch FRG01-M02	1
99.021.037	Řemen / Riemen / Belt SPA -1932	1

4.12.2. Pushing bearing replacement

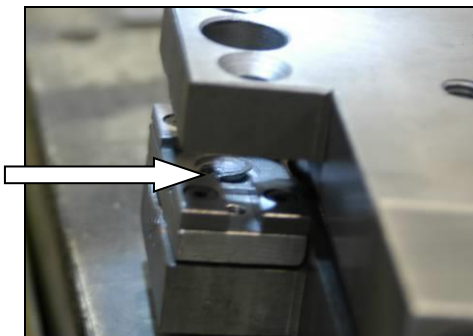
If it is impossible to adjust the bundle gripping assembly and the pushing bearing is worn, it needs to be replaced



1. Dismantle the saw band.
2. Disconnect the hose from the cooling agent eventually unmount microniser.
3. Unmount guiding cube from holder on saw.



4. Loosen the 2 clamp screws solid carbide guides and remove them..
5. Remove fixed hardmetal.



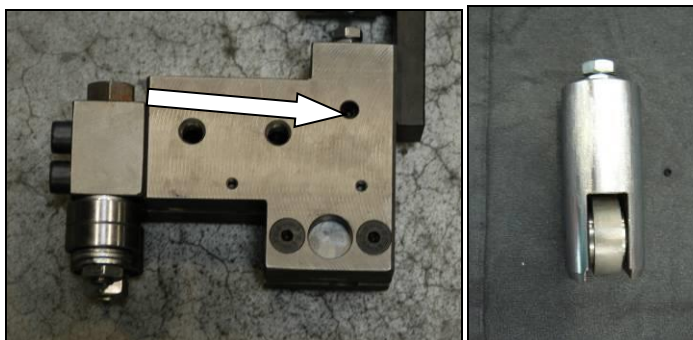
6. Remove retaining ring. Then unmount adjusting screw.



7. Remove other three screws.



8. Carefully remove the hardmetal. Remove disc springs.



9. Loosen the mounting worm (allen wrench no. 3). Remove the pivot with bearing from the guiding cube.



10. Insert the pivot to the vice.

Attention:

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

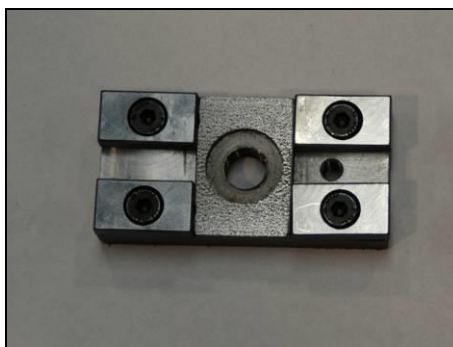
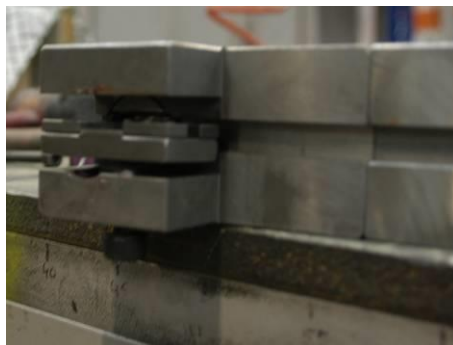
11. Remove the bearing pivot from the bearing holder by means of the swager.



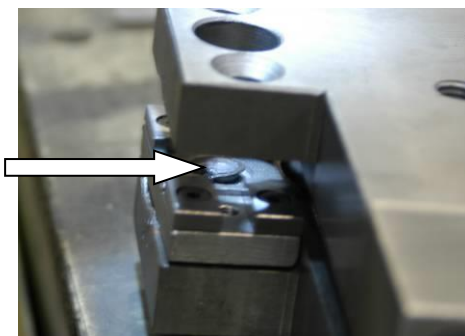
12. Remove the worn bearing and other damaged parts.
13. Fasten the holder to the vice.
14. Insert the bearing and washers and return the pivot to its original place.
15. Place the assembled piston guide cube. Piston must move freely in a guiding cube.
16. Worm screw defines the operation of the piston (piston has a slot in which is the worm). Tighten the worm, but with a minimum clearance to the piston could move.



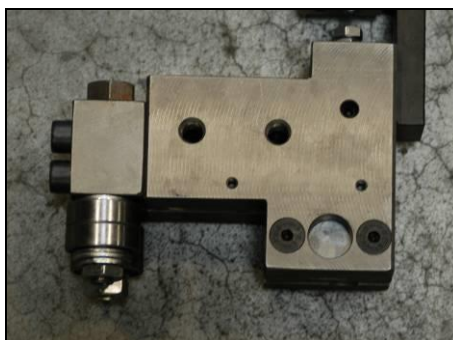
17. Insert the disc springs. The number of disc springs must match the number of dismantled springs. Disc springs are folded against each other 1 to 1 Odd plate spring is near the harmetal carbide.



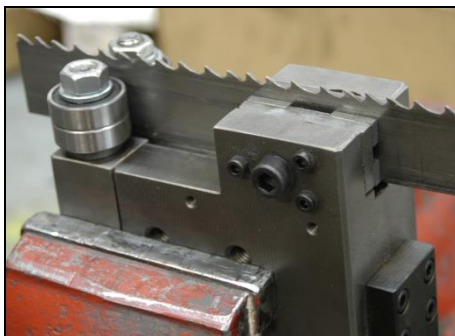
18. Insert the new hard metal guide. **Attention, Do not lose disc springs.** Ensure proper position of carbide guides – holes for 3 stop screws must be in the same position as the holes in a guiding cube.
19. Insert and tighten central screw.



20. Insert the retaining ring on central screw.
21. Insert 3 stop screw around central screw.



22. Insert fixed hardmetal guiding and mount hard metal with two screws.



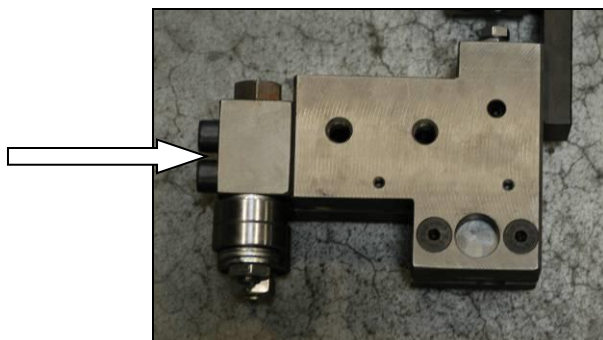
23. Using a short piece of the blade used on the machine, adjust the width of the gap between the guides. Loosen the central screw. Set the gap by central adjusting screw. Belt guides must walk freely without large and will also not scrub.

Attention:

Guiding pulleys must be replaced together on both guiding cubes!

4.12.3. Saw band guiding pulleys replacement

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.

Attention:

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



2. Tighten the guiding cube to the vice and dismantle both eccentrics with bearings following way.
3. Screw off nuts from eccentrics.
4. Remove eccentrics from bearings by means of the swager.



5. Change all bearings and other worn parts.
6. 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.



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



8. 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
9. 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 the band and the pulley is 0,05 mm.

10. Tighten nuts on both eccentrics.
11. Remove the testing piece of saw band from the cube lead. Install the guiding cube on the machine.

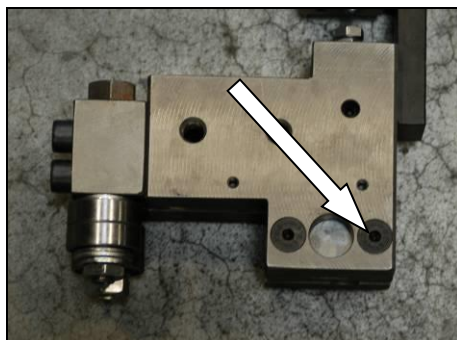
4.12.4. Hard metal guides replacement

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

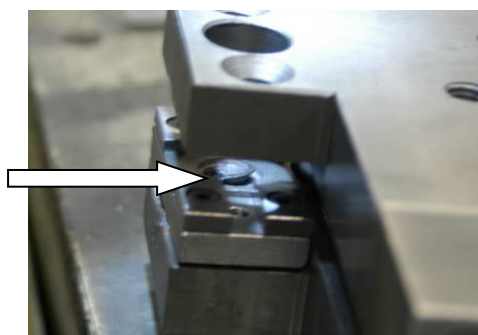
ATTENTION!

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

1. Dismantle the saw band.
2. Disconnect the hose from the cooling agent eventually unmount microniser.
3. Unmount guiding cube from holder on saw.



4. Loosen the 2 clamp screws solid carbide guides and remove them..
5. Remove fixed hardmetal.



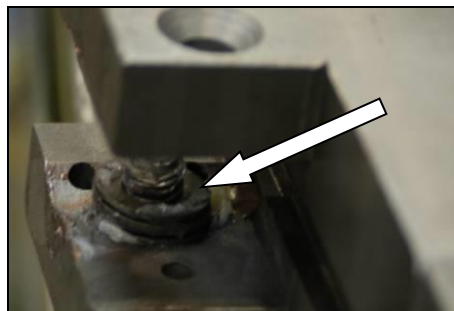
6. Remove retaining ring. Then unmount adjusting screw.



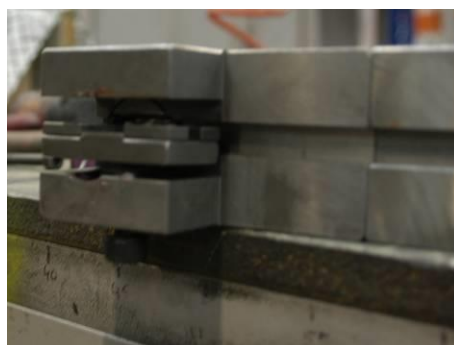
7. Remove other three screws. .



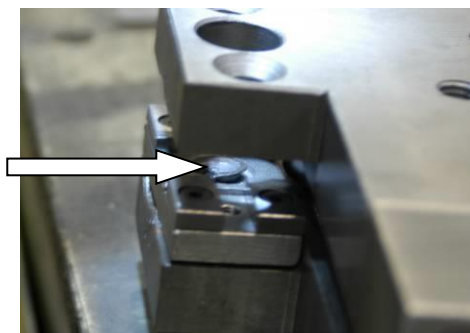
8. Carefully remove the hardmetal. **Pozor, nesmí dojít ke ztrátě talířových pružin.**



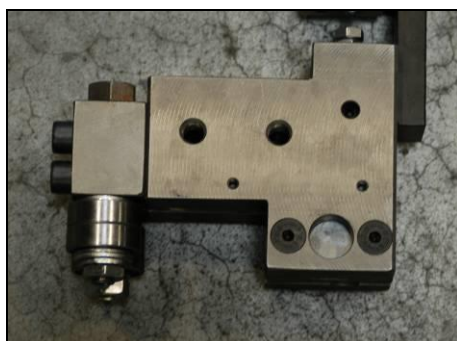
9. The number of disc springs must match the number of dismantled springs. Disc springs are folded against each other 1 to 1 Odd plate spring is near the hardmetal carbide.



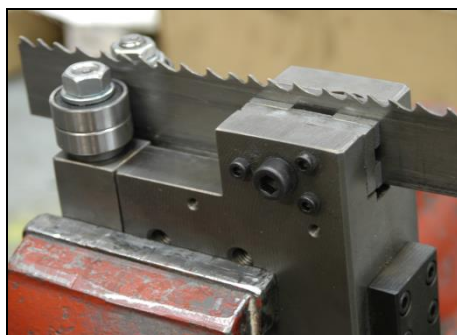
10. Insert the new hard metal guide. **Attention, Do not lose disc springs.** Ensure proper position of carbide guides – holes for 3 stop screws must be in the same position as the holes in a guiding cube.
11. Insert and tighten central screw.



12. Insert the retaining ring on central screw.
13. Insert three stop screw around central screw.



14. Insert fixed hardmetal guiding and mount hard metal with two screws.



15. Using a short piece of the blade used on the machine, adjust the width of the gap between the guides. Loosen the central screw. Set the gap by central adjusting screw. Belt guides must walk freely without large and will also not scrub.

4.12.5. Brush replacement

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

1. Hold shaft of the brush by wrench.



2. Release the nut on the brush, replace worn brush on the new brush, screw on the nut.
3. Set the brush to the saw band.

5. Troubleshooting

5.1. Mechanical problems

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

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

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

5.2. Electric problems

Problem	Possible causes	Repair
1. Machine is not possible start.	- In socket is not voltage	Line voltage must be checked.
	- Transfer relay is closed (thermal protector)	Each FA relay must be checked.
	- Limit switch of saw band stretching, cover of frame or cover of saw band is not started.	Check of saw band stretching and covers closing.
2. When cut is finished, the frame is not raising.	- Bottom limit switch is adjusted wrong.	Bottom limit switch must be adjusted according to chapter ADJUSTING.
	- In hydraulic (pneumatic) ring is error. HYTOS (BOSCH) is not acting to frame uplift.	Function of magnetic valve must be checked, valve must be closed, voltage of clamps and inductor must be checked.
3. Electric motor and pump are without voltage. Between contactor and thermal protector is not voltage.	- Wrong contactor.	Replace contactor of engine.
4. 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.
5. Protector is switched off from engine hydraulic aggregate MA3 sometimes.	- Into hydraulic system is high working pressure.	Service engineer must reduce the pressure in hydraulic system.
6. The hydraulic aggregate cannot be started	Auxiliary contact on thermo-relay FA1 is defective.	Replace the defective contact on motor starter FA1.
7. Hydraulic aggregate is switched on but the saw arm or the main vice is not functional	- Wrong connection of electrical supply. The electrical phases are connected conversely.	The phases must be switched. Only service engineer can do this.
8. Cooling is not active	Lack of cooling agent.	Fill the tank with cooling agent.
	- Thermal relay is defective	Change the thermal relay
	- Input hosepipe is broken or obstructed.	Check the cooling circuit and perhaps cleanse cooling system.
	- Cooling pump protection is defective	Check the protection of cooling pump if need change it.
	- Cooling pump is defective.	Replace the cooling pump.

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. **Schémata / Schemas / Schematics**

6.1. Elektrické schema /
Elektroschema /
Electric scheme – 3×400 V, PE, 50 Hz

0	1	2	3	4	5	6	7	8	9	
 Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic Extend 1120.1120 ES-64000-201/202-V6.6 Wiring diagram 3x400V+PE, 50Hz										
 BOMAR, s.r.o. Těžební 1236/1			Stroj/Machine/Machine: Extend 1120.1120		Název stránky/Name page/Name sheet: Úvodní strana / Start page / Startseite			Číslo dok./Doc.No./Anzahl der Dokumente.: ES-64000-201/202-V6.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracováno/Processed /Hat verarbeitet:		List/Page/ Seite: 1 List/Page/ Seite:



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/3	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/3.a	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/3.b	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/3.c	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/3.d	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/3.e	Kusovník artiklů / Parts list / Artikelstückliste	08.01.2019
/4	I/O řídicí systém / I/O Control station / I/O Steuerung	16.03.2016
/5	Rozmístění prvků v rozvaděči R1/ Placement of elements in enclosure R1/ Platzierung der Elemente im Schaltschrank R1	18.12.2018
/6	Ovládací panel na rozvaděči / Control panel / Bedienpult	21.03.2016
/7	Silová část M1 / Power part M1 / Feld partie M1	18.12.2018
/8	Silová část M1 / Power part M1 / Feld partie M1	08.01.2019
/9	Silová část M2,M3 / Power part M1,M2 / Feld partie M1,M2	18.12.2018
/10	Silová část M4 / Power part M4 / Feld partie M4	06.04.2016
/11	Deska zdroje / Power board / Netzgerat-Platte	08.01.2019
/12	Sytkače motorů, M5 / Motor contactor, M5 / Motor-Schutzschalter, M5	18.12.2018
/13	Hydraulické ventily / Hydraulic valve / Hydroventil	06.04.2016
/14	Hydraulické ventily / Hydraulic valve / Hydroventil	11.04.2016
/15	Vstupy / Inputs / Eingänge	18.12.2018
/16	Tlačítka ovládací panel / Button control panel / Taste Bedienpult	18.12.2018
/17	Bezpečnostní okruh / Safety circle / Sicherheitsbereich	08.01.2019
/18	Řídicí systém / Control system / Steuersystem	07.01.2019
/19	Snímač výšky ramene / Arm height sensor / Arm Höhensensor	21.03.2016
/20	Příslušenství / Accessories / Zubehör	18.12.2018

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			Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz		Seite: 2
			Zpracováno/Processed /Hat verarbeitet: 08.01.2019		Lib/Page/
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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
-ZD1	Napájecí zdroj - 15VAC/24VDC; 20VAC/28VDC Power supply unit - 15VAC/24VDC; 20VAC/28VDC Netzteil - 15VAC/24VDC; 20VAC/28VDC	ZDR-03	Bomar	265.915	1	/11.3
-BM1	Bezpečnostní relé 24VDC, 3NO Safety relay 24VDC, 3NO Sicherheitsrelais 24VDC, 3NO	BT50	ABB	91.051.063	1	/17.5
-CU1	Klávesnice - fóliová Touch-sensitive keyboard Folientastatur	31.R230-207	AKI ELECTRONIC, spol.s.r.o.	31.R230-207	1	/18.0
-FA3	Motorový spouštěč - 0.4A Motor starter - 0.4A Motorstarter - 0.4A	MS116-0.4	ABB	91.045.017	1	/9.2
-FA4	Motorový spouštěč - 1A Motor starter - 1A Motorstarter - 1A	MS116-1.00	ABB	91.045.019	1	/9.6
-FU1	Pojistka trubičková - 500mA/250V, pomalá, 5x20 Tube fuse - 500mA/250V, slow, 5x20 Rohrsicherung - 500 mA / 250 V, langsam, 5x20	T500mA/250V	ESKA	91.230.011	1	/11.5
-FU4	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	/11.5
-FU5	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/8.7
-FU6	Pojistka trubičková - 2A/250V, pomalá, 5x20 Tube fuse - 2A/250V, slow, 5x20 Rohrsicherung - 2A / 250V, langsam, 5x20	T2A/250V	ESKA	91.230.001	1	/8.7
-RP1	Potenciometr 4k7 Potentiometer 4k7 Potentiometer 4k7	TP195 4k7/N20A	Elektronické součástky CZ, a.s	91.283.015	1	/10.6
-RP1	Hlavice potenciometru - 24mm Head of potentiometer 24mm Leiter Potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/10.6
-RCF1	Filtr RFC vývodový Efficient RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/8.1

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: ES-6400-201/202-V6.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracováno/Processed /Hat verarbeitet: 08.01.2019	List/Page/ Seite: 3
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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
-RCF2	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/8.4
-RCF3	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/9.1
-RCF4	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/9.5
-RCF11	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/7.5
-RCF12	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/7.7
-FA1	Motorový spouštěč - 16A Motor starter - 16A Motorstarter - 16A	MS116-16,0	ABB	91.045.025	1	/8.2
-FA1	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/8.2
-FA2	Motorový spouštěč - 0.63A Motor starter - 0.63A Motorstarter - 0.63A	MS116-0,63	ABB	91.045.018	1	/8.4
-FA2	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/8.4
-FA3	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/9.2
-FA4	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/9.6
-FU1	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THS1U	WIELAND	91.251.102	1	/11.5

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-201/2023-V6.6		Účt./Page/ Seite: 3.a
			Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz		Účt./Page/ Seite: 3.a
			Zpracováno/Processed /Fert. verarbeitet:		Účt./Page/ Seite: 25
			Datum/Date/Datum: 08.01.2019		Účt./Page/ Seite: 25

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
-FU2	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSI5U	WIELAND	91.251.102	1	/11.5
-FU2	Pojistka trubičková - 800mA/250V, pomalá, 5x20 Tube fuse - 800A/250V, slow, 5x20 Rohrsicherung - 800A / 250V, langsam, 5x20	T800mA/250V	ESKA	91.230.010	1	/11.5
-FU3	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSI5U	WIELAND	91.251.102	1	/11.5
-FU3	Pojistka trubičková - 1A/250V, pomalá, 5x20 Tube fuse - 1A/250V, slow, 5x20 Rohrsicherung - 1A / 250V, langsam, 5x20	T1A/250V	ESKA	91.230.031	1	/11.5
-FU4	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSI5U	WIELAND	91.251.102	1	/11.5
-FU5	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSI5U	WIELAND	91.251.102	1	/8.7
-FU6	Svorka pojistková Fuse terminal Sicherungsklemme	WK4/THSI5U	WIELAND	91.251.102	1	/8.7
-KM1	Stýkač 5,5kW/400V Contactor 5,5kW/400V Schütz 5,5kW/400V	AF12-30-01-11	ABB	91.040.051	1	/12.1
-KM2	Minisýkač 4kW/400V Minicontactor 4kW/400V Mini Schütz 4kW/400V	B65-30-01-1.7-71	ABB	91.040.049	1	/12.6
-KM3	Minisýkač 4kW/400V Minicontactor 4kW/400V Mini Schütz 4kW/400V	B65-30-01-1.7-71	ABB	91.040.049	1	/12.3
-KM4	Minisýkač 4kW/400V Minicontactor 4kW/400V Mini Schütz 4kW/400V	B65-30-01-1.7-71	ABB	91.040.049	1	/12.4
-KM11	Stýkač - 18,5kW/400V, 3P Contactor - 18,5kW/400V, 3P Schütz - 18,5kW/400V, 3P	AF38-30-00-11	ABB	91.040.059	1	/17.7

The manufacturer reserves right to use an equivalent replacement device.

3.a	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: ES-6400-201/202-V6.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracování/Processed /Hat verarbeitet: 08.01.2019	Let/Page/ Seite: 3.b Let/Page/ Seite: 25
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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
-KM11	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/17.7
-KM12	Stykač - 18.5kW/400V, 3P Contactor - 18.5kW/400V, 3P Schütz - 18.5kW/400V, 3P	AF38-30-00-11	ABB	91.040.059	1	/17.8
-KM12	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/17.8
-KM12	Pomocný kontakt - 1xNO Auxiliary contact - 1xNO Hilfskontakt - 1xNO	CA4-10	ABB	91.041.044	1	/17.8
-PA1	Pojistkový odpínač pro válčové vložky - 3P Switch fuse for the cylinder inserts - 3p Schalter Sicherung für den Zylinderinsätze - 3P	E 93/32	ABB	91.241.014	1	/10.2
-PA2	Pojistkový odpojovač E-90 - 2P Fuse disconnector E-90 - 2p Sicherungstrenner E90 - 2p	E 92/32	ABB	91.241.013	1	/11.1
-RP1	Svorinka rychloupínací Fastconnect clamp Fast Connect Klemm	WAGO 224-112	WAGO	91.250.009	3	/10.6
-SB1	Hlavice prosvětleného tlačítka zelená Green transparent switch Grün transparent Schalter	M22-DL-G	EATON	91.060.031	1	/16.0
-SB1	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/16.0
-SB2	Upevňovací adaptér + 1NO Attaching adapter + 1NO Montageadapter + 1NO	M22-AK10	EATON	91.061.021	1	/16.1
-SB2	Hlavice tlačítka - černá Head button - black Kopftaste - schwarz	M22-D-S	EATON	91.060.035	1	/16.1
-SB3	Hlavice 3 položového přepínače Head of 3 position switch Leiter der 3-Positionsschalter	M22-WRK3	EATON	91.060.051	1	/16.2

The manufacturer reserves right to use an equivalent replacement device.

3.b

 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-201/2023-16.6		Let/Pager/
			Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz		Seiten: 3.c
			Zpracováno/Processed /Hat verarbeitet:		Let/Pager/
			Datum/Date/Datum: 08.01.2019		Seiten: 25

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
-SB3	Kontaktní blok - INO Contact block - INO Kontaktblock - INO	M22-K10	EATON	91.061.022	1	/16.2
-SB3	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/16.2
-SB500	Total stop - hlavice + 3xNC Emergency-stop mushroom push - button + 3xNC Not-Aus-Pilz - Taster + 3 xNC	YW1B-VAE02R	IDEC	91.060.084	1	/17.4
-SB500	Kontakt - 1x NO Contact - 1x NO Kontakt - 1x NO	YW-E10	IDEC	91.061.044	1	/17.4
-TR1	Toroidal transformer - 0-230-400V/20V/15V, 150VA Toroidal transformer - 0-230-400V/20V/15V, 150VA Ringkerntransformator - 0-230V-400V/20V/15V, 150VA	400V/230V/20V/15V 6A/2A 150VA	KARBAN s.r.o.	91.080.026	1	/11.2
=OP1-HL1	Signálka zelená na adaptér Green light for Eaton adapter Grünes Licht für Eaton-Adapter	M22-LED-G	EATON	91.061.023	1	/14.8
-SQ21	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/17.4
-SQ22	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/17.2
-PA1	Pojistka válcová - 20A, 10x38, rychlá Tube fuse - 20A, 10x38, fast Rohrsicherung - 20A, 10x38, schnell	PV10 20A gG	OEZ	91.230.038	1	/10.2
-PA2	Pojistka válcová - 2A, 10x38, pomalá Tube fuse - 2A, 10x38, slow Rohrsicherung - 2A, 10x38, langsam	PV10 2A gG	OEZ	91.230.034	2	/11.1
-SQ1	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/15.3
-SQ2	Koncový spínač - 1NC+1NO, M20 Limit switch - 1NC+1NO, M20 Endschalter - 1NC+1NO, M20	D4N-4A62	OMRON	91.173.008	1	/15.5

The manufacturer reserves right to use an equivalent replacement device.

3.c

 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: ES-6400-201/202-V6.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracováno/Processed /Hat verarbeitet: 08.01.2019	List/Page/ Seite: 3.d
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Schemata
Schemata
Schematics



Kusovník artiklů / Parts list / Stückliste

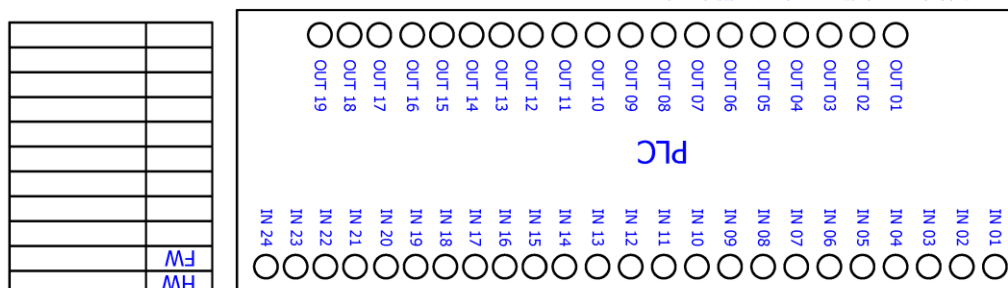
Označení přístroje Device identification Geräteidentifikation	Typ přístroje Device description Gerätebeschreibung	Objednávací číslo Type number Typennummer	Výrobce Manufacturer Hersteller	Skladové číslo Part number Lagernummer	Množství Quantity Menge	Umístění Location Stelle
-SQ3	Koncový spínač - 1NC+1NO, M20, pomalý Limit switch - 1NC+1NO, M20, slow Endschalter - 1NC+1NO, M20, langsam	D4N-4A32	OMRON	91.173.010	1	/15.6
-SQ4	Koncový spínač - 1NO + 1NC Limit switch - 1NO + 1NC Endschalter - 1NO + 1NC	FR 555-M2	PIZZATO	91.173.018	1	/15.7
-FM1	Frekvenční měnič - 11KW/ 3x400V Frequency converter - 11KW/ 3x400V Frequenzumrichter - 11KW/ 3x400V	VFD110E43A	ProfCom,s.r.o.	91.012.119	1	/10.2
-M6	Ventilátor s filtrační vložkou Fan with filter cartridge Lüfter mit Filterpatrone	3238.100	Rittal	91.015.134	1	/8.7
-M6	Mřížka ventilátoru Fan grid Lüftergitter	3238.200	Rittal	91.015.135	1	/8.7
-QS1	3 pólový odřezáček, 63A Disconnecter - 3P, 63A Trennschalter - 3P, 63A	SAP63/03-M2	SALZER YUEQING LEYI	91.170.031	1	/7.0
-KA1	Termostat - 0-60 ° C, 6A / 250VAC Thermostat - 0-60 ° C, 6A / 250VAC Thermostat - 0-60 ° C, 6A / 250VAC	8MR2170-1B8	SIEMENS	91.030.104	1	/8.7
-SB7	Hlavice prosvětleného tlačítka žlutá The button head backlit yellow Der Knopf Kopf von hinten beleuchtet gelb	ZBSAW35	TELEMECANIQUE	91.060.023	1	/17.6
-CU1	Řídicí obvod Control circuit Die Steuerschaltung	PRO-5.X	Bomar	91.995.221	1	/18.0
-RCF0	Vstupní odrušovací filtr 50A Input noise filter 50A Eingangsgrauschfilter 50A	50EB15/50/C2	WIDECOM TECHNOLOGY s.r.o.	91.041.064	1	/7.1
-M7	Ventilátor 24VDC, 154CFM Fan 24VDC, 154CFM Fan 24VDC, 154CFM	RDH1238 B2	Xinnulian Electronic Co.	91.015.126	1	/12.8

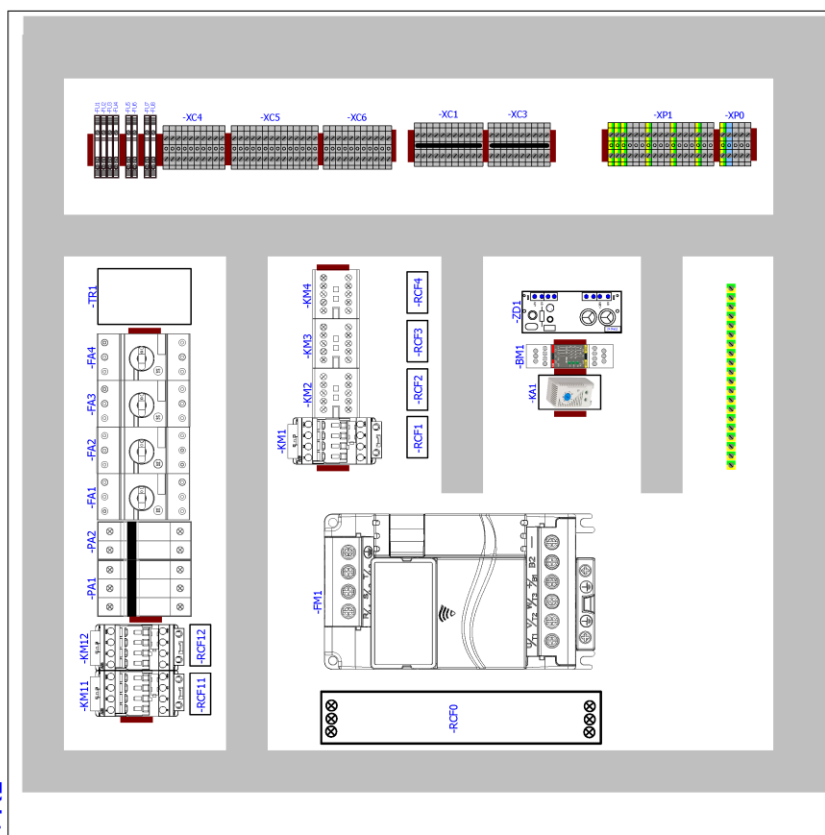
The manufacturer reserves right to use an equivalent replacement device.

3.d	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Kusovník artiklů / Parts list / Artikelstückliste	Císlo dok./Doc.No./Anzahl der Dokumente: ES-6400-201/202-16.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracování/Processed /Hat verarbeitet: 08.01.2019	Lib./Page/ Seite: 3.e Lib./Page/ Seite: 25
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I/O	CZE	ENG	DE
IN 01	Světlák upnutí	Vice is clamped	Schraubstock ist gespannt
IN 02	Rameno dole	Arm is down	Rahmen ist unten
IN 03	Rameno nahore	Arm is up	Rahmen ist oben
IN 04	Napnutí pásu	Blade tension	Bandspannung
IN 05	Motor OK	Motors OK	Motoren OK
IN 06	Bezpečnostní okruh uzavřen	Safety circle shut down	Sicherheitsschaltung gesperrt
IN 07	Tlačítko TOTAL STOP	Button TOTAL STOP	Taste TOTAL STOP
IN 08	Tlačítko START	Button START	Taste START
IN 09	Tlačítko STOP	Button STOP	Taste STOP
IN 10	MANUAL	MANUAL	MANUAL
IN 11	CYKLUS	CYCLE	ZYKLUS
IN 12	Kolize kostky	Cube collision	Klotzkollision
IN 13	NC	NC	NC
IN 14	NC	NC	NC
IN 15	NC	NC	NC
IN 16	NC	NC	NC
IN 17	NC	NC	NC
IN 18	NC	NC	NC
IN 19	Tlačítko napnutí pás	Button band tension	Taste Band spannen
IN 20	Tlačítko povolit pás	Button band release	Taste Band lösen
IN 21	Tlačítko rameno nahoru	Button arm up	Taste Rahmen nach oben
IN 22	NC	NC	NC
IN 23	Přítlak upnutí	Upper vice is clamped	Ober Schraubstock ist gespannt
IN 24	NC	NC	NC
OUT 01+	Start FM1	Start FM1	Start FM1
OUT 02+	NC	NC	NC
OUT 03+	NC	NC	NC
OUT 04	Motor chlazení	Coolant pump	Motor Kühlung
OUT 05	Čerpadlo hydrauliky	Hydraulic pump	Hydraulikpumpe
OUT 06	2.stupeň hydrauliky	Second level of hydraulic pump	Hydraulikpumpe 2.Stufe
OUT 07	Světlák upnutí	Vice clamp	Schraubstock spannen
OUT 08	Světlák povolit	Release vice	Schraubstock lösen
OUT 09	NC	NC	NC
OUT 10	NC	NC	NC
OUT 11	Rameno nahoru	Arm up	Rahmen nach oben
OUT 12	Rameno dolů	Arm down	Rahmen nach unten
OUT 13	Rameno rychlé	Arm fast	Rahmen schnell
OUT 14	Přítlak upnutí	Upper vice clamp	Ober Schraubstock spannen
OUT 15	Přítlak povolit	Release upper vice	Ober Schraubstock lösen
OUT 16	Napnutí pás	Sawblade tension	Spannen des Sägebandes
OUT 17	Uvolnit pás	Sawblade leave	Entspannen des Sägebandes
OUT 18	Mikronizer	Mikroniser	Mikronizer
OUT 19	Kontrolka start	Indicator start	Kontrolllicht start

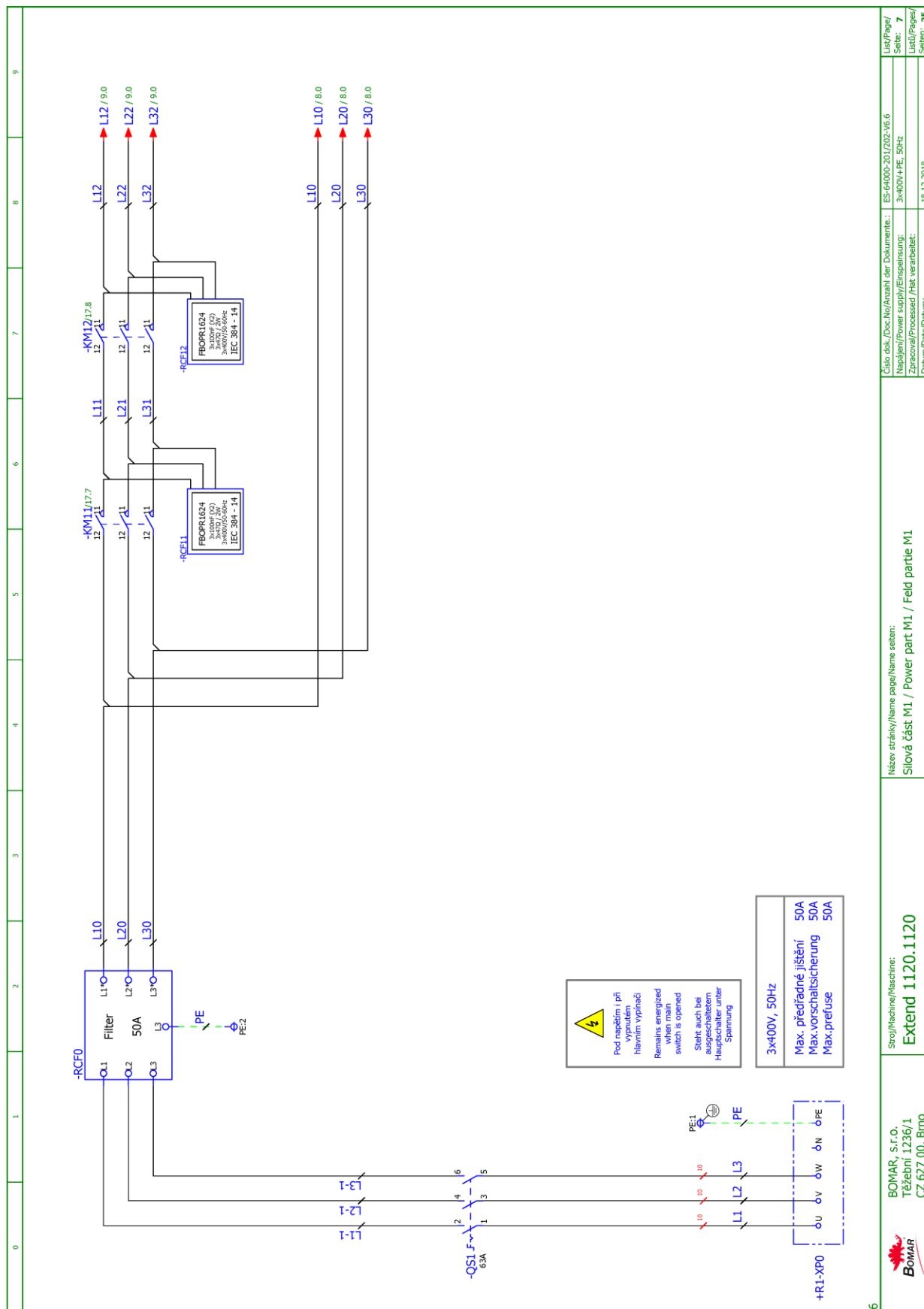
Pohled ze spodní/From under view/Blick nach

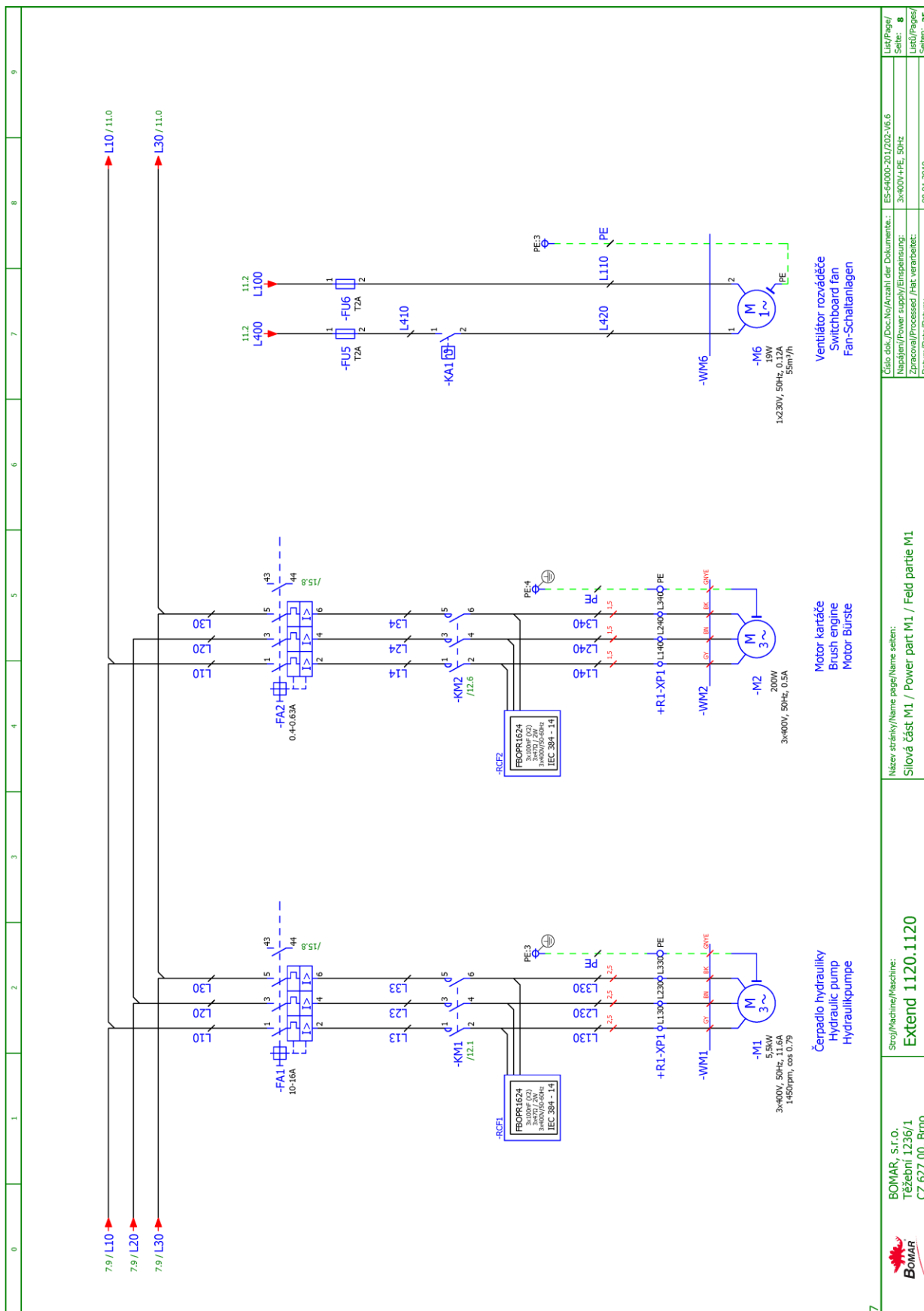


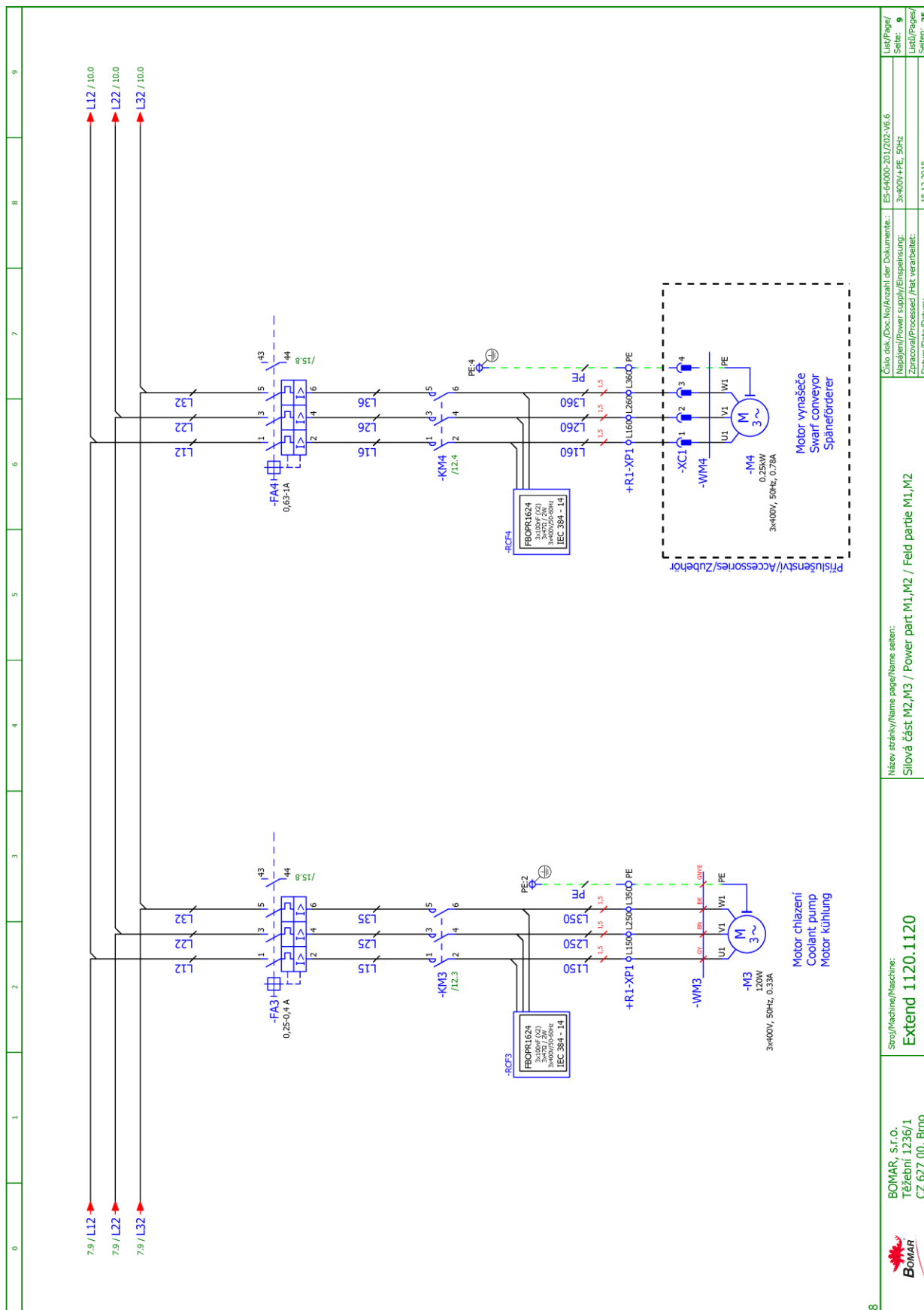


 BOMAR, s.r.o. Těžební 1226/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Rozmístění prvků v rozvaděči R1 Placement of elements in enclosure R1/ Platzierung der Elemente im Schaltschrank R1	Cílo dok./Doc.No./Anzahl der Dokumente.: ES-64000-201/202-V6.6 Nápis/Power supply/Einspeisung: 3x400V+PE 50Hz List/Lists/Listen: Zpracováno/Processed /Fikt. verarbeitet: Datum/Date/Datum: 18.12.2018	List/Page/Seite: 5 List/Lists/Listen: 25
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+OP1									
Stroj/Machine/Maschine: Extend 1120.1120			Název stránky/Name page/Name seiten: Ovládací panel na rozvaděči / Control panel / Bedienpult			Číslo dok./Doc.No./Anzahl der Dokumente.: ES-6400-201/202-V6.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracování/Processed /Hat verarbeitet: 21.03.2016 Datum/Date/Datum:			
BOMAR, s.r.o., Těžební 1236/1 CZ 627 00, Brno			Příslušenství/Accessories/Zubehör			List/Page/ Seite: 6 List/Page/ Seite: 25			



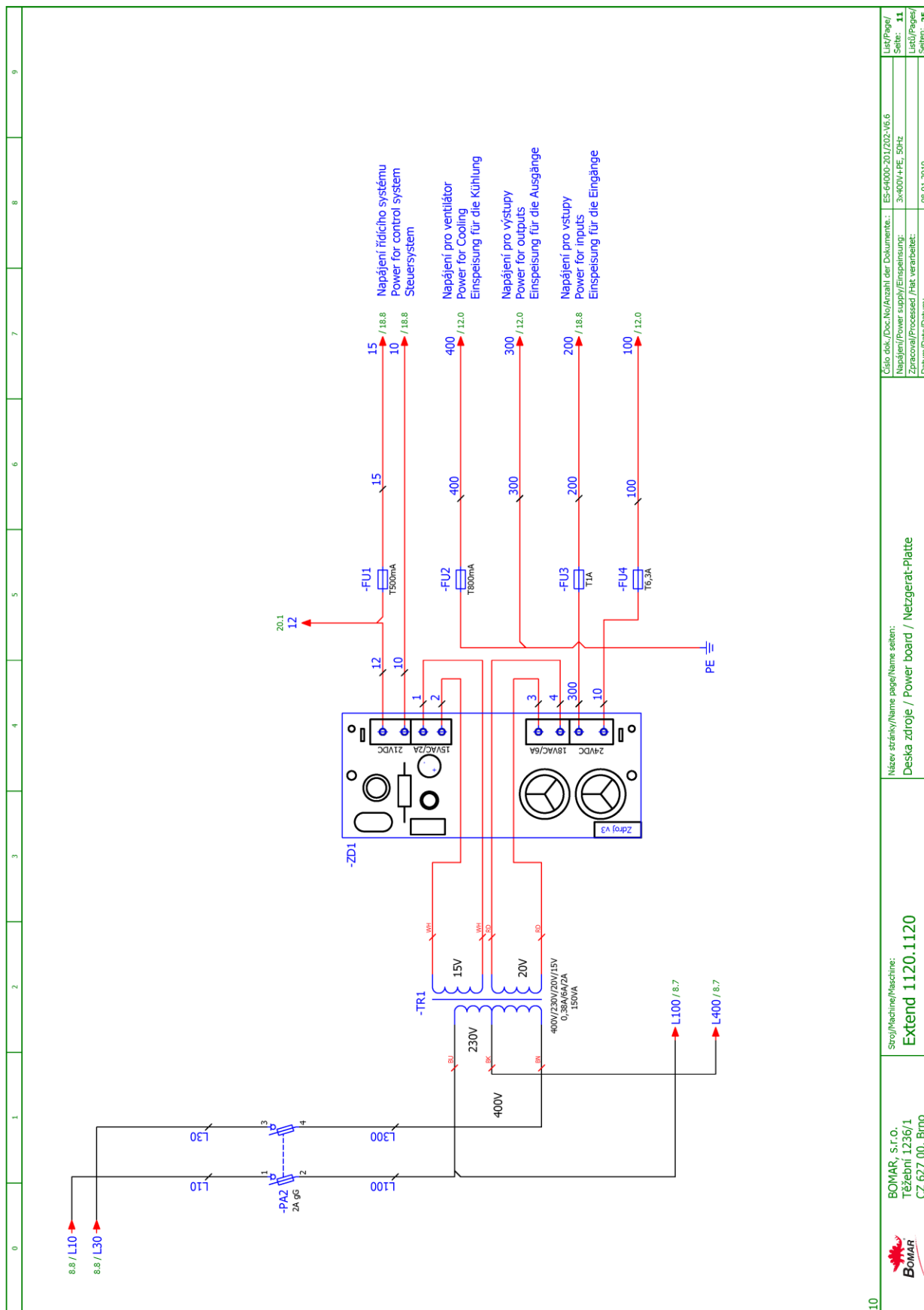




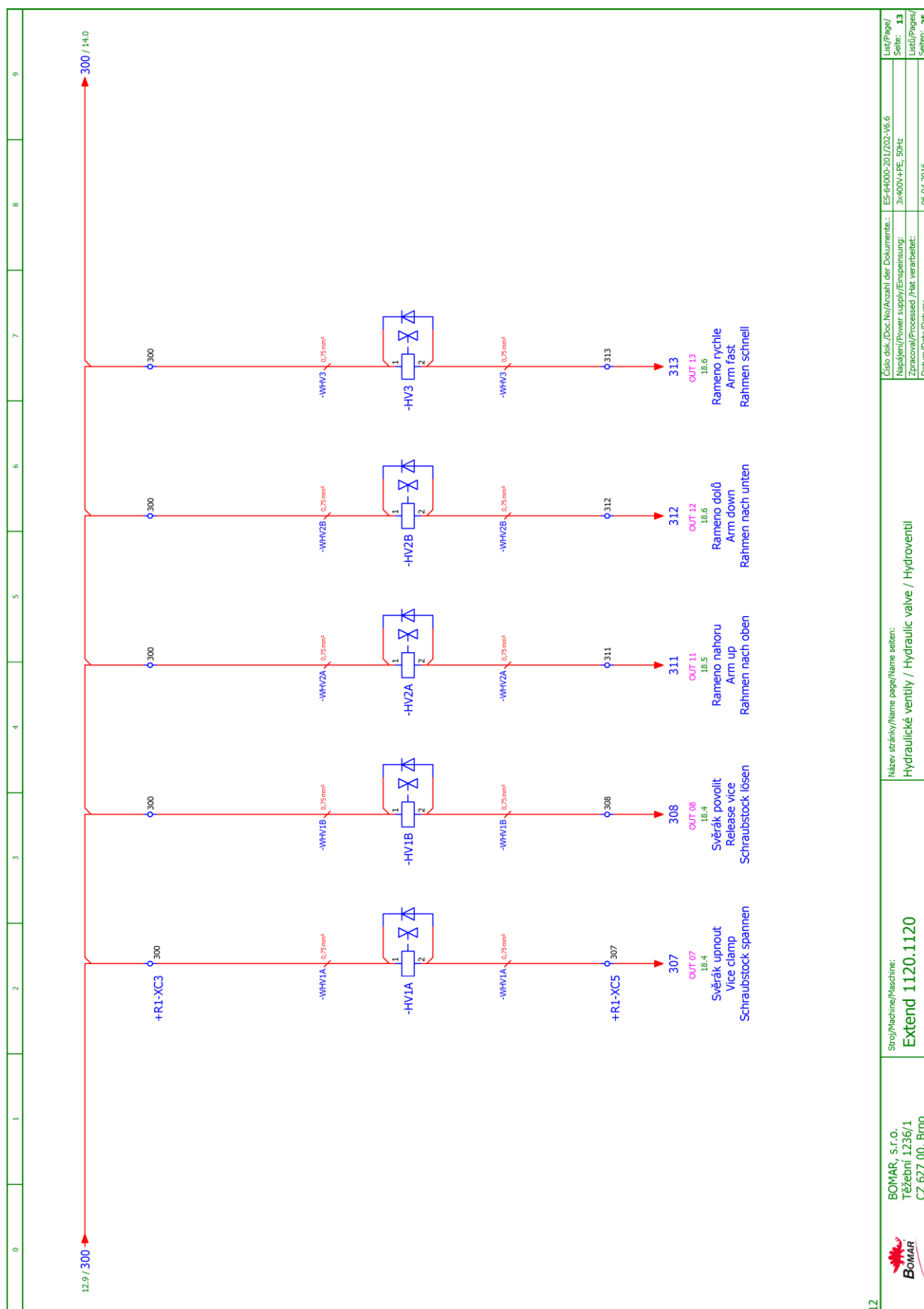
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	Extend 1120.1120		Silová část M2,M3 / Power part M1,M2 / Feld parte M1,M2		ES-6400-201/202-16.6		9	
					Napájení/Power supply/Einspeisung:		3x400V+PE, 50Hz	
					Zpracování/Processed /Fert verarbeitet:		18.12.2018	



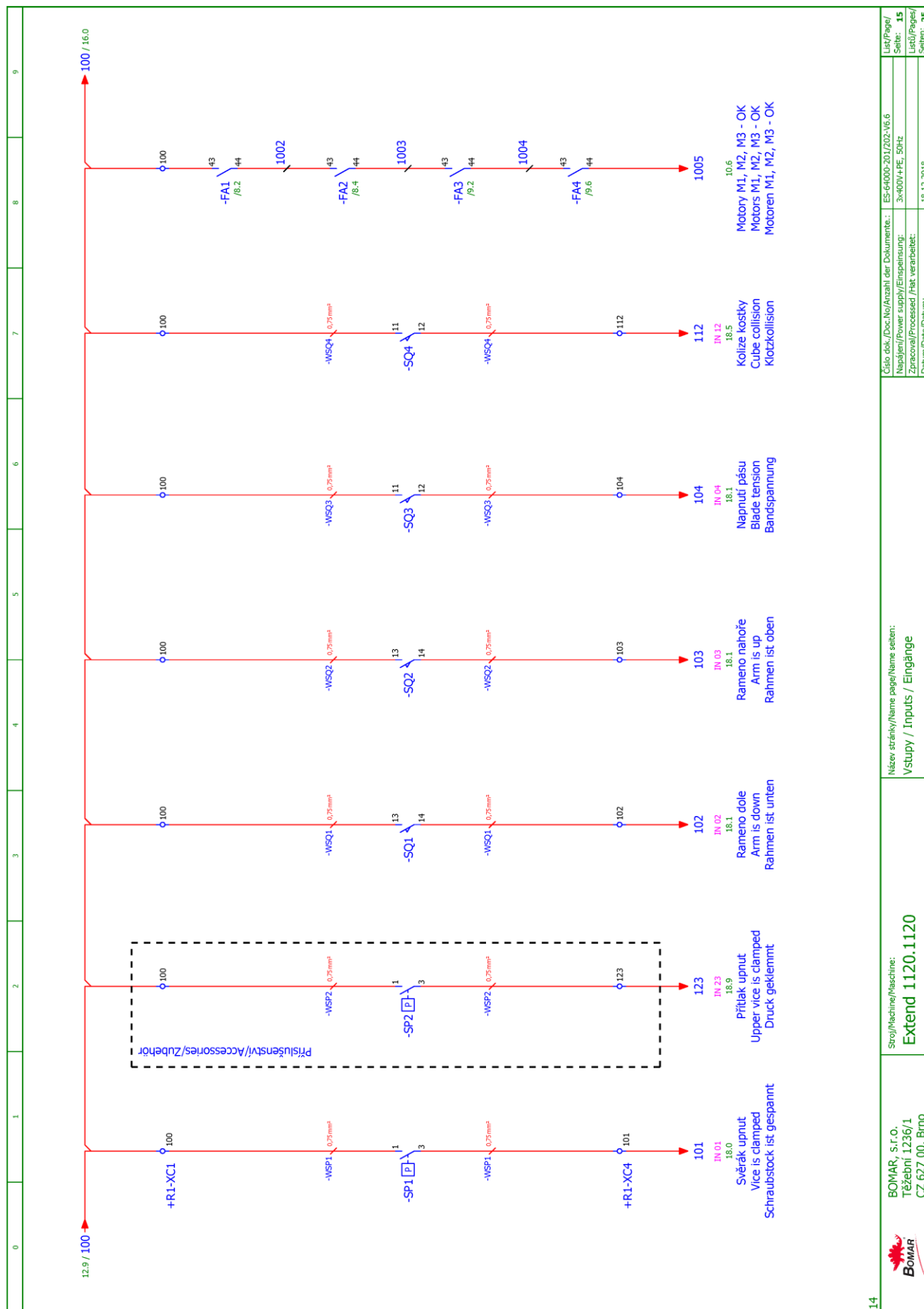
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				Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz
			Zpracováno/Processed /Nat. verarbeitet: Datum/Date/Datum:	List/Page/ Seite:
				List/Page/ Seite:



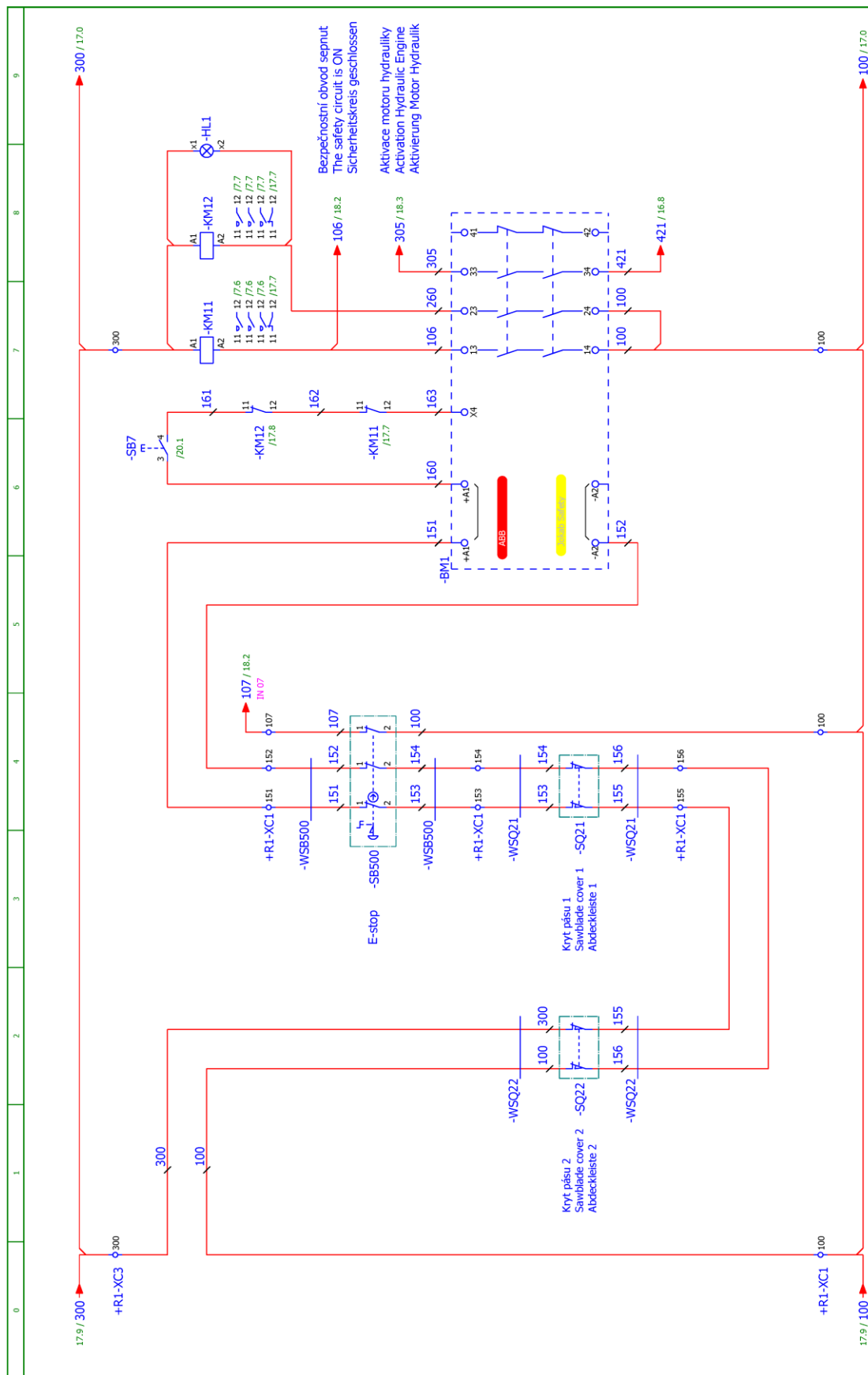












16	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Name seiten: Bezpečnostní okruh / Safety circle / Sicherheitsbereich	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-201/202-16.6 Napájení/Power supply/Einspeisung: 3x400V+PE, 50Hz Zpracování/Processed /Hat verarbeitet: 08.01.2019	List/Page/ Seite: 17 List/Page/ Seite: 25
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6.2. Elektrické schema /
Elektroschema /
Electric scheme – 3×230 V, PE, 50 Hz

0	1	2	3	4	5	6	7	8	9	
 Extend 1120.1120 ES-64000-203-V6.4 Wiring diagram 3x230V+PE, 50Hz Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic										
 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno			Scroj/Machine/Machine: Extend 1120.1120			Název stránky/Name page/Name seite: Úvodní strana / Start page / Startseite			Číslo dok./Doc. kof./Zahl der Dokumente.: ES-64000-203-V6.4 Napájení/Power supply/Einspeisung: 3x230V + PE, 50Hz Zpracování/Processed /Par. verarbeitet: Kotka List/Page/Seite: 1 List/Page/Seite: 1	

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2	Obsah/ Table of contents/ Inhaltsverzeichnis	6.4.2016
3	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.a	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.b	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.c	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.d	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.e	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
3.f	Kusovník artiklů / Parts list / Artikelstückliste	21.3.2016
4	I/O řídicí systém / I/O Control station / I/O Steuerung	16.3.2016
5	Rozmístění prvků v rozvaděči R1 / Placement of elements in enclosure R1 / Platzierung der Elemente im Schaltschrank R1	21.3.2016
6	Ovládací panel na rozvaděči / Control panel / Bedienpult	21.3.2016
7	Silová část / Power part / Feld partie	21.3.2016
8	Silová část M1, M2, M6 / Power part M1, M2, M6	21.3.2016
9	Silová část M3, M4 / Power part M3, M4 / Feld partie M3, M4	21.3.2016
10	Silová část M5 / Power part M5 / Feld partie M5	21.3.2016
11	Deska zdroje / Power board / Netzgerät-Platte	6.4.2016
12	Stykače motorů, M5 / Motor contactor, M5 / Motor-Schutzschalter, M5	6.4.2016
13	Hydraulické ventily / Hydraulic valve / Hydroventil	6.4.2016
14	Hydraulické ventily / Hydraulic valve / Hydroventil	21.3.2016
15	Vstupy / Inputs / Eingänge	6.4.2016
16	Tlačítka ovládací panel / Button control panel / Taste Bedienpult	21.3.2016
17	Bezpečnostní okruh / Safety circle / Sicherheitsbereich	21.3.2016
18	Řídicí systém / Control system / Steuersystem	6.4.2016
19	Snímač výšky ramene / Arm height sensor / Arm Höhensensor	21.3.2016
20	Příslušenství / Accessories / Zubehör	21.3.2016

	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Scio/Machine/Machine: Extend 1120.1120	Název stránky/Page name/Name seiten: Obsah/ Table of contents/ Inhaltsverzeichnis	Cílo dok./Doc.No./Anzahl der Dokumente: Napájení/Power supply/Einspeisung: Zpracování/Processed /Hr. verarbeitet: Datum/Date/Datum:	ES-6400-203-V6.4 3x230V+PE, 50-Hz Kódka 6.4.2016	LH/Page/ Seite: 2 List/ Pages/ Seiten: 26
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The manufacturer reserves right to use an equivalent replacement device.

	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stránka/Machine: Extend 1120.1120	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente:		ES-6400-203-V6.4	UK/Page/
				Napájení/Power supply/Einspeisung:		3x230V + PE, 50-Hz	Seite: 3
				Zpracování/Processed /Hr. verarbeitet:		Kódka	Lib./Pages/
				Datum/Date/Datum:		21.3.2016	Seite: 26

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
-RCF3	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Viček	91.041.015	1	/9.1
-RCF4	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Viček	91.041.015	1	/9.5
-RCF11	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Viček	91.041.015	1	/7.5
-RCF12	Filtr RFC vývodový Effluent RFC filter Ableitenden RFC Filter	FBOPR1624	Ing. Miroslav Viček	91.041.015	1	/7.7
-FA1	Motorový spouštěč - 25A Motor starter - 25A Motorstarter - 25A	MS116-25	ABB	91.045.056	1	/8.2
-FA1	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/8.2
-FA2	Motorový spouštěč - 1A Motor starter - 1A Motorstarter - 1A	MS116-1,00	ABB	91.045.019	1	/8.4
-FA2	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/8.4
-FA3	Motorový spouštěč - 0.63A Motor starter - 0.63A Motorstarter - 0.63A	MS116-0.63	ABB	91.045.018	1	/9.2
-FA3	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/9.2
-FA4	Motorový spouštěč - 1.6A Motor starter - 1.6A Motorstarter - 1.6A	MS116-1,6	ABB	91.045.020	1	/9.6
-FA4	Pomocné kontakty - 1xNO+1xNC Auxiliary contacts - 1xNO+1xNC Hilfskontakte - 1xNO + 1xNC	HK1-11	ABB	91.046.005	1	/9.6

The manufacturer reserves right to use an equivalent replacement device.

	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stránka/Machine: Extend 1120.1120	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelstückliste	Cílová adresa/Dok. No./Anzahl der Dokumente: ES-6400-203-v6.4 Napájení/Power supply/Einspeisung: 3x230V+PE, 50Hz Zpracování/Processed /Hr. verarbeitet: Kódka Datum/Date/Datum: 21.3.2016	LH/Page/ Seite: 3.a List/Pages/ Kódka Seiten: 26
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The manufacturer reserves right to use an equivalent replacement device.

3.a	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/machine/machine: Extend 1120.1120	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-203-V6.4	LH/Page/ Seite: 3.b
				Nápisání/Power supply/Einspeisung: 3x230V+PE, 50Hz	Lib./Pages/ Kodex
				Zpracování/Processed /Hr. verarbeitet: 21.3.2016	Seiten: 26

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
-KM11	Stykač - 18.5kW/400V, 3P Contactor - 18.5kW/400V, 3P Schütz - 18.5kW/400V, 3P	AF38-30-00-11	ABB	91.040.059	1	/17.7
-KM11	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/17.7
-KM12	Stykač - 18.5kW/400V, 3P Contactor - 18.5kW/400V, 3P Schütz - 18.5kW/400V, 3P	AF38-30-00-11	ABB	91.040.059	1	/17.8
-KM12	Pomocný kontakt - 1xNC Auxiliary contact - 1xNC Hilfskontakt - 1 xNC	CA4-01	ABB	91.041.043	1	/17.8
-PA1	Pojistkový odpojovač E-930 - 3P Fuse breaker E-930 - 3P Lasttrennschalter E-930 - 3P	E 933/50	ABB	91.241.015	1	/10.2
-PA2	Pojistkový odpojovač E-90 - 2P Fuse disconnector E-90 - 2P Sicherungstrenner E90 - 2P	E 92/32	ABB	91.241.013	1	/11.1
-QS1	3 pólový odpínač, 80A Disconnector - 3P, 80A Trenner - 3P, 80A	OTS0FT3	ABB	91.170.111	1	/7.0
-QS1	Rukojeť odpínače - černá Handle switch - black Griffschalter - schwarz	OHBS2RJ	ABB	91.180.015	1	/7.0
-QS1	Kryt svorek Terminal shroud Klemmenabdeckung	OTS63T3	ABB	91.170.024	1	/7.0
-RP1	Svorka rychloupínací Fastconnect clamp Fast Connect Klemm	WAGO 224-112	WAGO	91.250.009	3	/10.6
-SB1	Hlavice prosvětleného tlačítka zelená Green transparent switch Grün transparent Schalter	M22-DL-G	EATON	91.060.031	1	/16.0
-SB1	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/16.0

The manufacturer reserves right to use an equivalent replacement device.

3.b	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stránka/Machine: Extend 1120.1120	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-203-v6.4 Nápis/Power supply/Einspeisung: 3x230V+PE, 50Hz Zpracoval/Processed /Hr. verarbeitet: Kodba Datum/Date/Datum: 21.3.2016	LH/Page/ Seite: 3.c List/Page/ Kodba Seiten: 26
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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
-SB2	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/16.1
-SB2	Hlavice tlačítka - černá Head button - black Kopflaste - schwarz	M22-D-S	EATON	91.060.035	1	/16.1
-SB3	Hlavice 3 položového přepínače Head of 3 position switch Leiter der 3-Positionsschalter	M22-WRK3	EATON	91.060.051	1	/16.2
-SB3	Kontaktní blok - INO Contact block - INO Kontaktblock - INO	M22-K10	EATON	91.061.022	1	/16.2
-SB3	Upevňovací adaptér + INO Attaching adapter + INO Montageadapter + INO	M22-AK10	EATON	91.061.021	1	/16.2
-SB500	Total stop - hlavice + 3xNC Emergency-stop mushroom push - button + 3xNC Not-Aus-Pilz - Taster + 3 xNC	YW1B-VAE02R	IDEC	91.060.084	1	/17.4
-SB500	Kontakt - 1x NO Contact - 1x NO Kontakt - 1x NO	YW-E10	IDEC	91.061.044	1	/17.4
-TR1	Toroidální transformátor - 0-230-400V/20V/15V, 150VA Toroidal transformer - 0-230-400V/20V/15V, 150VA Ringkerntransformator - 0-230V-400V/20V/15V, 150VA	400V/230V/20V/15V 6A/2A 150VA	KARBAN s.r.o.	91.080.026	1	/11.2
=OP1-HL1	Signálka zelená na adaptér Green light for Eaton adapter Grünes Licht für Eaton-Adapter	M22-LED-G	EATON	91.061.023	1	/14.8
-SQ21	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/17.4
-SQ22	Bezpečnostní koncový spínač - 2xNC Safety Limit Switch - 2x NC Sicherheitsendschalter - 2x NC	QKS8	KEDU	91.173.012	1	/17.2
-PA1	Pojistka válcová - 50A, 14x51mm, rychlá Cylindrical fuse - 50A, 14x51mm, fast Zylindersicherungs - 50A, 14x51mm, schnell	PV14 50A 9G	OEZ	91.230.023	1	/10.2

The manufacturer reserves right to use an equivalent replacement device.

3.c	BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Scrip/Machine/Machine: Extend 1120.1120	Název stránky/Name page/Name sheet: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente: ES-6400-203-V6.4		LUK/Page/
				Napájení/Power supply/Einspeisung: 3x230V+PE, 50-Hz		Seite: 3.d
				Zpracování/Processed /Hr. verarbeitet: Kódka		Lib./Pages/
				Datum/Date/Datum: 21.3.2016		Seite: 26

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 - 2A, 10x38, pomalá Tube fuse - 2A, 10x38, slow Rohrsicherung - 2A, 10x38, langsam	PV10 2A gG	OEZ	91.230.034	2	/11.1
-SQ1	Koncový spínač - 1NC+1NO Limit switch - 1NC+1NO Endschalter - 1NC+1NO	D4N-4A31	OMRON	91.173.007	1	/15.3
-SQ2	Koncový spínač - 1NC+1NO, M20 Limit switch - 1NC+1NO, M20 Endschalter - 1NC+1NO, M20	D4N-4A62	OMRON	91.173.008	1	/15.5
-SQ3	Koncový spínač - 1NC+1NO, M20, pomalý Limit switch - 1NC+1NO, M20, slow Endschalter - 1NC+1NO, M20, langsam	D4N-4A32	OMRON	91.173.010	1	/15.6
-SQ4	Koncový spínač - 1NO + 1NC Limit switch - 1NO + 1NC Endschalter - 1NO + 1NC	FR 555-M2	PIZZATO	91.173.018	1	/15.7
-FM1	Frekvenční měnič - 11KW/ 3x400V Frequency converter - 11KW/ 3x400V Frequenzumrichter - 11KW/ 3x400V	VFD110E43A	ProfCom s.r.o.	91.012.119	1	/10.2
-M6	Ventilátor s filtrační vložkou Fan with filter cartridge Lüfter mit Filterpatrone	3238.100	Rittal	91.015.134	1	/8.7
-M6	Mřížka ventilátoru Fan grid Lüftergitter	3238.200	Rittal	91.015.135	1	/8.7
-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	/8.7
-SB7	Hlavice prosvětleného tlačítka žlutá The button head backlit yellow Der Knopf Kopf von hinten beleuchtet gelb	ZB5AW35	TELEMECANIQUE	91.060.023	1	/17.6
-CU1	Řídicí obvod Control circuit Die Steuerung	PRO-5.X	Bomar	91.995.221	1	/18.0

The manufacturer reserves right to use an equivalent replacement device.

3.d	BOMAR, s.r.o. Těšební 1256/1 CZ 627 00, Brno	Scroj/Machine/Maschine: Extend 1120.1120	Název stránky/Name page/Namen seiten: Kusovník artiklů / Parts list / Artikelstückliste	Číslo dok./Doc.No./Anzahl der Dokumente.: ES-6400-203-V6.4 Napájení/Power supply/Einspeisung: 3x230V + PE, 50-Hz Zpracování/Processed /Fert. verarbeitet: Kódka Datum/Date/Datum: 21.3.2016	Úkl./Page/ Seite: 3.e List./Pages/ Seiten: 26
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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		Umístění Location Stelle
-M7	Ventilátor 24VDC, 154CFM Fan 24VDC, 154CFM Fan 24VDC, 154CFM		RDH1238 B2		Xinruilian Electronic Co.		91.015.126		/12.8

The manufacturer reserves right to use an equivalent replacement device.



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

Scroj/Machine/Machine:
Extend 1120.1120

Název stránky/Name page/Name seten:
Kusovník artiklů / Parts list / Artikelstückliste

Číslo dok./Doc.No./Anzahl der Dokumente.:
Nápisání/Power supply/Einspeisung:
Zpracování/Processed /Hr. verarbeitet:

ES-6400-203-V6.4
3x230V+PE, 50-Hz
Kódka
21.3.2016

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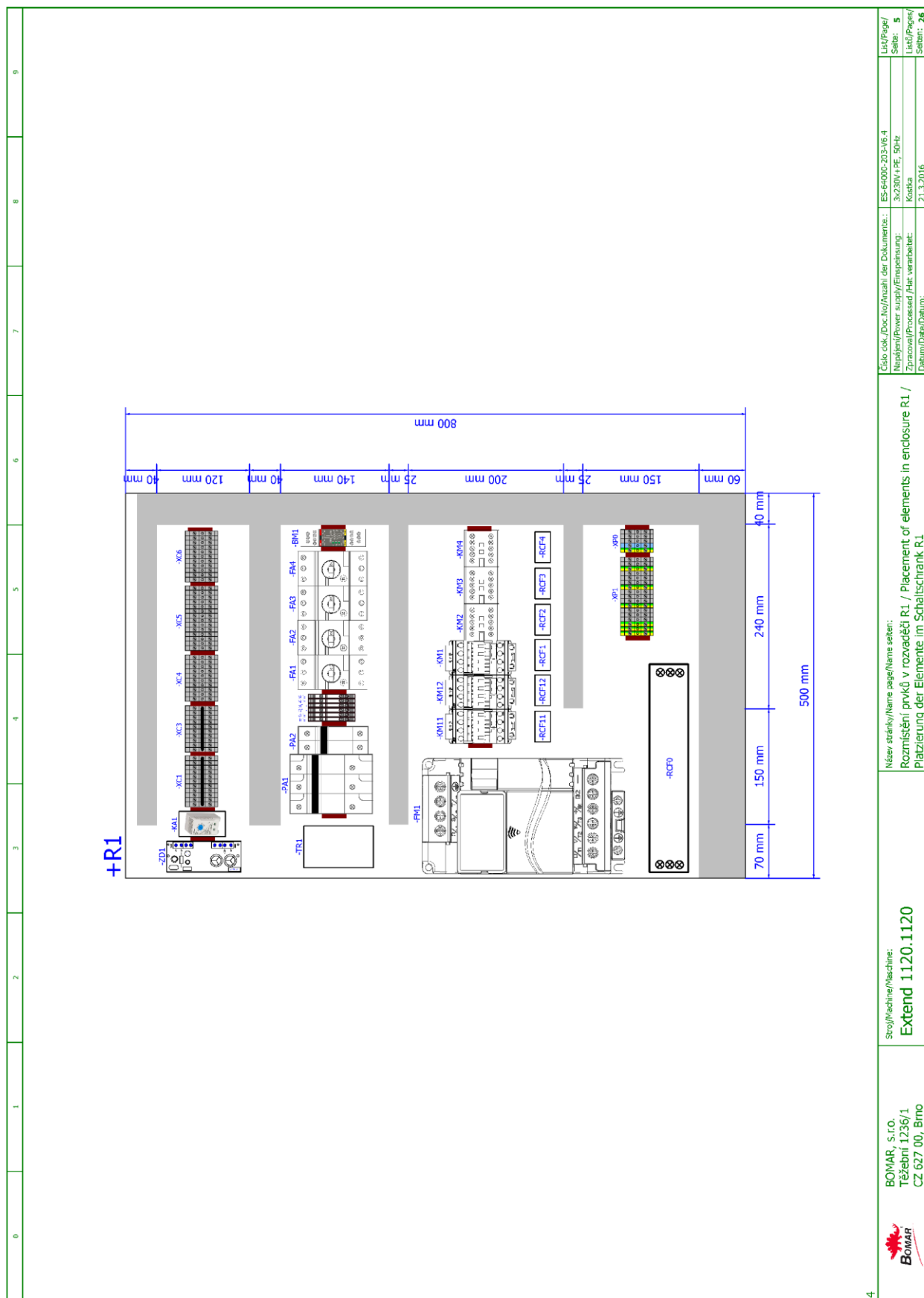
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IN 01	Světlák upnutí	Vice is clamped	Schraubstock ist gespannt
IN 02	Rameno dole	Arm is down	Rahmen ist unten
IN 03	Rameno nahore	Arm is up	Rahmen ist oben
IN 04	Napnutí pásu	Blade tension	Bandspannung
IN 05	Motorů OK	Motors OK	Motoren OK
IN 06	Bezpečnostní okruh uzavřen	Safety circle shut down	Sicherheitsschaltung gesperrt
IN 07	Tlačítko TOTAL STOP	Button TOTAL STOP	Taste TOTAL STOP
IN 08	Tlačítko START	Button START	Taste START
IN 09	Tlačítko STOP	Button STOP	Taste STOP
IN 10	MANUAL	MANUAL	MANUAL
IN 11	CYKLUS	CYCLE	ZYKLUS
IN 12	Kolize kostky	Cube collision	Klotzkoollision
IN 13	NC	NC	NC
IN 14	NC	NC	NC
IN 15	NC	NC	NC
IN 16	NC	NC	NC
IN 17	NC	NC	NC
IN 18	NC	NC	NC
IN 19	Tlačítko napnutí pás	Button band tension	Taste band spannen
IN 20	Tlačítko povolit pás	Button band release	Taste band lösen
IN 21	Tlačítko rameno nahoru	Button arm up	Taste Rahmen nach oben
IN 22	NC	NC	NC
IN 23	Přítlak upnutí	Upper vice is clamped	Oben Schraubstock ist gespannt
IN 24	NC	NC	NC
OUT 01+	Start FM1	Start FM1	Start FM1
OUT 02+	NC	NC	NC
OUT 03+	NC	NC	NC
OUT 04	Motor chlázení	Coolant pump	Motor kühlung
OUT 05	Cerpadlo hydrauliky	Hydraulic pump	Hydraulikpumpe
OUT 06	2. stupeň hydrauliky	Second level of hydraulic pump	Hydraulikpumpe 2. Stufe
OUT 07	Světlák upnutí	Vice clamp	Schraubstock spannen
OUT 08	Světlák povolit	Release vice	Schraubstock lösen
OUT 09	NC	NC	NC
OUT 10	NC	NC	NC
OUT 11	Rameno nahoru	Arm up	Rahmen nach oben
OUT 12	Rameno dole	Arm down	Rahmen nach unten
OUT 13	Rameno rychle	Arm fast	Rahmen schnell
OUT 14	Přítlak upnutí	Upper vice clamp	Oben Schraubstock spannen
OUT 15	Přítlak povolit	Release upper vice	Oben Schraubstock lösen
OUT 16	Napnutí pás	Sawblade tension	Spannen des Sägebandes
OUT 17	Uvolnit pás	Sawblade leave	Entspannen des Sägebandes
OUT 18	Mikronizer	Mikronizer	Mikronizer
OUT 19	Kontrolka start	Indicator start	Kontrolllicht start

Pohléd ze spodu/From under view/Blick nach

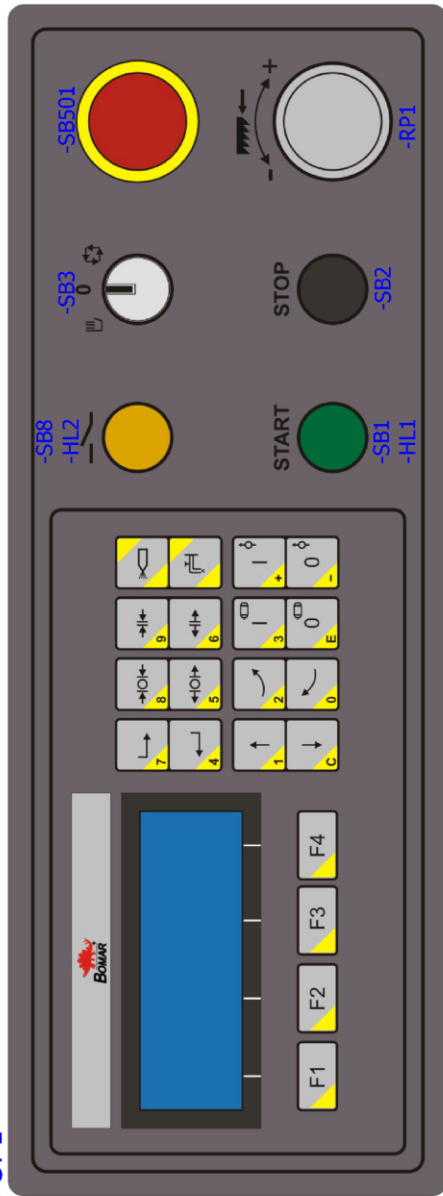
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OUT 01	OUT 02	OUT 03	OUT 04	OUT 05	OUT 06	OUT 07	OUT 08	OUT 09	OUT 10	OUT 11	OUT 12	OUT 13	OUT 14	OUT 15	OUT 16	OUT 17	OUT 18	OUT 19					

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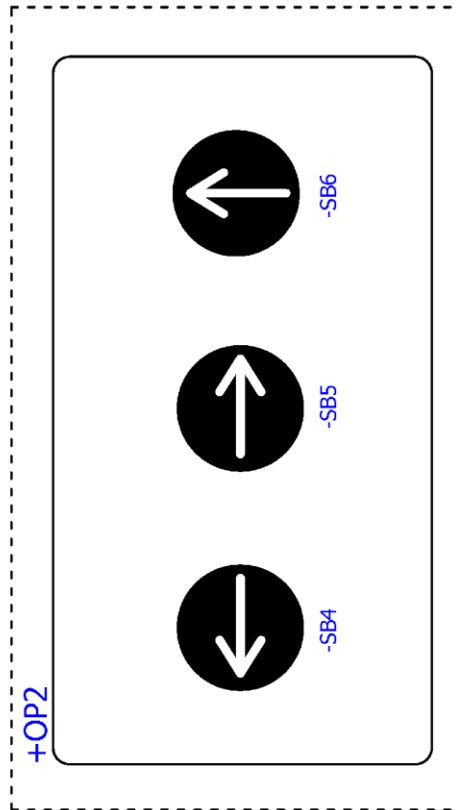
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+OP1



+OP2



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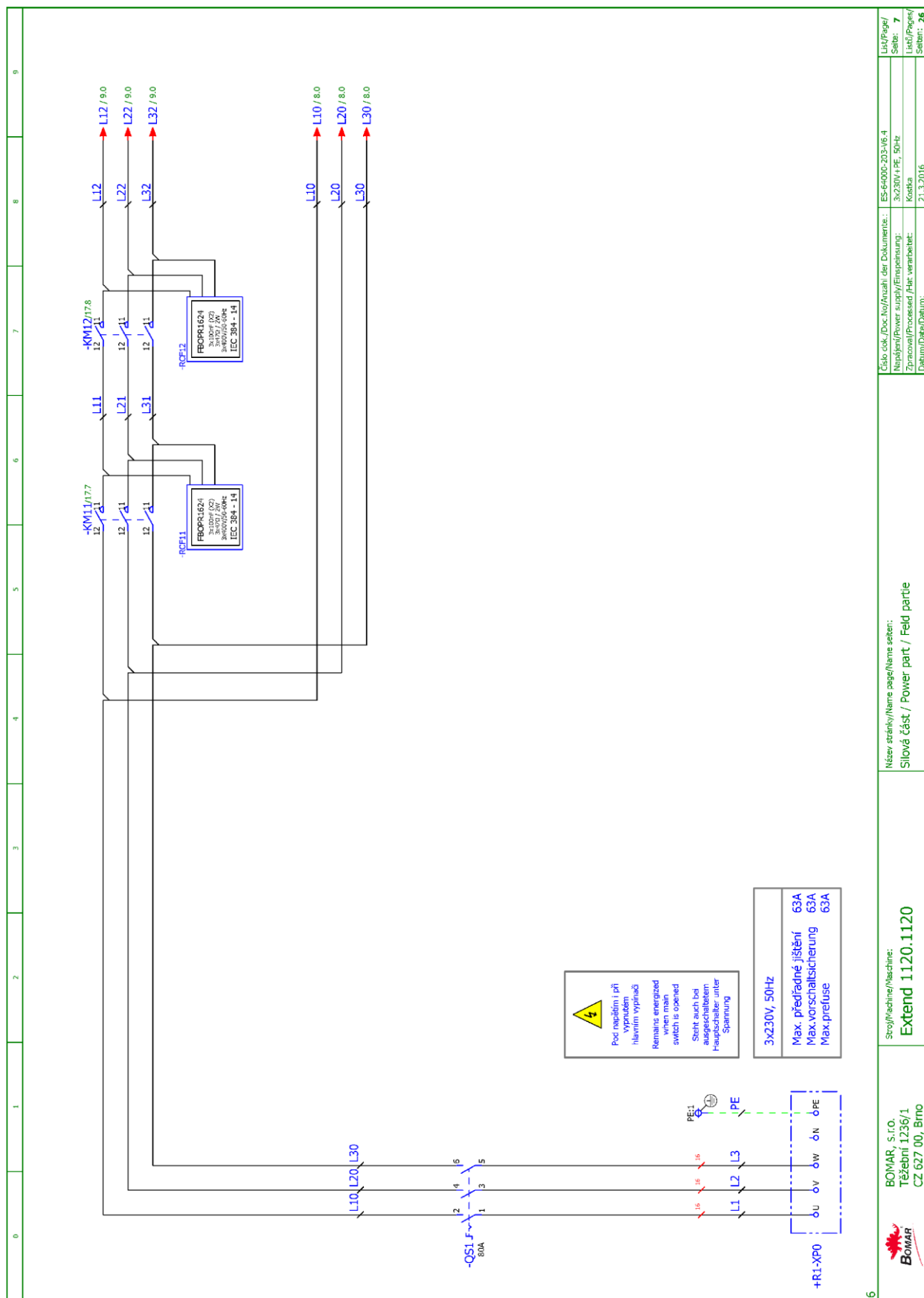
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno

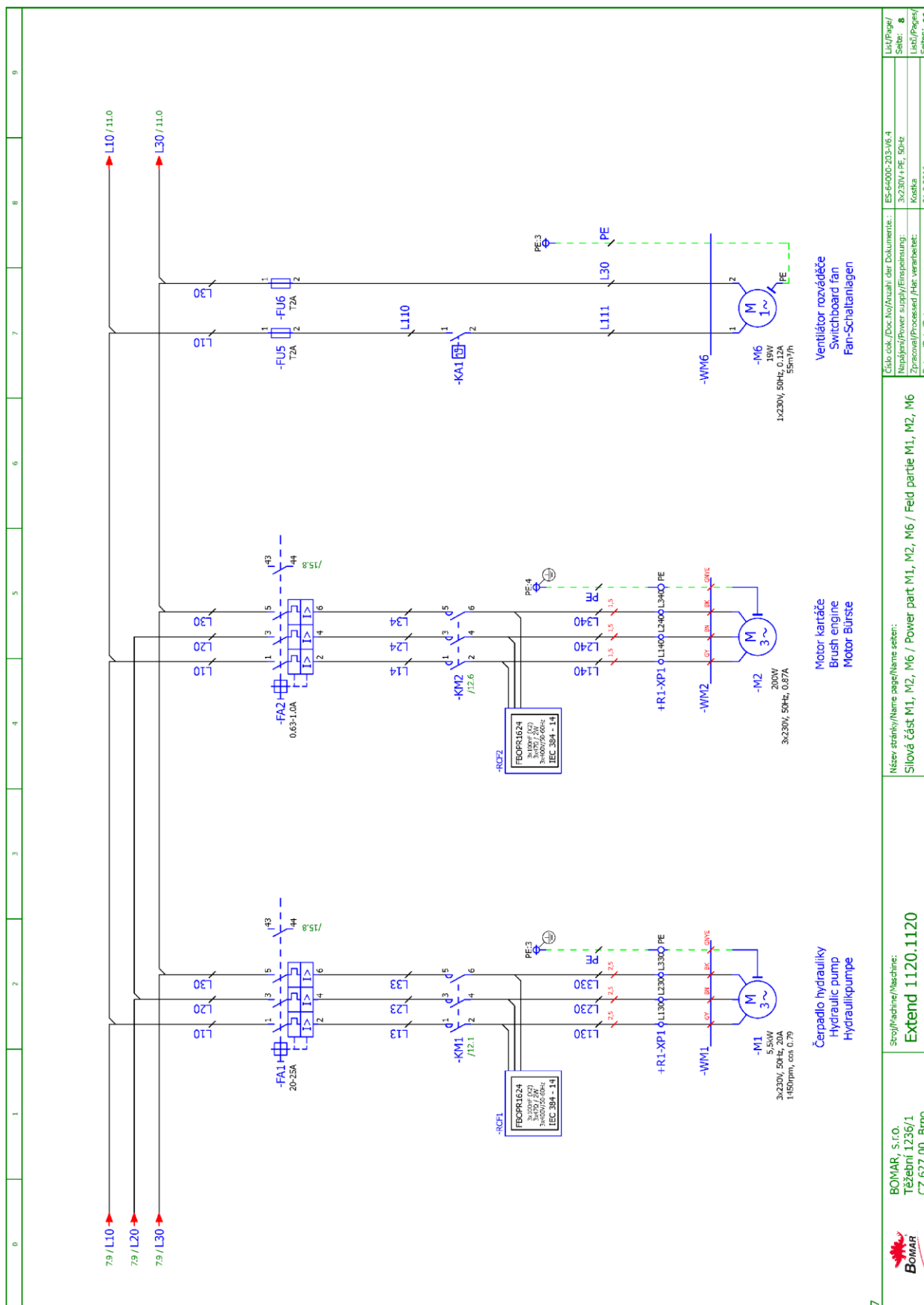
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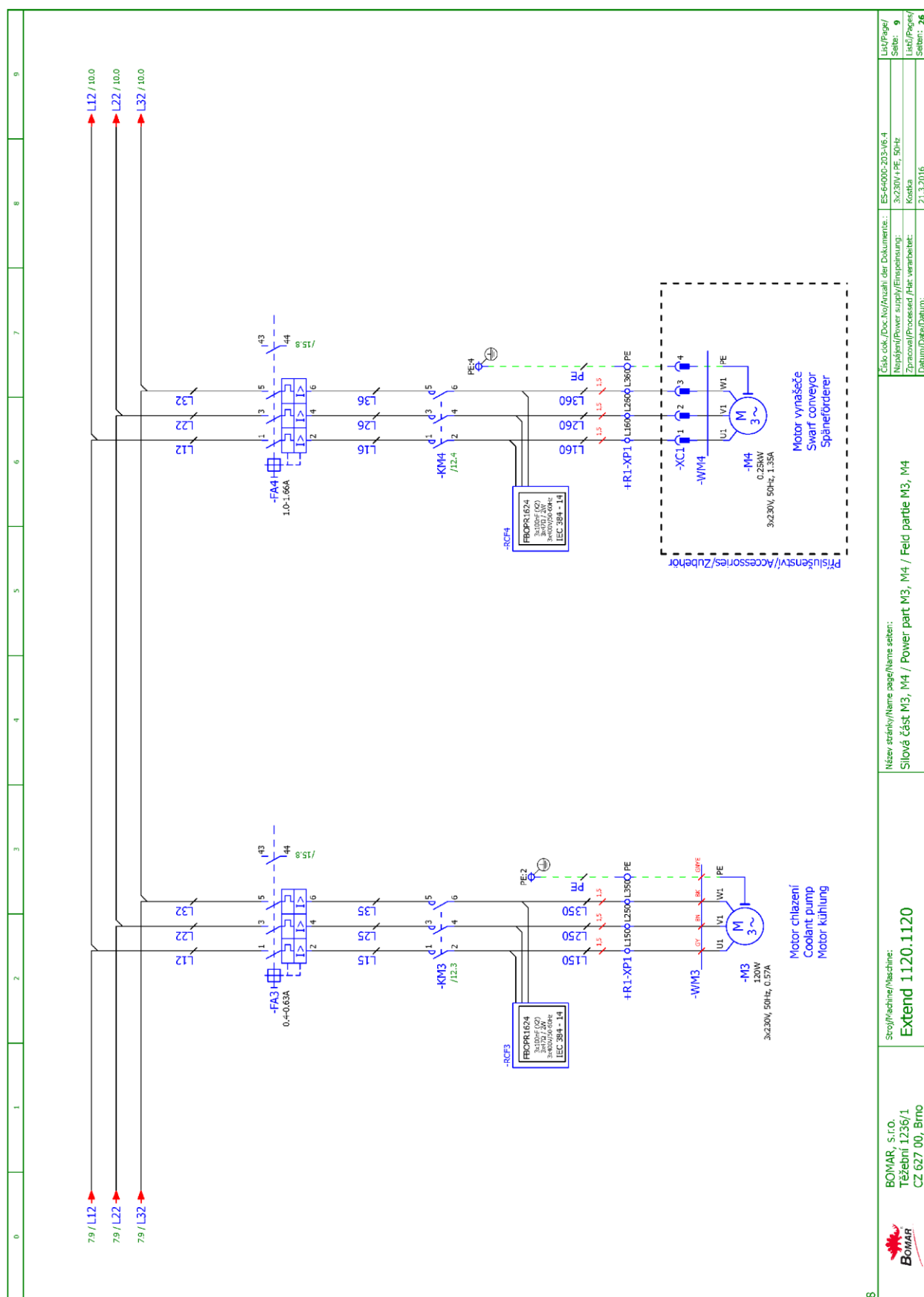
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Celo dok./Doc.No./Anzahl der Dokumente.: ES-6400-203-v6.4
Napájení/Power supply/Einspeisung: 3x230V / PE, 50-Hz
Zpracování/Processed /Her. verarbeitet: Kódka
Datum/Date/Datum: 21.3.2016

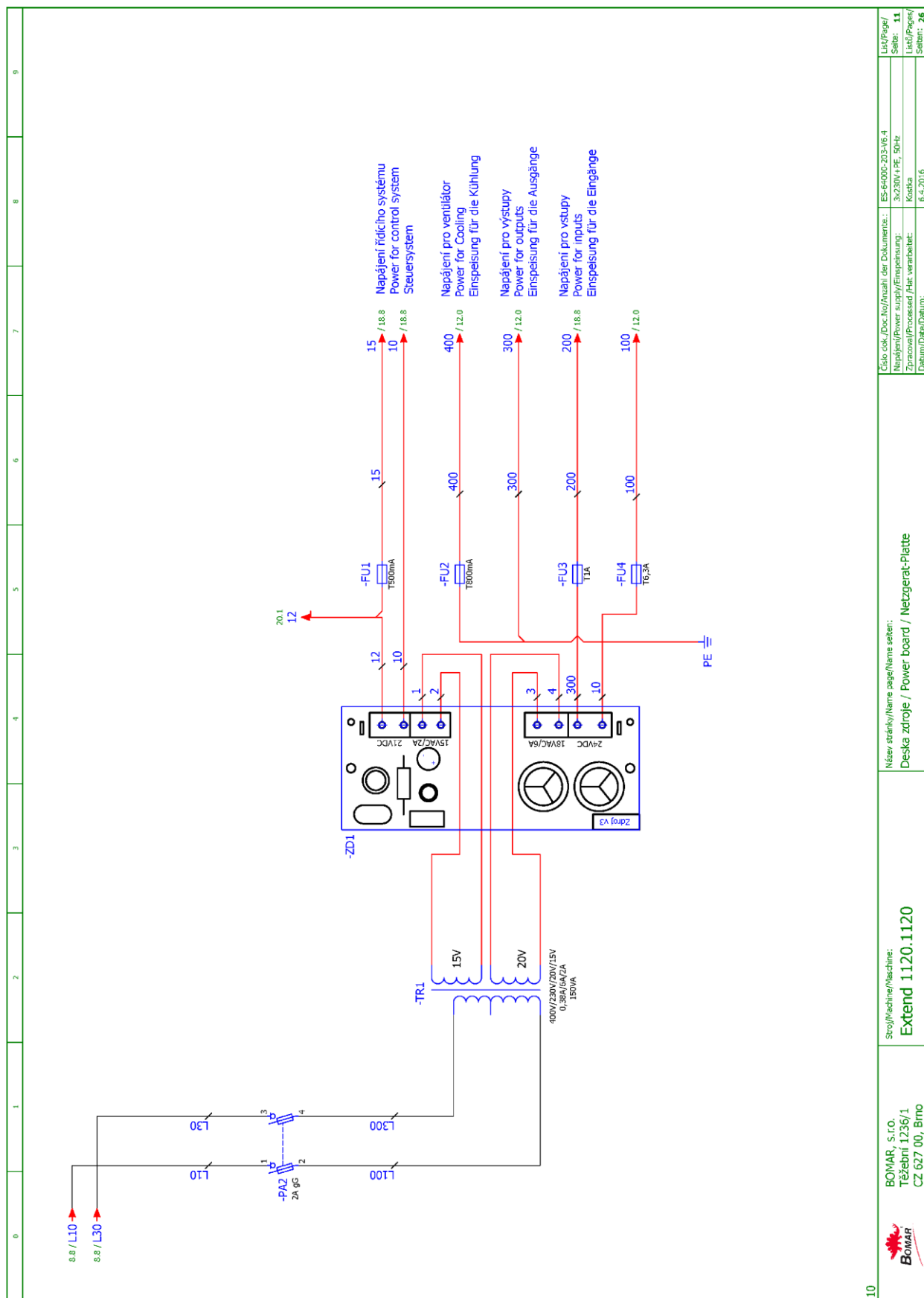
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Seite: 26



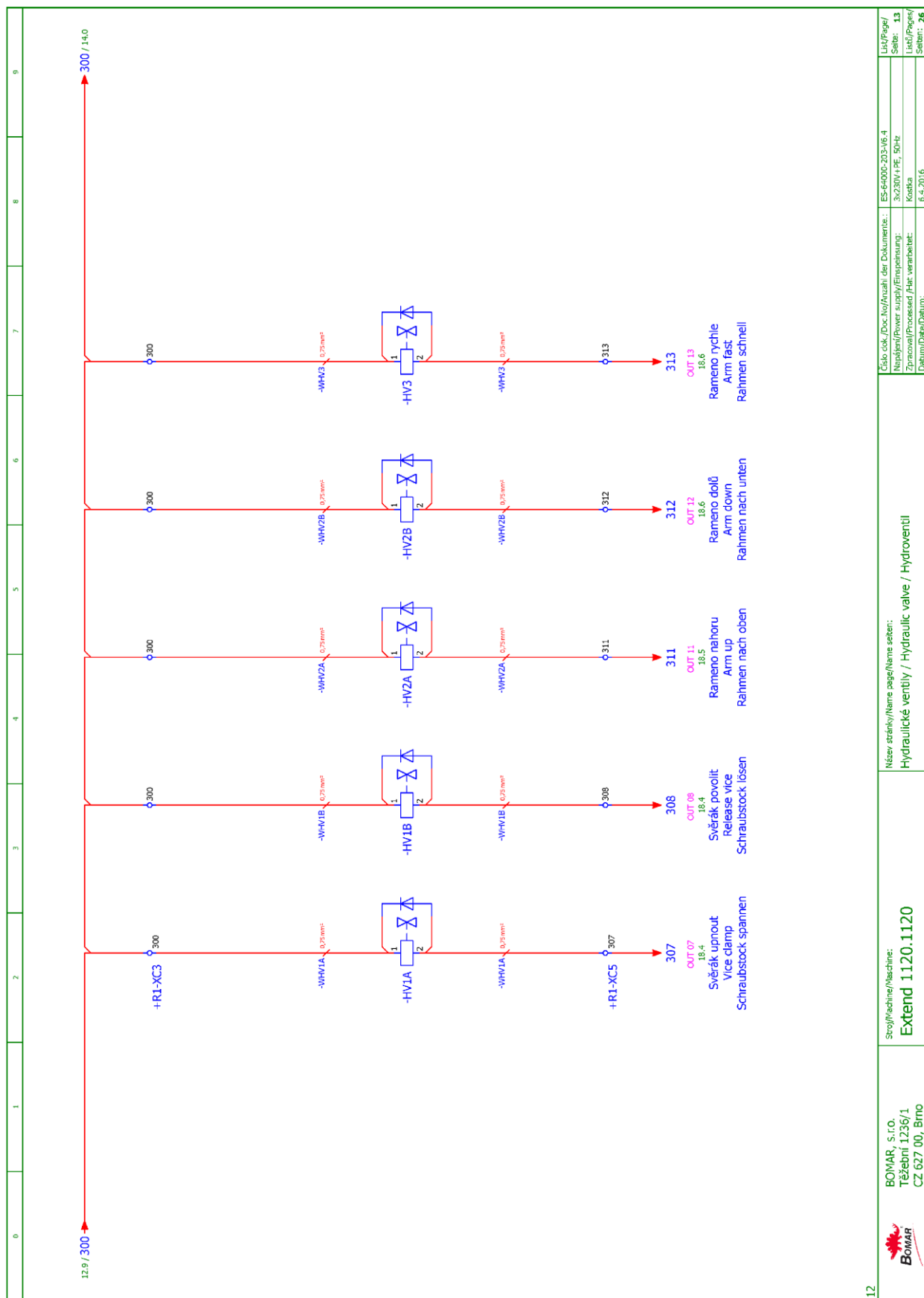




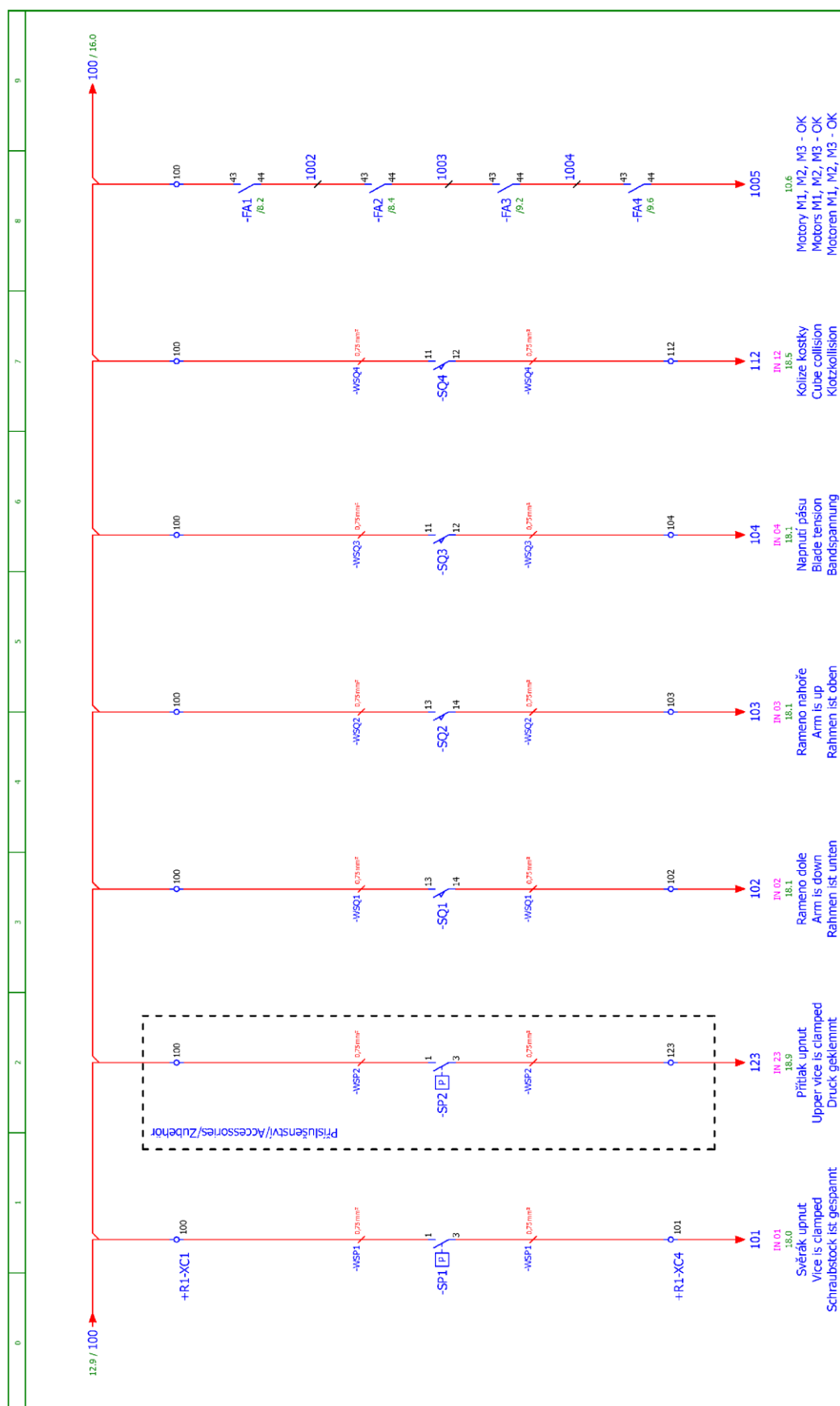




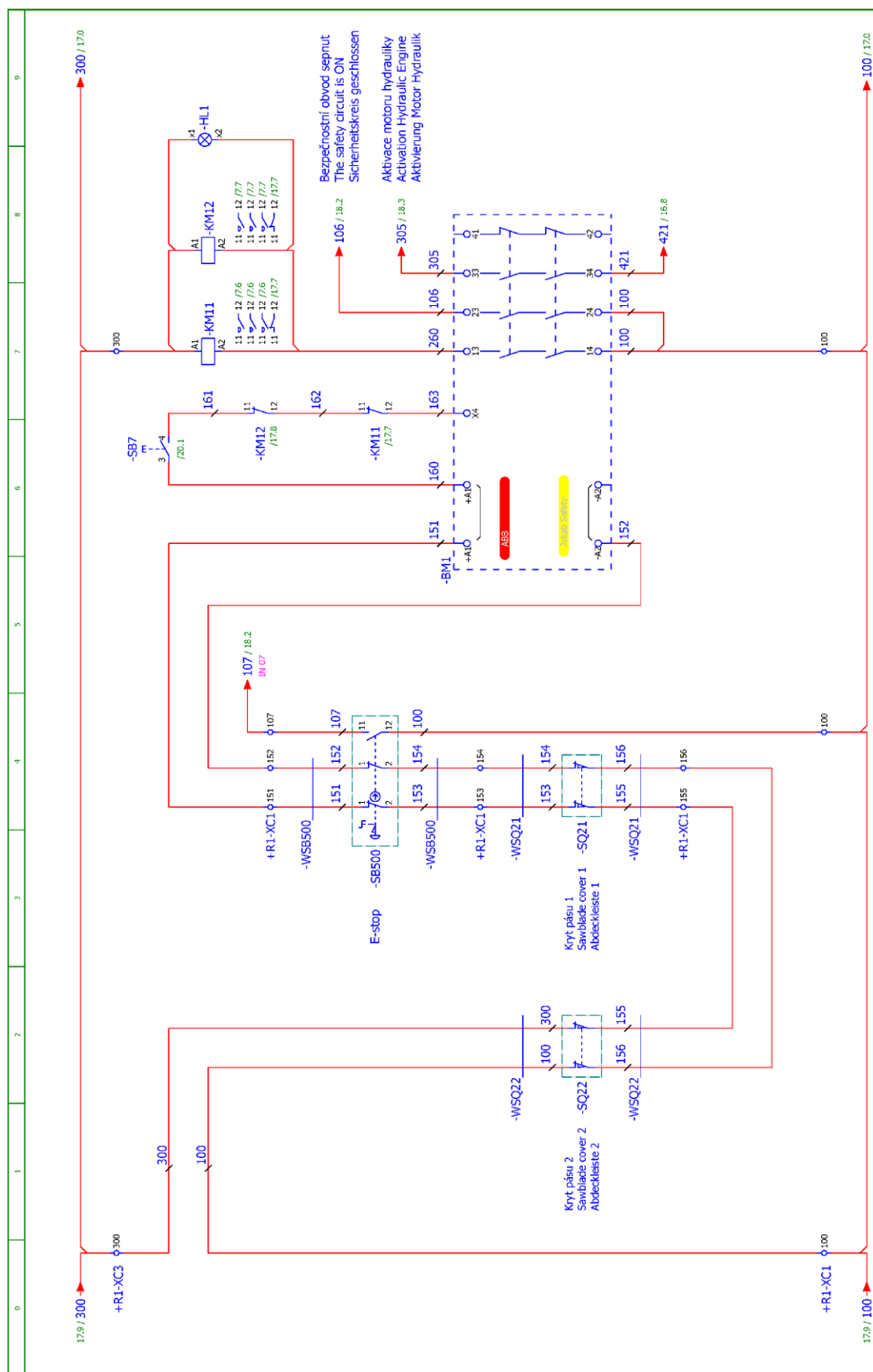


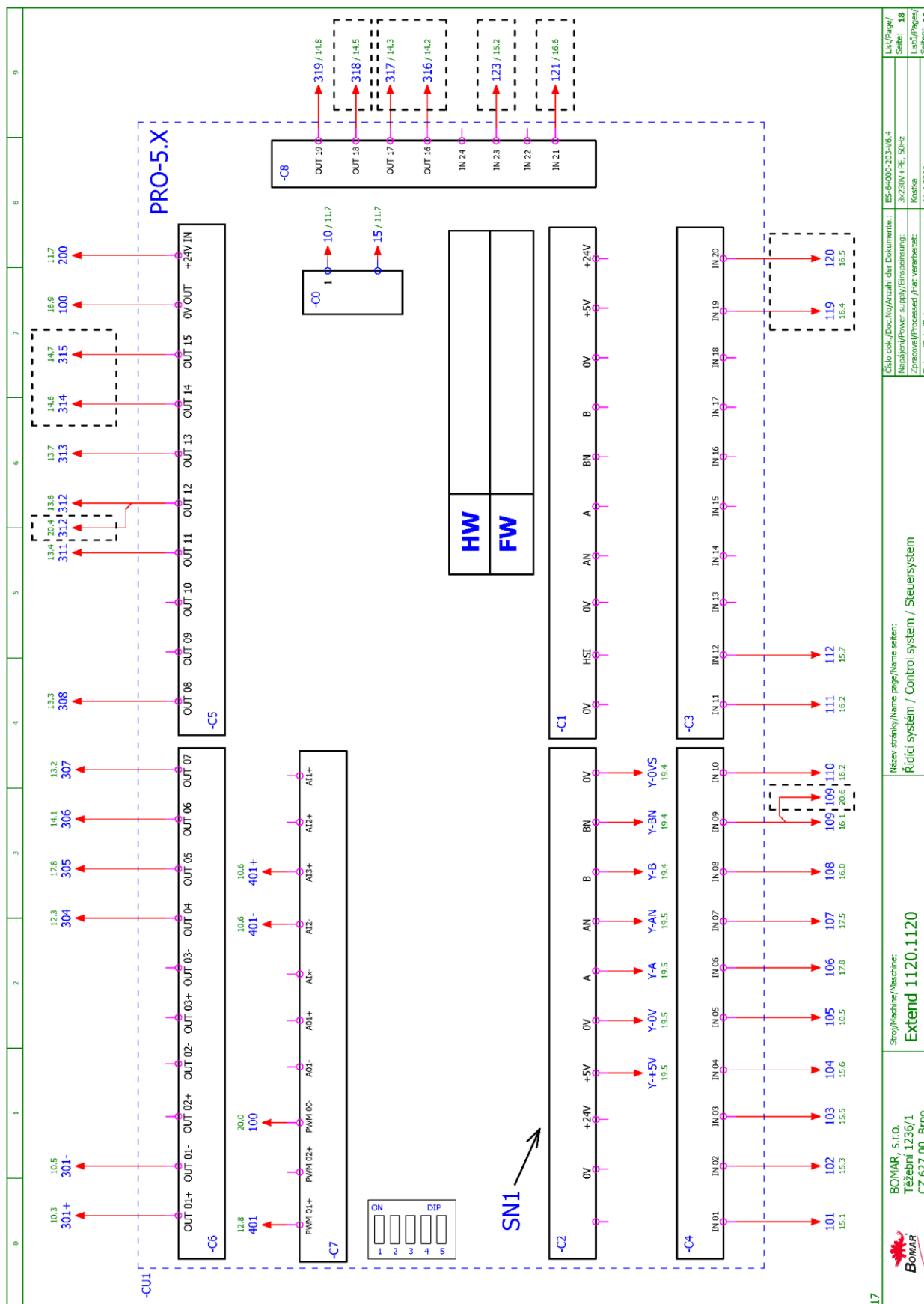






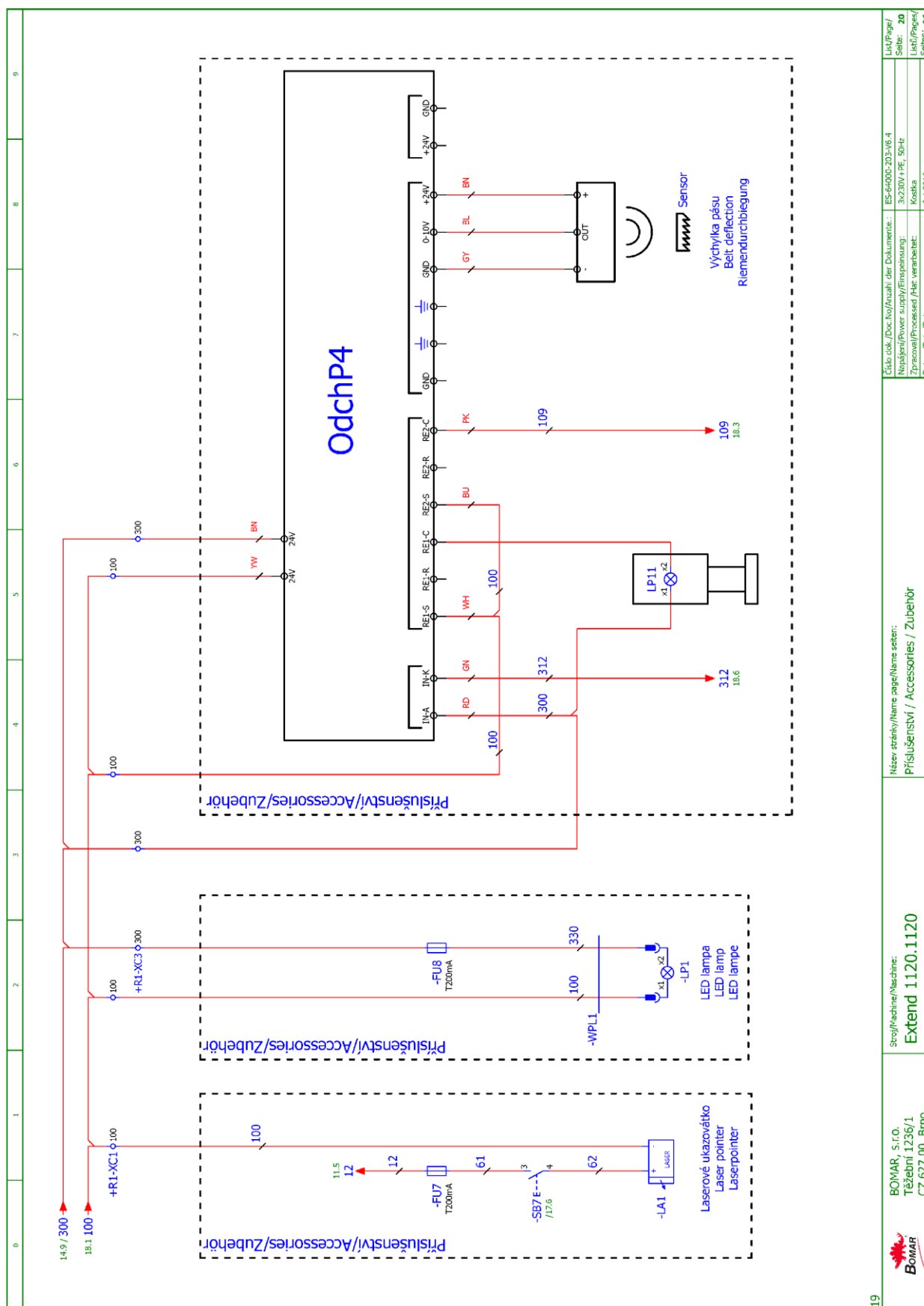




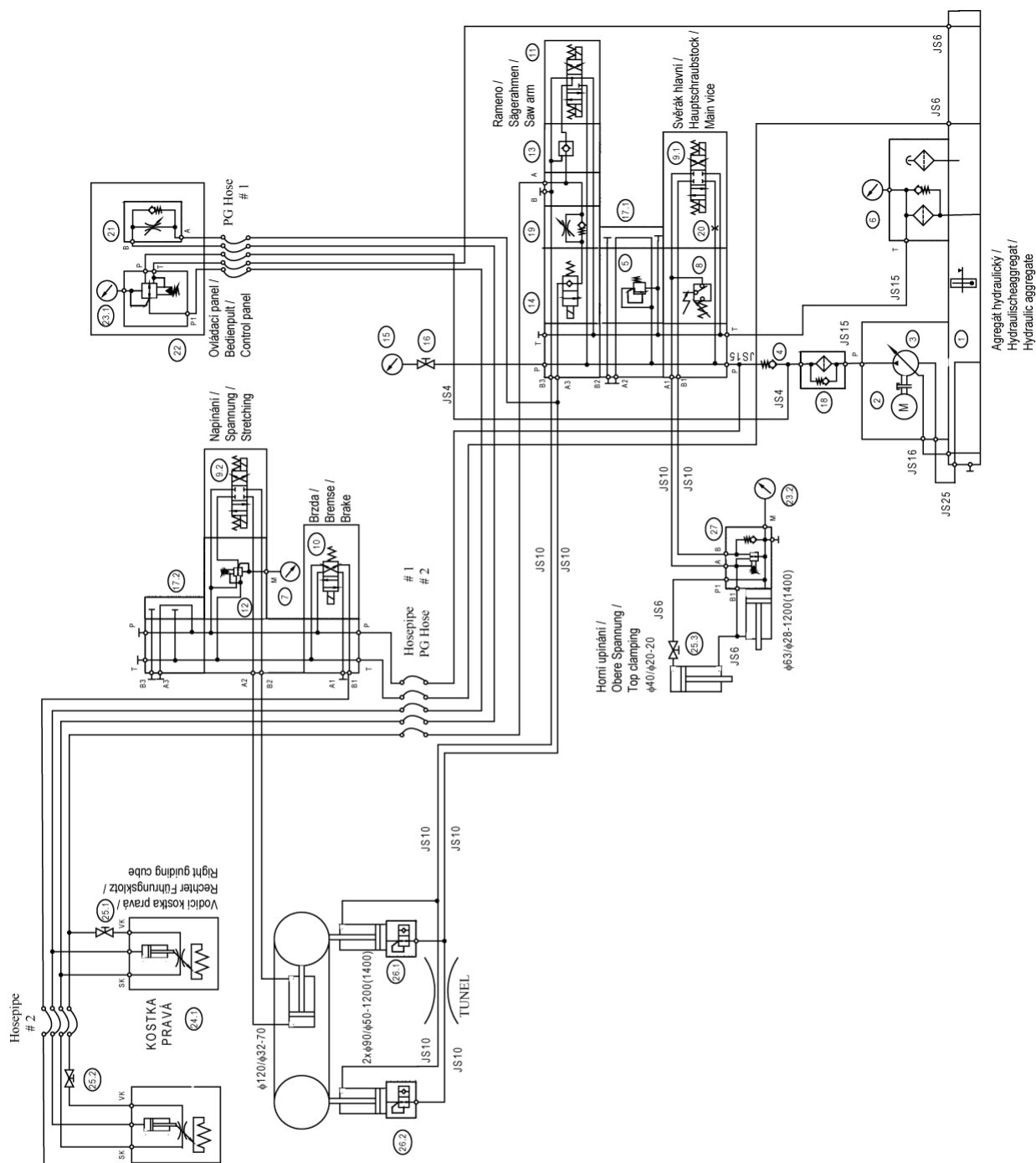




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6.3. Hydraulické schéma / Hydraulikschema / Hydraulic diagram



205.6416-000
EXTEND-1120
EXTEND-1320

Základní technické parametry Technische Spezifikation Technical specification

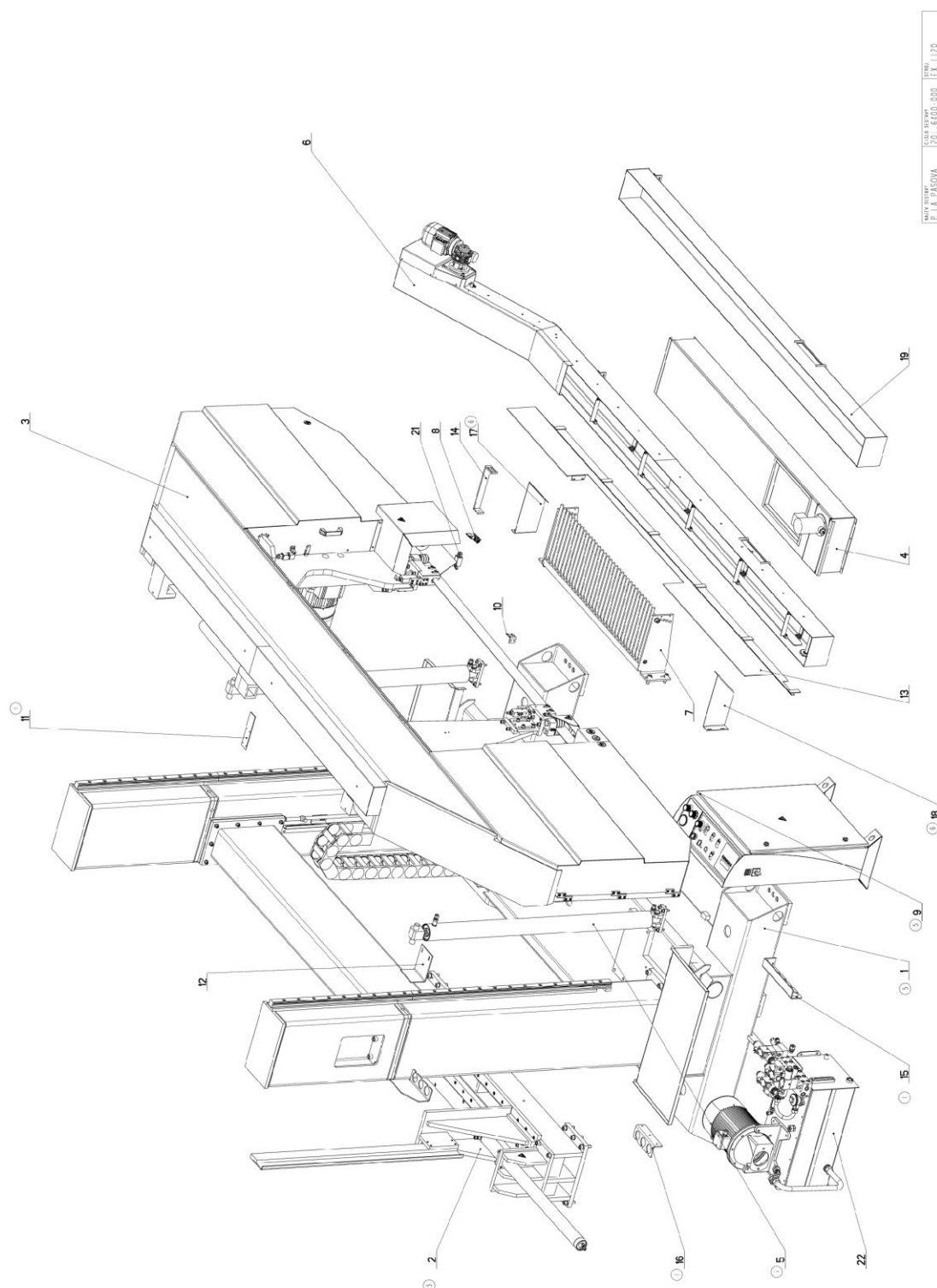
Typ / Type / Type		Extend 1120 / 1320
Hydraulický agregát / Hydroaggregat		871-1699
Hydro aggregat		92.001.049
Neuvedené světlosti / Unerwähnt Lichtbreite		JS6
Unlisted inside diameters		JS6
Výstupní šroubení / Ausgangsschraubung		G1/4"
Output screwing		G1/4"
P _{max}		8,5 Mpa
Q		33 dm ³ /min
n		1440 rpm
P		5,5 kW

Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Nádrž / Behälter / Tank	N60-BO, 60 l 700×370×394 mm	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL132L 400/230V 50 Hz, 5,5 kW	1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	LRR 025C PC 7 MPa/33 dm ³	1
4	Jednosměrný ventil / Einwegventil / One-way valve	VJ03-10-005-G1	1
5	Přepouštěcí ventil / Bypassventil / By pass valve	VPP2-04/MP06-16	1
6	Zpětný filtr / Filter / Filter	E072-56+DG 200-10 12 um	1
7	Manometr / Manometer / Manometer	Ø68 0-10 MPa	1
8	Tlakový spínač / Druckschalter / Pressure switch	TS2-18-0 5+/-0,5 MPa	1
8	Rozváděč / Schaltschrank / Switchboard	SD2E-A3/H2D21	1
9		166411031043	1
10	Rozváděč / Schaltschrank / Switchboard	RPE3- 043Z11/02400E1K1	1
11	Blok rychloposuvu / Eilgangsblok / Speed shift block	729-0084	1
12	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MA	1
13	Rozváděč / Schaltschrank / Switchboard	RPE3- 043Y11/02400E1K1	1
14	Škrťací ventil / Drosselventil / Throttle-valve	VS01-04/R2,5	1
15	Redukční ventil / Reduktionventil /	VRN2-06/S-6R	1
16	Redukční ventil / Reduktionventil /	VRN2-06/S-6R	1(0)
17	Kostka regulace / Regulationklotz /		2
18	Kulový ventil / Kugelventil / Globe valve		3(2)
19	Krycí deska / Schutzplatte / Cover platte	DK 1-04/32-2	1
20	Pojistný ventil / Sicherungventil / Safety valve	VPNH 1/4	2
21	Tlakový filtr / Druckfilter / Pressure filter	D 420153+V3,0510-03	1

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. practix Extend 1120.1120) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Extend 1120.1120), 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 1120.1120), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. EXTEND 1120.1120

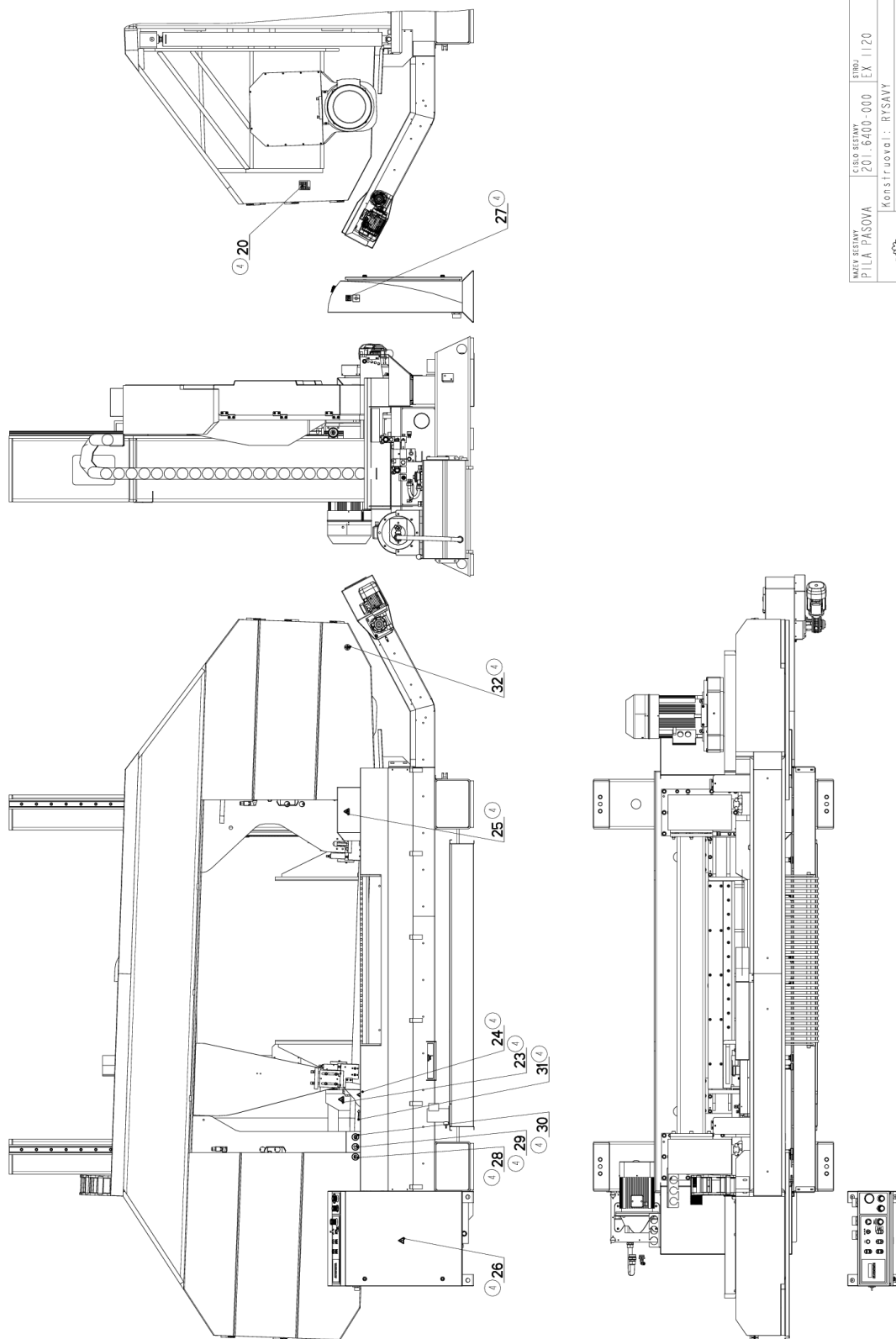


MAQUINA BOMAR	CLASSE BOMAR	MODELLO
P.L.A. 1120.1120	20 - 600-000	EX 1120
AGENZIA BOMAR	1120.1120	1120.1120
1120.1120	1120.1120	1120.1120

7.2. Kusovník / Piece list / Stückliste - EXTEND 1120.1120

Cislo Sestavy 201.6400-000		Ver. 7	Nazev sestavy PILA PASOVA/BAND SAW/BANDSÄGE		
Poz.	Objednaci cislo	Ver.	Nazev položky	Rozmer	Ks
1	201.6401-100 (5)	2	PODSTAVEC / BASE / UNTERSATZ		1
2	201.6403-250 (5)	0	SVERAK / VICE / SCHRAUBSTOCK		1
3	201.6404-000	3	RAMENO / SHOULDER / SÄGERAHMEN		1
4	201.6406-000	0	CHLAZENÍ / COOLING / KÜHLUNG		1
5	201.6407-600 (7)	0	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLLINDER		2
6	201.6417-000	1	VYNASEC TRISKOVÝ / CHIP EXTRACTOR / SPANABFÜHRUNG		1
7	201.6418-100	0	ROST / GRILL / GITTER		1
8	201.6702-200	2	SNIMAC / SENSOR / SENSOR		1
9	201.7430-000 (5)	2	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
10	30.6101-111	3	DRZAK / HOLDER / HALTER	P 3x40	1
11	30.6214-138 (1)	0	DRZAK / HOLDER / HALTER	P 4x60	1
12	30.6414-005	0	DRZAK / HOLDER / HALTER	P 5x140	1
13	30.6414-015	1	KRYT / COVER / ABDECKUNG		1
14	30.6414-018	1	DRZAK / HOLDER / HALTER		1
15	30.6414-019	0	DRZAK / HOLDER / HALTER	P 5x131	1
16	30.6414-020	0	DRZAK / HOLDER / HALTER	P5x130	1
17	30.6414-021 (6)	0	KRYT / COVER / ABDECKUNG	P 2x174	1
18	30.6414-022 (6)	0	KRYT / COVER / ABDECKUNG	P 2x174	1
19	30.6414-080	1	KORYTO / CHANNEL / Rinne		1
20	30.6499-001 (4)	4	STÍTEK TYPOVÝ / MACHINE LABEL / MASCHINE SCHILD	P 0.5x65	1
21	91.173.009	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER		1
22	92.001.049	0	AGREGAT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT	871-1699	1
23	99.900.039 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER	NEBEZP.STILACENI	1
24	99.900.040 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
25	99.900.043 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
26	99.900.045 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
27	99.900.046 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
28	99.900.047 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
29	99.900.048 (4)	0	SAMOLEPKA / STICKER / AUFKLEBER		1

7.3. EXTEND 1120.1120



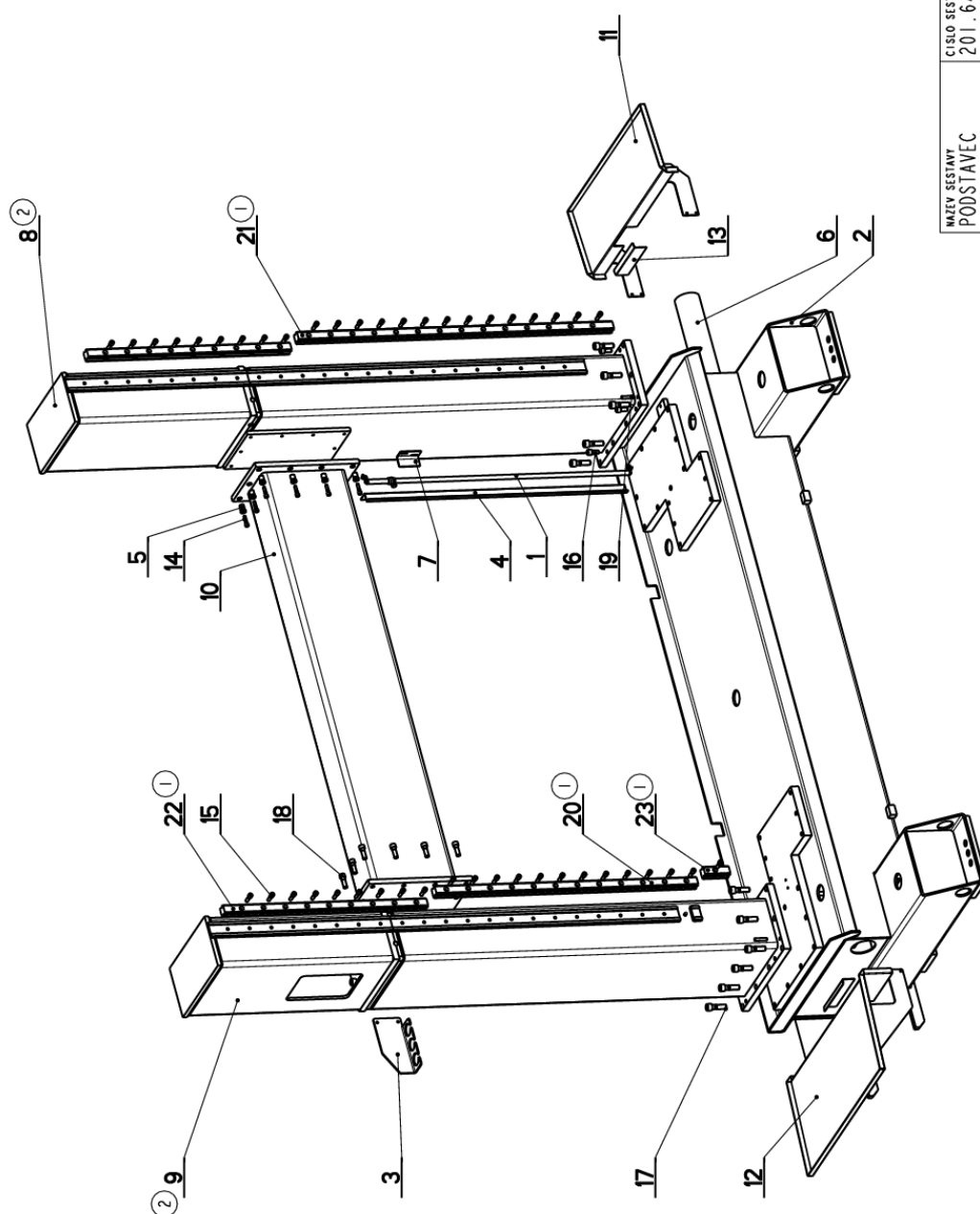
NÁVŠTĚVY	CÍSLO ŘEŠENÍ	STRUJ
PILA PASOVA	201.6400-000	EX 1120
Konstruoval: RYŠAVÝ		
Datum: 13. 01. 2012		
Meritko: 3:50		

7.4. Kusovník / Piece list / Stückliste - EXTEND 1120.1120

30	99.900.049	4	0	SAMOLEPKA / STICKER / AUFLIEBER		I
31	99.900.053	4	0	SAMOLEPKA / STICKER / AUFLIEBER		I
32	99.901.032	4	0	SAMOLEPKA / STICKER / AUFLIEBER	CETIFIKACNI SAMOLEPKA	I

1. ZRUS. DRZAK 30.6414-006 A NAHR. DRZAKEM 30.6214-138, PRIDANY DRZAKY ELEKTRO 30.6414-019, 30.6414-020.
119/ZM119 21.4.2008 SLEZACKOVA
2. ZRUS. VALEC ZVEDACI 201.6407-300 A NAHR. VALEN VALCEM 201.6407-500. 377/ZM362 29.10.2008 SLEZACKOVA
3. ZRUS. ROZVADEC 201.6230-100 A NAHR. ROZVADECEM 201.6430-000. 280/ZM023 20.1.2009 SLEZACKOVA
4. DOPLENENY BEZPECNOSTNI ZNACKY 99.900.047, 99.900.048, 99.900.049, 99.900.040, 99.900.045, 99.900.043, 99.900.053. 040/ZM092
6.4.2010 SLEZACKOVA
5. ZRUS. PODSTAVEC 201.6401-000 A NAHR. 201.6401-100, ZRUS. SVERAK 201.6403-200 A NAHR. 201.6403-250,
ZRUS. ROZVADEC 201.6430-000 A NAHR. 201.6430-000. 293,002/ZM007 13.1.2012 SLEZACKOVA
6. ZRUS. DRZAK 30.6414-017 A NAHR. 30.6414-022, ZRUS. DRZAK 30.6414-016 A NAHR. 30.6414-021. 009/ZM216 18.9.2015 SLEZACKOVA
7. ZRUS. VALEC 201.6407-500 A NAHR. 201.6407-600. 252/ZM334 13.10.2016 SLEZACKOVA

7.5. Podstavec / Base / Untersatz



NAZEV SESTAVY PODSTAVEC	ČÍSLO SESTAVY 201.6401-100	STROJ EX120
Konstruoval: RYŠAVÝ		
Datum: 07. 01. 2013		
Meritko: 3:50		

7.6. Kusovník / Piece list / Stückliste - Podstavec / Base / Untersatz

Císlo Sestavy 201.6401 - 100		Ver. 2	Název sestavy PODSTAVEC/BASE/UNTERSATZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6414-030	0	ODMEROVANI / MEASURING / GEHRUNGSMESSUNG		1
2	30.6401-001	1	PODSTAVEC / BASE / UNTERSATZ		1
3	30.6401-006	0	DRŽAK / HOLDER / HALTER	P5x206	1
4	30.6401-008	0	HREBEN / COMB / KAMM	P 3x109x1250	1
5	30.6401-009	1	SROUB / BOLT / SCHRAUBE	6HR-22	10
6	30.6401-012	0	TRUBKA / TUBE / ROHR	TR 110x2.5	1
7	30.6401-015	0	DORAZ / STOP PIECE / ANSCHLAG	PROFIL 50x50x4	1
8	30.6401-021 (2)	0	SLOUP / POLE / SAULE		1
9	30.6401-022 (2)	0	SLOUP / POLE / SAULE		1
10	30.6401-027	0	VZPERA / PROP / STREBE		1
11	30.6414-010	0	OKAP / GUTTER CHANNEL / BLECH		1
12	30.6414-011	0	OKAP / GUTTER CHANNEL / BLECH		1
13	31.6114-129	0	DESKA / BOARD / PLATTE	2x81	2
14	90.001.25.050	0	SROUB IMBUS / /	M10x40	10
15	90.001.25.060	0	SROUB IMBUS / /	M12x40	45
16	90.001.25.075	0	SROUB IMBUS / /	M16x35	8
17	90.001.25.129	0	SROUB IMBUS / /	M20x70	20
18	90.001.25.138	0	SROUB IMBUS / /	M16x50	10
19	90.300.02.020	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLÍK 12x60	4
20	99.200.301 (1)	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 45R 1260 E=52.5	1
21	99.200.302 (1)	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 45R 1517 E=52.5	1
22	99.200.303 (1)	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 45R 978 E=52.5	2
23	99.200.304 (1)	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 45R 122 E=52.5	1

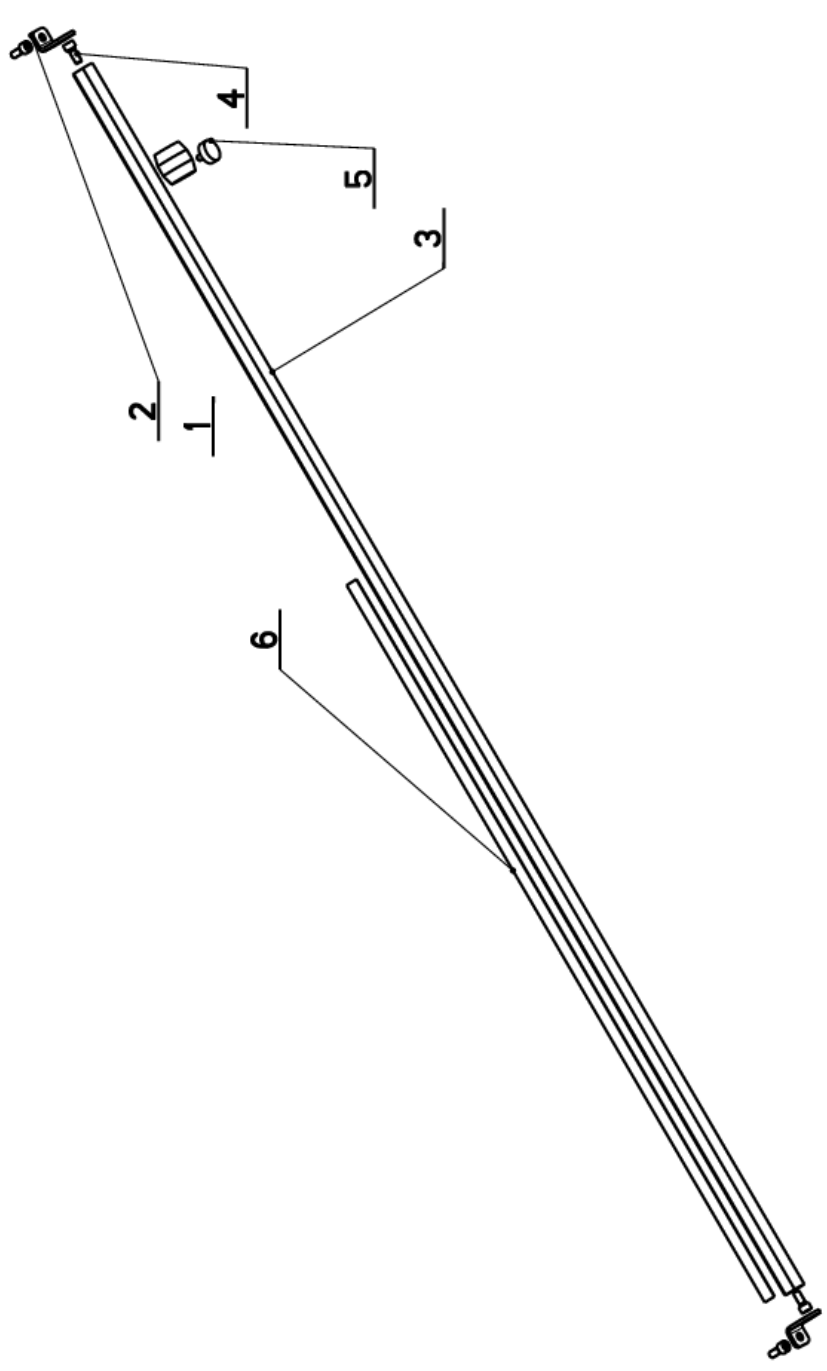
1. ZRUS.LIN. VEDENÍ (HIWIN) 99.200.245 A NAHR. 99.200.301 (PMI), ZRUS.LIN. VEDENÍ 99.200.246 A NAHR. 99.200.302,
ZRUS.LIN. VEDENÍ 99.200.247 A NAHR. 99.200.303, ZRUS.LIN. VEDENÍ 99.200.248 A NAHR. 99.200.304. 056/ZM159
16.5.2012 SLEZACKOVA

2. ZRUS.SLOUP 30.6401-025, 30.6401-103 A NAHR.SLOUPEM 30.6401-022, ZRUS.SLOUP 30.6401-026, 30.6401-102
A NAHR.SLOUPEM 30.6401-022, ZRUS.SROUB M20x50 90.001.25.137. 242/ZM361 7.1.2013 SLEZACKOVA

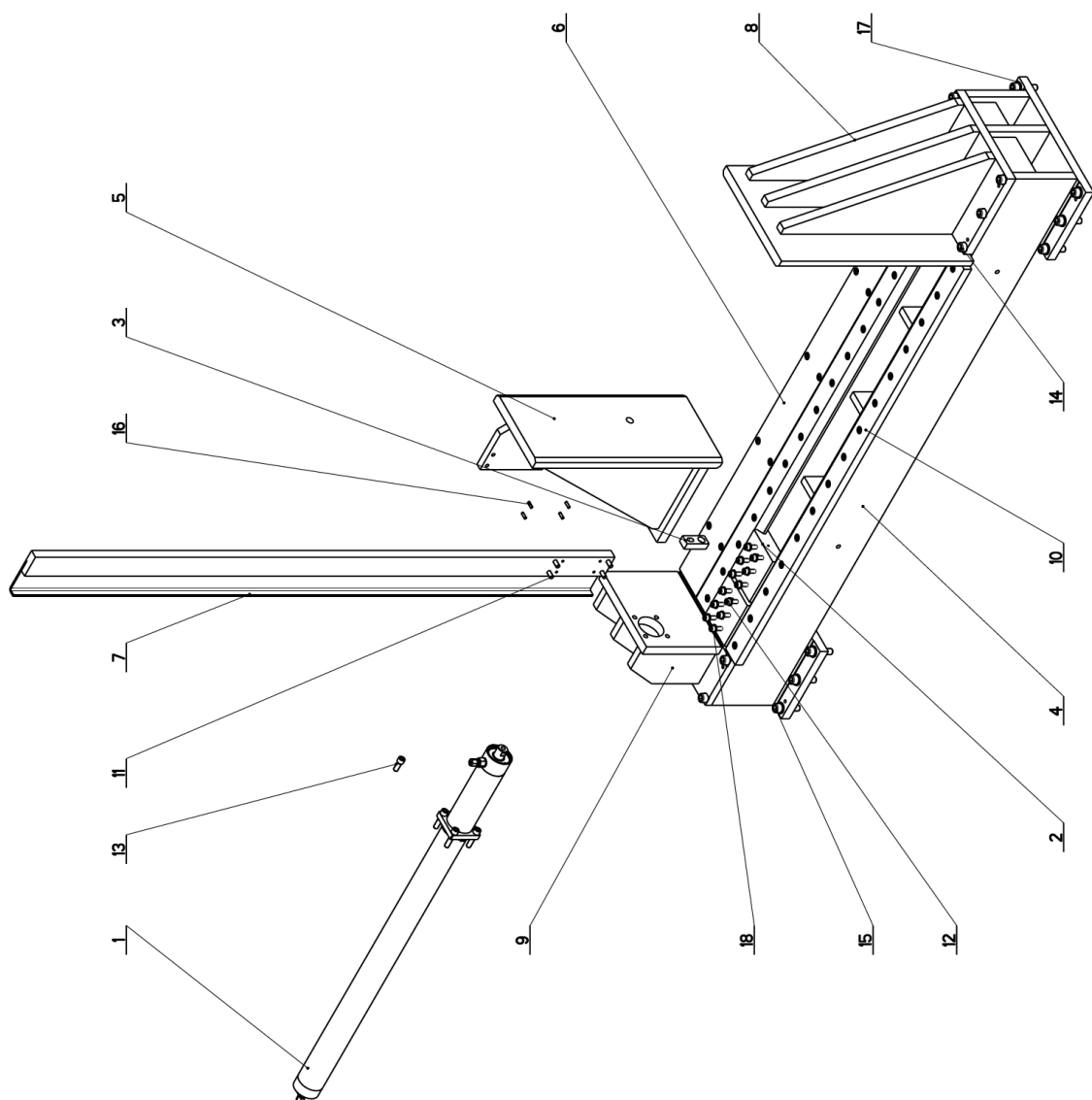
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.7. Odměrování / Measuring / Gehrungsmessung

Císlo Sestavy 201.6414-030		Ver. 0	Název sestavy ODMEROVÁNÍ / MEASURING / GEHRUNGSMESSUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rožmer	Ks
1	30.2014-001	0	OBJÍMKA / CLAMP / KLAMMERSTÜCK		1
2	30.6114-023	0	DRŽÁK / HOLDER / HALTER	P 3x20	2
3	30.6414-031	0	TYC / POLE / STANGE	d 20	1
4	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x14	4
5	94.007.001	0	SROUB / BOLT / SCHRAUBE	M5x10	1
6	99.120.002	0	PRAVÍTKO / RULER / SKALENBANDMAß		1



7.8. Svěrák / Vice / Schraubstock



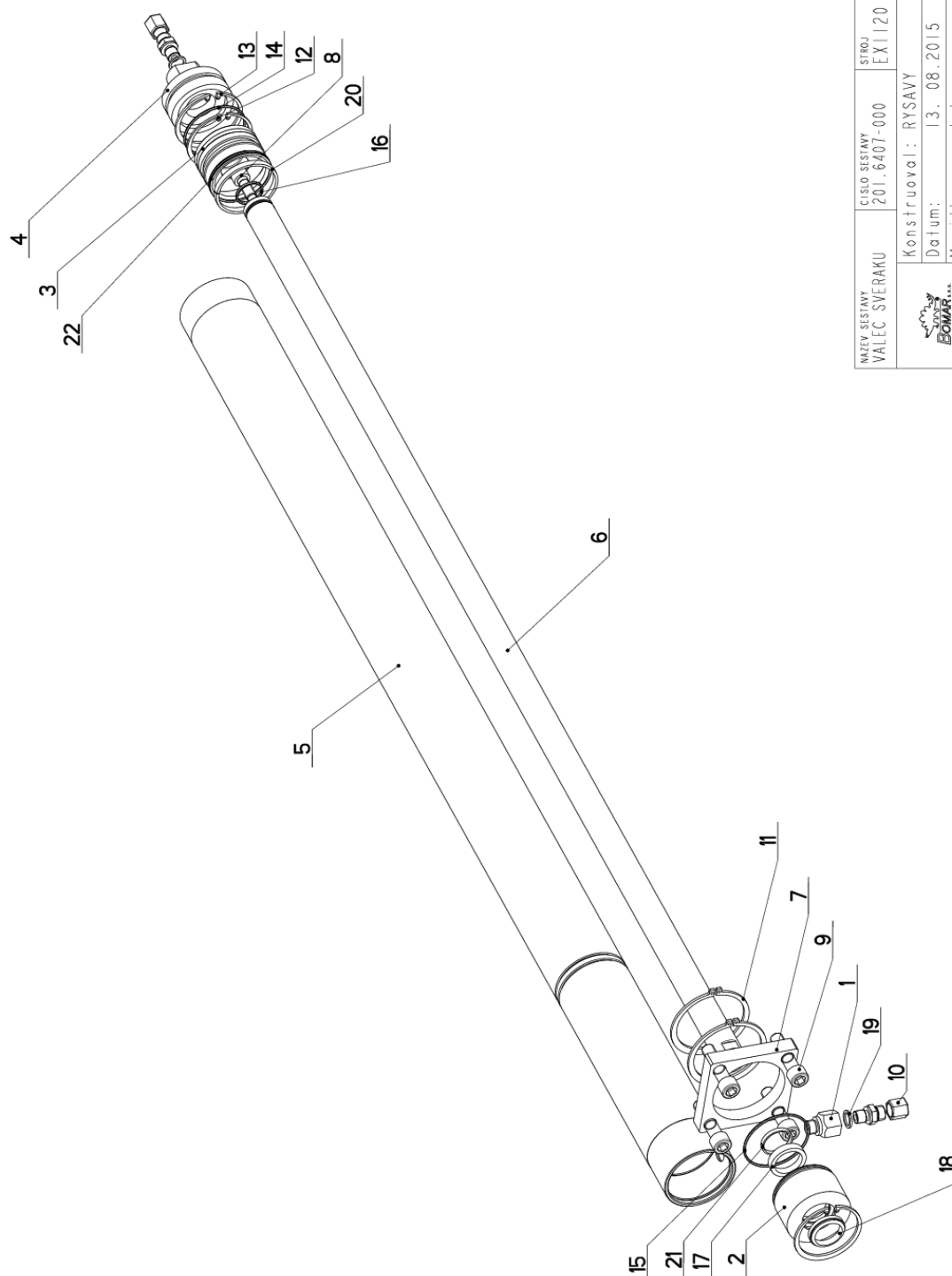
NÁZEV SOUŠTAVY SVĚRÁK	ČÍSLO SOUŠTAVY	STUPEŇ
	201.6403-250	EX1120
	Konstruoval: RYŠAVÝ	
	Datum: 13. 12. 2011	
	Měřítko: 7:50	

7.9. Kusovník / Piece list / Stückliste - Svěrák / Vice / Schraubstock

Cislo Sestavy 201.6403-250		Ver. 0	Nazev sestavy SVERAK/VICE /SCHRAUBSTOCK		
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6407-000	0	VALEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	30.6003-552	0	KLUZAK / GLIDER / GLEITER	HR 130x50	2
3	30.6103-005	0	DRZAK / HOLDER / HALTER	HR 30x20	1
4	30.6403-002	2	PODSTAVEC SVERAKU / VICE BASE / SCHRAUBSTOCKUNTERSATZ		1
5	30.6403-004	1	CELIST POHYBLIVA / MOVING JAW / BEWEGLICHE BACKE		1
6	30.6403-007	0	LISTA / TRIM / LEISTE	HR 110x25	1
7	30.6403-008	0	LISTA / TRIM / LEISTE		1
8	30.6403-101	0	CELIST / JAW / BACKE		1
9	30.6403-106	0	KONZOLA / CONSOLE / KONSOLE		1
10	30.6403-251	0	LISTA SVERAKU / VICE TRIM / SCHRAUBSTOCKLEISTE	HR 82x27	2
11	90.001.25.049	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	44
12	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x60	12
13	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	1
14	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x40	10
15	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x60	12
16	90.002.20.021	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x20	4
17	90.150.00.013	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 16	12
18	90.150.50.006	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 10,5	12

Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Verz./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

7.10. Válec svěráku / Vice cylinder / Schraubstockzylinder



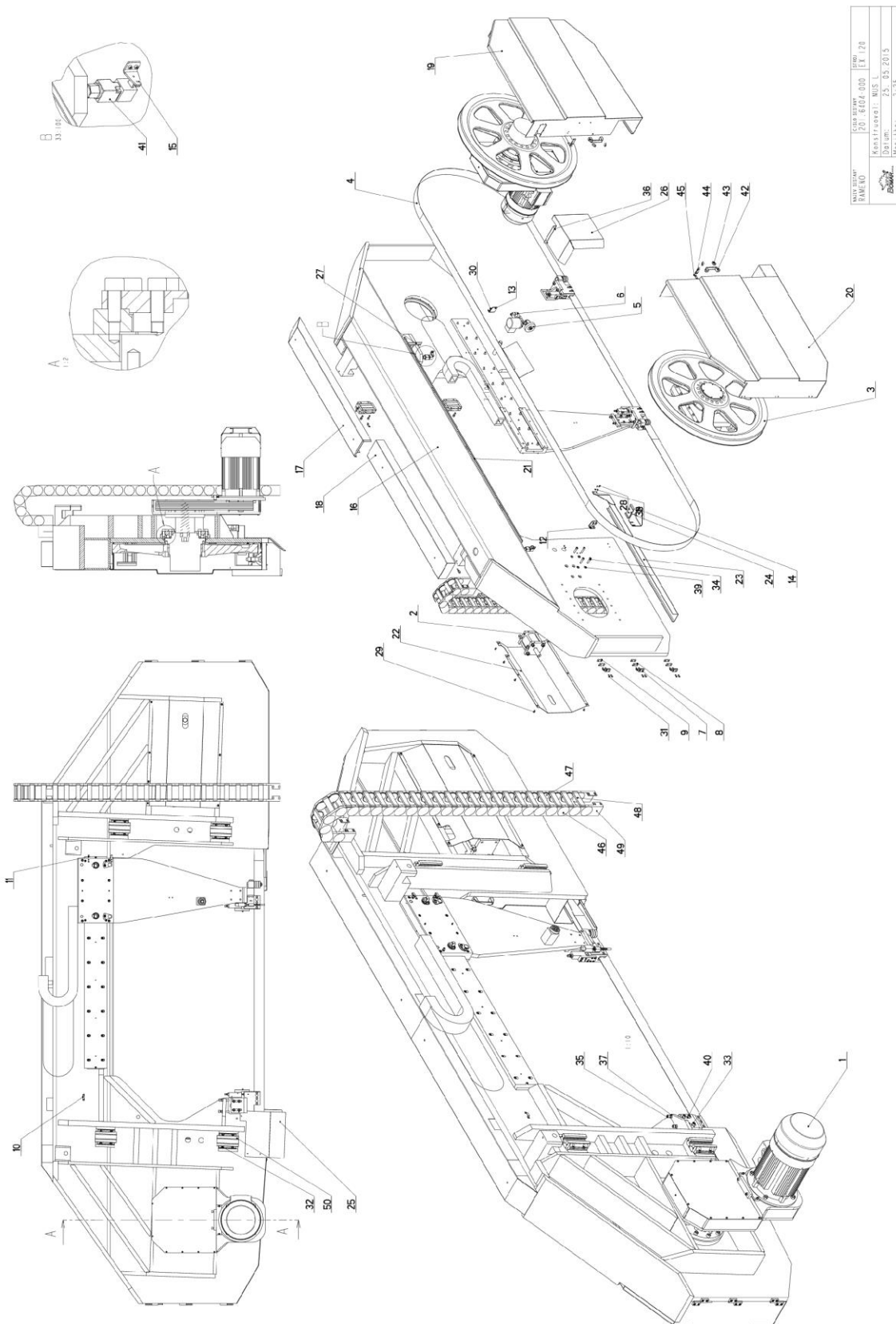
NAEVY SESTAVY VALEC SVERAKU	CÍSLO SESTAVY 201.6407-000	STROJ EX1120
Konstruoval: RYSAVY		
Datum: 13. 08.2015		
Meritko: 1-1		

7.11. Kusovník / Piece list / Stückliste - Válec svěráku / Vice cylinder / Schraubstockzylinder

Císlo Sestavy 201.6407-000	Ver. 0	Název sestavy VALEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER			
Poz	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1807-005	3	SROUBENÍ / BOLTING / VERSCHRAUBUNG	6-HR 22	1
2	30.5907-004	0	VÍKO / COVER / DECKEL	TYC 70	1
3	30.5907-104	0	PIST / PISTON / KOLBEN	TYC 65	1
4	30.6207-203	1	VÍKO / COVER / DECKEL	TYC 65	1
5	30.6407-001	0	VALEC / ROLLER / ZYLINDER	TR 73/63	1
6	30.6407-002	0	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC28	1
7	30.6407-003	0	PRÍLOŽKA / STRAP / LASCHE	TYC 90x15	1
8	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	1
9	90.001.25.062	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x50	4
10	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
11	95.800.026	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNY KROUZEK 72	2
12	95.801.011	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNY KROUZEK 63	1
13	95.801.012	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNY KROUZEK 65	2
14	96.001.015	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	56x3.55	1
15	96.001.016	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	60x2	1
16	96.002.011	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
17	96.041.003	0	TESNENÍ / SEALING / DICHTUNG	601-28x36x7.1	1
18	96.060.003	0	KROUZEK STIRACI / SCRAPER RING / ABSTREIFRING	KROUZEK STIRACI 28	1
19	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	2
20	96.084.002	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GP6500630-T47	1
21	96.084.006	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GR4300280-T47	1
22	96.900.005	0	TESNENÍ KOMBINOVANE / COMBINATION SEALING / KOMBIDICHTUNG	PW4200630-220N	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

7.12. Rameno / Shoulder / Sägerahmen



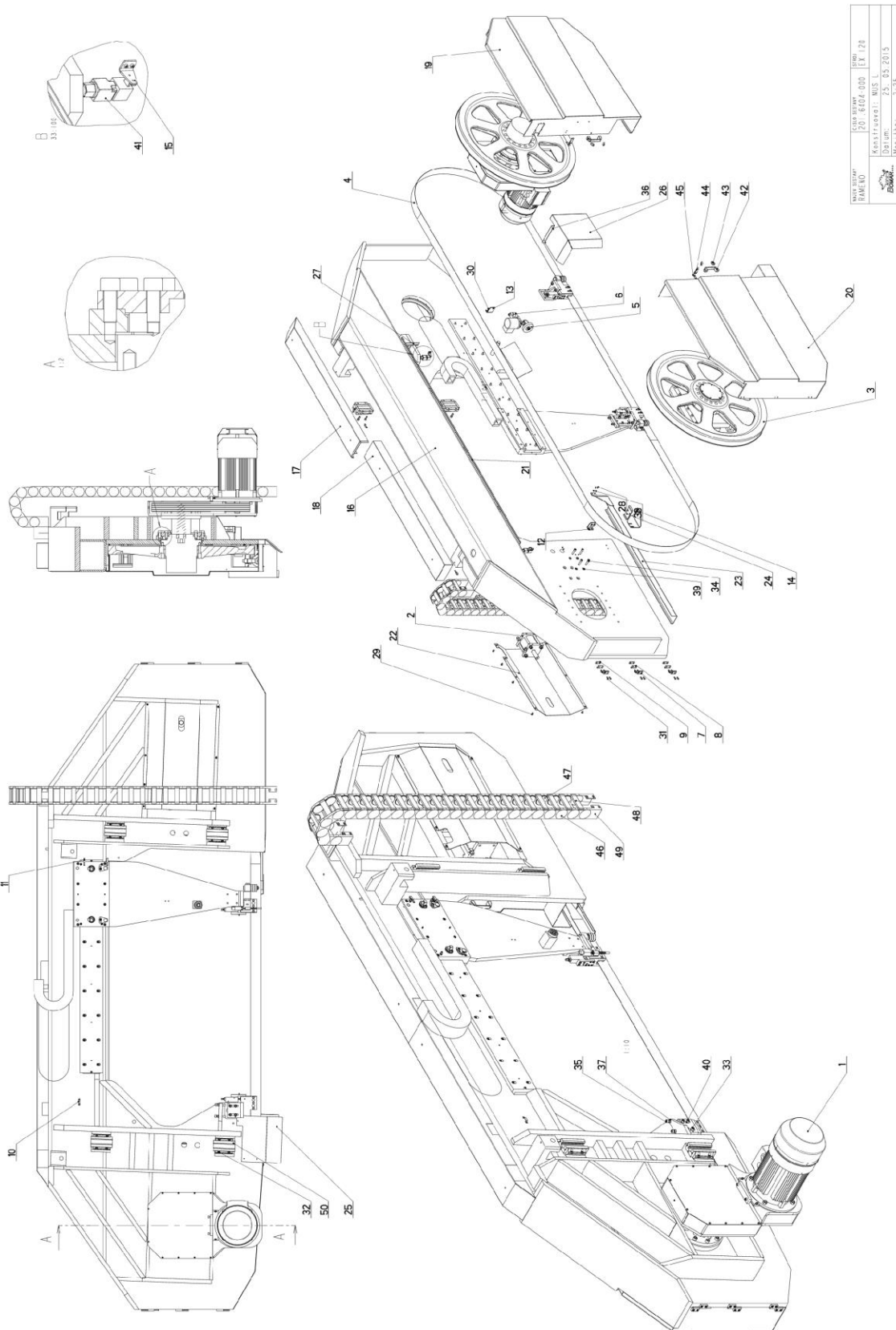
NAME: BOMAR	CODE: 853.000	REV: 1.00
FRAME NO:	20 - 8404-000	EX: 128
Assembly: MUS L		
Doc. no:	25 - 85.2015	
Rev. 118:	2.23	

7.13. Kusovník / Piece list / Stückliste - Rameno / Shoulder / Sägerahmen

Císlo Sestavy 201.6404-000		Ver. 3	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6405-000	3	POHON / DRIVE / ANTRIEB		1
2	201.6407-200	1	VALEC NAPINACÍ / TENSIONING CYLINDER / SPANNZYLINDER		1
3	201.6408-000	1	NAPINÁNÍ / TENSIONING / SPANNUNG		1
4	201.6410-000	1	VEDENÍ PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
5	201.C214-050	0	KARTAC / BRUSH / BÜRSTE		1
6	201.C214-220	0	DRŽÁK / HOLDER / HALTER		1
7	30.6014-109	1	PANT / HINGE / TÜRBAND		6
8	30.6014-110	1	PANT / HINGE / TÜRBAND	HR 30x12	6
9	30.6014-111	0	DESKA / BOARD / PLATTE	HR 20x6	6
10	30.6014-456 (3)	0	DRŽÁK / HOLDER / HALTER	P 1x12	1
11	30.6014-457 (3)	0	DRŽÁK / HOLDER / HALTER	P 1x12	2
12	30.6114-123	0	DRŽÁK / HOLDER / HALTER	P 4x55	1
13	30.6114-124	1	DRŽÁK / HOLDER / HALTER	P 4x55	1
14	30.6114-146	2	DRŽÁK / HOLDER / HALTER	P 3x150	1
15	30.6114-147	0	DRŽÁK / HOLDER / HALTER	P 3x30x60	2
16	30.6404-001	5	RAMENO / SHOULDER / SÄGERAHMEN		1
17	30.6414-012	0	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG		1
18	30.6414-013	0	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG		1
19	30.6414-101	2	DVERE / DOOR / TÜR		1
20	30.6414-102	2	DVERE / DOOR / TÜR		1
21	30.6414-103	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
22	30.6414-105	1	KRYT NAPINÁNÍ / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P 2x620	1
23	30.6414-106	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
24	30.6414-145 (1)	0	KLUZÁK / GLIDER / GLEITER	TYC 60x15	1
25	30.6414-152	1	KRYT KARTACKU / BRUSH COVER / BÜRSTENABDECKUNG	P 2x360	1
26	30.6414-153	0	KRYT KARTACKU / BRUSH COVER / BÜRSTENABDECKUNG	P 2x639	1
27	49.250.010	0	KARTAC / BRUSH / BÜRSTE		3
28	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	2
29	90.001.25.028	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x10	7
30	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	4
31	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	24
32	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	16
33	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x40	4

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

7.14. Rameno / Shoulder / Sägerahmen



7.15. Kusovník / Piece list / Stückliste - Rameno / Shoulder / Sägerahmen

34	90.001.25.062	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X50	4
35	90.001.25.064	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X70	2
36	90.001.55.086	0	SROUB IMBUS ZN / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M4X6	12
37	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE - M12	2
38	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	PODLOZKA 6,4	2
39	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	PODLOZKA 13	4
40	90.163.00.003	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	NORD-LOCK	4
41	91.173.012	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	QMS8-2xNC	2
42	94.012.001	0	RUKOJET / HANDLE / GRIFF		2
43	94.012.002	0	KRYT / COVER / ABDECKUNG		4
44	99.100.003	0	ZAMEK / LOCK / SCHLOSS		2
45	99.100.004	0	ZAMEK / LOCK / SCHLOSS	D13-00	2
46	99.170.022	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE		50
47	99.170.023	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE		48
48	99.170.024	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE		50
49	99.171.030	0	KONCOVKA / END / ENDSTÜCK		2
50	99.201.059	2	VOZIK LINEARNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA45LE SS F0 N	4

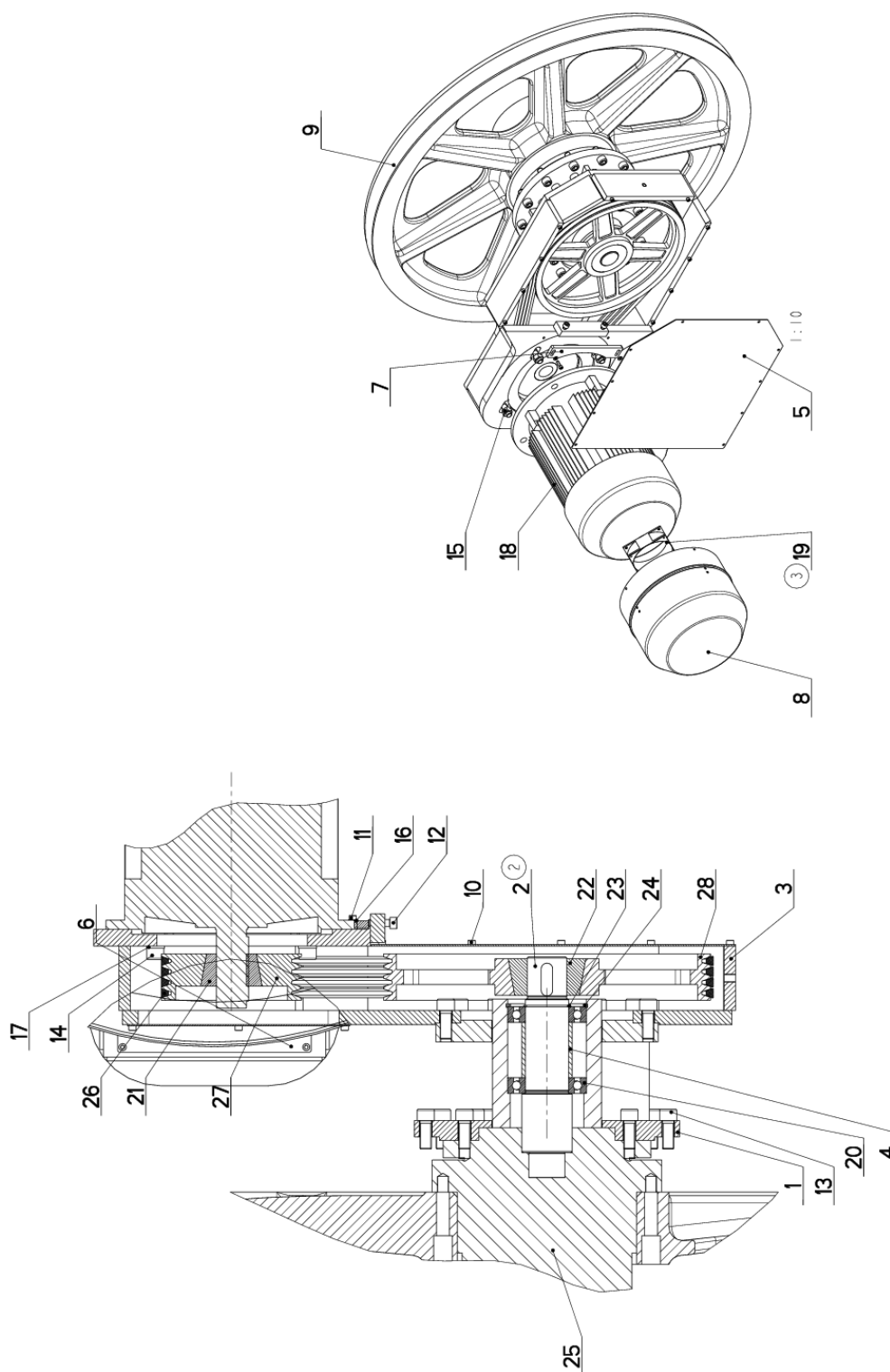
1. ZRUS.SOUČ. 30.6114-145 A NAHR. 30.6414-145. 300/ZM285 8.9.2008 SLEZACKOVA

2. ZRUS.VOZIK LINEARNÍHO VEDENÍ (HIWIN) 99.201.013 A NAHR. 99.201.059(PMI). 056/ZMI59 16.5.2012 SLEZACKOVA

3. PRIDAN 2xDRZAK 30.6014-457, 1xDRZAK 30.6014-456. 205/ZMI06 20.5.2015 SLEZACKOVA

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

7.16. Pohon / Drive / Antrieb



NAZEV SESTAVY POHON	CÍSLO SESTAVY 201.6405-000	STROJ EX1120
Konstruoval: MUSIL		
Datum: 20. 05.2015		
Meritko: 1:5		

7.17. Kusovník / Piece list / Stückliste - Pohon / Drive / Antrieb

Císlo Sestavy 201.6405-000		Ver. 3	Název sestavy POHON/DRIVE / ANTRIEB		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6405-020	0	PŘÍRUBA / FLANGE / FLANSCH		1
2	30.6405-021 (2)	1	HRIDEL / SHAFT / WELLE	d70	1
3	30.6405-022	1	SKRIN / BOX / KASTEN		1
4	30.6405-023	0	TRUBKA / TUBE / ROHR	TR 70x5	1
5	30.6405-024	0	KRYT / COVER / ABDECKUNG	P 2x508	1
6	30.6405-025	0	KRYT / COVER / ABDECKUNG	P 2x263	1
7	30.6405-027	0	DESKA / BOARD / PLATTE	P10-40	1
8	30.6405-030	1	VENTILATOR / VENTILATOR / VENTILATOR		1
9	30.6405-035	0	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD		1
10	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	16
11	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	2
12	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	2
13	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x40	36
14	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16x60	4
15	90.100.55.008	0	MATICE / NUT / MUTTER	MATICE - M16	4
16	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 6,4	2
17	90.163.00.005	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	NORDLOCK 16	4
18	91.001.066	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR		1
19	91.015.126 (3)	0	VENTILATOR / VENTILATOR / VENTILATOR	VENTILATOR RDH1238,B2	1
20	95.001.031	0	LOŽISKO / BEARING / LAGER	6212A	2
21	95.710.008	0	POUZDRO / SLEEVE / BÜCHSE		1
22	95.710.013	0	POUZDRO UPÍNACÍ / FIXING SLEEVE / SPANNHÜLSE	TB 3020-55	1
23	95.800.020	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 60	1
24	95.801.022	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 110	1
25	99.004.002	0	PŘEVODOVKA PLANETOVÁ / PLANETARY TRANSMISSION / PLANETENGETRIEBE	PŘEVODOVKA S HRIDELI G-RED	1
26	99.021.037	0	REMEK KLIMNOVÝ / V BELT / KEILRIEMEN	REWEN SPA-1932	4
27	99.280.055	0	REMEK / PULLEY / RIEMENSCHIEBE	SPA 0190-04 2517 IPL	1
28	99.280.070	0	REMEK / PULLEY / RIEMENSCHIEBE	SPA 0450-04 3020	1

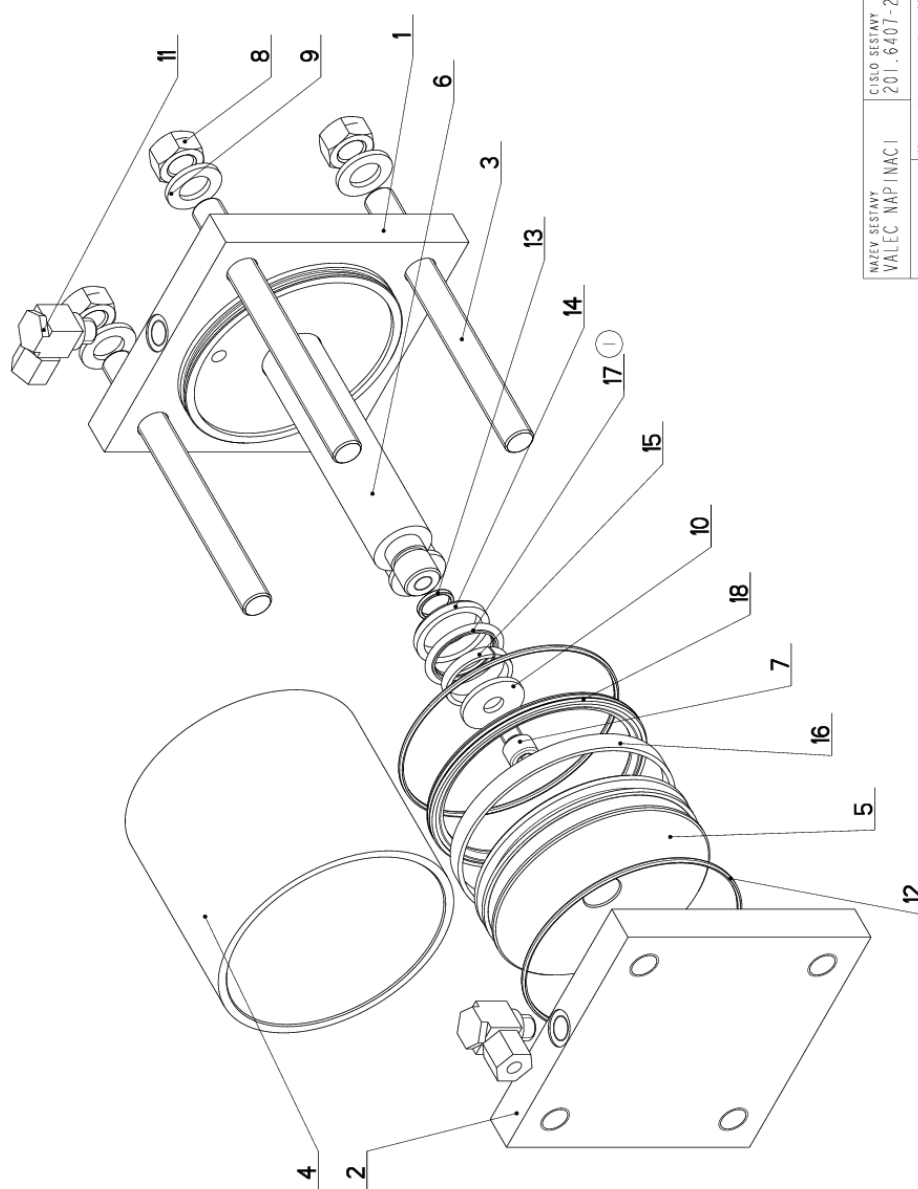
1. ZRUSENO HRIDEL 30.6405-036 A HRIDEL 30.6405-021 (OBE HRIDELE JSOU DODANY S PREVODOVKOU). 242/ZM240 17.7.2008 SLEZACKOVA

2. PRIDANA HRIDEL 30.6405-021 . 190/ZM222 5.8.2013 SLEZACKOVA

3. ZRUS. VENTILATOR 91.015.100 A NAHR. 91.015.126. 074/ZM025 14.2.2014 SLEZACKOVA

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

7.18. Válec napínací / Tensioning cylinder / Spannzyylinder



NAZEV SOUSTAVY VÁLEC NAPÍNACÍ	ČÍSLO SOUSTAVY 201.6407-200	STROJ EX1120
Konstruoval: MUSIL		
Datum: 13. 08.2015		
Meritko: 3:10		

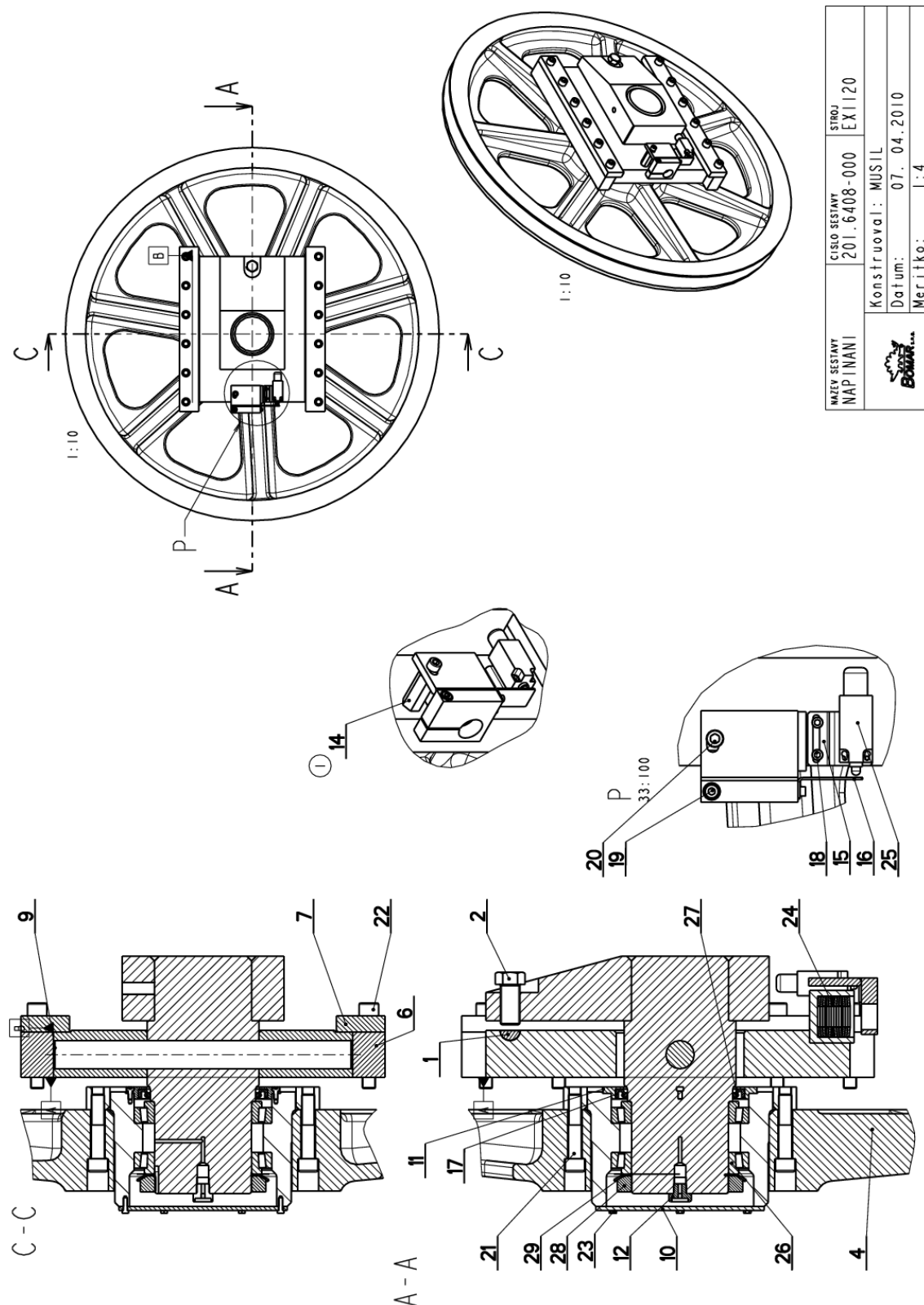
7.19. Kusovník / Piece list / Stückliste - Válec napínací / Tensioning cylinder / Spannzyylinder

Císlo Sestavy 201.6407-200		Ver. I	Název sestavy VALEC NAPÍNAČÍ / TENSIONING CYLINDER/SPANNZYLINDER		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6407-201	0	VÍKO / COVER / DECKEL	P30-150	1
2	30.6407-203	0	VÍKO / COVER / DECKEL	HR 150x30	1
3	30.6407-206	0	SROUB / BOLT / SCHRAUBE	M16	4
4	30.6707-402	0	VALEC / ROLLER / ZYLINDER	TRUBKA 130/120	1
5	30.6707-404	I	PIST / PISTON / KOLBEN	d 125	1
6	30.6707-405	I	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 32	1
7	90.001.25.043	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X12	1
8	90.100.55.008	0	MATICE / NUT / MUTTER	MATICE - M16	4
9	90.150.50.009	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 17	4
10	90.151.50.001	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10	1
11	92.003.001	0	SROUBENÍ UHLOVÉ / ANGLE BOLTING / WINKELVERSCHRAUBUNG	P-RSWS-08LR	2
12	96.001.031	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	114X3	2
13	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16x2 NBR 70SH	1
14	96.060.009	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	32x40x5x6	1
15	96.084.003	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GR 6500320	1
16	96.084.014	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	Páska	1
17	96.900.018	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200320-T46N	1
18	96.900.028	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG		1

I.ZRUS.TESNENI 96.900.026 A NAHR.TESNENIM 96.900.018. 28/1/2022 20.1.2009 SLEZACKOVA

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

7.20. Napínání / Tensioning / Spannung

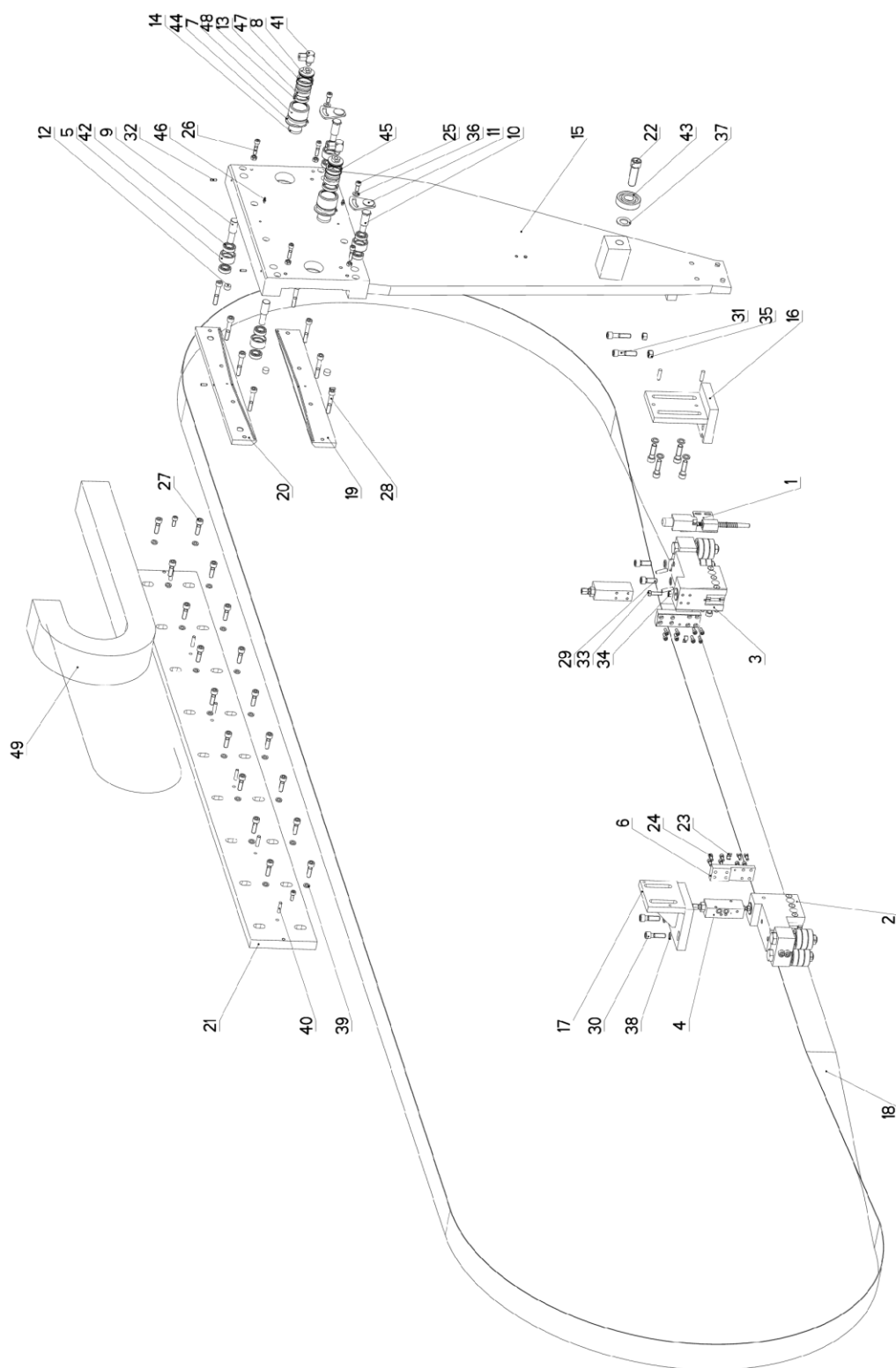


7.21. Kusovník / Piece list / Stückliste -
Napínání / Tensioning / Spannung

Císlo Sestavy 201.6408-000		Ver. I	Nazev sestavy NAPINANI/TENSIONING/SPANNUNG		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer	Ks
1	30.6208-003	0	CEP / LUG / BOLZEN	d 25	1
2	30.6208-004	0	SROUB / BOLT / SCHRAUBE	TYC 32	1
3	30.6208-104	0	TRMEN / BINDER / BÜGEL		1
4	30.6405-007	0	KOLO HNACI / DRIVE WHEEL / ANTRIEBSRAD		1
5	30.6408-002	1	DESKA / BOARD / PLATTE		1
6	30.6408-003	0	LISTA / TRIM / LEISTE	TYC 60x40	2
7	30.6408-004	0	LISTA / TRIM / LEISTE	TYC 60x20	2
8	30.6408-005	0	NAPINANI / TENSIONING / SPANNUNG		1
9	30.6408-007	0	CEP NAPINANI / TENSIONING LUG / SPANNUNGSBOLZEN	d 35 h6	1
10	30.6408-008	0	VÍKO / COVER / DECKEL	P5-208	1
11	30.6408-009	0	VÍKO / COVER / DECKEL	P15-190	1
12	30.6408-010	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M16x25 ZN	1
13	30.6408-011	0	PŘÍRUBA / FLANGE / FLANSCH		1
14	30.6408-025	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 6HR 22	1
15	30.6708-303	0	DRZAK / HOLDER / HALTER	P 3x50x95	1
16	30.6708-304	0	DORAZ / STOP PIECE / ANSCHLAG	P 2x20x76	1
17	90.001.25.007	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X10	8
18	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X10	2
19	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X60	1
20	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	1
21	90.001.25.098	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X80	16
22	90.001.25.101	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X90	12
23	90.005.55.003	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5X16	6
24	90.350.07.004	0	TAL.PRUŽINA DIN 2093 A / DISC SPRING / TELLERFEDER	50X25.4X3	12
25	91.173.007	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	-RIWK	1
26	95.501.002	0	LOŽISKO / BEARING / LAGER	KUZELIKOVE T4CB120	2
27	95.830.041	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 130X160X12	1
28	95.850.014	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM24	1
29	95.855.014	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	POJISTINA PODLOŽKA MB24	1

I. ZRUS. DORAZOVY SROUB 30.6208-103 A NAHAZEN 30.6408-025. 123/ZM122 21.4.2008 SLEZACKOVA

7.22. Vedení pásu / Belt guide / Sägebandführung



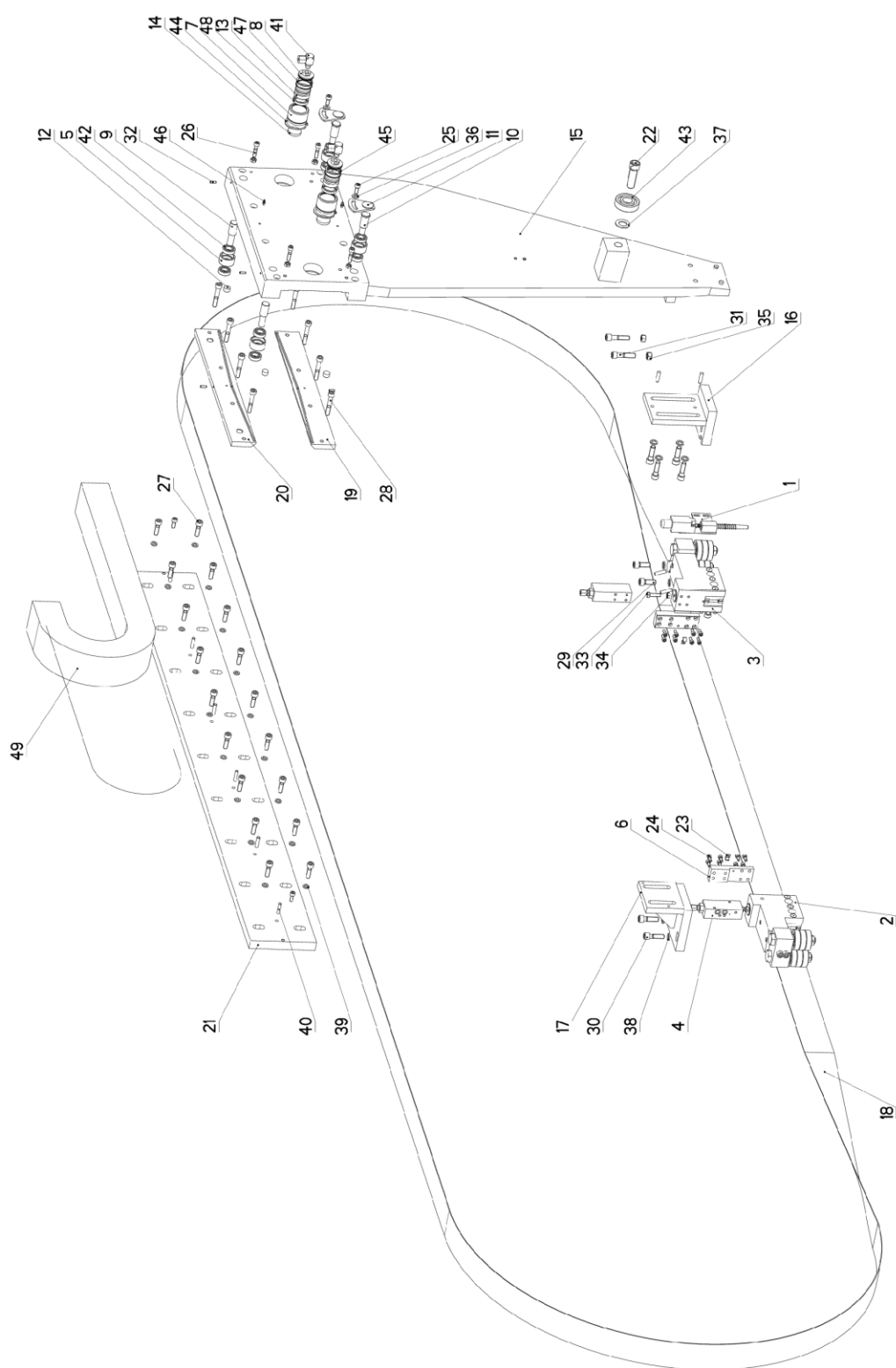
NÁZEV DOKUMENTU	ČÍSLO DOKUMENTU	VERZE
VEDENÍ PÁSU	20-6410-000	EX 128
Konstrukce: PYSKY	Datum: 21. 05. 2015	
Periférie:	11.30	

7.23. Kusovník / Piece list / Stückliste - Vedení pásu / Belt guide / Sägebandführung

Císlo Sestavy 201.6410-000		Ver. I	Název sestavy VEDENÍ PASU/BELT GUIDE/SÄGEBANDFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6110-020	I	DORAZ / STOP PIECE / ANSCHLAG		1
2	201.6410-050	I	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	201.6410-060	I	KOSTKA VODICÍ / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	201.6816-100	0	KOSTKA REGULACE / REGULATION CUBE / REGULUNGSWÜRFEL		2
5	30.1503-006	0	KLADKA / PULLEY / ROLLE	d 45	4
6	30.6016-002	0	DESKA / BOARD / PLATTE	HR 40x20	2
7	30.6210-053	0	TRUBKA / TUBE / ROHR	TR 52/40	2
8	30.6210-054	0	VÍKO / COVER / DECKEL	TYC KR TAZ 42	2
9	30.6210-056	0	CEP / LUG / BOLZEN	TYC 22	2
10	30.6210-057	0	CEP / LUG / BOLZEN	TYC 6HR	2
11	30.6210-058	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE		2
12	30.6210-062	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	TYC 16	4
13	30.6210-063	0	PIST / PISTON / KOLBEN	D 40	2
14	30.6210-064	I	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	TYC d 36	2
15	30.6410-001	2	DRŽAK / HOLDER / HALTER		
16	30.6410-002	0	DRŽAK / HOLDER / HALTER		1
17	30.6410-003	0	DRŽAK / HOLDER / HALTER		1
18	30.6410-004	0	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	PAS 67x1,6	1
19	30.6410-005	2	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSLEISTE	HR 70x20	1
20	30.6410-006	2	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSLEISTE	HR 70x20	1
21	30.6410-007	3	LISTA / TRIM / LEISTE	HR 180x25	1
22	30.6410-009	0	SROUB / BOLT / SCHRAUBE	SROUB 20x60	1
23	30.9010-003	0	DRŽAK / HOLDER / HALTER	PI. 5x10	2
24	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	16
25	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	4
26	90.001.25.035	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x35	4
27	90.001.25.049	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	18
28	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x60	8
29	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	2
30	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x40	6
31	90.001.25.062	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x50	2
32	90.002.20.007	0	SROUB STAVEČNÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x16	4
33	90.005.55.017	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x30	2
34	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE M8	5

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

7.24. Vedení pásu / Belt guide / Sägebandführung



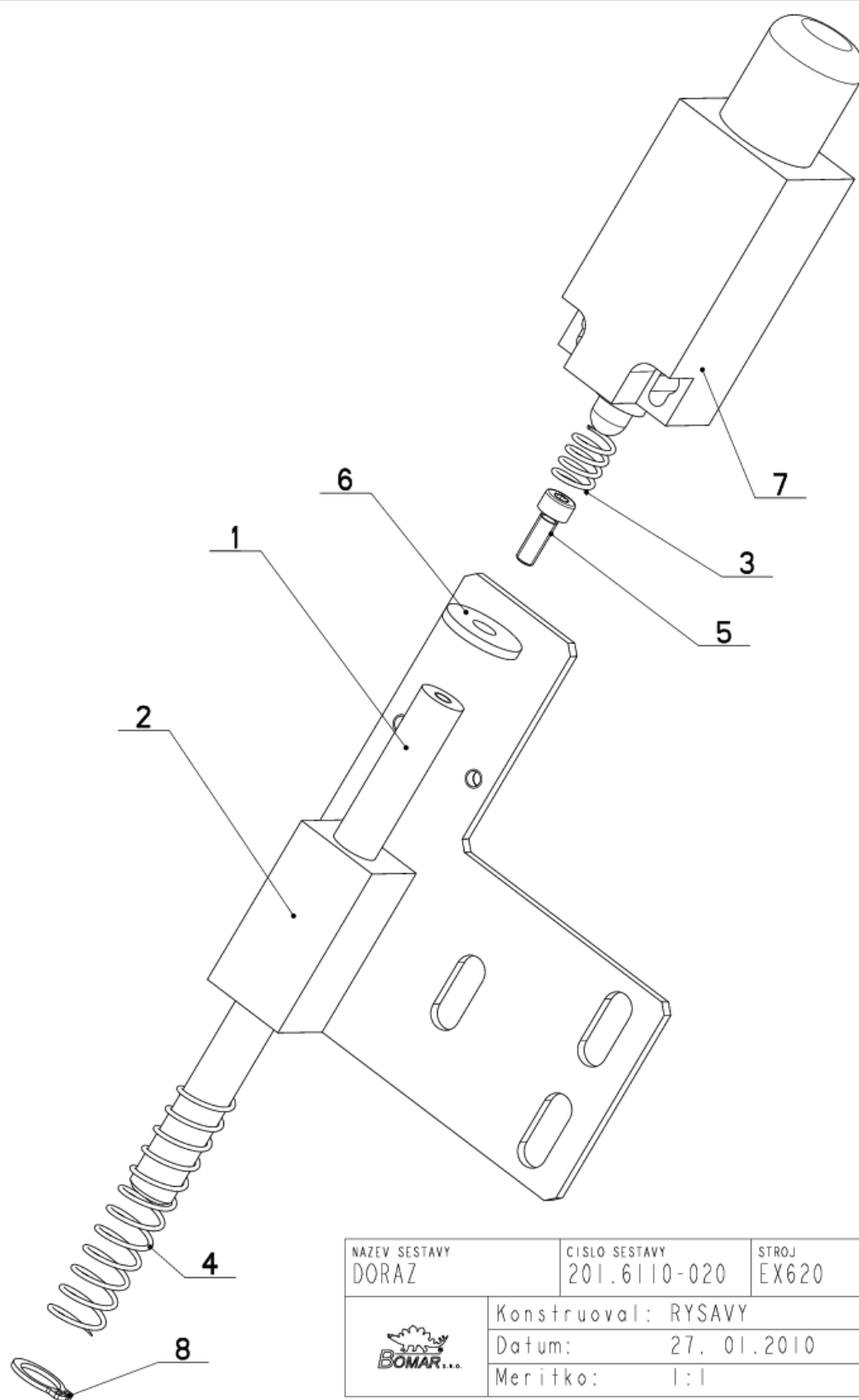
NÁZEV KRESLA	ČÍSLO KRESLA	STRANA
VEDENÍ PÁSU	20-6410-000	EX 128
Konstrukce: PYSKY	Datum: 21. 05. 2015	
Periférie:	11.30	

7.25. Kusovník / Piece list / Stückliste - Vedení pásu / Belt guide / Sägebandführung

35	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE - M12	2
36	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 8,4	2
37	90.150.50.011	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 21	1
38	90.163.00.003	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	NORD-LOCK	8
39	90.163.00.004	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	NORD-LOCK	18
40	90.300.02.010	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLÍK 8X32	10
41	92.003.001	0	SROUBENÍ UHLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	P-RSWS-08LR	2
42	95.001.006	0	LOŽISKO / BEARING / LAGER	6002 2RS	8
43	95.001.036	0	LOŽISKO / BEARING / LAGER	6305A	1
44	95.800.019	0	SEGR HŘÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 52	2
45	95.801.005	0	SEGR DIRA / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 40	2
46	95.860.001	0	HLAVICE MAZACÍ / HEAD / KOPF	KM5	2
47	96.001.010	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	36X2	2
48	96.042.001	0	TESNĚNÍ / SEALING / DICHTUNG	40x30x8 K606	2
49	99.170.021	0	6204-RETEZ ENERGIE_27.05.75 /	,	1

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

7.26. Doraz / Stop piece / Anschlag

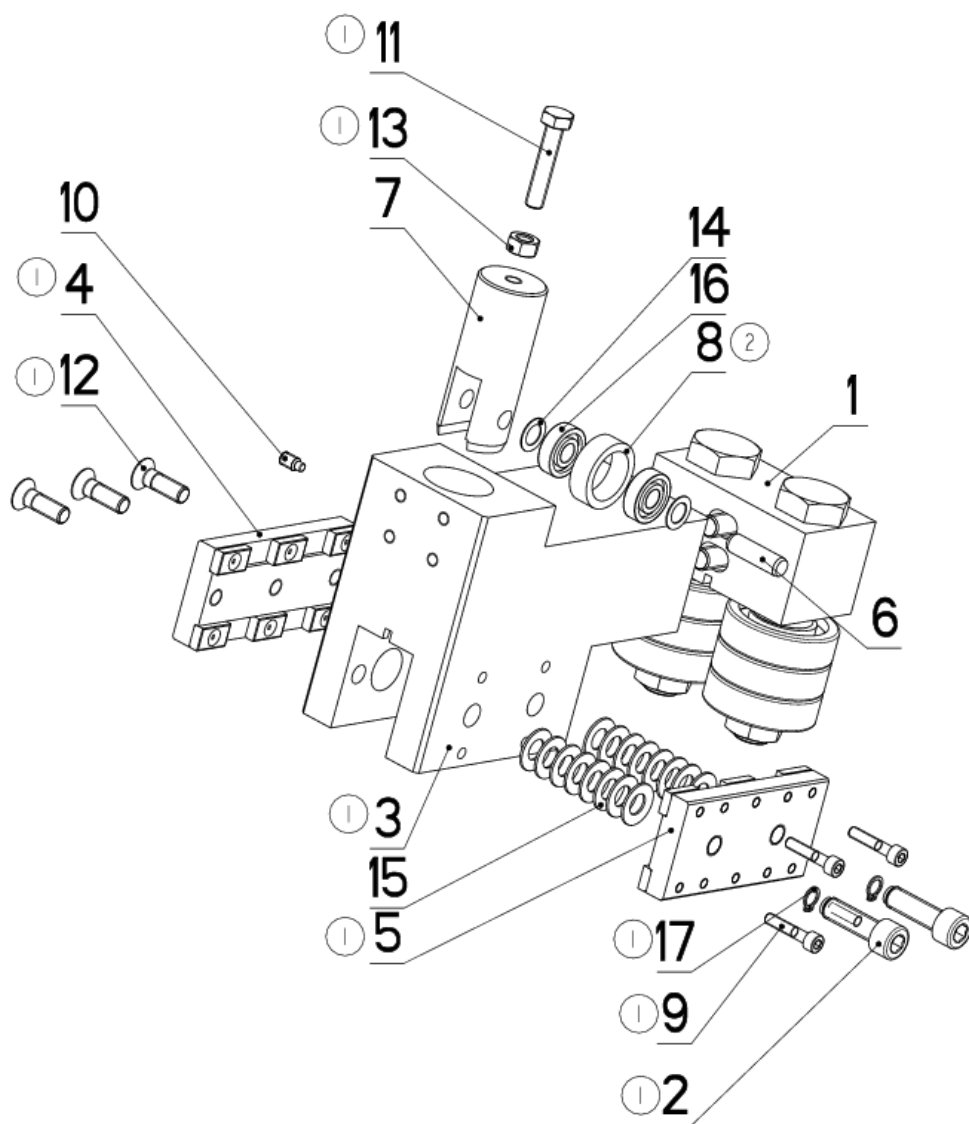


NAZEV SESTAVY DORAZ	CISLO SESTAVY 201.6110-020	STROJ EX620
	Konstruoval: RYSAVY	
	Datum: 27. 01.2010	
	Meritko: 1:1	

7.27. Kusovník / Piece list / Stückliste - Doraz / Stop piece / Anschlag

Číslo Sestavy 201.6110-020		Ver. 1	Název sestavy DORAZ/STOP PIECE/ANSCHLAG		
Poz.	Objednáci číslo	Ver.	Název položky	Rozmer	Ks
1	30.6110-114	0	TYC / POLE / STANGE	d 10	1
2	30.6110-116	0	DORAZ / STOP PIECE / ANSCHLAG		1
3	31.1605-121	0	PRUŽINA / SPRING / FEDER	1x9.5x12x4	1
4	31.2801-014	0	PRUŽINA / SPRING / FEDER	1x12.5x60x12	1
5	90.001.25.003	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUS-SCHRAUBE	M4x12	1
6	90.151.50.006		PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 5	1
7	91.173.007	0	SPÍNACÍ KONEC / END SWITCH / ENDSCHALTER	-R1WK	1
8	95.800.003	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 10	1

7.28. Kostka vodící / Lead cube / Führungsklotz



NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6410-050	STROJ EX1120
	Konstruoval: RYSAVY	
	Datum: 27. 07.2015	
	Meritko: 2:5	

7.29. Kusovník / Piece list / Stückliste - Kostka vodící / Lead cube / Führungsklotz

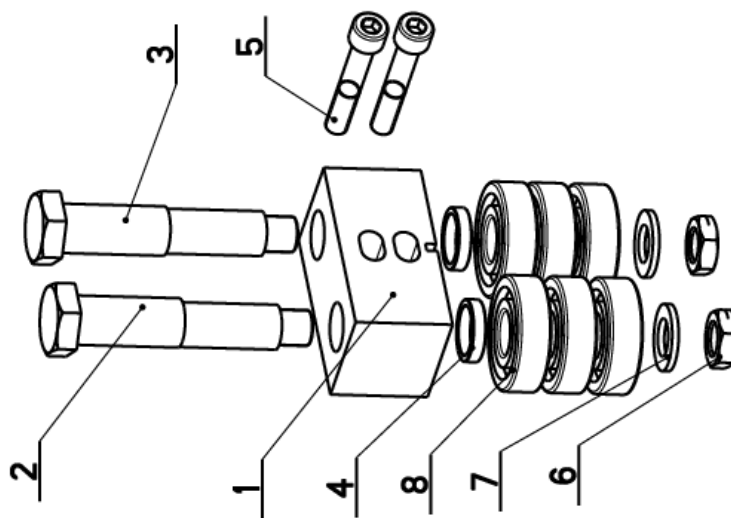
Císlo Sestavy 201.6410-050		Ver. 2	Název sestavy KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.5910-320	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6210-107 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	2
3	30.6410-051 (1)	0	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	TYC 130 x 80	1
4	30.6410-100 (1)	0	DRŽÁK TVRDOKOVU / POA HOLDER / HW-HALTER		1
5	30.6410-200 (1)	0	DRŽÁK TVRDOKOVU / POA HOLDER / HW-HALTER		1
6	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
7	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
8	31.6710-110 (2)	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	4
10	90.004.20.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
11	90.005.55.019 (1)	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x40	1
12	90.011.27.016 (1)	0	ZAPŮSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x25	3
13	90.100.55.005 (1)	0	MATICE / NUT / MÜTTER	MATICE - M8	1
14	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	10x16x0.50	2
15	90.350.02.005	0	PRUŽINA TALIROVÁ / DISC SPRING / TELLERFEDER	20x10.2x1	16
16	95.001.044	0	LOŽISKO / BEARING / LAGER	609 2RS	2
17	95.800.002 (1)	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 8	2

1. ZRUS. KOSTKA 30.6410-013 A NAHR. KOSTKOU 30.6410-051, ZRUS. DESKA VODÍCI 30.5910-104 A NAHR. 30.6410-100, ZRUS. DESKA VODÍCI 30.6410-015 A NAHR. 30.6410-200, ZRUS. SOUC. 90.001.25.046, 90.001.25.018, 90.015.30.003, 95.801.035, 30.6410-012, PRID. SOUC. 90.001.25.011, 95.800.002, 90.011.27.016, 30.6210-107, 90.005.55.019, 90.100.55.005. 142/ZM205 13.10.2009 SLEZACKOVA
2. ZRUS. SOUC. 30.6710-110 A NAHR. 31.6710-110. 175/ZM178 27.7.2015 SLEZACKOVA

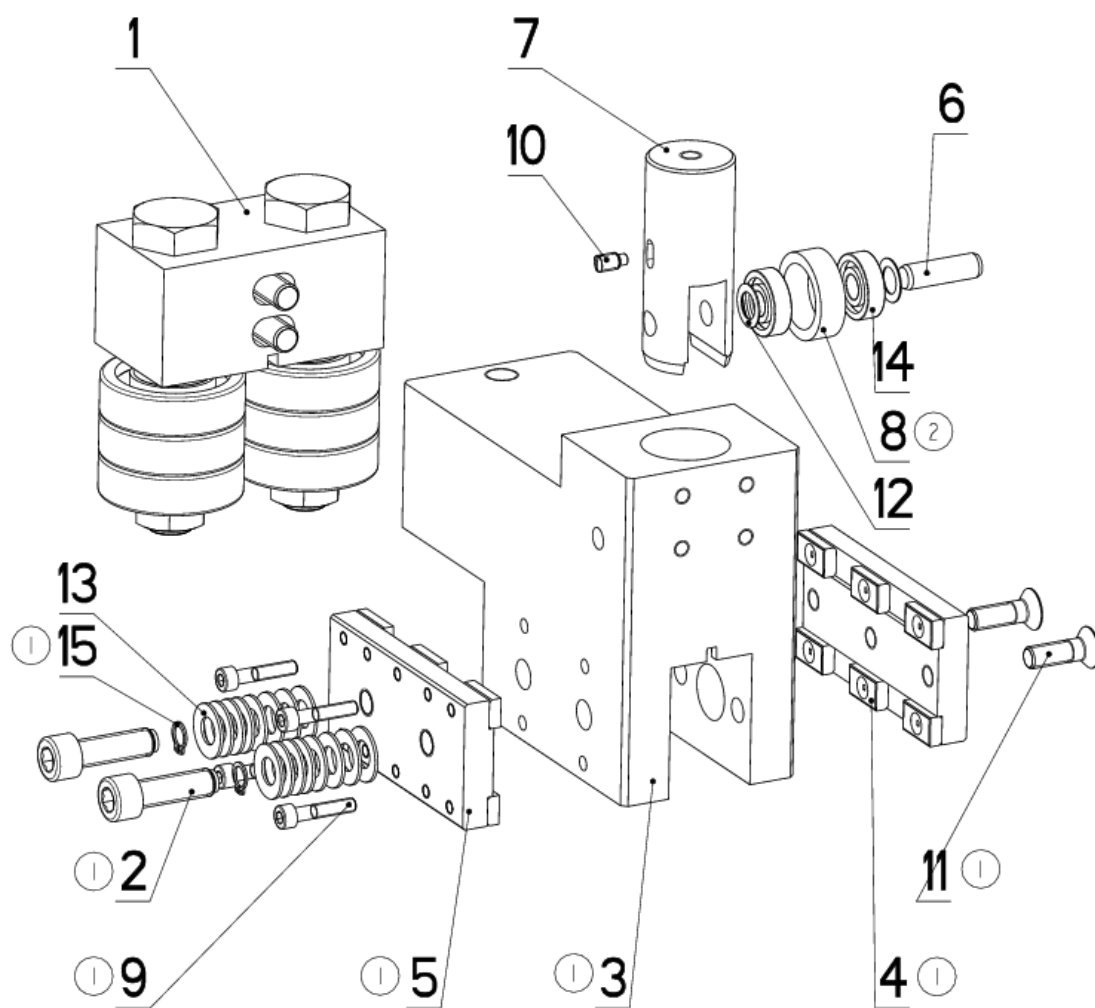
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.30. Vedení / Guide / Backenführung

Císlo Sestavy 201.5910-320	Ver. 0	Název sestavy VEDENÍ/GUIDE/BACKENFÜHRUNG			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.5910-321	0	KOSTKA / CUBE / WÜRFEL	HR 50x50	1
2	30.5910-322	0	CEP / LUG / BOLZEN	6HR 30	1
3	30.5910-323	0	CEP / LUG / BOLZEN	6HR 30	1
4	30.5910-325	0	POUZDRO / SLEEVE / BÜCHSE	TR 28x4	2
5	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x60	2
6	90.101.55.003	0	MATICE PR.NÍZKA ZN / NUT / MUTTER	MATICE M16	2
7	90.150.50.009	0	PODLOŽKA DIN125 / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 17	2
8	95.001.024	0	LOŽISKO KUL I RADE / BEARING / LAGER	6304 2RSA	6



7.31. Kostka vodící / Lead cube / Führungsklotz



NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6410-060	STROJ EX1120
	Konstruoval: RYSAVY	
	Datum: 27. 07.2015	
	Meritko: 1:2	

7.32. Kusovník / Piece list / Stückliste - Kostka vodící / Lead cube / Führungsklotz

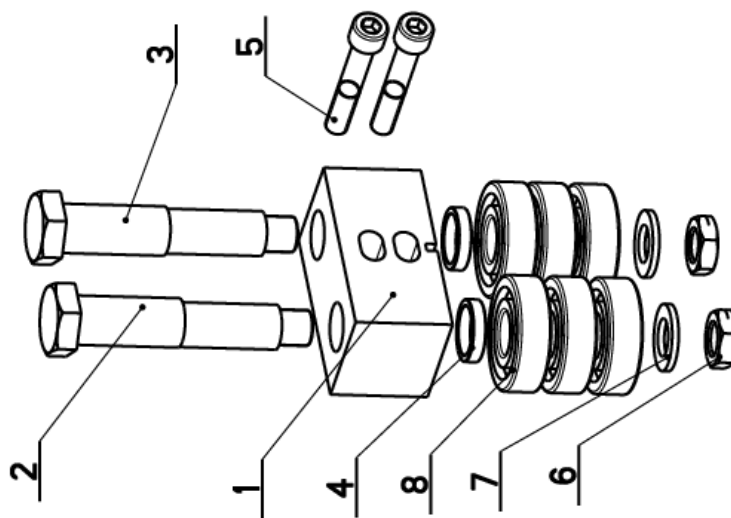
Číslo Sestavy 201.6410-060		Ver. 2	Název sestavy KOSTKA VODÍCI/LEAD CUBE/FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.5910-320	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6210-107	1	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	2
3	30.6410-061	1	KOSTKA VODÍCI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 130 x 80	1
4	30.6410-100	1	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
5	30.6410-200	1	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.6710-108	1	KOLÍK / PIN / BOLZEN	TTC 10	1
7	30.6710-109	0	PIST / PISTON / KOLBEN	ø 32	1
8	31.6710-110	2	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011	1	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	4
10	90.004.20.002	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
11	90.011.27.016	1	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x25	3
12	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	10x16x0.50	2
13	90.350.07.005	0	PRUŽINA TALÍŘOVÁ / DISC SPRING / TELLERFEDER	20x10.2x1	16
14	95.001.044	0	LOŽISKO / BEARING / LAGER	609 2RS	2
15	95.800.002	1	SEGR HRDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTINÝ KROUZEK 8	2

I. ZRUS. KOSTKA 30.6410-014 A NAHR. KOSTKOU 30.6410-061, ZRUS. DESKA VODÍCI 30.5910-104 A NAHR. DESKOU 30.6410-100,
ZRUS. DESKA VODÍCI 30.6410-015 A NAHR. 30.6410-200, ZRUS. SOUC. 90.001.25.046, 90.001.25.018, 90.015.30.003, 95.801.035,
30.6410-012, PRID. SOUC. 90.001.25.011, 90.011.27.016, 95.800.002, 30.6210-107, 142/ZM205 19.11.2009 SLEZACKOVA
2. ZRUS. SOUC. 30.6710-110 A NAHR. 31.6710-110, 175/ZM178 27.7.2015 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

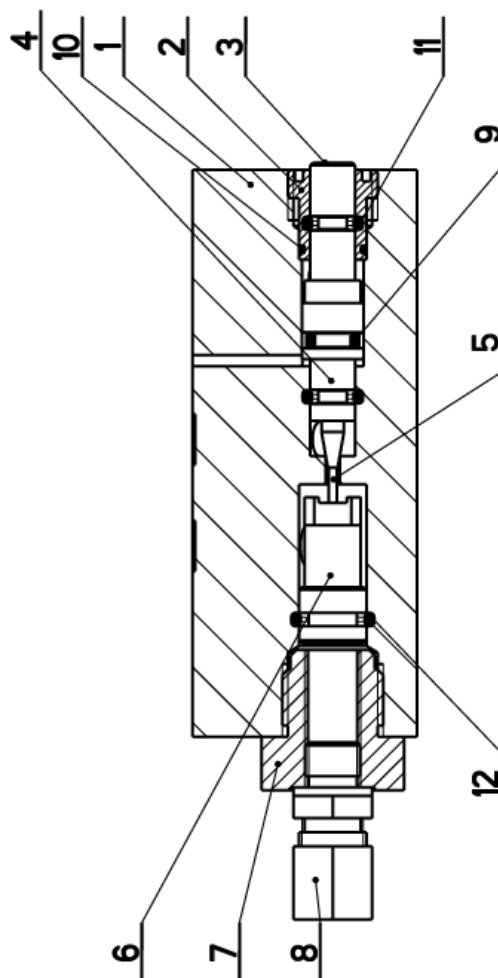
7.33. Vedení / Guide / Backenführung

Císlo Sestavy 201.5910-320	Ver. 0	Název sestavy VEDENÍ / GUIDE / BACKENFÜHRUNG			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.5910-321	0	KOSTKA / CUBE / WÜRFEL	HR 50x50	1
2	30.5910-322	0	CEP / LUG / BOLZEN	6HR 30	1
3	30.5910-323	0	CEP / LUG / BOLZEN	6HR 30	1
4	30.5910-325	0	POUZDRO / SLEEVE / BÜCHSE	TR 28x4	2
5	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x60	2
6	90.101.55.003	0	MATICE PR.NÍZKA ZN / NUT / MUTTER	MATICE M16	2
7	90.150.50.009	0	PODLOŽKA DIN125 / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 17	2
8	95.001.024	0	LOŽISKO KUL I RADE / BEARING / LAGER	6304 2RSA	6

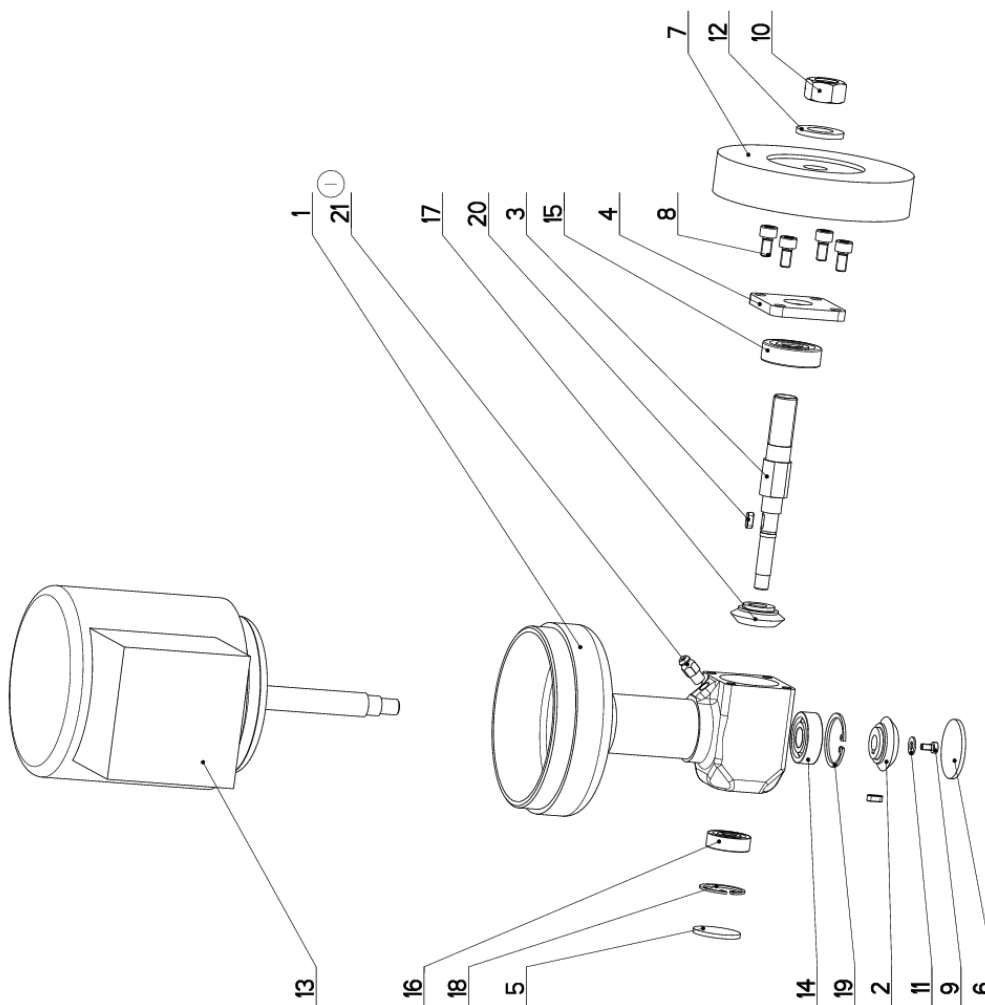
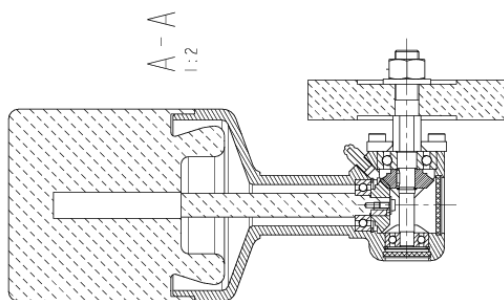


7.34. Kostka regulace / Regulation cube / Regelungswürfel

Císlo Sestavy 201.6816-100		Ver. 0	Název sestavy KOSTKA REGULACE/REGULATION CUBE/REGELUNGSWÜRFEL		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6816-101	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



7.35. Kartáč / Brush / Bürste



I.:NAHRADA GUMOVE ZASLEPKY MAZNICI

NAZEV SESTAVY KARTAC	CISLO SESTAVY 201.C214-050	STROJ P280
Konstruoval: DUFEK		
Datum: 20. 09.2016		
Meritko: 1:2		

7.36. Kusovník / Piece list / Stückliste - Kartáč / Brush / Bürste

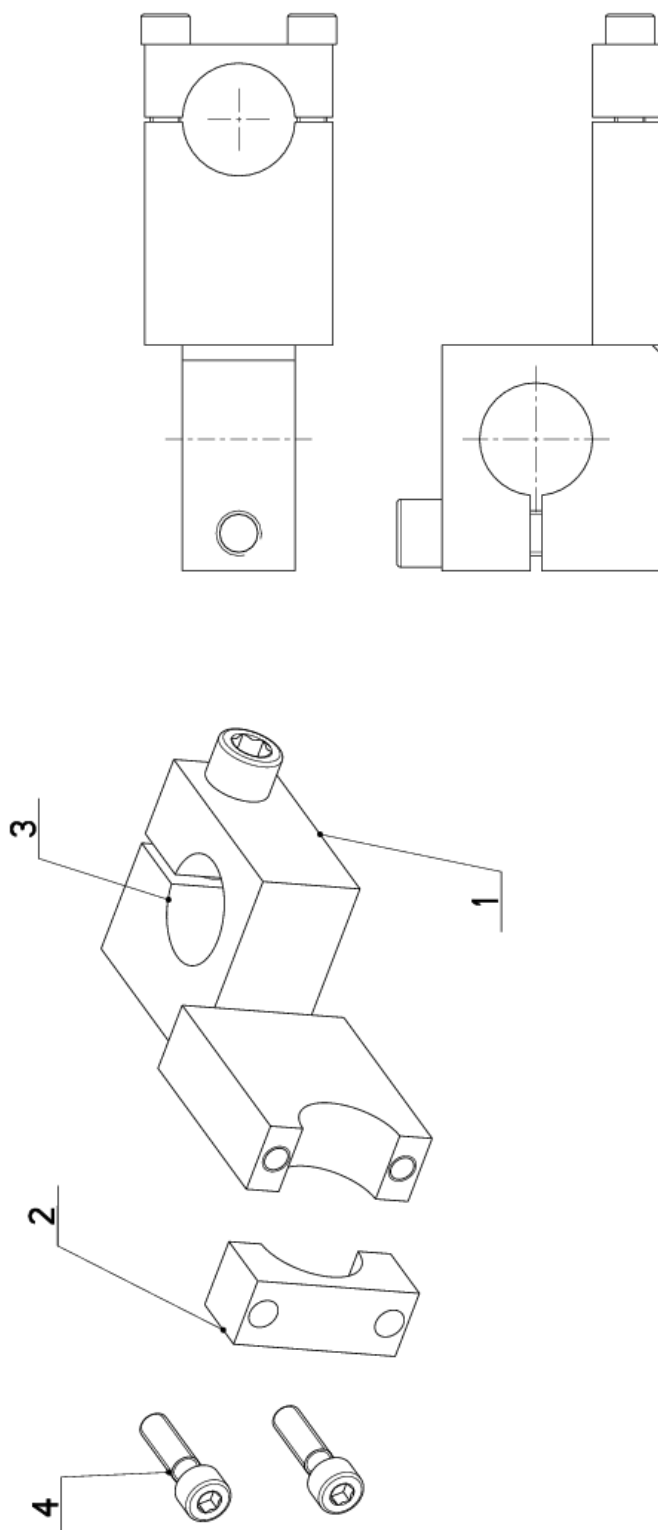
Císlo Sestavy 201.C214-050		Ver. 1	Název sestavy KARTAC/BRUSH/BÜRSTE		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	30.C214-051	1	TELESO / /		1
2	30.C214-052	1	OZUBENE KOLO-UPRAVA / /	M1, 262	2
3	30.C214-053	1	HRIDEL KARTACKU / /	d 14	1
4	30.C214-054	0	VÍKO / /	P 5x40	1
5	31.C214-056	0	DESKA PRYZOVA / /		1
6	31.C214-057	0	DESKA PRYZOVA / /		1
7	49.250.017	0	KARTAC / BRUSH / BÜRSTE		1
8	90.001.55.078	0	SROUB IMBUS ZINEK / /	SPB 100x12 M5x10	4
9	90.012.50.019	0	SR. S VALC. HLAV. / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M3x6	1
10	90.100.25.004	0	MATICE DIN 934 / /	MATICE - M12 LH	1
11	90.150.50.002	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 4,3	1
12	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 13	1
13	91.001.097	0	MOTOR / /	60W, 380V, 1400ot/min	1
14	95.001.004	0	LOZISKO / BEARING / LAGER	6000 2RS	1
15	95.001.014	0	LOZISKO / BEARING / LAGER	6200 2RS	1
16	95.001.054	0	LOZISKO / BEARING / LAGER	627	1
17	95.800.002	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNY KROUZEK 8	1
18	95.801.019	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 22	1
19	95.801.020	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 26	1
20	95.810.038	0	PERO TESNE / TIGHT SPRING / PASSFEDER	PERO 3x3x8	2
21	99.204.002 (1)	0	MAZNICE / LUBRICATOR / OELER	M6x0,75	1

1. ZRUSENA GUMA 31.C214-058 A NAHR.MAZNICI 99.204.002, ZRUS.LOZISKO 95.001.028. 216/ZM288 21.9.2016 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

7.37. Držák / Holder / Halter

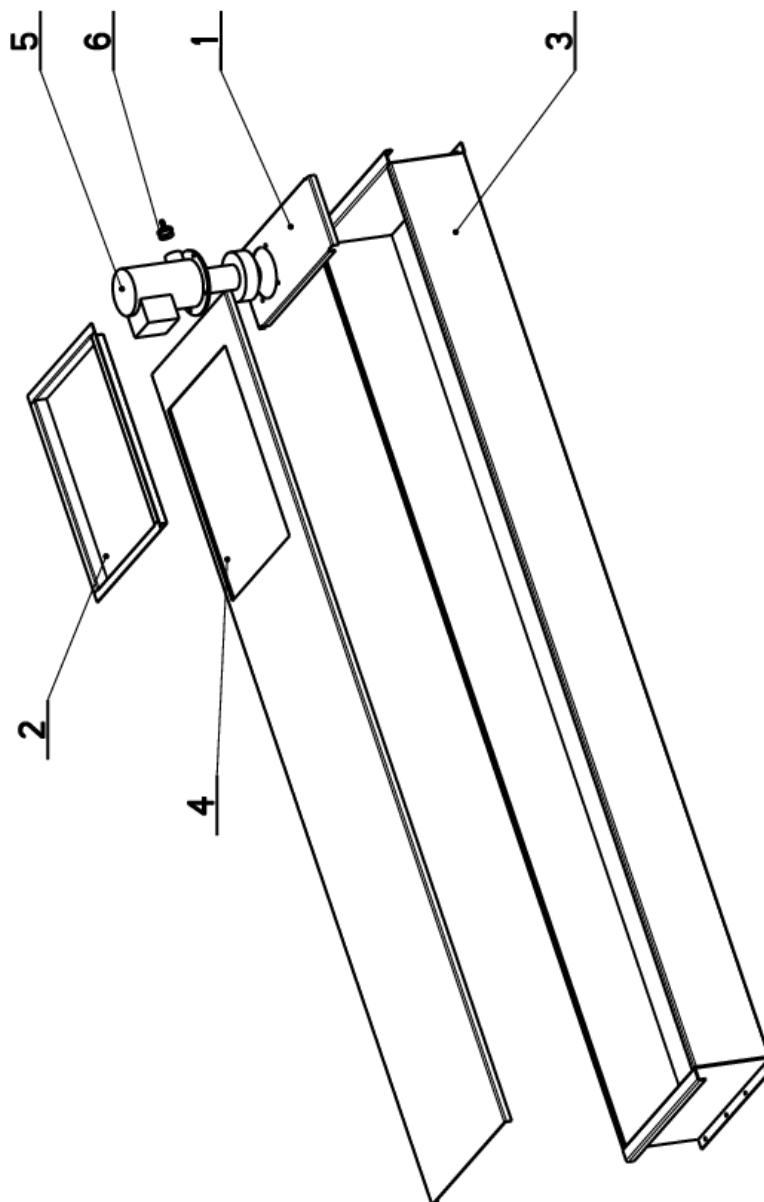
Císlo Sestavy 201.C214-220		Ver. 0	Název sestavy DRŽÁK/HOLDER/HALTER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.C214-221	0	DRŽÁK /	SVAREK	1
2	30.C214-222	0	OBJÍMKA / CLAMP / KLAMMERSTÜCK	HR 50x20	1
3	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X40	1
4	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X30	2



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

7.38. Chlazení / Cooling / Kühlung

Cislo Sestavy 201.6406-000		Ver. 0	Název sestavy CHLAZENÍ / COOLING / KÜHLUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6206-102	0	PLECH / PLATE / BLECH	P 1.5x186x410	1
2	30.6206-104	0	SITO / SIEVE / GITTERWERK	P 1.5 x386	1
3	30.6406-001	0	NADŘZ / CONTAINER / BEHÄLTER		1
4	30.6406-002	0	PLECH / PLATE / BLECH	P 1.5 - 410	1
5	91.020.009	0	CERPADLO / PUMP / PUMPE	3COA 2-14	1
6	94.202.005	0	REDUCE / REDUCTION / ADAPTOR / REDUKTION	3/4"-6	1



7.40. Kusovník / Piece list / Stückliste - Válec zvedací / Lifting cylinder / Hebezyylinder

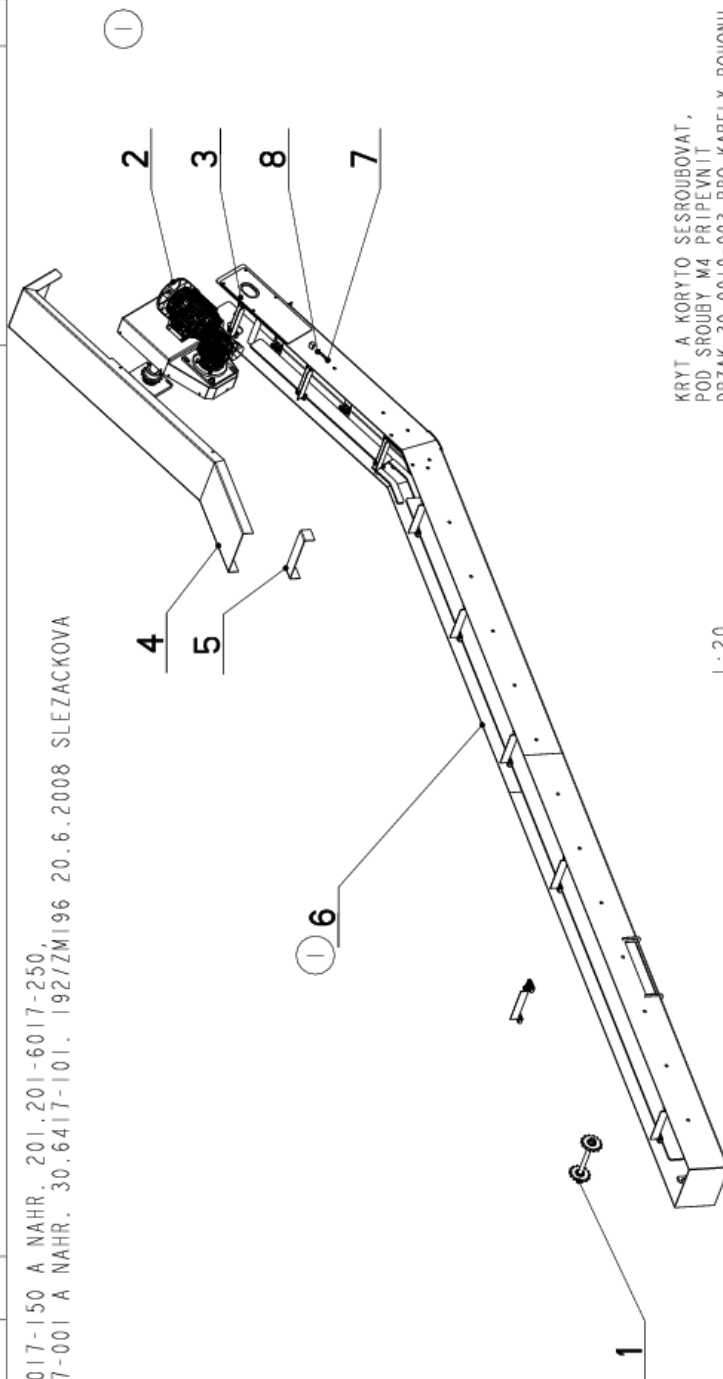
Císlo Sestavy 201.6407-600		Ver. 0	Název sestavy VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLYNDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6407-303	1	VÍKO / COVER / DECKEL	D 100	1
2	30.6407-306	0	CEP / LUG / BOLZEN	d30h6	1
3	30.6407-307	1	DRŽÁK / HOLDER / HALTER	HR 60x60	1
4	30.6407-310	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	6HR 27	2
5	30.6407-501	1	VALEC / ROLLER / ZYLINDER	TRUBKA 100/90	1
6	30.6407-502	1	DRŽÁK / HOLDER / HALTER	D 100	1
7	30.6407-503	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 5017	1
8	30.6407-504	0	PIST / PISTON / KOLBEN	d 90	1
9	30.6407-505	0	DISTANC / DISTANCE / DISTANZ	TR 60x5	1
10	30.6407-601	0	DRŽÁK / HOLDER / HALTER		1
11	30.6407-602	0	CEP / LUG / BOLZEN	D 30h6	1
12	90.001.25.050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x40	4
13	90.001.25.107	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M14x35	1
14	90.150.00.013	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 10	4
15	92.002.114	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 3/8	2
16	92.151.005	0	VENTIL POJISTNÝ / SAFETY VALVE / SICHERUNGSVENTIL		1
17	95.800.013	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 30	2
18	95.801.039	0	KROUZEK POJIST. VNITR. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 92	2
19	95.850.011	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM6	1
20	96.002.035	0	KROUZEK O DYNAMICKY / /	22x3	1
21	96.002.055	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	96.002.055	2
22	96.060.013	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	WD2200500-2201	1
23	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	2
24	96.082.012	0	KROUZEK / RING / RING	96.082.012	2
25	96.084.013	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GP6500900 T47	3
26	96.084.015	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GR6500500-T47	1
27	96.900.027	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PT0200900	1
28	96.900.031	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	96.900.031	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

7.41. Vynašeč třískový / Chip extractor / Spanabführung

Císto Sestavy 201.6417-000		Ver. 1	Název sestavy VYNAŠEČ TRÍSKOVÝ/CHIP EXTRACTOR/SPANABFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6017-103	0	KOLO NAPÍNAČÍ / TENSIONING WHEEL / UMLENKRAD		1
2	201.6017-250	1	POHON / DRIVE / ANTRIEB		1
3	201.6717-304	1	RETEZ / CHAIN / KETTE		12
4	30.6217-205	2	KRYT / COVER / ABDECKUNG		1
5	30.6417-005	0	KRYT / COVER / ABDECKUNG	P 2x278	1
6	30.6417-101	2	KORYTO / CHANNEL / Rinne		1
7	90.005.55.012	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M6x40	2
8	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE M6	2

1. ZRUS. POHON 201.6017-150 A NAHR. 201.201-6017-250,
ZRUS. KORYTO 30.6417-001 A NAHR. 30.6417-101. 192/ZM196 20.6.2008 SLEZACKOVA



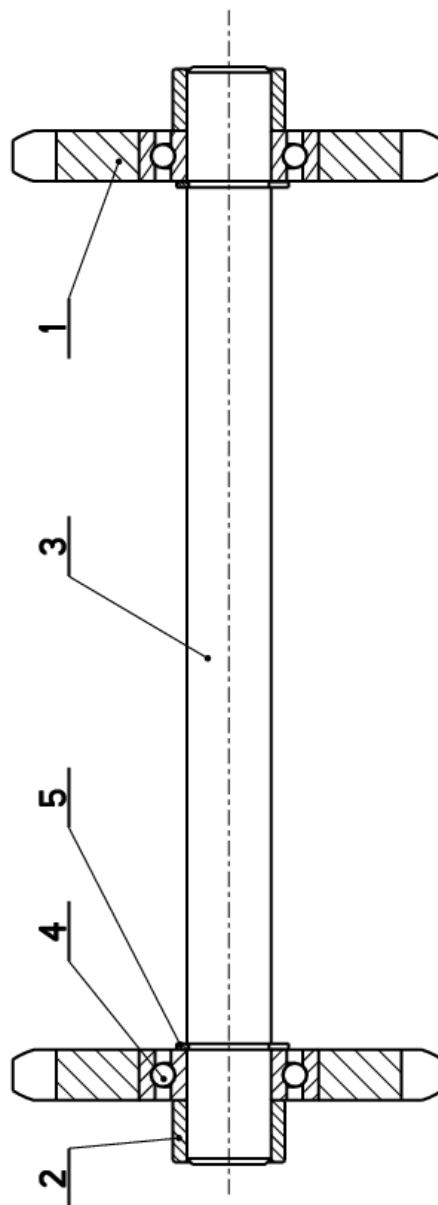
KRYT A KORYTO SESROUBOVAT,
POD SROUBY M4 PRIPEVNIT
DRŽÁK 30.9010-003 PRO KABELY POHONU

1:20

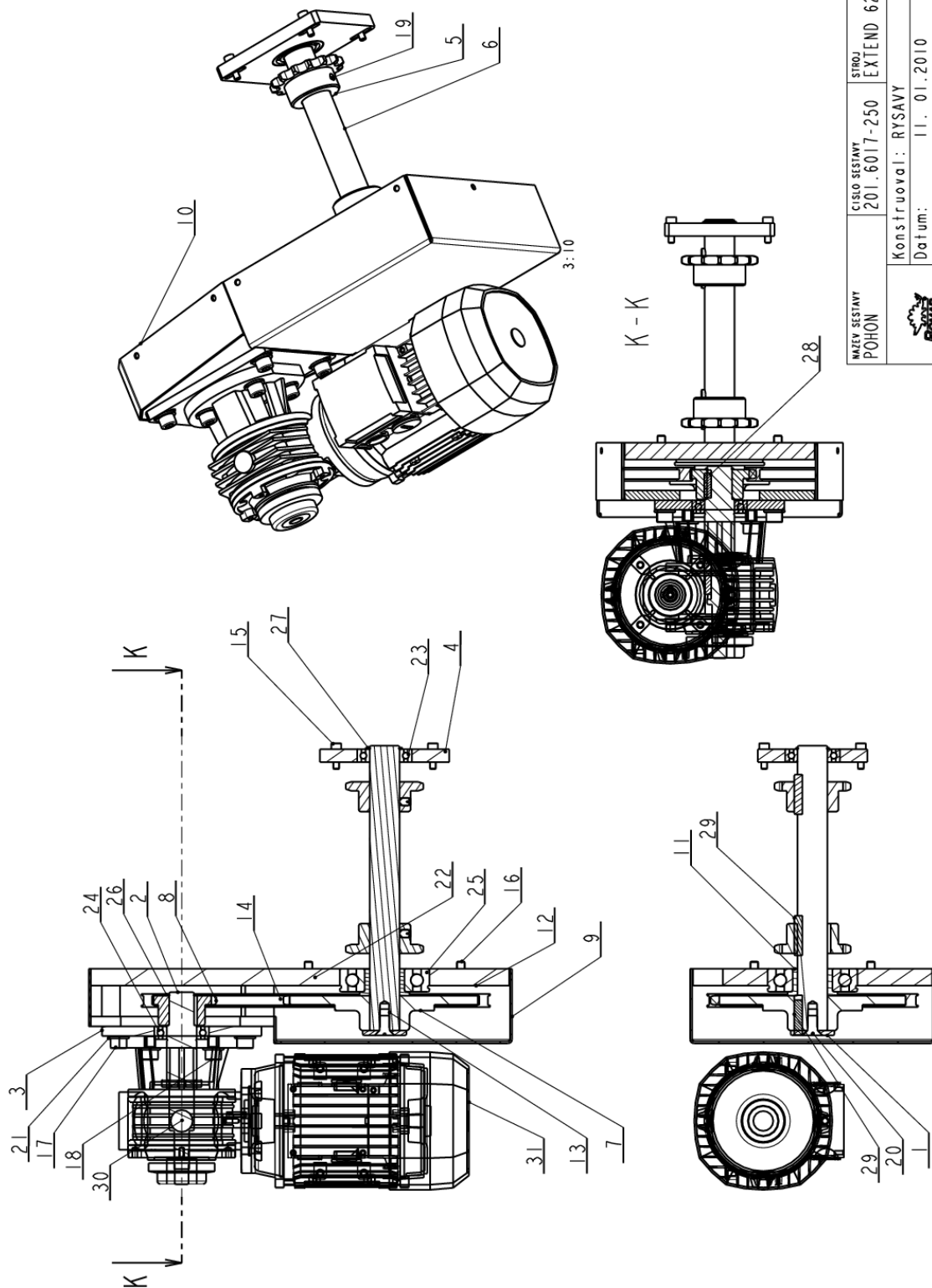
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.42. Kolo napínací / Tensioning / Wheel / Umlenkrad

Číslo Sestavy 201.6017-103		Ver. 0	Název sestavy KOLO NAPÍNACÍ / TENSIONING WHEEL / UMLENKRAD		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6017-111	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD	RETEZKA z=14	2
2	30.6017-114	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR. 20x3	2
3	30.6017-117	0	HRDEL / SHAFT / WELLE	d15	1
4	95.001.006	0	LOŽISKO KULÍ / RADE / BEARING / LAGER	6002 2RS	2
5	95.800.006	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 15	2



7.43. Pohon / Drive / Antrieb

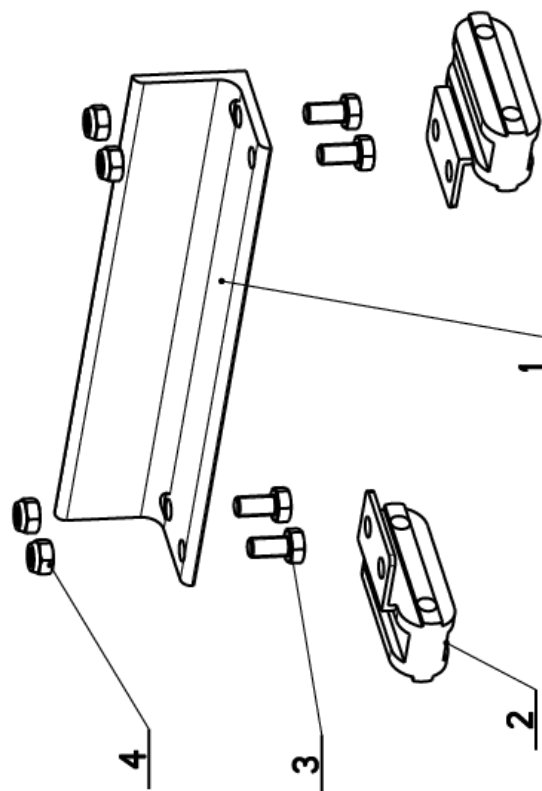


7.44. Kusovník / Piece list / Stückliste -
Pohon / Drive / Antrieb

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 / UNTERLEGSCHEIBE	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	108-1	1
8	30.6017-212	0	KOLO RETEZOVÉ / CHAIN WHEEL / KETTENRAD		1
9	30.6017-213	0	KRYT / COVER / ABDECKUNG	P2x335x390	1
10	30.6017-214	0	KRYT / COVER / ABDECKUNG	P2x58x511	1
11	30.6017-215	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	D 50	1
12	30.6017-216	0	DRŽÁK / HOLDER / HALTER	SVARENÝ	1
13	30.6017-218	0	PERO / SPRING / FEDER	PERO 8x10	1
14	49.200.027	0	RETEZ / CHAIN / KETTE	108-1	1
15	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x20	4
16	90.001.25.031	0	SROUB IMBUS ČERNÝ / 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 STAVEČÍ / 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 / UNTERLEGSCHEIBE	PODLOŽKA 10,5	8
22	90.163.00.002	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	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	KROUZEK POJIST.VNĚJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 25	1
27	95.800.013	0	KROUZEK POJIST.VNĚJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 30	1
28	95.810.007	0	PERO / SPRING / FEDER	PERO 8x7x25	1
29	95.810.010	0	PERO / SPRING / FEDER	PERO 10x8x40	3
30	95.810.016	0	PERO / SPRING / FEDER	PERO 8x7x40	1
31	99.001.073	0	PREVODOVKA / TRANSMISSION / GETRIEBE	VF 49 L2 F2 60 P7I 814 B8	1

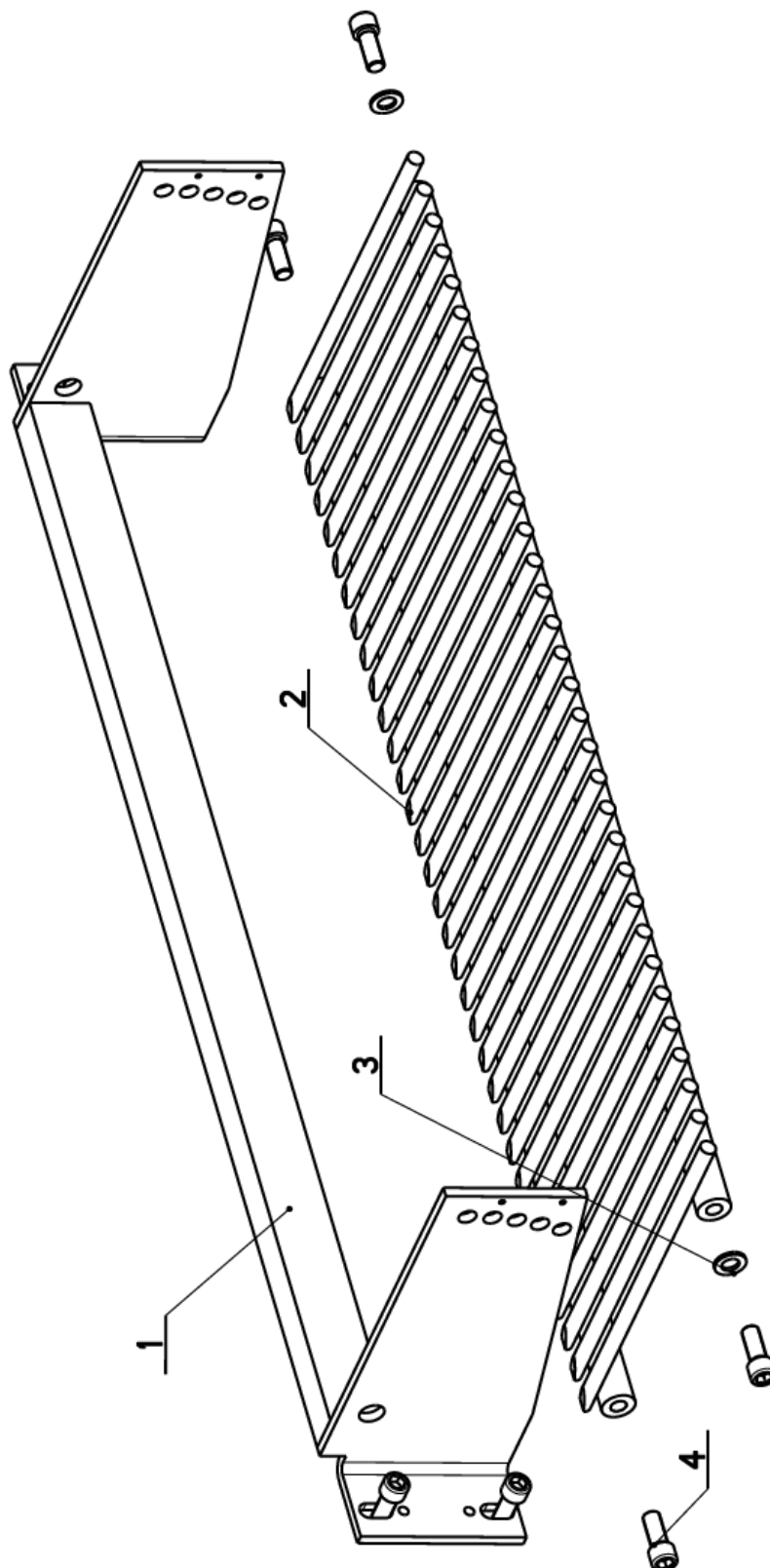
7.45. Řetěz / Chain / Kette

Číslo 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

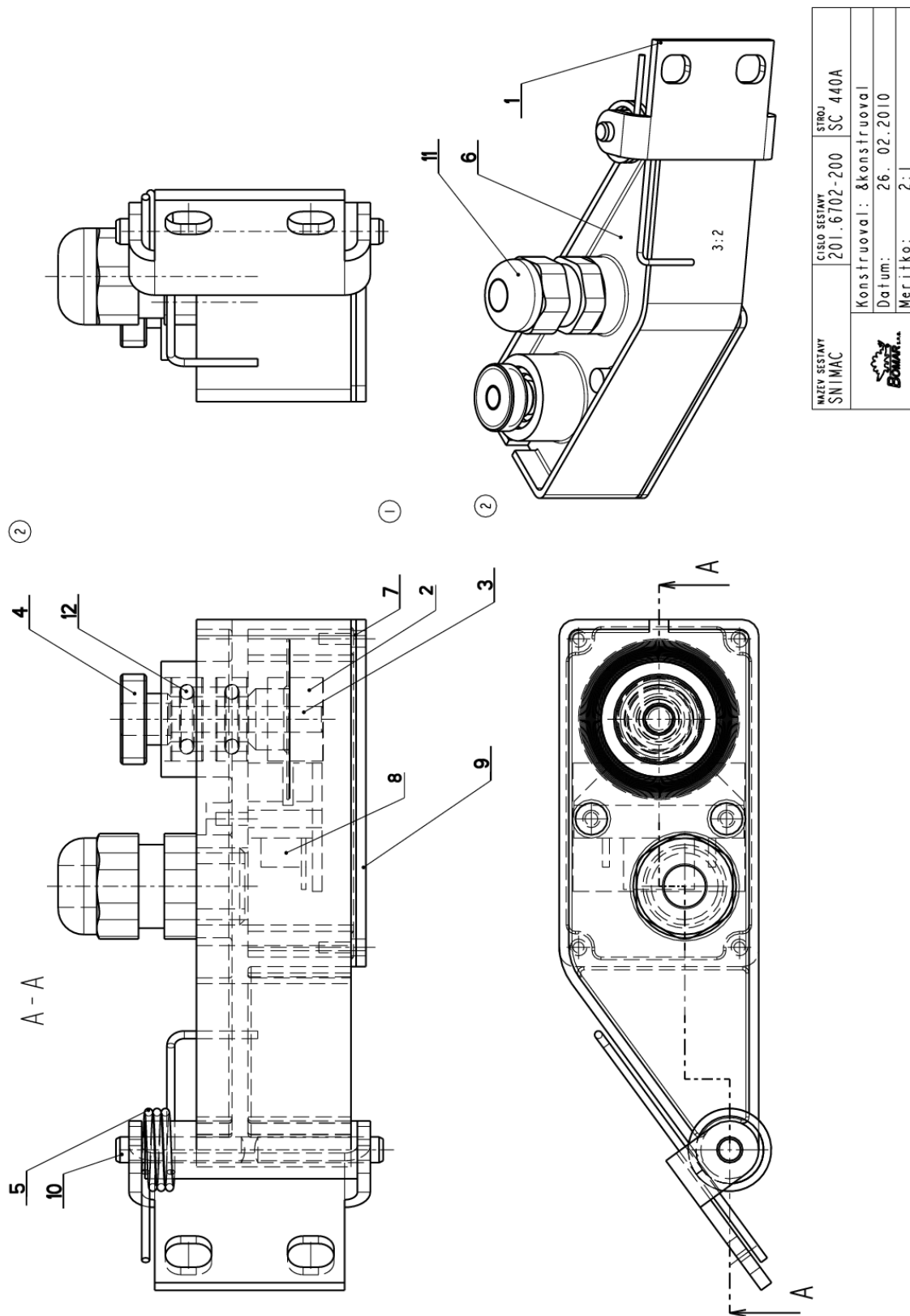


7.46. Rošt / Grill / Gitter

Číslo Sestavy 201.6418-100		Ver. 0	Název sestavy ROST/GRILL/GITTER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6418-101	1	DRŽAK / HOLDER / HALTER	SVARENÝ	1
2	30.6418-102	1	ROST / GRILL / GITTER		1
3	90.150.50.009	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 17	2
4	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X40	8



7.47. Snímač / Sensor / Sensor



7.48. Kusovník / Piece list / Stückliste - Snímač / Sensor / Sensor

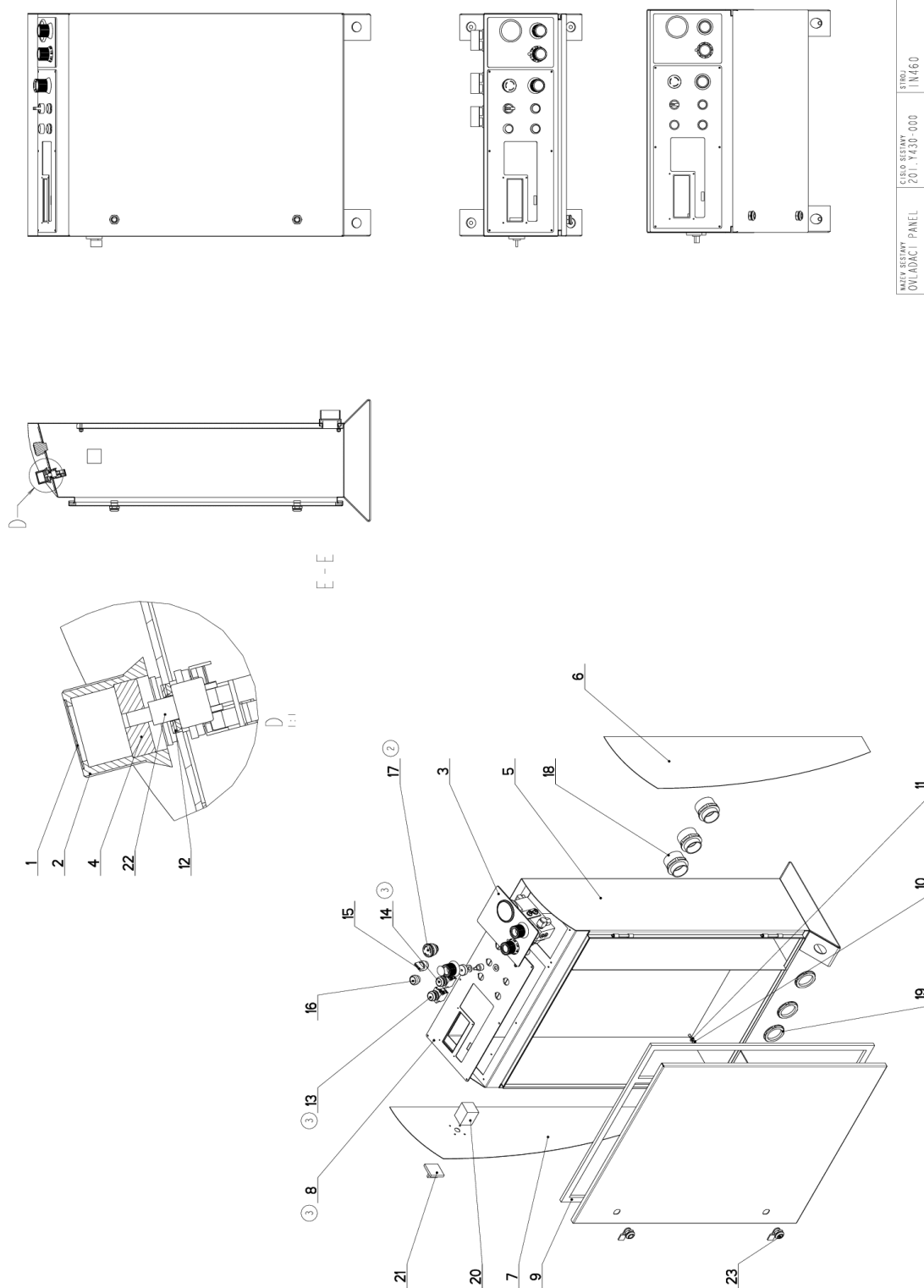
Císlo Sestavy 201.6702-200		Ver. 2	Název sestavy SNIMAC/SENSOR/SENSOR		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	30.2902-205	1	KONZOLA / CONSOLE / KONSOLE	P2 - 25.5	1
2	30.2902-209	0	CLONA / CURTAIN / SCHÜRZE		1
3	30.6702-212	2	HRIDEL / SHAFT / WELLE	KOLIK 5x32	1
4	30.6702-214	2	PASTOREK / PINION / RITZEL	z=12	1
5	31.2902-113	0	PRUŽINA / SPRING / FEDER	d 1.2	1
6	31.2902-201	0	RAMENO / SHOULDER / SÄGERAHMEN	VYLISEK-PLAST	1
7	31.2902-204	0	TESNENÍ / SEALING / DICHTUNG	TL.1 - 32.3	1
8	31.2930-001	0	SNIMAC / SENSOR / SENSOR	DAS 330GA	1
9	81.2902-203	0	KRYT / COVER / ABDECKUNG	P 1.5 - 31.8	1
10	90.300.02.XXX	0	KOLIK VALCOVÝ KALENÝ / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLIK 4x20	2
11	91.070.010	0	PRŮCHODKA / LEADTHROUGH / DURCHFÜHRUNG	M12x1.5 ČERNA	1
12	95.001.002	0	LOŽISKO / BEARING / LAGER	624 2RS	2

② POZ. 30.6702-202 NAHRAZENA 30.6702-212, POZ. 30.6702-204 NAHRAZENA 30.6702-214 22.3.05 STASTNA

① TESNENÍ 31.2902-206 NAHRAZENO TESNENÍM 31.2902-204 2.9.2003 ROZKOSNY

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. Ovladačí panel / Control panel / Bedienpult



WATY SERIANT	CIRKO SERIANT	STROJ
OVLADACÍ PANEĽ	201.Y430-000	IN460
Konštruoval: HLADIL		
Datum: 22. 09. 2017		
Meriliko: 7:50		

7.50. Kusovník / Piece list / Stückliste - Ovladací panel / Control panel / Bedienpult

Císlo Sestavy 201.Y430-000		Ver. 3	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6130-012	0	VÍKO / COVER / DECKEL	P 0,5x30	3
2	31.6130-008	0	HLAVICE / HEAD / KOPF		1
3	201.R230-220	1	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1
4	30.R230-010	0	MEZIKUS / INTERMEDIATE PIECE / PASSSTÜCK	d 32	1
5	30.R230-201	4	SKRIN / BOX / KASTEN		1
6	30.R230-204	0	PLECH / PLATE / BLECH	P 1x220	1
7	30.R230-206	1	PLECH / PLATE / BLECH	P 1x220	1
8	31.R230-207	0	PANEL ELEKTRO / ELECTRO PANEL / PANEL	P 3x205	1
9	61.352.001	0	TESNENÍ / SEALING / DICHTUNG	TESNENÍ 19x10	1
10	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE - M6	4
11	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 6,4	4
12	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	2
13	91.060.031	0	SPINAC / SWITCH / SCHALTER	zelené - prosvětlené	1
14	91.060.035	0	SPINAC / SWITCH / SCHALTER	černé	1
15	91.060.051	0	PREPINAC / SWITCH / UMSCHALTER		1
16	91.060.053	0	HLAVICE / HEAD / KOPF		1
17	91.060.084	0	HLAVICE TOTAL STOP / TOTAL STOP HEAD / TASTE TOTAL STOP		1
18	91.071.022	0	VÝVODKA / BUSHING / TÜLE		3
19	91.072.016	0	MATICE / NUT / MUTTER		3
20	91.170.003	0	SPINAC VÁKOVÝ / CAM SWITCH / SCHALTER	LE2-12-1763	1
21	91.180.001	0	DESKA SPINACE / ELECTRIC BOARD / PLATINE		1
22	91.283.015	0	POTENCIOMETR / POTENTIOMETER / POTENTIOMETER	TP 195 4K7/N 20A	1
23	99.104.002	0	ZAMEK / LOCK / SCHLOSS	ZAMEK ČERNÝ	2

1.ZRUS.VÍKO 30.R230-203,PANEL 30.R230-202,2xCEP 30.7217-028,2XPOJ.KROUZEK 95.802.003 (PRIDANO DO SKRINE 30.R230-201).

061/ZM110 29.3.2012 SLEZACKOVA

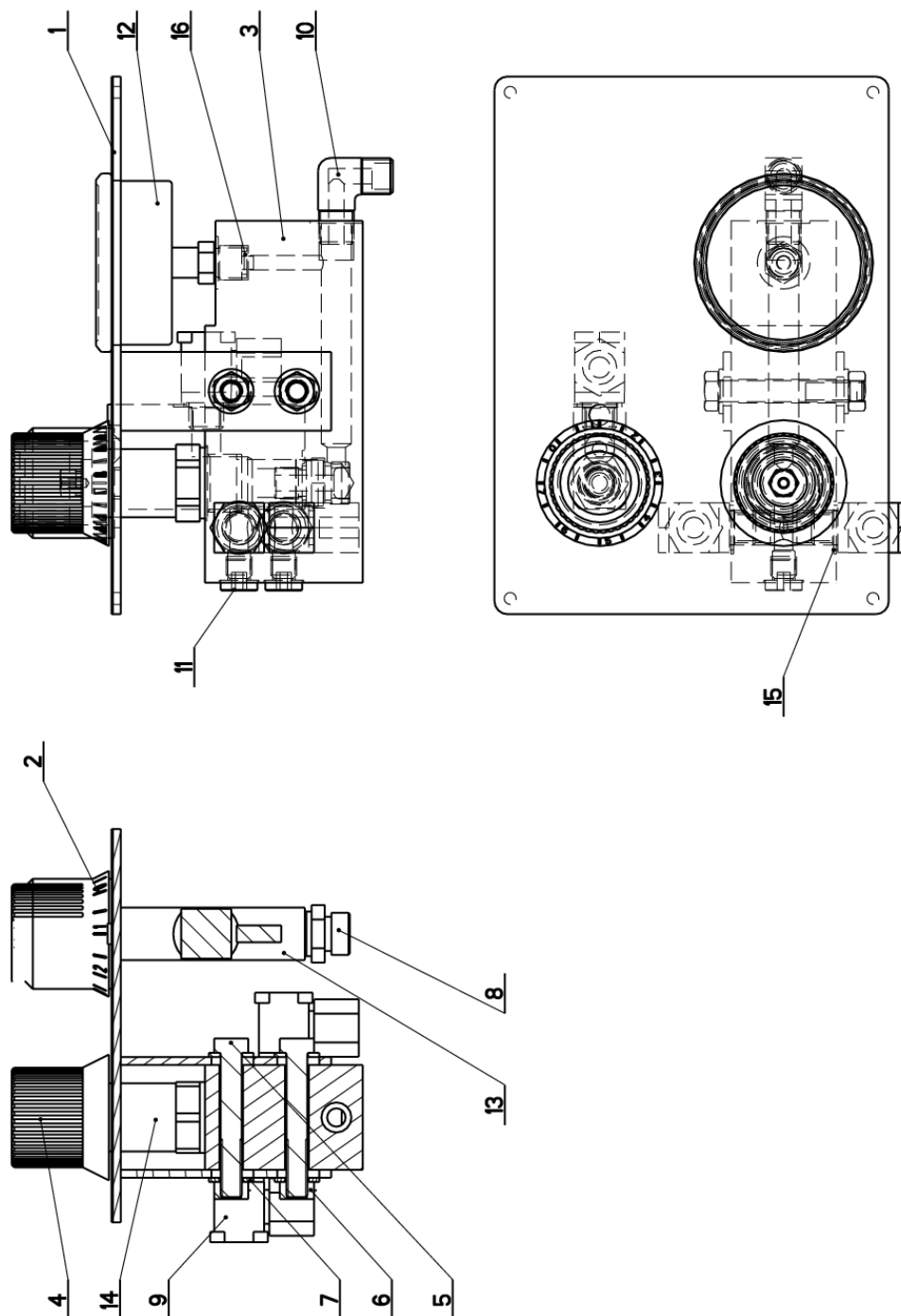
2.ZRUS.HLAVICE TOTAL STOP 91.060.030 A NAHR.91.060.084 147/ZM184 2.7.2013 SLEZACKOVA

3.ZRUS.PANEL ELEKTRO 251.654 A NAHR. 31.R230-207,ZRUS TLACITKA 91.060.034 A 91.060.055 A

91.060.054 A 91.060.033, PRID. TLACITKA 91.060.031 A 91.060.035 201/ZM304 22.9.2017 ČERNÝ

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

7.51. Ovladací panel / Control panel / Bedienpult



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

7.52. Kusovník / Piece list / Stückliste -
Ovladací panel / Control panel / Bedienpult

Císlo Sestavy 201.R230-220		Ver. I	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	251.652	0	PANEL / PANEL / PANEL		1
2	30.6130-018	0	HLAVICE / HEAD / KOPF	VYL ISEK	1
3	30.6130-103	2	KOSTKA REGULACE / REGULATION CUBE / REGULUNGSWÜRFEL	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 / UNTERLEGSCHIEBE	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-RWS-08LR	3
10	92.004.001	0	SROUBENÍ UHLÖVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	37701	1
11	92.019.003	0	ZATKA / PLUG / STOPFEN	G1/4" VNITRNÍ 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 REDUKČNÍ / REDUCTION VALVE / DRUCKMINDERUNGSVENTIL		1
15	96.082.002	0	TESNĚNÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	4
16	96.082.005	0	KROUZEK TESNÍCÍ / 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;
Objednávací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung