

Series **AL**



AL 500

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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7⁰⁰ – 16⁰⁰

Version:

1.19 / Jan. 2020
rev. 1

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

EC Declaration of Conformity

1) 2) We:

BOMAR, spol. s r.o.

Těžební 1236/1

627 00 Brno, Czech Republic

Id. No: 48908827

declare herewith

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

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

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

Name: **Circular Saw**

Type : **AL 500 Semi-automat**

Serial number:

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 aluminium, copper and its alloys with angle cut from -60°(L60°) to +90°(R90°)

Description: Stand, table, cutting unit with the saw blade and drive, microniser, Pneumatic-hydraulic unit, el. switch board, safety covers,

Pneumatic ☐ NO ☒ YES ☐ Hydraulic ☐ NO ☒ YES ☐ Control system ☒ NO ☐ YES ☐

Technical data: Blade speed 50m.s-1
Cutting angle -60°+90°
Total dimensions in mm (l×w×h) 1100×2350×1560
Supply voltage 3x400V+PE, or 3x230V+PE
Total power requirement 5,1 kW
Weight 500 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/EC

2004/108/EC

The applied harmonized standards, National standards and technical specifications:

ČSN EN ISO 12100:2011

ČSN EN ISO 16093:2018

ČSN EN ISO 13857:2008

ČSN EN ISO 4413:2011

ČSN EN ISO 4414:2011

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, par. 3, let. a), of the Law no. 22/1997 Coll. as amended.

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

The inspection certificate no **02.099.898/10/07/02/0** was issued

Brno, 28.01.2020

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



Alfred Pichlmann, Managing Director

Point of issue, datum

Name and function of the responsible subject, signature

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

2) Person authorized to complete the technical documentation

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

!

If the equipment is installed without safety equipment offered by BOMAR, spol. s r.o 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 r.o have been declared "identical" to a safety device, as offered by BOMAR, spol. s r.o 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 **AL 500** is determined for cross dividing and cutting of bars and profiles made of aluminum, copper and its alloys with angle cut from -60° (L60°) to +90° (R90°).

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!

Attention!

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

- For machine starting take care, that there is nobody in the working area of the machine (it means in the working area of the vice, the saw band, the saw arm etc.).
- In no circumstances touch the rotating elements.
- Work on the machine only when the machine is in good condition!
- Check at least once in a shift, if the machine is not damaged. If the machine is damaged, you must bring the machine in order and you must inform your superior!
- Keep your working area clean! Ensure sufficient lighting in the working area.
- Take off the spilt water or the oil from the floor and dry it. Do not touch the cooling liquid with bare hands! Do not set the nozzle of the cooling liquid, when the machine is started on
- Do not remove the chips from the working area of the machine, when the machine is started on!
- Do not use the compressed air for the machine cleaning or for the chips removing!
- Use the protective instruments for chips removal!
- Safety notes for the servicing and repairs

WARNING!

After switching off the machine, the blade will still rotate for at least one minute. Opening the door in this time is not allowed and can cause serious injuries!

*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.

Attention!

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

1.4. Safety 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.

1.4.1. 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.



1.4.2. Workplace cover

The cover is locked during operation. **Do not dismount safety cover.**



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

1.4.3. Pedestal door

WARNING!

*After switching off the machine, the blade will still rotate for at least one minute. **Opening the door in this time is not allowed and can cause serious injuries!***

Doors are secured with a lock. After cutting, machine is unlocked after about 50 sec.



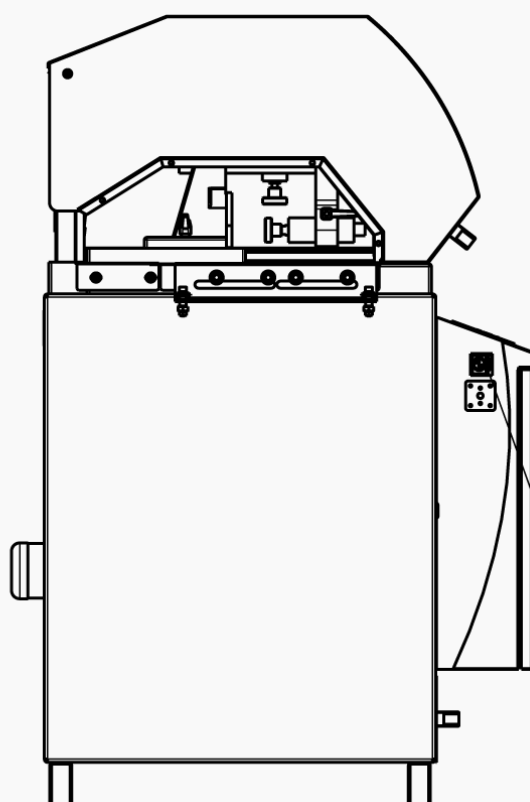
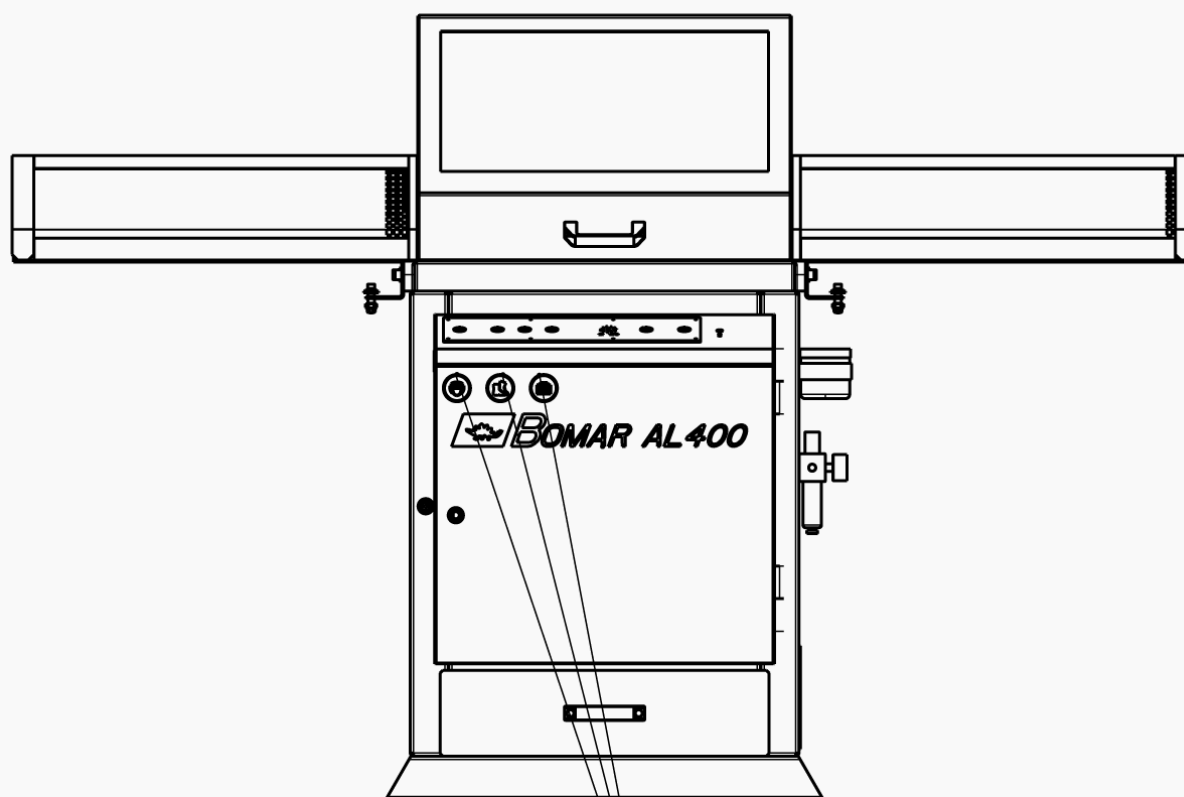
The saw is started to the operation, when the cover is closed!

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



Machine label is located at the rear of saw pedestal.

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



PO:

Noste pevnou pracovní obuv
Tragen Sie Sicherheitsschuhe
Wear fixed protective shoes



CZ:

Přečíst návod k použití
Bedienungsanleitung lesen
Read the operating instructions



OBS:

Noste ochranné brýle a sluchátka
Tragen Sie eine Schutzbrille und
Gehörschutz
Wear protective goggles
and headphones



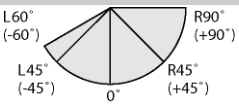
HV

Hlavní vypínač
Hauptschalter
Main switch

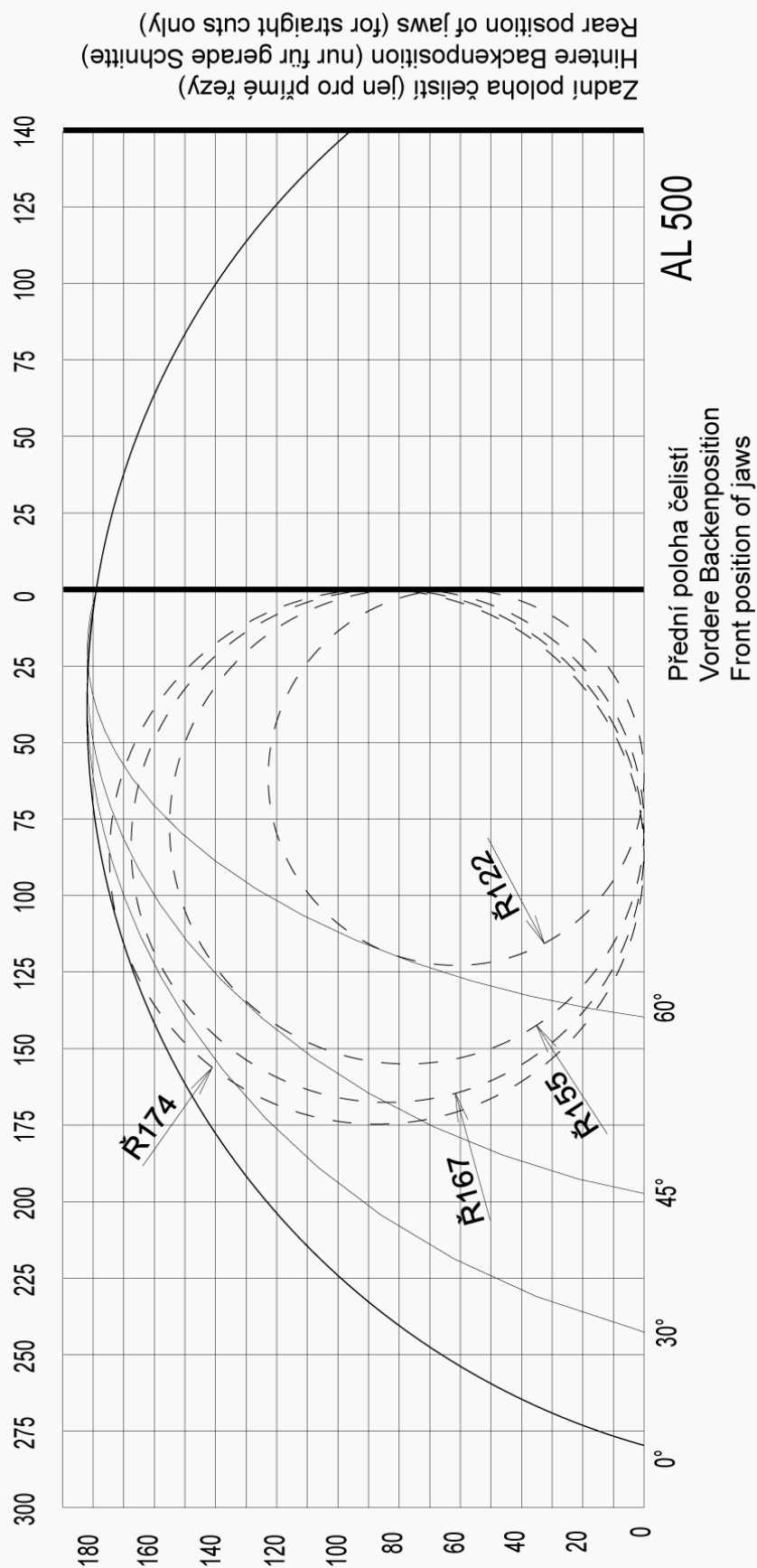


2. **Machine documentation**

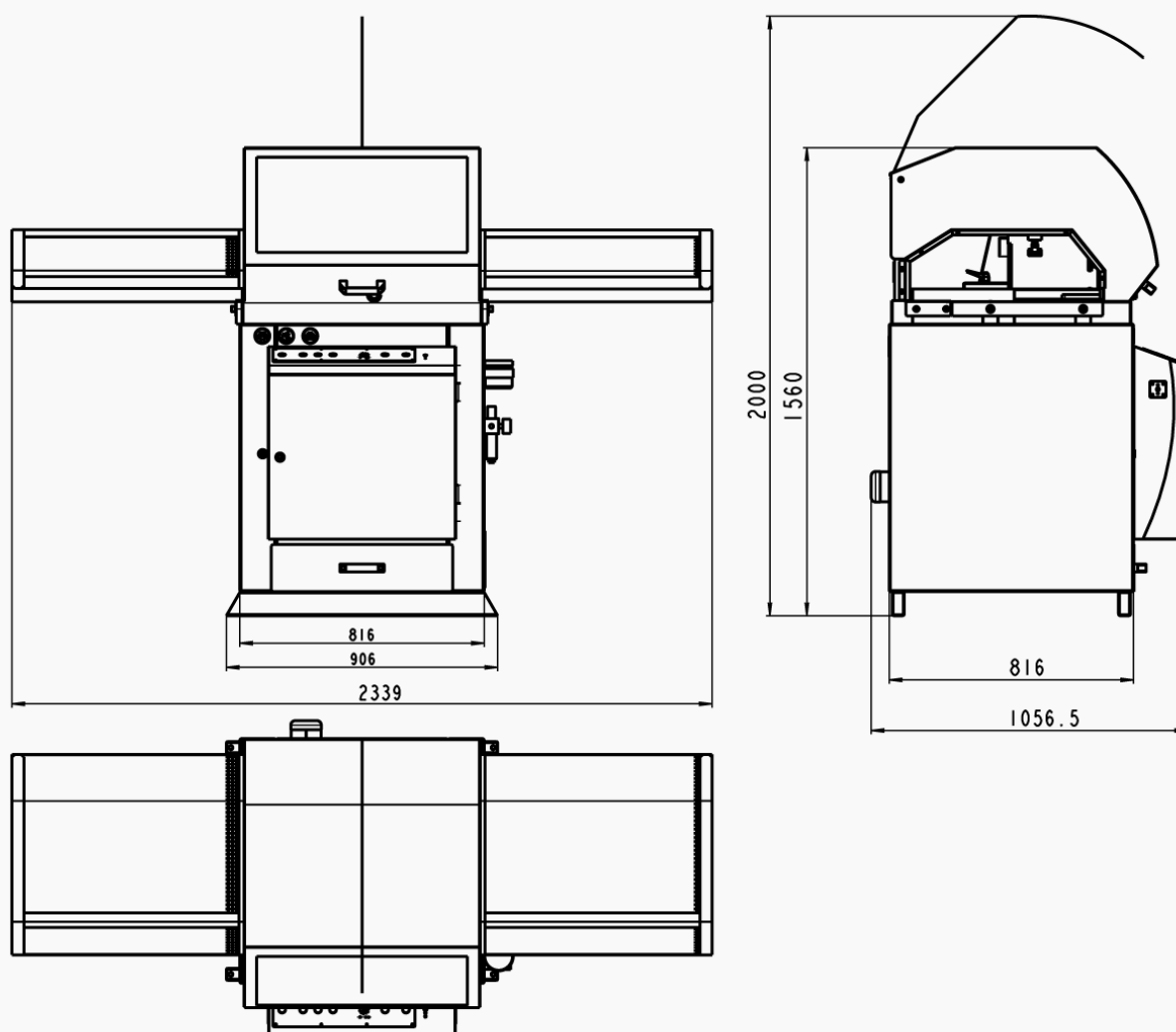
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:				
• Hmotnost / Gewicht / Weight	500 kg			
Rozměry stroje / Maschinengröße / Machine size :				
• Délka / Länge / Lenght	1100 mm			
• Šířka / Breite / Width	2350 mm			
• Výška / Höhe / Height	1560 mm / 2000 mm			
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:				
• Napájení / Versorgungsspannung / Supply voltage	~3 x 400 V (230 V), 50Hz, TN-C-S/TN-C (dep. on saw ver.)			
• Příkon / Gesamtschlusswert / Total Input	5,1 kW			
• Max.jištění / Max. Vorschaltsicherung / Max. Fuse	16 A			
• Krytí / Schutzart / Protection	IP 54			
Akustický tlak / Schalldruckpegel / Acoustic pressure:				
• AL 500	L _{Aeqv} = 76,3 dB			
Pohon / Atrieb / Drive:				
• Typ / Typ / Type	1LA 7166 – 2AA10			
• Výkon / Leistung / Output	3,0 kW			
Pneum-Hydraulické zařízení / Pneumatik-Hydraulikeinrichtung / Pneum-Hydraulic equipment:				
• Typ / Typ / Type	k115-100			
Rozměr pásu / Sägebandedimension / Band size:				
Ø500 × Ø30 × 4,1 mm				
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:				
50 m/s (kotouč / rädern / blade Ø500)				
Řezné rozsahy / Schnittbereiche / Cutting size:				
				
L60° (-60°)	Ø120 mm	120×70 mm	55×170 mm	115×115 mm
0° (jaws infront)	Ø170 mm	265×25 mm	90×175 mm	155×155 mm
0° (jaws back)	Ø150 mm	295×70 mm	375×95 mm	95×95 mm
R45° (+45°)	Ø155 mm	280×50 mm	80×170 mm	130×130 mm
R60° (+60°)	Ø120 mm	120×70 mm	55×170 mm	115×115 mm
Level of acoustic pressure:				
Equivalent level of acoustic pressure A (noise) at operator position are L _{Aeqv} =76,3 dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure.				

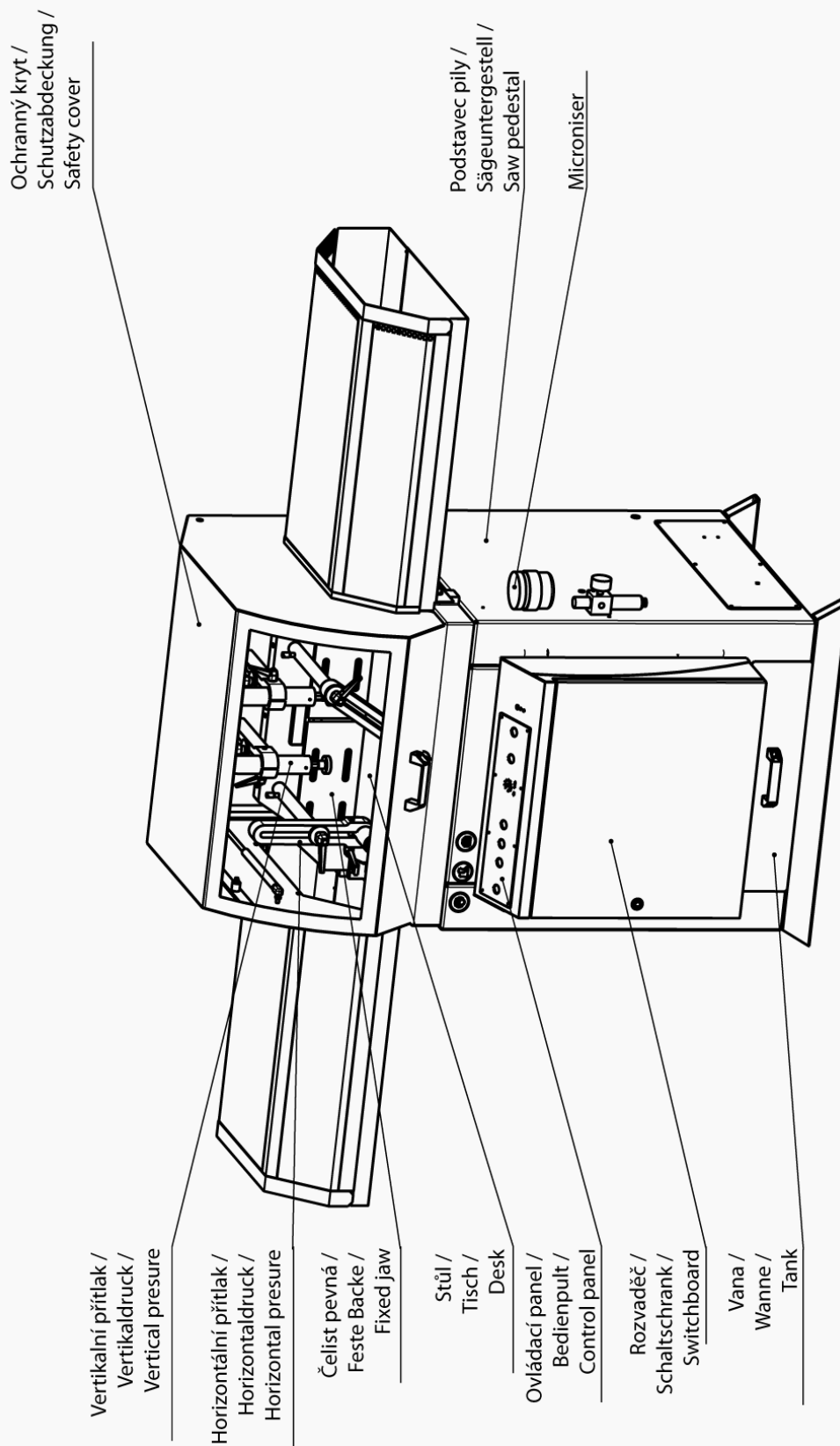
2.2. Řezné rozsahy / Schnittbereiche / Cutting sizes



2.3. Rozměrové schéma / Aufstellzeichnung / Installation diagram



2.4. Popis / Beschreibung / Description



2.5. Transportation and stocking

2.5.1. 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.

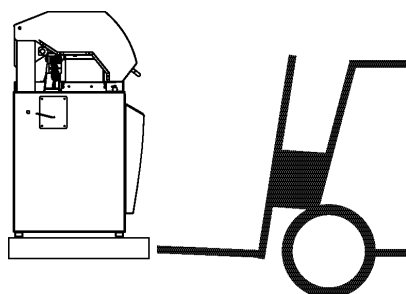
2.5.2. Transport and stocking preparations

- Close the vice and thoroughly oil all blank surfaces.
- Lower the saw frame to the lowest position.
- 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.

2.5.3. Transport and stocking

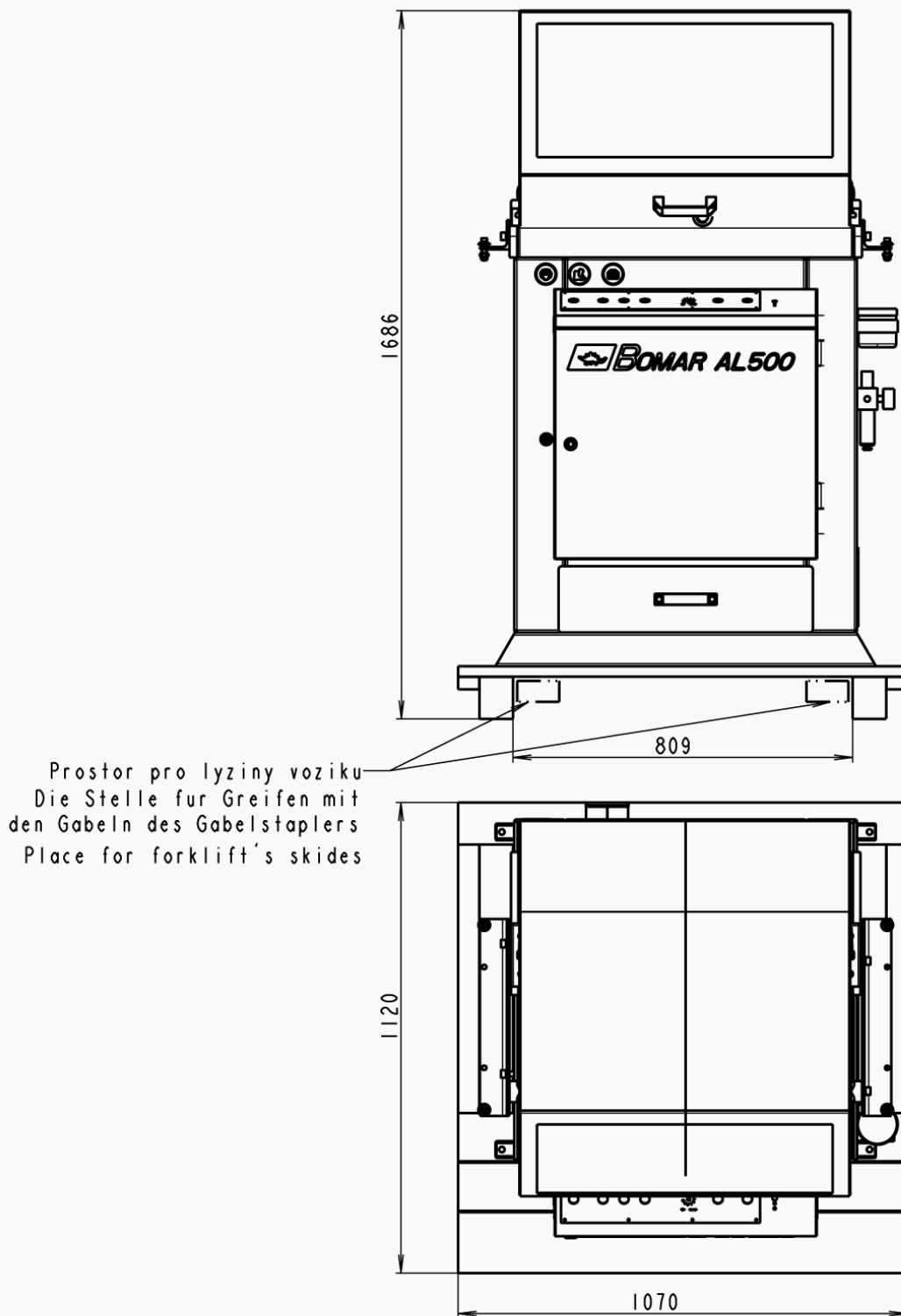
Handle the machine only with the hand pallet truck or the forklift truck! If the machine is equipped with the shackles in the pedestal, you can use the suspension cable and the crane.



- Make sure that the hand pallet truck; the forklift truck or the crane had sufficient capacity.
- Make sure that the van or the trailer had sufficient capacity.
- 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.

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

2.5.4. Transportní schéma /
Transport schema /
Transport scheme



2.6. Activation

2.6.1. Machine working conditions

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

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

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

2.7. Band saw unpacking and assembling

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.

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.

2.7.1. Machine installing and levelling

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

Minimal requirement:

machine weight – AL 500 – 500 kg

+ weight of accessories

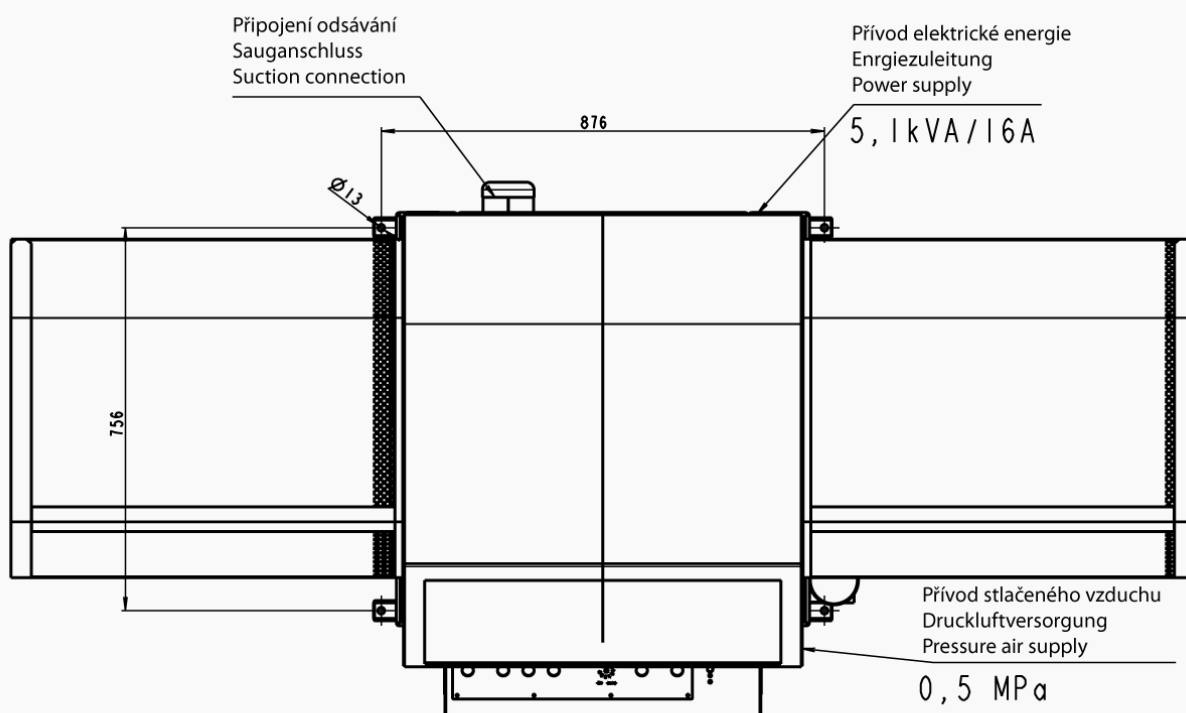
+ maximum weight of material

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

2.7.2. Machine disposal after lifetime

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

2.7.3. Kotevní plan / Verankerungsplan / Grounding plan



Kotvicí materiál / Verankerungsmaterial / Grouding material

- Hmoždina / Dübel / Plug – 4x Ø12 mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 120 mm
- Šrouby / Schraube / Screws – 4x M10

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

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

± 10 mm / 1 m

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.

2.8. Electrical connection

Electrical parameters of the machine:

- Service voltage: ~3 x 400 V (230 V), 50Hz, TN-C-S/TN-C (dep. on saw ver.)
- Total input / Max. fuse: 5,1 kW / 16 A
- Before connecting switch off the main switch of the power supply circuit for the machine and ensure dry place when doing connecting works!

Note:

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

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.

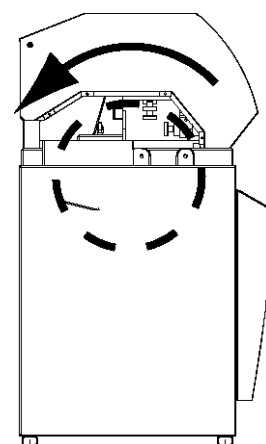
- Service voltage must agree with the line voltage! Crosscut of the supply line must respond with rated current for max. machine load.
- In case the machine is connected with a direct connection, an extra main switch must be added which can be locked in zero position.

2.8.1. Check the running direction of the cutting wheel

Attention!

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

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



2.9. Connecting to the compressed air supply

Connect the machine to the compressed air supply by means of the screw **G1/4** on the manifold period according to the picture.



Compressed air must satisfy conditions:

- Roughly cleaned and partly dry.
- $p_{min} = 0,4 \text{ MPa} = 4 \text{ bar}$
- $p_{max} = 0,6 \text{ MPa} = 6 \text{ bar}$

2.10. Filling of the cooling system

Note:

If the machine is equipped with Microniser, fill the Microniser container with prescribed cooling agent. Now is Microniser ready for operation.

2.11. Check machine function

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

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

Check, if covers are installed and functional.

Switch on the main switch and check the motors and systems (saw disk drive etc.).

Open and close the vice. Turn the saw frame from one outer position to other outer position. Raise the frame to the top position and drop the frame to the lowest position.

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.

2.12. Saw blade

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

2.12.1. Saw blade size

Ø500 × Ø30 × 4,1 mm

The maximum cutting range of the machine is reached by using diving disk with recommended diameter. The usable qualities of the machine are lowered by using diving disk with fewer diameter.

Usage of the dividing disk with fewer diameter than 350 mm is not recommended!

2.12.2. Selection of the saw disk

The circular disk is possible to equip with dividing disks according to the material character and requirements on the quality of cut.

Look at the recommendation of your supplier when selecting the suitable dividing disk.

Note: *The machine is supplied without the saw disk.*



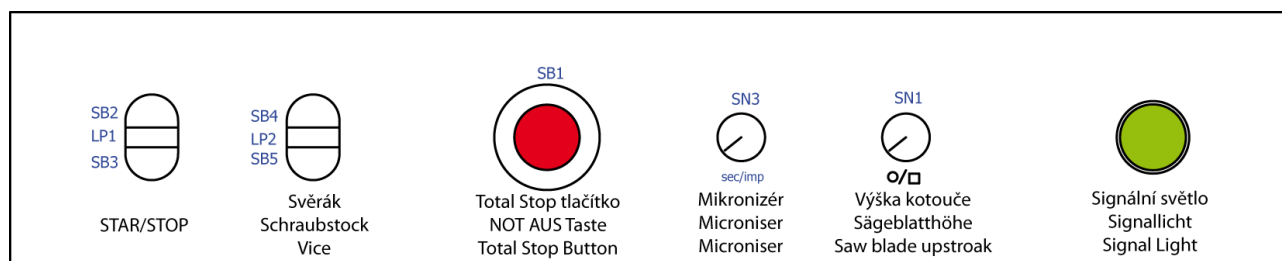
3. **Machine control**

3.1. Starting the saw

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



3.2. Control panel

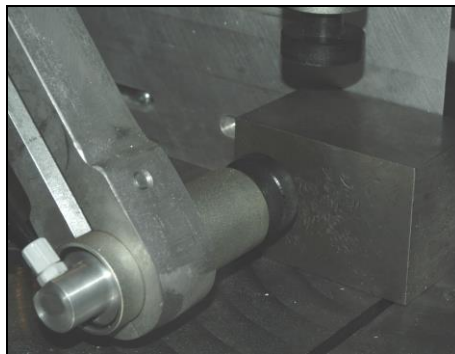


SB1	Emergency Stop Switch In case of emergency, the machine is stated to the order!
SB2 SB3	START / STOP Press to start or stop machine working cycle.
SB4 SB5	Clamp / open vice
SN3	Microniser Adjust the time between the two potions (injections) of cooling liquid (1-10 seconds). When the time between the two potions is shorter, the cooling is more intensive.
SN1	Adjusting wheel Turn to set the height of the circular-saw blade according to the profile of the cutting material.
	Control valve (not shown on picture) It adjusts the shift speed of the disk 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.

3.3. Machine control

3.3.1. Semiautomatic operation

1. Adjust the desired cutting angle.
2. Insert profile with the cover open.
3. Adjust height of circular blade with SN1 according of cutted profile



4. Set the clamping cylinder closest to the material (recommended value is 20 mm). If the clamping cylinders are further away from the material, the clamping takes longer.
5. Press and hold the button SB4 (clamping vice) for material clamping (the saw cover is still open). For security reasons, clamping pressure is limited, when is safety cover opened.
6. Close the saw cover.
7. By firstly pushing the START button (SB2) button, you can start the tool drive motor, which reaches the full speed after a certain time interval.
8. After the motor reaches the full speed, push the START button (SB2) again – the material will be clamped at full pressure and the cutting cycle will start.

Caution:

If you push the START button while the motor is starting up to the full speed, the cutting cycle will not start. In this case, push the START button again after a longer time interval.

9. The cycle is completed after cutting, saw cover is unlocked and material is released from vice.
10. Remove the material and the whole working cycle can be repeated.



Desired speed lifting arm to cut set by Control valve.

3.3.2. Signal light

- **Green** – upper cover unlocked
- **Red** – upper cover locked
- **Red blinking** – FAILURE (engine heat protection, opened covers, opened doors, Total Stop button)

3.3.3. Cycle breaking

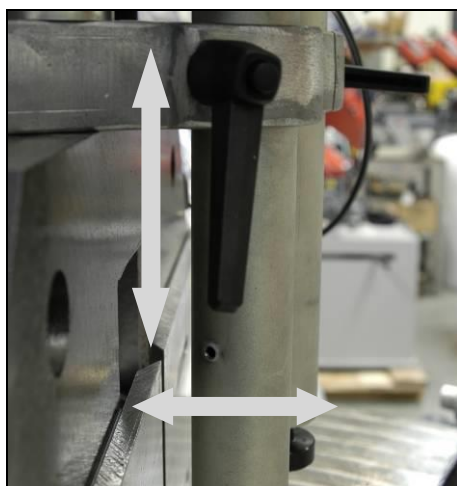
The cycle can be stopped by 2 ways:

- Release both buttons **Cutting (1)** and press **STOP** button (button **5** – control panel) – the saw interrupts the actual cut, the saw arm lifts to the starting position and the saw disk drive stops.
- Press **Emergency Stop Switch** (button 3 – control panel) in emergency causes! The safety circuit is broken and the saw disk drive is stopped too.

3.4. Circular saw adjusting

3.4.1. Set of clamping cylinders

Security hole at maximum retract the rod.



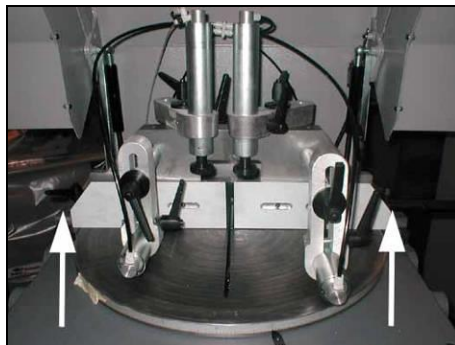
- When adjusting the height of the cylinder bore, the hole must be directed from the service. When removing the cylinder bore must be directed into the groove clamp.
- Material can be clamped main cylinder or two cylinders. Main clamping cylinder with a pressure switch (left from the perspective of the machine service)
- The cylinder can be adjusted from 20 mm to 100 mm from the cut material!
- If no possible clamping of the material at the maximum protrusion of clamping cylinders, not to run the operating cycle.

Attention!

If the main cylinder to clamp the material being cut off (eg. the table) can be run cycle.

3.4.2. Jaw console setting

Normally, the jaw console is situated in the front position. At cutting with 0° angle, the cutting range can be increased by shifting with console to the back.



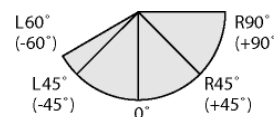
1. Loosen the tightening levers of the console.
2. Move the jaw console as far as the rear stops.
3. Tighten the securing levers of the jaw console.

ATTENTION! At angular cuts, console with jaws must be situated in front!

ATTENTION! With chips collector device installed on table, the cut angle can be varied from -60° to 60° .

3.4.3. Angular cut setting

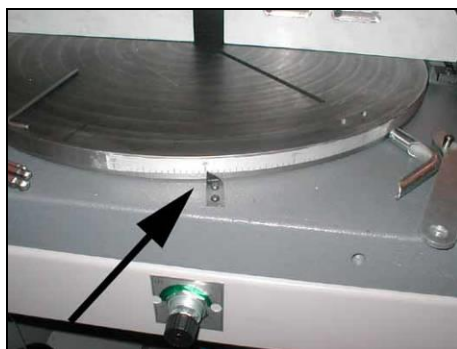
The cut angle can be varied from -60° (L60°) to $+90^\circ$ (R90°).



ATTENTION! At angular cuts, console with jaws must be situated in front!

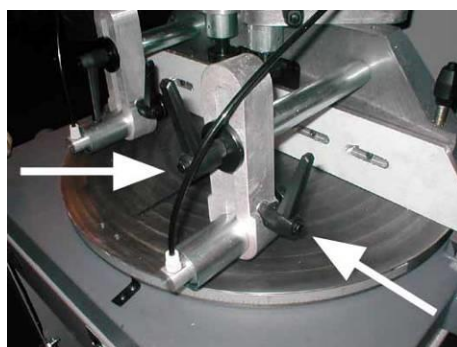


1. Release the securing lever of the turning console and adjust the desired cutting angle according to the scale.

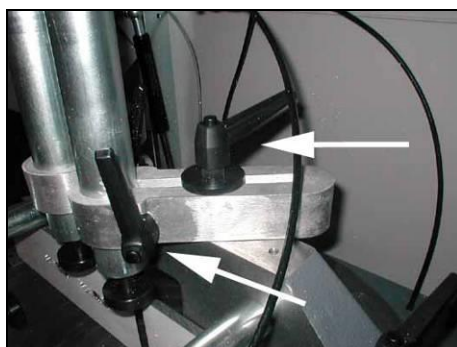


2. The scale is situated on the side of the turning console. Tighten again the securing levers of the turning console.

3.4.4. Clamping adjusting



1. Release the securing lever of the clamping cylinder.
2. Shift the clamping cylinder. The clamping vice must be situated about 10 mm from the material.
3. Tighten again the securing lever.



4. Adjust all four clamping cylinders.

3.4.5. Speed adjusting of the arm lowering

Set the speed of the arm lowering to the cut by control valve (position 7 – 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.

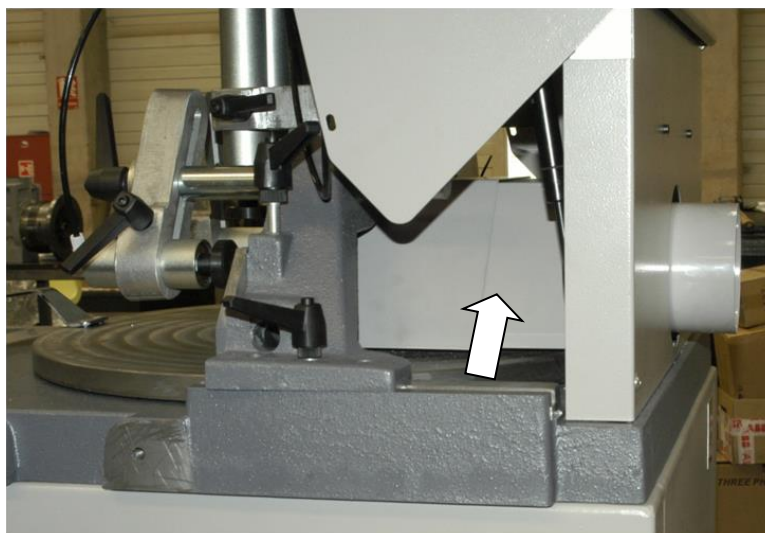
3.5. Suction device (optional accessory)

The suction set for the AL semi machines has **two suction outlets**.

The first outlet, installed at **the bottom of the machine**, provides for removal of chips from the blade directly.



The second outlet is located at the **top of the machine** behind the adjustable horizontal bridge.



Each of these outlets is separately connected to the suction device by means of a flexible suction hose.

For sufficient exhaust output, it is necessary to ensure:

- correct installation of the suction set on the machine
- correct suction installation with the suction hose
- correct connection (fan rotation direction) of the suction device
- observance of the specified suction output (we recommend you to connect the suction set to a suction device of the Bomar company)
- each suction outlet must be connected to a separate suction device, with regard to a sufficient suction efficiency
- the suction efficiency is influenced by the amount of the micronizer cooling dose; with an increasing cooling dose, the chips are becoming heavier, with which the efficiency decreases
- every machine is also equipped with the drawer for removal of chips at the bottom; which must be emptied regularly during operation of the machine

3.6. 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!

3.6.1. Handling agent selection

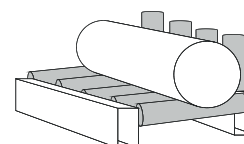
- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

3.6.2. 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!



4. **Machine service**

4.1. Saw disk dismantling

WARNING!

*After switching off the machine, the blade will still rotate for at least one minute. **Opening the door in this time is not allowed and can cause serious injuries!***

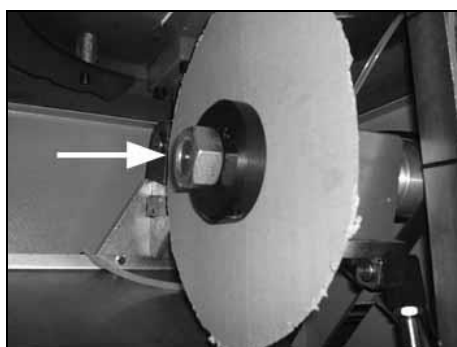
Doors are secured with a lock. Approximately 50 s after the last cutting machine doors are unlocked. The machine must be connected to the network and turned on



1. Wait for the door unlock and open it. Saw is switch ON.
2. Switch the main switch off.



3. If your saw has exhausting device installed, before removing saw blade, remove exhausting device from blade. Dismount plastic screw.



4. Loose the nut, get off the washer and the saw disk.

4.2. Saw disk installation

1. Prior to installation, clean the shaft thoroughly of all traces of chips and dirt. Keep in mind **the teeth direction when installing the saw disk.**
2. Put on the saw disk and the washer. Tighten the nut fast.
3. Close the door at the pedestal.

4. Switch the main switch on. The circular saw is set up.

4.3. 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

4.3.1. Cooling liquid inspection

Check the state of the cooling liquid periodically. Keep notes in chapter **Cooling agents and chips removal** for state checking and cooling liquid filling.

If the cooling liquid is little in the tank, it can cause the damage of the saw disk by influence of insufficient cooling.

The excess liquid can overflow from the tank on the floor, the service worker can slide and he can injure.

4.3.2. 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.

4.4. Hydraulic, Greases and oils

4.4.1. Lubricant greases

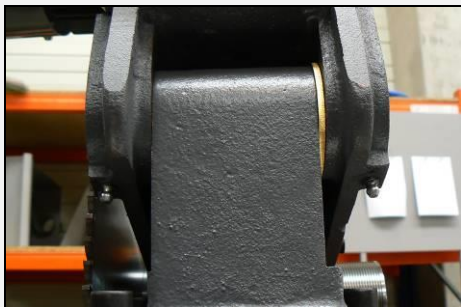
We recommend using lithium based saponified grease, class NGLI-2 for lubrication. Different greases are mixable, if their oil bases and consistence type are identical.

Comparative table of the lubricant greases:

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

4.4.2. 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
	Concole of the saw arm – lubricate with grease once per month (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.

4.4.3. 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:

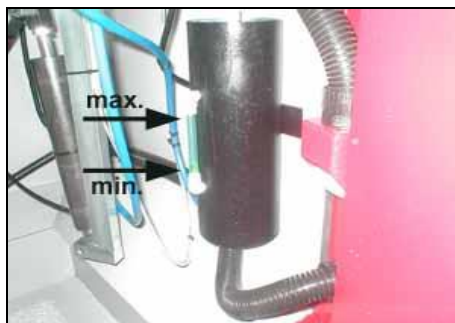
When replacing, use oils recommended by BOMAR or oils, which has comparable parameters from the other manufacturers. Do not forget, that mineral and synthetic oils may not be mixed!

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 832 WR
Esso	Nuto H 32	Texaco	Rando HD B 32
Fam	HD 5040	Valvoline	Ultramax AW 32
Fina	Hydran 32		

4.4.4. Hydraulic oil level check

Open the door at the pedestal and check the state of the oil. The oil level must be situated between marks **min** and **max**.



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

4.5. Pressure system servicing

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



Screw off the screw and let to drain sediments to the reservoir. Screw on the screw again.

WARNING!

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

4.6. Machine cleaning

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

- Clamping jaws of the vice.
- The guiding of the jaws' console.
- Loading surface and area in the pedestal.

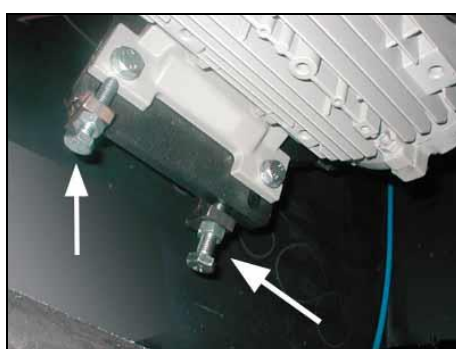
4.7. Worn pieces replacement

4.7.1. Belt replacement

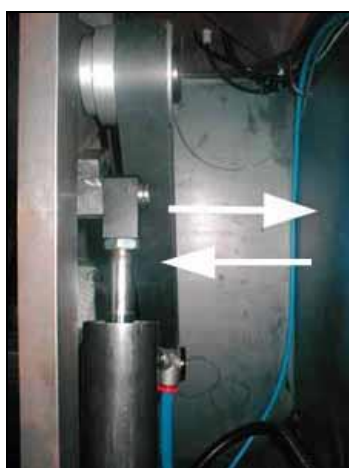
1. Switch off the machine main switch.
2. Open the door on the pedestal.



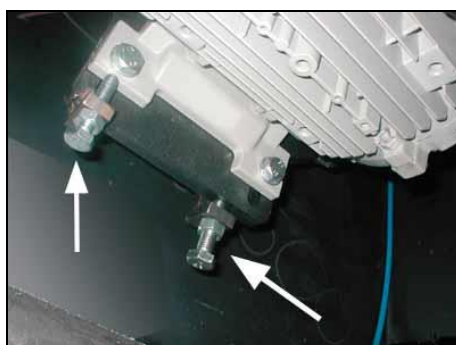
3. Release 4 screws, which holds the electromotor.



4. Release nuts of the stretching screws and screw off both screws, until the belt is not released.



5. Remove worn driving belt and put on the new.



6. Stretch the driving belt by means of the stretching screws and tighten nuts of the stretching screws again.



7. Tighten 4 screws, which holds electromotor.
8. Close the door on the pedestal and switch on the main switch. Belt replacement is finished.

5. **Schémata / Schemas / Schematics**

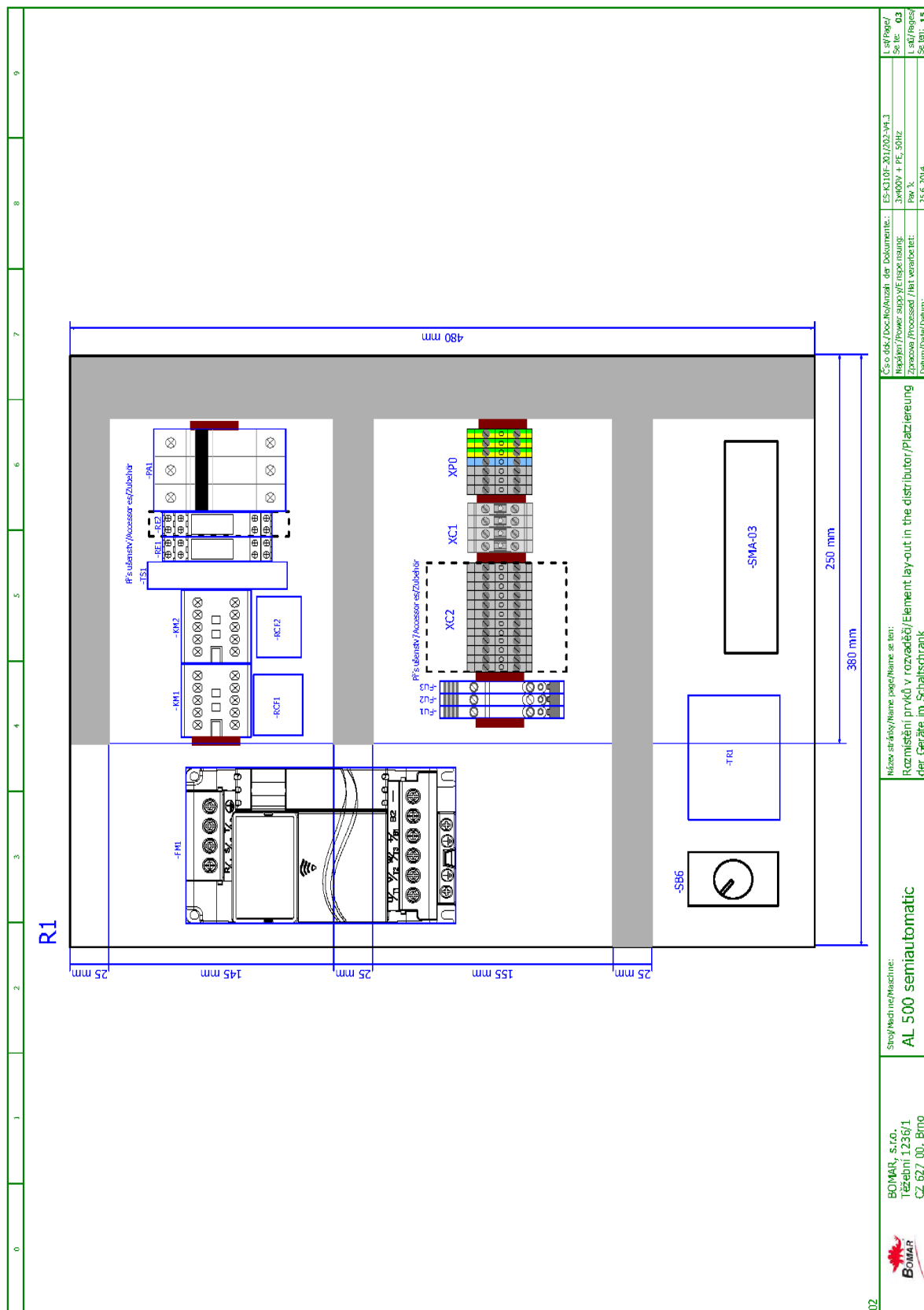
5.1. Elektrické schéma /Elektroschema /Wiring diagrams –
Frekv. měnič / Frequenzumrichter / Frequency convertor –
3×400 V+PE,50Hz

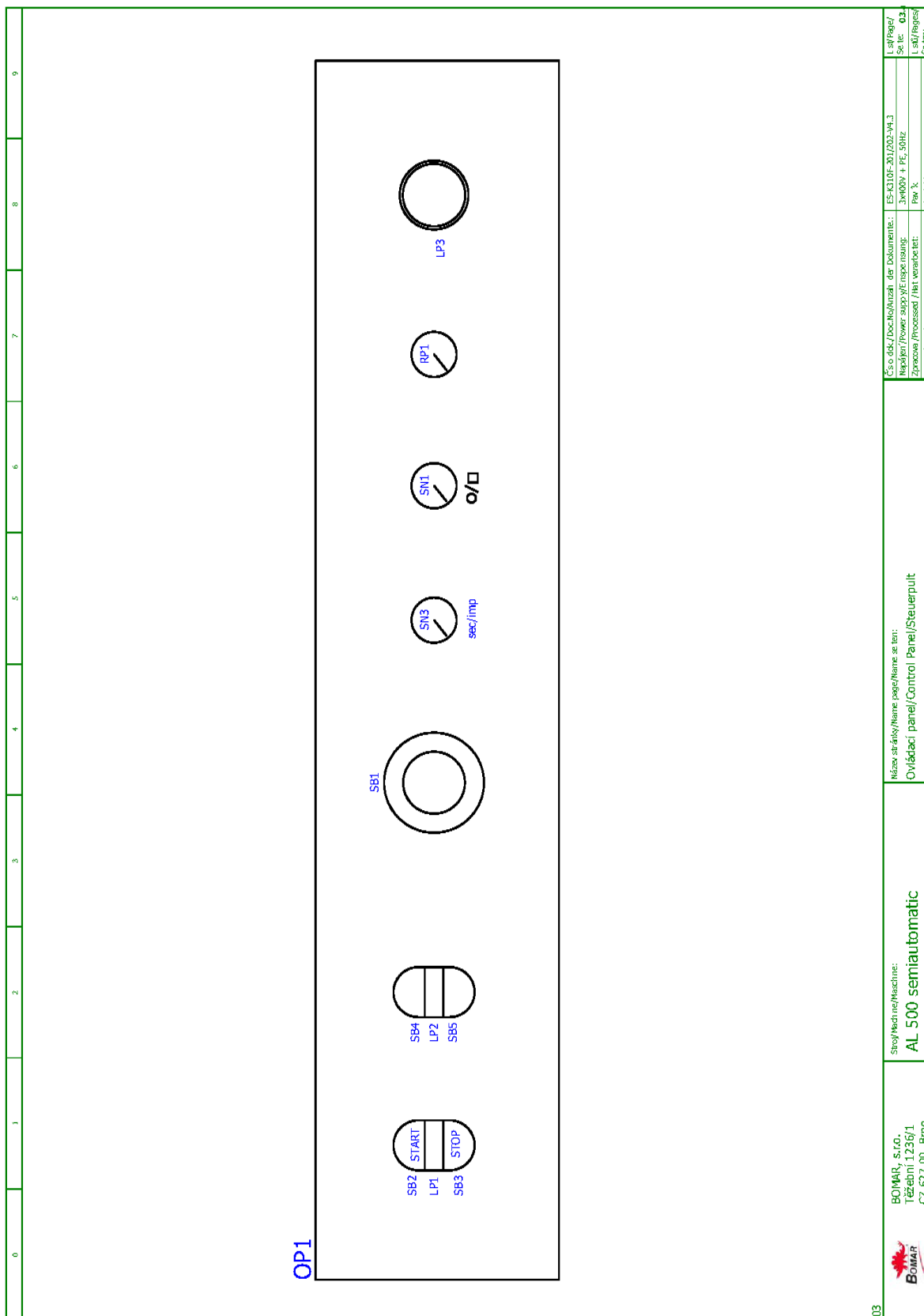
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 Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic AL 500 semiautomatic ES-K310F-201/202-V4.3 Wiring diagram 3x400V + PE, 50Hz									
 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno			Stroj/Machine/Maschine: AL 500 semiautomatic			Název stránky/Name page/Name seiten: Úvodní strana/ Start page/ Startseite			Číslo dok./Doc.No/Anzahl der Dokumente: ES-K310F-201/202-V4.3 Majitel/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracováno /Processed / Mit verarbeitet: Kodaň Datum/Date/Datum: 20.4.2015
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03.a	Ovládací panel/Control Panel/Steuerpult	25.6.2014							
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09	Řídicí systém/Control system/Steuersystem	20.4.2015							
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11	Příslušenství/Accessories/Zubehör	20.4.2015							

 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Obsah/ Table of contents/ Inhaltsverzeichnis	Cs o des./Doc.No./Anzahl der Dokumente: ES-K10F-201/202-V4.3 Napájení/Power supply/Energieausstattung: 3x400V + PE, 50Hz Zpracováno/Processed /Mit verarbeitet: Kosička Datum/Date/ Datum: 20.4.2015	Leaf Page/ Seite: L. 01 Leaf Page/ Seite: 15
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Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page,column)
-CU1	Control unit SMA 3.X	SMA 3.X	BOMAR s.r.o.	91.995.222	1	/09.1
-FM1	Frequency converter - 3.7kW, 3x400VAC	VFD037E43A	DELTA ELECTRONICS, INC.	91.012.094	1	/05.2
-FU1	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU1	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU2	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU2	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU3	Tube fuse - 4A/250V, slow, 5x20	T4A/250V	ESKA	91.230.015	1	/05.8
-FU3	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.8
-KM1	Mini contactor - 4kW/400V, 3P	B65-30-01-1.7-71	ABB	91.040.049	1	/06.a.7
-KM2	Mini contactor - 4kW/400V, 3P	B65-30-01-1.7-71	ABB	91.040.049	1	/06.a.8
-LP1	The head backlit buttons white	M22-DL-W	EATON	91.060.038	1	/07.1
-LP2	White light for Eaton adapter	M22-LED-W	EATON	91.061.034	1	/07.0
-LP3/1	LED red and green common ground 24V DC	HIS-95 G/R 24V DC	ELECO	91.060.069	1	/07.2
-PA1	Fuse disconnecter E-90 - 3P	E 93/32	ABB	91.241.014	1	/05.2
-PA1	Tube fuse - 12A, 10x38, fast	PV10 12A gG	OEZ	91.231.007	3	/05.2
-QS1	Disconnecter - 3P, 16A	OT16FT3	ABB	91.170.018	1	/05.1
-QS1	Handle switch - black	OHBS3RH	ABB	91.180.016	1	/05.1
-RCF1	Effluent RFC filter	F80PRL624	Ing. Miroslav Vřěak	91.041.015	1	/05.2
-RCF2	Effluent RFC filter	F80PRL624	Ing. Miroslav Vřěak	91.041.015	1	/05.2
-RE1	Plug-in relay	CR-P024DC2	ABB	91.051.049	1	/06.a.5
-RE1	Relay socket	CR-PSS	ABB	91.051.048	1	/06.a.5
-RE2	Plug-in relay	CR-P024DC2	ABB	91.051.049	1	/07.8
-RE2	Relay socket	CR-PSS	ABB	91.051.048	1	/07.8
-RP1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/05.6
-RP1	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/05.6
-RP1	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/05.6
-SB1	Emergency-stop mushroom push - button + 3xWNC	YW1B-V4E02R	IDEC	91.060.084	1	/06.5
-SB2	Double button head white/black start/stop	M22-DDL-W5-GB1/GB0	EATON	91.060.034	1	/06.2

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o.
Těžební 1236/1
Č. 627 M - Brno

Stroj/Mechine/Machine:
AL 500 seniautomatic

Název stránky/Name page/Name of text:
Kusovník artiklů/ Parts list/ Artikelstückliste

Číslo dok./Doc.No./Značka der. Dokumentu.:
Replacen/Power supply/Energieversorgung:
Zpracováno/Processed / IMI Verarbeitet

Leaf/Paper/Str.
S. 04
S. 44/Rechnung
S. 44

03.a

The manufacturer reserves right to use an equivalent replacement device.

03.a	 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name of the page: Kusuovník artiklů/ Parts list/ Artikelstückliste	Cso dok./Doc./Kurzsch. der Dokumenten.: ES-K310F-2012/2013-V4.3 Napájení/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracováno/Processed / Mit verarbeitet: Kosska Datum/Dating/Datum: 20.4.2015	Lst/Sheet/ Se. It.: 04 Lst/Reprint/ Se. It.: 15

Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page column)
-SB2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.2
-SB3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.1
-SB4	Double button head white/black, arrow close/open	M22-DDL-WS-*	EATON	91.060.055	1	/06.3
-SB4	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.3
-SB5	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.4
-SB6/1	Attaching adapter + 1NC	M22-AK01	EATON	91.061.020	1	/06.a.5
-SB6/1	Switch 2 positions	M22 - WKV	EATON	91.060.037	2	/06.a.5
-SB6/2	NC contact for Eaton adapter	M22-K01	EATON	91.061.024	1	/06.a.7
-SB6/3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.6
-SW1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW1	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW1	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8
-SW2	Position measuring	DH-RAIM	Bomar	262.012	1	/06.7
-SW3	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW3	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW3	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8
-SQ1	Head	ZCE10	TELEMECANIQUE	91.061.201	1	/06.a.0
-SQ1	The switch body	ZCD31	TELEMECANIQUE	91.061.202	1	/06.a.0
-SQ1	Cable gland	ZCDEG11	TELEMECANIQUE	91.061.203	1	/06.a.0
-SQ2	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/08.3
-SQ3	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/07.4
-TR1	Toroidal transformer - 400V / 230V / 230V / 20V 4,5A 90VA	400V/230V/20V 4,5A 90VA	KARBAN s.r.o.	91.080.023	1	/05.7
-TS1	Multifunction time relay - 12-240V, 10 functions	CRM-91H/UNI	ELKO	91.051.027	1	/08.1

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o.
Těšební 1236/1
ČZ 627 00 Rno

Šroty/Spare parts/Machine:
AL 500 seniautomatic

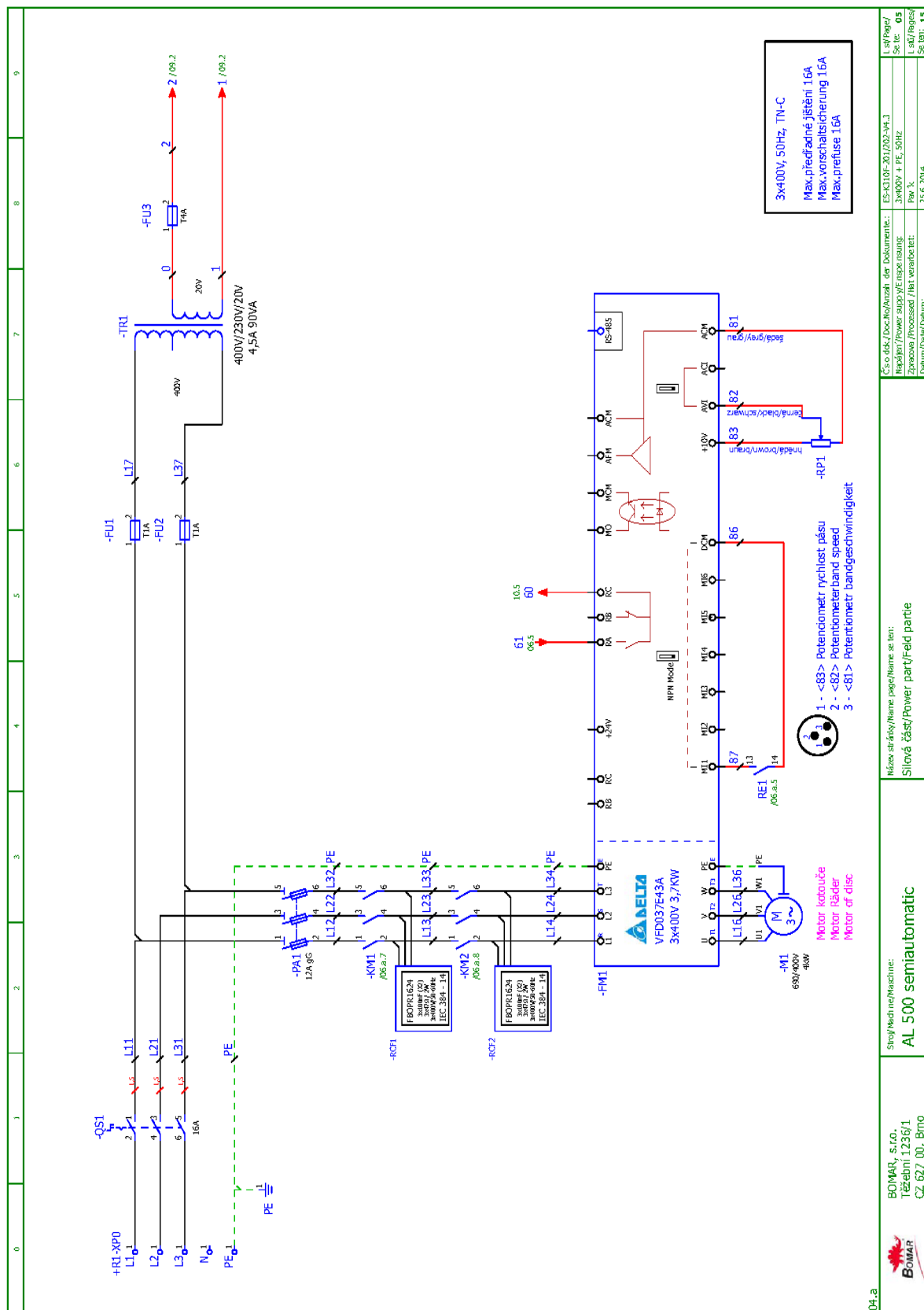
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Napájení/Power supply/Energie versorgung: 3x400V + PE, 50Hz
Zpracováno/Processed / Mit Verarbeitung: Kuba

Str./Page/ Seite: 04
Číslo/Registru: 1-42/Registru:

The manufacturer reserves right to use an equivalent replacement device.

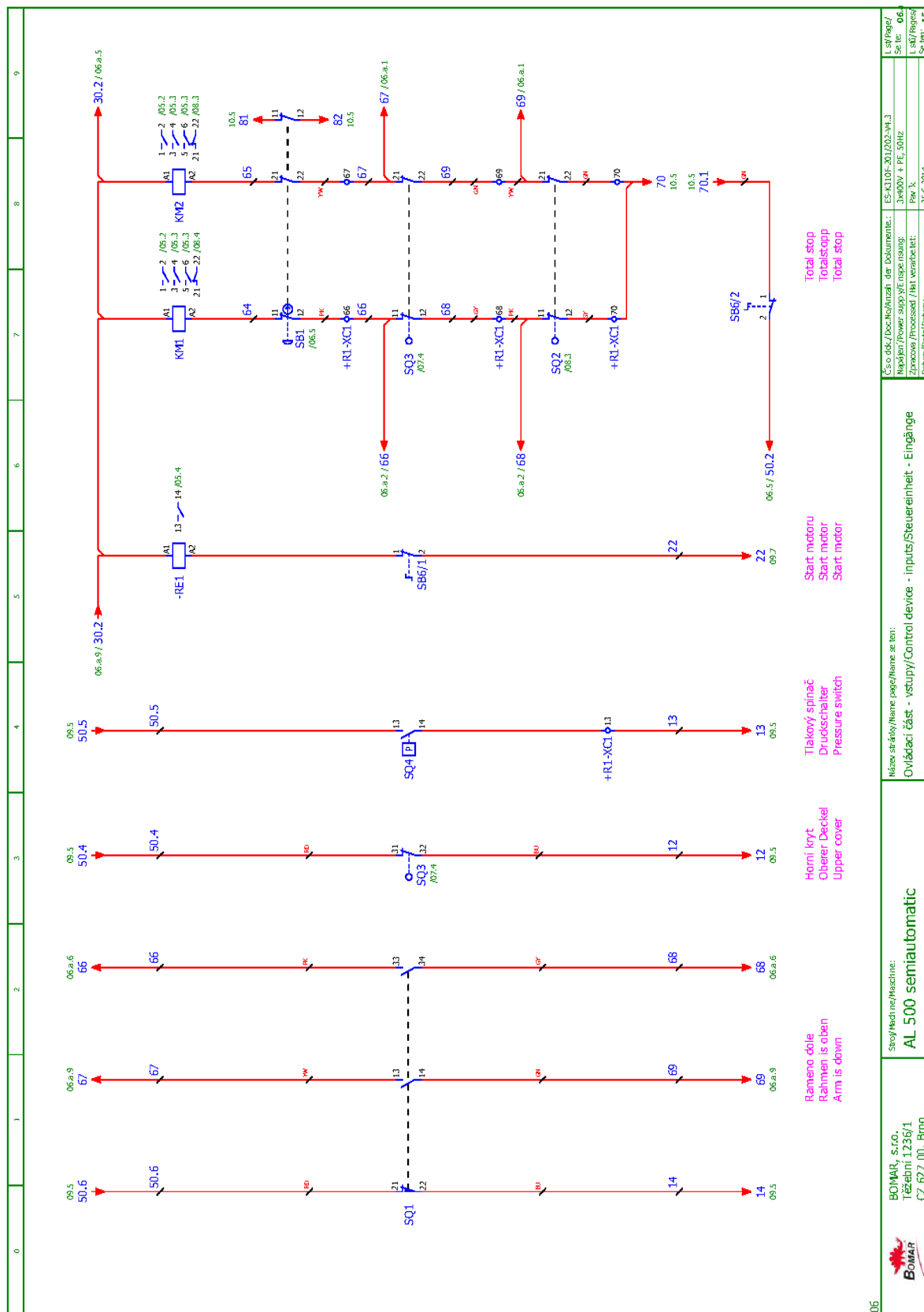
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04-a

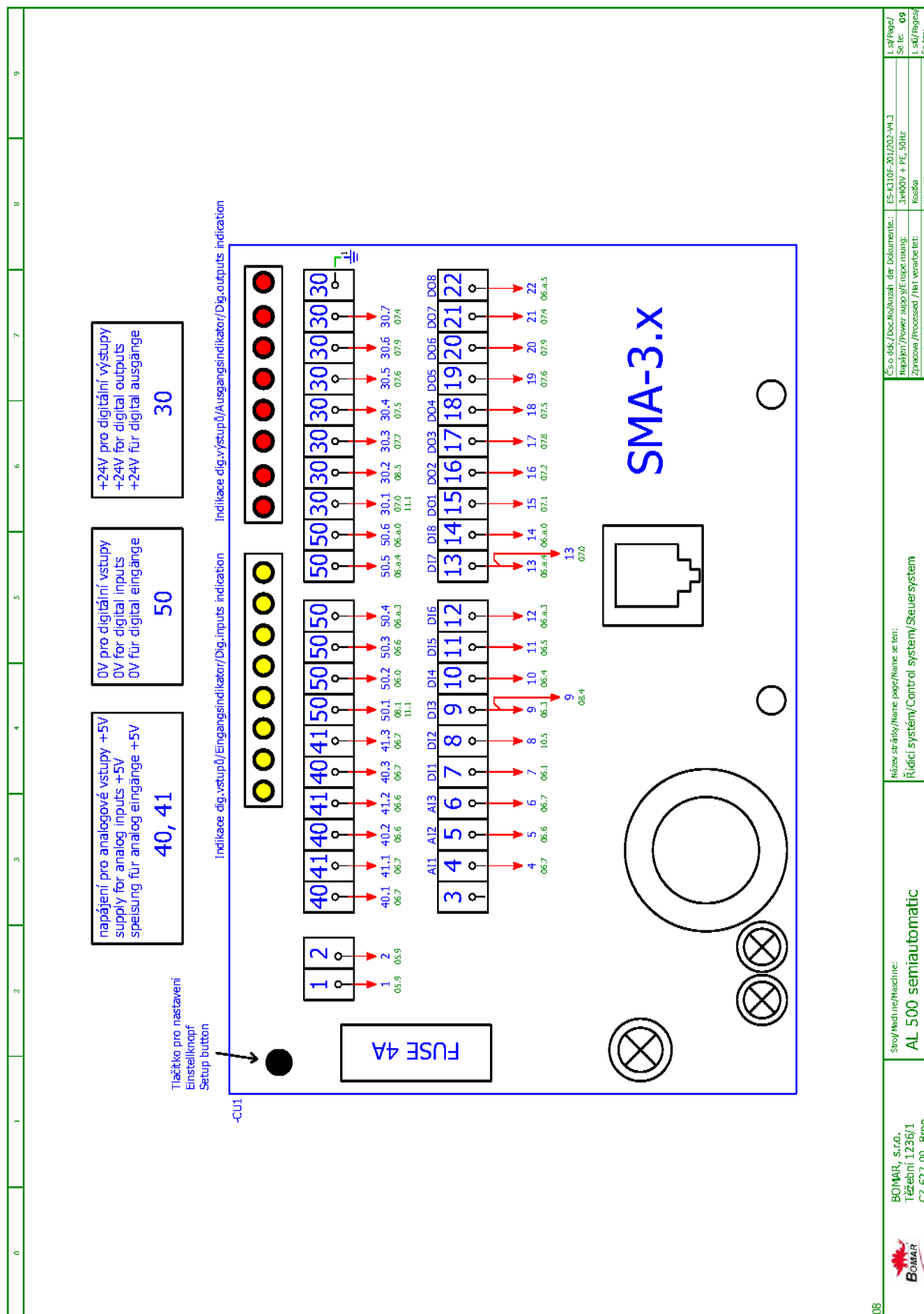
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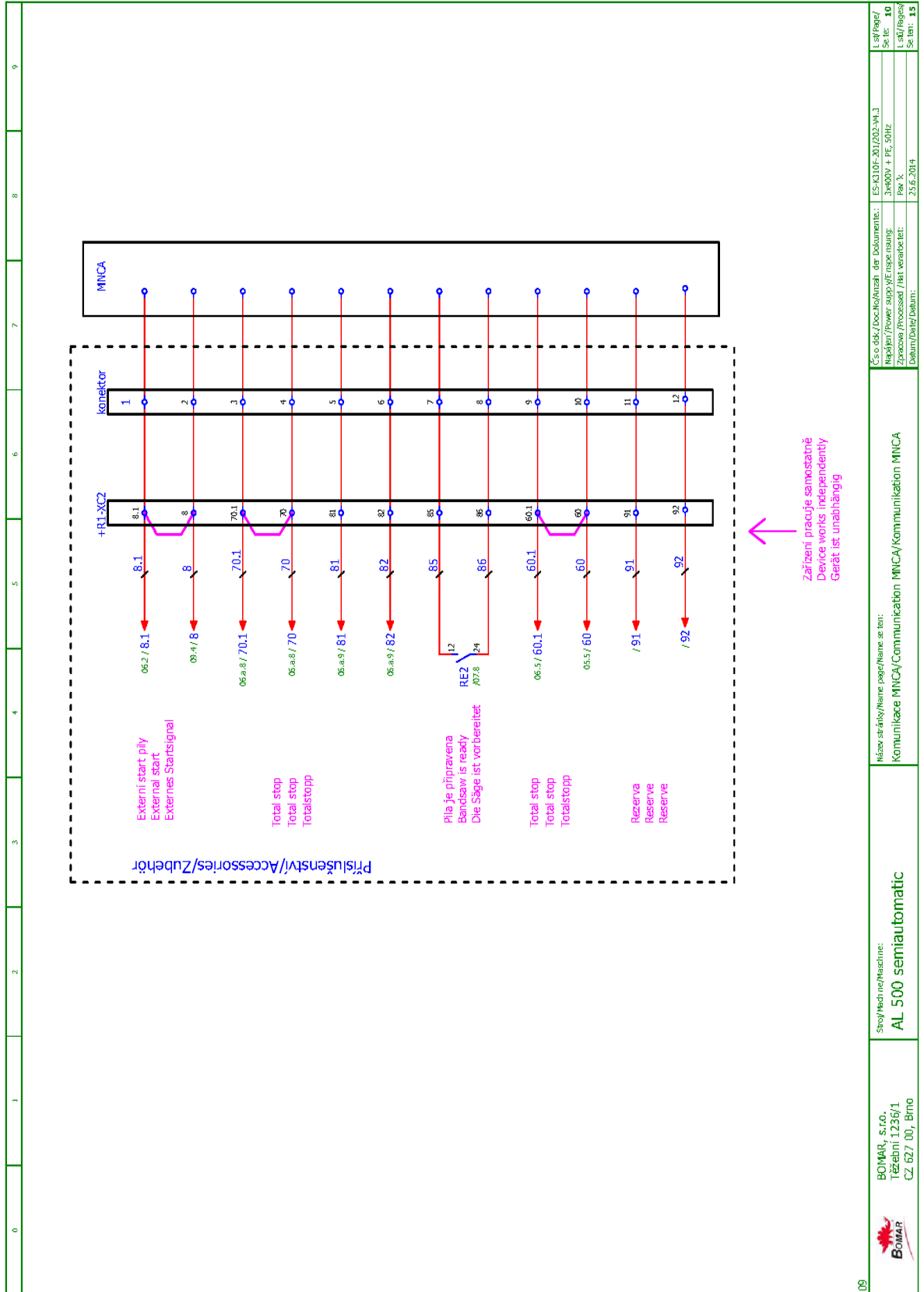


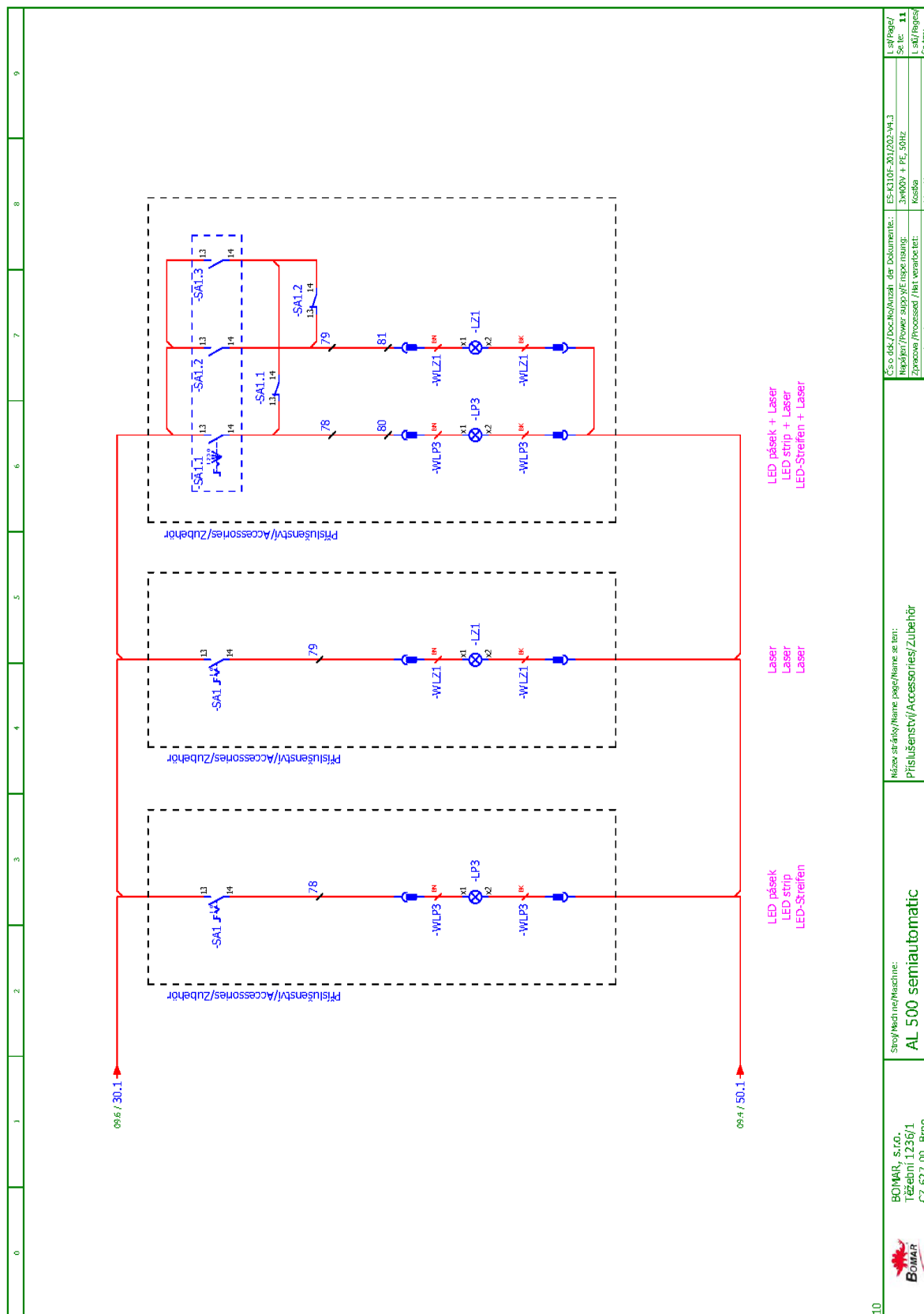




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	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Řídicí systém/Control system/Steuer system	Číslo dok./Doc.No./Anzahl der Dokumente: ES-K10F-201/202-V4-3	Verze./Ver. 09	Datum/Date/Datum: 29.4.2015	L. a. l. / Page / Se. / te. / L. a. l. / Page / Se. / te. / 15
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 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Přístrojství/Accessories/Zubehör	Číslo dok./Document number: ES-K10F-201/202-V4.3 Napájecí/Power supply/Energieversorgung: 3x400V + PE, 50Hz Zpracováno/Processed / Mit verarbeitet: Kossida Datum/Dating/datum: 29.4.2015	List/Page/ Seite: 11
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5.2. Elektrické schéma /Elektroschema /Wiring diagrams –
Frekv. měnič / Frequenzumrichter / Frequency convertor –
3×230 V+PE,50Hz

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 AL 500 semiautomatic ES-K310F-203-V4.3 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			Stroj/Machine/Maschine: AL 500 semiautomatic			Název stránky/Name page/Name seiten: Úvodní strana/ Start page/ Startseite			Cs o dok./Doc.No/Anzahl der Dokumenten.: ES-K310F-203-V4.3 Mapky/Power supply/Einspeisung: 3x230V +PE, 50Hz Zpracováno /Processed / Mit verarbeitet: Kosička Datum/Date/datum: 20.4.2015
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00	Úvodní strana/ Start page/ Startseite	20.4.2015							
01	Obsah/ Table of contents/ Inhaltsverzeichnis	20.4.2015							
02	I/O řídicí systém / I/O Control station / I/O Steuerung	25.6.2014							
03	Rozmístění prvků v rozvaděči/ Element lay-out in the distributor/ Platzierung der Geräte im Schaltschrank	25.6.2014							
03.a	Ovládací panel/ Control Panel/ Steuerpult	25.6.2014							
04	Kusovník artiklů/ Parts list/ Artikelstückliste	20.4.2015							
04.a	Kusovník artiklů/ Parts list/ Artikelstückliste	20.4.2015							
05	Silová část/ Power part/ Feld partie	25.6.2014							
06	Ovládací část - vstupy/ Control device - Inputs/ Steuereinheit - Eingänge	20.4.2015							
06.a	Ovládací část - vstupy/ Control device - Inputs/ Steuereinheit - Eingänge	25.6.2014							
07	Ovládací část - výstupy/ Control device - outputs/ Steuereinheit - Ausgänge	20.4.2015							
08	Ovládací část/ Control device/ Steuereinheit	20.4.2015							
09	Řídicí systém/ Control system/ Steuersystem	20.4.2015							
10	Komunikace MNCA/ Communication MNCA/ Kommunikation MNCA	25.6.2014							
11	Příslušenství/ Accessories/ Zubehör	20.4.2015							

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	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/ Machine/ Maschine: AL 500 semiautomatic	Název stránky/ Name page/ Name seiten: Obsah/ Table of contents/ Inhaltsverzeichnis	Cs o dok./ Doc.No./ Anzahl der Dokumente: ES-K10F-203-V4-1 Napájení/ Power supply/ E rspeisung: 3x230V + PE, 50Hz Zpracováno/ Processed/ Mit verarbeitet: Kosička Datum/ Date/ Datum: 20.4.2015	List Page/ Seite: L. s. 01 L. s. 01/ Page/
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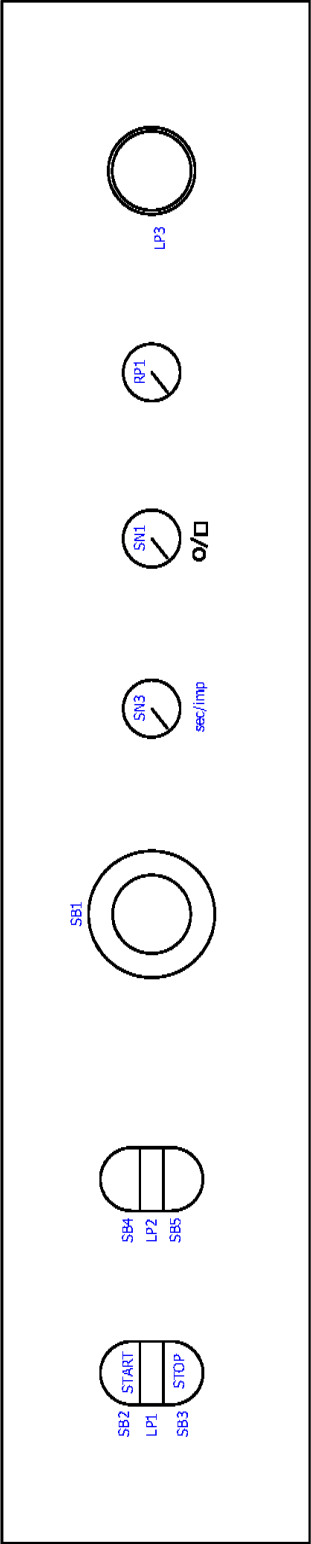
AL 500 semiautomatic

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I/O	CZE	ENG	DE
AI 1	Nastavení výšky ramene	High position setup	Einstellung höhererahmen
AI 2	Snímač výšky ramene	High position sensor	Sensor höherahmen
AI 3	Nastavení microniseru	Microniser adjust	Einstellung Microniser
DI 1	Stop motor/cyklus	Stop motor/cycle	Stop motor/zyklus
DI 2	Start motor/cyklus	Start motor/cycle	Start motor/zyklus
DI 3	Světlák upnout	Clamp vice	Schraubstock spannen
DI 4	Světlák uvolnit	Release vice	Schraubstock lösen
DI 5	Total stop	Total stop	Totalstopp
DI 6	Horní kryt	Upper cover	Oberer Deckel
DI 7	Tlakový spínač	Pressure switch	Druckschalter
DI 8	Rameno dole	Arm is down	Rahmen is oben
DO 1	Cyklus	Cycle	Zyklus
DO 2	Horní kryt uzamčený/dyha	Cover locked/fault	Deckel verschlossen/fehler
DO 3	Rameno nahoru	Arm up	Rahmen nach oben
DO 4	Světlák upnout	Vice clamp	Schraubstock spannen
DO 5	Světlák uvolnit	Release vice	Schraubstock lösen
DO 6	Microniser	Microniser	Microniser
DO 7	Horní kryt odemčený	Cover unlocked	Deckel erschlossen
DO 8	Total stop	Total stop	Totalstopp



OP1



03

	BOMAR, s.r.o. Třávní 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name page: Ovládací panel/Control Panel/Steuerpult	Cs o db./Doc.No/Anzahl der Dokumente: ES-K10F-203-V4.1 Napájení/Power supply/Einspeisung: 3x230V 4PE, 50Hz Zpracováno/Processed /Mit verarbeitet: Pev. 3. Datum/Date/Datum: 25.6.2014	Li st/Pages/ Se ite: 03 Li st/Requis/ Se ite: 15
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Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page column)
-CU1	Control unit SMA 3.X	SMA 3.X	BOMAR s.r.o.	91.995.222	1	/09.1
-FM1	Frequency converter - 3.7kW, 3x230VAC	VFD037E23A + KPE-LE02	DELTA ELECTRONICS, INC.	91.012.090	1	/05.2
-FM1	Frequency converter - 3.7kW, 3x400VAC	VFD037E43A	DELTA ELECTRONICS, INC.	91.012.094	1	/03.2
-FU1	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU1	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU2	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU2	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU3	Tube fuse - 4A/250V, slow, 5x20	T4A/250V	ESKA	91.230.015	1	/05.8
-FU3	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.8
-KM1	Contact - 5.5kW/400V, 3P	AF12-30-01-11	ABB	91.040.051	1	/06.a.7
-KM2	Contact - 5.5kW/400V, 3P	AF12-30-01-11	ABB	91.040.051	1	/06.a.8
-LP1	The head backlit buttons white	M22-DL-W	EATON	91.060.038	1	/07.1
-LP2	White light for Eaton adapter	M22-LED-W	EATON	91.061.034	1	/07.0
-LP3/1	LED red and green common ground 24V DC	HIS-95 G/R 24V DC	ELECO	91.060.069	1	/07.2
-PA1	Fuse disconnect E-90 - 3P	E 93/32	ABB	91.241.014	1	/05.2
-PA1	Tube fuse - 25A, 10x38, Fast	PV10 25A gG	OEZ	91.230.021	3	/05.2
-QS1	Disconnect - 3P, 16A	OT16FT3	ABB	91.170.018	1	/05.1
-QS1	Handle switch - black	OHBS3RH	ABB	91.180.016	1	/05.1
-RCF0	RFC-filter - 5.5 kW, 3x400V/230V, 25A	ATV31/5.5KW	Ing. Miroslav Vřětek	91.041.027	1	/05.2
-RCF1	Efferent RFC filter	FBOPRL624	Ing. Miroslav Vřětek	91.041.015	1	/05.2
-RCF2	Efferent RFC filter	FBOPRL624	Ing. Miroslav Vřětek	91.041.015	1	/05.2
-RE1	Plug-in relay	CR-P024DC2	ABB	91.051.049	1	/06.a.5
-RE1	Relay socket	CR-PSS	ABB	91.051.048	1	/06.a.5
-RE2	Plug-in relay	CR-P024DC2	ABB	91.051.049	1	/07.8
-RE2	Relay socket	CR-PSS	ABB	91.051.048	1	/07.8
-RP1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.263.015	1	/05.6
-RP1	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/05.6
-RP1	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/05.6

The manufacturer reserves right to use an equivalent replacement device.

03.a	BOMAR, s.r.o. Těšební 1236/1 CZ 627 00, Brno	Stroj/Machine/Name: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Kusovník artiklů/ Parts list/ Artikelstückliste	Cs o dok./Doc.No./Anzahl der Dokumente: ES-K10F-203-V4-1 Napájení/Power supply/Einspeisung: 3x230V + PE, 50Hz Zpracováno/Processed / Mit verarbeitet: Kosla Datum/Dating/Datum: 20.4.2015	Str. /Page/ Se. /te. L. /Bl./Reihe/ Se. /te.: 04 Se. /te.: 15
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Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page,column)
-SB1	Emergency-stop mushroom push - button + 3xNC	YW1B-V4E02R	IDEC	91.060.084	1	/06.5
-SB2	Double button head white/black start/stop	M22-DDL-WS-GB1/GB0	EATON	91.060.034	1	/06.2
-SB2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.2
-SB3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.1
-SB4	Double button head white/black, arrow close/open	M22-DDL-WS-*	EATON	91.060.055	1	/06.3
-SB4	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.3
-SB5	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.4
-SB6/1	Attaching adapter + 1NC	M22-AK01	EATON	91.061.020	1	/06.a.5
-SB6/1	Switch 2 positions	M22 - WKV	EATON	91.060.037	2	/06.a.5
-SB6/2	NC contact for Eaton adapter	M22-K01	EATON	91.061.024	1	/06.a.7
-SB6/3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.6
-SW1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW1	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW1	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8
-SW2	Position measuring	DH-R4M	Bomar	262.012	1	/06.7
-SW3	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW3	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW3	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8
-SQ1	Head	ZCE10	TELEMECANIQUE	91.061.201	1	/06.a.0
-SQ1	The switch body	ZCD31	TELEMECANIQUE	91.061.202	1	/06.a.0
-SQ1	Cable gland	ZDEG11	TELEMECANIQUE	91.061.203	1	/06.a.0
-SQ2	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/08.3
-SQ3	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/07.4
-TR1	Toroidal transformer - 400V / 230V / 20V 4,5A 90VA	400V/230V/20V 4,5A 90VA	KARBAN s.r.o.	91.080.023	1	/05.7
-TS1	Multifunction time relay - 12-240V, 10 functions	CRM-91H/UNI	ELKO	91.051.027	1	/08.1

The manufacturer reserves right to use an equivalent replacement device.



BOMAR, s.r.o.
Třebetín 1236/1
ČP 627 M. Řím

Šrojf/Mech/ ne/Machine:
AL 500 seniautomatic

Název stránky/Name page/Name se text:
Kusovník artiklů/ Parts list/ Artikelstückliste

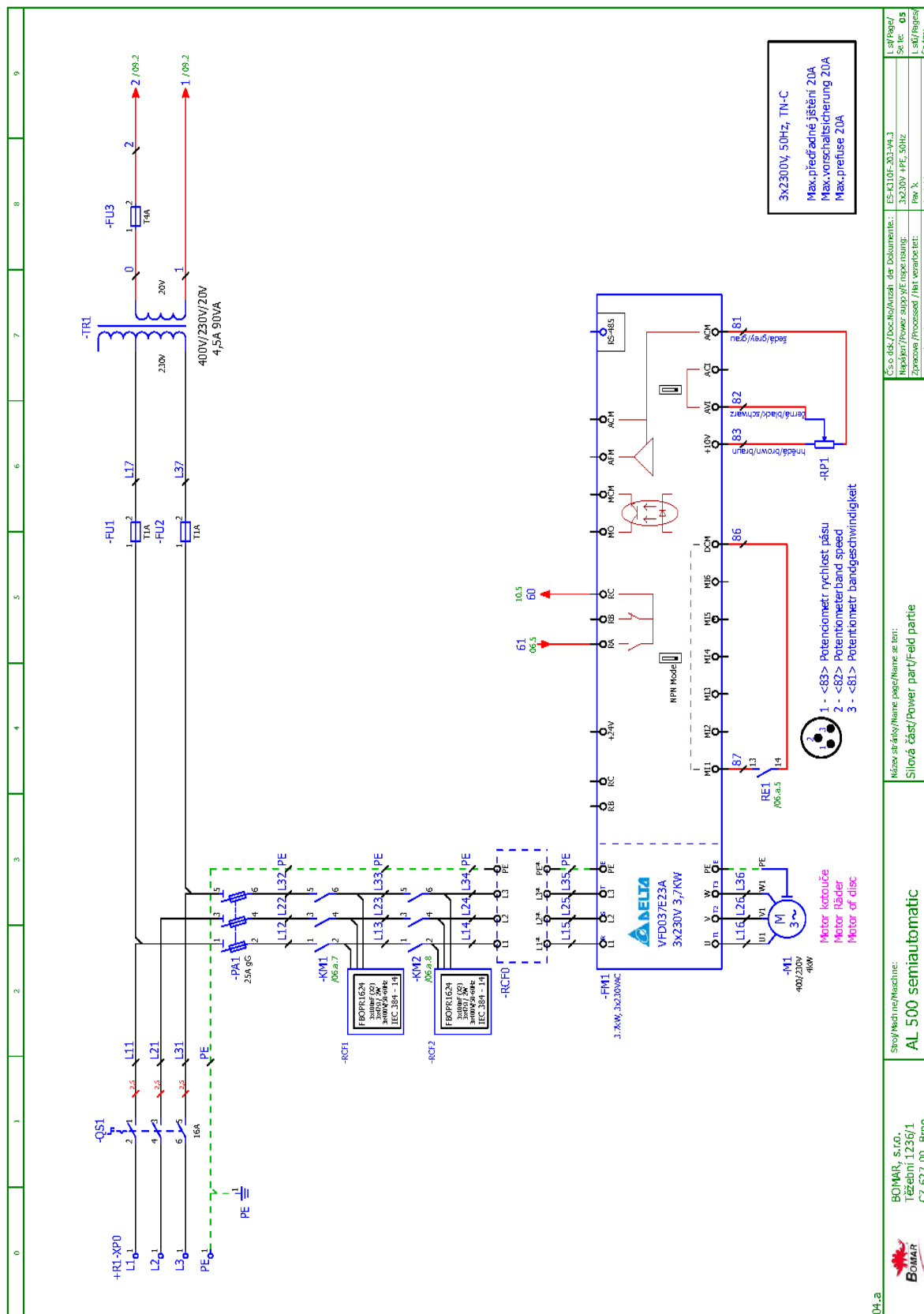
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Replacen/Power supply/Equip. name:
Zpracov. /Processed / IMI Verarbeit. /E

ES-K10F-303-V4.3
3X230V 4PF, 50Hz
Kusovník

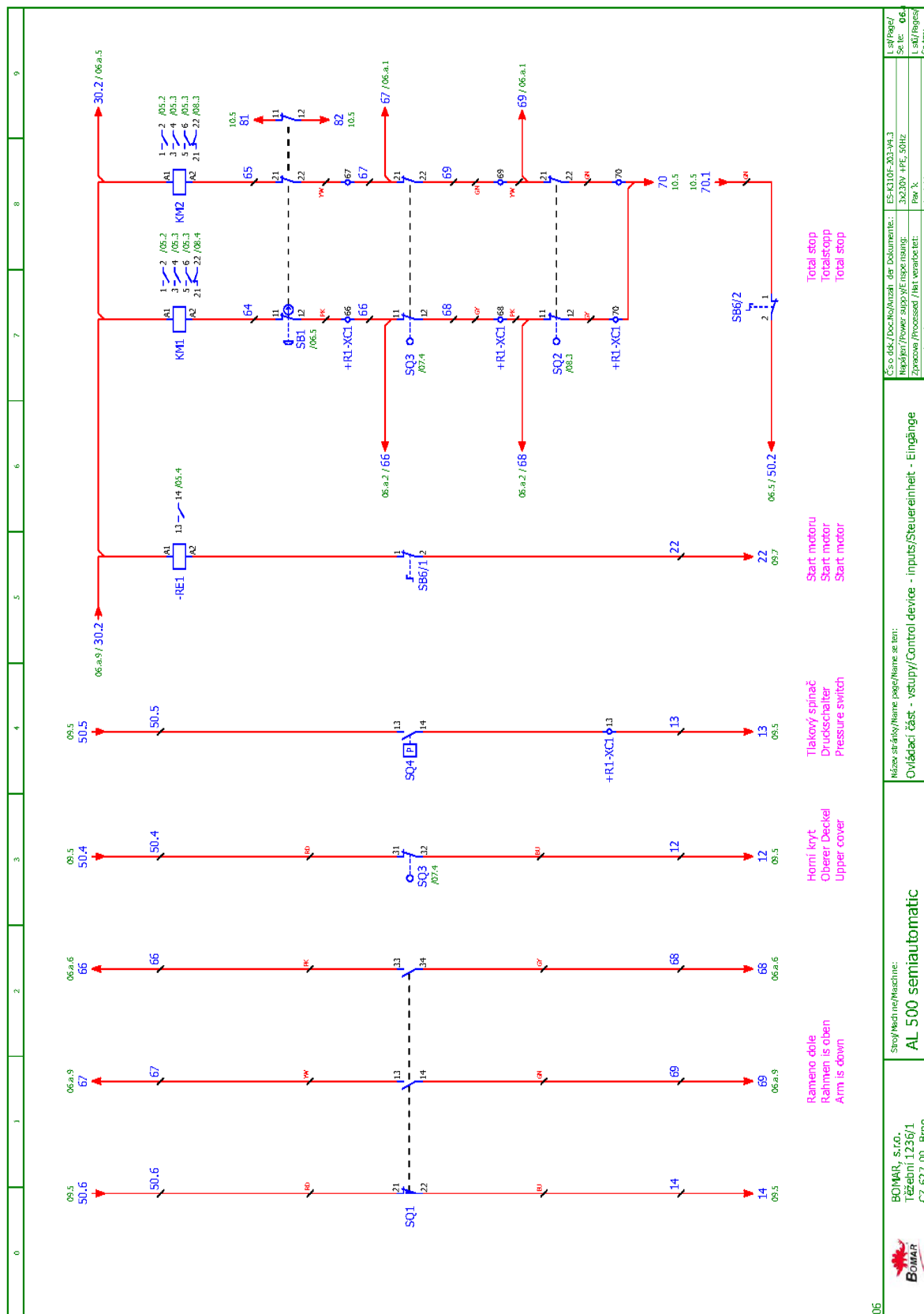
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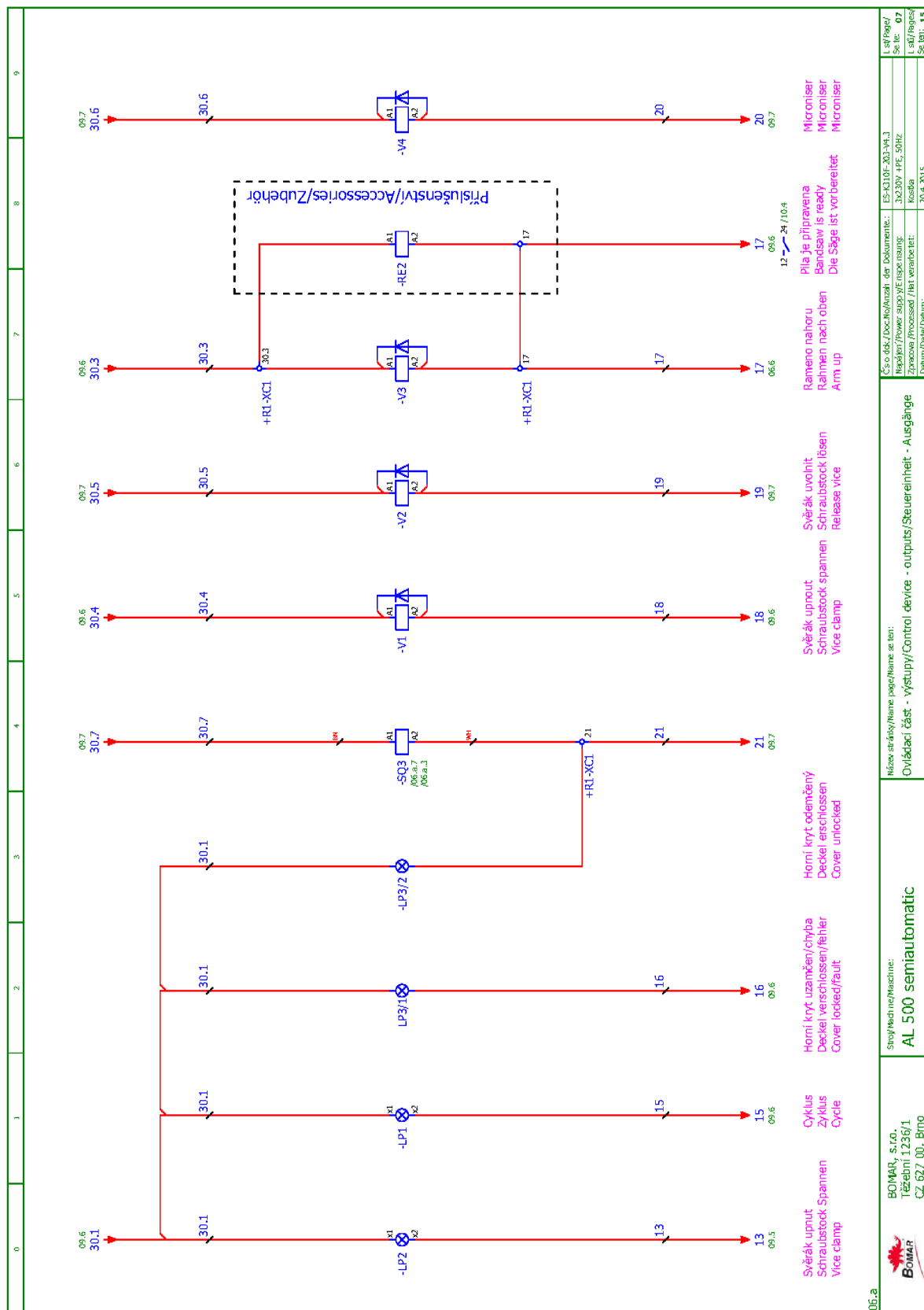
The manufacturer reserves right to use an equivalent replacement device.

04	 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine: AL 500 semiautomatic	Název stránky/Name page/Name de l'en: Kusovník artiklů/ Parts list/ Artikelstückliste	Císlo dok./Doc.No/kvůli, der Dokumenten.: ES-K10F-203-V4.1 Repár/en/Power supply/E nspalung: 3x230V +PE, 50Hz Zpracová /Processed / Mit verarbeitet: Kosička Datum/Dating/Datum: 20.4.2015	List Page/ Se. ite: 04
					List Page/ Se. ite: 15



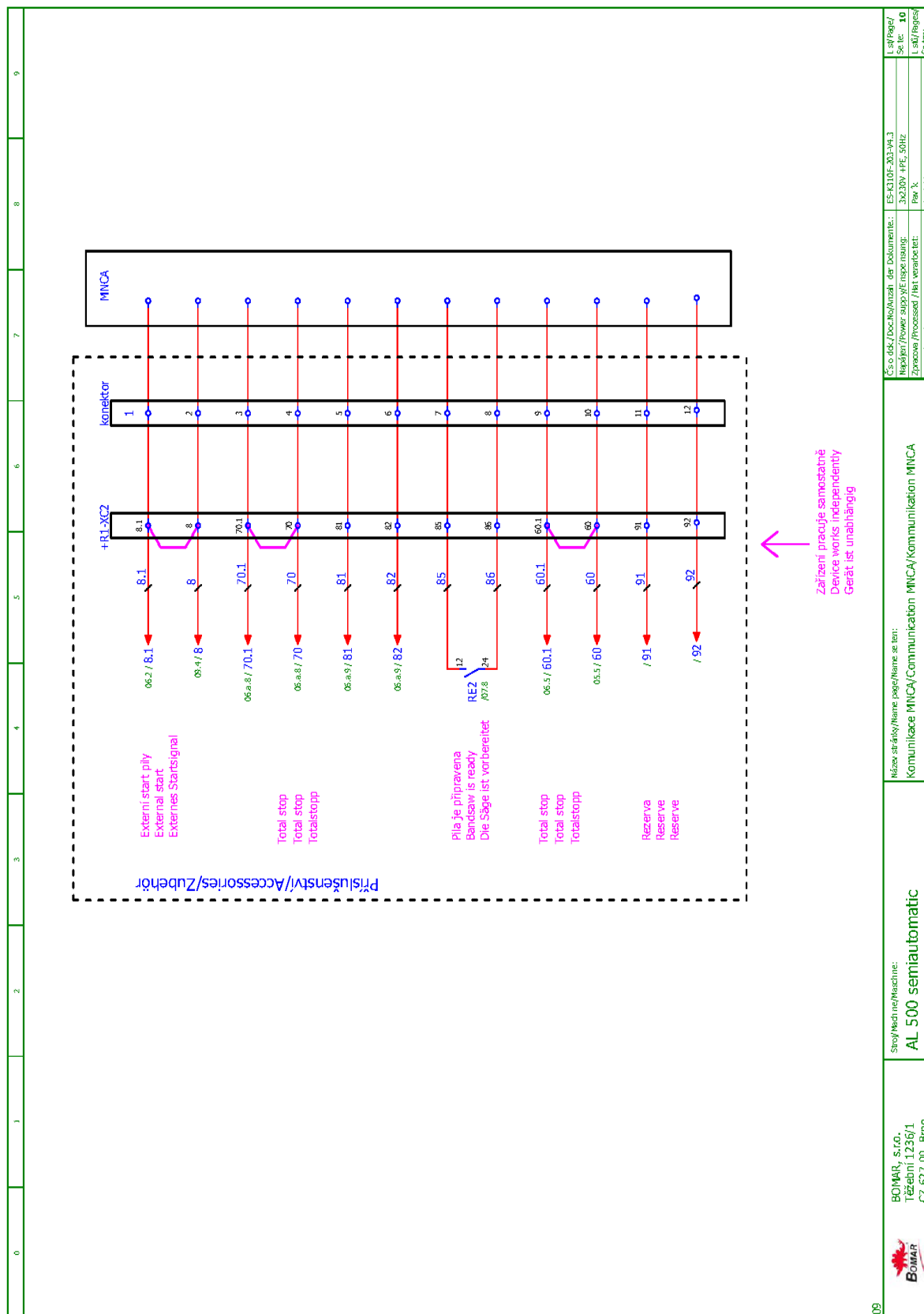












Zařizení pracuje samostatně
Device works independently
Gerät ist unabhängig



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

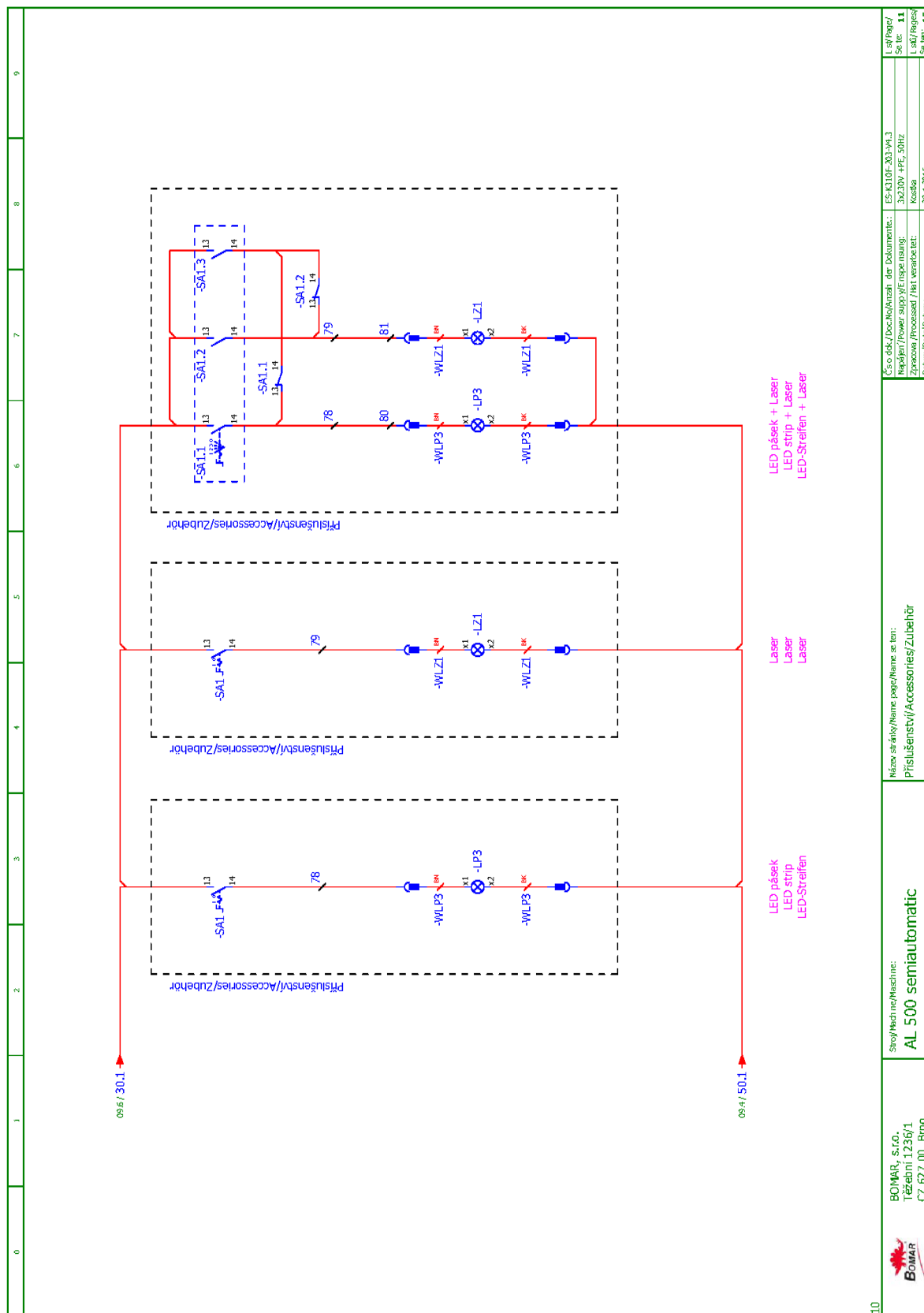
Stroj/Machine/Maschine:
AL 500 semiautomatic

Název stránky/Page/Page/Seite:
Kommunikace MINCA/Communication MINCA/Kommunikation MINCA

Cs o dok./Doc.No./Anzahl der Dokumente: ES-K10F-203-V4-1
Napájení/Power supply/Erspeisung: 3x230V + PE, 50Hz
Zpracováno/Processed/Hat verarbeitet: Per. 7.
Datum/Dating/datum: 25.6.2014

09

Str. 10
Seite 10
L. 10/Reise



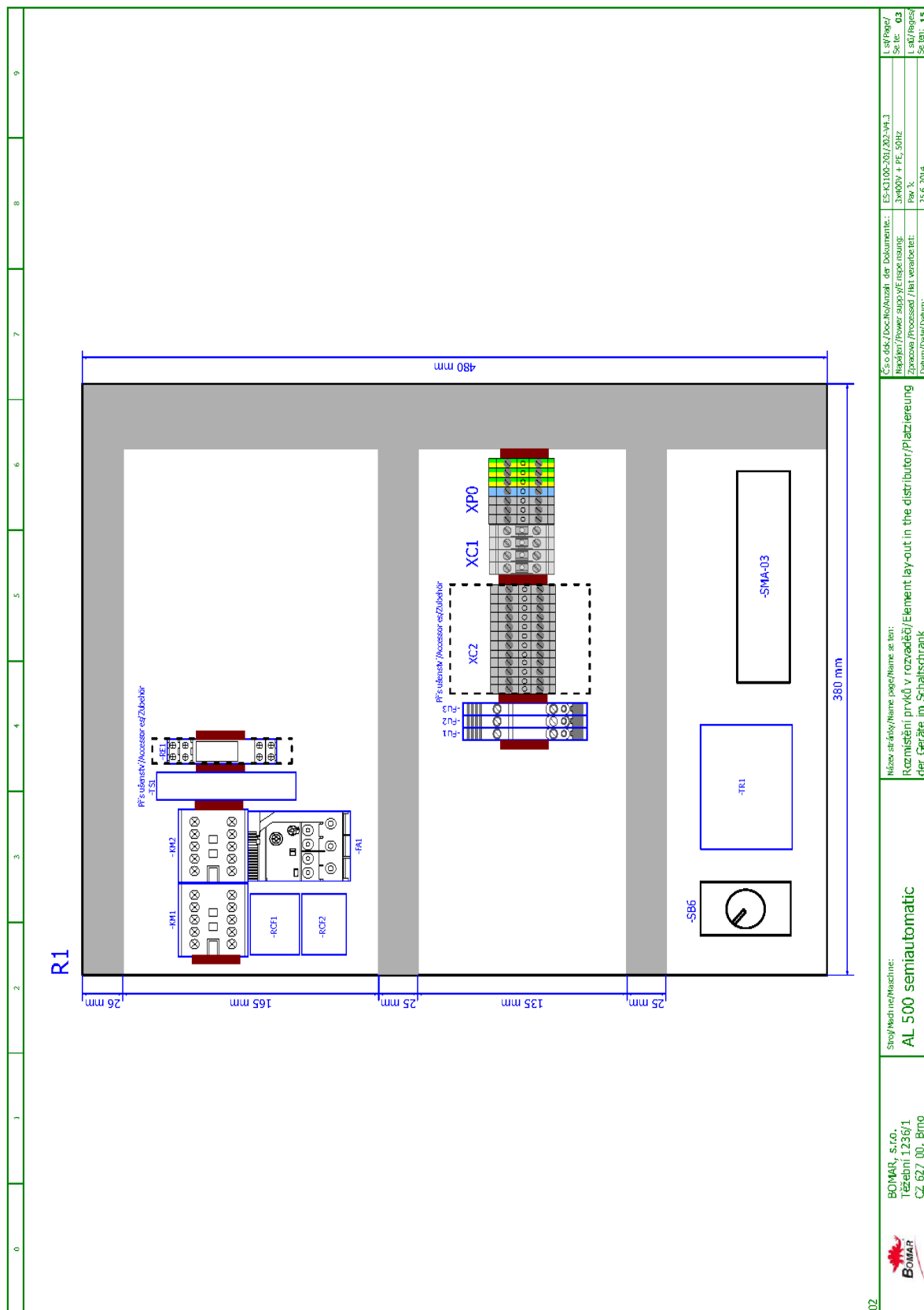
5.3. Elektrická schémata / Elektroschemas / Wiring diagrams –
bez frekv. měniče / ohne Frequenzumrichter / without
frequency convertor – 3×400 V+PE,50Hz

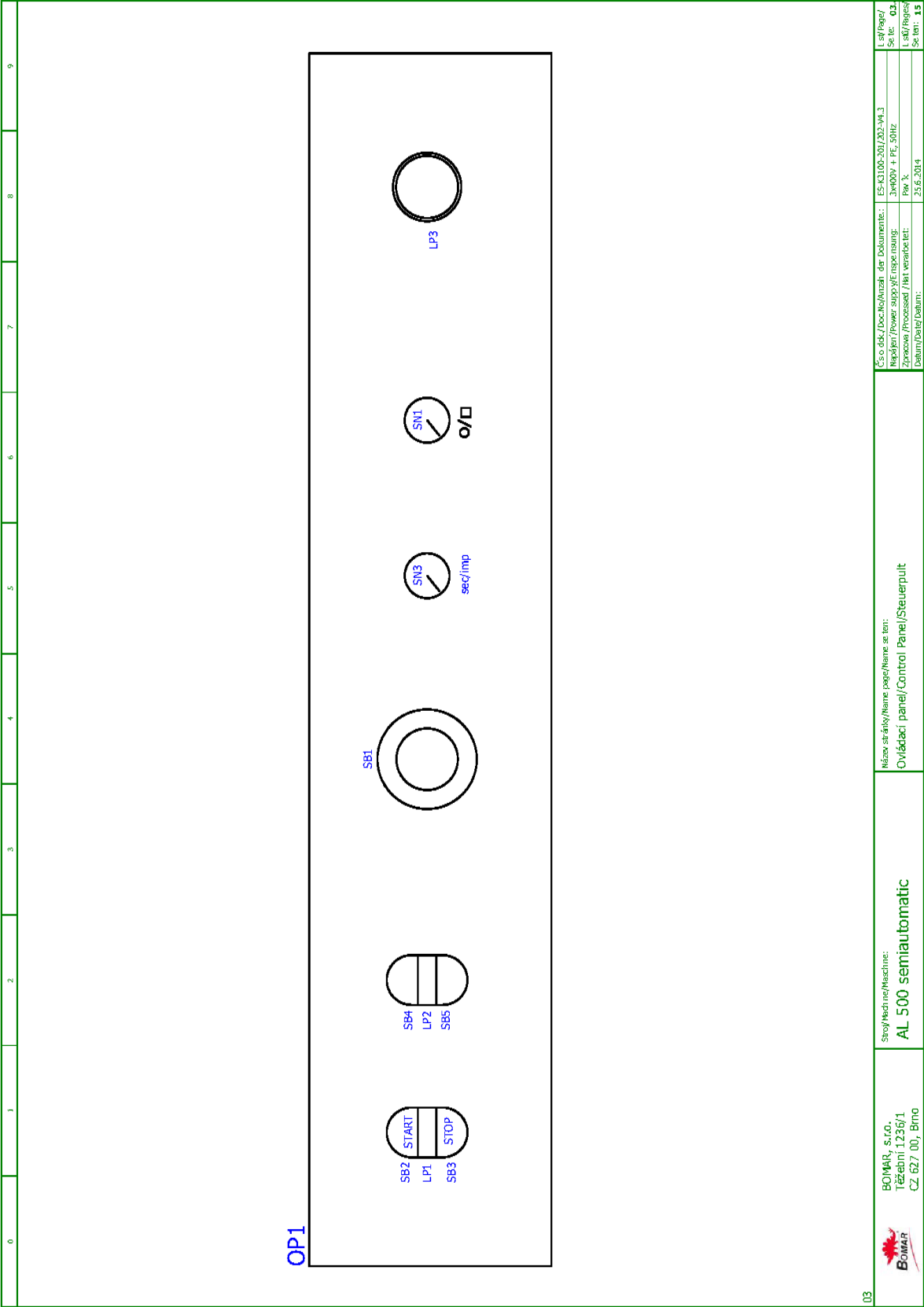
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 Bomar, spol. s r.o. Těžební 1236/1 627 00 Brno Czech republic AL 500 semiautomatic ES-K3100-201/202-V4.3 Wiring diagram 3x400V + PE, 50Hz									
 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno		Stroj/Machine/Maschine: AL 500 semiautomatic		Název stránky/Name page/Name seiten: Úvodní strana/ Start page/ Startseite		Cs o dok./Doc.No/Anzahl der Dokumente: ES-K3100-201/202-V4.3 Majitel/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracováno /Processed / Mit verarbeitet: Kodaň Datum/Date/Datum: 17.4.2015		Stránka/Page/ Seite: 00 Lisát/Reprint/ Seiten: 15	



0	1	2	3	4	5	6	7	8	9
Table of contents									
Page	Page name								Date
00	Úvodní strana/ Start page/ Startseite								17.4.2015
01	Obsah/ Table of contents/ Inhaltsverzeichnis								17.4.2015
02	I/O řídicí systém / I/O Control station / I/O Steuerung								25.6.2014
03	Rozmístění prvků v rozvaděči/Element lay-out in the distributor/Platzierung der Geräte im Schaltschrank								25.6.2014
03.a	Ovládací panel/Control Panel/Steuerpult								25.6.2014
04	Kusovník artiklů/ Parts list/ Artikelstückliste								25.6.2014
04.a	Kusovník artiklů/ Parts list/ Artikelstückliste								25.6.2014
05	Silová část/Power part/Feld partie								25.6.2014
06	Ovládací část - vstupy/Control device - Inputs/Steuereinheit - Eingänge								25.6.2014
06.a	Ovládací část - vstupy/Control device - Inputs/Steuereinheit - Eingänge								25.6.2014
07	Ovládací část - výstupy/Control device - outputs/Steuereinheit - Ausgänge								25.6.2014
08	Ovládací část/Control device/Steuereinheit								25.6.2014
09	Řídicí systém/Control system/Steuersystem								25.6.2014
10	Komunikace MNCA/Communication MNCA/Kommunikation MNCA								25.6.2014
00									
BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno		Společná technika/Machine: AL 500 semiautomatic		Název stránky/Name page/Name seite: Obsah/ Table of contents/ Inhaltsverzeichnis				Číslo dok./Doc.No./Anzahl der Dokumente: ES-K3100-208/202-V4.3 Registrační číslo/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracování/Processed /Fert. verarbeitet: Kódika Datum/Date/ Datum: 17.4.2015	
								List Page/ Seite: 01 List Page/ Seite: 15	

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Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page,column)
-CU1	Control Unit SMA 3.X	SMA 3.X	BOMAR s.r.o.	91.995.222	1	/09.1
-FA1	Thermal Overload Relay - 10A	T16-10	ABB	91.050.028	1	/05.2
-FU1	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU1	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU2	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU2	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU3	Tube fuse - 4A/250V, slow, 5x20	T4A/250V	ESKA	91.230.015	1	/05.8
-FU3	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.8
-KM1	Minicontactor - 4kW/400V, 3P	B65-30-01-1.7-71	ABB	91.040.049	1	/06.a.7
-KM2	Minicontactor - 4kW/400V, 3P	B65-30-01-1.7-71	ABB	91.040.049	1	/06.a.8
-LP1	White translucent switch head	M22-DL-W	EATON	91.060.038	1	/07.1
-LP2	White light for Eaton adapter	M22-LED-W	EATON	91.061.034	1	/07.0
-LP3/1	Indicating light - white, red	HIS-95 G/R 24V DC	ELECO	91.060.069	1	/07.2
-QS1	Disconnecter - 3P, 16A	OT16FT3	ABB	91.170.018	1	/05.1
-QS1	Handle switch - black	OHBS3RH	ABB	91.180.016	1	/05.1
-RCF1	RCF filter	FBOPRL624	Ing. Miroslav Vítěk	91.041.015	1	/05.2
-RCF2	RCF filter	FBOPRL624	Ing. Miroslav Vítěk	91.041.015	1	/05.2
-RE1	Pluggable interface relay CR-P	CR-P024DC2	ABB	91.051.049	1	/07.8
-RE1	CR-P Standard socket	CR-PSS	ABB	91.051.048	1	/07.8
-SB1	Emergency-stop mushroom push - button + 3xNC	YW1B-V4E02R	IDEC	91.060.084	1	/06.5
-SB2	Double button head white/black start/stop	M22-DDL-W5-GB1/GB0	EATON	91.060.034	1	/06.2
-SB2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.2
-SB3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.1
-SB4	Double button head white/black, arrow close/open	M22-DDL-W5-*	EATON	91.060.055	1	/06.3
-SB4	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.3
-SB5	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.4
-SB6/1	Attaching adapter + 1NC	M22-AK01	EATON	91.061.020	1	/06.5
-SB6/1	Switch 2 positions	M22 - WKV	EATON	91.060.037	1	/06.5

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o.
Třebelví 1236/1
Č. 627 M. Rmno

Stroj/Mech/ ne/Machine:
AL 500 seniautomatic

Název stránky/Name page/Name se text:
Kusovník artiklů/ Parts list/ Artikelstückliste

Číslo dok./Doc.No./Značka der. Dokumentu:
Rapid Power supply/Energieversorgung:
Zpracováno/Processed / Mit verarbeitet

Leaf/Paper:
St. č.: 04
St. číslo/Regist. No.:
Ver. X.

03.a

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Kusuovník artiklů/ Parts list/ Artikelstückliste	Cso dok./Doc./Kvzsch. der Dokumenten.: ES-K100-201/202-V4.3		List Page/ Seite: 04
			Napájení/Power supply/Erspeisung: 3x400V + PE, 50Hz Zpracováno /Processed / Mit verarbeitet: Per. N. Datum/Dating/Datum: 25.6.2014		List Page/ Seite: 04

0	1	2	3	4	5	6	7	8	9
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Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page column)
-SB6/1	Button box DIN	M2-IVS	EATON	91.190.037	1	/06.5
-SB6/2	NC contact for Eaton adapter	M2-K01	EATON	91.061.024	1	/06.a.8
-SB6/3	NO contact for Eaton adapter	M2-K10	EATON	91.061.022	1	/06.6
-SW1	Potenciometr 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW1	Potentiometer knob - 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW1	Fastconnect clamp	WAGO 224-112	WIELAND	91.250.009	3	/06.8
-SW2	Position measuring	DH-RAIM	Bomar	262.012	1	/06.7
-SW3	Potenciometr 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8
-SW3	Potentiometer knob - 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8
-SW3	Fastconnect clamp	WAGO 224-112	WIELAND	91.250.009	3	/06.8
-SQ1	Head	ZCE10	TELEMECANIQUE	91.061.201	1	/06.a.1
-SQ1	Switch body	ZCD31	TELEMECANIQUE	91.061.202	1	/06.a.1
-SQ1	Cable gland	ZDEG11	TELEMECANIQUE	91.061.203	1	/06.a.1
-SQ2	Guard Lock Safety-door with solenoid 24V	D4NL-4HFA-B	OMRON	91.173.040	1	/08.3
-SQ3	Guard Lock Safety-door with solenoid 24V	D4NL-4HFA-B	OMRON	91.173.040	1	/07.4
-TR1	Toroidal transformer - 400V/230V/20V 4,5A 90VA	400V/230V/20V 4,5A 90VA	KARBAN s.r.o.	91.080.023	1	/05.7
-TS1	Multifunction time relay - 12-240V, 10 functions	CRM-91H/UNI	ELKO	91.051.027	1	/08.1

The manufacturer reserves right to use an equivalent replacement device.



BOMAR, s.r.o.

Trávní 1236/1

ČZ 627 00 Rno

Název stránky/Name page/Nom de text:

Kusovník artiklů/ Parts list/ Artikelstückliste

Stroj/Machine/Machine:

AL 500 seniautomatic

Číslo dok./Doc./No./Nº del documento:

ES-K100-301/203-VA.3

Repent/Power supply/Energie versorg:

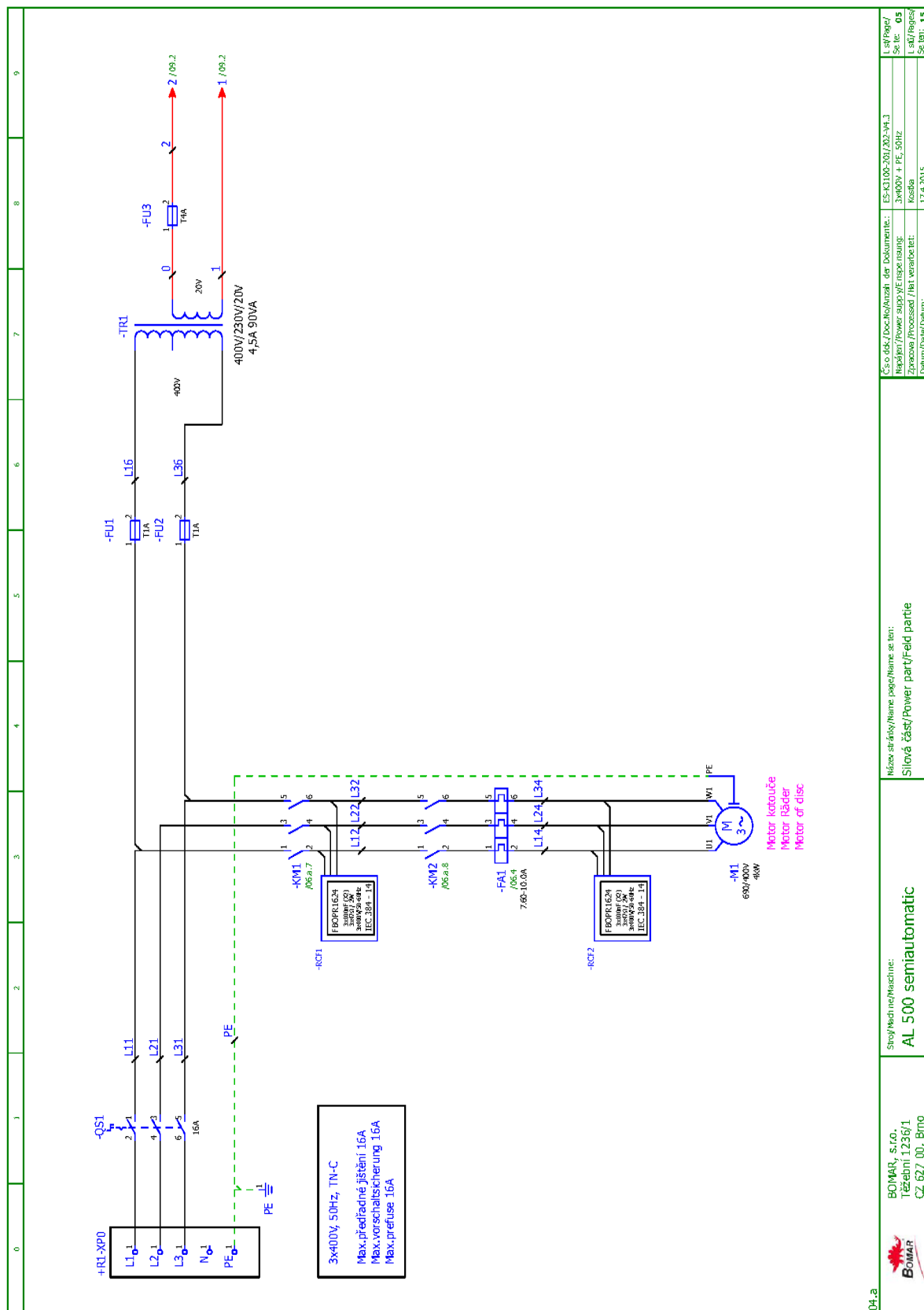
3x400V + PE, 50Hz

Číslo požadavku/Request number:

Rev. X.

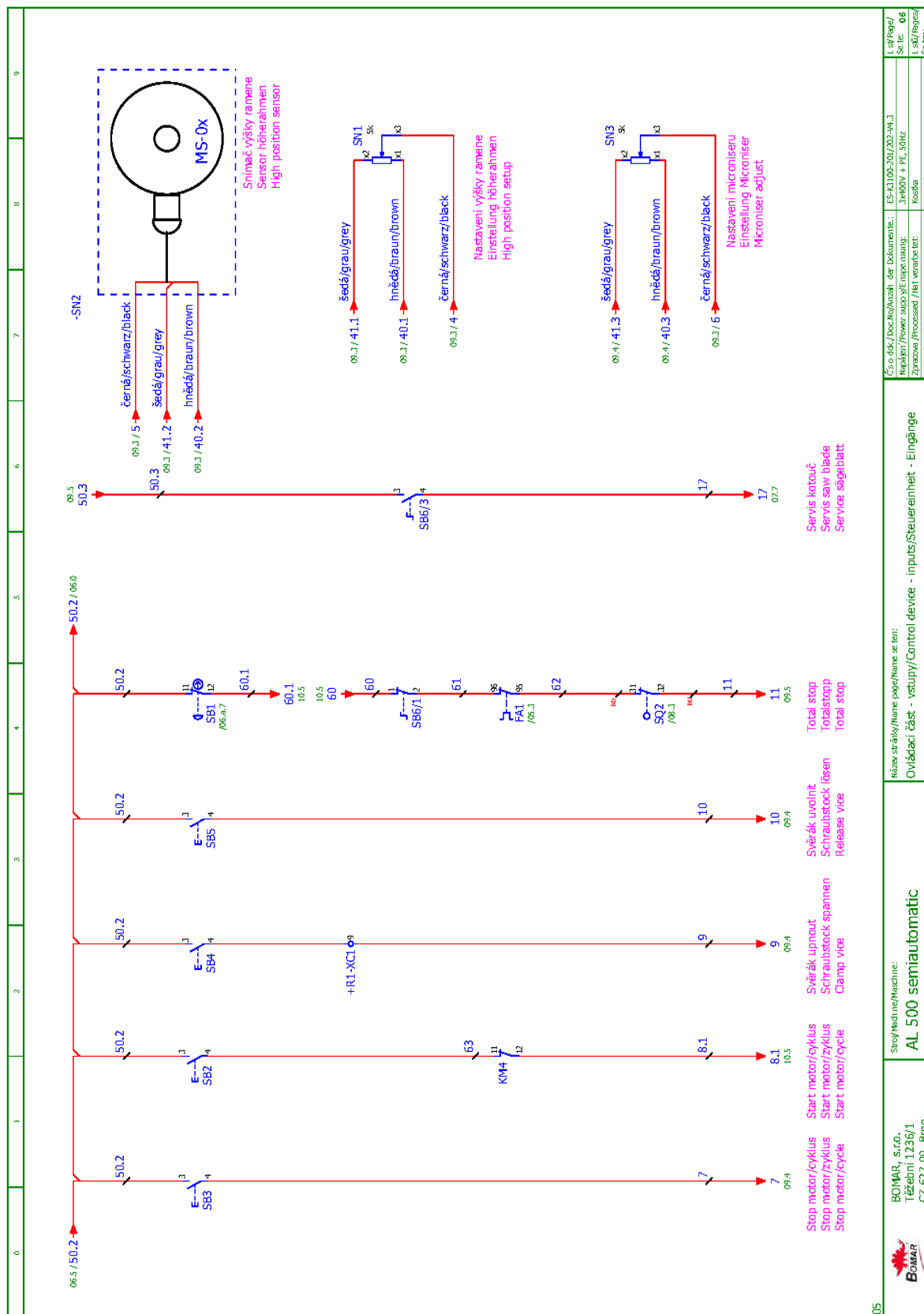
The manufacturer reserves right to use an equivalent replacement device.

04	 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine: AL 500 semiautomatic	Název stránky/Name page/seiten: Kusuovník artiklů/ Parts list/ Artikelstückliste	C:\o dok\DocNo\Anzahl der Dokumente: ES-K106-201/202-V4.3 Mapky/Power supply/Ersatzteil: Zpracováno/Processed / Mit verarbeitet: Datum/Dating/datum: 25.6.2014	List Page/ Se. list: 04
					List Page/ Se. list: 15

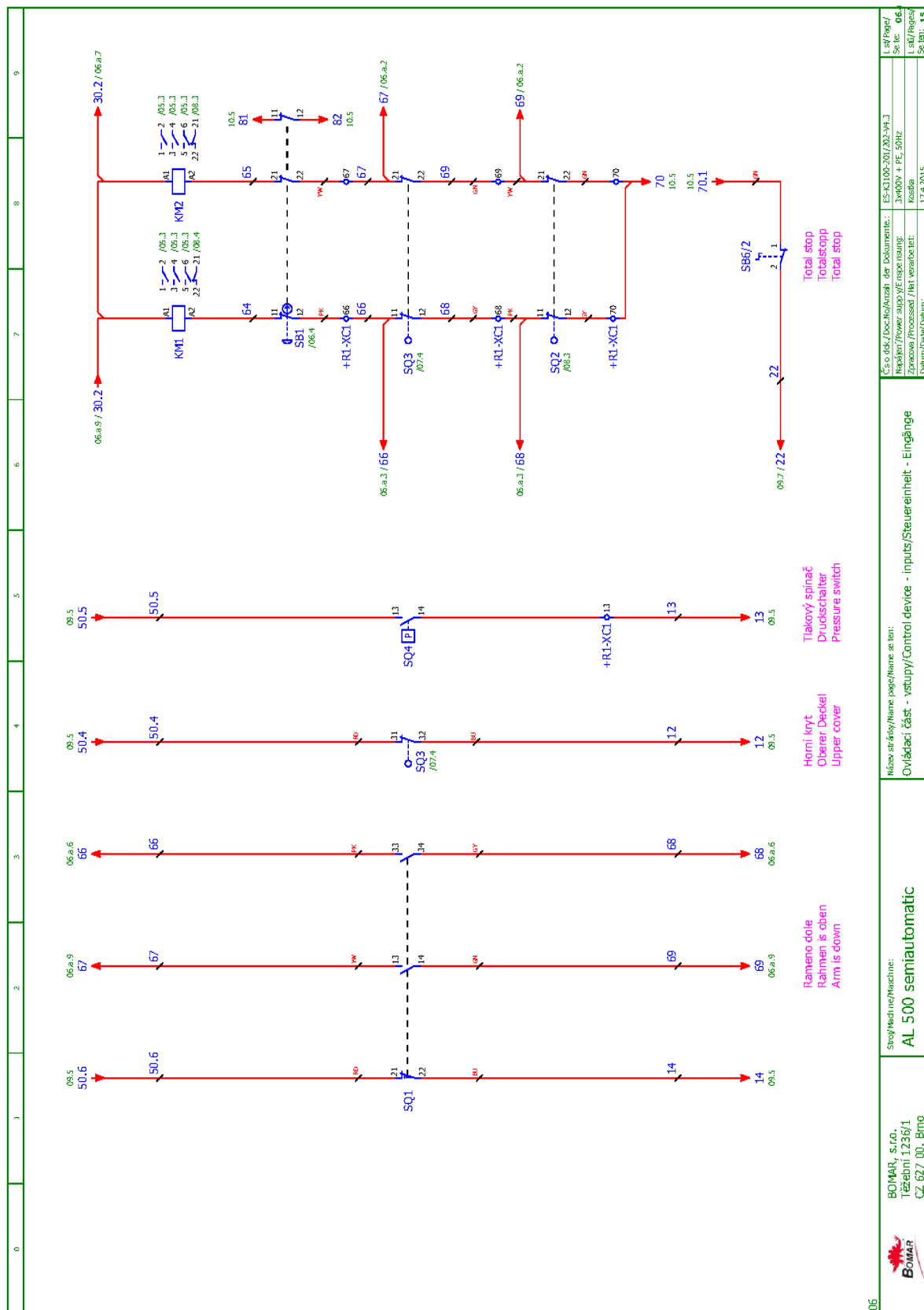


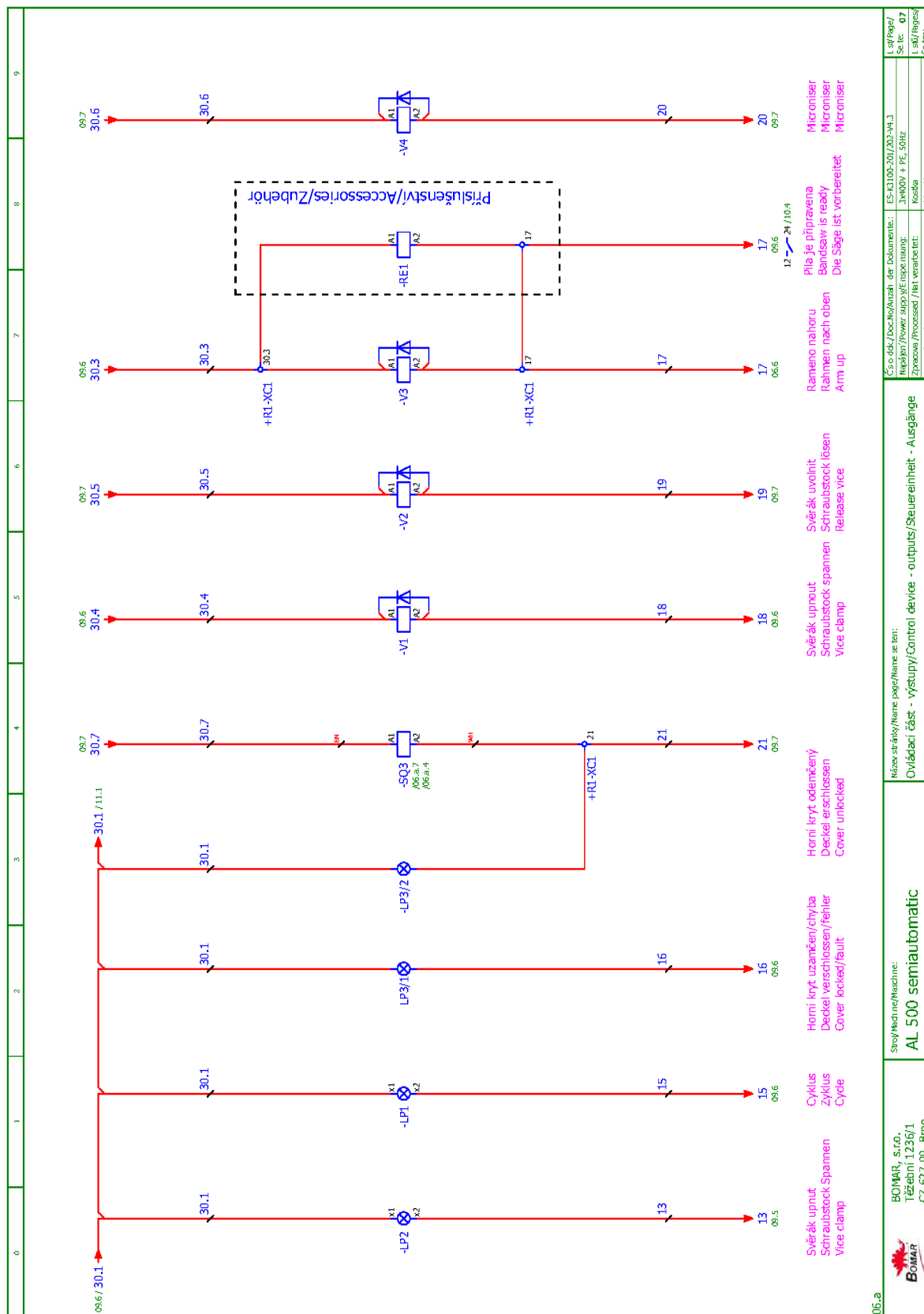
04_a

	BOMAR, s.r.o. Třávní 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Silová část/Power part/Feld partie	Číslo dok./Doc.No./Kurzsch. der Dokumente.: ES-K100-201/202-34.3 Napájecí/Power supply/Einspeisung: 3x400V + PE, 50Hz Zpracováno/Processed /Mit verarbeitet: Kosička Datum/Dating/datum: 17.4.2015	List/Page/ Se.ite. 05 List/Reihen/ Se.iten: 15
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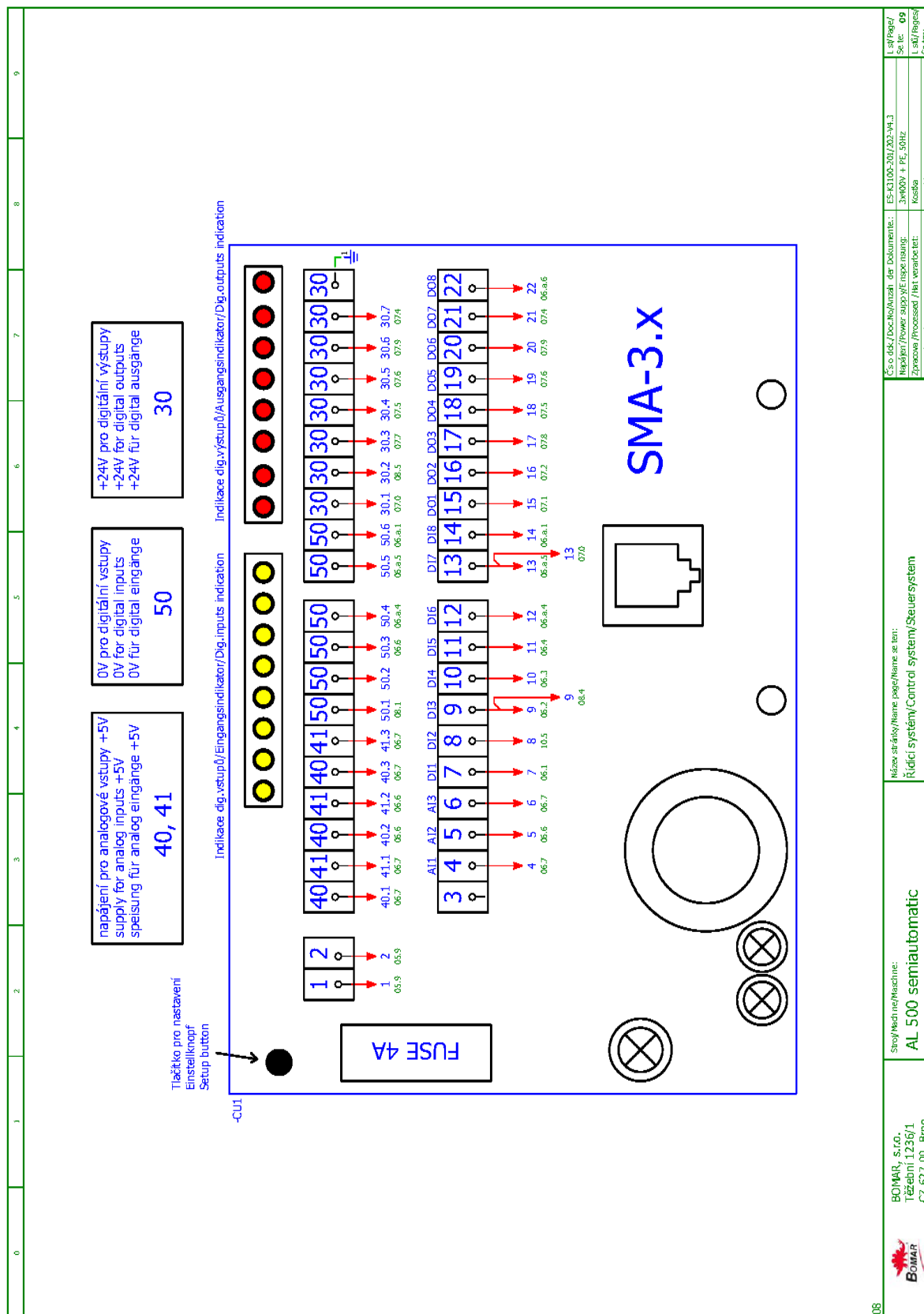


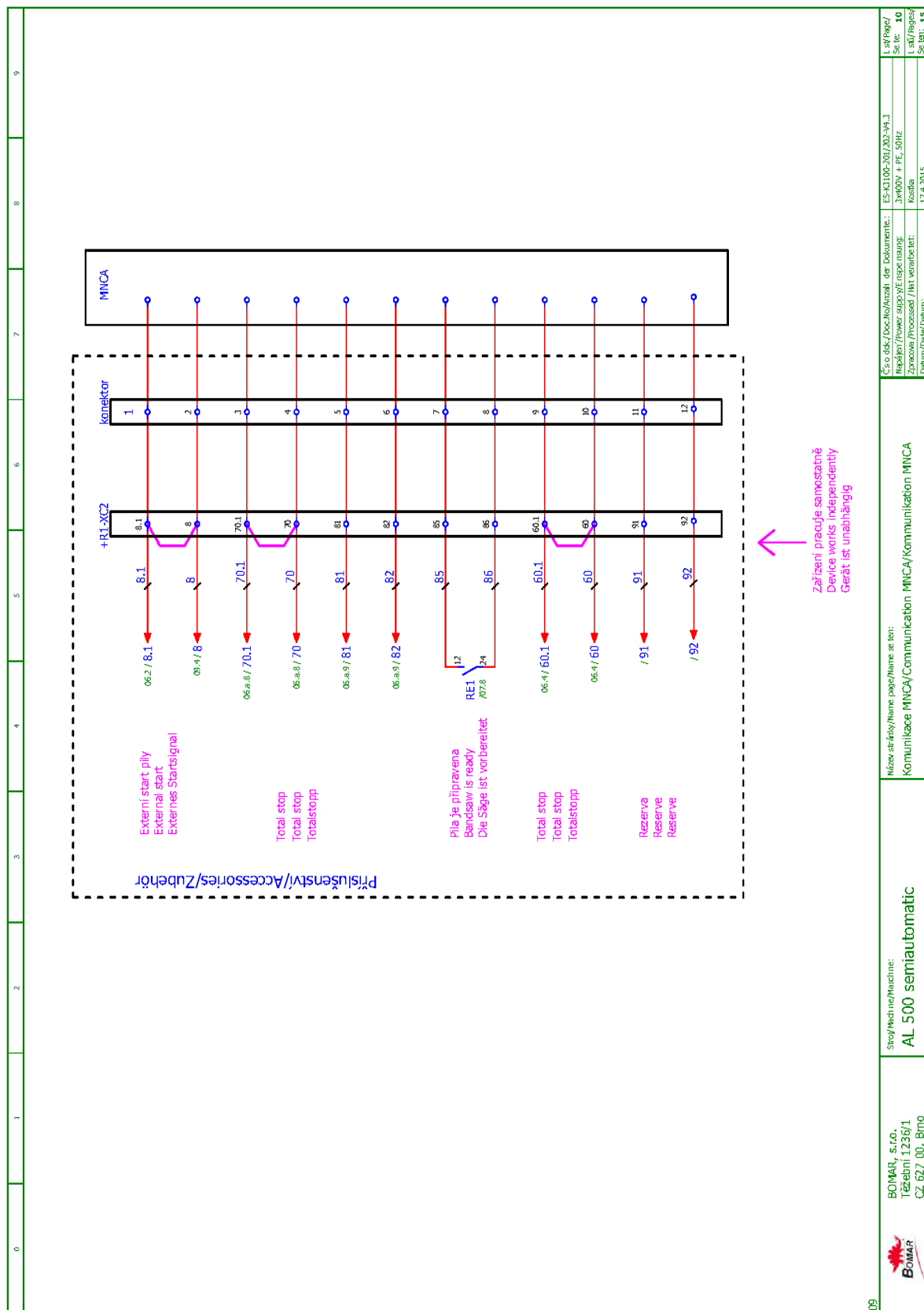
Schemata Schemas Schematics

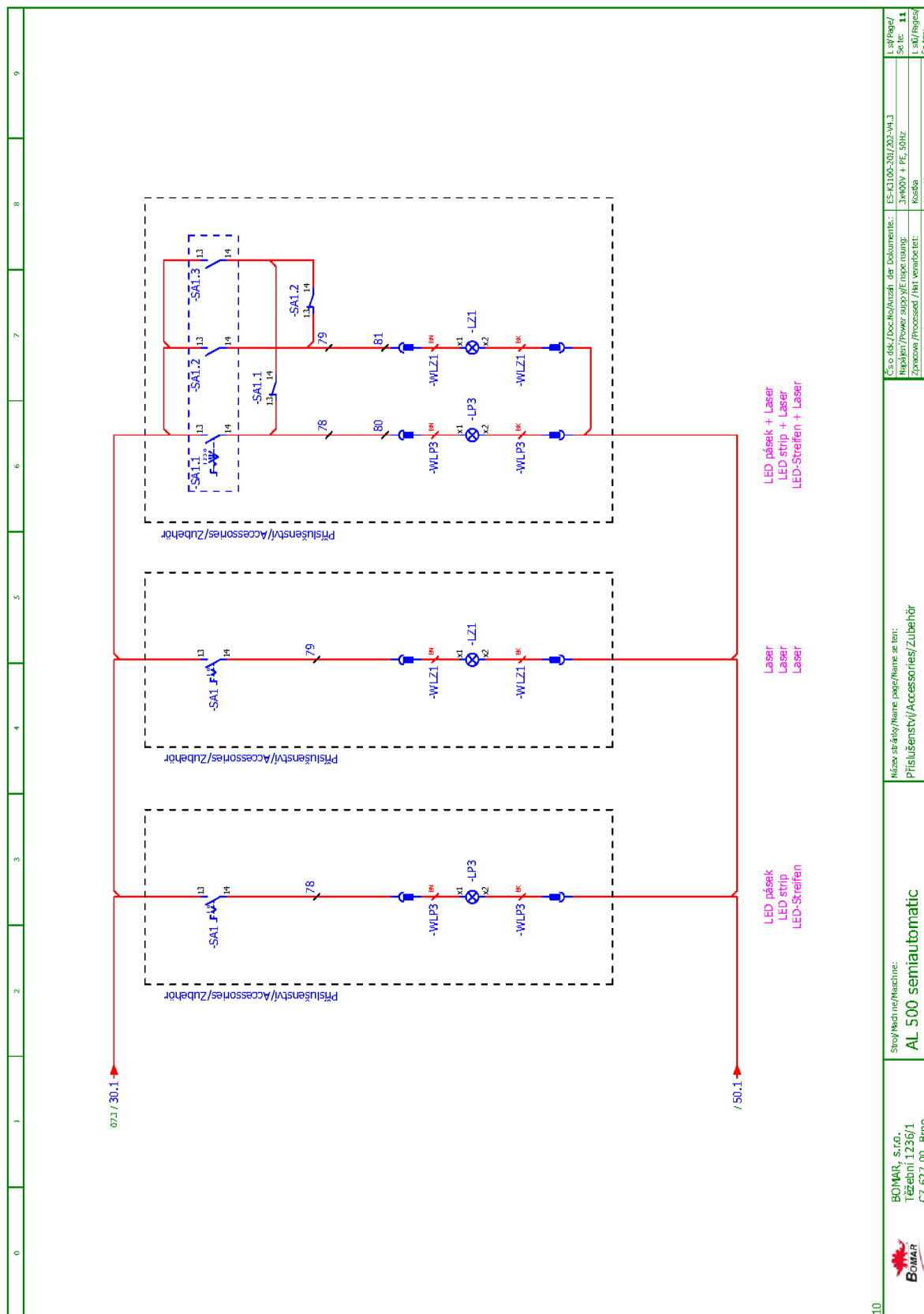












	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Přislušenství/Accessories/Zubehör	Císlo dok./Doc.No/Anzahl der Dokumente: ES-K100-201/202-V4-3 Napájecí/Power supply/Energieversorgung: 3x400V + PE, 50Hz Zpracováno/Processed / Mit verarbeitet: Kosiba Datum/Dating/datum: 29.4.2015	List/Page/ Se.ite. L. sál./Reise/ Se.iten: 15
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5.4. Elektrická schémata / Elektroschemas / Wiring diagrams –
bez frekv. měniče / ohne Frequenzumrichter / without
frequency convertor – 3×230 V+PE,50Hz

0	1	2	3	4	5	6	7	8	9
 AL 500 semiautomatic ES-K3100-203-V4.3 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		Stroj/Machine/Maschine: AL 500 semiautomatic		Název stránky/Name page/Name seiten: Úvodní strana/ Start page/ Startseite		Cs o dok./Doc.No/Anzahl der Dokumenten.: ES-K3100-203-V4.3 Mapkjen/Power supply/E nspalung: 3x230V + PE, 50Hz Zpracova /Processed / Mit verarbeitet: Kosiha Datum/Date/ Datum: 20.4.2015		List Page/ Seite: 00 List/Reise/ Seiten: 15	

0	1	2	3	4	5	6	7	8	9
Table of contents									
Page	Page name	Date							
00	Úvodní strana/ Start page/ Startseite	20.4.2015							
01	Obsah/ Table of contents/ Inhaltsverzeichnis	20.4.2015							
02	I/O řídicí systém / I/O Control station / I/O Steuerung	25.6.2014							
03	Rozmístění prvků v rozvaděči/ Element lay-out in the distributor/ Platzierung der Geräte im Schaltschrank	25.6.2014							
03.a	Ovládací panel/ Control Panel/ Steuerpult	25.6.2014							
04	Kusovník artiklů/ Parts list/ Artikelstückliste	20.4.2015							
04.a	Kusovník artiklů/ Parts list/ Artikelstückliste	20.4.2015							
05	Silová část/ Power part/ Feld partie	20.4.2015							
06	Ovládací část - vstupy/ Control device - Inputs/ Steuereinheit - Eingänge	20.4.2015							
06.a	Ovládací část - vstupy/ Control device - Inputs/ Steuereinheit - Eingänge	20.4.2015							
07	Ovládací část - výstupy/ Control device - outputs/ Steuereinheit - Ausgänge	20.4.2015							
08	Ovládací část/ Control device/ Steuereinheit	20.4.2015							
09	Řídicí systém/ Control system/ Steuersystem	20.4.2015							
10	Komunikace MINCA/ Communication MINCA/ Kommunikation MINCA	20.4.2015							
11	Příslušenství/ Accessories/ Zubehör	20.4.2015							

00	 BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/ Machine/ Maschine: AL 500 semiautomatic	Název stránky/ Name page/ Name seiten: Obsah/ Table of contents/ Inhaltsverzeichnis	Cs o dok./ Doc.No./ Anzahl der Dokumente: ES-K106-203-V4.1 Napájení/ Power supply/ Ernährung: 3x230V + PE, 50Hz Zpracováno/ Processed/ Mit verarbeitet: Kosička Datum/ Date/ Datum: 20.4.2015	Leaf Page/ Seite: L. s. / Page/ Seite: 01
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AL 500 semiautomatic

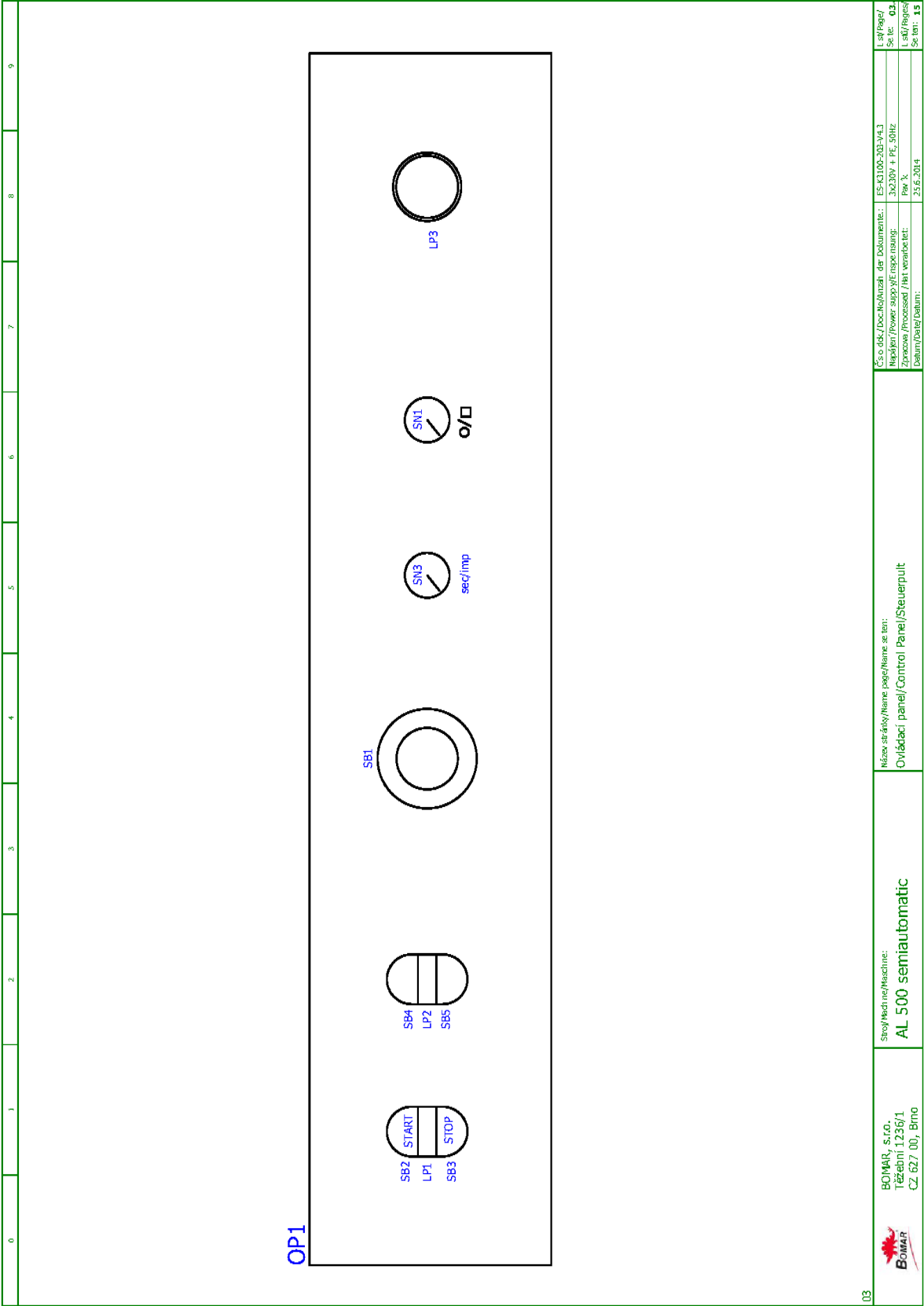
HW
FW

I/O	CZE	ENG	DE
AI 1	Nastavení výšky ramene	High position setup	Einstellung höherahmen
AI 2	Snímač výšky ramene	High position sensor	Sensor höherahmen
AI 3	Nastavení microniseru	Microniser adjust	Einstellung Microniser
DI 1	Stop motor/cyklus	Stop motor/cycle	Stop motor/zyklus
DI 2	Start motor/cyklus	Start motor/cycle	Start motor/zyklus
DI 3	Svěrák upnout	Clamp vice	Schraubstock spannen
DI 4	Svěrák uvolnit	Release vice	Schraubstock lösen
DI 5	Total stop	Total stop	Totalstopp
DI 6	Horní kryt	Upper cover	Oberer Deckel
DI 7	Tlakový spínač	Pressure switch	Druckschalter
DI 8	Rameno dole	Arm is down	Rahmen is oben
DO 1	Cyklus	Cycle	Zyklus
DO 2	Horní kryt uzamčen/chyba	Cover locked/fault	Deckel verschlossen/fehler
DO 3	Rameno nahoru	Arm up	Rahmen nach oben
DO 4	Svěrák upnout	Vice clamp	Schraubstock spannen
DO 5	Svěrák uvolnit	Release vice	Schraubstock lösen
DO 6	Microniser	Microniser	Microniser
DO 7	Horní kryt odemčený	Cover unlocked	Deckel erschlossen
DO 8	Total stop	Total stop	Totalstopp

01

 BOMAR, s.r.o. Třezní 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: I/O řídicí systém / I/O Control station / I/O Steuerung	Cso ddz / Doc.No/Anzahl der Dokumente.: Napájení /Power supply/Energie nahrung: Zpracováno /Processed / Hat verarbeitet: Datum/Date/ Datum:	ES-K100-203-V4.3	L.st/Page/ Seite: 02
				3x230V + PE, 50Hz	L.st/Page/ Seite: 02
				25.6.2014	L.st/Page/ Seite: 15





Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page column)
-CU1	Control unit SMA 3.X	SMA 3.X	BOMAR s.r.o.	91.995.222	1	/09.1
-FA1	Motor starter - 16A	MS116-16,0	ABB	91.045.025	1	/05.2
-FU1	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU1	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU2	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.6
-FU2	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/05.6
-FU3	Tube fuse - 4A/250V, slow, 5x20	T4A/250V	ESKA	91.230.015	1	/05.8
-FU3	Fuse terminal	WK4/THSISU	WIELAND	91.251.102	1	/05.8
-KM1	Contact - 11kW/400V, 3P	AF26-30-00-11	ABB	91.040.052	1	/06.a.7
-KM1	Auxiliary contact - 1xNC	C44-01	ABB	91.041.043	1	/06.a.7
-KM2	Contact - 11kW/400V, 3P	AF26-30-00-11	ABB	91.040.052	1	/06.a.8
-KM2	Auxiliary contact - 1xNC	C44-01	ABB	91.041.043	1	/06.a.8
-LP1	The head backlit buttons white	M22-DL-W	EATON	91.060.038	1	/07.1
-LP2	White light for Eaton adapter	M22-LED-W	EATON	91.061.034	1	/07.0
-LP3/1	LED red and green common ground 24V DC	HIS-95 G/R 24V DC	ELECO	91.060.069	1	/07.2
-QS1	Disconnect - 3P, 16A	OT16FT3	ABB	91.170.018	1	/05.1
-QS1	Handle switch - black	OHBS3RH	ABB	91.180.016	1	/05.1
-RCF1	Efferent RFC filter	FBOPRL624	Ing. Miroslav Vřětek	91.041.015	1	/05.2
-RCF2	Efferent RFC filter	FBOPRL624	Ing. Miroslav Vřětek	91.041.015	1	/05.2
-RE1	Plug-in relay	CR-P024DC2	ABB	91.051.049	1	/07.8
-RE1	Relay socket	CR-PSS	ABB	91.051.048	1	/07.8
-SB1	Emergency stop mushroom push - button + 3xNC	YW1B-V4E02R	IDEC	91.060.084	1	/06.5
-SB2	Double button head white/black start/stop	M22-DDL-WVS-GB1/GB0	EATON	91.060.034	1	/06.2
-SB2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.2
-SB3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.1
-SB4	Double button head white/black, arrow close/open	M22-DDL-WVS-*	EATON	91.060.055	1	/06.3
-SB4	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/06.3
-SB5	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.4

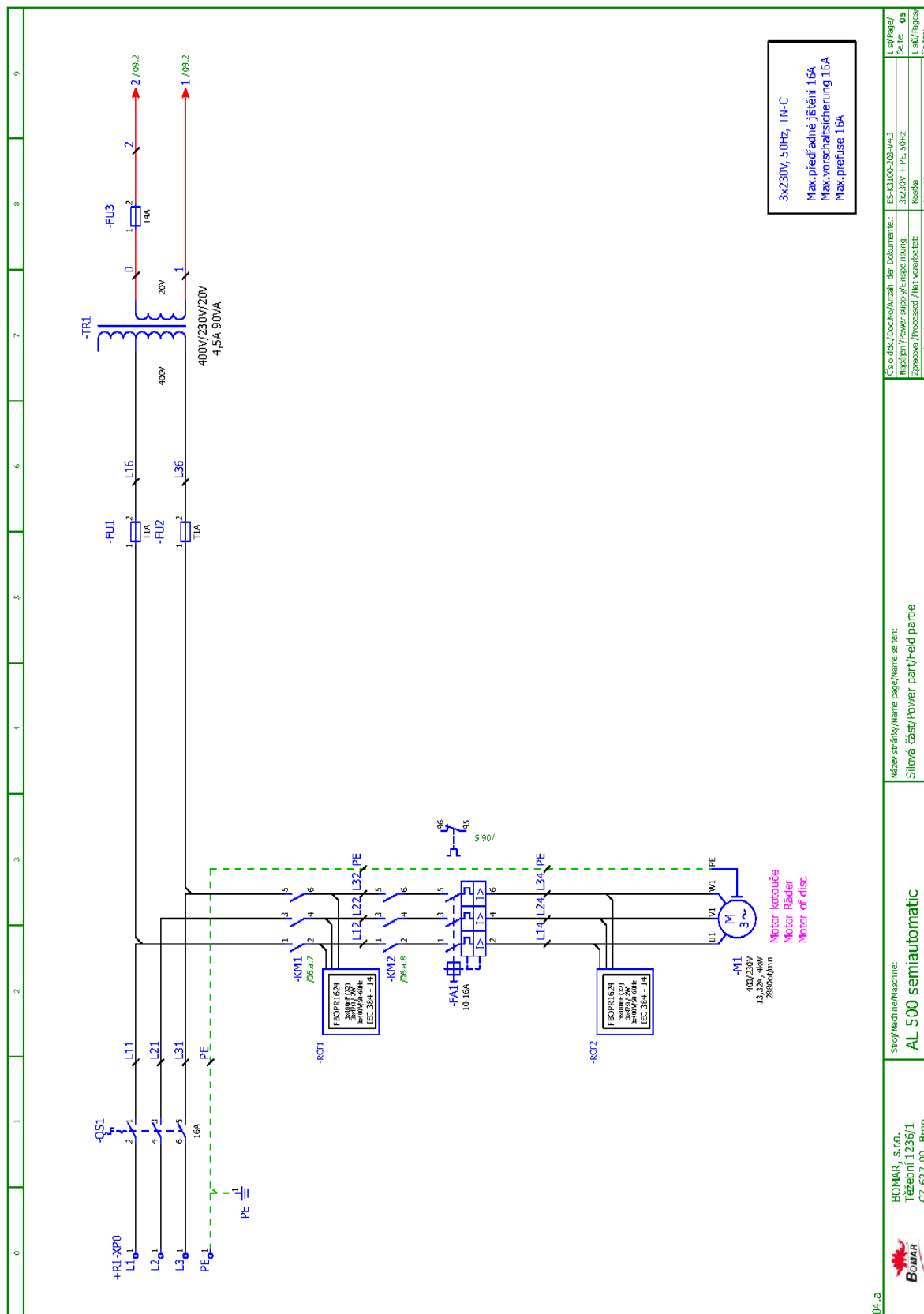
The manufacturer reserves right to use an equivalent replacement device.

03.a	 BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Kusuovník artiklů/ Parts list/ Artikelstückliste	C:\sdd\Doc\Kvazit\der Dokumente: ES-K106-203-V4.3 Repetier/Power supply/E repeatung: 3x230V + PE, 50Hz Zpracov /Processed / Mit verarbeitet: Kosla Datum/Date/Datum: 20.4.2015	List Page/ Se ite: L ist/Repeat/ Se iten:

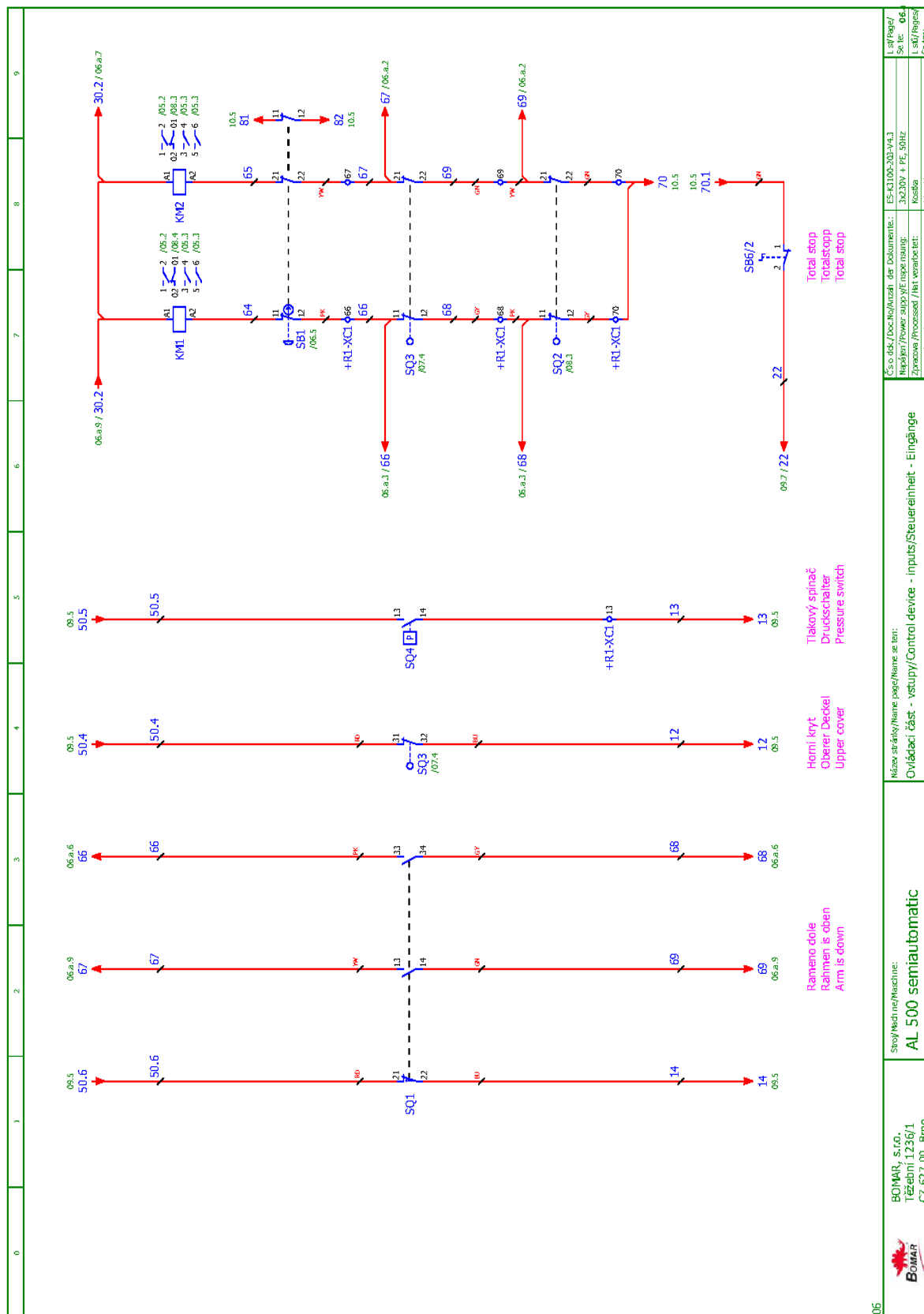
0	1	2	3	4	5	6	7	8	9
Parts list									
Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page,column)			
-SB6/1	Attaching adapter + 1NC	M22-AK01	EATON	91.061.020	1	/06.5			
-SB6/1	Switch 2 positions	M22 - WKV	EATON	91.060.037	1	/06.5			
-SB6/1	Box, click on the DIN	M22-IVS	EATON	91.190.037	1	/06.5			
-SB6/2	NC contact for Eaton adapter	M22-K01	EATON	91.061.024	1	/06.a.8			
-SB6/3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/06.6			
-SW1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8			
-SW1	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8			
-SW1	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8			
-SW2	Position measuring	DH-RAIM	Bomar	262.012	1	/06.7			
-SW3	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/06.8			
-SW3	Head of potentiometer 24mm	S8877 BLK	GES-ELECTRONICS, a.s.	91.060.063	1	/06.8			
-SW3	Fastconnect clamp	WAGO 224-112	WAGO	91.250.009	3	/06.8			
-SQ1	Head	ZCE10	TELEMECANIQUE	91.061.201	1	/06.a.1			
-SQ1	The switch body	ZCD31	TELEMECANIQUE	91.061.202	1	/06.a.1			
-SQ1	Cable gland	ZCDEG11	TELEMECANIQUE	91.061.203	1	/06.a.1			
-SQ2	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/08.3			
-SQ3	Safety Limit Switch with 24V coil	D4NL-4HFA-B	OMRON	91.173.040	1	/07.4			
-TR1	Toroidal transformer - 400V / 230V / 20V 4,5A 90VA	400V/230V/20V 4,5A 90VA	KARBAN s.r.o.	91.080.023	1	/05.7			
-TS1	Multifunction time relay - 12-240V, 10 functions	CRM-91H/UNI	ELKO	91.051.027	1	/08.1			

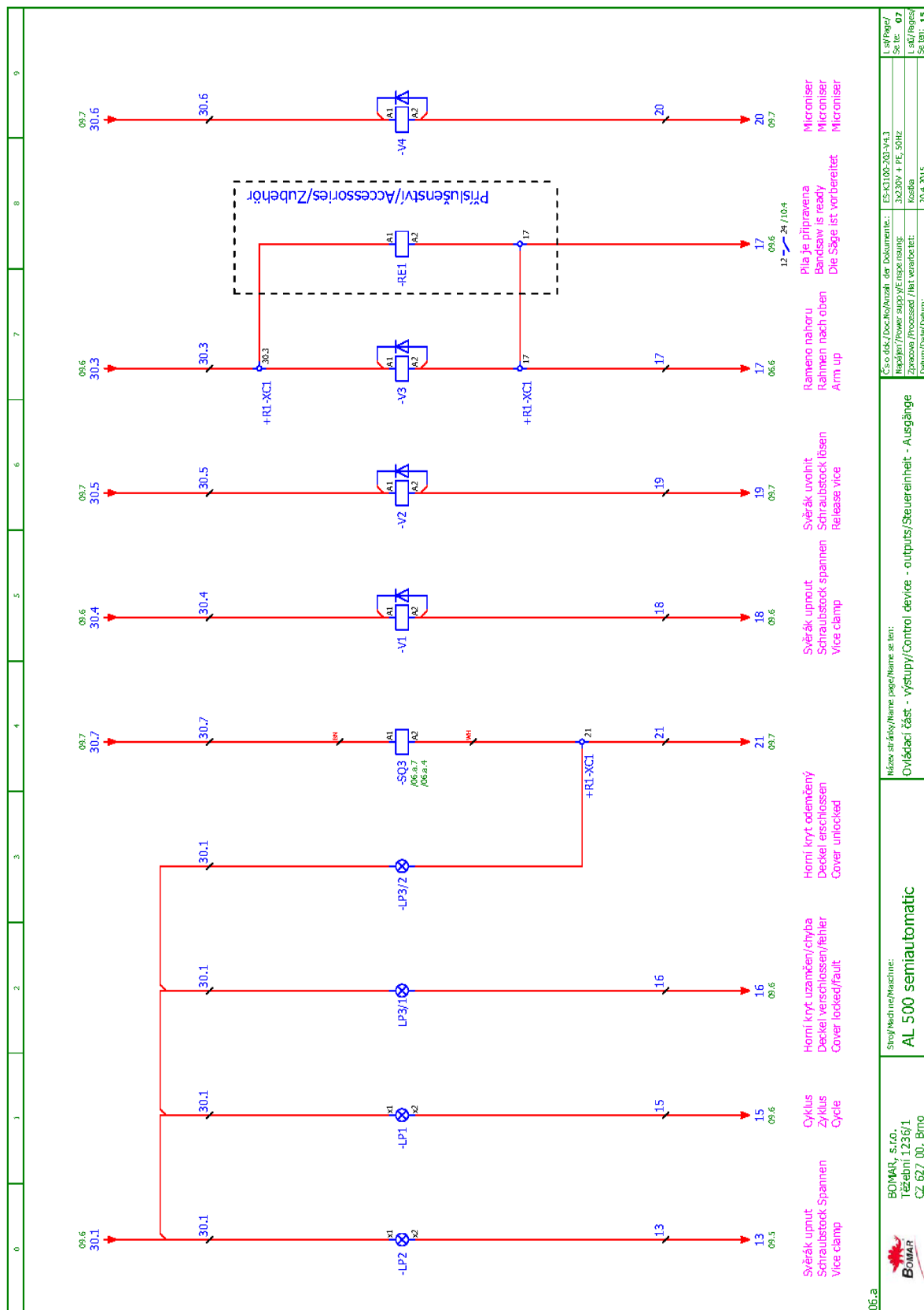
The manufacturer reserves right to use an equivalent replacement device.

04	 BOMAR, s.r.o. Těšední 1236/1 CZ 627 00, Brno	Stroj/Machine/Machine: AL 500 semiautomatic	Název stránky/Name page/Name de l'art: Kusuovník artiklů/ Parts list/ Artikelstückliste	Cso dok./Doc.No/Kirszat der Dokumenten.: ES-K100-203-V4.1 Napájení/Power supply/Energieversorgung: 3x230V + PE, 50Hz Zpracováno /Processed / Mit verarbeitet: Kosska Datum/Dating/Datum: 20.4.2015	List Page/ Seite: L. sz/Rejezt Seiten:	04 04 15





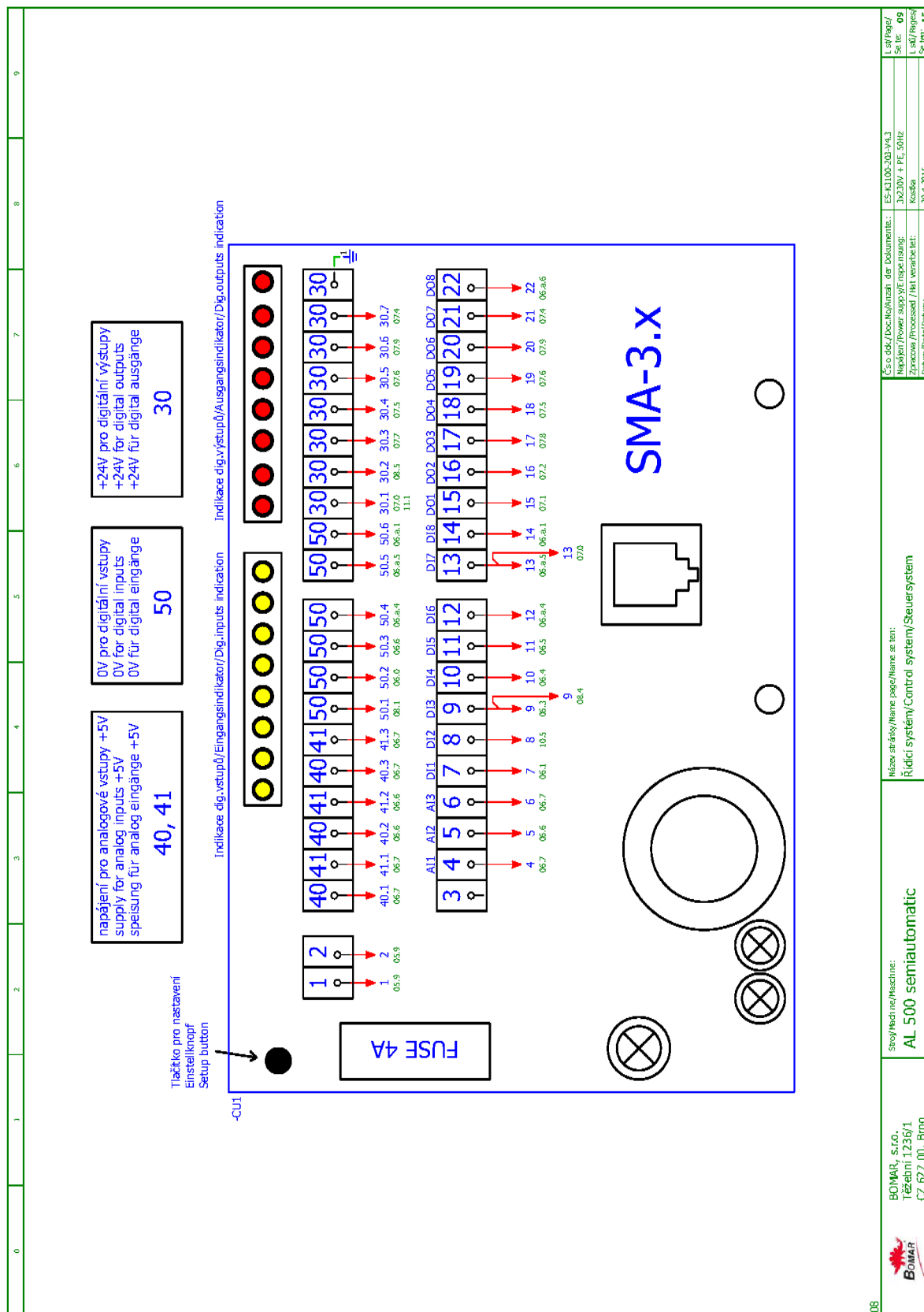


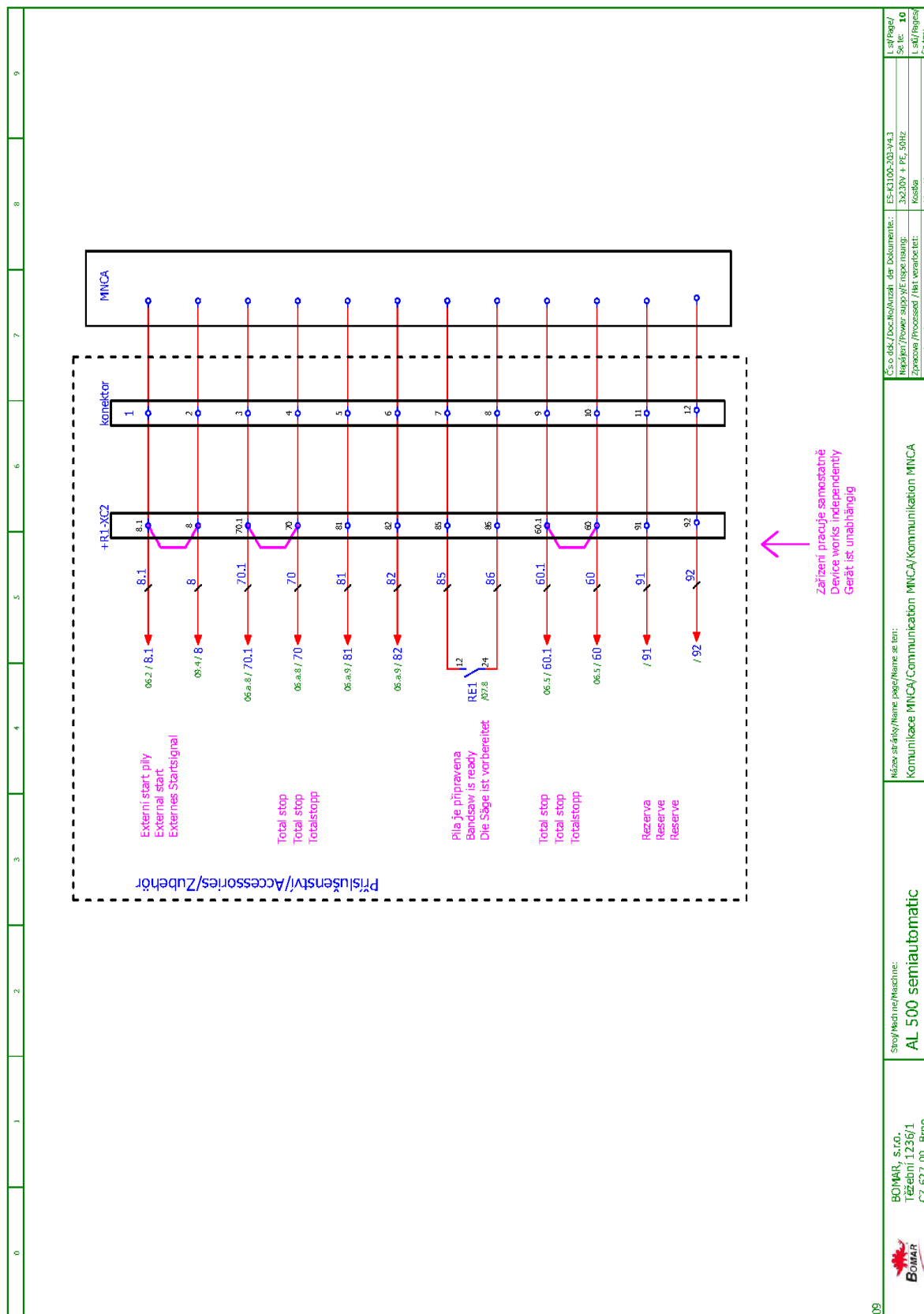


06.a

	BOMAR, s.r.o. Třeborní 1236/1 CZ 627 00, Brno	Stroj/Machine: AL 500 semiautomatic	Název stránky/Name page/Name seiten: Ovládací část - výstupy/Control device - outputs/Steuer einheit - Ausgänge	C:\o dok\Doc\Kurzrath der Dokumente: ES-K100-203-V4.1		List Page/ Seite: 07
				Napájení/Power supply/Erspeisung: 3x230V + PE, 50Hz		List Page/ Seite: 15
				Zpracováno/Processed / Mit verarbeitet: Kosiba		
				Datum/Date/datum: 20.4.2015		







↖ ↗

Zařízení pracuje samostatně
Device works independently
Gerät ist unabhängig



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

Stroj/Machine/Maschine: **AL 500 semiautomatic**

Název stránky/Name page/Name seiten: **Komunikace MINCA/Communication MINCA/Kommunikation MINCA**

Cs o dok./Doc.No/Anzahl der Dokumente: **ES-K100-203-V4.1**

Mapky/Power supply/Erspeisung: **3x230V + PE, 50Hz**

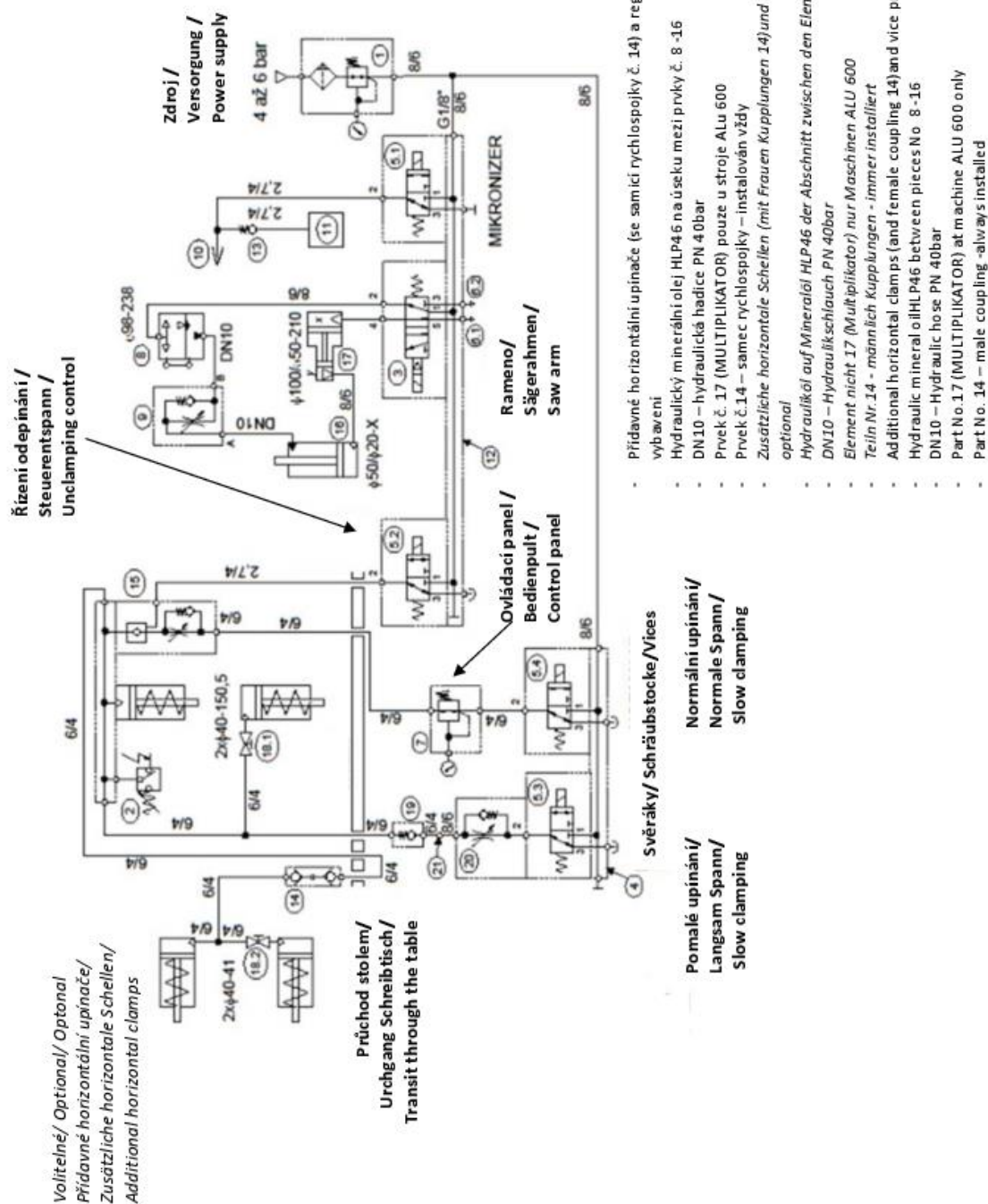
Zpracováno/Processed /Mit verarbeitet: **Kosiba**

Datum/Dating/datum: **20.4.2015**

Leaf/Page/
Seite: **10**

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Seite: **15**

5.5. Pneumaticko-hydraulické schéma / Pneumatik-Hydraulikschema / Pneumatic-Hydraulic diagram

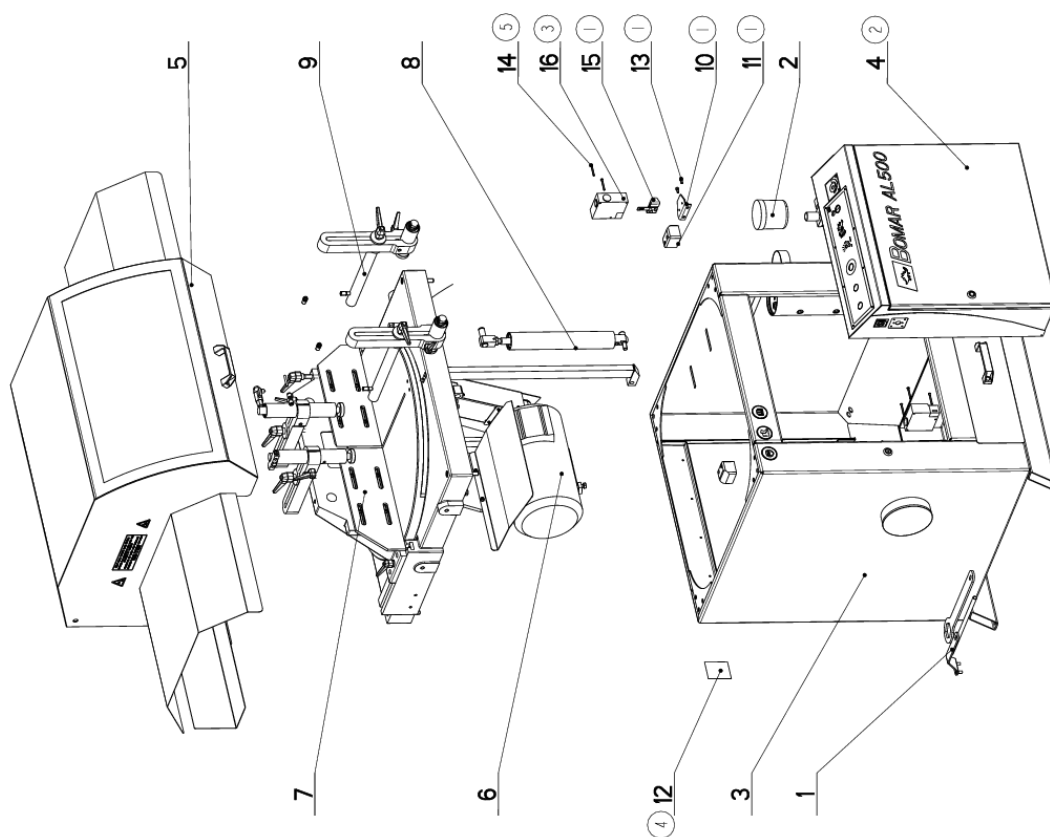


Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Redukční ventil / Reduktionsventil / Control valve	93.003.001	1
2	Tlakový spínač / Druckschalter / Pressure switch	92.201.004	1
3	Rozvaděč / Verteilungsventil / Distributor	93.002.003	1
4	Rozváděcí kostka/ Verteilung Würfel / Distribution Cube	30.1505-704	1
5	Rozvaděč / Verteilungsventil / Distributor	93.001.008	4
6	Tlumič / Dämpfer / Inhibitor	93.014.003 G1/8"	2
7	Redukční ventil / Reduktionsventil / Control val (volitelné vybavení/ optional)	93.002.004	1(0)
8	Výměník / AUSTAUSCHER / exchanger	201.K107-300 V=1,785dm ³	1
9	Škrtkový ventil / Drosselventil / Throttle-valve	92.152.013 (ALU 400,500) VS01-04/R3,5-O6S 92.152.011 (ALU 600) VS01-04/R3,5-O6	1
10	MIKRONIZER	99.150.002	1
11	Nádrž / Behälter / Tank	94.404.001 0,5dm ³	1
12	Rozváděcí kostka/ Verteilung Würfel / Distribution Cube	30.0915-101	1
13	Jednosměrný ventil / Einwegventil / One-way valve	93.024.001	1
14	Rychlospojka / Schnellkupplung / Gladhand Část „samice“ – volitelné vybavení (horizontální upínače), část „samec“ instalována vždy/ Die "weiblich" - optional (horizontal Klemmen), die "männliche" immer installiert/ The "female" - optional (horizontal clamps), the "male" always installed	93.023.001/002 G1/4"	1
15	Ventil pojistný / Sicherungsventil / Retaining valve	93.021.002 SMC JAPAN	1
16	Zvedací válec / Hubzylinder / Lifting cylinder	201.K107-000 (ALU400) X=175 201.K307-000 (ALU500) X=228 201.K407-000 (ALU600) X=173	1
17	MULTIPLIKÁTOR (4x) Pouze u stroje/ Nur Maschinenú Only for machine AL 600	201.K415-000	1
18	Ventil uzavírací / Ventil / Valve	99.260.001	2(1)
19	Ventil / Rückschlagventil / non-return valve	93.021.009	1
20	Škrtkový ventil / Drosselventil / Throttle-valve	93.021.004 G1/8- 8/6	1
21	Redukce/ Reduktion/ Reduction	93.023.067	

6. **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. AL 500) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. AL 500), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example AL 500), serial number (for example 125, see cover page) and year of construction (for example 1999).

6.1. AL 500



NAZEV SESTAVY PILA KOTOUČOVÁ	CÍSLO SESTAVY 201.K300-100	STROJ AL 500
Konstruoval: HERALT		
Datum: 05. 09. 2018		
Verze: 2.25		

6.2. Kusovník / Piece list / Stückliste - AL 500

Císlo sestavy		Ver.	Název sestavy		Císlo sestavy	
201.K300-100		5	PILA KOTOUČOVÁ/ROTARY SAW/KREISSÄGE			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	201.K114-100	0	KLIC / KEY / SCHLÜSSEL		1	
2	201.K116-000	6	PNEUMATIKA / TYRE / PNEUMATIK		1	
3	201.K301-100	4	PODSTAVEC / BASE / UNTERSATZ		1	
4	201.K301-220 (2)	2	ROZVADEC / DISTRIBUTOR / VERTEILER		1	
5	201.K301-500	6	KRYT / COVER / ABDECKUNG		1	
6	201.K302-000	9	RAMENO / SHOULDER / SÄGERAHMEN		1	
7	201.K303-000	10	STUHL / TABLE / TISCH		1	
8	201.K307-000	1	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		1	
9	201.K314-000	6	UPINÁNÍ HORNÍ / TOP CLAM / SPANNVORRICHTUNG OBEN		1	
10	30.K303-012 (1)	1	DRŽÁK / HOLDER / HALTER	P 3x70	1	
11	30.K303-036 (1)	0	KOSTKA / CUBE / WÜRFEL	HR 50x60	2	
12	30.K399-101 (4)	4	STÍTEK TYPOVÝ / MACHINE LABEL / MASCHINE SCHILD	P 0,5-65	1	
13	90.001.25.008 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	2	
14	90.013.92.111 (5)	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M4x40	5	
15	91.173.039	0	ZAMEK / LOCK / SCHLOSS	XCS 713	1	
16	91.173.040 (3)	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER	D4NL-4HFA-B	2	
17	99.900.039 (1)	0	SAMOLEPKA / STICKER / AUFLEBER	NEBEZP.STLACENÍ	2	
18	99.900.040	0	SAMOLEPKA / STICKER / AUFLEBER		2	
19	99.900.046	0	SAMOLEPKA / STICKER / AUFLEBER		1	
20	99.900.047	0	SAMOLEPKA / STICKER / AUFLEBER		1	
21	99.900.048	0	SAMOLEPKA / STICKER / AUFLEBER		1	
22	99.900.049 (1)	0	SAMOLEPKA / STICKER / AUFLEBER		1	
23	99.900.066	0	SAMOLEPKA / STICKER / AUFLEBER	NEVKLADAT RUCE	2	
24	99.901.009	0	SAMOLEPKA / STICKER / AUFLEBER	AL500	1	

1. PRIDANÝ SAMOLEPKY 99.900.066, 99.900.039, 99.900.040, ZAMEK 91.173.039, SPINAC KONCOVÝ 91.173.040, DRŽÁK 30.K303-012, KOSTKA 30.K303-036, SROUB M5x12 (90.001.25.008). 259/ZM257 29.9.2010 SLEZACKOVA

2. ZRUS. ROZVADEC 201.K101-220 A NAHR. 201.K301-220. 322/ZM341 SLEZACKOVA 16.12.2010

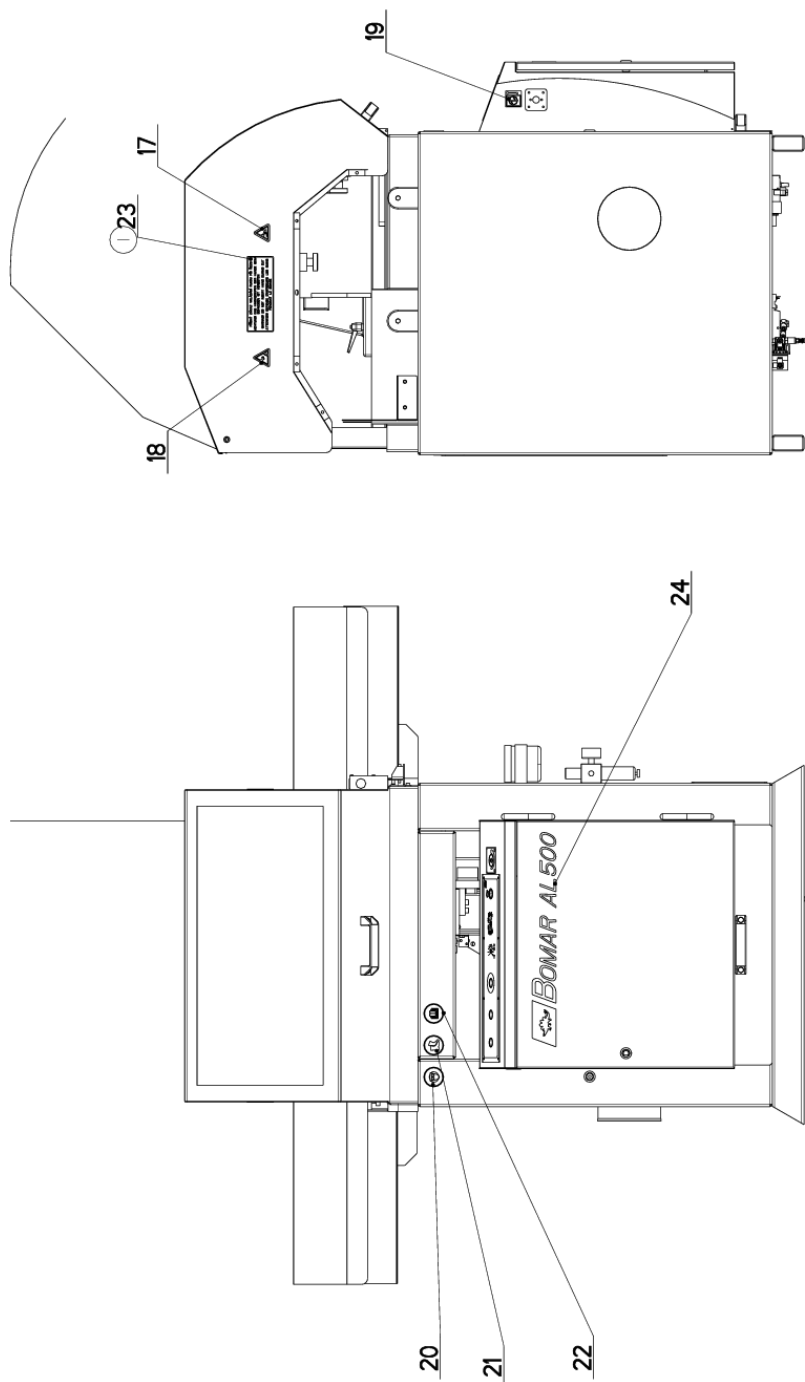
3. PRIDANÝ 1x ZAMEK 91.173.040. 151/ZM190 18.7.2011 SLEZACKOVA

4. ZRUSENÝ STÍTEK 31.K399-101 A NAHR. 30.K99-101. 095/ZM251 19.7.2017 SLEZACKOVA

5. PRID. 5x SROUB M4x40 90.013.92.111. 171/ZM311 5.9.2018 SZABARI

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

6.3. AL 500



NAZEV SYSTÉMU PILA KOTOUČOVÁ	CÍSLO SYSTÉMU 201.K300-100	STROJ AL 500
Konstruoval: HERALT		
Datum: 05. 09. 2018		
Měřítko: 1:10		

6.4. Kusovník / Piece list / Stückliste - AL 500

Císlo sestavy		Ver.	Název sestavy		Císlo sestavy	
201.K300-100		5	PILA KOTOUČOVÁ/ROTARY SAW/KREISSÄGE			
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks	
1	201.K114-100	0	KLIC / KEY / SCHLÜSSEL		1	
2	201.K116-000	6	PNEUMATIKA / TYRE / PNEUMATIK		1	
3	201.K301-100	4	PODSTAVEC / BASE / UNTERSATZ		1	
4	201.K301-220 (2)	2	ROZVADEC / DISTRIBUTOR / VERTEILER		1	
5	201.K301-500	6	KRYT / COVER / ABDECKUNG		1	
6	201.K302-000	9	RAMENO / SHOULDER / SÄGERAHMEN		1	
7	201.K303-000	10	STUHL / TABLE / TISCH		1	
8	201.K307-000	1	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		1	
9	201.K314-000	6	UPINÁNÍ HORNÍ / TOP CLAM / SPANNVORRICHTUNG OBEN		1	
10	30.K303-012 (1)	1	DRŽÁK / HOLDER / HALTER	P 3x70	1	
11	30.K303-036 (1)	0	KOSTKA / CUBE / WÜRFEL	HR 50x60	2	
12	30.K399-101 (4)	4	STÍTEK TYPOVÝ / MACHINE LABEL / MASCHINE SCHILD	P 0,5-65	1	
13	90.001.25.008 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	2	
14	90.013.92.111 (5)	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M4x40	5	
15	91.173.039	0	ZAMEK / LOCK / SCHLOSS	XCS 713	1	
16	91.173.040 (3)	0	SPINAC KONCOVÝ / END SWITCH / ENDSCHALTER	D4NL-4HFA-B	2	
17	99.900.039 (1)	0	SAMOLEPKA / STICKER / AUFLEBER	NEBEZP.STLACENÍ	2	
18	99.900.040	0	SAMOLEPKA / STICKER / AUFLEBER		2	
19	99.900.046	0	SAMOLEPKA / STICKER / AUFLEBER		1	
20	99.900.047	0	SAMOLEPKA / STICKER / AUFLEBER		1	
21	99.900.048	0	SAMOLEPKA / STICKER / AUFLEBER		1	
22	99.900.049 (1)	0	SAMOLEPKA / STICKER / AUFLEBER		1	
23	99.900.066	0	SAMOLEPKA / STICKER / AUFLEBER	NEVKLADAT RUCE	2	
24	99.901.009	0	SAMOLEPKA / STICKER / AUFLEBER	AL500	1	

1.PRIDANÝ SAMOLEPKY 99.900.066, 99.900.039, 99.900.040,ZAMEK 91.173.039,SPINAC KONCOVÝ 91.173.040,
DRŽÁK 30.K303-012,KOSTKA 30.K303-036,SROUB M5x12 (90.001.25.008). 259/ZM257 29.9.2010 SLEZACKOVA

2.ZRUS.ROZVADEC 201.K101-220 A NAHR.201.K301-220. 322/ZM341 SLEZACKOVA 16.12.2010

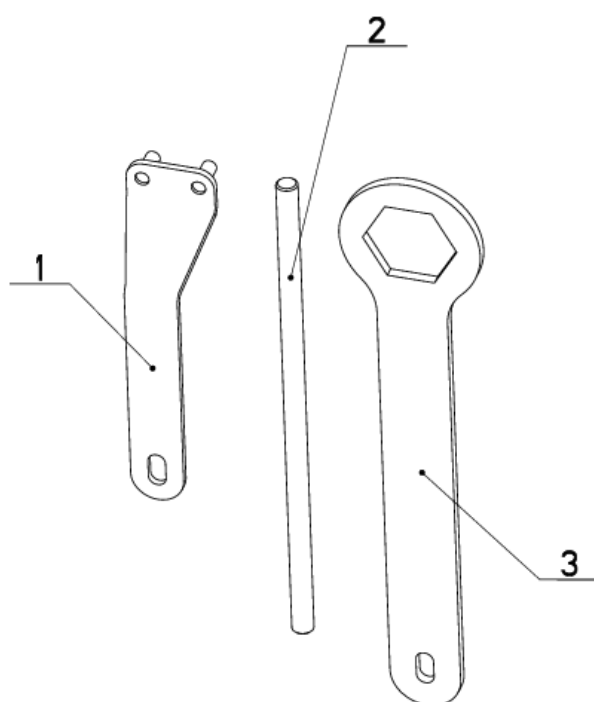
3.PRIDANÝ 1xZAMEK 91.173.040. 151/ZM190 18.7.2011 SLEZACKOVA

4.ZRUSEN STÍTEK 31.K399-101 A NAHR.30.K99-101. 095/ZM251 19.7.2017 SLEZACKOVA

5.PRID. 5XSROUB M4x40 90.013.92.111. 171/ZM311 5.9.2018 SZABARI

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

6.5. Klíč / Key / Schlüssel



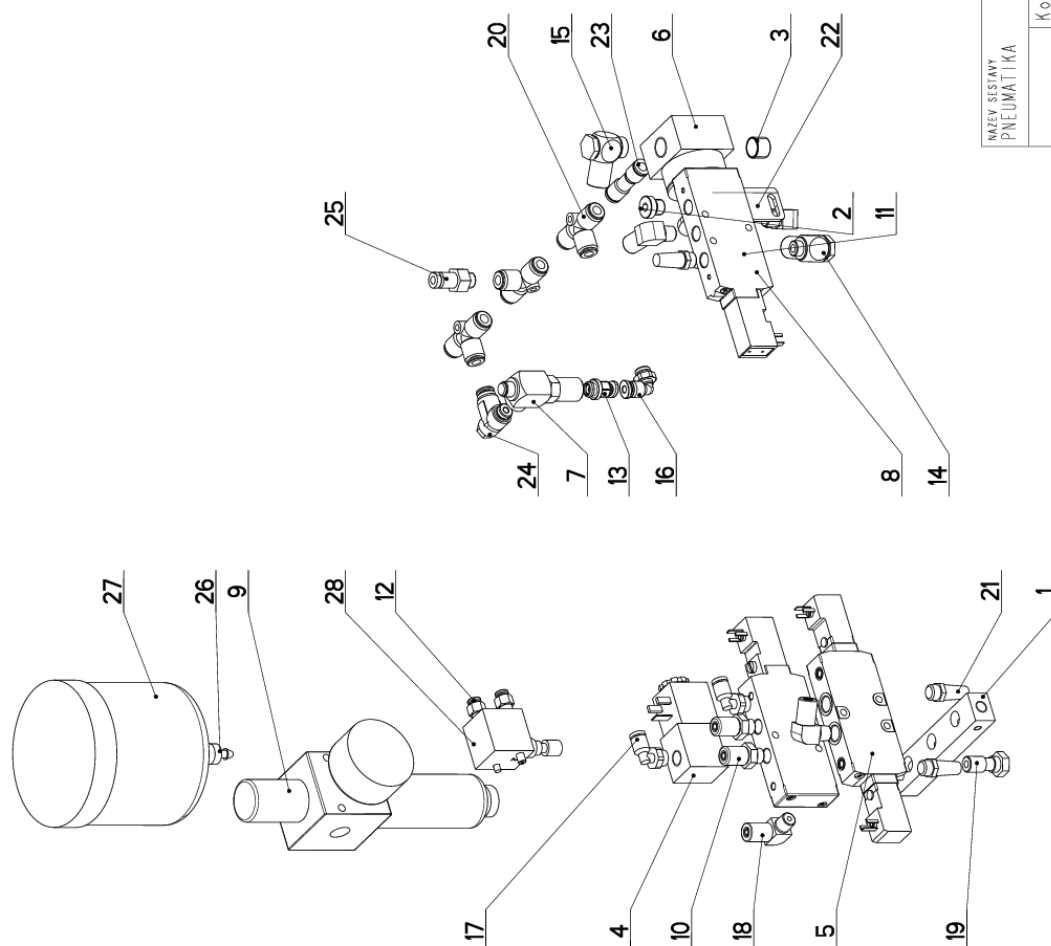
NAZEV SESTAVY KLÍČ	CÍSLO SESTAVY 201.K114-100	STROJ AL400
	Konstruoval:	
	Datum:	04. 05.2018
	Meritko:	33:100

6.6. Kusovník / Piece list / Stückliste - Klíč / Key / Schlüssel

Císlo Sestavy 201.K114-100		Ver. 0	Název sestavy KLÍČ/KEY/SCHLÜSSEL	
Poz.	Objednací číslo	Ver.	Název položky	Rozměr
1	30.K114-101	0	KLÍČ / KEY / SCHLÜSSEL	I
2	30.K114-102	0	TYC / POLE / STANGE	d 12
3	30.K114-104	0	KLÍČ / KEY / SCHLÜSSEL	P 4x80
				I

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

6.7. Pneumatika / Tyre / Pneumatik



NAZEV SESTAVY PNEUMATIKA	CISLO SESTAVY 201.K116-000	STROJ ALU400/500
Konstruoval:		
Datum: 11. 05.2017		
Měřítko: 2:5		

6.8. Kusovník / Piece list / Stückliste - Pneumatika / Tyre / Pneumatik

Císlo sestavy 201.K116-000		Ver. 6	Název sestavy PNEUMATIKA/TYRE/PNEUMATIK		
Poz.	Objednací číslo	Ver.	Název položky	Rozebr	Ks
1	30.0915-101	1	KOSTKA ROZVODŮCÍ / DISTRIBUTION CUBE / VERTEILUNGSWÜRFEL	HR 20x15	1
2	92.019.003	0	ZATKA / PLUG / STOPFEN	G1/4" VNITŘNÍ IMBUS	1
3	92.019.004	0	ZATKA / PLUG / STOPFEN	1/4"	1
4	93.001.008 1	0	VENTIL / VALVE / VENTIL	VENTIL MAGNETICKÝ	1
5	93.001.012 6	0	VENTIL / VALVE / VENTIL	082006001	1
6	93.002.014	0	REGULATOR / REGULATOR / REGLER		1
7	93.002.038 5	0	VENTIL / VALVE / VENTIL	G1/8	1
8	93.002.044 2	0	VENTIL / VALVE / VENTIL		2
9	93.003.001	0	VENTIL REDUKČNÍ / REDUCTION VALVE / DRUCKMINDERUNGSVENTIL		1
10	93.005.001	0	ŠROUBENÍ PRŮME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/8-6/4	2
11	93.005.005	0	MATICE / NUT / MUTTER		1
12	93.006.007	0	ŠROUBENÍ PRŮME / /	M5/4	2
13	93.006.019 5	0	ŠROUBENÍ PRŮME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	50020	1
14	93.007.002	0	ŠROUBENÍ UNLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	G1/8"-8/6	1
15	93.007.004	0	ŠROUBENÍ UNLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	G1/8-8/6	1
16	93.007.005 5	0	ŠROUBENÍ UNLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	G 1/8"-4	1
17	93.007.005	0	ŠROUBENÍ UNLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	1/8" x 4	2
18	93.008.001	0	ŠROUBENÍ UNLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	R1/8"-6/4	4
19	93.010.001	0	ŠROUB / BOLT / SCHRAUBE	DUTY	1
20	93.011.002	0	PROPOJKA T / CONNECTION T / VERBINDUNGSSTÜCK T	6	3
21	93.014.003	0	TLUMIC / DAMPER / DÄMPFER	G 1/8	3
22	93.019.012	0	DRŽÁK / HOLDER / HALTER	DRŽÁK BOSCH	1
23	93.021.009	0	VENTIL ŠRTICÍ / CHOKE VALVE / DROSSELVENTIL		1
24	93.021.045 5	0	VENTIL ŠRTICÍ / CHOKE VALVE / DROSSELVENTIL	1/8" 6/4	1
25	93.023.002	0	SPOJKA / JOINT / KÜPLUNG	RÝCHLOSPOJKA	1
26	93.024.001	0	VENTIL / VALVE / VENTIL	ZPEVNĚNÝ	1
27	94.404.001	0	NADŘEZ / CONTAINER / BEHÄLTER	MIKRONIZÉR	1
28	99.150.002	0	MIKRONIZÉR / MICRONIZER / MICRONIZER		1

1. ZRUSEN VENTIL ASCO 93.001.001 A NAHR. VENTILEM BOSCH 93.001.008 . 055/ZM192 21.6.2010 SLEZACKOVA

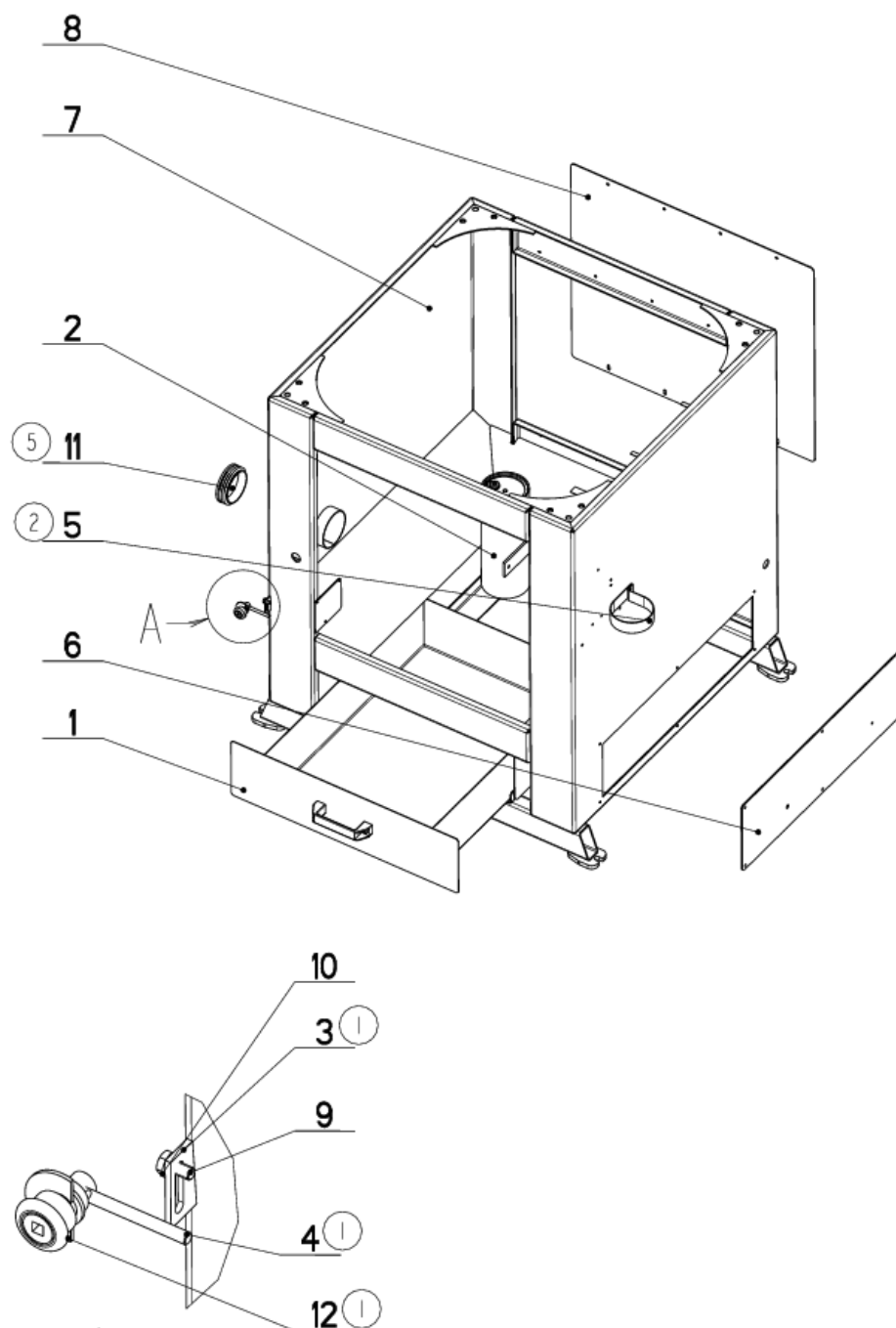
2. ZRUSEN VENTIL 93.002.003 A NAHR. 93.002.044. 062/ZM074 17.3.2015 SLEZACKOVA

5. ZRUS. VENTIL 93.021.002 A NAHR. VENTIL 93.002.038 A 93.021.045, ZRUS. SROUBENÍ 93.006.007 A NAHR. SROUBENÍ 93.006.019 A 93.007.005. 332/ZM052 14.2.2017 SLEZACKOVA

6. ZRUS. VENTIL 93.002.001 A NAHR. VENTILEM 93.001.012, 113/ZM174, 11.5.2017, KUDELA

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; Rozebr/Stock size/Abmessung

6.9. Podstavec / Base / Untersatz



A
39:100

NAZEV SESTAVY PODSTAVEC	CISLO SESTAVY 201.K301-100	STROJ AL500
	Konstruoval: TOK	
	Datum: 07. 05.2019	
	Meritko: 2:25	

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

Císlo Sestavy
201.K301-100

Ver.
5

Název sestavy
PODSTAVEC/BASE/UNTERSATZ

Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.K101-145	0	VANA / TANK / WANNE		1
2	201.K107-300 (1)	1	VÁLEC / ROLLER / ZYLINDER		1
3	30.K100-111 (1)	0	DRŽÁK / HOLDER / HALTER	P 3x22	1
4	30.K101-154	0	TYC / POLE / STANGE	D 6	1
5	30.K103-023	0	DRŽÁK / HOLDER / HALTER	P1. 5x30	1
6	30.K107-112 (2)	2	KRYT / COVER / ABDECKUNG	P 3x190	1
7	30.K301-101	7	PODSTAVEC / BASE / UNTERSATZ		1
8	30.K301-109	0	KRYT / COVER / ABDECKUNG	P2x568	1
9	90.005.55.006	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSMANTSCHRAUBE	SROUB M6X12	1
10	90.150.50.004 (3)	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE	PODLOŽKA 6,4	1
11	94.100.021 (5)	0	ZATKA / PLUG / STOPFEN	D 90	1
12	99.104.004	0	ZÁMEK ROZVÁDECOVÝ / DISTRIBUTOR LOCK / VERTEILERSCHLOSS	LK3	1

1. ZRUSEN ZÁMEK 91.990.001 A NAHRAZEN 99.104.004, PRIDANÝ SOUCASTI 30.K101-154, 30.K100-111 A 94.100.020 026/ZM038
9.2.2010 TOK

2. ZRUSENA SOUCASTI 201.K107-300 A NAHR. 30.K107-300. 048/ZM148 24.5.2010 SLEZACKOVA

3. ZATKA 94.100.020 NAHRAZENÁ ZATKOU 94.101.042 299/zm.338 HLADIL 3.1.2012

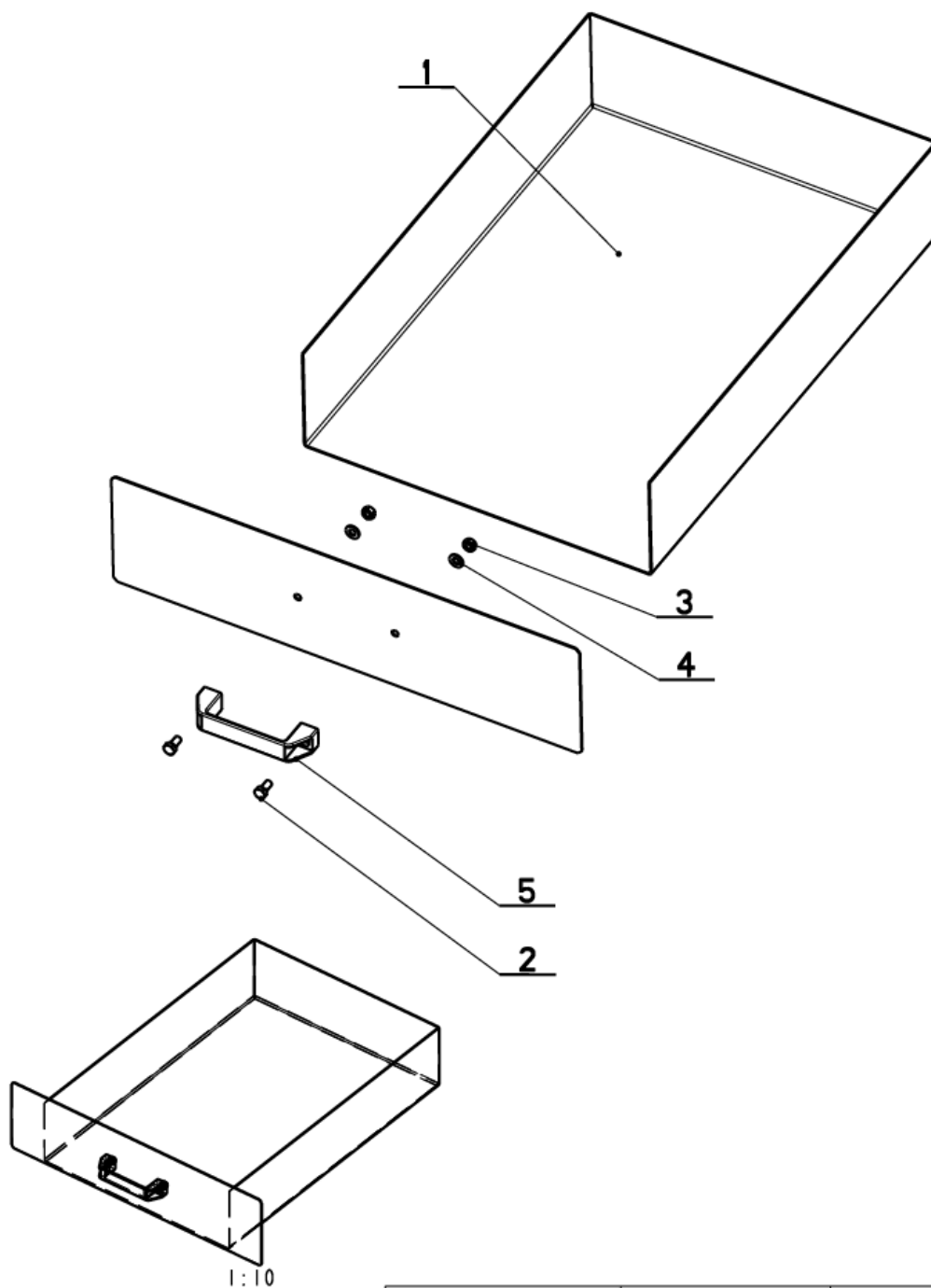
4. PRIDAN KRYT 30.K301-109: 64/zm.78 22.3.2016 HLADIL

5. ZRUS. ZATKA 94.101.042 A NAHR. 94.100.021. 110/ZM158 7.5.2019 SZABARI

Císlo Sestavy/Number of assembly/Numer 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

Číslo sestavy/Number of assembly/Numer 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

6.11. Vana / Tank / Wanne



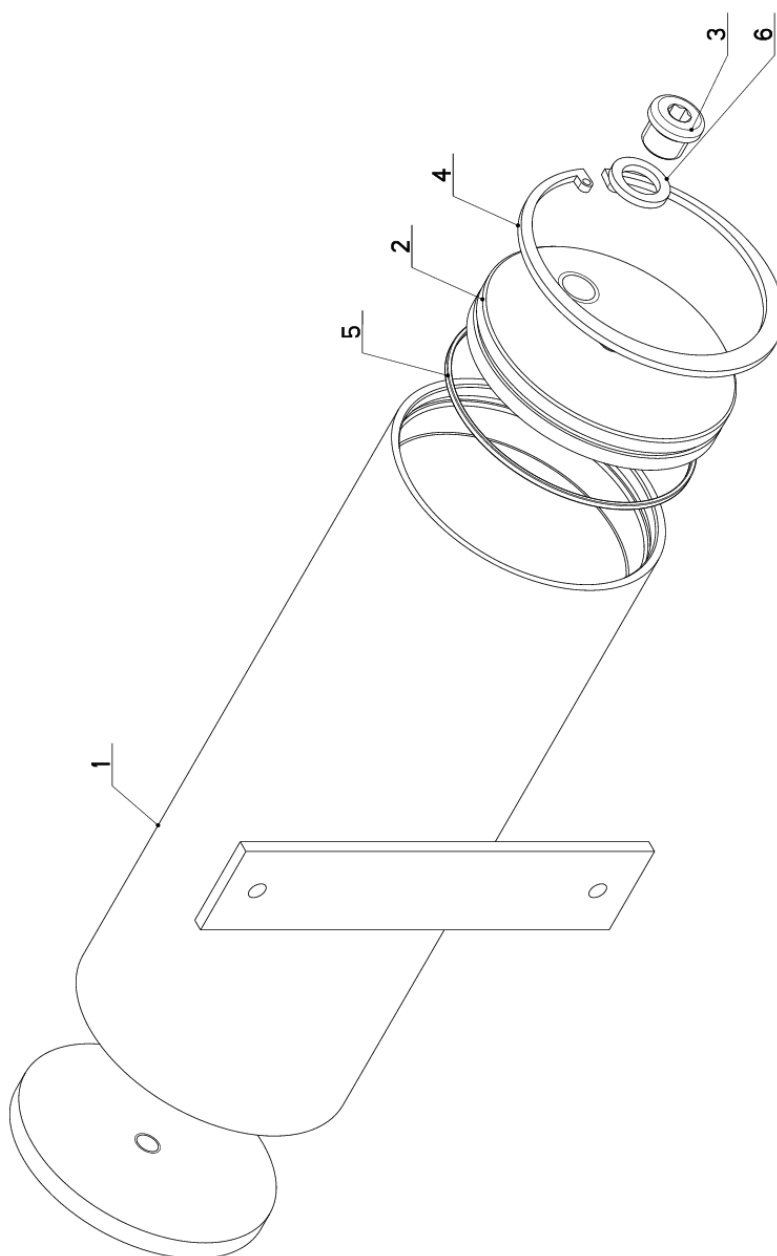
NAZEV SESTAVY VANA	CISLO SESTAVY 201.K101-145	STROJ AL400
	Konstruoval: TOK	
	Datum: 16. 12.2009	
	Meritko: 17:100	

6.12. Kusovník / Piece list / Stückliste - Vana / Tank / Wanne

Cislo Sestavy 201.K101-145		Ver. 0	Název sestavy VANA/TANK/WANNE	
Poz.	Objednací číslo	Ver.	Název položky	Měr
1	30.K101-144	0	VANA / TANK / WANNE	1
2	90.005.55.014	0	ŠROUB 6HRANNÝ / 6 SIDED BOLT / SECHSANTSCHRAUBE	2
3	90.100.55.005	0	MATICE / NUT / MUTTER	2
4	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	2
5	94.012.001	0	RUKOJET / HANDLE / GRIF	1

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

6.13. Válec / Roller / Zylinder



NAZEV SESTAVY VÁLEC	CÍSLO SESTAVY 201.K107-300	STROJ ALU 400
Konstruoval: ZAJIC		
Datum: 13. 04.2015		
Meritko: 1:2		

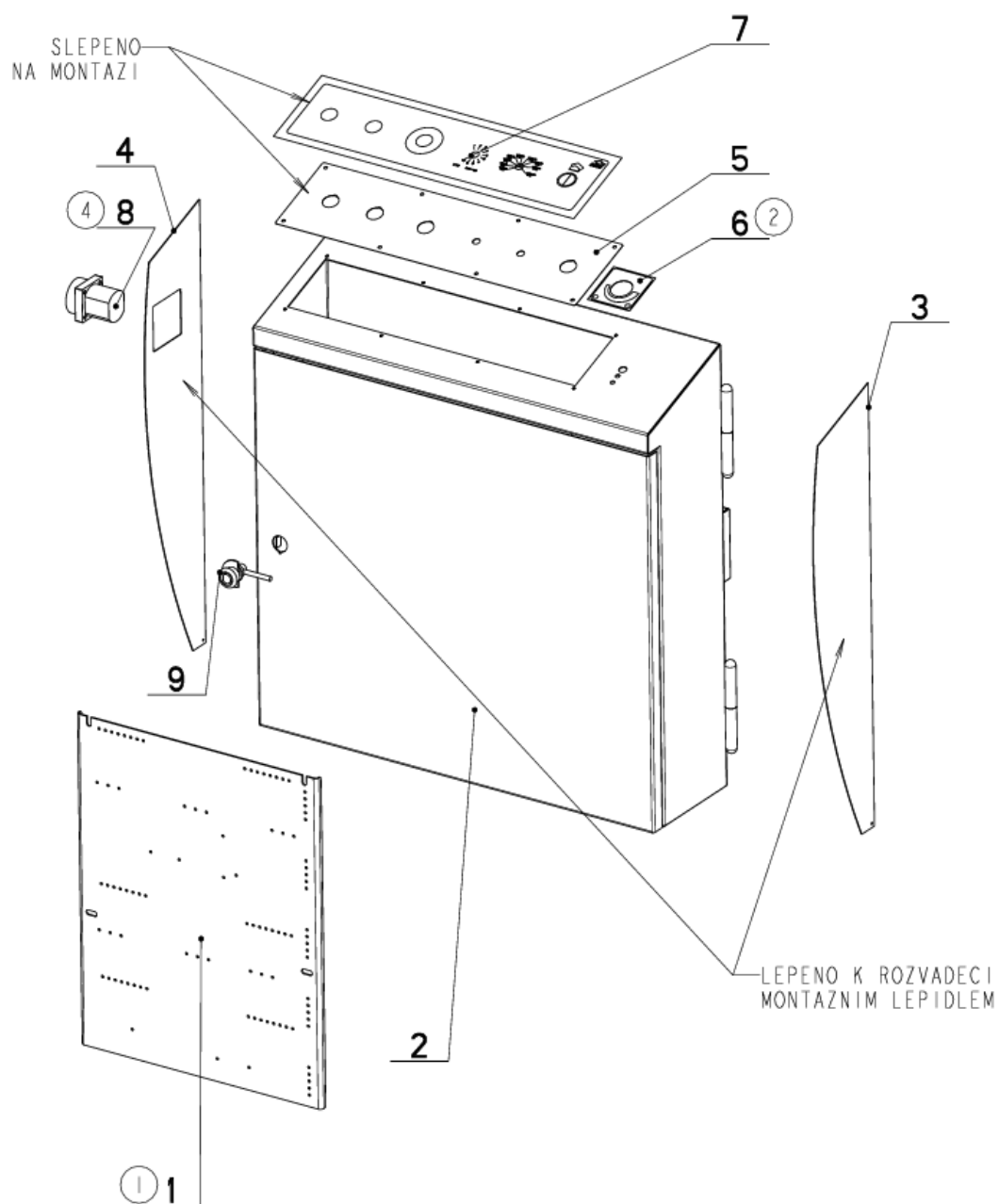
6.14. Kusovník / Piece list / Stückliste - Válec / Roller / Zylinder

Císlo Sestavy 201.K107-300		Ver. 1	Název sestavy VALEC/ROLLER/ZYLINDER		
Poz.	Objednávací číslo	Ver.	Název položky	Rozměr	Ks
1	30.K107-301	6	VALEC / CONTAINER / BEHÄLTER		1
2	30.K107-302	2	VÍKO / COVER / DECKEL	d 110	1
3	90.400.52.002	0	ZATKA / PLUG / STOPFEN	M16x1,5	1
4	95.801.031	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 100	1
5	96.002.022	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	95x2	1
6	96.081.001	0	KROUZEK TESNICÍ / SEAL RING / DICHTUNGSRING	23x15x3	1

1.ZRUS.1x"0" KROUZEK 96.002.022, 1xPOJISTNÝ KROUZEK 95.801.031. 048/ZMI48 24.5.2010 SLEZACKOVA

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

6.15. Rozvaděč / Distributor / Verteiler



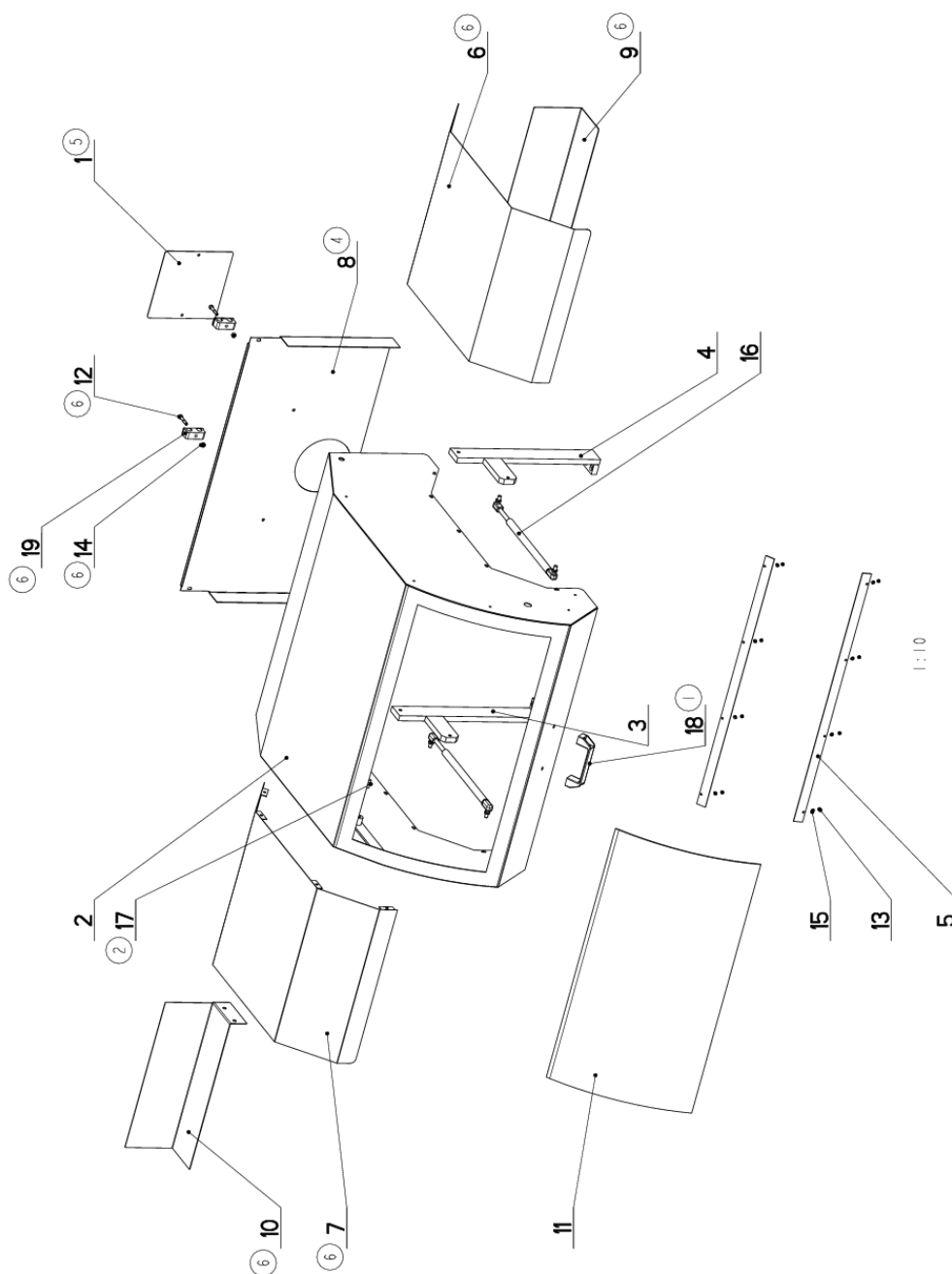
NAZEV SESTAVY ROZVADEC	CISLO SESTAVY 201.K301-220	STROJ AL500
	Konstruoval: TOK	
	Datum: 23. 01.2019	
	Meritko: 7:50	

6.16. Kusovník / Piece list / Stückliste - Rozvaděč / Distributor / Verteiler

Císlo Sestavy 201.K301-220		Ver. 4	Název sestavy ROZVADEC/DISTRIBUTOR/VERTEILER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.K101-214 (1)	2	DESKA ELEKTRO / ELECTRIC BOARD / PLATINE	P2x480	1
2	30.K101-221	3	ROZVADEC / DISTRIBUTOR / VERTEILER		1
3	30.K101-230	1	PLECH / STICKER / AUFKLEBER	P 1-134	1
4	30.K101-231	3	PLECH / PLATE / BLECH	P 1x134	1
5	30.K301-212	0	PANEL / PANEL / PANEL	P 2x123	1
6	31.K199-001 (2)	0	STÍTEK / LABEL / SCHILD	P 0.5x66	1
7	31.K301-225	0	SAMOLEPKA / STICKER / AUFKLEBER		1
8	91.170.028 (4)	0	VYPINAC / SWITCH / SCHALTER	VYPINAC	1
9	91.990.001	0	ZAMEK ROZVADECOVY / DISTRIBUTOR LOCK / VERTEILERSCHLOSS		1
1.ZRUSEN PLECH 30.K101-207 A NAHR. 30.K101-214. 058/ZM082 24.3.2014 SLEZACKOVA					
2.PRIDAN STITEK 31.K199-001. 103/ZM117 30.5.2014 SLEZACKOVA					
3.PRID. VYPINAC 91.170.029. 009/ZM024 23.1.2019 SZABARI					
4.ZRUS. VYPINAC 91.170.029 A NAHR. 91.170.028. 009/ZM295 17.7.2019 SZABARI					

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

6.17. Kryt / Cover / Abdeckung



NAZEV SESTAVY KRYT	CISLO SESTAVY 201.K301-500	STROJ ALU-500
Konstruoval: HERALT		
Datum: 19. 07.2017		
Meritko: 1:10		

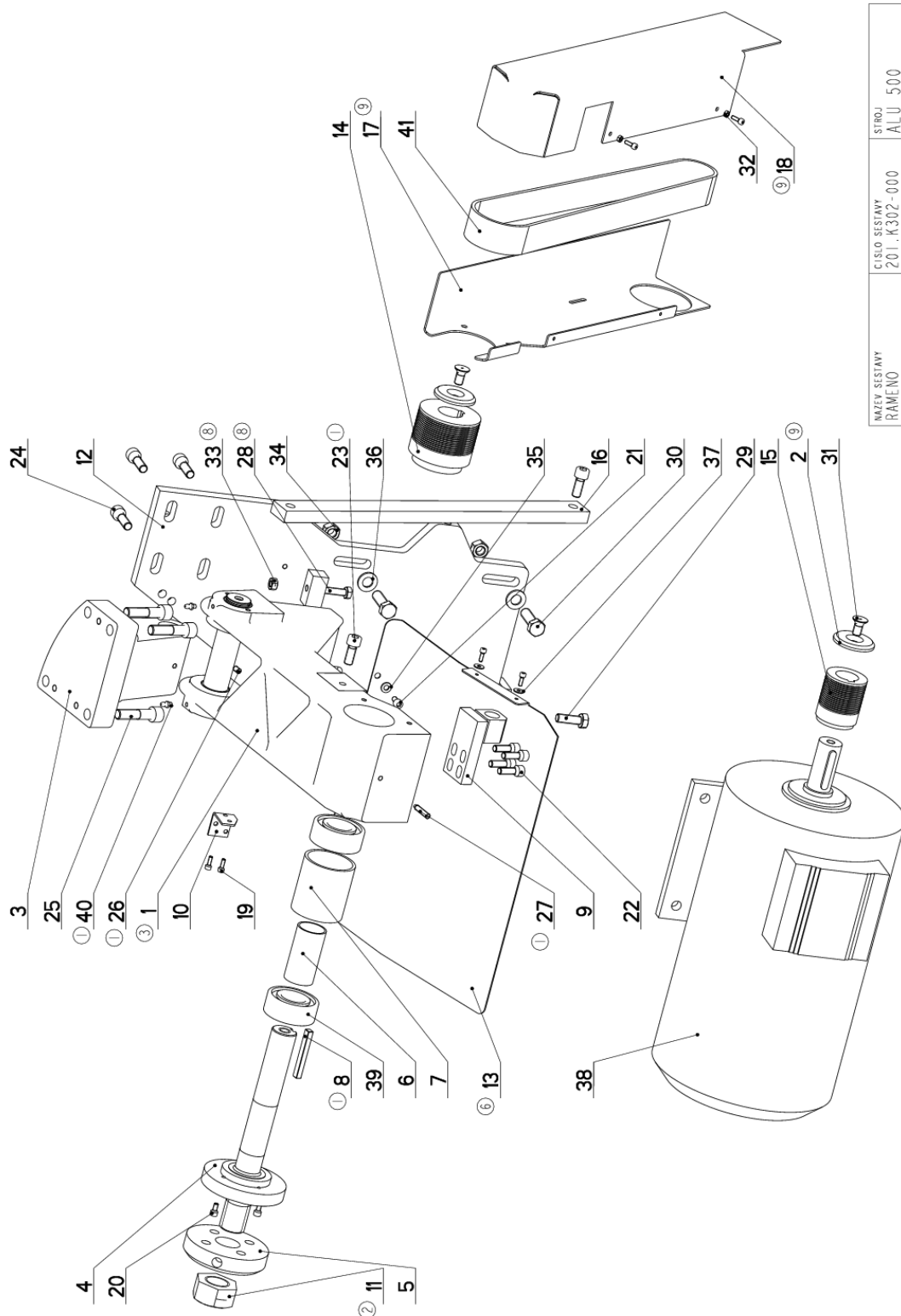
6.18. Kusovník / Piece list / Stückliste - Kryt / Cover / Abdeckung

Císlo Sestavy 201.K301-500		Ver. 6	Název sestavy KRYT/COVER/ABDECKUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.K101-526 (5)	0	KRYT / COVER / ABDECKUNG	P 1,5x200	1
2	30.K301-501	1	KRYT / COVER / ABDECKUNG		1
3	30.K301-502	0	DRŽAK / HOLDER / HALTER		1
4	30.K301-504	0	DRŽAK / HOLDER / HALTER		1
5	30.K301-506 (6)	0	LISTA / TRIM / LEISTE	P2 x 25	2
6	30.K301-507	1	KRYT / COVER / ABDECKUNG		1
7	30.K301-508 (6)	1	KRYT / COVER / ABDECKUNG		1
8	30.K301-519 (4)	1	KRYT / COVER / ABDECKUNG	P 1,5x426	1
9	30.K301-531 (6)	0	KRYT / /	P1,5x250	1
10	30.K301-532 (6)	0	KRYT / /	P1,5x250	1
11	31.K301-505	0	SKLO ORGANICKE / PLEXIGLASS / PLEXIGLAS	3x395,5	1
12	90.001.25.021 (6)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X35	2
13	90.100.55.002	0	MATICE / NUT / MUTTER	MATICE - M4	8
14	90.100.55.004 (6)	0	MATICE / NUT / MUTTER	MATICE - M6	2
15	90.150.50.002	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 4,3	8
16	93.004.004	0	VZPERA PLYNOVA / GAS PROP / GASDRUCKFEDER	D18-530	2
17	93.004.005 (2)	0	CEP / LUG / BOLZEN	PRO PLYN. VZPERY	1
18	94.012.001 (1)	0	RUKOJET / HANDLE / GRIFF		1
19	94.204.005 (6)	0	DRŽAK / HOLDER / HALTER	LBG 14/14-PP	2

1. ZM. PRIDANY POZ. 49.250.004, 61.360.002, 30.K301-512, POZ. 94.012.001 NAHRADILA POZ. 30.K101-509. 5.11.04 VRSECKY POZ. 49.250.004 LEPIŤ OBOUSTRANNOU LEPIČÍ PÁSKOU POZ. 61.360.002 NA ODMASTENÝ POVRCH
2. PRIDANA CEP 93.004.005 7.4.2006 RYSAVÝ
3. PRID. 2xGUMA 30.K301-603, 2xPLECH 30.K301-604, ZRUS. KRYT 30.K301-507, 30.K301-508, 259ZM257 27.9.2010 SLEZACKOVA
4. KRYT 30.K301-503 NAHRAZEN KRYTEM 30.K301-519; ZRUSENÝ KARTACKY 49.250.004, KRYT 30.K301-512, LEP PÁSKA 61.360.002 PRIDANA ZATKA 94.101.042; 302/zm. 340 HLADIL 3.1.2012
5. ZRUS. ZATKA 94.101.042 A NAHR. PLECHEM 30.K101-526. 147/ZM195 18.6.2012 SLEZACKOVA
6. PRID. DRŽAK KABELU 2x94.204.005, 2xSROUB M6x35(90.001.25.021), 2xMATICE M6(90.100.55.004), ZRUS. PLECH 30.K301-804, GUMA 30.K301-803, PRID. KRYT 30.K301-507, 30.K301-508, 30.K301-531, 30.K301-532, 032/ZM223 7.10.2015 SLEZACKOVA

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

6.19. Rameno / Shoulder / Sägerahmen



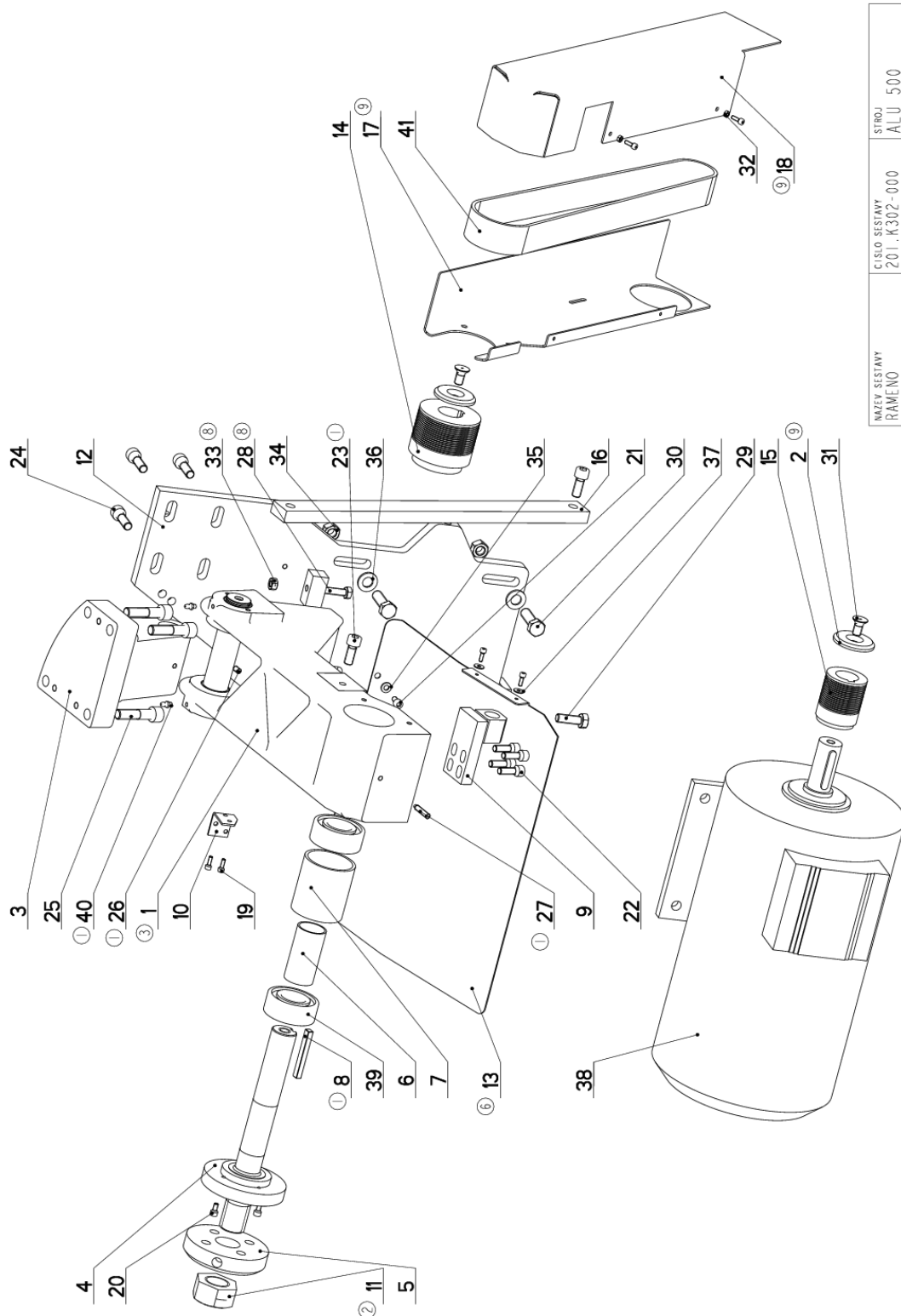
NAZEV SESTAVY RAMENO	CISLO SESTAVY 201.K302-000	STROJ ALU 500
Konstruoval: ZAJIC		
Datum: 08. 08. 2017		
Meritko: 1:4		

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

Císlo Sestavy 201.K302-000		Ver. 9	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	201.K302-050 (3)	0	KONZOLA / CONSOLE / KONSOLE		1
2	30.2908-001 (5)	1	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	d 50	2
3	30.K102-001	3	KONZOLA / CONSOLE / KONSOLE	ODLITEK	1
4	30.K102-004	4	HRDEL / SHAFT / WELLE	d 100	1
5	30.K102-005	3	KOTOUČ / DISC / SCHEIBE	D 100	1
6	30.K102-006	1	DISTANC / DISTANCE / DISTANZ	TR 35x2	1
7	30.K102-007	1	DISTANC / DISTANCE / DISTANZ	TR 65x5	1
8	30.K102-009 (1)	0	PERO / SPRING / FEDER	8x7	1
9	30.K102-010	3	DRŽÁK / HOLDER / HALTER		1
10	30.K102-022	2	DRŽÁK / HOLDER / HALTER	P 2x25	1
11	30.K102-028 (2)	0	MATICE / NUT / MUTTER	TYC 6HR 46	1
12	30.K302-003	2	DRŽÁK / HOLDER / HALTER		1
13	30.K302-013 (6)	0	KRYT MOTORU / /	P 1.5x318	1
14	30.K302-017	1	REMEŇICE / PULLEY / RIEMENSCHIEBE	TYC 75	1
15	30.K302-018	1	REMEŇICE / PULLEY / RIEMENSCHIEBE	TYC 50	1
16	30.K302-021	0	VÝZTUHA / REINFORCEMENT / VERSTEIFUNG	HR 30x15	1
17	30.K302-025 (9)	0	KRYT REMENE / BELT COVER / RIEMENABDECKUNG	P 2x179	1
18	30.K302-026 (9)	0	KRYT REMENE / BELT COVER / RIEMENABDECKUNG	P 2x184	1
19	90.001.25.003	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M4x12	6
20	90.001.25.007	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x10	2
21	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
22	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	4
23	90.001.25.047 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	2
24	90.001.25.049	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	4
25	90.001.25.062	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x50	4
26	90.002.20.023 (1)	0	SROUB STAVEČ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x10	1
27	90.004.20.004 (1)	0	SROUB STAVEČ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x30	1
28	90.005.55.019 (8)	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x40	1
29	90.005.55.025	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10x30	1
30	90.005.55.034	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x40	4
31	90.011.27.008	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M10x20	2
32	90.100.55.002	0	MATICE / NUT / MUTTER	MATICE _ M4	4
33	90.100.55.005 (8)	0	MATICE / NUT / MUTTER	MATICE _ M8	1
34	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE _ M12	4

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

6.21. Rameno / Shoulder / Sägerahmen



NAZEV SESTAVY RAMENO	CISLO SESTAVY 201.K302-000	STROJ ALU 500
Konstruoval: ZAJIC		
Datum: 08. 08. 2017		
Meritko: 1:4		

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

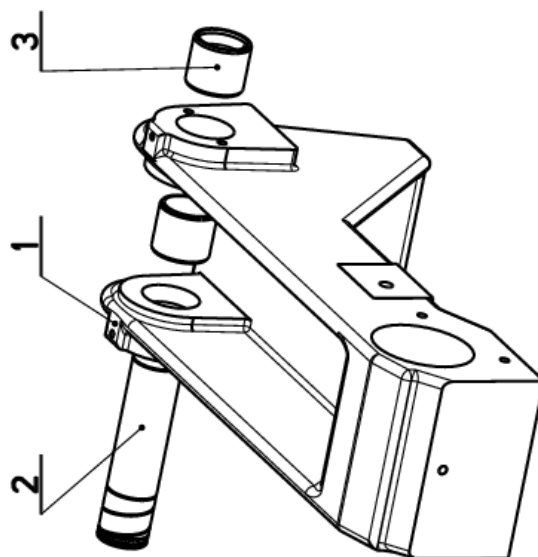
35	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6, 4	2
36	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 13	4
37	90.151.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 4	2
38	91.001.054	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR	4 kW	1
39	95.001.039	0	LOŽISKO / BEARING / LAGER	5206-2RS	2
40	95.860.001	①	HLAVICE MAZACÍ / HEAD / KOPF	KMS	2
41	99.023.009	0	REVEN DRAŽKOVÝ / GROOVED BELT / KEILRIPPENRIEMEN	16PJ	1

1. ZM. PRIDANY POZICE 90.001.25.047, 90.002.2D.023, 90.004.2D.004, 90.100.55.004, 95.860.001, POZ. 30.K102-009 NAHRADILA POZ. 95.810.016.16.12.04 VRSECKY
2. ZM. PRIDANY POZICE 30.K102-025, 30.K302-023, 30.K302-024, 30.K102-028 12.1.06 RYSAVY ZM-055
3. ZRUSENA POZICE 30K.102-025, 30.K102-008, 30.302-002, NOVA SOUCAST 201.K302-050 26.4.2006 RYSAVY
4. ZRUSENA SOUCAST 30.K302-011 A NAHR. 30.K302-012.253/ZM194. 26.7.2006 SLEZACKOVA
5. ZRUS.PODLOZKA 30.1704-008 A NAHR.30.2908-001. 110/ZM 212 26.6.2012 SLEZACKOVA
6. ZRUSEN KRYT 30.K302-012 A NAHR.30.K302-013. 004/ZM017 31.1.2014 SLEZACKOVA
7. ZRUSEN DRŽAK 30.K102-020 A NAHR.30.K102-029, ZRUS.SROUB M12x45(90.005.55.035) A NAHR.M10x45(90.005.55.027). 178/ZM209 2.10.2014 SLEZACKOVA
8. ZRUS.DRŽAK 30.K102-029, SROUB M10x45(90.005.55.027), PRID. 1xSROUB M8x40(90.005.55.019), 1xMATICE M8(90.100.55.005). 189/ZM211 9.9.2015 SLEZACKOVA
9. KRYT 30.K302-023 A 30.K302-024 NAHRAZEN KRYTEM 30.K302-025 A 30.K302-026; zm.066 3.3.2017 HLADIL

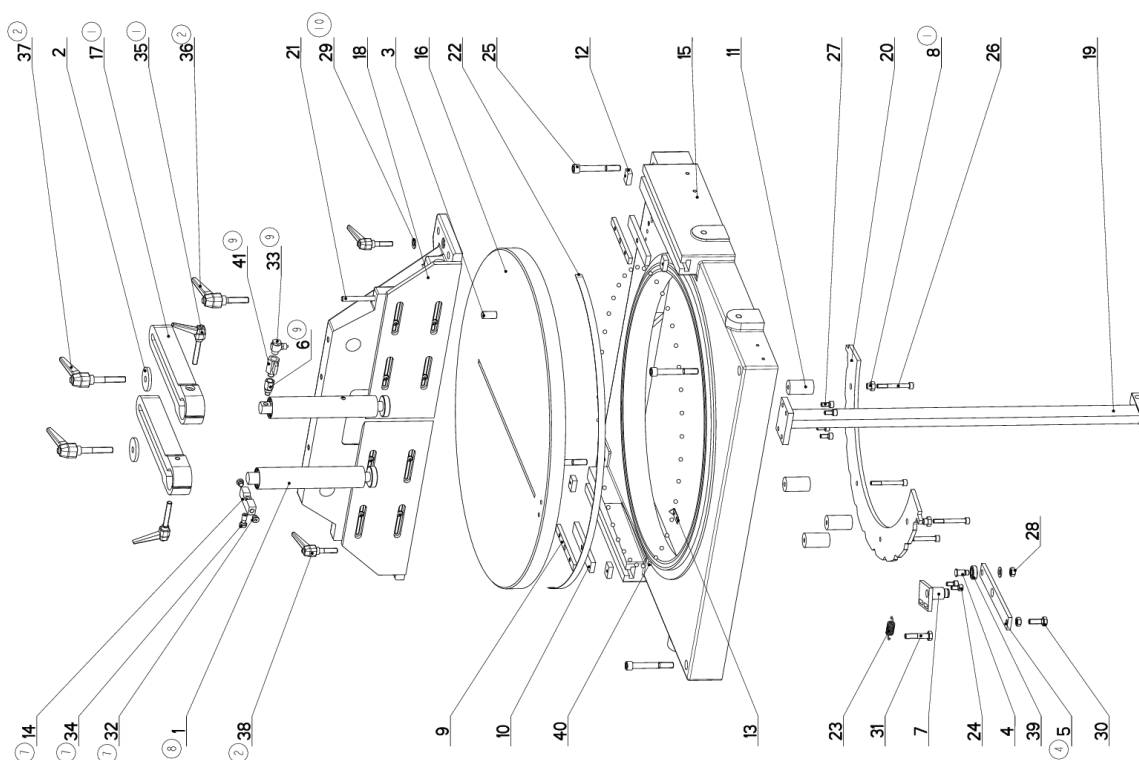
Cislo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver./Version/Version; Nazev sestavy/Assembly title/Name der Baugruppe; Pozice (Poz./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Nazev položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

6.23. Konzola / Console / Konsole

Císlo Sestavy 201.K302-050		Ver. 0	Název sestavy KONZOLA/KONSOLE/KONSOLE		
Poz.	Objednací Císlo	Ver.	Název položky	Rozmer	Ks
1	30.K302-002	4	KONZOLA / CONSOLE / KONSOLE	ODLITEK	1
2	30.K102-008	3	CEP / LUG / BOLZEN	d 32	1
3	30.K102-025	1	POUZDRO / SLEEVE / BÜCHSE	d 36	2



6.24. Stůl / Table / Tisch



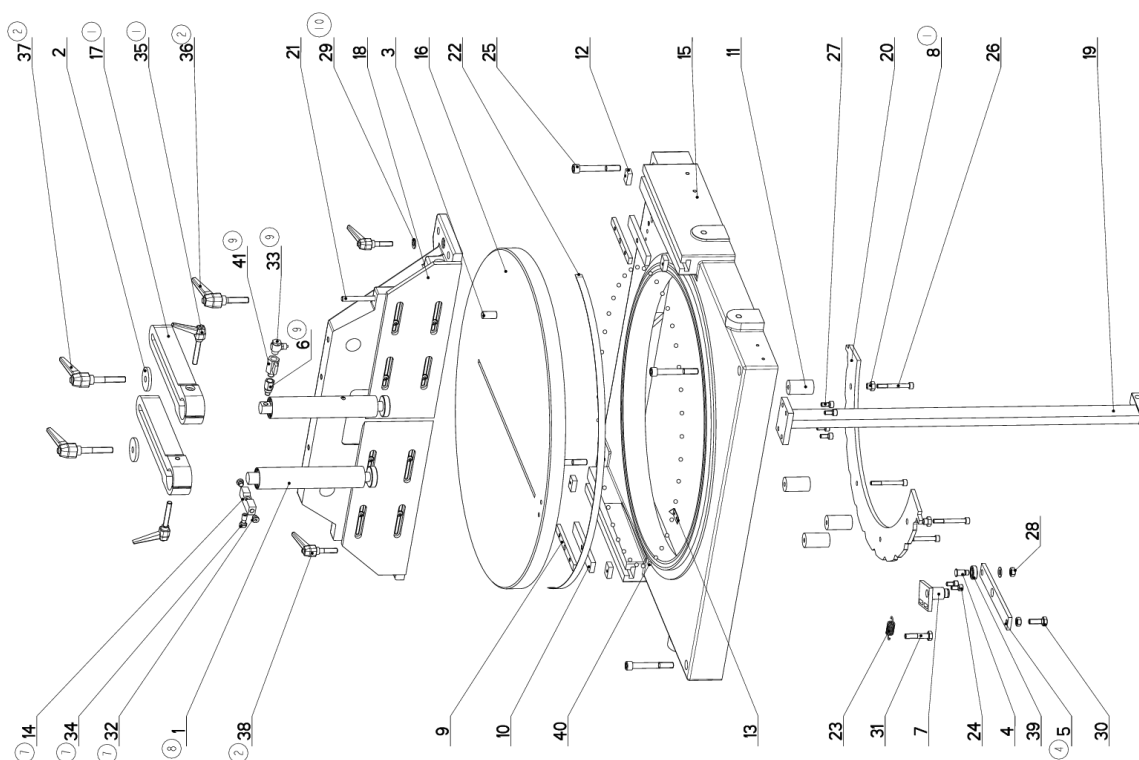
NAZEV SYSTÉMU STŮL	ČÍSLO SYSTÉMU 201.K303-000	STŮJ ALU 500
Konstruoval: ZAJIC		
Datum: 03. 04. 2018		
Měřitko: 1:5		

6.25. Kusovník / Piece list / Stückliste - Stůl / Table / Tisch

Císlo Sestavy 201.K303-000		Ver. 10	Název sestavy STUL/TABLE/TISCH		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.K107-100 (8)	0	VALEC UPÍNACÍ / FIXING CYLINDER / SPANNZYLINDER		2
2	30.0502-603	1	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	P 6x50	2
3	30.0509-606	0	VALEČEK / CYLINDER / ROLLE	d15	1
4	30.0802-011	0	CEP / LUG / BOLZEN	d16	1
5	30.0802-013 (4)	1	PAKA / LEVER / HEBEL	P 8x30	1
6	30.3407-103 (9)	1	REDUCE / REDUCTION / ADAPTOR / REDUKTION	TYC 17	1
7	30.3509-013	3	CEP / LUG / BOLZEN		1
8	30.6804-102 (7)	2	EXCENTR / CAM / EXZENTER	TYC 17	2
9	30.K103-008	1	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSEIESTE	HR 15x8	2
10	30.K103-009	1	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSEIESTE	HR 25x10	2
11	30.K103-016	2	DISTANC / DISTANCE / DISTANZ	d30	4
12	30.K103-017	3	DORAZ / STOP PIECE / ANSCHLAG	HR 20x10	4
13	30.K103-024	0	UKAZATEL / INDICATOR / ZEIGER	P 11x15	1
14	30.K107-417 (7)	0	KOSTKA ROZVÁDEČI / DISTRIBUTION CUBE / VERTEILUNGSWÜRFEL	HR 20x15	1
15	30.K303-001	10	STUL / TABLE / TISCH	ODLITEK	1
16	30.K303-002	6	STUL / TABLE / TISCH	ODLITEK	1
17	30.K303-004 (1)	0	DRŽAK / HOLDER / HALTER	ODLITEK	2
18	30.K303-005 (3)	0	CELIST PEVNÁ / SOLID JAW / FESTE BACKE	SESTAVA	1
19	30.K303-013	4	DRŽAK / HOLDER / HALTER		1
20	30.K303-015	3	SEGMENT / SEGMENT / SEGMENT	P 8x280	1
21	30.K303-018	0	TYC / POLE / STANGE	d10	1
22	30.K303-022	1	MERITKO / MEASURE / SKALA	P 0.5x15	1
23	31.K303-021	0	PRUŽINA / SPRING / FEDER	2.0x16x53x13.5	1
24	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	2
25	90.001.25.072	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X90	4
26	90.001.25.095	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X70	4
27	90.001.25.105	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X18	4
28	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE _ M10	2
29	90.150.50.006 (10)	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10.5	3
30	90.401.02.002	0	SROUB 6HRANNÝ ZN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10X30	1
31	90.401.02.002	0	SROUB 6HRANNÝ ZN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10X50	1
32	92.019.003 (7)	0	ZATKA / PLUG / STOPFEN	G1/4" VNITRNÍ IMBUS	2
33	93.007.003 (9)	0	SROUBENÍ / BOLTING / VERSCHRAUBUNG	SROUBENÍ UHL. NATAČECÍ 1/4"-6/4	1
34	93.010.001 (7)	0	SROUB / BOLT / SCHRAUBE	DUTTY	1

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

6.26. Stůl / Table / Tisch



NAZEV SYSTÉMU STŮL	ČÍSLO SYSTÉMU 201.K303-000	STUJ ALU 500
Konstruoval: ZAJIC		
Datum: 03. 04. 2018		
Verze: 1:5		

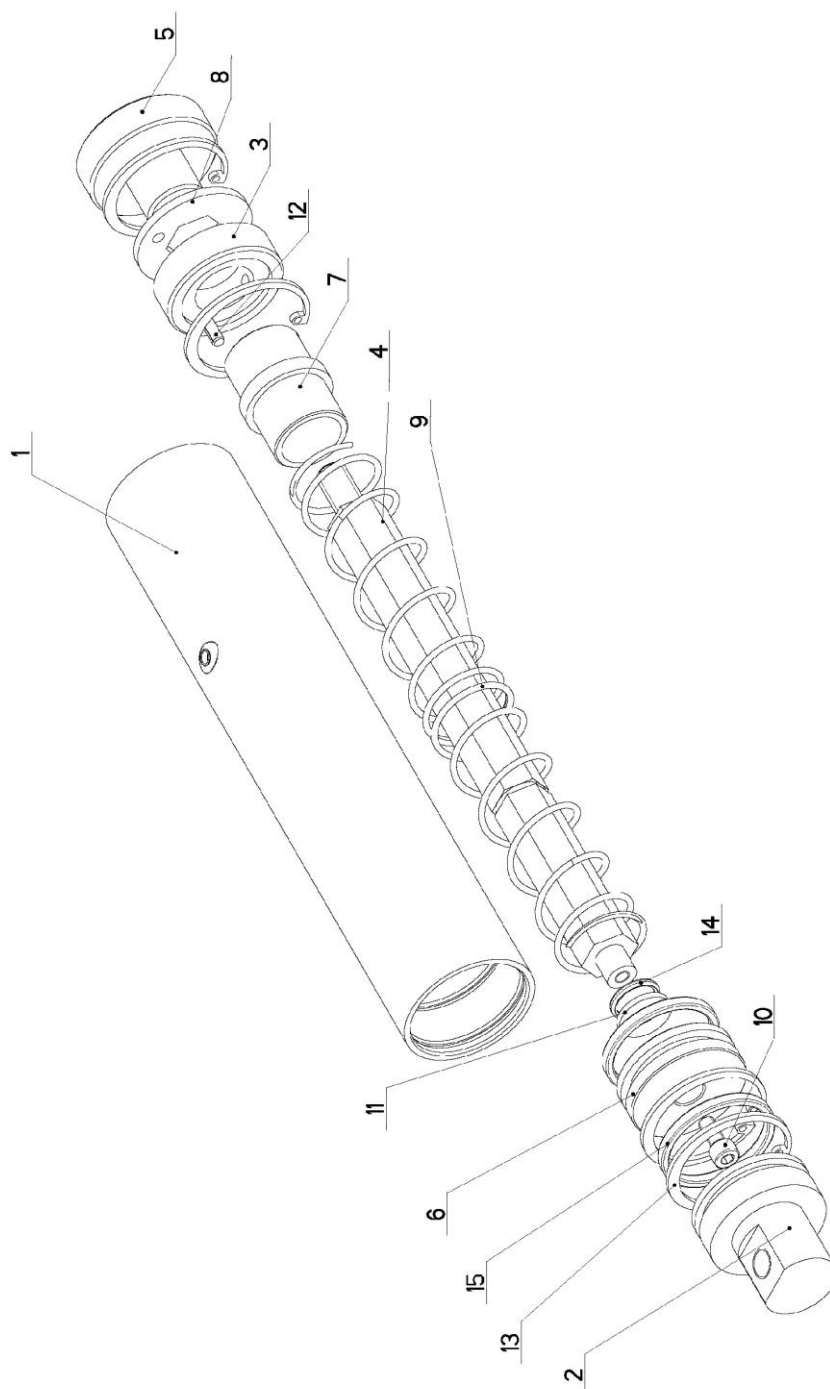
6.27. Kusovník / Piece list / Stückliste - Stůl / Table / Tisch

35	94.008.006	①	0	PAKA UPINACI / ATTACHMENT LEVER / SPANNHEBEL	M10	2
36	94.008.009		0	PAKA UPINACI / ATTACHMENT LEVER / SPANNHEBEL	M12	1
37	94.008.012	②	0	PAKA UPINACI / ATTACHMENT LEVER / SPANNHEBEL	M12x10	2
38	94.008.013	②	0	PAKA UPINACI / ATTACHMENT LEVER / SPANNHEBEL	M10	2
39	95.001.005		0	LOŽISKO / BEARING / LAGER	6001 2RS	1
40	95.691.006	⑨	0	KOLEČKO / WHEEL / ROLLE	RB 8	40
41	99.260.001		0	VENTIL / VALVE / VENTIL	VENTIL KULOVÝ	1

1. ZRUS.SOUC.30.K103-004 A NAHR.30.K303-004,ZRUS.SOUC.94.008.005 A NAHR.94.008.006. 10.8.2005 SLEZACKOVA
2. ZRUS.SOUC.94.008.009-2x,94.008.005 - 2x N.SOUC.94.008.012-2x,94.008.013-2x. 7.4.2006 RYSAVY
3. ZRUS.30.K303-003,30.K303-006,30.K303-007 A NAHR.30.K303-005.329/ZM331 9.10.2008 SLEZACKOVA
4. ZRUS.SOUCAST 30.0802-009 A NAHR.30.0802-013. 167/ZM169 7.6.2010 SLEZACKOVA
6. VALCE 201.K107-100 NAHRAZENÝ VALCI 201.K107-400.19.8.2010 HLADIL 232/zm.230
7. PRIDAN 2xEXCENTR 30.6804-102; 30.K107-417; 92.019.003,93.010.001; 235/ZM242 8.9.2010 SLEZACKOVA
8. VALCE 201.K107-400 NAHRAZENÝ VALCI 201.K107-100; 216/zm.252 HLADIL 16.9.2011
9. PRIDANA - REDUKCE 30.3407-103,SROUBENI 99.260.001,93.007.003. 256/ZM054 16.2.2012 SLEZACKOVA
10. PRIDANO - PODLOŽKA 10,5 (90.150.50.006) POD MONTAZ. PAKU M10x40(94.008.013) 032/ZM094 14.3.2018 SZABARI

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

6.28. Válec upínací / Fixing cylinder / Spannzyylinder



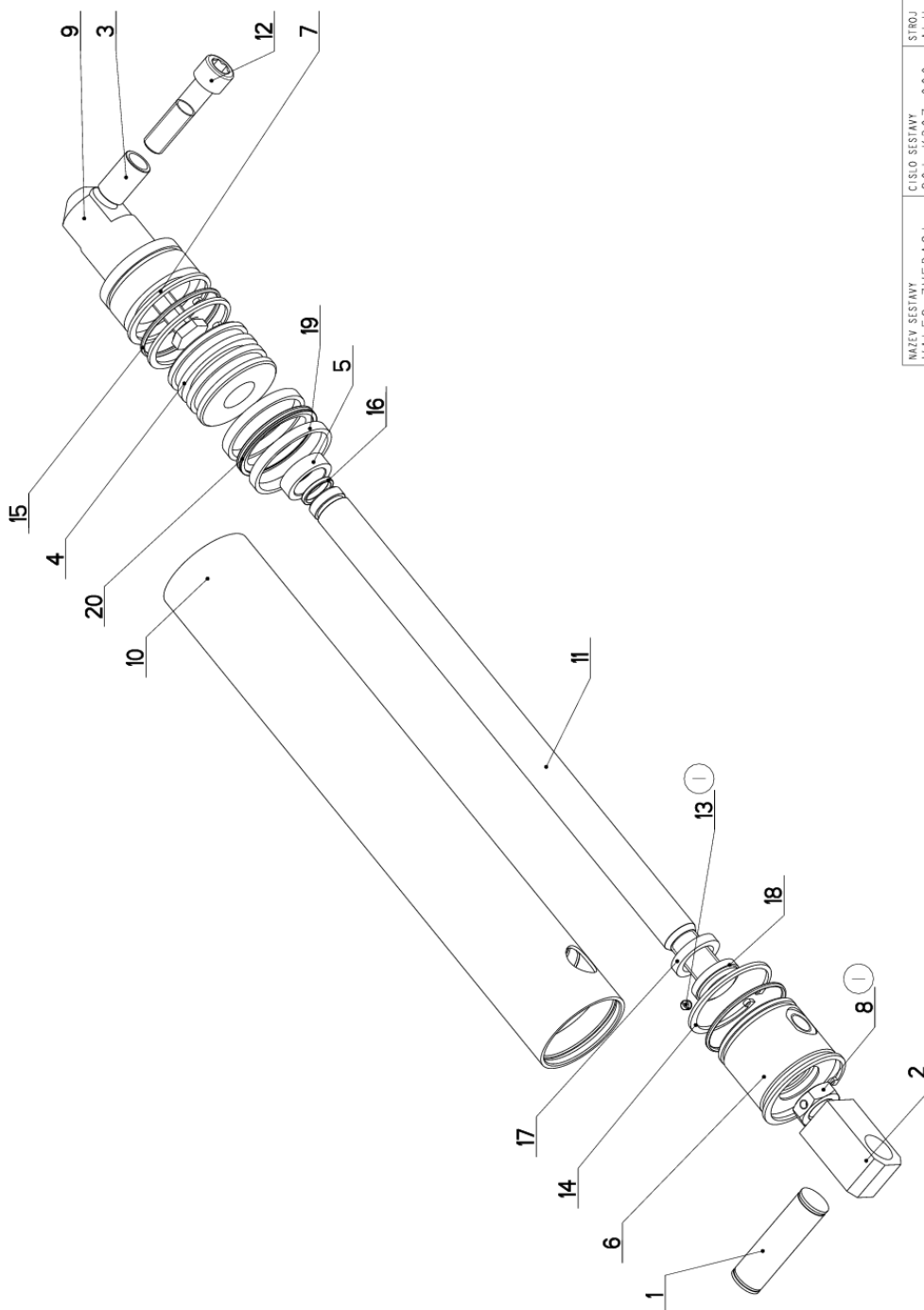
NAZEV SESTAVY VÁLEC UPÍNACÍ	ČÍSLO SESTAVY 201.K107-100	STROJ ALU 400
Konstruoval: ZAJIC		
Datum: 13. 04. 2015		
Měřítko: 1:2		

6.29. Kusovník / Piece list / Stückliste - Válec upínací / Fixing cylinder / Spannzylinder

Císlo Sestavy 201.K107-100		Ver. 0	Název sestavy VALEC UPÍNAČI / FIXING CYLINDER / SPANNZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.K107-101	2	VALEC UPÍNAČI / FIXING CYLINDER / SPANNZYLINDER	TR 45/40H8	1
2	30.K107-102	0	VÍKO / COVER / DECKEL	d 45	1
3	30.K107-103	1	VÍKO / COVER / DECKEL	d 45	1
4	30.K107-104	3	PISTNICE / PISTON ROD / KOLBENSTANGE	6HR-17	1
5	30.K107-105	1	DORAZ / STOP PIECE / ANSCHLAG	d 50	1
6	30.K107-106	3	PIST / PISTON / KOLBEN	d 45	1
7	30.K107-109	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	d 30	1
8	30.K107-111	2	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	d 40	1
9	31.K107-107	0	PRUŽINA / SPRING / FEDER	2x30x105x(5+2)	2
10	90.001.25.008	0	SROUB / IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x12	1
11	90.151.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHENKE	PODLOŽKA 5	1
12	90.303.07.013	0	KOLÍK PRUŽNÝ / PIN / BOLZEN	KOLÍK 4x12	1
13	95.801.005	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 40	4
14	96.001.004	0	O-KROUZEK / STATIC O RING / O-RING STATISCH	10x2	1
15	96.002.017	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	34x3 NBR 70SH	2

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

6.30. Válec zvadací / Lifting cylinder / Hebezyylinder



NAZEV STAVBY VALEC ZVEDACI	CISLO SESTAVY 201.K307-000	STROJ ALU-500
Konstruoval: ZAJIC		
Datum: 13. 04.2015		
Meritko: 1:2		

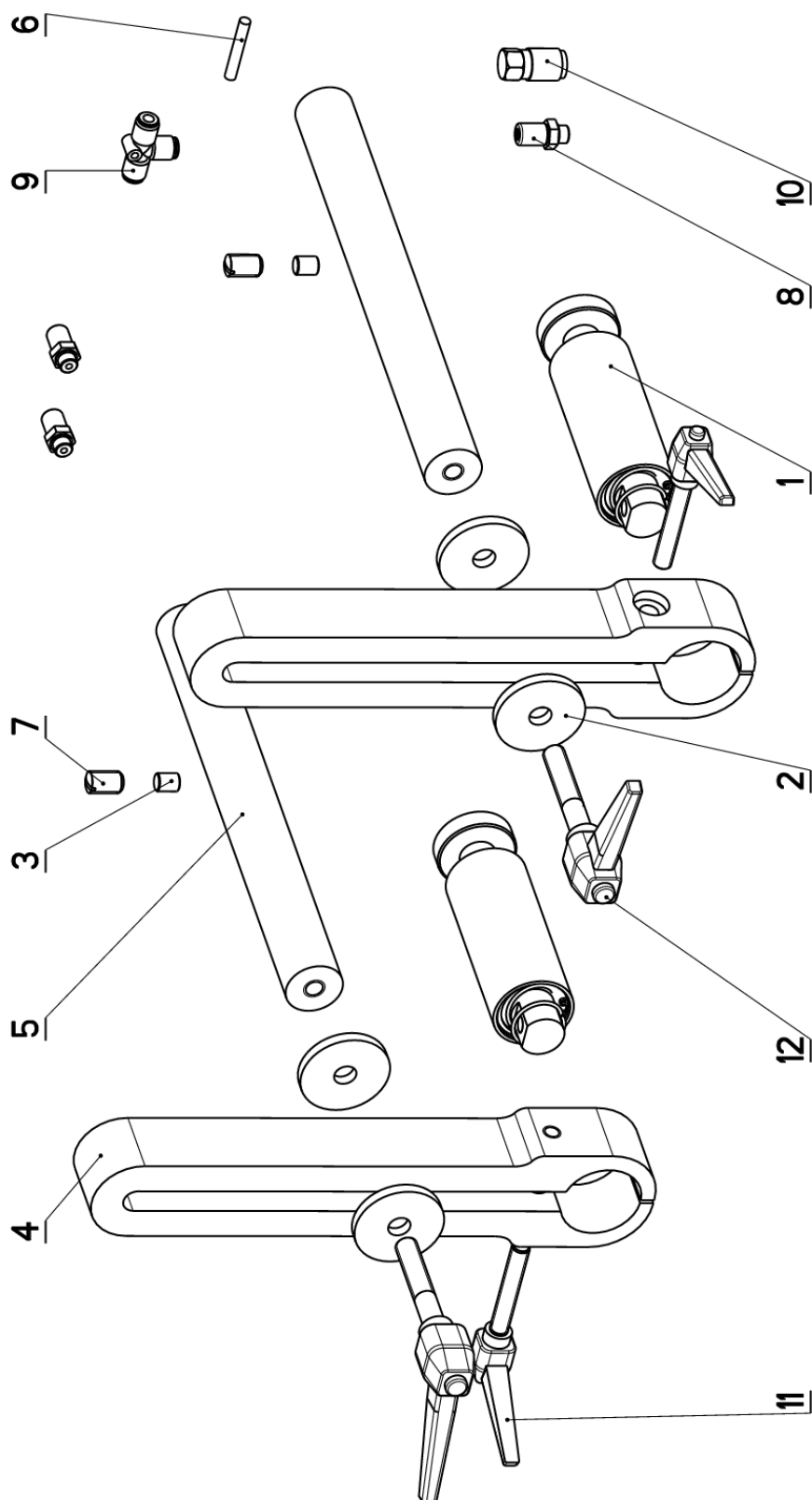
6.31. Kusovník / Piece list / Stückliste - Válec zvadací / Lifting cylinder / Hebezyylinder

Císlo Sestavy 201.K307-000		Ver. 1	Název sestavy VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLYNDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0514-904	0	CEP / LUG / BOLZEN	d 18	1
2	30.0807-006	2	DRŽÁK / HOLDER / HALTER	TYC 25x25	1
3	30.K107-003	2	POUZDRO / SLEEVE / BÜCHSE	d 18	1
4	30.K107-004	1	PIST / PISTON / KOLBEN	TYC 55	1
5	30.K107-005	0	DISTANC / DISTANCE / DISTANZ	TR 28x4	1
6	30.K107-008	4	VÍKO / COVER / DECKEL	d 55	1
7	30.K107-009	1	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x25	1
8	30.K107-010 (1)	0	MATICE / NUT / MUTTER	MATICE M16	1
9	30.K107-011	2	VÍKO / COVER / DECKEL	d 50	1
10	30.K307-001	1	VALEC / ROLLER / ZYLINDER	TR 55/50H8	1
11	30.K307-002	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d20	1
12	90.001.25.062	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x50	1
13	90.003.20.001 (1)	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x6	1
14	95.801.018	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 50	4
15	96.001.013	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	45x2	2
16	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16x2 NBR 70SH	1
17	96.041.002	0	TESNENÍ / SEALING / DICHTUNG	601-20x28x5	1
18	96.060.002	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRAČI 20	1
19	96.084.001	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	GP6500500-147	2
20	96.900.001	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PW4200500-Z20N	1

1.ZRUS.MATICE M16(90.101.55.003) A NAHR.30.K107-010,PRIDAN SROUB STAVECI M5x6(90.003.2D.001).
072/ZM097 14.4.2014 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

6.32. Upínání horní / Top clam / Spannvorrichtung oben



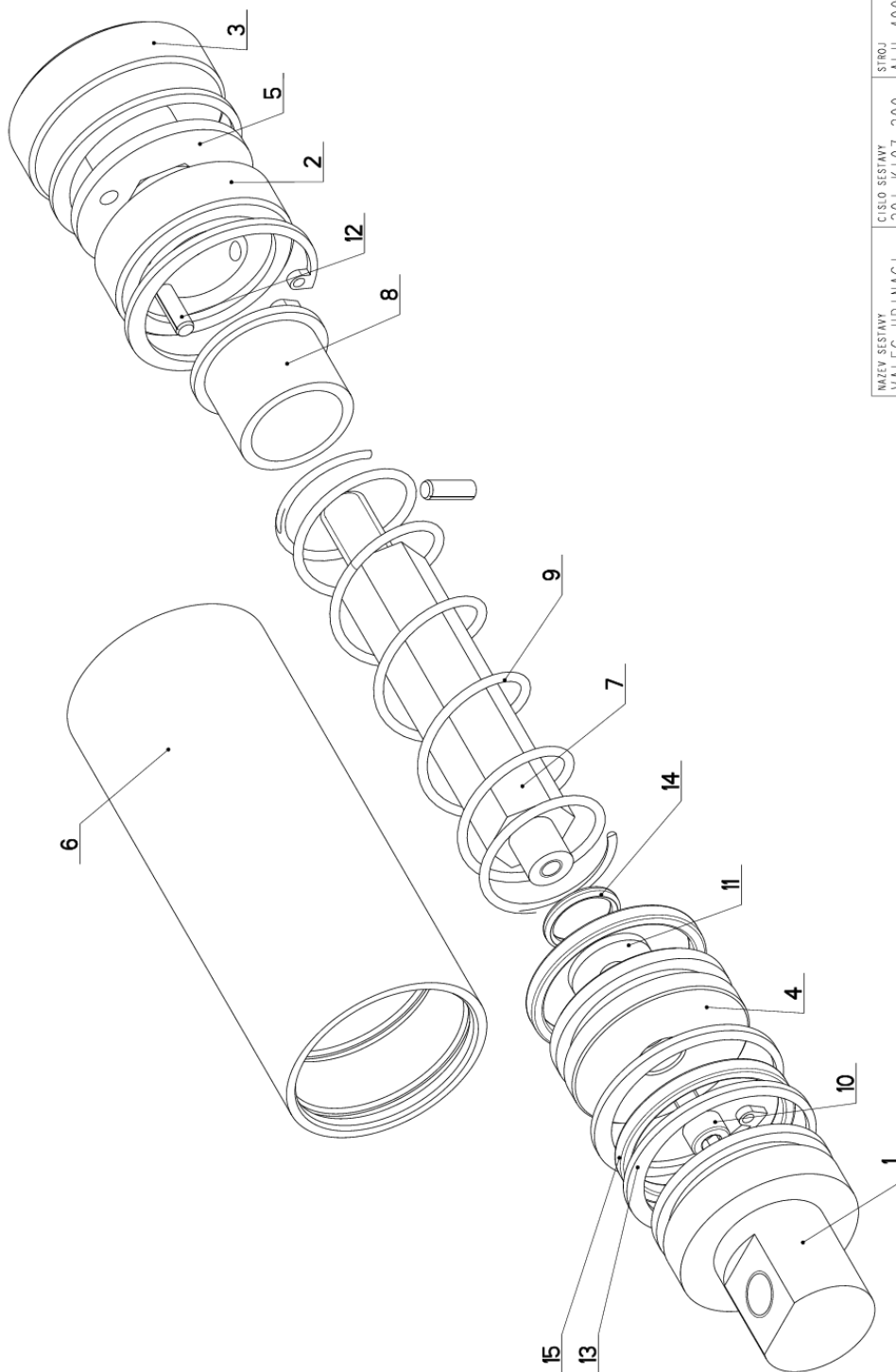
NAZEV SESTAVY UPÍNÁNÍ HORNÍ	ČÍSLO SESTAVY 201.K314-000	STROJ ALU-500,600
Konstruoval: ZAJIC		
Datum: 16. 09.2011		
Meritko: 1:2		

6.33. Kusovník / Piece list / Stückliste -
Upínání horní / Top clam / Spannvorrichtung oben

Cislo Sestavy 201.K314-000		Ver. 6	Název sestavy UPÍNANÍ HORNÍ / TOP CLAM/SPANNVORRICHTUNG OBEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.K107-200	0	VALEC UPÍNACÍ / FIXING CYLINDER / SPANNZYLINDER		2
2	30.0502-603	1	PODLOŽKA / WASHER / UNTERLEGSCHIBE	d50	4
3	30.K103-022	0	VALEČEK / CYLINDER / ROLLE	d 10	2
4	30.K303-004	0	DRŽÁK / HOLDER / HALTER	ODLITEK	2
5	30.K303-019	0	TYC / POLE / STANGE	d 32	2
6	43.001.008	0	HADICE / HOSE / SCHLAUCH	PU6	1
7	90.002.20.018	0	SROUB STAVEČÍ / ADJUSTMENT BOLT / STELSCHRAUBE	SROUB M12x20	2
8	93.005.001	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/8-6/4	3
9	93.011.002	0	PROPOJKA T / CONNECTION T / VERBINDUNGSSTÜCK T	6	1
10	93.023.001	0	SPOJKA / JOINT / KUPPLUNG	182-1/8"	1
11	94.008.006	0	PAKA UPÍNACÍ / ATTACHMENT LEVER / SPANNHEBEL	M10	2
12	94.008.012	0	PAKA UPÍNACÍ / ATTACHMENT SLIDER / SPANNHEBEL	M12x70	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

6.34. Válec upínací / Fixing cylinder / Spannzylinder



NAZEV SESTAVY VÁLEC UPÍNACÍ	ČÍSLO SESTAVY 201.K107-200	STROJ ALU-400
Konstruoval: ZAJIC		
Datum: 13. 04. 2015		
Meritko: 1:1		

6.35. Kusovník / Piece list / Stückliste - Válec upínací / Fixing cylinder / Spannzylinder

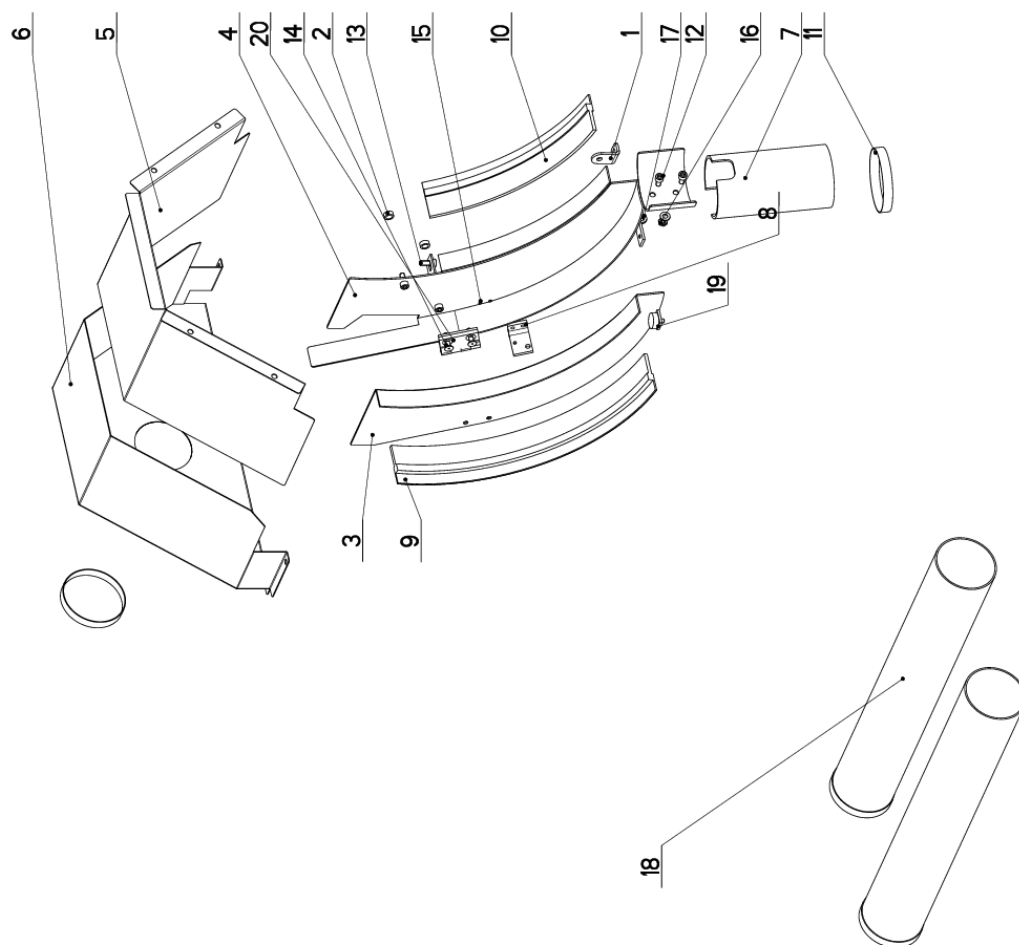
Císlo Sestavy 201.K107-200		Ver. 0	Název sestavy VALEC UPÍNAČÍ / FIXING CYLINDER / SPANNZYLINDER		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	30.K107-102	0	VÍKO / COVER / DECKEL	d 45	1
2	30.K107-103	1	VÍKO / COVER / DECKEL	d 45	1
3	30.K107-105	1	DORAZ / STOP PIECE / ANSCHLAG	d 50	1
4	30.K107-106	3	PIST / PISTON / KOLBEN	d 45	1
5	30.K107-111	2	KROUZEK VODÍČÍ / LEAD RING / FÜHRUNGSRING	d 40	1
6	30.K107-201	1	VALEC / ROLLER / ZYLINDER	TR 45/40H8	1
7	30.K107-204	1	PISTNICE / PISTON ROD / KOLBENSTANGE	6HR 17	1
8	30.K107-209	0	VEDENÍ / GUIDE / BACKENFÜHRUNG	d30	1
9	31.K107-107	0	PRŮŽINA / SPRING / FEDER	2x30x105x(5+2)	1
10	90.001.25.008	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M5x12	1
11	90.151.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHETBE	PODLOŽKA 5	1
12	90.303.02.013	0	KOLÍK PRUŽNÝ / PIN / BOLZEN	KOLÍK 4x12	2
13	95.801.005	0	SEGR DÍRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 40	4
14	96.001.004	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	10x2	1
15	96.002.017	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	34x3 NBR 70SH	2

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

7. Výkresy sestav pro objednání náhradních dílů – volitelné příslušenství/ Zeichnungen für Bestellung der Ersatzteile – optionale Zubehör/ Drawing assemblies for spare parts order – optional accessories

- Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. AL 500) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. AL 500), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example AL 500), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Kryty / Covers / Abdeckungen



NAZEV SESTAVY KRYTÍ	CÍSLO SESTAVY 201.K315-400	STROJ AL 500
Konstruoval: SOCHOR		
Datum: 14. 09. 2018		
Měřítko: 1:5		

7.2. Kusovník / Piece list / Stückliste - Kryty / Covers / Abdeckungen

Císlo Sestavy 201.K315-400		Ver. 0	Název sestavy KRYTY/COVERS/ABDECKUNGEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6114-023	0	DRŽAK / HOLDER / HALTER	P 3x20	1
2	30.K115-205	0	DISTANC / DISTANCE / DISTANZ	TR 12x2	2
3	30.K315-302	0	DVERE / DOOR / TÜR		1
4	30.K315-401	0	KRYT / COVER / ABDECKUNG		1
5	30.K320-082	0	PLECH / PLATE / BLECH	P1x218	1
6	30.K320-481	0	KRYT / COVER / ABDECKUNG		1
7	30.K415-408	0	TRUBKA / TUBE / ROHR	80	1
8	30.K920-062	0	DRŽAK MIKRONIZERU / HOLDER / HALTER	P 4x25	1
9	49.250.004	0	KARTAC / BRUSH / BÜRSTE	FBL6000-K5	1
10	49.250.004	0	KARTAC / BRUSH / BÜRSTE	FBL6000-K5	1
11	61.500.007	0	UCHYTKA / CLIP / HALTER	TORRO 70-90	4
12	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
13	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x14	3
14	90.011.27.004	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x10	4
15	90.013.27.001	0	SROUB / BOLT / SCHRAUBE	M4x8	2
16	90.101.55.008	0	MATICE / NUT / MUTTER	MATICE M6	2
17	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 6,4	2
18	93.026.011	0	HADICE / HOSE / SCHLAUCH	DN 80 PU-M	2
19	94.007.001	0	SROUB / BOLT / SCHRAUBE	M5x10	1
20	99.100.010	0	PANT / HINGE / TÜRBAND		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