



Individual 520.360 GANC

Operating instructions

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

Service and information

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Mondays to Fridays

7⁰⁰ – 16⁰⁰

Version:

1.09 / May 2016
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: **Band Saw**

Type : **Individual 520.360 GANC**

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 steel, stainless steel, non-ferrous metals and plastics

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

Pneumatic ☒ YES ☐ Hydraulic ☐ YES ☒ Control system ☐ YES ☒

Technical data: Cutting rate 20–120 m.min⁻¹
 Cutting angle 0° až 60°
 Total dimensions in mm (l×w×h) 3350x2390x2100
 Total power requirement 6,7 kW
 Weight 1800 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 13898+A1:2009	ČSN EN ISO 13857:2008
ČSN EN ISO 4413:2011		ČSN EN 60204-1 ed.2+A1:2009
ČSN EN 55011 ed.3+A1:2011	ČSN EN 61000-6-2 ed.3:2006	ČSN EN 61000-6-4 ed.2+A1:2011

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

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

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

The inspection certificate no **08.188.740**

was issued

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

Brno, 17.6.2015

Point of issue, datum



Alfred Pichlmann, Managing Director

Name and function of the responsible subject, signature

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

2) Person authorized to complete the technical documentation

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

!

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

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

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

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 **Individual 520.360 GANC** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **with cutting angle from 0° to 60°**.

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**

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

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!**

Attention!

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

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

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

1.4. Safety notes for the servicing and repairs

Attention!

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

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

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

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

1.5. Safety machine accessories

The machine is equipped with safety accessories. It protects the operator from injuries and the machine before damage. The safety accessories are blocking accessories, emergency switches and covers. Check once in a week the function of the safety accessories. If the safety accessories are functionless, you must stop work and repair or change the safety accessories.

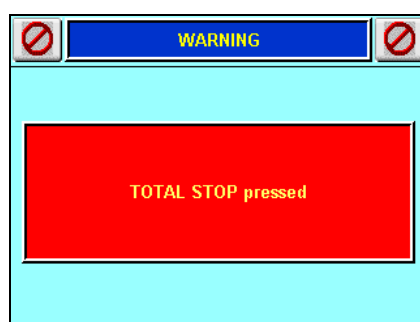
Enhanced risk!

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

1.5.1. Total Stop

TOTAL STOP button is used for emergency switching – off the machine in case defect or health hazard. By pressing **TOTAL STOP** button is interrupted the supply of the electrical power.

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



After push **TOTAL STOP** button is shown warning message on LCD.

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

1.5.2. Arm covers

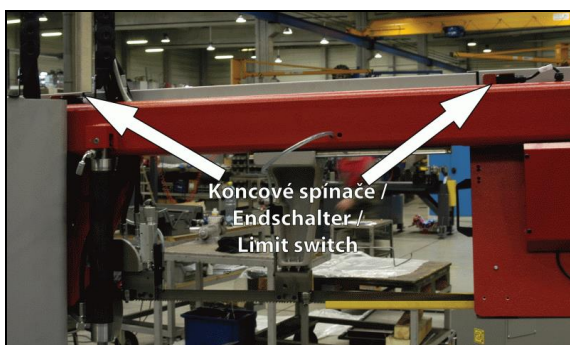
Left cover – It covers tightening wheel. If the cover is opened during operation, the limit switch is opened and the band saw is stopped. The band saw is not possible start in set mode.

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

Central cover – It covers band saw.



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



Two limit switches on saw arm control if covers are open or not.

1.5.3. Saw band stretching and rupture inspection

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



The device contains limit switch. Check the stretching carefully and periodically – eventually adjust.

1.5.4. Band saw cover

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



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

1.6. Safety notes for the cooling

Attention!

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

1.6.1. Instructions for first help

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

1.7. Safety notes for Swarf conveyor

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

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

Attention!

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

1.8. Protected space around saw - Protective fencing

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

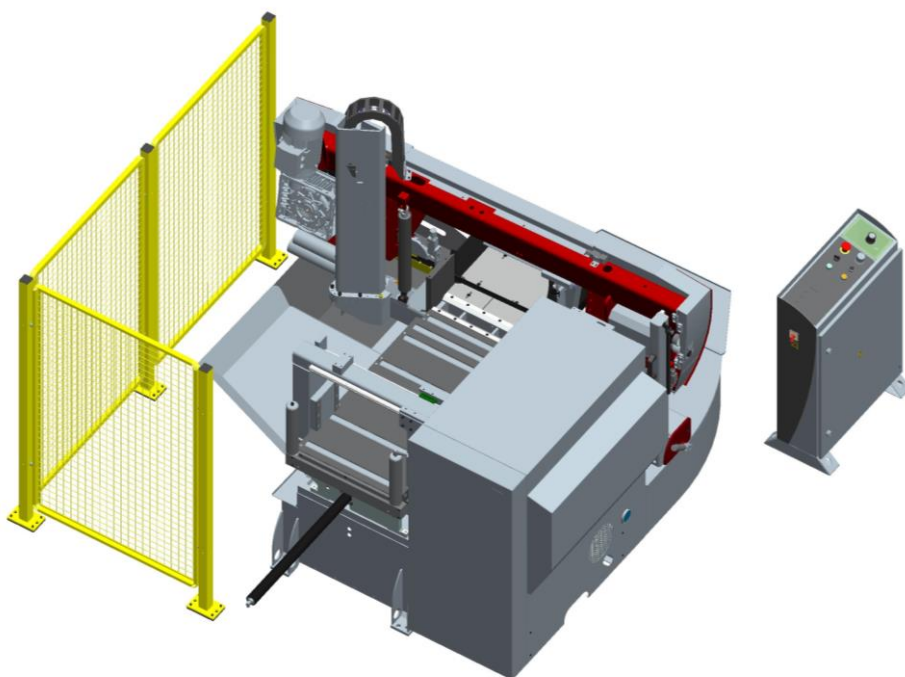
Caution!

The equipment operation can only be safe with the safety protective fencing according to EN ISO 13857!

Do not put the equipment in operation without the safety fencing according to EN ISO 13857!

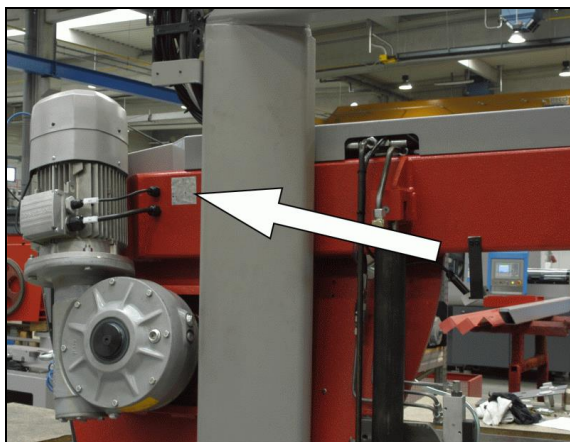
If the equipment is operated without the safety fencing according to EN ISO 13857, the submitted EC Declaration of Conformity expires!

Proposal of the safety fence



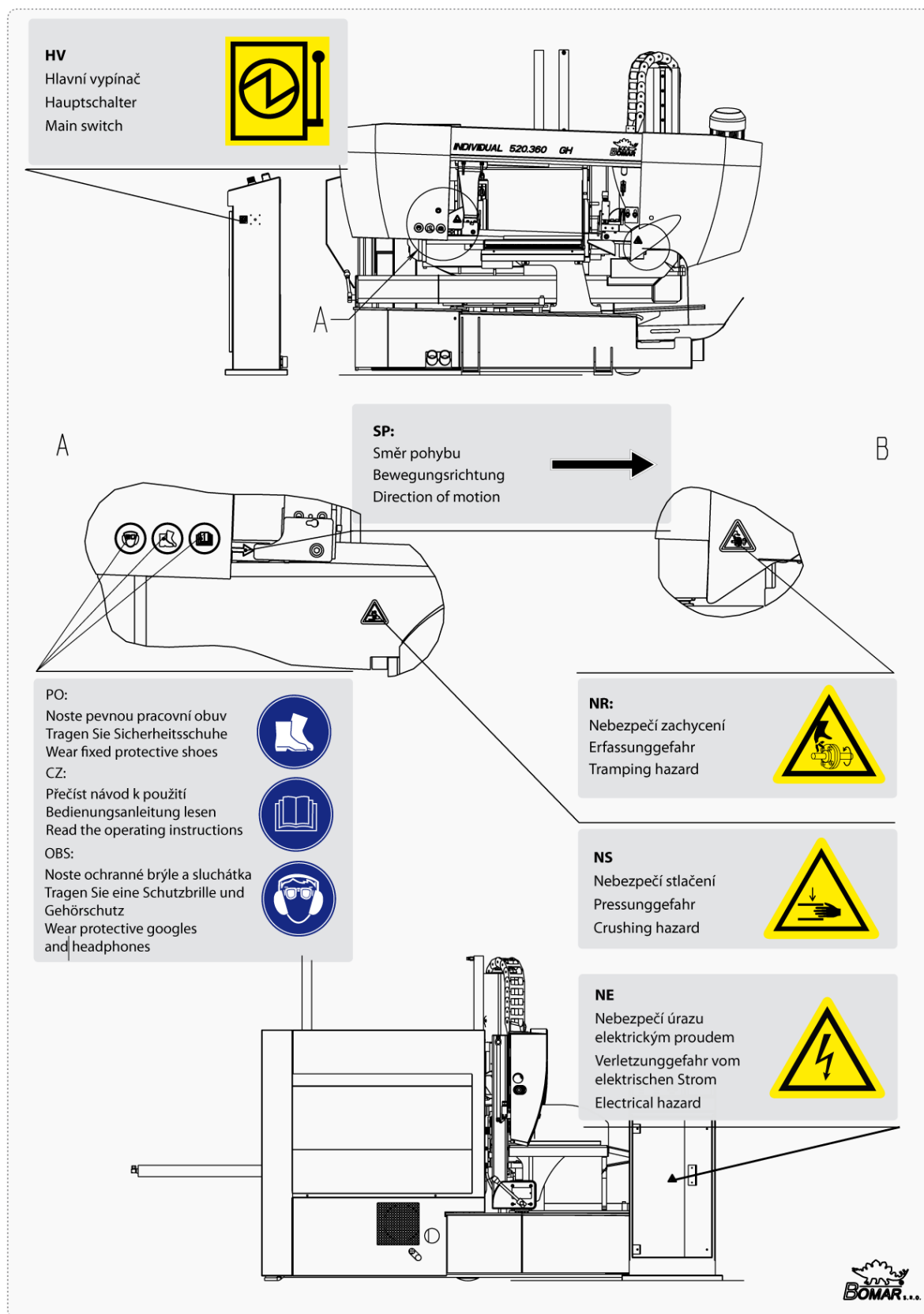
Machinery space should be protected by a fence to a height of 2000 mm..

**1.9. Umístění štítku stroje /
Maschinenschild position /
Position of machine label**



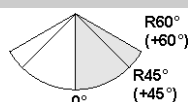
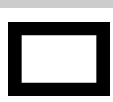
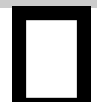
The machine label is located on the saw frame, between pillar and band drive.

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



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

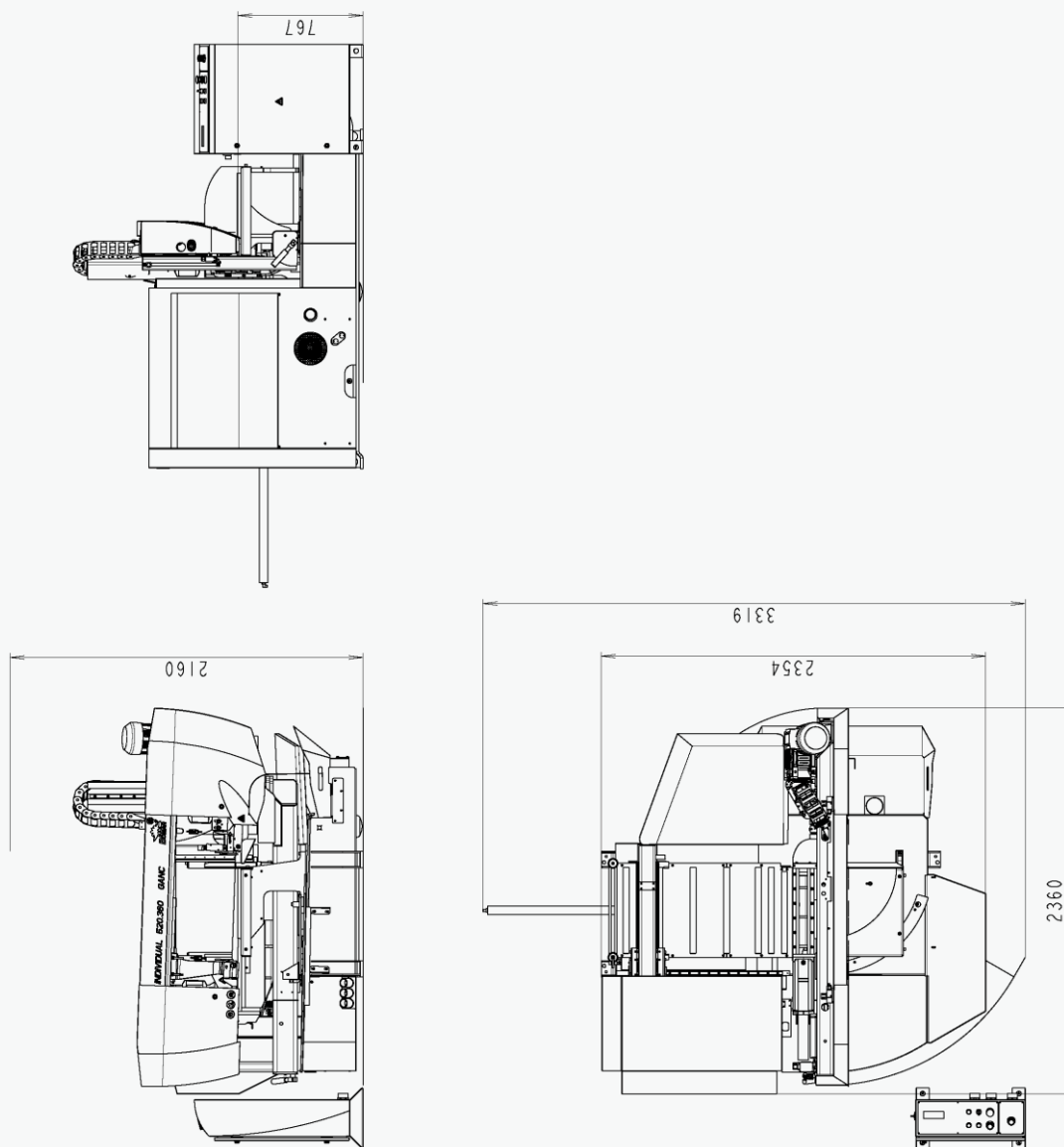
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:				
• Hmotnost / Gewicht / Weight	1800 kg			
Rozměry stroje / Maschinengröße / Machine size :				
• Délka / Länge / Lenght	3350 mm			
• Šířka / Breite / Width	2390 mm			
• Výška / Höhe / Height	2160 mm			
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:				
• Napájení / Versorgungsspannun / Supply voltage	3x400 V / 3x230 V, TN-C-S/TN-C, 50 Hz			
• Příkon / Gesamptschlusswert / Total Input	6,7 kW			
• Max.jištění / Max. Vorschaltsicherung / Max.Fuse	16 A			
• Krytí / Schutzart / Protection	IP 54			
Akustický tlak / Schalldruckpegel / Acoustic pressure:				
• Individual 520.360 GANC	L _{Aeqv} =76,3 dB			
Pohon / Atrieb / Drive:				
• Typ / Typ / Type	JMC 71 2/4 B14			
• Napájení / Versorgungsspannung / Supply voltage	~ 3x400 V, 50 Hz			
• Výkon / Leistung / Output	3 kW			
• Jmenovité otáčky / Motorenndrehzahl / Nominal speed	1420 m.min ⁻¹			
Hydraulické zařízení / / Hydraulic equipment				
• Typ / Typ / Type	3COA4-12			
• Výkon / Leistung / Output	35 dm3			
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:				
• Typ / Typ / Type	3COA4-12			
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	35 dm3			
• MICRONISER	na přání / möglich / optional -			
Rozměr pásu / Sägebanddimension / Band size:				
4780x34x1,1 mm				
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:				
20–120 m/min.				
Jeden Zdvih / Vorschublänge Einfachhub / One Upstroak:				
750 mm				
Max. Délka podání / Max. Vorschublänge / Max. feed:				
9999 mm				
Řezné rozsahy / Schnittbereiche / Cutting size:				
				
0°	Ø360 mm	520x360 mm	520x360 mm	360x360 mm
R 45°	Ø360 mm	360x325 mm	315x360 mm	350x350 mm
R 60°	Ø240 mm	235x325 mm	215x360 mm	235x235 mm

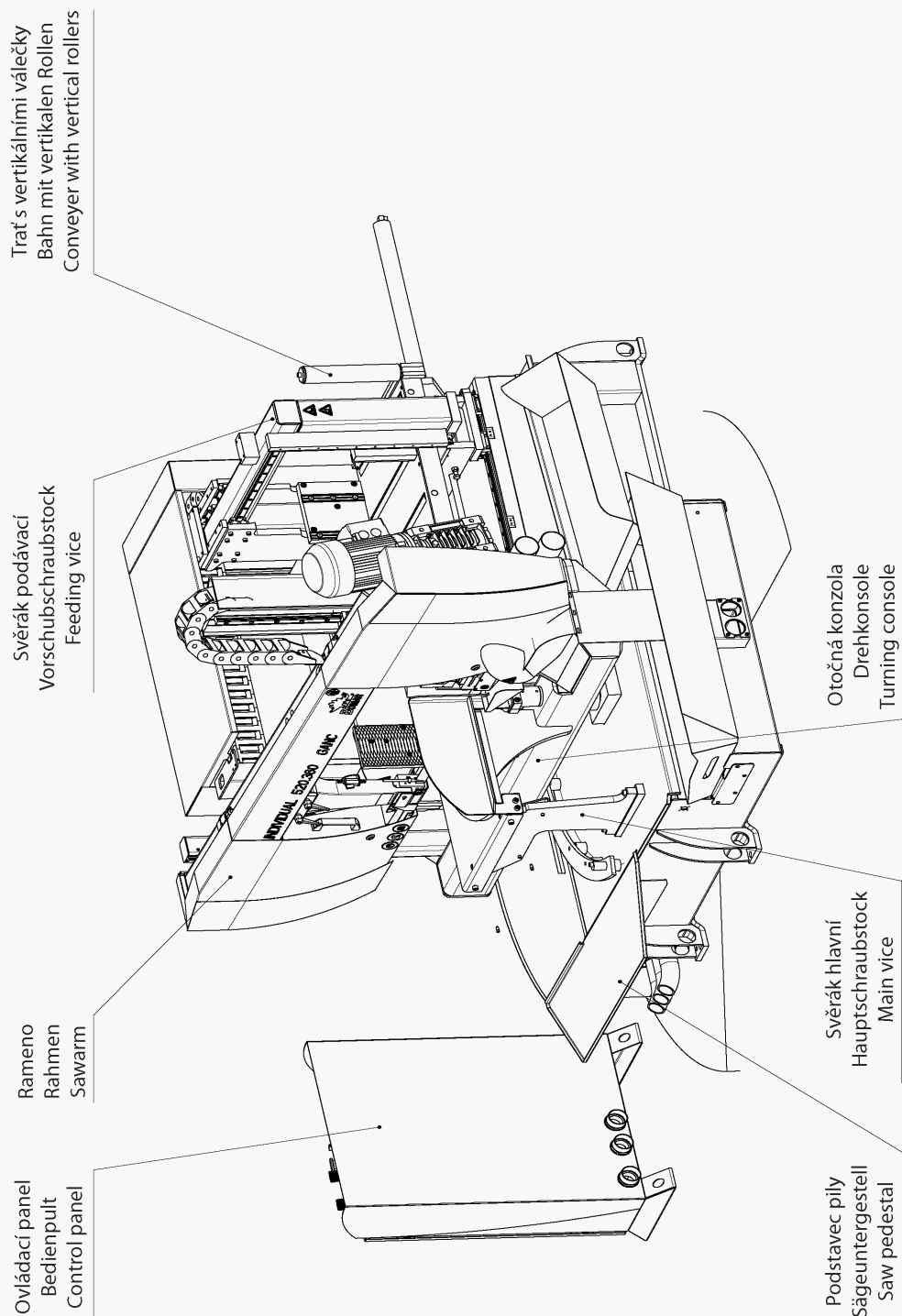
Acoustic pressure level:

The equivalent level of the acoustic pressure A (noise) in the position of the operator is L_{Aeqv}= 76,3 dB. The values are indicating the emission levels and may not present safety working levels. Among the factors, which influence the real values of the operator exposure, are properties of the workshop room, cut material and used saw bands – which may significantly influence the exposure levels.

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram



2.3. Popis / Beschreibung / Description



2.4. Transportation and stocking

2.4.1. Conditions for transportation and stocking

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

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

2.4.2. Transport and stocking preparations

Close the vice and thoroughly oil all blank surfaces.

Lower the saw frame to the lowest position.

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

Fasten all loose parts securely to the machine.

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

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

2.4.3. Transport and stocking

Handle the machine only with a forklift truck! Use the lifters of the truck according to the Transport scheme.

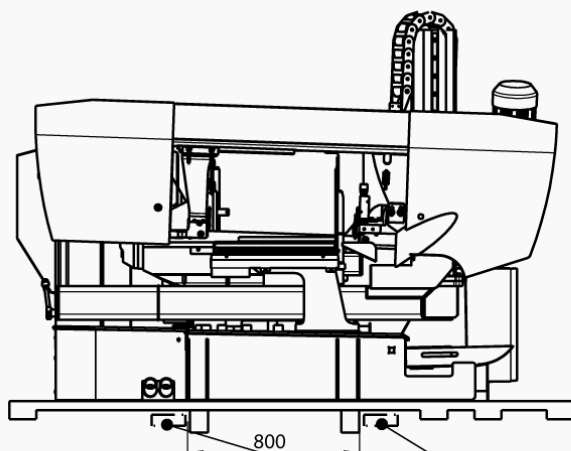
- Make sure that the forklift has sufficient capacity.
- Make sure that the van or the trailer has sufficient capacity.
- The machine must be properly secured during transport, to not tip over or fall from the transport vehicle.
- Screw on the palette to the floor of the van or the trailer.
- Be careful that the machine is not damaged during transportation.

Attention!

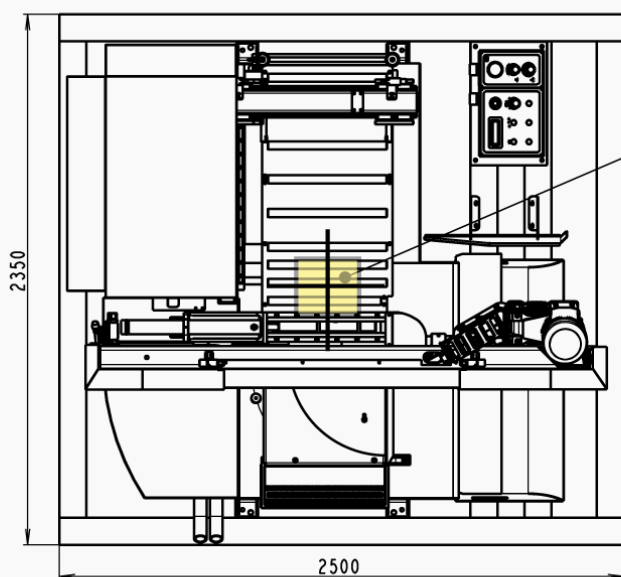
It is forbidden to handle the machine any other way (for example by, lifting by the saw frame of the band saw), than it is written in this operating instructions, the machine can be damaged!

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

2.4.4. Transportní schéma / Transport schema / Transport scheme



Místo pro lyžiny
vysokozdvížného vozíku
Die Stelle für Greifen mit
der Gabel des Gabelstaplers
Place for forklift's skides



Přibližné těžiště stroje
Ungefährer Schwerpunkt der
Maschine
Approximate center of gravity



POZOR! NEZVEDAT STROJ ZA RAMENO NEBO ZA SLOUPY.

ACHTUNG! DIE MASCHINE DARF NICHT AM ARM ODER SÄULEN GEHOBBEN WERDEN.



WARNING! DO NOT LIFT THE MACHINE BY THE ARM OR BY THE PILLARS.

Požadavky / Anforderungen / Requirements

- Minimální délka ližin / Minillänge der Gabel / Minimum forks length – 1800 mm
- Minimální nosnost vozíku / Minimaltragkraft des Gabelstaplers / Minimum fork-lift capability – 2500 kg

2.5. Activation

2.5.1. Machine working conditions

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

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

- At temperature air from **10°C to 40°C**, the temperature average during 24 hours must **not exceed over 35°C**.
- At relative dampness of the air in the 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.

2.5.2. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.

Attention!

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

2.5.3. Machine installing and levelling

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

Minimal requirement:

machine weight – Individual 520.360 GANC – 1800 kg

+ weight of accessories

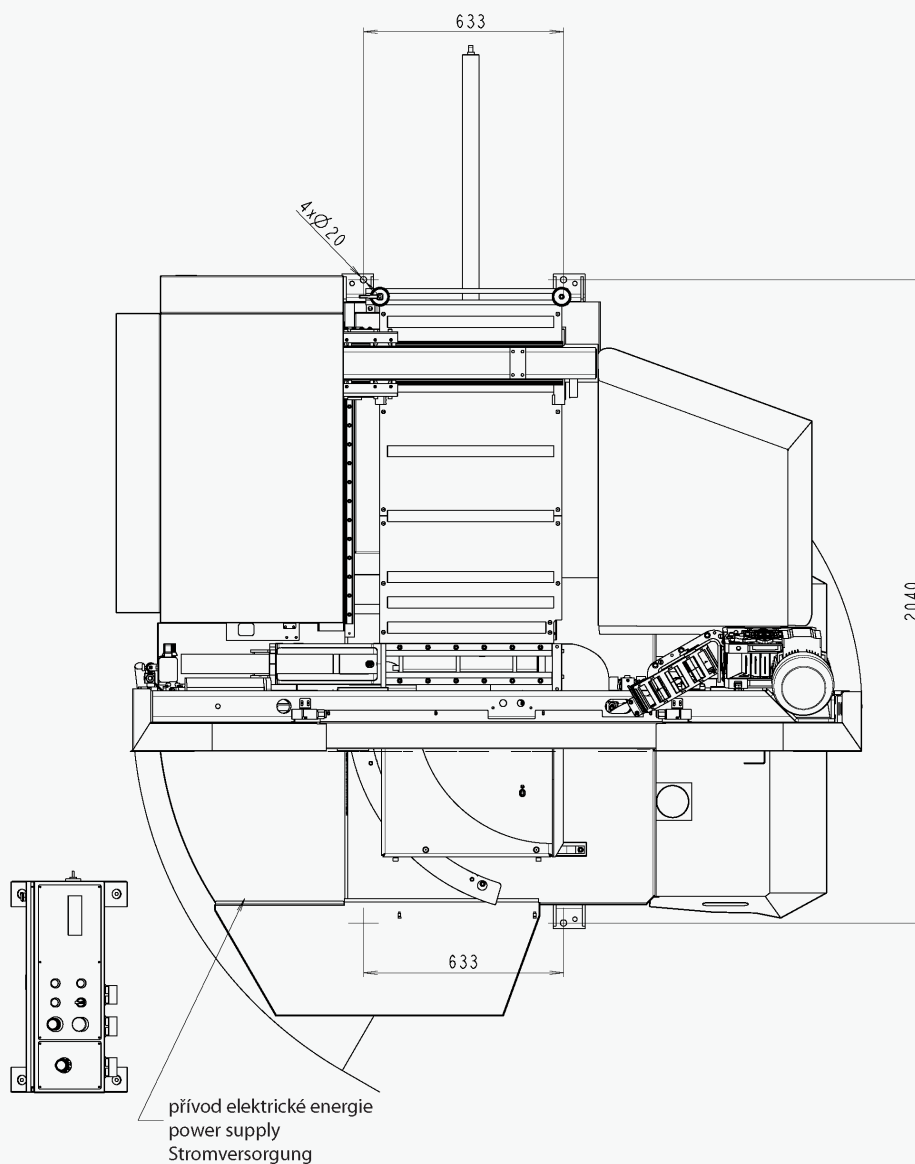
+ maximum weight of material

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

2.6. 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. Kotevní plan / Verankerungsplan / Grounding plan



Kotvicí materiál / Verankerungsmaterial / Grouding material

- 4x Chemická hmoždina / Chemische Dübel / Chemical Plug – $\varnothing 18$ mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 140 mm
- Šrouby / Schraube / Screws – M16

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

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

± 10 mm / 1 m

2.8. Electrical connection

Attention!

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

Electrical parameters of the machine:

- Service voltage: $\sim 3 \times 400\text{V} / 3 \times 230\text{V}$, 50 Hz, TN-C-S / TN-C-S
- Total input / Max. fuse: 6,7 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!

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

Note:

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

Note:

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

Attention!

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

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

2.8.1. Check the direction of the saw band



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

2.9. Filling of the cooling system

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

Let the drainage hole opened and with the sieve during operation, because it secures the right work of the cooling system. Filling the tank with the cooling liquid, take care that the liquid does not drip out of the tank and the tank does not overflowed.

2.10. First run of the power pack

Before the first run check:

- The direction of the Pump, while run the power pack for max. 2seconds.
- The cooling fan of the motor has to rotate in the same direction as the arrow on the top of the motor cowling indicates.
- In case of wrong rotational direction, the electrical phase in the connection box is to be changed. This check is required after every disconnection from the power source
- Wiring matches with electrical and hydraulic diagrams
- the electric motors (pump and cooler) are properly connected and have the prescribed rotation
- the hydraulic accumulator with nitrogen gas to the specified value
- aux. elements work right (thermometer, level gauge, heater)

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

- In the short intervals activate an electric pump
- check for leaks and noise
- Bleed the hydraulic circuit
- if possible, test the circuit function with minimum load
- test the electrical equipment
- during operation monitor measuring equipment, noise, height and temperature of oil in the tank
- During this time a careful bleeding off for the whole hydraulic system is necessary. In case there is no bleeder port, the power pack will bleed itself after a while via the air breather on the tank or the return line filter.
- After multiple start-up.

2.10.1. Filling the reservoir with hydraulic oil

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

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

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

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

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

2.11. Check machine function

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

Check, if covers are installed and functional. Check by means of the Tenzomat if the saw band is correctly stretched. If it is necessary, you can stretch the saw band according to chapter *Selection and replacement of the saw band*. Values of the saw band stretching are on the Tenzomat. Switch on the main switch and check the motors and systems (saw band drive, hydraulic pump, cooling pump, chips conveyor).

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

Start the machine with the cooling pump and let it run without load until the cooling system will be filled with cooling liquid. As soon as the cooling liquid starts to escape from the nozzles of the cooling system, the cooling system is ready for the operation. Carry one cycle of cutting without material. Check, if the machine runs with no irregularities. If all machine functions are right, the machine is ready for operation..

2.12. Saw band

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

2.12.1. Saw band size

4780x34x1,1 mm



2.12.2. Selection of the saw band tooth system

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

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

BOMAR for recommended Variable tooth system for band saw.

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

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

Footnotes:

Z₀Z – teeth number on one inch S – tooth with zero angle of the teeth K – tooth with positive angle of the teeth

Examples of the tooth system marking:

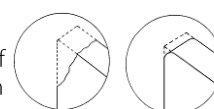
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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

2.12.3. Saw band running-in

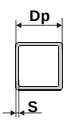
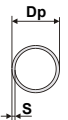
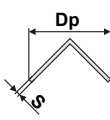
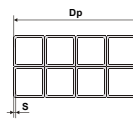
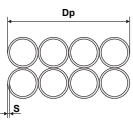
Running-in: Cut the material with the frame lowering reduced to 50% only. When vibrations occur increase or decrease the band speed.

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

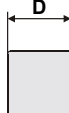
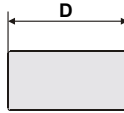
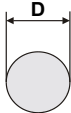
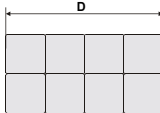
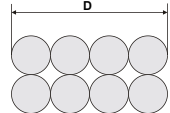


Note: Run regrinding saw bands too.

2.12.4. Tables for teeth selection

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

Size of the wall $S [\text{mm}]$	Tooth system (Z_p, Z) Outer diameter of the profile $D_p [\text{mm}]$					
	150	200	300	500	750	1000
2	10–14 S	10–14 S	8–12 S	6–10 S	5–8 S	5–8 S
3	8–12 S	8–12 S	6–10 S	5–8 S	4–6 K	4–6 K
4	6–10 S	6–10 S	5–8 S	4–6 K	4–6 K	4–6 K
5	6–10 S	5–8 S	4–6 K	4–6 K	4–6 K	3–4 K
6	5–8 S	5–8 S	4–6 K	4–6 K	3–4 K	3–4 K
8	5–8 S	4–6 K	4–6 K	3–4 K	3–4 K	3–4 K
10	4–6 K	4–6 K	4–6 K	3–4 K	3–4 K	2–3 K
12	4–6 K	4–6 K	3–4 K	3–4 K	2–3 K	2–3 K
15	4–6 K	3–4 K	3–4 K	2–3 K	2–3 K	2–3 K
20	3–4 K	3–4 K	2–3 K	2–3 K	2–3 K	2–3 K
30	3–4 K	2–3 K	2–3 K	2–3 K	1,4–2 K	1,4–2 K
50	2–3 K	2–3 K	2–3 K	1,4–2 K	1,4–2 K	1,4–2 K
75	-	2–3 K	1,4–2 K	1,4–2 K	1,4–2 K	0,75–1,25 K
100	-	-	1,4–2 K	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K
150	-	-	-	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K
200	-	-	-	0,75–1,25 K	0,75–1,25 K	0,75–1,25 K

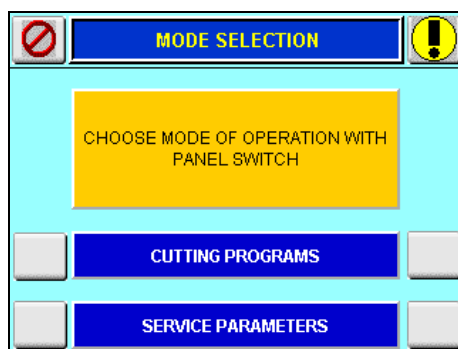
SOLID MATERIAL ($D = \text{mm}$)				
				
Constant tooth system		Variable tooth system		
length of the cut D	tooth system (Z_p, Z)	length of the cut D	tooth system (Z_p, Z)	
to 3 mm	32	to 30 mm	10–14	
to 6 mm	24	20–50 mm	8–12	
to 10 mm	18	25–60 mm	6–10	
to 15 mm	14	35–80 mm	5–8	
15–30 mm	10	50–100 mm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

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

3.1. Saw band start



1. Turn the main switch of the saw into **position 1 – ON**. The main switch is on the side of the control panel (right side from the point of view of operator standing behind the panel), see arrow.

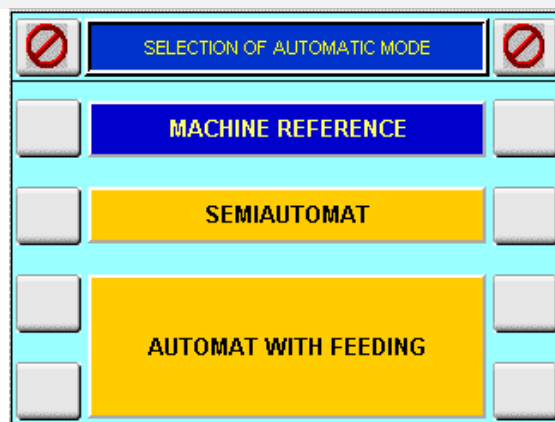


2. After start of the control system the initial window appears on LCD. The operator may select:

1.	Select machine operation with key switch , see next point
2.	Make changes in the cutting modes , see chapter Machine control
3.	Make changes in the maintenance parameters, see Maintenance parameters chapter.

3. Select the machine mode by the key on the control panel (control panel, pos. 9)

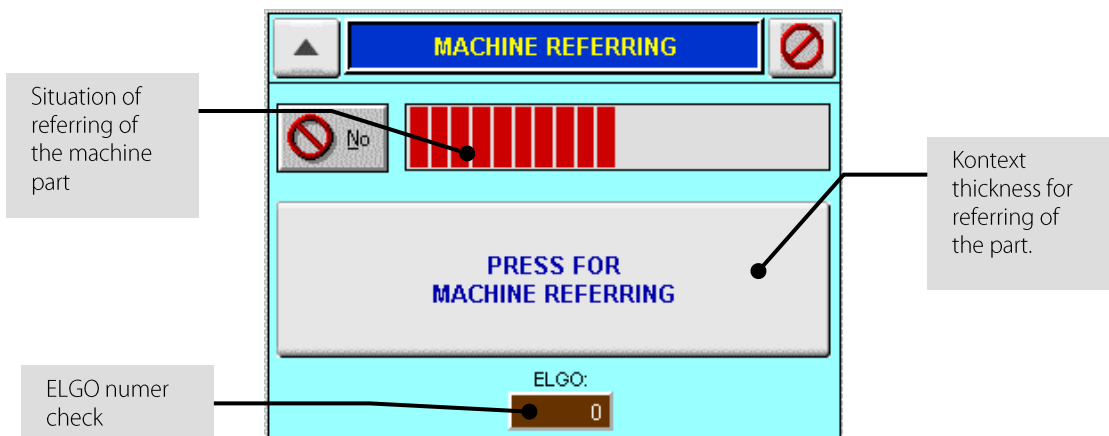
1.	Switch to position 1 to enter machine set up mode
2.	Switch to position 2 to turn machine into operational mode



4. Machine referring (see chapter Machine referring) must be made before One-cut automat or Feeder automat mode is used.
5. After the machine is referred one of the machine operation modes may be used.

3.1.1. Machine referring

Machine referring is necessary for correct operation of the saw in automatic mode.



Function buttons – press to automatically perform the referring process. Select any item to automatically start referring of all parts of the machine. After correct referring the indication in the left part of the display turns to YES.

Referring stop – press to stop the referring process

ELGO – linear sensor on the feeder chek; does not measure any particular value, just checking the sensor operation.

3.2. Control panel – description



1	Feeder vice Buttons to tighten / release the feeder vice jaws
2	Main vice Buttons to tighten / release the main vice jaws
3	Feeder movement Feeder movement to / from saw
4	Frame up / down While pressing both buttons are activated rapid, rapid arm operates one direction up (first press the button for the direction of the arm up, then the other arm button down)
5	Touch screen LCD Displays current state of the operation. Function keys F1 to F10 are located along both sides of LCD.
6	Regulation valve speed adjustment of the arm lowering Regulation valve sets the lowering speed of the frame into the cut. The speed is limited by the adjustment of the pressure regulation in the cut on the guiding cubes. Note: If the throttle valve is closed too tightly, the valve seat may be damaged and may start to leak. Tighten the valve lightly.
7	Frequency changer Turn to change to speed of the saw band.
8	STOP button Interrupts the cycle, to restart press 8 – START button. START button Press to start the work cycle. Press 8 – STOP to stop the cycle.
9	Machine mode selection • 1 – Adjustment mode • 2 – Machine operation mode • 0 – Machine setting mode
10	Safety circuit Press button to start the safety circuit
11	TOTAL – STOP button Immediately stops the machine in emergency.

3.3. Service parameters

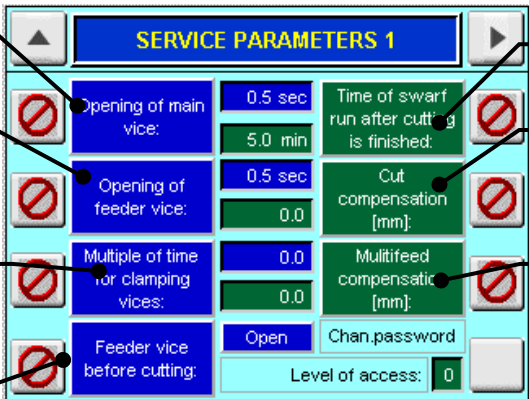
Attention!

Wrong setting of following parameters may damage the machine. Change the values reasonably!

Enter the service parameters menu:

1.	Turn the key switch into position 0	
2.	Select the item Service parameters on LCD	
3.	To leave the menu:	- Turn the key switch to different position - Press  button

3.3.1. Service parameters 1

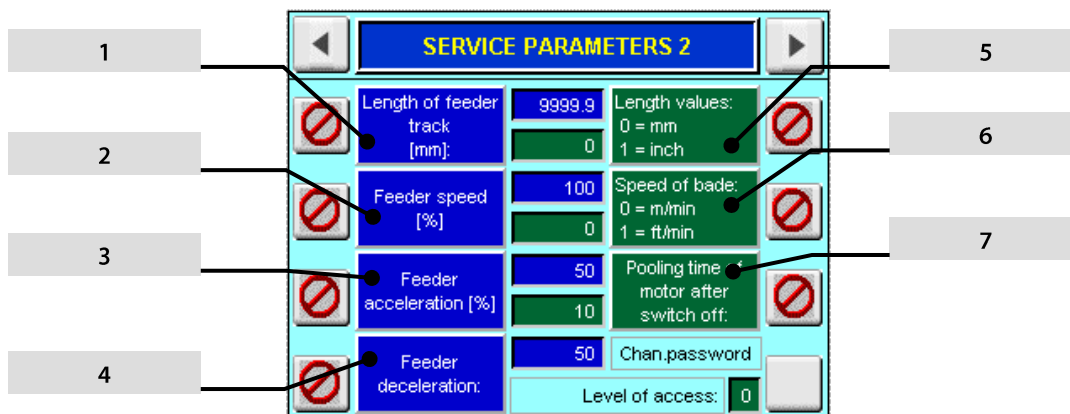


The screenshot shows the 'SERVICE PARAMETERS 1' menu. Numbered callouts point to the following settings:

- 1: Up arrow button
- 2: Opening of main vice: 0.5 sec
- 3: Opening of feeder vice: 0.5 sec
- 4: Multiple of time for clamping vices: 0.0
- 5: Right arrow button
- 6: Time of swarf run after cutting is finished: 5.0 min
- 7: Cut compensation [mm]: 0.0

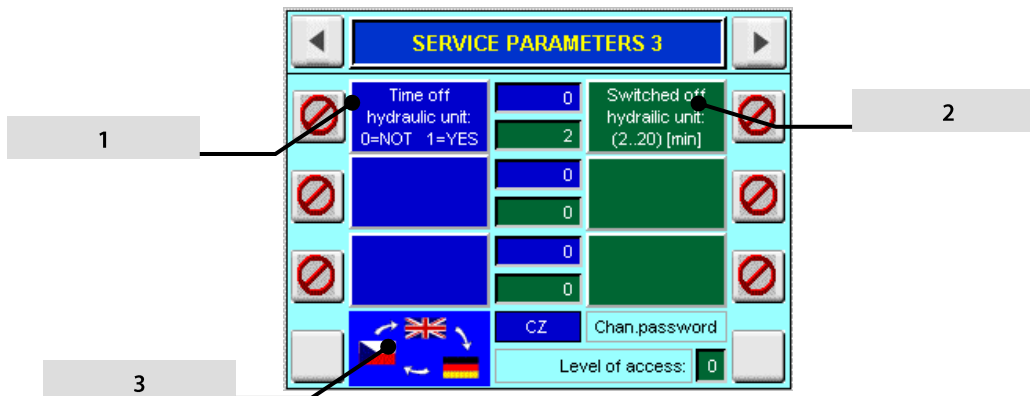
Pos.	Function
1.	Main vice opening time – vice opening time. The vice opens only for this period of time, does not opens fully to save the time.
2.	Feeding vice opening time – Guarding time of the hydraulics to open the feeding vice.
3.	Multiple time factor for vice clamping – Check time for vice clamping. The time factors correspond with multiple check time on the pressure switch. 1 – is detected as clamped if during the certain time interval (100% of the time interval) no change of the pressure is detected on the pressure switch. e.g. 1,2 – the vice will be detected as clamped if no pressure change will be detected on the pressure switch for $100\% \times 1,2$ time interval (i.e. for 20% longer time period).
4.	Feeding vice prior to cutting – Setting of the feeding vice prior to cutting – open / closed.
5.	Operation time of the remover after cutting – Time of operation of the remover after the cut has been finished. Note: Chip remover is auxiliary accessory.
6.	Offcut correction – width of the saw band, important value for calculation of the lengths in automatic mode.
7.	Correction of multiple feeding – correction for correct operation of the feeder.

3.3.2. Service parameters 2



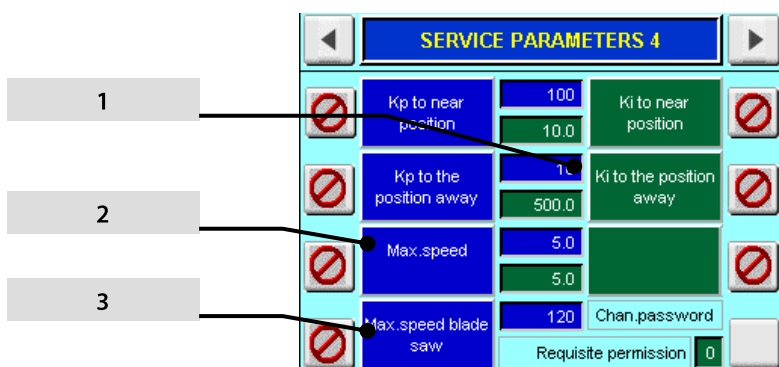
Pos.	Function
1.	Feeder travel length – parameter of the maximum feeder length for multiple feeds.
2.	Feeder speed – maximum speed of feeder
3.	Feeder acceleration – value of the feeder acceleration. The parameter is suitable for feeding heavy and unstable material (due to base shape and dimensions). These values are used only for movement with loaded feeder.
4.	Feeder deceleration – value of the feeder deceleration (breaking). The parameter is suitable for feeding heavy and unstable material (due to base shape and dimensions). These values are used only for movement with loaded feeder.
5.	Selection of the units for length in control system – - metric (mm) - imperial (inches)
6.	Selection of the units for speed in control system - m.min⁻¹ - ft.min⁻¹
7.	Selection of electromotor pooling time after cut – Drive of saw blade will run for a fixed period and will be cooled

3.3.3. Service parameters 3



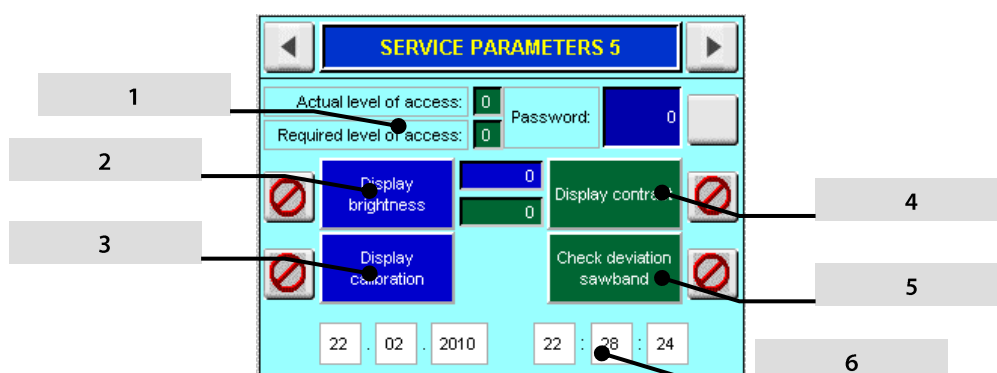
Pos.	Function
1.	Switch off the hydraulic system of the machine after certain period: ANO – the system switches off after selected period NE – the hydraulic circuit will run until the machine is switched off
2.	The parameter sets the time for hydraulic system switch of.
3.	Language selection – displays following selection of the control software languages

3.3.4. Serviceparameter 4



Pos.	Funktion
1.	The constant movement of the feeder. Do not change!
2.	Max speed feeder i(n both directions)m.min ⁻¹
3.	Max. speed blade saw v m.min ⁻¹

3.3.5. Serviceparameter 5



Pos.	Funkce
1.	Permissions - without registering with the desired password can not be parameters and their values to the appropriate privilege level to change
2.	The brightness of the LCD
3.	Calibration LCD surface contact
4.	Adjusting the contrast of the LCD.
5.	Deviation sawband – no function
6.	The system date and time - it is appropriate to adjust the date and time for the proper recording of all errors and messages.

3.4. Machine operation – Semiautomat

Caution!

Be careful when the feeder goes to the arm! If the saw arm is rotated to a greater angle than 0°, there is a risk of collision between the arm and the feeder.

To enter the Semiautomat:

1.	Turn the key switch into position 2 – Working mode 
2.	Select Semiautomat on LCD 
3.	Enter the parameters for Semiautomat in the following menu.

Preparation before cutting:

Enter the parameters for cutting in “Semiautomat” n this system menu.

⊘
SEMIAUTOMAT
⊘

START button = start of cycle

Type of cooling:	End of cycle:
Without cooling	End on top
Turn. off the band after cut:	Vice after cutting:
Do not turn off saw band	Stays clamped
Turn off cooling after cutting:	Use of scavenger:
Do not turn off cooling	Do not use scavenger

Option	Description
Type of cooling: Without cooling	Cooling method during cutting: - Cooling liquid - Micronization (optional accessory) - No cooling
Turn. off the band after cut: Do not turn off saw band	Switch off the saw band drive after cut – Switch off the band / do not switch off the band.
Turn off cooling after cutting: Do not turn off cooling	Switch off the cooling pump after cut – Switch off the pump / do not switch off the pump.
End of cycle: End on top	After the cut the frame: - ends up, drive to upper limit switch position - drive over the material
Vice after cutting: Stays clamped	After the cut the main vice: - stays clamped - releases the clamped material
Use of scavenger: Do not use scavenger	Use the chip remover during cutting – YES/NO.

3.4.1. Cutting procedure in Semiautomat

Cutting progress in "Semiautomat":

1.	Prepare the cutting material, load it to the saw and clamp into vice
2.	Set the Semiautomat, see previous text – Preparation before cutting.
3.	Press START button to start.
4.	The following menu appears on LCD, the frame starts to descend into the cut – the semiautomatic cycle starts.
5.	End the Semiautomat mode by turning the key switch into other position.

Window showing progress of the semiautomat

⊘
SEMIAUTOMAT
⊘

STOP button = end of cycle

Speed of band:	Cycle time:	Number of pieces:
0 m/min	0.0 min	0 St

Type of cooling:	End of cycle:
Without cooling	End on top
Turn. off the band after cut:	Vice after cutting:
Do not turn off saw band	Stays clamped
Turn. off cooling after cut:	Use of scavenger:
Do not turn off cooling	Do not use scavenger

Item	Description												
Speed of band: 0 m/min	Saw band speed set by frequency changer – control panel, position 7												
Cycle time: 0.0 min	Total time of the One cut automatic mode duration.												
Number of pieces: 0 St	Number of pieces cut in the One cut automatic mode.												
<table border="1"> <tr> <td>Type of cooling:</td><td>End of cycle:</td></tr> <tr> <td>Without cooling</td><td>End on top</td></tr> <tr> <td>Turn. off the band after cut:</td><td>Vice after cutting:</td></tr> <tr> <td>Do not turn off saw band</td><td>Stays clamped</td></tr> <tr> <td>Turn. off cooling after cut:</td><td>Use of scavenger:</td></tr> <tr> <td>Do not turn off cooling</td><td>Do not use scavenger</td></tr> </table>	Type of cooling:	End of cycle:	Without cooling	End on top	Turn. off the band after cut:	Vice after cutting:	Do not turn off saw band	Stays clamped	Turn. off cooling after cut:	Use of scavenger:	Do not turn off cooling	Do not use scavenger	Individual parameters set in menu Preparation before cut .
Type of cooling:	End of cycle:												
Without cooling	End on top												
Turn. off the band after cut:	Vice after cutting:												
Do not turn off saw band	Stays clamped												
Turn. off cooling after cut:	Use of scavenger:												
Do not turn off cooling	Do not use scavenger												

3.5. Machine control – Automat

Caution!

It is possible to cut angles to max. 45° in automatic mode. If the saw arm is rotated to a greater angle, collision between the arm and the feeder will come in.

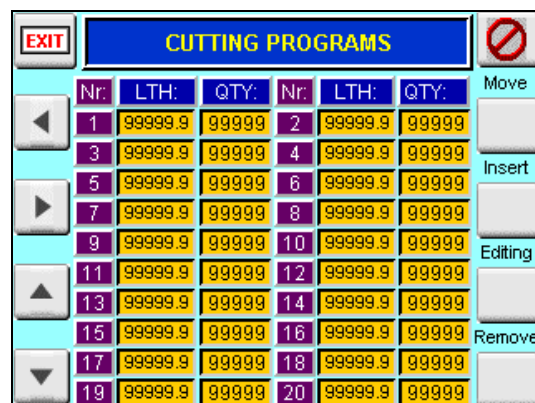
3.5.1. Cutting programs

The cutting programs are important part of the automatic cycle. It is possible to define up to 20 programs. It is always started from program no. 1. All sequence of the programs is performed, until the first program without any parameters set (both values are zero).

To enter the cutting parameters selection mode:

1.	Turn the key switch into position 0 – machine adjustment. 
2.	Select Cutting modes item on LCD  List of 20 programs is displayed; see section below <i>Setting of the cutting parameters</i>.
3.	The other way to display the Cutting parameters selection mode is to use Preset item in automatic cycle selection. 

Entering of the cutting parameters:



Function keys for Cutting programs selection:

Button	Description
	To move left in the values of Cutting programs table.
	To move right in the values of Cutting programs table.
	To move up in the values of Cutting programs table.
	To move down in the values of Cutting programs table.
	To move any program to different position in the list.
	To enter the program to a new place in the list.
	To edit the values of the program.
	To remove any program (reset the values).

The active field in the program list is displayed in red.

Nr.	LTH.	QTY.
1	99999.9	99999
3	99999.9	99999
5	99999.9	99999

Two values are set for each program:

- Length of individual pieces
- Number of individual pieces

3.5.2. Automat with Feeding

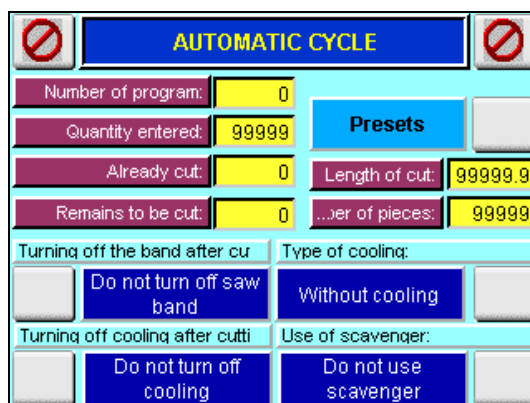
To enter the automat:

1.	Turn the key switch into position 2 – Working mode 
2.	Select the item Automat with feeding on LCD 
3.	The menu to enter the new values for automat or menu allowing proceeding with started automat follows.

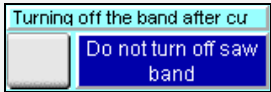
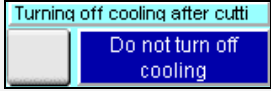
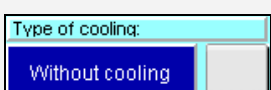
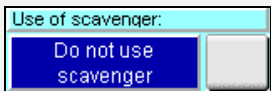
Preparation before start of the automatic mode:

This menu allows entering the start program and parameters adjusting the automat.

Select the menu item **Presets** to enter the Cutting mode, see previous chapter **Cutting modes**.

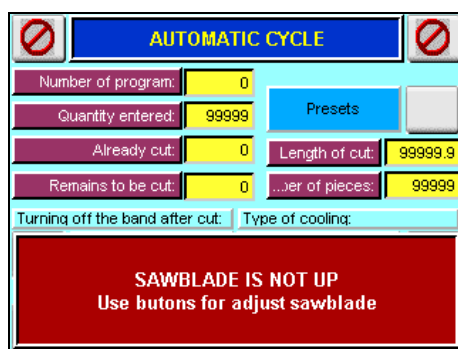


The screenshot shows the 'AUTOMATIC CYCLE' menu with various parameters and settings. The parameters include: Number of program (0), Quantity entered (99999), Already cut (0), and Remains to be cut (0). The settings include: Type of cooling (Without cooling), Use of scavenger (Do not use scavenger), and a 'Presets' button.

Button	Description
	Switch off the saw band drive after cut – Switch off the band / do not switch off the band.
	Switch off the cooling pump after cut – Switch off the pump / do not switch off the pump.
	Cooling method during cutting: - Cooling liquid - Micronization (optional accessory) - No cooling
	Use the chip remover during cutting – YES/NO.
	Enter the cutting parameters

Button	Description
Number of program: 0 Quantity entered: 99999 Already cut: 0 Remains to be cut: 0 Length of cut: 99999.9 Number of pieces: 99999	Parameters: - Program no. – number of the start program - Set number – loads the number of pieces from program(s) - Finished cut – number of pieces cut before the last interruption of the program - Remains to be cut – number of pieces remaining to be cut - Cut length – length of one piece - Number of pieces – already cut

If the measurement frame (for detection of clamped material for cutting) is not installed, the operator is before the start of the automatic mode requested to set the saw frame into its highest position to the upper limit switch.



Adjust position to the upper limit switch by buttons on the control panel in position 7.

Procedure for Automat cutting:

1.	Prepare the cut material
2.	Set the automatic cycle, see Preparation before start of the automatic cut
3.	After START button is pressed, the software asks if the material in the first cut should be cut.
4.	The following menu appears on LCD, the frame starts to descend to the cut – semiautomatic cycle starts.

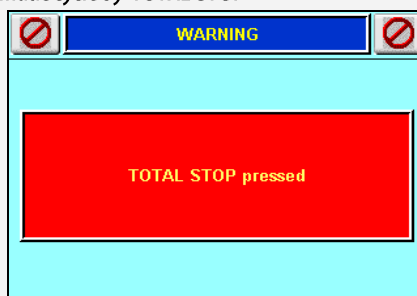
3.6. Work cycle interruption

Attention!

When STOP button is pressed during movement of some parts of the machine (frame, feeder...), the operation is finished and after that the machine is stopped. For emergency stop use TOTAL-STOP button.

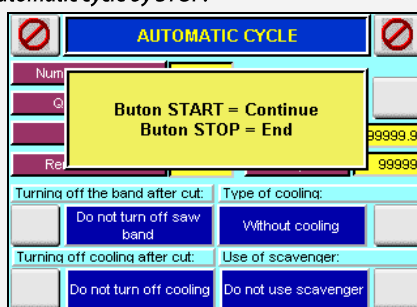
Possibilities for stopping:

» Stopping of the automatic cycle by TOTAL-STOP



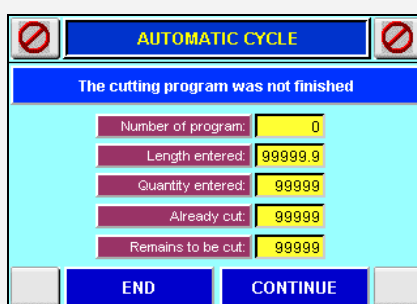
TOTAL-STOP button activation is indicated on LCD.

» Interruption of the automatic cycle by STOP:



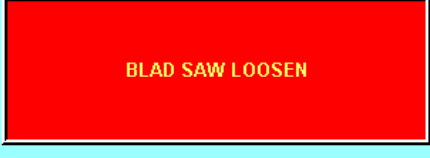
If the operator presses the **STOP** button, the cutting process is stopped. When **START** button is pressed, the cutting continues. Repeated pressing of **STOP** button stops the automatic cycle.

» Continue in automatic cycle



The process interrupted in this way can be continued – if the operator returns to the Automatic mode, the following menu is displayed. Press the function button **Continue** to continue with the automatic cycle from the position of interruption. Select item **Stop** to finish the automatic process; the operator may start the new process with new values.

3.7. System error messages

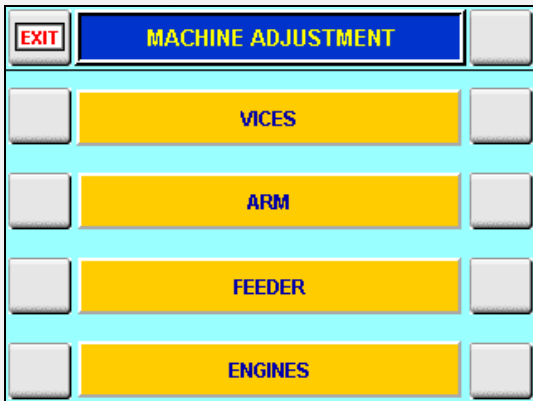
Error message	Description
 MESSAGE  	Safety circuit - The safety circuit is not switched on; the machine cannot be used. - Press the safety circuit button on the control panel (pos. 10)
 REPORT  	Machine reference - The machine cannot start without referencing – see chapter Referencing of the machine. - Proceed according to directions in message –turn the key to position 0 and select Machine referencing in the menu.
 REPORT  	Saw band - The system monitoring saw band stretching level detected insufficient stretching. - Stretch the band to recommended level.
 WARNING  	Total Stop TOTAL-STOP has been pressed.

3.8. Band saw adjustment

The machine is able to perform the special adjustment code, which allows the operator to test and set the main peripherals of the machine.

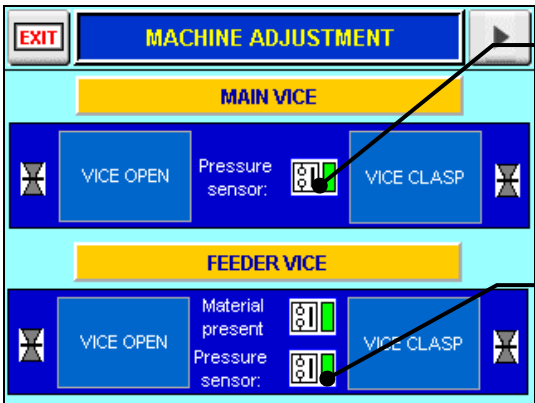
Further setting of the band saw, like setting of the cutting angle and others, is performed in the machine itself without the control software.

Entry to the Machine adjustment mode:

1.	Turn the key switch to position 1 – Machine adjustment. 
2.	LCD panel shows the following menu with four parts of the band saw.  Machine adjustment mode allows operators to test parts of the machine, e.g. after replacement of parts or adjustments.
3.	To leave the menu: • Turn the key switch to other position • Press  button

3.8.1. Vice adjustment

This menu allows testing both vices of the saw Individual 520.360 GANC.



MAIN VICE

VICE OPEN Pressure sensor:  VICE CLASP

FEEDER VICE

VICE OPEN Material present Pressure sensor:  VICE CLASP

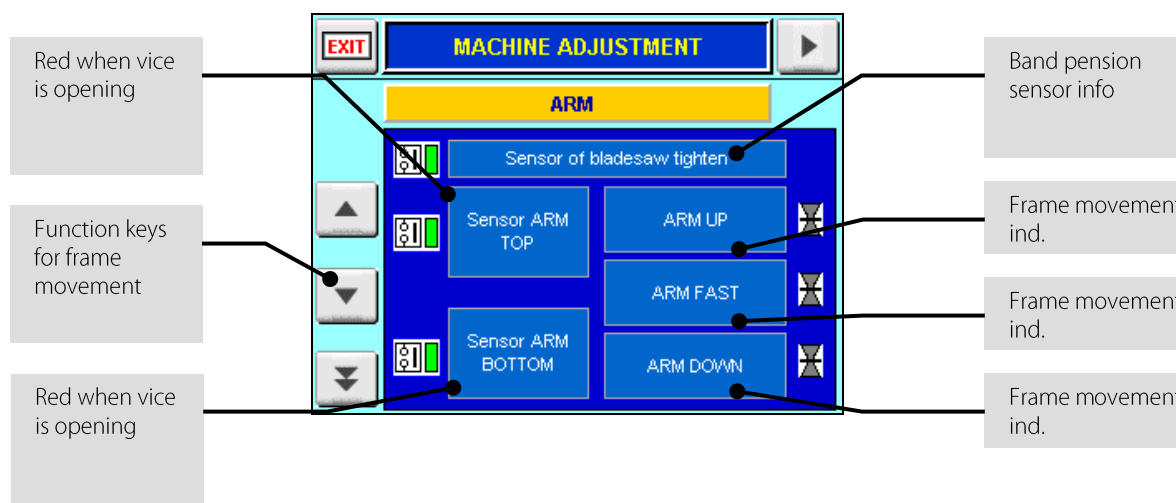
Pressure sensor for main vice
Green – activ
Red –no activ

Pressure sensor for feeder vice
Green –activ
Red – no activ

Vice movement is controlled by the respective buttons on the control panel (positions 1 and 2.).

3.8.2. Frame adjustment

This menu allows to check the band saw frame movement. The menu **Frame parameters** is also suitable for testing of the limit positions of the frame and adjustment of the limit switches.



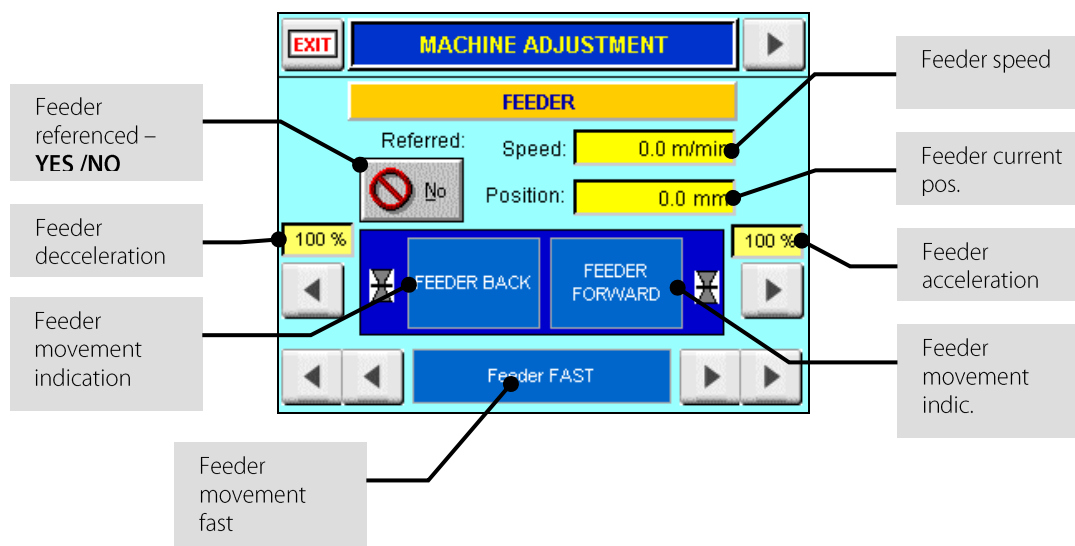
Function keys for frame movement:

Button	Description
	Frame movement up , the same movement is initiated by black part of the button on position 4 on the control panel.
	Frame movement down , the same movement is initiated by white part of the button on position 4 on the control panel.
	Frame movement fast down , the same movement is initiated by both buttons on position 4 on the control panel.

3.8.3. Feeder adjustment

This menu shows all parameters concerning the machine feeder. The operator can test all possible movements of the feeder either by function keys on LCD or by buttons for feeder movement on the control panel – position 3.

During feeder movement its speed and position is displayed as well as information about its correct referencing.



Function keys for feeder movement:

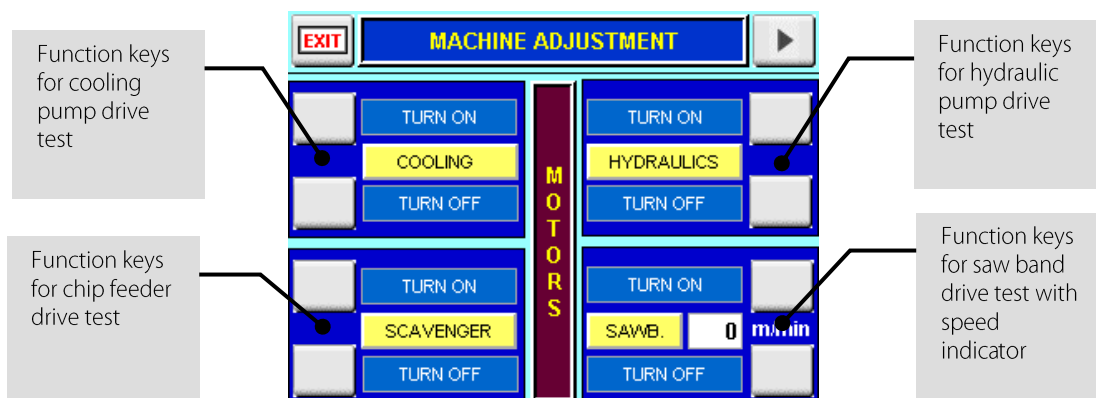
Button	Description
 	Normal speed feeder movement.
 	Higher speed feeder movement
 	

3.8.4. Drive adjustment

The last item of the Machine adjustment menu allows to test individual drives.

The drives are as follows:

- Cooling pumps
- Hydraulic aggregates (hydraulic pump)
- Chip remover movement (chip remover is optional part of the machine)
- Band saw movement



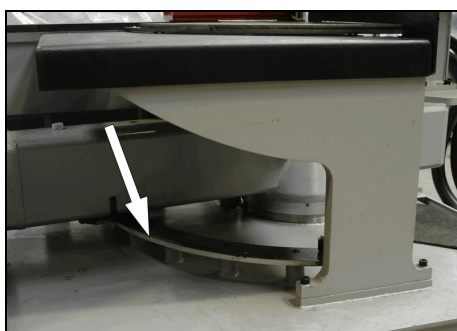
3.9. Band saw adjusting

3.9.1. Cutting angle setting

Band saw **Individual 520.360 GANC** allows to make cuts in angles between **0° to 60°**. For easy setting of the positions **0° – 60°** the machine is equipped with stops.



1. Release the fastening lever.



2. Swivel the frame to the desired angle by pulling the saw arm. Angle is shown on scale
3. After cutting angle setup tighten securing lever.

Attention!

Moving parts of the vice must be moved when saw arm has zero angle of rotation and closed vice jaws. Moving vice jaw of vice must be in endmost position otherwise there is a danger of collision saw arm with vice.

Attention!

It is possible to cut angles to max. 45° in automatic mode. If the saw arm is rotated to a greater angle, collision between the arm and the feeder will come in. Be careful when the feeder goes to the arm at the others modes of the machine. If the saw arm is rotated to a greater angle than 0°, there is a risk of collision between the arm and the feeder.

Electronic admeasurement (optional accessories)



Desired cutting angle is shown on LCD. How to use electronic admeasurement is described in special instruction manual.

Electronic measuring and display of the cutting angle is optional accessory and is not standard part of the machine.

3.9.2. Setting of the cutting speed

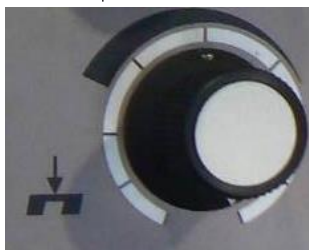


The speed of the saw band can be gradually adjusted from 20 to 120 m.min⁻¹. Set the speed as follows:

- Set the switch of the frequency changer on the control panel (position **6**) to required speed. The band speed is displayed during **semiautomatic cycle**.

3.9.3. Speed adjustment of the arm lowering

Set the speed of the arm lowering to the cut by control valve for Cutting pressure regulation (position **10**) on control panel.



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

Notice:

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

3.9.4. Adjusting band guides

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



1. Press button **STOP** on control panel (position **8**) to switch off the hydraulics and stop on 2 second.
2. Release the stopping lever of the listel (see picture).
3. Move the left part of the guide apparatus so that the left guide cube edge is as close to the cut material as possible.

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

3.9.5. Saw frame lift stop setting

Stop position the upper arm position is monitored by readers and terminals, which are located in the back of the arm.

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



Note:

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

1. Lift the saw arm to the upper position.
2. Take the arm using the button **Arm up** (position **4**) to the highest position.
3. Insert a material into the vice and carefully lower the saw arm to the material using the button **Arm down** (position **4**) or with **rapid**.
4. Stop the saw arm **5-10mm** above the material.
5. Lift height adjust arm (by turning the locking knob) according to the height of material so that the upper part of the adjustable eccentric with a scale showing the desired value (the value of the scale height of the eccentric Responsible worth of material)
6. Press the **START** button (position **8**) to the beginning of the cutting cycle.

Set arm lowering using incremental encoder position into the upper arm (optional accessories):

Note:

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

1. Lift the saw arm to the upper position.
2. Take the arm using the button **Arm up** (position **4**) to the highest position.
3. Insert a material into the vice and carefully lower the saw arm to the material using the button **Arm down** (position **4**) or with **rapid**.
4. Stop the saw arm **5-10mm** above the material.
5. Press the **START** button (position **8**) to the beginning of the cutting cycle.
6. After sawing material to the bottom position of the arms incremental encoder returns to the upper position of the arm, ie. to the position it was in before being put into action by pressing the **START** button (remember you saw this position – frame lift stop)



3.9.6. Frame bottom stop position setting

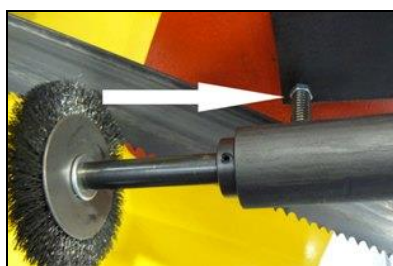
The bottom stop position of the frame limits the lowest position of the frame. This position must be checked once per month. In case of wrong setting the vice may be cut or the material is not cut completely.



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

3.9.7. Brush setting

The brush influence the cutting power, lifetime of the saw band, circular wheels, hardmetal guides and precision of the cutting. Replace the brush each shift.



1. Release the tightening bolt of the brush (see arrow) so the brush can be moved.
2. Set the brush to the saw band. Ends of the brush bristles should not touch the saw band teeth.
3. Tighten the bolt.
4. If the brush is not rotating properly (brush drive wheel slips on the saw band drive wheel) press down the wheel using the bolt to the saw band drive wheel.

3.10. 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!

3.10.1. Handling agent selection

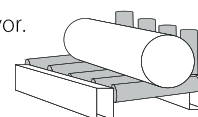
- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

3.10.2. Insertion

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

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

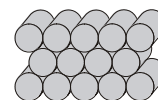
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!



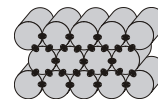
3.10.3. Bundle material cutting

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

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

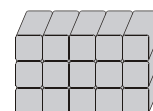


Always weld the material at the rear end of the bundle to secure it from moving.



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

Square material bundle:



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

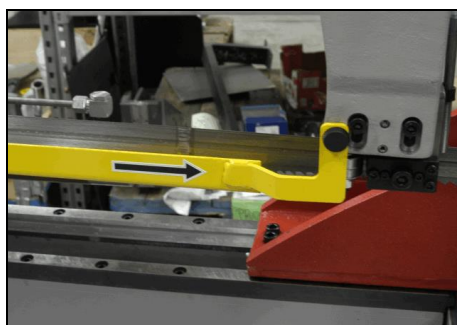
4. **Údržba stroje / Wartung / Machine service**

4.1. Saw band dismantling

1. Press button **8** to lift the saw arm to maximum position.
2. **STOP hydraulic** with button **5**.



3. Open all three covers on the saw arm.



4. Dismantle left protective cover of the band (arrow). Cover is fastened by screws..
5. Release the screw holding the brush. Turn the brush to the side



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



7. Pull down the band from the wheels.
8. Pull up the saw band from the guiding cubes.

4.2. Saw band installation

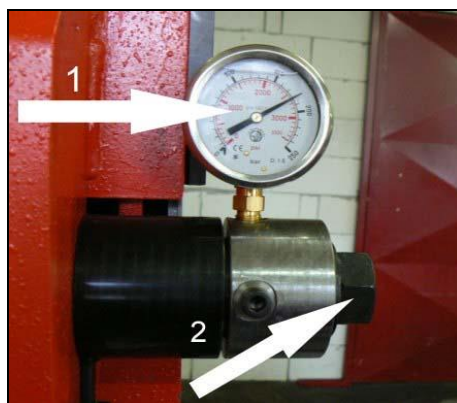
1. Prior to installation, clean all track wheels, guide cubes and inner side of the arm thoroughly of all traces of chips and dirt. *Keep in mind the teeth direction when installing the saw band.*
2. Insert new saw band in the guide cubes. Make sure the saw band runs between both guide rollers and it is pushed all the way to the top.
3. Put the saw band on both guide wheels. Make sure that the saw band ridge fits tightly to the wheel rim. Then push the saw band as far back as possible.
4. Stretch the saw band by means of the screw, that the band did not falls from wheels.
5. Install yellow protective cover of the band.
6. Move the brush to the saw band. Tighten the securing screw.
7. Close the covers of both driving wheels.
8. Saw band installation is finished.

4.3. Saw band stretching and inspection

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

4.3.1. Saw band stretching

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



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

4.3.2. Saw band inspection

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

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

4.4. Saw band run setting



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

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

Check saw band run adjustment again.

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

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



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



- If the drive engine is switched on, but it is not running, turn with the screw clockwise, until the engine begins run..
- If the drive engine is possible switched on, turn with the screw anticlockwise, until the engine is stopped and then turn with the screw clockwise, until the engine begins run.

4.6. Cooling agents and chips disposal

The quality of the cooling agent will deteriorate due to:	If the solution is too weak:	If the solution is too strong:
• use of contaminated water • 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

4.6.1. Coolant device inspection

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

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

Note:

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

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

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

* According to manufacturers' instructions

4.6.2. Chips disposal

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

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

4.7. Hydraulic, Greases and oils

4.7.1. Gearbox oils

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

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

Attention:

When replacing, use oils recommended by BOMAR or oils, which has comparable parameters from the other manufacturers.

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

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

Band saw	Gearbox oil	Capacity
Individual 520.360 GANC	Shell Tivela S 320	3,3 l
Swarf conveyor	Shell Tivela S 320	0,075 l

Comparative table of the gearbox oils

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

4.7.2. Lubricant greases

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

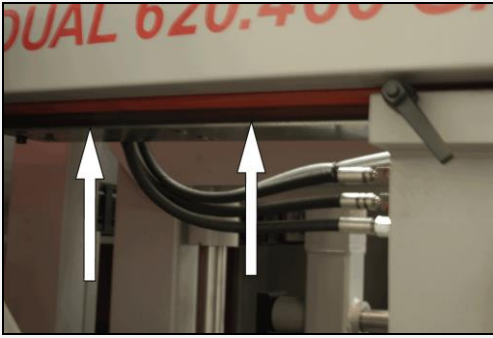
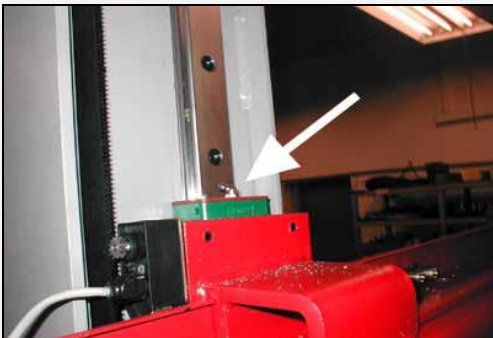
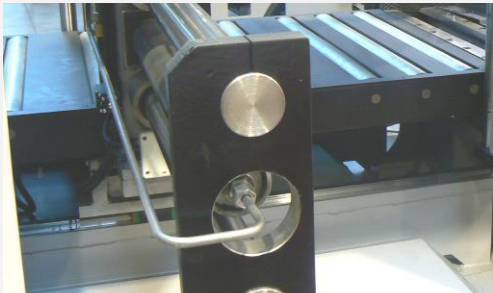
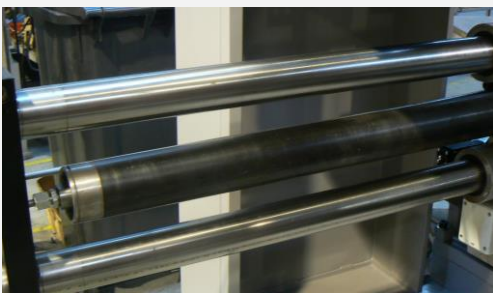
Comparative table of the lubricant greases:

Manufacturer	Type of the lubricant grease
BP	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

Manufacturer	Type of the lubricant grease
Texaco	Multifak EP1

4.7.3. Lubrication

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

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

4.7.4. Hydraulic oils

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

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:

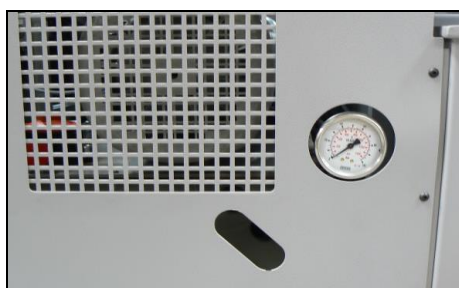
When replacing, use oils recommended by BOMAR or oils, which has comparable parameters from the other manufacturers. Do not forget, that mineral and synthetic oils may not be mixed!

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		

4.7.5. Hydraulic oil level check

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



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

4.8. Machine cleaning

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

- Clamping jaws guiding of the vice.

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

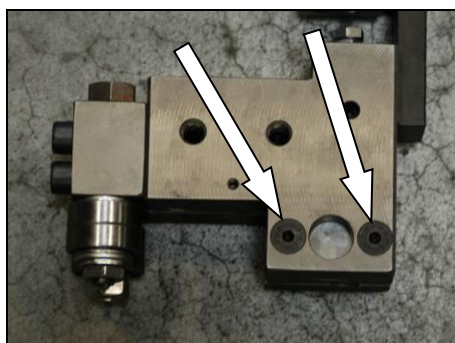
4.9. Worn pieces replacement

4.9.1. Pushing bearing replacement

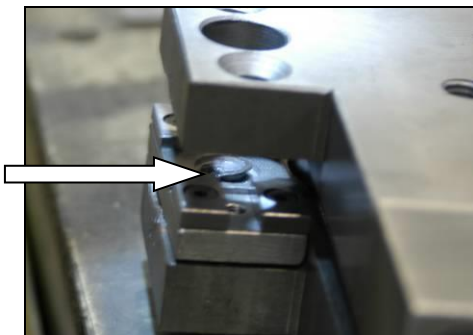
If it is impossible to adjust the bundle gripping assembly and the pushing bearing is worn, it needs to be replaced



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



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



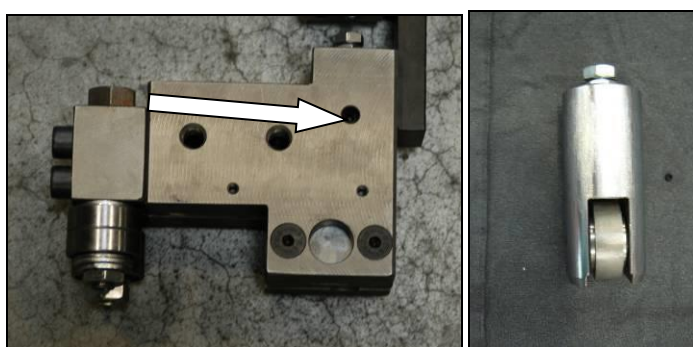
6. Remove retaining ring. Then unmount adjusting screw.



7. Remove other three screws.



8. Carefully remove the hardmetal. Remove disc springs.



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



10. Insert the pivot to the vice.

Attention:

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

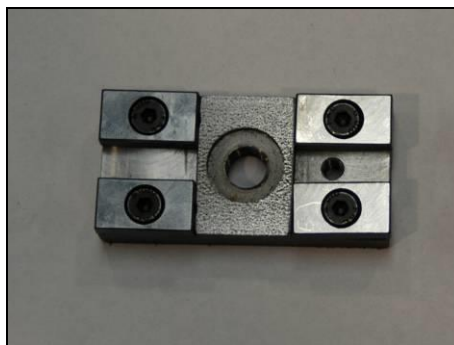
11. Remove the bearing pivot from the bearing holder by means of the swager.



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

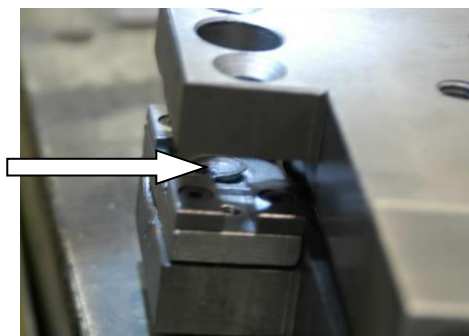


17. Insert the disc springs. The number of disc springs must match the number of dismantled springs. Disc springs are folded against each other 1 to 1 Odd plate spring is near the harmetal carbide.



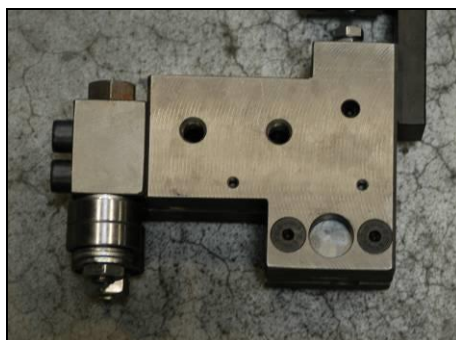
18. Insert the new hard metal guide. **Attention, Do not lose disc springs.** Ensure proper position of carbide guides – holes for 3 stop screws must be in the same position as the holes in a guiding cube.

19. Insert and tighten central screw.



20. Insert the retaining ring on central screw.

21. Insert 3 stop screw around central screw.



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



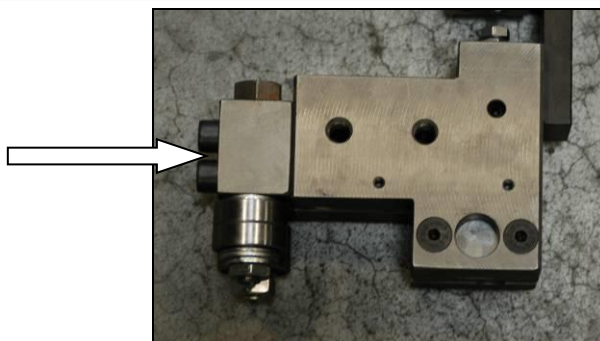
23. Using a short piece of the blade used on the machine, adjust the width of the gap between the guides. Loosen the central screw. Set the gap by central adjusting screw. Belt guides must walk freely without large and will also not scrub.

4.9.2. Saw band guiding pulleys replacement

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

Attention:

Guiding pulleys must be replaced together on both guiding cubes!



1. Release 2 screws. Dismantle the guiding cube of the saw band.

Attention:

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



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



5. Change all bearings and other worn parts.
6. Install eccentrics to the cubes. Install components on both eccentrics in given order. Put bearings by means of the preparation on eccentrics.

Attention:

Do not replace the eccentrics placing in the cube.



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



8. Insert the saw band to the guiding cube (cca 15 – 20 cm). Secure the movable hard metal guide with scotch so, that the saw band is pressed with guides and it is possible to move with saw band
9. Set the eccentrics by means of the wrenches, the saw band must run in the centre. Guide pulleys must not press too much on the band, but must spin freely during the band run

Optimal distance between the band and the pulley is 0,05 mm.

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

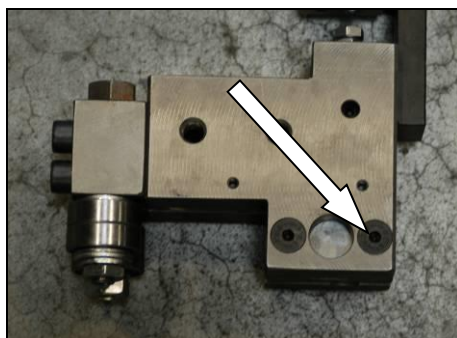
4.9.3. Hard metal guides replacement

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

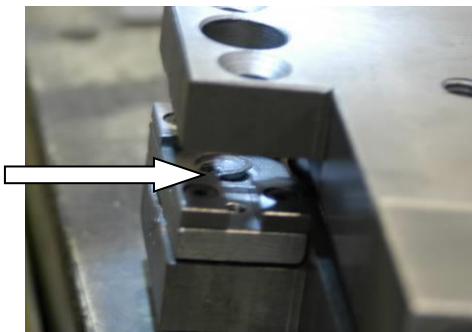
ATTENTION!

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

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



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



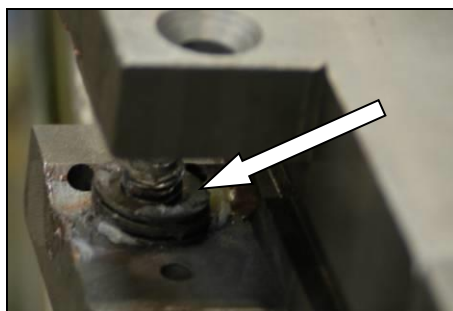
6. Remove retaining ring. Then unmount adjusting screw.



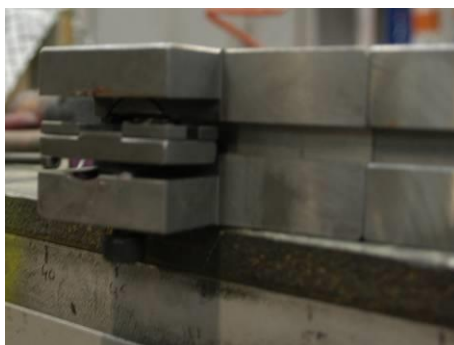
7. Remove other three screws. .



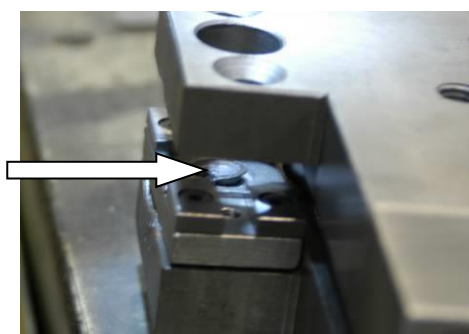
8. Carefully remove the hardmetal. **Pozor, nesmí dojít ke ztrátě talířových pružin.**



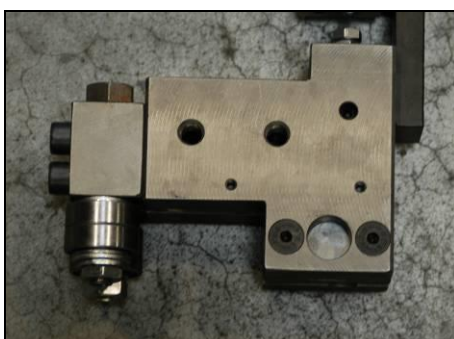
9. The number of disc springs must match the number of dismantled springs. Disc springs are folded against each other 1 to 1 Odd plate spring is near the hardmetal carbide.



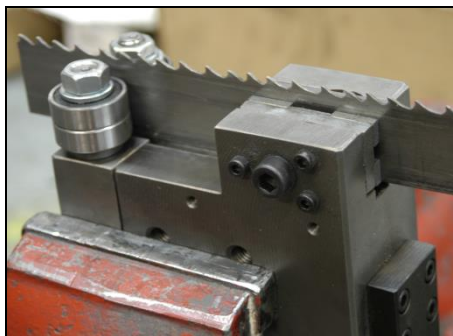
10. Insert the new hard metal guide. **Attention, Do not lose disc springs.** Ensure proper position of carbide guides – holes for 3 stop screws must be in the same position as the holes in a guiding cube.
11. Insert and tighten central screw.



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



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



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

4.9.4. Brush replacement

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

1. Hold shaft of the brush by wrench.



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

5. Závady / Störungen / Troubleshooting

5.1. Mechanical problems

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

Problem	Possible causes	Repair
	- Worn saw band guide bearings.	Check guiding bearings and if you notice some sort of excessive damage, replace them according to chapter „Worn pieces replacement“
	- Wrongly adjusted guiding cubes of the saw band.	Set guiding cube according to chapter „Servicing and adjustment“
	- Wrongly adjusted down feed and saw band speed.	Adjust the feeding and speed of a saw band according to values published by saw band manufacturer.
	- Different material quality.	Adjust feeding and speed of a saw band according to desired material (try cut-test).
	- Low-class saw band	Replace the saw band (contact your local accessory supplier for more information)
	- Wrongly chosen saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly adjusted tracking.	Check the space between top of a saw band and driving wheel. Perhaps adjust the tracking as described in chapter „Servicing and adjustment“
4. Insufficient cut output.	- Worn saw band.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrong saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly set down feed and speed of a saw band.	Set feed and speed of a saw band according to values published by saw band manufacturer.
5. The cut is not finished.	- Wrongly adjusted lower stop point of the saw frame.	Check lower limit switch and screw.
	- Stop point surface is messed-up.	Cleanse stop point surface of the limit switch from debris and residue material.
6. By choke is not possible turn	- Metal clamps between valve and panel.	Clamps must be removed and put on the shaft O-Ring about 10x2 mm.
	- Metal clams are in body of valve.	Valve must be cleared or changed.
7. Saw band drive cannot be started.	- Pressure switch is adjusted wrong.	Set the pressure switch according to chapter „Servicing and adjustment“
	- Pressure switch is defective.	Replace defective parts of the pressure switch.
8. The saw bands are cracked.	- In stretching wheel is wrong adjusting geometry.	Adjust distance band from recess wheel c.2 mm according to operating instructions.
	- Hard metal plates of circuit saw band are not adjusting.	Hard metal plates of circuit saw band must be adjusting according to operating instructions.
	- Guiding cubes are not adjusting (bearings + hard metal circuit)	Guiding cubes must be adjusting (bearings + hard metal circuit) according to operating instructions.
	- Bearings of guiding cubes are used (rolling elements are damaged or outside ring of bearing has conical form).	Bearings of guiding cubes must be replaced. Bearings must be adjusting according to operating instructions.
9. Damage tooth system of the saw band	- In gripping the lifting cylinder is backlash.	
	- Squeezed pin upper or downer holder of the lifting cylinder.	Exchange complete upper or downer holder of lifting cylinder.
10. The saw is cut downing.	- Geometry of hardmetal guiding cubes is wrong adjusted.	Hardmetal guiding cubes must be adjusted.
	- Bearings of guiding cubes are used.	Bearings of guiding cubes must be replaced.
11. Cleansing of the saw band is not functional.	- Elastic wheel of the brush drive is worn-down.	Elastic wheel of the brush must be changed.
	- Knurling of the driving wheel is worn-down.	Driving wheel must be changed.
	- The shaft of the brush drive is rusted.	The shaft of the brush must be cleaned and oiled.

Problem	Possible causes	Repair
	- The brush position and the brush cover is adjusted wrong – with the brush cannot be turned.	The brush cover must be posed, in order to the brush can be turned.
12. The saw arm periodically rise and fall during the cut; this cause short lifetime of the saw band.	- Backlash in driving wheel lodgement on the shaft.	Change the driving shaft for a long one, new bearings, distance ring, new driving wheel, spring, two covers on the forehead of the shaft + screws.
	- Worn channel for spring.	

5.2. Electric and hydraulic problems

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

6. **Schémata / Schemas / Schematics**

6.1. Elektrické schéma / Elektroschema / Wiring diagrams

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

Individual 360 GANC

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2.b	Kusovník artiklů/Parts list/Artikelstückliste	8.1.2015
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7	Vstupní obvody/Input circuits/Eingangskreise	4.2.2015
8	Vstupní obvody/Input circuits/Eingangskreise	28.1.2015
8a	Vstupní obvody/Input circuits/Eingangskreise	4.2.2015
9	Podavač/Feeder/Handlanger	3.2.2015
10	Moduly řízení/Control modules/Steuermodule	4.2.2015
11	Frekvenční měnič/Frequency converter/Frequenzumrichter	4.2.2015
12a	Bezpečnostní obvod/Safety circuit/Sicherheitsschaltung	4.2.2015

2

Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page.column)
-A1	PWM motor bridge	X20MM2436	B&R	91.995.215	1	/9.1
-A1.3.1	Digital input module	X20D19371	B&R	91.995.212	1	/7.1
-A1.3.2	Digital input module	X20D19371	B&R	91.995.212	1	/8.1
-A1.5.1	Digital output module	X20DO8332	B&R	91.995.213	1	/5.1
-A1.5.2	Digital output module	X20DO8332	B&R	91.995.213	1	/6.1
-BM1	Safety circuit relay - 3xNO, 24VDC	RT6	ABB	91.051.056	1	/12a.5
-CS1.1	Emergency-stop mushroom push - button + 3xNC	YWB1B-V4E02R	IDEC	91.060.084	1	/12a.2
-CS1.1	Contact - 1x NO	YW-E10	IDEC	91.061.044	1	/12a.2
-FA1.1	Motor starter - 0.4A	MS116-0,4	ABB	91.045.017	1	/3.4
-FA1.1	Auxiliary contacts - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/3.4
-FA1.2	Motor starter - 1A	MS116-1,00	ABB	91.045.019	1	/3.6
-FA1.2	Auxiliary contacts - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/3.6
-FA1.3	Motor starter - 1.6A	MS116-1,6	ABB	91.045.020	1	/3.7
-FA1.3	Auxiliary contacts - 1xNO+1xNC	HKF1-11	ABB	91.046.002	1	/3.7
-FM1	Frequency converter - 3.7kW, 3x400VAC	VFD037E43A	DELTA ELECTRONICS, INC.	91.012.094	1	/11.1
-FU1.1	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/4.4
-FU1.1	Fuse terminal	WK4/THS15U	WIELAND	91.251.102	1	/4.4
-FU1.2	Tube fuse - 8A/250V, slow, 5x20	T8A/250V	ESKA	91.230.032	1	/4.4
-FU1.2	Fuse terminal	WK4/THS15U	WIELAND	91.251.102	1	/4.4
-FU1.3	Tube fuse - 1A/250V, slow, 5x20	T1A/250V	ESKA	91.230.031	1	/4.4
-FU1.3	Fuse terminal	WK4/THS15U	WIELAND	91.251.102	1	/4.4
-KM1.1	Mini contactor - 4kW/400V, 3P	B6S-30-10-1.7-71	ABB	91.040.048	1	/6.1
-KM1.2	Mini contactor - 4kW/400V, 3P	B6S-30-10-1.7-71	ABB	91.040.048	1	/5.1
-KM1.3	Mini contactor - 4kW/400V, 3P	B6S-30-10-1.7-71	ABB	91.040.048	1	/5.2
-KM11	Mini contactor - 4kW/400V, 3P	B6S-30-01-1.7-71	ABB	91.040.049	1	/12a.7
-KM12	Mini contactor - 4kW/400V, 3P	B6S-30-01-1.7-71	ABB	91.040.049	1	/12a.8
-M1.5	Fan - 80x80x25, 24 V/73 mVA	EF8025B1-A99	SUNON	91.015.113	1	/6.6
-PA1.1	Switch fuse for the cylinder inserts - 1P, size 10	OPV10/3	OEZ	91.241.002	1	/3.8

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Těšební 1236/1 CZ 627 00, Brno	Scp/Machine/Machine: INDIVIDUAL 360 GANC	Název státního/územního podniku/územní jednotky: Kusovník artiklů/Parts list/Artikelliste	Verze/Version/Version: Název/Power supply/Einspeisung: Datum/Date/Datum Zpracoval/Processed/Not verarbeitet: Koska	ES-03.10.201.V1.3	2.a
				3x400V + PE + N, 50Hz	2
				4.2.2015	17



Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page.column)
-PA1.1	Tube fuse - 10A, 10x38, slow	PV10 10A aM	OEZ	91.230.041	3	/3.8
-PA1.2	Switch fuse for the cylinder inserts - 1P, size 10	OPV10/1	OEZ	91.241.001	1	/4.1
-PA1.2	Tube fuse - 4A, 10x38, fast	PV10 4A gG	OEZ	91.231.011	1	/4.1
-POT1.1	Potentiometer 4k7	TP195 4k7/N20A	GES-ELECTRONICS, a.s.	91.283.015	1	/11.6
-QSL1.1	Disconnector - 3P, 25A	OT25FT3	ABB	91.170.016	1	/3.0
-RCF0	Line filter	FFA 4-25-400	Ing. Miroslav Vlček	91.041.020	1	/3.1
-RCF1.1	Efferent RFC filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/3.3
-RCF1.2	Efferent RFC filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/3.5
-RCF1.3	Efferent RFC filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/3.6
-RCF11	Efferent RFC filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/3.2
-RCF12	Efferent RFC filter	FBOPR1624	Ing. Miroslav Vlček	91.041.015	1	/3.3
-SAL.2	Head of 3 positional key switch	M22-WRS3	EATON	91.060.058	1	/7.4
-SAL.2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/7.4
-SAL.2	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/7.4
-SQL.7	Safety Limit Switch - 2x NC	QKS8	KEDU	91.173.012	2	/12a.2;/12a.3
-SQL.8	Safety Limit Switch - 2x NC	QKS8	KEDU	91.173.012	2	/12a.2;/12a.3
-TS1.1	Double button head white/black start/stop	M22-DDL-WS-GB0/GB0	EATON	91.060.034	1	/8.1
-TS1.1	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/8.1
-TS1.1	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/8.1
-TS1.2	Double button head white/black, arrow close/open	M22-DDL-WS-*	EATON	91.060.055	1	/8.2
-TS1.2	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/8.2
-TS1.2	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/8.2
-TS1.3	Double button head white/black, arrow close/open	M22-DDL-WS-*	EATON	91.060.055	1	/8.4
-TS1.3	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/8.4
-TS1.3	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/8.4
-TS1.4	Double button head white/black, arrow up/down	M22-DDL-WS-*	EATON	91.060.054	1	/8.5
-TS1.4	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/8.5
-TS1.4	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/8.5

The manufacturer reserves right to use an equivalent replacement device.

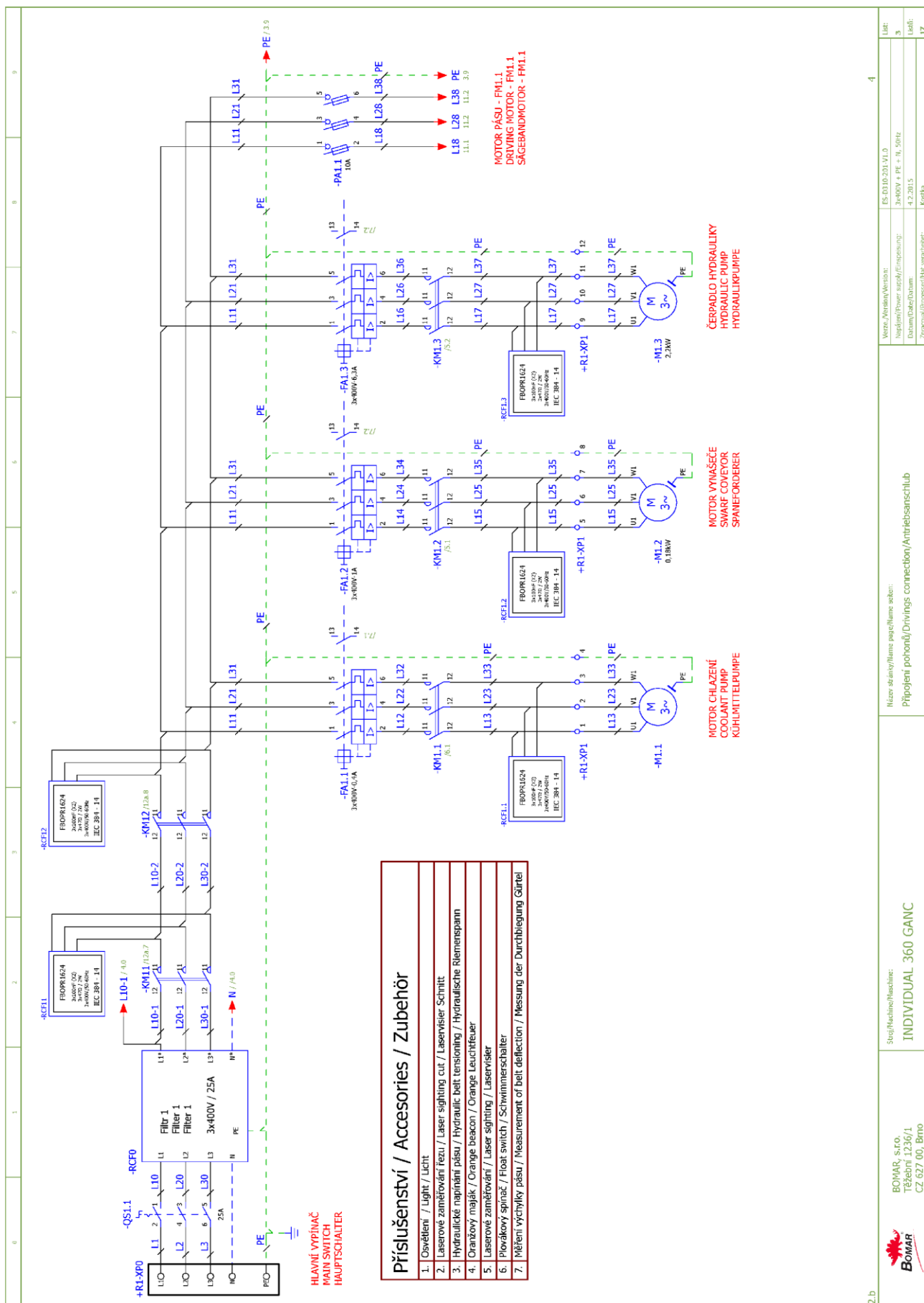
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				2a		2a	2a		
				17		17	17		

Parts list

Device identification	Device description	Type number	Manufacturer	Part number	Quantity	Location (page.column)
-TS1.5	Double button head white/black	M22-DD1-WS	EATON	91.060.033	1	/8.6
-TS1.5	Attaching adapter + 1NO	M22-AK10	EATON	91.061.021	1	/8.6
-TS1.5	NO contact for Eaton adapter	M22-K10	EATON	91.061.022	1	/8.6
-TS1.6	The button head backlit yellow	ZB5AW35	TELEMECANIQUE	91.060.023	1	/12a.4
-TS1.6	Mounting adapter + 1NO	ZB5AZ101	TELEMECANIQUE	91.061.007	1	/12a.4
-ZD1	Power supply - 230V AC/24V DC, 10A	CP-E 24/10A	ABB	91.085.028	1	/4.1

The manufacturer reserves right to use an equivalent replacement device.

 BOMAR, s.r.o. Těšební 1236/1 CZ 627 00, Brno	Scp/Machine/Machine: INDIVIDUAL 360 GANC	Název státní/Name page/Name admi: Kusovník artikl/Parts list/Artikelstückliste	Verz. Version/Version: Název/Power supply/Einspeisung: Datum/Date/Dateum: Zpracoval/Processed/Not. verarbeitet:	FS-03.10-201-V1.0 3xR0V + PE + N, 50Hz 18.1.2015 Kozdva	3	Let: 2.8 Lufi: 17





Verze./Version/Version:	ES-D310-201-V1.0	List:
Application/Power supply/Erzeugnis/nr.:	3x400V + PE + N, 50Hz	4
Datum/Date/Datum:	4.2.2015	Issued:

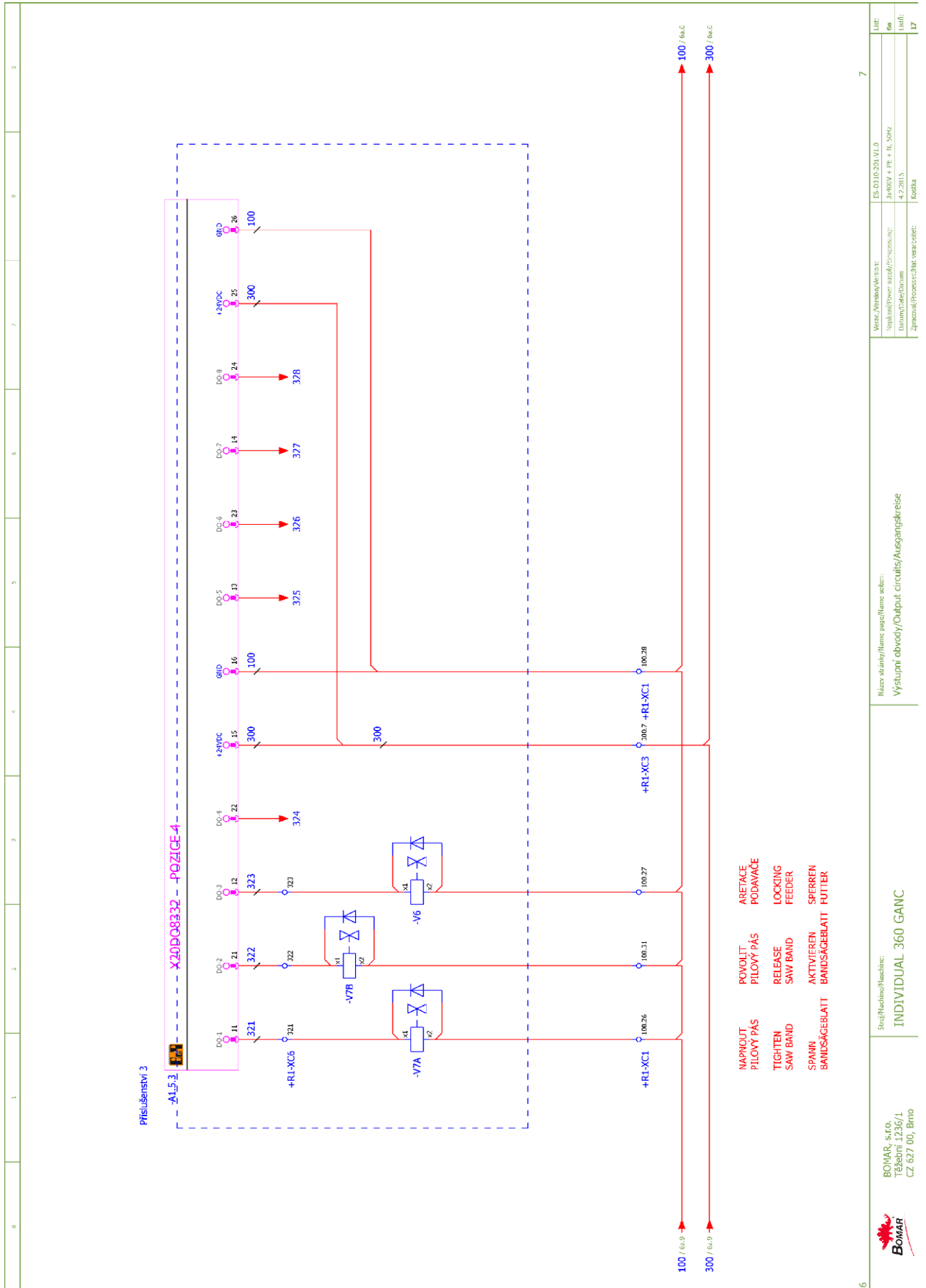
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Napájecí zdroj/Power supply/Netzteil

Stroj/Machine/Maschine:
INDIVIDUAL 360 GANC

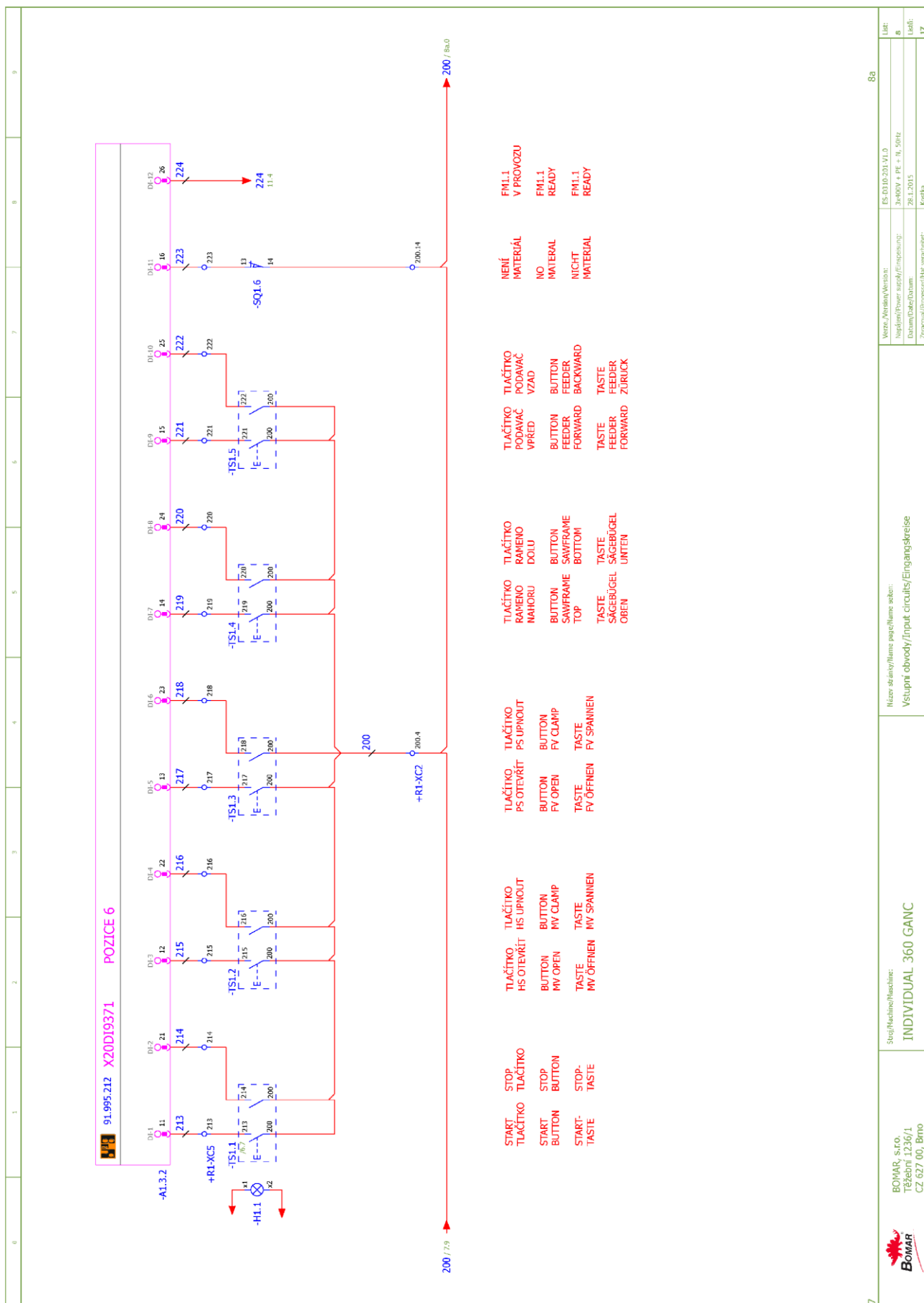
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno

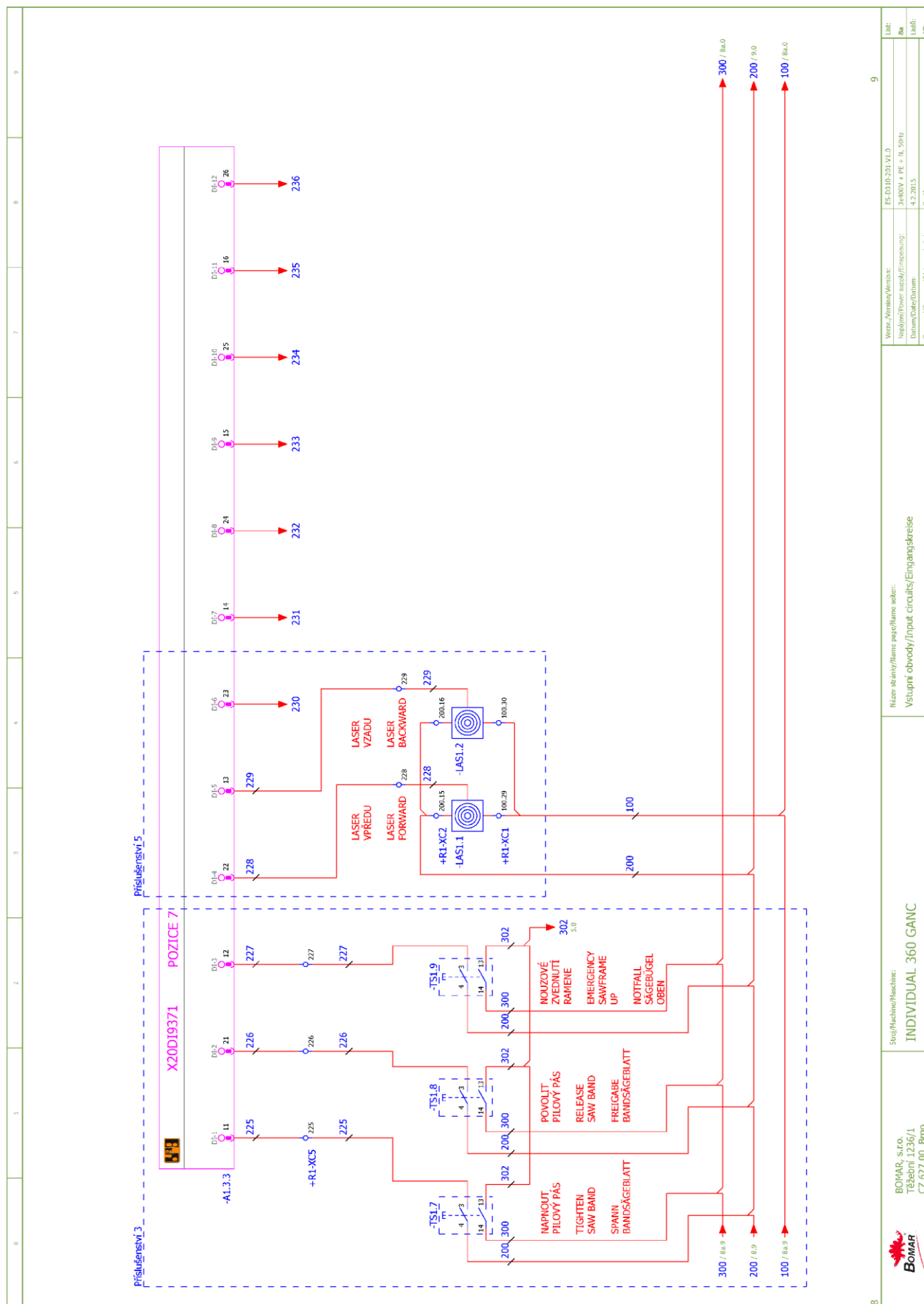




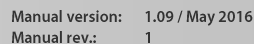






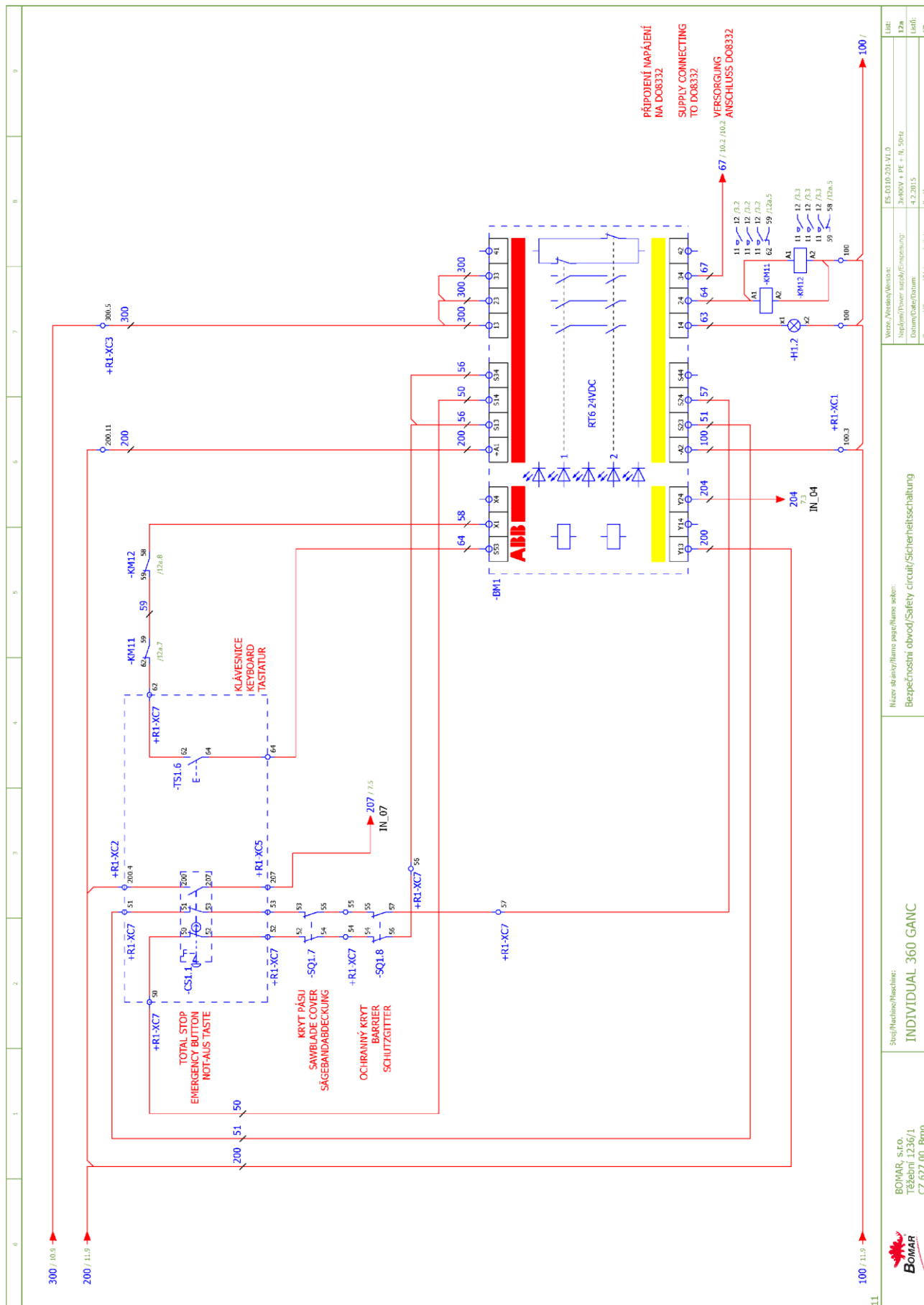


8	9
 BOMAR, s.r.o. Těšební 1236/1 CZ 627 00, Brno	Stručná/Machine/Headline: INDIVIDUAL 360 GANC
Název stránky/Name page/Name sheet: Vstupní obvody/Input circuits/Eingangskreise	Verze/Version/Version: ES-03.10.201.V1.0 Návrh/Drawn/entworfen/Impulsung: Datum/Date/Date: 4.2.2013 Kód/Kode
Let: 8a	17



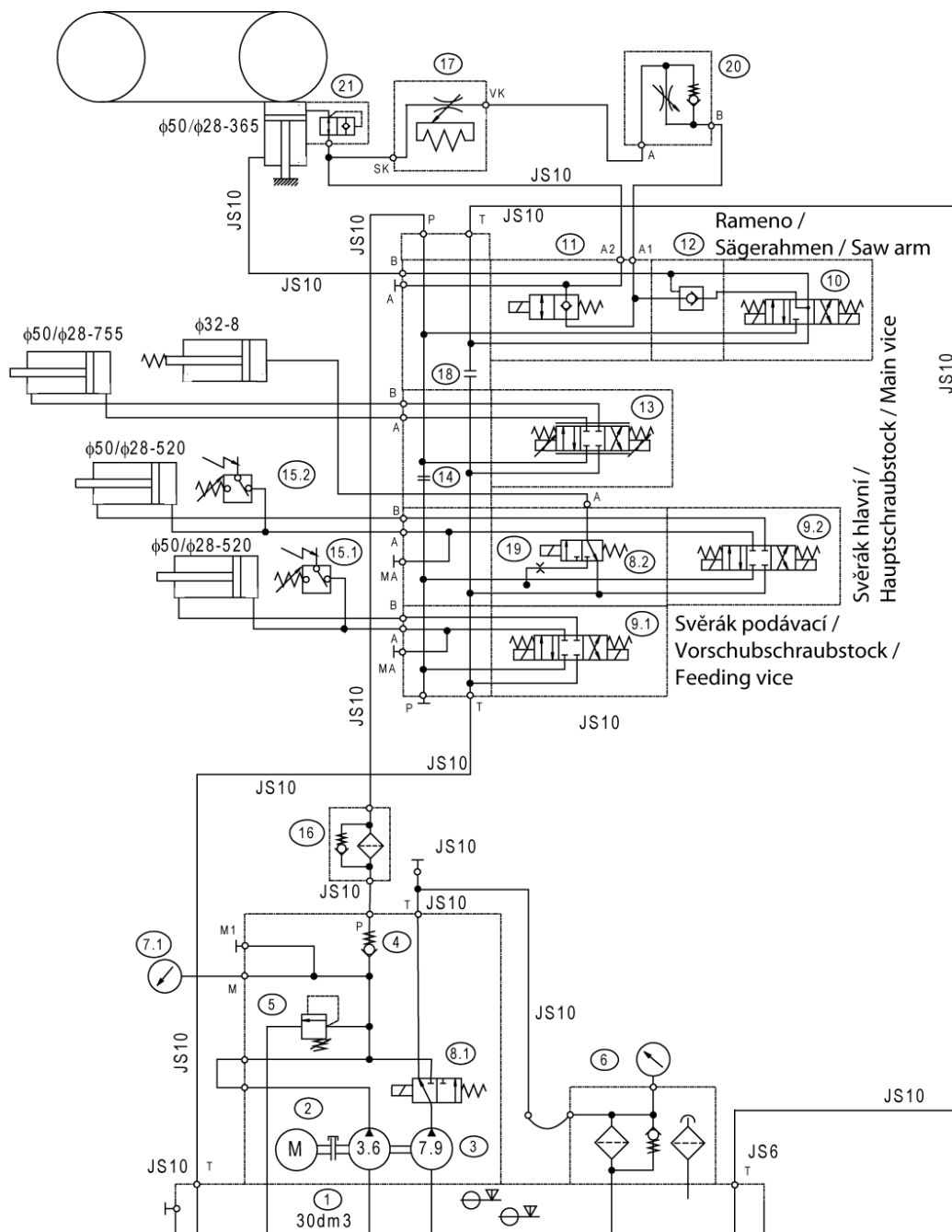






6.2. Hydraulické schéma / Hydraulikschema / Hydraulic diagram

Schémata
Schemas
Schematics



Základní technické parametry
Technische Spezifikation
Technical specification

Typ / Type / Type	Individual 520.360 GANC
Hydraulický agregát / Hydroaggregat SMA03-79, 36/17.O-SDPO-V30M.0	
Hydro aggregat	92.001.064
Neuvedené světllosti / Unerwähnt Lichtbreite	JS6
Unlisted inside diameters	
Výstupní šroubení / Ausgangschraubung	G1/4"
Output screwing	
p_{max}	6,5 Mpa
Q	10,6 + 4,9 dm ³ /min
n	1425 ot./min
P	2,2 kW

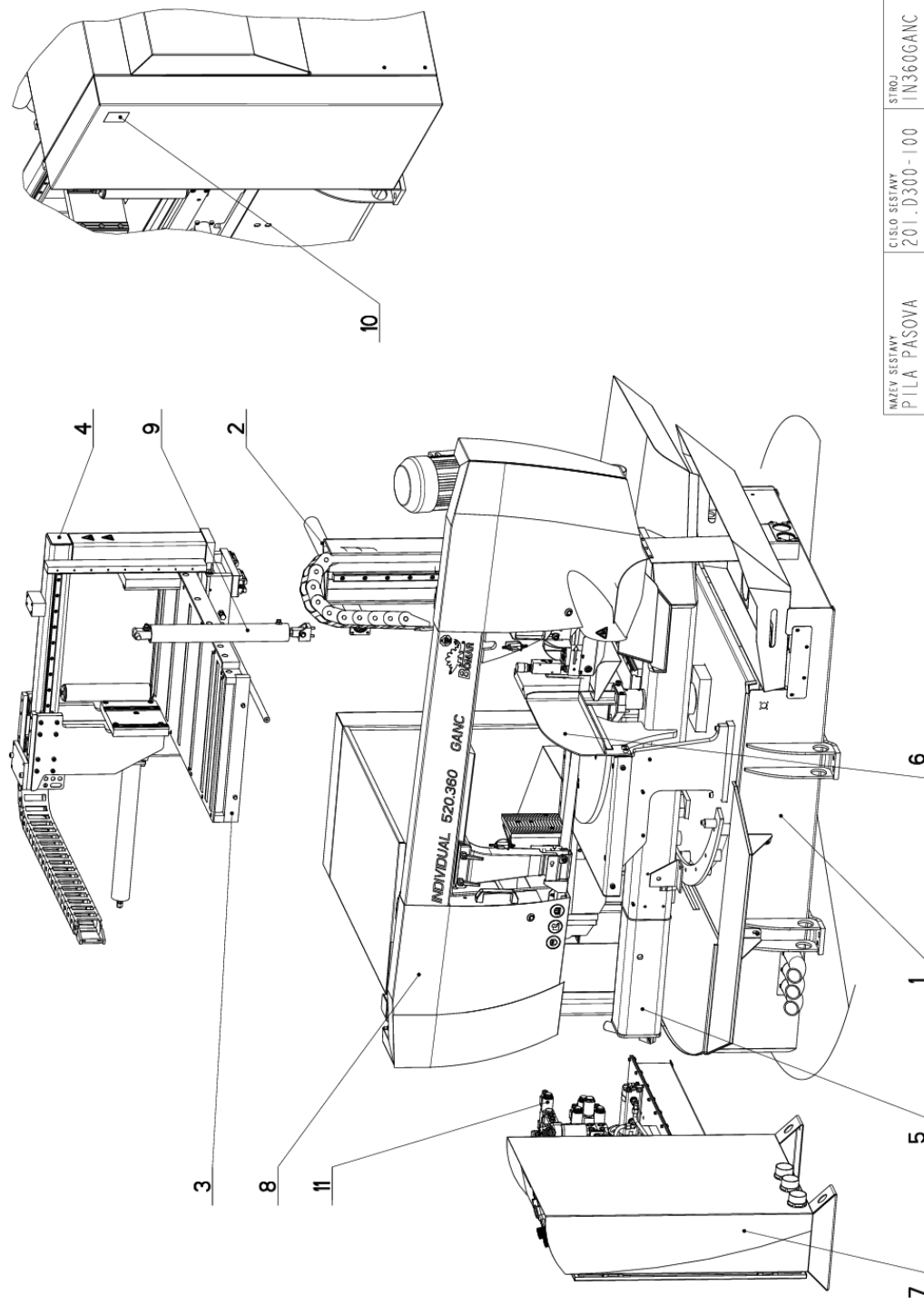
(TIN7) PR0690
205.Y316-250

Poz.	Název	Typ	Počet
1	Nádrž / Behälter / Tank	N30-B0-II 30 dm ³	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL100L 2,2 kW 400/230V,50Hz, 5,07 A	1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	P 23-7,9/3,6 L.65334 7,9/3,6 cm ³ /ot.	1
4	Jednosměrný ventil / Einwegventil / One-way valve	V J01-06/S G-1	1
5	Přepouštěcí ventil / Bypassventil / By pass valve	VPP2-04/S-10S 6,5 MPa	1
6	Zpětný filtr / Filter / Filter	FR043-166/0 (10 µm) 92.153.101 /.039	1
7	Manometr / Manometer / Manometer	Ø68 S GLYCERINEM 0-6 M P a	1
8	Rozvaděč / Verteilungsventil / Distributor	S D2E -A 3/C2D 21 408-0328.003	2
9	Rozvaděč / Verteilungsventil / Distributor	RPE3-043Z 11/02400E 1K 1 92.101.010	2
10	Rozvaděč / Verteilungsventil / Distributor	RPE3-043Y 11/02400E 1K 1 92.101.005	1
11	Blok rychloposuvu / Eilgangsblok / Speed shift block	729-0084 92.153.006	1
12	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MA 92.103.002	1
13	Rozvaděč / Verteilungsventil / Distributor	RPM2-043Z11/04-24M IKRO 92.101.024	1
14	Zátka / Einfüllspund / Fill stopper	M6	1
15	Tlakový spínač / Druckschalter / Pressure switch	166415031059 20-50bar 92.201.003	2
16	Tlakový filtr / Druckfilter / Pressure filter	D042-153 (3 µm) 92.153.102 /.055	1
17	Kostka regulace / Regulationklotz / Regulation cube		1
18	Zátka / Einfüllspund / Fill stopper		1
19	Clona / Schürze / Shield	Ø0,8 92.153.022	1
20	Škrticí ventil / Drosselventil / Throttle-valve	V S 01-04/R2,5-O 92.152.001	1
21	Ventil pojistný / Sicherungsventil / Retaining valve	VPNH 1/4" 92.151.001	1

7. **Výkresy sestav pro objednání náhradních dílů/ Zeichnungen für Bestellung der Ersatzteile / Drawing assemblies for spare parts order**

- Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. practix Individual 520.360 GANC) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Individual 520.360 GANC), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example Individual 520.360 GANC), serial number (for example 125, see cover page) and year of construction (for example 1999).
- Položky označené (Optional) - volitelné příslušenství/
Einträge markiert mit (Optional) - optionale Zubehör/ I
tems marked with (Optional) - optional accessories

7.1. INDIVIDUAL 520.360 GANC



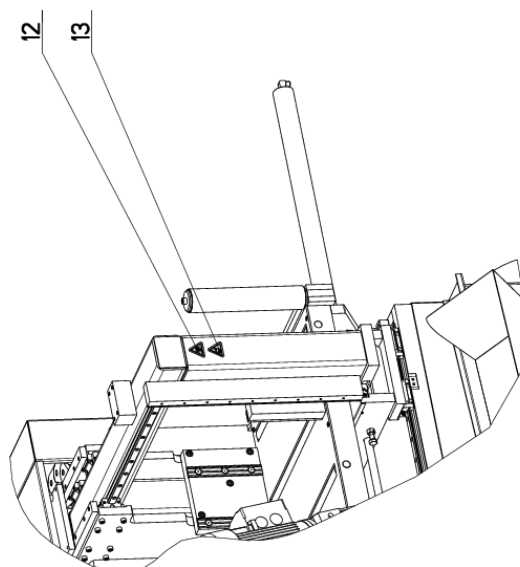
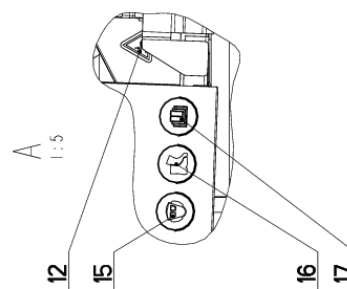
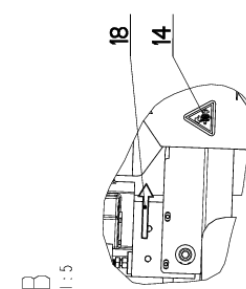
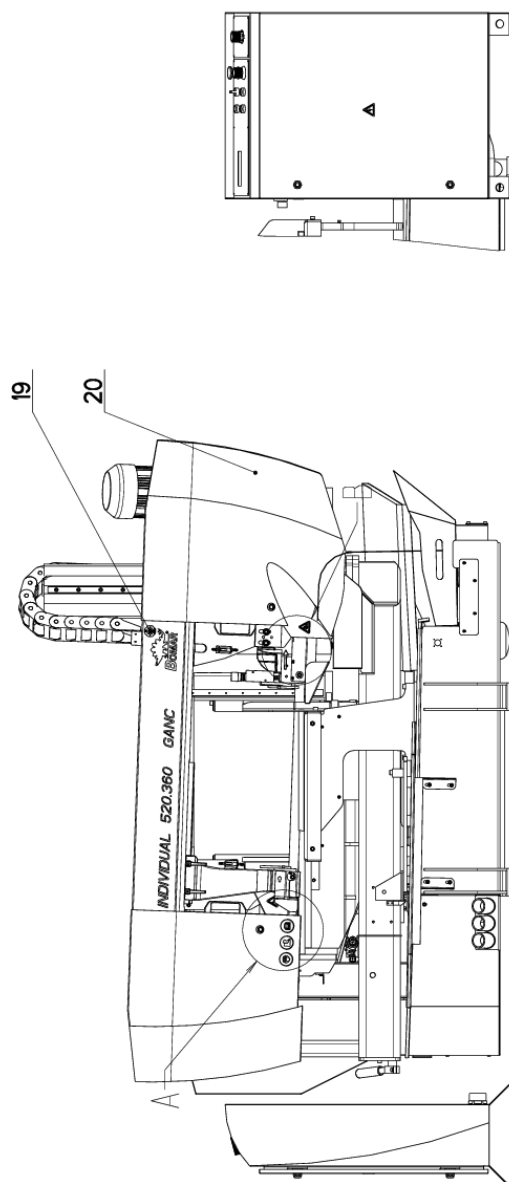
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Konstruoval: MUSIL		
Datum: 30. 06.2015		
Meritko: 2:25		

7.2. Kusovník / Piece list / Stückliste - INDIVIDUAL 520.360 GANC

Císlo Sestavy 201.D300-100		Ver. 1	Název sestavy PILA PASOVA/BAND SAW/BANDSÄGE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	201.D301-100	8	PODSTAVEC / BASE / UNTERSATZ	1
2	201.D307-200	0	VALEC SVERAHU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	1
3	201.D311-150	1	TRAT / TRACK / BAHN	1
4	201.D311-200	4	PODAVAC / FEEDER / VORSCHUB	1
5	201.N302-100	4	KONZOLA OTOČNÁ / TURNABLE CONSOL / DREHKONSOLE	1
6	201.N303-100	3	SVERAK / VICE / SCHRAUBSTOCK	1
7	201.R230-300	2	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT	1
8	201.Y304-100	9	RAMENO / SHOULDER / SÄGERAHMEN	1
9	201.Y307-010	4	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER	1
10	30.D399-001	2	STÍTEK TYPOVY / /	P 0.5x65
11	92.901.065		AGREGAT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT	1
12	99.900.039	0	SAMOLEPKA / STICKER / AUFKLEBER	NEBEZP-STLACENI 2
13	99.900.041	0	SAMOLEPKA / STICKER / AUFKLEBER	1
14	99.900.043	0	SAMOLEPKA / STICKER / AUFKLEBER	1
15	99.900.047	0	SAMOLEPKA / STICKER / AUFKLEBER	1
16	99.900.048	0	SAMOLEPKA / STICKER / AUFKLEBER	1
17	99.900.049	0	SAMOLEPKA / STICKER / AUFKLEBER	1
18	99.900.053	0	SAMOLEPKA / STICKER / AUFKLEBER	1
19	99.901.032	0	SAMOLEPKA / STICKER / AUFKLEBER	CETIFIKACNI SAMOLEPKA
20	99.901.033	0	SAMOLEPKA / STICKER / AUFKLEBER	IN360 GANC

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

7.3. INDIVIDUAL 520.360 GANC



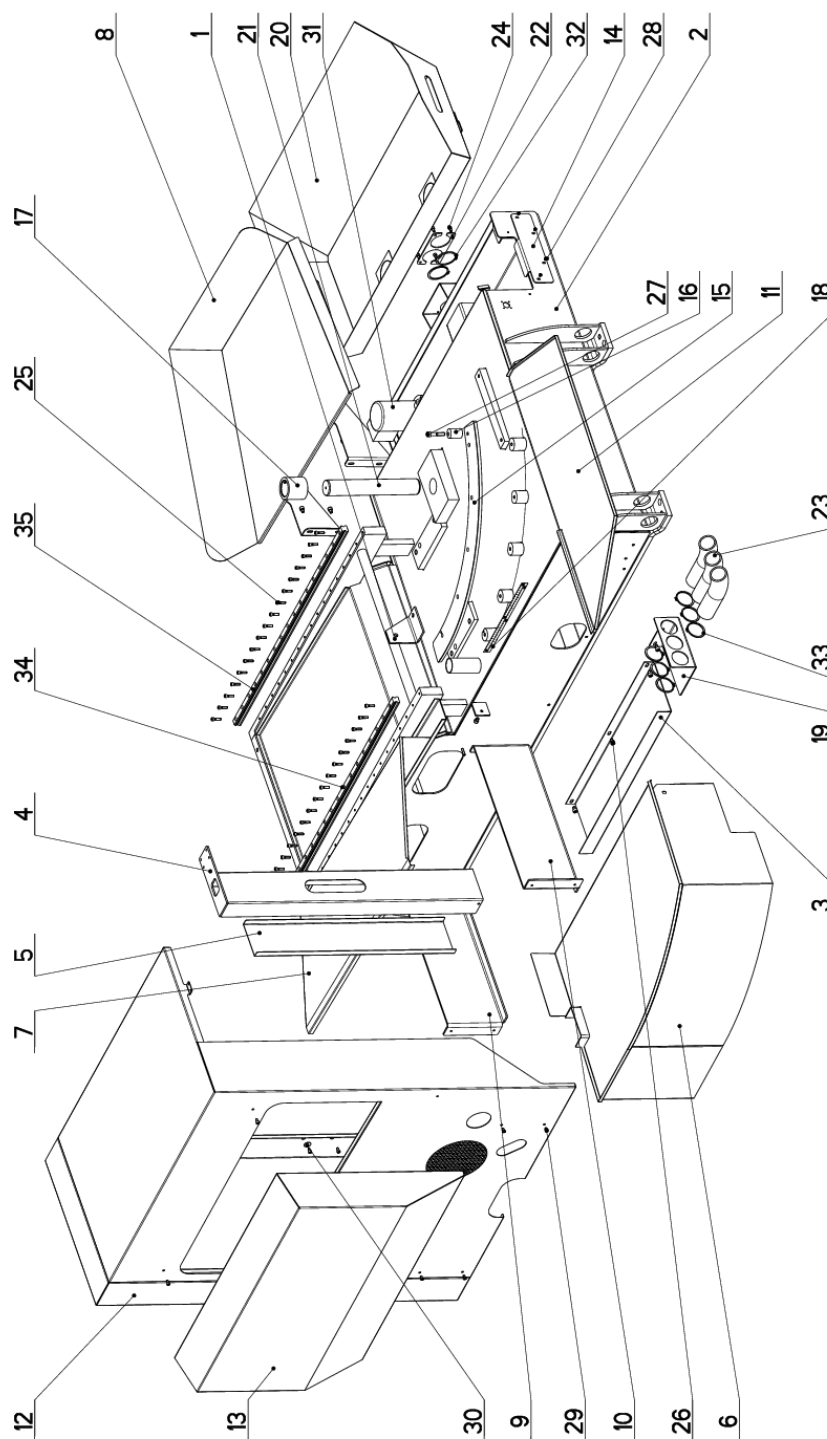
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Konstruoval: MUSIL		
Datum: 30. 06.2015		
Meritko: 7:100		

7.4. Kusovník / Piece list / Stückliste - INDIVIDUAL 520.360 GANC

Císlo Sestavy 201.D300-100		Ver. 1	Název sestavy PILA PASOVA/BAND SAW/BANDSÄGE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.D301-100	8	PODSTAVEC / BASE / UNTERSATZ		1
2	201.D307-200	0	VALEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
3	201.D311-150	1	TRAT / TRACK / BAHN		1
4	201.D311-200	4	PODAVAC / FEEDER / VORSCHUB		1
5	201.N302-100	4	KONZOLA OTOČNÁ / TURNABLE CONSOL / DREHKONSOLE		1
6	201.N303-100	3	SVĚRAK / VICE / SCHRAUBSTOCK		1
7	201.R230-300	2	OVLADACÍ PANEĽ / CONTROL PANEL / BEDIENPULT		1
8	201.Y304-100	9	RAMENO / SHOULDER / SÄGERAHMEN		1
9	201.Y307-010	4	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		1
10	30.D399-001	2	STIITEK TYPYVY / /	P 0.5x65	1
11	92.001.065		AGREGAT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
12	99.900.039	0	SAMOLEPKA / STICKER / AUFKLEBER	NEBEZP. STĽACENÍ	2
13	99.900.041	0	SAMOLEPKA / STICKER / AUFKLEBER		1
14	99.900.043	0	SAMOLEPKA / STICKER / AUFKLEBER		1
15	99.900.047	0	SAMOLEPKA / STICKER / AUFKLEBER		1
16	99.900.048	0	SAMOLEPKA / STICKER / AUFKLEBER		1
17	99.900.049	0	SAMOLEPKA / STICKER / AUFKLEBER		1
18	99.900.053	0	SAMOLEPKA / STICKER / AUFKLEBER		1
19	99.901.032	0	SAMOLEPKA / STICKER / AUFKLEBER	CETIFIKACNÍ SAMOLEPKA	1
20	99.901.033	0	SAMOLEPKA / STICKER / AUFKLEBER	IN360 GANC	1

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

7.5. Podstavec / Base / Untersatz



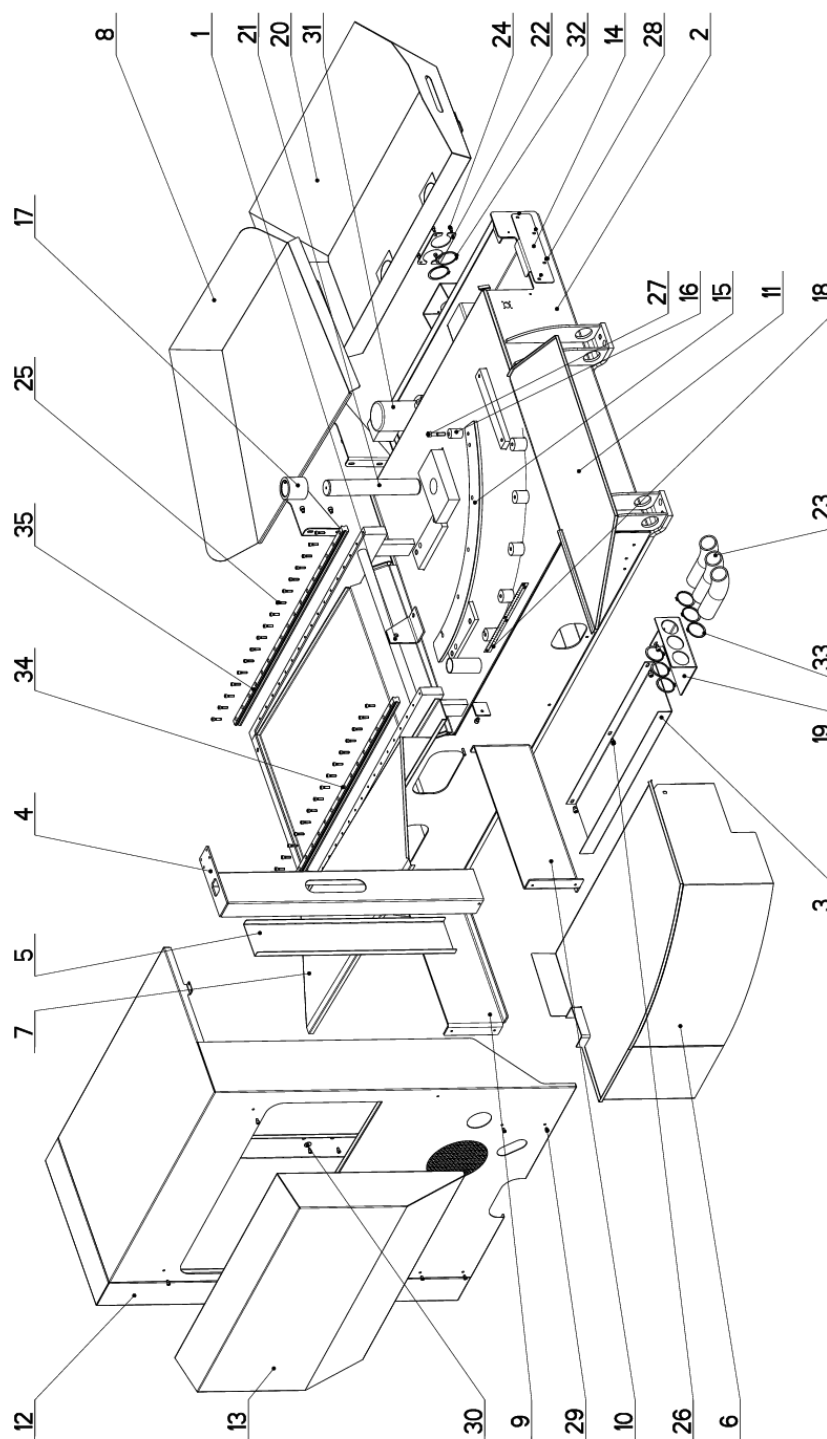
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Konstruoval: HLADIL		
Datum: 07. 04.2014		
Verziko: 2:25		

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

Císlo Sestavy 201.D301-100		Ver. 8	Název sestavy PODSTAVEC/BASE/UNTERSATZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.7202-199	2	KONZOLA / CONSOLE / KONSOLE	HR 100x5	1
2	30.D301-101	10	PODSTAVEC / BASE / UNTERSATZ		1
3	30.D301-103	0	PLECH / PLATE / BLECH	P 2x278	1
4	30.D301-105	0	KRYT / COVER / ABDECKUNG		1
5	30.D301-106	1	KRYT / COVER / ABDECKUNG	P 1.5x168	1
6	30.D301-110	0	KRYT / COVER / ABDECKUNG		1
7	30.D301-112	0	KRYT HYDRAULIKY / HYDRAULIC COVER / HYDRAULIKABDECKUNG	P 1x651	1
8	30.D301-116	0	OKAP / GUTTER CHANNEL / BLECH		1
9	30.D301-117	1	KONZOLA / CONSOLE / KONSOLE	P 5x226	1
10	30.D301-118	1	KONZOLA / CONSOLE / KONSOLE	P 5x226	1
11	30.D301-121	2	OKAP / GUTTER CHANNEL / BLECH		1
12	30.D314-109	0	KRYT PODAVACE / FEEDER COVER / VORSCHUBABDECKUNG		1
13	30.D314-110	0	KRYT SVĚRAKU / VICE COVER / SCHRAUBSTOCKABDECKUNG	P 1,5 - 855	1
14	30.D314-130	1	KRYT / COVER / ABDECKUNG	P 3x104	1
15	30.N301-002	1	SEGMENT / SEGMENT / SEGMENT	P 12- 197	1
16	30.N301-005		EXCENTR / CAM / EXZENTER	d 30	1
17	30.N301-013		KROUZEK / /	TR 70x12,5	1
18	30.N301-041	0	STUPNICE / SCALE / SKALA	P0,5-22	1
19	30.Y301-205	0	DRŽAK / HOLDER / HALTER	P 3x234	1
20	30.Y301-320	0	VANA / TANK / WANNE		1
21	30.Y401-103	0	CEP / LUG / BOLZEN	d 50 h6	1
22	30.Y502-163	0	UCHYTKA / CLIP / HALTER	P 3x80	1
23	41.001.006	0	HADICE / HOSE / SCHLAUCH	55/46	3
24	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	12
25	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	32
26	90.001.25.028	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x10	15
27	90.001.25.052	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x50	1
28	90.013.21.002	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M5x6	4
29	90.013.21.007	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M6x10	4
30	90.151.50.004		PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 6	2
31	91.020.015	0	CERPADLO / PUMP / PUMPE	3C044-12	1
32	95.800.021	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	2
33	95.800.034	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 55	6
34	99.200.270	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 25R 900 30/30N	1

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

7.7. Podstavec / Base / Untersatz



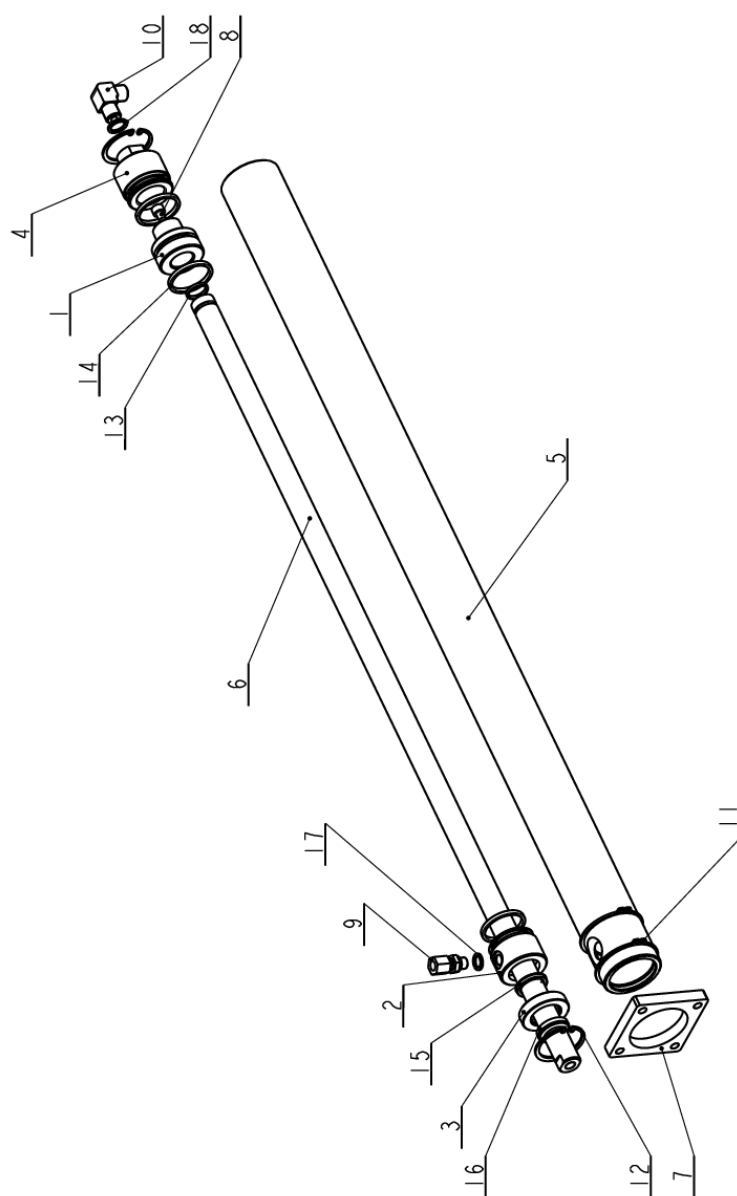
NAZEV SESTAVY PODSTAVEC	CÍSLO SESTAVY 201.D301-100	STROJ IND360CANC
Konstruoval: HLADIL		
Datum: 07. 04.2014		
Verziko: 2:25		

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

35	99.200.296	0	VEDENÍ LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 25R 1000 20/20N	I

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

7.9. Válec svěráku / Vice cylinder / Schraubstockzylinder



NAZEV SESTAVY VÁLEC SVĚRÁKU	ČÍSLO SESTAVY 201.D307-200	STROJ IN360GANC
Konstruoval: MUSIL		
Datum: 15. 10. 2010		
Meritko: 3:10		

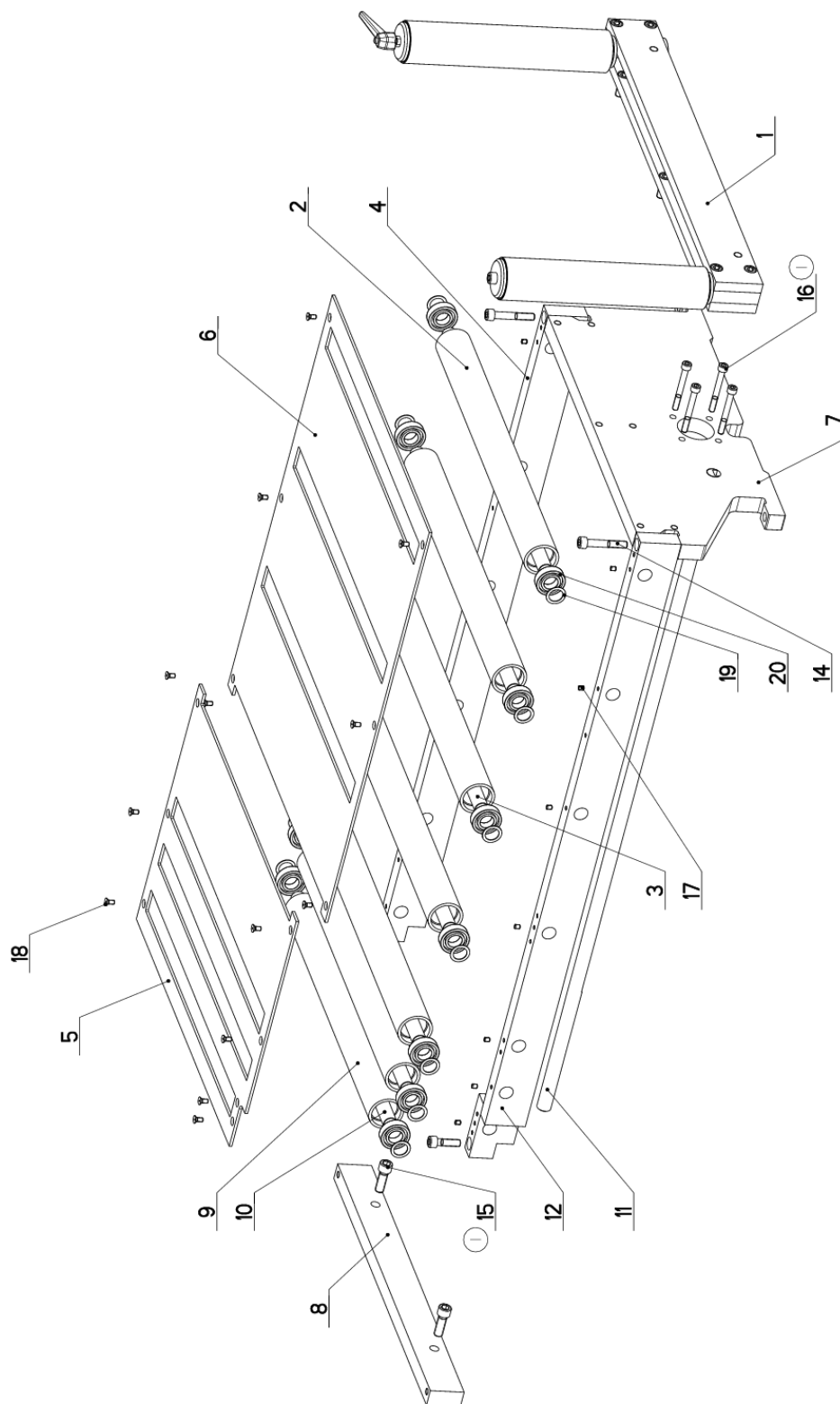
7.10. Kusovník / Piece list / Stückliste - Válec svěráku / Vice cylinder / Schraubstockzylinder

Cislo Sestavy 201.D307-200		Ver. 0	Název sestavy VALEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2107-001	0	PIST / PISTON / KOLBEN	d 45	1
2	30.2107-002	0	PRIRUBA / FLANGE / FLANSCH	TYC 45	1
3	30.2107-003	0	VÍKO / COVER / DECKEL	d 45	1
4	30.2107-004	0	VÍKO / COVER / DECKEL	d45	1
5	30.D307-201	0	VALEC PODAVACE / FEEDER CYLINDER / VORSCHUBWALZE	TRUBKA 52/40	1
6	30.D307-202	0	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 20	1
7	30.D311-109	0	PRÍLOŽKA / STRAP / LASCHÉ	HR 70x10	1
8	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	1
9	92.002.102	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	S-GEV-8LLR	1
10	92.004.001	0	SROUBENÍ UHLÓVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	37701	1
11	95.800.019	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTINY KROUZEK 52	2
12	95.801.006	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTINY KROUZEK 42	2
13	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16x2	1
14	96.002.017	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	34x3	3
15	96.041.002	0	TESNENÍ / SEALING / DICHTUNG	20x28x4	1
16	96.060.002	0	KROUZEK STIRACÍ / SCRAPER RING / ABSTREIFRING	KROUZEK STIRACÍ 20	1
17	96.082.001	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 10/14	1
18	96.082.002	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	1

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

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

7.11. Trať / Track / Bahn



NAZEV SESTAVY TRAT	CÍSLO SESTAVY 201.D311-150	STROJ 360GANC
Konstruoval: HLADIL		
Datum: 22. 07.2014		
Měřítko: 1:5		

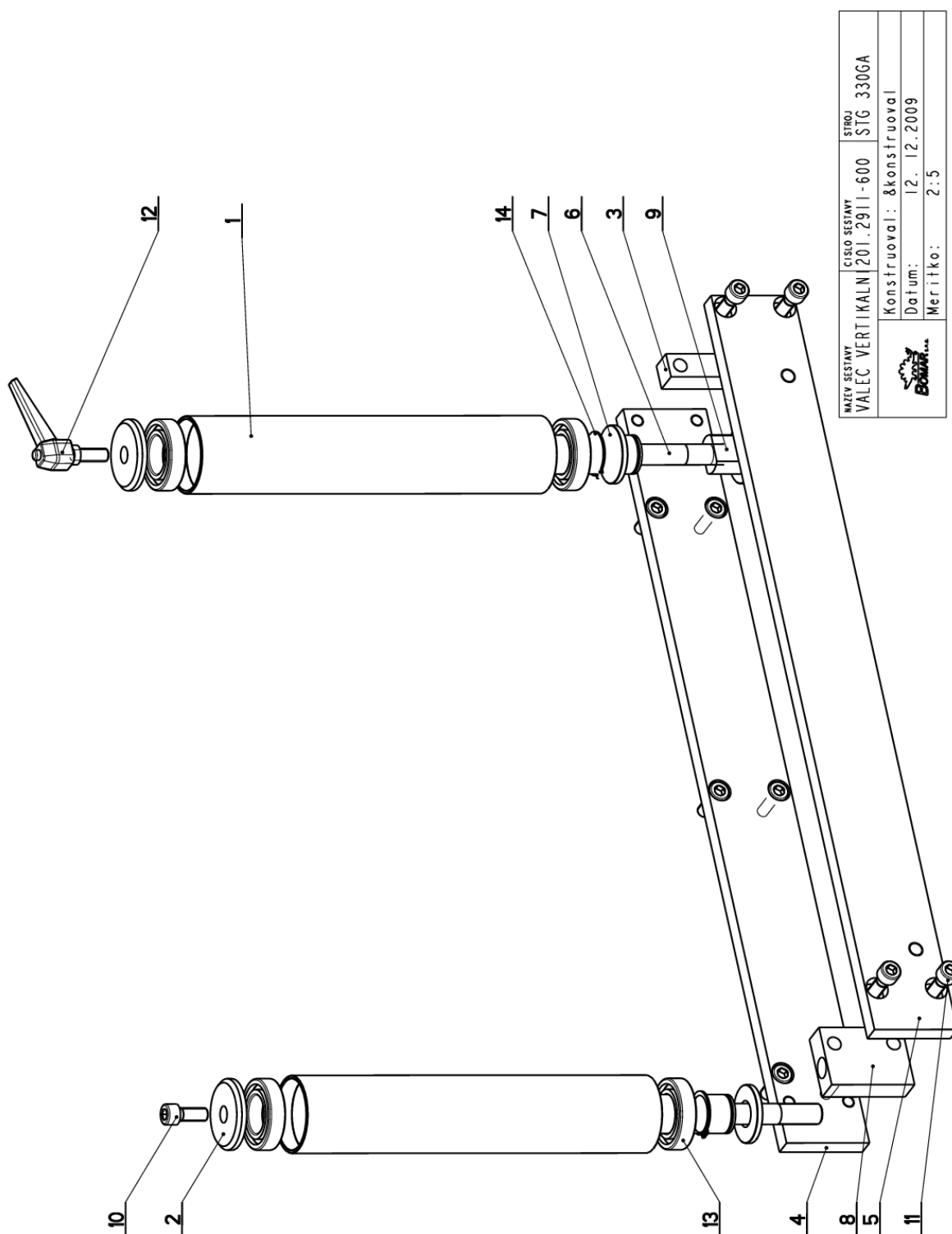
7.12. Kusovník / Piece list / Stückliste - Trať / Track / Bahn

Císlo Sestavy 201.D311-150		Ver. 1	Název sestavy TRAT/TRACK/BAHN		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	201.2911-600	1	VALEC VERTIKÁLNI / VERTICAL CYLINDER / VERTIKALZYLINDER		1
2	30.2911-102	0	VALEC / ROLLER / ZYLINDER	TR 51x6.3	6
3	30.2911-103	1	TYC / POLE / STANGE	d 20	6
4	30.D311-151	2	LISTA / TRIM / LEISTE	HR 60x25	1
5	30.D311-152	2	ROST / GRILL / GITTER	P 4x404	1
6	30.D311-153	1	ROST / GRILL / GITTER	P 4x577	1
7	30.D311-155	1	CELO / HEAD / STIRN	P25-238	1
8	30.D311-157	2	LISTA / TRIM / LEISTE	HR 50x25	1
9	30.D311-158	0	VALEC / ROLLER / ZYLINDER	TR 51x6.3	1
10	30.D311-159	0	TYC / POLE / STANGE	d 20	1
11	30.D311-160	1	TYC / POLE / STANGE	d 20	1
12	30.D311-161	2	LISTA / TRIM / LEISTE		1
13	90.001.25.049 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x35	2
14	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x60	2
15	90.001.25.059 (1)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	2
16	90.001.25.095	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x70	4
17	90.002.20.029	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x8	14
18	90.011.21.005	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x12	13
19	90.154.50.011	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	20x28x1	14
20	95.001.007	0	LOŽISKO / BEARING / LAGER	6004 2RSA	14

I. PRIDAN 4xSROUB M8x70(90.001.25.095), 2xSROUB M12x35(90.001.25.059). 032/ZMI55 30.9.2014 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

7.13. Válec vertikální / Vertical cylinder /Vertikalzylinder

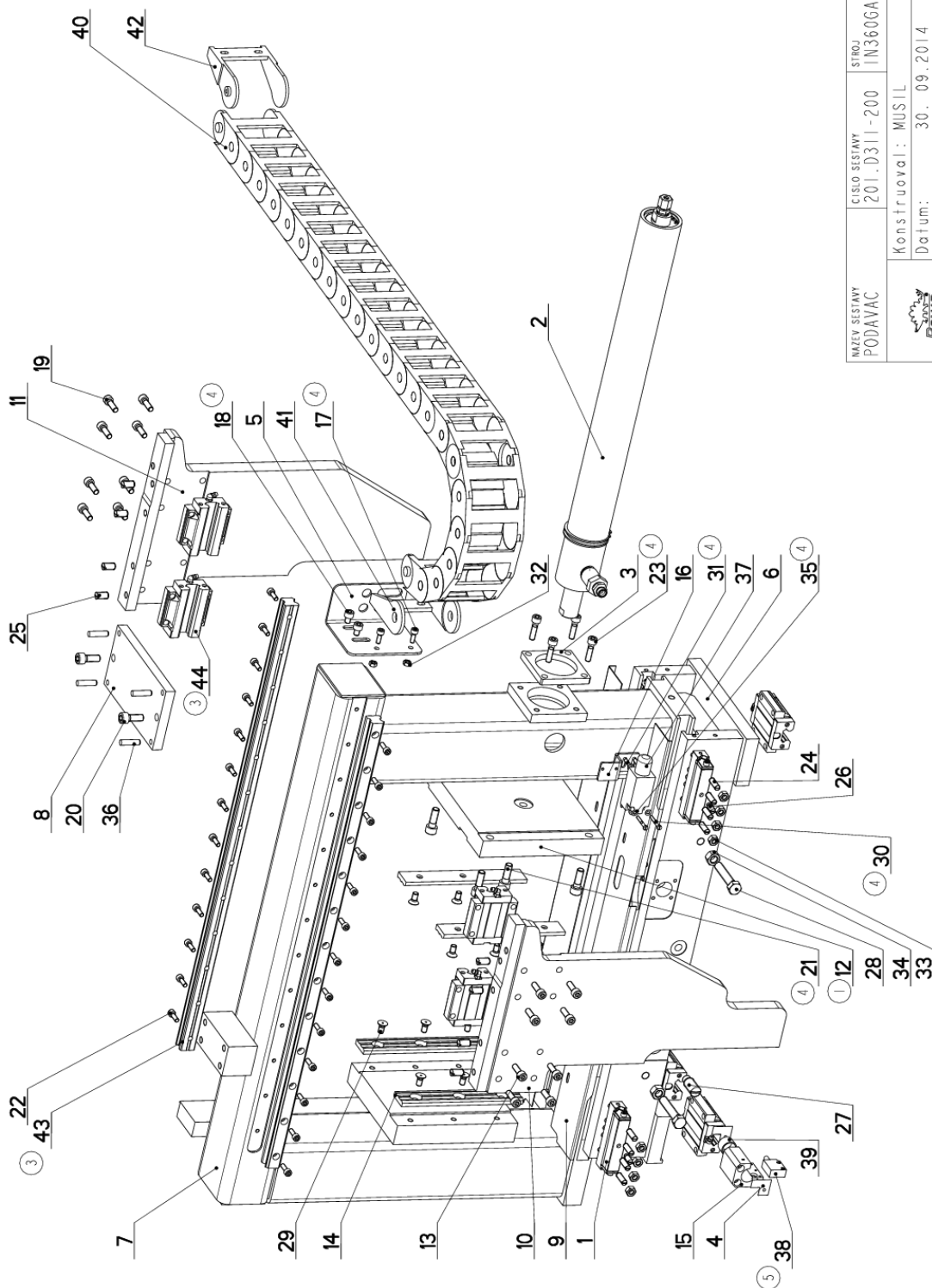


7.14. Kusovník / Piece list / Stückliste - Válec vertikální / Vertical cylinder /Vertikalzylinder

Cislo Sestavy 201.2911-600		Ver. I	Název sestavy VALEC VERTIKÁLNÍ / VERTICAL CYLINDER / VERTIKALZYLINDER		
Pos.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1514-405	0	VALEC VERTIKÁLNÍ / VERTICAL CYLINDER / VERTIKALZYLINDER	TR 80x3	2
2	30.1804-006	0	POLOŽKA / WASHER / UNTERLEGSCHIEBE	d 55	2
3	30.2014-406	I	KOSTKA / CUBE / WÜRFEL	HR 20 x 20	1
4	30.2911-601	I	LISTA / TRIM / LEISTE	HR 70x15	1
5	30.2911-602	I	LISTA / TRIM / LEISTE	HR 70x15	1
6	30.2911-603	I	OSA / AXLE / ACHE	d 30	2
7	30.2911-606	I	POLOŽKA / WASHER / UNTERLEGSCHIEBE	d 45	2
8	30.2911-608	0	KOSTKA / CUBE / WÜRFEL	HR 50x20	1
9	30.4311-605	0	MATICE / NUT / MUTTER	d 45	1
10	90.001.25.047	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M10x25	7
11	90.001.25.049	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSHSCRAUBE	M10x35	4
12	94.008.005	0	KLIČKA / HANDLE / HÜBEL	M10	1
13	95.001.009	0	LOŽISKO KUL. I. RADE / BEARING / LAGER	6008 2RS	4
14	95.000.013	0	KROUZEK POJIST.VNEJŠ. / OUTSIDE SAFETY RING / SICHERUNGSRING AUFEN	POJISTY KROUZEK 30	2

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

7.15. Podavač / Feeder /Vorschub



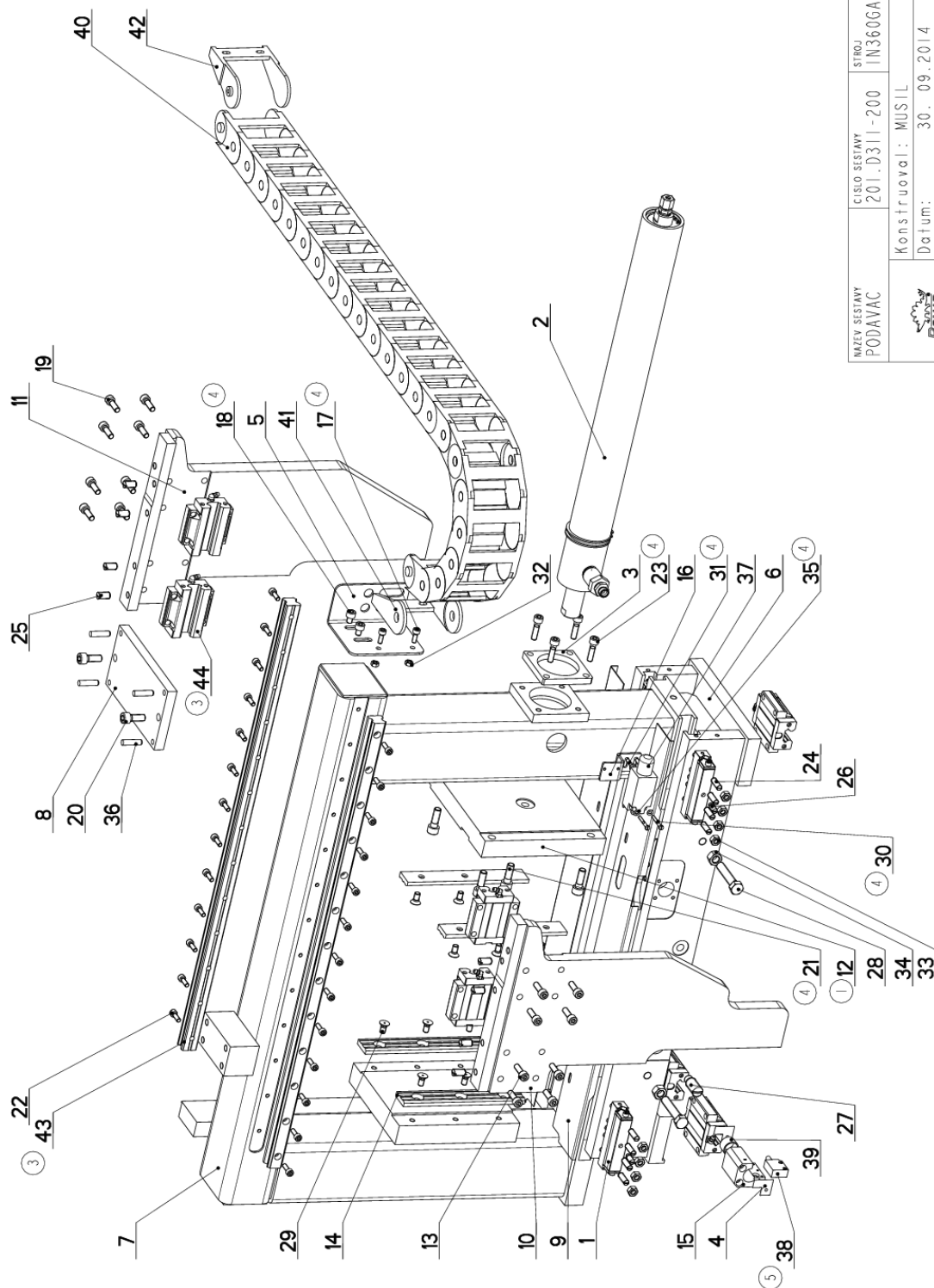
NAZEV VEŠTAVY PODAVAC	CÍSLO VEŠTAVY 201.D311-200	STROJ IN360GANC
Konstruoval: MUSIL		
Datum: 30. 09.2014		
Měřítko: 1:5		

7.16. Kusovník / Piece list / Stückliste - Podavač / Feeder /Vorschub

Císlo Sestavy 201.D311-200		Ver. 5	Název sestavy PODAVAC/FEEDER/VORSCHUB		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2911-200	0	ELEMENT VALECKOVÝ / ROLLER ELEMENT / ROLLELEMENT		4
2	201.D307-120	0	VALEC SVERAHU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
3	201.D301-010	0	PRÍLOŽKA / STRAP / LASCHE	HR 80x10	1
4	30.2911-030	0	STERAC / WIPER / ABSTREIFER	P 0.2-26.5	2
5	30.D311-101	0	KONZOLA / CONSOLE / KONSOLE	P 3x120	1
6	30.D311-201	2	VOZÍK / CART / WAGEN		1
7	30.D311-202	3	SLOUP PODAVACE / FEEDER POLE / VORSCHUBSÄULE		1
8	30.D311-219	0	VYŽTUHA / REINFORCEMENT / VERSTEIFUNG	HR 100x15	1
9	30.D311-223	0	KRYT / BEARINGS COVER / LAGERABDECKUNG	P 1x90	1
10	30.D311-224	0	KRYT / BEARINGS COVER / LAGERABDECKUNG	P 1x90	1
11	30.D311-231	1	CELIST POKRYBLIVA / MOVING JAW / BEWEGLICHE BACKE		1
12	30.D311-232	0	DESKA / BOARD / PLATTE	P30x196	1
13	30.D311-233	1	CELIST POKRYBLIVA / MOVING JAW / BEWEGLICHE BACKE		1
14	30.D311-235	2	LISTA / TRIM / LEISTE	HR 30x10	4
15	30.K511-110	2	DRŽAK / HOLDER / HALTER	HR 50x50	1
16	30.Y504-003	0	DRŽAK / HOLDER / HALTER	P 3x30	1
17	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	2
18	90.001.25.028	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x10	2
19	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	16
20	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	2
21	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	5
22	90.001.25.076	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x18	26
23	90.001.25.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	4
24	90.002.20.013	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x25	8
25	90.002.20.015	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M10x20	8
26	90.004.20.009	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x20	4
27	90.004.20.019	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x40	1
28	90.005.55.055	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x60	4
29	90.011.27.012	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x16	12
30	90.012.50.007	0	SROUB / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M4x30	2
31	90.013.27.006	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M5x20	2
32	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE - M6	2
33	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	8
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 (Pos./Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.17. Podavač / Feeder /Vorschub



NAZEV ŘEŠENÍ PODAVAČ	ČÍSLO ŘEŠENÍ 201.D311-200	STROJ IN360GANC
Konstruoval: MUSIL		
Datum: 30. 09.2014		
Měřítko: 1:5		

7.18. Kusovník / Piece list / Stückliste - Podavač / Feeder /Vorschub

35	90.150.50.002 (4)	0	PODLOZKA / WASHER / UNTERLESCHEIBE	PODLOZKA 4,3	2
36	90.300.02.010	0	KOLIK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLIK BX32	4
37	91.173.007	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	-RIWK	1
38	91.270.011 (5)	0	SNIMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	LMX2-026-08.0-1-00	1
39	95.700.003	0	POUZDRO / SLEEVE / BÜCHSE	20X15	1
40	99.170.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	0555-030.075.100	23
41	99.173.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNEJ	1
42	99.173.002	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNIT	1
43	99.200.276 (3)	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 25R 760 20/20N	2
44	99.201.046 (3)	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA25E SS FD N	7

1. PRIDANA CELIST 30.D311-232 (ROZDELENI CELISTI 30.D311-231); LIN. VEDENI 99.201.166 NAHRAZEN VEDENIM 99.200.067;
VOZIK 99.201.036, 99.201.026 A NAHRAZEN VOZIKEM 99.201.008; 299/zm.311 HLADIL 16.11.2010

2. ZRUSENY DILY 30.D411-238; 30.4307-508; 097/zm.094 HLADIL 5.3.2011

3. ZRUS. LIN. VEDENI 99.200.067 A NAHR. 99.200.276, ZRUS. LIN. VOZIK 99.201.008 A NAHR. 99.201.046 . 056/ZM085
13.3.2012 SLEZACKOVA

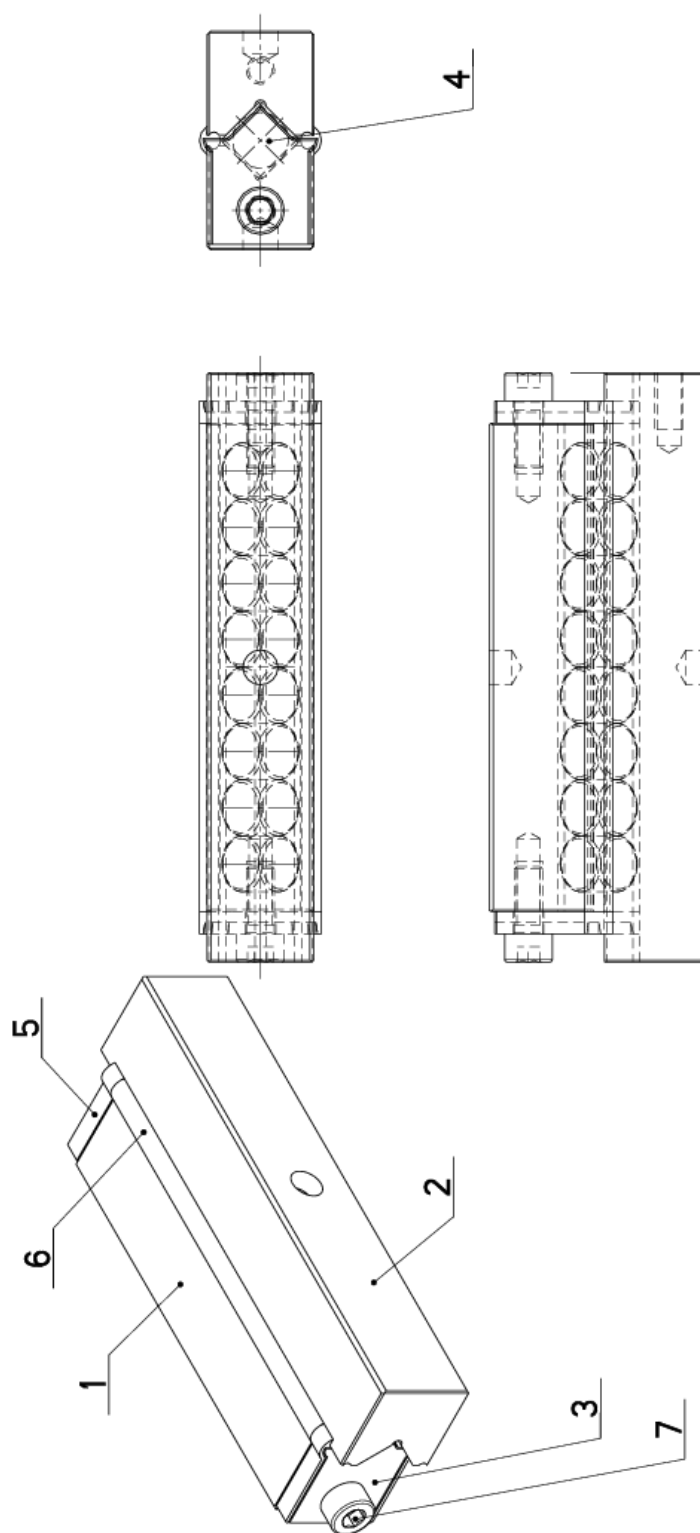
4. PRIDANO - 4xSROUB M8x30(90.001.55.083), 1xSROUB M10x30(90.001.25.048), 2xSROUB M4x30(90.012.50.007), 2xPODLOZKA 4,3
(90.150.50.002), 2xSROUB M5x20(90.013.27.006), 2xMATICE 6(90.100.55.004), 2xSROUB M8x16(90.001.25.017), 2xSROUB M8x10
(90.001.25.028). 032/ZM155 30.9.2014 SLEZACKOVA

5. ZRUS. MAGNATICKY SNIMAC 91.270.006 A NAHR. 91.270.011. 032/ZM062 7.3.2016 SLEZACKOVA

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

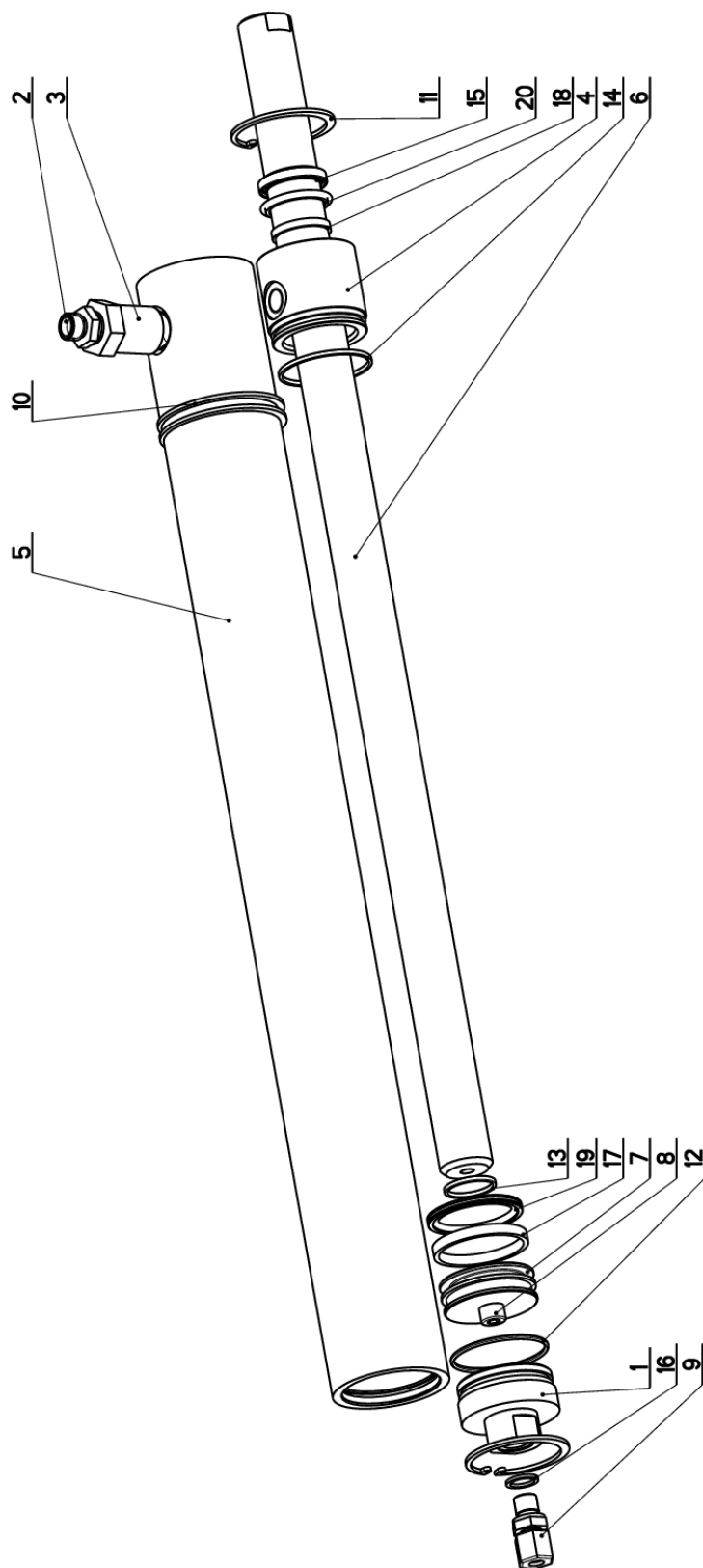
7.19. Element válečkový / Roller element / Rollenelement

Císlo Sestavy 201.2911-200		Ver. 0	Název sestavy ELEMENT VALEČKOVÝ/ROLLER ELEMENT/ROLLENELEMENT	
Poz.	Objednávací číslo	Ver.	Název položky	Ks
1	30.2911-201	1	LISTA / TRIM / LEISTE	1
2	30.2911-202	1	LISTA / TRIM / LEISTE	1
3	30.2911-206	0	PŘÍLOŽKA / STRAP / LASCHE	2
4	30.4311-203	0	VALEČEK / CYLINDER / ROLLE	8
5	31.2911-204	0	STERAC / WIPER / ABSTREIFER	2
6	31.2911-205	0	PRACHOVKA / DUST COVER / STAUBSCHUTZ	2
7	90.001.25.008	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	2



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

7.20. Válec svěráku / Vice cylinder / Schraubstockzylinder



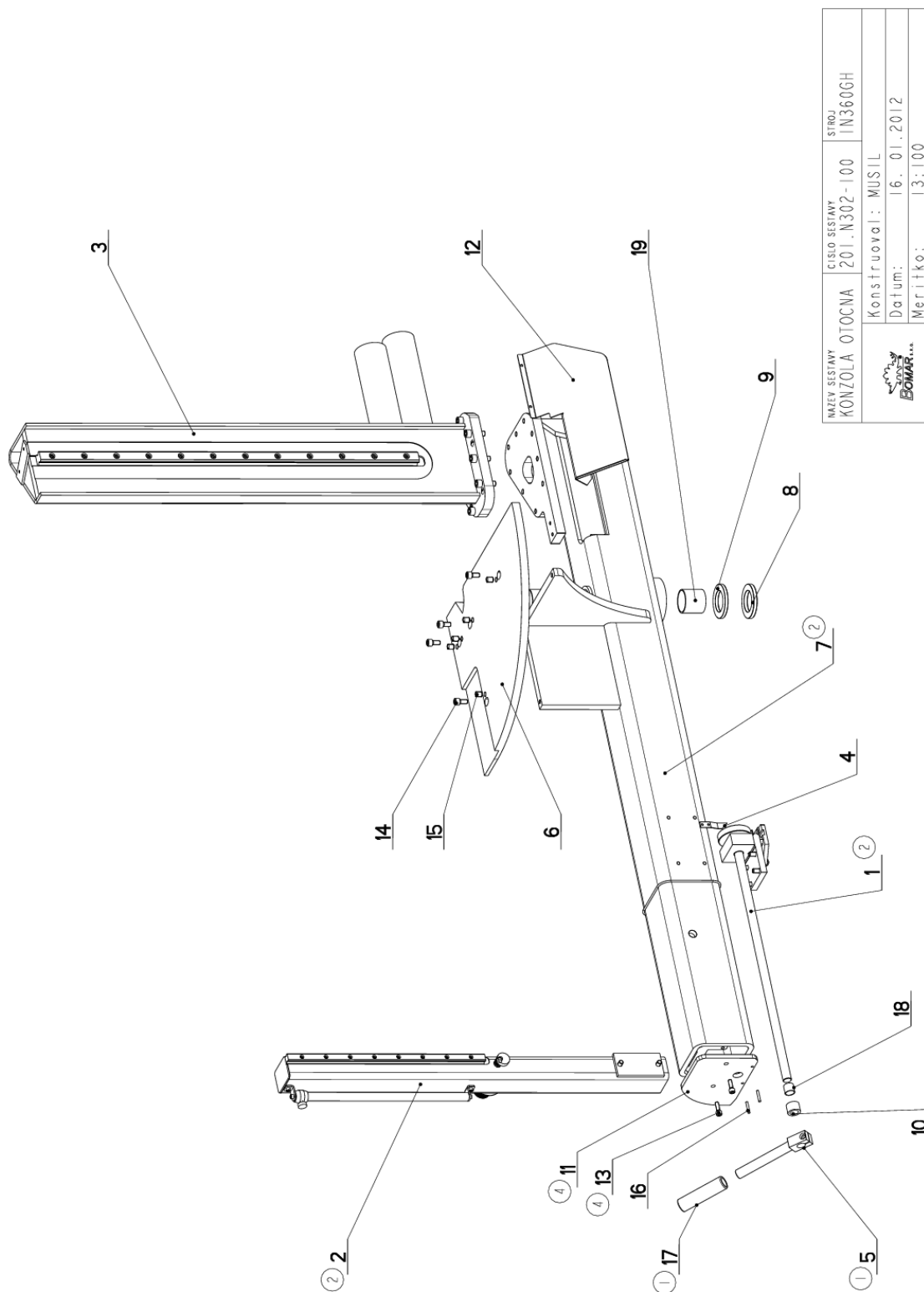
NAZEV SESTAVY VÁLEC SVĚRAKU	ČÍSLO SESTAVY 201.D307-120	STROJ 1360
Konstruoval: HLADIL		
Datum: 15. 10.2010		
Měřítko: 1:2		

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

Císlo Sestavy 201.D307-120		Ver. 0	Název sestavy VALEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2007-304	0	VÍKO / COVER / DECKEL	d 55	1
2	30.2807-109	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
3	30.6407-310	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	6HR 27	1
4	30.C407-012	1	VÍKO / COVER / DECKEL	d 55	1
5	30.D307-121	0	VALEC / ROLLER / ZYLINDER	TR 62/50	1
6	30.D307-124	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1
7	30.7307-035	0	PIST / PISTON / KOLBEN	d 55	1
8	90.001.25.032	0	SROUB IMBUS ČERNÝ / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	1
9	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
10	95.800.021	0	KROUZEK POJIST.VNEJŠ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 62	2
11	95.801.009	0	KROUZEK POJIST.VNITŘ / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 52	2
12	96.001.013	0	KROUZEK O STATICKÝ / STATIC O RING / O-RING STATISCH	45x2	1
13	96.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
14	96.002.019	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	46x2	1
15	96.061.009	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	WD2200280	1
16	96.082.002	0	TESNĚNÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	3
17	96.084.001	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GP6500500-T47	1
18	96.084.006	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GR4300280-T47	1
19	96.900.001	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG		1
20	96.900.021	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280	1

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

7.22. Konzola otočná / Turnable consol / Drehkonsole



7.23. Kusovník / Piece list / Stückliste - Konzola otočná / Turnable consol / Drehkonsole

Císlo Sestavy 201.N302-100		Ver. 4	Název sestavy KONZOLA OTOČNÁ/TURNABLE CONSOL/DREHKONSOLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.Y302-120 (2)	0	BRZDA / BRAKE / BREMSE		1
2	201.Y302-150 (2)	4	SLOUP / POLE / SAULE	SESTAVA	1
3	201.Y302-160	7	SLOUP / POLE / SAULE	SESTAVA	1
4	30.4604-004	0	UKAZATEL / INDICATOR / ZEIGER	P 1,5x15	1
5	30.8602-505 (1)	0	PAKA / LEVER / HEBEL		1
6	30.N302-004	2	DESKA / BOARD / PLATTE	P 20 - 430	1
7	30.N302-101 (2)	3	KONZOLA / CONSOLE / KONSOLE	SVARENO	1
8	30.Y302-006	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	d 80	1
9	30.Y302-007	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	d 80	1
10	30.Y302-204	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 30x5	1
11	30.Y302-303 (4)	0	VÍKO / COVER / DECKEL	P10x150	1
12	30.Y314-301	1	SKLIZ / SLIDE / RUTSCH	P 1x235	1
13	90.001.25.033 (4)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	2
14	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x20	4
15	90.002.20.017	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12x16	5
16	90.300.07.004	0	KOLÍK VALCOVÝ KALENÝ / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLÍK 5X30	2
17	94.004.502 (1)	0	RUKOJET / HANDLE / GRIFF	D22	1
18	95.700.004	0	POUZDRO / SLEEVE / BÜCHSE	20x20	1
19	95.720.002	0	POUZDRO / SLEEVE / BÜCHSE	50x50x55	2

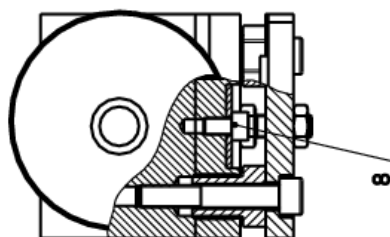
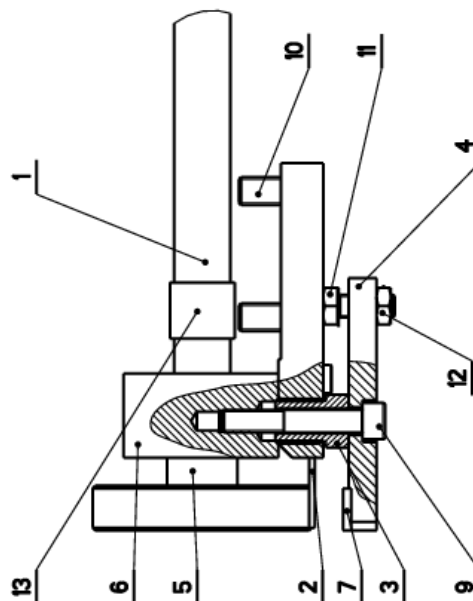
1.ZRUSENA ZASLEPKA 30.Y302-205,ZRUS.SOUCAST 30.8602-514 A NAHR.30.8602-505,ZRUS.SOUC.94.002.001 A NAHR.94.004.502 .
167,279/2M289 29.11.2010 SLEZACKOVA

2.ZM.DELKY KONZOLY 30.N302-101(1789 NA 1812),ZM.SIRKY SLOUPU 30.Y302-151(40 NA 60),ZM.DELKY EXCENTRU BRZDY
30.Y302-125(650 NA 673). 247,252/M311 9.11.2012 SLEZACKOVA

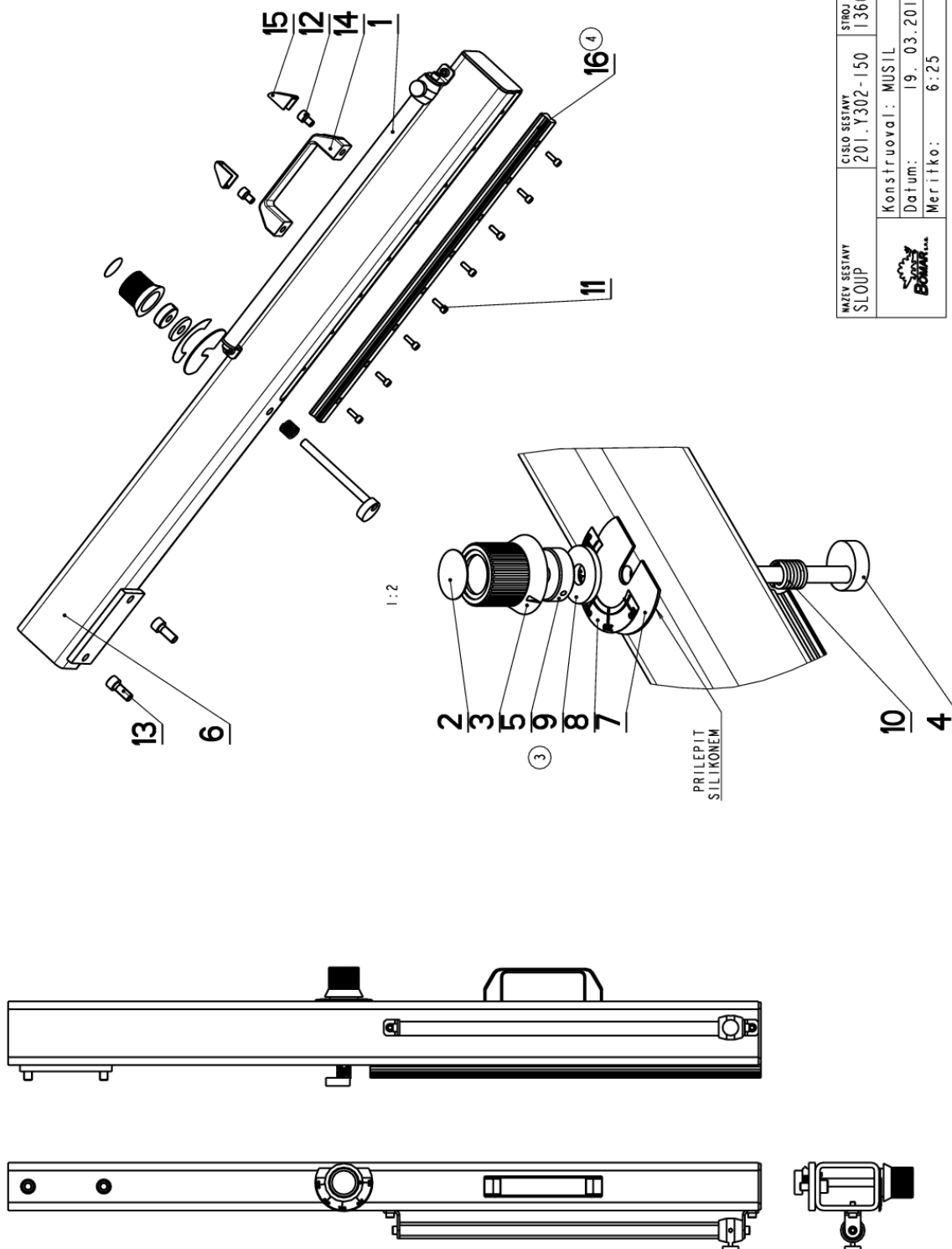
4.ZRUS.VÍKO 30.Y302-203 A NAHR.30.Y302-303,ZRUS.2XSROUB M8x25(90.001.25.033). 133/ZM164 24.7.2014 SLEZACKOVA

7.24. Brzda / Brake / Bremse

Cislo Sestavy 201.Y302-120		Ver. 0	Název sestavy BRZDA/BRAKE/BREMSE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.Y302-125	0	EXCENTR / CAM / EXZENTER		1
2	30.Y402-022	0	DESKA / BOARD / PLATTE	P2-30	1
3	30.Y402-023	0	SROUB STAVECI / ADJUSTMENT BOLT / STELSCHRAUBE	6HR 19	2
4	30.Y402-024	0	DESKA / BOARD / PLATTE	HR 80x10	1
5	30.Y402-027	0	KROUZEK / RING / RING	TR 25x5	1
6	30.Y402-028	0	TELESO / BODY / KÖRPER		1
7	30.Y402-029	0	DESKA / BOARD / PLATTE	P 3-15	1
8	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	2
9	90.001.25.038	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x50	2
10	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x20	4
11	90.005.55.015	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x20	1
12	90.101.55.001	0	MATICE PR. NITZKA ZN / NUT / MUTTER	MATICE M8	1
13	95.700.004	0	POUZDRO / SLEEVE / BÜCHSE	20x20	1



7.25. Sloup / Pole / Säule



NAZEV SESTAVY SLOUP	CÍSLO SESTAVY 201.Y302-150	STROJ 1360DGH
Konstruoval: MUSIL		
Datum: 19. 03.2012		
Meritko: 6:25		

7.26. Kusovník / Piece list / Stückliste - Sloup / Pole / Säule

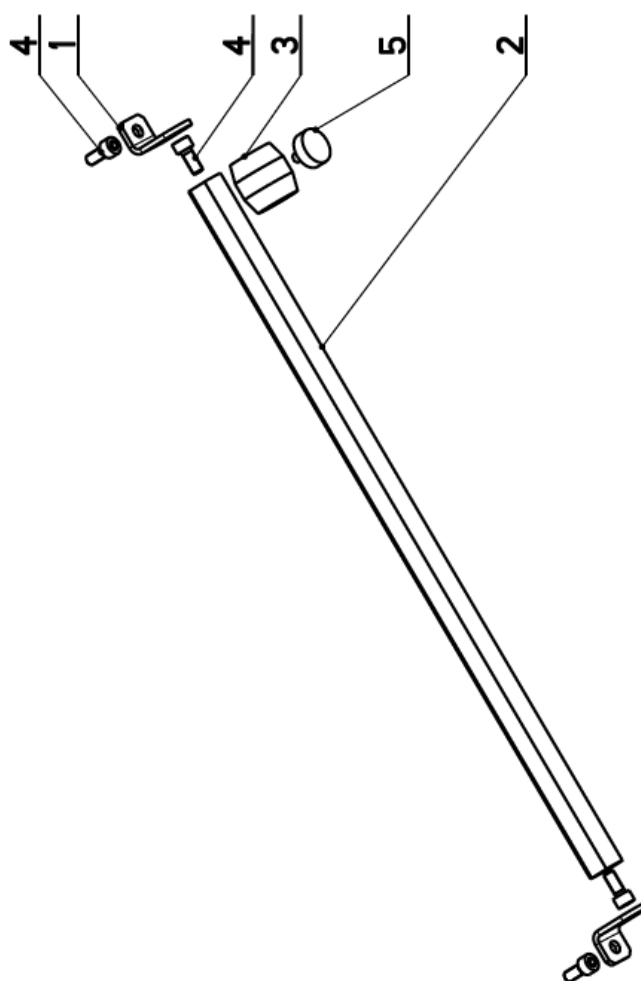
Cislo Sestavy 201.Y302-150		Ver. 4	Název sestavy SLOUP/POLE/SAULE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.Y302-070	0	ODMEROVÁNÍ / MEASURING / GEHRUNGSMESSUNG	SESTAVA	1
2	30.6130-012	0	VÍKO / COVER / DECKEL	P 0.5x 30x30	1
3	30.6130-020	0	OVLADÁNÍ / CONTROLS / STEUERUNG	VYLÍSEK	1
4	30.Y302-055	1	OSA / AXLE / Achse	SVARENO	1
5	30.Y302-058	1	VLOŽKA / INSERT / EINLAGE	d 32	1
6	30.Y302-151	3	SLOUP / POLE / SAULE	SVARENO	1
7	30.Y302-153	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	Pl, 5-72	1
8	30.Y302-154	0	STUPNICE / SCALE / SKALA	Pl-41	1
9	31.K107-006 (3)	1	GUMA / RUBBER / GUMMI	d35	1
10	31.T302-054	0	PRŮŽINA / SPRING / FEDER	d 2.24	1
11	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x16	8
12	90.001.25.029	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x12	2
13	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	2
14	94.012.001	0	RUKOJET / HANDLE / GRIFF		1
15	94.012.002	0	ZATKA / PLUG / STOPFEN		2
16	99.200.286 (4)	0	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FUHRUNG	MSA 20R 490 35/35N	1

- 1.ZRUS.LIN.VEDENÍ HGR 20 L=490 (99.200.111) A NAHR.LIN.VEDENÍ HSR20 L=490 (99.200.137). 120/ZMI49 23.6.2009 SLEZACKOVA
2.ZRUS.LINEARNÍ VEDENÍ HSR20 490 (99.200.137) A NAHR.HGR20 490 (99.200.111). 290/ZM303 5.11.2010 SLEZACKOVA
3.ZRUS.GUMA 30.Y302-157 A NAHR.31.K107-006. 125/ZMI41 10.6.2011 SLEZACKOVA
4.ZRUS.LIN.VEDENÍ 99.200.111 A NAHR.99.200.286. 056/ZMI00 19.3.2012 SLEZACKOVA

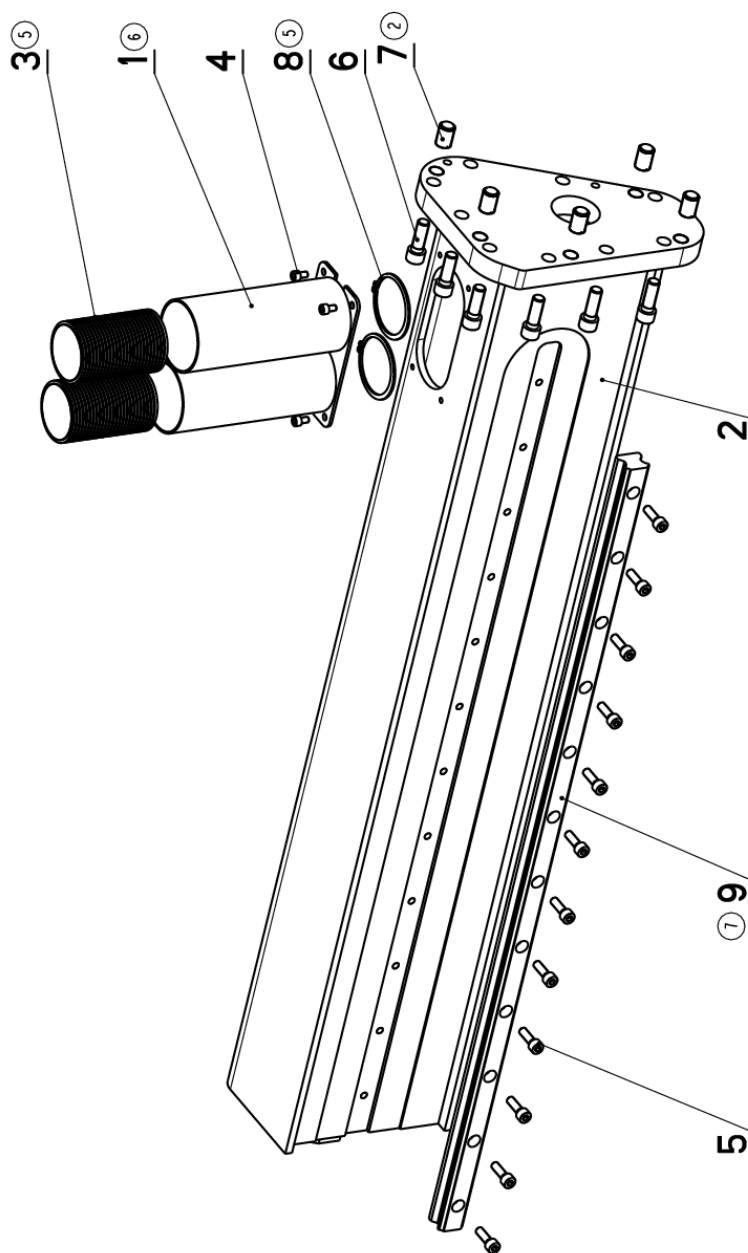
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.27. Odměrování / Measuring / Gehrungsmessung

Císlo Sestavy 201.Y302-070		Ver. 0	Název sestavy ODMEROVÁNÍ / MEASURING / GEHRUNGSMESSUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6114-023	0	DRŽÁK / HOLDER / HALTER	P 3x20	2
2	30.Y302-071	0	TYC / POLE / STANGE	d 20	1
3	30.2014-001	0	KLUZÁK / GLIDER / GLEITER		1
4	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x14	4
5	94.007.001	0	SROUB / BOLT / SCHRAUBE	M5x10	1



7.28. Sloup / Pole / Säule



NAZEV SESTAVY SLOUP	CÍSLO SESTAVY 201.Y302-160	STROJ IN 360
Konstruoval: MUSIL		
Datum: 19. 03.2012		
Meritko: 1:4		

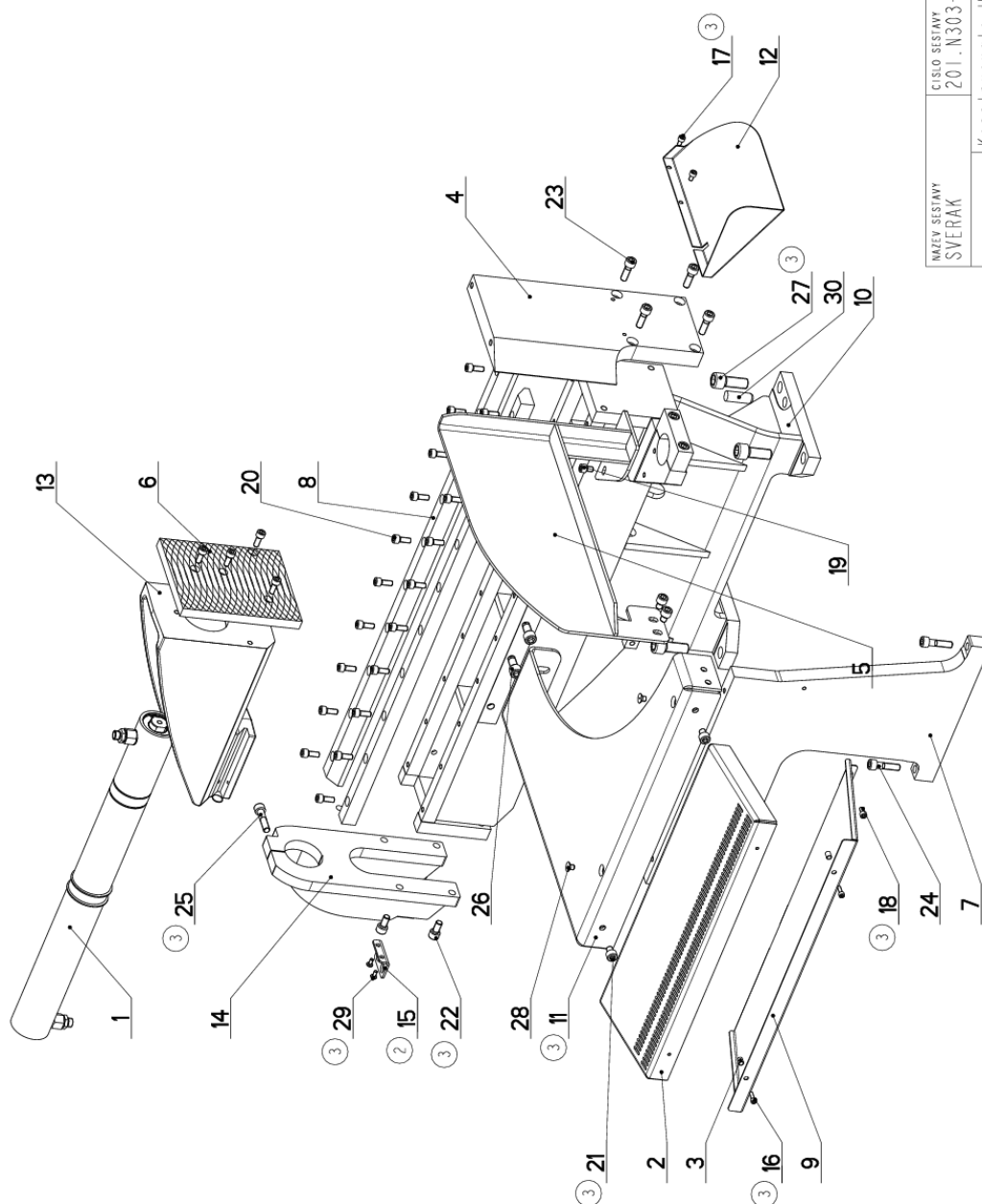
7.29. Kusovník / Piece list / Stückliste - Sloup / Pole / Säule

Císlo Sestavy 201.Y302-160		Ver. 7	Název sestavy SLOUP/POLE/SAULE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.Y302-125	6	DRŽAK / HOLDER / HALTER		1
2	30.Y302-161	5	SLOUP / POLE / SAULE	SVARENO	1
3	41.001.006	5	HADICE / HOSE / SCHLAUCH	PG48	2
4	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	4
5	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	12
6	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	9
7	90.002.20.028	2	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M16x1,5x25	5
8	95.800.021	5	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 62	2
9	99.200.285	1	VEDENÍ LINEARNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 30R 940 30/30N	1

1. ZRUS.SOUČ. 30.Y302-062 A NAHR. 30.Y502-162,PRID.1xPOJISTNÝ KROUZEK 95.800.016,
1xHADICE PG36(41.001.005). 075/ZM092 2.4.2009 MUSIL
- 2.PRIDAN 5xSROUB STAVECI M16x1,5x25 (90.002.20.028. 093/ZM121 21.5.2009 SLEZACKOVA
- 3.ZRUS.LINEARNÍ VEDENÍ HGR30 L=940 (99.200.108) A NAHR.LIN.VEDENÍM HSR30 L=940 (99.200.138).120/ZM149 23.6.2009 SLEZACKOVA
- 4.ZRUS.LINEARNÍ VEDENÍ HGR30 L=940 (99.200.138) A NAHR.LIN.VEDENÍM HGR30 L=940 (99.200.108).290/ZM303 5.11.2010 SLEZACKOVA
- 5.ZRUS.HADICE PG36 (41.001.005) A NAHR.HADICI PG48 (41.001.006),ZRUS.POJISTNÝ KROUZEK 42 (95.800.016)
A NAHR.POJ.KROUZEK 62 (95.800.021),ZRUS.UCHYTKA 30.Y502-162 A NAHR.30.Y502-163. 326/ZM014 24.1.2011 SLEZACKOVA
- 6.ZRUS.DRŽÁK 30.Y502-163 A NAHR.30.Y302-125. 287/ZM322 13.12.2011 SLEZACKOVA
- 7.ZRUS.LIN.VEDENÍ 99.200.108 A NAHR.99.200.285 . 056/ZM100 19.3.2012 SLEZACKOVA

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

7.30. Svěrák / Vice / Schraubstock



MAŠEV SESTAVY SVERAK	CÍLO SESTAVY 201.N303-100	STROJ IN360GH
	Konstruktor: HLADIL Datum: 17. 07. 2014 Meritko: 17.100	

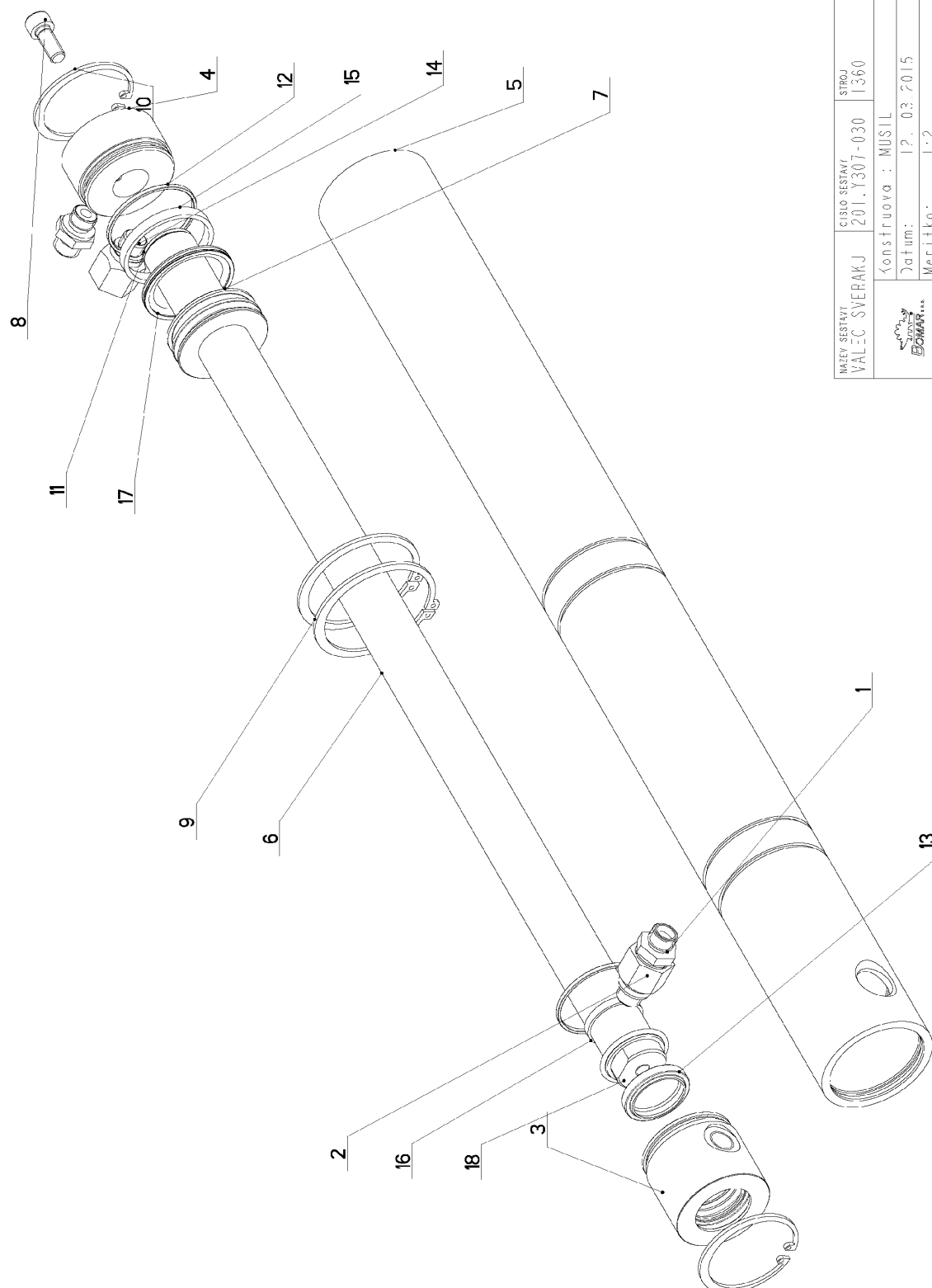
7.31. Kusovník / Piece list / Stückliste - Svěrák / Vice / Schraubstock

Císlo Sestavy 201.N303-100		Ver. 3	Název sestavy SVĚRÁK/VICE/SCHRAUBSTOCK		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.Y307-030	1	VALEC SVĚRÁKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	30.2903-012	3	ROST / GRILL / GITTER	P 3x240	1
3	30.3509-015	2	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 8x1	2
4	30.N303-004	2	CELIST PEVNÁ / SOLID JAW / FESTE BACKE	P 30x195	1
5	30.N303-006	1	BOČNICE / /		1
6	30.N303-009	1	CELIST / JAW / BACKE	HR 200x16	1
7	30.N303-013	0	NOHA / LEG / STÄNDER	P25 - 394	1
8	30.N303-102	0	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSEIESTE	HR 40x25	2
9	30.N303-112	0	SKLIZ / SLIDE / RUTSCH	P 1,5x272	1
10	30.N303-201	2	TELESO SVĚRÁKU / VICE BODY / SCHRAUBSTOCKKÖRPER		1
11	30.N303-210	0	STUL / TABLE / TISCH	P 5x640	1
12	30.N314-002	0	SKLIZ / SLIDE / RUTSCH	P 1,5x80	1
13	30.Y303-005	2	CELIST / JAW / BACKE		1
14	30.Y303-104	4	DRŽÁK / HOLDER / HALTER		1
15	30.Y309-204	0	DRŽÁK / HOLDER / HALTER	P 3x45	1
16	90.001.25.009	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X16	2
17	90.001.25.015	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X10	2
18	90.001.25.016	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X12	2
19	90.001.25.029	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X12	2
20	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	24
21	90.001.25.043	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X12	4
22	90.001.25.046	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X20	4
23	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	4
24	90.001.25.050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X40	2
25	90.001.25.051	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X45	1
26	90.001.25.056	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x20	2
27	90.001.25.086	3	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X40	4
28	90.011.27.010	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8X10	2
29	90.013.27.003	3	SROUB / BOLT / SCHRAUBE	M5X10	2
30	90.300.02.035	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 16X45	2

1.ZRUS.PRÍLOŽKA 30.Y309-008, 2xSROUB M10x40 (90.001.25.050). 046/ZM255 22.9.2010 SLEZACKOVA
2.PRÍDAN DRŽÁK 30.Y309-204. 025/ZM065 11.3.2013 SLEZACKOVA
3.PRÍD.SROUBY - 2x M5x16(90.001.25.009), 2x M6x10(90.001.25.015), 2x M6x12(90.001.25.043), 1x M10x45(90.001.25.051), 4xM16x40(90.001.25.086), 2x M5x10(90.013.27.003), 4xM10x20(90.001.25.046)ZRUS.STUL 30.N303-110 A NAHR.30.N303-210.102/ZM53 15.7.201

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

7.32. Válec svěráku / Vice cylinder / Schraubstockzylinder



NAZEV SESTAVY VÁLEC SVĚRÁKU	ČÍSLO SESTAVY 201.Y307-030	STROJ 1360
Konstruová : MUSIL		
Datum: 12. 03. 2015		
Verze: 1:2		

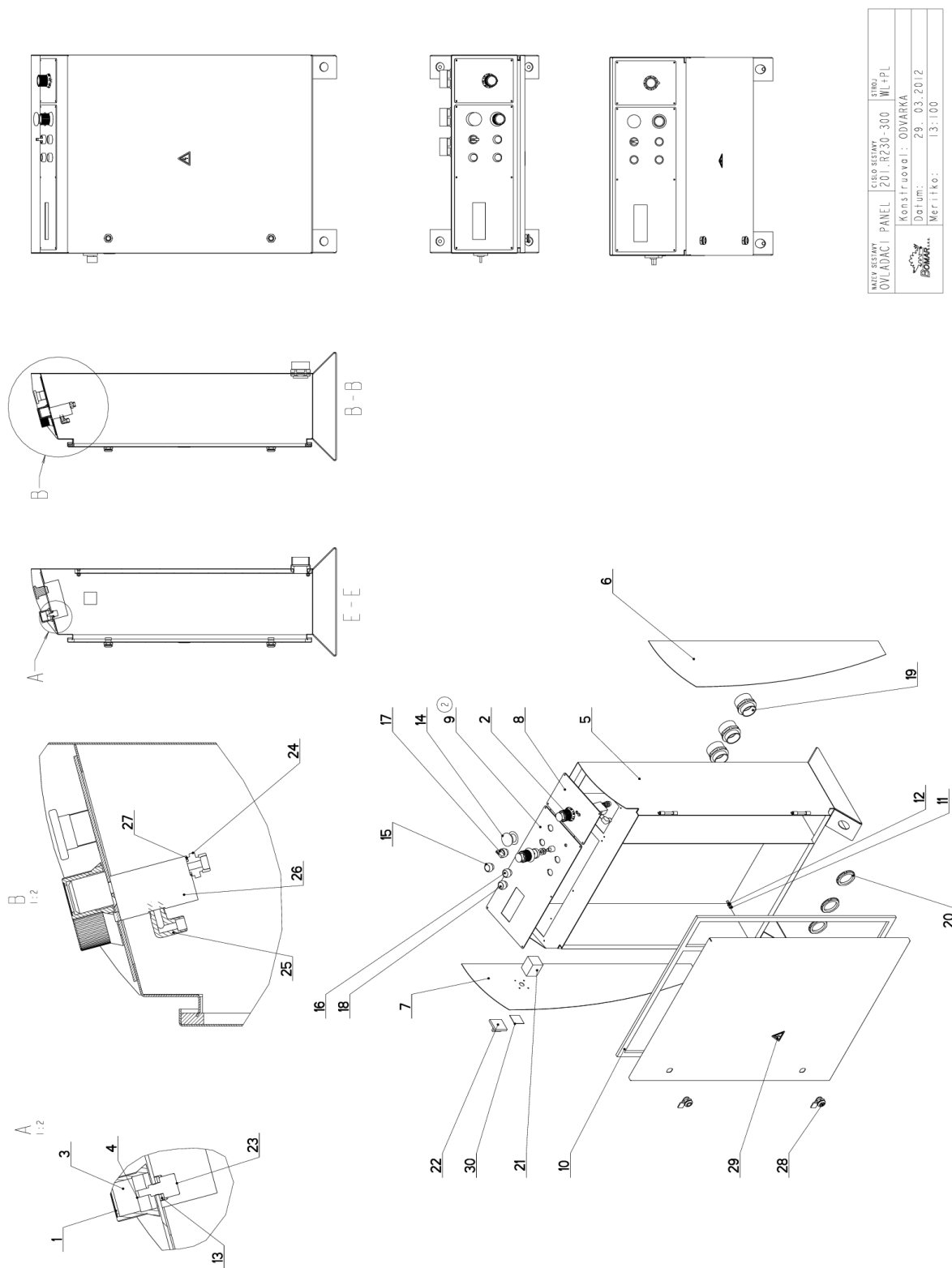
7.33. Kusovník / Piece list / Stückliste - Válec svěráku / Vice cylinder / Schraubstockzylinder

Císlo Sestavy 201.Y307-030		Ver. 1	Název sestavy VALEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.1807-005	3	SROUBENÍ / BOLTING / VERSCHRAUBUNG	6-HR 22	2	
2	30.2807-109	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2	
3	30.C407-012	1	VÍKO / COVER / DECKEL	d 55	1	
4	30.C407-111	0	VÍKO / COVER / DECKEL	d 55	1	
5	30.Y307-033	3	VALEC SVĚRAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER	TR 62/50	1	
6	30.Y307-034	2	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1	
7	30.Y307-035	0	PIST / PISTON / KOLBEN	d 55	1	
8	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	1	
9	95.800.021	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 62	2	
10	95.801.009	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 52	2	
11	96.002.011	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	24X2	1	
12	96.002.019	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	45x2 NBR 70SH	2	
13	96.061.009	0	KROUZEK STÍRAČI / SCRAPER RING / ABSTREIFRING	WD2200280 Z201	1	
14	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	4	
15	96.084.001	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	GP6500500-T47	1	
16	96.084.006	0	KROUZEK VODÍČI / LEAD RING / FÜHRUNGSRING	GR4300280-T47	1	
17	96.900.001	0	TESNENÍ KOMBINOVA NE / COMBINATION SEALING / KOMBIDICHTUNG	PW4200500-Z20N	1	
18	96.900.021	0	TESNENÍ KOMBINOVA NE / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-46N	1	

1. ZM. DELKY ZDVIHU 520 NA 528. 226/ZM270 4. 10. 2011 SLEZACKOVA

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

7.34. Ovladací panel / Control panel / Bedienpult



WZRY SESTAVY	CISLO SESTAVY	STROJ
OVLADACÍ PANEL	201-R230-300	WL+PL
Konstruoval: ODVARKA		
Datum: 29. 03. 2012		
Meritko: 13:100		

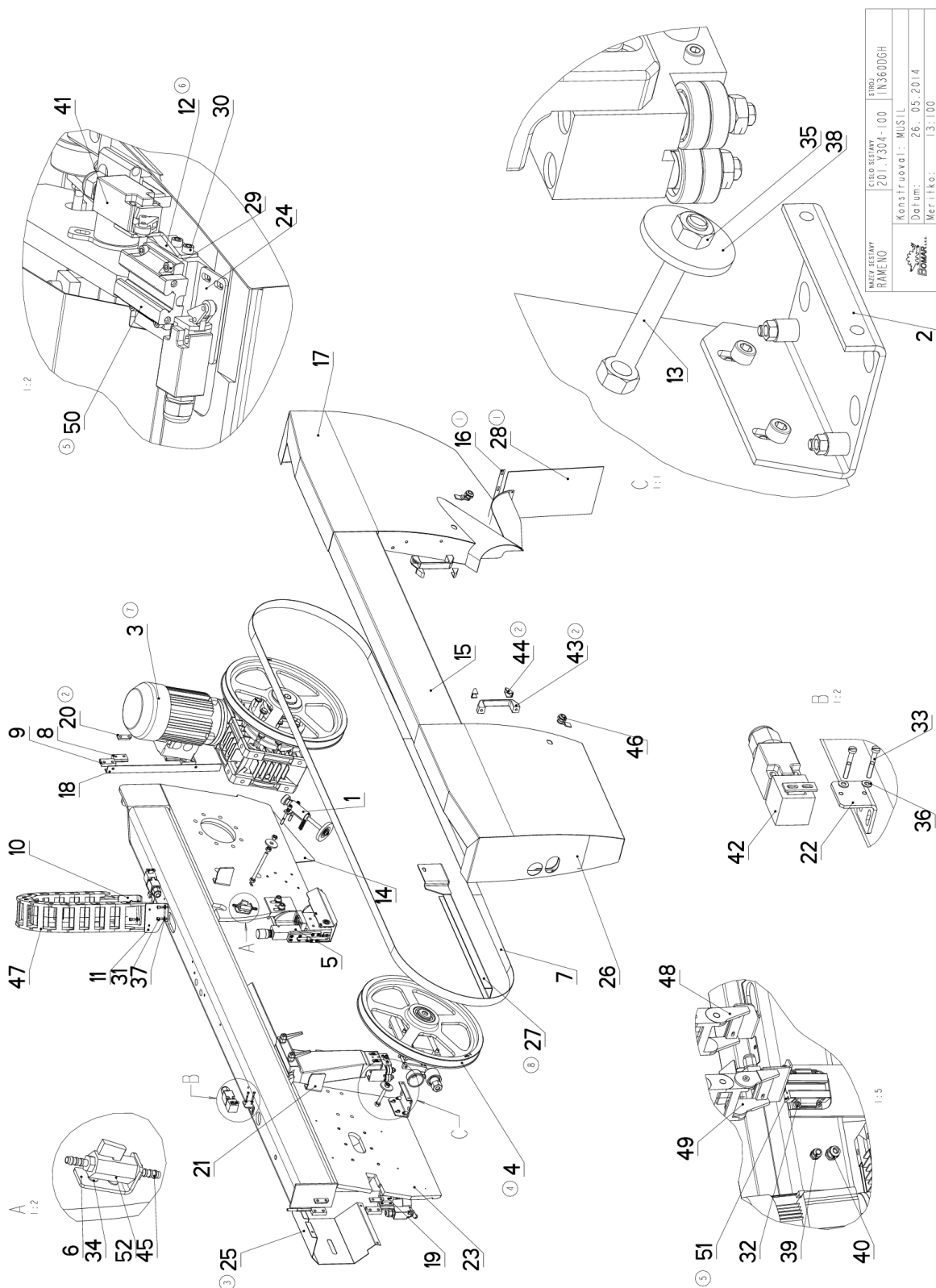
7.35. Kusovník / Piece list / Stückliste - Ovladací panel / Control panel / Bedienpult

Císlo Sestavy 201.R230-300		Ver. 2	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6130-012	0	VÍKO / COVER / DECKEL	P 0.5x 30x30	2
2	30.6130-018	0	HLAVICE / HEAD / KOPF	VYLISEK	1
3	31.6130-008	0	HLAVICE / HEAD / KOPF		1
4	30.R230-010	0	MEZIKUS / INTERMEDIATE PIECE / PASSTÜCK	d 32	1
5	30.R230-201	3	SKRIN / BOX / KASTEN		1
6	30.R230-204	0	PLECH / PLATE / BLECH	P 1x220	1
7	30.R230-206	1	PLECH / PLATE / BLECH	P 1x220	1
8	30.R230-208	1	DESKA / BOARD / PLATTE	P 3x150	1
9	31.R230-207 (2)	0	PANEL ELEKTRO / ELECTRO PANEL / PANEL	P 3x205	1
10	61.352.001	0	TESNENÍ / SEALING / DICHTUNG	TESNENÍ 19x10	1
11	90.100.55.004	0	MATICE / NUT / MÜTTER	MATICE - M6	4
12	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 6,4	4
13	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	2
14	91.060.030	0	HLAVICE TOTAL STOP / TOTAL STOP HEAD / TASTE TOTAL STOP		1
15	91.060.031	0	HLAVICE / HEAD / KOPF		1
16	91.060.035	0	HLAVICE / HEAD / KOPF		1
17	91.060.051	0	PREPINAC / SWITCH / UNSCHALTER		1
18	91.060.053	0	HLAVICE / HEAD / KOPF		1
19	91.071.022	0	VÝVODKA / BUSHING / TÜLLE		3
20	91.072.016	0	MATICE / NUT / MÜTTER		3
21	91.170.003	0	SPINAC VÁČKOVÝ / CAM SWITCH / SCHALTER	LE2-12-1763	1
22	91.180.001	0	DESKA SPINACE / ELECTRIC BOARD / PLATINE		1
23	91.283.015	0	POTENCIOMETR / POTENTIOMETER / POTENTIOMETER	TP 195 4K7/N 20A	1
24	92.002.103	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4" tr12	1
25	92.004.001	0	SROUBENÍ ÚHLOVÉ / ANGLE BOLTING / WINKELVERSCHRAUBUNG	37701	1
26	92.152.001	0	VENTIL SKRTICI / CHOKER VALVE / DROSSELVENTIL	VS01-04/R 2.5-0	1
27	96.082.002	0	TESNENÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	1
28	99.104.002	0	ZAMEK / LOCK / SCHLOSS	ZAMEK CÍNSKY	2
29	99.900.045	0	SAMOLEPKA / STICKER / AUFKLEBER		1
30	99.900.046	0	SAMOLEPKA / STICKER / AUFKLEBER		1

1. ZRUS. VÍKO 30.R230-203, PANEL 30.R230-202, 2x CEP 30.7217-028, 2x POJ. KROUZEK 95.802.003 (PRIDANO DO SKRINE 30.R230-201).
0617ZMI10 29.3.2012 SLEZACKOVA

2. ZRUS. SOUCASTI 30.R230-207 A 31.R330-003 A NAHR. 31.R230-207. 007/ZM021 4.2.2014 SLEZACKOVA

7.36. Rameno / Shoulder / Sägerahmen



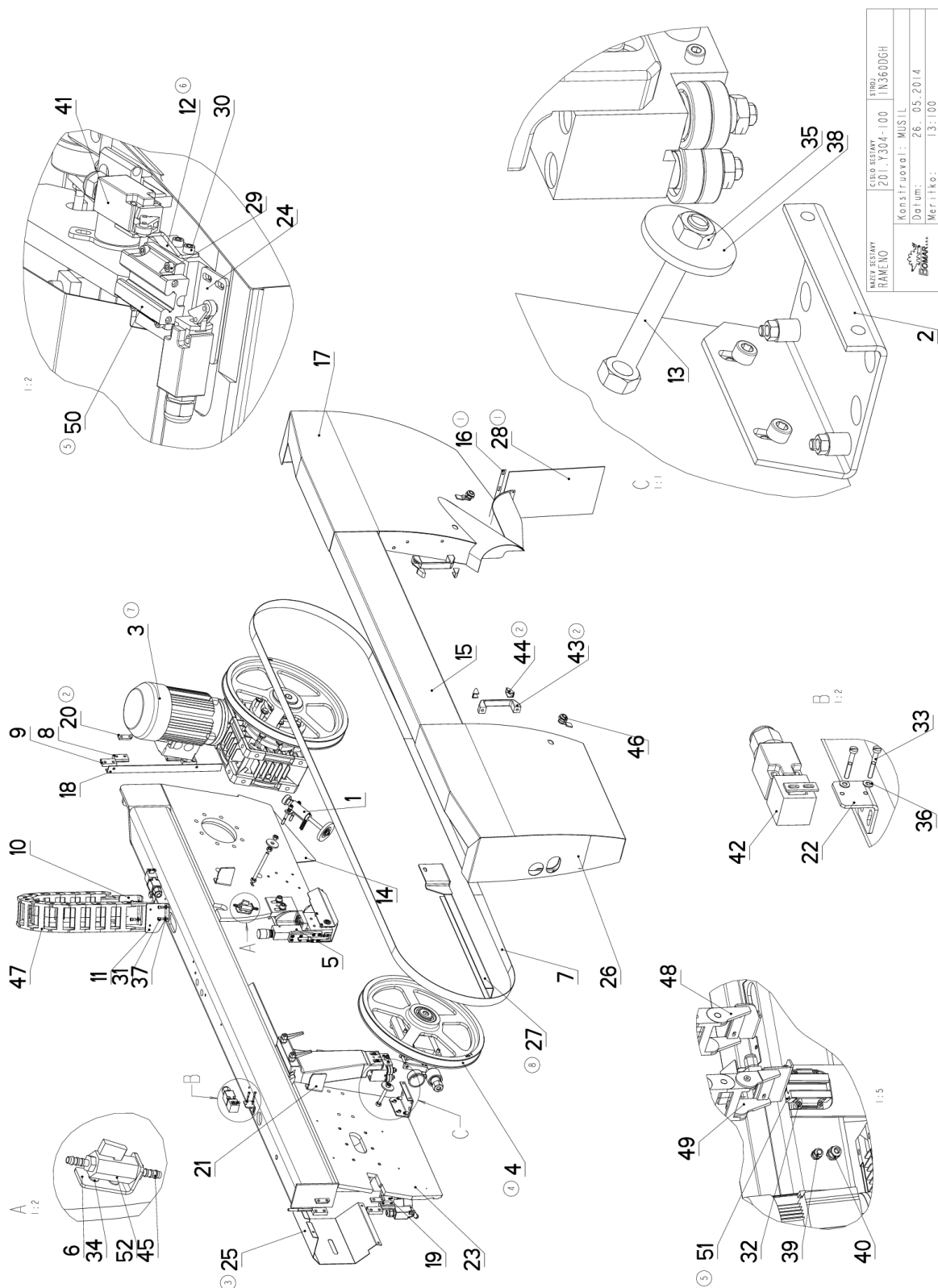
WAZV SESTAVY	CÍLOVÝ SESTAVY	STUPEŇ
RAMENO	201.Y304-100	IN3600GH
Konstruoval: MUSTIL		
Datum: 26. 05. 2014		
Verz. číslo: 13.100		

7.37. Kusovník / Piece list / Stückliste - Ramenno / Shoulder / Sägerahmen

Cislo Sestavy 201.Y304-100		Ver. 8	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.9114-300	0	KARTAC / BRUSH / BÜRSTE		1
2	201.Y304-010	0	VEDENÍ / GUIDE / BACKENFÜHRUNG	VEDENÍ KRYTU	1
3	201.Y305-100	7	POHON / DRIVE / ANTRIEB	POHON PASU	1
4	201.Y308-000	1	NAPÍNÁNÍ / TENSIONING / SPANNUNG		1
5	201.Y310-000	2	VEDENÍ PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
6	30.1814-011	1	DRŽAK / HOLDER / HALTER	P 3x76	1
7	30.2904-913	0	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	4780x32(4)x0.90	1
8	30.6014-109	1	PANT / HINGE / TÜRBAND		4
9	30.6014-110	1	PANT / HINGE / TÜRBAND	HR 30x12	4
10	30.7114-142	1	DRŽAK / HOLDER / HALTER	P 4x100	1
11	30.7304-014	0	DRŽAK / HOLDER / HALTER	P 4x100	1
12	30.Y304-014	6	DRŽAK / HOLDER / HALTER	P 3x30	1
13	30.Y304-018	0	TYC ZAVÍTOVÁ / THREADED POLE / GEWINDESTANGE	M10	2
14	30.Y304-027	0	KRYT / COVER / ABDECKUNG	P2 - 114	1
15	30.Y304-029	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
16	30.Y304-030	1	PLECH / PLATE / BLECH	P 1-15	1
17	30.Y304-031	1	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG		1
18	30.Y304-033	1	DRŽAK / HOLDER / HALTER	L 20x30	1
19	30.Y304-034	1	DRŽAK / HOLDER / HALTER	L 20x30	1
20	30.Y304-035	2	DESKA / BOARD / PLATTE	HR 20x5	4
21	30.Y304-038	0	ZAMEK / LOCK / SCHLOSS	P4 - 67	2
22	30.Y304-039	0	DRŽAK / HOLDER / HALTER	P 3x34	2
23	30.Y304-101	7	RAMENO / /		1
24	30.Y304-107	0	DRŽAK / HOLDER / HALTER	P 3x40	1
25	30.Y304-115	3	KRYT NAPÍNÁNÍ / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P 1,5x244	1
26	30.Y304-132	4	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG		1
27	30.Y304-159	8	KRYT PASU / BELT COVER / BANDABDECKUNG		1
28	31.PK02-054	1	GUMA / RUBBER / GUMMI	G2 - 206	1
29	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x16	4
30	90.001.25.015	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x10	2
31	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x14	4
32	90.001.55.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	8
33	90.012.50.007	0	SROUB / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M4x30	4
34	90.013.27.003	0	SROUB / BOLT / SCHRAUBE	M5x10	2

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

7.38. Rameno / Shoulder / Sägerahmen



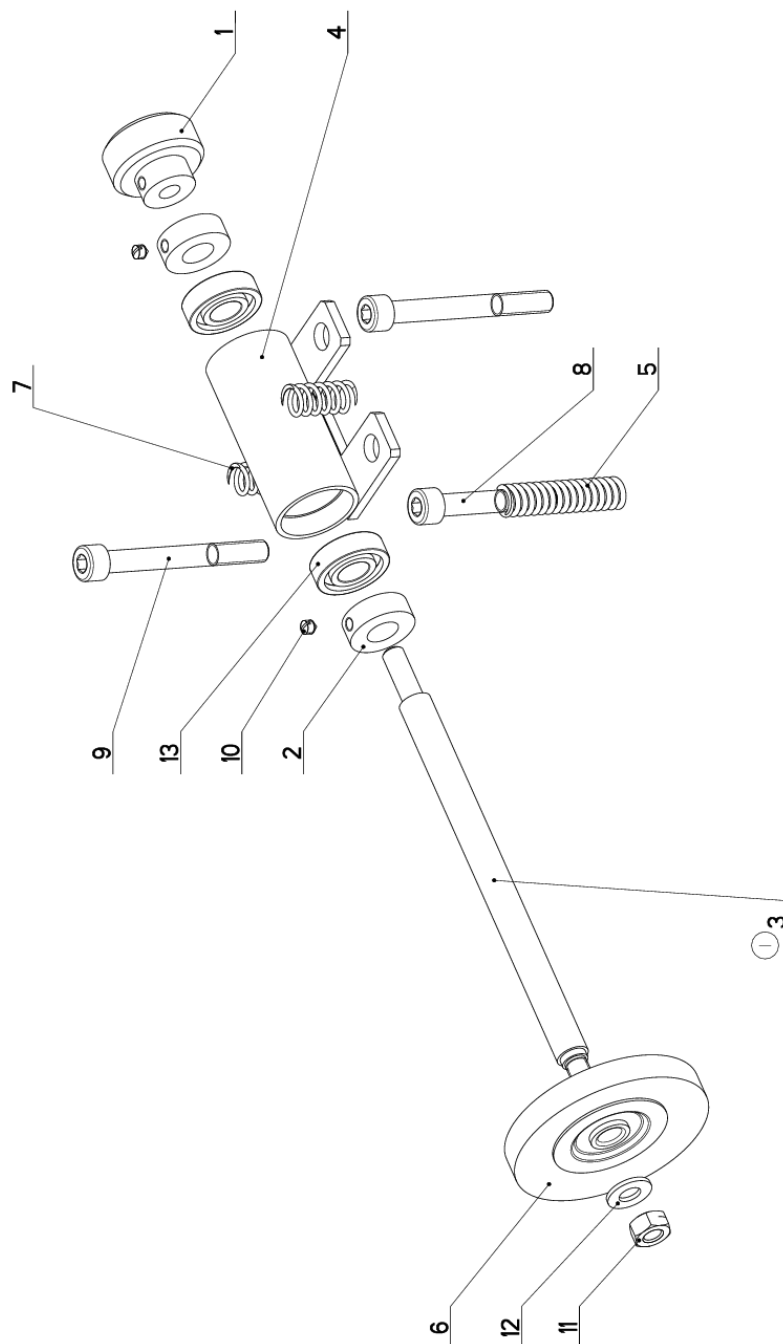
7.39. Kusovník / Piece list / Stückliste - Rameno / Shoulder / Sägerahmen

35	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE - M10	6
36	90.150.50.002	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 4,3	4
37	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 6,4	4
38	90.151.50.002	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 12	2
39	91.070.011	0	VYVODKA / BUSHING / TÜLLE	M16x1,5	1
40	91.070.012	0	VYVODKA / BUSHING / TÜLLE	M20x1,5	1
41	91.173.010	0	SPINAC KONC.S KLADK. / END SWITCH WITH PULLEY / ENDSCHALTER MIT ROLLE	PZ-FR605-M2	2
42	91.173.012	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	QKS8-2xNC	2
43	94.012.001	2	RUKOJET / HANDLE / GRIFF		2
44	94.012.002	2	ZATKA / PLUG / STOPFEN		4
45	94.202.002	0	REDUCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/RI/4"	2
46	99.104.002	0	ZAMEK / LOCK / SCHLOSS	ZAMEK C1INSKY	2
47	99.170.001	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE	0555.030.075.100	14
48	99.173.001	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNEJ	1
49	99.173.002	0	RETEZ ENERGI / ENERGY BELT / ENERGIEKETTE	KONCOVKA VNIT	1
50	99.201.045	5	VOZIK LINEARNIHO VEDENI / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA20E SS FO N	1
51	99.201.058	5	VOZIK LINEARNIHO VEDENI / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	MSA30E SS FO N	2
52	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1

1. ZRUS.2xVOZIK HGW 30CC(99.201.007) A NAHR.2xVOZIKEM HSR 30B SS(99.201.027), HGW20 CC(99.201.012)
A NAHR.VOZIKEM HSR 20B SS CI(99.201.025), PRID.GUMA 31.PK02-054, PLECH 30.Y304-030. 120/ZM149 19.9.2006 SLEZACKOVA
2. PRIDANO 4xDESKA 30.Y304-035,2xRUKOJET 94.012.001,4xZATKA 94.012.002. 198/ZM244 11.12.2009 SLEZACKOVA
3. ZRUS.2xVOZIK HSR 30B SS(99.201.027) A NAHR.2xVOZIKEM HGW 30CC(99.201.007), HSR 20B SS CI(99.201.025)
A NAHR.VOZIKEM HGW20 CC(99.201.012), KRYT 30.Y304-023 NAHRAZEN KRYTEM 30.Y304-115; 285/zm293 29.10.2010 HLADIL
4. KRYT 30.Y304-032 NAHRAZEN KRYTEM 30.Y304-132; 275/zm.302 HLADIL 18.11.2011
5. ZRUS.VOZIK LIN.VEDENI 99.201.007 A NAHR.99.201.058,ZRUS.VOZIK LIN.VEDENI 99.201.045 A NAHR.99.201.045 .
056/ZM100 20.3.2012 SLEZACKOVA
6. ZRUS.DRZAK 30.Y304-013 A NAHR.30.Y304-014. 247,252/ZM311 9.11.2012 SLEZACKOVA
7. ZRUS.POHON 201.Y305-000 A NAHR.201.Y305-100. 056/ZM105 28.3.2013 SLEZACKOVA
8. ZRUS.KRYT PASU 30.Y304-059 A NAHR.30.Y304-0159. 065/ZM114 26.5.2014 MUSIL

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

7.40. Kartáč / Brush / Burste



NAZEV SESTAVY KARTÁČ	ČÍSLO SESTAVY 201.9114-300	STROJ EC0260
Konstruoval: STASTNA		
Datum: 12. 02.2015		
Meritko: 7:10		

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

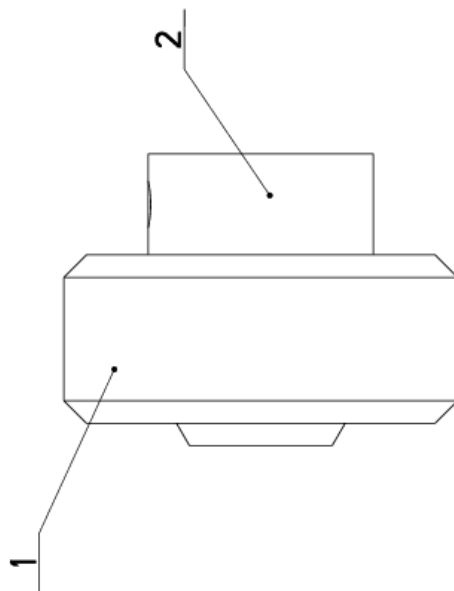
Císlo Sestavy 201.9114-300		Ver. 0	Název sestavy KARTAC/BRUSH/BURSTE		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	201.0814-204	0	KOLEČKO / WHEEL / ROLLE	SESTAVA	1
2	30.0814-207	0	KROUZEK / RING / RING	d 25	2
3	30.9114-301 (1)	0	HRDEL / SHAFT / WELLE	d 12	1
4	30.9214-301	2	DRŽAK / HOLDER / HALTER		1
5	31.0305-211	0	PRUŽINA / SPRING / FEDER	2 x 12x50x15.5	1
6	31.0814-208	0	KARTAC / BRUSH / BÜRSTE		1
7	31.1506-115	0	PRUŽINA / SPRING / FEDER	1.6 x 12x25x7.5	2
8	90.001.25.038	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x50	1
9	90.001.25.095	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x70	2
10	90.003.20.001	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x6	3
11	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	1
12	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 8.4	1
13	95.001.005	0	LOŽISKO / BEARING / LAGER	6001 2RS	2

1. ZRUŠENA HRDEL 30.0814-206 A MAHR. 30.9114-301 23.1.03 STASTNA

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

7.42. Kolečko / Eheel / Rolle

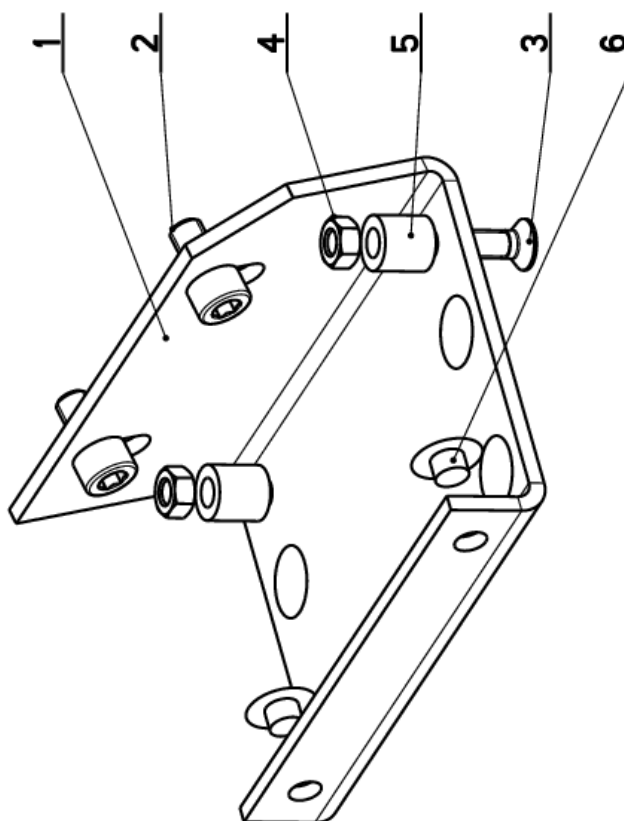
Císlo Sestavy 201.0814-204		Ver. 0	Název sestavy KOLEČKO / WHEEL / ROLLE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.0814-204.1	0	KOLEČKO / /	1
2	30.0814-204.2	0	NABOJ / /	1



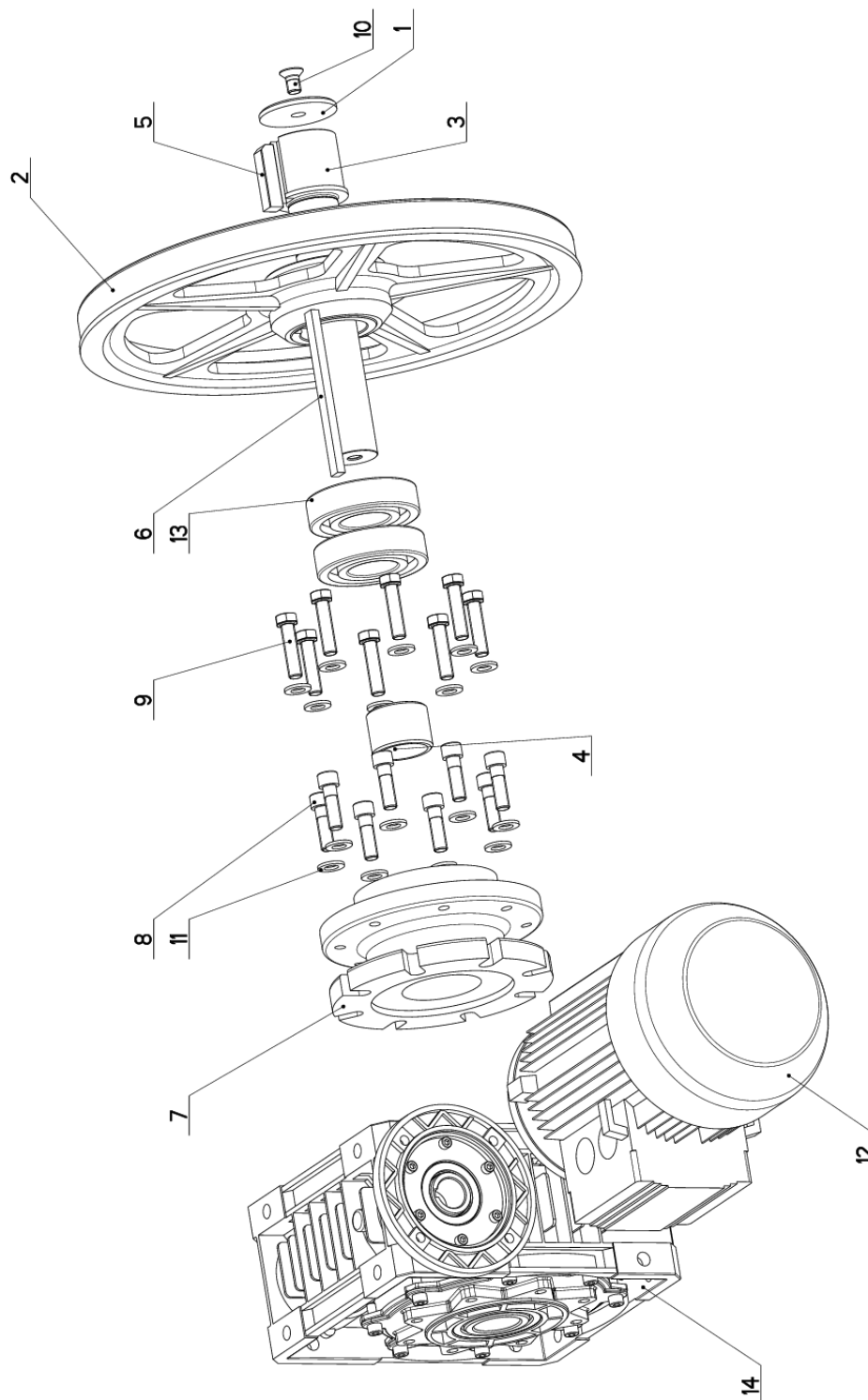
Císlo Sestavy/Number of assembly/Nummer der Baugruppe; Verze (Ver.)/Version/Version; Název sestavy/Assembly title/Name der Baugruppe; Pozice (Poz.)/Position/Position;
Objednací číslo/Purchase order number/Bestellnummer; Název položky/Volume title/Name der Position; Rozměr/Stock size/Abmessung

7.43. Vedení / Guide / Backenführung

Cislo sestavy 201.Y304-010		Ver. 0	Název sestavy VEDENÍ / GUIDE / BACKENFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.Y304-011	0	DRŽÁK / HOLDER / HALTER	P3 - 100	1
2	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
3	90.011.27.024	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M5x20	2
4	90.100.55.003	0	MATICE DIN 934 / NUT / MUTTER	MATICE _ M5	2
5	90.163.00.006	0	DISTANC / DISTANCE / DISTANZ	TR 10/5,3	2
6	94.101.029	0	ZATKA / PLUG / STOPFEN	PRO IMBUS M8	6



7.44. Pohon / Drive / Antrieb



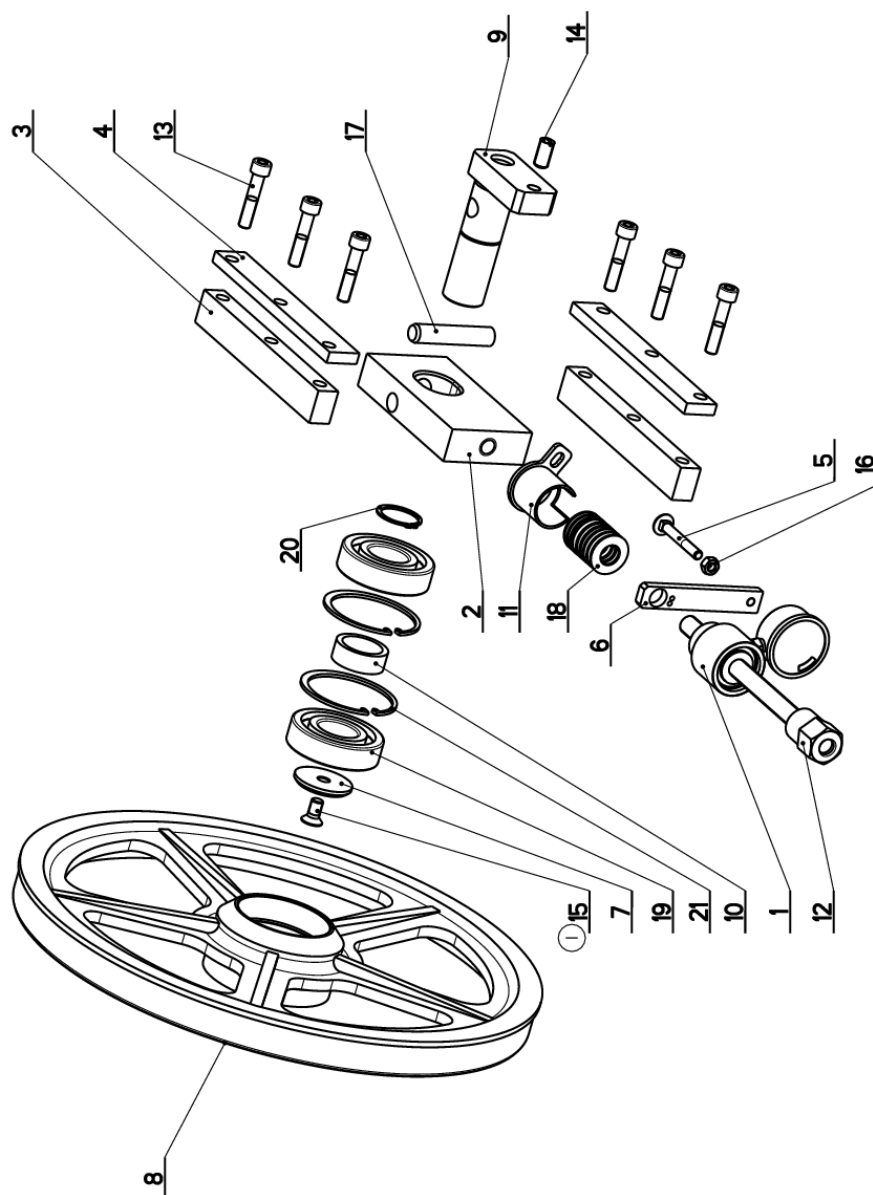
NAZEV SESTAVY POHON	CÍSLO SESTAVY 201.Y305-100	STROJ IN360
Konstruoval: MUSIL		
Datum: 27. 03.2013		
Meritko: 3:10		

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

Císlo Sestavy 201.Y305-100		Ver. 0	Název sestavy POHON/DRIVE / ANTRIEB		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1804-010	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	d 70	1
2	30.2904-003	3	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD	ODLITEK	1
3	30.2904-004	2	HRDEL / SHAFT / WELLE	d 65	1
4	30.2904-005	0	DISTANC / DISTANCE / DISTANZ	TR 55x8	1
5	30.2904-006	0	PERO / SPRING / FEDER	HR 14x14	1
6	30.2904-008	0	PERO / SPRING / FEDER	HR 12x8	1
7	30.4405-052	0	PŘÍRUBA / FLANGE / FLANSCH	ODLITEK	1
8	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x40	8
9	90.005.55.045	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x50	8
10	90.011.27.009	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12x20	1
11	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 13	16
12	91.001.053	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR	MDERA 100-32pro	1
13	95.001.027	0	LOŽISKO / BEARING / LAGER	6309 2RS	2
14	99.002.040	0	PREVODOVKA SNEKOVÁ / WORM GEAR TRANSMISSION / SCHNECKENGETRIEBE	MU110 P100 B14	1

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

7.46. Napínání / Tensioning / Spannung



NAZEV SESTAVY NAPÍNÁNÍ	CÍSLO SESTAVY 201.Y308-000	STROJ TIN 360
Konstruoval: MUSIL		
Datum: 25. 06.2012		
Meritko: 3:10		

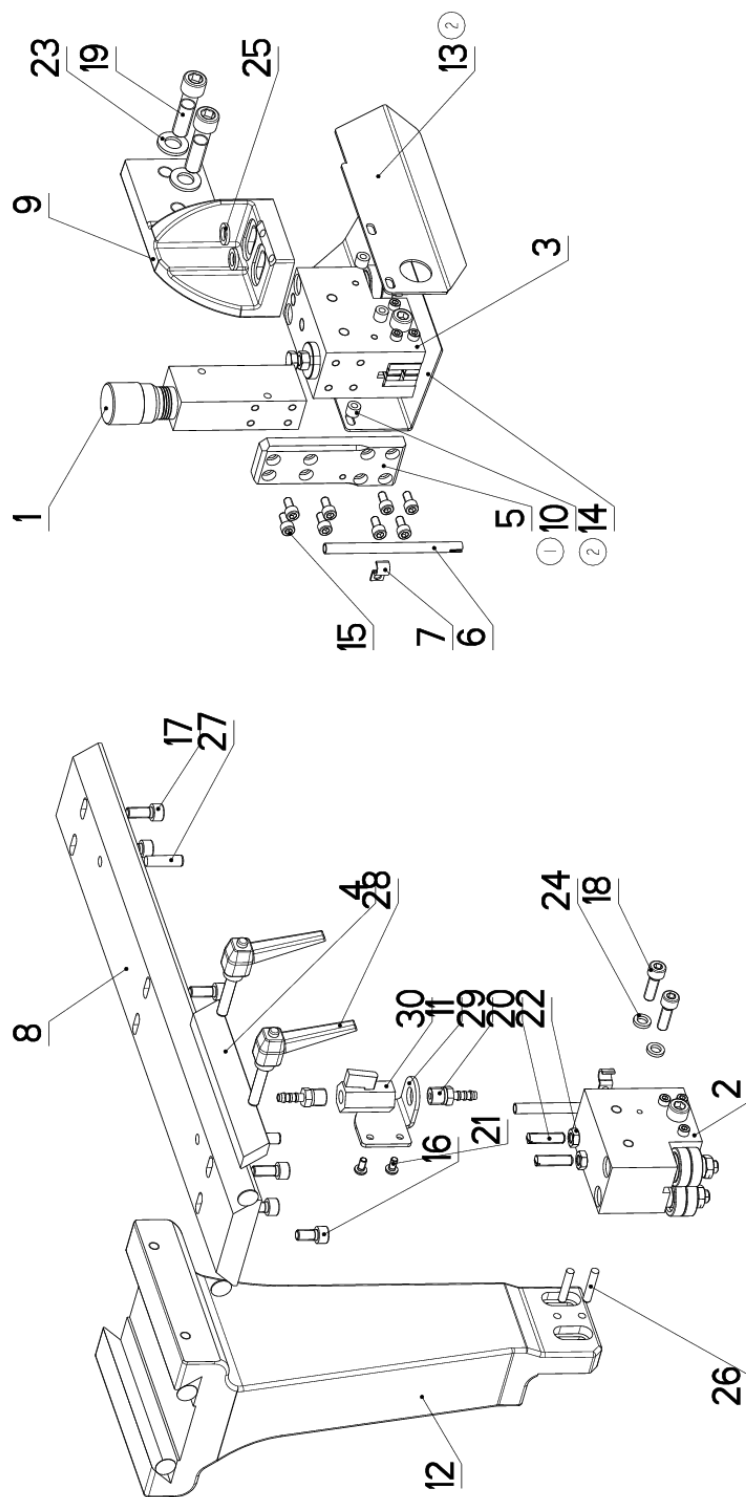
7.47. Kusovník / Piece list / Stückliste -
Napínání / Tensioning / Spannung

Císlo Sestavy 201.Y308-000		Ver. I	Název sestavy NAPÍNANÍ / TENSIONING / SPANNUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	202.2912-100	I	INDIKÁTOR NAPÍNANÍ / POWER INDICATOR / SPANNUNGSINDIKATOR	SESTAVA	I
2	30.0808-001	I	KOSTKA NAPÍNANÍ / TENSIONING CUBE / BANDSPANNUNGSWÜRFEL	80x30	I
3	30.0808-002	I	LISTA VODÍČÍ / LEAD TRIM / FÜHRUNGSEIESTE	30x20	2
4	30.0808-006	I	LISTA / TRIM / LEISTE	HR 30x10	2
5	30.0808-007	0	SROUB / BOLT / SCHRAUBE	M8x60	I
6	30.1708-004	4	DRŽÁK / HOLDER / HALTER	HR 20x8	I
7	30.2908-001	I	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	d 50	I
8	30.2908-103	2	KOLO NAPÍNANÍ / TENSIONING WHEEL / UMLENKRAD	ODLITEK	I
9	30.4808-101	4	CEP NAPÍNANÍ / TENSIONING LUG / SPANNUNGSBOLZEN		I
10	30.4808-103	I	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	d 45	I
11	30.6908-102	I	DRŽÁK / HOLDER / HALTER		I
12	30.Y308-001	0	SROUB NAPÍNANÍ / TENSION BOLT / SCHRAUBE BANDSPANNUNG		I
13	90.001.25.052	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x50	6
14	90.002.20.013	0	SROUB STAVEČÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12x25	I
15	90.011.27.008 (1)	0	ZAPUSTNÝ IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M10x20	I
16	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	I
17	90.300.07.003	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 16x80	I
18	90.350.02.002	0	TALÍROVÁ PRUŽINA / DISC SPRING / TELLERFEDER	35,5x18,3x2,0x2,8	9
19	95.001.026	0	LOŽISKO / BEARING / LAGER	6307 2RS	2
20	95.800.014	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 35	I
21	95.801.013	0	SEGR DÍRA. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 80	2

I.ZRUS.SROUB M12x20(90.011.27.009) A NAHR.M10x20(90.011.27.008). 110/ZM212 25.6.2012 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; Rožmer/Stock size/Abmessung

7.48. Vedení pásu / Belt guide / Sägebandführung



NAZEV SOUSTAVY VEDENÍ PÁSU	CÍSLO SOUSTAVY 201.Y310-000	STROJ IN360DGH
Konstruktor: Datum: Meritko:	MUSIL 23. 05.2014 33:100	

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

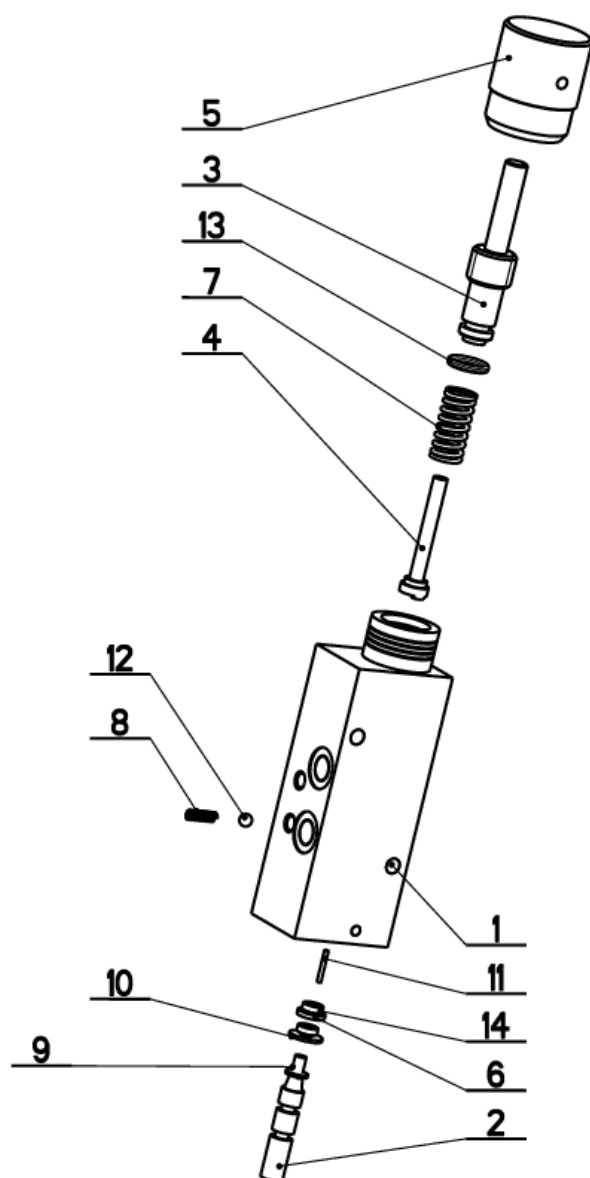
Císlo Sestavy 201.Y310-000		Ver. 2	Název sestavy VEDENÍ PASU/BELT GUIDE/SÄGEBANDFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.2016-000	0	REGULACE PŘÍTLAKU / PRESSURE REGULATION / SCHNITTDRUCKREGULATION		1
2	201.Y310-300	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	201.Y310-400	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	30.0810-011	0	LISTA TRECI / FRICTION TRIM / FRIKTIONSLEISTE	HR 30x10	1
5	30.2016-006	0	DESKA / BOARD / PLATTE	HR 40x12	1
6	30.3510-004	0	TRUBKA / TUBE / ROHR	TR 8x 1	2
7	30.9010-003	0	DRŽAK / HOLDER / HALTER	PL 5x10	2
8	30.9210-002	3	LISTA VODICI / LEAD TRIM / FÜHRUNGSLISTE	HR 90x20	1
9	30.Y310-003	1	DRŽAK / HOLDER / HALTER		1
10	30.Y310-007 (1)	0	KROUZEK / RING / RING	TR 10x2,5	4
11	30.Y310-008	0	DRŽAK / HOLDER / HALTER	P3-50	1
12	30.Y310-104	0	KONZOLA / CONSOLE / KONSOL		1
13	30.Y310-106 (2)	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2x96	1
14	30.Y310-108 (2)	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2x96	1
15	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	8
16	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	1
17	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	6
18	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	2
19	90.001.25.061	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x45	2
20	90.002.20.022	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x30	2
21	90.013.27.003	0	SROUB / BOLT / SCHRAUBE	M5x10	2
22	90.101.55.001	0	MATICE / NUT / MUTTER	MATICE M8	2
23	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 13	2
24	90.163.00.001	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	M8 NORD-LOCK	2
25	90.163.00.004	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	NORD-LOCK	2
26	90.300.07.006	0	KOLÍK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 8x32	2
27	90.302.02.002	0	KUŽEL. KOLÍK S ZAV. / TAPER PIN + THREAD / KEGELBOLZEN + GEWINDE	KOLÍK 8x30	2
28	94.008.003	0	PAKA UPIŇACÍ / ATTACHMENT LEVER / SPANNHEBEL	M8x40	2
29	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/R1/4"	2
30	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1
1. PRIDAN KRYT 30.Y410-006,30.Y410-008,KROUZEK 30.Y310-007. 156/ZM189 21.9.2009 SLEZACKOVA					
2. ZRUSEN KRYT PASU 30.Y410-006 A NAHR.30.Y310-106,ZRUS.KRYT PASU 30.Y410-008 A NAHR.30.Y310-108. 065/ZM114 23.5.2014 SLEZACKOVA					

1. PRIDAN KRYT PASU 30.Y410-006, 30.Y410-008, KROUZEK 30.Y310-007. 156/ZM189 21.9.2009 SLEZACKOVA

2. ZRUSEN KRYT PASU 30.Y410-006 A NAHR. 30.Y310-106, ZRUS. KRYT PASU 30.Y410-008 A NAHR. 30.Y310-108. 065/ZM114 23.5.2014 SLEZ

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

7.50. Regulace přítaku / Pressure regulation / Schnittdruckregulation



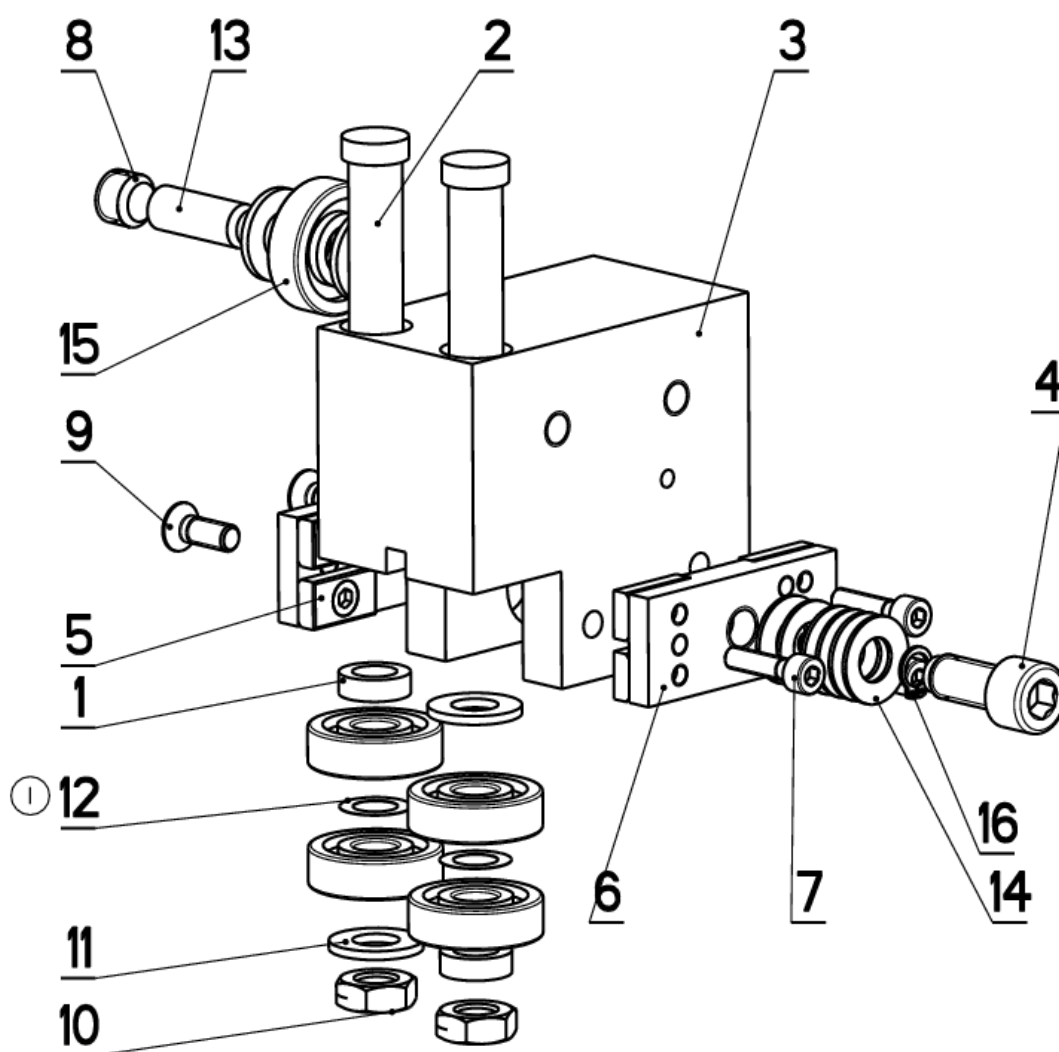
NAZEV SESTAVY REGULACE PRITLAKU	CISLO SESTAVY 001.2016-000	STROJ STG340DGS
	Konstruoval: &konstruoval	
	Datum: 19. 02.2010	
	Meritko: 1:2	

7.51. Kusovník / Piece list / Stückliste -
Regulace přítlaku / Pressure regulation /
Schnittdruckregulation

Císlo Sestavy 201.2016-000		Ver. 0	Název sestavy REGULACE PŘÍTLAKU/PRESSURE REGULATION/SCHNITTDRUCKREGULATION		
Pos.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2016-001	2	TELESO / BODY / KÖRPER	HR 40 x 40	1
2	30.2016-002	0	JEHLA / NEEDLE / NADEL	KR 8	1
3	30.2016-003	0	SROUB / BOLT / SCHRAUBE	d 16	1
4	30.2016-004	0	CÍDLO / SENSOR / SENSOR	d 10	1
5	30.2016-005	0	KOLEČKO / WHEEL / ROLLE	d 32	1
6	30.2016-009	0	KROUZEK / RING / RING	TR 10x1	1
7	31.2016-007	0	PRUŽINA / SPRING / FEDER	d 11,6x1,6	1
8	31.2016-008	0	PRUŽINA / SPRING / FEDER	0,25x3,6x12x9,5	1
9	90.099.002	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	4x6	1
10	90.151.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 4	1
11	95.690.001	0	JEHLA / NEEDLE / NADEL	1,5x11,8	1
12	95.691.001	0	KULICKÁ LOŽISKA / BALL / KUGEL	RB 4.5	1
13	96.001.003	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	8x2	1
14	96.002.001	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	4x2	2

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

7.52. Kostka vodící / Lead cube / Führungsklotz



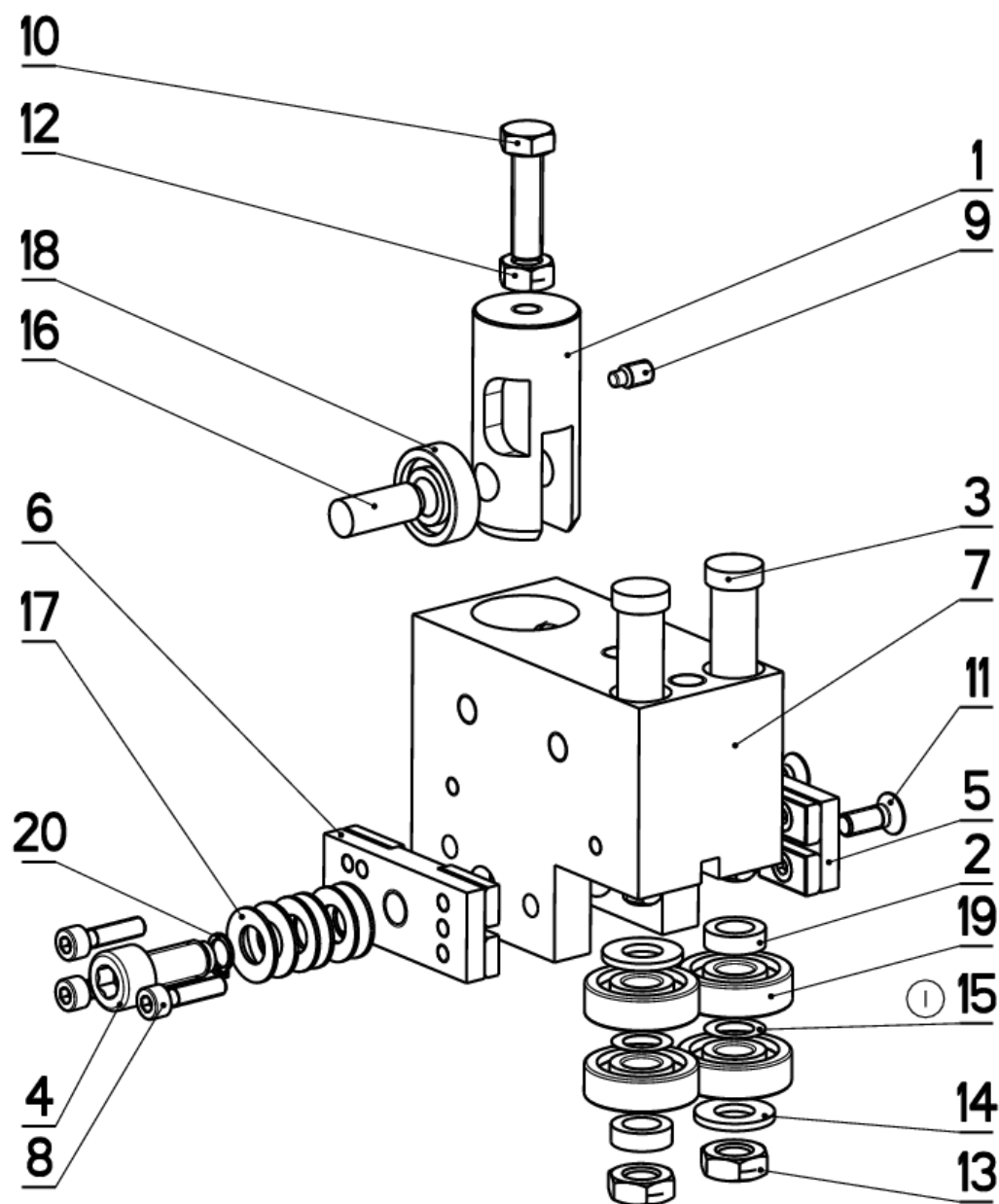
NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.Y310-300	STROJ IND360
	Konstruoval: HLADIL	
	Datum: 01. 11. 2010	
	Meritko: 4:5	

7.53. Kusovník / Piece list / Stückliste -
Kostka vodičí / Lead cube / Führungsklotz

Číslo Sestavy 201.Y310-300		Ver. 1	Název sestavy KOSTKA VODIČI / LEAD CUBE / FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.C210-403	1	DISTANC / DISTANCE / DISTANZ	TR 16x3	2
2	30.Y310-212	0	EXCENTR / CAM / EXCENTER	d 15	2
3	30.Y310-301	1	KOSTKA VODIČI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 80x50	1
4	30.Y310-306	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	1
5	30.Y310-310	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.Y310-320	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	90.001.25.010	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x20	3
8	90.002.20.016	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12x10	1
9	90.011.27.017	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x16	2
10	90.101.55.002	0	MATICE / NUT / MUTTER	MATICE M10	2
11	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	4
12	90.154.50.001	1	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	10x16x0,1	2
13	90.301.07.001	0	KOLÍK VALCOVÝ / CYLINDRICAL PIN SOFT / ZYLINDERSTIFT WEICH	KOLÍK 10x28	1
14	90.350.07.005	0	PRŮŽINA TALÍŘOVÁ / DISC SPRING / TELLERFEDER	20x10.2x1	6
15	95.001.014	0	LOŽISKO / BEARING / LAGER	6200 2RS	5
16	95.800.002	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 8	1

1. PRIDANA PODLOŽKA 90.154.50.001. 277/ZM294 1.11.2010 SLEZACKOVA

7.54. Kostka vodící / Lead cube / Führungsklotz



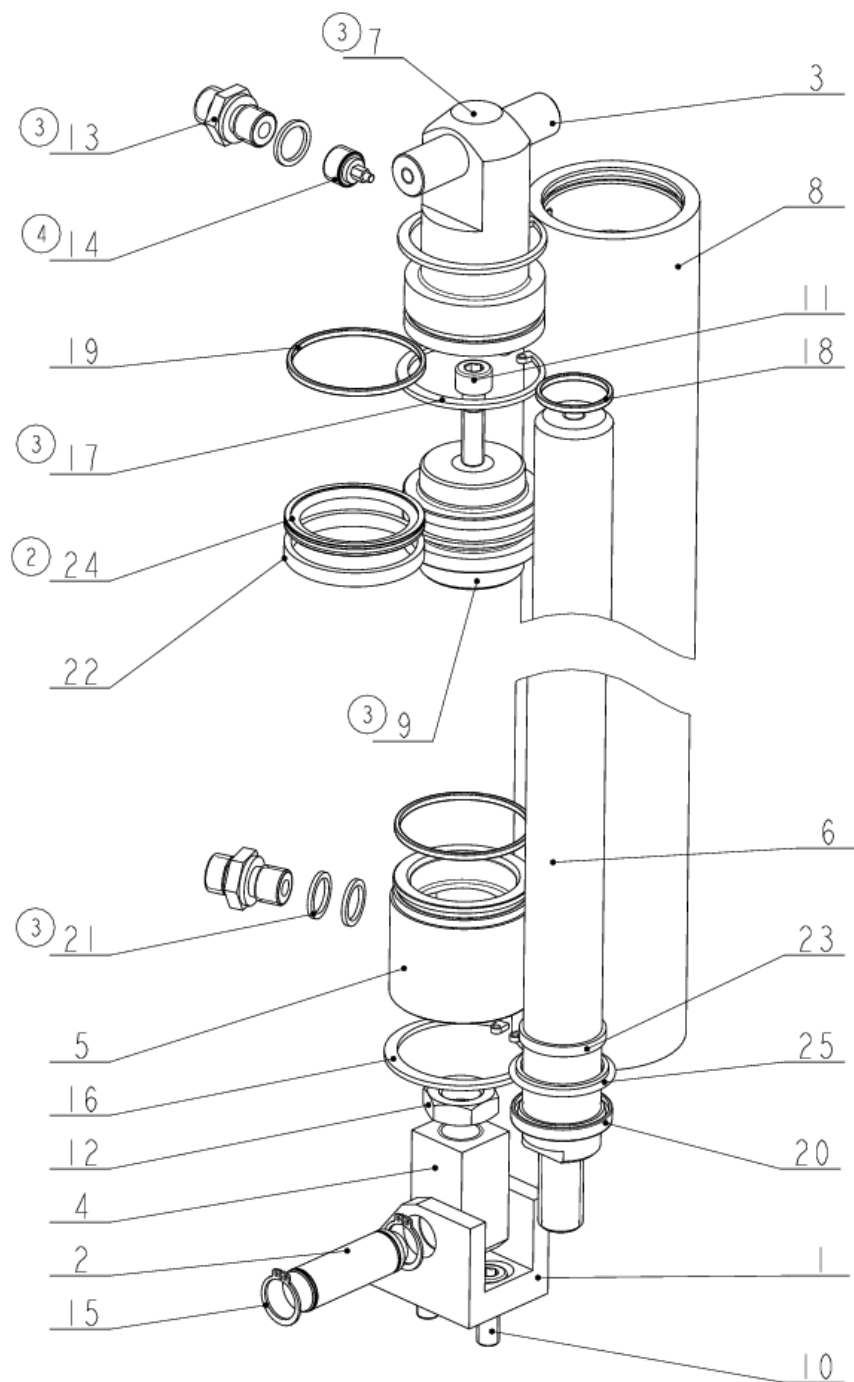
NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.Y310-400	STROJ IN360
	Konstruoval: HLADIL	
	Datum: 01. 11. 2010	
	Meritko: 7:10	

7.55. Kusovník / Piece list / Stückliste -
Kostka vodičí / Lead cube / Führungsklotz

Číslo Sestavy 201.Y310-400		Ver. I	Název sestavy KOSTKA VODIČI / LEAD CUBE / FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1810-102	3	DRŽAK / HOLDER / HALTER	TYC 28	1
2	30.C210-403	1	DISTANC / DISTANCE / DISTANZ	TR 16x3	2
3	30.Y310-212	0	EXCENTR / CAM / EXZENTER	d 15	2
4	30.Y310-306	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	1
5	30.Y310-310	0	DRŽAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.Y310-320	0	DRŽAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	30.Y310-401	3	KOSTKA VODIČI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 80x50	1
8	90.001.25.010	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x20	3
9	90.004.20.002	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
10	90.005.55.017	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x30	1
11	90.011.27.017	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6x16	2
12	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
13	90.101.55.002	0	MATICE / NUT / MUTTER	MATICE M10	2
14	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	2
15	90.154.50.001	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	10x16x0,1	2
16	90.301.02.009	0	KOLÍK VALCOVÝ / CYLINDRICAL PIN SOFT / ZYLINDERSTIFT WEICH	KOLÍK 10x26	1
17	90.350.02.005	0	PRUŽINA TALÍROVÁ / DISC SPRING / TELLERFEDER	20x10.2x1	6
18	95.001.004	0	LOŽISKO / BEARING / LAGER	6000 2RS	1
19	95.001.014	0	LOŽISKO / BEARING / LAGER	6200 2RS	4
20	95.800.002	0	KROUZEK POJIST.VNĚJSÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 8	1

I.PRIDANA PODLOZKA 90.154.50.001 . 2777M294 I.11.2010 SLEZACKOVA

7.56. Válec zvedací / Lifting cylinder / Hebezyylinder



NAZEV SESTAVY VALEC ZVEDACI	CISLO SESTAVY 201.Y307-010	STROJ 1360
	Konstruoval: MUSIL	
	Datum: 09. 03.2011	
	Meritko: 1:2	

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

Císlo Sestavy 201.Y307-010	Ver. 4	Název sestavy VALEC ZVEDACÍ/LIFTING CYLINDER/HEBEZYLINDER			
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0807-008	3	DRŽAK / HOLDER / HALTER	HR 40x40	1
2	30.0807-009	2	CEP / LUG / BOLZEN	d 16h9	1
3	30.8307-205	0	CEP / LUG / BOLZEN	d 16h9	1
4	30.8607-001	0	DRŽAK / HOLDER / HALTER	HR 25x25	1
5	30.C407-012	1	VÍKO / COVER / DECKEL	d 55	1
6	30.Y307-002	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28 f8	1
7	30.Y307-003	3	VÍKO / COVER / DECKEL	d 55	1
8	30.Y307-011	4	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER	TR 62/50	1
9	30.Y307-012	1	PIST / PISTON / KOLBEN	d 55	1
10	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	2
11	90.001.55.083	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	1
12	90.101.55.003	0	MATICE / NUT / MUTTER	MATICE M16	1
13	92.002.001	3	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	GES 08LR	2
14	92.151.008	4	VENTIL POJISTNÝ / SAFETY VALVE / SICHERUNGSVENTIL	VPN-H 1/4"	1
15	95.800.007	0	SEGR HRÍDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUSSEN	POJISTNÝ KROUZEK 16	2
16	95.801.009	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 52	1
17	95.801.018	3	KROUZEK POJIST.VNITR. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 50	2
18	96.002.011	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	24x2	1
19	96.002.019	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	46x2 NBR 70SH	2
20	96.061.009	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	W02200280 Z201	1
21	96.082.002	3	TESNĚNÍ / SEAL RING / DICHTUNGSRING	13/17x1.5 CU	3
22	96.084.001	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GP6500500-147	1
23	96.084.006	0	KROUZEK VODICÍ / LEAD RING / FÜHRUNGSRING	GR4300280-147	1
24	96.900.013	2	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PT0200500	1
25	96.900.021	0	TESNĚNÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280-46N	1

1.ZRUS.SROUBENÍ 92.002.005 A NAHR.92.003.001,ZRUS.SROUBENÍ 30.6107-510 A NAHR.30.9107-509.,ZRUS.1xTESNĚNÍ 96.082.002 (ZUSTAVAJÍ 2ks).071/ZM097 12.4.2010 SLEZACKOVA

2.ZRUSENO TESNĚNÍ 96.900.001 A NAHR.96.900.013. 336/ZM006 10.1.2011 SLEZACKOVA

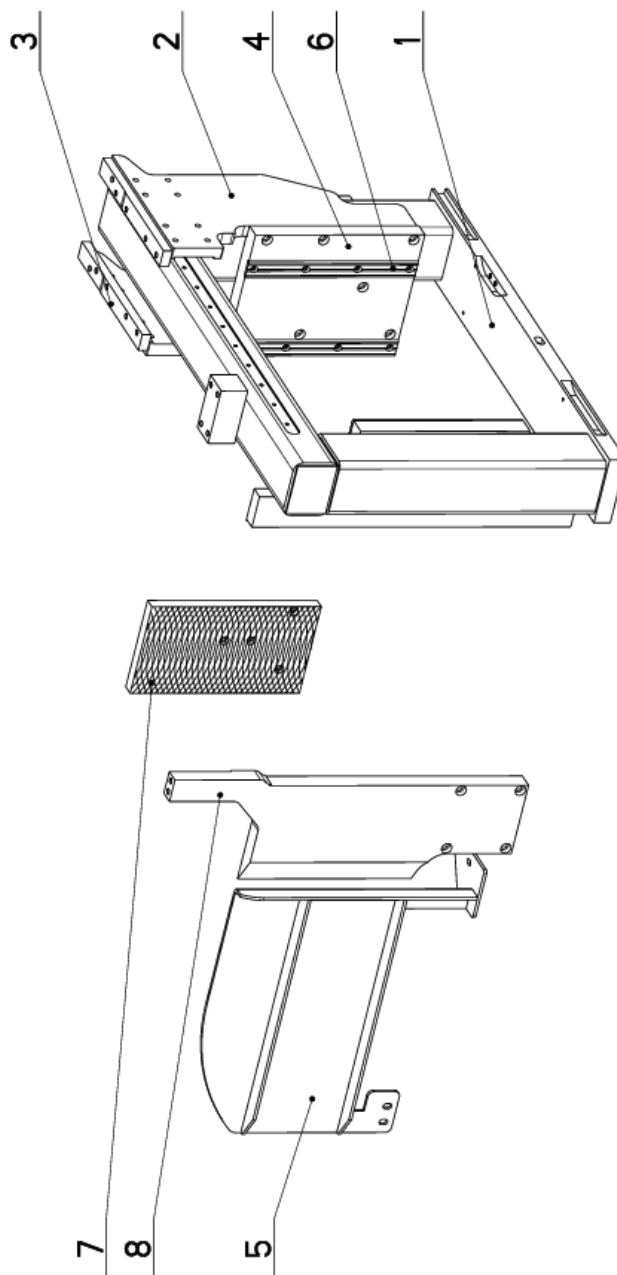
3.ZRUS.REDUKCE 30.9107-509,ZRUS.SROUBENÍ 30.1807-005,ZRUS.VÍKO 30.Y307-005 A NAHR.30.Y307-003,ZRUS.SROUBENÍ 92.003.001 A NAHR.92.002.001,ZRUS.PIST 30.LM07-504 A NAHR.30.Y307-012,ZRUS.KROUZEK 95.801.009 A NAHR.95.801.018. 026/ZM027

24.2.2011 SLEZACKOVA

4.VENTIL 92.151.001 PRECISLOVAN NA 92.151.008. 222/ZM211 29.7.2013 SLEZACKOVA

7.58. Čelist/ jaw/ Backe 33 mm (Optional)

Cislo Sestavy 201.D314-270		Ver. 1	Název sestavy CELIST/JAW/BACKE			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.D311-252	0	SLOUP PODAVACE / FEEDER POLE / VORSCHUBSÄULE		1	
2	30.D311-253	1	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE		1	
3	30.D311-254	0	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE		1	
4	30.D311-255	0	DESKA / BOARD / PLATTE	P30x230	1	
5	30.D314-276	0	BOČNICE / SIDE PLATE / SEITENTEIL		1	
6	30.D411-235	2	LISTA CELISTI / JAW TRIM / BACKENLEISTE		4	
7	30.N303-052	0	CELIST / JAW / BACKE	HR 30x10	1	
8	30.N303-053	0	CELIST PEVNÁ / SOLID JAW / FESTE BACKE	HR 165x20	1	
				P30x206	1	



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