

Series **Ergonomic**



Ergonomic 320.250 DG

Operating instructions

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

Seriové číslo / Serien Nummer / Serial Number _____

Service and information

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7⁰⁰ – 16⁰⁰

Version:

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rev. 1

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

EC Declaration of Conformity

1) We

BOMAR, spol. s r.o.
Těžební 1236/1
627 00 Brno, The 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. In the event of any device modification not approved by us this declaration shall lose its validity.

Name: **Band Saw**
 Type range: **Ergonomic 320.250 DG**
 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 arm, saw band and drive, control panel
	Hydraulic	YES ☐ NO ☒
	Control system	YES ☐ NO ☒
Technical data:	cutting rate	40/80 m.min ⁻¹ (20 - 120 m.min ⁻¹)
	cutting angle	-15° - 0° - 50°
	Total dimensions in mm (LxWxH)	1670 x 900 x 1250 mm
	weight	358 kg
	Supply voltage	3x400 V (1 N C S/1 N C)
	total power requirement	1,7 kW

The applied decrees of governments: **No. 24/2003 Coll. (Directive 98/37/EC)**
No. 616/2006 Coll. (Directive 2004/108/EC)
No. 17/2003 Coll. (Directive 2006/95/EC)

The applied harmonized standards,
 National standards and technical specifications: ČSN EN ISO 12 100-2:2004, ČSN EN 13 898:2004, ČSN EN ISO 13857:2008, ČSN EN 55 011 ed.2:2007, ČSN EN 61000 6 4 ed.2:2007, ČSN EN 60204 1 ed.2:2007

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

2) The declaration of conformity was carried out in the cooperation with the TÜV SÜD Czech s.r.o., Novodvorská 994, 142 21 Prague 4 – Czech Republic, Identification number: 63987121 - Inspection body no. 4602

The inspection certificate no. 01.0/4.556/09/07/07/0 was issued.

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

Alfred Pichlmann, managing director



Point of issue, datum

Name and function
 of the responsible subject

Signature

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

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



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

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1. **Safety notes**

The operating instructions must be read by the person, who keeps in touch with the machine before transportation, installation, using, servicing, repairation, 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 **Ergonomic 320.250 DG** 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 angles from -45° 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!

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

Attention!

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

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

1.5.2. Arm cover

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



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

1.5.3. Band saw cover

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



Never turn-ON saw band when cover is not mounted!

1.5.4. Saw band stretching and rupture inspection

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



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

1.6. Safety notes for the cooling

Attention!

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

1.6.1. Instructions for first help

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

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



Machine label is placed on saw band base.

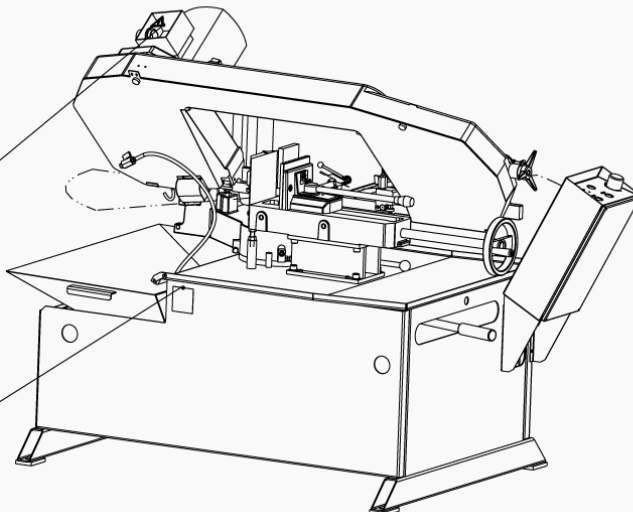
1.8. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols

NE

Nebezpečí úrazu
elektrickým proudem
Verletzungsgefahr vom
elektrischen Strom
Electrical hazard



Štítek stroje
Maschinenschild
Machine label



NSS

Nebezpečí stlačení svěrákem
Pressungsgefahr
Crushing hazard by vice



PO:

Noste pevnou pracovní obuv
Tragen Sie Sicherheitsschuhe
Wear fixed protective shoes



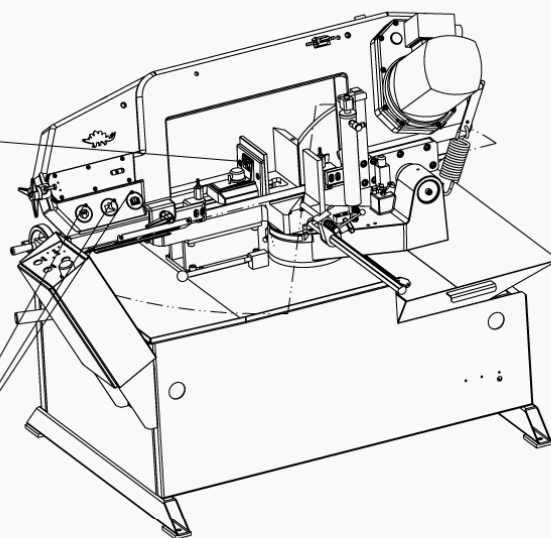
CZ:

Přečíst návod k použití
Bedienungsanleitung lesen
Read the operating instructions



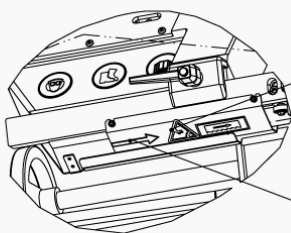
OBS:

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



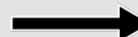
NR:

Nebezpečí říznutí
Schnittgefahr
Cutting or severing hazard



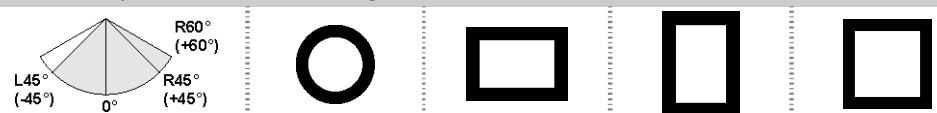
SP:

Směr pohybu
Bewegungsrichtung
Direction of motion



2. **Machine documentation**

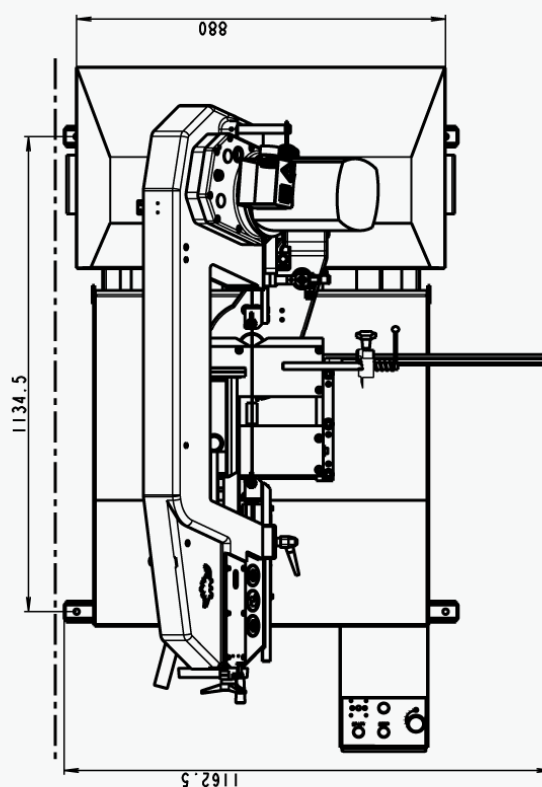
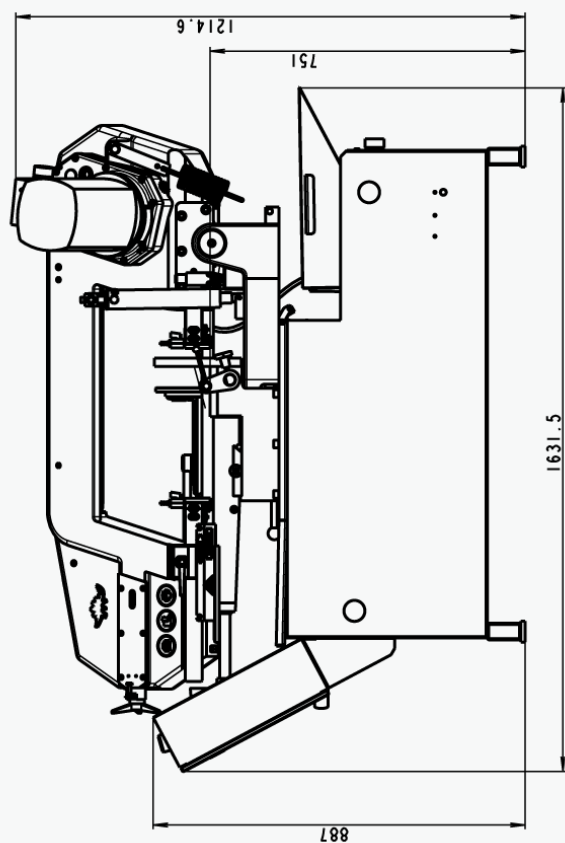
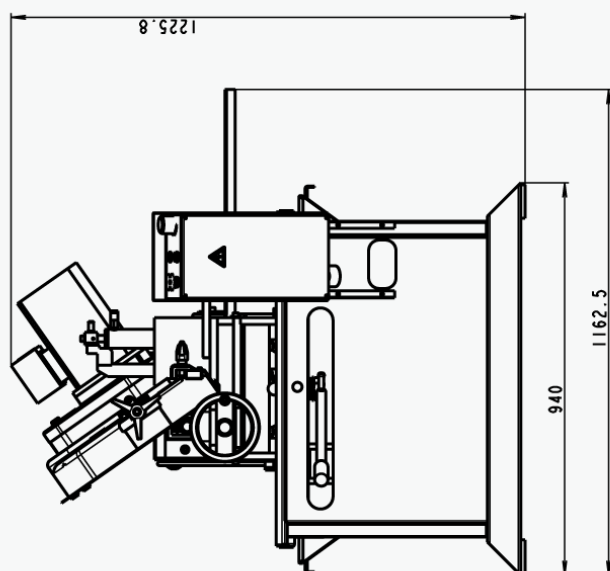
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:				
• Hmotnost / Gewicht / Weight				358 kg
Rozměry stroje / Maschinengröße / Machine size :				
• Délka / Länge / Length				1670 mm
• Šířka / Breite / Width				1166 mm
• Výška / Höhe / Height				1239 mm
Elektrické vybavení / Elektrische Ausrüstung / Electrical equipment:				
• Napájení / Versorgungsspannung / Supply voltage				~ 3x400V, 50Hz
• Příkon / Gesamtschlussswert / Total Input				1,7 kW
• Max.jištění / Max. Vorschaltssicherung / Max. Fuse				16 A
• Krytí / Schutzart / Protection				IP 54
Akustický tlak / Schalldruckpegel / Acoustic pressure:				
• Ergonomic 320.250 DG				$L_{Aeqv} = 59 / 65 \text{ dB} \dots 40 \text{ m} \cdot \text{min}^{-1} / 80 \text{ m} \cdot \text{min}^{-1}$
Pohon / Antrieb / Drive:				
• Typ / Typ / Type				TM 90-2/4S B5
• Výkon / Leistung / Output				1,1 / 1,5 kW
• Jmenovité otáčky / Motorenndrehzahl / Nominal speed				2800/1420 m/min
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:				
• Výkon / Leistung / Output				0,09 kW
• Obsah nádrže / Volumen vom Kühlmittel / Capacity				12 dm ³
Rozměr pásu / Sägebanddimension / Band size:				
2910×27×0,90 mm				
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:				
without freq. converter 40-80 m/min, with freq. converter 20-120 m/min				
Řezné rozsahy / Schnittbereiche / Cutting size:				
				
0°	250 mm	320×200 mm	300×240 mm	240×240 mm
R 45°	220 mm	230×120 mm	190×230 mm	190×190 mm
L 45°	180 mm	230×70 mm	110×230 mm	160×160 mm
R 60°	120 mm	130×100 mm	130×100 mm	100×100 mm

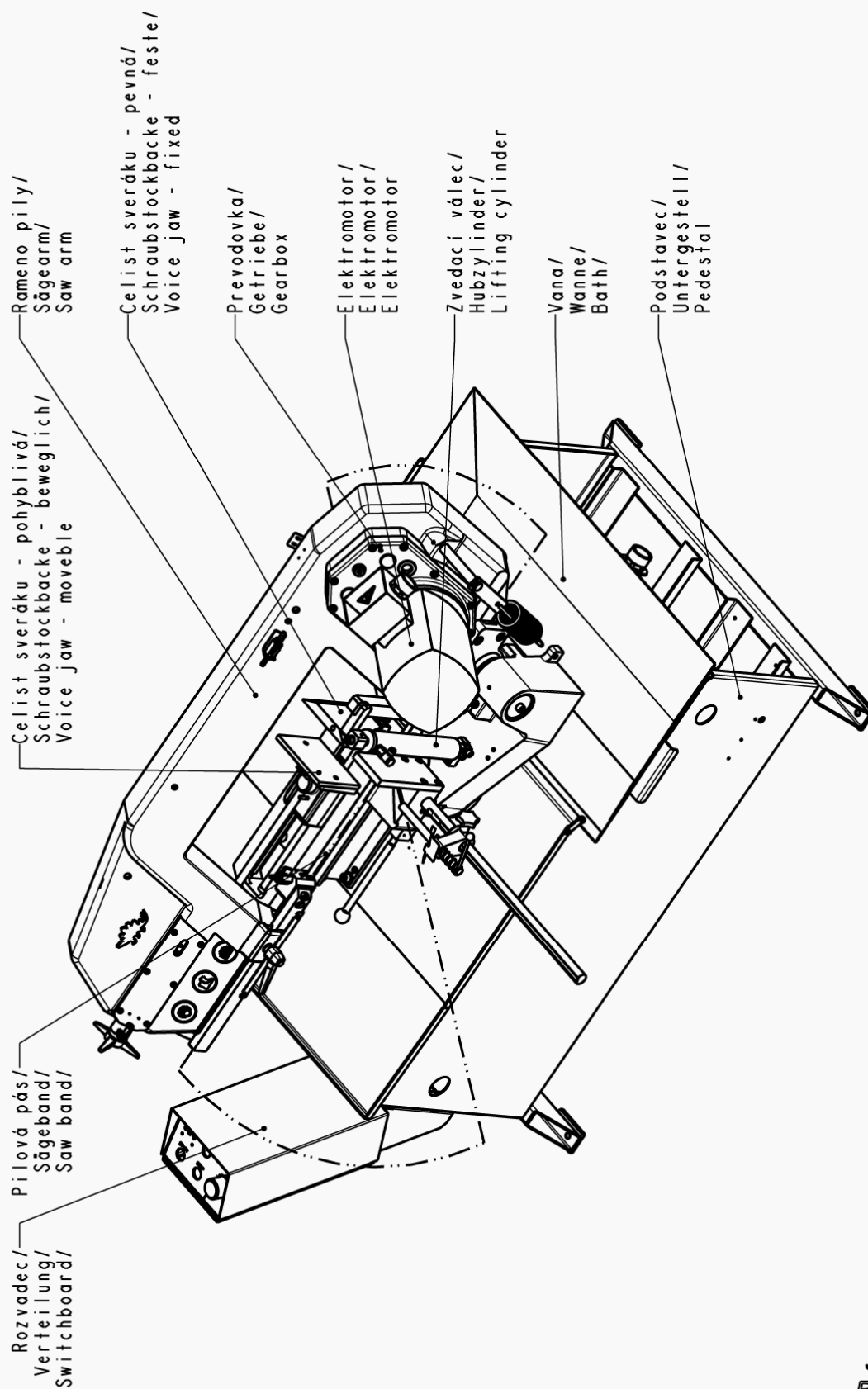
Level of acoustic pressure:

Equivalent level of acoustic pressure A (noise) at operator position are $L_{Aeqv} = 59 / 65 \text{ dB}$ for speed $40 \text{ m} \cdot \text{min}^{-1} / 80 \text{ m} \cdot \text{min}^{-1}$. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure..

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram



2.3. Popis / Beschreibung / Description



2.4. Transportation and stocking

2.4.1. Conditions for transportation and stocking

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

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

2.4.2. Transport and stocking preparations

Close the vice and thoroughly oil all blank surfaces.

Lower the saw frame to the lowest position.

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

Fasten all loose parts securely to the machine.

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

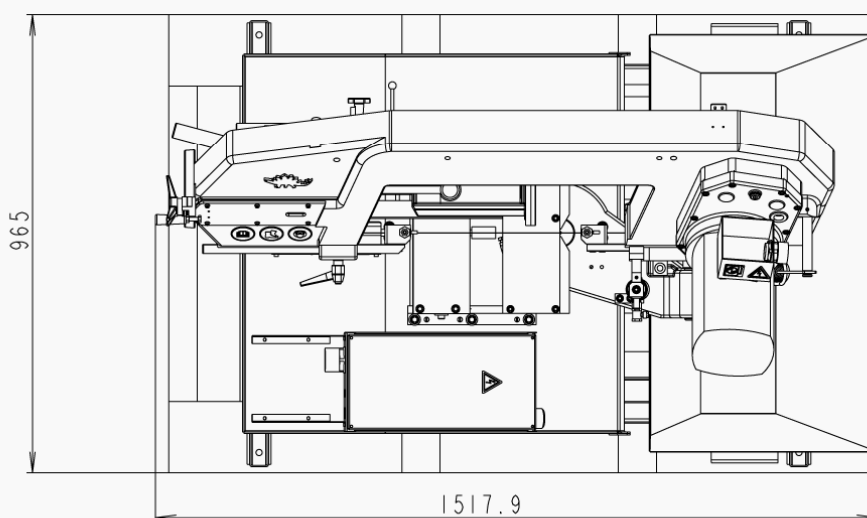
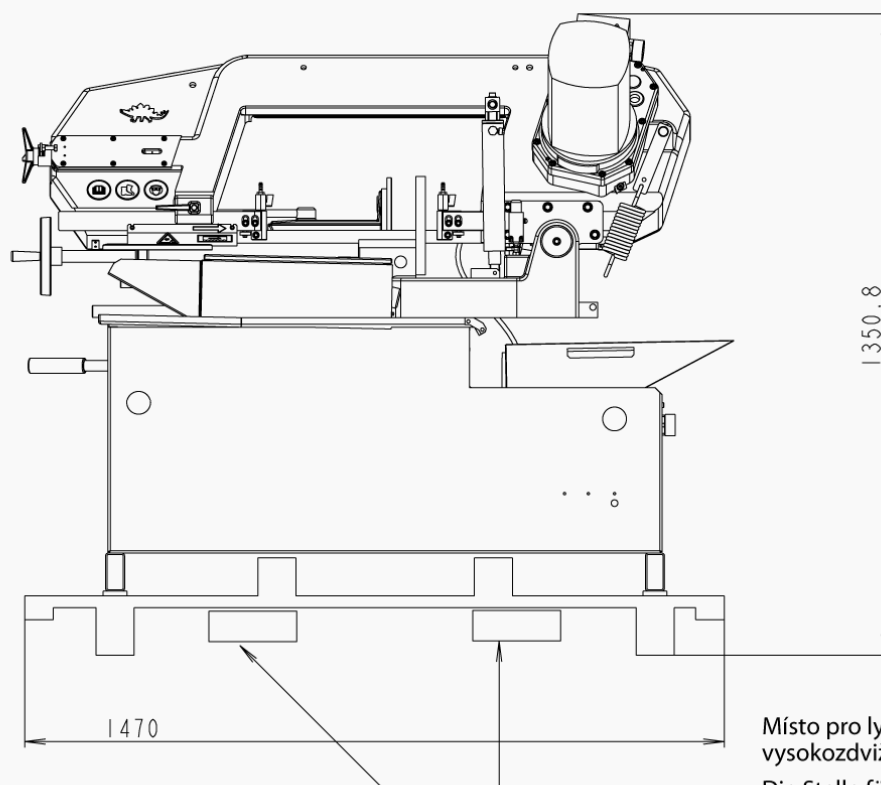
Fix the stickers stating the minimum approximate machine weight to at least five well visible places.

2.4.3. Transport and stocking

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

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

2.4.4. Transportní schéma / Transport schema / Transport diagram



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

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:

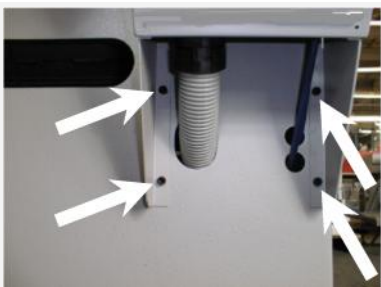
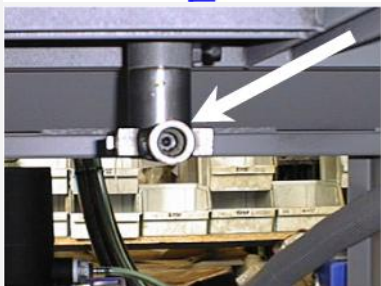
- At temperature air from **5°C to 40°C**, the temperature average during 24 hours must **not exceed over 35°C**.
- At relative dampness of the air in the extend from 30% to 95% (not concentrate)
- Altitude lower than 1000 metres.
- Do not expose the machine to the radiation (for example microwave radiation, ultra-violet radiation, laser radiation, x-ray radiation). Radiation can cause problems with the machine function and deteriorating condition of the isolation.

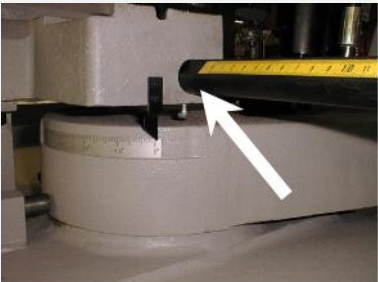
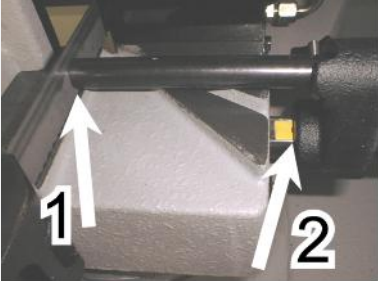
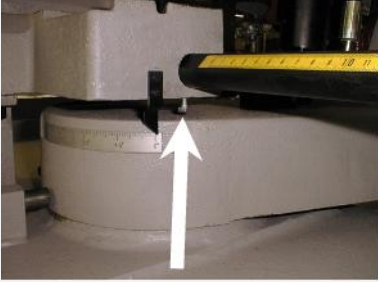
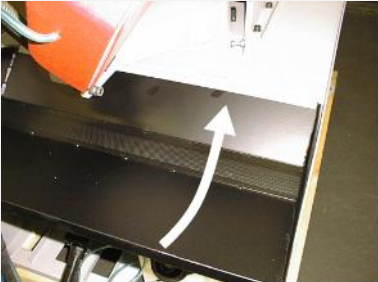
2.6. Band saw unpacking and assembling

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.

Component	Description
	Assembly of the control panel Screw on the control panel with 4 screws to the pedestal.
	Assembly of the hold-down lever..
	

Component	Description
	Hand wheel assembling Take down the nut from holder of the hand wheel. Insert it to the hole on back side of the wheel and screw on the holder.
  	Length stop assembly 1. Take on the length stop to the hole on vice side. 2. Shift the length stop till the saw band (arrow 1) and set the scale to the value „0“ (arrow 2). 3. Secure it with screw on the bottom side of the vice.
	Drainage metal plate installing Install drainage metal plate on the backside of the band saw.
	Lifting spring assembly 1. Lift the saw arm up. 2. Unscrew the screw and remove the washer from the holder. 3. Put together the spring and draw bar. Put the assembly on the holder and the console 4. Put the washer on the holder and screw on the screw.

2.6.1. Machine installing and levelling

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

Minimal requirement:

machine weight – Ergonomic 320.250 DG – 358 kg

+ weight of accessories

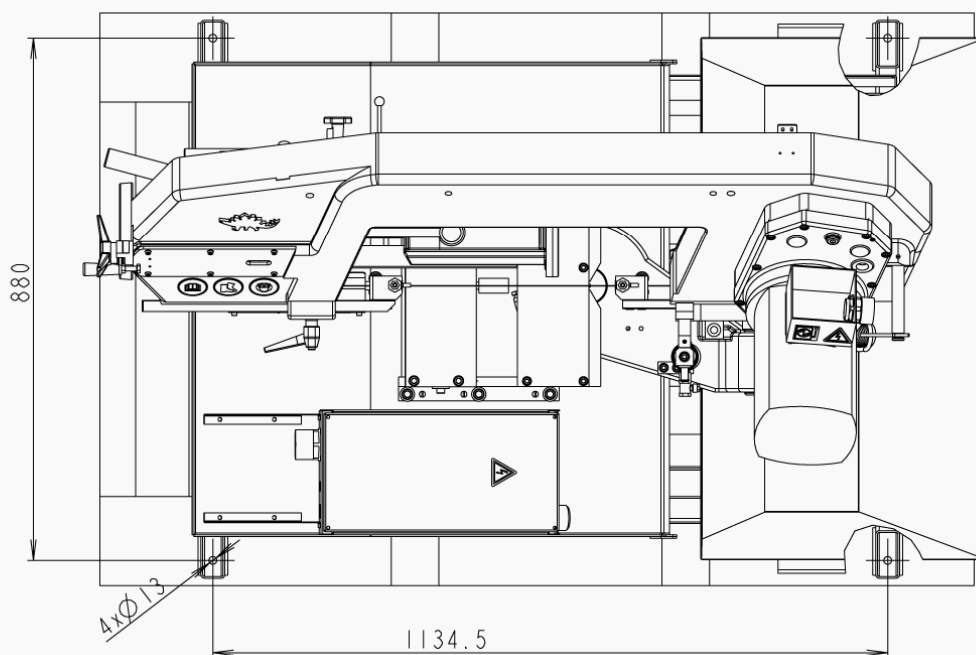
+ maximum weight of material

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

2.6.2. Machine disposal after lifetime

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

2.6.3. Kotevní plan / Verankerungsplan / Grounding plan



Kotvící materiál / Verankerungsmaterial / Grouding material

- 4x Hmoždina / Dübel / Plug – $\varnothing 14$ mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 100 mm
- Šrouby / Schraube / Screws – M12

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

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

± 10 mm / 1 m

2.7. Electrical connection

Attention!

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

Electrical parameters of the machine:

- Service voltage: $\sim 3 \times 400 \text{ V}$, 50 Hz, TN-C-S
- Total input / Max. fuse: 1,7 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.

Connect the service cable of the machine on the clamps of the electric distribution.

Note:

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

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

Attention!

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

2.7.1. Check the direction of the saw band



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

2.8. Filling of the cooling system

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

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

2.9. Check machine function

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

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

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

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

2.10. Saw band

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

2.10.1. Saw band size

2910×27×0,90 mm



2.10.2. Selection of the saw band tooth system

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

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

BOMAR for recommended Variable tooth system for band saw.

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

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

Footnotes:

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

Examples of the tooth system marking:

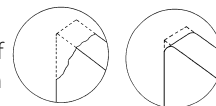
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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

2.10.3. Saw band running-in

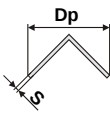
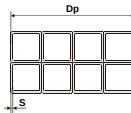
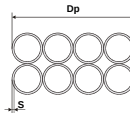
Running-in: Cut the material with the frame lowering reduced to 50% only. When vibrations occur increase or decrease the band speed.

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

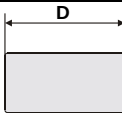
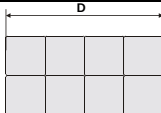
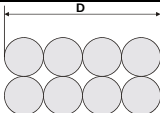


Note: Run regrinding saw bands too.

Tables for teeth selection

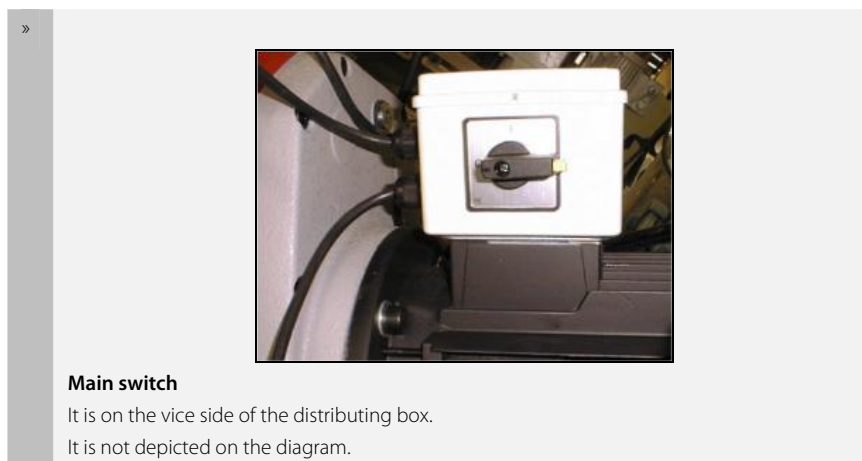
SHAPED MATERIAL (D _p , S = mm)						
						
Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S“ equates to 2xS). In table,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

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

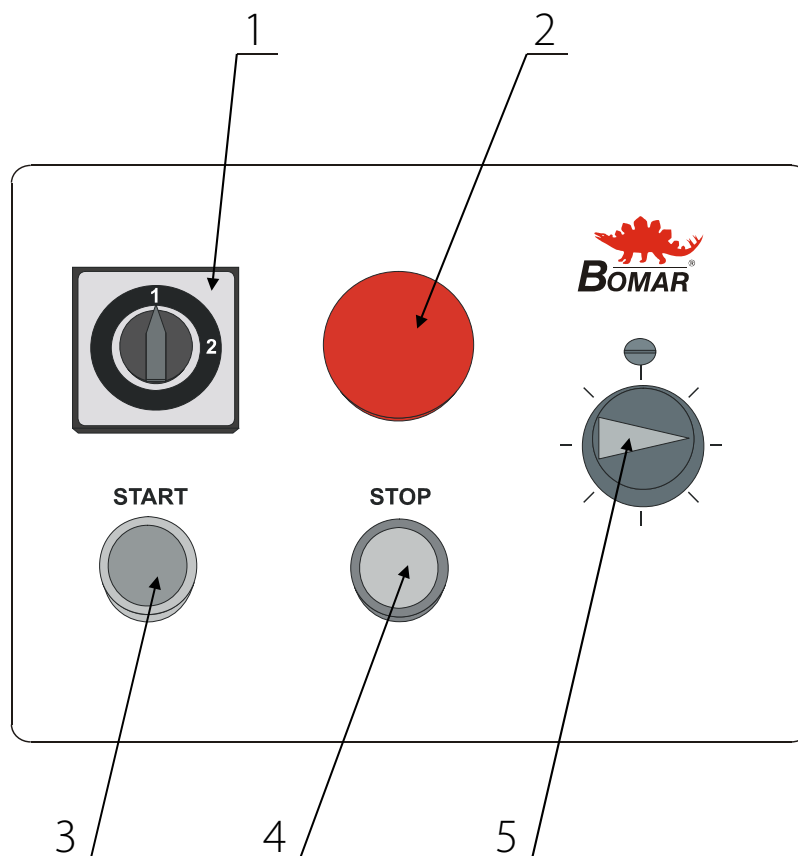
SOLID MATERIAL (D = mm)				
				
Constant tooth system			Variable tooth system	
length of the cut D	tooth system (Z _p Z)		length of the cut D	tooth system (Z _p Z)
to 3 mm	32		to 30 mm	10–14
to 6 mm	24		20–50 mm	8–12
to 10 mm	18		25–60 mm	6–10
to 15 mm	14		35–80 mm	5–8
15–30 mm	10		50–100 mm	4–6
30–50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

3. **Machine control**

3.1. Control elements



3.1.1. Ergonomic 320.250 DG without frequency converter



1	Switch of the cutting speed Select the cutting speed during cutting (40 or 80 m. min-1).
2	TOTAL STOP button In case of emergency, the machine is stated to the order! ATTENTION! By pressing button TOTAL STOP is not stopped saw frame sinking!
3	START Start of the saw band drive.
4	STOP Stop of the saw band drive.

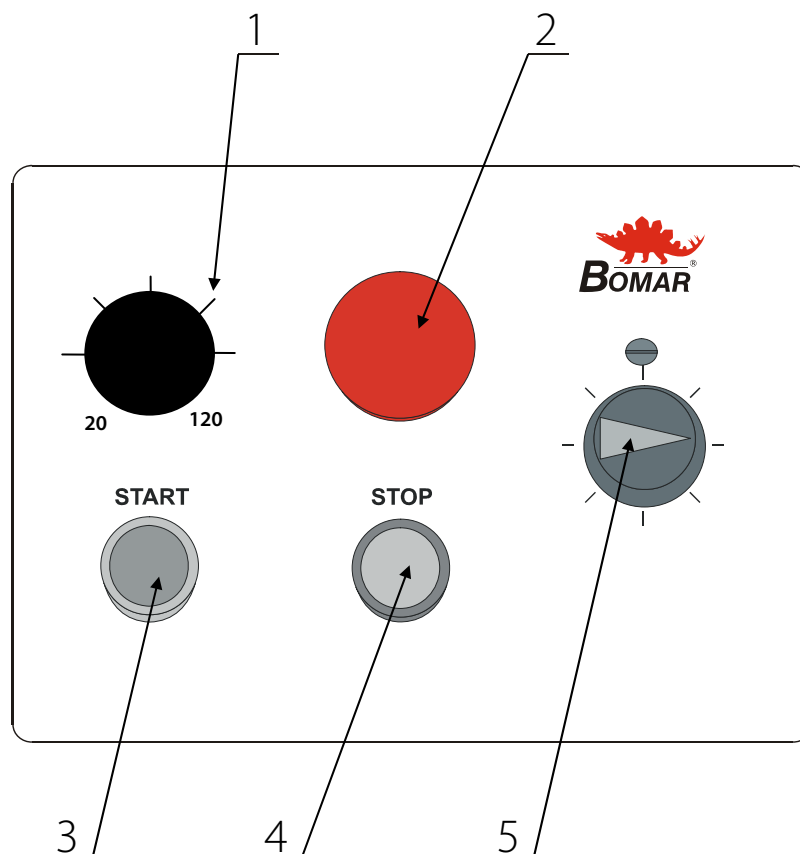
5

Governing valve

Adjust the speed of the arm sinking to the cut by governing valve.

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

3.1.2. Ergonomic 320.250 DG with frequency converter



1

Switch of the cutting speed

Select the cutting speed during cutting (20–120 m. min⁻¹).

2

TOTAL STOP button

In case of emergency, the machine is stated to the order!

ATTENTION! By pressing button TOTAL STOP **is not stopped** saw frame sinking!

3

START

Start of the saw band drive.

4

STOP

Stop of the saw band drive.

5

Governing valve

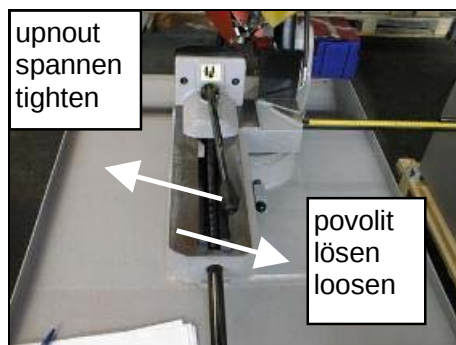
Adjust the speed of the arm sinking to the cut by governing valve.

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

3.2. Machine control

3.2.1. Cutting

1. Open the vice of the band saw.
2. Set the length stop to the desired length of the material.
3. Set the desired cutting angle.
4. Insert the material and pull it to the length stop.



5. Pull vice jaws about 5 mm from the material by hand wheel.
6. Tighten the material by the clamping lever.
7. Set the saw band speed.
8. Start saw band drive by button **START**.

Note:

*Saw band drive is possible to stop by button **STOP** or by button **TOTAL STOP** in emergency causes during cutting.*

ATTENTION! *Saw frame sinking is possible to stop by governing valve closing!*

*By pressing button **TOTAL STOP** **is not stopped** saw frame sinking!*

9. Set the speed of the saw frame sinking.
10. Close the governing valve of the frame sinking and lift the saw frame to the top position after cutting
11. Remove the cut. Now you can repeat whole progress.

3.2.2. Setting of the material length

Release the securing screw, move the length stop on the desired length of the material and fasten the securing screw..



Note:

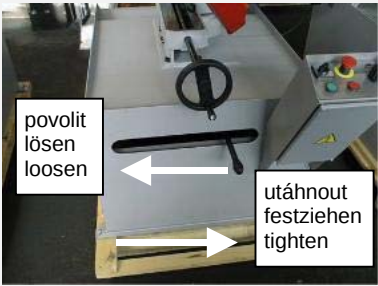
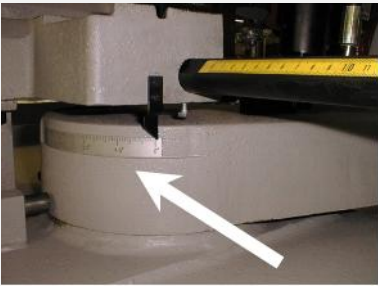
The length stop makes bounce listel of the material, so that the saw band will be not compressed in the cut. Turn the lever to the arrow direction..

3.2.3. Cutting speed adjustment

Picture	Description
Ergonomic 320.250 DG without freq. converter 	- speed 40 m.min^{-1} – turn speed switch into pos. no. 1 - speed 80 m.min^{-1} – turn speed switch into pos. no. 2
Ergonomic 320.250 DG with freq. Converter 	Change bansaw speed by frequency converter in range $20\text{--}120 \text{ m.min}^{-1}$.

3.2.4. Angular cut setting

The cut angle can be varied from -45° to 60° . The angles -45° , 0° , $+45^\circ$ and 60° is set by means of the fixed stop.

Picture	Description
	Loosen the saw arm and release-securing lever of the console.
	Set the desired angle of the cut. If you want set the cut angle bigger then 45°, pull out the stop pin.
	Turn the saw frame to the desired angle according to the scale on the turning console and tighten the securing lever of the console.

3.2.5. Optimal adjusting of the guide cubes span

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



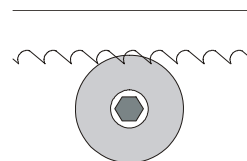
1. Release the lever of the left listel and move left part of the guide apparatus so that the left guide cube edge is as close to the cut material as possible.
2. Lower the frame to the lower position and check the position of the guide cube towards vice loading area. The guide cube must be a distance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

3.2.6. Brush adjustment

The brush has essential influence on cutting performance, saw band lifetime and lifetime of wheels and hard metal guides and finally cut accuracy. Therefore the brush has to be checked during every shift.



1. Release the tightening screw of the brush so that it is possible to move with the brush.
2. Get the brush closer to the saw band teeth. After the brush is set, its ends must not reach the saw band teeth bottoms..
3. Tighten the screw again and turn on the band driver.
4. If the chip removing brush is correctly fastened the brush moves and turns smoothly with the saw band.



3.3. 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!

3.3.1. Handling agent selection

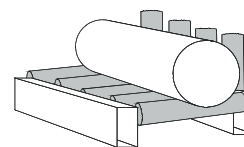
- Use the strong handling agents to lift and transfer the material!
- Handle with the material only with the lift truck or use the suspension strands and the crane!
- Do not use the lift truck or crane in case that you do not have the license to handle with it!

3.3.2. 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.

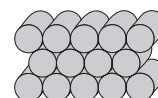
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!



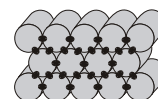
3.3.3. Bundle material cutting

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

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

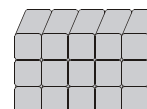


Always weld the material at the rear end of the bundle to secure it from moving.



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

Square material bundle:



Attention:

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

4. Machine service

4.1. Saw band dismantling

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



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



3. Dismantle back covering sheet metal of the saw frame. The covering sheet metal is clamped with two screws with plastic head.



4. Release brush holder and turn it. The brush must not defend saw band dismantling.



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



6. 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 fit tightly to the wheel rim. Then push the saw band as far back as possible.
4. By turning the stretching star to the right, you will stretch the saw band slightly.



5. Put the brush into the function position and screw up the holder.



6. Install the rear protective cover of the frame.



7. Install the yellow protective cover of the band. The arrow on the cover must match the direction of the arrow on the band. If it does not, you must turn the band round.

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

1. The saw band must not fall from the wheels after setting.



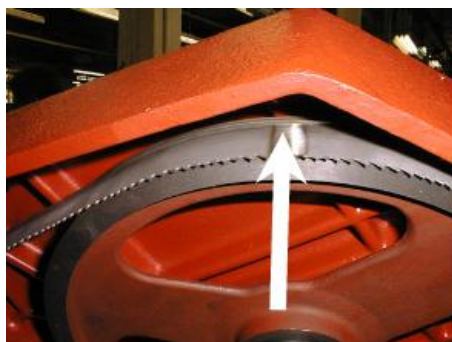
2. Install the Tenzomat on the saw band and secure it with screws.
3. Stretch the saw band until it is stretched to the recommended value.

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. 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

4.4.1. 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

Testing	Interval	Method	Condition	Precaution
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

4.4.2. 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.

4.5. Greases and oils

4.5.1. 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
Ergonomic 320.250 DG	Paramo PP7	2 l
Swarf conveyer	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

4.5.2. Lubricant greases

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

Comparative table of the lubricant greases:

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

4.5.3. Lubrication

Na stroji se vyskytuje několik uložení, která je nutno pravidelně promazávat, aby byla zajištěna správná funkce stroje.

Lubrication place	Description
	The upper pivot of the lifting cylinder – drop the oil once a week.

4.5.4. Hydraulic oils

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

Use oils with specification DIN 51524-HLP, ISO 6743-4 and viscosity grade ISO VG 46 in hydraulic aggregates.

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
	Oso 46	Ina	Hidraol 46 HD
Aral	Vitam GF 46	Klüber	Lamora HLP 46
Avia	Avilub RSL 46	Hungary	Hidrokomol P 46
Benzina	OH-HM 46	Mobil	Mobil DTE 25
BP	Energol HLP 46	ÖMV	HLP 46
Bulgaria	MX-M/46	Poland	Hydrol 30
Castrol	Hyspin AWS 46	Rumania	H 46 EP
Čepro	Mogul HM 46	Russia	IGP 30
DEA	Astron HLP 46	Shell	Tellus Oil 46
Elf	Elfolna 46	Sun	Sunvis 846 WR
Esso	Nuto H 46	Texaco	Rando HD B 46
Fam	HD 5040	Valvoline	Ultramax AW 46
Fina	Hydran 46		

5. **Závady / 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.
	- Unexpected oscillation in material quality.	Set the cut and feeding speed to the relevant material.
2. The cut is not cut upon desired angle	- Securing lever is loosened.	Check the securing lever efficiency and carry out its adjustment according to chapter „Servicing and adjustment“.
	- Set angle does not match the cut angle.	Check the angle adjustment with a protractor and possibly set it according to chapter „Servicing and adjustment“.
	- Insufficient saw band stretching.	Stretch the saw band and set the limit switch according to chapter „Servicing and adjustment“.
	- Guiding arm and guiding cube are loosened.	Fasten the guiding arm and the cube.
	- Dirt between material and clamping jaw.	Cleanse the material and mating jaw.
3. Short lifetime of the saw band	- Insufficient saw band stretching.	Raise the tightening of the saw band set the scanner of saw band tightening according to chapter „Servicing and adjustment“.
	- Worn swarf brush.	Check the swarf brush condition and replace it in case of excessive use as described in chapter „Worn pieces replacement“
	- Wrongly adjusted swarf brush.	Check swarf brush adjustment, set it according to chapter „Servicing and adjustment“
	- 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.	

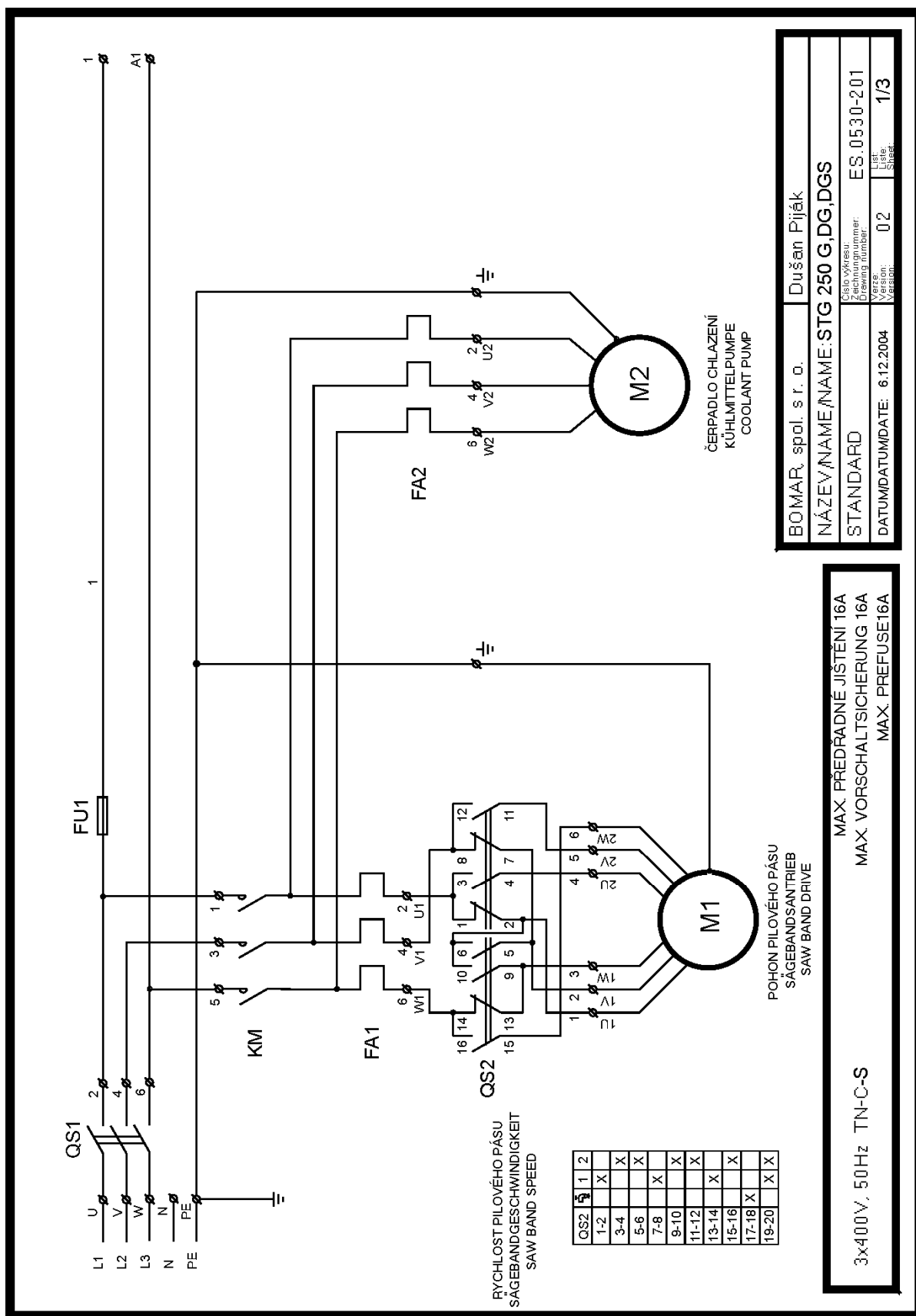
5.2. Electric problems

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. Elektrická schémata / Elektroschemas / Wiring diagrams –
bez frekv. měniče / ohne Frequenzumrichter / without
frequency convertor – 3×400 V/50 Hz, TN-C-S

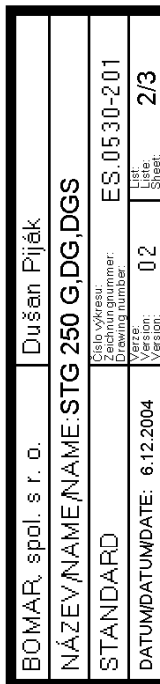
Schéματα
Schemas
Schematics



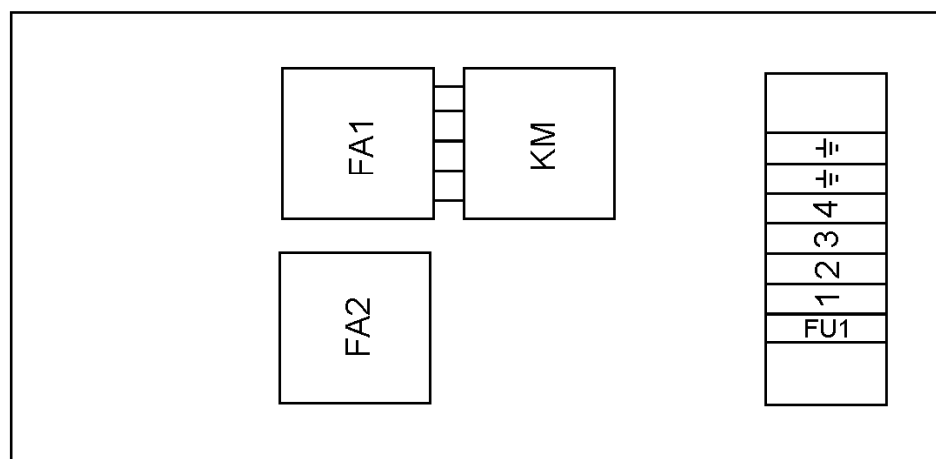
BOMAR, spol. s r. o.	Dušan Piják
NÁZEV/NAME/NAME: STG 250 G,DG,DGS	
STANDARD	Číslo výkresu/ Drawing number: ES.0530-201
DATUM/DATUM/DATE: 6.12.2004	Verze/ Version: 02
	Strana/ Sheet: 1/3

MAX. PŘEDŘADNÉ JIŠTĚNÍ 16A
MAX. VORSCHALTSICHERUNG 16A
MAX. PREFUSE 16A

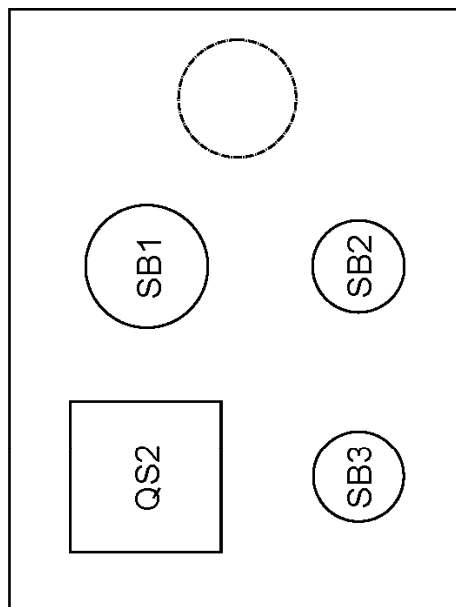
3×400V, 50Hz TN-C-S



PŘÍSTROJOVÁ DESKA
GERATEBRETT
DASHBOARD

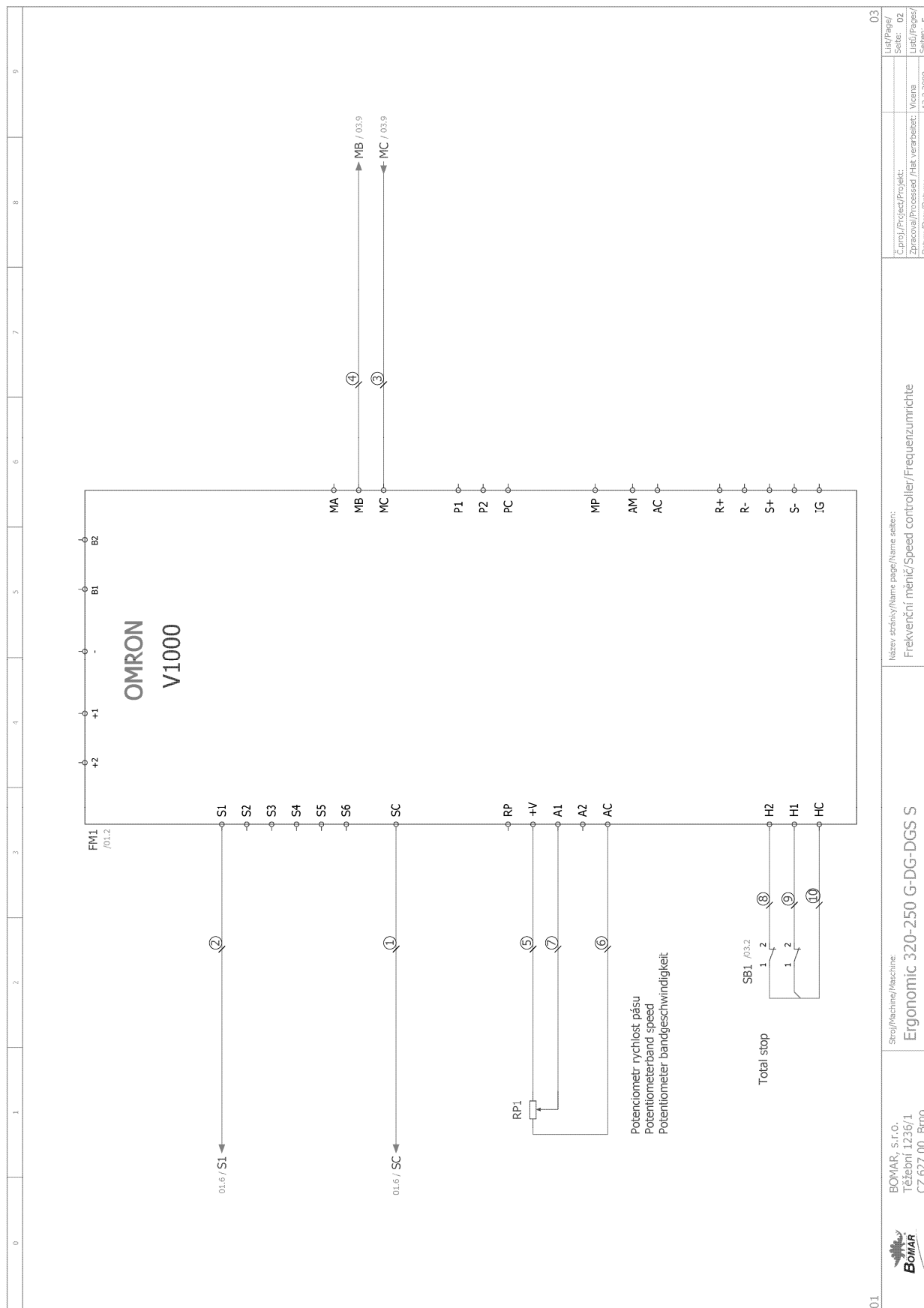


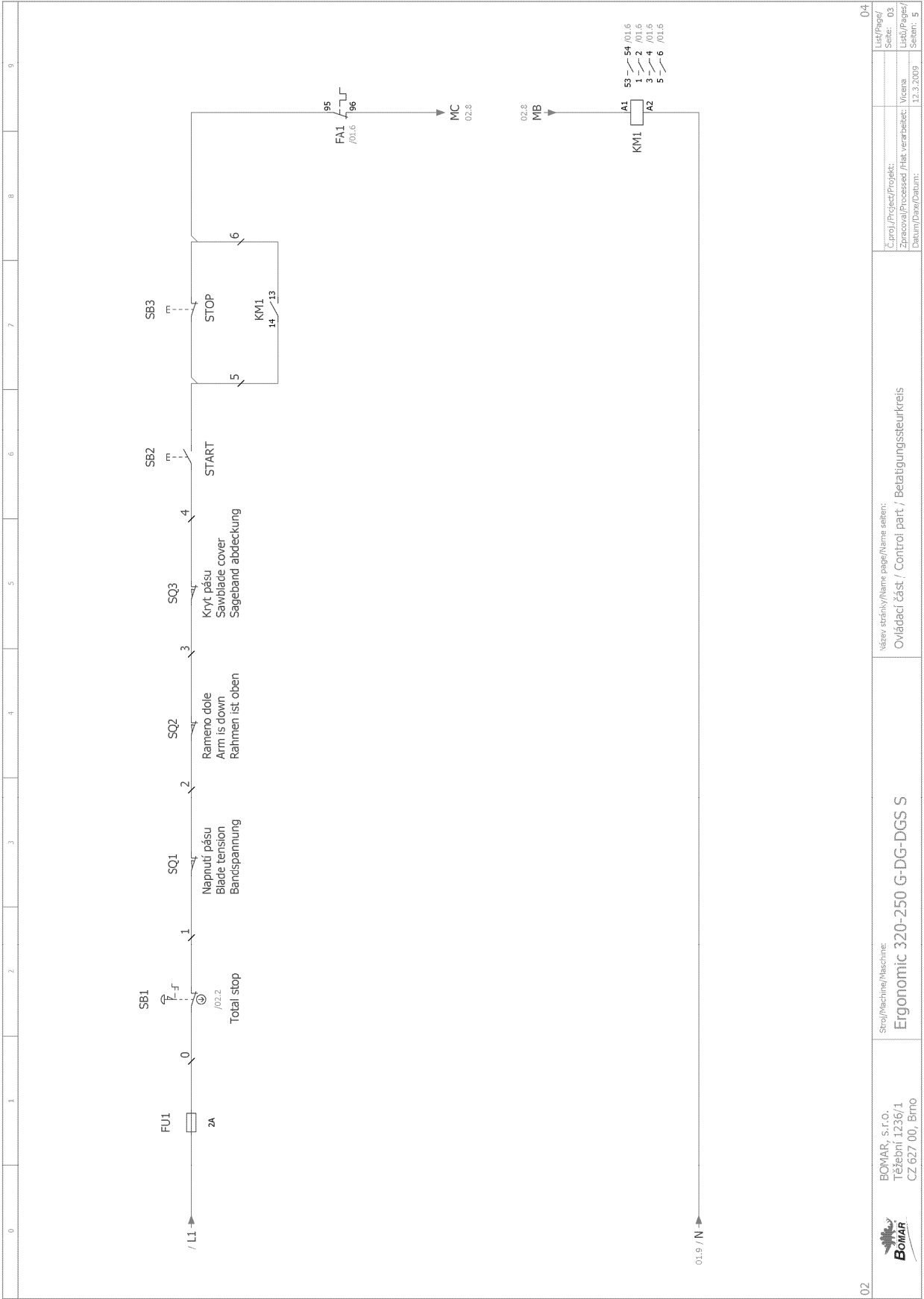
OVLÁDACÍ PANEL
BEDIENPULT
CONTROL PANEL



BOMAR s.r.o.	KRESLIL: Dušan Piják
NÁZEV: SCHEMA STG 250 G,DG,DGS	
STANDARD	REV. STG 250
DATUM: 1.1.2001	VÝTISK: List: 3/3

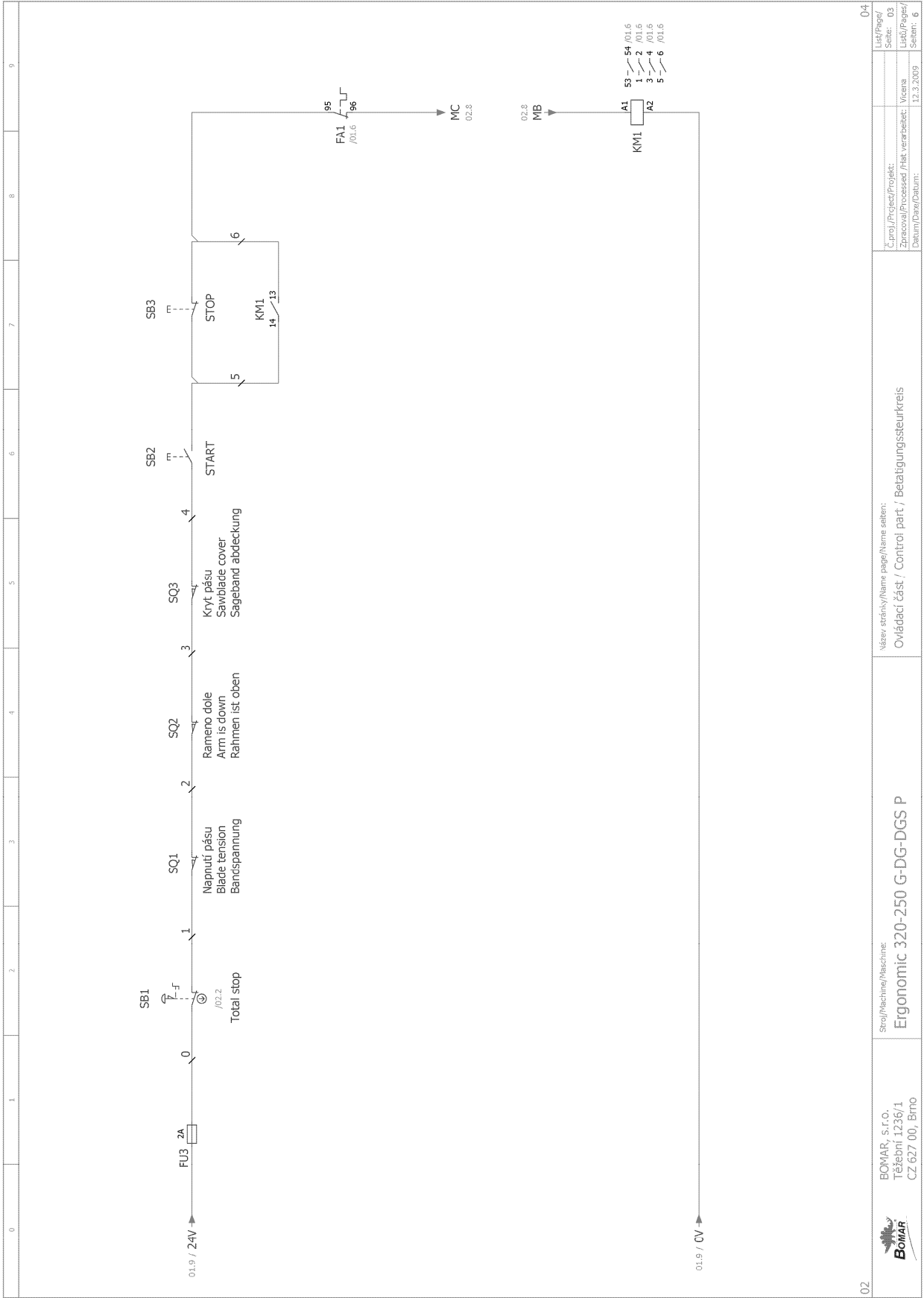
Objednací číslo	Název položky		Ozn.	ks
Bestell - Nr.	Bezeichnung		Signatur	Menge
Reference No.	Item		Sign.	Pcs.
91.001.007	Elektromotor / Elektromotor / Electromotor	TM902/4 B5	M1	1
91.020.006	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump	3COA2-22H	M2	1
91.040.001	Stykač / Schaltschütz / Contactor	9A 230V	KM	1
91.050.003	Relé tepelné / Electro thermal relay / Thermorelais	0.26-0.43A	FA2	1
91.050.009	Relé tepelné / Electro thermal relay / Thermorelais	3.0-4.7A	FA1	1
91.060.012	Hlavice TOTAL STOP / NOT-AUS Taste / Total stop jugulum	ZB5AS844	SB1	1
91.061.006	Kontakt rozp.+adapt. / Schaltkontakt / Expand.+adapt. contact	ZB5AZ102	SB1	1
91.060.015	Hlavice rudá / Kopf – rot / Red jugulum	ZB5AA4	SB2	1
91.061.006	Kontakt rozp.+adapt. / Schaltkontakt / Expand.+adapt. contact	ZB5AZ102	SB2	1
91.060.014	Hlavice zelená / Kopf – grün / Green jugulum	ZB5AA3	SB3	1
91.061.007	Kontakt spín.+adapt. / Schaltkontakt / Switch.+adapt. contact	ZB5AZ101	SB3	1
91.170.003	Spínač vačkový / Schalter / Cam switch	194L-E16-1753	QS1	1
91.180.001	Deska spínače černá / Schalterplatte – schwarz / Black board of the switch	194L-HE4E-175	QS1	1
91.171.006	Spínač vačkový / Schalter / Cam switch	S10-60129	QS2	1
91.173.012	Spínač konc.-zámek / Endschalter / Limit switch-lock	QKS8	SQ3	1
91.173.007	Spínač koncový / Endschalter / Limit switch	Pizzato	SQ1,2	2
91.230.001	Pojistka / Sicherung / Fuse	2A	FU1	1
91.190.004	Krabice elektro / Buchse / Box			1





55





02		Stroj/Machine/Maschine: Ergonomic 320-250 G-DG-DGS P	Název stránky/Name page/Name seiten: Ovládací část / Control part / Betätigungssteuerkreis	04	
				Úst/Project/Projekt: Zpracoval/Processed /Hat verarbeitet: Datum/Date/Datum:	Úst/Page/ Seite: 03 Úst/Pages/ Seiten: 6
				Vicena 12.3.2009	

Kusovník artiklů

Označení přístroje	Typ přístroje	Objednáací číslo	Výrobce	Skladové číslo	Množství	Umístění (strana, sloupec)
-FA1	Tepelná ochrana 0,26 - 0,43A	MT03C	GE	91.050.003	1	/01.6
-FM1	Frekvenční měnič 1,5kW	VZ44IP5BAA	OMRON	91.012.026	1	/02.3
-FU1	Pojistkové pouzdro	WK4/THS5...U	WIELAND	91.251.102	1	/01.7
-FU1	Pojistka trubičková 2A, 5x20	F2A/250V	ESKA	91.230.001	1	/01.7
-FU2	Pojistkové pouzdro	WK4/THS5...U	WIELAND	91.251.102	1	/01.7
-FU2	Pojistka trubičková 2A, 5x20	F2A/250V	ESKA	91.230.001	1	/01.7
-FU3	Pojistkové pouzdro	WK4/THS5...U	WIELAND	91.251.102	1	/03.1
-FU3	Pojistka trubičková 2A, 5x20	F2A/250V	ESKA	91.230.001	1	/03.1
-KM1	Pomocný kontakt ke stykači	MARN422AT	GE	91.041.005	1	/01.6
-KM1	Stykač 230V AC, 9A	MC1A 10E	GE	91.040.001	1	/03.9
-M1	Motor Pésu	TM 90 2S B5		91.001.027	1	/01.2
-M2	Čerpadlo 50W, 0.24A 3x400V, 50Hz	2COP1-22 HP1		91.020.006	1	/01.6
-QS1	Hlavní vypínač 16A	P016	GIOVENZANA	91.170.003	1	/01.1
-QS1	Hlavní vypínač-ovládání	SE 16	GIOVENZANA	91.180.001	1	/01.1
-RF11	Filtr k frekvenčnímu měniči 1,5kW	A1000-FIV3010-RE	OMRON	91.012.027	1	/01.2
-RP1	Potenciometr 4k7	TP195 4K7-N20A	TES-Ostrava	91.283.002	1	/02.1
-RP1	Svorka rychloupínací	Svorka rychloupínací	WIELAND	91.250.009	3	/02.1
-SB1	Hlavice hříbového ovládače	ZB5 A5844	TELEMECANIQUE	91.060.012	1	/03.2
-SB1	Rozpínací kontakt s adaptérem	ZB5AZ102	TELEMECANIQUE	91.061.006	1	/03.2
-SB1	Rozpínací kontakt	ZBE-102	TELEMECANIQUE	91.061.008	2	/02.2
-SB2	Hlavice zelená	ZB5AA3	TELEMECANIQUE	91.060.014	1	/03.6
-SB2	Kontakt s adaptérem spínací	ZB5AZ101	TELEMECANIQUE	91.061.007	1	/03.6
-SB3	Hlavice červená	ZB5AA4	TELEMECANIQUE	91.060.015	1	/03.7
-SB3	Rozpínací kontakt s adaptérem	ZB5AZ102	TELEMECANIQUE	91.061.006	1	/03.7
-SQ1	Koncový spínač	D4N-4A31	OMRON	91.173.007	1	/03.3
-SQ2	Koncový spínač	D4N-4A31	OMRON	91.173.007	1	/03.4
-SQ3	Bezpečnostní koncový spínač	QK58	KEDU	91.173.012	1	/03.5

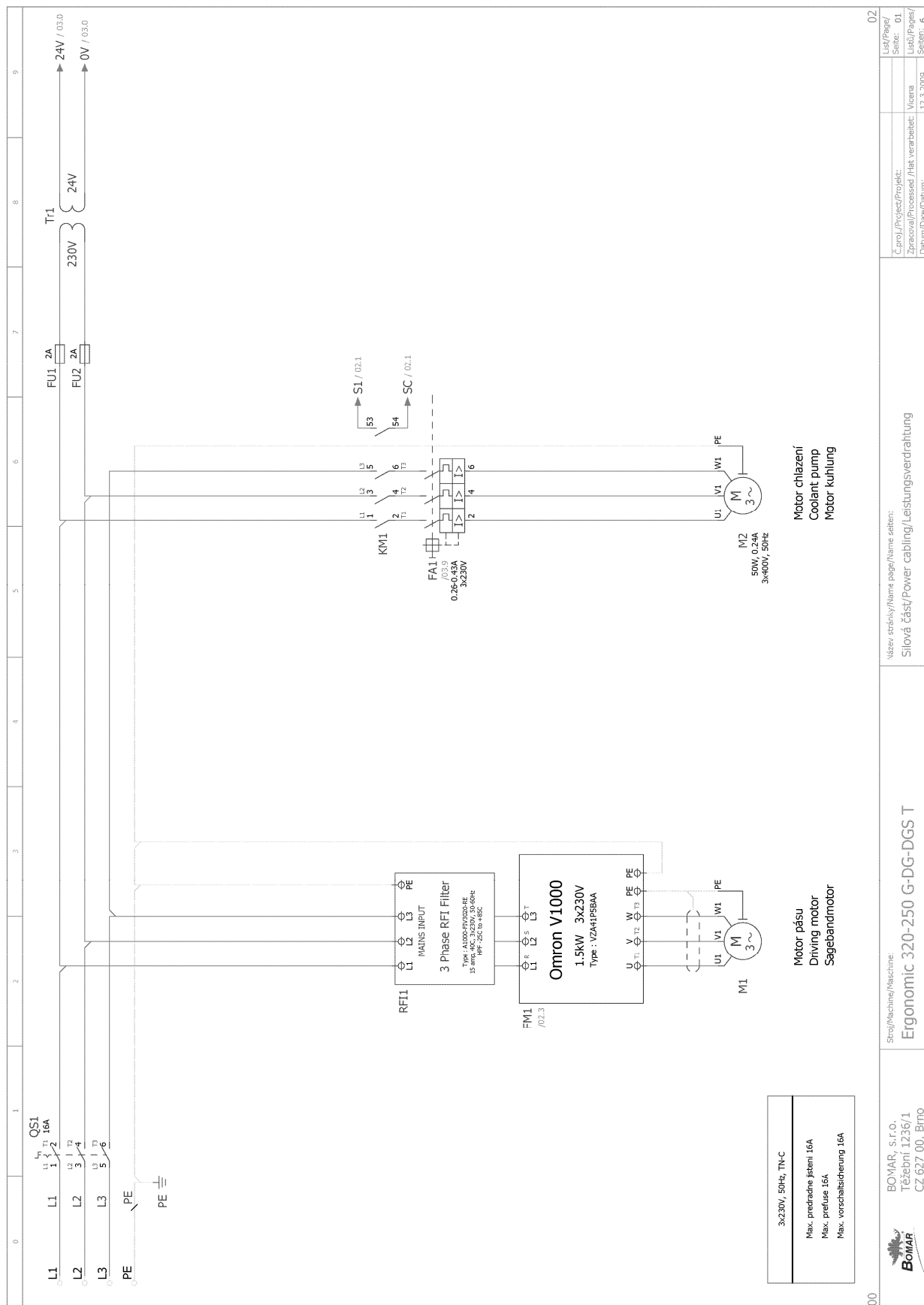
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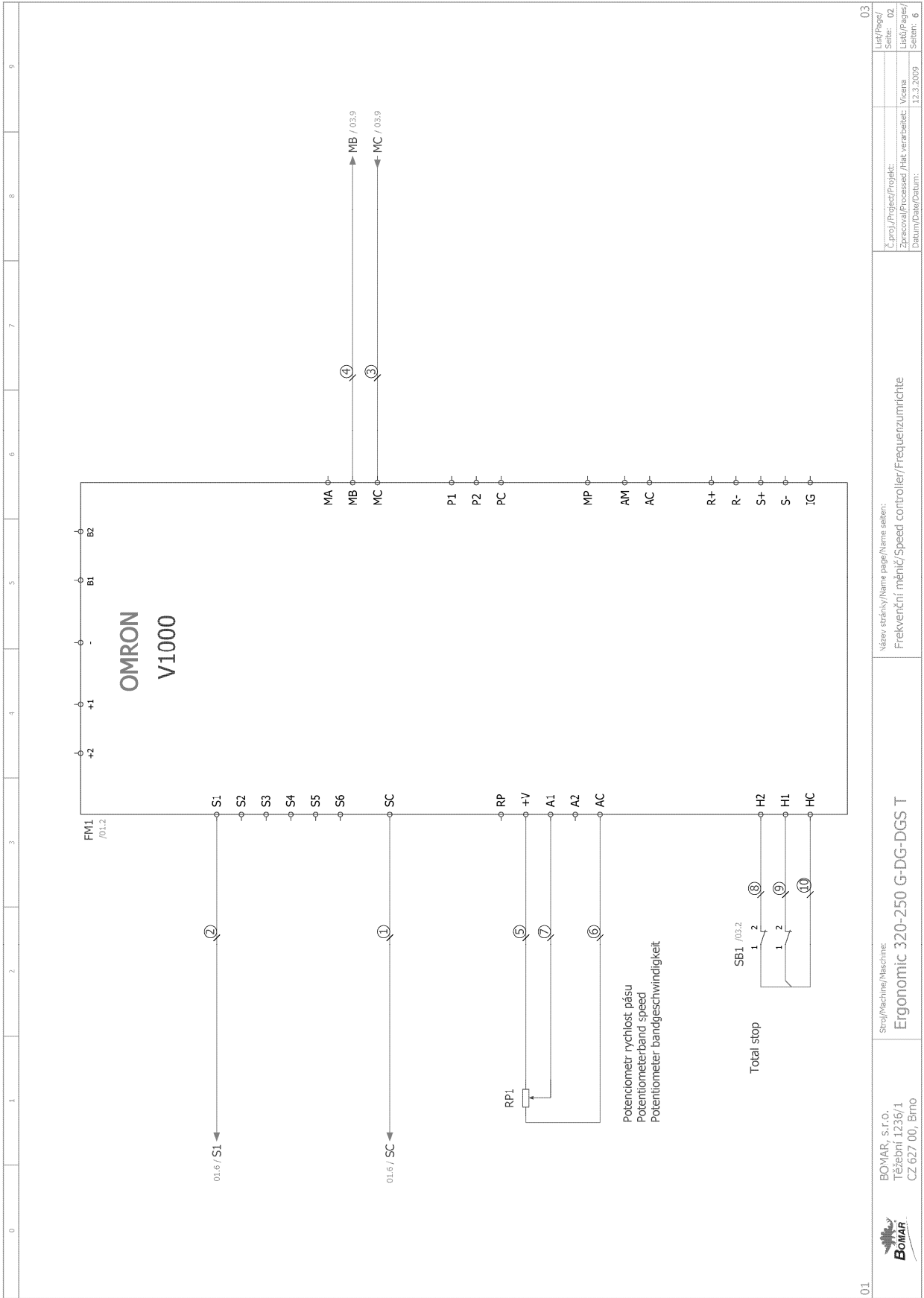
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				Lib. 04 Lib. 6

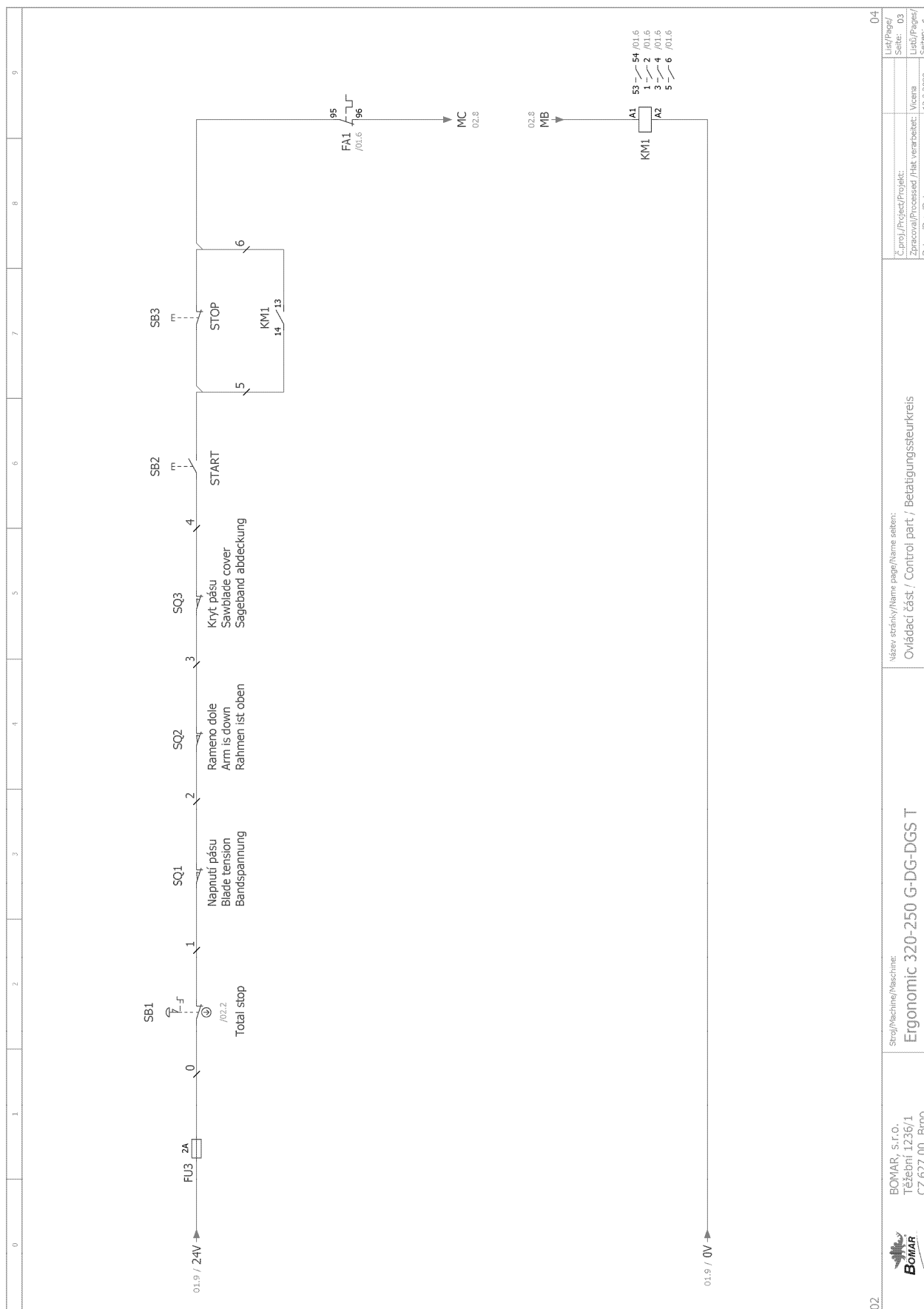


0	1	2	3	4	5	6	7	8	9
Kusovník artiklů									
Označení přístroje	Typ přístroje	Objednací číslo			Výrobce	Skladové číslo	Množství	Umístění (strana, sloupec)	
-Tr1	Transformátor 400V/230V/24V 20VA	JBC E2025 - 0173			ELEKTROKOV a.s. ZNOJMO	91.C80.003	1	/01.8	
Výrobce si vyhrazuje použít ekvivalentní náhrady přístrojů.									
04 Datum	Ergonomic 320-250 G-DG-DGS			Bomar s.r.o.					
						List 6			

**6.4. Elektrické schema /
Elektroschema /
Wiring diagrams – Erg. 320.250 G-F/DG-F/DGS-F, 3×230 V**







0	1	2	3	4	5	6	7	8	9
Kusovník artiklů									
Označení přístroje	Typ přístroje	Objednací číslo			Výrobce	Skladové číslo		Množství	Umístění (strana, soupec)
-FA1	Tepelná ochrana 0,26 - 0,43A	MT03C			GE	91.050.003		1	/01.6
-FW1	Frekvenční měnič 1,5kW	VZA41P5BAA			OMRON	91.012.026		1	/02.3
-FU1	Pojistkové pouzdro	WK4/THS15...U			WIELAND	91.251.102		1	/01.7
-FU1	Pojistka trubičková 2A, 5x20	F2A/250V			ESKA	91.230.001		1	/01.7
-FU2	Pojistkové pouzdro	WK4/THS15...U			WIELAND	91.251.102		1	/01.7
-FU2	Pojistka trubičková 2A, 5x20	F2A/250V			ESKA	91.230.001		1	/01.7
-FU3	Pojistkové pouzdro	WK4/THS15...U			WIELAND	91.251.102		1	/03.1
-FU3	Pojistka trubičková 2A, 5x20	F2A/250V			ESKA	91.230.001		1	/03.1
-KW1	Pomocný kontakt ke stykači	MAR422AT			GE	91.041.005		1	/01.6
-KW1	Stykač 230V AC, 9A	MC1A 10E			GE	91.040.001		1	/03.9
-M1	Motor Pásu	TM 90 25 B5				91.001.027		1	/01.2
-M2	Čerpadlo 50W, 0,24A 3x400V, 50Hz	2C0P1-22 HP1				91.020.006		1	/01.6
-QS1	Hlavní vypínač 16A	P016			GIOVENZANA	91.170.003		1	/01.1
-QS1	Hlavní vypínač-ovládání	SE 16			GIOVENZANA	91.180.001		1	/01.1
-RF11	Filtr k frekvenčnímu měniči 1,5kW	A1000-FIV3010-RE			OMRON	91.012.027		1	/01.2
-RP1	Potenciometr 4k7	TP195 4k7-N20A			TES-Ostrava	91.283.002		1	/02.1
-RP1	Svorka rychloupínací	Svorka rychloupínací			WIELAND	91.250.009		3	/02.1
-SB1	Hlavice hříbového ovládače	ZB5 ASB44			TELEMECANIQUE	91.060.012		1	/03.2
-SB1	Rozpínací kontakt s adaptérem	ZB5AZ102			TELEMECANIQUE	91.061.006		1	/03.2
-SB1	Rozpínací kontakt	ZBE-102			TELEMECANIQUE	91.061.008		2	/02.2
-SB2	Hlavice zelená	ZB5AA3			TELEMECANIQUE	91.060.014		1	/03.6
-SB2	Kontakt s adaptérem spínací	ZB5AZ101			TELEMECANIQUE	91.061.007		1	/03.6
-SB3	Hlavice červená	ZB5AA4			TELEMECANIQUE	91.060.015		1	/03.7
-SB3	Rozpínací kontakt s adaptérem	ZB5AZ102			TELEMECANIQUE	91.061.006		1	/03.7
-SQ1	Koncový spínač	D4N-4A31			OMRON	91.173.007		1	/03.3
-SQ2	Koncový spínač	D4N-4A31			OMRON	91.173.007		1	/03.4
-SQ3	Bezpečnostní koncový spínač	QKS8			KEDU	91.173.012		1	/03.5

Výrobce si vyhradzuje použit ekvivalentní náhrady přístrojů.

03

Datum

Ergonomic 320-250 G-DG-DGS

Bomar s.r.o.

04.a

Ust

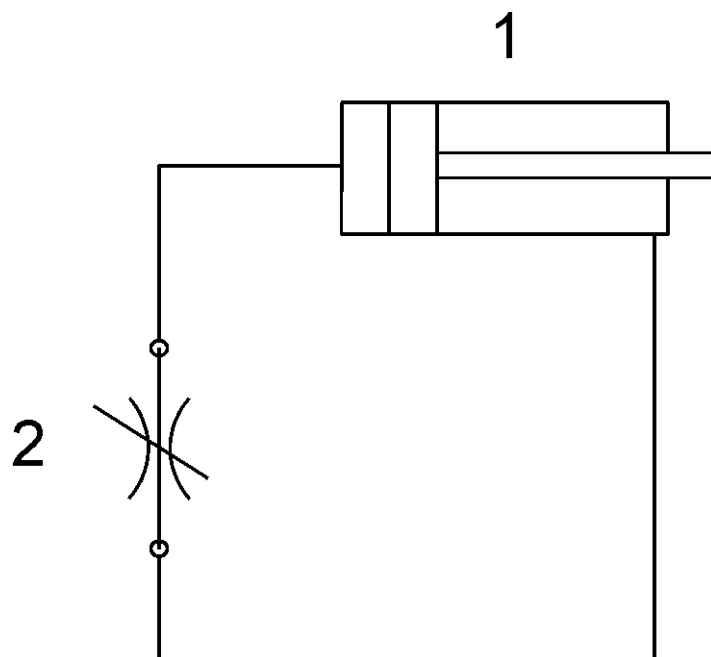
Ust

04

6

0	1	2	3	4	5	6	7	8	9
Kusovník artiklů									
Označení přístroje	Typ přístroje	Objednací číslo			Výrobce	Skladové číslo	Množství	Umístění (strana, sloupec)	
-Tr1	Transformátor 400V/230V/24V 20VA	JBC E2025 - 0173			ELEKTROKOV a.s. ZNOJMO	91.080.003	1	/01.8	
Výrobce si vyhrazuje použít ekvivalentní náhrady přístrojů.									
04 Datum	Ergonomic 320-250 G-DG-DGS			Bomar s.r.o.					
									04.a List 6

6.5. Hydraulické schéma
 Hydraulisches Schéma
 Hydraulic diagram

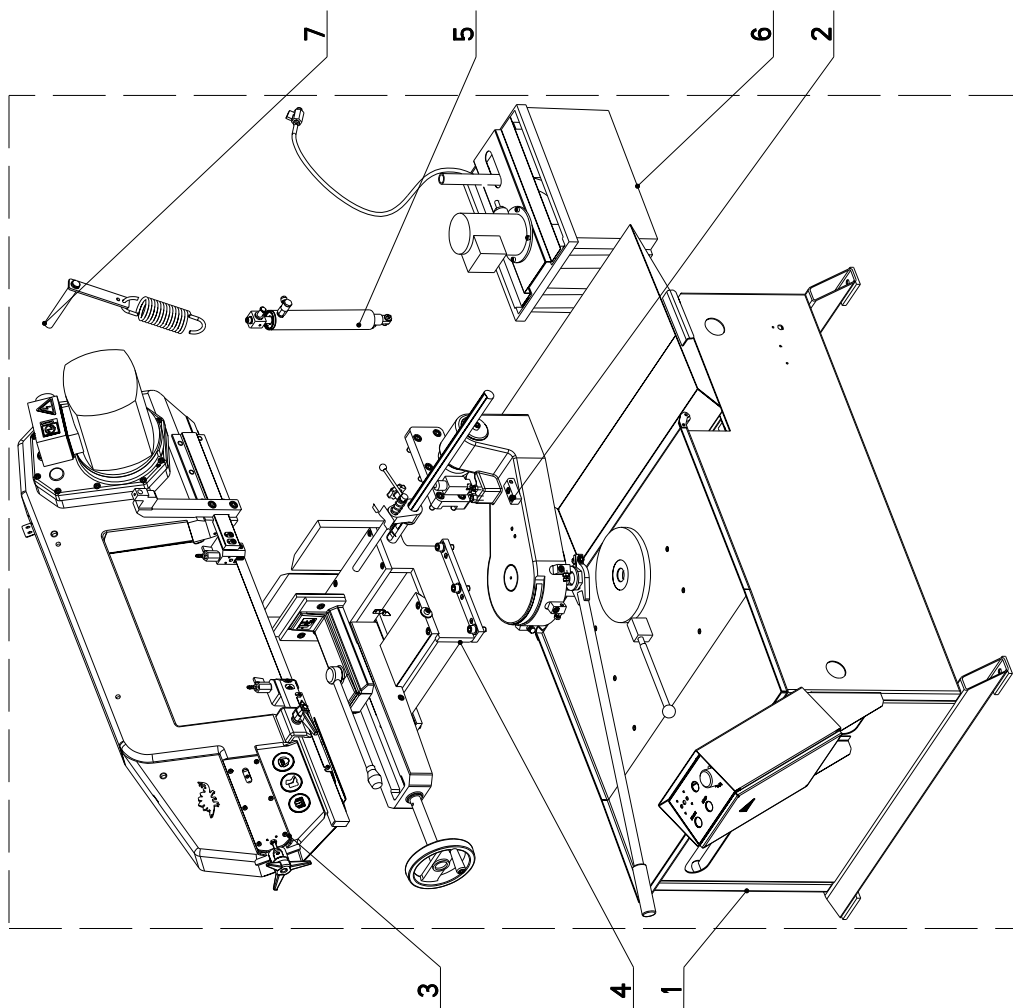


Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	251.056	Hydraulický válec / Hydraulischer Zylinder / Hydraulic cylinder	1
2	92.152.002	Regulační ventil / Regelventil / Control valve HYTOS	1

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 Ergonomic 320.250 DG) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Ergonomic 320.250 DG), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example Ergonomic 320.250 DG), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Ergonomic 320.250 DG

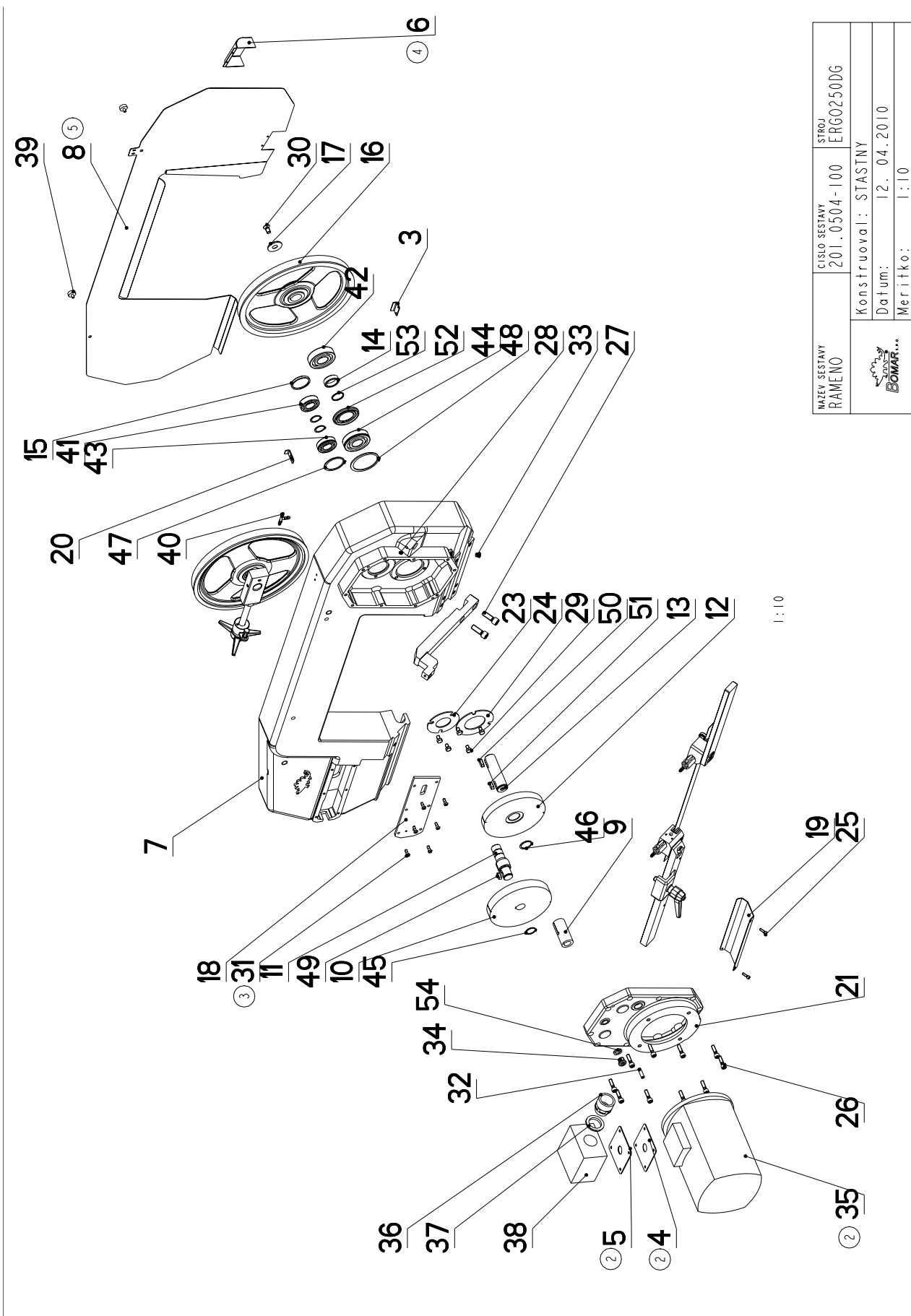


NAZEV SESTAVY PILA PASOVA	CÍSLO SESTAVY 201.0500-100	STROJ STG-250DG
Konstruoval:		
Datum: 26. 01. 2010		
Meritko: 1:10		

7.2. Kusovník / Stückliste / Piece list – Ergonomic 320.250 DG

Číslo Sestavy 201.0500-100		Ver. 2	Název sestavy PILA PASOVA/BAND SAW/BANDSÁGE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0501-700	4	PODSTAVEC / BASE / UNTERSATZ		1
2	201.1002-000	2	KONZOLA OTOCNA / TURNABLE CONSOL / DREHKONSOLE		1
3	201.0504-100	3	RAMENO / SHOULDER / SÄGERAHMEN		1
4	201.1003-000	0	SVERAK / VICE / SCHRAUBSTOCK		1
5	201.0507-000	0	VALEC ZVEDACI / LIFTING CYLINDER / HEBEZYLYNDER		1
6	201.0506-000	0	CHLAZENÍ / COOLING / KÜHLUNG		1
7	201.0514-750	0	PRUŽINA / SPRING / FEDER		1
8	99.900.040	0	SAMOLEPKA / STICKER / AUFKLEBER		1
9	99.900.043	0	SAMOLEPKA / STICKER / AUFKLEBER		1
10	99.900.045	0	SAMOLEPKA / STICKER / AUFKLEBER		2
11	99.900.046	0	SAMOLEPKA / STICKER / AUFKLEBER		1
12	99.900.047	0	SAMOLEPKA / STICKER / AUFKLEBER		1
13	99.900.048	0	SAMOLEPKA / STICKER / AUFKLEBER		1
14	99.900.049	0	SAMOLEPKA / STICKER / AUFKLEBER		1
15	99.900.053	0	SAMOLEPKA / STICKER / AUFKLEBER		1
16	31.0104-026	0	SAMOLEPKA / STICKER / AUFKLEBER		1
17	31.0508-005	0	STÍTEK / LABEL / SCHILD	P 0.8-25	1
18	31.0599-005	0	SAMOLEPKA / STICKER / AUFKLEBER		1
19	31.0599-802	1	STÍTEK / LABEL / SCHILD	P 0.5x65	1

7.3. Rameno / Sägerahmen / Saw arm

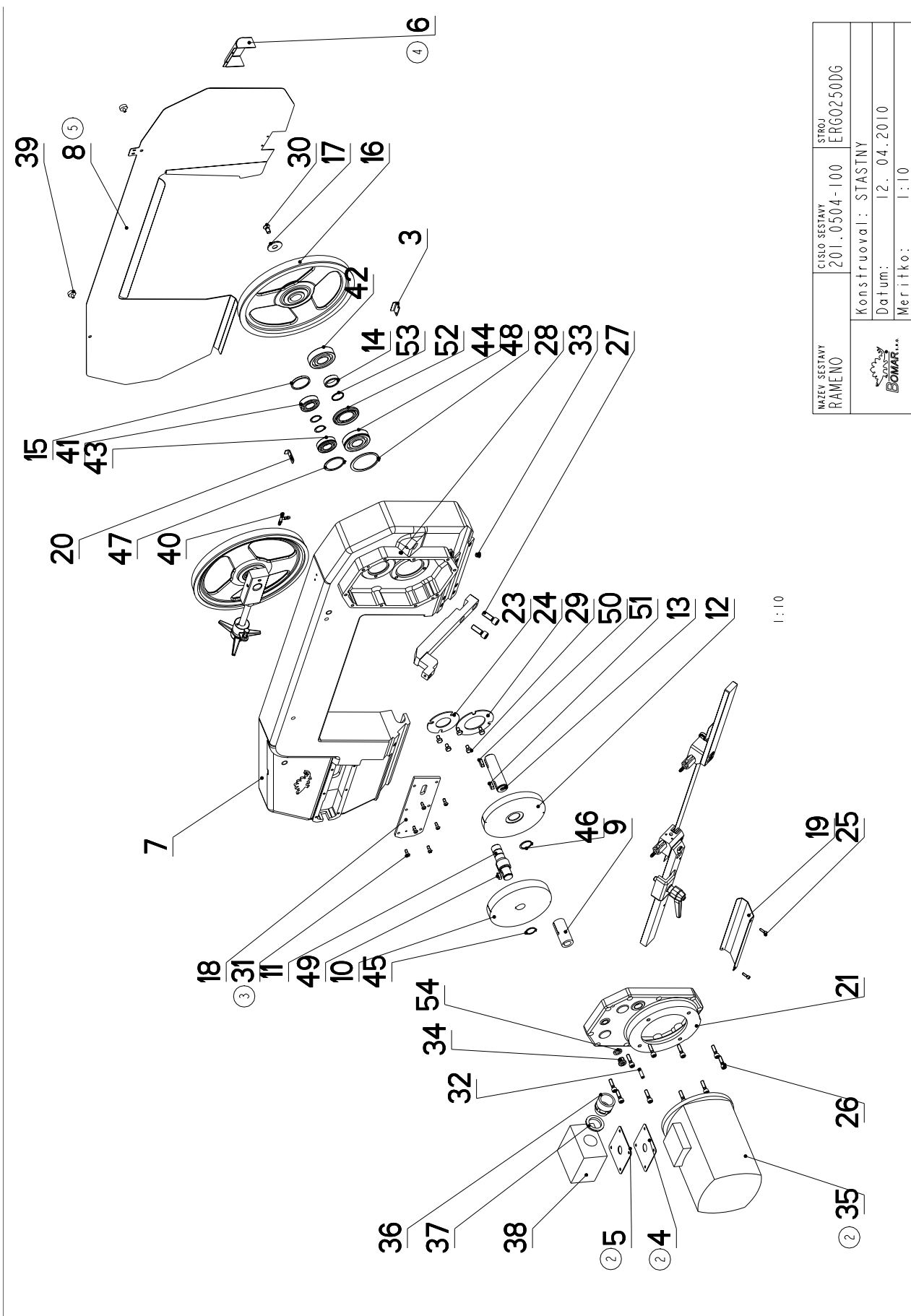


NAZEV SESTAVY RAMENO	CISLO SESTAVY 201.0504-100	STROJ ERG0250DG
Konstruoval: STASTNY		
Datum: 12. 04. 2010		
Meritko: 1:10		

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

Císlo Sestavy 201.0504-100		Ver. 4	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0508-000	0	NAPINANI / TENSIONING / SPANNUNG		1
2	201.0510-000	1	VEDENÍ PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
3	30.0104-029	0	UCHYTKA / CLIP / HALTER	P 2- 36	1
4	30.0504-010	2	DESKA ELEKTRO / ELECTRIC BOARD / PLATINE	P 1.5 - 95	1
5	30.0504-011	0	GUMA / RUBBER / GUMMI	TL 2-95	1
6	30.0504-604	0	KRYT / COVER / ABDECKUNG	P 1.5x84	1
7	30.0504-751	0	RAMENO / SHOULDER / SÄGERAHMEN	80.0504-701	1
8	30.0504-753	5	KRYT NAPINANI / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P 1.5-492	1
9	30.0505-002	0	PASTOREK / PINION / RITZEL	d 35	1
10	30.0505-003	1	KOLO OZUBENÉ / COG WHEEL / ZAHNRAD	D 176	1
11	30.0505-004	1	HRIDEL / SHAFT / WELLE	D40	1
12	30.0505-005	0	KOLO OZUBENÉ / COG WHEEL / ZAHNRAD	D 180	1
13	30.0505-007	1	HRIDEL / SHAFT / WELLE	TYC 35	1
14	30.0505-009	1	KROUZEK / RING / RING	Tr 44,5x8	1
15	30.0505-013	0	ZATKA / PLUG / STOPFEN	d 55	1
16	30.0505-701	0	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD		1
17	30.0508-002	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	d 40	1
18	30.0704-007	2	KRYT NAPINANI / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	VÝPALEK	1
19	30.0704-021	1	KRYT PASU / BELT COVER / BANDABDECKUNG	P 1.5-101	1
20	30.0704-032	2	PRÍLOŽKA / STRAP / LASCHE	P 2 - 15	1
21	30.0705-001	1	VÍKO / COVER / DECKEL	ODLITEK	1
22	30.1014-001	0	DRŽÁK / HOLDER / HALTER		1
23	81.0105-007	0	PRÍLOŽKA / STRAP / LASCHE	P2.5-90	1
24	81.0505-010	0	PRÍLOŽKA / STRAP / LASCHE	P 2.5- 108	1
25	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x16	2
26	90.001.25.034	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	10
27	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	2
28	90.004.20.001	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x8	1
29	90.005.55.013	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x12	6
30	90.011.27.008	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHEIBE	SROUB M10x20	1
31	90.013.27.008	0	SROUB PULKULATÝ / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M6x16	6
32	90.302.02.002	0	KOLÍK KUŽELOVÝ / TAPER PIN / KEGELBOLZEN	KOLÍK 8x30	2
33	90.400.52.001	0	ZATKA / PLUG / STOPFEN	M10x1	1
34	90.400.52.002	0	ZATKA / PLUG / STOPFEN	M16x1.5	1
35	91.001.007	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR		1
36	91.071.004	0	VÝVODKA / BUSHING / TÜLLE	VÝVODKA	1

7.5. Rameno / Sägerahmen / Saw arm



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

Císlo Sestavy 201.0504-100		Ver. 4	Název sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
37	91.072.007	0	MATICE / NUT / MUTTER	MATICE	1
38	91.190.004	0	KRABICE ELEKTRO / ELECTRO BOX / ELEKTRODOSE		1
39	94.007.002	0	SROUB / BOLT / SCHRAUBE		2
40	94.200.001	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	6	1
41	95.001.018	0	LOŽISKO / BEARING / LAGER	6205 2RS	1
42	95.001.025	0	LOŽISKO / BEARING / LAGER	6306 2RS	1
43	95.003.002	0	LOŽISKO / BEARING / LAGER	6205AN	1
44	95.003.003	0	LOŽISKO / BEARING / LAGER	6306AN	1
45	95.800.012	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 25	3
46	95.800.013	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 30	1
47	95.800.019	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 52	1
48	95.800.026	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 72	1
49	95.810.006	0	PERO / SPRING / FEDER	PERO 8X7X20	1
50	95.810.007	0	PERO / SPRING / FEDER	PERO 8X7X25	1
51	95.810.023	0	PERO / SPRING / FEDER	PERO 8X7X22	1
52	95.830.005	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 40X72X7	1
53	96.002.034	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	30X2	1
54	96.081.001	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING	23x15x3	1

1. VYMENA MOTORU - ZRUSEN MOTOR 91.001.007 A NAHR. MOTOREM 91.001.129, ZRUS. SOUCASTI 30.0504-010, 30.0504-011
A NAHRAZENY SOUC. 30.0504-012, 30.0504-013. 31/ZM295 10.9.2008 SLEZACKOVA

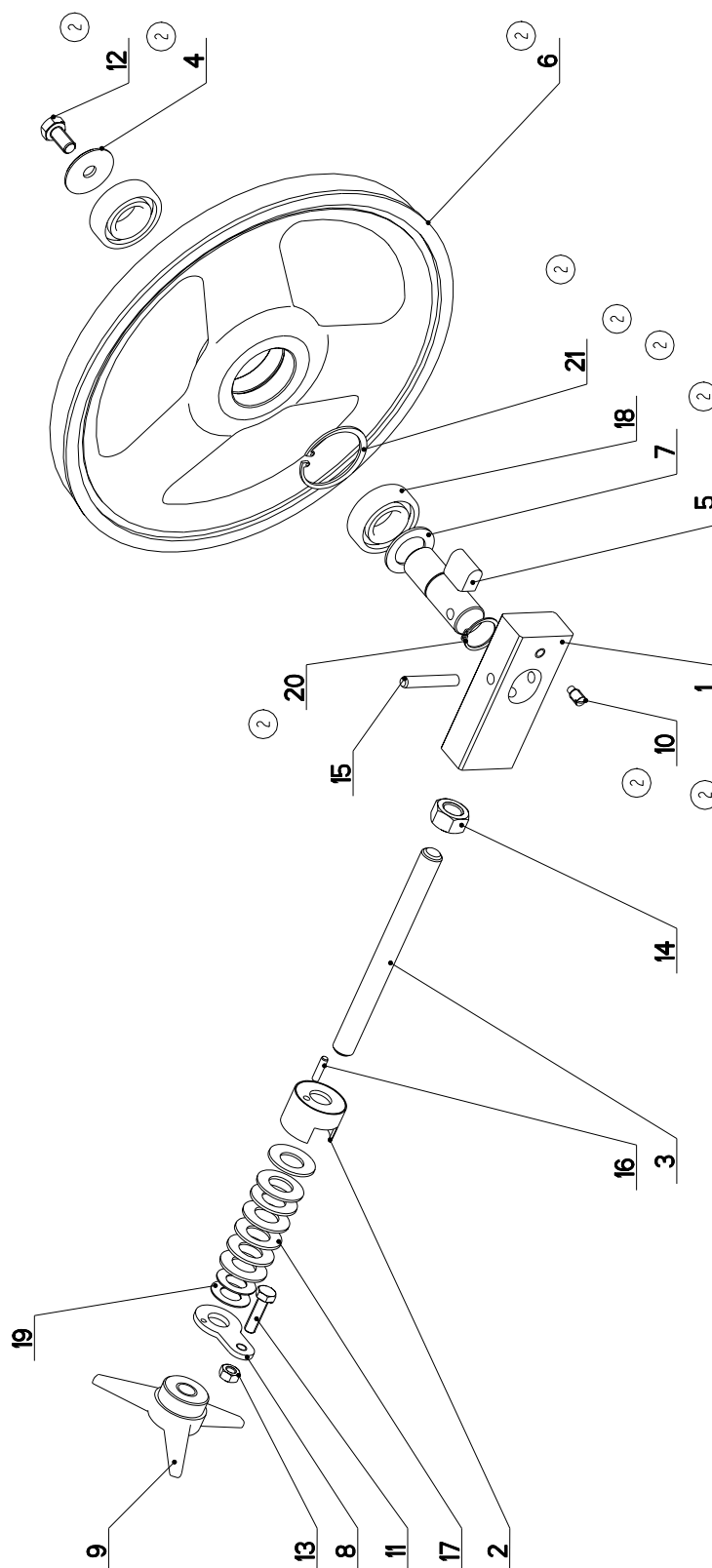
2. VYMENA MOTORU - ZRUS. MOTOR CINSKY 91.001.129 A NAHR. MOTOREM EMP SLAVKOV 91.001.007, ZRUS. PLECH ELEKTRO 30.0504-012 A NAHR. PLECHEM 30.0504-010,
ZRUS. GUMA 30.0504-013 A NAHR. GUMOU 30.0504-011. 061/ZM085 25.3.2009 SLEZACKOVA

3. ZRUSEN KARTACEK 201.0704-100, PRID. KRYT KARTACKU 30.0504-603, ZRUS. SROUB IMBUS M6x16 (90.001.25.017)
A NAHRAZEN SROUBEM S PULKULATOU HLAVOU M6x16 (90.013.27.008). 183/ZM211 26.11.2009 SLEZACKOVA

4. ZRUSEN KRYT KARTACKU A NAHRAZEN 30.0504-604. 052/ZM050 22.2.2010 SLEZACKOVA

5. ZRUSEN KRYT RAMENE 30.0504-752 A NAHRAZEN 30.0504-753. 036/ZM095 12.4.2010 SLEZACKOVA

7.7. Napínání / Spannung / Tensioning



NAZEV SESTAVY NAPÍNÁNÍ	CÍSLO SESTAVY 201.0508-000	STROJ ERGO 250GA
Konstruoval:		
Datum: 06. 11. 2009		
Meritko: 33:100		

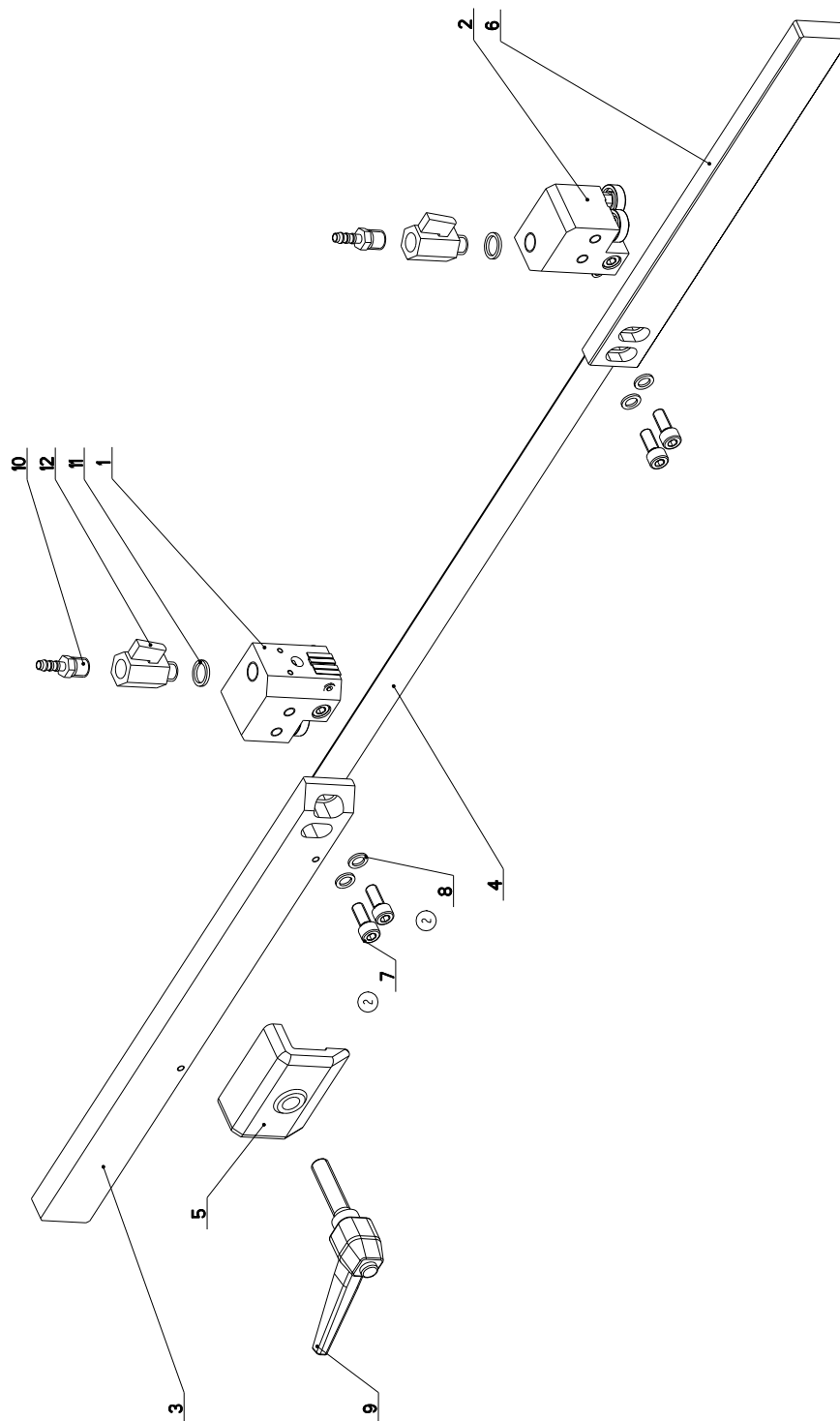
7.8. Kusovník / Stückliste / Piece list – Napínání / Spannung / Tensioning

Číslo Sestavy 201.0508-000		Ver. 0	Název sestavy NAPINANI / TENSIONING / SPANNUNG		
Poz	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0104-002	0	HRANOL / BLOCK / PRISMA	HR 50x 30	1
2	30.0104-004	2	DRŽAK / HOLDER / HALTER		1
3	30.0303-005	0	SROUB / BOLT / SCHRAUBE	M16	1
4	30.0505-011 (2)	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	TYC 40	1
5	30.0508-004 (2)	0	CEP NAPINANI / TENSIONING LUG / SPANNUNGSBOLZEN		1
6	30.0508-701 (2)	4	KOLO NAPINACI / TENSIONING WHEEL / UMLENKRAD		1
7	30.0702-023 (2)	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING		1
8	30.0704-025	3	DRŽAK / HOLDER / HALTER	P 4x 36	1
9	31.0104-006	0	HVEZDICE / STAR WHEEL / STERN	PLAST	1
10	90.004.20.008 (2)	0	STAV SR S CIP / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x16	1
11	90.005.55.017	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x30	1
12	90.005.55.023	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10x20	1
13	90.100.55.005	0	MATICE DIN 934 / NUT / MUTTER	MATICE – M8	1
14	90.100.55.008	0	MATICE DIN 934 / NUT / MUTTER	MATICE – M16	1
15	90.300.07.012	0	KOLIK VALC. KAL. / PIN / BOLZEN	KOLIK 8x50	1
16	90.303.07.008	0	KOLIK PRUŽNÝ / PIN / BOLZEN	KOLIK 5x20	1
17	90.350.07.002	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	35,5x18,3x2,0x2,8	7
18	95.001.018 (2)	0	LOŽISKO / BEARING / LAGER	6205 2RS	2
19	95.750.001	0	KROUZEK KU / KU RING / KU-RING	16x1	2
20	95.800.012	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 25	1
21	95.801.009 (2)	0	SEGR DIRA / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 52	1

① ZMENA 30.0702-023 NA 30.0508-006, 0508-701 NA 0508-102, 0508-004 NA 0508-007, 0104-002 NA 0508-008, 95.001.018 NA 95.001.036
0505-011 NA 0508-002, 95.801.009 NA 95.801.010 14.5.2004 URICAR

2.ZRUSENA ZMENA 1. NEBYLA REALIZOVANA. 266/ZM255 28.7.2008 SLEZACKOVA

7.9. Vedení pásu / Sägebandführung / Belt guide



NAZEV SESTAVY VEDENÍ PÁSU	ČÍSLO SESTAVY 201.0510-000	STROJ STG 240G.DG
Konstruoval:		
Datum: 20. 01. 2010		
Neríko: 1:2		

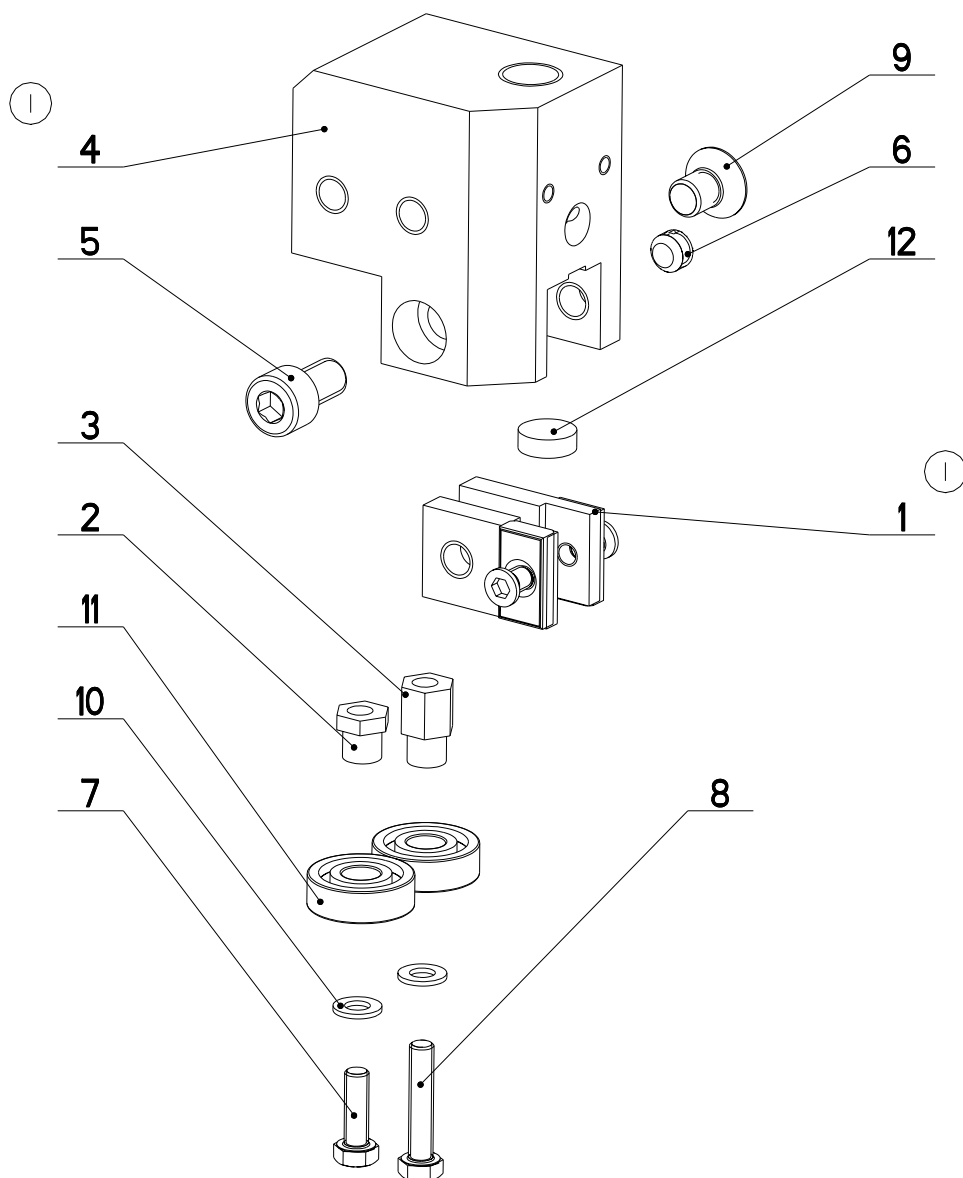
7.10. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide

Číslo sestavy 201.0510-000		Ver. 1	Název sestavy VEDENÍ PÁSU/BELT GUIDE/SÄGEBANDFÜHRUNG		
Poz.	Objednávací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0110-100	0	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
2	201.0110-200	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	30.0104-015	4	LISTA / TRIM / LEISTE	TYC 40x20	1
4	30.0504-961	0	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	2910x25(7)x0.90	1
5	30.0704-010	3	UPÍNKA / FASTENER / SPANNEISEN	ODLITEK	1
6	30.0704-014	4	LISTA / TRIM / LEISTE	TYC 40x15	1
7	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	4
8	90.163.00.002	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE	PODLOŽKA 8	4
9	94.008.009	0	PAKA UPÍNACÍ / ATTACHMENT LEVER / SPANNHEBEL	M12	1
10	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/RI/4"	2
11	96.080.001	0	TESNĚNÍ / SEALING / DICHTUNG	17.8x13.5x2	2
12	99.260.001	0	VENTIL / VALVE / VENTIL	VENTIL KULOVÝ	2

1. dopl. kol. kuzel. 6x20, 6x26, 13.4.04 Stastný

2. PRID. 4x PODLOŽKA NORDLOCK M8 90.163.00.002, ZRUS. 4x SROUB M8x16 A NAHR. SROUBEM M8x20. 161/ZM148 14.5.2008 SLEZACKOVA

7.11. Vodící kostka / Führungsklotz / Guiding cube – 1



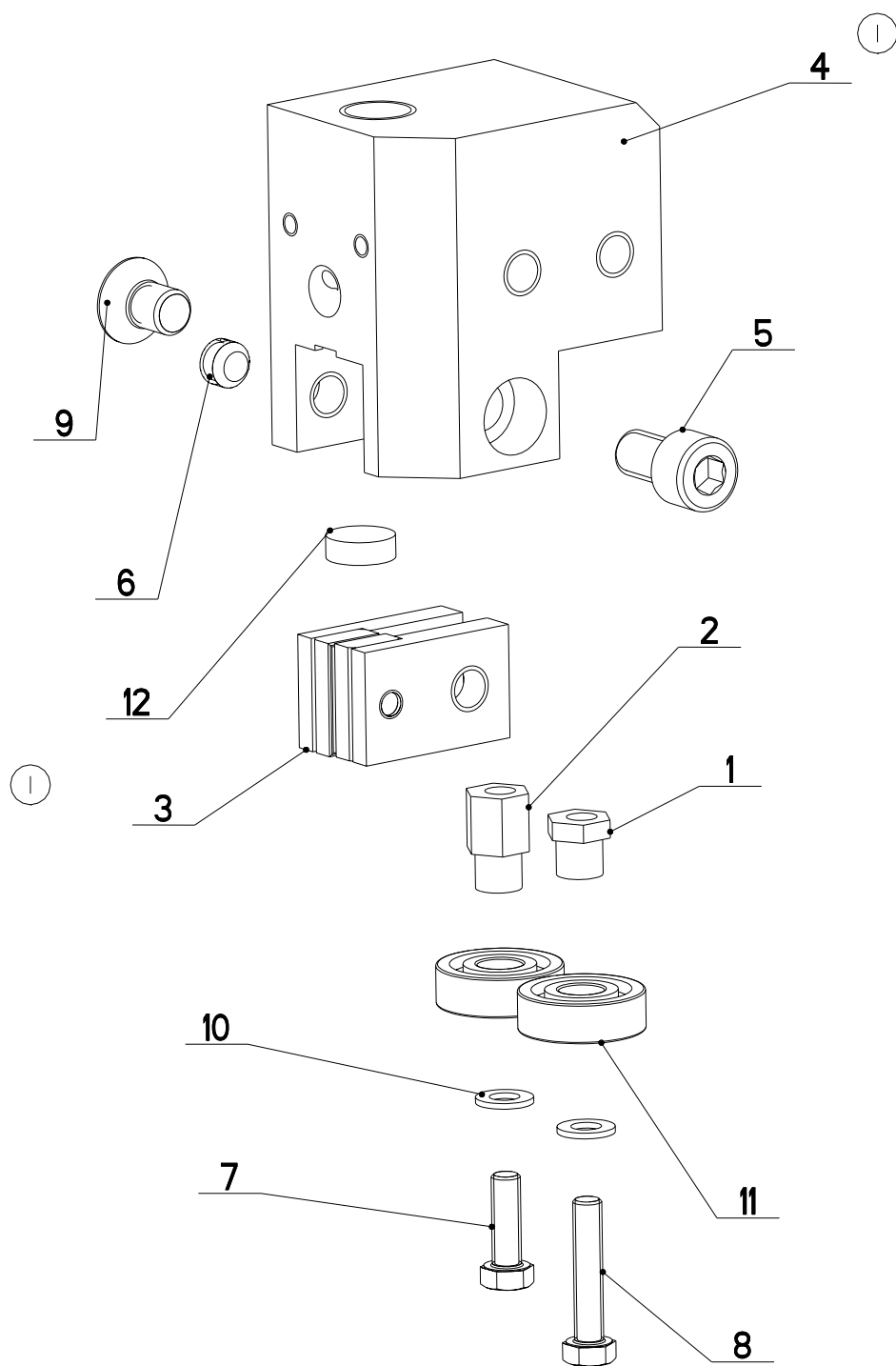
NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.0110-100	STROJ STG-240
	Konstruoval:	
	Datum:	06. 11. 2009
	Meritko:	4:5

7.12. Kusovník / Stückliste / Piece list – Vodící kostka / Führungsklotz / Guiding cube – 1

Číslo Sestavy 201.0110-100		Ver. 0	Název sestavy KOSTKA VODÍCI / LEAD CUBE / FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0104-021	0	DRŽÁK / HOLDER / HALTER		2
2	30.0104-018	0	EXCENTR / CAM / EXCENTER	SK10	1
3	30.0104-019	0	EXCENTR / CAM / EXCENTER	SK10	1
4	30.0104-032	0	KOSTKA VODÍCI / LEAD CUBE / FÜHRUNGSKLOTZ	TTC 60x40	1
5	90.001.55.082	0	SROUB IMBUS ZINEK / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x14	1
6	90.002.20.009	0	STAVEČÍ S KUZEL / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x6	1
7	90.005.55.003	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5x16	1
8	90.005.55.005	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5x25	1
9	90.011.27.007	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x12	1
10	90.150.50.003	0	PODLOŽKA DIN125 / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 5,3	2
11	95.001.001	0	KUL. LOŽ. I RADE / BEARING / LAGER	608 2RS	2
12	99.040.002	0	TVRDOKOV / HARD METAL / HM-SEGMENT	d 12	1

I. ZRUSENA SOUC. 30.0104-020 A NAHR. 201.0104-021. 297/272 12.8.2008 KRPEC

7.13. Vodící kostka / Führungsklotz / Guiding cube – 2



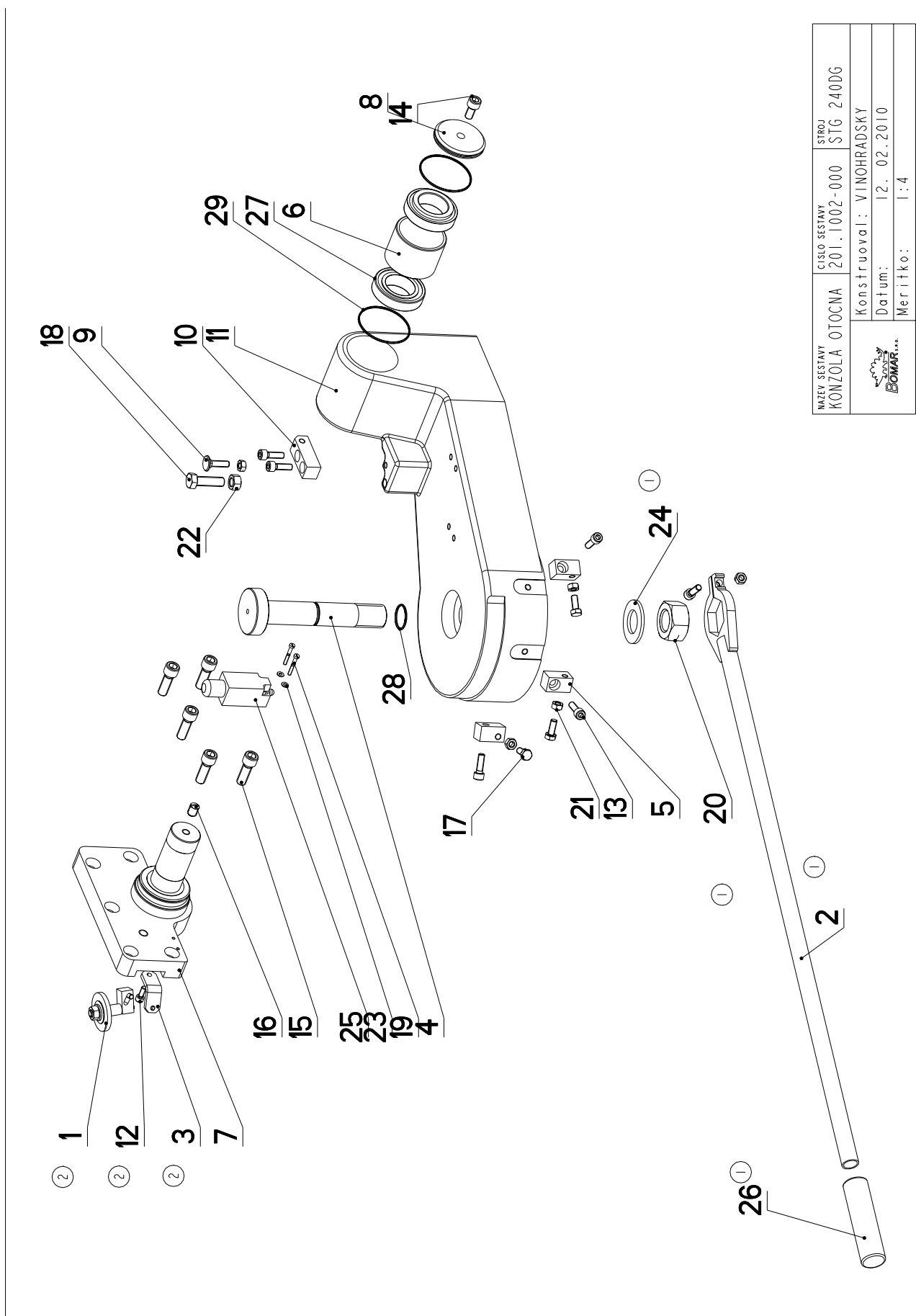
NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.0110-200	STROJ ERGO250DDG
	Konstruoval:	
	Datum: 20. 01.2010	
	Meritko: 1:1	

7.14. Kusovník / Stückliste / Piece list – Vodící kostka / Führungsklotz / Guiding cube – 2

Číslo Sestavy 201.0110-200		Ver. 1	Název sestavy KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0104-018	0	EXCENTR / CAM / EXZENTER	SK10	1
2	30.0104-019	0	EXCENTR / CAM / EXZENTER	SK10	1
3	30.0104-021	0	DRŽÁK / HOLDER / HALTER		2
4	30.0104-031	2	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	TYC 60x40	1
5	90.001.55.082	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x14	1
6	90.002.20.009	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x6	1
7	90.005.55.003	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5x16	1
8	90.005.55.005	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M5x25	1
9	90.011.27.007	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x12	1
10	90.150.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHLEIBE	PODLOZKA 5, 3	2
11	95.001.001	0	LOŽISKO / BEARING / LAGER	608 2RS	2
12	99.040.002	0	TVRDOKOV / HARD METAL / HM-SEGMENT	Ø 12	1

1 ZRUS.SOUCAST 30.0104-020 NAHRAZENA SOUC.30.0104-021,ZRUS.SOUCAST 30.0104-016 NAHRAZENA SOUC.30.0104-031.
2977ZM272 12.8.2008 KRPEC

7.15. Konzola / Konzole / Console



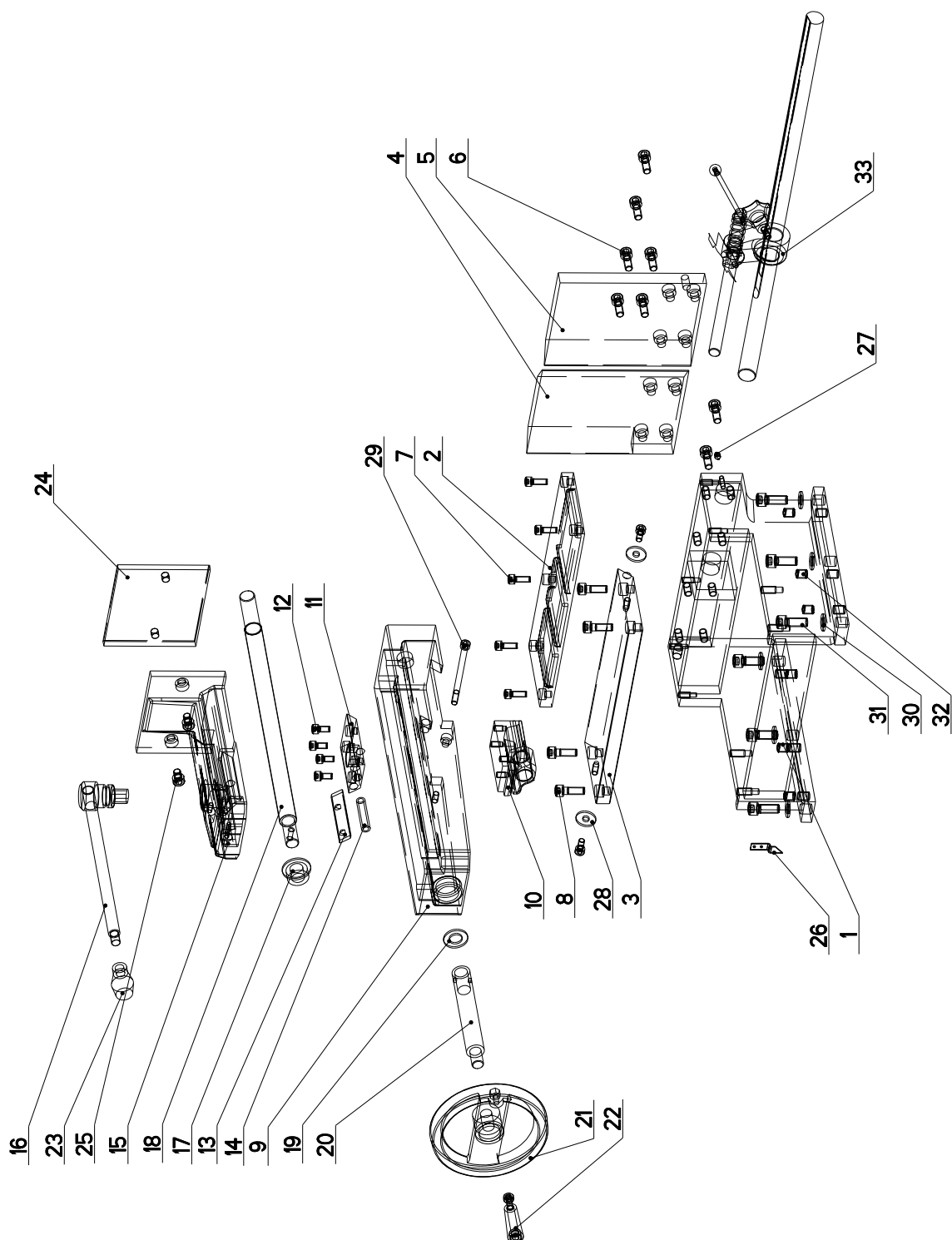
NAZEV SESTAVY KONZOLA OTOCNA	CISLO SESTAVY 201.1002-000	STROJ STG 240DG
Konstruoval: VINOHRADSKY		
Datum: 12. 02. 2010		
Meritko: 1:4		

7.16. Kusovník / Stückliste / Piece list – Konzola / Konsole / Console

Číslo Sestavy 201.1002-000		Ver. 2	Název sestavy KONZOLA OTOCNA/TURNABLE CONSOL/DREHKONSOLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.0704-100 (2)	0	KARTAC / BRUSH / BÜRSTE		1
2	30.0502-004 (1)	0	PAKA / LEVER / HEBEL	SVARENO	1
3	30.0514-603 (2)	0	DRŽAK / HOLDER / HALTER	HR20x5	1
4	30.0702-002	2	CEP / LUG / BOLZEN	M30x173	1
5	30.0702-006	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 20x20	3
6	30.0702-008	0	POUZDRO / SLEEVE / BÜCHSE	TR 70x5	1
7	30.0702-010	0	DRŽAK / HOLDER / HALTER		1
8	30.0702-012	0	VÍKO / COVER / DECKEL	d 70	1
9	30.0702-013	0	SROUB / BOLT / SCHRAUBE	M8	1
10	30.0707-011	0	DRŽAK / HOLDER / HALTER	TYC 20x20	1
11	30.1002-001	0	KONZOLA OTOCNA / TURNABLE CONSOL / DREHKONSOLE	ODLITEK	1
12	90.001.25.017 (2)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x16	1
13	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	6
14	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x20	1
15	90.001.25.059	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x35	5
16	90.002.20.017	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12X16	1
17	90.005.55.015	0	SROUB 6HRANNY / 6 S IDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x20	3
18	90.005.55.034	0	SROUB 6HRANNY / 6 S IDED BOLT / SECHSKANTSCHRAUBE	SROUB M12x40	1
19	90.012.50.007	0	SROUB / BOLT / SCHRAUBE	SROUB M4x30	2
20	90.100.25.001 (1)	0	MATICE / NUT / MUTTER	MATICE _ M30	1
21	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	5
22	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE _ M12	1
23	90.150.50.002	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 4, 3	2
24	90.150.50.XXX (1)	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 31	1
25	91.173.007	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	-RIWK	1
26	94.004.502 (1)	0	RUKOJET / HANDLE / GRIFF	D22	1
27	95.300.002	0	LOŽISKO KUZELIK / BEARING / LAGER	32008AX	2
28	96.001.008	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	26x2	1
29	96.001.018	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	63x2	2

I ZM. Z ks. STROJE ZRUŠENO: 30.0301-012, 30.0502-002, 30.0502-001, 94.00.2.001, NOVE SOUCASTI: 30.0502-004, 94.00.502, 90.100.25.001, 90.150.50.018 11.6.2008 VINOHRADSKY
2. PRIDAN KARTACEK 201.0704-100, DRŽAK KARTACKU 30.0514-603 A SROUB M6x16 (90.001.25.017). 183/ZM211 29.10.2009 SLEZACKOVA

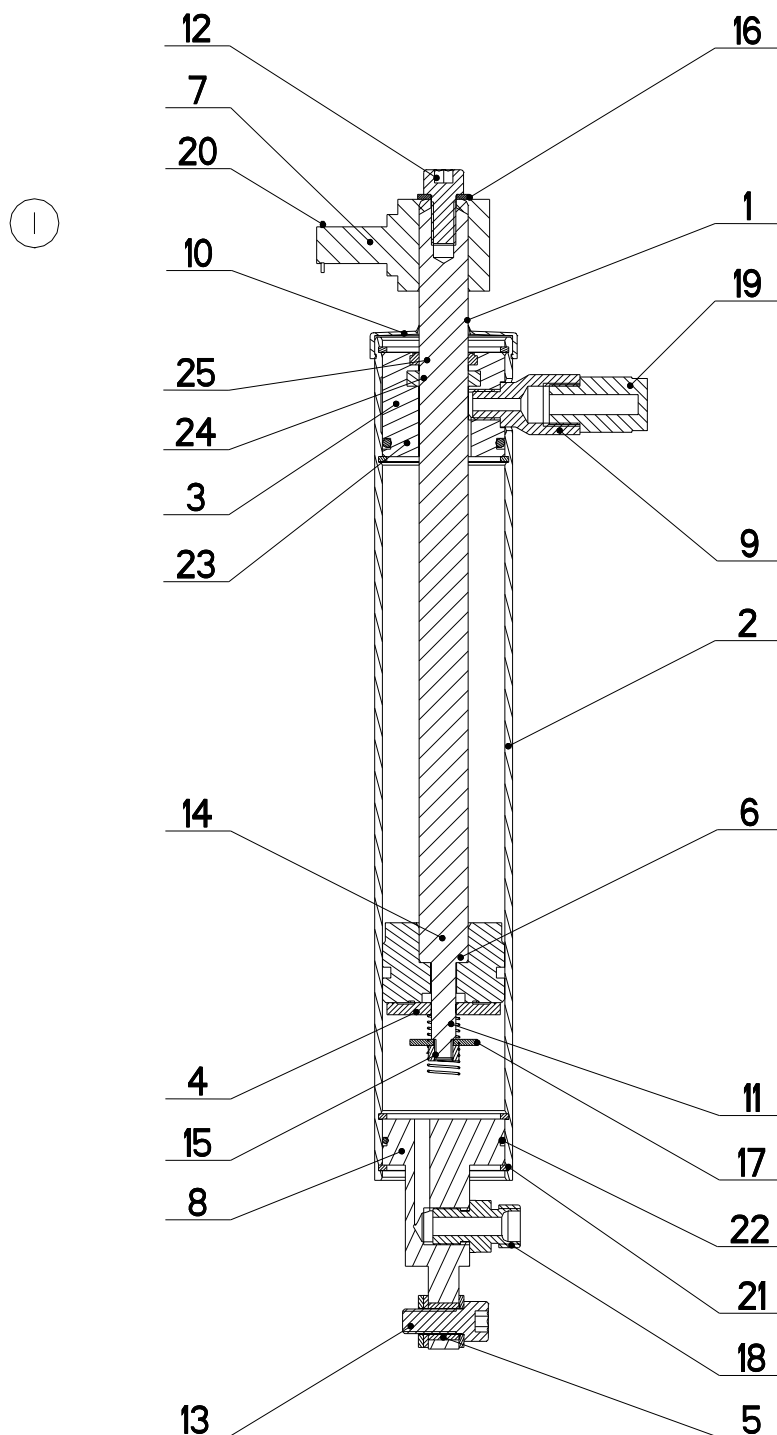
7.17. Svěrák / Schraubstock / Vice



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

Císlo Sestavy 201.1003-000		Ver. 0	Název sestavy SVĚRÁK/VICE/SCHRAUBSTOCK		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1003-013	4	KONZOLA / CONSOLE / KONSOLE		1
2	30.1003-014	3	DESKA / BOARD / PLATTE	ODLITEK	1
3	30.1003-006	1	DESKA / BOARD / PLATTE	HR 120x20	1
4	30.1003-023	1	CELLIST / JAW / BÄCKE	HR 165 x 20	1
5	30.1003-024	1	CELLIST / JAW / BÄCKE	HR 165 x 20	1
6	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	8
7	90.001.25.104	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x22	5
8	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	4
9	30.1003-012	0	TELESO SVĚRAKU / VICE BODY / SCHRAUBSTOCKKÖRPER	ODLITEK	1
10	30.1003-018	2	MATICE / NUT / MUTTER		1
11	30.1003-017	0	VEDENÍ / GUIDE / BACKENFÜHRUNG	HR 65x15	1
12	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	6
13	30.1003-021	0	LISTA / TRIM / LEISTE	HR 20x5	1
14	31.1003-016	0	PRUŽINA / SPRING / FEDER	12x2.24x56x16	1
15	30.1003-011	3	CELLIST / JAW / BÄCKE	ODLITEK	1
16	10.1003-015	1	EXCENTR / CAM / EXZENTER		1
17	30.1003-007	1	POUZDRO / SLEEVE / BÜCHSE	d 40	1
18	30.1003-010	2	SROUB / BOLT / SCHRAUBE	Tr24x5L	1
19	30.1003-022	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE		1
20	30.1003-009	1	NASTAVEC / EXTENSION / ANSATZ	TYC 25	1
21	94.010.001	0	KOLEČKO / WHEEL / ROLLE		1
22	94.010.002	0	RUKOJET / HANDLE / GRIFF		1
23	94.002.001	0	HLAVICE / HEAD / KOPF		1
24	30.0703-018	0	CELLIST / JAW / BÄCKE	HR 130x10	1
25	90.001.25.043	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x12	2
26	30.0703-011	0	UKAZATEL / INDICATOR / ZEIGER	P 1.5 - 12	1
27	90.003.20.010	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8x10	1
28	90.151.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	PODLOŽKA 8	2
29		0	SROUB IMBUS / /	M8x100	1
30	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	PODLOŽKA 13	6
31	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	6
32	90.002.20.017	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M12x16	6
33	201.0703-100	0	DORAZ / STOP PIECE / ANSCHLAG		1

7.19. Válec zvedací / Hebezyylinder / Liftink cylinder



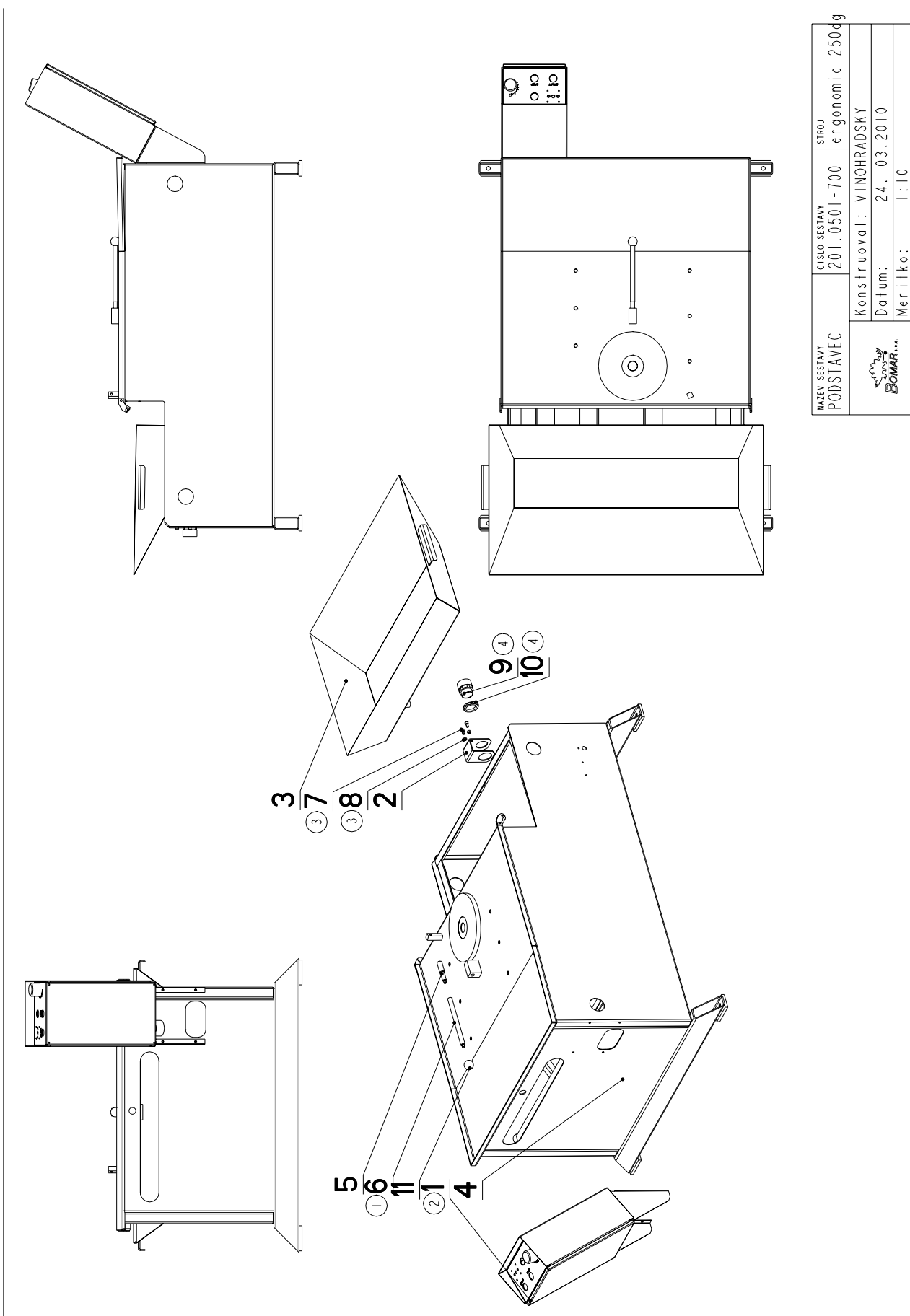
NAZEV SESTAVY VALEC ZVEDACI	CISLO SESTAVY 201.0507-000	STROJ
	Konstruoval: STASTNY	
	Datum: 20. 01.2010	
	Meritko: 1:2	

7.20. Kusovník / Stückliste / Piece list – Válec zvedací / Hebezyylinder / Liftink cylinder

Cislo Sestavy 201.0507-000	Ver. I	Nazev sestavy VALEC ZVEDACI/LIFTING CYLINDER/HEBEZYLINDER			
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.0507-001	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 1618	I
2	30.0507-002	I	VALEC / ROLLER / ZYLINDER	TRUBKA 45/40	I
3	30.0507-003	0	VIKO / COVER / DECKEL	d 45	I
4	30.0507-004	I	KLAPKA / PULLEY / VENTILKLAPPE	d 38	I
5	30.0507-005	I	POUZDRO / SLEEVE / BÜCHSE	d 12	I
6	30.0707-001	0	PIST / PISTON / KOLBEN	d 45	I
7	30.0707-009	0	DRZAK / HOLDER / HALTER	HR 30x 30	I
8	30.0907-001	0	DRZAK / HOLDER / HALTER	d 40	I
9	30.3407-103	I	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	TYC 17	I
10	31.0507-010	I	VIKO / COVER / DECKEL		I
11	31.0707-014	0	PRUZINA / SPRING / FEDER	0.63x10x20x9.5	I
12	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	I
13	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	I
14	90.003.20.003	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x12	I
15	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE _ M6	I
16	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 8,4	4
17	90.151.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	PODLOZKA 6	I
18	92.002.001	0	SROUBENI PRIME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	I
19	93.009.002	0	SROUBENI UHLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG		I
20	95.800.004	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 12	I
21	95.801.005	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 40	4
22	96.001.010	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING	d36x2	I
23	96.002.017	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	d34x3	I
24	96.041.001	0	TESNENI / SEALING / DICHTUNG	d16	I
25	96.060.001	0	KROUZEK STIRACI / SCRAPER RING / ABSTREIFRING	16x22	I

I. dopl. položka 31.0507-010, 8.6.04 Státní

7.21. Podstavec / Untersatz / Base



7.22. Kusovník / Stückliste / Piece list – Podstavec / Untersatz / Base

Cislo Sestavy 201.0501-700		Ver. 4	Nazev sestavy PODSTAVEC/BASE/UNTERSATZ		
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.0513-000(2)	0	OVLADACI PANEL / CONTROL PANEL / BEDIENPULT		1
2	30.0501-003	1	DRZAK / HOLDER / HALTER	P3 - 60	1
3	30.0501-602	1	VANA / TANK / WANNE		1
4	30.0501-701	5	PODSTAVEC / BASE / UNTERSATZ		1
5	30.0701-016	0	DORAZ / STOP PIECE / ANSCHLAG	d 16h9	1
6	30.1003-004(1)	0	NASTAVEC / EXTENSION / ANSATZ	d 14	1
7	90.001.25.016(3)	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	2
8	90.100.55.004(3)	0	MATICE / NUT / MUTTER	MATICE - M6	2
9	91.071.004(4)	0	VYVODKA / BUSHING / TÜLLE	VYVODKA	1
10	91.072.007(4)	0	MATICE / NUT / MUTTER	MATICE	1
11	94.001.002	0	HLAVICE / HEAD / KOPF		1

1. PRIDAN NADSTAVEC 30.1003-004. 403/ZM393 14.11.2008 SLEZACKOVA

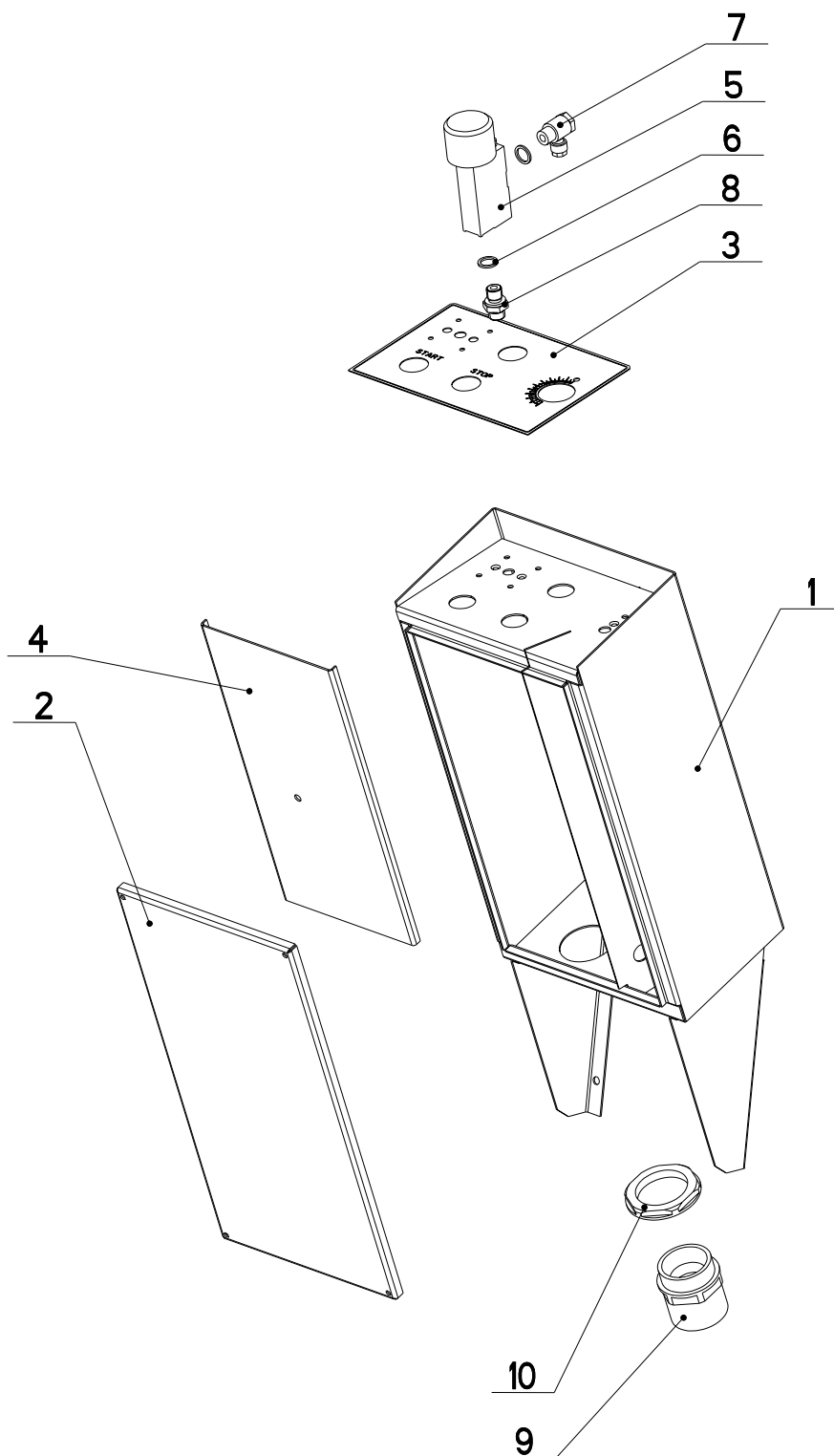
2. ZM. POLOHY OVLADACÍHO PANELU 201.0513-000. 048/ZM069 9.3.2009 SLEZACKOVA

3. ZRUS. 2xSROUB M5x6 (90.001.25.006) A NAHR. 2xSROUB M6x12 (90.001.25.016), PRID. 2xMATICE M6 (90.100.55.004).
115/ZM135 10.6.2009 SLEZACKOVA

4. ZRUS. VYVODKA PG36 (91.071.005) A NAHR. VYVODKOU PG29 (91.071.004), ZRUS. MATICE PG36 (91.072.008)
A NAHR. MATICE PG29 (91.072.007). 133/ZM163 20.7.2009 SLEZACKOVA

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

7.23. Ovládací panel / Bedienpult / Control panel

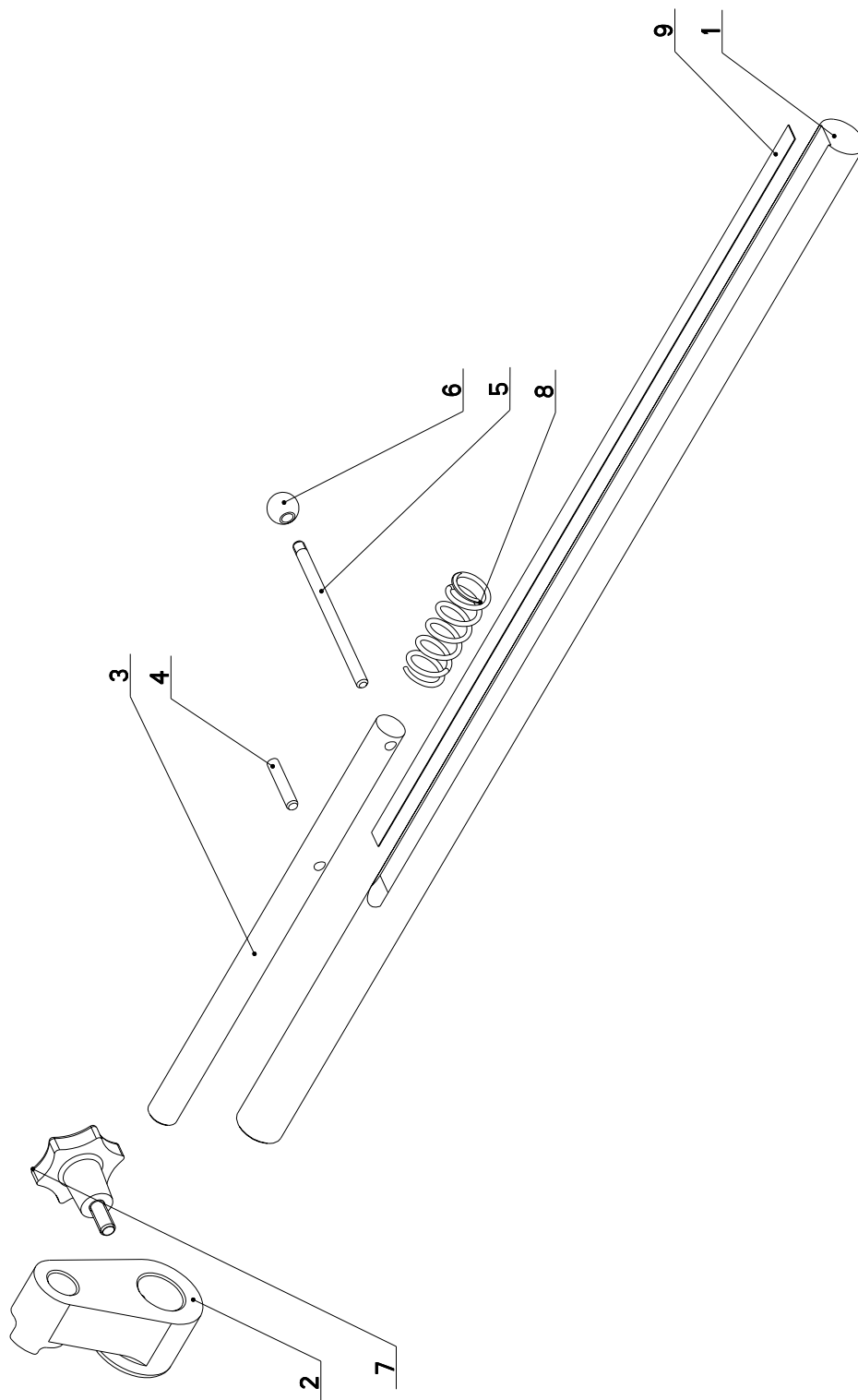


NAZEV SESTAVY OVLADACÍ PANEL	CISLO SESTAVY 201.0513-000	STROJ G.DG
	Konstruoval:	
	Datum: 20. 01.2010	
	Meritko: 1:5	

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

Císlo Sestavy 201.0513-000		Ver. 0	Název sestavy OVLADACÍ PANEL/CONTROL PANEL/BEDIENPULT		
Poz.	Objednací číslo	Ver.	Název položky	Rožmer	Ks
1	30.0513-001	0	PANEL ELEKTRO / ELECTRO PANEL / PANEL		1
2	30.0513-003	0	VÍKO / COVER / DECKEL	P11.5x214	1
3	31.0513-004	0	PANEL ELEKTRO / ELECTRO PANEL / PANEL	P0.8x135	1
4	30.0513-002	0	DESKA ELEKTRO / ELECTRIC BOARD / PLATINE	P11.5-166	1
5	92.152.001	0	VENTIL SKRTICI / CHOKE VALVE / DROSSELVENTIL	VS01-04/R 2.5-0	1
6	96.082.002	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	2
7	93.009.002	0	SROUBENÍ UHLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG		1
8	92.002.003	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
9	91.071.005	0	PRŮCHODKA / LEADTHROUGH / DURCHFÜHRUNG		1
10	91.072.008	0	MATICE / NUT / MUTTER		1

7.25. Ovládací panel / Bedienpult / Control panel

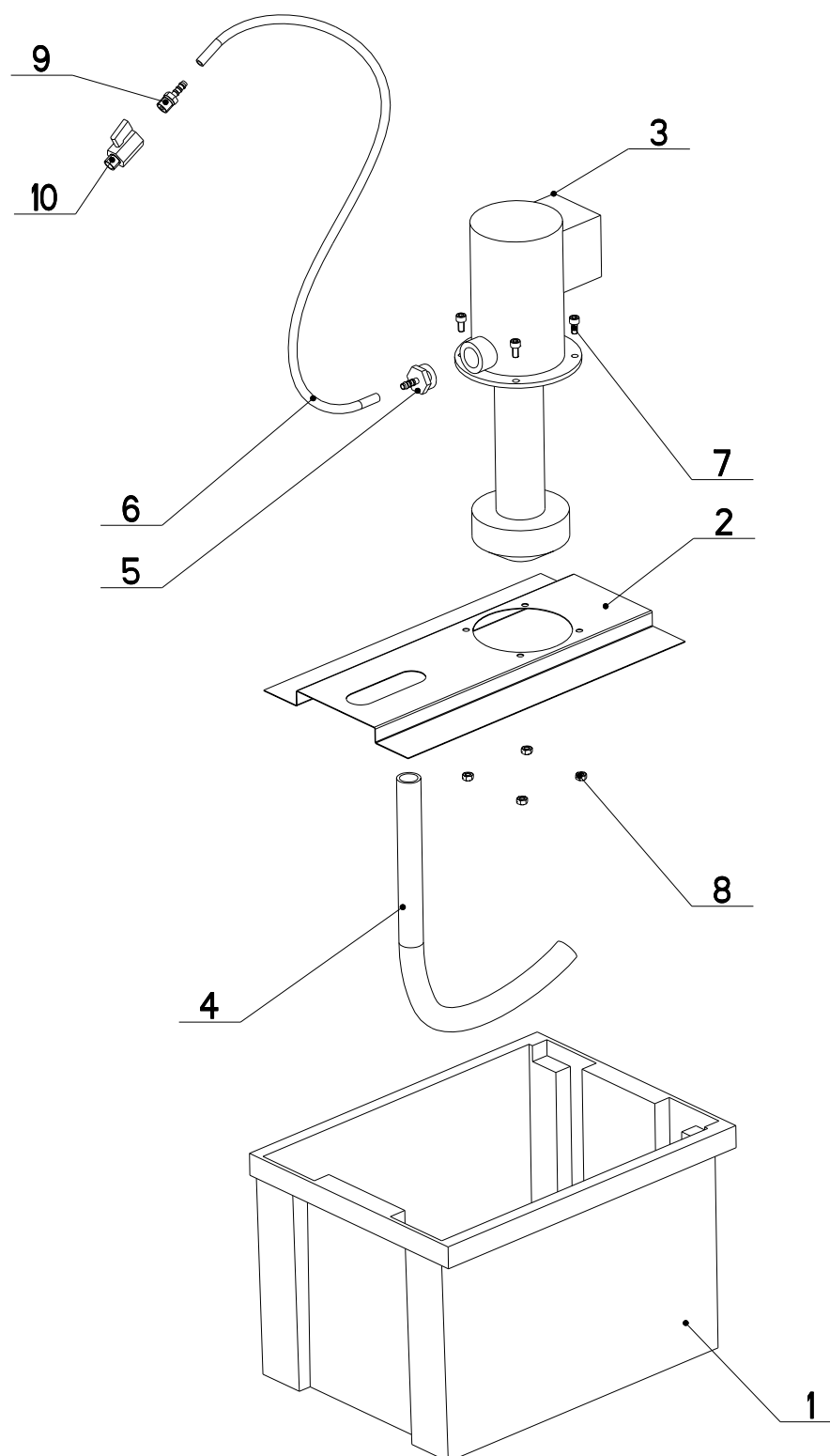


NAZEV SESTAVY DORAZ	CÍSLO SESTAVY 201.0703-100	STROJ STG220
Konstruoval:		
Datum: 13. 01. 2010		
Meritko: 1:2		

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

Číslo Sestavy 201.0703-100		Ver. 0	Název sestavy DORAZ/STOP PIECE/ANSCHLAG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.0703-010	0	TYC / POLE / STANGE	d25	1
2	30.0703-013	0	TELESO DORAZU / STOP BODY / ANSCHLAGKÖRPER	ODLITEK	1
3	30.1003-101	1	TYC / POLE / STANGE	d 16	1
4	90.300.02.006	0	KOLÍK VALCOVÝ KALENÝ / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLÍK 6X32	1
5	30.0703-016	1	PAKA / LEVER / HEBEL	d6	1
6	94.001.001	0	RUKOJET / HANDLE / GRIFF	M6 PRŮMĚR 16	1
7	94.006.001	0	SROUB / BOLT / SCHRAUBE	M8x17	1
8	31.0304-013	0	PRŮŽINA / SPRING / FEDER	2.5x21.5x60x7	1
9	99.120.001	0	PRÁVÍTKO / RULER / SKALENBANDMAß	0.5m	1

7.27. Chlazení / Kühlung / Cooling



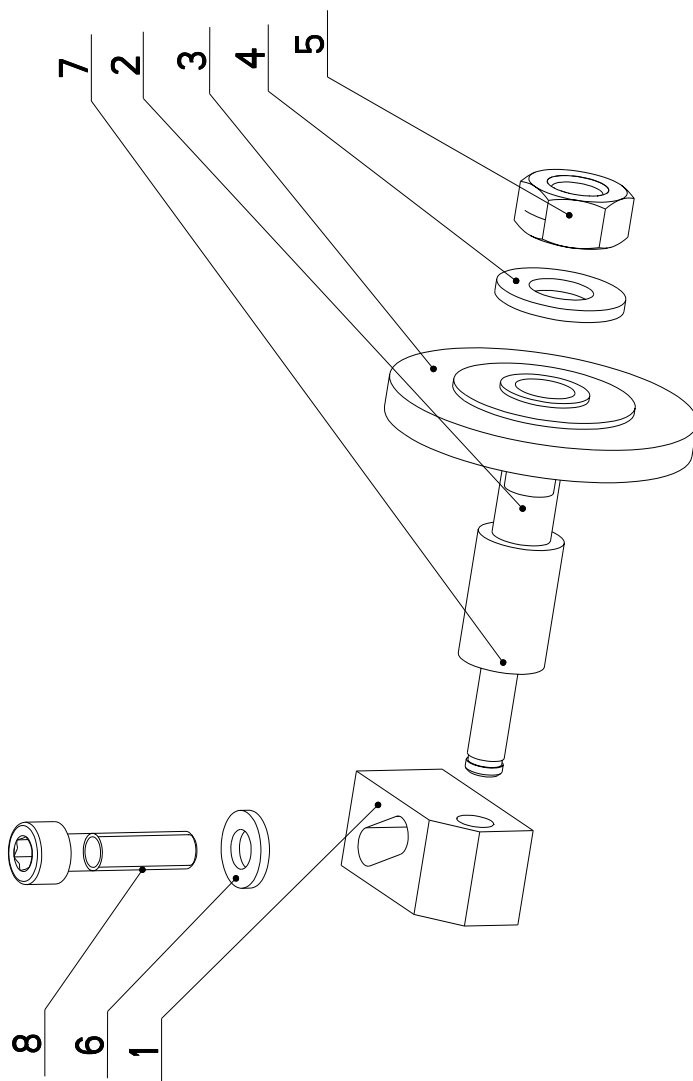
NAZEV SESTAVY CHLAZENÍ	CISLO SESTAVY 201.0506-000	STROJ STG-120
	Konstruoval: ZAJIC	
	Datum: 20. 01.2010	
	Meritko: 17:100	

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

Císlo Sestavy 201.0506-000		Ver. 0	Název sestavy CHLAZENÍ / COOLING / KÜHLUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	94.403.001	0	NADŘZ / CONTAINER / BEHÄLTER	POLYPACK	1
2	30.0506-001	3	VÍKO / COVER / DECKEL	P 0.8 - 249	1
3	91.020.006	0	CERPADLO CHLAZENÍ / COOLING PUMP / KÜHLMITTEL PUMPE	3COA 2-22	1
4	42.020.003	0	HADICE / HOSE / SCHLAUCH	19x3	1
5	94.202.005	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	3/4"-6	1
6	42.020.001	0	HADICE / HOSE / SCHLAUCH	6x1.5	1
7	90.001.25-016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x12	4
8	90.100.55-004	0	MATICE / NUT / MUTTER	MATICE _ M6	4
9	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/RI/4"	1
10	99.260.001	0	VENTIL / VALVE / VENTIL	VENTIL KULOVÝ	1

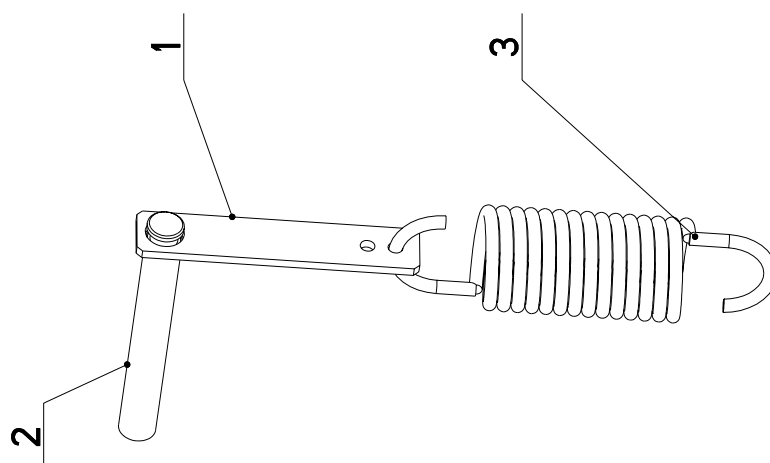
7.29. Kartáč / Bürste / Brush

Císlo Sestavy 201.0704-100		Ver. 0	Název sestavy KARTAC/BRUSH/BÜRSTE		Rozměr	Ks
Poz.	Objednávací číslo	Ver.	Název položky			
1	30.0104-022	0	DRŽÁK / HOLDER / HALTER		HR 16x16	1
2	30.0704-029	0	HRÍDEL / SHAFT / WELLE		d 14	1
3	31.0704-031	0	KARTAC / BRUSH / BÜRSTE			1
4	90.150.50.006	0	PODLOŽKA DIN125 / WASHER / UNTERLEGSCHLEIBE		PODLOŽKA 10,5	1
5	90.100.55.006	0	MATICE / NUT / MUTTER		MATICE _ M10	1
6	90.150.50.004	0	PODLOŽKA / WASHER / UNTERLEGSCHLEIBE		PODLOŽKA 6,4	1
7	95.800.001	0	KROUZEK POJIST. VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN		POJISTNÝ KROUŽEK 6	1
8	90.001.25.019	0	SROUB IMBUS ČERNÝ / ALLEN HEAD BOLT / IMBUSSCHRAUBE		M6x25	1



7.30. Pružina / Feder / Spring

Cislo Sestavy 201.0514-750		Ver. 0	Nazev sestavy PRUZINA / SPRING / FEDER	
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer
1	30.0502-720	2	TAHLO / GUY ROD / ZUGSTANGE	TYC 30x5
2	30.0504-050	1	TYC / POLE / STANGE	TYC 20
3	31.0502-719	1	PRUZINA / SPRING / FEDER	7.1x56.5x194.7x14.5



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