

Serie **Construction**



Construction 820.450 DGS

Operating instructions

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

Seriové číslo / Serien Nummer / Serial Number _____

Service and information

Your BOMAR dealer:

Direct BOMAR contact:

BOMAR spol. s r.o.

Těžební 1236/1
62700 Brno
Czech Republic, EU

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

We are available:

Mondays to Fridays

7⁰⁰ – 16⁰⁰

Version:

1.09 /Jun. 2010
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: **Construction (Transverse) 820.450 DGS**
Serial number:
Manufacturer: **BOMAR, spol. s r.o., Těžební 1236/1, 627 00 Brno**

Product data

Determination: for cross dividing and cutting of rolled and towed bars and profiles made of steel, stainless steel, non-ferrous metals and plastics.

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

Hydraulic YES ☒ NO ☐ Control system YES ☒ NO ☐

Technical data: Cutting rate 20–90 m.min⁻¹, cutting angle from - 60° to 60°
Total dimensions in mm (l×w×h) 3485x1590x2480
Supply voltage 3×400 V, 50Hz, TN-C-S
Total power requirement 6,8 kVA, weight 2800 kg

The applied decrees of governments: **No. 176/2008 Coll.** (Directive 2006/42/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+A1:2009, ČSN EN ISO 13857:2008, ČSN EN 982+A1:2008, ČSN EN 61000-6-2 ed. 2:2007, ČSN EN 61000-6-4:2002 ed.2:2007, ČSN EN 60204-1 ed.2:2007

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

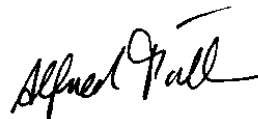
The conformity judging was performed according to §12, par. 3, let. a), of the Law no. 22/1997 Coll. as amended

2) 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. 4002

The inspection certificate no. 01.125.728/09/07/02/0 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 of importer)
2) The authorized or accredited body co-operating on the conformity judging

Content

1. SAFETY NOTES	9
1.1. Machine determination.....	11
1.2. Protective suit and personal safety	11
1.3. Safety notes for machine operator	12
1.4. Safety notes for the servicing and repairs	12
1.5. Safety notes for the servicing and repairs on hydraulic unit.....	13
1.6. Safety machine accessories	13
1.6.1. Total Stop.....	13
1.6.2. Saw arm avers	13
1.6.3. Saw band stretching and rupture inspection	14
1.6.4. Band saw cover	14
1.7. Safety notes for the cooling.....	14
1.7.1. Instructions for first help	14
1.8. Umístění štítku stroje / Maschinenschild position / Position of machine label.....	15
1.9. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols.....	16
2. MACHINE DOCUMENTATION	17
2.1. Technická data / Technische Daten / Technical data.....	19
2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram	20
2.3. Popis / Beschreibung / Description.....	21
2.4. Transportation and stocking.....	22
2.4.1. Conditions for transportation and stocking	22
2.4.2. Transport and stocking preparations.....	22
2.4.3. Transport and stocking	22
2.4.4. Transportní schéma / Transport schema / Transport scheme.....	23
2.5. Activation.....	24
2.5.1. Machine working conditions	24
2.6. Band saw unpacking and assembling	24
2.6.1. Machine installing and levelling	25
2.6.2. Machine disposal after lifetime.....	25
2.6.3. First run of the power pack	25
2.6.4. Filling the reservoir with hydraulic oil	26
2.6.5. Kotevní plan / Verankerungsplan / Grounding plan.....	27
2.7. Electrical connection	28
2.7.1. Check the direction of the saw band.....	28
2.8. Filling of the cooling system	28
2.9. Check machine function.....	29
2.10. Saw band	29
2.10.1. Saw band size	29
2.10.2. Selection of the saw band tooth system.....	29
2.10.3. Saw band running-in	30
3. MACHINE CONTROL.....	33
3.1. Control panel.....	35
3.1.1. Control panel – description	37
3.2. Machine control	38
3.2.1. Set mode.....	38
3.2.2. Manuální režim	39
3.2.3. Semi – automatic mode.....	40
3.2.4. Break-in of the semi-automatic cycle	40
3.3. Service menu.....	41
3.3.1. Entrance to service menu	41
3.3.2. Band release	41
3.3.3. Vice parameters.....	41
3.3.4. Cooling parameters.....	42
3.3.5. Cooling type	42
3.3.6. Cooling mode.....	43
3.3.7. Cutting parameters	43
3.3.8. Deblock rotation	44
3.3.9. Language	45
3.3.10. Service menu closing.....	45
3.4. Band saw adjusting.....	45
3.4.1. Setting of angular cut.....	45
3.4.2. Optimal adjusting of the guide cubes span.....	45
3.4.3. Cutting speed adjustment.....	45
3.4.4. Setting of the top clamping.....	46
3.4.5. Setting of the clamping pressure of the vice	47
3.4.6. Setting the cutting pressure regulation.....	47
3.5. Brush adjustment	48
3.6. Material insertion	48
3.6.1. Handling agent selection	48
3.6.2. Insertion.....	49
3.7. Bundle material cutting.....	49

4. MACHINE SERVICE51

4.1. Saw band dismantling.....	53
4.2. Saw band installation.....	54
4.3. Saw band stretching and inspection.....	56
4.3.1. Saw band stretching.....	56
4.3.2. Saw band inspection.....	56
4.4. Guiding cubes adjustment.....	57
4.5. Hard metal guides adjustment.....	57
4.6. Saw band run adjustment on the stretching wheel.....	58
4.6.1. Saw band inspection.....	58
4.6.2. Saw band run setting.....	59
4.7. Adjusting of the limit switch of the saw band stretching.....	59
4.8. Saw frame lower position stop adjustment.....	59
4.9. Limit switch adjustment of the saw frame lower position.....	59
4.9.1. Setting inspection.....	59
4.9.2. Limit switch petting.....	60
4.10. Adjustment of the cutting pressure regulation.....	60
4.10.1. Setting on the right guiding cube.....	60
4.10.2. Setting on the left guiding cube.....	61
4.11. Pressure switches petting.....	61
4.12. Adjustment of a throttle valve.....	63
4.13. Cooling agents and chips disposal.....	63
4.13.1. Cooling liquid preparation.....	63
4.13.2. Coolant device inspection.....	64
4.13.3. Chips disposal.....	64
4.14. Hydraulic, Greases and oils.....	64
4.14.1. Gearbox oils.....	64
4.14.2. Lubricant greases.....	65
4.14.3. Lubrication.....	66
4.14.4. Hydraulic oils.....	66
4.14.5. Hydraulic unit service.....	67
4.14.6. Hydraulic oil level check.....	67
4.15. Machine cleaning.....	68
4.16. Worn pieces replacement.....	68
4.16.1. Pushing bearing replacement.....	68
4.17. Saw band guiding pulleys replacement.....	70
4.17.1. Hard metal guides replacement.....	72
4.18. Round brush replacement.....	73

5. ZÁVADY / TROUBLESHOOTING75

5.1. Mechanical problems.....	77
5.2. Electric problems.....	79
5.3. Hydraulic problems.....	80

6. SCHÉMATA / SCHEMAS / SCHEMATICS81

6.1. Elektrické schéma / Elektroschema / Wiring diagrams – 3×400 V, TN-C-S.....	82
6.2. Hydraulické schéma / Hydraulikschema / Hydraulic diagram.....	96

7. VÝKRESY SESTAV PRO OBJEDNÁNÍ NÁHRADNÍCH DÍLŮ / ZEICHNUNGEN FÜR BESTELLUNG DER ERSATZTEILE / DRAWING ASSEMBLIES FOR SPARE PARTS ORDER99

7.1. Construction 820.450 DGS.....	100
7.2. Kusovník / Stückliste / Piece list – Construction 820.450 DGS.....	101
7.3. Rameno / Sägerahmen / Saw arm - 1.....	102
7.4. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm – 1.....	103
7.5. Rameno / Sägerahmen / Saw arm - 2.....	104
7.6. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm – 2.....	105
7.7. Válec svěráku / Schraubstockzylinder / Vice Cylinder.....	106
7.8. Kusovník / Stückliste / Piece list – Válec svěráku / Schraubstockzylinder / Vice Cylinder.....	107
7.9. Válec zvedací / Hebezyylinder / Lifting Cylinder.....	108
7.10. Kusovník / Stückliste / Piece list – Válec zvedací / Hebezyylinder / Lifting Cylinder.....	109
7.11. Vodicí kostka / Führungsklotz / Guiding cube - 1.....	110
7.12. Kusovník / Stückliste / Piece list – Vodicí kostka / Führungsklotz / Guiding cube - 1.....	111
7.13. Vodicí kostka / Führungsklotz / Guiding cube - 2.....	112
7.14. Kusovník / Stückliste / Piece list – Vodicí kostka / Führungsklotz / Guiding cube – 2.....	113
7.15. Podstavec / Untersatz / Base.....	114
7.16. Kusovník / Stückliste / Piece list – Podstavec / Untersatz / Base.....	115
7.17. Snímač / Senzor / Sensor.....	116
7.18. Kusovník / Stückliste / Piece list – Snímač / Senzor / Sensor.....	117
7.19. Brzda / Bremse / Brake.....	118
7.20. Kusovník / Stückliste / Piece list – Brzda / Bremse / Brake.....	119
7.21. Vedení pásu / Sägebandführung / Belt guide.....	120
7.22. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide.....	121
7.23. Napínání / Spannung / Tensioning.....	122
7.24. Kusovník / Stückliste / Piece list – Napínání / Spannung / Tensioning.....	123
7.25. Kartáč / Bürste / Brush.....	124
7.26. Kusovník / Stückliste / Piece list – Kartáč / Bürste / Brush.....	125
7.27. Válec natáčení / Drehzylinder / Turning cylinder.....	126
7.28. Kusovník / Stückliste / Piece list – Válec natáčení / Drehzylinder / Turning cylinder.....	127
7.29. Svěrák / Schraubstock / Vice.....	128

7.30. Kusovník / Stückliste / Piece list – Svěrák / Schraubstock / Vice.....	129
7.31. Konzola otočná / Drehkonsole / Turnable konsole – 1	130
7.32. Kusovník / Stückliste / Piece list – Konzola otočná / Drehkonsole / Turnable konsole – 1	131
7.33. Konzola otočná / Drehkonsole / Turnable konsole – 2	132
7.34. Kusovník / Stückliste / Piece list – Konzola otočná / Drehkonsole / Turnable konsole – 2	133
7.35. Sloup / Saule / Pole - 1	134
7.36. Kusovník / Stückliste / Piece list – Sloup / Saule / Pole – 1	135
7.37. Sloup / Saule / Pole - 2	136
7.38. Kusovník / Stückliste / Piece list – Sloup / Saule / Pole – 2	137
7.39. Pohon / Antrieb / Drive	138
7.40. Kusovník / Stückliste / Piece list – Pohon / Antrieb / Drive –	139
7.41. Ovládací panel / Bedienpult / Control panel	140
7.42. Kusovník / Stückliste / Piece list – Ovládací panel / Bedienpult / Control panel –	141
7.43. Regulace přítlaku / Schnittdruckregulation / Pressure into cut regulation	142
7.44. Vedení / Backenführung / Guide.....	143
7.45. Ložisko / Lager / Bearing.....	144
7.46. Válec pomocný / Hilfszylinder / Auxiliary cylinder	145
7.47. Válec napínací / Spannzylinder / Tensioning cylinder.....	146
7.48. Upínací horní / Spannvorrichtung oben / Top clam	147

1. **Safety notes**

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

The operating instructions include relevant information. The operator must familiarise himself with the install and operation, safety notes and machine servicing, because reliability and service life must be reached. The operating instructions must avoid risks, which are linked to work on the machine. Before transporting and using of the machine, please read the instructions thoroughly!

Attention!

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

1.1. Machine determination

The band saw **Construction 820.450 DGS** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **with cutting angle** from -60° 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 notes for the servicing and repairs on hydraulic unit

Compliance with the the principles of cleanliness is basic requirement for trouble-free operation of hydraulic equipment. Hydraulic components are products made with high accuracy, and any contamination leads to a reduction lifetime or even malfunction. The consequences are very difficult to remove and expensive.

Always use clean tools. Parts and fasteners, which are part of a hydraulic circuit, never put away the dirty surface. The best cleaning agent is crepe paper, because the fibers of the cleaning cloths can also cause malfunction.

Protective cap from the threaded chamber remove just before the assembly of the unit.

Hoses and pipes before mounting flush with gasoline or other cleaning agent and blow compressed air.

All fittings must be properly tightened. However, do not raw power.

1.6. Safety 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.

1.6.1. 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.

1.6.2. Saw arm averts

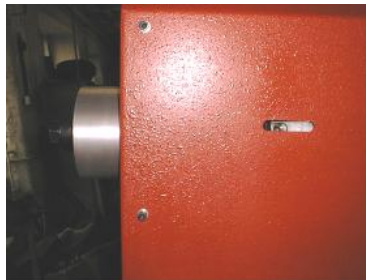
If the cover is opened during operation, the limit switch is opened and the band saw is stopped. The band saw is not possible to start in set mode



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

1.6.3. 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.

1.6.4. Band saw cover

This protective cover envelops the saw band in the area from guiding cube to the arm



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

1.7. Safety notes for the cooling

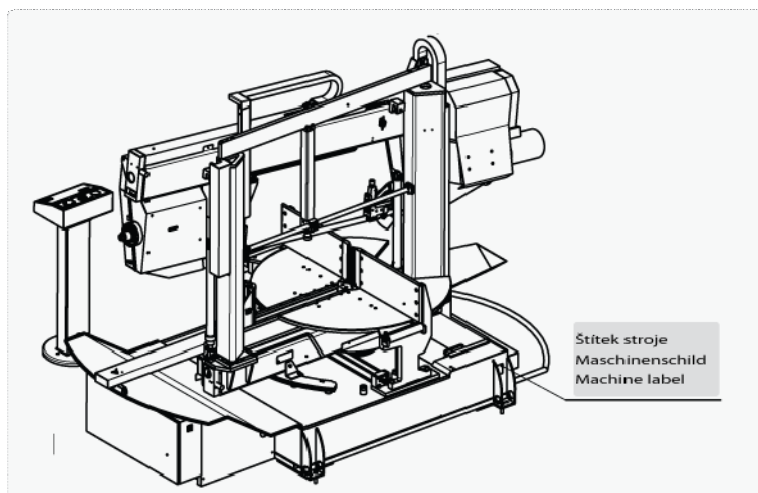
Attention!

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

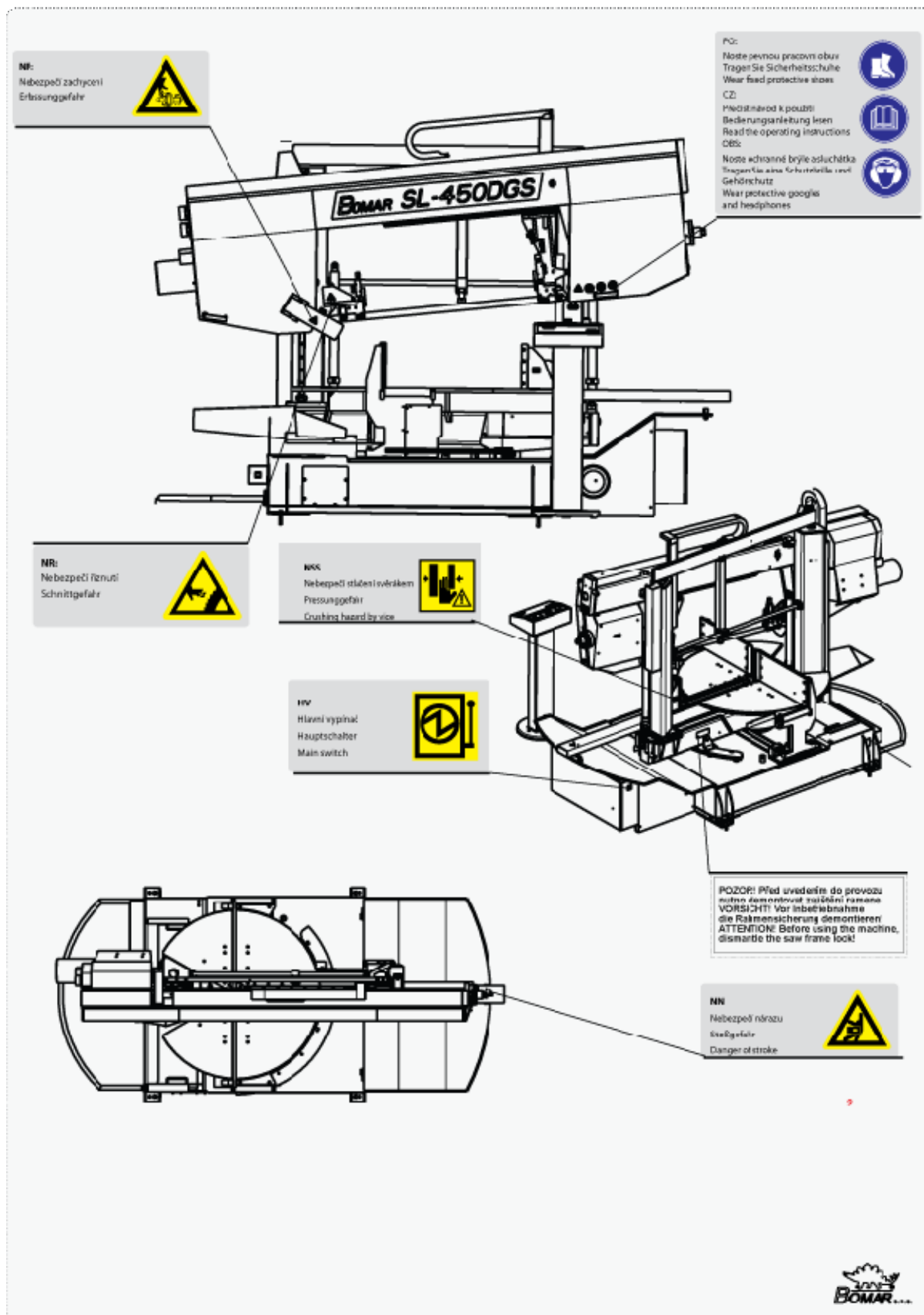
1.7.1. Instructions for first help

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.

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

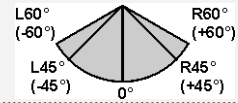


1.9. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols

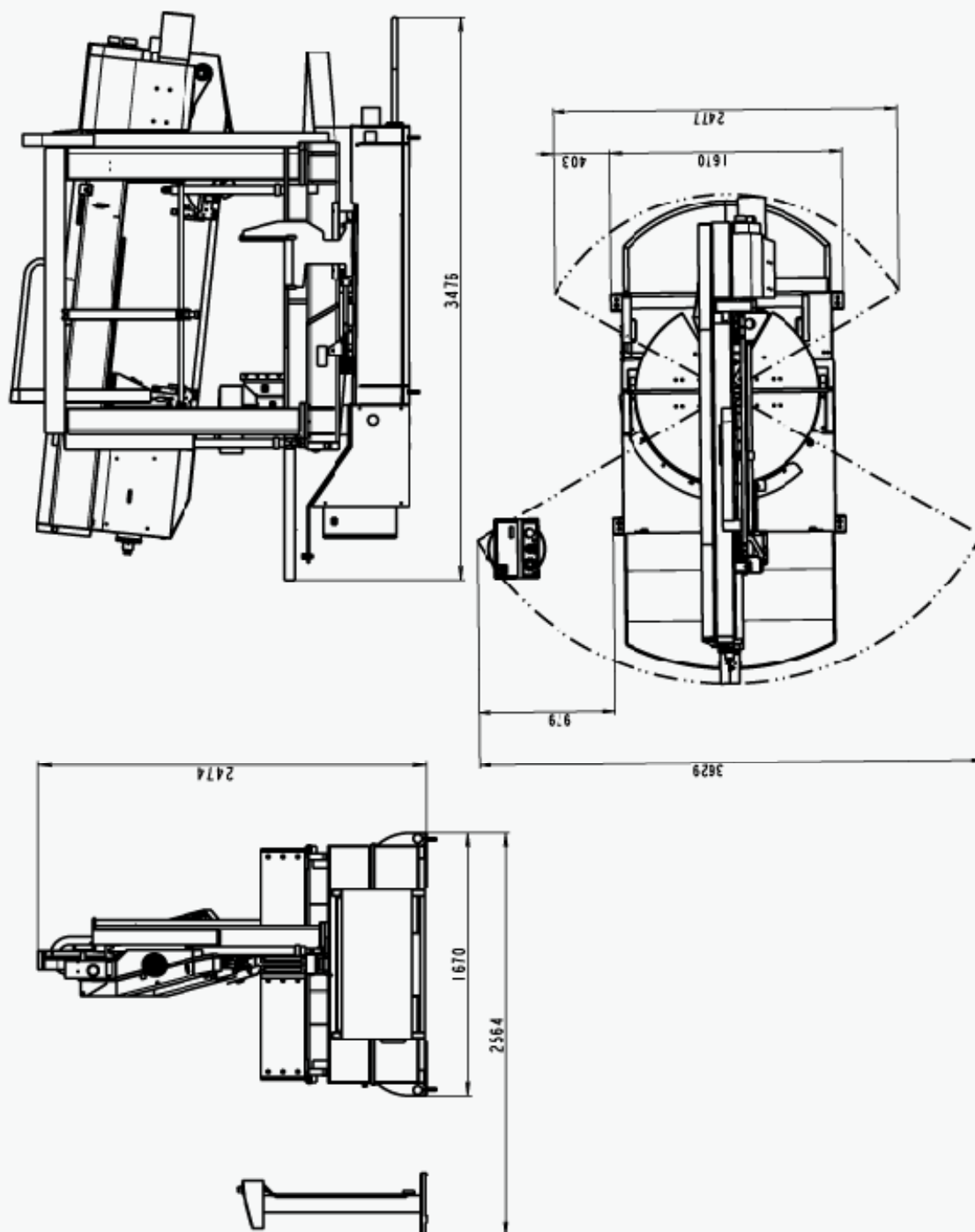


2. **Machine documentation**

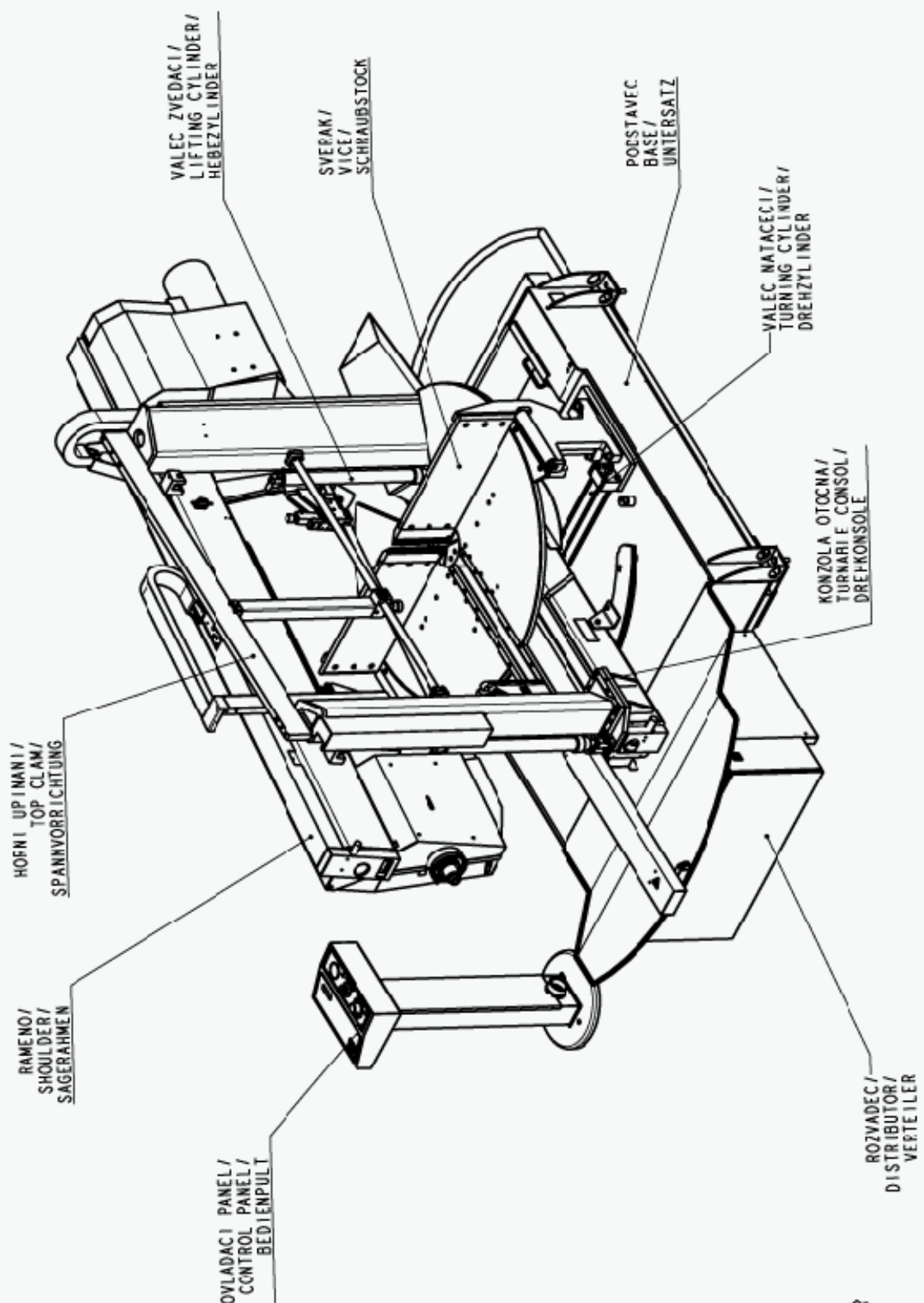
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:	
• Hmotnost / Gewicht / Weight	2800 kg
Rozměry stroje / Maschinengröße / Machine size :	
• Délka / Länge / Length	3485 mm
• Šířka / Breite / Width	1590 mm
• Výška / Höhe / Height	2480 mm
Elektrické vybavení / Elektrische Ausrüstung / Electrical equipment:	
• Napájení / Versorgungsspannung / Supply voltage	~3 x 400 V , 50Hz, TN-C-S
• Příkon / Gesamtschlosswert / Total Input	6,8 kW
• Max.jištění / Max. Vorschaltssicherung / Max. Fuse	16 A
• Krytí / Schutzart / Protection	IP 54
Akustický tlak / Schalldruckpegel / Acoustic pressure:	
• Construction 820.450 DGS	$L_{Aeq} = 76,3$ dB
Pohon / Atrieb / Drive:	
• Typ / Typ / Type	1LA9107-4LA10
• Napájení / Versorgungsspannung / Supply voltage	~3 x 400V, 50Hz
• Výkon / Leistung / Output	4 kW
• Jmenovité otáčky / Motornendrehzahl / Nominal speed	1400 min ⁻¹
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment:	
• Výkon / Leistung / Output	1,1 kW
• Objem hydraulického oleje/ Kühlmittelvolumen/ Hydraulic oil capacity	25 dm ³
Chladicí zařízení / Kühlmiteleinrichtung / Cooling equipment:	
• Výkon / Leistung / Output	0,05 kW
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	75 dm ³
Rozměr pásu / Sägebanddimension / Band size:	
6470×41×1,3 mm	
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:	
20–90 m/min.	
Řezné rozsahy / Schnittbereiche / Cutting size:	
	
0°	Ø500 mm 820×500 mm 820×500 mm 500×500 mm
45° R	Ø500 mm 560×500 mm 560×500 mm 500×500 mm
45° L	Ø500 mm 560×500 mm 560×500 mm 500×500 mm
60° R	Ø360 mm 360×500 mm 360×500 mm 360×360 mm
60° L	Ø360 mm 360×500 mm 360×500 mm 360×360 mm
Level of acoustic pressure:	
Equivalent level of acoustic pressure A (noise) at operator position are $L_{Aeq}=76,3$ dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure.	

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram



2.3. Popis / Beschreibung / Description



2.4. Transportation and stocking

2.4.1. Conditions for transportation and stocking

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

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

2.4.2. Transport and stocking preparations

Close the vice and thoroughly oil all blank surfaces.

Lower the saw frame to the lowest position.

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

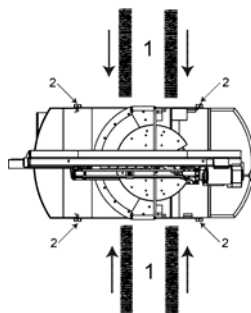
Fasten all loose parts securely to the machine.

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

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

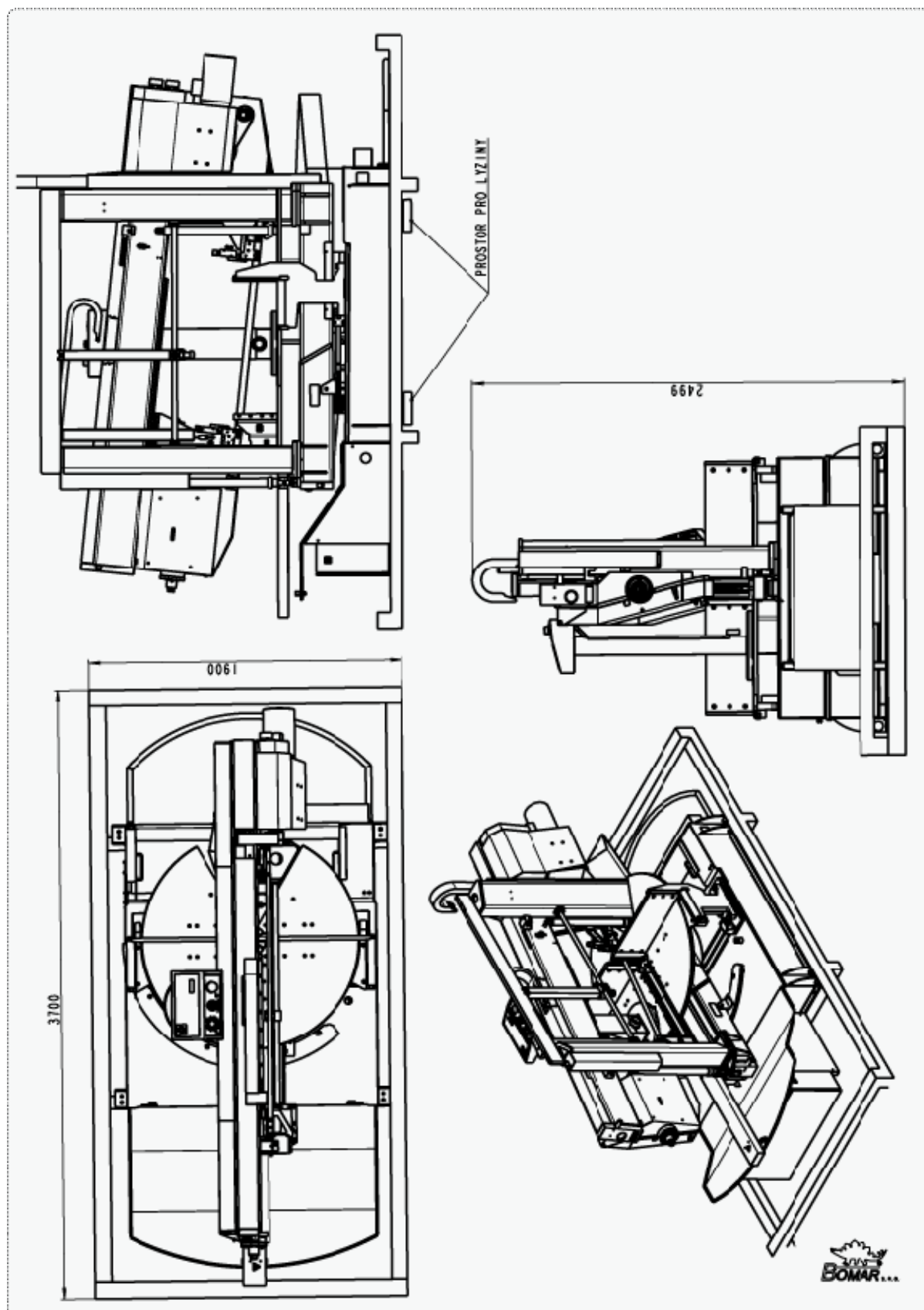
2.4.3. Transport and stocking

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



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

2.4.4. Transportní schéma /
Transport schema /
Transport scheme



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:

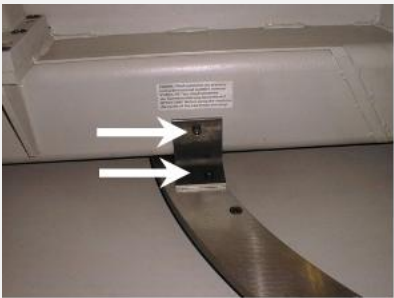
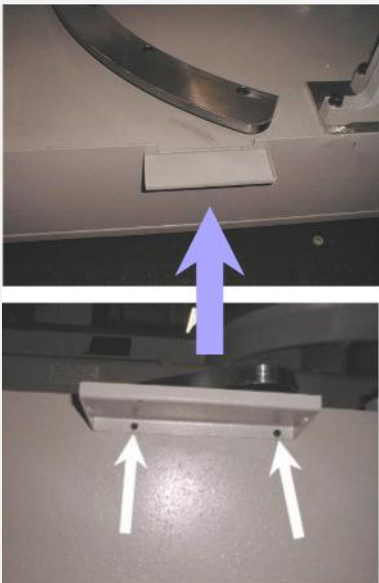
- At temperature air from **5°C to 40°C**, the temperature average during 24 hours must **not exceed over 35°C**.
- At relative dampness of the air in the extend from 30% to 95% (not concentrate)
- Altitude lower than 1000 metres.
- Do not expose the machine to the radiation (for example microwave radiation, 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.

Picture	Sequence
	Saw frame blocking Dismantle the saw frame blocking from the machine before band saw operation. Poznámka: Store the holder and screws! Install the saw frame blocking on the machine for band saw displacement! You can avoid the saw frame damage.
	Drainage metal plate installing Screw the drainage metal plates on the machine (on both sides). Poznámka: Dismantle the drainage metal plates from the machine for band saw displacement! You can avoid their damage.

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 – **Construction 820.450 DGS – 2800 kg**

+ weight of accessories

+ maximum weight of material

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

2.6.2. Machine disposal after lifetime

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

2.6.3. First run of the power pack

Before the first run check:

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

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

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

2.6.4. Filling the reservoir with hydraulic oil

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

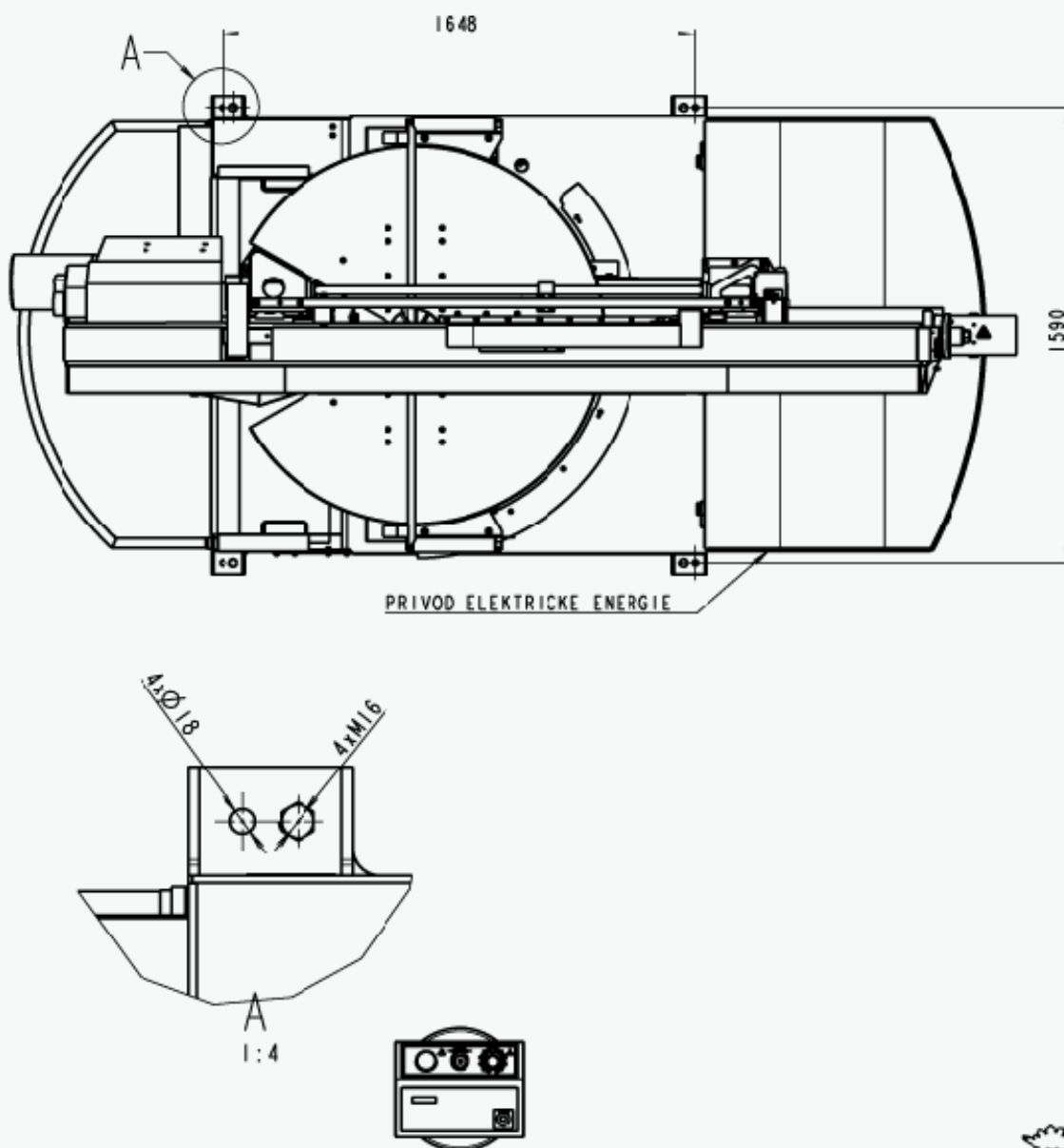
Power packs have to be filled up with clean, pre-filtered oil! The purity of the hydraulic fluid must correspond to the class 10 NAS 1638 (reachable with filter $\beta = 75$)!

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

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

Oil type	Kinematic viscosity ν in mm^2/s in relationship to the fluid temperatur					Freezing point
	0°C	20°C	40°C	60°C	80°C	°C
OH-HM 32	220	100	32	15	7	-40
OH-HM 46	400	170	46	18	11	-30
OH-HM 68	700	170	68	26	14	-28
OH-HV 32	180	67	32	17	11	-40
OH-HV 46	350	110	46	25	14	-36

2.6.5. Kotevní plan / Verankerungsplan / Grounding plan



Kotvící materiál / Verankerungsmaterial / Grouding material

- 4x Hmoždina (chemická) / Dübel (chemisch) / Plug(chemical) – $\varnothing 16$ mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 140 mm
- Šrouby / Schraube / Screws – 4xM14

- Šrouby podložit deskami o min. rozměrech P10x100-100
- Die Schrauben mit Platten mit Minimaldimensionen P10x100-100 unterlegen
- Screw must be bottomed with plates (min. dimensions P10x100-100)

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: 6,8 kW / 16 A

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

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

Note:

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

Note:

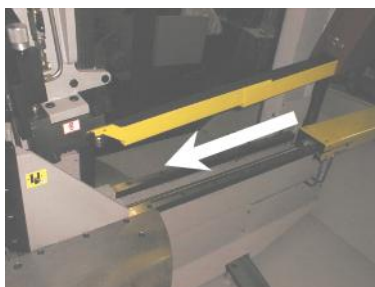
The socket with the fork can be used only at the machines with the rated current less than 16 A and total input less than 3 kW.

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

Attention!

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

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

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

6470×41×1,3 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

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

BOMAR recommended Variable tooth system for band saw.

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

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

Footnotes:

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

Examples of the tooth system marking:

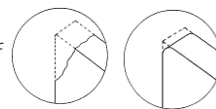
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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

2.10.3. Saw band running-in

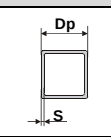
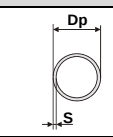
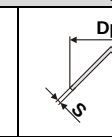
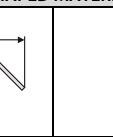
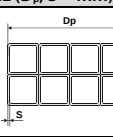
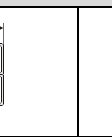
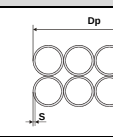
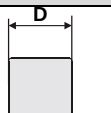
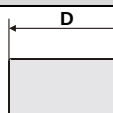
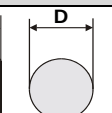
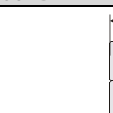
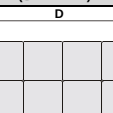
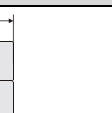
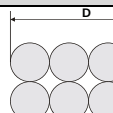
Running-in: Cut the material with the frame lowering reduced to 50% only. When vibrations occur increase or decrease the band speed.

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



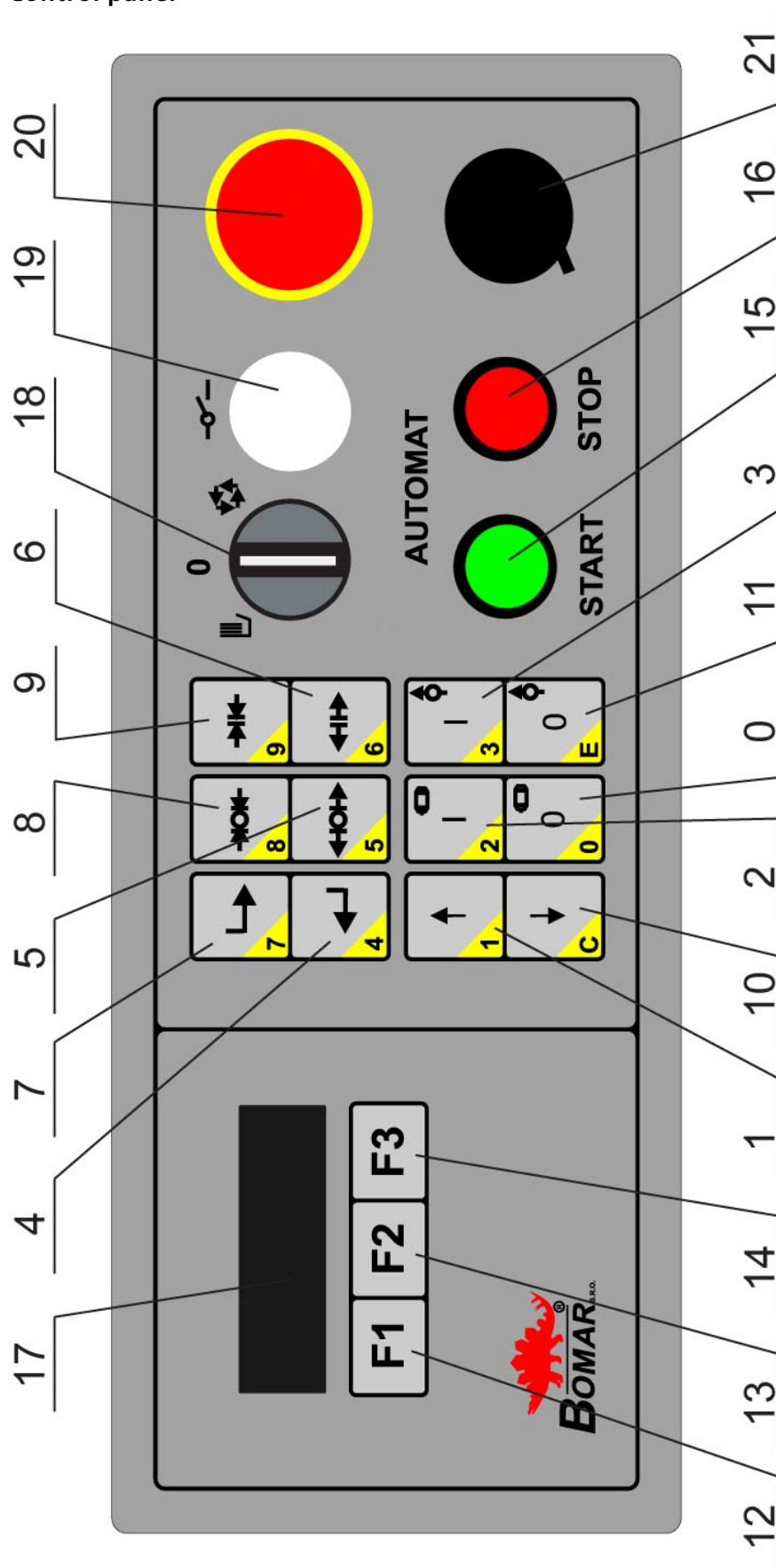
Note: Run regrinding saw bands too.

Tables for teeth selection

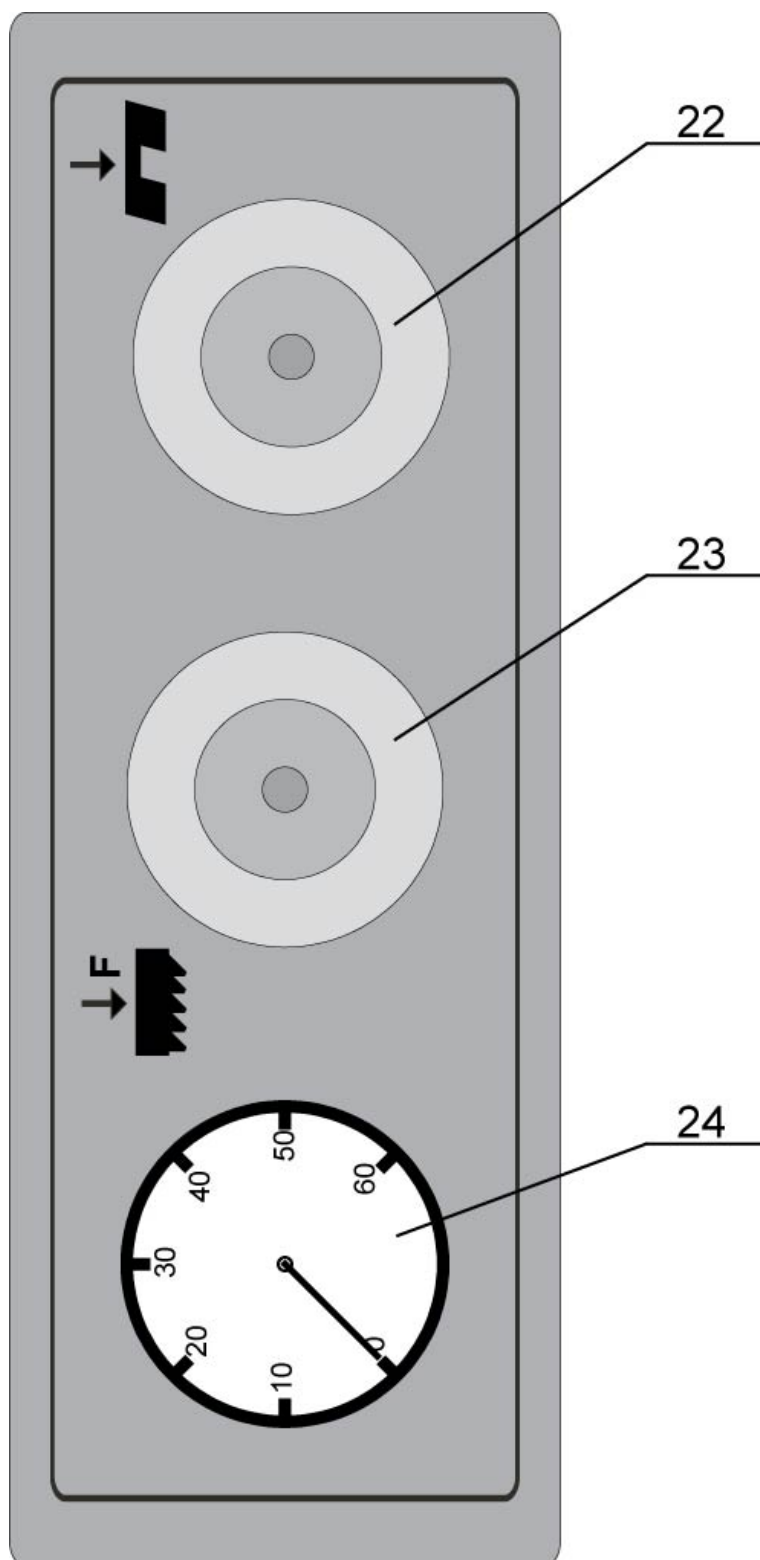
SHAPED MATERIAL ($D_p, S = \text{mm}$)						
						
Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S“ equates to 2xS). In table, there are tooth systems constant and variable.						
Size of the wall S [mm]	Tooth system (Z_pZ) 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_pZ) Outer diameter of the profile D_p [mm]					
	150	200	300	500	750	1000
2	10-14 S	10-14 S	8-12 S	6-10 S	5-8 S	5-8 S
3	8-12 S	8-12 S	6-10 S	5-8 S	4-6 K	4-6 K
4	6-10 S	6-10 S	5-8 S	4-6 K	4-6 K	4-6 K
5	6-10 S	5-8 S	4-6 K	4-6 K	4-6 K	3-4 K
6	5-8 S	5-8 S	4-6 K	4-6 K	3-4 K	3-4 K
8	5-8 S	4-6 K	4-6 K	3-4 K	3-4 K	3-4 K
10	4-6 K	4-6 K	4-6 K	3-4 K	3-4 K	2-3 K
12	4-6 K	4-6 K	3-4 K	3-4 K	2-3 K	2-3 K
15	4-6 K	3-4 K	3-4 K	2-3 K	2-3 K	2-3 K
20	3-4 K	3-4 K	2-3 K	2-3 K	2-3 K	2-3 K
30	3-4 K	2-3 K	2-3 K	2-3 K	1,4-2 K	1,4-2 K
50	2-3 K	2-3 K	2-3 K	1,4-2 K	1,4-2 K	1,4-2 K
75	-	2-3 K	1,4-2 K	1,4-2 K	1,4-2 K	0,75-1,25 K
100	-	-	1,4-2 K	0,75-1,25 K	0,75-1,25 K	0,75-1,25 K
150	-	-	-	0,75-1,25 K	0,75-1,25 K	0,75-1,25 K
200	-	-	-	0,75-1,25 K	0,75-1,25 K	0,75-1,25 K
SOLID MATERIAL ($D = \text{mm}$)						
						
Constant tooth system		Variable tooth system				
length of the cut D	tooth system (Z_pZ)	length of the cut D	tooth system (Z_pZ)			
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 panel



Ovládání stroje
Bedienung der Maschine
Machine control



3.1.1. Control panel – description

0	Saw band drive OFF
1	Saw frame up If you press button 1 and button F3 together, the saw frame will be lifted with accelerated shift
2	Saw band drive ON
3	Hydraulic aggregate ON
4	Saw frame turning to the left
5	Button without function
6	Vice open
7	Saw frame turning to the right
8	Button without function
9	Vice close
10	Saw frame down If you press button 10 and button F3 together, the saw frame will be lowered with accelerated shift. ATTENTION! Do not lower the frame with accelerated shift until the material; the saw band may be damaged
11	Hydraulic aggregate OFF
12	F1 –Functional button Button function – see below
13	F2 –Functional button Button function – see below
14	F3 –Functional button Button function – see below
15	START – button Switch on the automatic cycle
16	STOP – button Switch off the automatic cycle
17	Display It shows the operating mode and it allows dialogue with the service workers
18	Switch with lock It is for preset operating kind. In “0” position is possible to remove the key.
	 Semi – automatic mode
	 Automatic mode
19	0 Set mode
	Safety circuit starting Switch on the safety circuit by press the button

20	TOTAL – STOP button
21	Frequency convertor Set the saw band speed from 20 min ⁻¹ to 90 min ⁻¹
22	Governing valve Adjust the speed of the arm sinking to the cut by governing valve
23	Cutting pressure regulation Adjust the arm pressure to the cut
24	Cutting pressure manometer

3.2. Machine control

3.2.1. Set mode

- »
- **Entrance to set mode**
 1. Turn with switch **18** to position „0“.
 2. Switch on the safety circuit by button **19**.
 - **Reference** – set the null position of the desk.
 1. Press button **F1**.
 2. Press button **START** and hold it. The frame starts to turn to angle **0°**. Release the button. The report, „Referential position of the desk is set.“ is depicted on the display.
 3. Press button **F2**, referential position of the desk is entered.

If you release the button **START** during frame turning, setting of the null position of the desk is braked. If you want continue in setting of the null position of the desk, press button **F2** and press and hold button **START**.
 - **Service** – setting of the cutting parameters.
 1. button **1** – saw band release. It is used for saw band replacement (see below)
 - F1** – saw band release
 - F2** – return to the previous menu
 - F3** – saw band stretching
 2. button **2** – cooling parameters
 - a) button **1** – type of cooling
 - I. button **1** – saw band cooling with the water.
 - II. button **2** – saw band cooling with Microniser.
 - III. button **3** – without saw band cooling.

Select the way of the cooling and confirm the selection by press button **F3**.
 - b) button **2** – cooling mode
 - I. button **1** – stop the saw band cooling in **top** position of the saw arm after the cut
 - II. button **2** – stop the saw band cooling in **down** position of the saw arm after the cut
 - III. button **3** – **do not stop** the saw band cooling after the cut

Press button **F3**. The selected cooling type is stored and you can return to the previous menu. To another pressing button **F3**, you can return to the

service menu

3. button **3** – cutting parameters

- I. button **1** – saw band stopping in **top** position of the saw frame after the cut.
- II. button **2** – saw band stopping in **down** position of the saw frame after the cut.
- III. button **3** – don't stop the saw band after the cut.

Select the mode of the saw band stopping and confirm the selection by press button **F3**.

4. button **F2** – others

Service menu. The entrance is permitted only authorized person and it is secured with the password.

5. button **F2** – others

- a) button **1 a 3** – Service menu. The entrance is permitted only authorized person and it is secured with the password.
- b) button **2** – cycle ending
- I. button **1** – Down after the cut: Mark with **X** to finish the cut with saw arm in down position, otherwise the arm will move to the top position.
- II. button **2** – Open the vice: Mark with **X** to finish the cut with opened vice, otherwise the vice will close.

Select the required mode and confirm the selection by pressing button **F3**

End the parameters setting by button **F3**

3.2.2. Manuální režim

Turn with switch **18** to position „“.

1. Set the cutting parameters in set mode.
2. Open the vice by button **6**.
3. Set the desired cutting angle by buttons **4** and **7**.
4. Lift the frame to the top position by button **1**.
5. Insert the material to the vice.
6. Lower the frame of the saw about 10 mm above the material by button **10 (C)**.
7. Shift the top clamping so, that top clamping clamps in the middle of the material.
8. Set the pressure of the vice. The pressure shows the barometer.
9. Clamp the material to the vice of the saw by button **9**.
10. Set the cutting pressure regulation on the guiding cubes
11. Start the saw band drive by button **2** and set the saw band speed on the switch **21** (it shows on display of the saw)
12. Set the speed of the frame sinking to the cut by control valve **22** on the control panel
13. Press and hold button **10 ©**. The frame starts to sink to the cut
14. Lift the frame to the top position by button **1** after material cutting, it means the frame sinks to the lowest position
15. Remove the cut
16. You can cut material again.

3.2.3. Semi – automatic mode

Turn with switch **18** to position „“.

1. Set the parameters in set mode.
2. Set the desired cutting angle like this:
 - a) press **F2**.
 - b) order the value of the desired angle.
 - c) select, if you want positive angle (**F3**) or negative angle (**F1**)
 - d) press and hold button **START**, until the saw is not on the desired angle.

Note: Before setting of the desired angle, the vice is opened completely, that during frame turning the vice with material will not be in conflict

3. Lift the frame of the saw to the top position by button **1**.
4. Insert the material to the vice.
5. Lower the frame of the saw about 10 mm above the material by button **10 (C)**. Save the setting position by button **F2**. After cycle finishing, the frame is lifted to this height.
6. Shift the top clamping so, that top clamping clamps in the middle of the material.
7. Set the cutting pressure regulation on the guiding cubes.
8. Set the pressure of the vice. The pressure shows the barometer.
9. Set the saw band speed on the switch **21** (it shows on the display of the saw).
10. Set the speed of the frame sinking to the cut by control valve **22** on the control panel.
11. Press button **15 (START)**. The saw clamps material to the vice and starts the cutting cycle

Note: The cycle can be broken by button **16 (STOP)** of the semi-automatic cycle). The saw frame is lifted to the set position and the saw band drive is stopped after pressing the button. Press **TOTAL STOP** in emergency cases! The safety circuit is stopped, the saw band drive and saw frame sinking are stopped too

12. Cut the material, lift the saw frame to the set position and saw band drive is stopped.
13. Remove the cut
14. You can to cut the material again.

3.2.4. Break-in of the semi-automatic cycle

- » • **Button STOP**
- Semi-automatic cycle can be braked by button „**16**“ (**STOP** of the semi-automatic cycle).
- The saw band is stopped and the frame is lifted to the up.
- You can start the cycle again by button „**15**“ (**START** of the semi-automatic cycle).
- **TOTAL STOP emergency button**
- Press **TOTAL STOP** button in case of the danger.
- After pressing button **TOTAL STOP**, saw band drive is braked and saw frame sinking is stopped.
- **Activation**
1. Turn by button **TOTAL STOP** according to the arrows (on button)

2. Switch on the safety circuit by button **19**.
3. Switch on the hydraulic aggregate by button **F2**.
4. Press button „**15**“ (**START** of the semi-automatic cycle). The frame is lifted to the up and the saw performs the cycle again.

3.3. Service menu

Service – adjusting of the cutting parameters. All parameters are possible to find in service menu

3.3.1. Entrance to service menu

Turn switch (16) to position „0“ and press button **F3** to enter to service menu

```
"  MODE SELECTION  "
" Mode select. Switch "
" is in position '0' "
"<REFER>    <SERVICE> "
```



3.3.2. Band release

1. Press button **1** to enter to menu: Band release

```
" 1 = Band release.  "
" 2 = Cooling params. "
" 3 = Cutting params. "
"          <NEXT> <DONE> "
```



2. Press button **F1**- band release

```
"band release "
" <Menu>"
<release>    <stretch>
<next>
```



3. Press button **F3**- band stretch

Press button **F2**-next

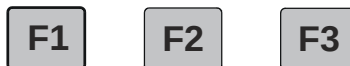
3.3.3. Vice parameters

By setting the time opening of both vices you can set, distance of the movable jaw vices opening, it means, the vice is opened any more, when the time is set longer. This function is used in case of the cutting of the rough materials. Is necessary to set longer vice opening, that the material will be released. Smooth materials has set shorter vice opening. Shorten the time of the cycle. Time of the vices opening is 1

1. Press button **1** to enter to menu: Vice parameters

```
"1 = clamp params.  "
"2 = Language        "
"3 = Rotation deblock "
```

"<BACK> <NEXT> <DONE> "



2. Feeding vice (upper row) – adjust the time, press button **F2**.

" CLAMP OPENING TIME "

" <-] 0 [-> : x.x sec "

" <-] [-> : x.x sec "

" <NEXT> <MENU> "



The main vice (lower row) – adjust the time, press button **F3** for returning to main menu

3.3.4. Cooling parameters

You can adjust the type and mode of the band cooling

Press button **2** to enter to menu: Cooling parameters hlazení

" 1 = Band release "

" 2 = Cooling params. "

" 3 = Cutting params. "

" <NEXT><DONE> "



3.3.5. Cooling type

You can select the cooling with the water, Microniser or without cooling

1. Press button **1** to enter to menu: Cooling type

" 1 = Cooling type "

" 2 = Cooling mode "

" "

" <MENU> "



2. Select the desired cooling mode. The selected item is marked „x“.

button **1** – saw band cooling with the water.

button **2** – saw band cooling with Microniser.

button **3** – without cooling of the saw band

" 1= Water cooling [x]"

" 2= Microniser []"

" 3= No cooling []"

" <MENU> "



3. Press button **F3**. The selected cooling type is stored and you can return to the previous menu

3.3.6. Cooling mode

You can select, if you want to stop the cooling in upper or lower position or do not stop the cooling

1. Press button **2**, to enter to menu: Cooling mode

```
" 1 = Cooling type      "
```

```
" 2 = Cooling mode      "
```

```
"                        "
```

```
"                        <MENU> "
```



2. Select the desired mode of cooling stopping. The selected item is marked „x“.

button **1** – stop the saw band cooling after cutting finishing in **top** position of the saw arm.

button **2** – stop the saw band cooling after cutting finishing in **down** position of the saw arm.

button **3** – **do not stop** the saw band cooling after cutting finishing.

3. Press button **F3**. The selected cooling type is stored and you can return to the previous menu. To another pressing button **F3**, you can return to the service menu

3.3.7. Cutting parameters

You can select, if you want to stop the saw band drive in upper or lower position of the saw arm, or do not stop the drive

1. Press button **3** to enter to menu: Cutting parameters

```
" 1 = Band release      "
```

```
" 2 = Cooling params    "
```

```
" 3 = Cutting params    "
```

```
"                        <NEXT><DONE> "
```



2. Select the desired mode of the saw band stopping. The selected item is marked „x“.

tlačítko **1** – saw band stopping in **top** position after cutting finishing.

tlačítko **2** – saw band stopping in **down** position after cutting finishing.

tlačítko **3** – **do not stop** the saw band after cutting finishing.

```
"1=Top pos shutoff [x]"
```

```
"2=Bot.pos shutoff [ ]"
```

```
"3=No shutoff      [ ]"
```

```
"                        <MENU> "
```



3. Press button **F3**. The selected mode of band stopping is stored you can return to the previous menu

3.3.8. Deblock rotation

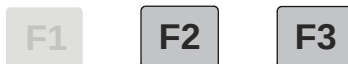
1. Press button **F2** - next to enter to next menu

```
" 1 = Band release "
```

```
" 2 = Cooling params "
```

```
" 3 = Cutting params "
```

```
" <NEXT><DONE> "
```



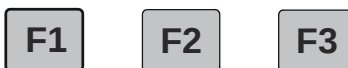
2. Press button **F3** - to enter to menu Deblock rotation

```
"1 = clamp params. "
```

```
"2 = Language "
```

```
"3 = Rotation deblock "
```

```
"<BACK> <NEXT> <DONE> "
```



- Select the desired mode with **F2** press

button **1** – rotation constant

button **2** – cycle ending

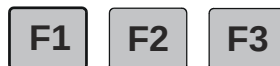
button **3** – rollers deblock

```
"1 = Rotation constant"
```

```
"2 = cyklus ending "
```

```
"3 = Rollers deblock "
```

```
"<BACK> <NEXT> <DONE> "
```



Enter password and press button **1**

```
" Machine params "
```

```
"offset 0,0='xx.x st "
```

```
"constant =xxxxx "
```

```
"<-> <menu> <-> "
```



- Press button **F3**. The selected cooling type is stored and you can return to the previous menu

Press button **2**- select the desired mode of cycle ending

```
"1= after cut under"
```

```
"2=vice open "
```

```
" <MENU> "
```



Press button 3- select **rollers deblock**

Press button F1-NO

Press button F2-YES

```
"  rollers deblock  "
"  rollers drop  "
"<No>                <YES> "
[F1] [F2] [F3]
```

3. Press button **F3**. The selected mode is stored you can return to the previous menu

3.3.9. Language

Press button **2** – Language to shift to the next menu, where you can set the required language

```
"1 = Vice params.  "
"2 = Language       "
"3 = Rotation deblock "
"<BACK> <NEXT> <DONE> "
[F1] [F2] [F3]
```

First level password (user) is required to enter this menu:

- password: 947

3.3.10. Service menu closing

Press button **F3**. Service menu is closed

```
"1 = Vice params.  "
"2 = Language       "
"3 = Rotation deblock "
"<BACK> <NEXT> <DONE> "
[F1] [F2] [F3]
```

3.4. Band saw adjusting

3.4.1. Setting of angular cut

The band saw turning to the desired angle is performed by hydraulically. Setting of angular cut is controlled from the keyboard of the control panel. Saw frame turning in manual mode and semi-automatic mode is described below in text

3.4.2. Optimal adjusting of the guide cubes span

Optimal adjusting of the guide cubes span is set by automatically without service workers. Guide cubes span depends on the vice jaw position. Optimal guide cubes span is set at material clamping to the vice.

3.4.3. Cutting speed adjustment

Saw band speed is possible to change from 20 to 90 min⁻¹. Setting of the speed is performed with controller of the saw band speed (position **21**). Saw band speed is depicted on the display of the band saw (see picture)



3.4.4. Setting of the top clamping

Top clamping is used for material clamping from above. Piston rod of the top clamping is possible to stop in top position and the material is possible to clamp only with vice jaws

Top clamping is necessary to shift according cut angle, the piston rod of the top clamping must to clamp the material in middle its width

Note! By wrong setting of the top clamping, it may occur to the contact of the piston rod of the top clamping and fixed jaw of the vice, piston rod can be damaged

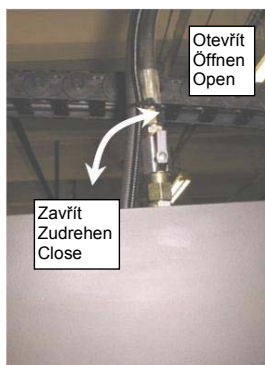
1. Switch on the machine and turn the switch with key **18** to the position „“ (manual mode)
2. Open the vice and top clamping by button **6**
3. Turn the saw frame to the desired angle by buttons **4** and **7**.
4. Insert the material to the vice
5. Shift top clamping. It must be in the middle width of the material



6. Clamp the material to the vice by button **9**. Piston rod must to clamp the material in middle its width
7. Setting of the top clamping is ready

Piston rod stopping of the top clamping

1. Switch on the machine and turn the switch with key **18** to the position „“ (manual mode)
2. Open the vice and top clamping by button **6**. Piston rod of the top clamping must be inserted to the cylinder
3. Close the tap on the supply line of the top clamping



4. Top clamping is secured in top position and the material will be clamped only with vice jaws

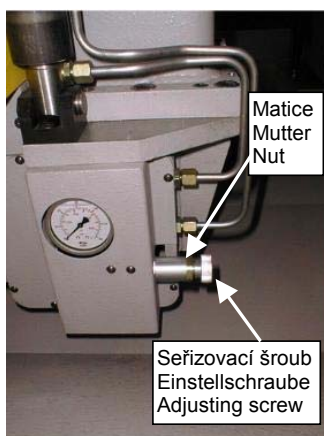
3.4.5. Setting of the clamping pressure of the vice

The band saw **Construction 820.450 DGS** is equipped with the vice with adjustable clamping pressure. It makes possible to change the clamping pressure of the vice according to the type and sizes of the cutting material. Recommended value of the clamping pressure is **20 – 30 bar** (see barometer).

Note! Setting of the lower clamping pressure may cause insufficient material clamping and problems during cutting. Setting of the high clamping pressure may cause damage the clamping material.

Setting of the vice clamping pressure

1. Switch on the machine and turn switch with key **18** to position „“ (manual mode)
2. Close the vice and top clamping by button **9**
3. Release the securing nut of the adjusting screw (see picture)
4. Set the desired pressure by adjusting screw (see picture). Setting pressure shows the barometer
5. Tighten the adjusting nut of the adjusting screw. The pressure is set



3.4.6. Setting the cutting pressure regulation

The band saw **Construction 820.450 DGS** is equipped with cutting pressure regulation on the both guiding cubes.

Note! The guiding cubes are equipped with taps that must be opened during operating

Pressure adjusting is performed with regulating wheel (position 23 – control panel). The pressure to the cut is displayed on the cutting pressure manometer 24



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

3.5. Brush adjustment

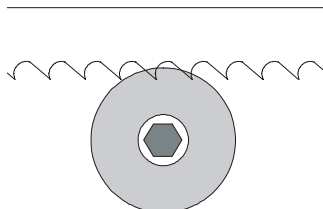
The brush for chip removal from the saw band influences cutting durability, saw band lifetime and wheels lifetime, hard metal guides and finally the cut accuracy. Brush adjustment must be checked every shift.

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



2. Set the brush to the saw band

After the brush is set, its ends must not reach the saw band teeth bottoms



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



ATTENTION! The screw must not be tightened with heavy force, because driving wheel of the brush can be damaged or the lifetime of the bearings of the driving wheel of the band can be lowered!

3.6. Material insertion

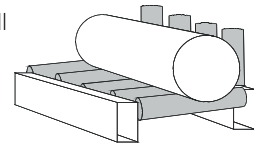
- Never walk under a suspended load!
- Never climb onto the gravity-roller conveyor!
- Do not hold the material for clamping material to the vice! The vice can cause injury!

3.6.1. Handling agent selection

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

3.6.2. Insertion

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



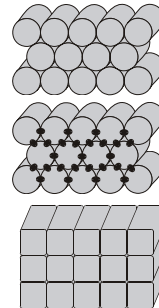
Make sure the conveyor is long enough and the material cannot tip off the conveyor.

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

3.7. 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.

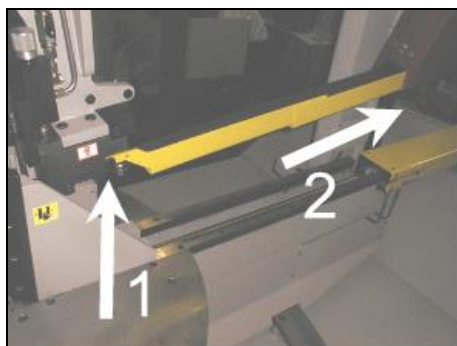
4. Machine service

4.1. Saw band dismantling

1. Switch on the main switch of the saw and turn the switch **18** to position „“.
2. Lift the frame to the up.
3. Release the saw band in the following way::

1.	Turn the switch 18 to position „0“.
2.	Press button F3 (service)
3.	Press button 1 – saw band releasing
4.	Release the saw band by button F1

4. Screw off the screw on yellow cover of the saw band (arrow 1).
5. Insert yellow cover to the cover of the frame (arrow 2).



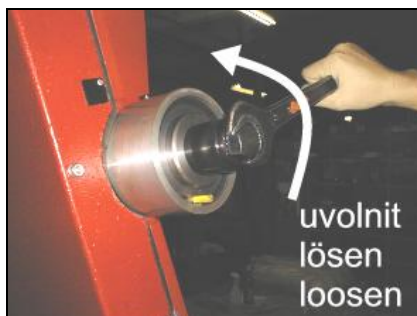
6. Open the cover of the frame.



7. Release the screw, which secures the position of the brush and turn the brush to the position in which removing will be easier.



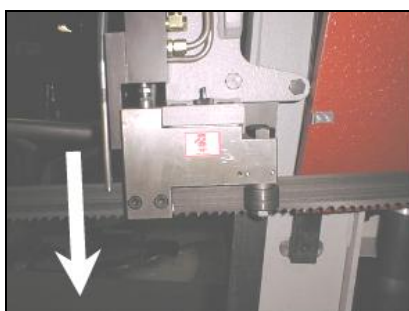
8. Turn by the stretching screw. The saw band must be loosening.



9. Remove the band from the wheels.

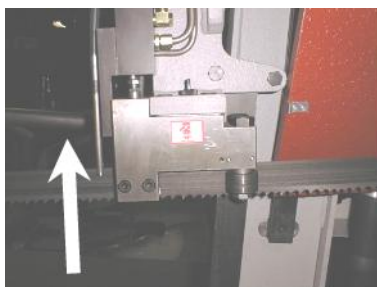


10. Pull up the band from the guiding cubes .



4.2. Saw band installation

1. Put the band to the guiding cubes



2. Put the band on the wheels.



3. Tighten the saw band by stretching screw. The head of the screw is on a level with edge of the cylinder.



4. Set the brush to the saw band and fasten the securing screw.



5. Close the cover of the frame



6. Pull up yellow cover of the band and screw on it to the guiding cube.



7. Switch on the safety circuit by button **19**.
8. Stretch the saw band in the following way
 - Press button **F3** (service)
 - Press button **1** – saw band releasing
 - Stretch the saw band by button **F3**.
9. Saw band installing is finished.

4.3. Saw band stretching and inspection

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

4.3.1. Saw band stretching

- After saw band installing, switch on the hydraulic aggregate and check the saw band stretching on manometer

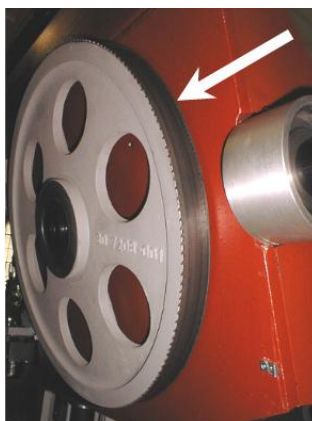


- If the band is not stretched on optimal value, you can carry out the following:
 - a) release the nut on the adjusting screw
 - b) stretch the band on optimal value by means of the adjusting screw (see manometer)
 - c) tighten the nut on the adjusting screw

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

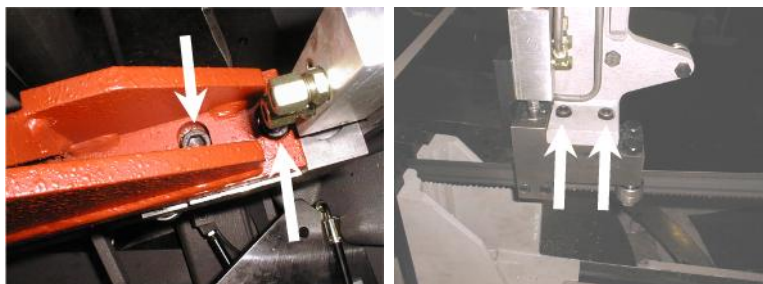


- if the distance between backside of the saw band and the offset wheel is **1 – 3 mm**, setting is right
 - if the distance is bigger than **3 mm**, or the saw band is on the offset of the wheel, set the saw band
5. Close cover of the saw band

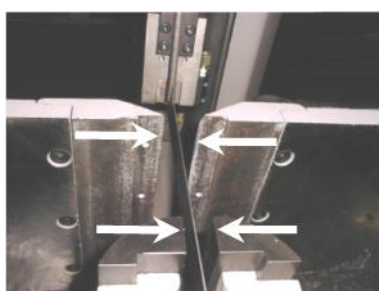
4.4. Guiding cubes adjustment

The guiding cubes are set from the manufacturer. Guiding cubes are not set during whole lifetime.

1. Release screws on both guiding cubes



2. Set the guiding cubes so, that the band runs between vice jaws. Tighten screws on the guiding cubes again.



3. The guiding cubes are set

4.5. Hard metal guides adjustment

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

1. Release the screw. The screw holds the guide in the guiding cube. Make sure, that the guide of the hard metal does not falls



2. Press the guide on the saw band by tighten three screws. Check, if the hard metal guide does not put up to much resistance against the movement of the band. As soon as it is possible to move the band without resistance (and between saw band and the guide is not width) the hard metal guides are adjusted



3. Tighten the screw. The screw holds the guide in the guiding cube. Make sure, that the guide did not damaged



4. Be sure that the hard metal guides do not put up to much resistance otherwise the lifetime of the saw band and drive decreases

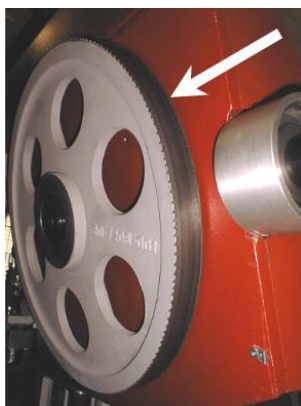
4.6. Saw band run adjustment on the stretching wheel

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

4.6.1. Saw band inspection

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

- **The saw band falls off the wheel**
The saw band and protective cover can be damaged
- **The saw band runs on the wheel rim**
The saw band and wheel rim can be damaged



1. Start and stop saw band drive
2. Stop the main switch
3. Open rear cover of the saw frame
4. Check saw band placing on the wheels
 - If the distance of the rear part of the saw band from wheel rim is **1-3 mm**, setting is right
 - If the distance is bigger than **3 mm**, or the saw band runs on the wheel rim, saw band run must be set

4.6.2. Saw band run setting



Saw band run is set with imbus screw in the stretching cube on the saw frame. Right distance rear part of the saw band from wheel rim is **1mm**.

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

Check saw band run adjustment again.

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

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

4.8. Saw frame lower position stop adjustment

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



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

4.9. Limit switch adjustment of the saw frame lower position

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

4.9.1. Setting inspection

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

4.9.2. Limit switch petting



1. Screw on the stop screw of the switch of the lower position
2. Start the frame on the lower stop and switch on by button **START** the automatic cycle
3. Screw off the stop screw of the switch, until the frame is not in top position
4. Check the setting of the limit switch again

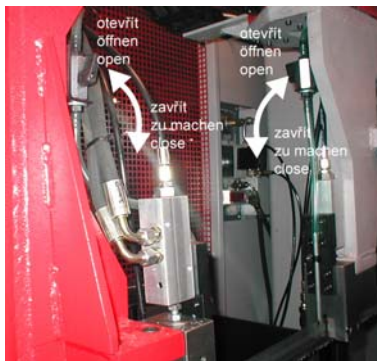
4.10. Adjustment of the cutting pressure regulation

The saw band **Construction 820.450 DGS** band saw is equipped with pressure regulation to the cut on both guiding cubes. Pressure regulation is set separately on every guiding cube.

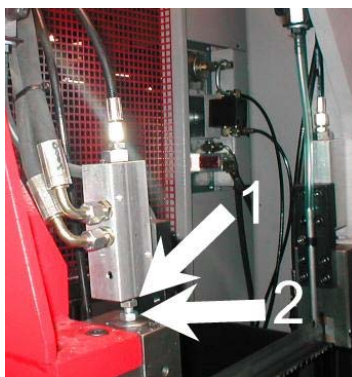
4.10.1. Setting on the right guiding cube

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

Left and right guiding cube



2. Screw off the set – screw on the right guiding cube to the stop, the valve is blocked (pos1). You can move by arm only up, because the arm movement down is blocked with pressure regulation valve



3. Press button „Arm down“ and slowly screw on the set – screw on the right guiding cube. Screw by set – screw until the optimal speed of the arm sinking is not reached. The optimum speed of the arm sinking to the cut from maximum lift until lower stop is about 55 seconds
4. Secure the set – screw with nut for reaching of the optimum speed of the arm sinking
5. Pressure regulation on the right guiding cube is set

4.10.2. Setting on the left guiding cube.

6. Open the tap on the left guiding cube. Close it on the right guiding cube
7. Set the cutting pressure regulation on the left guiding cube in the same way
8.) Open taps on both guiding cubes after pressure regulation setting.
ATTENTION! Both taps must be opened during operation
9. Setting is ended

4.11. Pressure switches petting

1. Switch the switch of the control panel to the manual mode



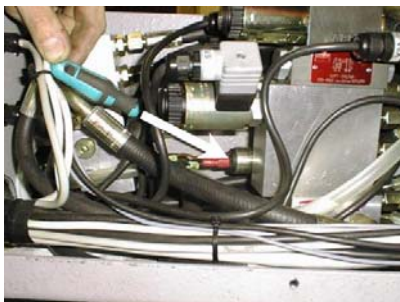
2. Close the vice (button number 9 on the control panel).



3. Hold button number 9 on the control panel and set the pressure to **20 bars** (service pressure of the machine) by turning the screw



4. Tighten the pressure switch to the stop



Inspection of the right setting of the pressure switches

LED diode number **14** on JDI system must not shine for vice closing



1. Open the upper pressure valve



2. Open the vice (button number **6** on the control panel)



3. Release the pressure switches about $\frac{1}{4}$ revolution, close the vice (button number **9**) and check LED diode number **14** on JDI system. Diode has to blink for vice closing and it has to stay switched off. Hold button number **9** (close the vice) all along of vice closing. LED diode number **14** is shining for total closing

4. Set the pressure to **30 bars** (operating pressure of the machine) by turning the screw



5. Pressure switches are set

4.12. Adjustment of a throttle valve

Adjustment of a throttle valve is set by the producer

4.13. 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

4.13.1. Cooling liquid preparation

Prepare the mix of the water and cooling liquid. Conform the notes of the manufacturer and keep manufacturer-approved concentration

All instructions are stated on the tank of the cooling liquid or in documents of the cooling liquid. For cooling liquid using and liquidation reads date of cooling liquid manufacturer, which it is necessary to keep

Fill the mix of water and cooling liquid to the tank of the cooling system. The capacity of the tank for the cooling liquid is stated in chapter „2.1

When filling tank with the cooling liquid take care that the liquid will not drip out of the tank and the tank will not overflow

Keep manufacturer specified recommendations for adding the anticorrosive agents, the antifreeze or other agents! For mixture of two different mixes can produce toxic and aggressive mixes, which can peril your health or damage cooling system of the machine.

Note: If the machine is equipped with Microniser (see. **Special accessory**), fill the tank of the Microniser by specified cooling liquid. Microniser is ready for the operation

The quality of the cooling agent will deteriorate due to:

- use of contaminated water
- impurity
- outside oil contamination (hydraulics, gears)
- high operating temperatures
- lack of air circulation
- wrong concentration

If the solution is too weak:

- corrosion protection is diminished

- lubrication decreases
- microbial attack is more likely

If the solution is too strong:

- the cooling ability is decreased
- foam behaviour increases
- emulsions stability deteriorates
- sticky residue develops

4.13.2. Coolant device inspection

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

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

Note:

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

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

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

* according to manufacturers' instructions

4.13.3. 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.

4.14. Hydraulic, Greases and oils

4.14.1. 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
Construction 820.450 DGS	Shell Tivela S 320	3,3 l
Swarf conveyor	Shell Tivela S 320	0,075 l

Comparative table of the gearbox oils

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

4.14.2. Lubricant greases

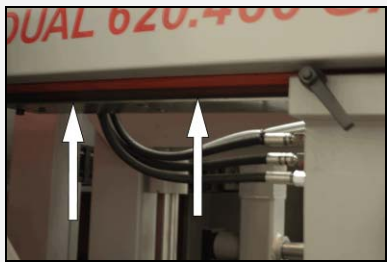
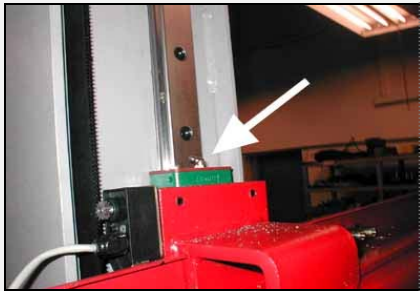
We recommend using lithium based saponified grease, class NGLI-2 for lubrication. Different greases are mixable, if their oil bases and consistence type are identical.

Comparative table of the lubricant greases:

Manufacturer	Type of the lubricant grease
BP	Energol 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

4.14.3. Lubrication

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

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

4.14.4. 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. Hydraulic oils quantity – see chapter **Hydraulic oil level check**.

Note:

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

Comparative table of the hydraulic oils

Manufacturer	Type	Manufacturer	Type
Agip	Oso 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 4hy6	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		

4.14.5. Hydraulic unit service

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



checking off all screws and connections, fixing points, tubes and hoses for leakage

Check hydraulic oil level

During time of duty the oil temperature shouldn't exceed 60-70°C

check function of signaling components (thermometer, level gauge, dirty filter indicator)

Check the adjustment of working pressure

To realise a high reliability of the power pack, the manufacturer lays down following inspection intervals

Interval	daily	weekly	monthly	three monthly	six monthly	annually
Hydraulic fluid						
Level	-	•	-	-	-	-
Temperature	-	•	-	-	-	-
Condition	-	-	•	-	-	-
Change interval	-	-	-	-	-	•
Filter						
Change interval	-	-	-	-	-	-
Other checks						
External Leakages	•	-	-	-	-	-
Contamination	•	-	-	-	-	-
Damages	•	•	-	-	-	-
Noise-(level)	•	-	-	-	-	-
Gauges	-	-	•	-	-	-

4.14.6. Hydraulic oil level check



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

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

4.15. Machine cleaning

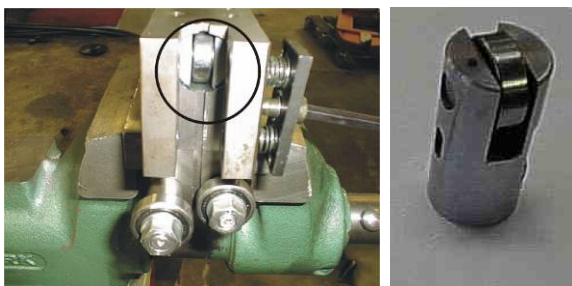
Clean the machine from the cooling liquid and impurities after every shift stopping. Conserve the guiding surfaces, mainly.

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

4.16. Worn pieces replacement

4.16.1. Pushing bearing replacement

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

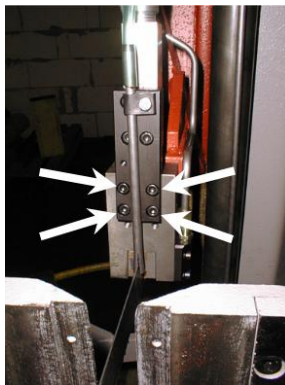


The bearing condition is possible discover, on the cube from the bottom side, for a better inspection is possible put out the holder of the bearing from the cube.

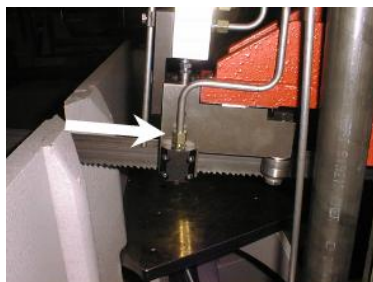
If the bearing is worn, there is a visible channel on it.

Bearing replacement

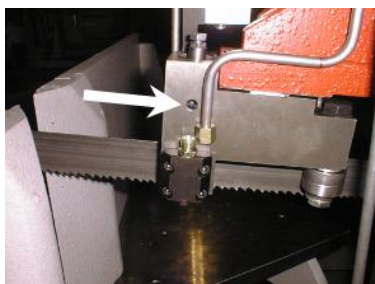
1. Dismantle the saw band
2. Disconnect the cutting pressure regulation. Let cutting pressure regulation connected to the hydraulic system



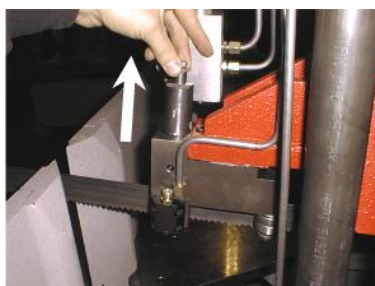
3. Release the hydraulic tube connected to the hard metal guide



4. Release the fixative pin of the bearing holder



5. Remove the bearing holder from the guiding cube



6. Insert the pivot to the vice

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

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



7. Remove the worn bearing



8. Fasten the holder to the vice

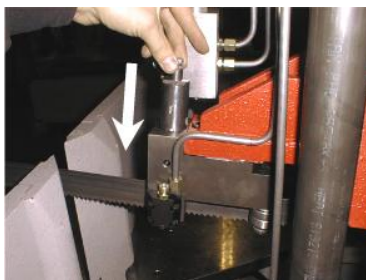


ATTENTION!! The vice has aluminium jaws, eventually, there has to be an aluminium agent to protect the pivot from damage.

Insert the bearing and washers and return the pivot to its original place.

The pivot may not extend past the holder; otherwise, the bundle gripping assembly regulator gets worse

9. Insert the holder to the guiding cubes. Fasten it with pin



10. Connect the cutting pressure regulation and the hydraulic tube. Bearing replacement is ended

4.17. Saw band guiding pulleys replacement

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

ATTENTION! Guiding pulleys must be replaced together on both guiding cubes!

1. Dismantle the saw band
2. Disconnect the hose from the cooling agent, screw off the cutting pressure regulation.

Let the cutting pressure regulation connected to the hydraulic system

Dismantle the guiding cube of the saw band

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



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

4. Screw off nuts from eccentrics
5. Remove eccentrics from bearings by means of the swager



6. Change all bearings and other worn parts.



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

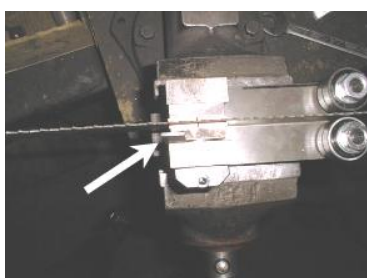


ATTENTION! Do not replace the eccentrics placing in the cube

8. Screw on nuts on both eccentrics and tighten them



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



10. Set the eccentrics by means of the wrenches, the saw band must run in the centre. Guide pulleys must not press too much on the band, but must spin freely during the band run

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



11. Tighten nuts on both eccentrics



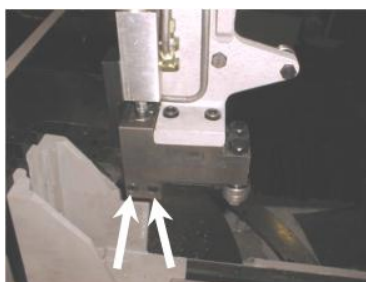
12. Remove the testing piece of saw band from the cube lead. Install the guiding cube on the machine and connect the cutting pressure regulation to the cut and cooling. Install the saw band

4.17.1. Hard metal guides replacement

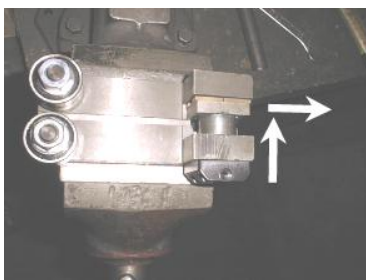
If the hard metal guides cannot be adjusted, they have to be replaced.

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

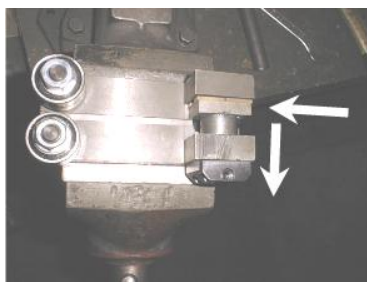
1. Dismantle the saw band
2. Dismantle the fixed hard metal guide



3. Remove the movable hard metal guide



4. Insert the new movable hard metal guide



5. Screw on the fixed hard metal guide
6. Deaerate the hydraulic circuit of the hard metal guide. Switch on the machine, hydraulic unit and saw band drive
7. Release the screw and let to escape the air from the circuit. Catch the oil to the bath. Close the screw



ATTENTION! Work with safety, because you can injure about the saw band!

8. Hard metal guides replacement is ended



4.18. Round brush replacement

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

1. Hold shaft of the brush by wrench



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

5. **Závady / 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

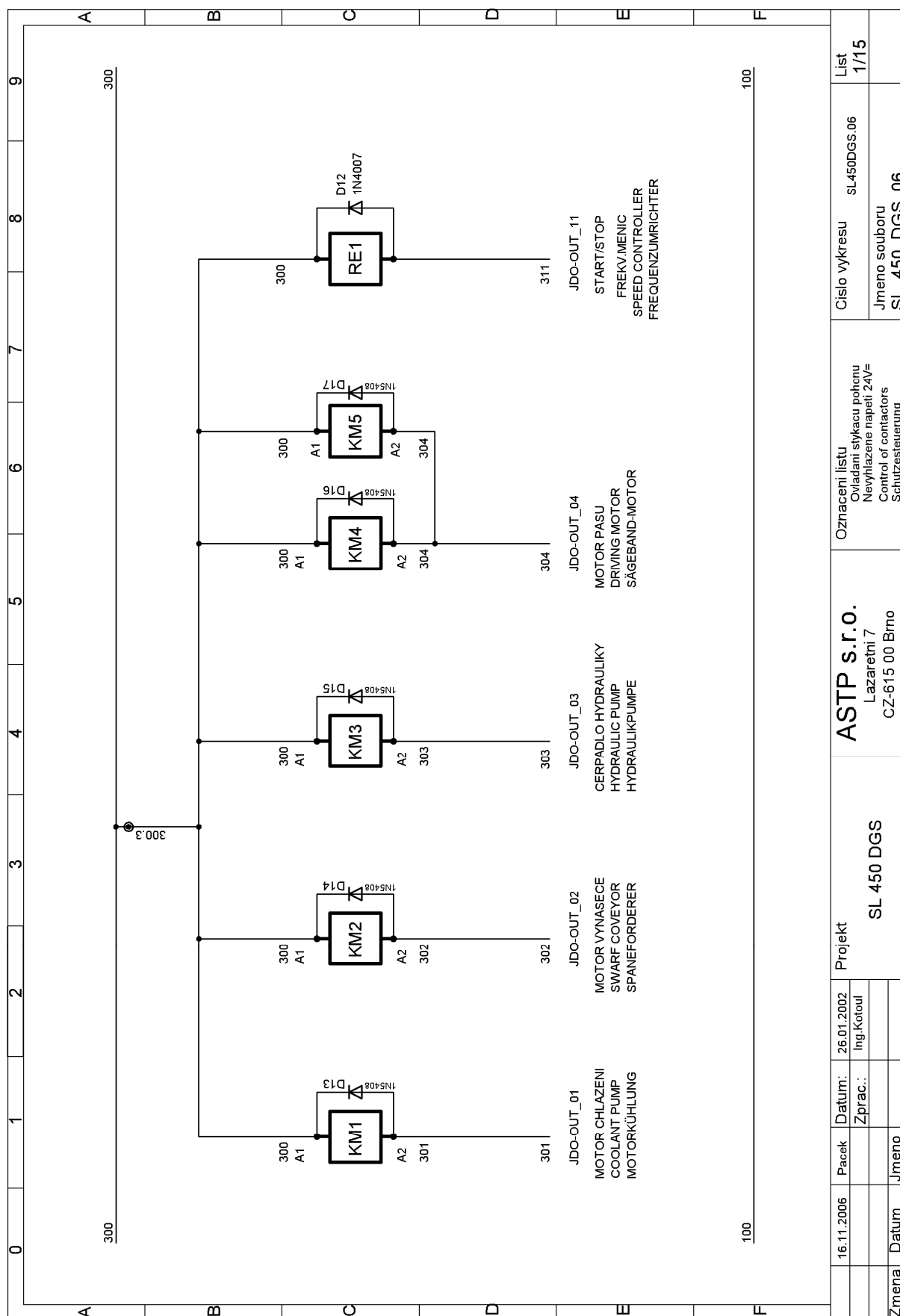
Problem	Possible causes	Repair
1. Machine is not possible start.	- In socket is not voltage	Line voltage must be checked.
	- Transfer relay is closed (thermal protector)	Each FA relay must be checked.
	- Limit switch of saw band stretching, cover of frame or cover of saw band is not started.	Check of 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.

5.3. Hydraulic problems

Problem	Possible causes	Repair
1. Hydrogenerator not supplying oil	• reverse rotation	Check the connections of each phase. Reconnect properly connection of the electrical phases.
	• shortage of oil in the tank	Add hydraulic oil
	• Oil viscosity does not correspond prescribed viscosity value	Change hydraulic oil.
	• Hydrogenerator malfunction	Call service
	• Wrong power supply connection.	Check the connections of each phase. Reconnect properly connection of the electrical phases.
2. Hydraulic oil contains bubbles	• Hydraulic circuit is not adequately deaerated	Make deaeration of hydraulic circuit.
	• Low oil level	Add hydraulic oil
	• the pump shaft seals damaged	Call service
3. Increased mechanical noise	• damaged joint drive	Call service
	• damaged or destroyed motor bearings	Call service
	• air intake	Check for leaks.
4. Low pressure, pump supplies oil	• problem in the safety valve	Wrong settings. Check the settings and adjust the safety valve.
	• pump wear	Call service
	• external or internal leakage	Call service
5. Hydrogenerator is seized	• damage by solid particles in oil	Make oil filtration, or call the service.
	• non-prescribed oil	Change hydraulic oil.
	• wrong type of oil	Change hydraulic oil.
	• exceeding the life of the pump	Call service
6. Overheating oil	• cooler malfunction	Check the cooler function or call service.
	• wear the pump, the energy is converted into heat	Call service
7. Hydraulic valve can not be readjusted	• electromagnet has no signal (voltage) - interrupted supply lines	Check again.
	• Electromagnet coil burnt	Replace coil – Call service.
	• spool valve sticking	Replace valve – Call service

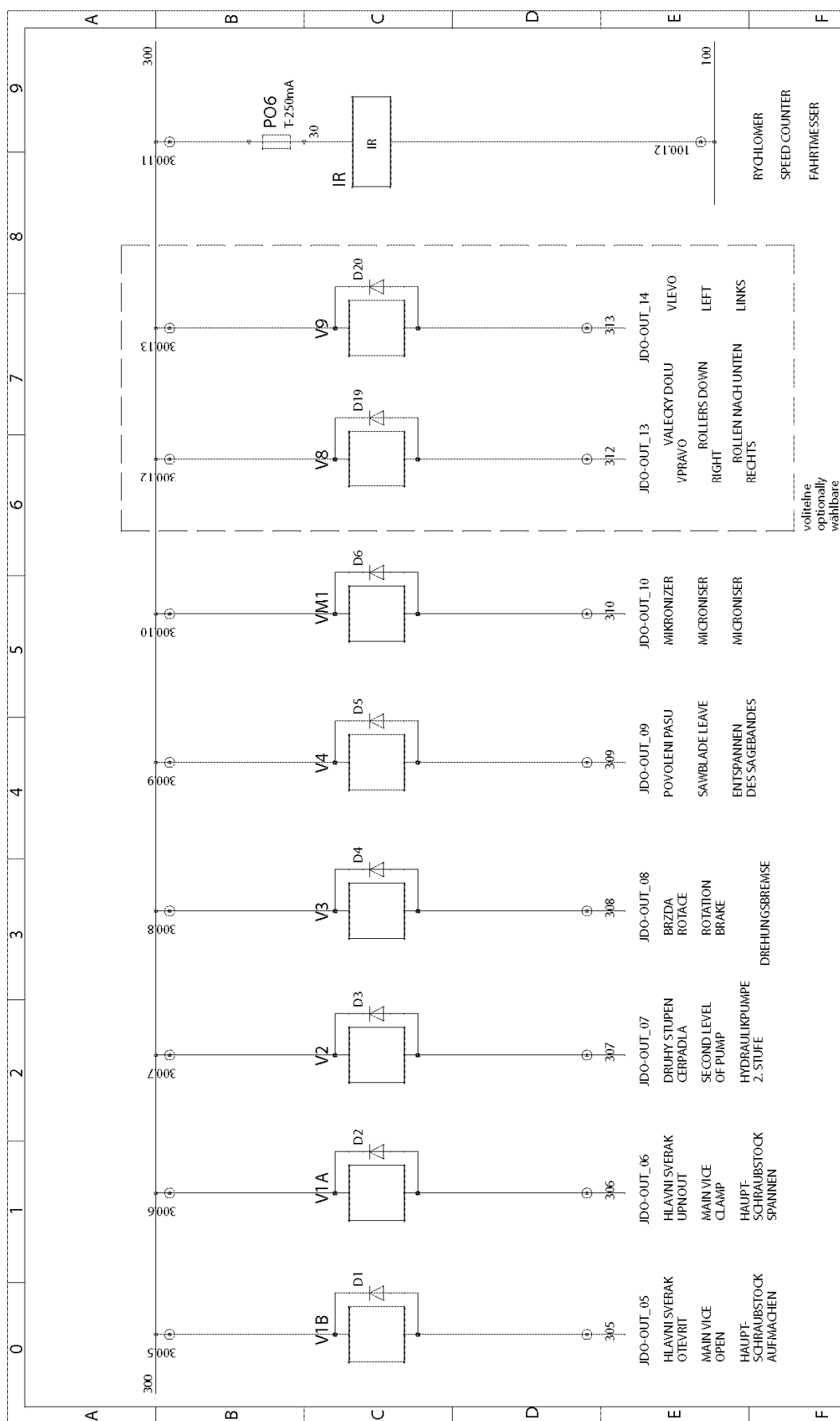
6. **Schémata / Schemas / Schematics**

6.1. Elektrické schema / Elektroschema / Wiring diagrams – 3×400 V, TN-C-S

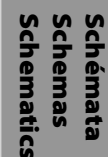


Oznaceni listu Ovládání stykačů pohonu Newhlazene napeti 24V= Control of contactors Schützesteuerung		Cislo vykresu SL450DGS.06		List 1/15	
ASTP s.r.o. Lazaretni 7 CZ-615 00 Brno		Projekt SL 450 DGS		Jmeno souboru SL_450_DGS_06	
Datum: 26.01.2002 Ing. Kotoul		Pacek 16.11.2006		Zmena Datum	
Zprac.: 1		Jmeno 1			

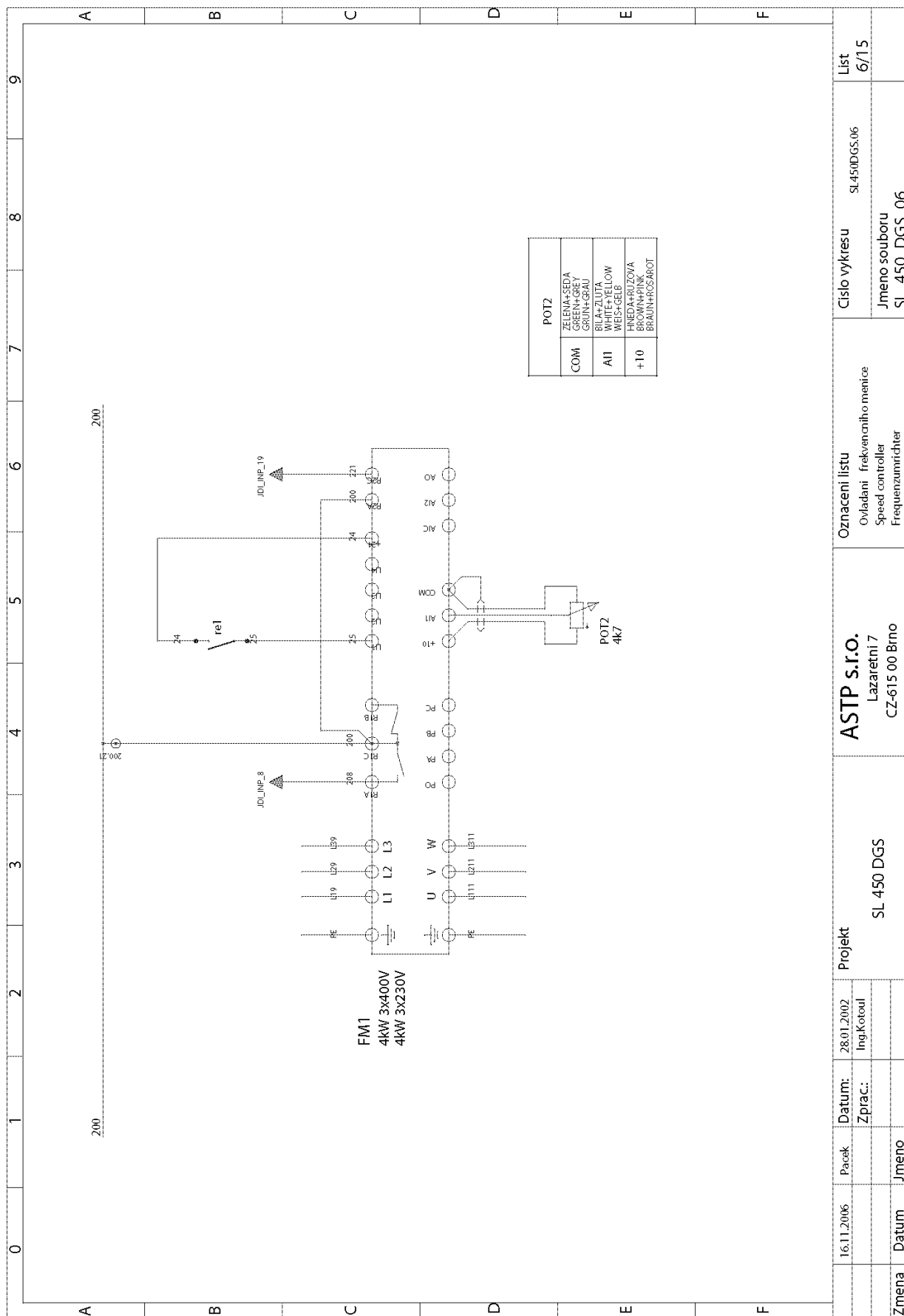


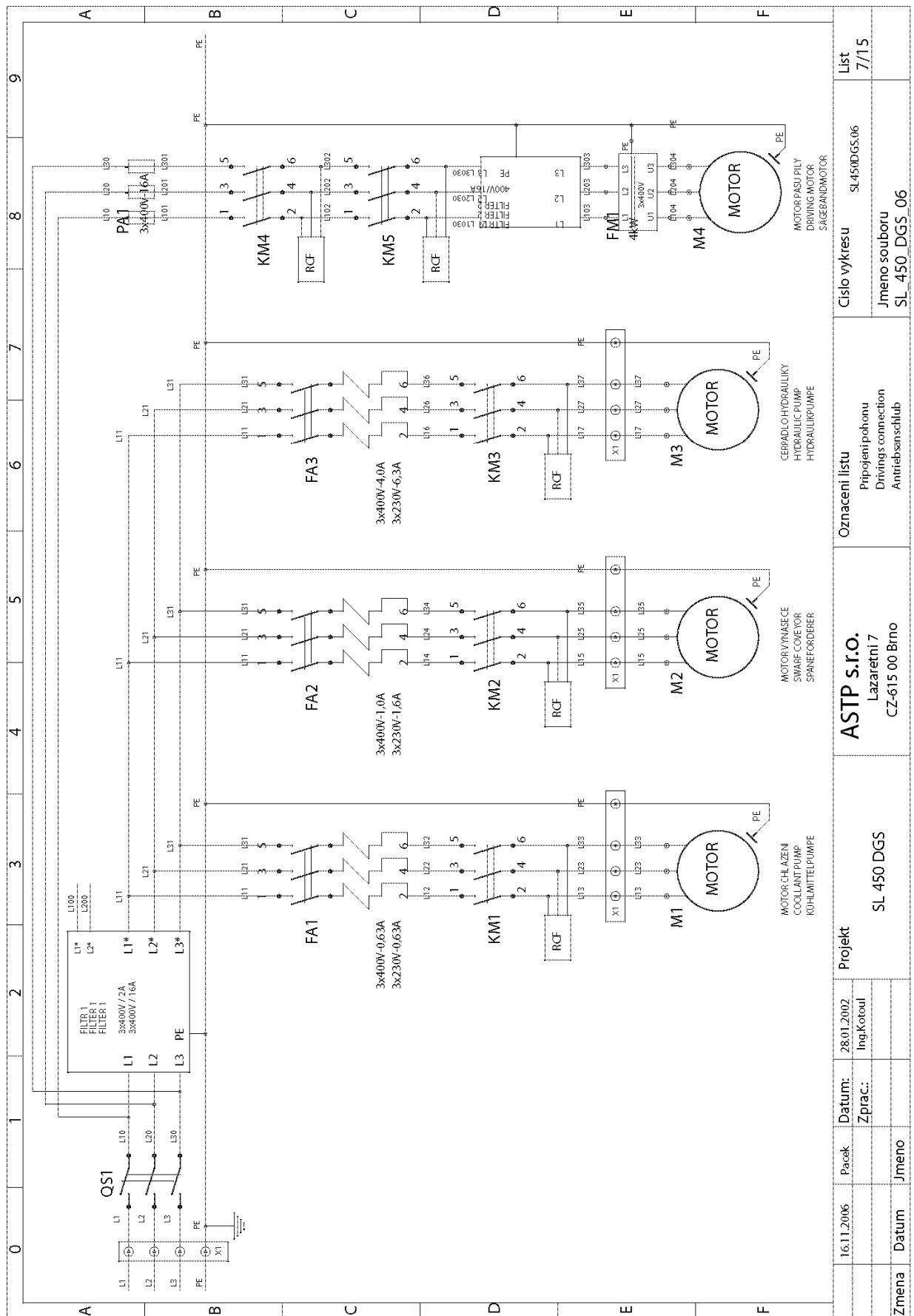


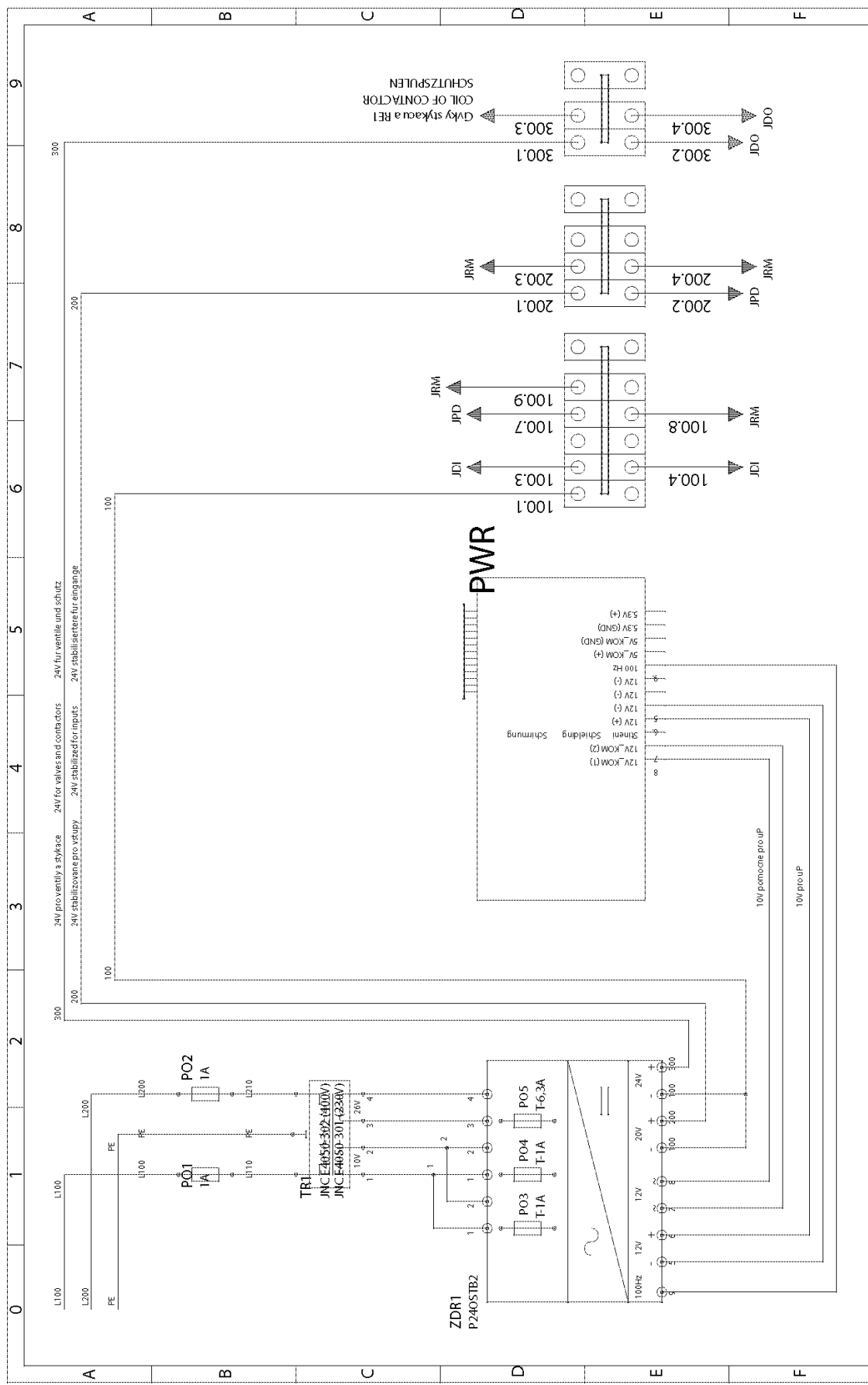
16.11.2006	Pacek	Datum: 28.01.2002 Zprac.: Ing.Kotoul	Projekt SL 450 DGS	ASTP s.r.o. Lazaretní 7 CZ-615 00 Brno	Oznaceni listu Vystupý s nevyhlazeným Napajecím napětím 24V = Outputs Ausgänge	Císlo vykresu SL450DGS.06	List 3/15
Zmena	Datum	Jmeno				Jmeno souboru SL 450 DGS 06	









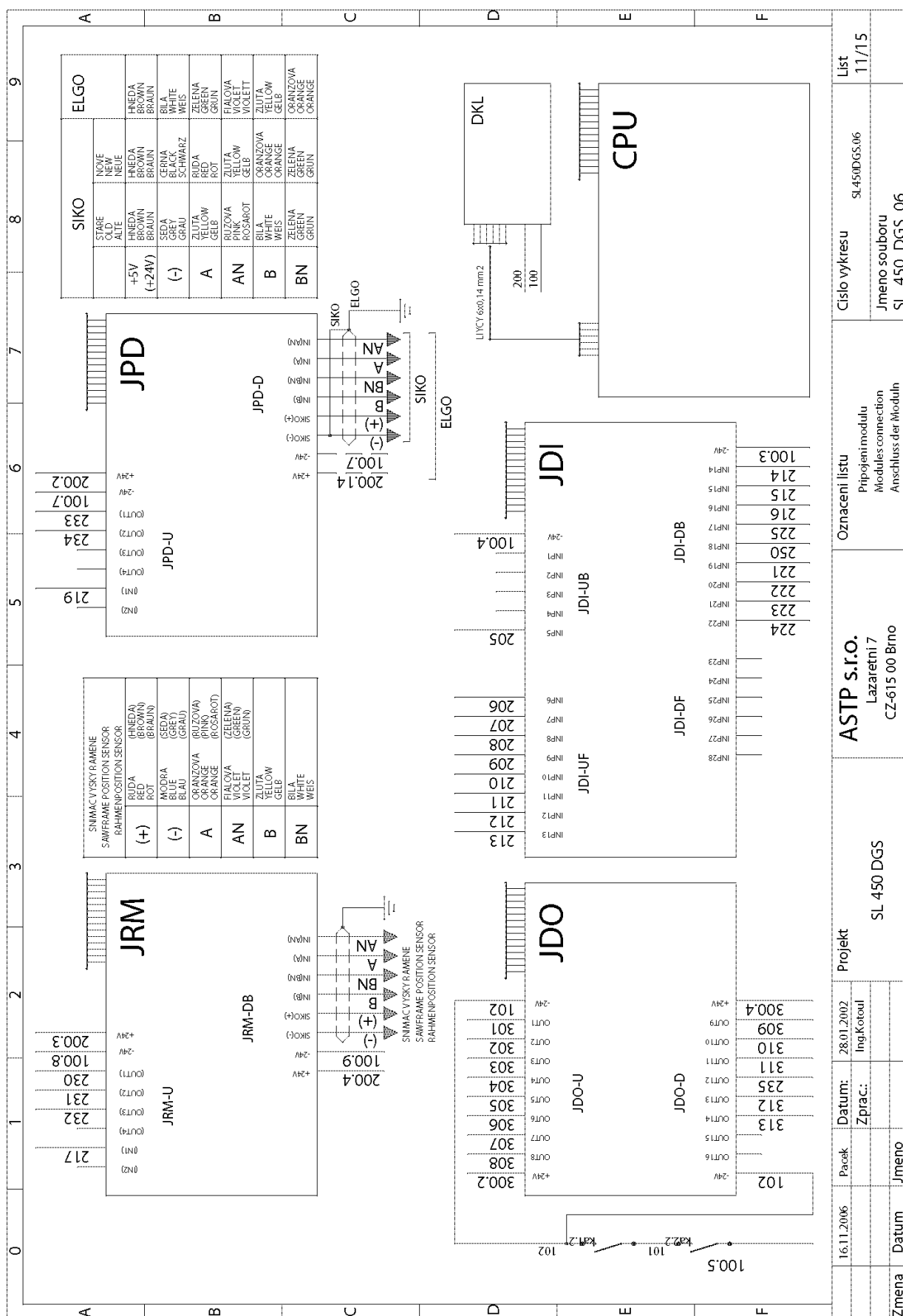


16.11.2006	Pacek	Datum:	28.01.2002	Projekt	ASTP s.r.o.	Oznaceni listu	Cislo vykresu	List
		Zprac:	Ing.Kotoul		Lazaretni 7	Propojeni napajecich obvodu	SL450DGS_06	8/15
Zmena	Datum	Jmeno			CZ-615 00 Brno	Feeding circuits	Jmeno souboru	
						Stromversorgungsgebiete	SL_450_DGS_06	



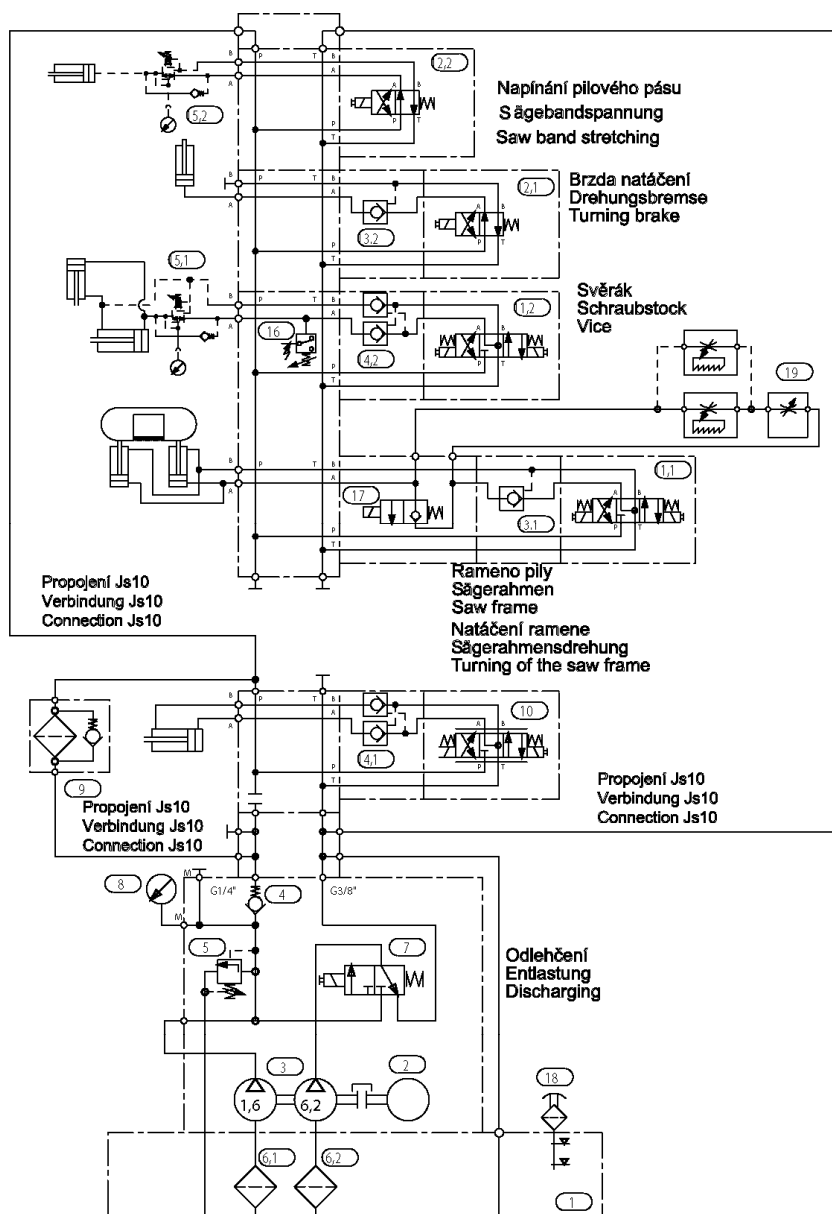
DVKY STYKACU STAVY STYKACU STAVY SPOUSTECU KONCOVY SPINAC SNIMAC VENTIL BEZP. MODUL MIKRONIZER KLAVESNICE FREKVENCNI MIENIC RYCHLOMER KONTAKT RELE		COIL OF CONTACTOR STATUS OF CONTACTORS STATUS OF SCHIELDS LIMIT SWITCH SENSOR VALVE SAFETY MODULE MICRONISER KEYBOARD SPEED CONTROLLER SPEED COUNTER CONTACT RELAY		SCHUTZSPULEN SCHALTSTUTZSTAND SCHALTERSTAND ENDSCHALTER SENSOR VENTIL SICHERHEITSMODUL MICRONISER TASTATUR FREQUENZUMRICHTER FAHRTIMESSER KONTAKT RELAIS		1 2 3		Projekt		Datum: 26.01.2002 Zprac: Ing.Kotoul		Pacek Jmeno		Jmeno Datum	
								ASTP s.r.o. Lazaretni 7 CZ-615 00 Brno				SL 450 DGS			
								Oznaceni listu Pripojeni ke svorkam X3 Connection to X3 Anschluss an X3				Cislo vykresu SL450DGS.06		List 10/15	
														Jmeno souboru SL_450_DGS_06	

100.1 P240		100.3 JDI		100.5 kontakt ka2.2		100.7 JPD		100.9 JRM		100.11 Gvký stykacu KA1,KA2		100.13 Snimac SQ7	
100.2 Klavesnice		100.4 JDI		100.8 JRM		100.10 JRM		100.12 Rychlomer		100.14 Snimac SQ8			
X3													
200.1 P240		200.3 JRM		200.7 Ventil V5		200.9 Ventil V6B		200.11 Ventil V7A		200.13 Koncový spinac SQ4		200.15 Koncový spinac SQ6	
										200.17 Koncový spinac SQ2		200.21 Rele R1 a R2 menice	
										200.22 Snimac SQ8		200.24 Koncový spinac SQ10	
										200.16 Koncový spinac SQ1		200.18 Bezp. modul BM	
										200.14 rezerva (JPD - Elgo)		200.20 Snimac SQ7	
										200.12 Ventil V7B		200.22 Snimac SQ8	
										200.10 Klavesnice		200.24 Koncový spinac SQ10	
										200.8 Stavy spousteacu		200.18 Bezp. modul BM	
										200.6 JRM		200.20 Snimac SQ7	
										200.4 JRM		200.22 Snimac SQ8	
										200.2 JPD		200.24 Koncový spinac SQ10	
										300.1 P240		300.5 Gvký stykacu + RE1	
										300.3 Ventil V1B		300.7 Ventil V2	
										300.5 Ventil V4		300.9 Ventil V6	
										300.7 Ventil V8		300.11 Ventil V9	
										300.9 Ventil V10		300.13 Ventil V11	
										300.11 Ventil V12		300.15 Ventil V13	
										300.13 Ventil V14		300.17 Ventil V15	
										300.15 Ventil V16		300.19 Ventil V17	
										300.17 Ventil V18		300.21 Ventil V19	
										300.19 Ventil V20		300.23 Ventil V21	
										300.21 Ventil V22		300.25 Ventil V23	
										300.23 Ventil V24		300.27 Ventil V25	
										300.25 Ventil V26		300.29 Ventil V27	
										300.27 Ventil V28		300.31 Ventil V29	
										300.29 Ventil V30		300.33 Ventil V31	
										300.31 Ventil V32		300.35 Ventil V33	
										300.33 Ventil V34		300.37 Ventil V35	
										300.35 Ventil V36		300.39 Ventil V37	
										300.37 Ventil V38		300.41 Ventil V39	
										300.39 Ventil V40		300.43 Ventil V41	
										300.41 Ventil V42		300.45 Ventil V43	
										300.43 Ventil V44		300.47 Ventil V45	
										300.45 Ventil V46		300.49 Ventil V47	
										300.47 Ventil V48		300.51 Ventil V49	
										300.49 Ventil V50		300.53 Ventil V51	
										300.51 Ventil V52		300.55 Ventil V53	
										300.53 Ventil V54		300.57 Ventil V55	
										300.55 Ventil V56		300.59 Ventil V57	
										300.57 Ventil V58		300.61 Ventil V59	
										300.59 Ventil V60		300.63 Ventil V61	
										300.61 Ventil V62		300.65 Ventil V63	
										300.63 Ventil V64		300.67 Ventil V65	
										300.65 Ventil V66		300.69 Ventil V67	
										300.67 Ventil V68		300.71 Ventil V69	
										300.69 Ventil V70		300.73 Ventil V71	
										300.71 Ventil V72		300.75 Ventil V73	
										300.73 Ventil V74		300.77 Ventil V75	
										300.75 Ventil V76		300.79 Ventil V77	
										300.77 Ventil V78		300.81 Ventil V79	
										300.79 Ventil V80		300.83 Ventil V81	
										300.81 Ventil V82		300.85 Ventil V83	
										300.83 Ventil V84		300.87 Ventil V85	
										300.85 Ventil V86		300.89 Ventil V87	
										300.87 Ventil V88		300.91 Ventil V89	
										300.89 Ventil V90		300.93 Ventil V91	
										300.91 Ventil V92		300.95 Ventil V93	
										300.93 Ventil V94		300.97 Ventil V95	
										300.95 Ventil V96		300.99 Ventil V97	
										300.97 Ventil V98		301.01 Ventil V99	
										301.01 Ventil V100		301.05 Ventil V101	
										301.05 Ventil V102		301.09 Ventil V103	
										301.09 Ventil V104		301.13 Ventil V105	
										301.13 Ventil V106		301.17 Ventil V107	
										301.17 Ventil V108		301.21 Ventil V109	
										301.21 Ventil V110		301.25 Ventil V111	
										301.25 Ventil V112		301.29 Ventil V113	
										301.29 Ventil V114		301.33 Ventil V115	
										301.33 Ventil V116		301.37 Ventil V117	
										301.37 Ventil V118		301.41 Ventil V119	
										301.41 Ventil V120		301.45 Ventil V121	
										301.45 Ventil V122		301.49 Ventil V123	
										301.49 Ventil V124		301.53 Ventil V125	
										301.53 Ventil V126		301.57 Ventil V127	
										301.57 Ventil V128		301.61 Ventil V129	
										301.61 Ventil V130		301.65 Ventil V131	
										301.65 Ventil V132		301.69 Ventil V133	
										301.69 Ventil V134		301.73 Ventil V135	
										301.73 Ventil V136		301.77 Ventil V137	
										301.77 Ventil V138		301.81 Ventil V139	
										301.81 Ventil V140		301.85 Ventil V141	
										301.85 Ventil V142		301.89 Ventil V143	
										301.89 Ventil V144		301.93 Ventil V145	
										301.93 Ventil V146		301.97 Ventil V147	
										301.97 Ventil V148		302.01 Ventil V149	
										302.01 Ventil V150		302.05 Ventil V151	
										302.05 Ventil V152		302.09 Ventil V153	
										302.09 Ventil V154		302.13 Ventil V155	
										302.13 Ventil V156		302.17 Ventil V157	
										302.17 Ventil V158		302.21 Ventil V159	
										302.21 Ventil V160		302.25 Ventil V161	
										302.25 Ventil V162		302.29 Ventil V163	
										302.29 Ventil V164		302.33 Ventil V165	
										302.33 Ventil V166		302.37 Ventil V167	
										302.37 Ventil V168		302.41 Ventil V169	
										302.41 Ventil V170		302.45 Ventil V171	
										302.45 Ventil V172		302.49 Ventil V173	
										302.49 Ventil V174		302.53 Ventil V175	
										302.53 Ventil V176		302.57 Ventil V177	
										302.57 Ventil V178		302.61 Ventil V179	
										302.61 Ventil V180		302.65 Ventil V181	
										302.65 Ventil V182		302.69 Ventil V183	
										302.69 Ventil V184		302.73 Ventil V185	
										302.73 Ventil V186		302.77 Ventil V187	
										302.77 Ventil V188		302.81 Ventil V189	
										302.81 Ventil V190		302.85 Ventil V191	
										302.85 Ventil V192		302.89 Ventil V193	
										302.89 Ventil V194		302.93 Ventil V195	
										302.93 Ventil V196		302.97 Ventil V197	
										302.97 Ventil V198		303.01 Ventil V199	
										303.01 Ventil V200		303.05 Ventil V201	
										303.05 Ventil V202		303.09 Ventil V203	
										303.09 Ventil V204		303.13 Ventil V205	
										303.13 Ventil V206		303.17 Ventil V207	
										303.17 Ventil V208		303.21 Ventil V209	
										303.21 Ventil V210		303.25 Ventil V211	
										303.25 Ventil V212		303.29 Ventil V213	
										303.29 Ventil V214		303.33 Ventil V215	
										303.33 Ventil V216		303.37 Ventil V217	
										303.37 Ventil V218		303.41 Ventil V219	
										303.41 Ventil V220		303.45 Ventil V221	
										303.45 Ventil V222		303.49 Ventil V223	
										303.49 Ventil V224		303.53 Ventil V225	
										303.53 Ventil V226		303.57 Ventil V227	
										303.57 Ventil V228		303.61 Ventil V229	
										303.61 Ventil V230		303.65 Ventil V231	
										303.65 Ventil V232		303.69 Ventil V233	
										303.69 Ventil V234		303.73 Ventil V235	
										303.73 Ventil V236		303.77 Ventil V237	
										303.77 Ventil V238		303.81 Ventil V239	
										303.81 Ventil V240		303.85 Ventil V241	
										303.85 Ventil V242		303.89 Ventil V243	
										303.89 Ventil V244		303.93 Ventil V245	
										303.93 Ventil V246		303.97 Ventil V247	
										303.97 Ventil V248		304.01 Ventil V249	
										304.01 Ventil V250		304.05 Ventil V251	
										304.05 Ventil V252		304.09 Ventil V253	
										304.09 Ventil V254		304.13 Ventil V255	
										304.13 Ventil V256			





6.2. Hydraulické schéma / Hydraulikschema / Hydraulic diagram



Základní technické parametry :
Technische Spezifikation:
Technical specification:

Q	8+2,1	dm ³ ·min ⁻¹	ot.	1410	min ⁻¹
P _{max}	4	MPa	P	1,1	kW

Hydraulické schéma:
Hydraulikschema:
Hydraulic diagram:

870-1518

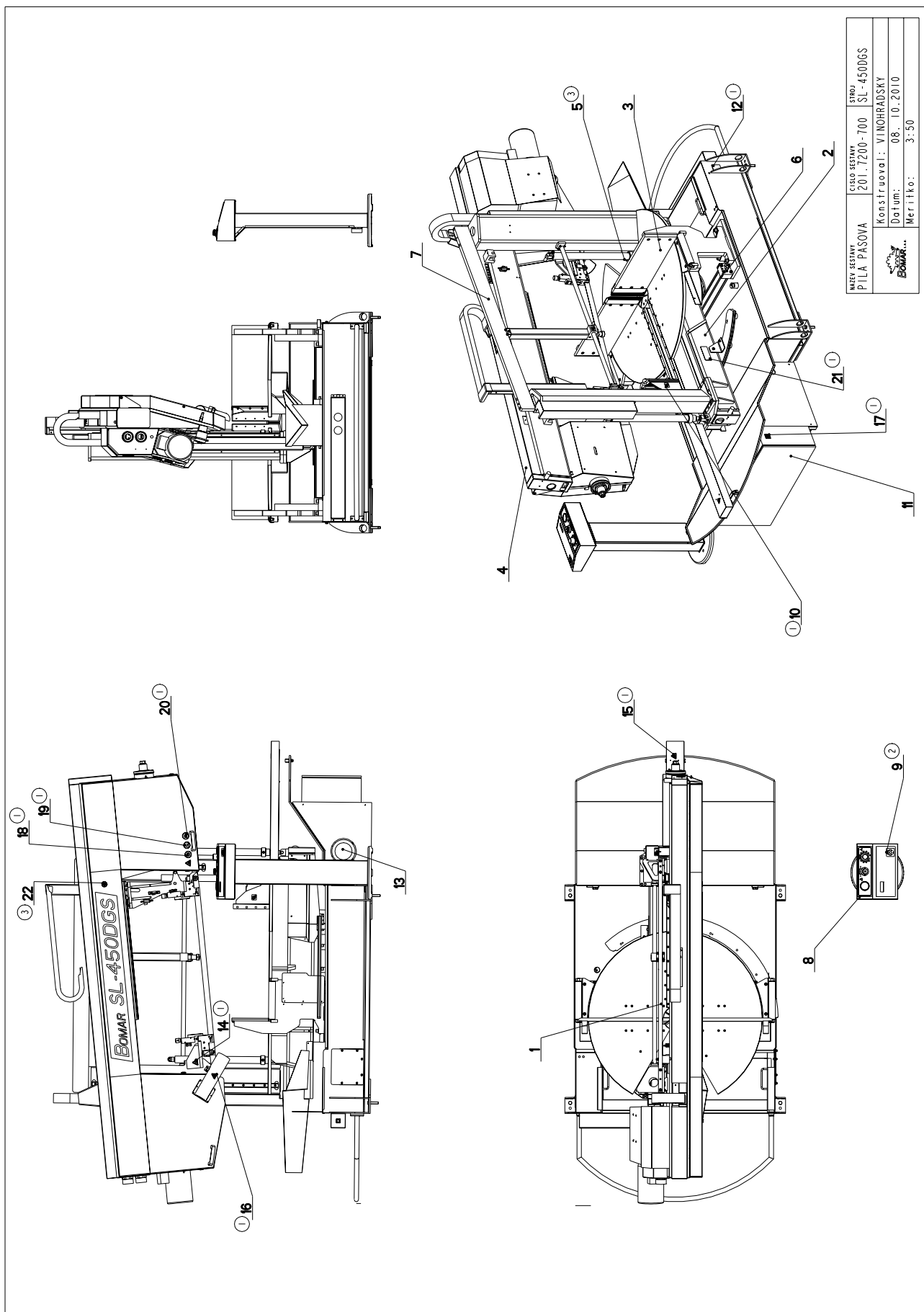
Schéma / Schema / Diagram: 8701518A .DWG
Datum / Datum / Date: 4.7. 2003

Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Nádrž / Behälter / Tank	220dl.750mm 25dm ³	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL90S-4 1,1kW 2,78 A	1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	P2-6,2/1,6L.66313	1
4	Jednosměrný ventil / Einwegventil / One-way valve	VJO1-06/SG-1	1
5	Přepouštěcí ventil / Bypašventil / By pass valve	VPP2-04/S-6	1
6	Sací filtr / Filter / Filter	2SF 56/48-0,063	2
7	Manometr / Manometer / Manometer	Ø68 (0-10 MPa)	4
8	Rozváděč / Schaltschrank / Switchboard	ROX1- 042D21/02400E1K2	1
9	Tlakový filtr / Druckfilter / Pressure filter Vložka ve filtru / Filtereinsatz / Filter inset 92.153.102	D 042-153 V3.0510-03	1
10	Proporcionální rozváděč / Wege-Proportionalventil / Proportional distributor	PRM2-043Y11/1,2-24 Mikro	1
11	Rozváděč / Schaltschrank / Switchboard	RPE3- 043Y11/02400E1K1	1
12	Rozváděč / Schaltschrank / Switchboard	RPE3- 042R11/2400E1K1	2
13	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MA	3
14	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MC	3
15	Redukční ventil / Reduktionventil /	VRN2-06/S-6R	3
16	Tlakový spínač/Druckschalter/Pressure switch 92.201.003	SUCO 0166 415 031 059	1
17	Blok rychloposuvu / Eilgangsblock / Speed shift block	729-0084	1
18	Nalévací zátka / Stopfen / Fill stopper	L1.0406-51	1
19	Škrticí ventil / Drosselventil / Throttle valve	VSO1-04/R2,5-O	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 Construction 820.450 DGS) , výrobní číslo (např. 125) a rok výroby (např. 1999).
- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Construction 820.450 DGS), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).
- For spare parts order, you must always to allege: type of machine (for example Construction 820.450 DGS), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Construction 820.450 DGS



7.2. Kusovník / Stückliste / Piece list – Construction 820.450 DGS

Císlo Sestavy 201.7200-700		Ver. 3	Název sestavy PILA PASOVA/BAND SAW/BANDSAĞE			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	201.7201-200	4	PODSTAVEC / BASE / UNTERSATZ		1	
2	201.7202-700	1	KONZOLA OTOČNÁ / TURNABLE CONSOL / DREHKONSOLE		1	
3	201.7203-200	0	SVERAK / VICE / SCHRAUBSTOCK		1	
4	201.7204-700	0	RAMENO / SHOULDER / SÄGERAHMEN		1	
5	201.7207-750 (3)	0	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLINDER		2	
6	201.7207-900	0	VALEC NATACENÍ / TURNING CYLINDER / DREHZYLINDER		1	
7	201.7214-000	0	UPINANÍ HORNÍ / TOP CLAM / SPANNVORRICHTUNG OBEN		1	
8	201.8814-200	1	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		1	
9	30.0599-008 (2)	0	STÍTEK / LABEL / SCHILD	P 0,5-62	1	
10	31.3199-005 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		3	
11	31.7230-001	0	ROZVADEC / DISTRIBUTOR / VERTEILER	3x400V komplet	1	
12	31.7299-101 (1)	0	STÍTEK TYPYVÝ / MACHINE LABEL / MASCHINE SCHILD	P 0,5x65	1	
13	92.001.026	0	AGREGÁT HYDRAULICKÝ / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT	Typ 870-1184	1	
14	99.900.040 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		2	
15	99.900.041 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
16	99.900.043 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
17	99.900.046 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
18	99.900.047 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
19	99.900.048 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
20	99.900.049 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
21	99.900.055 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1	
22	99.901.032 (3)	0	SAMOLEPKA / STICKER / AUFKLEBER	CERTIFIKACNÍ SAMOLEPKA	1	

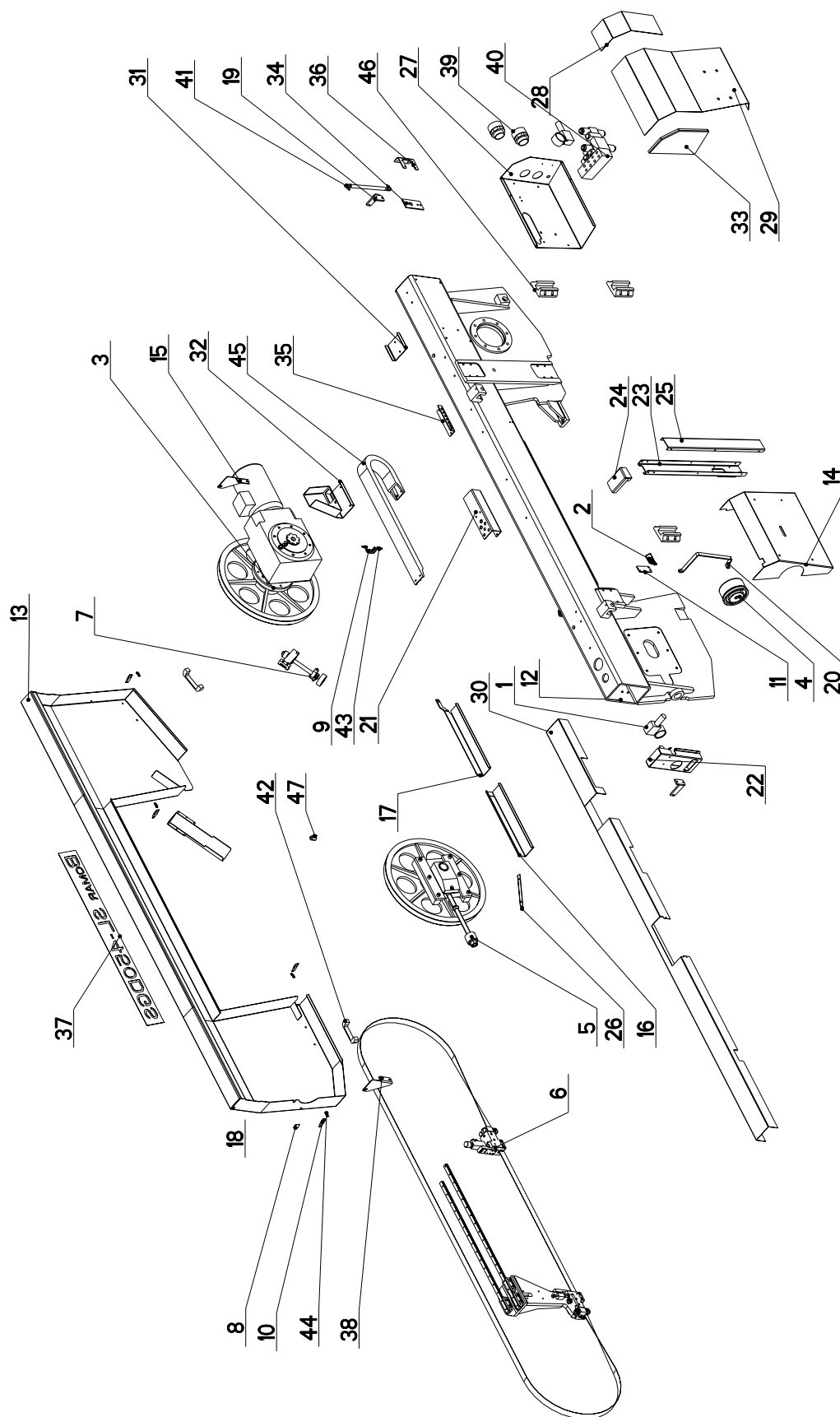
1. PRIDANÝ BEZPEČNOSTNÍ STÍTEK 2x 99.900.040, 1x 99.900.043, 1x 99.900.046, 1x 99.900.047, 1x 99.900.048, 1x 99.900.049, 1x 99.900.055,
1x 99.900.041, 3x 3199-005, 1x TYPYVÝ STÍTEK 31.7299-101. 246/ZM317 6.8.2007 SLEZACKOVA

2. PRIDANÝ STÍTEK RYCHLOSTI 30.0599-008. 298/ZM016 11.2.2008 SLEZACKOVA

3. PRIDANÝ CERTIFIKACNÍ SAMOLEPKA 99.901.032, ZRUS.VALEC 201.7207-800 A NAHR.201.7207-750. 071/ZM267 8.10.2010 SLEZACKOVA

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

7.3. Rameno / Sägerahmen / Saw arm - 1



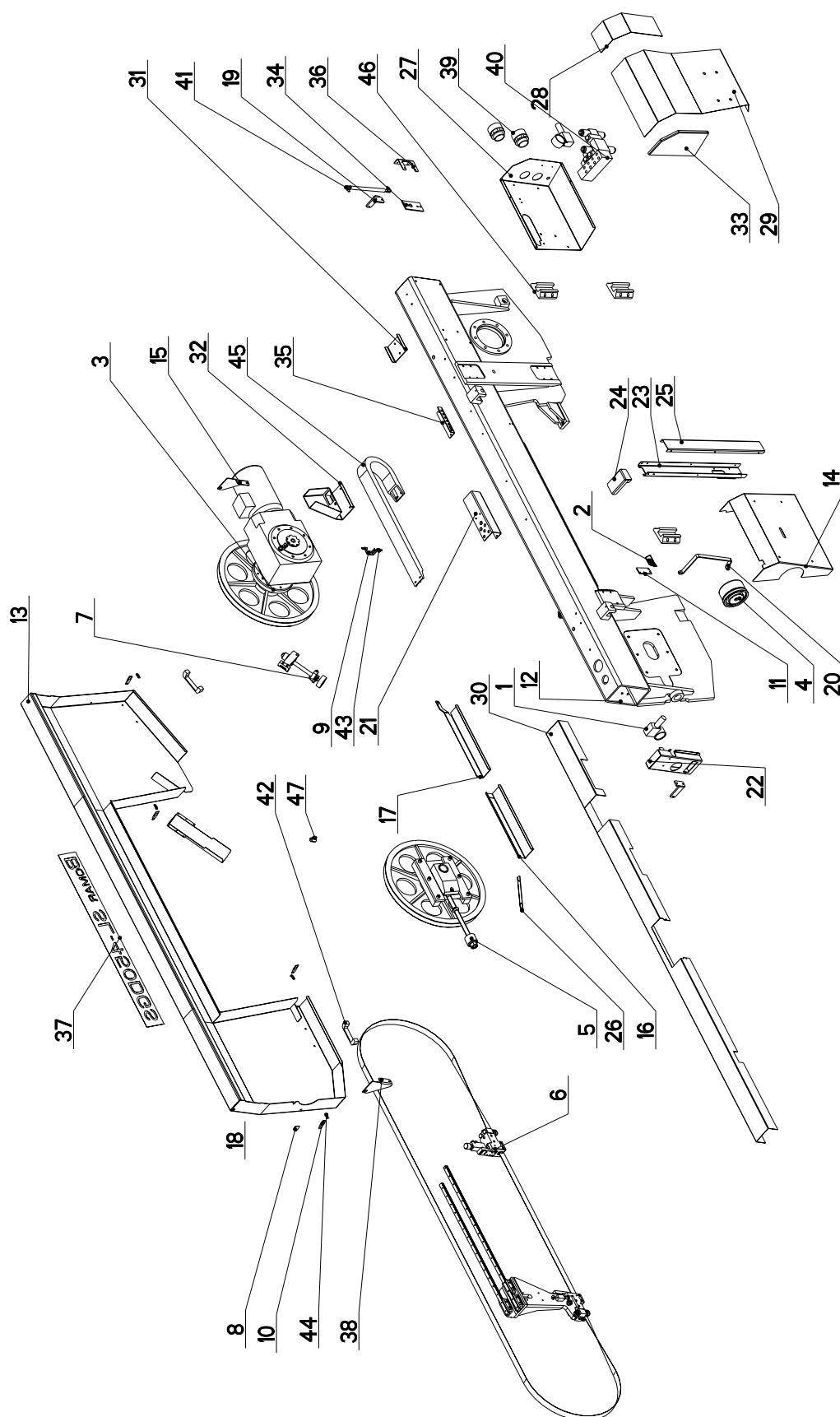
NÁZEV, SESTAVY RAMENO	ČÍSLO, SESTAVY 201.7204-700	STROJ SL-450DGS
	Konstruoval: VINOHRADSKÝ	
	Datum: 04. 03. 2010	
	Meritko: 1:20	

7.4. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm – 1

Cislo Sestavy 201.7204-700		Ver. 0	Nazev sestavy RAMENO/SHOULDER/SÄGERAHMEN		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozměr	Ks
1	252.020	0	VENTIL REGULACNI / REGULATION VALVE / REGELVENTIL	MAKETA	2
2	201.6702-200	2	SNIMAC / SENSOR / SENSOR		1
3	201.7205-000	0	POHON / DRIVE / ANTRIEB		1
4	201.7207-400	0	VALEC NAPINACI / TENSIONING CYLINDER / SPANNZYLINDER		1
5	201.7208-000	0	NAPINANI / TENSIONING / SPANNUNG		1
6	201.7210-300	3	VEDENI PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
7	201.7214-300	0	KARTAC / BRUSH / BÜRSTE		1
8	30.0814-113	0	PLECH / PLATE / BLECH	P2-30	1
9	30.1814-011	0	DRZAK / HOLDER / HALTER	P 3- 76	1
10	30.1814-110	0	PANT / HINGE / TÜRBAND		4
11	30.7204-202	0	DRZAK / HOLDER / HALTER	HR 40x5	1
12	30.7204-701	4	RAMENO / SHOULDER / SÄGERAHMEN		1
13	30.7214-101	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
14	30.7214-105	1	KRYT NAPINANI / TENSIONING COVER / BANDSPANNUNGSABDECKUNG		1
15	30.7214-108	0	PANT / HINGE / TÜRBAND	P4-124	1
16	30.7214-115	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
17	30.7214-116	0	KRYT PASU / BELT COVER / BANDABDECKUNG		1
18	30.7214-136	1	KRYT KARTACKU / BRUSH COVER / BÜRSTENABDECKUNG		1
19	30.7214-141	0	DRZAK / HOLDER / HALTER		2
20	30.7214-150	0	DRZAK / HOLDER / HALTER	HR 20x5	1
21	30.7214-159	2	DRZAK / HOLDER / HALTER	P 3 - 190	1
22	30.7214-160	0	KRYT / COVER / ABDECKUNG		1
23	30.7214-167	1	VEDENI / GUIDE / BACKENFÜHRUNG		1
24	30.7214-168	1	DRZAK / HOLDER / HALTER		1
25	30.7214-169	1	KRYT / COVER / ABDECKUNG	P 2-108	1
26	30.7214-171	0	OKAP / GUTTER CHANNEL / BLECH	P 1.5 - 44	1
27	30.7214-201	4	KRYT / COVER / ABDECKUNG	P2-616	1
28	30.7214-202	1	PLECH / PLATE / BLECH	P2-140	1
29	30.7214-203	0	KRYT MOTORU / MOTOR COVER / MOTORABDECKUNG		1
30	30.7214-206	0	KRYT / COVER / ABDECKUNG		1
31	30.7214-207	0	DRZAK / HOLDER / HALTER	P 3 - 110	1
32	30.7214-208	1	DRZAK / HOLDER / HALTER		1

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

7.5. Rameno / Sägerahmen / Saw arm – 2

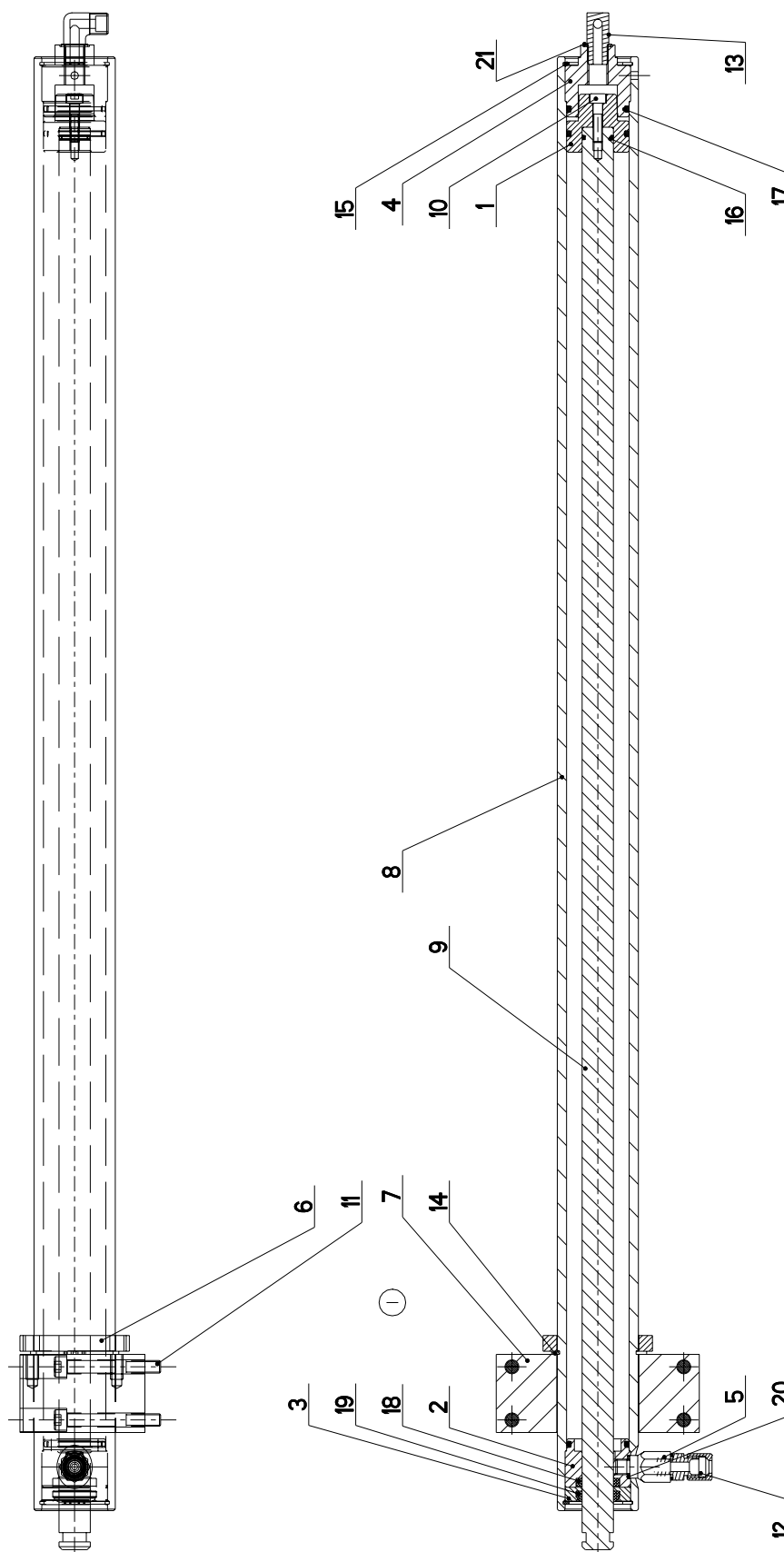


NAZEV SESTAVY RAMENO	ČÍSLO SESTAVY	STROJ
	201.7204-700	SL-450DGS
	Konstruoval: VINOHRADSKÝ	
	Datum: 04. 03. 2010	
	Meritko: 1:20	

[illegible]

Cislo Sestavy/Number of assembly; Verze (Ver.)/Version; Nazev sestavy/Assembly title; Pozice (Poz.)/Position; Objednaci cislo/Purchase order number; Rozmer/Size; Rozmer/Stock size; Abmesung

7.7. Válec svěráku / Schraubstockzylinder / Vice Cylinder



NAZEV SESTAVY	CÍSLO SESTAVY	STROJ
VALEC SVĚRAKU	201.7207-100	SL-450DGS
Konstruoval: &konstruoval		
Datum: 25. 02.2010		
Meritko: 2:5		

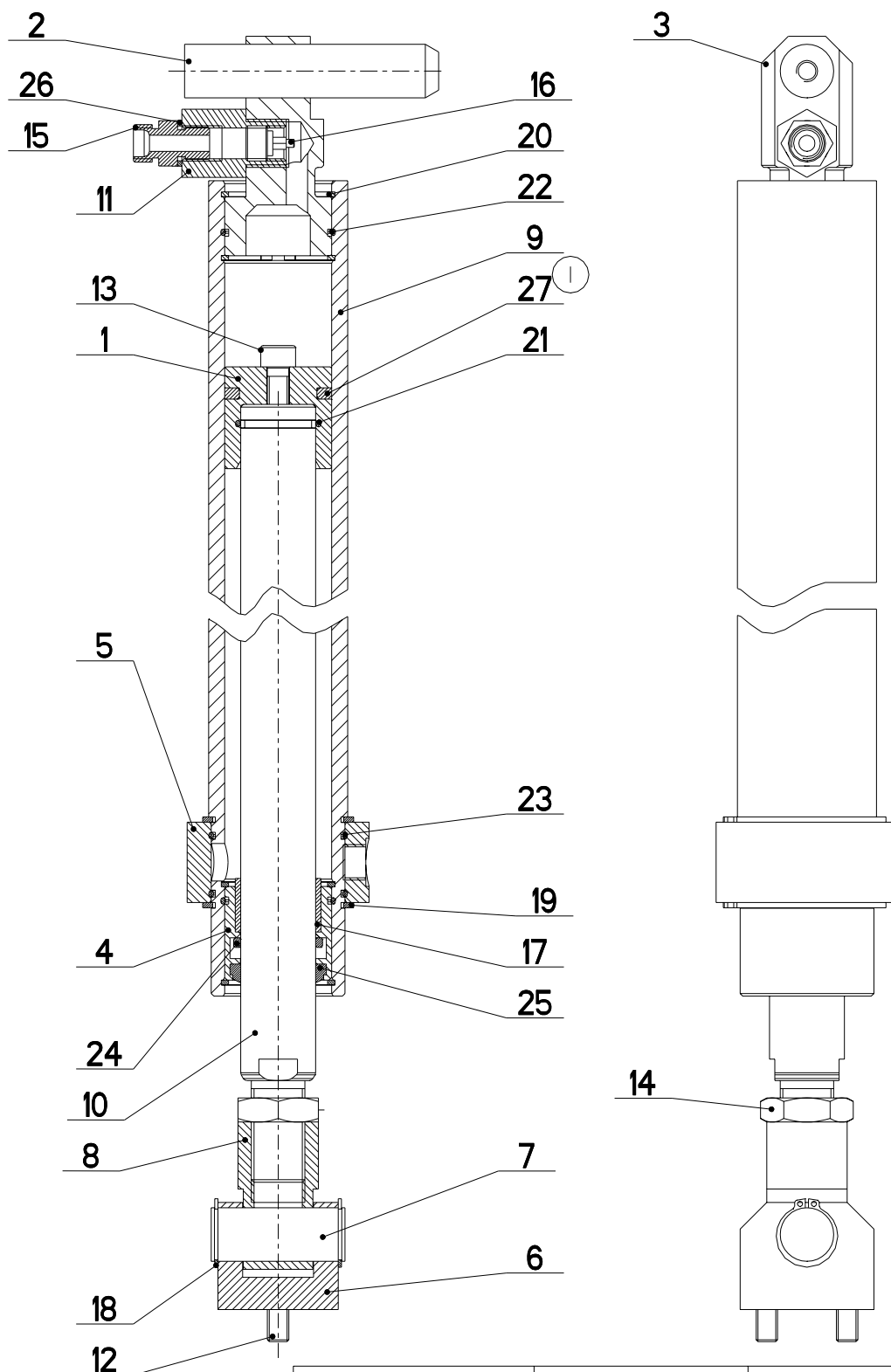
7.8. Kusovník / Stückliste / Piece list – Válec svěráku / Schraubstockzylinder / Vice Cylinder

Císlo Sestavy 201.7207-100		Ver. 0	Název sestavy VÁLEC SVĚRAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2107-001	0	PIST / PISTON / KOLBEN	d 45	1
2	30.2107-002	0	PŘÍRUBA / FLANGE / FLANSCH	TYC 45	1
3	30.2107-003	0	VÍKO / COVER / DECKEL	d 45	1
4	30.2107-004	0	VÍKO / COVER / DECKEL	d45	1
5	30.3407-103	1	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	TYC 17	1
6	30.3511-009	0	PŘÍLOŽKA / STRAP / LASCH	HR 70x10	1
7	30.7107-110	0	KOSTKA / CUBE / WÜRFEL	HR 80x50	1
8	30.7207-102	0	VÁLEC / ROLLER / ZYLINDER	TR 52/40H8	1
9	30.7207-103	0	PISTNICE / PISTON ROD / KOLBENSTANGE	d 20	1
10	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6x25	1
11	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x60	4
12	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
13	92.004.001	0	SROUBENÍ UHLIVÉ / ANGLE BOLTING / WINKELVERSCHRAUBUNG	37701	1
14	95.800.019	0	KROUZEK POJIST.VNĚJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUFEN	POJISTINY KROUZEK 52	1
15	95.801.006	0	KROUZEK POJIST.VNITŘÍ / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTINY KROUZEK 42	2
16	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16x2	1
17	96.002.017	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	34x3	3
18	96.041.002	1	TESNĚNÍ / SEALING / DICHTUNG	601-20x28x5	1
19	96.060.002	0	KROUZEK STÍRAČÍ / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRAČÍ 20	1
20	96.082.001	0	TESNĚNÍ / SEALING / DICHTUNG	KROUZEK CU 10/14	1
21	96.082.002	0	TESNĚNÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	2

1 O-KROUZEK 96.002.010 NAHRAZEN MANZETOU 96.041.002 29.4.2003 ROZKOSNY

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

7.9. Válec zvedací / Hebezyylinder / Lifting Cylinder



A - A

NAZEV SESTAVY VALEC ZVEDACI	CISLO SESTAVY 201.7207-750	STROJ STG450DGS
	Konstruoval: VINOHRADSKY	
	Datum: 10. 01.2011	
	Meritko: 1:2	

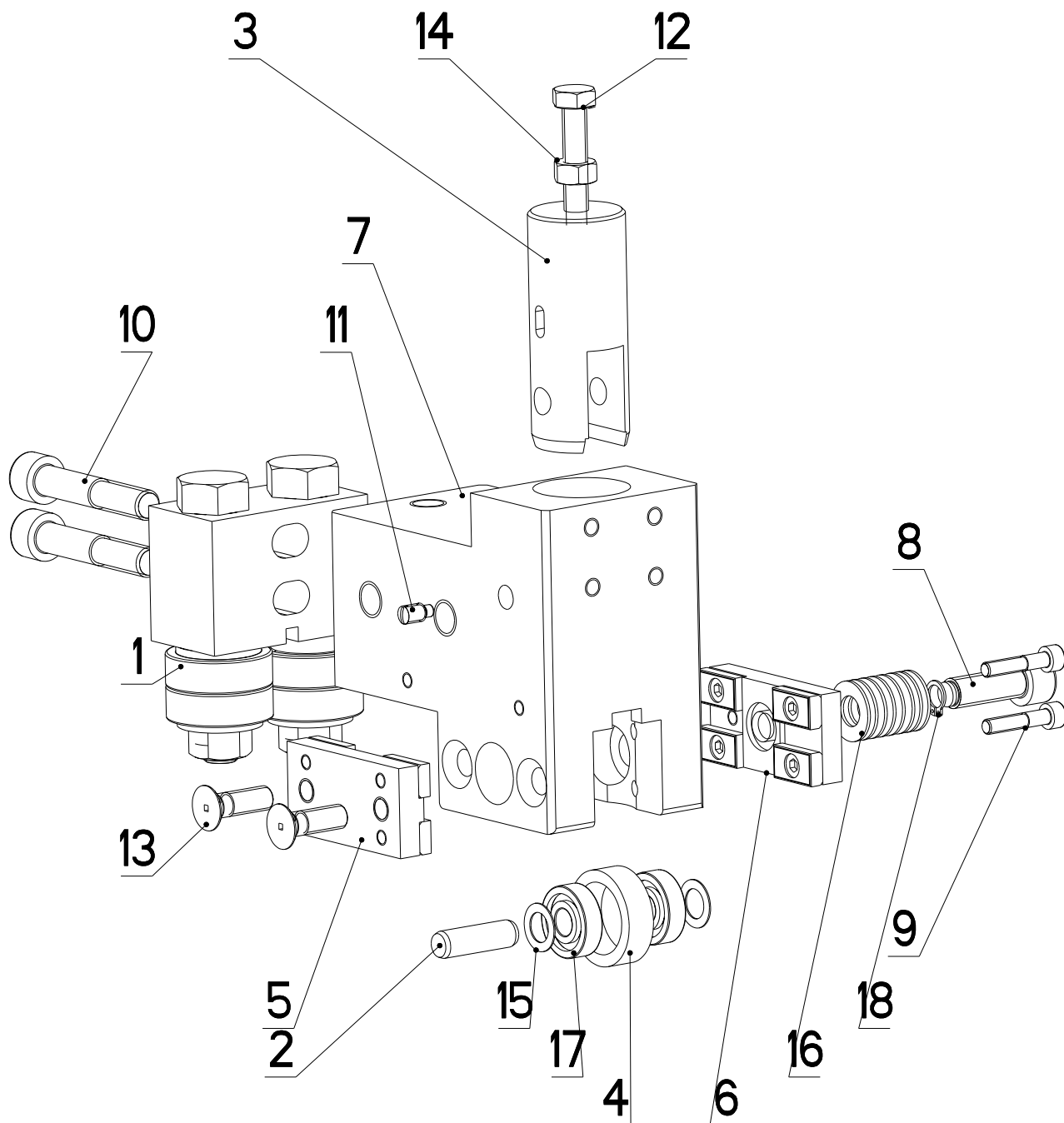
7.10. Kusovník / Stückliste / Piece list – Válec zvedací / Hebezyylinder / Lifting Cylinder

Císlo Sestavy 201.7207-750		Ver. I	Název sestavy VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6007-005	2	PIST / PISTON / KOLBEN	TYC 45	1
2	30.6007-007	0	CEP / LUG / BOLZEN	d 20	1
3	30.6007-008	0	VÍKO / COVER / DECKEL	d 40	1
4	30.7207-097	1	VÍKO / COVER / DECKEL	d 45	1
5	30.7207-099	0	KROUZEK / RING / RING	TR 70x12.5	1
6	30.7207-511	0	DRZAK / HOLDER / HALTER	HR 45x45	1
7	30.7207-512	0	CEP / LUG / BOLZEN	d 20	1
8	30.7207-513	0	DRZAK / HOLDER / HALTER	TYC 30x30	1
9	30.7207-801	2	VALEC ZVEDACÍ / LIFTING CYLINDER / HEBEZYLLINDER	TR 52/40H8	1
10	30.7207-802	2	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 28	1
11	30.9107-509	0	SROUBENÍ / BOLTING / VERSCHRAUBUNG	6HR 22	1
12	90.001.25.031	0	SROUB IMBUS CERNÝ / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	2
13	90.001.25.033	0	SROUB IMBUS CERNÝ / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	1
14	90.101.55.007	0	MATICE / NUT / MUTTER	MATICE M20x1,5	1
15	92.002.001	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	1
16	92.151.001	0	VENTIL POJISTNÝ / SAFETY VALVE / SICHERUNGSVENTIL	VPN-H 1/4"	1
17	95.700.005	0	POUZDRO / SLEEVE / BÜCHSE	28x20	1
18	95.800.009	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 20	2
19	95.800.019	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 52	2
20	95.801.005	0	KROUZEK POJIST.VNITŘÍ / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 40	4
21	96.001.007	0	KROUZEK O STATICKÝ / STATIC O RING / O-RING STATISCH	25x2	1
22	96.001.010	0	KROUZEK O STATICKÝ / STATIC O RING / O-RING STATISCH	36x2	2
23	96.001.013	0	KROUZEK O STATICKÝ / STATIC O RING / O-RING STATISCH	45x2	2
24	96.002.014	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	28x3	1
25	96.060.003	0	KROUZEK STÍRACÍ / SCRAPER RING / ABSTREIFRING	KROUZEK STÍRACÍ 28	1
26	96.082.002	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	1
27	96.900.015 (1)	0	TESNENÍ KOMBINOVANÉ / COMBINATION SEALING / KOMBIDICHTUNG	PT0200400-T46N	1

I.ZRUSENO TESNENÍ 96.900.002 A NAHAZENO 96.900.015. 336/ZM006 10.1.2011 SLEZACKOVA

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

7.11. Vodící kostka / Führungsklotz / Guiding cube - 1

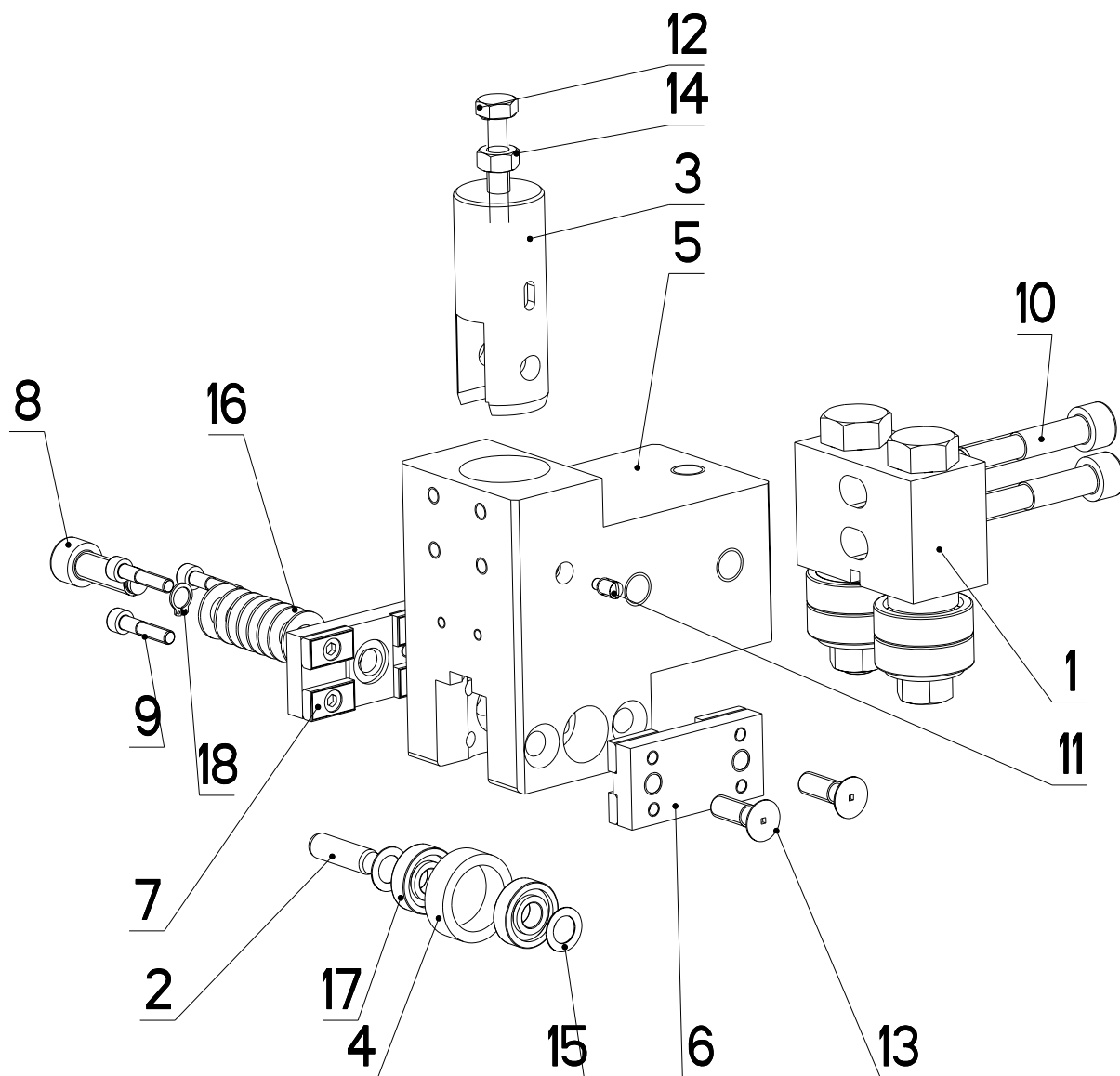


NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6110-550	STROJ IN440
	Konstruoval: HLADIL	
	Datum: 27. 01.2010	
	Meritko: 3:5	

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

Císlo Sestavy 201.6110-550		Ver. 3	Název sestavy KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6110-510	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
3	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
4	30.6710-110	1	KROUZEK / RING / RING	LH 2403210	1
5	30.Y410-110	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.Y410-120	0	DRŽÁK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	30.Y410-201	1	KOSTKA VODICI LEVA / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
8	30.Y610-503	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	1
9	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	3
10	90.001.25.053	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x55	2
11	90.004.2D.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
12	90.005.55.019	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x40	1
13	90.011.27.016	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	1
15	90.154.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHIEBE	10x16x0.50	2
16	90.350.02.005	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	20x10.2x1.1	8
17	95.001.044	0	LOZISKO / BEARING / LAGER	609 2RS	2
18	95.800.002	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUBEN	POJISTNY KROUZEK 8	1

7.13. Vodící kostka / Führungsklotz / Guiding cube - 2

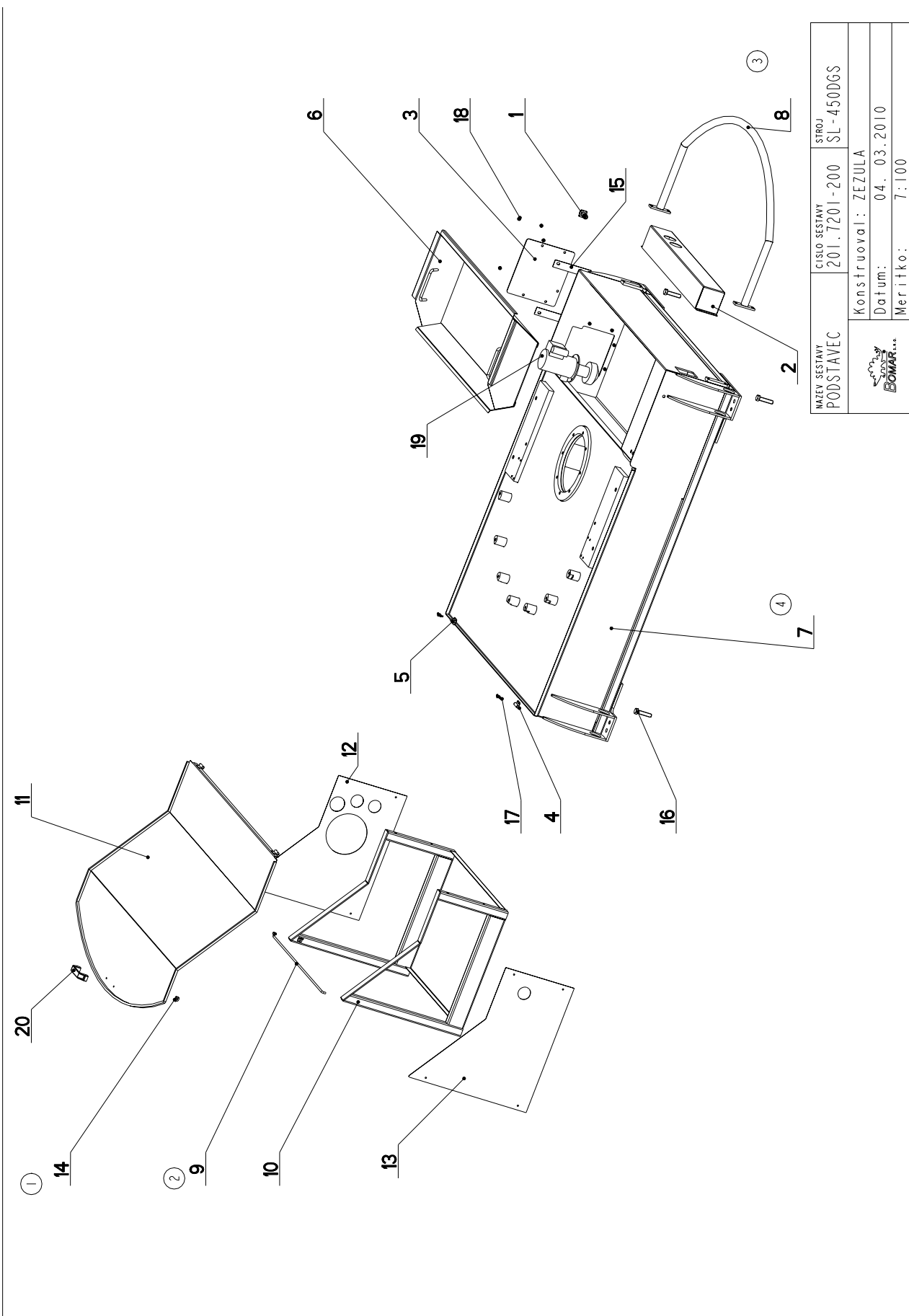


NAZEV SESTAVY KOSTKA VODICI	CISLO SESTAVY 201.6110-610	STROJ EX520
	Konstruoval: HLADIL	
	Datum: 27. 01.2010	
	Meritko: 1:2	

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

Číslo Sestavy 201.6110-610		Ver. 3	Název sestavy KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6110-510	0	VEDENÍ / GUIDE / BACKENFÜHRUNG		1
2	30.6710-108	1	KOLÍK / PIN / BOLZEN	TYC 10	1
3	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
4	30.6710-110	1	KROUZEK / RING / RING	LH 2403210	1
5	30.7410-101	1	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 110x70	1
6	30.7410-110	0	DRŽAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
7	30.7410-120	0	DRŽAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
8	30.7610-503	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x30	1
9	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5x25	3
10	90.001.25.053	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x55	2
11	90.004.20.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x12	1
12	90.005.55.019	0	SROUB 6HRANNÝ / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8x40	1
13	90.011.27.016	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8x25	2
14	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	1
15	90.154.50.003	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	10x16x0.50	2
16	90.350.02.005	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	20X10.2X1.1	8
17	95.001.044	0	LOŽISKO / BEARING / LAGER	609 2RS	2
18	95.800.002	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUBEN	POJISTNÝ KROUZEK 8	1

7.15. Podstavec / Untersatz / Base



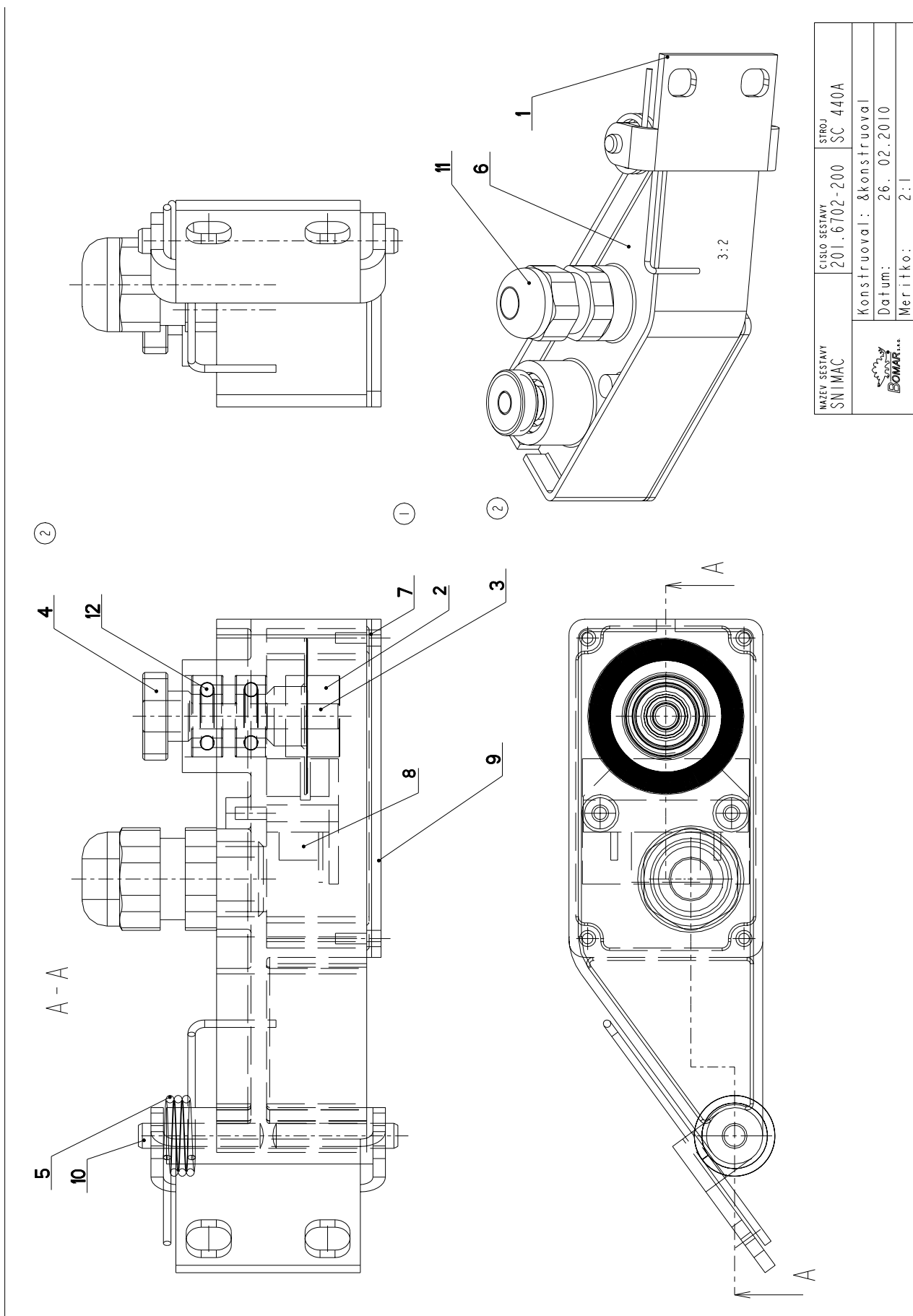
7.16. Kusovník / Stückliste / Piece list – Podstavec / Untersatz / Base

Císlo Sestavy 201.7201-200	Ver. 4	Název sestavy PODSTAVEC/BASE/UNTERSATZ			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	262.007	0	KONEKTOR / CONNECTOR / STECKVERBINDER		I
2	30.7201-102	I	KRYT / COVER / ABDECKUNG	P 2x327x1070	I
3	30.7201-103	I	KRYT / COVER / ABDECKUNG	P 4x235x270	I
4	30.7201-106	0	PANT / HINGE / TÜRBAND	40x40	I
5	30.7201-107	0	PANT / HINGE / TÜRBAND	40x40	I
6	30.7201-160	I	VANA / TANK / WANNE		I
7	30.7201-301	4	PODSTAVEC / BASE / UNTERSATZ		I
8	30.7214-114	0	PLOT / FENCE / ZAUN		I
9	30.7214-181	0	HACEK / HOOK / HÄKCHEN		I
10	30.7214-190	4	DRŽAK / HOLDER / HALTER		I
11	30.7214-191	I	SKLUZ / SLIDE / RUTSCH		I
12	30.7214-196	I	DRŽAK / HOLDER / HALTER	P 2,5 -605	I
13	30.7214-197	I	DRŽAK / HOLDER / HALTER	P 2,5 -605	I
14	30.7214-199	I	DRŽAK / HOLDER / HALTER	P 2 - 20	I
15	31.7217-032	0	TESNENÍ / SEALING / DICHTUNG	TL4	I
16	90.005.55.XXX	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M16x70	4
17	90.013.27.003	0	SROUB / BOLT / SCHRAUBE	M5x10	6
18	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	6
19	91.020.004	0	CERPADLO / PUMP / PUMPE	230/400V	I
20	94.012.001	0	RUKOJET / HANDLE / GRIFF		I

1. PRIDANY NOVE SOUCASTI - 30.7214-199, 30.7214-198, 90.152.50.004 . 18.4.2005 SLEZACKOVA
2. ZRUS. SOUCAST 30.7214-198 A NAHR. 30.7214-181, ZRUSENA PODLOZKA 5.3 90.152.50.004. 424/ZM187 7.8.2006 SLEZACKOVA
3. PRIDAN OCHRANNY RAM 30.72147-114. 330/ZM329 8.10.2008 SLEZACKOVA
4. ZRUSEN PODSTAVEC 30.7201-101 A NAHRAZEN PODSTAVCEM 30.7201-301. 016/ZM031 1.4.2009 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

7.17. Snímač / Senzor / Sensor



7.18. Kusovník / Stückliste / Piece list – Snímač / Sensor / Sensor

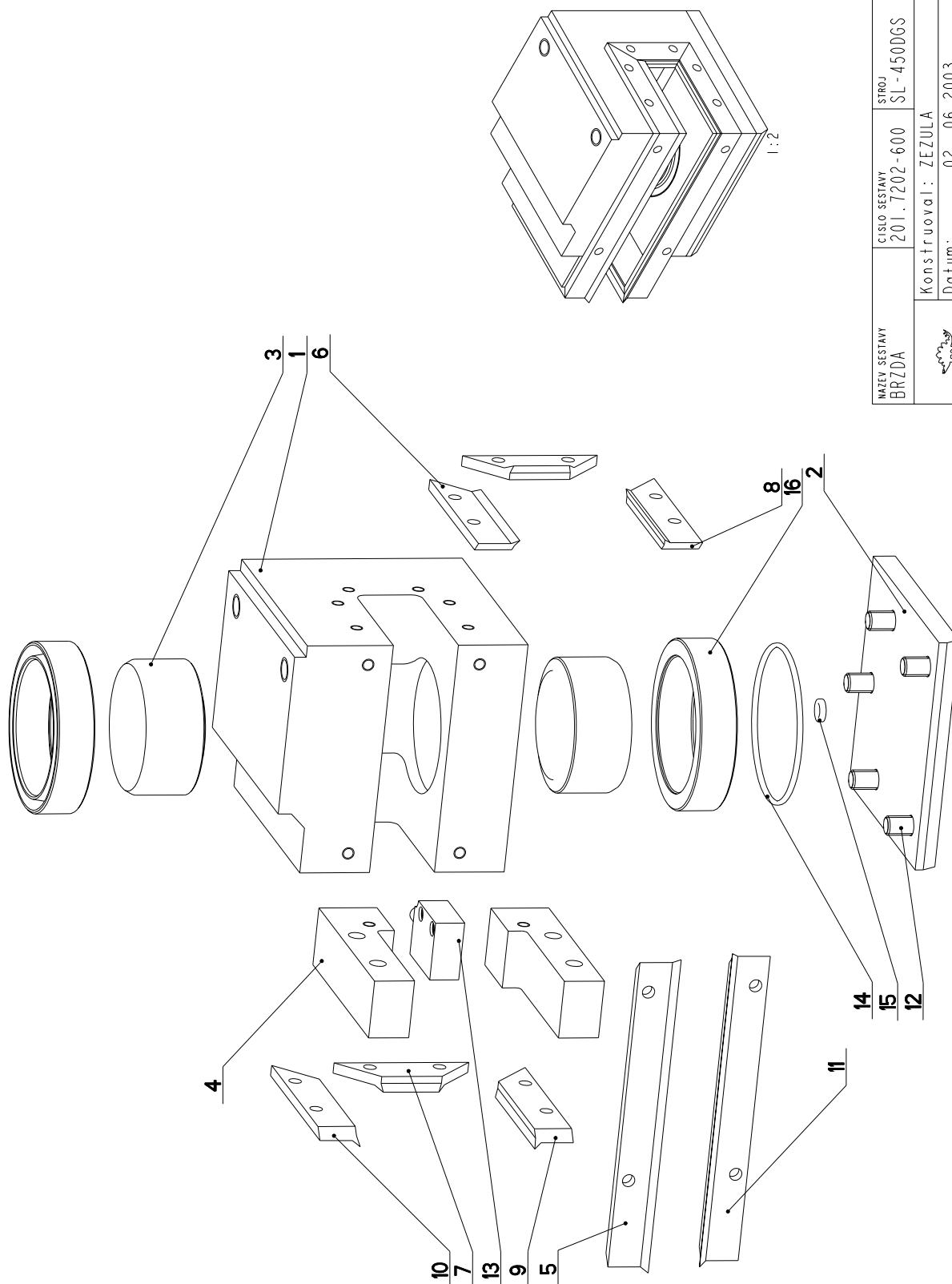
Císlo Sestavy 201.6702-200		Ver. 2	Název sestavy SNIMAC / SENSOR / SENSOR		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.2902-205	1	KONZOLA / CONSOLE / KONSOLE	P2 - 25.5	1
2	30.2902-209	0	CLONA / CURTAIN / SCHÜRZE		1
3	30.6702-212	0	HRIDEL / SHAFT / WELLE	KOLIK 5x32	1
4	30.6702-214	0	PASTOREK / PINION / RITZEL	z=12	1
5	31.2902-113	0	PRUŽINA / SPRING / FEDER	d 1.2	1
6	31.2902-201	0	RAMENO / SHOULDER / SÄGERAHMEN	VYLISEK-PLAST	1
7	31.2902-204	0	TESNENÍ / SEALING / DICHTUNG	TL. I - 32.3	1
8	31.2930-001	0	SNIMAC / SENSOR / SENSOR	DAS 330GA	1
9	81.2902-203	0	KRYT / COVER / ABDECKUNG	P 1.5 - 31.8	1
10	90.300.0Z.XXX	0	KOLIK VALCOVÝ KALENÝ / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLIK 4X20	2
11	91.070.010	0	PRŮCHODKA / LEADTHROUGH / DURCHFÜHRUNG	M12x1.5 ČERNA	1
12	95.001.002	0	LOŽISKO / BEARING / LAGER	624 2RS	2

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

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

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

7.19. Brzda / Bremse / Brake



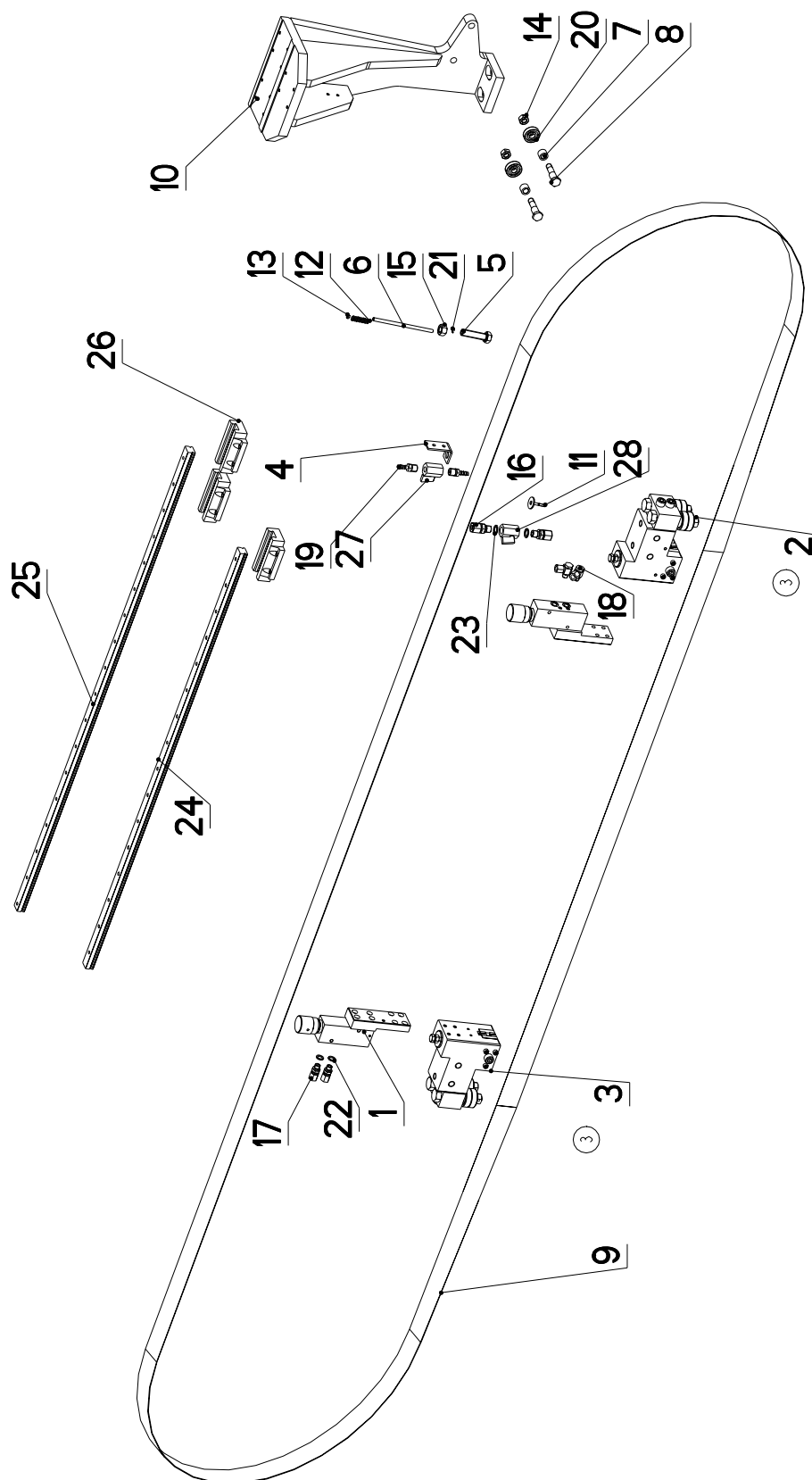
NAZEV SESTAVY BRZDA	CÍSLO SESTAVY 201.7202-600	STROJ SL-450DGS
Konstruoval: ZEZULA		
Datum: 02. 06. 2003		
Meritko: 7:10		

7.20. Kusovník / Stückliste / Piece list – Brzda / Bremse / Brake

Císlo Sestavy 201.7202-600	Ver. 0	Název sestavy BRZDA/BRAKE/BREMSE				
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks	
1	30.7202-408	3	KOSTKA / CUBE / WÜRFEL	TYC 100x100	1	
2	30.7202-409	2	PRÍLOŽKA / STRAP / LASCHE	TYC 100x10	1	
3	30.7202-410	1	PIST / PISTON / KOLBEN	TYC 56	2	
4	30.7202-601	0	DRŽAK / HOLDER / HALTER	TYC 25x25	2	
5	30.7202-602	0	STERAC / WIPER / ABSTREIFER	BA18	1	
6	30.7202-603	0	STERAC / WIPER / ABSTREIFER	BA18	1	
7	30.7202-604	0	STERAC / WIPER / ABSTREIFER	BA 18	2	
8	30.7202-605	0	STERAC / WIPER / ABSTREIFER	BA18	1	
9	30.7202-606	0	STERAC / WIPER / ABSTREIFER	BA 18	1	
10	30.7202-607	0	STERAC / WIPER / ABSTREIFER	BA18	1	
11	30.7202-611	0	STERAC / WIPER / ABSTREIFER	BA18	1	
12	90.011.27.027	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCRAUBE	SROUB M8x20	5	
13	91.270.007	0	SNÍMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	ELGO	1	
14	96.001.016	0	KROUZEK O STATICKÝ / STATIC O RING / O-RING STATISCH	60x2	1	
15	96.002.003	0	KROUZEK O DYNAMICKÝ / DYNAMIC O RING / O-RING DYNAMISCH	6x2	1	
16	96.042.010	0	TESNENÍ / SEALING / DICHTUNG	RU3100560	2	

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

7.21. Vedení pásu / Sägebandführung / Belt guide



NAZEV SESTAVY VEDENÍ PÁSU	CÍSLO SESTAVY 201.7210-300	STROJ SL-450DGS
Konstruoval: ZEŽULA		
Datum: 06. 02. 2007		
Meritko: 7:50		

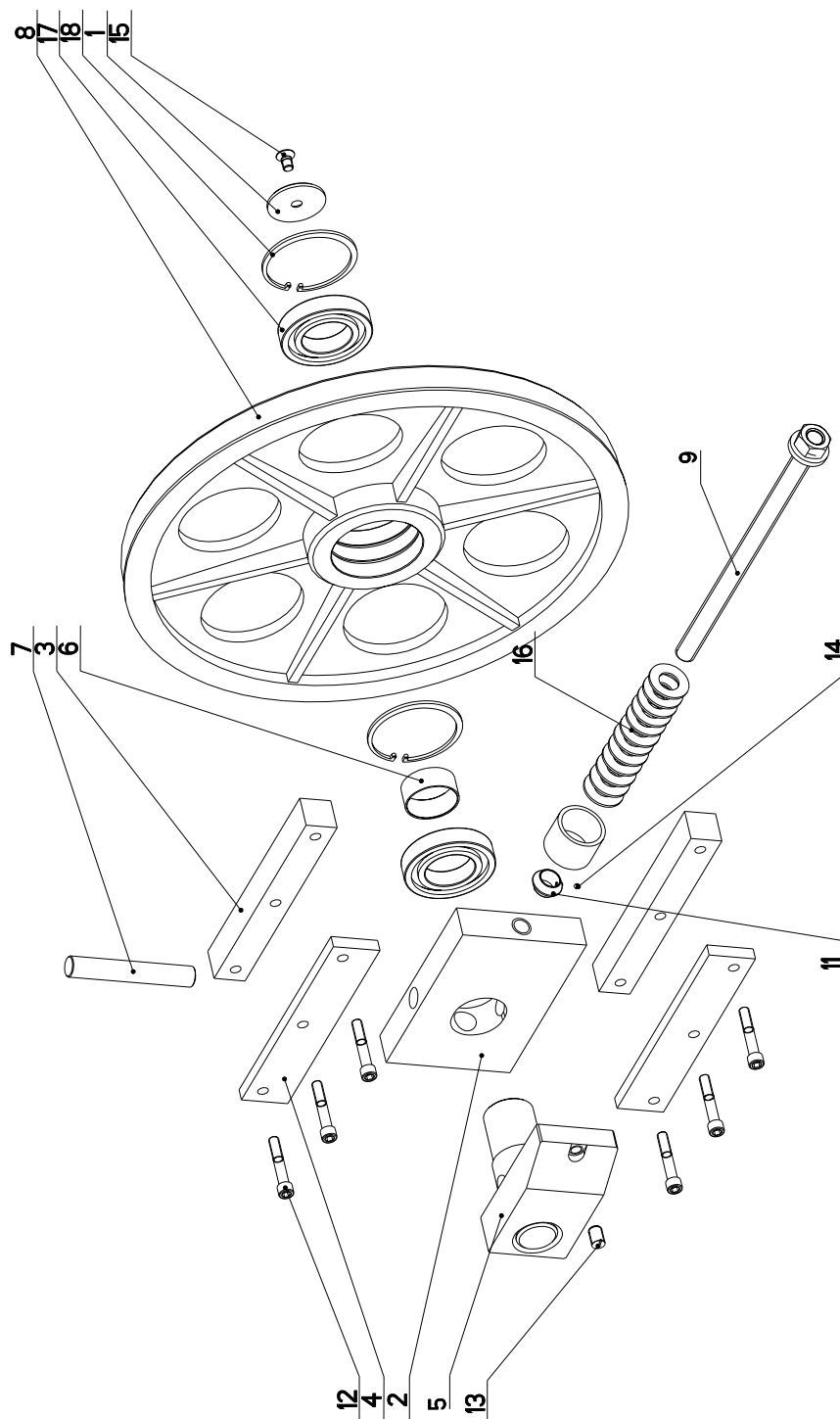
7.22. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide

Císlo Sestavy 201.7210-300		Ver. 3	Název sestavy VEDENÍ PASU/BELT GUIDE / SÄGEBANDFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.6016-000	0	REGULACE PRÍTLAKU / PRESSURE REGULATION / SCHNITTDRUCKREGULATION		2
2	201.6110-550	3	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
3	201.6110-610	3	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	30.1814-011	0	DRŽÁK / HOLDER / HALTER	P 3- 76	1
5	30.6010-004	1	SROUB / BOLT / SCHRAUBE	SROUB M12x50	1
6	30.6010-005	0	TAHLO / GUY ROD / ZUGSTANGE	d 6	1
7	30.7110-005	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 16x3	2
8	30.7110-011	0	EXCENTR / CAM / EXZENTER	SK17	2
9	30.7204-901	0	PAS PÍLOVÝ / SAW BELT / SÄGEBAND	41x1,3	1
10	30.7210-001	0	RAMENO / SHOULDER / SÄGERAHMEN		1
11	30.7210-005	0	SROUB / BOLT / SCHRAUBE		1
12	31.6010-006	0	PRUŽINA / SPRING / FEDER	d 8	1
13	90.100.55.002	0	MATICE / NUT / MUTTER	MATICE _ M4	1
14	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE _ M10	2
15	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE _ M12	1
16	92.002.101	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
17	92.002.102	0	SROUBENÍ PRÍME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	S-GEV-8LLR	2
18	92.003.104	0	SROUBENÍ ÚHLOVÉ / ANGLE BOLTING / WINKELVERSCHRAUBUNG	607002	2
19	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	REDUKCE 6/11/4"	2
20	95.001.014	0	LOŽISKO / BEARING / LAGER	6200 2RS	2
21	95.802.002	0	KROUZEK POJIST.VNEJSÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNÝ KROUZEK 4	1
22	96.082.001	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 10/14	2
23	96.082.002	0	TESNENÍ / SEALING / DICHTUNG	KROUZEK CU 13/17	2
24	99.200.010	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	LGR20-450-1	1
25	99.200.011	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	LGR20-450-2	1
26	99.201.005	0	VOZÍK LINEÁRNÍHO VEDENÍ / LINEAR GUIDE CART / LINEARFÜHRUNGSWAGEN	LGW20HC	3
27	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1
28	99.260.004	0	VENTIL / VALVE / VENTIL	VNÍTRNÍ/VNITRNI	1

1. ZRUSENA SOUCAST 201.7210-100, 201.7210-500 A NAHR. 201.8910-100, 201.8910-200. 6.2.2006 SLEZACKOVA
2. ZRUS. VODICI KOSTKA 201.8910-100 A NAHR. KOSTKOU 201.6110-600, ZRUS. VODICI KOSTKA 201.8910-200 A NAHR. KOSTKOU 201.6110-570. 216/ZM210
30.5.2007 SLEZACKOVA
3. VÝMENA VODICICH KOSTEK - ZRUS. SOUC. 201.6110-600 A NAHR. 201.6110-610, ZRUS. SOUC. 201.6110-570 A NAHR. 201.6110-550. 274/ZM280
20.6.2007 SLEZACKOVA

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

7.23. Napínání / Spannung / Tensioning



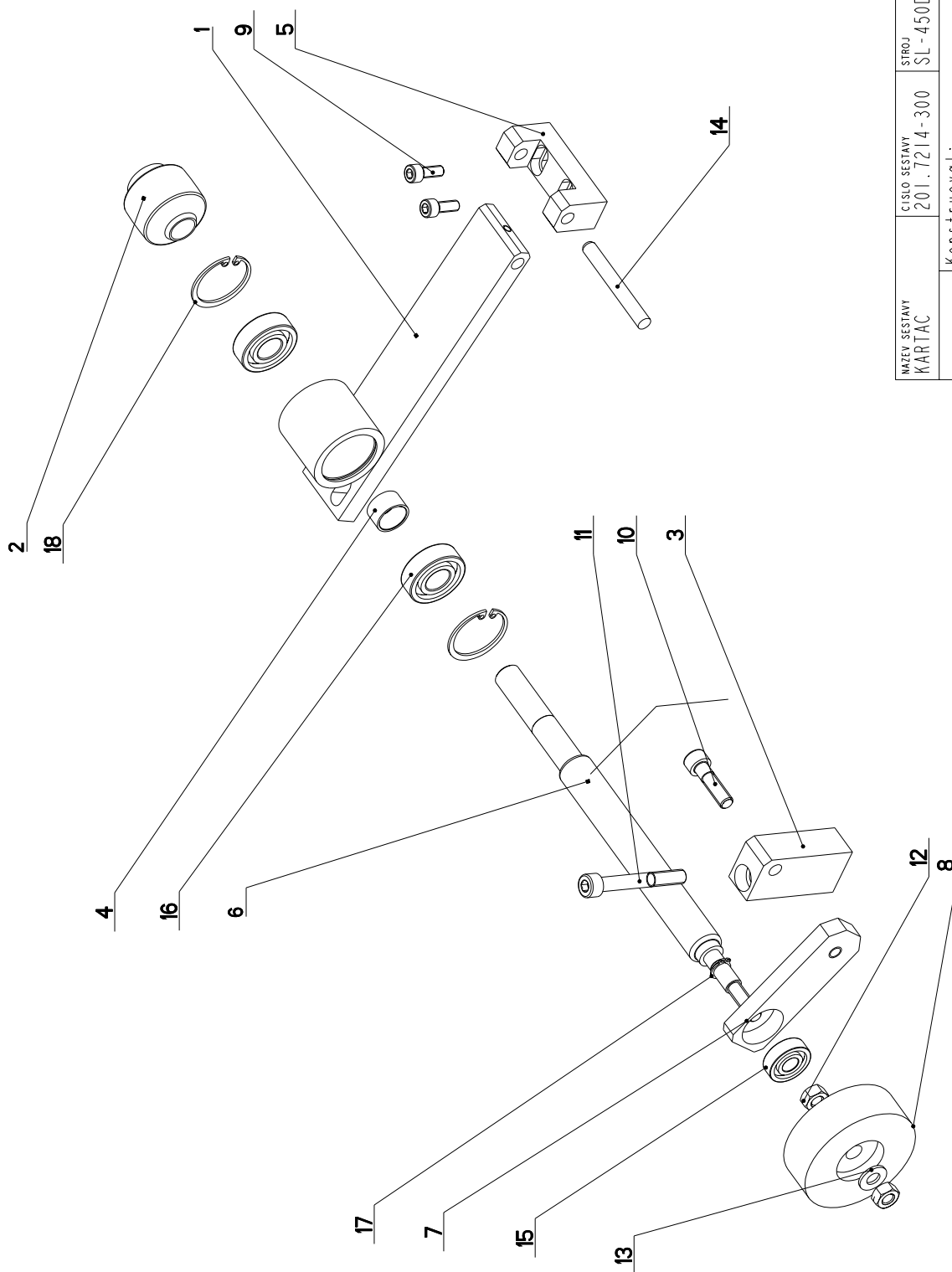
 NÁZEV SESTAVY NAPÍNÁNÍ	ČÍSLO SESTAVY 201.7208-000	STROJ SL-450DGS
	Konstruoval:	
	Datum: 28. 11. 2007	
	Meritko: 1:5	

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

Císlo Sestavy 201.7208-000		Ver. 0	Název sestavy NAPÍNÁNÍ / TENSIONING / SPANNUNG	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.1804-010	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	1
2	30.6008-001	0	KOSTKA NAPÍNÁNÍ / TENSIONING CUBE / BANDSPANNUNGSWÜRFEL	1
3	30.6008-002	0	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSLISTE	2
4	30.6008-003	0	LISTA VODICÍ / LEAD TRIM / FÜHRUNGSLISTE	2
5	30.6008-004	1	NAPÍNÁNÍ / TENSIONING / SPANNUNG	1
6	30.6008-009	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	1
7	30.6008-014	1	CEP NAPÍNÁNÍ / TENSIONING LUG / SPANNUNGSBOLZEN	1
8	30.7208-001	0	KOLO NAPÍNÁNÍ / TENSIONING WHEEL / UMLENKRAD	1
9	30.7208-002	0	SROUB NAPÍNÁNÍ / TENSION BOLT / SCHRAUBE BANDSPANNUNG	1
10	30.7208-003	0	DRŽÁK / HOLDER / HALTER	1
11	30.7208-006	0	DORAZ / STOP PIECE / ANSCHLAG	1
12	90.001.25.064	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	6
13	90.002.2D.028	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	1
14	90.003.2D.001	0	SROUB STAVEČI / ADJUSTMENT BOLT / STELLSCHRAUBE	1
15	90.011.27.009	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKTSCHRAUBE	1
16	90.350.0Z.004	0	PRUŽINA TALIROVA / DISC SPRING / TELLERFEDER	12
17	95.001.031	0	LOŽISKO / BEARING / LAGER	2
18	95.801.022	0	KROUZEK POJIST. VNITR. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	2

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

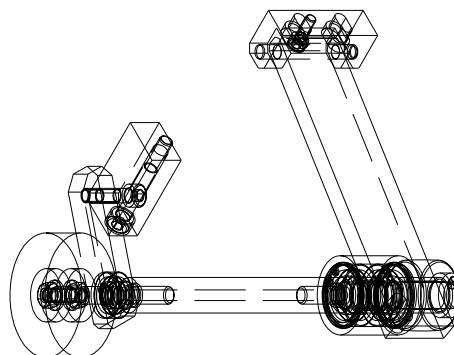
7.25. Kartáč / Bürste / Brush



 MŠMT MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY	MAZEJ SEŠTAVY KARTAC	CISLO SEŠTAVY 201.7214-300	STROJ SL-450DGS
	Konstruoval:		
	Datum: 28. 11. 2007		
	Meritko: 1:2		

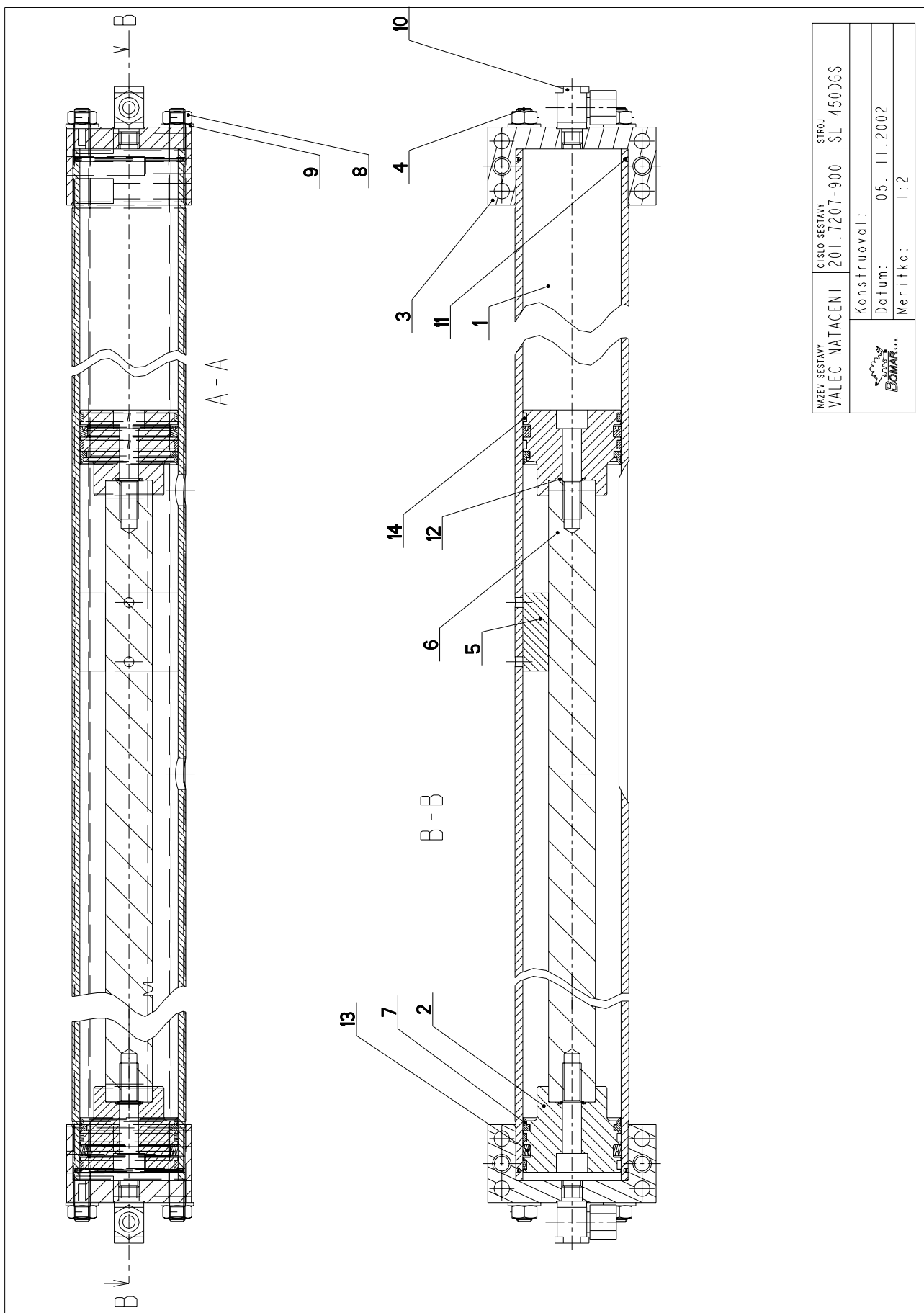
7.26. Kusovník / Stückliste / Piece list – Kartáč / Bürste / Brush

Císlo Sestavy 201.7214-300		Ver. 0	Název sestavy KARTAC/BRUSH/BÜRSTE	
Poz.	Objednávací číslo	Ver.	Název položky	Ks
1	30.6014-401	0	PAKA / LEVER / HEBEL	1
2	30.6014-404	0	KOLECKO / WHEEL / ROLLE	1
3	30.6014-408	0	DESKA / BOARD / PLATTE	1
4	30.6014-411	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	1
5	30.6014-412	0	DESKA / BOARD / PLATTE	1
6	30.7214-301	0	SPOJKA / JOINT / KUPPLUNG	1
7	30.7214-302	0	PAKA / LEVER / HEBEL	1
8	49.250.005	0	KARTAC / BRUSH / BÜRSTE	1
9	90.001.25.017	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	2
10	90.001.25.034	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	1
11	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	1
12	90.100.55.005	0	MATICE / NUT / MUTTER	2
13	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHIBE	2
14	90.301.07.XXX	0	KOLÍK VALCOVÝ MEKKÝ / CYLINDRICAL PIN SOFT / ZYLINDERSTIFT WEICH	1
15	95.001.004	0	LOŽISKO / BEARING / LAGER	1
16	95.001.015	0	LOŽISKO / BEARING / LAGER	2
17	95.800.003	0	KROUZEK POJIST.VNEJŠÍ / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	1
18	95.801.004	0	KROUZEK POJIST.VNITŘNÍ / INSIDE SAFETY RING / SICHERUNGSRING INNEN	2



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

7.27. Válec natáčení / Drehzylinder / Turning cylinder



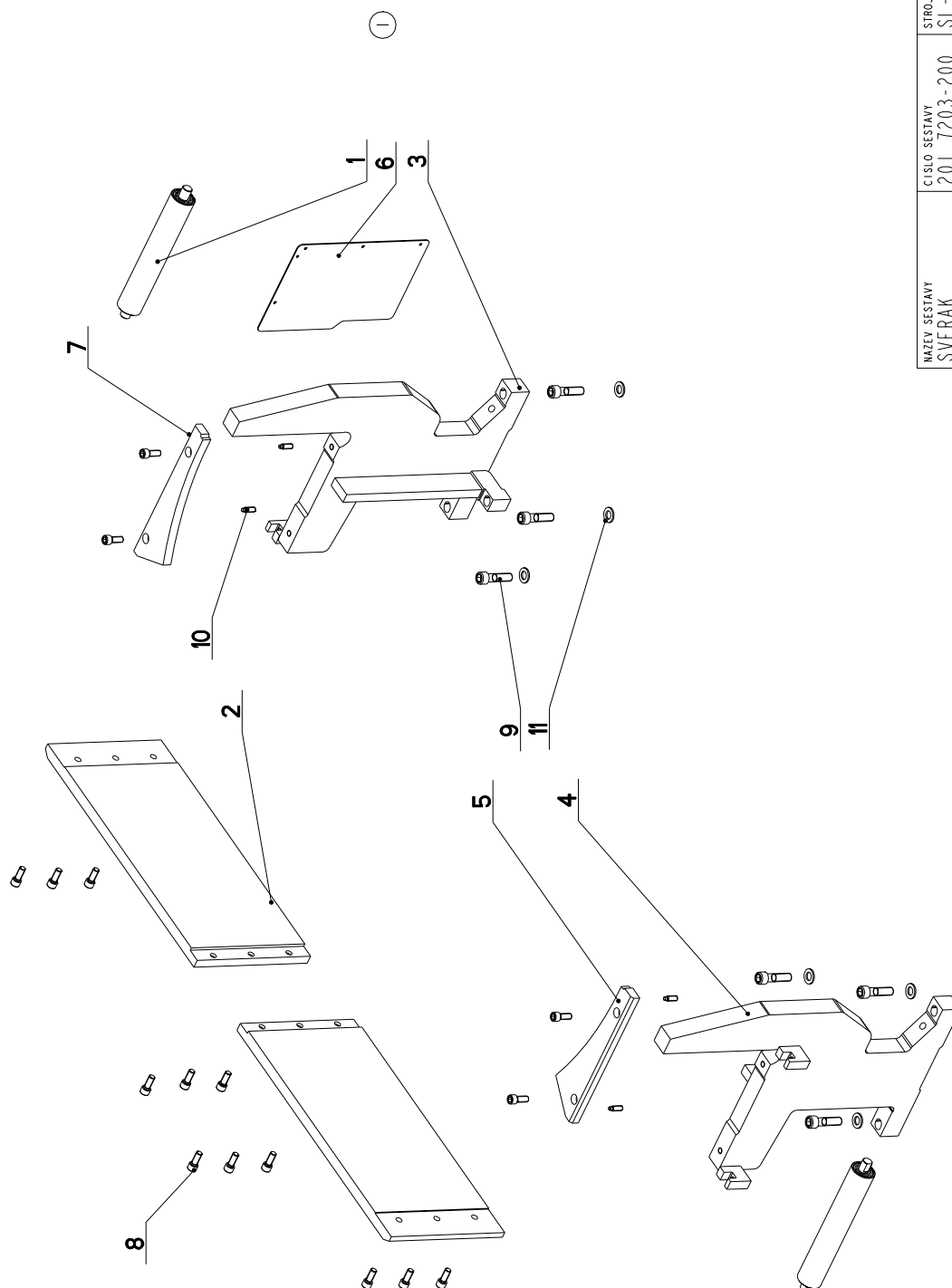
NAZEV SESTAVY VALEC NATACENI	CISLO SESTAVY 201.7207-900	STROJ SL 450DGS
Konstruoval:		
Datum: 05. 11. 2002		
Meritko: 1:2		

7.28. Kusovník / Stückliste / Piece list – Válec natáčení / Drehzylinder / Turning cylinder

Číslo sestavy 201.7207-900		Ver. 0	Název sestavy VALEC NATACENI / TURNING CYLINDER / DREHZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.7207-901	2	VALEC NATACENI / TURNING CYLINDER / DREHZYLINDER	TRd73/463H8	1
2	30.7207-903	1	PIST / PISTON / KOLBEN	d 70	2
3	30.7207-905	3	VIKO / COVER / DECKEL	HR 80x50	2
4	30.7207-906	0	SVORNÍK / HINGE PIN / KLEINKE	M 10	4
5	30.7207-907	0	VEDENÍ / GUIDE / BACKENFÜHRUNG	d 65	1
6	30.7207-908	1	TYC OZUBENA / LUG POLE / ZAHNSTANGE	HR 35x35	1
7	31.7207-913	0	STERAC / WIPER / ABSTREIFER		2
8	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE _ M10	8
9	90.150.50.006	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 10,5	8
10	92.003.001	0	SROUBENÍ UHLÍVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	P-RSWS-08LR	2
11	96.001.018	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	63x2	2
12	96.001.026	0	KROUZEK TESNÍČÍ / SEAL RING / DICHTUNGSRING	13x1.5	2
13	96.042.012	0	KROUZEK TESNÍČÍ / SEAL RING / DICHTUNGSRING	63x53x1.3 M606	2
14	96.084.002	0	KROUZEK VODÍČÍ / LEAD RING / FÜHRUNGSRING	GP6500630.Z61	4

Číslo 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

7.29. Svěrák / Schraubstock / Vice



NÁZEV SESTAVY SVĚRÁK	ČÍSLO SESTAVY 201.7203-200	STROJ SL-450DGS
	Konstruoval: ZEŽULA	
	Datum: 05. 11. 2003	
	Meritko: 1:10	

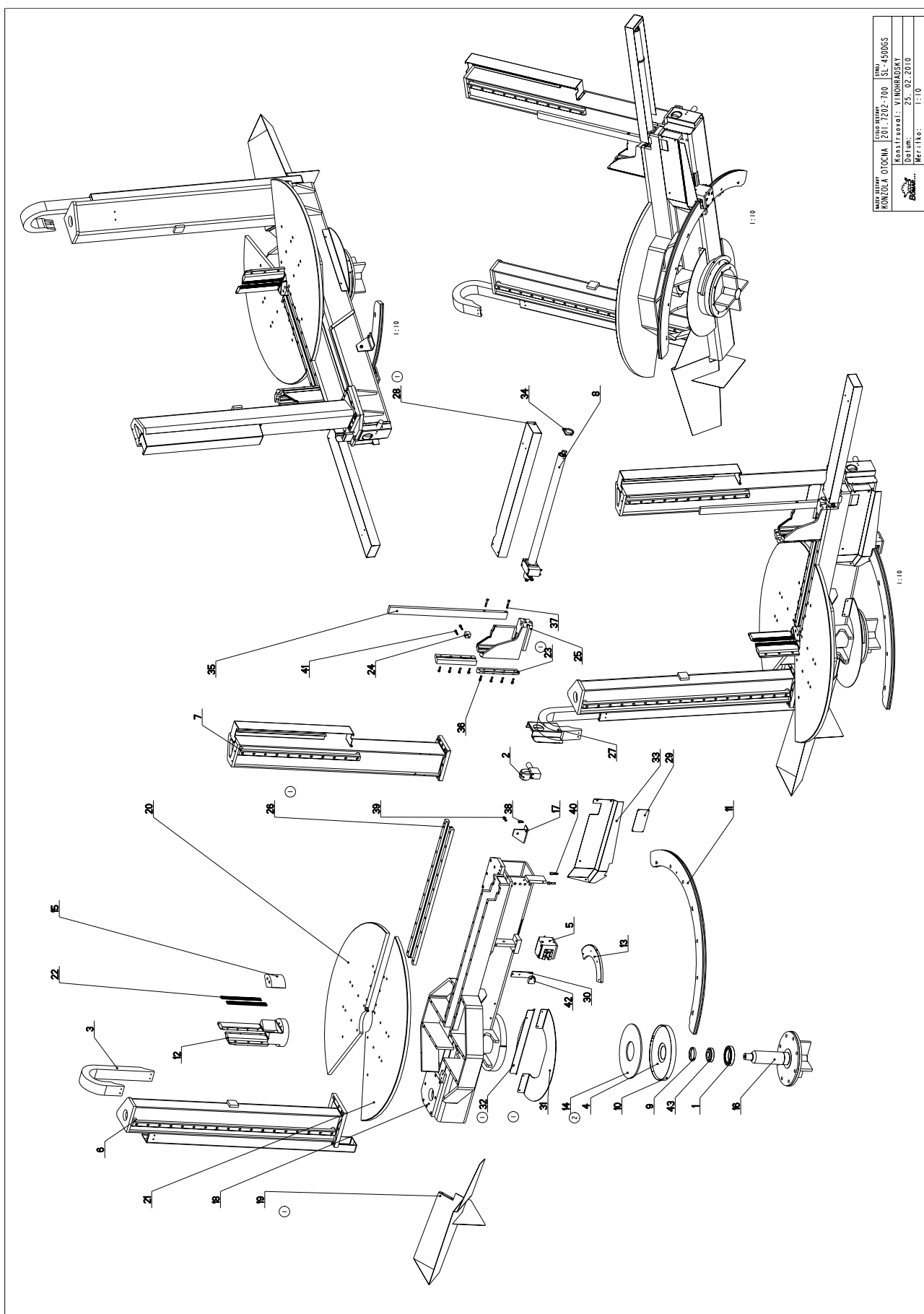
7.30. Kusovník / Stückliste / Piece list – Svěrák / Schraubstock / Vice

Císlo Sestavy 201.7203-200		Ver. 0	Název sestavy SVĚRÁK/VICE / SCHRAUBSTOCK	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	201.7203-210	0	VALEC POMOČNÝ / AUXILIARY CYLINDER / HILFSSTYLINDER	2
2	30.7203-001	3	CELIST PĚVNA / SOLID JAW / FESTE BACKE	2
3	30.7203-002	3	DRŽÁK / HOLDER / HALTER	1
4	30.7203-005	4	DRŽÁK / HOLDER / HALTER	1
5	30.7203-011	1	DESKA / BOARD / PLATTE	1
6	30.7203-201	0	KRYT / COVER / ABDECKUNG	1
7	7203-010-VYP	1	DESKA / BOARD / PLATTE	1
8	90.001-25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	16
9	90.001-25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	6
10	90.004-20.012	0	SROUB STAVEČÍ / ADJUSTMENT BOLT / STELLSCHRAUBE	4
11	90.150-50.009	0	PODLOŽKA / WASHER / UNTERLEGSCHIBE	6

I PRIDANA NOVA POZICE 30.7203-201. 15.6.2004 VINOHRADSKY

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

7.31. Konzola otočná / Drehkonsole / Turnable console – 1

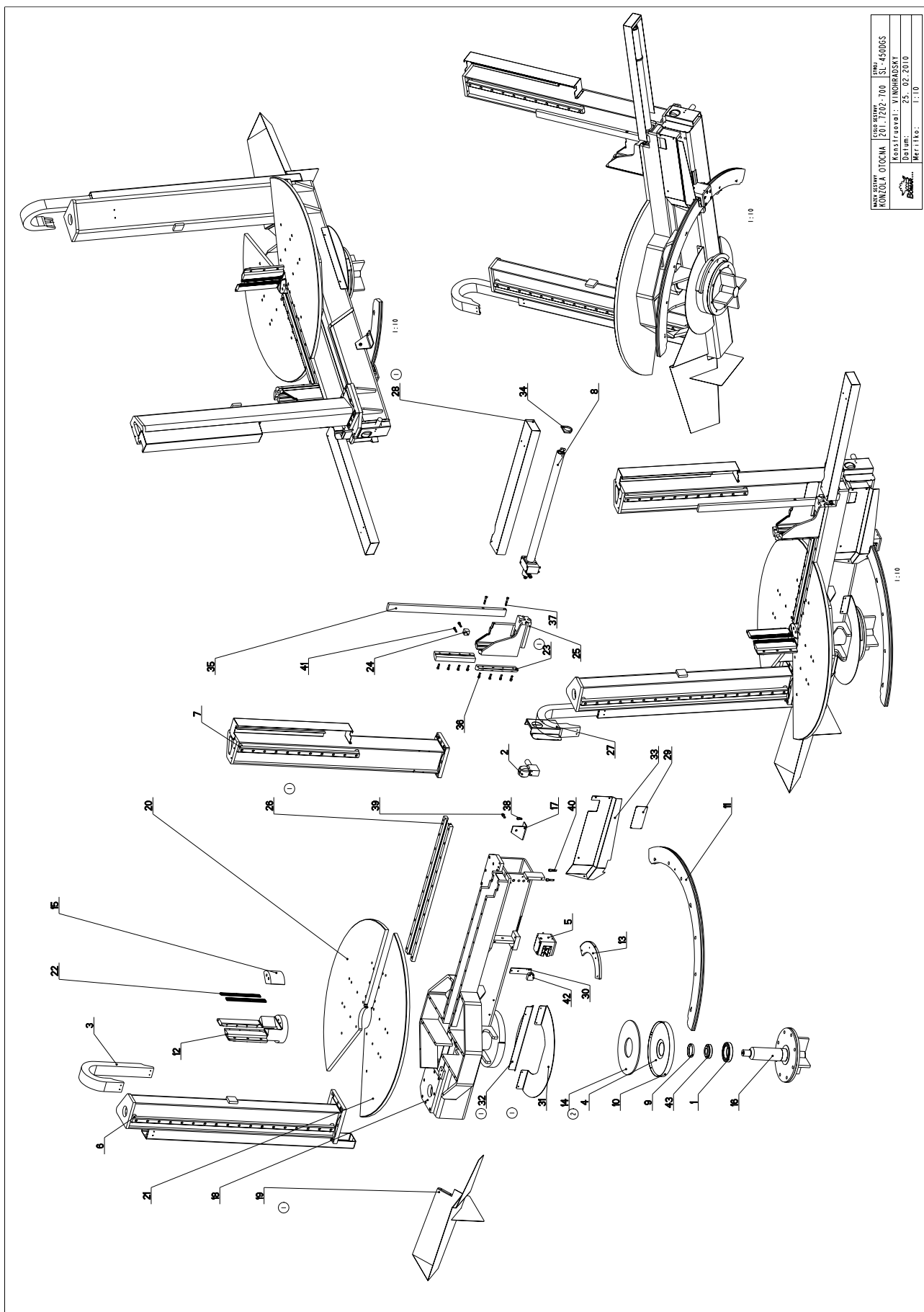


7.32. Kusovník / Stückliste / Piece list – Konzola otočná / Drehkonsole / Turnable konsole – 1

Císlo Sestavy 201.7202-700	Ver. I	Název sestavy KONZOLA OTOČNÁ/TURNABLE CONSOL/DREHKONSOLE			
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	95.001034	0	LOŽISKO / BEARING / LAGER	6016A	1
2	252.022	0	REGULACE PŘÍTLAKU / PRESSURE REGULATION / SCHNITTDRUCKREGULATION		1
3	--	0	KRYT / COVER / ABDECKUNG	EFK0555.038.050.100	1
4	201.7102-100	0	LOŽISKO / BEARING / LAGER		1
5	201.7202-600	0	BRZDA / BRAKE / BREMSE		1
6	201.7202-720	1	SLOUP / POLE / SÄULE		1
7	201.7202-730	0	SLOUP / POLE / SÄULE		1
8	201.7207-100	0	VALEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
9	30.7102-007	1	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	TR 89x8	1
10	30.7102-124	1	KRYT / COVER / ABDECKUNG	P 0.8x33x1120	1
11	30.7201-105	2	BRZDA / BRAKE / BREMSE	P 25 - 503	1
12	30.7202-005	2	CELIST PEVNÁ / SOLID JAW / FESTE BACKE	ODLITEK	1
13	30.7202-007	2	SEGMENT / SEGMENT / SEGMENT	PI5 - 155	1
14	30.7202-008	0	PŘÍRUBA / FLANGE / FLANSCH	P 8-352	1
15	30.7202-015	2	SEGMENT / SEGMENT / SEGMENT	d 180	1
16	30.7202-104	0	ČEP / LUG / BOLZEN		1
17	30.7202-199	2	KONZOLA / CONSOLE / KONSOLE	HR 100x5	1
18	30.7202-501	4	KONZOLA / CONSOLE / KONSOLE		1
19	30.7202-704	0	SKLUIZ / SLIDE / RUTSCH		1
20	30.7203-003	1	DESKA / BOARD / PLATTE	P 25 - 610	1
21	30.7203-004	1	DESKA / BOARD / PLATTE	P 25 - 610	1
22	30.7203-012	1	LISTA SVERAKU / VICE TRIM / SCHRAUBSTOCKLEISTE	HR 30x10	2
23	30.7203-014	0	CELIST / JAW / BACKE	HR 60x40	2
24	30.7203-020	0	KOSTKA / CUBE / WÜRFEL	HR 30x30	1
25	30.7203-708	4	CELIST POHYBLIVÁ / MOVING JAW / BEWEGLICHE BACKE		1
26	30.7203-709	2	LISTA SVERAKU / VICE TRIM / SCHRAUBSTOCKLEISTE	TYC 40x25	2
27	30.7214-139	0	KRYT / COVER / ABDECKUNG		1
28	30.7214-145	0	KRYT VALCE / ROLLER COVER / ZYLINDERABDECKUNG		1
29	30.7214-153	0	KRYT / COVER / ABDECKUNG	P 2 - 80	1
30	30.7214-214	0	DRŽÁK / HOLDER / HALTER	HR 40x5	1
31	30.7214-215	1	PLECH / PLATE / BLECH	P3-367.5	1
32	30.7214-216	1	PLECH / PLATE / BLECH	P 3x168x498	1
33	30.7214-217	2	KRYT / COVER / ABDECKUNG	P2-247.5	1

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

7.33. Konzola otočná / Drehkonsole / Turnable console – 2



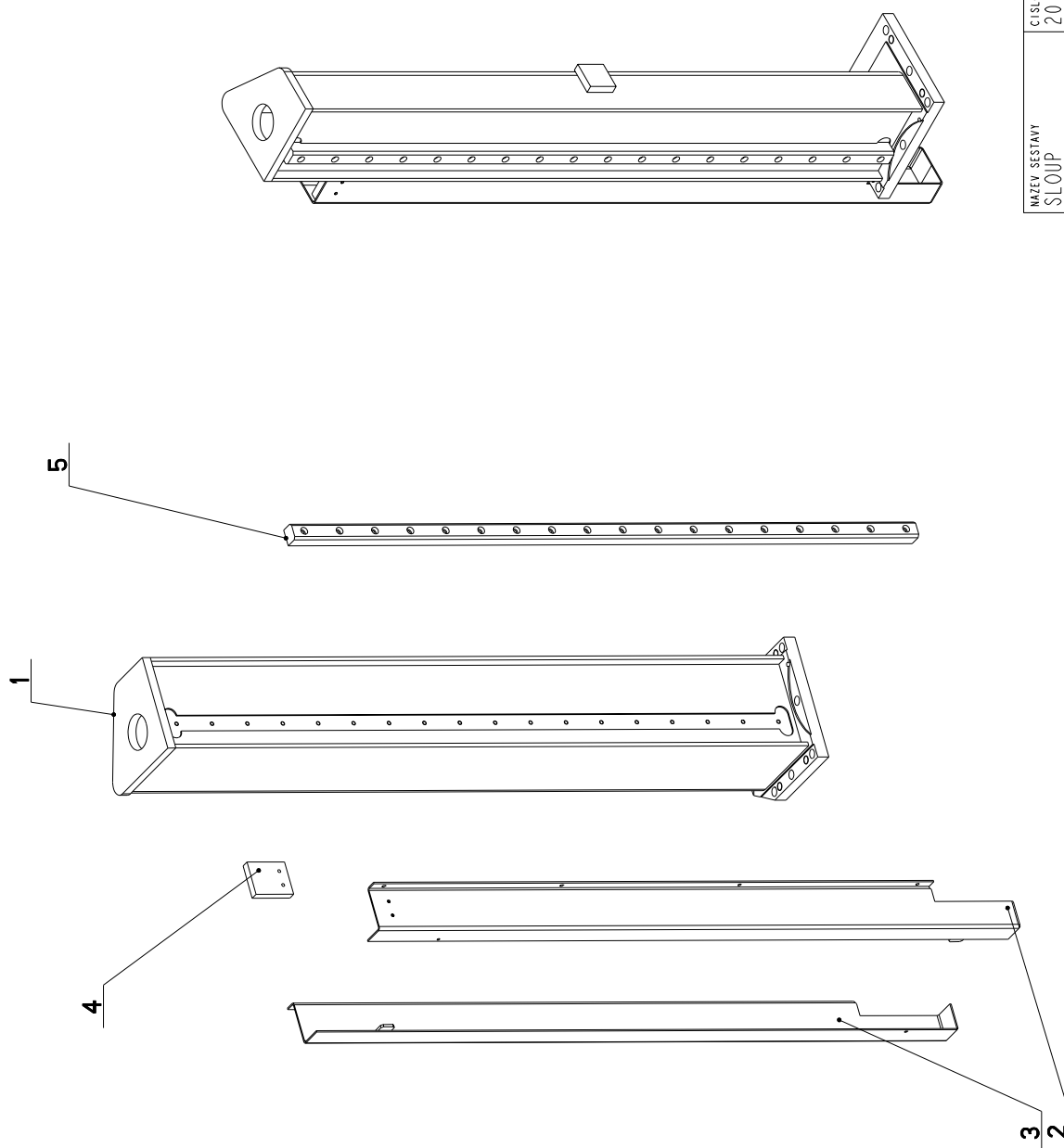
7.34. Kusovník / Stückliste / Piece list – Konzola otočná / Drehkonsole / Turnable konsole – 2

Císlo Sestavy 201.7202-700		Ver. I	Název sestavy KONZOLA OTOČNÁ/TURNABLE CONSOL/DREHKONSOLE		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
34	30.7214-218	0	OBJÍMKA / CLAMP / KLAMMERSTÜCK	P8-66	1
35	7203-713	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLISTE	HR 50x20	1
36	90.001.25.033	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	8
37	90.001.25.037	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x45	2
38	90.001.25.045	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x16	1
39	90.001.25.047	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x25	1
40	90.001.25.050	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x40	2
41	90.001.55.035	0	ŠROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x35	2
42	91.173.016	0	SPÍNACÍ KONCOVÝ / END SWITCH / ENDSCHALTER	KONČAK	1
43	95.300.003	0	LOŽISKO KUZELKOVÝ / BEARING / LAGER	31308A	1

I Z KUS. STROJE ZRUŠENO 30.7203-009, 30.7202-123 NAHRAZUJE 30.7203-708, 30.7203-709, 30.7202-124
PRIDANA NOVA POZICE 30.7202-704, 15.6.2004 VINOHRADSKÝ
ZM. MAT. A TVARU POZ. 30.7214-215, 30.7214-216, PRIDAN OTVOR PRO OKO VALCE POZ. 30.7214-145. 7.7.2004 VRSECKÝ
2 Z KUS. ZRUŠENA SOUCAST 30.7202-124, NAHRAZENA NOVOU SOUCASTI 30.7102-124. 15.4.2005 SLEZÁČKOVÁ

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

7.35. Sloup / Saule / Pole - 1



NAZEV SESTAVY SLOUP	CISLO SESTAVY 201.7202-720	STROJ SL-450DGS
	Konstruoval: VINOHRADSKY	
	Datum: 25. 02. 2010	
	Meritko: 13:100	
		

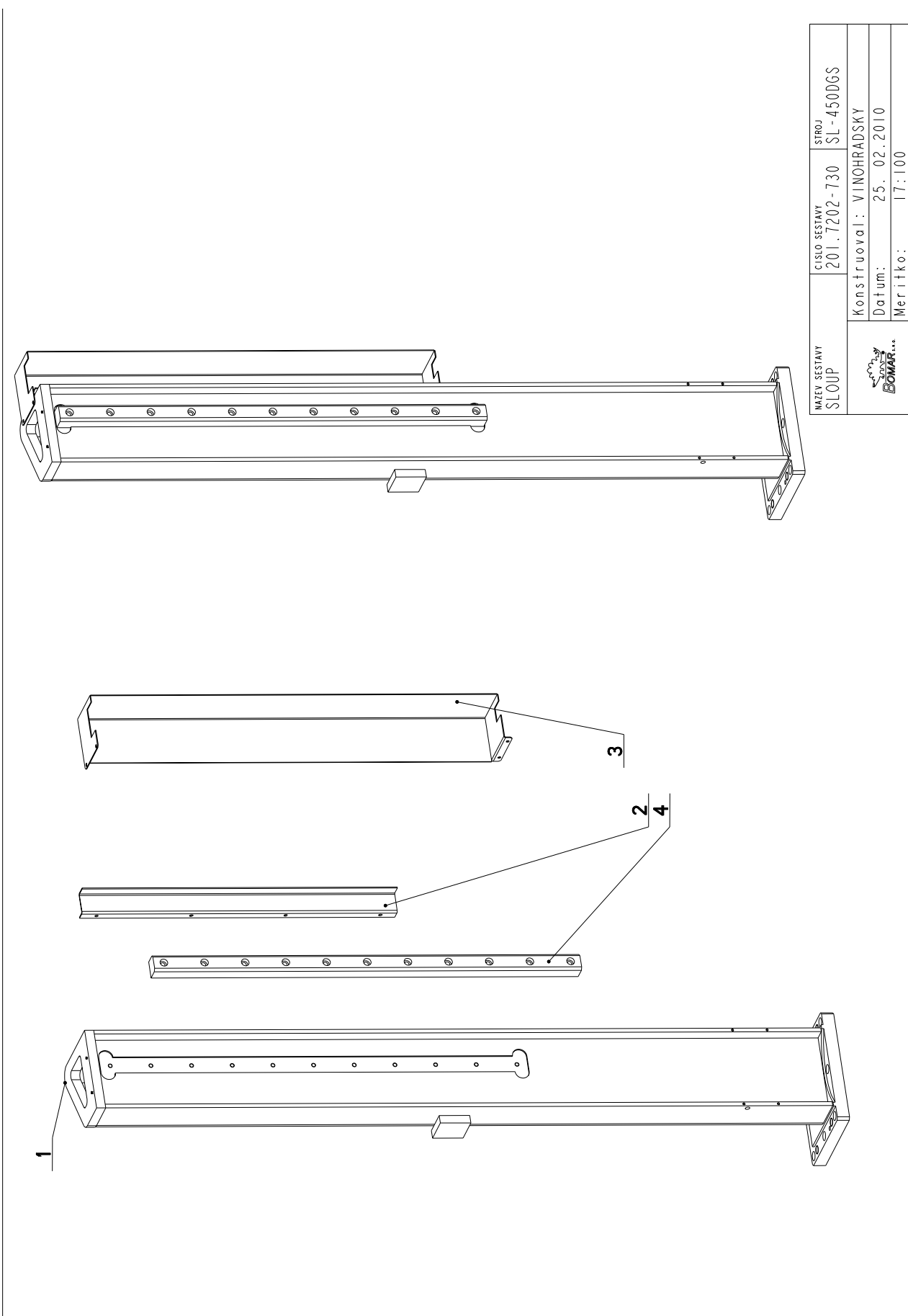
7.36. Kusovník / Stückliste / Piece list – Sloup / Saule / Pole – 1

Císlo sestavy 201.7202-720		Ver. 1	Název sestavy SLOUP / POLE / SAULE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.7202-722	3	SLOUP / POLE / SAULE	1
2	30.7214-204	1	KRYT / COVER / ABDECKUNG	1
3	30.7214-205	0	KRYT / COVER / ABDECKUNG	1
4	30.7214-209	0	KOSTKA / CUBE / WÜRFEL	1
5	99.200.033	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	1

I. VÝMENA VYKRESU. 401/ZMI/55. 19.6.2006 SLEZÁČKOVÁ

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

7.37. Sloup / Saule / Pole - 2

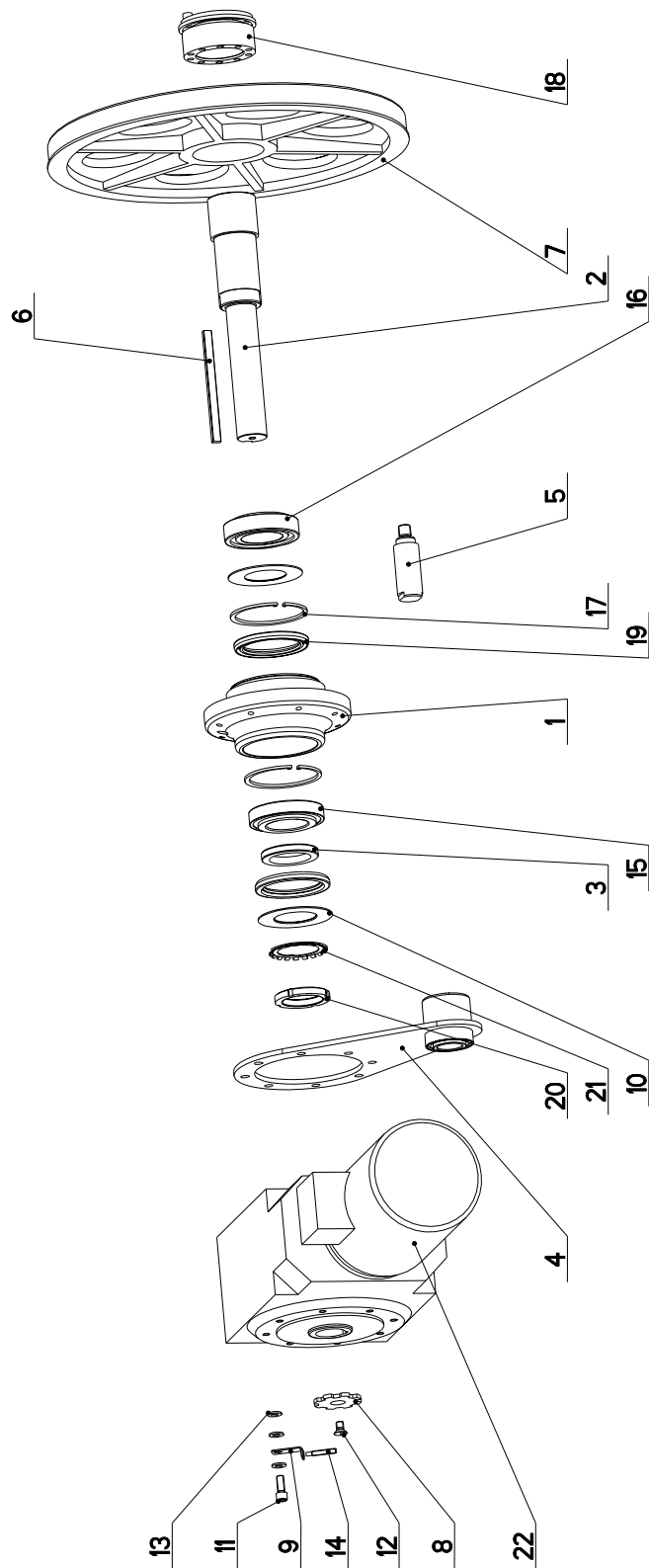


7.38. Kusovník / Stückliste / Piece list – Sloup / Saule / Pole – 2

Císlo Sestavy 201.7202-730		Ver. 0	Název sestavy SLOUP/POLE/SAULE	
Poz.	Objednací číslo	Ver.	Název položky	Ks
1	30.7202-733	3	SLOUP / POLE / SAULE	I
2	30.7202-735	0	HREBEN / COMB / KAMM	I
3	30.7214-146	I	KRYT / COVER / ABDECKUNG	I
4	99.200.034	0	VEDENÍ LINEÁRNÍ / LINEAR GUIDE / LINEARE FÜHRUNG	I

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

7.39. Pohon / Antrieb / Drive



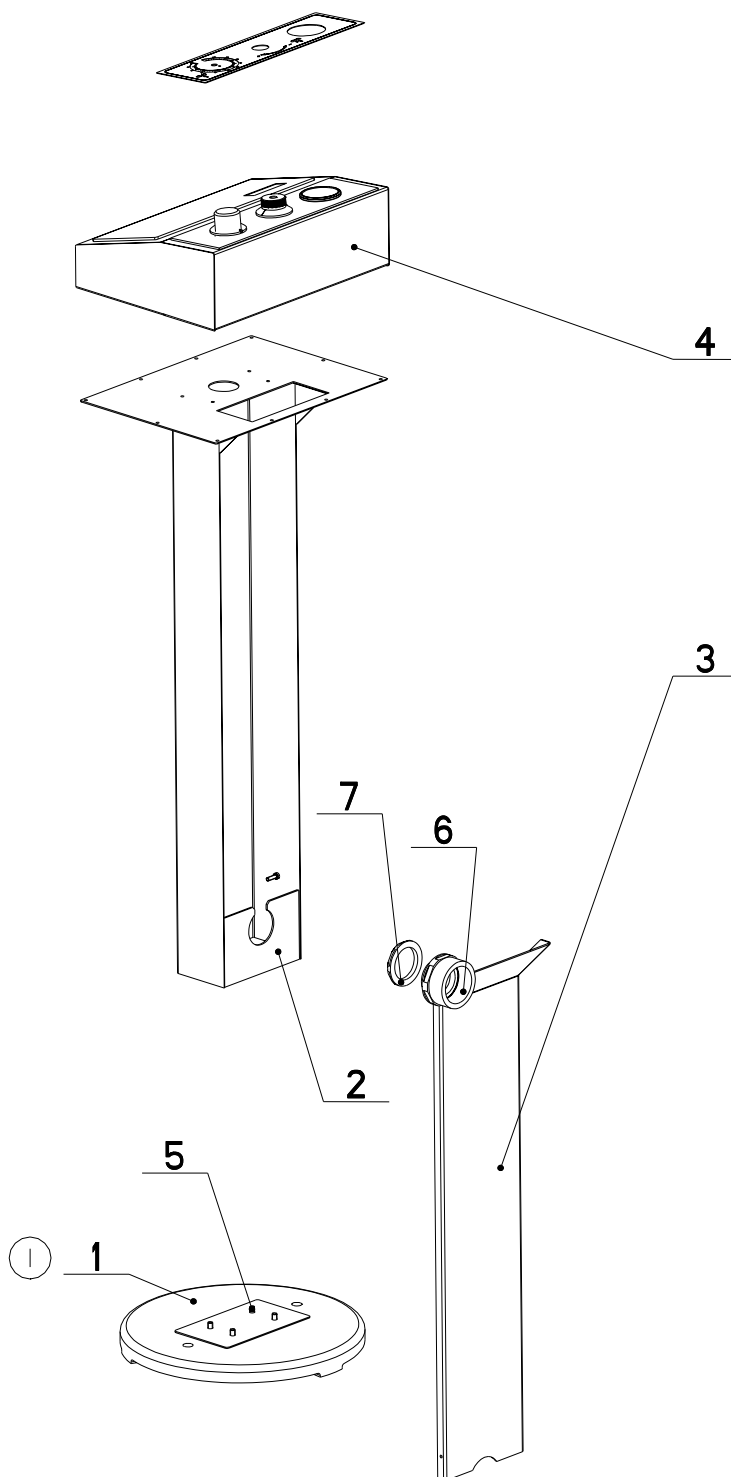
NAZEV SESTAVY POHON	CÍSLO SESTAVY 201.7205-000	STROJ SL-450DGS
Konstruoval: &konstruoval		
Datum: 26. 02. 2010		
Meritko: 7:50		

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

Císlo Sestavy 201.7205-000		Ver. 0	Nazev sestavy POHON/DRIVE / ANTRIEB		
Poz.	Objednací číslo	Ver.	Nazev položky	Rozměr	Ks
1	30.7204-002	1	PRIRUBA / FLANGE / FLANSCH		1
2	30.7204-003	1	HRDEL / SHAFT / WELLE	d 85	1
3	30.7204-004	2	KROUZEK / RING / RING	TRUBKA 101.6x17.5	2
4	30.7204-006	0	RAMENO / SHOULDER / SÄGERAHMEN		1
5	30.7204-007	2	CEP / LUG / BOLZEN	d42 TAŽENA	1
6	30.7204-008	0	PERO / SPRING / FEDER	HR 14x9	1
7	30.7205-001	0	KOLO HNACÍ / DRIVE WHEEL / ANTRIEBSRAD		1
8	30.7214-142	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	P 6 - 80	1
9	30.7214-152	0	DRŽÁK / HOLDER / HALTER		1
10	81.7204-005	1	KRYT / COVER / ABDECKUNG	P 2-125	2
11	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x30	1
12	90.011.27.009	0	SROUB ZAPUSTNÝ / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12x20	1
13	90.150.50.007	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	PODLOŽKA 13	3
14	91.172.001	0	SPINAC / SWITCH / SCHALTER	BES M08M1	1
15	95.300.005	0	LOŽISKO KUZELÍK / BEARING / LAGER	30214A	1
16	95.300.006	0	LOŽISKO KUZELÍK / BEARING / LAGER	32214A	1
17	95.801.027	0	KROUZEK POJIST.VNITR. / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 125	2
18	95.825.001	0	POUZDRO UPÍNACÍ / FIXING SLEEVE / SPANNHÜLSE	KTR210- 80x120	1
19	95.830.009	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 95x125x12	2
20	95.850.005	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM14	1
21	95.855.0XX	0	PODLOŽKA / WASHER / UNTERLEGSCHIEBE	POJISTNÁ PODLOŽKA MB14	1
22	99.003.001	0	PREVODOVKA S MOTOREM / TRANSMISSION WITH MOTOR / GETRIEBE MIT MOTOR	A503-S3M3LC	1

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

7.41. Ovládací panel / Bedienpult / Control panel



NAZEV SESTAVY OVLADACÍ PANEL	CISLO SESTAVY 201.8814-200	STROJ STG 400DGH
	Konstruoval: VINOHRADSKÝ	
	Datum: 11. 09.2003	
	Meritko: 1:10	

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

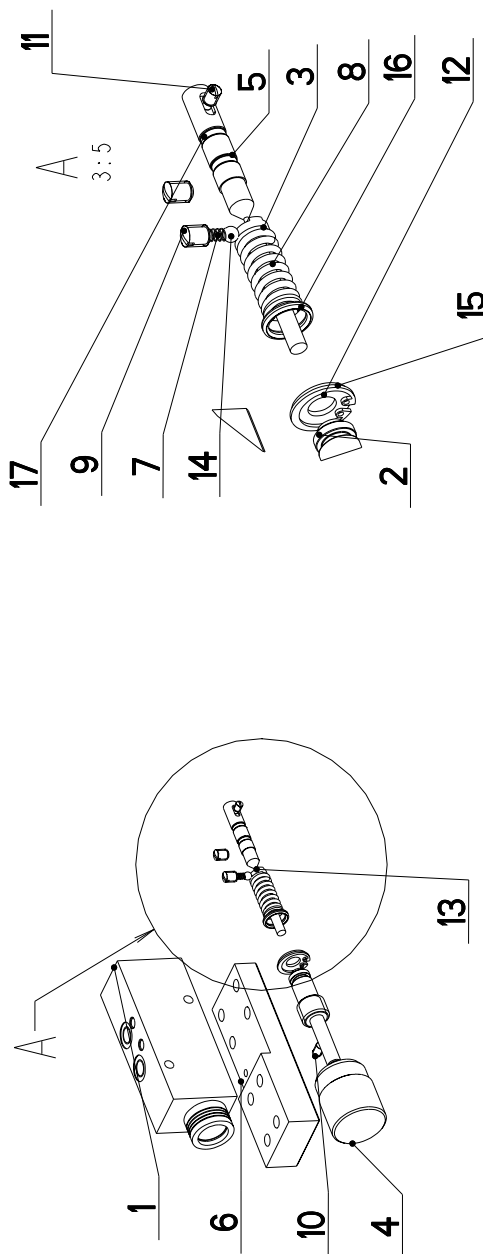
Císlo Sestavy 201.8814-200		Ver. I	Název sestavy OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		
Poz.	Objednáací číslo	Ver.	Název položky	Rozměr	Ks
1	30.1814-014	2	DESKA / BOARD / PLATTE		I
2	30.8814-202	I	NOHA / LEG / STÄNDER		I
3	30.8814-203	0	VÍKO / COVER / DECKEL	P 2x214	I
4	30.8814-220	0	OVLADACÍ PANEL / CONTROL PANEL / BEDIENPULT		I
5	90.001.25.034	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8x30	4
6	91.071.006	0	VÝVODKA / BUSHING / TÜLLE		I
7	91.072.009	0	MATICE / NUT / MUTTER		I

I. ZMENA DESKY PANELU, ZRUŠENA SOUCAST 30.8814-204 A NAHR. 30.1814-014. 019/ZM011. 3.2.2006 SLEZACKOVA

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

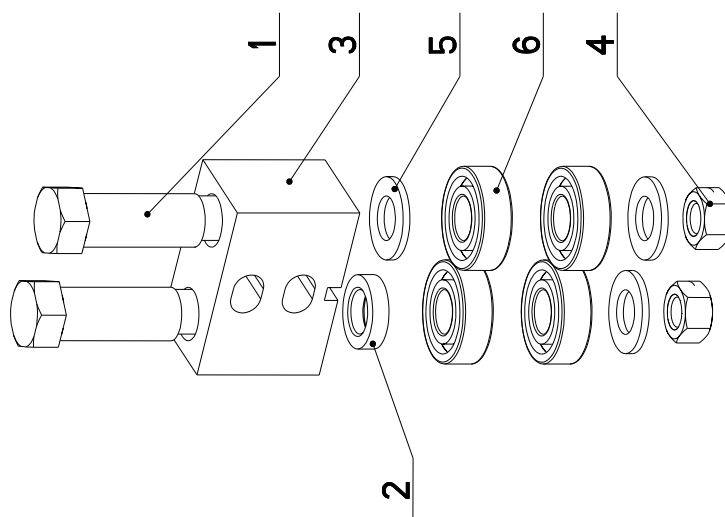
7.43. Regulace přitlaku / Schnittdruckregulation / Pressure into cut regulation

Císlo Sestavy 201.6016-000		Ver. 0	Název sestavy REGULACE PRITLAKU/PRESSURE REGULATION/SCHNITTDROCKREGULATION		Rozměr	Ks
Poz.	Objednací číslo	Ver.	Název položky			
1	30.2016-001	2	TELESO / BODY / KÖRPER	HR 40 x 40		1
2	30.2016-003	0	SROUB / BOLT / SCHRAUBE	d 16		1
3	30.2016-004	0	CIDLO / SENSOR / SENSOR	d 10		1
4	30.2016-005	0	KOLEČKO / WHEEL / ROLLE	d 32		1
5	30.6016-001	0	JEHLA REGULACE 70 / /	d 8		1
6	30.6016-002	0	DESKA / BOARD / PLATTE	HR 40x20		1
7	31.2016-008	0	PRUŽINA / SPRING / FEDER	0.25x3,6x12x9,5		1
8	31.6016-003	0	PRUŽINA / SPRING / FEDER	d 11,6x2		1
9	90.002.20.029	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6x8		2
10	90.003.20.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5x10		1
11	90.004.20.016	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M4x8		1
12	90.150.50.005	0	PODLOŽKA / WASHER / UNTERLEGSCHEIBE	PODLOŽKA 8,4		1
13	95.690.001	0	JEHLA / NEEDLE / NADEL	1,5x11,8		1
14	95.691.001	0	KULICKÁ LOŽISKA / BALL / KUGEL	RB 4,5		1
15	95.801.017	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNÝ KROUZEK 18		1
16	96.001.003	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	8x2		1
17	96.002.001	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	4x2		2



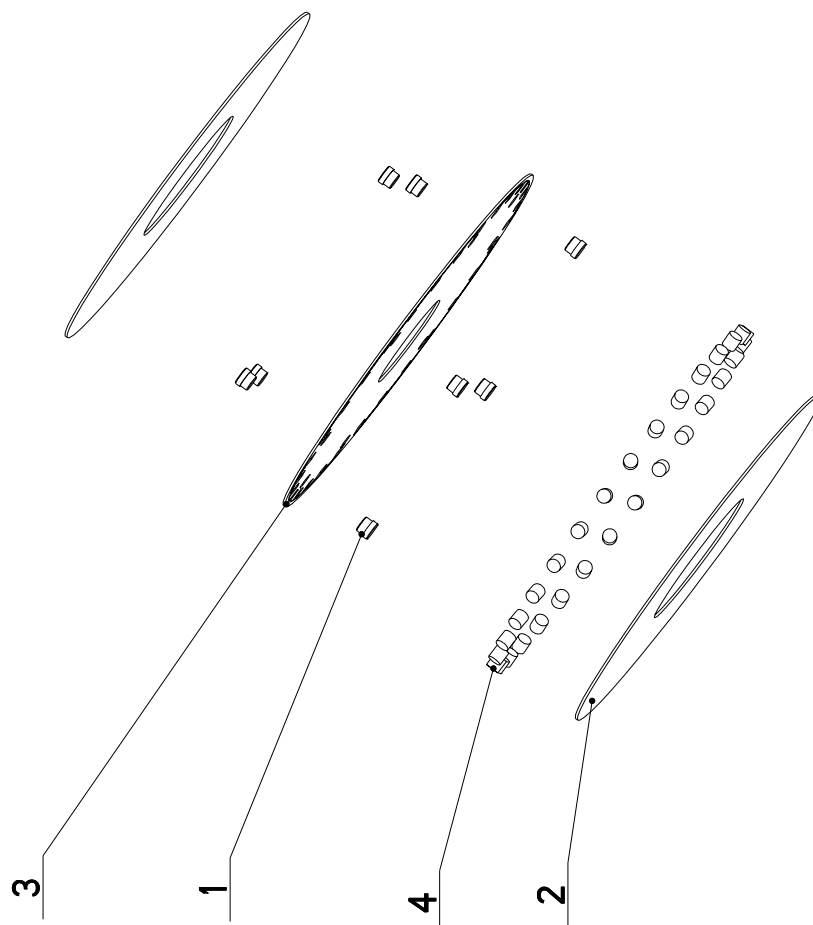
7.44. Vedení / Backenführung / Guide

Císlo Sestavy 201.6110-510		Ver. 0	Název sestavy VEDENÍ/GUIDE/BACKENFÜHRUNG		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	30.6010-104	1	EXCENTR / CAM / EXCENTER	SK 22	2
2	30.6010-108	0	KROUZEK DISTANČNÍ / DISTANCE RING / DISTANZRING	Tr 25x5	1
3	30.6110-502	0	KOSTKA VODÍČI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 80x50	1
4	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE _ M12	2
5	90.150.50.008	0	PODLOŽKA / WASHER / UNTERLEGSCHENKE	PODLOŽKA 15	3
6	95.001.015	0	LOŽISKO / BEARING / LAGER	6202 2RS	4



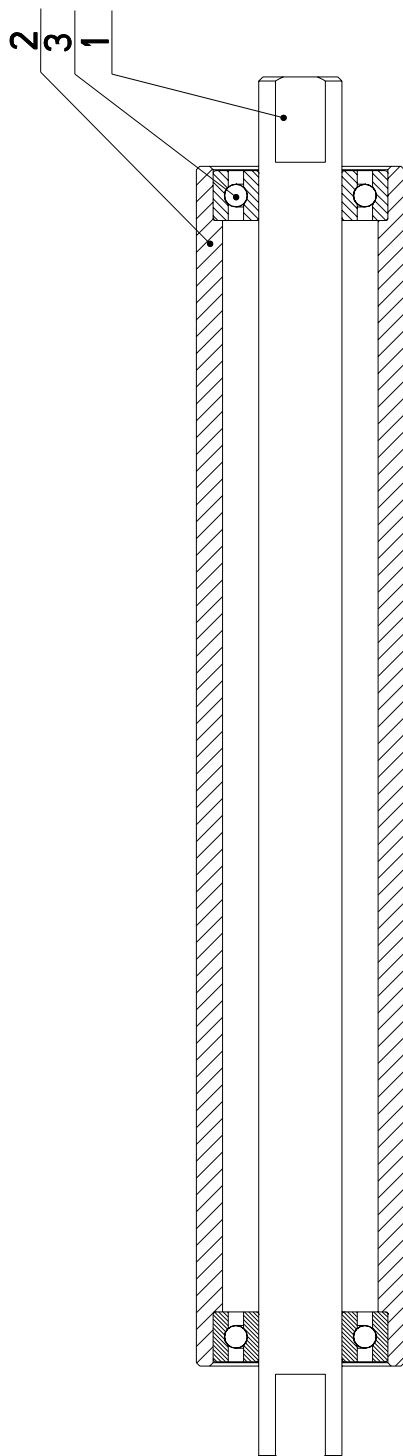
7.45. Ložisko /Lager / Bearing

Cislo Sestavy 201.7102-100		Ver. 0	Nazev sestavy LOŽISKO/BEARING/LAGER	
Poz.	Objednací číslo	Ver.	Nazev položky	Rozmer
1	30.7102-103	0	CEP / LUG / BOLZEN	d 16
2	31.7102-101	0	KOTOUC / DISC / SCHEIBE	340x125x2.2
3	81.7102-102	0	KOTOUC / DISC / SCHEIBE	P 2 - 348
4	95.692.001	0	VALECEK / CYLINDER / ROLLE	12x12
				Ks
				8
				2
				1
				36



7.46. Válec pomocný /Hilfszylinder / Auxiliary cylinder

Císlo Sestavy 201.7203-210		Ver. 0	Název sestavy VALEC POMOCNY/AUXILIARY CYLINDER/HILFSZYLINDER		
Poz.	Objednací číslo	Ver.	Název položky	Rozmer	Ks
1	30.7203-015	1	OSA / AXLE / Achse	d 20	1
2	30.7203-016	0	VALEC POMOCNY / AUXILIARY CYLINDER / HILFSZYLINDER	TR 51x6.3	1
3	95.001.007	0	LOZISKO / BEARING / Lager	6004 2RSA	2

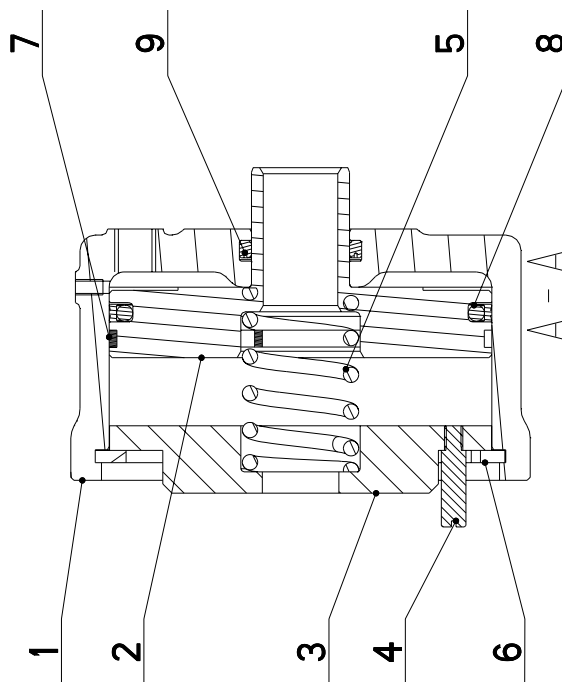


B - B

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

7.47. Válec napínací /Spannzylinder / Tensioning cylinder

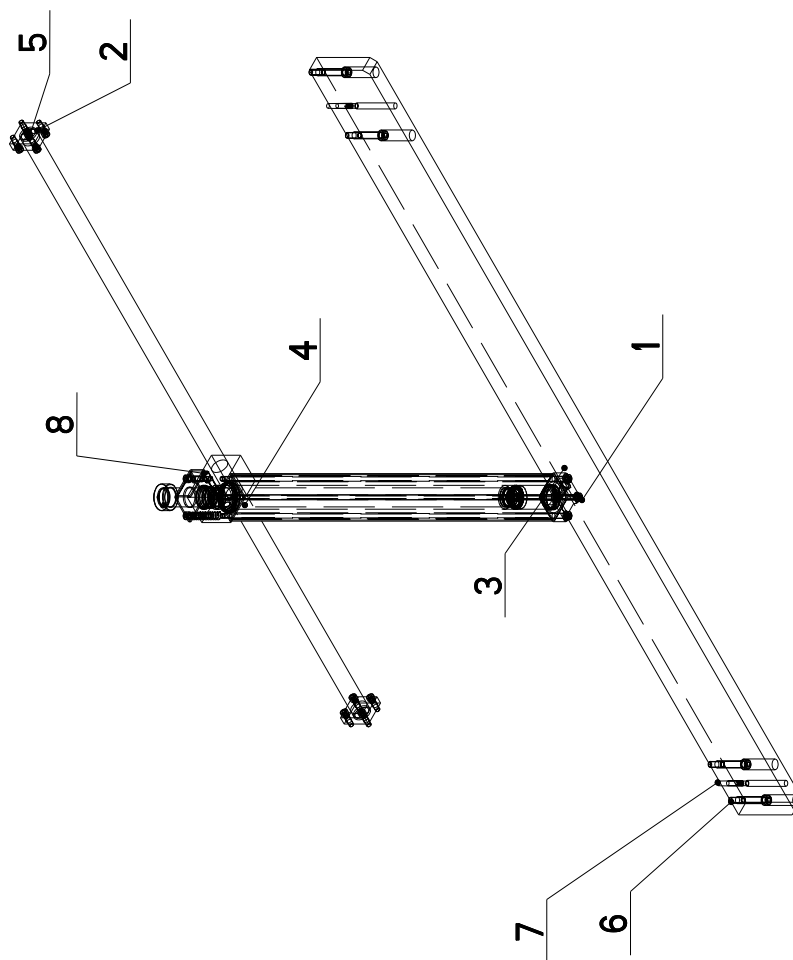
Cislo Sestavy 201.7207-400		Ver. 0	Nazev sestavy VALEC NAPINACI / TENSIONING CYLINDER / SPANNZYLINDER		
Poz.	Objednaci cislo	Ver.	Nazev polazky	Rozmer	Ks
1	30.7207-401	1	VALEC NAPINACI / TENSIONING CYLINDER / SPANNZYLINDER	d 150	1
2	30.7207-402	4	PIST / PISTON / KOLBEN	d 140	1
3	30.7207-403	0	VÍKO / COVER / DECKEL	P 25 - 130	1
4	30.7207-405	0	CEP / LUG / BOLZEN	d 8	1
5	31.7207-404	0	PRUŽINA / SPRING / FEDER	D 38	1
6	95.801.025	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 130	1
7	96.084.001	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GP6500500_Z61	2
8	96.900.003	0	TESNENI KOMBINOVA NE / COMBINATION SEALING / KOMBIDICHTUNG		1
9	96.042.xxx	0	TESNENI / SEALING / DICHTUNG	RU3100320	1



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

7.48. Upínání horní / Spannvorrichtung oben / Top clam

Císlo Sestavy 201.7214-000		Ver. 0	Název sestavy UPINANI HORNÍ / TOP CLAM/ SPANNVORRICHTUNG OBEN		
Poz.	Objednací číslo	Ver.	Název položky	Rozměr	Ks
1	201.7207-700	0	VALEC UPINACÍ / FIXING CYLINDER / SPANNZYLINDER		1
2	30.7114-001	1	KOSTKA / CUBE / WÜRFEL	HR 50x15	2
3	30.7214-003	0	LISTA / TRIM / LEISTE	HR 120x25	1
4	30.7214-004	0	TYC VODICÍ / LEAD POLE / FÜHRUNGSSTANGE	Ø 30	1
5	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	8
6	90.001.25.055	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10x70	4
7	90.302.02.004	0	KOLÍK KUŽELOVÝ / TAPER PIN / KEGELBOLZEN	KOLIK 8x50	2
8	91.172.001	0	SPINAC / SWITCH / SCHALTER	BES M08MI	1



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