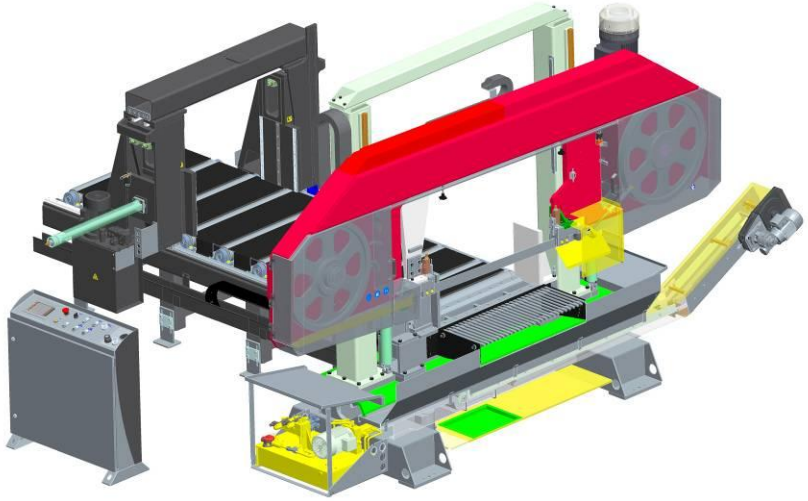
Serie **Extend**



Extend 900.720 A 2500

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 $7^{00} – 16^{00}$

Version:

1.00 / Apr. 2013

rev. 1

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.
This statement applies exclusively to the machine device in conditions in which it was brought to the market. It does not apply to parts subsequently added by the end user or to modifications performed subsequently by the end user.
In the event of any device modification not approved by us this declaration shall lose its validity.

Name: **Band Saw**

Type range: **Extend 900.720 ANC LS 2500**

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 15–90 $m.min^{-1}$
Cutting angle 0°
Total dimensions in mm (l×w×h) 4500x4000x2600 mm
Supply voltage 3x400 V TN-C-S, 50 Hz
Total power requirement 19,5 kW
Weight 8500 kg

Documentation: Technical documentation for this machine device was elaborated in compliance with Government regulation no. 176/2008, Annex 7, part A..

The device meets relevant requirements of the given directives: **No. 176/2008 Coll.** (Directive 2006/42/ES)
No. 616/2006 Coll. (Directive 2004/108/ES)
No. 17/2003 Coll. (Directive 2006/95/EC)

The applied harmonized standards,National standards and technical specifications:
ČSN EN ISO 12100:2011, ČSN EN 13 898+A1:2009,ČSN EN ISO 13857:2008,ISO 4413:2011,
ČSN EN 61000-6-2 ed.2:2007, ČSN EN 61000-6-4 ed.2:2007, ČSN EN 60204-1 ed.2:2007

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

The conformity judging was performed according to §12, par. 3, let. a), of the Law no. 22/1997 Coll. as amended
2) *The* declaration of conformity was carried out in the cooperation with the TÜV SÜD Czech s.r.o, Novodvorská 994, 142 21 Prague 4 – Czech Republic, Identification number: 63987121 - Inspection body no. 4002

The inspection certificate no . 01.446.760/10/07/02/0 was issued.

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

16.04.2013	Alfred Pichlmann, Managing Director	
Point of issue, datum	Name and function of the responsible subject	Signature

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

1] Name, address and identification number of the subject issuing the conformity declaration (producer of importer)
2) The authorized or accredited body co-operating on the conformity judging

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

Content

1. BEZPEČNOSTNÍ POKYNY/ SICHERHEITSHINWEISE/ 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. Arm covers 14
1.6.3. Band saw cover 14
1.6.4. Brush cover 14
1.6.5. Feeder cover 15
1.6.6. Safety notes for Swarf conveyor (optional accessories) 15
1.7. Safety notes for the cooling 15
1.7.1. Instructions for first help 15
1.8. Umístění štítku stroje / Maschinenschild position / Position of machine label 16
1.9. Protective fencing workspace 16
1.10. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols 17
1.10.1. Band saw 17
1.10.2. Feeder 18

2. DOKUMENTACE STROJE/ DOKUMENTATION DER MACHINE/ MACHINE DOCUMENTATION 19

2.1. Technická data / Technische Daten / Technical data 21
2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram 23
2.2.1. Bandsaw 23
2.2.2. Feeder 24
2.3. Popis / Beschreibung / Description 25
2.4. Transportation and stocking 26
2.4.1. Conditions for transportation and stocking 26
2.4.2. Transport and stocking preparations 26
2.4.3. Transport and stocking 26
2.5. Transportní schéma / Transport schema / Transport diagram – zerav 27
2.5.1. Band saw - forklift 27
2.5.2. Band saw - crane 28
2.5.3. Feeder 29
2.6. Activation 30
2.6.1. Machine working conditions 30
2.7. Band saw unpacking and assembling 30
2.7.1. Machine installing and levelling 30
2.7.2. Machine disposal after lifetime 31
2.8. First run of the power pack 31
2.9. Filling the reservoir with hydraulic oil 31
2.10. Kotevní plan / Verankerungsplan / Grounding plan 33
2.10.1. Pásová pila 33
2.10.2. Feeder 34
2.11. Electrical connection 35
2.11.1. Check the direction of the saw band 35
2.11.2. Check machine connection into electrical network 36
2.12. Filling of the cooling system 36
2.13. Check machine function 36
2.14. Saw band 36
2.14.1. Saw band size 36
2.14.2. Selection of the saw band tooth system 36
2.14.3. Saw band running-in 37
2.14.4. Tables for teeth selection 38

3. MACHINE CONTROL/ BEDIENUNG DER MASCHINE/ MACHINE CONTROL 39

3.1. Saw band start 41
3.2. Control panel 42
3.3. Machine referring 44
3.4. Service parameters 44
3.4.1. Service parameters 1 45
3.4.2. Service parameters 2 45
3.4.3. Service parameters 3 46
3.4.4. Service paramaters 4 47
3.4.5. Service parameters 5 47
3.5. Machine operation – semiautomat mode 48
3.5.1. Cutting procedure in semiautomat mode 49
3.6. Machine control – automat mode with feeding 50

3.6.1. Cutting programs....50
3.6.2. Automatic cycle....52
3.7. Work cycle interruption....54
3.8. System error messages....55
3.9. Band saw adjustment....56
3.9.1. Vice adjustment....56
3.9.2. Frame adjustment....57
3.9.3. Feeder adjustment....57
3.9.4. Drive adjustment....58
3.10. Band saw adjusting....59
3.10.1. Cutting speed adjusting....59
3.10.2. Adjustment of pressure to the cut....59
3.10.3. Speed adjustment of the arm lowering....60
3.10.4. Adjusting band guides....60
3.10.5. Saw arm lower position stop adjustment....61
3.10.6. Limit switch lower position stop adjustment....61
3.10.7. Saw arm upper position stop adjustment ¨....62
3.10.8. Limit switch upper position stop adjustment....62
3.10.9. Set arm elevation using encoder upper arm position....62
(optional accessories)....62
3.10.10. Brush adjustment....63
3.11. Material insertion....63
3.11.1. Handling agent selection....63
3.11.2. Insertion....64
3.11.3. Bundle material cutting....64

4. ÚDRŽBA STROJE/ WARTUNG DER MASCHINE/ MACHINE SERVICE....65

4.1. Saw band dismantling....67
4.2. Saw band installation....68
4.3. Saw band stretching and inspection....68
4.3.1. Saw band stretching....68
4.3.2. Limit switch setting of the saw band stretching....69
4.3.3. Saw band run adjustment on stretching wheel....69
4.3.4. Saw band run inspection....69
4.3.5. Saw band run setting....70
4.3.6. Adjustment of the cutting pressure regulation....70
4.3.7. Setting on the right guiding cube....70
4.3.8. Setting on the left guiding cube....71
4.4. Cooling agents and chips disposal....71
4.4.1. Coolant device inspection....71
4.4.2. Chips disposal....72
4.5. Hydraulic, Greases and oils....72
4.5.1. Gearbox oils....72
4.5.2. Lubricant greases....73
4.5.3. Lubrication....73
4.5.4. Hydraulic oils....74
4.5.5. Pressure regulation....75
4.5.6. Hydraulic unit service....76
4.6. Machine cleaning....77
4.7. Worn pieces replacement....77
4.7.1. Pushing bearing replacement and hard metal guides replacement....77
4.7.2. Saw band guiding pulleys replacement....82
4.7.3. Brush replacement....84
4.7.4. Cooling pump replacement....84

5. ZÁVADY / STÖRUNGEN/ TROUBLESHOOTING....87

5.1. Mechanical problems....89
5.2. Electric problems....91
5.3. Hydraulic problems....92

6. SCHÉMA / SCHEMAS / SCHEME 93

6.1. Elektrické schema / Elektroschema / Wiring diagrams – 3×400 V, 50 Hz / TN-C-S 95
6.2. Hydraulické schema / Hydraulikschema / Hydraulic diagrams....114
6.2.1. Pila / Säge / Saw....114
6.2.2. Dopravník / Vorschub / Feeder....116

7. VÝKRESY SESTAV PRO OBJEDNÁNÍ NÁHRADNÍCH DÍLŮ/ ZEICHNUNGEN FÜR BESTELLUNG DER ERSATZTEILE / DRAWING ASSEMBLIES FOR SPARE PARTS ORDER.... 119

7.1. Extend 900.720 A 2500 -1....120
7.2. Kusovník / Stückliste / Piece list – Extend 900.720 A 2500 -1....121
7.3. Extend 900.720 A 2500 -2....122
7.4. Kusovník / Stückliste / Piece list – Extend 900.720 A 2500 -2....123
7.5. Podavač / Vorschub / Feeder -1....124
7.6. Kusovník / Stückliste / Piece list – Podavač / Vorschub / Feeder -1....125
7.7. Kusovník / Stückliste / Piece list – Podavač / Vorschub / Feeder -2....126
7.8. Kusovník / Stückliste / Piece list – Podavač / Vorschub / Feeder -2....127

7.9. Rameno / Sägerahmen / Saw arm -1 128
7.10. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm -1 129
7.11. Rameno / Sägerahmen / Saw arm -2 130
7.12. Kusovník / Stückliste / Piece list – Rameno / Sägerahmen / Saw arm -2 131
7.13. Podstavec / Untersatz / Base 132
7.14. Kusovník / Stückliste / Piece list – Podstavec / Untersatz / Base 133
7.15. Pohon / Antrieb / Drive 134
7.16. Kusovník / Stückliste / Piece list – Pohon / Antrieb / Drive 135
7.17. Svěrák / Schraubstock / Vice 136
7.18. Kusovník / Stückliste / Piece list – Svěrák / Schraubstock / Vice 137
7.19. Válec svěráku / Schraubstockzylinder / Vice cylinder 138
7.20. Kusovník / Stückliste / Piece list – Válec svěráku / Schraubstockzylinder / Vice cylinder 139
7.21. Válec zvedací / Hebezylinder / Lifting cylinder 140
7.22. Kusovník / Stückliste / Piece list – Válec zvedací / Hebezylinder / Lifting cylinder 141
7.23. Snímač / Sensor / Sensor 142
7.24. Kusovník / Stückliste / Piece list – Snímač / Sensor / Sensor 143
7.25. Napínání / Spannung / Tensioning 144
7.26. Kusovník / Stückliste / Piece list – Napínání / Spannung / Tensioning 145
7.27. Vedení pásu / Sägebandführung / Belt guide -1 146
7.28. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide -1 147
7.29. Vedení pásu / Sägebandführung / Belt guide -2 148
7.30. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide -2 .149
7.31. Vodící kostka / Führungsklotz / Guiding cube -1 150
7.32. Kusovník / Stückliste / Piece list – Vodící kostka / Führungsklotz / Guiding cube -1 .151
7.33. Vodící kostka / Führungsklotz / Guiding cube -2 152
7.34. Kusovník / Stückliste / Piece list – Vodící kostka / Führungsklotz / Guiding cube -2 .153
7.35. Ovládací panel / Bedienpult / Control panel 154
7.36. Kusovník / Stückliste / Piece list – Ovládací panel / Bedienpult / Control panel 155
7.37. Kartáč / Bürste / Brush 156
7.38. Kusovník / Stückliste / Piece list – Kartáč / Bürste / Brush 157
7.39. Odměřování / Gehrungmessung / Measuring 158
7.40. Třískový vynašeč / Spanabführung / Chip extractor 159
7.41. Kostka regulace / Regulation cube / Regelungswürfel 160
7.42. Válec napínací / Spannzylinder / Tensioning cylinder 161
7.43. Regulace tlaku svěráku / Schraubstock-Druckregelung/ Vice pressure regulation 162
7.44. Rošt / Gitter / Grill 163

Manual version:1.00 / Apr. 2013
Manual rev.: 1

1. Bezpečnostní pokyny/ Sicherheitshinweise/ Safety notes

Manual version:1.00 / Apr. 2013
Manual rev.: 1

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

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

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

1.1. Machine determination

The band saw **Extend 900.720 A 2500** is determined for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics **without cutting angle**.

Combustible materials are excepted for cutting! Any other usage and operation outside this range are unauthorized and the manufacturer/supplier does not accept any responsibility for any damages resulting from such misuse. **The operator has full responsibility!**

The machine is equipped with safety and protective guarding for operator and machine protection. Nevertheless, this safety and protective guarding cannot prevent injury. Service personnel must read this chapter and comprehend it, before he starts to work on the machine. **Always keep instructions about work safety!** Service personnel must take into account other aspects of the risk, which refer to the ambient conditions and the material.

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

1.2. Protective suit and personal safety

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

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

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

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

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

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

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

Operate the machine only when you are fit enough to work. Illnesses or injuries diminish concentration. Avoid machine work, which may compromise the safety of you and your colleagues!

1.3. Safety notes for machine operator

Attention!
Machine can be operated by person older than 18 years!
Machine can be operated only person physically and mentally fit for this activity

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.

Manual version:1.00 / Apr. 2013
Manual rev.: 1

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

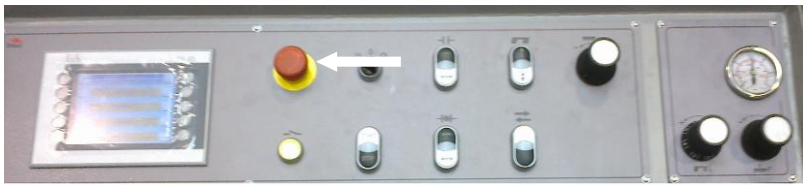
The machine is equipped with safety accessories. It protects the operator from injuries and the machine before damage. The safety accessories are blocking accessories, emergency switches and covers. Check once in a week the function of the safety accessories. If the safety accessories are functionless,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

Button TOTAL STOP is placed on bandsaw control panel:



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. Arm covers

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

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

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

1.6.3. Band saw cover

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

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

1.6.4. Brush cover

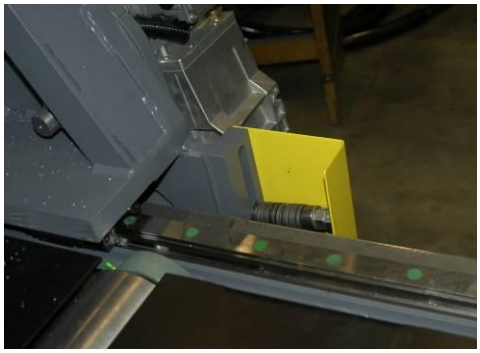
It covers the brush for saw blade.

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

Manual version:1.00 / Apr. 2013
Manual rev.: 1

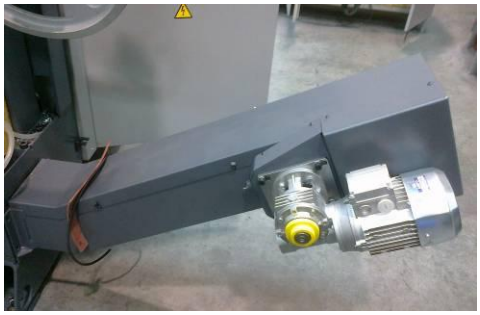
1.6.5. Feeder cover

It covers tensioning pinion of feeder's.



1.6.6. Safety notes for Swarf conveyor (optional accessories)

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



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

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

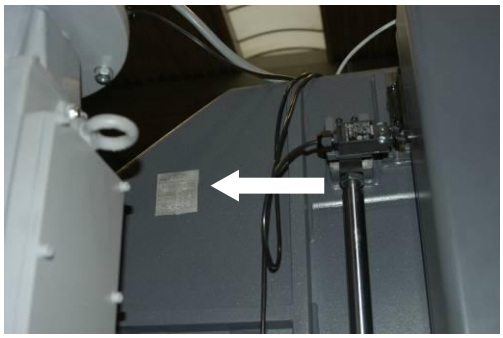
1.7. Safety notes for the cooling

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.

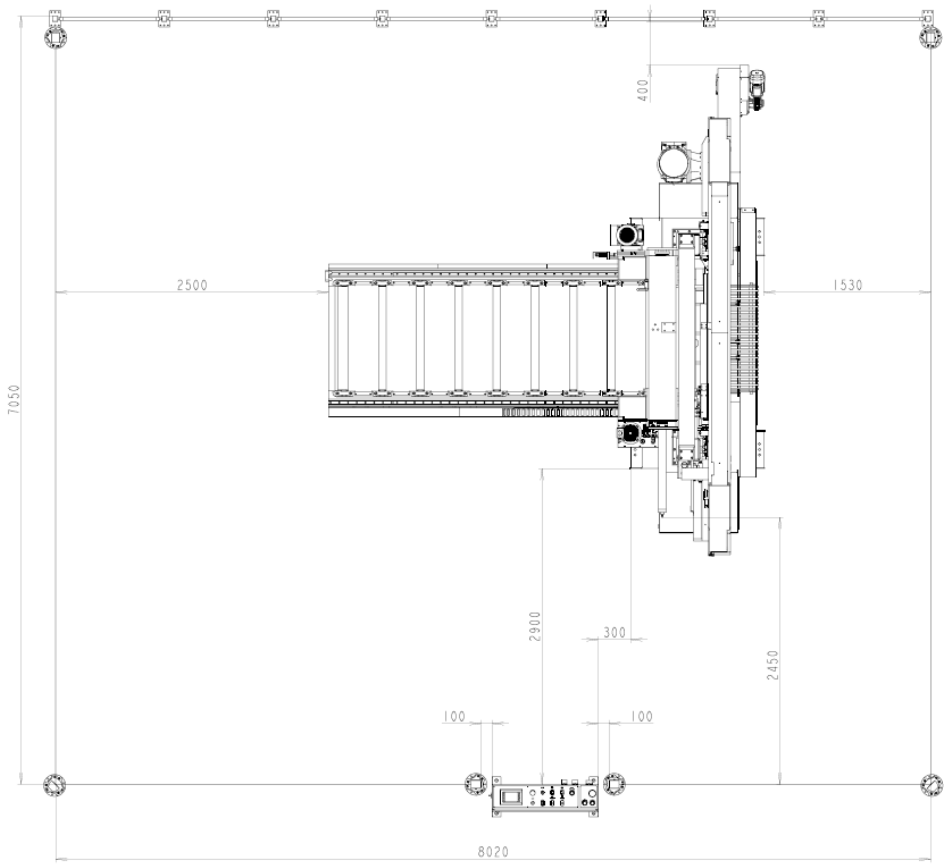
1.8. Umístění štítku stroje / Maschinenschild position / Position of machine label



Machine label is placed on arm.

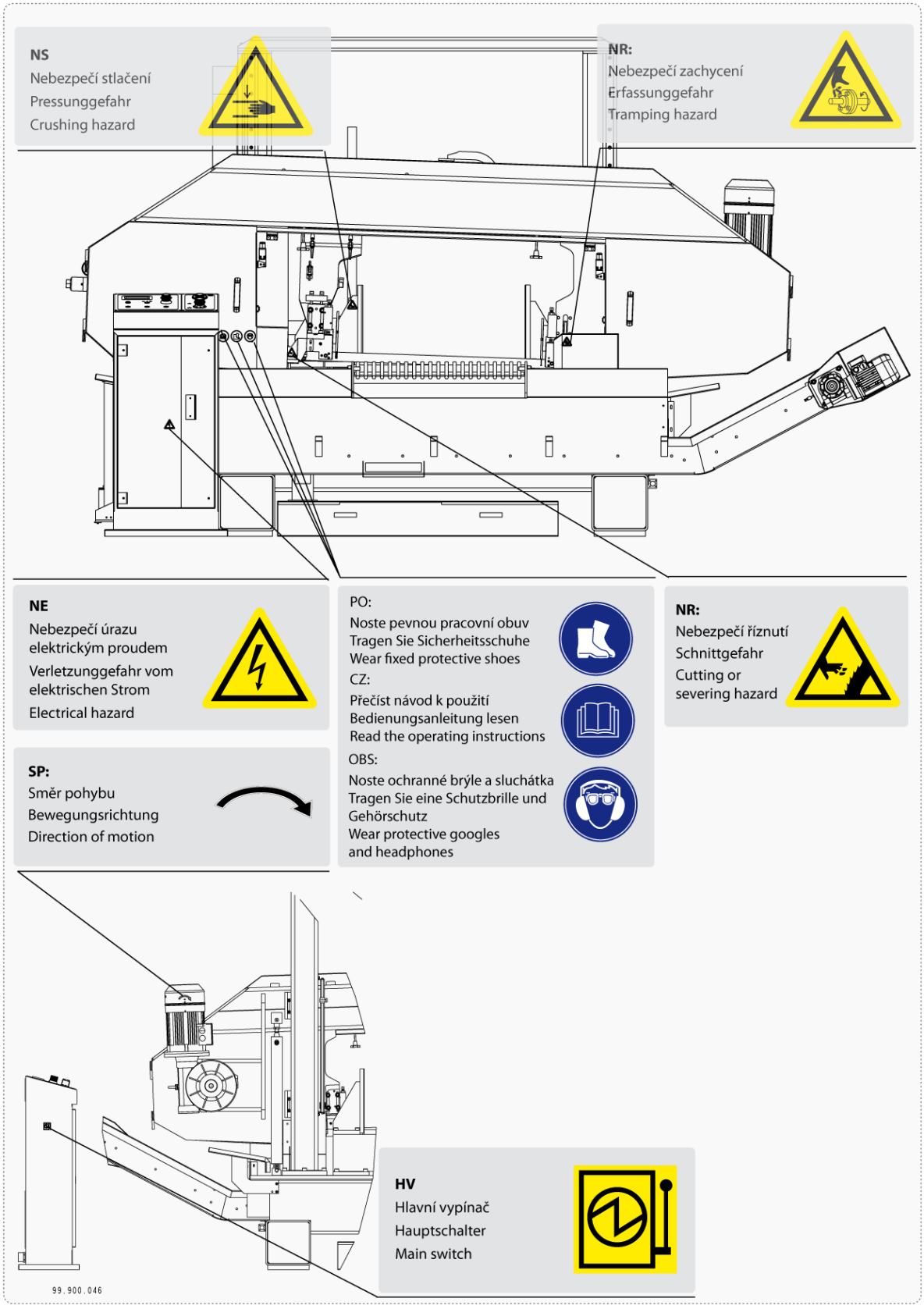
1.9. Protective fencing workspace

Warning!
Safe conduct of activities Bandsaws using only safety protective security!!
Recommended distance safety protective security workspace saws must be followed according to the diagram from the manufacturer!
In the case of the recommended distance not met, a statement of compliance for the device loses efficiency in and void!!

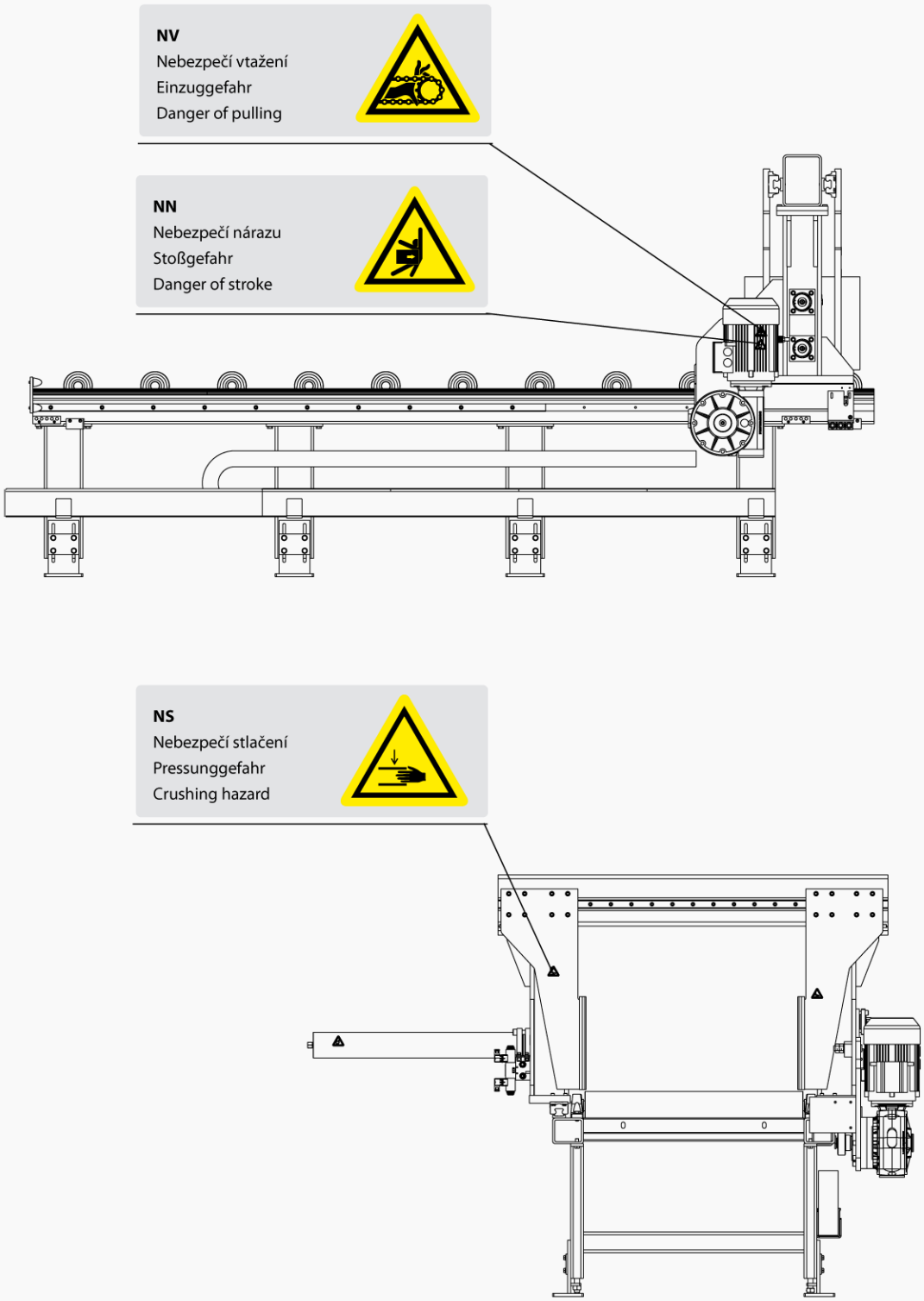


1.10. Umístění bezpečnostních značek / Verteilung der Sicherheitszeichen / Position of safety symbols

1.10.1. Band saw



1.10.2. Feeder


NV
Nebezpečí vtažení
Einzuggefahr
Danger of pulling
NN
Nebezpečí nárazu
Stoßgefahr
Danger of stroke
NS
Nebezpečí stlačení
Pressunggefahr
Crushing hazard

2. Dokumentace stroje/ Dokumentation der Machine/ Machine documentation

Manual version:1.00 / Apr. 2013
Manual rev.: 1

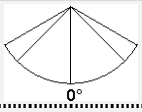
2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:	
• Hmotnost / Gewicht / Weight	8 500 kg (6000 kg/bandsaw +2500kg/feeder)
Rozměry stroje / Maschinengröße / Machine size :	
• Délka / Länge / Lenght	4 500 mm
• Šířka / Breite / Width	4 000 mm
• Výška / Höhe / Height	2 600 mm
Elektrické vybavení / Elektrische Ausrüstung / Electical equipment:	
• Napájení / Versorgungsspannun / Supply voltage	~3 x 400 V, 50Hz, TN-C-S
• Příkon / Gesamptschlusswert / Total Input	19,5 kW
• Max.jištění / Max. Vorschaltsicherung / Max. Fuse	40 A
• Krytí / Schutzart / Protection	IP 54
Akustický tlak / Schalldruckpegel / Acoustic pressure:	
• Extend 900.720 A2500	L_{Aeqv}=86 dB
Pohon pásové pily/ Bandsägeatrieb / Bandsaw drive:	
• Typ / Typ / Type	1LA7133-4AA11
• Napájení / Versorgungsspannun / Supply voltage	~3 x 400V, 50Hz
• Výkon / Leistung / Output	7,5 kW
• Jmenovité otáčky / Motornenndrehzahl / Nominal speed	1445 min^{-1}
Pohon podavače/ Vorschubatrieb / Feeder drive:	
• Typ / Typ / Type	GKS07-3MHAK
• Napájení / Versorgungsspannun / Supply voltage	~3 x 400V, 50Hz
• Výkon / Leistung / Output	3 kW
• Jmenovité otáčky / Motornenndrehzahl / Nominal speed	1430min^{-1}
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment – Pila / Säge / Saw:	
• Typ / Typ / Type	PPM/S001-071-1
• Výkon / Leistung / Output	0,75 kW/15MPa
Hydraulické zařízení / Kühlmiteleinrichtung / Hydraulic equipment – Podavač / Vorschub / Feeder:	
• Typ / Typ / Type	SMA03/731-0507
• Výkon / Leistung / Output	2,2 kW/6,5 MPa
Chladící zařízení / Kühlmiteleinrichtung / Cooling equipment:	
• Typ / Typ / Type	4C0A4-12H-P1
• Výkon / Leistung / Output	0,120 kW
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	50 l
Rozměr pásu / Sägebanddimension / Band size:	
8560×67×1,6 mm	
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:	
20–120 m/min.	
Maximální podávaná hmotnost / Maximalgewicht / Maximal loading weight:	
10 000 kg	
Délka podání / Vorschublänge / Feeding lenght:	
2 500 mm	
Zbytková délka / Restlänge / Rest lenght	
300 mm	

Minimální řezaná délka / Minimale Schnittlänge / Minimal cutted material size:

50 mm

Řezné rozsahy / Schnittbereiche / Cutting size:



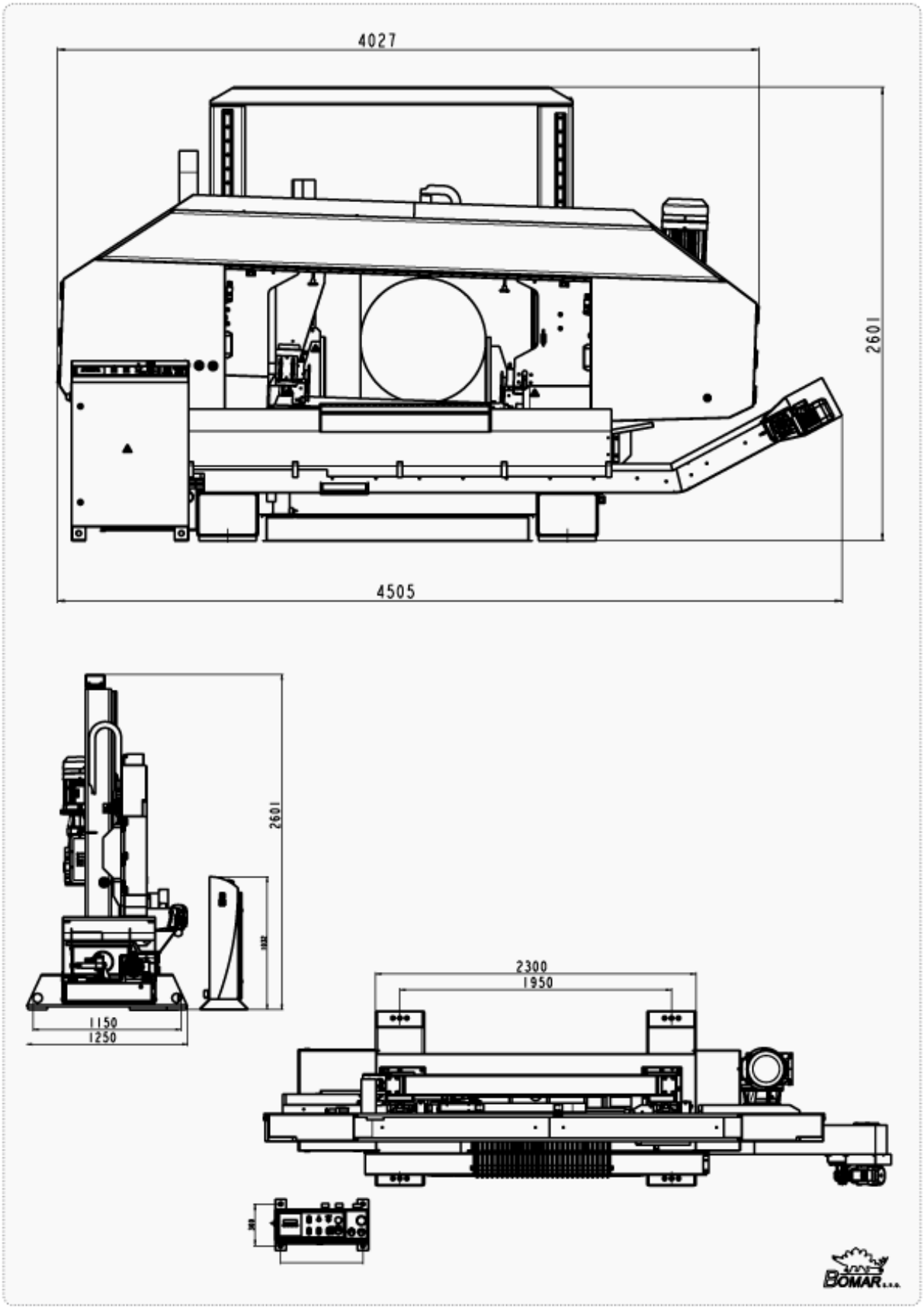
0°	Ø720 mm	720×900 mm	720×900 mm	720×900 mm

Level of acoustic pressure:

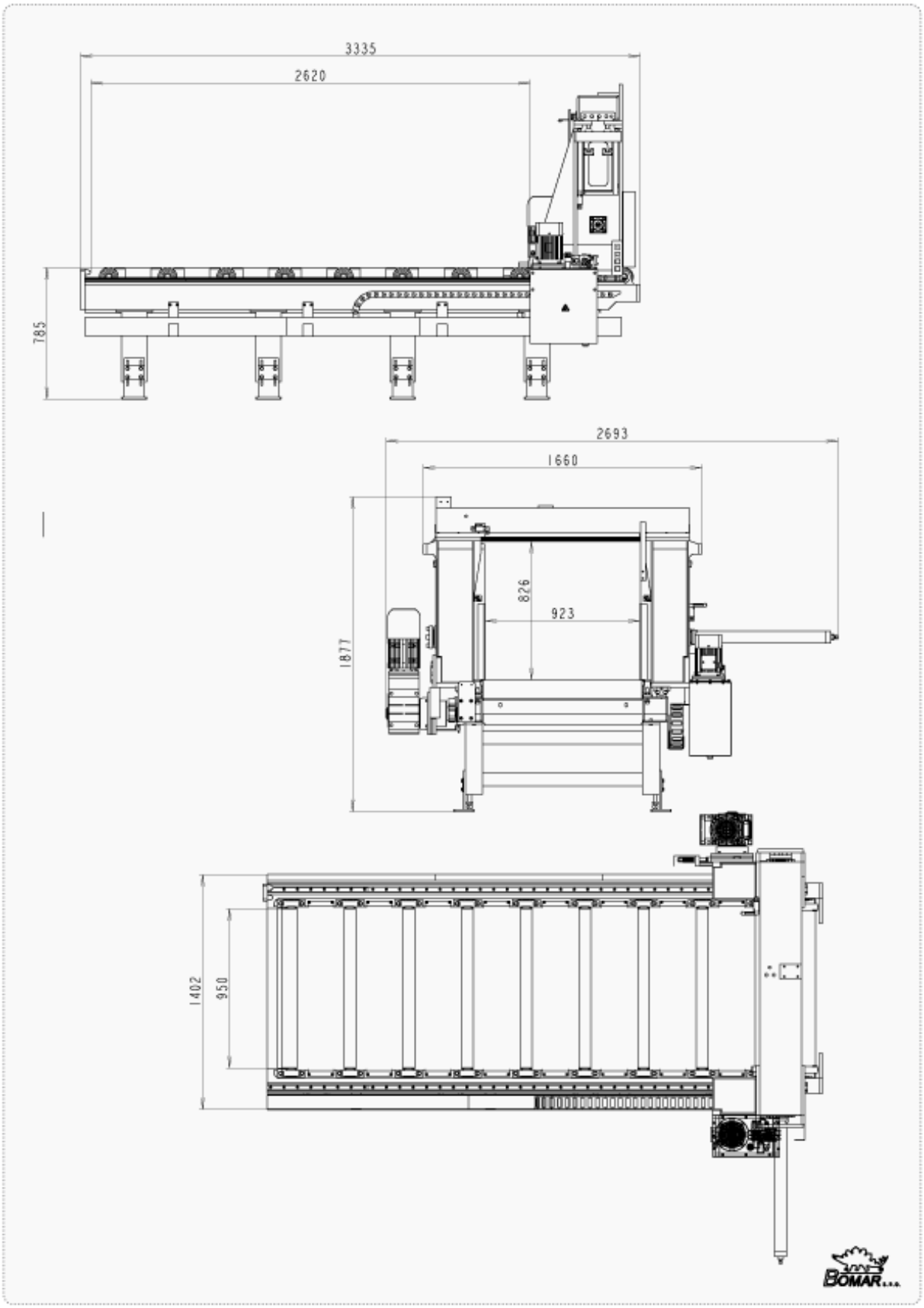
Equivalent level of acoustic pressure A (noise) at operator position are L_{Aeqv}=76,3 dB. Mentioned values are levels of emission which doesn't have to represent safe levels. Factors which influence real level of acoustic pressure on machine operator are: working place characteristics, cut material, saw band. These factors have significantly influence on acoustic pressure.

2.2. Rozměrové schéma / Aufstellzeichnung / Installation diagram

2.2.1. Bandsaw

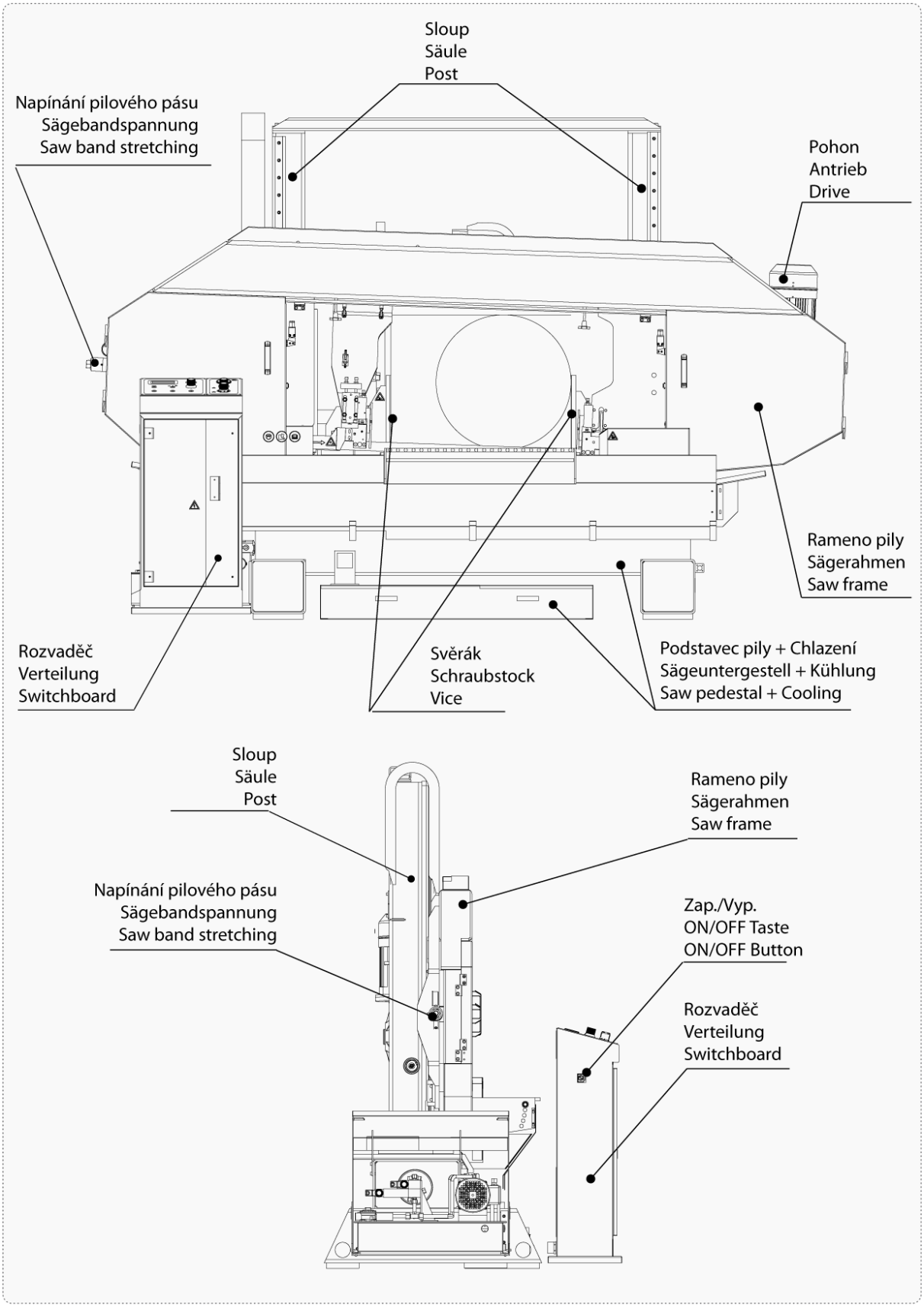


2.2.2. Feeder



Manual version:1.00 / Apr. 2013
Manual rev.: 1

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

Operate the machine only with hanging cords and crane. Stand the machine is equipped with a hole diameter of 70 mm. Insert into holes steel logs corresponding dimensions. It is possible to use two four shorter or longer rods so as to pass through all eight holes. Hanging cords with adequate strength for the weight machines attach to steel rods.

Conditions for steel rods:

lenght : 400 mm

diameter : Ø 40 mm

material : 11 373

tensile strength : Rm=340-440 Mpa

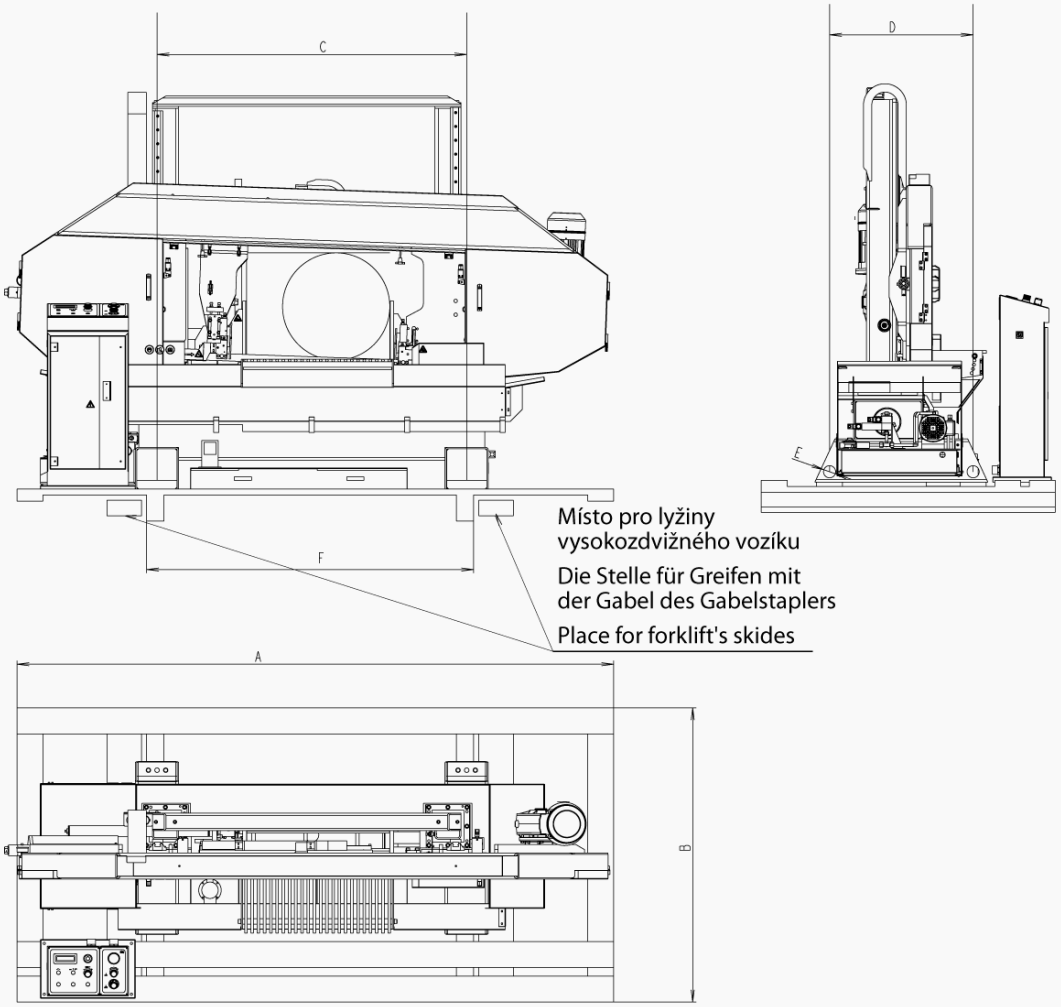
flexural strength : 0,7 x tensile strength

it is necessary to observe the conditions:

- Make sure to have sufficient crane capacity.
- Ensure that the truck or trailer had sufficient capacity.
- The machine must be secured during transportation, that it can not tip over or fall from the equipment ..
- If possible, attach the palette to the floor of the truck or trailer.
- Be careful that the machine is not damaged during
- It is forbidden to handle the machine any other way, than it is written in this operating instructions, the machine can be damaged

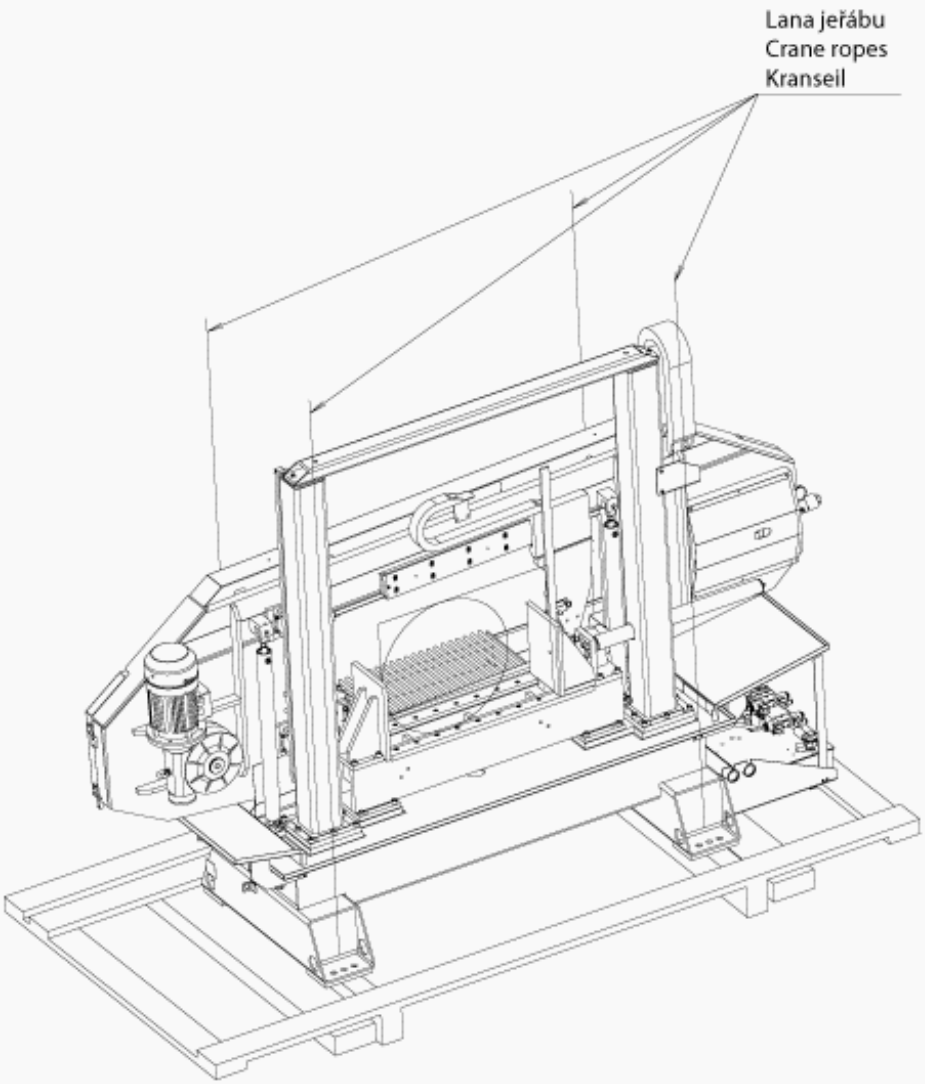
2.5. Transportní schéma / Transport schema / Transport diagram – zerav

2.5.1. Band saw - forklift



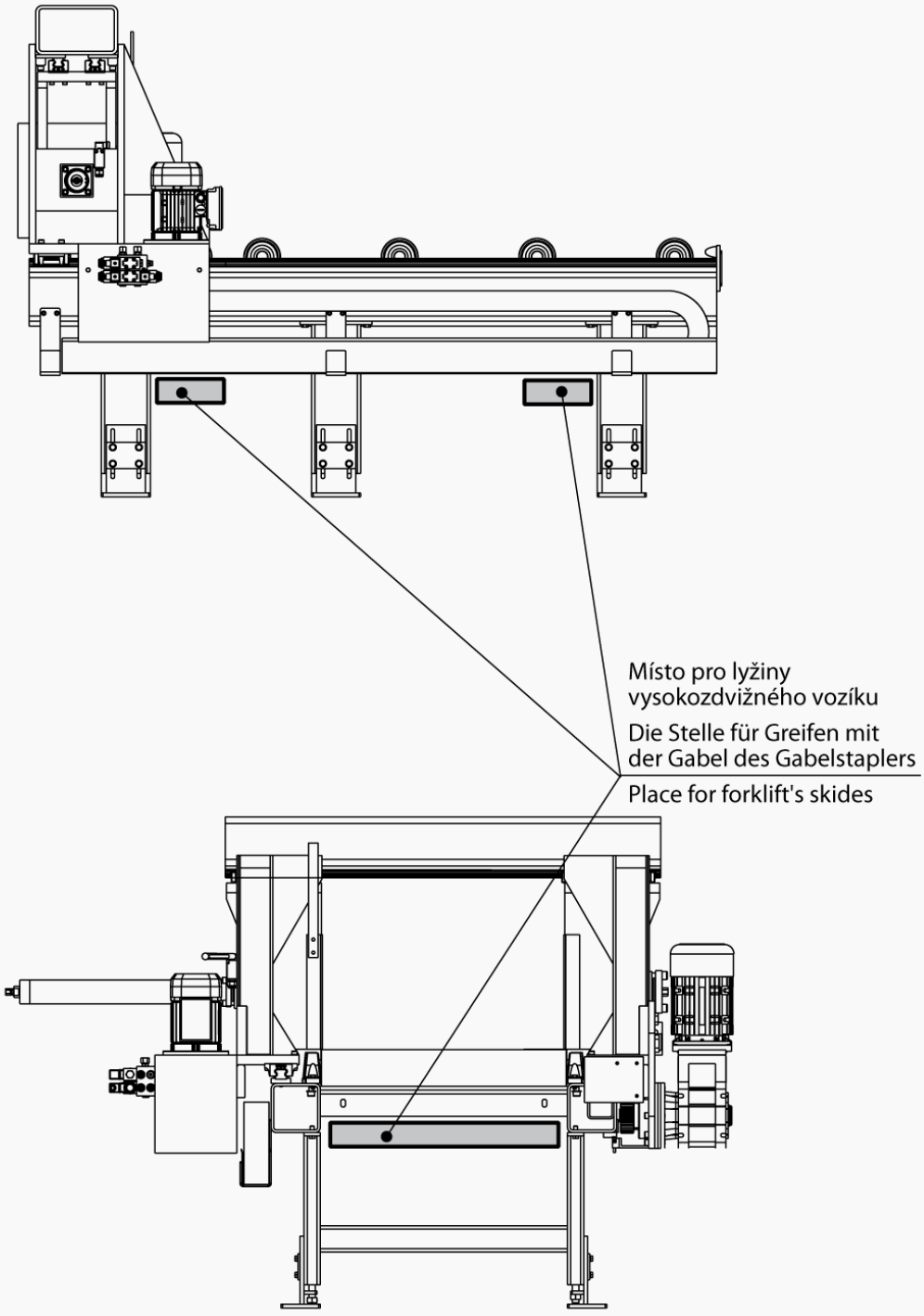
	A	B	C	D	E	F
Extend 700.520	3300	1540	1655	900	ø70	1865
Extend 800.620	3450	1700	1790	900	ø70	1990
Extend 900.720	4000	1800	1950	1150	ø70	2150
Extend1000.820	4300	2200	2275	1300	ø70	2475
Extend1120.1120	3000	2400	2565	1600	ø70	

2.5.2. Band saw - crane



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

2.5.3. Feeder


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

2.6. Activation

2.6.1. Machine working conditions

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

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

- At temperature air from ***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.

Attention!
If the ambient temperature drops below 15 ° C is required before operating the machine to have switch on hydraulic unit around 10 minutes and then made several motion few times (for example, in manual mode) by all hydraulic cylinders. The reason is to heat hydraulic oil to the operating temperature for proper function of the pressure switches (and choke).

- Do not expose the machine to the radiation (for example microwave radiation, ultra-violet radiation, laser radiation, x-ray radiation). Radiation can cause problems with the machine function and deteriorating condition of the isolation.

2.7. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.

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

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

2.7.1. Machine installing and levelling

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

Minimal requirement:

machine weight – Extend 900.720 A 2500 – 8 500 kg

+ weight of accessories

+ maximum weight of material

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

2.7.2. Machine disposal after lifetime

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

2.8. 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.

2.9. 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 ß =75)!

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

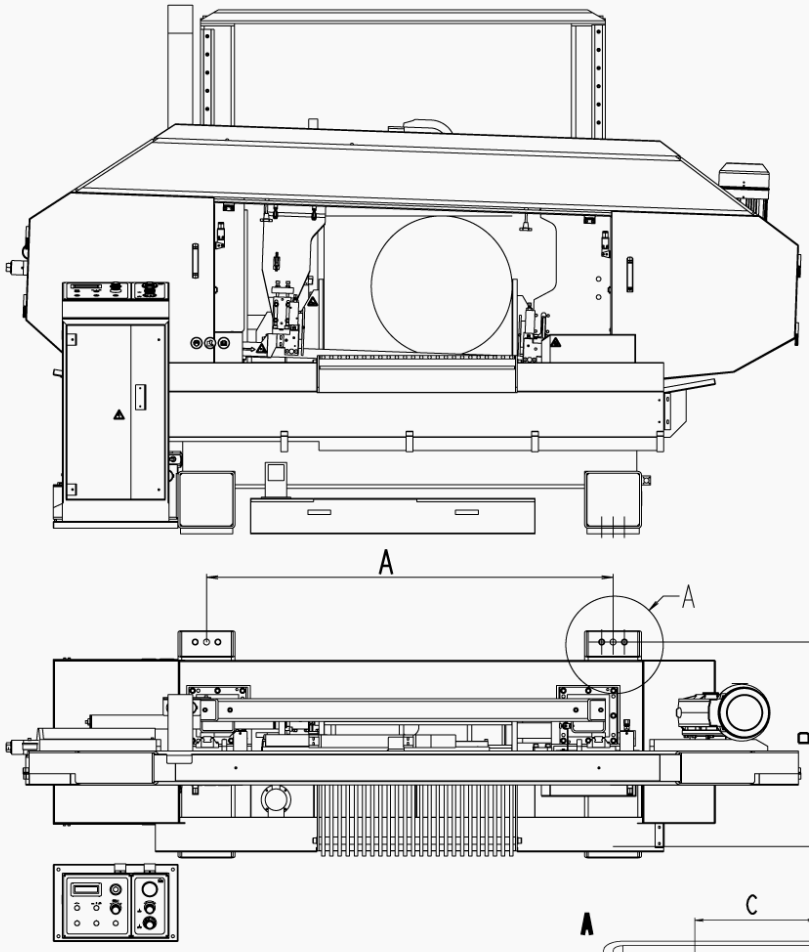
The maximum oil level will be shown on the upper marking at the dipstick or the sight level glass. Overfilling has to be prevent. The maximum filling rate of 15 l/min shouldn´t be exceed.

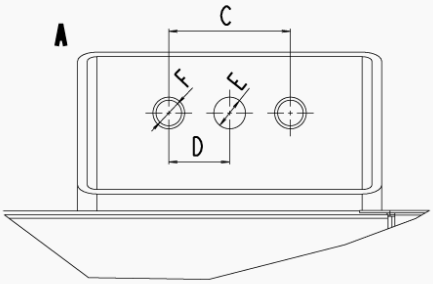
Oil type	Kinematic viscosity v in mm^2/s in relationship to the fluid temperatur					Freezing point
	0°C	20°C	40°C	60°C	80°C	°C
OH-HM 32	220	100	32	15	7	-40
OH-HM 46	400	170	46	18	11	-30
OH-HM 68	700	170	68	26	14	-28

Oil type	Kinematic viscosity v in mm²/s in relationship to the fluid temperatur					Freezing point
OH-HV 32	180	67	32	17	11	-40
OH-HV 46	350	110	46	25	14	-36

2.10. Kotevní plan / Verankerungsplan / Grounding plan

2.10.1. Pásová pila





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

Kotvící materiál / Verankerungsmaterial / Grouding material

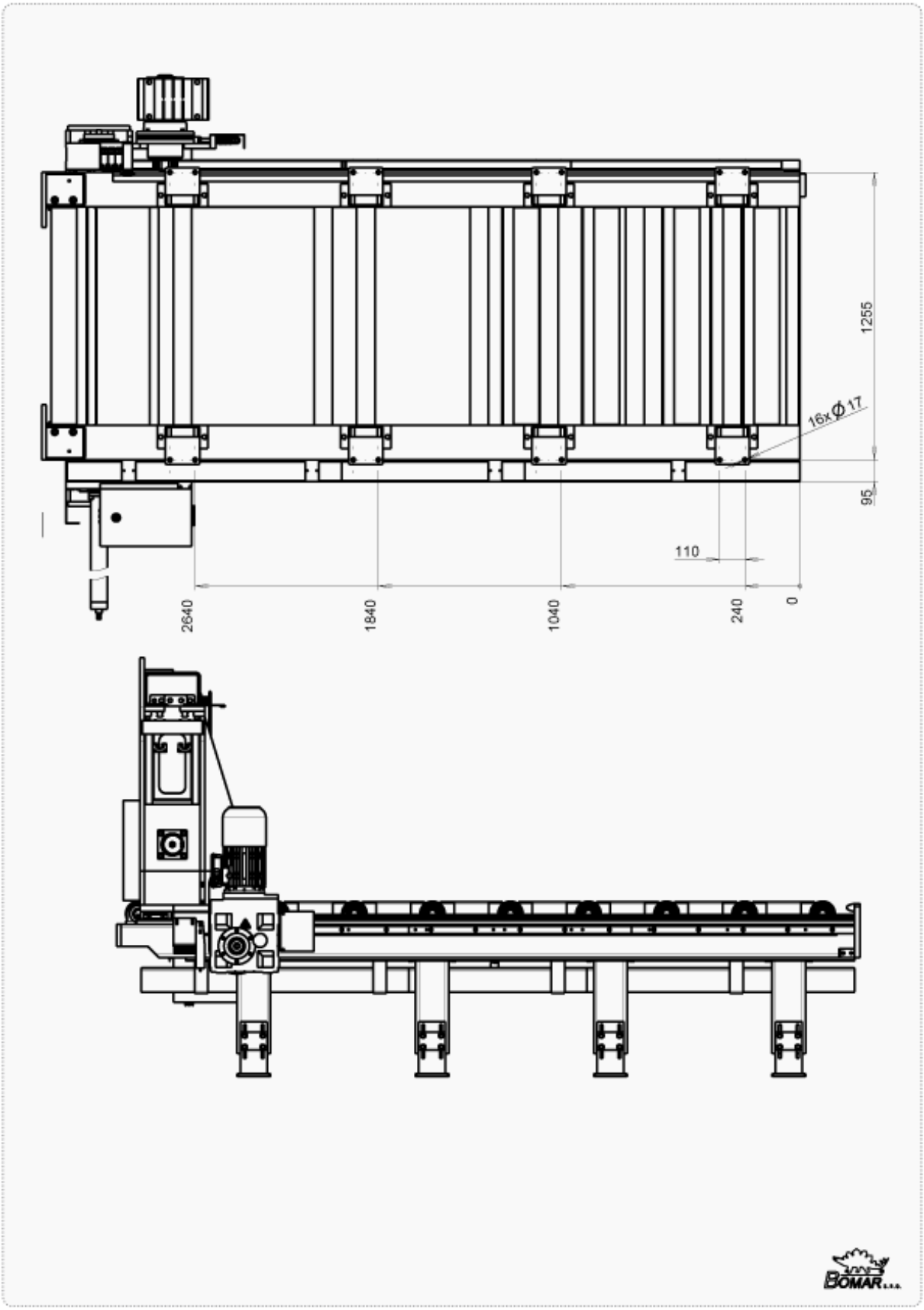
- 4× Kotvící šroub / Verankerungsschraube / Grounding screw — M24, pos. E
- 8× Stavěcí šroub / Stellschraube / Set-screw — M24, pos. F
- Do hloubky / In die Tiefe / Into deep — 150 mm

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

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

± 10 mm / 1 m

2.10.2. Feeder



Manual version:1.00 / Apr. 2013
Manual rev.: 1

2.11. 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: ~ 3×400 V, 50 Hz, TN-C-S
- Total input / Max. fuse: 19,5 kW / 40 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.

2.11.1. 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.

2.11.2. Check machine connection into electrical network

2.12. Filling of the cooling system

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

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

2.13. 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..

2.14. Saw band

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

2.14.1. Saw band size

8560×67×1,6 mm

2.14.2. Selection of the saw band tooth system

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

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

BOMAR for recommended Variable tooth system for band saw.

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

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

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!!!

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:

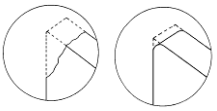
32 S – number „32" means 32 teeth on one inch (that means constant tooth system), letter „S" marks teeth with zero angle of the tooth.

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.

2.14.3. 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.

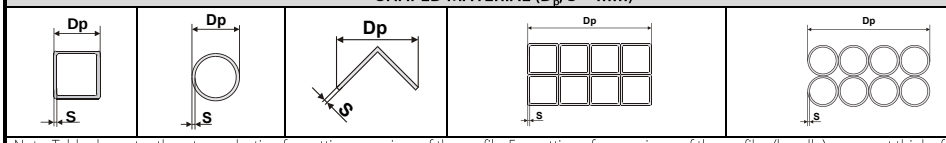
When cutting small pieces run the band until approximately 300 cm^2 of material has been cut. When cutting large pieces run the band for 15 minutes approximately. When the band has been run, increase the lowering-speed to normal speed. The running in of the saw band avoids micro-breaks on the cutting edges of new saw band ensuing from first excessive stress. This would decrease service life substantially. The optimal running in of the saw band produces ideal rounded cutting edges and therefore the conditions for an optimal service life.



Note: *Run regrinding saw bands too.*

2.14.4. Tables for teeth selection

SHAPED MATERIAL (D_p, S = mm)

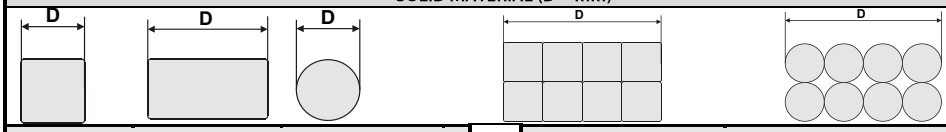


Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S" equates to 2×S). In table, there are tooth systems constant and variable.

Size of the wall S [mm]	Tooth system (Z_p,Z) Outer diameter of the profile D_p [mm]					
	20	40	60	80	100	120
2	32 S	24 S	18 S	18 S	14 S	14 S
3	24 S	18 S	14 S	14 S	10–14 S	10–14 S
4	24 S	14 S	10–14 S	10–14 S	8–12 S	8–12 S
5	18 S	10–14 S	10–14 S	8–12 S	6–10 S	6–10 S
6	18 S	10–14 S	8–12 S	8–12 S	6–10 S	6–10 S
8	14 S	8–12 S	6–10 S	6–10 S	5–8 S	5–8 S
10	-	6–10 S	6–10 S	5–8 S	5–8 S	5–8 S
12	-	6–10 S	5–8 S	5–8 S	4–6 K	4–6 K
15	-	5–8 S	5–8 S	4–6 K	4–6 K	4–6 K
20	-	-	4–6 K	4–6 K	4–6 K	3–4 K
30	-	-	-	3–4 K	3–4 K	3–4 K
50	-	-	-	-	-	3–4 K

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

SOLID MATERIAL (D = mm)



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

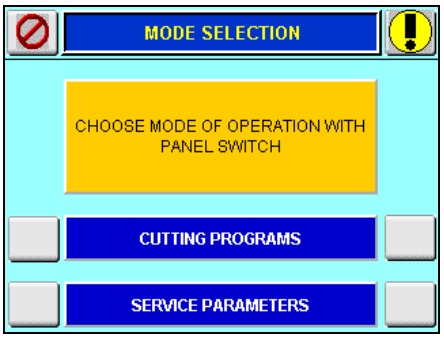
Manual version:1.00 / Apr. 2013
Manual rev.: 1

3. Machine control/ Bedienung der Maschine/ Machine control

Manual version:1.00 / Apr. 2013
Manual rev.: 1

3.1. Saw band start

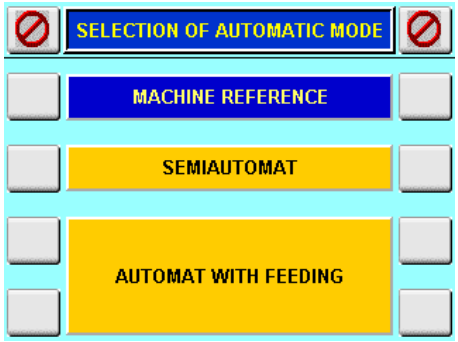
1. Turn the main switch of the saw into ***position 1 – ON***. The main switch in on side of the control panel (right side from the point of view of operator standing behind the panel),.
2. After start of the control system the initial window appears on LCD. The operator may select:



1.	Select ***machine operation with key switch***, see next point
2.	Make changes in ***the cutting programs***, see chapter ***Cutting programs***
3.	Make changes in the machine setup, see **Service parameters** chapter.

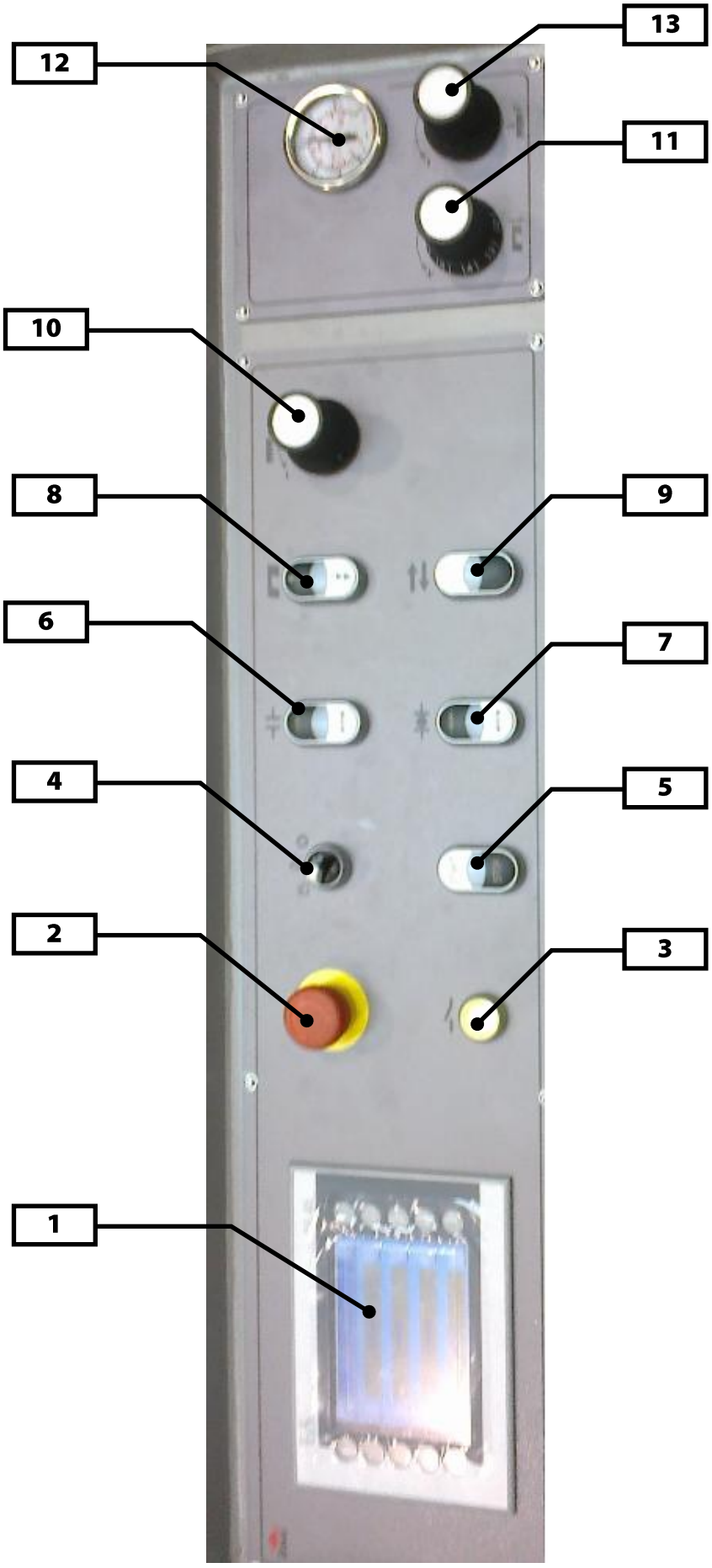
3. Select the machine mode by the key on the control panel (position. **4**)

1.	Switch to  to enter **Machine adjustment** mode
2.	Switch to  to turn machine ***into operational mode***



4. Machine referring (see chapter Machine referring) must be made before machine is used**.**
5. After the machine is referred one of the machine operation modes may be used.

3.2. Control panel

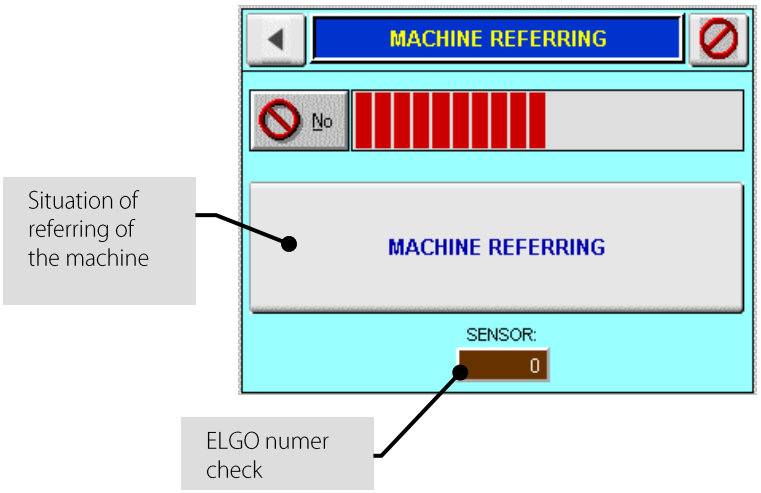


Manual version:1.00 / Apr. 2013
Manual rev.: 1

1	**Touchscreen LCD** Displays the current status of ongoing processes. On both sides of the LCD are placed soft keys F1 to F10
2	**TOTAL – STOP button** Immediately stops the machine in emergency
3	**Safety circuit** Press button to start the safety circuit
4	**Machine mode selection**  Adjustment mode  Machine operation mode  Machine setting mode
5	**START button** Interrupts the cycle, to restart press ***START*** button. **STOP button** Press to start the work cycle. Press **STOP** to stop the cycle.
6	**Main vice** Buttons to tighten / release the main vice jaws
7	**Feeder vice** Buttons to tighten / release the feeder vice jaws. The current pressing both buttons activate rapid moving (first button press choose direction, second button press activate rapid moving)
8	**Frame up / down** If both buttons are pressed at the same time, the frame moves faster **Rapid move**: While pressing both buttons are activated rapid move (Rapid move works only when moving the frame down. First, press the button frame do wn and then continuously frame up., Rapidmove for frame up is still works when press button frame up.
9	**Move feeder** Button to move the feeder to / from the band saw. While pressing both buttons are activated rapid (first press the direction button, then another button for rapid move)
10	**Frequency changer** Turn to change to speed of the saw band. Speed can be set in interval 15–90 m/min.
11	**Regulation valve** Regulation valve sets the lowering speed of the frame into the cut. The speed is limited by the adjustment of the pressure regulation in the cut on the guiding cubes. **Note:** If the throttle valve is closed too tightly, the valve seat may be damaged and may start to leak. Tighten the valve lightly.
12	**Manometer** Shows value of pressure into cut
13	**Regulation of pressure into cut** Regulation valve sets pressure into cut. **Note:** If the throttle valve is closed too tightly, the valve seat may be damaged and may start to leak. Tighten the valve lightly.

3.3. Machine referring

Machine referring is necessary for correct operation of the saw. Referring is necessary for proper positioning all machine parts.



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

3.4. Service parameters

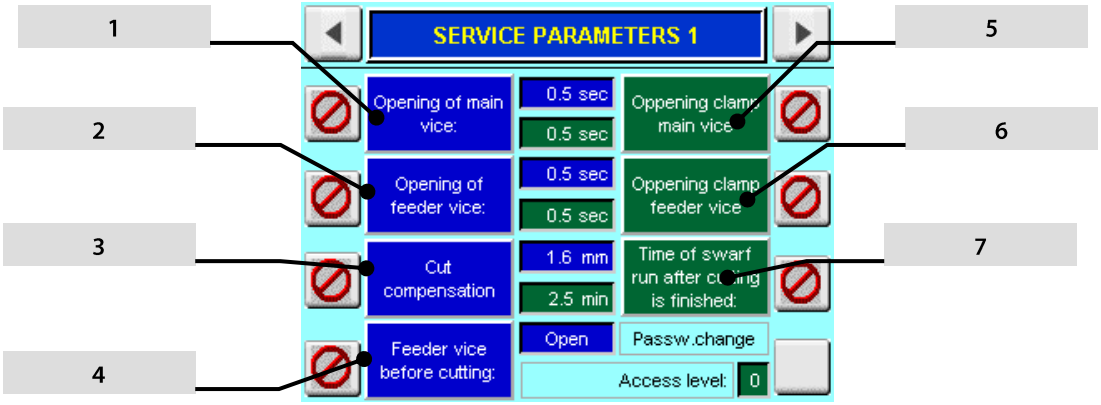
> ***Attention!***
> *Wrong setting of following parameters may damage the machine.* ***Change the values reasonably!***

Enter the service parameters menu:

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

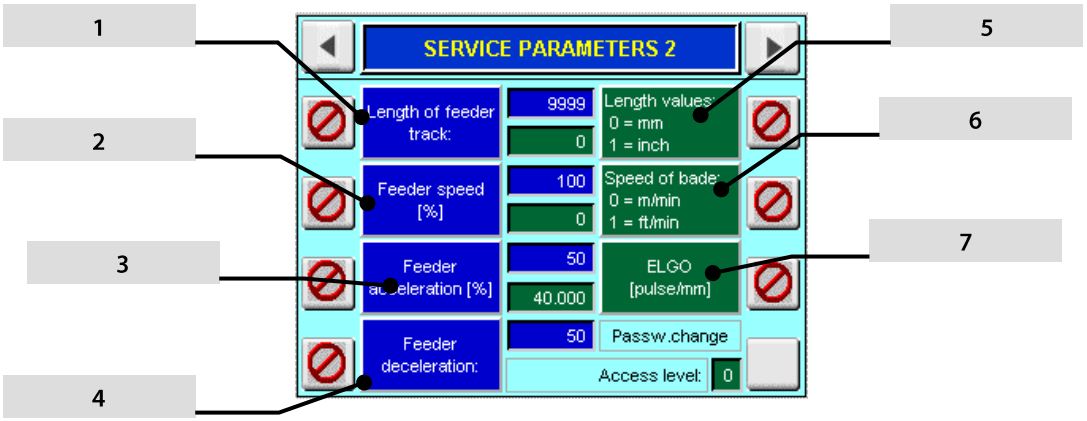
Manual version:1.00 / Apr. 2013
Manual rev.: 1

3.4.1. Service parameters 1



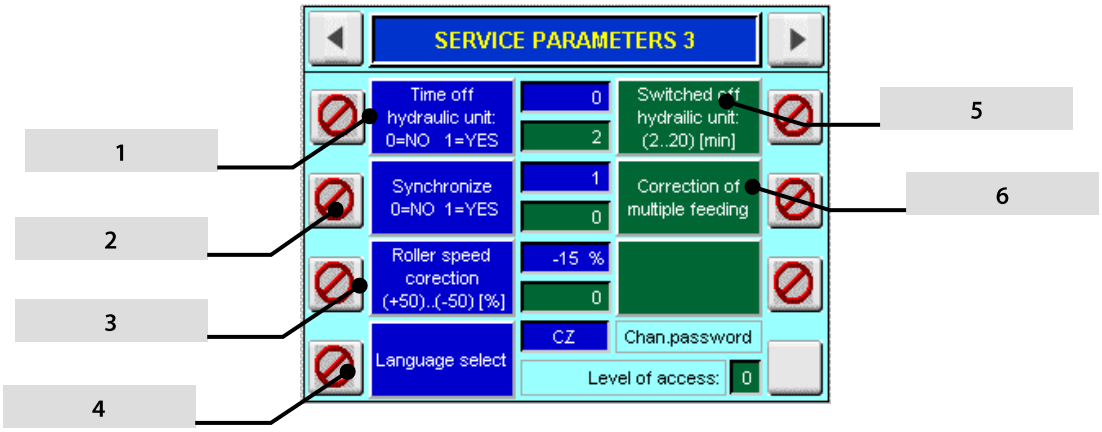
Pos.	Function
1.	**Main vice opening time –** vice opening time. The vice opens only for this period of time, does not opens fully to save the time.
2.	**Feeding vice opening time –** Guarding time of the hydraulics to open the feeding vice.
3.	**Cut compensation –** width of the saw band, important value for calculation of the lengths in automatic mode
4.	**Feeding vice prior to cutting –** Setting of the feeding vice prior to cutting – open / closed.
5.	**Opening clamp main vice –** setting of the opening clamp main vice
6.	.**Opening clamp feeder vice -** setting of the opening clamp feeder vice
7.	**Operation time of the remover after cutting** – Time of operation of the remover after the cut has been finished. ***Note:*** Chip remover is auxiliary accessory.

3.4.2. Service parameters 2



Pos.	Function
1.	**Feeder travel length –** parameter of the maximum feeder length for multiple feeds.
2.	**Feeder speed –** maximum speed of feeder
3.	**Feeder acceleration –** value of the feeder acceleration. The parameter is suitable for feeding heavy and unstable material (due to base shape and dimensions). These values are used only for movement with loaded feeder.
4.	**Feeder deceleration –** value of the feeder deceleration (breaking). The parameter is suitable for feeding heavy and unstable material (due to base shape and dimensions). These values are used only for movement with loaded feeder.
5.	**Selection of the units for length** in control system • metric (mm) • imperial (inches)
6.	**Selection of the units for speed** in control system • $m.min^{-1}$ • $ft.min^{-1}$
7.	**Elgo** linear sensor on the feeder chek; does not measure any particular value, just checking the sensor operation, in pulse/min.

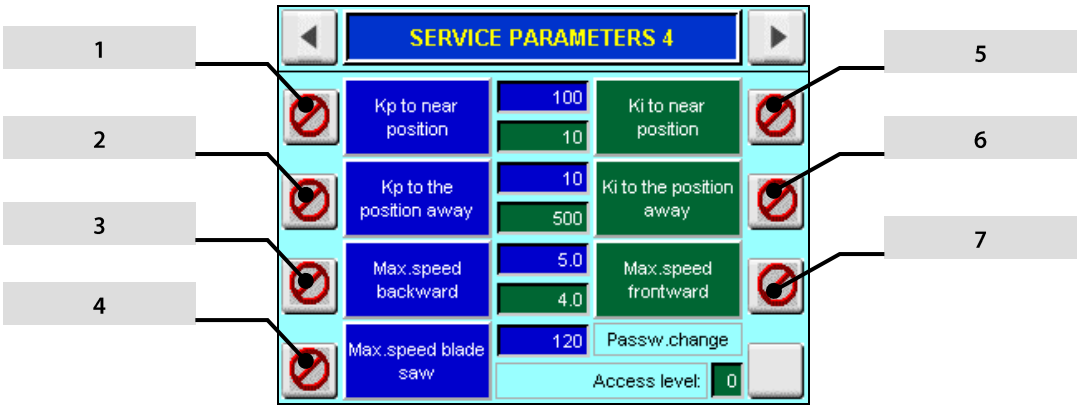
3.4.3. Service parameters 3



Pos.	Function
1.	**Switch off the hydraulic system** of the machine after certain period: • **YES** – the system switches off after selected period • **NO** – the hydraulic circuit will run until the machine is switched off
2.	**Synchronization powered roller track with feede -** Yes/No
3.	**Speed correction powered roller track with feeder** in % - adding or reducting speed in dependence of speed of the feeder
4.	**Language selection** – displays menu for selection of control software language
5.	The parameter sets the time for **hydraulic system switch of**.
6.	**Correction of multiple feeding** – constant correction for multiple submissions in mm. The correction value is added to the length of Odan upon each grip (grip upon each error occurs, which must be compensated)

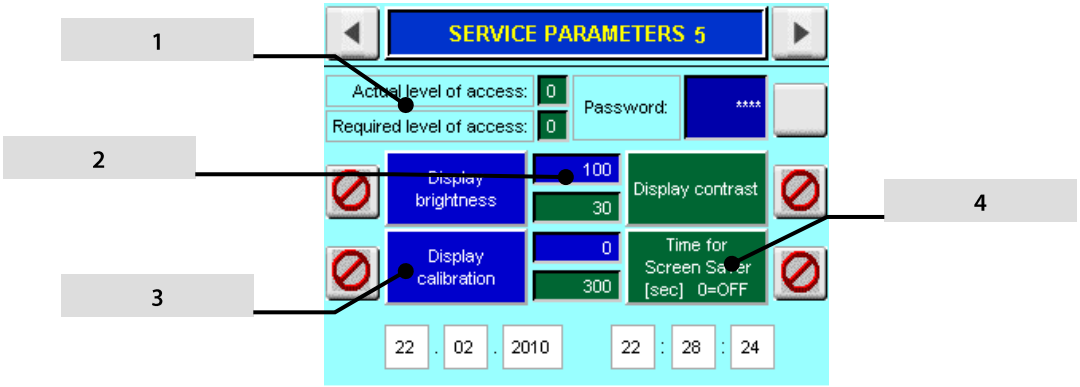
Manual version:1.00 / Apr. 2013
Manual rev.: 1

3.4.4. Service paramaters 4



Pos.	Funkce
1.	Constants for feeder moving. **Do not change!**
2.	Constants for feeder moving. **Do not change!**
3.	**Max. speed backward** – maximal speed for conveyer in backward direction
4.	**Max. speed blade saw** – Adjustable maximum speed can be less than the maximum achievable speed
5.	Constants for feeder moving. **Do not change!**
6.	Constants for feeder moving. **Do not change!**
7.	**Max. speed forward** – maximal speed for conveyer in forward direction.

3.4.5. Service parameters 5



Pos.	Function
1.	**Acess levels:** Level 0 – operator level, lowest acess rights Level 1 – service level, for most service activites, password 1234 Level 2 – BOMAR level, highest acess rights, call service
2.	**Display setting**
3.	**Touchscreen calibration**. Influence of temperature can cause false detection touch. Do not use gloves durring calibration.
4.	**Time for screen server** – sett timing of screen serves

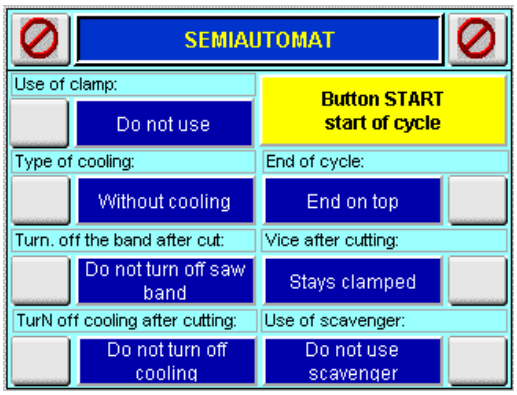
3.5. Machine operation – semiautomat mode

To enter the semiautomat mode:

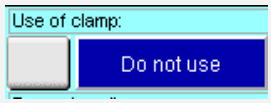
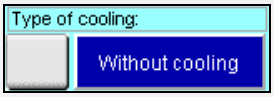
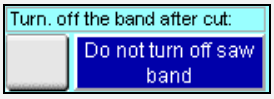
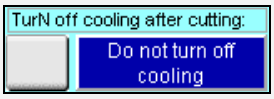
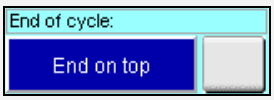
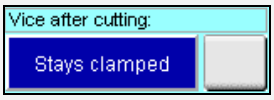
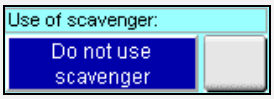
1.	**Turn the key switch into position**  **– Working mode** 
2.	**Select semiautomat mode on LCD** 
3.	**Enter the parameters for semiautomat mode in the following menu.**

Preparation before cutting:

Enter the parameters for cutting in "semiautomat" mode in this system menu.



Manual version:1.00 / Apr. 2013
Manual rev.: 1

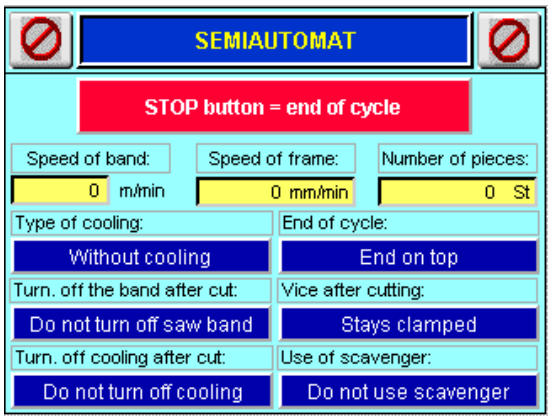
Option	Description
	Choice for **use/do not use clamp**
	**Cooling method** during cutting: • Cooling liquid • Micronization (optional accessory) • No cooling
	Switch off the saw band drive after cut – **Switch off the band / do not switch off the band**.
	Switch off the cooling pump after cut – **Switch off the pump / do not switch off the pump**.
	After the cut the frame: • ends up, drive to upper limit switch position • drive over the material
	After the cut the main vice: • stays clamped • releases the clamped material
	Use the chip remover during cutting – **YES/NO**.

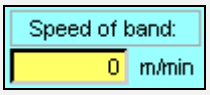
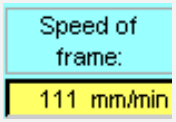
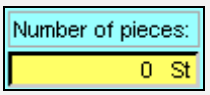
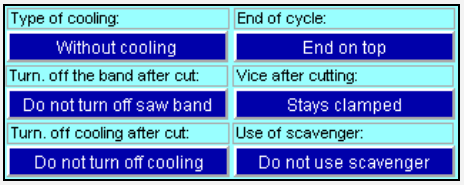
3.5.1. Cutting procedure in semiautomat mode

Cutting progress in "semiautomatic mode":

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

Window showing progress of the semiautomatic cycle:



Item	Description
	Saw band speed set by frequency changer on control panel
	Saw band speed of frame setting
	Number of pieces cut in the One cut automatic mode.
	Individual parameters set in menu **Preparation before cut**.

3.6. Machine control – automat mode with feeding

3.6.1. Cutting programs

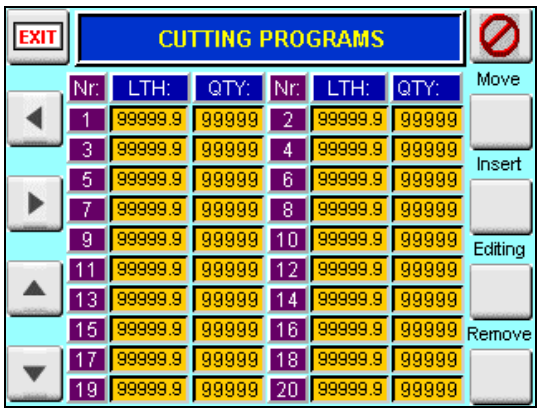
The cutting programs are important part of the automatic cycle. It is possible to define up to 20 programs. Automatic mode always starts from program no. 1. All sequence of the programs are performed, until the first program without any parameters set (both values are zero).

To enter the cutting parameters selection mode:

1.	**Turn the key switch into position 0 – machine adjustment.** 
2.	**Select Cutting modes item on LCD**  List of 20 programs is displayed; see section below ***Setting of the cutting parameters***.

3. The other way to display the Cutting parameters selection mode is to use Preset item in automatic cycle selection.

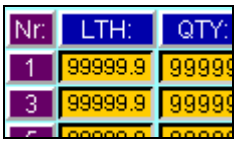
Entering of the cutting parameters:



Function keys for Cutting programs selection:

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

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



Two values are set for each program:

- Length of individual pieces
- Number of individual pieces

3.6.2. Automatic cycle

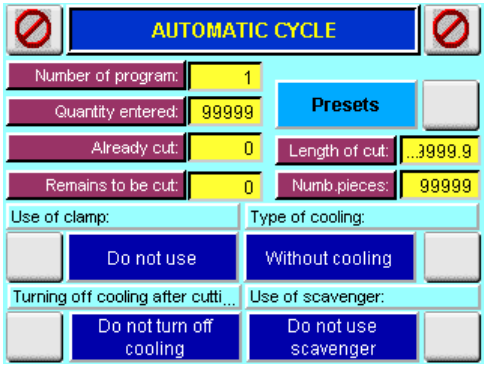
To enter the automatic cycle:

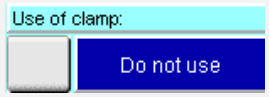
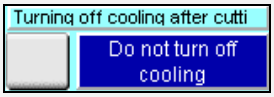
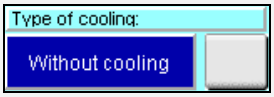
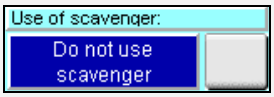
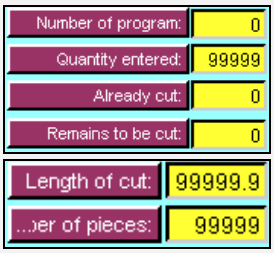
1.	**Turn the key switch into position**  **– Working mode** 
2.	**Select the item Automat with feed on LCD** 
3.	**The menu to enter the new values for automatic cycle or menu allowing proceeding with started automatic mode follows.**

Preparation before start of the automatic mode:

This menu allows entering the start program and parameters adjusting the automatic mode.

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



Button	Description
	Use of clamp **use/do not use**
	Switch off the cooling pump after cut – **Switch off the pump / do not switch off the pump**.
	Cooling method during cutting: • Cooling liquid • Micronization (optional accessory) • No cooling
	Use the chip remover during cutting – **YES/NO**.
	Enter **the cutting parameters**
	**Parameters:** • Program no. – number of the start program • Set number – loads the numbed of pieces from program(s) • Finished cut – number of pieces cut before the last interruption of the program • Remains to be cut – number of pieces remaining to be cut • Cut length – length of one piece • Number of pieces – already cut

Procedure for automatic cutting:

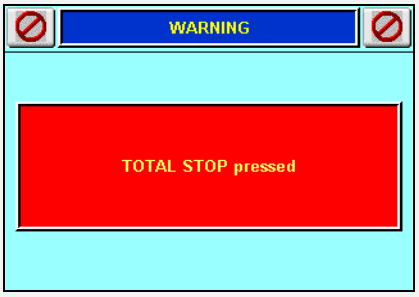
1.	Prepare the cut material
2.	Set the automatic cycle, see ***Preparation before start of the automatic cut***
3.	Press button **START**
.	On LCD message appears : 

3.7. Work cycle interruption

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

Possibilities for stopping:

» ***Stopping of the automatic cycle by TOTAL-STOP***



TOTAL-STOP button activation is indicated on LCD.

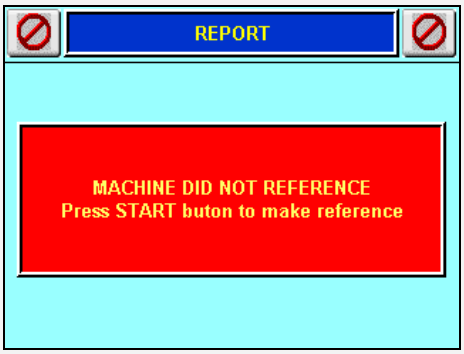
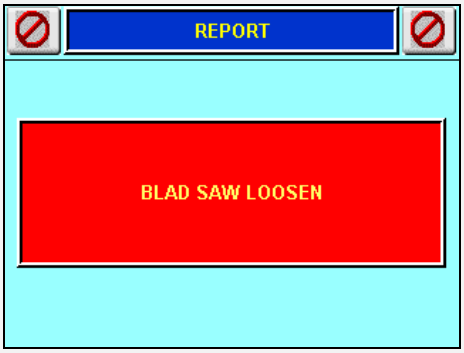
» ***Interruption of the automatic cycle by STOP:***

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

» ***Continue in automatic cycle***

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

3.8. System error messages

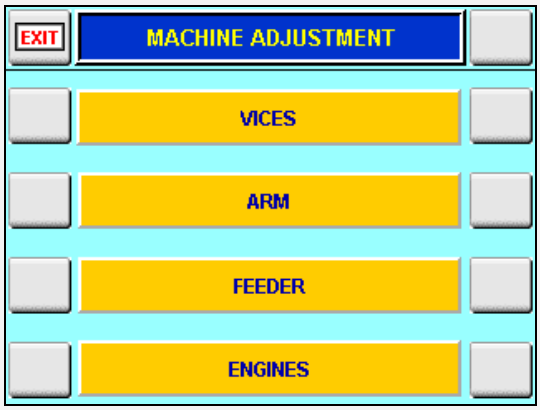
Error message	Description
	**Safety circuit** • The safety circuit is not switched on; the machine cannot be used. • Press the safety circuit button on the control panel (pos. 10)
	**Machine reference** • The machine cannot start without referencing – see chapter Referencing of the machine. • Proceed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

3.9. Band saw adjustment

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

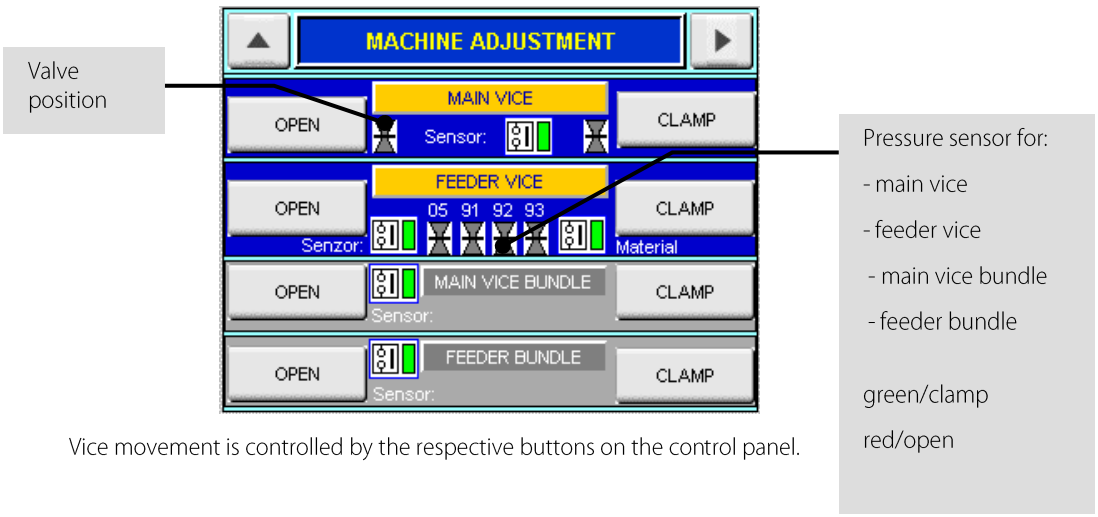
Further setting of the band saw, like setting of the cutting angle and others, is performed in the machine itself without the control software.

Entry to the Machine adjustment mode:

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

3.9.1. Vice adjustment

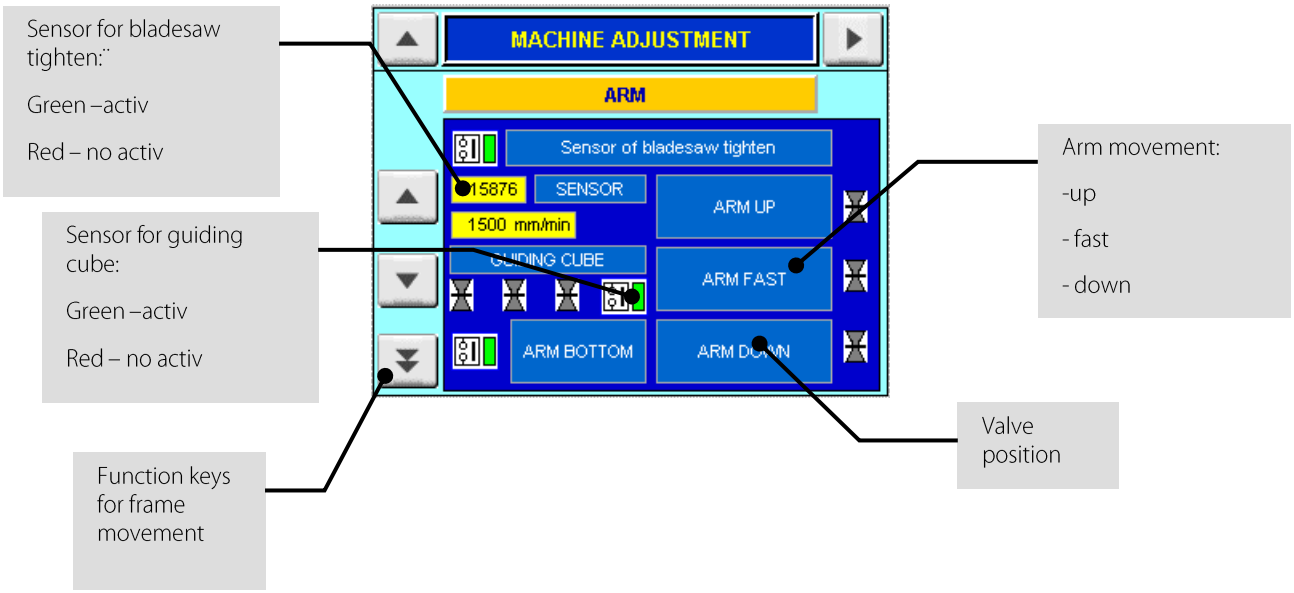
This menu allows testing both vices of the saw Extend 900.720 A 2500.



Vice movement is controlled by the respective buttons on the control panel.

3.9.2. Frame adjustment

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



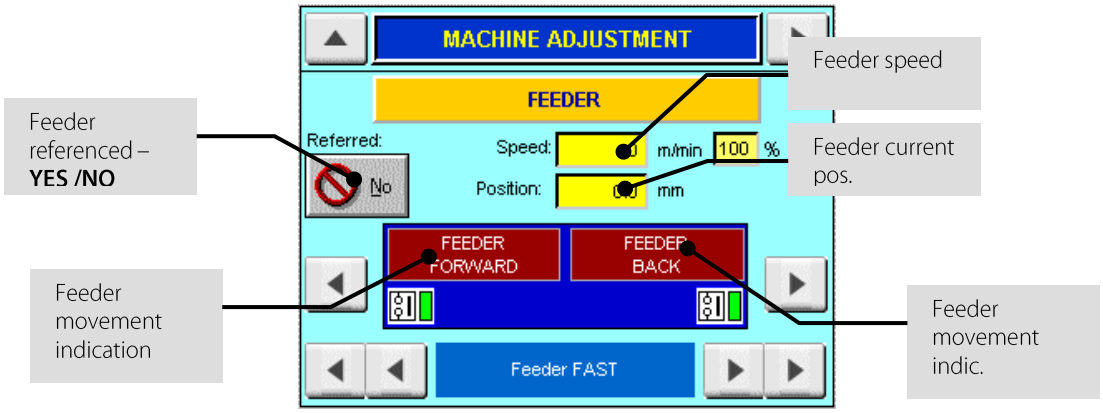
Function keys for frame movement:

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

3.9.3. Feeder adjustment

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

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



Function keys for feeder movement:

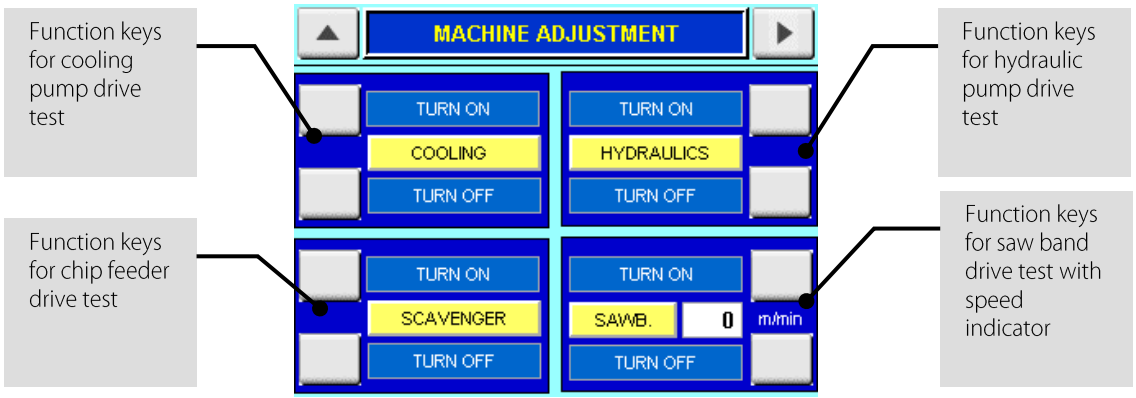
Button	Description
	*Normal speed feeder movement.*
	*Higher speed feeder movement*

3.9.4. Drive adjustment

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

The drives are as follows:

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



3.10. Band saw adjusting

3.10.1. Cutting speed adjusting

Speed of the saw band is possible change from **15 to 90 m/min**. You can effect to adjusting speed of the saw band following.

Use the frequency convertoron control pane l(position 10) to adjust requested speed of the saw band. You can see the speed on display.

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

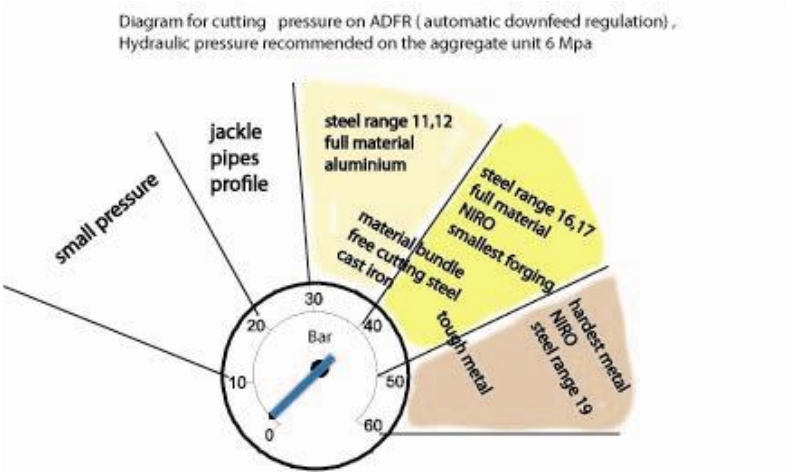
3.10.2. Adjustment of pressure to the cut

The band saw **Extend 900.720 A 2500** is equipped with cutting pressure regulation on the both guiding cubes.

Pressure adjusting is performed with regulating wheel on control panel (position **13**). The pressure to the cut is displayed on the cutting pressure manometer on control panel (position **12**).

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



3.10.3. Speed adjustment of the arm lowering

Set the speed of the arm lowering to the cut by control valve on control panel (position **11**).

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

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

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

3.10.4. Adjusting band guides

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

1. Switch off the hydraulics.
2. Release the stopping lever of the listel (see picture).
3. Move the left part of the guide apparatus so that the left guide cube edge is as close to the cut material as possible.

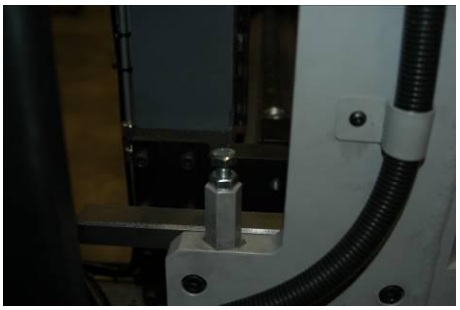
Note:
Position of the guiding cubes is secure by the limit switch. The limit switch is activated after switch lever hits the listel.

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

Manual version:1.00 / Apr. 2013
Manual rev.: 1

3.10.5. Saw arm lower position stop adjustment

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



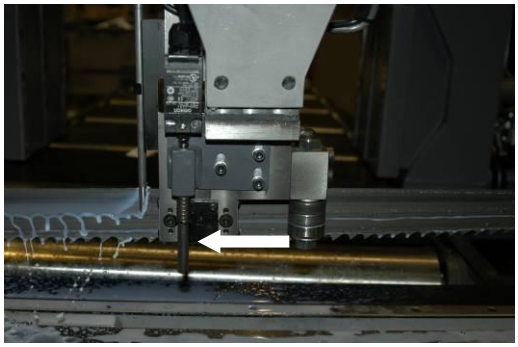
1. Lift the saw frame to the top position.
2. Release the nut of the screw and set it on the desired value.
3. Secure the screw with nut again.
4. Set the limit switch of the saw frame lower position.

3.10.6. Limit switch lower position stop adjustment

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

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.



1. Release the nut of the stop screw of the limit switch and screw the screw.
2. Lower the saw frame to the lower stop and switch on the saw band drive
3. Screw out the stop screw of the limit switch, until the saw band drive is not stopped.
4. Secure the screw with nut and check limit switch adjustment again.

3.10.7. Saw arm upper position stop adjustment ¨

The upperstop limits the upperest position of the saw arm. This stop point has to be checked at least once a month.

3.10.8. Limit switch upper position stop adjustment

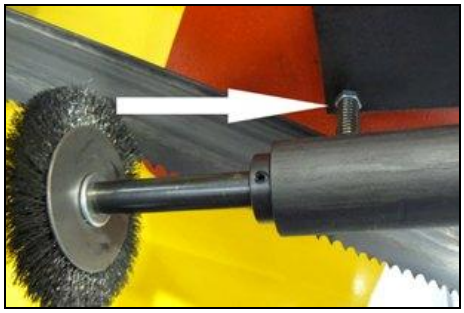
The Limit switch is set from the manufacturer. It not necesary set it.

3.10.9. Set arm elevation using encoder upper arm position (optional accessories)

1. Insert material in main vice
2. Take the Arm using the button **Arm up** into position over material.
3. Carefully pull off to the arm of the material using the button **Arm down**., or **Rapid move** arm 5-10 mm above the cut material.
4. Pressing the **START** button to start cutting material
5. Band saw cut material to the lower position of the arm and returned the arm to the upper arm position in which the START button has been pressed (band saw the position programmatically remember - stop upper arm)

3.10.10. 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 according to the picture.

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

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

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

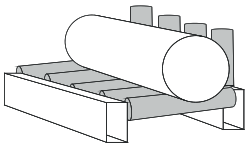
3.11. Material insertion

- 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!

3.11.1. 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!

3.11.2. Insertion



Insert material to the feeding vice (on the feeder) and than to the main vice (on the bandwaw) 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

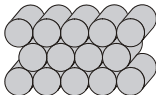
Both vices is divided for better griping material – top and bottom of material

Make sure the feeder possibly roller conveyors are long enough and the material cannot tip off the feeder and off the roller conveyors.

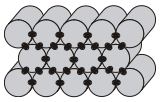
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the roller conveyor.

3.11.3. Bundle material cutting

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



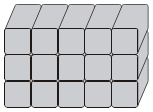
Round material bundle: Take care especially with round material that the bars are put according to the picture. If the bars are put differently, you may have problems with movement.



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

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

Square material bundle:



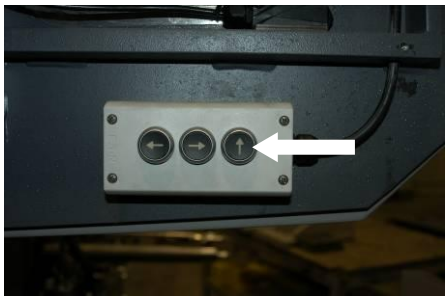
Attention:
Not all material shapes are suitable for bundle cuts. Keep the recommendation of your supplier of the saw bands for material insertion to the bundle.

4. Údržba stroje/ Wartung der Maschine/ Machine service

Manual version:1.00 / Apr. 2013
Manual rev.: 1

4.1. Saw band dismantling

1. Third Turn off the safety circuit
2. First Turn the cage switch to position 0
3. Lift the saw arm to maximum position.



4. STOP hydraulic.
5. Open the covers of both driving wheels.

6. Dismantle left protective cover of the band. Cover is fastened by screws..

7. Release the screw holding the brush. Turn the brush to the side
8. Release the saw band stretching by pressing left button, until it is possible to remove the band off the wheel.

9. Pull down the band from the wheels.
10. Pull up the saw band from the guiding cubes.

4.2. Saw band installation

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

4.3. Saw band stretching and inspection

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

Pilový pás Sägeband Saw band	Napětí pilového pásu Sägebandspannung Blade tension	Napětí pilového pásu PSI (pro Tenzomat) Sägebandspannung PSI (für Tenzomat) Blade tension PSI (for Tenzomat)
20 x 0,9 mm	160 $N.mm^{-2}$	23 500
27 x 0,9 mm	180 $N.mm^{-2}$	26 500
34 x 1,1 mm	210 $N.mm^{-2}$	30 500
41 x 1,3 mm	240 $N.mm^{-2}$	35 000
54 x 1,3 mm	240 $N.mm^{-2}$	35 000
54 x 1,6 mm	280 $N.mm^{-2}$	40 600
67 x 1,6 mm	290 $N.mm^{-2}$	42 000
80 x 1,6 mm	300 $N.mm^{-2}$	43 500

4.3.1. Saw band stretching

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

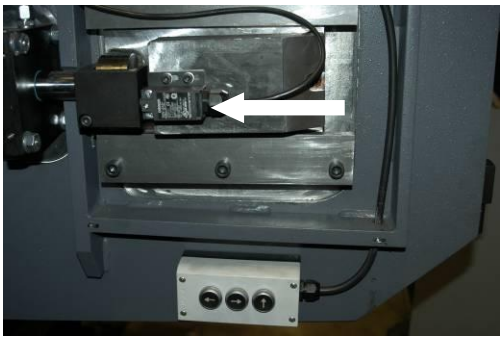
The device contains limit switch. Check the stretching carefully and periodically – eventually adjust.

Manual version:1.00 / Apr. 2013
Manual rev.: 1

4.3.2. Limit switch setting of the saw band stretching

The limit switch of the saw band stretching is set from the manufacturer. Is not necessary to set it. After the saw band is replaced, the limit switch setting must be checked out. If the limit switch is not set correctly, the band is stretch too much or it is to loose

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



4.3.3. Saw band run adjustment on stretching wheel

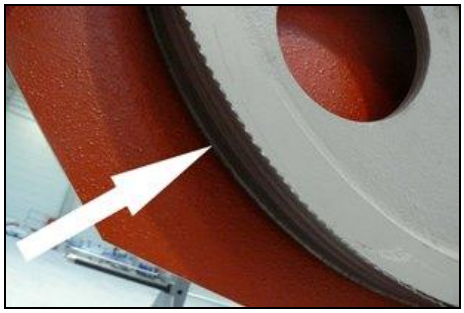
Saw band run on the stretching wheel must be regularly inspected. The inspection has to follow every saw band replacement.

4.3.4. Saw band run 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

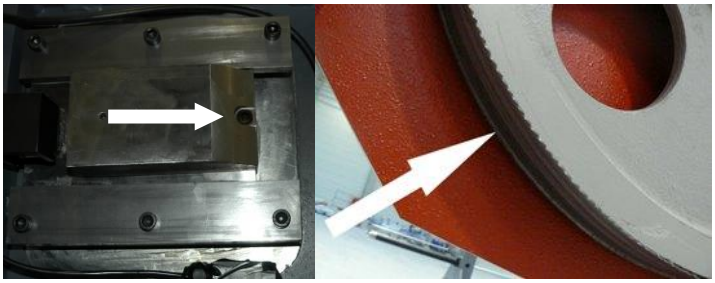


1. Start and stop saw band drive.
2. Stop the main switch!.
3. Open rear cover of the saw frame.
4. Check saw band placing on the wheels.

If the distance of the rear part of the saw band from wheel rim is **1 mm**, setting is right.

If the distance is bigger than **1 mm**, or the saw band runs on the wheel rim, saw band run must be set.

4.3.5. Saw band run setting



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

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

Check saw band run adjustment again.

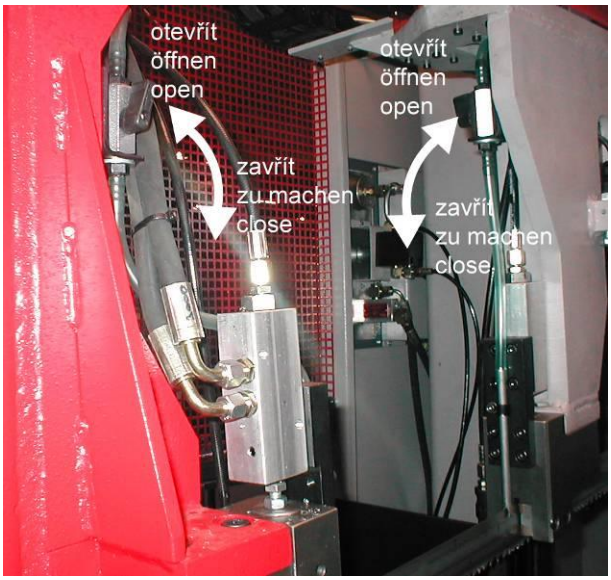
4.3.6. Adjustment of the cutting pressure regulation

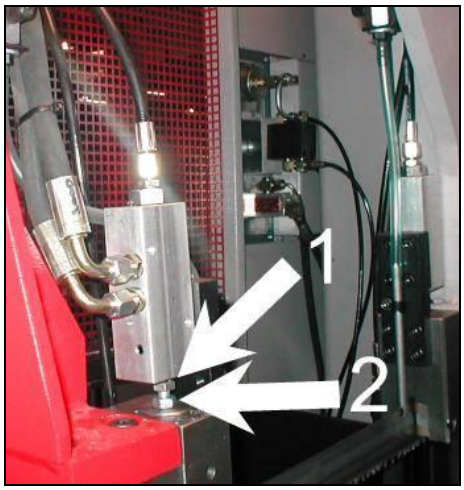
This chapter describes the basic speed setting of arm sinking to the cut for idle run. Saw is equipped with cutting pressure regulation on both guiding cubes. Cutting pressure regulation is set separately on every guiding cube.

4.3.7. Setting on the right guiding cube

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

Left guiding cube **Right guiding cube**





2. Screw off the set – screw on the right guiding cube to the stop, the valve is blocked (pos1). You can move by arm only up, because the arm movement down is blocked with pressure regulation valve.
3. Press button „Arm down" and slowly screw on the set – screw on the right guiding cube. Screw by set – screw until the optimal speed of the arm sinking is not reached. The optimum speed of the arm sinking to the cut from maximum lift until lower stop is about 55 seconds.
4. Secure the set – screw with nut (pos. 2) for reaching of the optimum speed of the arm sinking.
5. Pressure regulation on the right guiding cube is set.

4.3.8. Setting on the left guiding cube

1. Open the tap on the left guiding cube. Close it on the right guiding cube.
2. Set the cutting pressure regulation on the left guiding cube in the same way.
3. Open taps on both guiding cubes after pressure regulation setting.

   Attention! Both taps must be opened during operation!
4. Setting is ended.

4.4. Cooling agents and chips disposal

The quality of the cooling agent will deteriorate due to:	If the solution is too weak:	If the solution is too strong:
• use of contaminated water • impurity • outside oil contamination (hydraulics, gears) • high operating temperatures • lack of air circulation • wrong concentration	• corrosion protection is diminished • lubrication decreases • microbial attack is more likely	• the cooling ability is decreased • foam behaviour increases • emulsions stability deteriorates • sticky residue develops

4.4.1. Coolant device inspection

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

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

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

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

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

* according to manufacturers' instructions

4.4.2. Chips disposal

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

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

4.5. Hydraulic, Greases and oils

4.5.1. Gearbox oils

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

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

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

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

Band saw	Gearbox oil	Capacity
Extend 900.720 A 2500	Shell Tivela S 320	3,3 l
Swarf conveyor	Shell Tivela S 320	0,075 l

Manual version:1.00 / Apr. 2013
Manual rev.: 1

Comparative table of the gearbox oils

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

4.5.2. Lubricant greases

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

Comparative table of the lubricant greases:

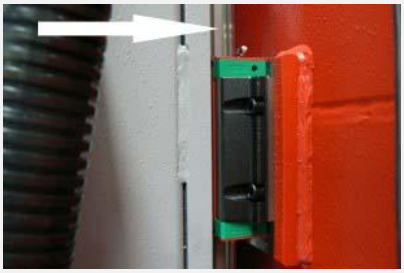
Manufacturer	Type of the lubricant grease
BP	Energrease LS - EP
DEA	Paragon EP1
Esso	FETT EGL 3144
	Beacon EP 1
	Beacon EP 2
FINA	FINA LICAL M12
Klüber	Microlube GB0
	Staburags NBU8EP
	Isoflex Spezial
Optimol	Optimol Longtime PD 0, PD1, PD2
Shell Aseol AG	ASEOL Litea EP 806-077
Texaco	Multifak EP1

4.5.3. Lubrication

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

Lubrication the linear guiding is provide automatically.

Lubricate place	Lubrication
	The guiding cubes leading Grease with oil from both sides once a week.

Lubricate place	Lubrication
	The linear guiding of the saw arm Lubricate with grease once a half year (see chapter **Lubricant greases**). Use 1-3g grease on the every carriage of the linear guiding. Use the grease gun to the lubrication. Drive 3–5 times whole line of the linear guiding during lubrication.
	The linear guiding for conveyer vice jaws Lubricate with grease once a half year (see chapter **Lubricant greases**). Use 1-3g 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.
	Conveyer linear guiding Lubricate with grease once a half year (see chapter **Lubricant greases**). Use 1-3g 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.
	Vice listel Grease with oil from both sides once a week.
	Hydraulic band saw stretching

4.5.4. Hydraulic oils

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

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

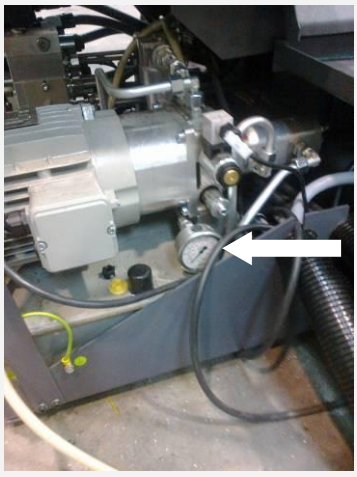
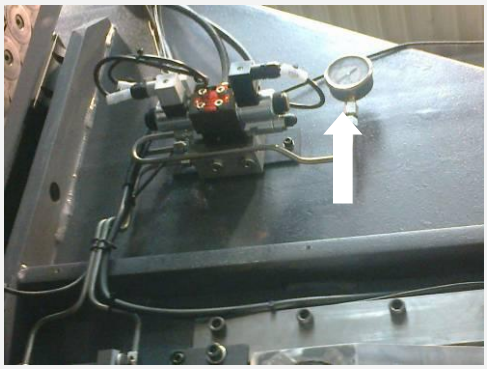
Comparative table of the hydraulic oils

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		

4.5.5. Pressure regulation

Pressure regulation with hydraulic pressure petting indicator

Hydraulic pressure is situated:

Picture	Pressure regulation type, value
	**Regulation of system pressure** (6 MPa) • Placed on the bandwaw • The value is set by the manufacturer, do not change!
	**Regulation of hydraulic tensioning blade** (275 N/mm^2 MPa) • Placed on the bandwaw • The value is set by the manufacturer, do not change!

Regulation of feeding vice pressure (max.4,5 t)

- Placed on the feeder

Warning !
Loosen the screw very carefully !

Setting:

1 Loosen the knob of the pressure valve.

2. Set the pressure by pressure valve and Manometer.

- When turning the pressure valve **clockwise to increase** the pressure.
- When turning the pressure valve **counterclockwise decreases** the pressure.

3. When the desired pressure is set, tighten the lock nut.

4.5.6. Hydraulic unit service

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

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

4.6. 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.
- Swarf conveyor

4.7. Worn pieces replacement

4.7.1. Pushing bearing replacement and hard metal guides replacement

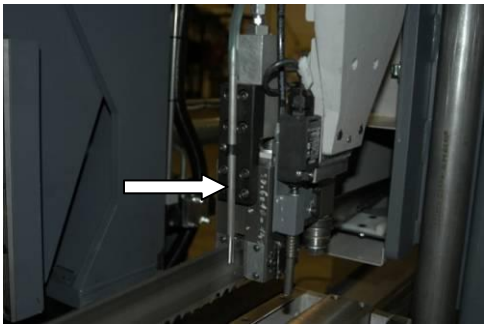
If it is impossible to adjust the bundle gripping assembly and the pushing bearing is worn, it needs to be replaced.

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

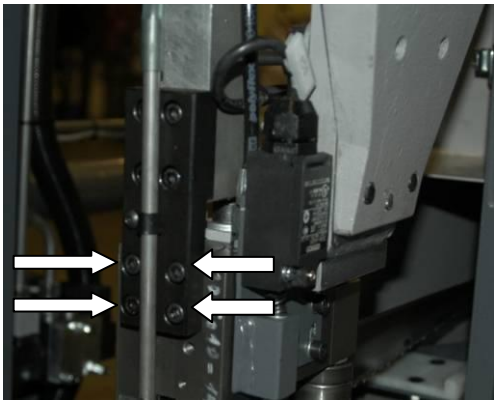
If the bearing is worn, there is a visible channel on it.

earing replacement:

1. Dismantle the band saw
2. Disconnect the hose from the cooling agent.

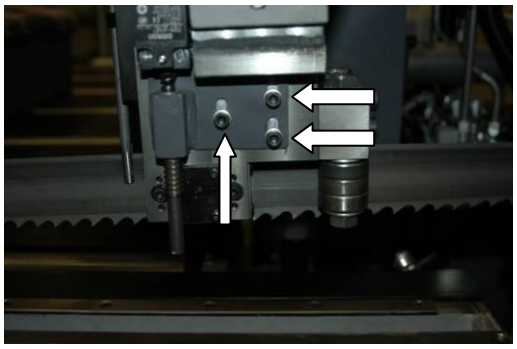


3. Remove the 4 screws from the cube holder



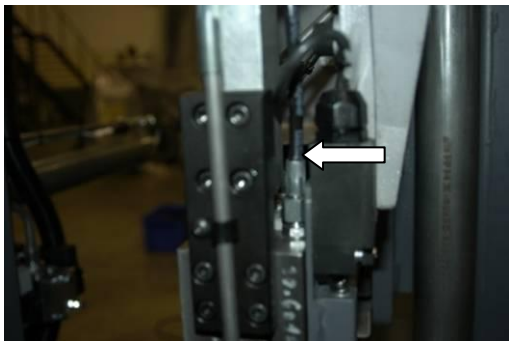
4. Remove 3 screws from limit switch lower position stop

   When re-mounting holder should be returned to the same place due to administrative functions (it is necessary to mark locations)

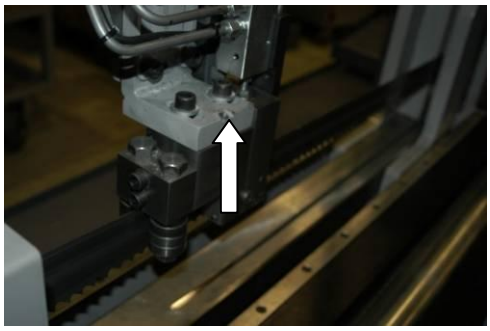


Manual version:1.00 / Apr. 2013
Manual rev.: 1

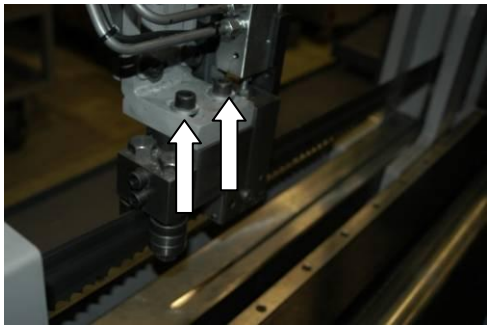
5. Turn off and remove the inlet hydraulics



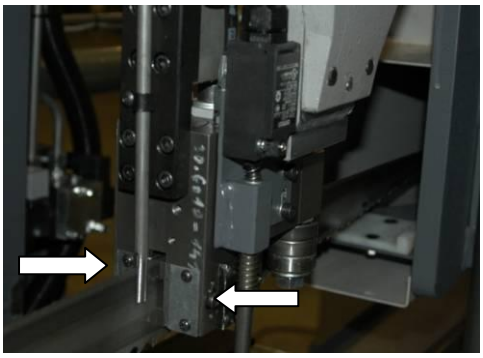
6. Pull pin with extractor. Pin is used to lock cube.



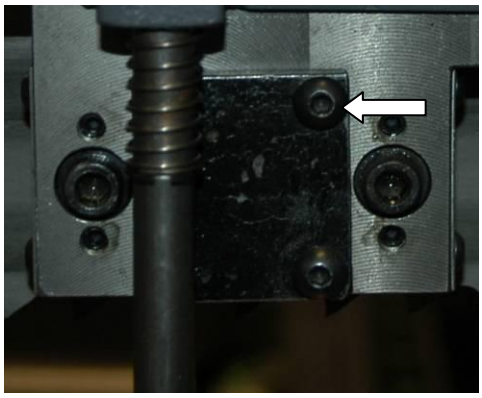
7. Release 2 imbus screws



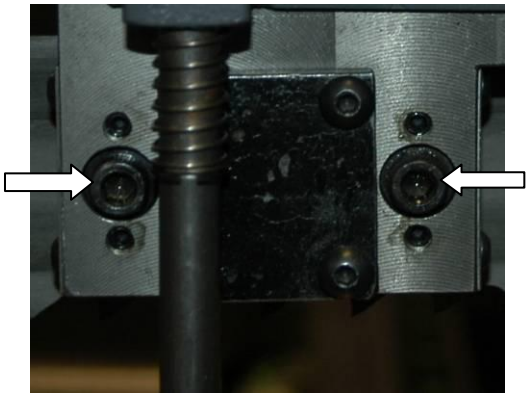
8. Cube release from holder
9. Remove 4 galvanized covers for walls cube



10. The black plate cube unscrew 4 screws

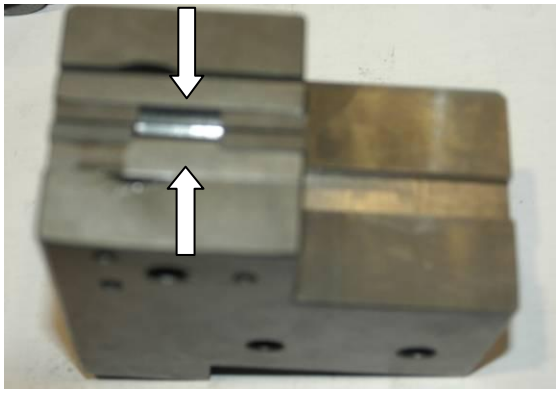


Warning! With set screws no handle !



11. From the other side of the cube unscrew 3 screws and one center screw

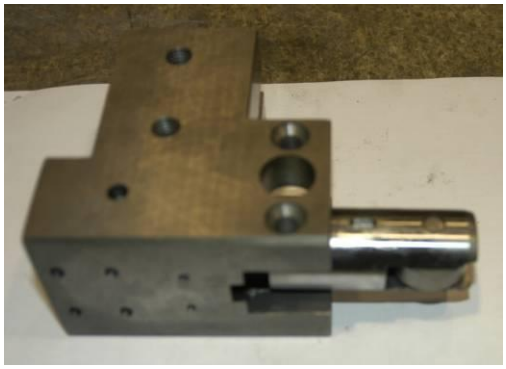
12. Choose 2 guiding pulleys from the cube



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!

13. Choose bearing holder from cube



14. Insert the pivot to the vice and Remove the bearing pivot from the bearing holder by means of the swager

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

15. Check, remove and change the worn bearing.

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

17. The complete bearing holder insert back into the cube, tighten loose screws and attach back

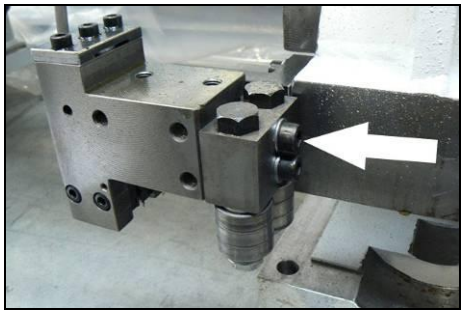
18. To properly set the cube and band recommended to follow the recommended distance (left side about 3.5 mm and 2 mm right side)

4.7.2. Saw band guiding pulleys replacement

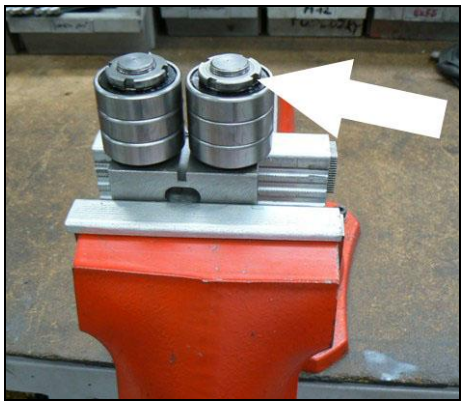
If the saw band is not sufficiently guided by guiding pulleys or if the pulleys are obviously worn, the pulleys should be replaced.

Attention:
Guiding pulleys must be replaced together on both guiding cubes!

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



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



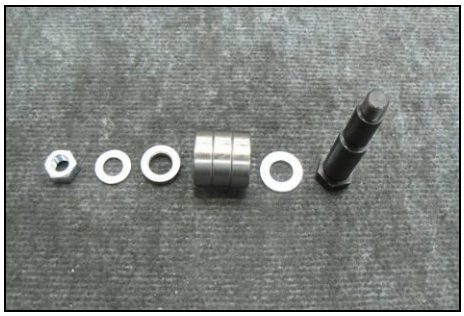
Attention:
Mark both eccentrics placing and components on the eccentric!
Eccentrics must not be replaced with each other!

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

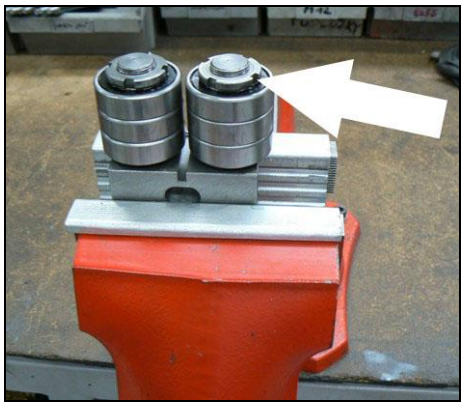
Manual version:1.00 / Apr. 2013
Manual rev.: 1

5. Change all bearings and other worn parts.

Attention:
Do not replace the eccentrics placing in the cube.



6. Install eccentrics to the cubes. Install components on both eccentrics in given order. Put bearings by means of the preparation on eccentrics.
7. Screw on nuts on both eccentrics and tighten them.



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

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

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

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

4.7.3. 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.

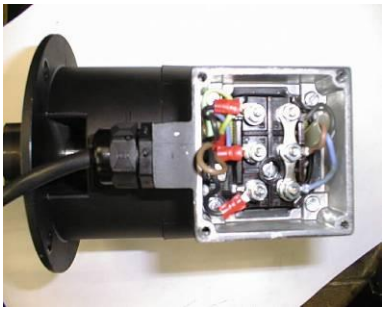
2. Release the nut on the brush, replace worn brush on the new brush, screw on the nut.
3. Set the brush to the saw band.

4.7.4. Cooling pump replacement

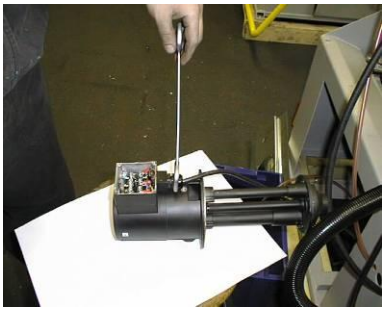
Only a qualified worker can carry out the connection!

High-voltage shock may have fatal results

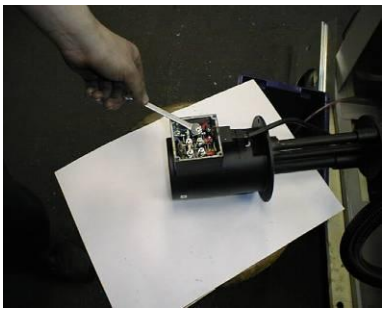
1. Pull the tank with the liquid from the pedestal..
2. Remove the hosepipe leading to the cooling agent from the plug on the pump. Screw off four screws from the cooling pump flange and pull out the pump from the sheet metal holder.



3. Remove the cover of the pump terminal switchboard. Disconnect 4 terminal connectors of the input cables. Cables are identified according to the red clamps..



4. Loosen the bushing and pull the cable out from the pump.



5. Dismantle new pump switchboard cover. Push the cable through the bushing and fasten it.

6. Screw on the cable bushing and cover of the terminal block. Do not forget the rubber gasket! Tighten the cooling liquid hose with non-stick tape and screw it again. Install cooling liquid hose, place the pump on the sheet metal holder and screw it.

Manual version:1.00 / Apr. 2013
Manual rev.: 1

5. Závady / Störungen/ Troubleshooting

Manual version:1.00 / Apr. 2013
Manual rev.: 1

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.

Manual version:1.00 / Apr. 2013
Manual rev.: 1

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.	- Backslash 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

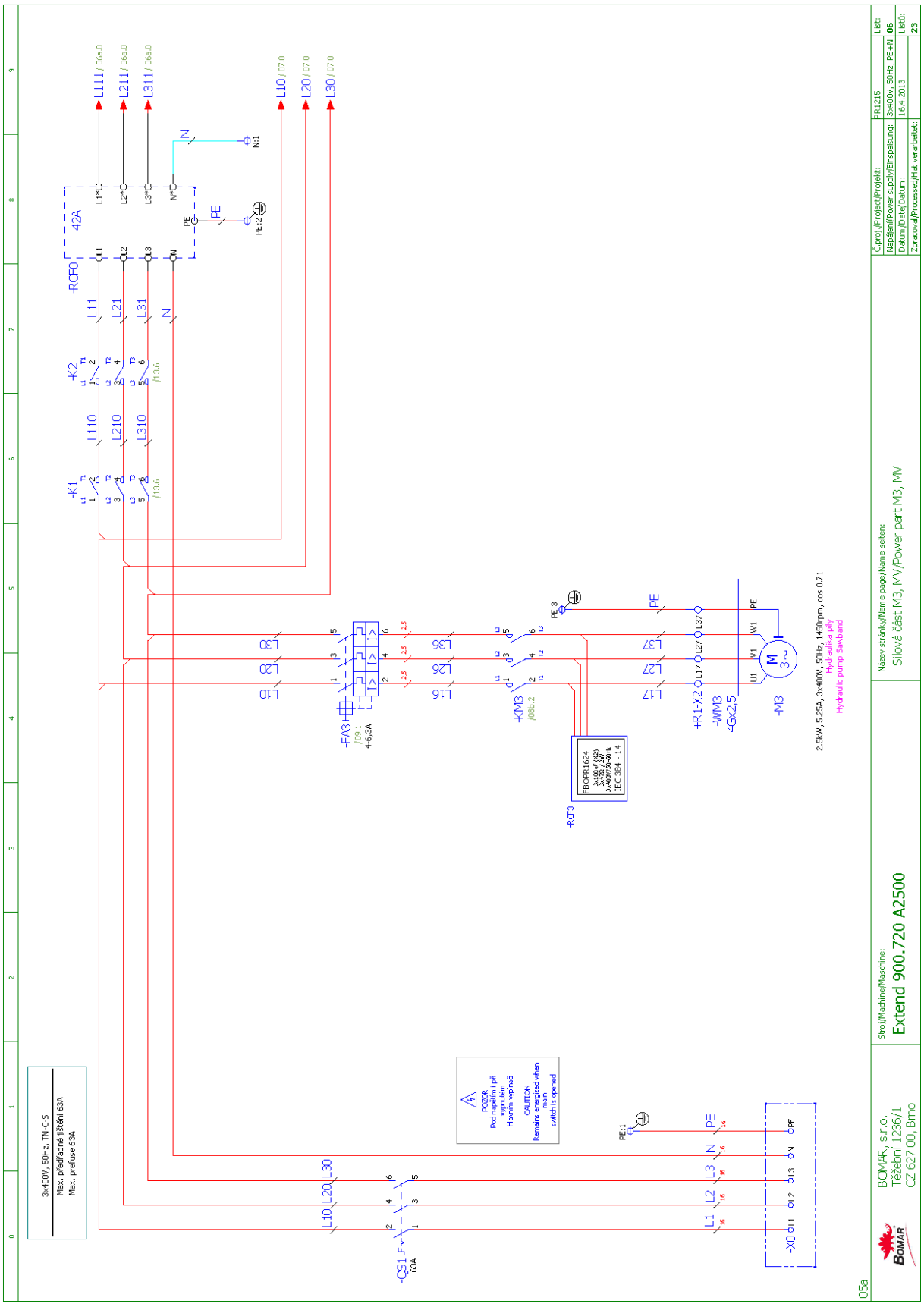
Problem	Possible causes	Repair
1. Hydrogenerator not supplying oil	• reverse rotation	Check the connections of each phase. Reconnect properly connection of the electrical phases.
	• shortage of oil in the tank	Add hydraulic oil
	• Oil viscosity does not correspond prescribed viscosity value	Change hydraulic 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

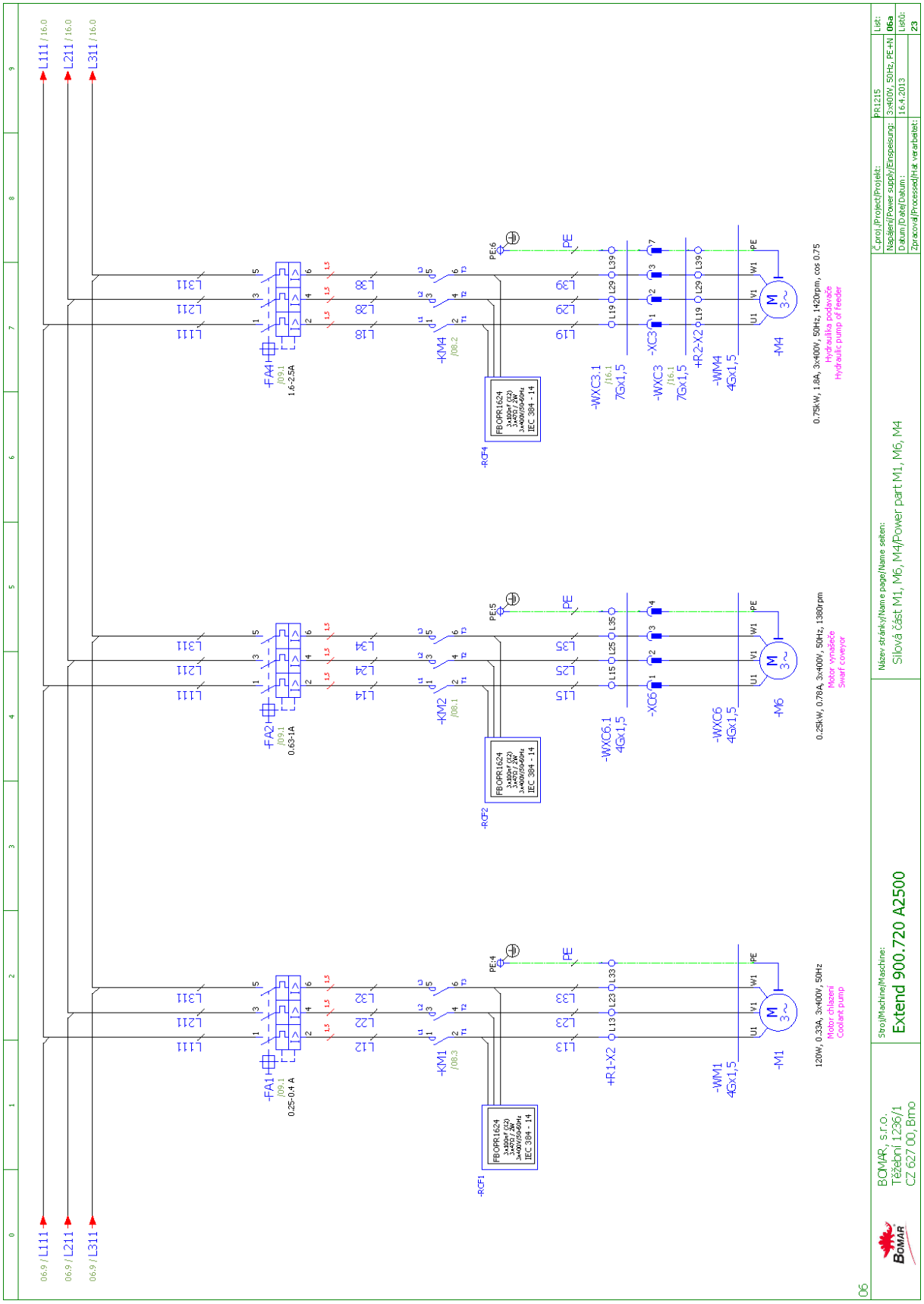
Manual version:1.00 / Apr. 2013
Manual rev.: 1

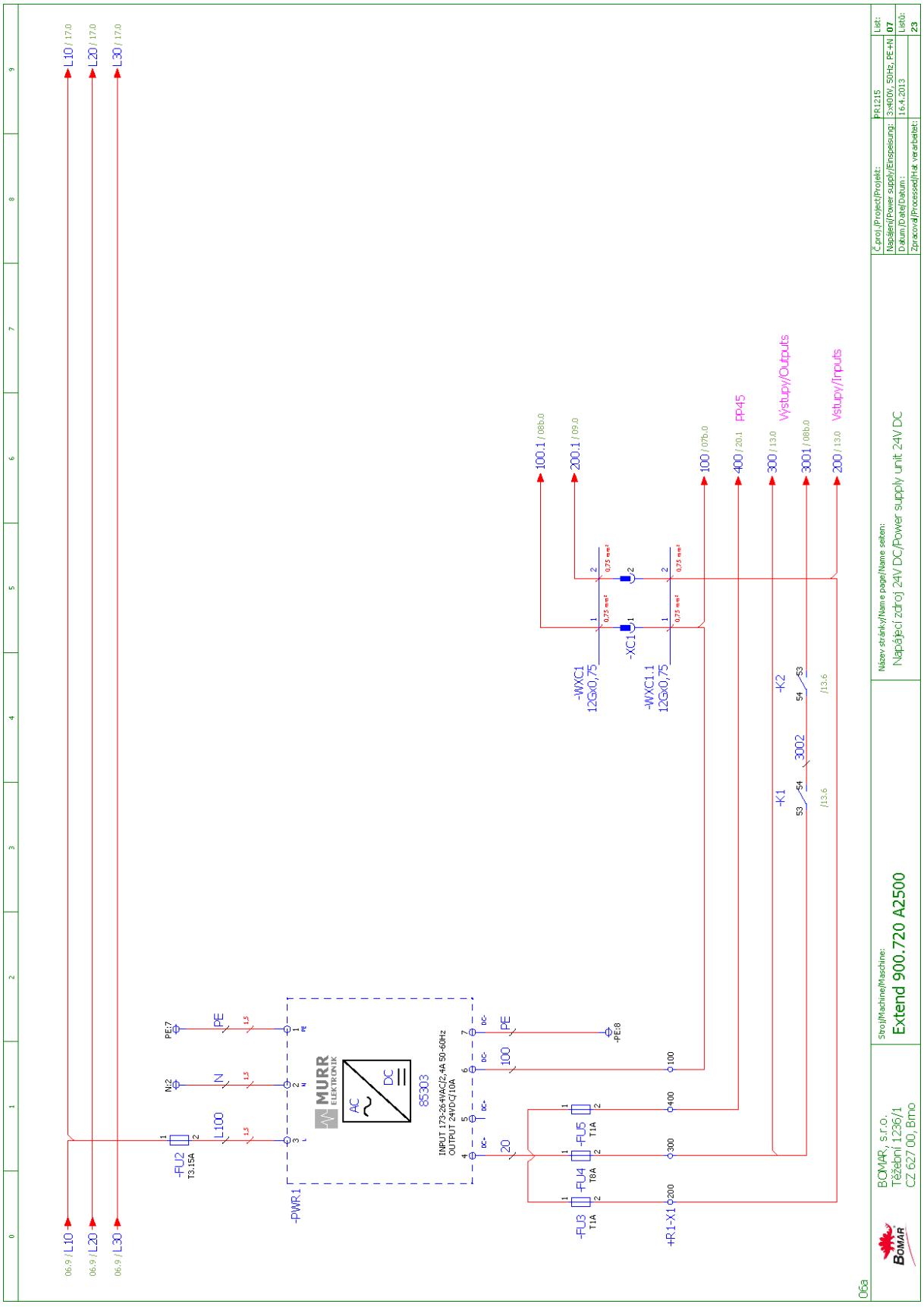
6. Schéma / Schemas / Scheme

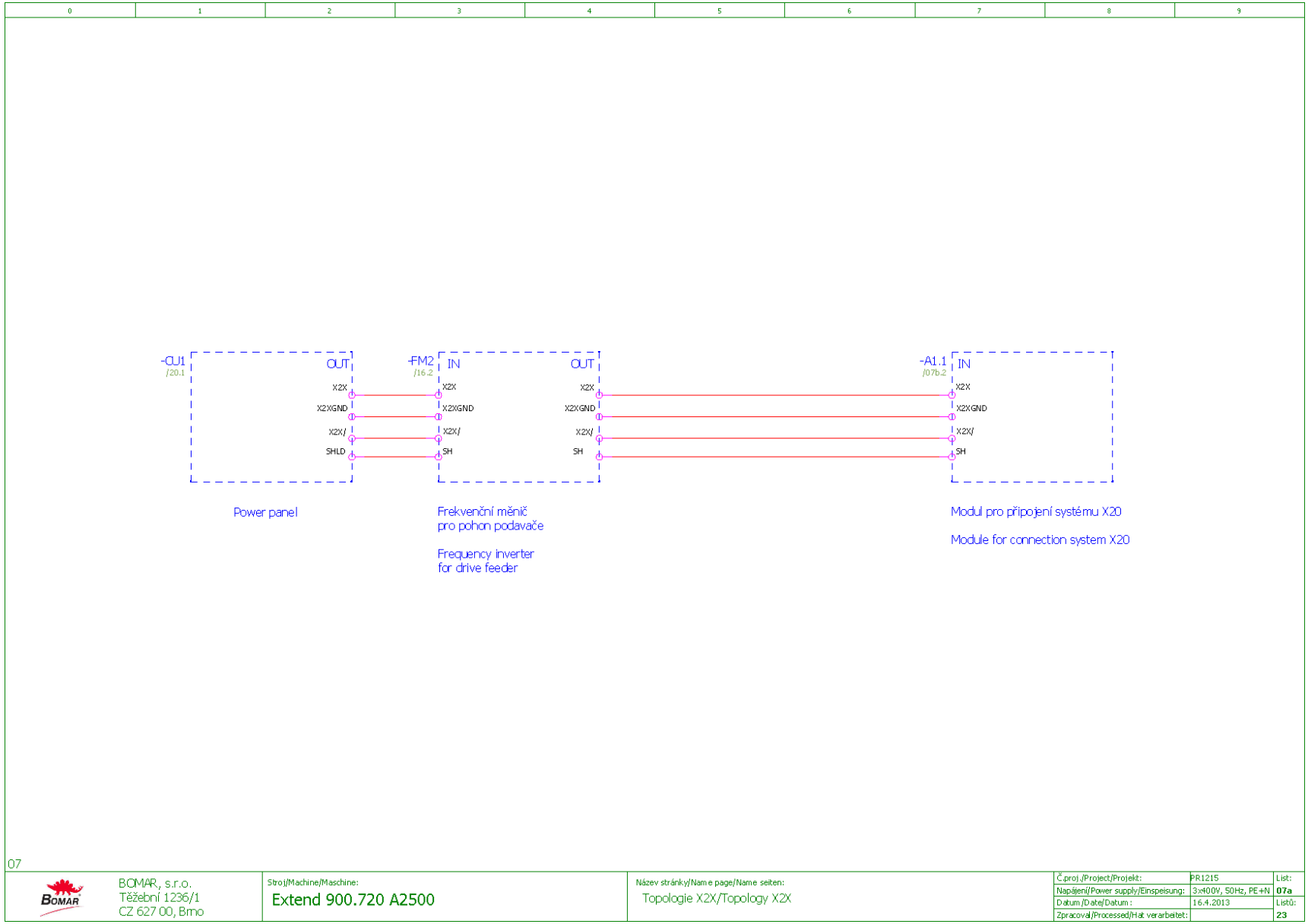
Manual version:1.00 / Apr. 2013
Manual rev.: 1

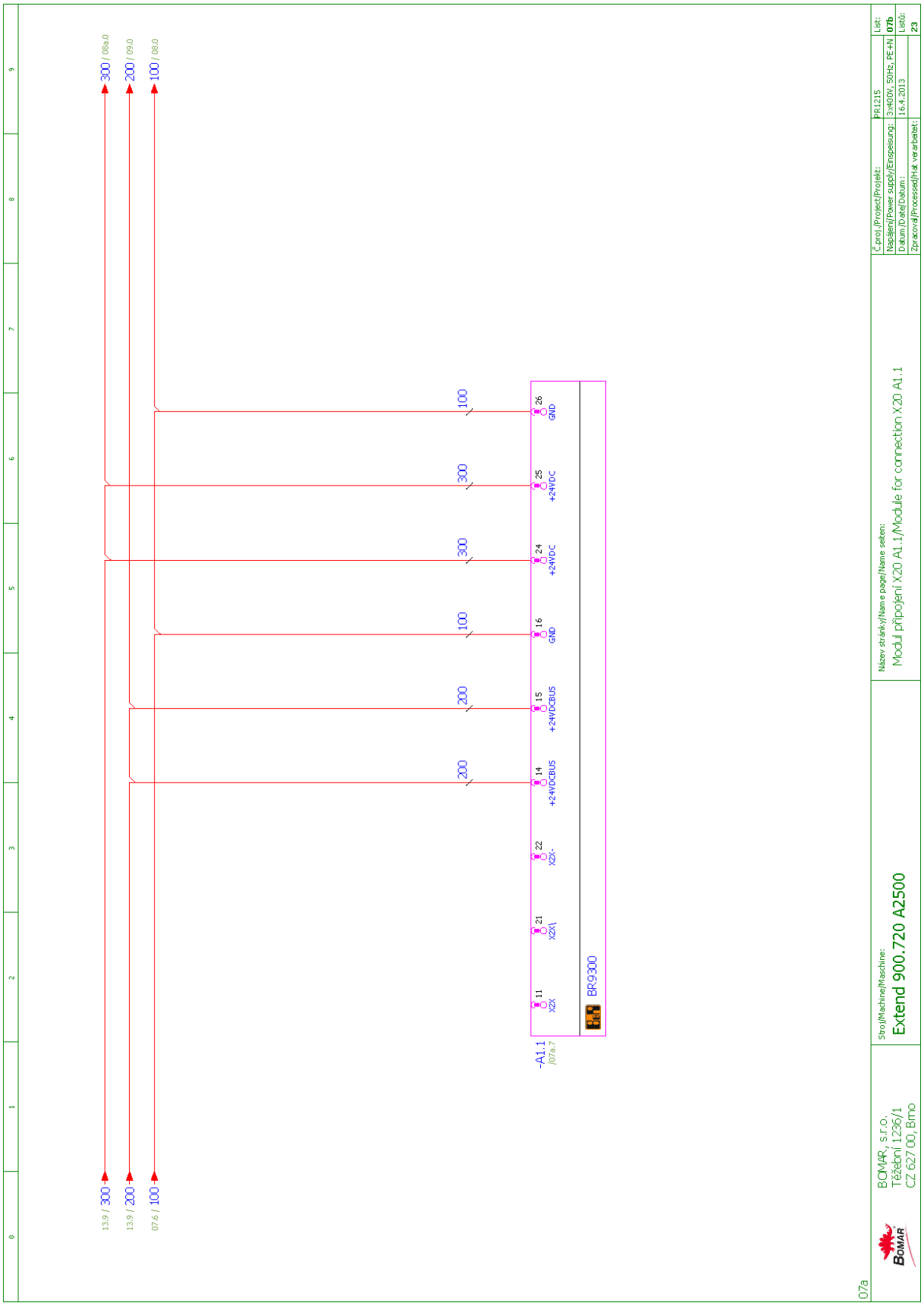
6.1. Elektrické schema / Elektroschema / Wiring diagrams – 3×400 V, 50 Hz / TN-C-S

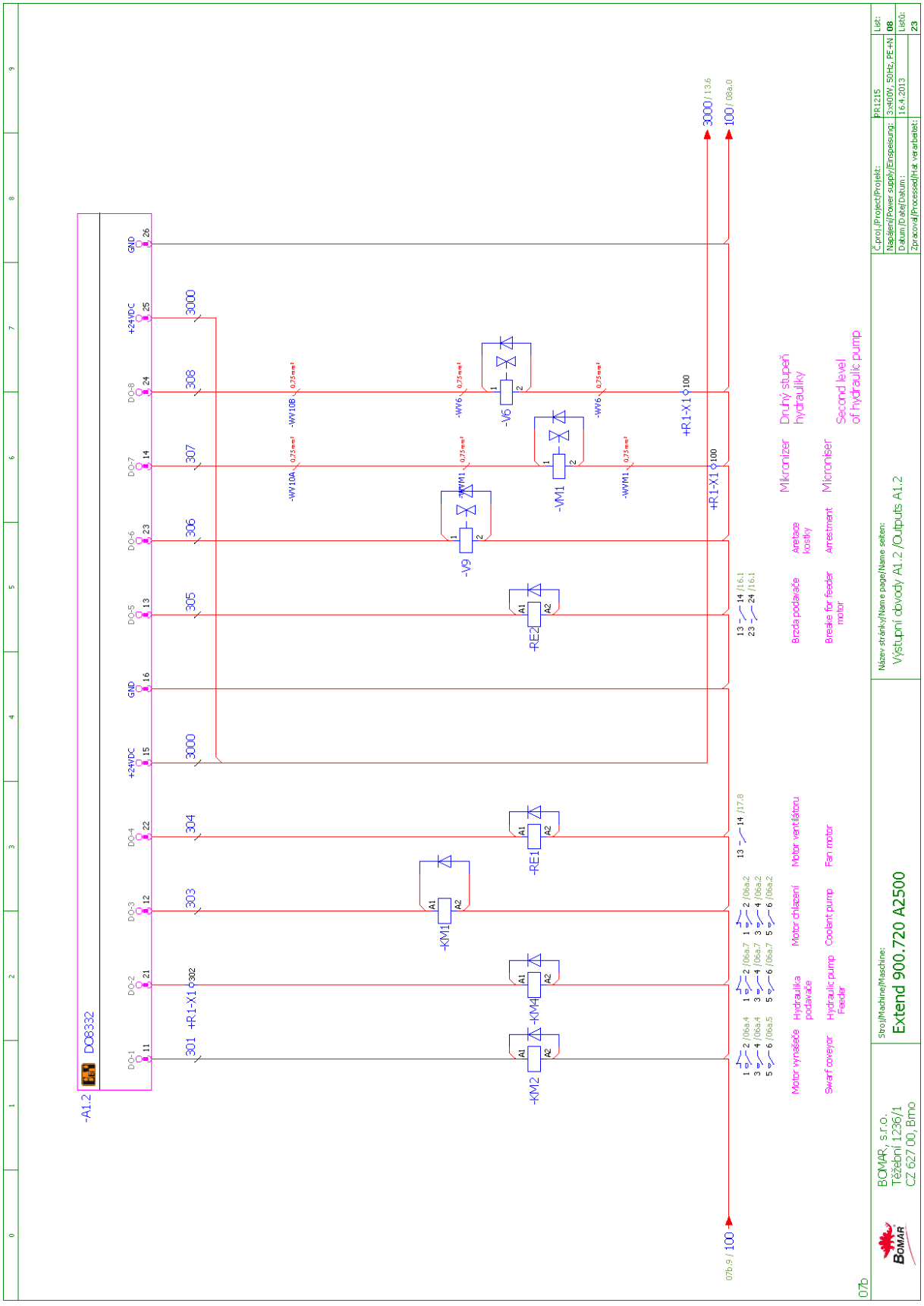


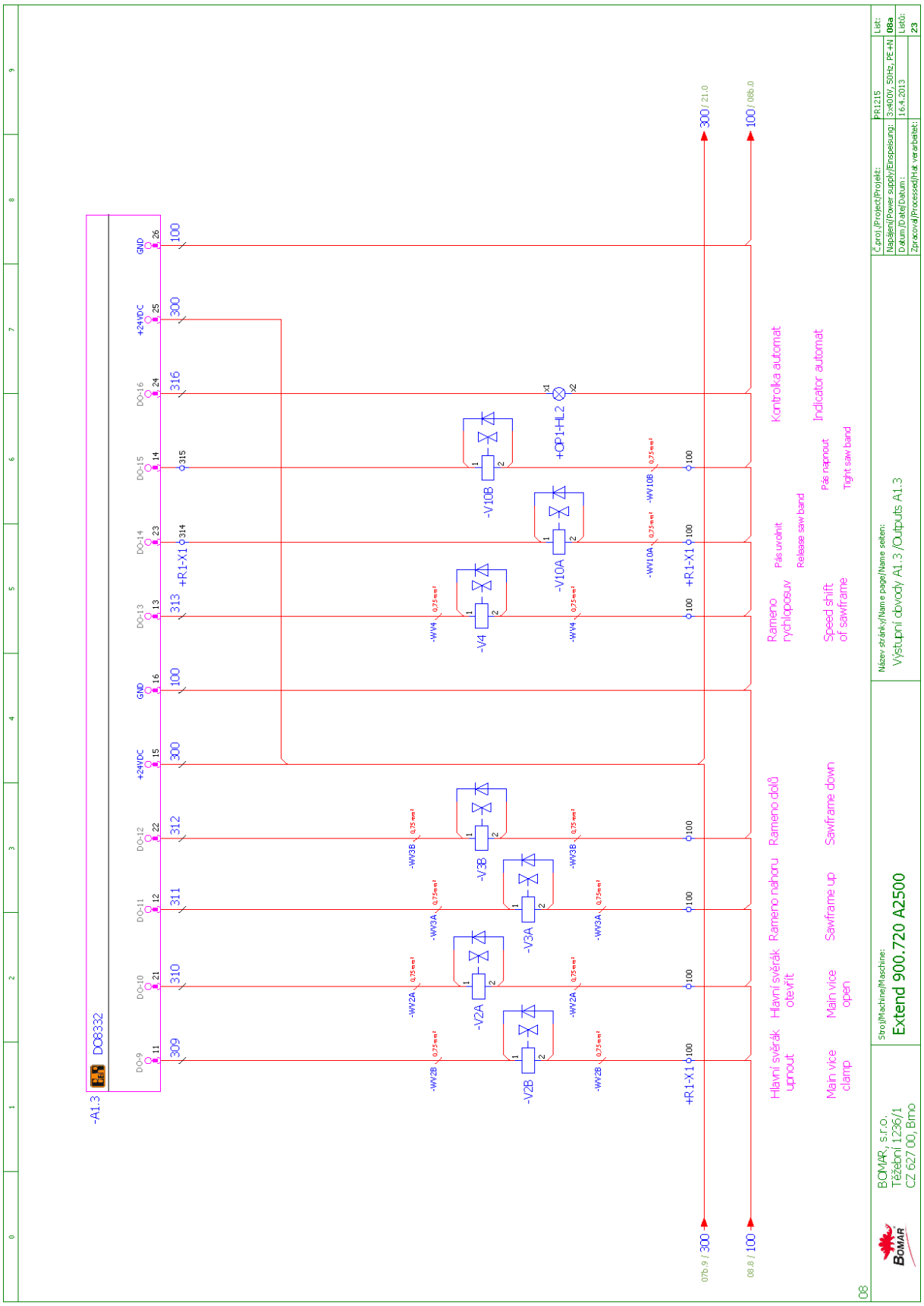

L111 /16.0
L211 /16.0
L311 /16.0
06.9 / L111
06.9 / L211
06.9 / L311
-FA1
0.25-0.4 A
-FA2
0.63-1A
-FA4
1.6-2.5A
-KM1
-KM2
-KM4
-RCF1
-RCF2
-RCF4
-R1-X2
-WM1
4Gx1,5
-M1
120W, 0.33A, 3x400V, 50Hz
Motor chlazení
Coolant pump
-WXC6.1
4Gx1,5
-XC6
-WXC6
4Gx1,5
-M6
0.25kW, 0.78A, 3x400V, 50Hz, 1380rpm
Motor vynašeče
Swarf conveyor
-WXC3.1
7Gx1,5
-XC3
-WXC3
7Gx1,5
+R2-X2
-WM4
4Gx1,5
-M4
0.75kW, 1.8A, 3x400V, 50Hz, 1420rpm, cos 0.75
Hydraulika podavače
Hydraulic pump of feeder
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Silová část M1, M6, M4/Power part M1, M6, M4
Č.proj./Project/Projekt:
PR1215
Napájení/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
06a
Listů:
23
06

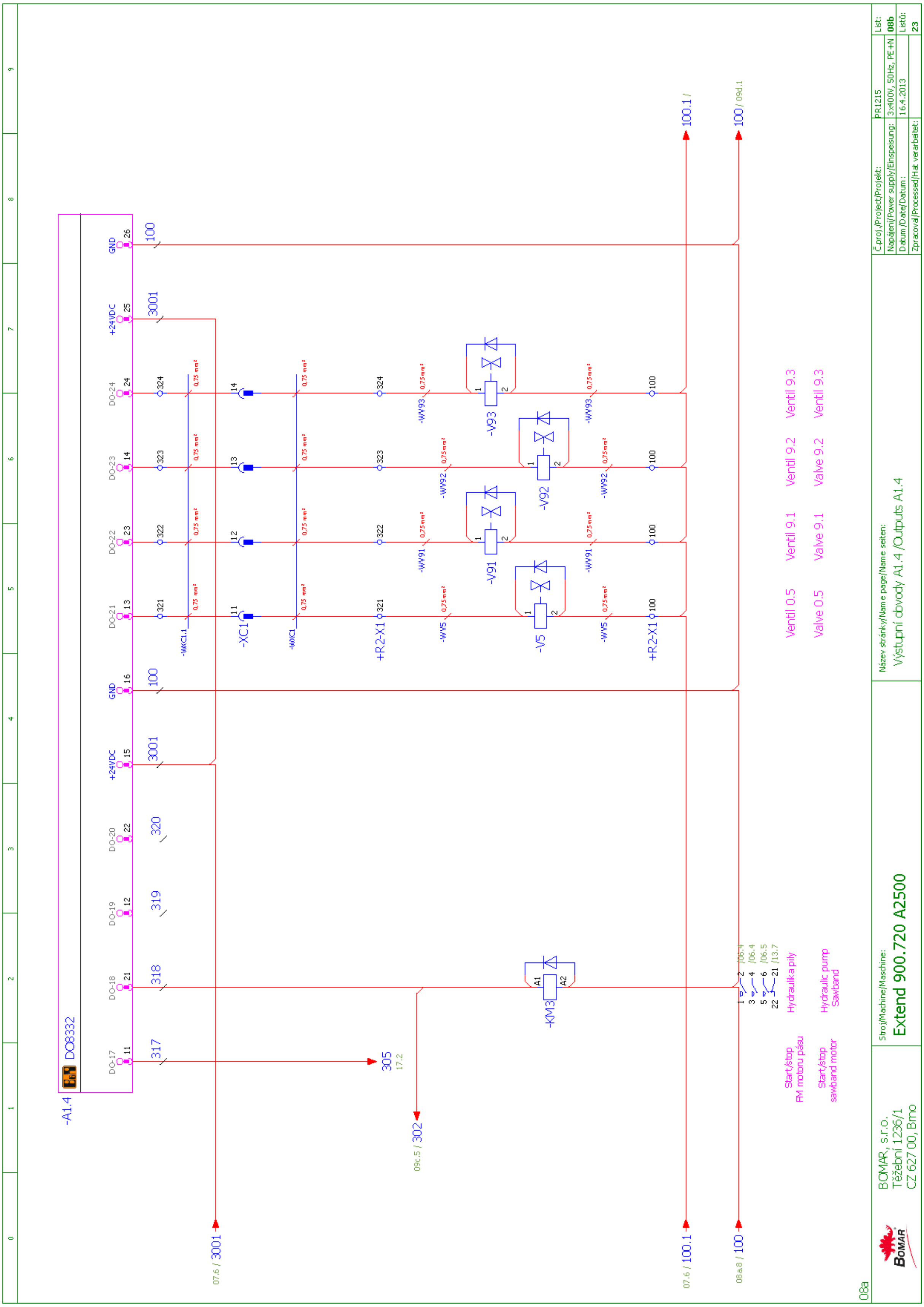

L10 / 17.0
L20 / 17.0
L30 / 17.0
06.9 / L10
06.9 / L20
06.9 / L30
-FU2
T3.15A
L100
N
PE
N:2
PE:7
-PWR.1
MURR ELEKTRONIK
AC
DC
85303
INPUT 173-264VAC/2,4A 50-60Hz
OUTPUT 24VDC/10A
-FU3
T1A
-FU4
T8A
-FU5
T1A
20
100
PE
-PE:8
+R1-X1
-WXC1
12Gx0,75
-XC1
-WXC1.1
12Gx0,75
100.1 / 08b.0
200.1 / 09.0
100 / 07b.0
400 / 20.1
PP45
300 / 13.0
Výstupy/Outputs
3001 / 08b.0
200 / 13.0
Vstupy/Inputs
-K2
-K1
3002
/13.6
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Napájecí zdroj 24V DC/Power supply unit 24V DC
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
07
Listů:
23
06a

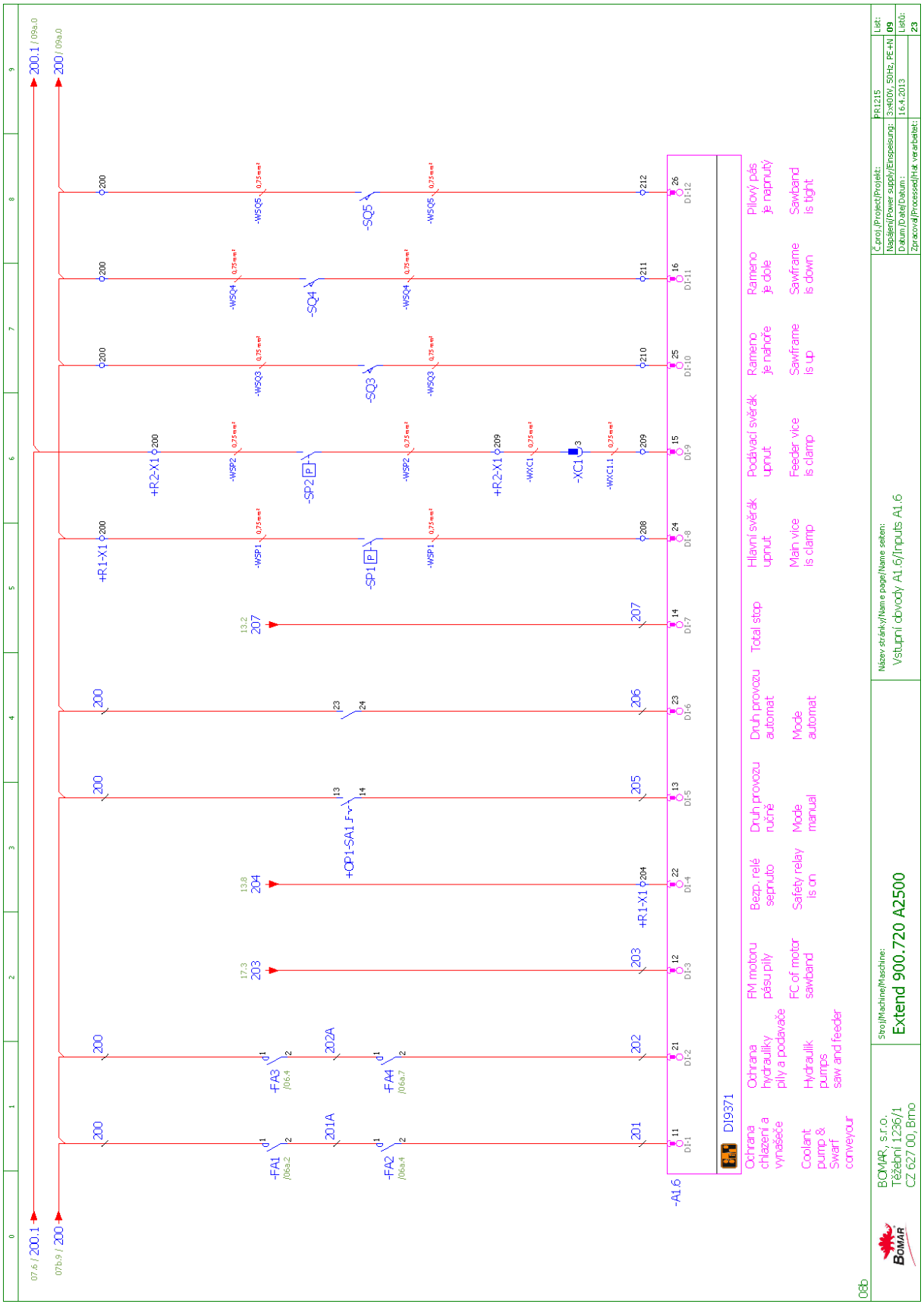

0
1
2
3
4
5
6
7
8
9
-CU1
/20.1
OUT
X2X
X2XGND
X2X/
SHLD
-FM2
/16.2
IN
X2X
X2XGND
X2X/
SH
OUT
X2X
X2XGND
X2X/
SH
-A1.1
/07b.2
IN
X2X
X2XGND
X2X/
SH
Power panel
Frekvenční měnič
pro pohon podavače
Frequency inverter
for drive feeder
Modul pro připojení systému X20
Module for connection system X20
07
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Topologie X2X/Topology X2X
Č.proj./Project/Projekt:
PR1215
List:
Napájení/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
07a
Datum/Date/Datum:
16.4.2013
Listů:
Zpracoval/Processed/Hat verarbeitet:
23

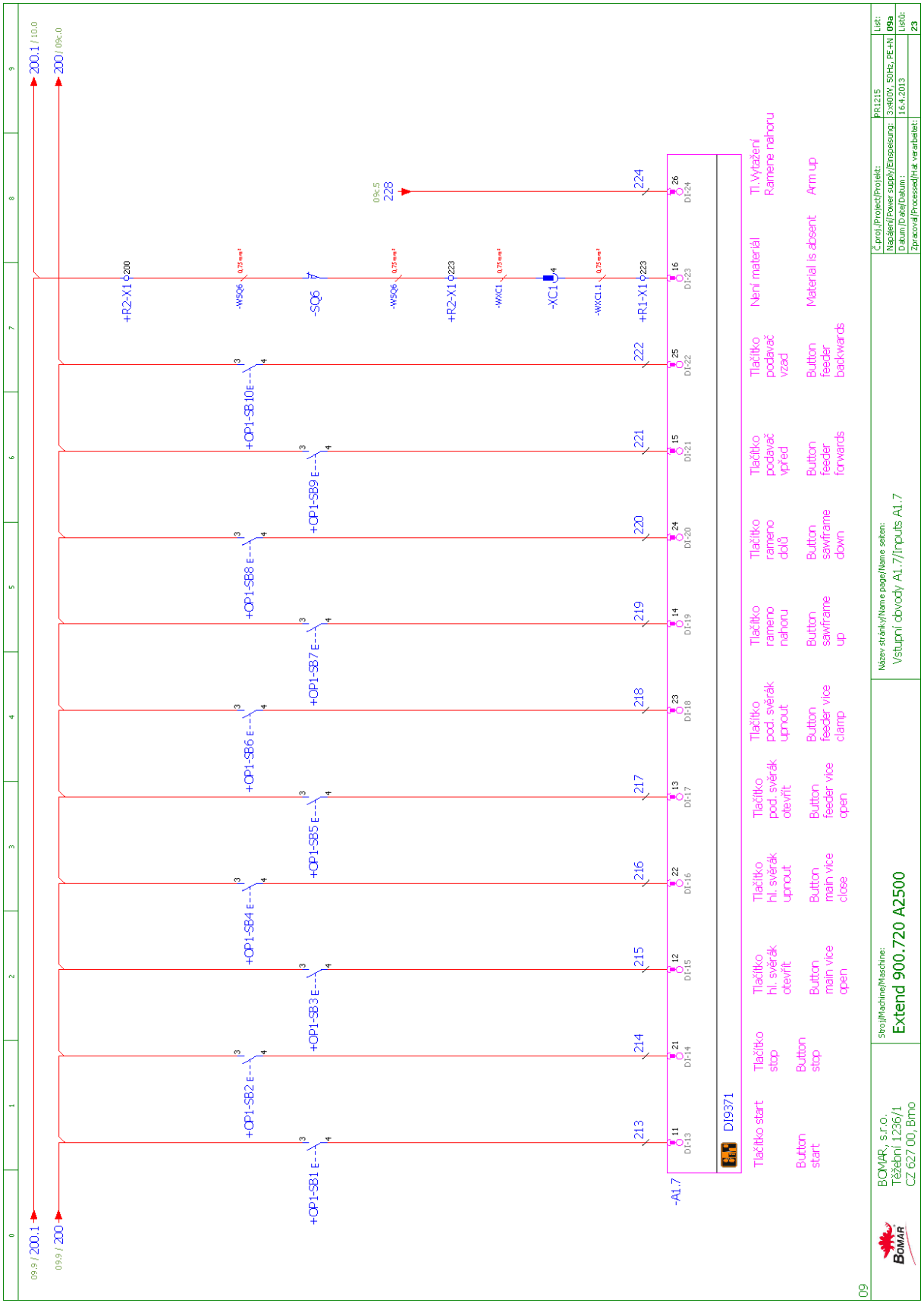

300 / 08a.0
200 / 09.0
100 / 08.0
13.9 / 300
13.9 / 200
07.6 / 100
-A1.1
/07a.7
BR9300
11 X2X\
21 X2X\
22 X2X-
14 +24VDCBUS
15 +24VDCBUS
16 GND
24 +24VDC
25 +24VDC
26 GND
200
200
100
300
100
300
100
07a
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Modul připojení X20 A1.1/Module for connection X20 A1.1
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
07b
Listů:
23

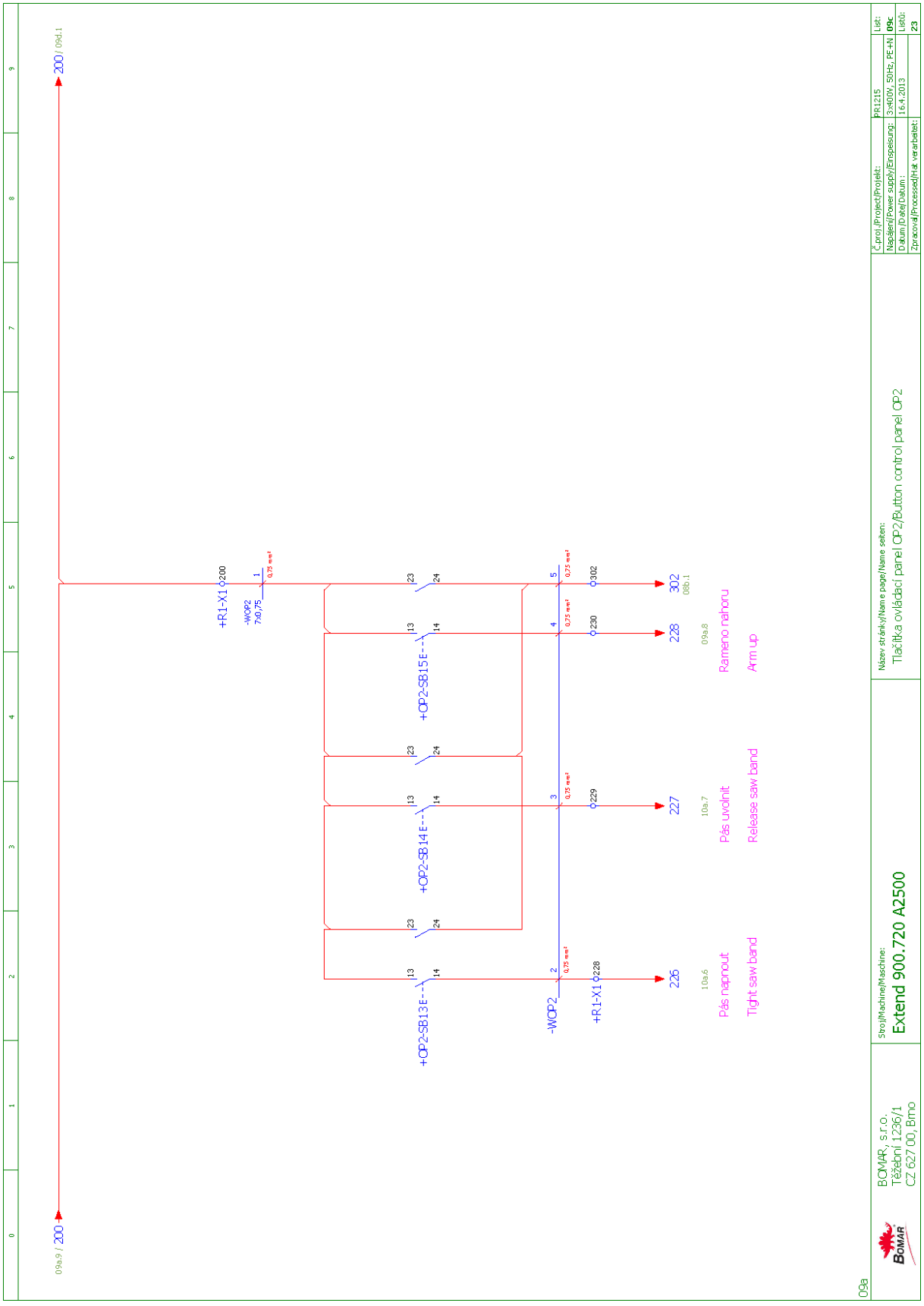

-A1.2
DO8332
DO-1
DO-2
DO-3
DO-4
DO-5
DO-6
DO-7
DO-8
GND
+24VDC
301 +R1-X1 ϕ302
303
304
305
306
307
308
3000
-KM2
-KM4
-KM1
-RE1
-RE2
-Y9
-VM1
-V6
-WY10A
-WY10B
-WY6
-WYM1
0,75mm²
+R1-X1 ϕ100
3000 / 13.6
100 / 08a.0
100 / 07b.9
Motor vynášeče
Hydraulika podavače
Motor chlazení
Motor ventilátoru
Swarf conveyor
Hydraulic pump Feeder
Coolant pump
Fan motor
Brzda podavače
Aretace kostky
Arrestment
Breake for feeder motor
Mikroniser
Druhý stupeň hydrauliky
Micronizer
Second level of hydraulic pump
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Výstupní dovody A1.2 /Outputs A1.2
Č.proj./Project/Projekt:
PR1215
Napájení/Power supply/Einspeisung:
3+400V, 50Hz, PE+N
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
08
Listů:
23
07b

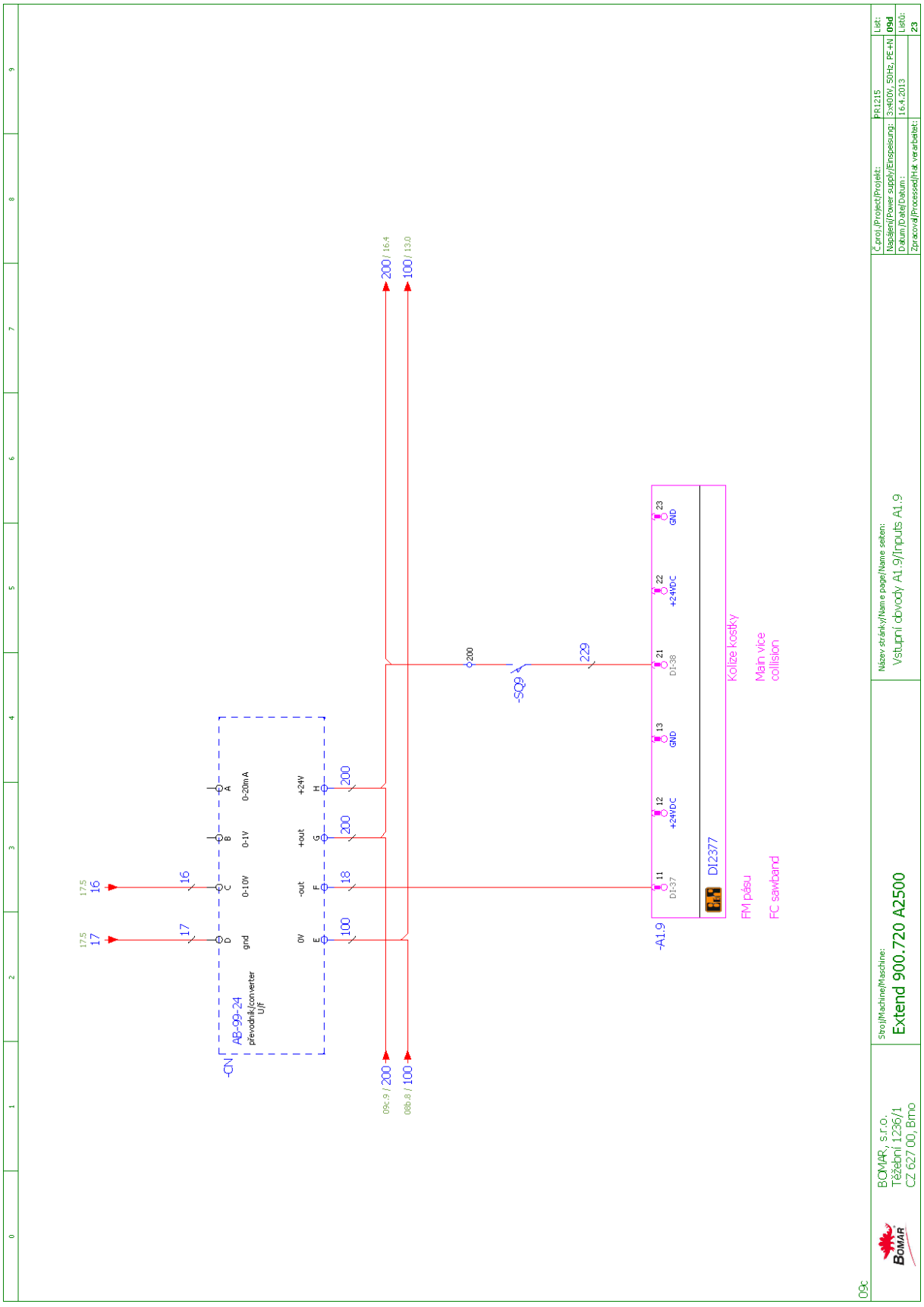

-A1.3
DO8332
DO-9
DO-10
DO-11
DO-12
DO-13
DO-14
DO-15
DO-16
+24VDC
GND
+R1-X1
-WV2B
-WV2A
-WV3A
-WV3B
-WV4
-WV10A
-WV10B
-V2B
-V2A
-V3A
-V3B
-V4
-V10A
-V10B
+OP1-HL2
Hlavní svěrák upnout
Main vice clamp
Hlavní svěrák otevřít
Main vice open
Rameno nahoru
Sawframe up
Rameno dolů
Sawframe down
Rameno rychloposuv
Pás uvolnit
Release saw band
Speed shift of sawframe
Pás napnout
Tight saw band
Kontrolka automat
Indicator automat
07b.9 / 300
08.8 / 100
300 / 21.0
100 / 08b.0
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Výstupní obvody A1.3 /Outputs A1.3
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
08a
Listů:
23
08

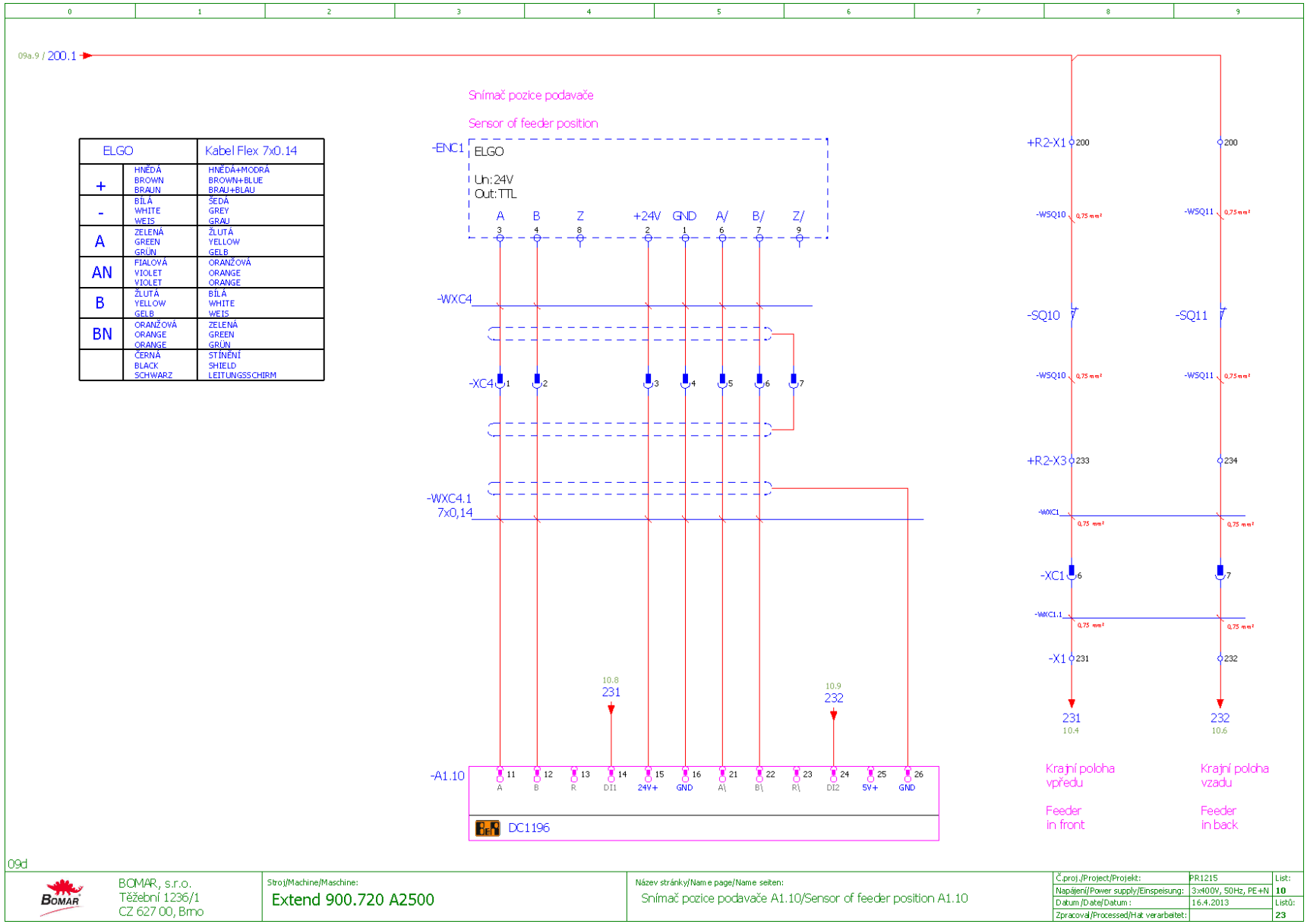

-A1.4
DO8332
Ventil 0.5
Valve 0.5
Ventil 9.1
Valve 9.1
Ventil 9.2
Valve 9.2
Ventil 9.3
Ventil 9.3
Hydraulika pily
Hydraulic pump
Sawband
Start/stop
FM motoru pásu
Start/stop
sawband motor
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Extend 900.720 A2500
Výstupní obvody A1.4 /Outputs A1.4
PR1215
3x400V, 50Hz, PE+N
16.4.2013
08b
23
08a


BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Vstupní obvody A1.6/Inputs A1.6
Č.proj./Project/Projekt: PR1215
Napětí/Power supply/Einspeisung: 3x400V, 50Hz, PE+N
Datum/Date/Datum: 16.4.2013
Zpracoval/Processed/Hat vearbeitet:
List: 09
Listů: 23
-A1.6
D19371
Ochrana chlazení a vynašeče
Ochrana hydrauliky pily a podavače
Hydraulik pumps saw and feeder
Coolant pump & Swarf conveyour
FM motoru pásu pily
FC of motor sawband
Bezp. relé sepnuto
Safety relay is on
Druh provozu ruční
Mode manual
Druh provozu automat
Mode automat
Total stop
Hlavní svěrák upnut
Main vice is clamp
Podávací svěrák upnut
Feeder vice is clamp
Rameno je nahoře
Sawframe is up
Rameno je dole
Sawframe is down
Pilový pás je napnutý
Sawband is tight
-FA1
-FA2
-FA3
-FA4
-SP1
-SP2
-SQ3
-SQ4
-SQ5
+R1-X1
+R2-X1
+OP1-SA1
-XC1
-WSP1
-WSP2
-WSQ3
-WSQ4
-WSQ5
-WXC1
-WXC1.1
200.1
200


09.9 / 200.1
09.9 / 200
200.1 / 10.0
200 / 09c.0
-A1.7
D19371
+OP1-SB1 E---
+OP1-SB2 E---
+OP1-SB3 E---
+OP1-SB4 E---
+OP1-SB5 E---
+OP1-SB6 E---
+OP1-SB7 E---
+OP1-SB8 E---
+OP1-SB9 E---
+OP1-SB10E---
+R2-X1 Q200
-WSQ6
-SQ6
-WSQ6
+R2-X1 Q223
-WXC1
-XC1
-WXC1.1
+R1-X1 Q223
09c.5
228
213
214
215
216
217
218
219
220
221
222
224
Tlačítko start
Button start
Tlačítko stop
Button stop
Tlačítko hl. svěrák otevřít
Button main vice open
Tlačítko hl. svěrák upnout
Button main vice close
Tlačítko pod. svěrák otevřít
Button feeder vice open
Tlačítko pod. svěrák upnout
Button feeder vice clamp
Tlačítko rameno nahoru
Button sawframe up
Tlačítko rameno dolů
Button sawframe down
Tlačítko podávač vpřed
Button feeder forwards
Tlačítko podávač vzad
Button feeder backwards
Není materiál
Material is absent
Tl.Vytažení Ramene nahoru
Arm up
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Vstupní obvody A1.7/Inputs A1.7
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
09a
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
Listů:
23
09


200
09d.1
09a.9
200
+R1-X1
200
-WOP2
7x0,75
1
0,75 mm²
+OP2-SB13E---
13
14
+OP2-SB14E---
13
14
+OP2-SB15E---
13
14
23
24
-WOP2
2
3
4
5
0,75 mm²
+R1-X1
228
229
230
302
226
227
228
302
09b.1
10a.6
10a.7
09a.8
Pás napnout
Tight saw band
Pás uvolnit
Release saw band
Rameno nahoru
Arm up
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Tlačítka ovládací panel OP2/Button control panel OP2
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
09c
Listů:
23
09a

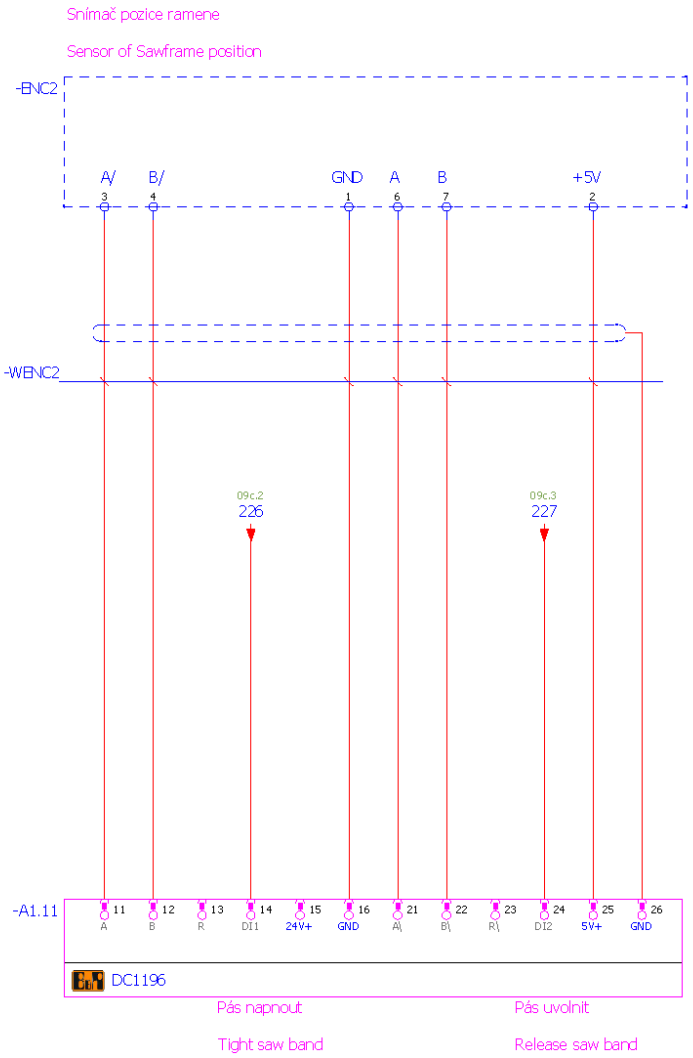

-CN
AB-99-24
převodník/converter
U/f
gnd
0V
0-10V
-out
0-1V
+out
0-20mA
+24V
17
16
18
100
200
-A1.9
DI2377
DI-37
DI-38
+24VDC
GND
Kolize kostky
Main vice collision
FM pásu
FC sawband
-SQ9
229
200 / 16.4
100 / 13.0
09c.9 / 200
08b.8 / 100
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Vstupní obvody A1.9/Inputs A1.9
Č.proj./Project/Projekt:
PR1215
Napájení/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
09d
Listů:
23



ELGO		Kabel Flex 7x0.14
+	HNĚDÁ BROWN BRAUN	HNĚDÁ+MODRÁ BROWN+BLUE BRAU+BLAU
-	BÍLÁ WHITE WEIS	ŠEDÁ GREY GRAU
A	ZELENÁ GREEN GRÜN	ŽLUTÁ YELLOW GELB
AN	FIALOVÁ VIOLET VIOLET	ORANŽOVÁ ORANGE ORANGE
B	ŽLUTÁ YELLOW GELB	BÍLÁ WHITE WEIS
BN	ORANŽOVÁ ORANGE ORANGE	ZELENÁ GREEN GRÜN
	ČERNÁ BLACK SCHWARZ	STÍNĚNÍ SHIELD LEITUNGSSCHIRM

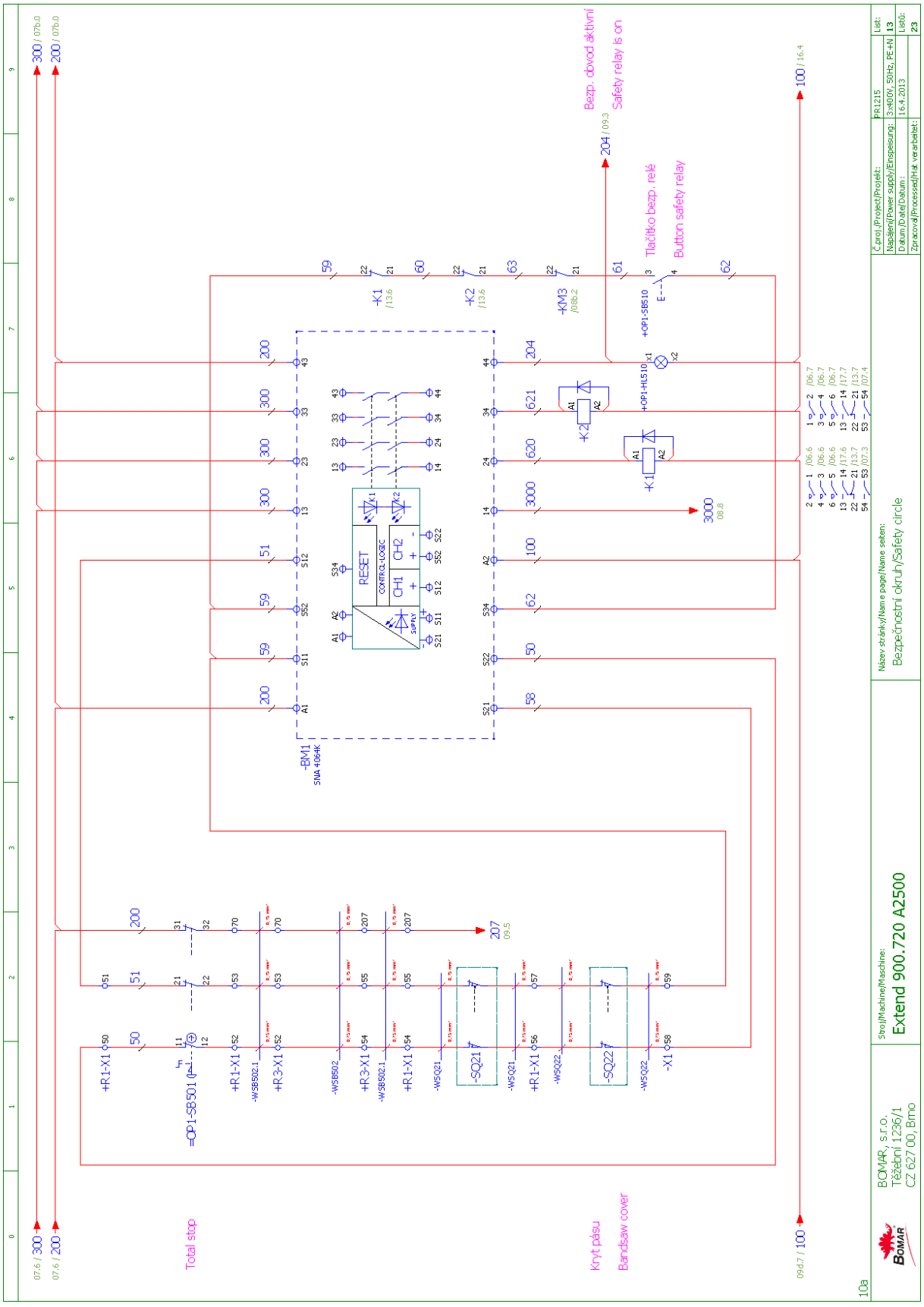
Schéma
Schemas
Scheme

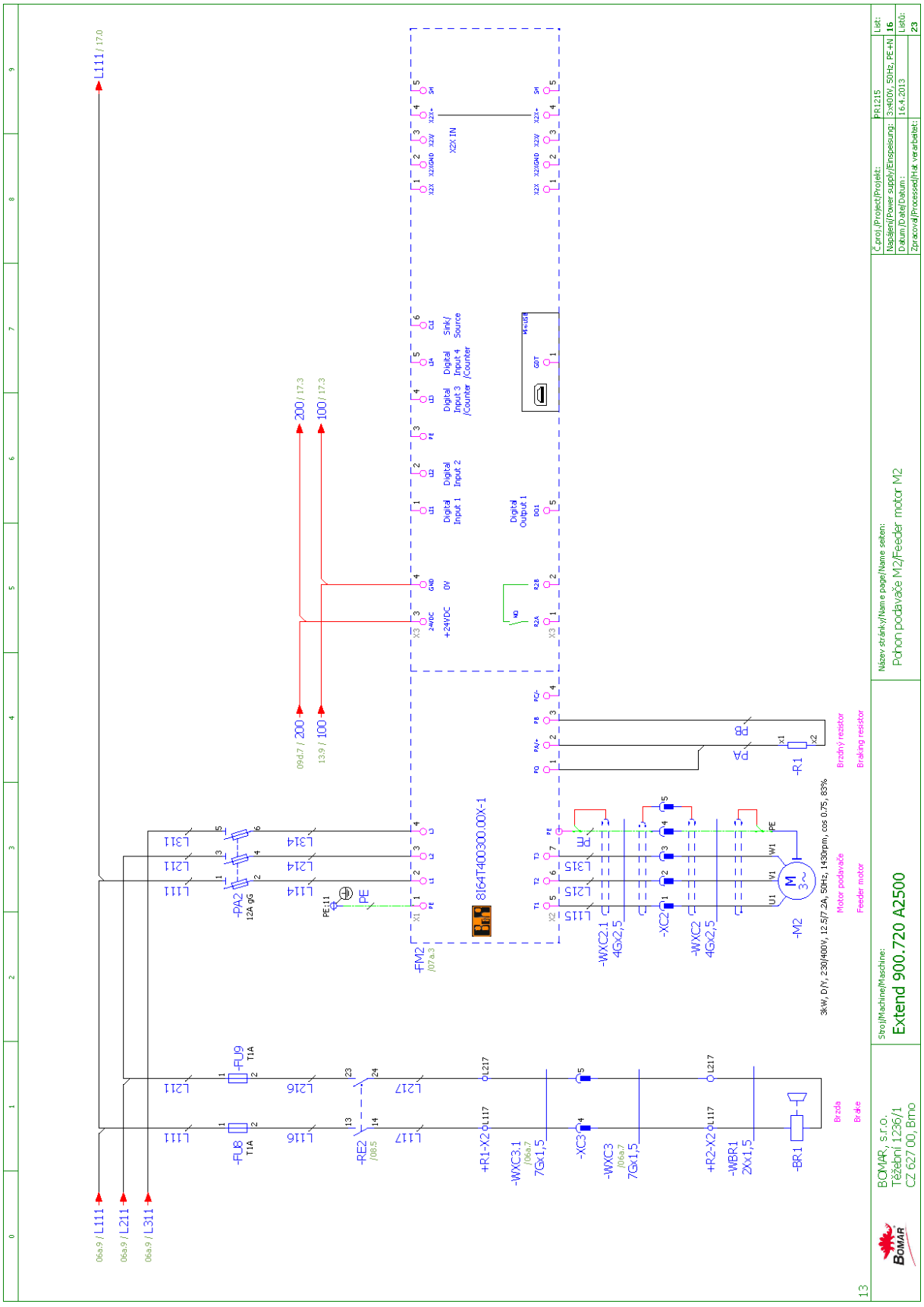
Snímač výšky ramene Sawframe position sensor Rahmenposition sensor		Kabel HELU-Flexi 7x0.14	Kabel SYKFY 4x2x0.5
+	HNĚDÁ BROWN BRAUN	HNĚDÁ+MODRÁ BROWN+BLUE BRAU+BLAU	HNĚDÁ+MODRÁ BROWN+BLUE BRAU+BLAU
-	SEDÁ GREY GRAU	SEDÁ GREY GRAU	HNĚDÁ/BÍLÁ+MODRÁ/BÍLÁ BROWN/WHITE+BLUE/WHITE BRAUN/WEIS+BLAU/WEIS
A	RUZOVA PINK ROSAROT	ŽLUTÁ YELLOW GELB	ZELENÁ GREEN GRUN
AN	ZELENÁ GREEN GRÜN	RŮŽOVÁ PINK ROSA	ZELENÁ/BÍLÁ GREEN/WHITE GRUN/WEIS
B	ŽLUTÁ YELLOW GELB	BÍLÁ WHITE WEIS	ORANŽOVÁ ORANGE ORANGE
BN	BÍLÁ WHITE WEIS	ZELENÁ GREEN GRÜN	ORANŽOVÁ/BÍLÁ ORANGE/WHITE ORANGE/WEIS
	ČERNÁ BLACK SCHWARZ	STÍNĚNÍ SHIELD LEITUNGSSCHIRM	STÍNĚNÍ SHIELD LEITUNGSSCHIRM

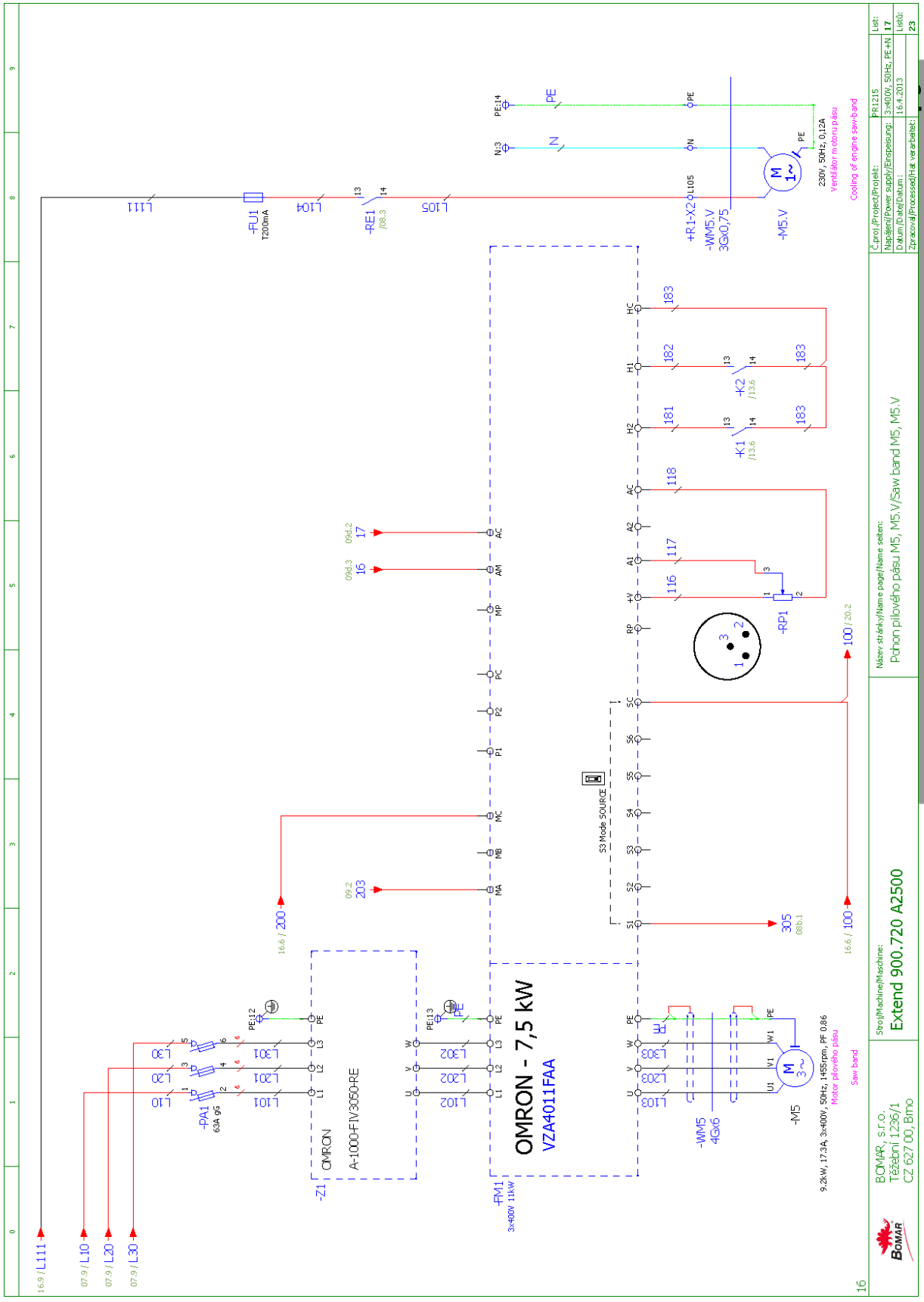


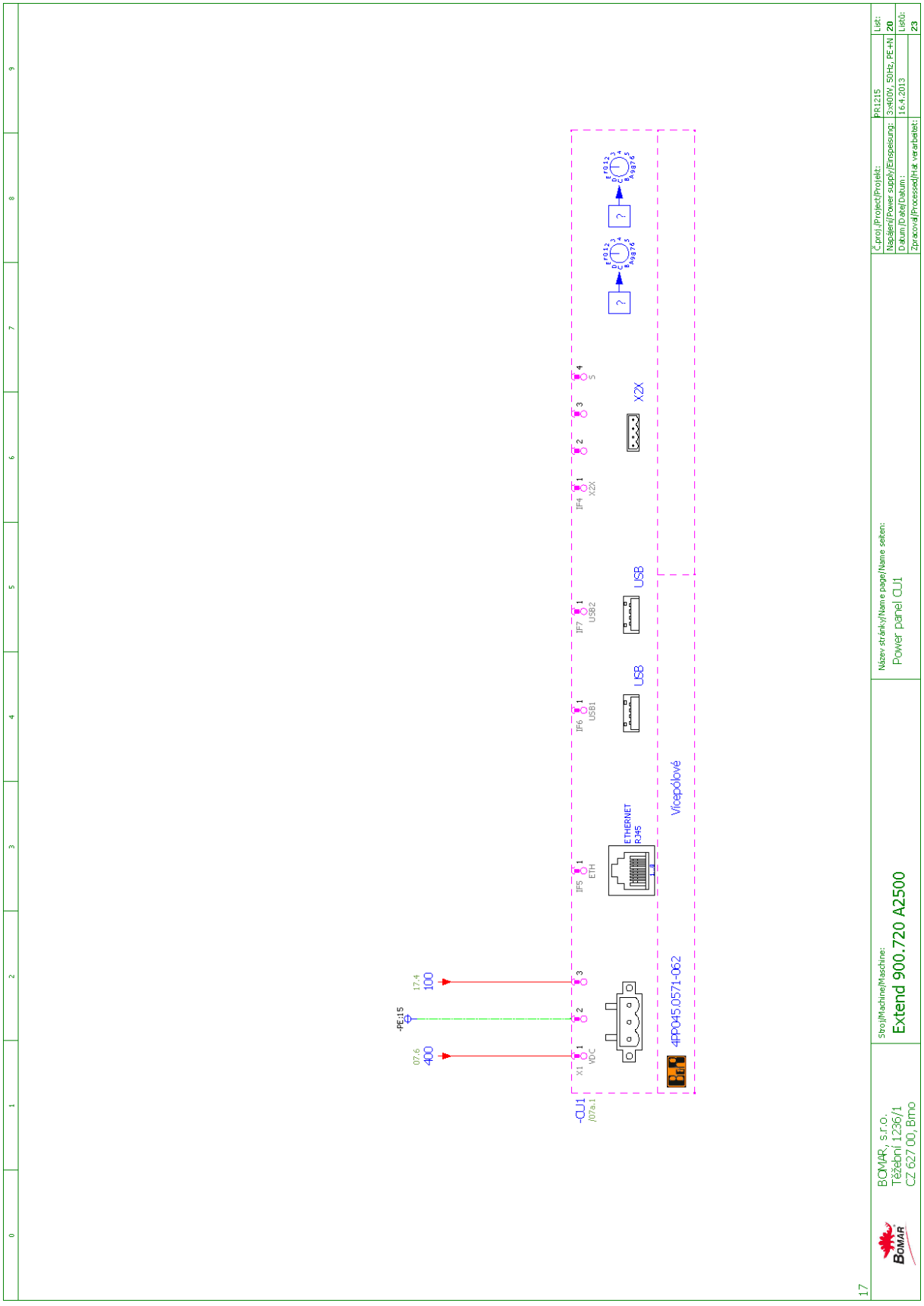
10

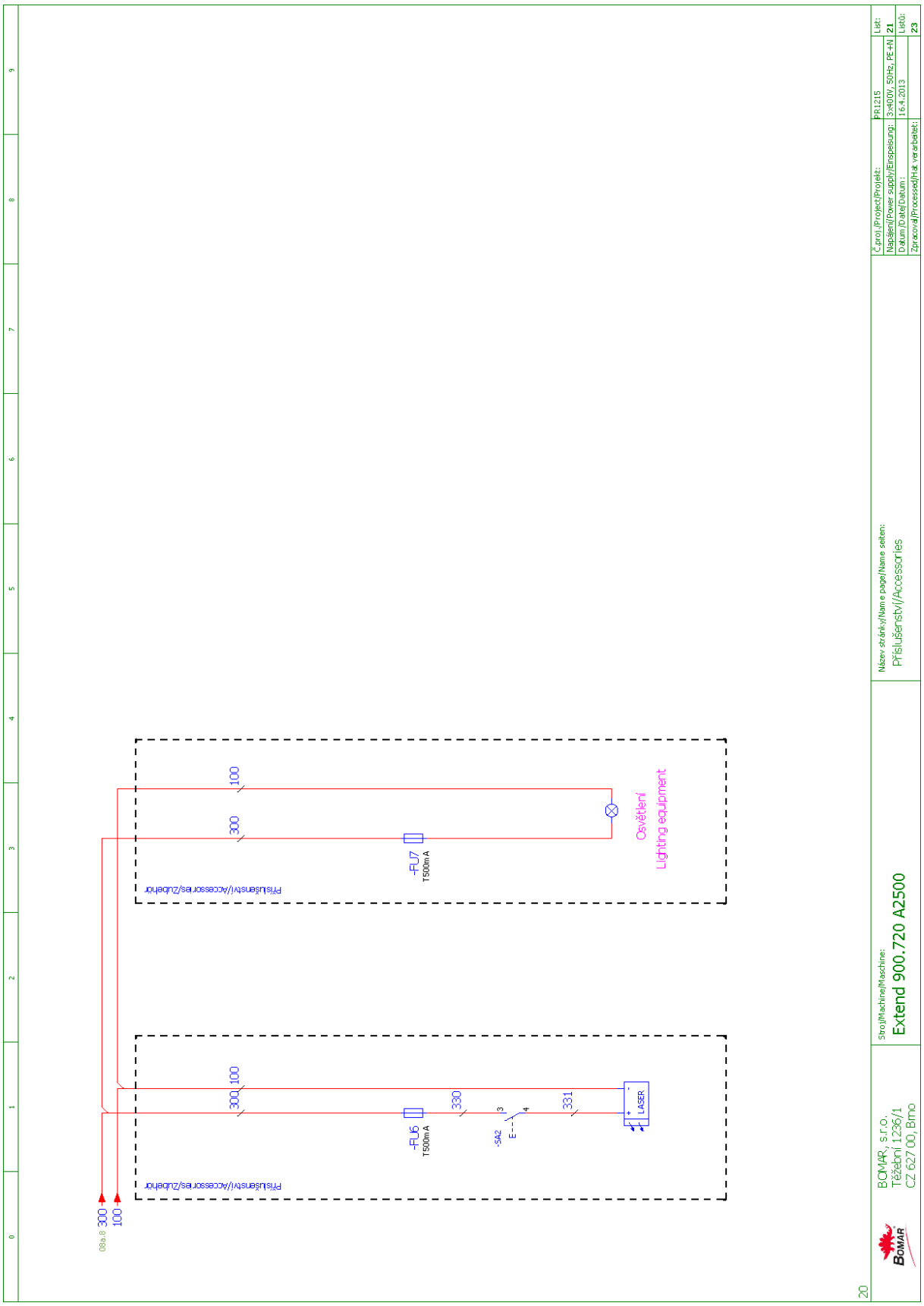
BOMAR, s.r.o. Těžební 1236/1 CZ 627 00, Brno	Stroj/Machine/Maschine: Extend 900.720 A2500	Název stránky/Name page/Name seiten: Odměřování ramene A1.11/Sensor of sawframe position A1.11	Č.proj./Project/Projekt: PR1215 | List: Napájení/Power supply/Einspeisung: 3x400V, 50Hz, PE+N | 10a Datum/Date/Datum: 16.4.2013 | Listů: Zpracoval/Processed/Hat verarbeitet: | 23


Total stop
Kryt pásu
Bandsaw cover
Bezp. obvod aktivní
Safety relay is on
Tlačítko bezp. relé
Button safety relay
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Bezpečnostní okruh/Safety circle
PR1215
3x400V, 50Hz, PE+N
16.4.2013
13
23


L111 / 17.0
06a.9 / L111
06a.9 / L211
06a.9 / L311
-PA2
12A gG
-FU8
T1A
-FU9
T1A
-RE2
/08.5
PE:11
PE
-FM2
/07a.3
8164T400300.00X-1
200 / 17.3
100 / 17.3
09d.7 / 200
13.9 / 100
Digital Input 1
Digital Input 2
Digital Input 3 /Counter
Digital Input 4 /Counter
Sink/ Source
Digital Output 1
+24VDC
0V
X2X IN
Master
-R1
Brzdný rezistor
Braking resistor
-WXC2.1
4Gx2,5
-XC2
-WXC2
4Gx2,5
-M2
3~
3kW, D/Y, 230/400V, 12.5/7.2A, 50Hz, 1430rpm, cos 0.75, 83%
Motor podavače
Feeder motor
+R1-X2
-WXC3.1
/06a.7
7Gx1,5
-XC3
-WXC3
/06a.7
7Gx1,5
+R2-X2
-WBR1
2Gx1,5
-BR1
Brzda
Brake
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Pohon podavače M2/Feeder motor M2
Č.proj./Project/Projekt:
PR1215
Napájení/Power supply/Einspeisung:
3×400V, 50Hz, PE+N
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
16
Listů:
23

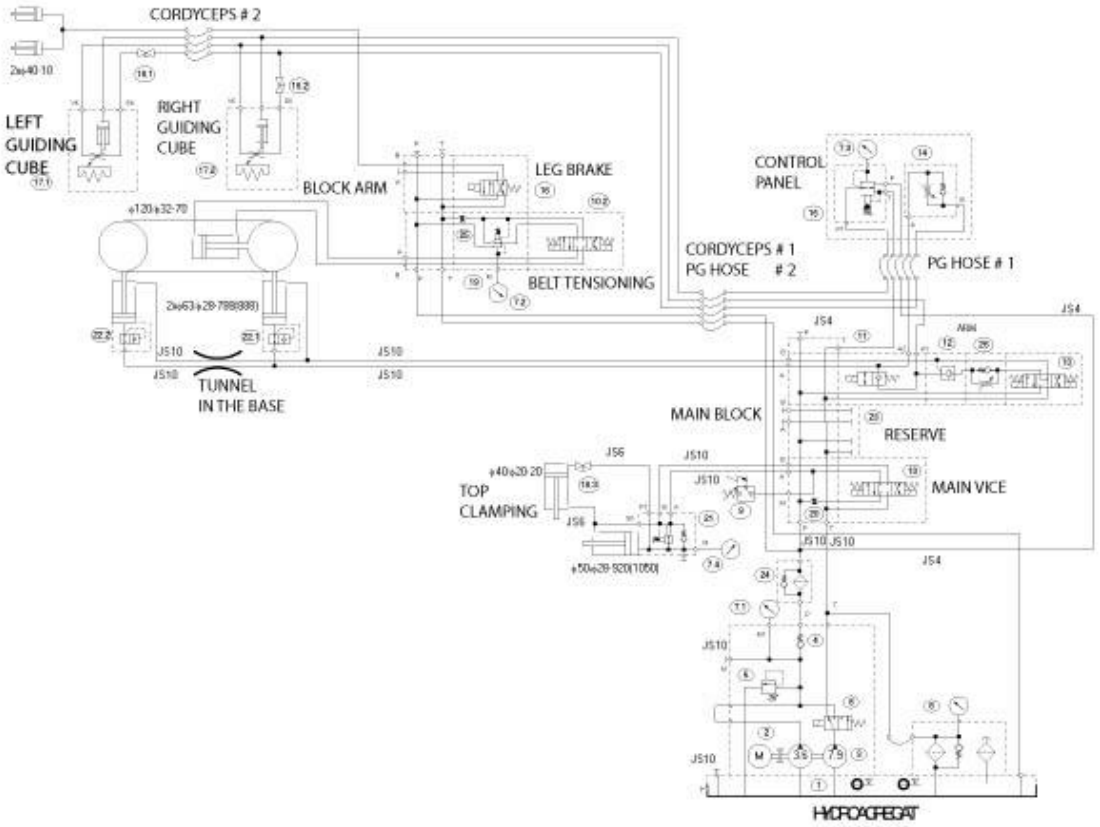

OMRON - 7,5 kW
VZA4011FAA
-FM1
3x400V 11kW
-Z1
OMRON
A-1000-FIV3050-RE
-PA1
63A gG
-FU1
T200mA
-RE1
-K1
-K2
-RP1
-M5
-M5.V
-WM5
4Gx6
-WM5.V
3Gx0,75
+R1-X2
53 Mode SOURCE
Saw band
Motor pilového pásu
9.2kW, 17.3A, 3x400V, 50Hz, 1455rpm, PF 0.86
Cooling of engine saw-band
Ventilátor motoru pásu
230V, 50Hz, 0,12A
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Pohon pilového pásu M5, M5.V/Saw band M5, M5.V
Č.proj./Project/Projekt:
PR1215
Napájení/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum /Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
17
Listů:
23
16


-CU1
/07a.1
X1
VDC
-PE15
07.6
400
17.4
100
IF5
ETH
ETHERNET
RJ45
IF6
USB1
USB
IF7
USB2
USB
IF4
X2X
X2X
4PP045.0571-062
Vícepólové
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Power panel CU1
BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Č.proj./Project/Projekt:
PR1215
List:
20
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Listů:
23
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:


BOMAR, s.r.o.
Těžební 1236/1
CZ 627 00, Brno
Stroj/Machine/Maschine:
Extend 900.720 A2500
Název stránky/Name page/Name seiten:
Příslušenství//Accessories
Č.proj./Project/Projekt:
PR1215
Napětí/Power supply/Einspeisung:
3x400V, 50Hz, PE+N
Datum/Date/Datum:
16.4.2013
Zpracoval/Processed/Hat verarbeitet:
List:
21
Listů:
23
20
088.8
300
100
Příslušenství//Accessories/Zubehör
-FU6
T500mA
300
100
330
-SA2
331
LASER
Příslušenství//Accessories/Zubehör
-FU7
T500mA
300
100
Osvětlení
Lighting equipment

6.2. Hydraulické schema / Hydraulikschema / Hydraulic diagrams

6.2.1. Pila / Säge / Saw

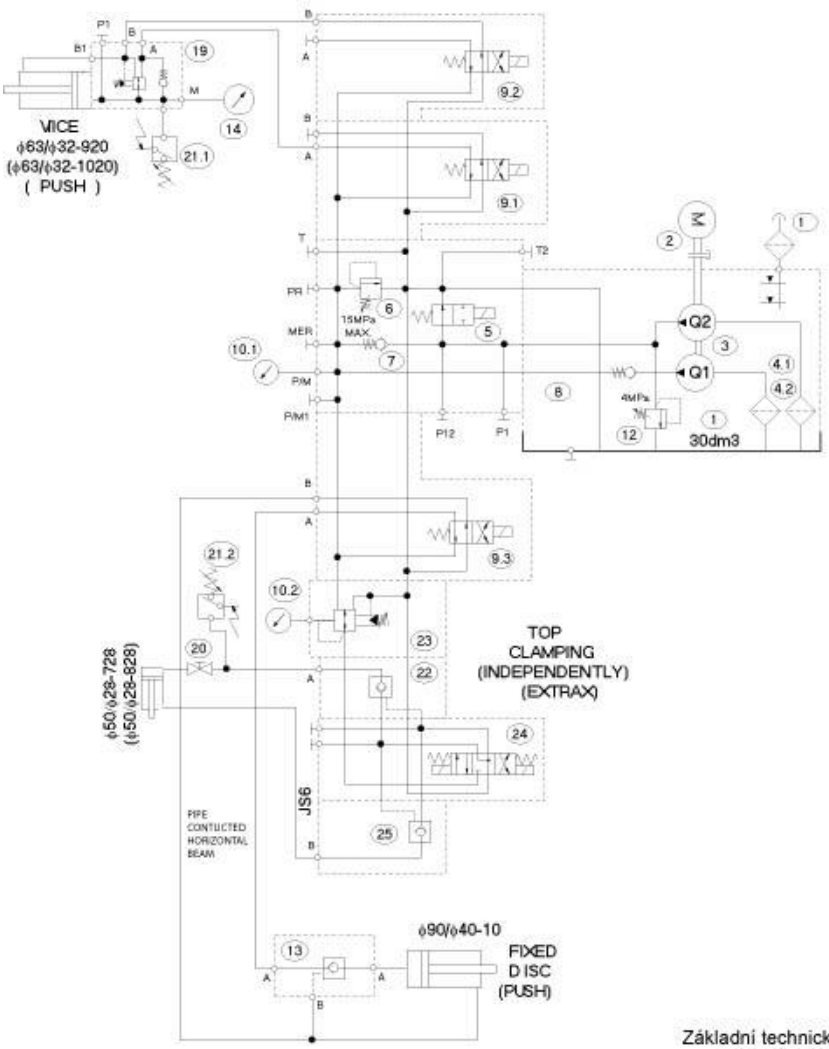


Typ / Type / Type	Extend 900.720
Hydraulický agregát / Hydroaggregat Hydro aggregat	731-0507 92.001.046
Neuvedené světlosti / Unerwähnt Lichtbreite Unlisted inside diameters	JS6
Výstupní šroubení / Ausgangschraubung Output screewing	G1/4"
P_{max}	6,5 Mpa
Q	10,6 + 4,9 dm^3/min
n	1425 ot./min
P	2,2 kW

Manual version:1.00 / Apr. 2013
Manual rev.: 1

Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Nádrž / Behälter / Tank	N30-BO / 30 l	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL100L 400/230V 50 Hz 2,2 kW	1
3	Hydrogenerátor / Hydraulikgenerator / Hydrogenerator	P23-7,9/3,6 L65334	1
4	Jednosměrný ventil / Einwegventil / One-way valve	VJ01-06/SG-1	1
5	Přepouštěcí ventil / Bypaßventil / By pass valve	VPN1-06/S-10S	1
6	Zpětný filtr / Filter / Filter	FR 043-166/0 10um	1
7	Manometr / Manometer / Manometer	∅68 0-10 MPa	4(3)
8	Rozváděč / Schaltschrank / Switchboard	SD2E-A3/H2D21	1
9	Tlakový spínač / Druckschalter / Pressure switch	166415031059, 20-50 bar	1
10	Rozváděč / Schaltschrank / Switchboard	RPE3-043Z11/02400E1K1	2
11	Blok rychloposuvu / Eilgangsblock / Speed shift block	729-0084	1
12	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock	VJR1-04/MA	1
13	Rozváděč / Schaltschrank / Switchboard	RPE3-043Y11/02400E1K1	1
14	Škrtící ventil / Drosselventil / Throttle-valve	VS01-04/R2,5-0	1
15	Redukční ventil / Reduktionventil / Reduce ventil	VRN2-06/S-6R	1
16	Rozváděč / Schaltschrank / Switchboard	RPE3-042X11/02400E1K1	1
17	Kostka regulace / Regulationklotz / Regulation cube		2
18	Kulový ventil /Kugelventil / Globe valve		3(2)
19	Redukční ventil / Reduktionventil / Reguce ventil	VRP2-04-PS/6,3	1
20	Clona / Blende / Shield	Ø 1,5 mm	1
21	Redukční ventil / Reduktionventil / Reduction ventil	VRN2-06/S-6R	1(0)
22	Pojistný ventil / Sicherungventil / Safety valve	VPNH ¼"	2
23	Krycí deska / Abdeckplatte / Cover plate	DK1-04/32-2	1
24	Tlakový filter / Druckfilter / Pressure filter	D 042-153 (3µm)	1
25	Clona / Blende / Shield	Ø 1,2 mm	1
26	Škrtící ventil / Drosselventil / Throttle-valve	VS01-04/ME S	1

6.2.2. Dopravník / Vorschub / Feeder



Základní technické parametry
Technische Spezifikation
Technical specification

Typ / Type / Type	LONG - STROKE HEAVY / 10t
Hydraulický agregát / Hydroaggregat 92.001.073 (S001_071_1) Hydro aggregat	
Neuvedené světlosti / Unerwähnt Lichtbreite Unlisted inside diameters	JS10
p_{max}	15 Mpa
Q1 / Q2	1,3+8,1 dm³/min
n	1400 ot./min
P	0,75 kW

Manual version:1.00 / Apr. 2013
Manual rev.: 1

Pos.	Item	Type	Pcs
1	Nádrž / Behälter / Tank	TM30/S 30 l	1
2	Elektromotor / Elektromotor / Electromotor	EM80-0,75 kW / 3-B34-L 400/230V 50 Hz	1
3	Hydrogenerátor / Hydraulikaggregat / Hydrogenerator	11A5X181G/A1X182G	1
4	Sací filtr / Saugfilter / Suction filter	AS010-00	2
5	Rozváděč / Verteilungsventil / Distributor	S D2E –A2/S2I11M9	1
6	Přepouštěcí ventil / Bypaßventil / By pass valve	SR1A-A2/S25	1
7	Jednosměrný ventil / Einwegventil / One-way valve	SC1F-A2/H005	1
8	Jednosměrný ventil / Einwegventil / One-way valve	XRVV-12LR	1
9	Rozváděč / Verteilungsventil / Distributor	RPEK-03G2R11/02400E1	3
10	Manometer	∅68 G LY CE RINE 0-6 MPa	2/1
11	Zavzdušňovací filtr / Belüftungsfilter/ Aeration filter	CPT–MD–FA/1“	1
12	Přepouštěcí ventil / Bypaßventil / By pass valve	SR1A-A2/S06	1
13	Hydraulický zámek / Hydraulische Verriegelung / Hydraulic lock	FMV	1
14	Manometer	∅68 G LY CE RINE 0-6 MPa	1
15	-	–	-
16	-	–	-
17	-	–	-
18	-	–	-
19	Redukční ventil / Reduktionventil / Reduction ventil	VRN1-06/RV-16	1/0
20	Kulový ventil /Kugelventil / Globe valve		1/0
21	Tlakový spínač / Druckschalter / Pressure switch	166415031059	2/1
22	Hydraulický zámek / Hydraulische Verriegelung / Hydraulic lock	FMV	1/0
23	Redukční ventil / Reduktionventil / Reduction ventil	FMV	1/0
24	Rozváděč / Verteilungsventil / Distributor	FMV	1/0
25	Hydraulický zámek / Hydraulische Verriegelung / Hydraulic lock	FMV	1/0

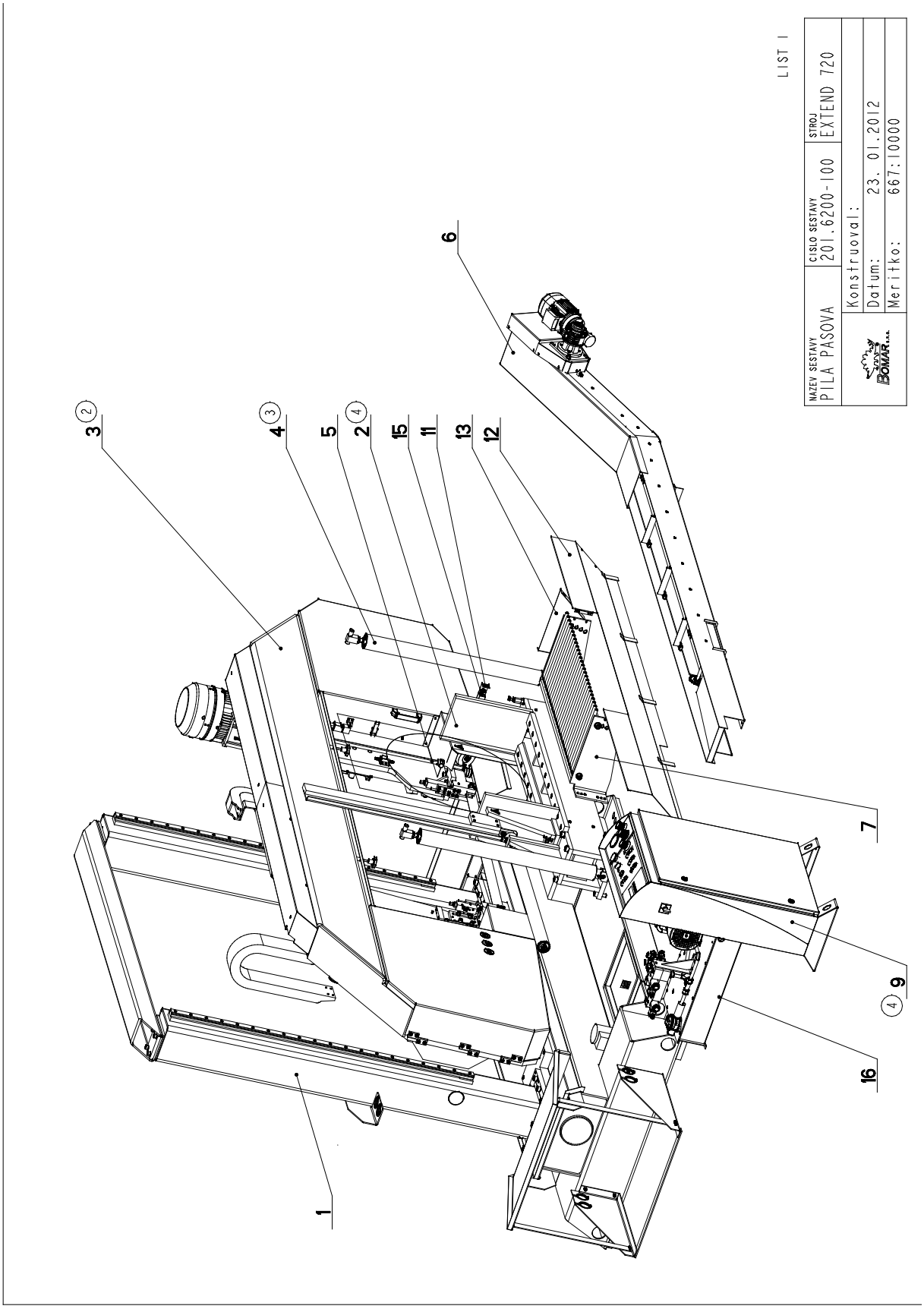
7. Výkresy sestav pro objednání náhradních dílů/ Zeichnungen für Bestellung der Ersatzteile / Drawing assemblies for spare parts order

- Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. practix Extend 900.720 A 2500) , výrobní číslo (např. 125) a rok výroby (např. 1999).

- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. Extend 900.720 A 2500), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).

- For spare parts order, you must always to allege: type of machine (for example Extend 900.720 A 2500), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Extend 900.720 A 2500 -1



Manual version:1.00 / Apr. 2013
Manual rev.: 1

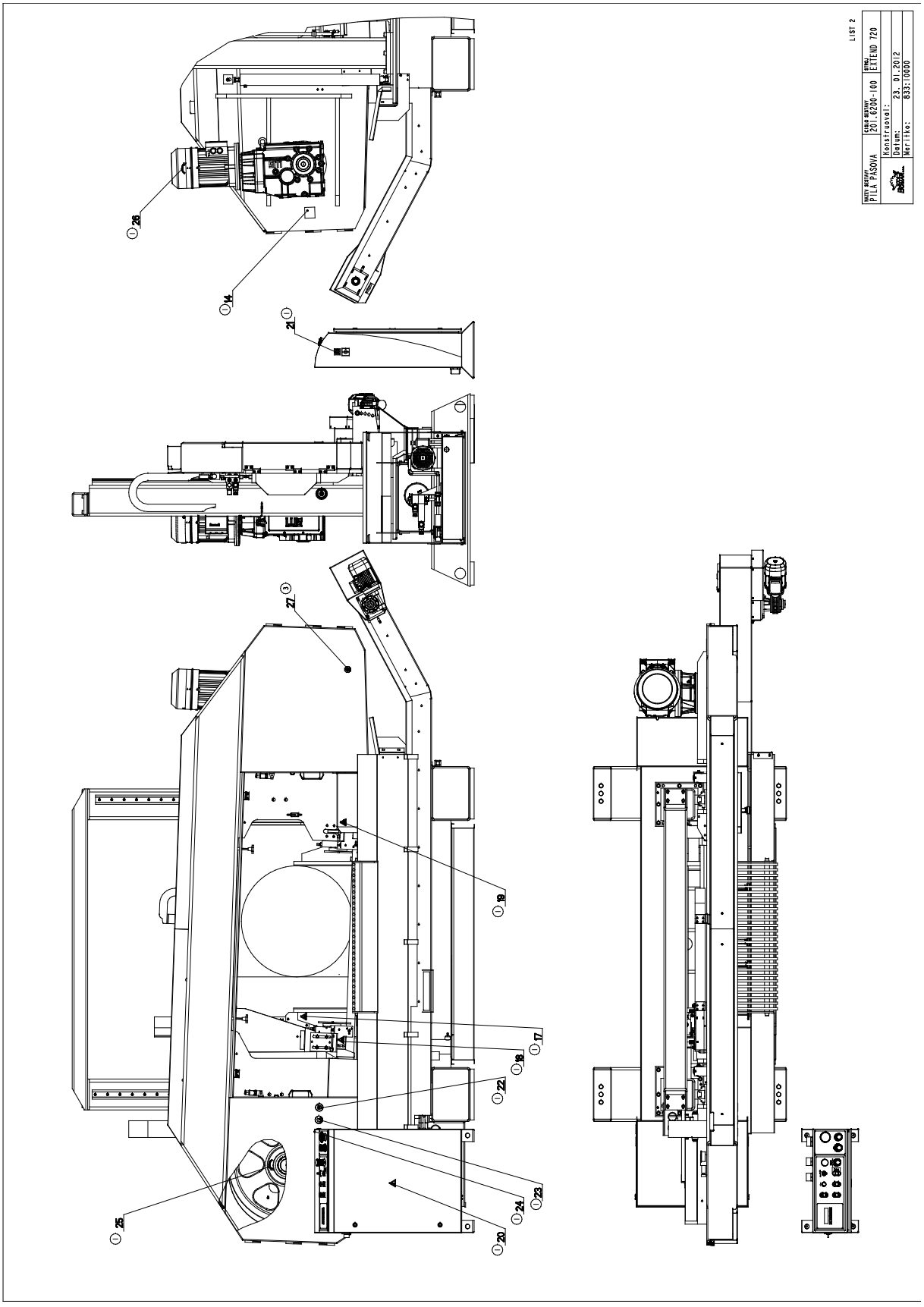
Cislo Sestavy 201.6200-100	Ver. 4	Nazev sestavy PILA PASOVA/BAND SAW/BANDSÄGE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6201-100	2	PODSTAVEC / BASE / UNTERSATZ		1
2	201.6203-150 (4)	0	SVERAK / VICE / SCHRAUBSTOCK		1
3	201.6204-200 (2)	2	RAMENO / SHOULDER / SÄGERAHMEN		1
4	201.6207-600 (3)	1	VALEC ZVEDACI / LIFTING CYLINDER / HEBEZYLINDER		2
5	201.6214-020	0	ODMEROVANI / MEASURING / GEHRUNGSMESSUNG		1
6	201.6217-100	4	VYNASEC TRISKOVY / CHIP EXTRACTOR / SPANABFÜHRUNG		1
7	201.6218-100	0	ROST / GRILL / GITTER		1
8	201.6299-100	0	SAMOLEPKA / STICKER / AUFKLEBER		1
9	201.Y430-000 (4)	0	OVLADACI PANEL / CONTROL PANEL / BEDIENPULT		1
10	202.6220-100 (2)	5	PRISLUSENSTVI / /		1
11	30.6104-006	0	DRZAK / HOLDER / HALTER	P3x35	1
12	30.6214-154	1	KRYT / COVER / ABDECKUNG		1
13	30.6214-156	0	KRYT / COVER / ABDECKUNG	P 2x182	1
14	31.6299-101 (1)	0	STITEK TYPOVY / MACHINE LABEL / MASCHINE SCHILD	P 0.5x65	1
15	91.173.009	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER		1
16	92.001.048	0	AGREGAT HYDRAULICKY / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
17	99.900.039 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER	NEBEZP.STLACENI	1
18	99.900.040 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
19	99.900.043 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
20	99.900.045 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
21	99.900.046 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
22	99.900.047 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
23	99.900.048 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
24	99.900.049 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
25	99.900.050 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		2
26	99.900.051 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
27	99.901.032 (3)	0	SAMOLEPKA / STICKER / AUFKLEBER	CETIFIKACNI SAMOLEPKA	1

1.PRIDANY DO KUSOVNIKU BEZPECNISTNI SAMOLEPKY,PRID.PRISLUSENSTVI 202.6220-100 26.4.07 RYSAVY 150/ZM178,289
2.ZRUSENO RAMENO 201.6204-100 A NAHRAZENO RAMENEM 201.6204-200. 137/ZM328 7.10.2008 SLEZACKOVA
3.ZRUS.VALEC 201.6207-500 A NAHR.201.6207-600.DOPL.CERTIFIKACNI SAMOLEPKA 99.901.032 . 040/ZM226-3 26.8.2010 SLEZACKOVA
4.ZRUS.SVERAK 201.6203-100 A NAHR.201.6203-150,ZRUS.ROZVADEC 201.6230-100 A NAHR.201.Y430-000. 002/ZM017 23.1.2012 SLEZACKOVA

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

7.3. Extend 900.720 A 2500 -2



Manual version:1.00 / Apr. 2013
Manual rev.: 1

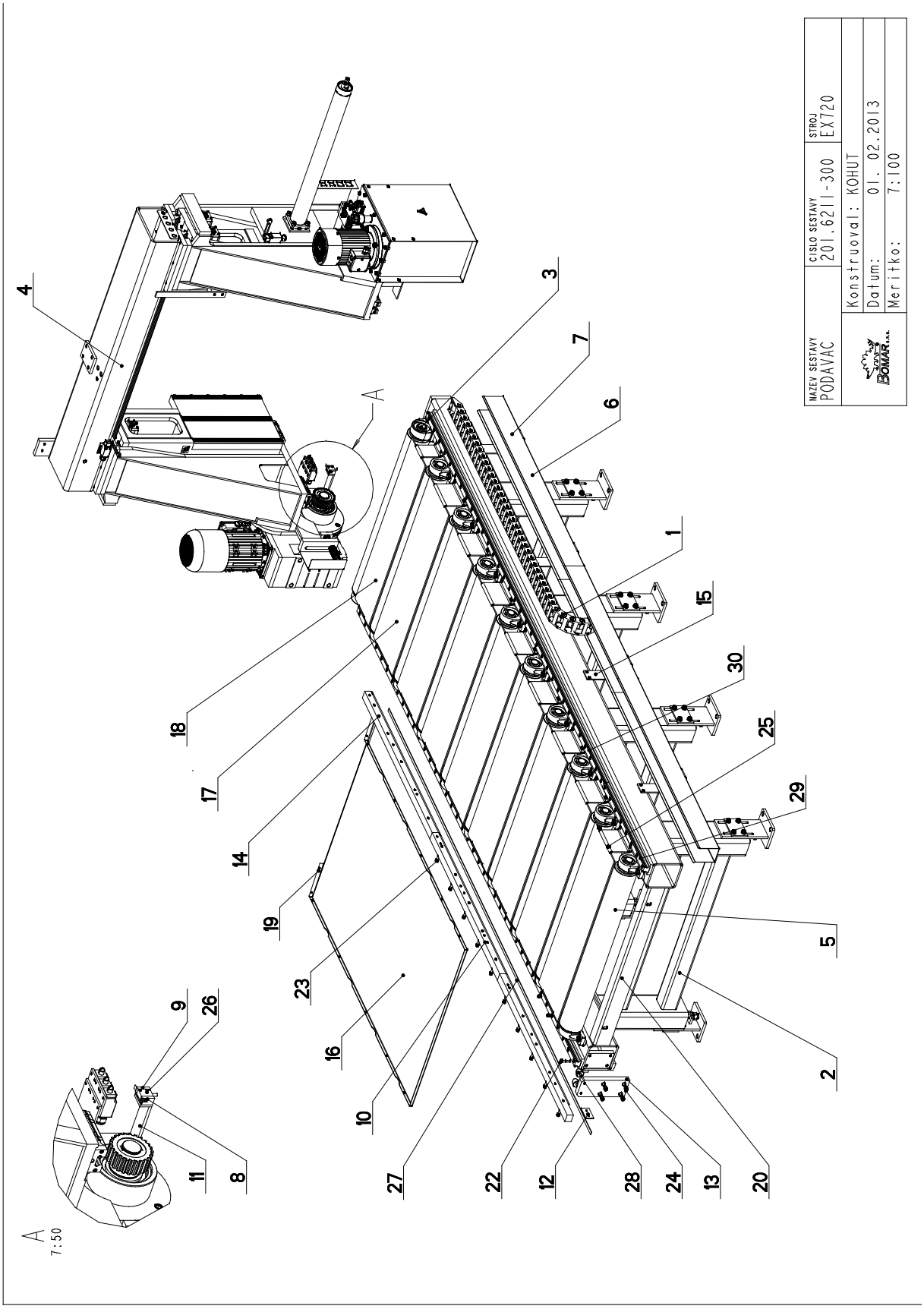
Cislo Sestavy 201.6200-100	Ver. 4	Nazev sestavy PILA PASOVA/BAND SAW/BANDSÄGE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6201-100	2	PODSTAVEC / BASE / UNTERSATZ		1
2	201.6203-150 (4)	0	SVERAK / VICE / SCHRAUBSTOCK		1
3	201.6204-200 (2)	2	RAMENO / SHOULDER / SÄGERAHMEN		1
4	201.6207-600 (3)	1	VALEC ZVEDACI / LIFTING CYLINDER / HEBEZYLINDER		2
5	201.6214-020	0	ODMEROVANI / MEASURING / GEHRUNGSMESSUNG		1
6	201.6217-100	4	VYNASEC TRISKOVY / CHIP EXTRACTOR / SPANABFÜHRUNG		1
7	201.6218-100	0	ROST / GRILL / GITTER		1
8	201.6299-100	0	SAMOLEPKA / STICKER / AUFKLEBER		1
9	201.Y430-000 (4)	0	OVLADACI PANEL / CONTROL PANEL / BEDIENPULT		1
10	202.6220-100 (2)	5	PRISLUSENSTVI / /		1
11	30.6104-006	0	DRZAK / HOLDER / HALTER	P3x35	1
12	30.6214-154	1	KRYT / COVER / ABDECKUNG		1
13	30.6214-156	0	KRYT / COVER / ABDECKUNG	P 2x182	1
14	31.6299-101 (1)	0	STITEK TYPOVY / MACHINE LABEL / MASCHINE SCHILD	P 0.5x65	1
15	91.173.009	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER		1
16	92.001.048	0	AGREGAT HYDRAULICKY / HYDRAULIC GENERATOR / HYDRAULIKAGGREGAT		1
17	99.900.039 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER	NEBEZP.STLACENI	1
18	99.900.040 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
19	99.900.043 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
20	99.900.045 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
21	99.900.046 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
22	99.900.047 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
23	99.900.048 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
24	99.900.049 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
25	99.900.050 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		2
26	99.900.051 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		1
27	99.901.032 (3)	0	SAMOLEPKA / STICKER / AUFKLEBER	CETIFIKACNI SAMOLEPKA	1

1.PRIDANY DO KUSOVNIKU BEZPECNISTNI SAMOLEPKY,PRID.PRISLUSENSTVI 202.6220-100 26.4.07 RYSAVY 150/ZM178,289
2.ZRUSENO RAMENO 201.6204-100 A NAHRAZENO RAMENEM 201.6204-200. 137/ZM328 7.10.2008 SLEZACKOVA
3.ZRUS.VALEC 201.6207-500 A NAHR.201.6207-600.DOPL.CERTIFIKACNI SAMOLEPKA 99.901.032 . 040/ZM226-3 26.8.2010 SLEZACKOVA
4.ZRUS.SVERAK 201.6203-100 A NAHR.201.6203-150,ZRUS.ROZVADEC 201.6230-100 A NAHR.201.Y430-000. 002/ZM017 23.1.2012 SLEZACKOVA

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

7.5. Podavač / Vorschub / Feeder -1

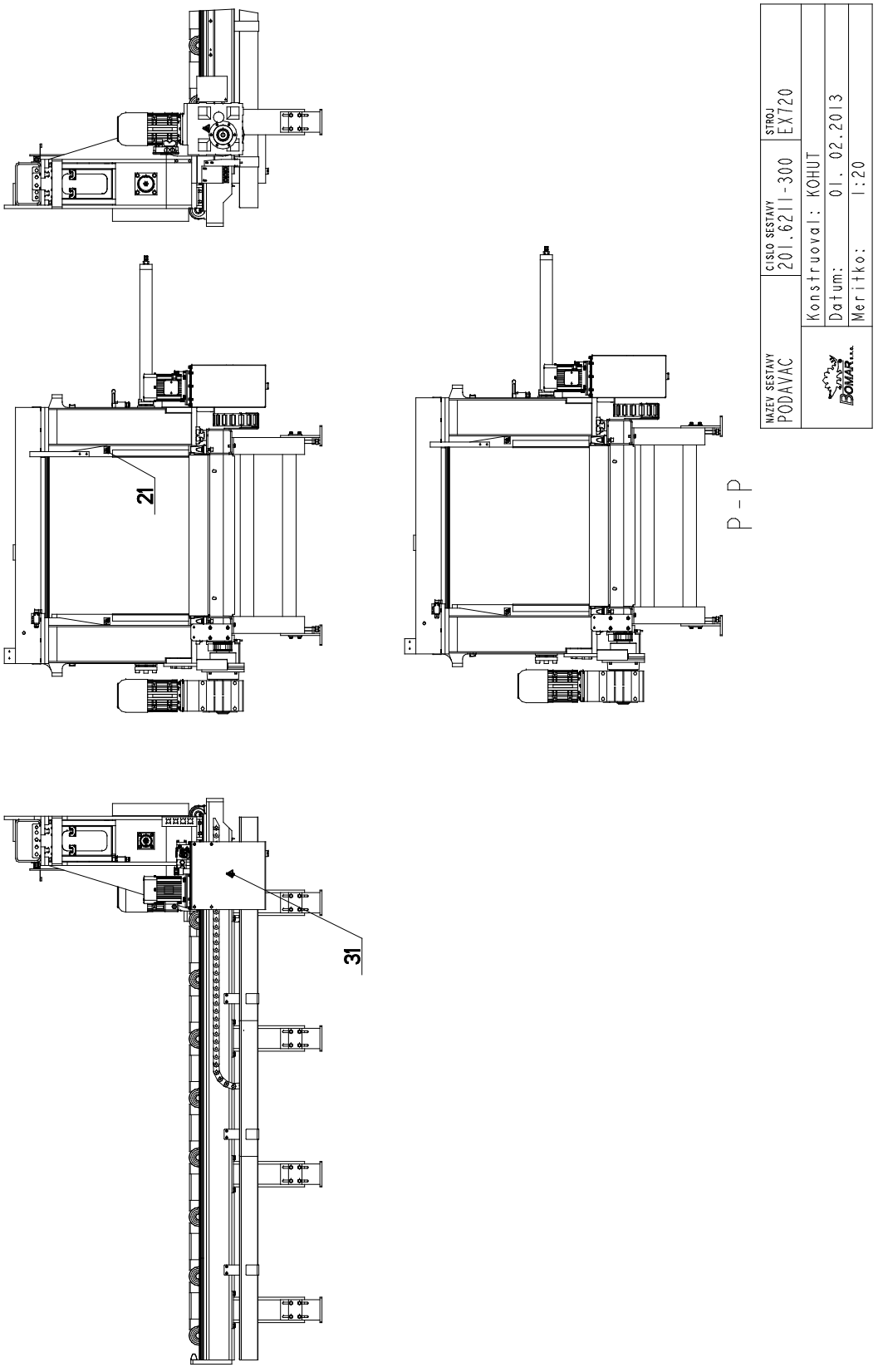


Cislo Sestavy	Ver.	Nazev sestavy
201.6211-300	0	PODAVAC/FEEDER/VORSCHUB

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6211-035	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	26x56/R-95	1
2	201.6211-310	0	NOHA / LEG / STÄNDER		4
3	201.6211-320	0	VALECEK / CYLINDER / ROLLE		1
4	201.6211-350	0	PODAVAC / FEEDER / VORSCHUB		1
5	203.1206-010		VALECEK / /		9
6	30.1503-512	1	KORYTO / CHANNEL / RINNE	P 1.5x297	2
7	30.1503-513	0	KRYT RETEZU / CHAIN COVER / KETTENABDECKUNG	P 1.5x143	1
8	30.1504-017	0	STERAC / WIPER / ABSTREIFER	P 0,3x11	2
9	30.1504-024	0	DRZAK / HOLDER / HALTER	HR 40x20	1
10	30.6011-737	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	OZ.TYC 40x40	1
11	30.6011-743	0	DRZAK / HOLDER / HALTER		1
12	30.6011-753	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 40x5	2
13	30.6011-803	0	TELESO DORAZU / STOP BODY / ANSCHLAGKOERPER	HR 100x25	1
14	30.6111-259	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	HR 40x40	1
15	30.6111-612	0	DRZAK / HOLDER / HALTER	HR 60x5	4
16	30.6211-031	0	PLECH / PLATE / BLECH	P 2x974	1
17	30.6211-032	0	KRYT / COVER / ABDECKUNG		8
18	30.6211-033	0	KRYT / COVER / ABDECKUNG		1
19	30.6211-034	0	PLECH / PLATE / BLECH	P2x280	1
20	30.6211-301	0	RAM / FRAME / RAHMEN		1
21	31.0599-005	0	SAMOLEPKA / STICKER / AUFKLEBER		4
22	90.001.25.036	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X40	82
23	90.001.25.037	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X45	10
24	90.001.25.050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X40	4
25	90.013.27.011	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M8X12	32
26	91.270.007	0	SNIMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	ELGO	1
27	91.271.002	0	PASKA MAGNETICKA / MAGNETIC TAPE / MAGNETBAND	ELGO PASKA	1
28	94.700.001	0	SILENTBLOK / SILENT BLOCK / SCHWINGUNGSDÄMPFER		2
29	99.200.298	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA 35R 600 E=20	2
30	99.200.322	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 35R 2620 30/30N	2
31	99.900.041	0	SAMOLEPKA / STICKER / AUFKLEBER		2

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

7.7. Kusovník / Stückliste / Piece list – Podavač / Vorschub / Feeder -2

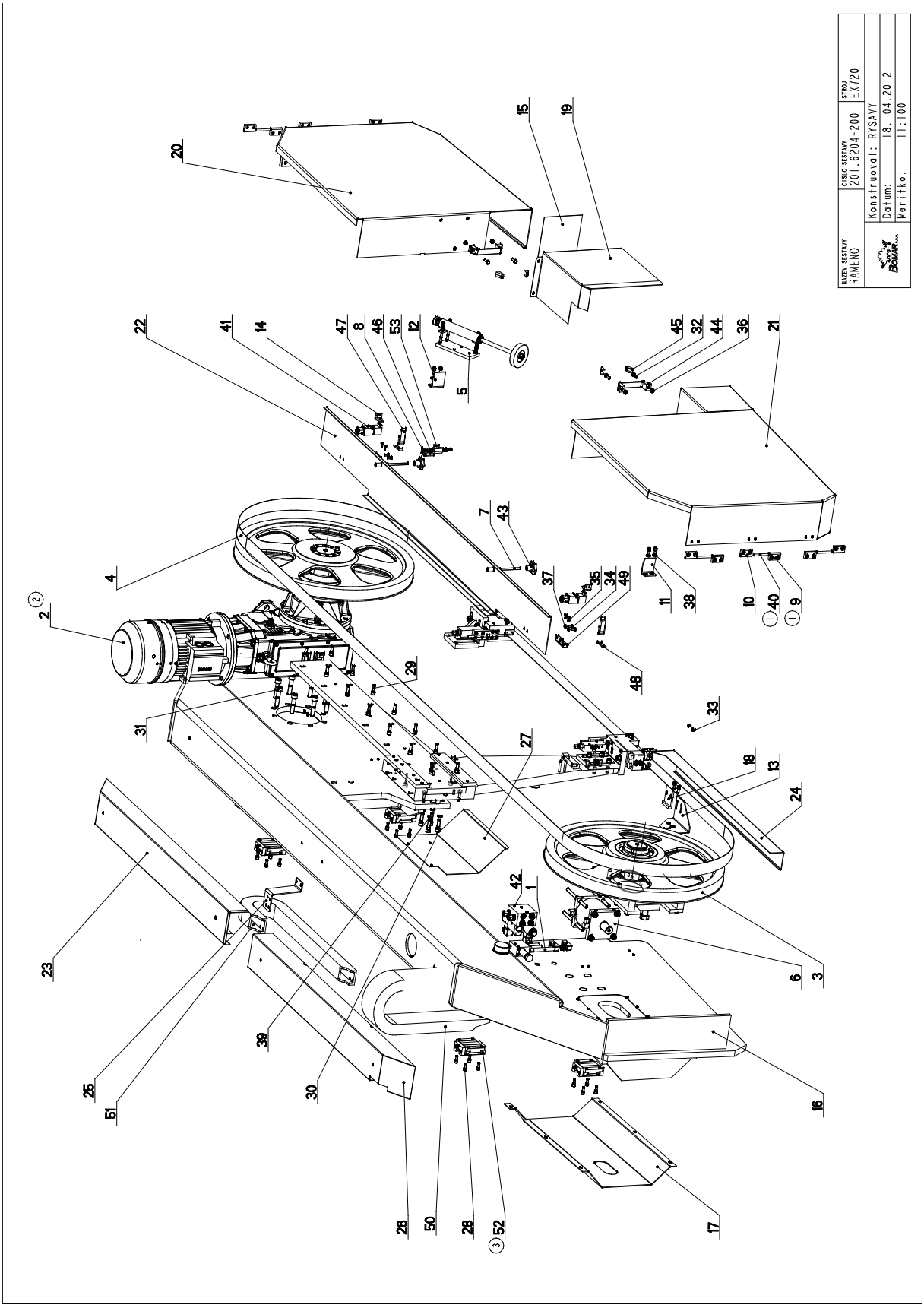


Cislo Sestavy	Ver.	Nazev sestavy
201.6211-300	0	PODAVAC/FEEDER/VORSCHUB

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6211-035	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	26x56/R-95	1
2	201.6211-310	0	NOHA / LEG / STÄNDER		4
3	201.6211-320	0	VALECEK / CYLINDER / ROLLE		1
4	201.6211-350	0	PODAVAC / FEEDER / VORSCHUB		1
5	203.1206-010		VALECEK / /		9
6	30.1503-512	1	KORYTO / CHANNEL / RINNE	P 1.5x297	2
7	30.1503-513	0	KRYT RETEZU / CHAIN COVER / KETTENABDECKUNG	P 1.5x143	1
8	30.1504-017	0	STERAC / WIPER / ABSTREIFER	P 0,3x11	2
9	30.1504-024	0	DRZAK / HOLDER / HALTER	HR 40x20	1
10	30.6011-737	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	OZ.TYC 40x40	1
11	30.6011-743	0	DRZAK / HOLDER / HALTER		1
12	30.6011-753	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 40x5	2
13	30.6011-803	0	TELESO DORAZU / STOP BODY / ANSCHLAGKOERPER	HR 100x25	1
14	30.6111-259	0	TYC OZUBENA / LUG POLE / ZAHNSTANGE	HR 40x40	1
15	30.6111-612	0	DRZAK / HOLDER / HALTER	HR 60x5	4
16	30.6211-031	0	PLECH / PLATE / BLECH	P 2x974	1
17	30.6211-032	0	KRYT / COVER / ABDECKUNG		8
18	30.6211-033	0	KRYT / COVER / ABDECKUNG		1
19	30.6211-034	0	PLECH / PLATE / BLECH	P2x280	1
20	30.6211-301	0	RAM / FRAME / RAHMEN		1
21	31.0599-005	0	SAMOLEPKA / STICKER / AUFKLEBER		4
22	90.001.25.036	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X40	82
23	90.001.25.037	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X45	10
24	90.001.25.050	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X40	4
25	90.013.27.011	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M8X12	32
26	91.270.007	0	SNIMAC MAGNET. / MAGNETIC SENSOR / MAGNETSENSOR	ELGO	1
27	91.271.002	0	PASKA MAGNETICKA / MAGNETIC TAPE / MAGNETBAND	ELGO PASKA	1
28	94.700.001	0	SILENTBLOK / SILENT BLOCK / SCHWINGUNGSDÄMPFER		2
29	99.200.298	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA 35R 600 E=20	2
30	99.200.322	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FÜHRUNG	MSA 35R 2620 30/30N	2
31	99.900.041	0	SAMOLEPKA / STICKER / AUFKLEBER		2

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

7.9. Rameno / Sägerahmen / Saw arm -1



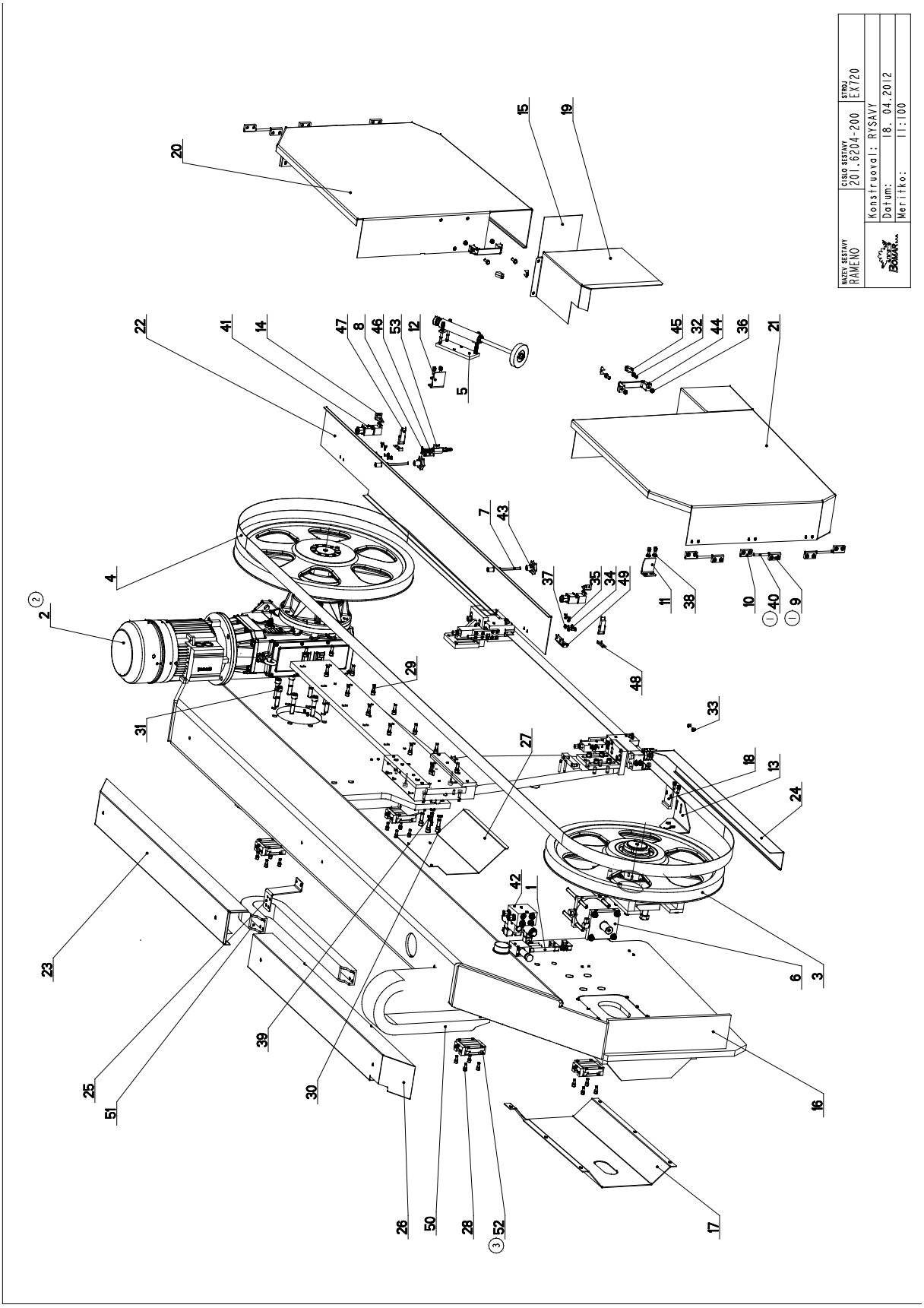
Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6204-200	3	RAMENO/SHOULDER/SÄGERAHMEN

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.2115-200	1	REGULACE TL. SVERAKU / VICE PRESSURE REGULATION / SCHRAUBSTOCK-DRUCKREGELUNG		1
2	201.6205-450 (2)	0	POHON / DRIVE / ANTRIEB		1
3	201.6208-100	2	NAPINANI / /		1
4	201.6210-080	2	VEDENI PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		1
5	201.6214-250	0	KARTAC / BRUSH / BÜRSTE		1
6	201.6707-400	3	VALEC NAPINACI / TENSIONING CYLINDER / SPANNZYLINDER		1
7	30.0203-005	0	SROUB / BOLT / SCHRAUBE	M8	2
8	30.1814-011	1	DRZAK / HOLDER / HALTER	P 3x76	1
9	30.6014-109.1 (1)	1	DESKA / /	HR 30x12	6
10	30.6014-110	1	PANT / HINGE / TÜRBAND	HR 30x12	6
11	30.6114-123	0	DRZAK / HOLDER / HALTER	P 4 - 55	1
12	30.6114-124	1	DRZAK / HOLDER / HALTER	P 4 - 55	1
13	30.6114-146	2	DRZAK / HOLDER / HALTER	P3-150x199	1
14	30.6114-147	0	DRZAK / HOLDER / HALTER	P 3x30x60	2
15	30.6114-160	0	CLONA / CURTAIN / SCHÜRZE	2x180	1
16	30.6204-201	0	RAMENO / SHOULDER / SÄGERAHMEN		1
17	30.6214-119	0	KRYT NAPINANI / TENSIONING COVER / BANDSPANNUNGSABDECKUNG	P3-507	1
18	30.6214-124	0	KLUZAK / GLIDER / GLEITER	TYC 50x60 natur	1
19	30.6214-125	2	KRYT KARTACKU / BRUSH COVER / BÜRSTENABDECKUNG	P 2x566x593	1
20	30.6214-131	2	DVERE / DOOR / TÜR		1
21	30.6214-132	2	DVERE / DOOR / TÜR		1
22	30.6214-133	1	KRYT / COVER / ABDECKUNG		1
23	30.6214-135	0	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG		1
24	30.6214-136	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 2 - 196	1
25	30.6214-139	1	DRZAK / HOLDER / HALTER	P 4x60	1
26	30.6214-140	2	KRYT RAMENE / SHOULDER COVER / RAHMENABDECKUNG	P 1,5- 324	1
27	30.6214-206	0	KRYT / COVER / ABDECKUNG	P 2x 410	1
28	90.001.25.032	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	22
29	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	14
30	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X40	4
31	90.001.25.093	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X70	8
32	90.005.55.016	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8X25	4
33	90.011.27.005	0	ZAPUSTNY IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6X12	2
34	90.011.27.006	0	ZAPUSTNY IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6X20	4

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

7.11. Rameno / Sägerahmen / Saw arm -2



Manual version:1.00 / Apr. 2013
Manual rev.: 1

35	90.011.27.017	0	ZAPUSTNY IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M6X16	4
36	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	4
37	90.101.55.008	0	MATICE / NUT / MUTTER	MATICE M6	4
38	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	6
39	90.163.00.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	NORD-LOCK	4
40	90.300.0Z.017 (1)	0	KOLIK VALC. KAL. / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHARTET	KOLIK 8X70	6
41	91.173.012	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	QKS8-2xNC	2
42	92.153.048	0	BLOK / BLOCK / BLOCK	881-0027*RAMENO	1
43	94.003.001	0	HLAVICE / HEAD / KOPF		2
44	94.012.001	0	RUKOJET / HANDLE / GRIFF		2
45	94.012.002	0	KRYT / COVER / ABDECKUNG		4
46	94.202.002	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION	GES 6/R1/4"	2
47	99.100.003	0	ZAMEK / LOCK / SCHLOSS		2
48	99.100.004	0	ZAMEK / LOCK / SCHLOSS	D13-00	2
49	99.100.007	0	PANT / HINGE / TŮRBAND		2
50	99.170.001	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	36x75/R-100	1
51	99.170.021	0	RETEZ ENERGII / ENERGY BELT / ENERGIEKETTE	,	1
52	99.201.056 (3)	0	VOZIK LINEARNIHO VEDENI / LINEAR GUIDE CART / LINEARFUHRUNGSWAGEN	MSA35ESSF0N	4
53	99.260.003	0	VENTIL / VALVE / VENTIL	1/4"	1

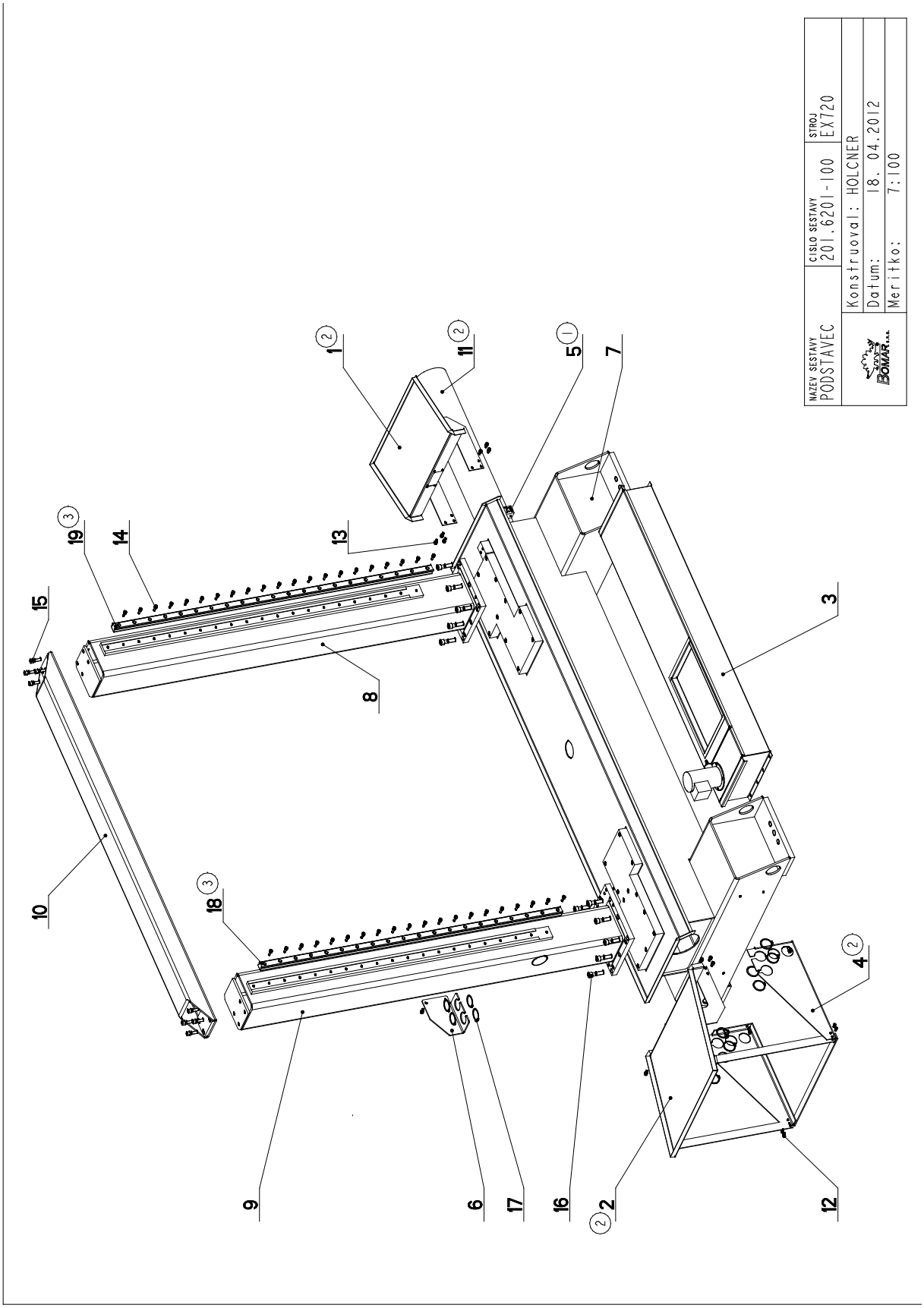
1.ZRUSEN PANT 30.6014-109 A NAHRAZEN KOLIKEM 8x70 (90.300.0Z.017) A DESKOU 30.6014-109.1 . 054/ZM072 16.3.2010 SLEZACKOVA

2.POHON 201.6205-100 A NAHR.201.6205-450. 220/ZM279 10.10.2011 SLEZACKOVA

3.ZRUS.VOZIK LIN.VEDENI(HIWIN) 99.201.011 A NAHR.99.201.056(PMI). 056/ZM129 18.4.2012 SLEZACKOVA

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

7.13. Podstavec / Untersatz / Base



Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6201-100	3	PODSTAVEC/BASE/UNTERSATZ

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6201-111 (2)	0	KRYT / COVER / ABDECKUNG	SESTAVA	1
2	201.6201-121 (2)	0	KRYT / COVER / ABDECKUNG		1
3	201.6206-100	0	CHLAZENI / COOLING / KÜHLUNG		1
4	30.6101-110 (2)	0	DRZAK / HOLDER / HALTER		1
5	30.6101-111 (1)	0	DRZAK / HOLDER / HALTER	PROFIL 40x40x4	1
6	30.6114-136	1	DRZAK / HOLDER / HALTER	P5x210	1
7	30.6201-101	4	PODSTAVEC / BASE / UNTERSATZ		1
8	30.6201-102	1	SLOUP / POLE / SÄULE		1
9	30.6201-103	1	SLOUP / POLE / SÄULE		1
10	30.6201-104	0	PRICKA / BRACE / QUERLATTE		1
11	30.6201-109 (2)	0	TRUBKA / TUBE / ROHR	D 150	1
12	90.001.25.016	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X12	4
13	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	18
14	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	41
15	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X40	8
16	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X60	16
17	95.800.019	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 52	12
18	99.200.278 (3)	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA 35R 1560 E=20	1
19	99.200.279 (3)	0	VEDENI LINEARNI / LINEAR GUIDE / LINEARE FUHRUNG	MSA 35R 1650 E=25	1

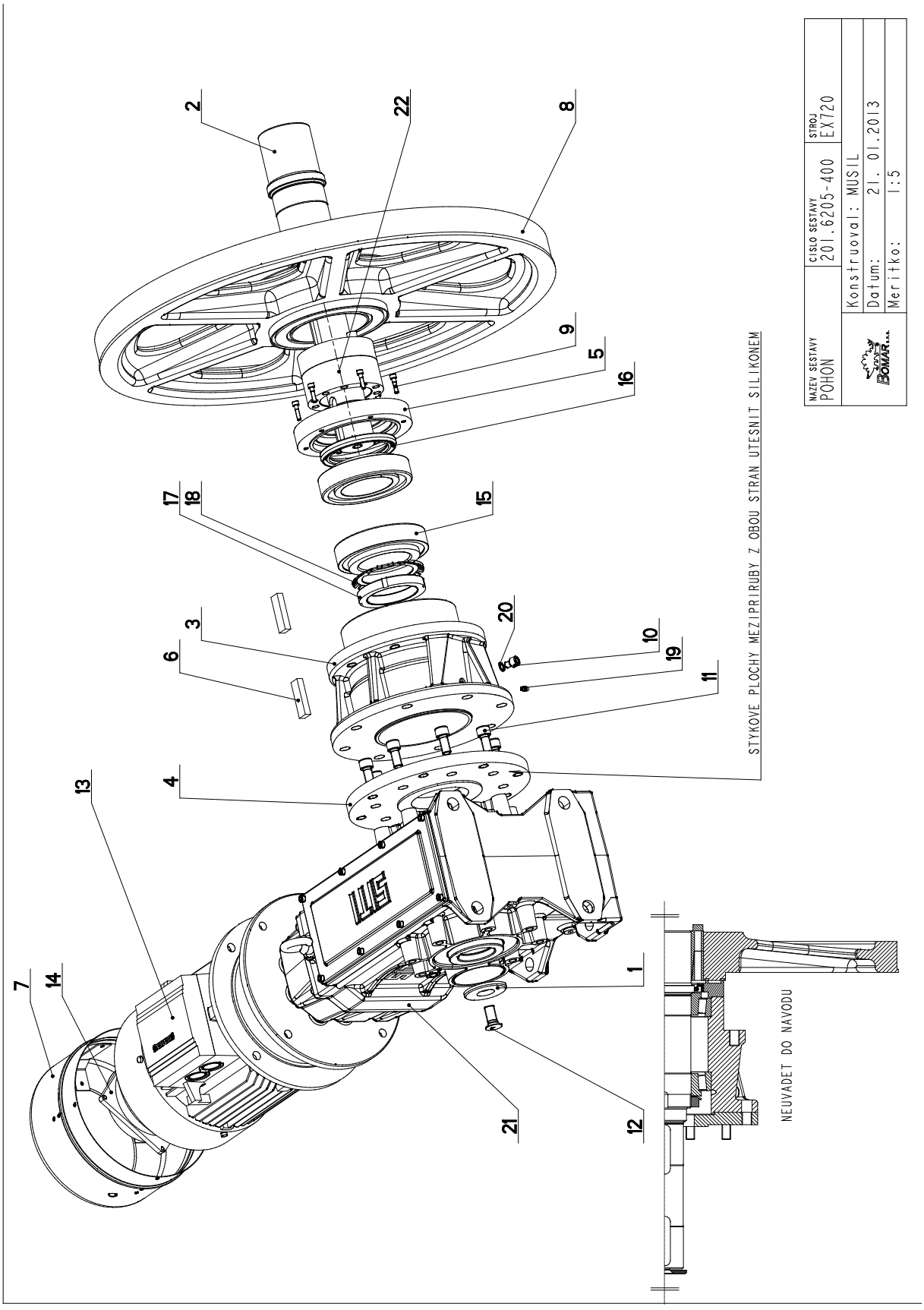
1.PRIDANA SOUCAST 30.6101-111 ZM-102 7.3.2007 RYSAVY

2.ZRUS.KRYTY 201.6114-134,201.6114-131 A NAHRAZENY 201.6201-111,201.6201-121,ZRUS.TRUBKA 30.6101-109 A NAHR.30.6201-109. ZRUS.SOUC.. 30.6101-101-5,30.6101-101-6,30.6101-101-8 A NAHR.SVARKEM 30.6101-1110. 031/ZM098 30.6.2010 SLEZACKOVA

3.ZRUS.LIN.VEDENI 99.200.070(HIWIN) A NAHR.99.200.278(PMI),ZRUS.LIN.VEDENI 99.200.072(HIWIN) A NAHR.99.200.PMI). 056/ZM129 18.4.2012 SLEZACKOVA

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

7.15. Pohon / Antrieb / Drive



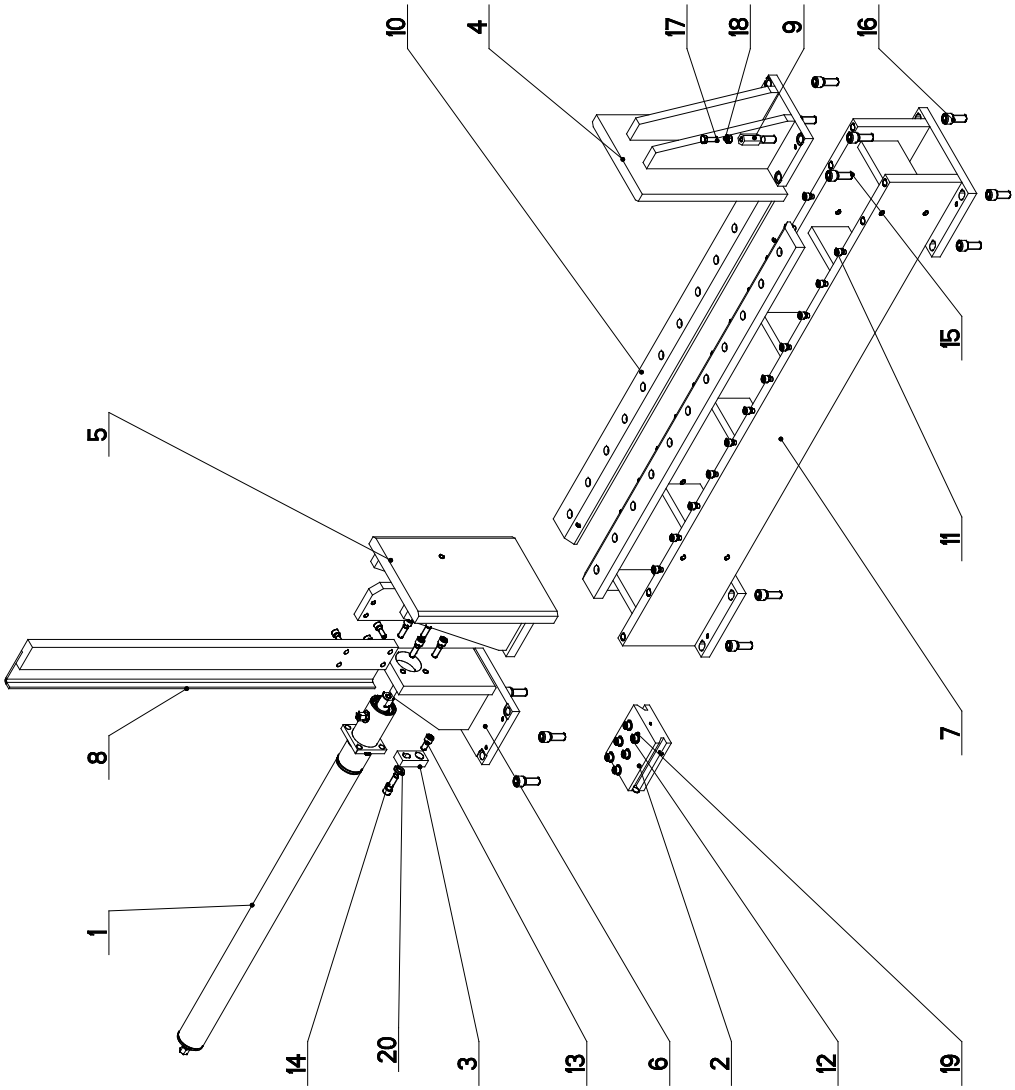
Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6205-400	0	POHON/DRIVE /ANTRIEB

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.1804-005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	d 70	1
2	30.6205-401	0	HRIDEL / SHAFT / WELLE	D 100	1
3	30.6205-402	2	PRIRUBA / FLANGE / FLANSCHE		1
4	30.6205-403	1	KROUZEK DISTANCNI / DISTANCE RING / DISTANZRING	P 25x300	1
5	30.6205-407	0	VIKO / COVER / DECKEL	P30x192	1
6	30.6305-109	0	PERO / SPRING / FEDER	TYC 18x11	2
7	30.6704-018	2	VENTILATOR / VENTILATOR / VENTILATOR		1
8	30.7504-007	2	KOLO HNACI / DRIVE WHEEL / ANTRIEBSRAD	KOLO	1
9	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X25	6
10	90.001.25.043	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X12	1
11	90.001.25.166	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M14X30	7
12	90.011.27.040	0	ZAPUSTNY IMBUS / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M16X35	1
13	91.001.131	0	ELEKTROMOTOR / ELECTRIC MOTOR / ELEKTROMOTOR	LA7133-4AA11	1
14	91.015.100	0	VENTILATOR / VENTILATOR / VENTILATOR		1
15	95.300.018	0	LOZISKO KUZELIK / BEARING / LAGER	32217A	2
16	95.830.009	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 95X125X12	1
17	95.850.012	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM17	1
18	95.855.011	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	POJISTNA PODLOZKA MB17	1
19	95.860.001	0	MAZNICE / LUBRICATOR / ÖLER	KULOVA PRIMA M5	1
20	96.082.001	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING	10/14x1.5 CU	1
21	99.003.023	0	PREVODOVKA KUZELOCEL / CONICAL TRANSMISSION / KEGELRADGETRIEBE	MBH125C PAM132	1
22	99.710.013	0	SPOJKA / JOINT / KUPPLUNG	85x125	1

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

7.17. Svěrák / Schraubstock / Vice



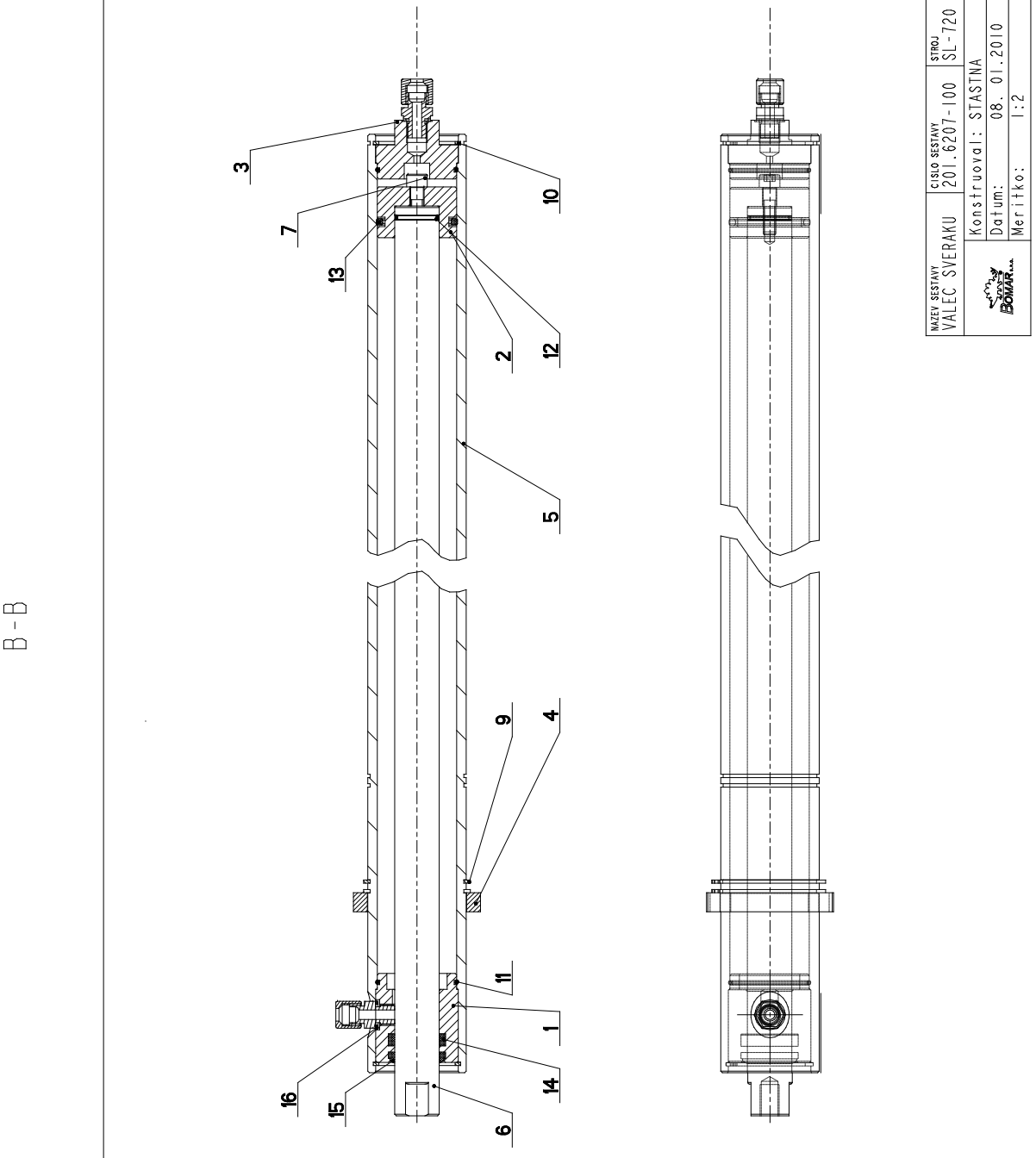
Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6203-150	0	SVERAK/VICE/SCHRAUBSTOCK

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6207-100	0	VALEC SVERAKU / VICE CYLINDER / SCHRAUBSTOCKZYLINDER		1
2	30.6003-552	0	KLUZAK / GLIDER / GLEITER	HR 130x50	1
3	30.6103-005	0	DRZAK / HOLDER / HALTER	HR 30x20	1
4	30.6203-001	3	CELIST PEVNA / SOLID JAW / FESTE BACKE		1
5	30.6203-102	3	CELIST POHYBLIVA / MOVING JAW / BEWEGLICHE BACKE		1
6	30.6203-108	0	KONZOLA / CONSOLE / KONSOLE		1
7	30.6203-109	4	PODSTAVEC SVERAKU / VICE BASE / SCHRAUBSTOCKUNTERSATZ		1
8	30.6203-110	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLEISTE		1
9	30.6203-111	0	DORAZ / STOP PIECE / ANSCHLAG	TYC 6HR 22	1
10	30.6203-151	0	LISTA SVERAKU / VICE TRIM / SCHRAUBSTOCKLEISTE	HR 82x27	2
11	90.001.25.048	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X30	26
12	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X60	6
13	90.001.25.057	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12x25	1
14	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X40	5
15	90.001.25.074	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X45	12
16	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X40	4
17	90.005.55.025	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10X30	1
18	90.100.55.006	0	MATICE / NUT / MUTTER	MATICE _ M10	1
19	90.150.50.006	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 10,5	6
20	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 13	1

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

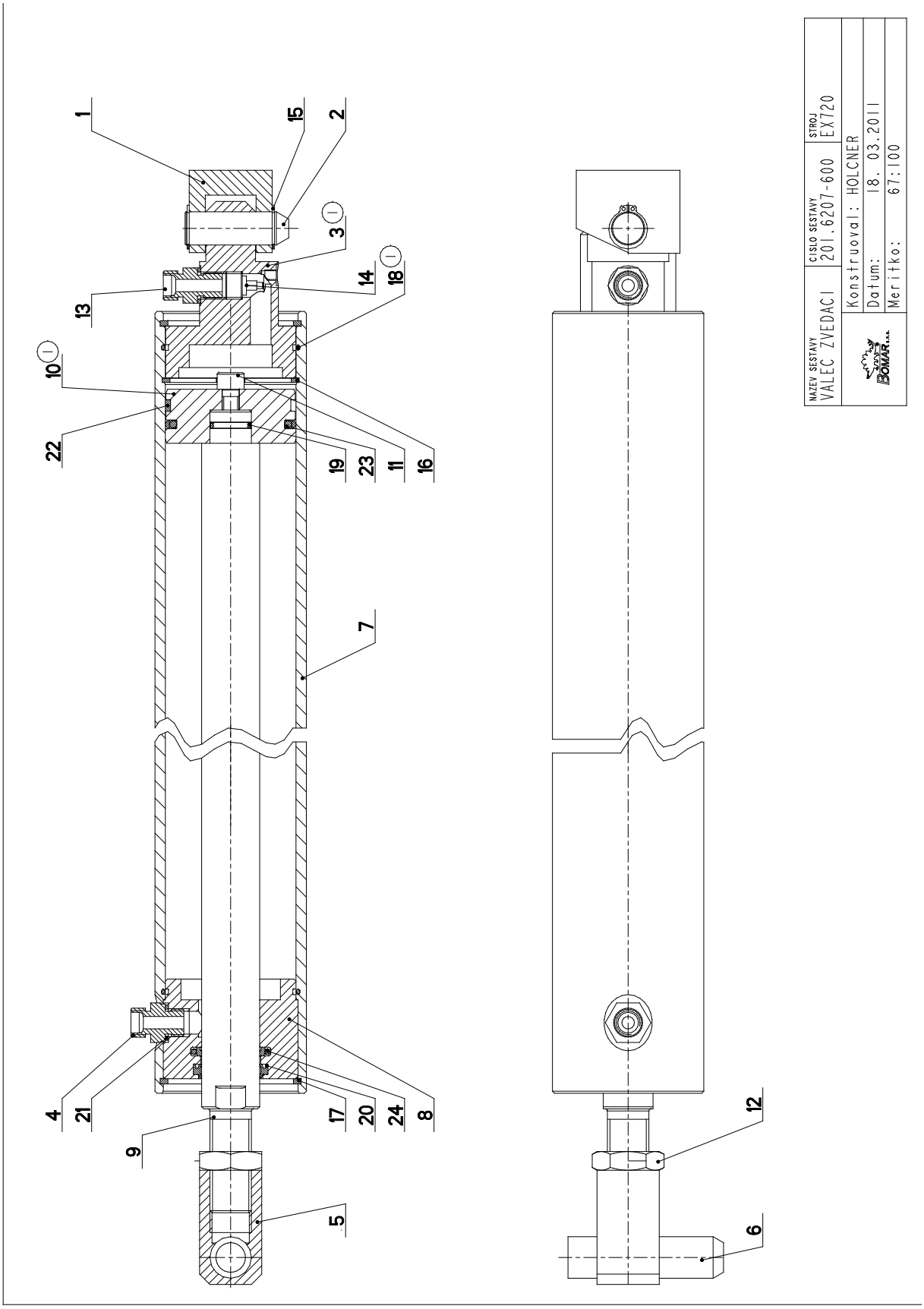
7.19. Válec svěráku / Schraubstockzylinder / Vice cylinder



Cislo Sestavy	Ver.	Nazev sestavy
201.6207-100	0	VALEC SVERAKU/VICE CYLINDER/SCHRAUBSTOCKZYLINDER

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.1807-104	2	VIKO / COVER / DECKEL	TYC 55	1
2	30.2007-302	0	PIST / PISTON / KOLBEN	d 55	1
3	30.2007-304	0	VIKO / COVER / DECKEL	d 55	1
4	30.6007-107	0	PRILOZKA / STRAP / LASCHE	HR 80x12	2
5	30.6207-101	2	VALEC / ROLLER / ZYLINDER	TRUBKA 62/50	1
6	30.6207-102	2	PISTNICE / PISTON ROD / KOLBENSTANGE	d 28	1
7	90.001.25.034	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X30	1
8	92.002.101	0	SROUBENI PRIME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		2
9	95.800.021	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 62	2
10	95.801.009	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 52	2
11	96.001.013	0	O-KROUZEK STATIC / STATIC O RING / O-RING STATISCH	45X2	2
12	96.002.011	0	O-KROUZEK DYNAMIC / DYNAMIC O RING / O-RING DYNAMISCH	24X2	1
13	96.020.005	0	KROUZEK TESNICI / SEAL RING / DICHTUNGSRING	39.2X5.33	1
14	96.041.003	0	TESNENI / SEALING / DICHTUNG	601-28x36x7.1	1
15	96.060.003	0	KROUZEK STIRACI / SCRAPER RING / ABSTREIFRING	KROUZEK STIRACI 28	1
16	96.082.002	0	KROUZEK CU TESNICI / SEAL RING / DICHTUNGSRING	KROUZEK CU 13/17	2

7.21. Válec zvedací / Hebezylinder / Lifting cylinder



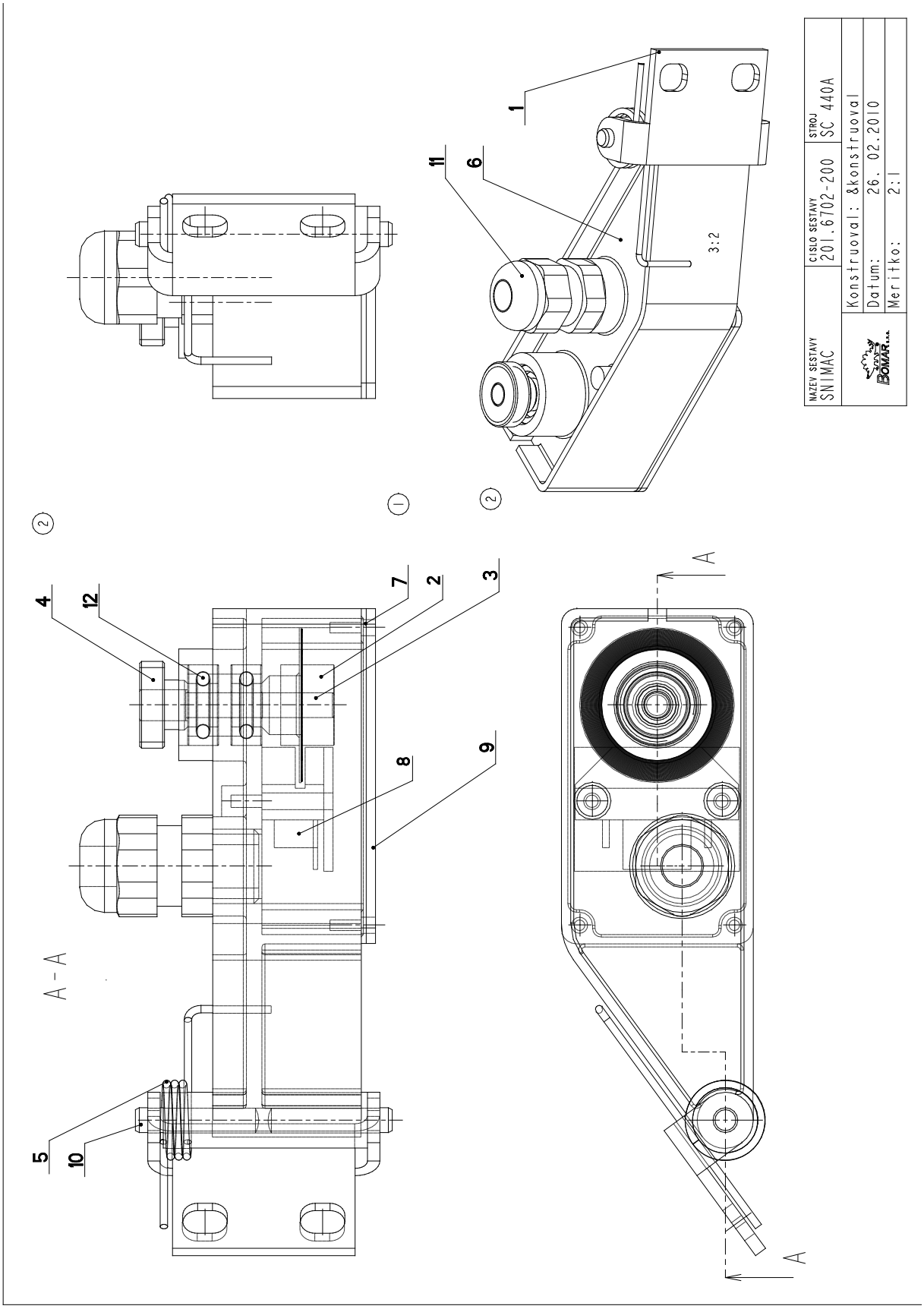
Cislo Sestavy	Ver.	Nazev sestavy
201.6207-600	1	VALEC ZVEDACI/LIFTING CYLINDER/HEBEZYLINDER

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.0807-008	1	DRZAK / HOLDER / HALTER	HR 40x40	1
2	30.0807-009	1	CEP / LUG / BOLZEN	d 16h9	1
3	30.1807-008 (1)	0	VIKO / COVER / DECKEL	d 65	1
4	30.2807-109	0	SROUBENI PRIME / DIRECT BOLTING / GERADE VERSCHRAUBUNG		1
5	30.4707-206	0	DRZAK / HOLDER / HALTER	HR 30x30	1
6	30.6107-505	0	CEP / LUG / BOLZEN	d 20	1
7	30.6207-501	4	VALEC / ROLLER / ZYLINDER	TRUBKA 73/63	1
8	30.6207-502	2	VIKO / COVER / DECKEL	TYC 70	1
9	30.6207-505	0	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 28	1
10	30.6207-507 (1)	0	PIST / PISTON / KOLBEN	D65	1
11	90.001.25.033	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	1
12	90.101.55.007	0	MATICE / NUT / MUTTER	MATICE M20X1,5	1
13	92.002.001	0	SROUBENI PRIME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	1
14	92.151.001	0	VENTIL POJISTNY / SAFETY VALVE / SICHERUNGSVENTIL	VPN-H 1/4"	1
15	95.800.007	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 16	2
16	95.801.011	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 63	1
17	95.801.012	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 65	2
18	96.001.016 (1)	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	60X2	2
19	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16X2	1
20	96.061.009	0	KROUZEK STIRACI / SCRAPER RING / ABSTREIFRING	WD2200280	1
21	96.082.002	0	TESNENI / SEALING / DICHTUNG	KROUZEK CU 13/17	2
22	96.084.002	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GP6500630_Z61	1
23	96.900.016	0	TESNENI KOMBINOVANE / COMBINATION SEALING / KOMBIDICHTUNG	PT0200630	1
24	96.900.021	0	TESNENI KOMBINOVANE / COMBINATION SEALING / KOMBIDICHTUNG	RSK200280	1

1.ZRUS.REDUKCE 30.9107-509,ZRUS.VIKO 30.6207-506 A NAHR.30.1807-008,ZRUS.KROUZEK VODICI 96.001.015 A NAHR.96.001.016.
ZRUS.PIST 30.6207-504 A NAHR.30.6207-507,ZRUS.1xVODICI KROUZEK 96.084.002.026/ZM041 15.3.2011 SLEZACKOVA

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

7.23. Snímač / Sensor / Sensor



Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6702-200	2	SNIMAC/SENSOR/SENSOR

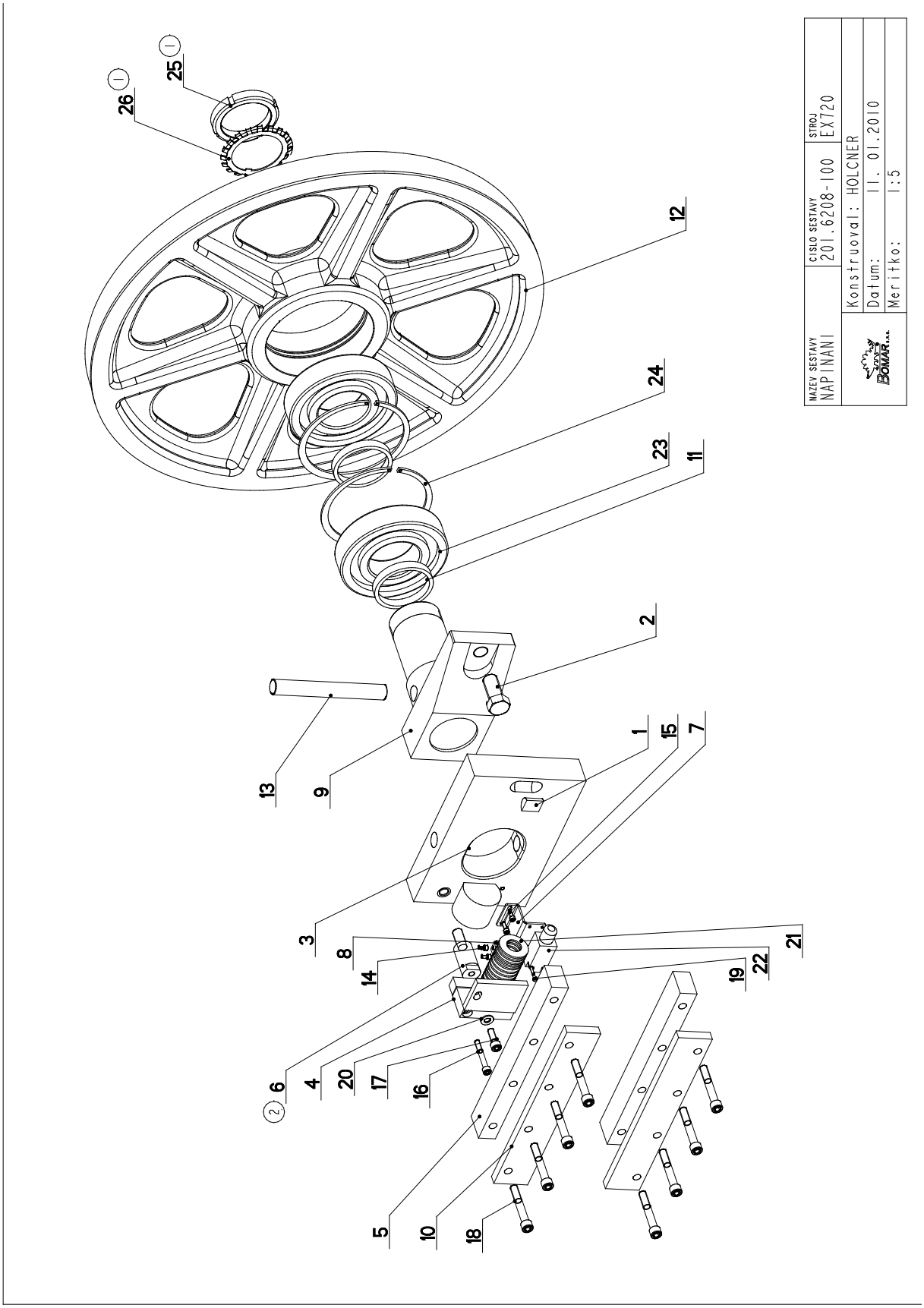
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.2902-205	1	KONZOLA / CONSOLE / KONSOLE	P2 - 25.5	1
2	30.2902-209	0	CLONA / CURTAIN / SCHÜRZE		1
3	30.6702-212 (2)	0	HRIDEL / SHAFT / WELLE	KOLIK 5x32	1
4	30.6702-214 (2)	0	PASTOREK / PINION / RITZEL	z=12	1
5	31.2902-113	0	PRUZINA / SPRING / FEDER	d 1.2	1
6	31.2902-201	0	RAMENO / SHOULDER / SÄGERAHMEN	VYLISEK-PLAST	1
7	31.2902-204 (1)	0	TESNENI / SEALING / DICHTUNG	TL.1 - 32.3	1
8	31.2930-001	0	SNIMAC / SENSOR / SENSOR	DAS 330GA	1
9	81.2902-203	0	KRYT / COVER / ABDECKUNG	P 1.5 - 31.8	1
10	90.300.0Z.XXX	0	KOLIK VALCOVY KALENY / CYLINDRICAL PIN TEMPERED / ZYLINDERSTIFT GEHÄRTET	KOLIK 4X20	2
11	91.070.010	0	PRUCHODKA / LEADTHROUGH / DURCHFÜHRUNG	M12x1.5 CERNA	1
12	95.001.002	0	LOZISKO / BEARING / LAGER	624 2RS	2

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

(1) TESNENI 31.2902-206 NAHRAZENO TESNENIM 31.2902-204 2.9.2003 ROZKOSNY

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

7.25. Napínání / Spannung / Tensioning

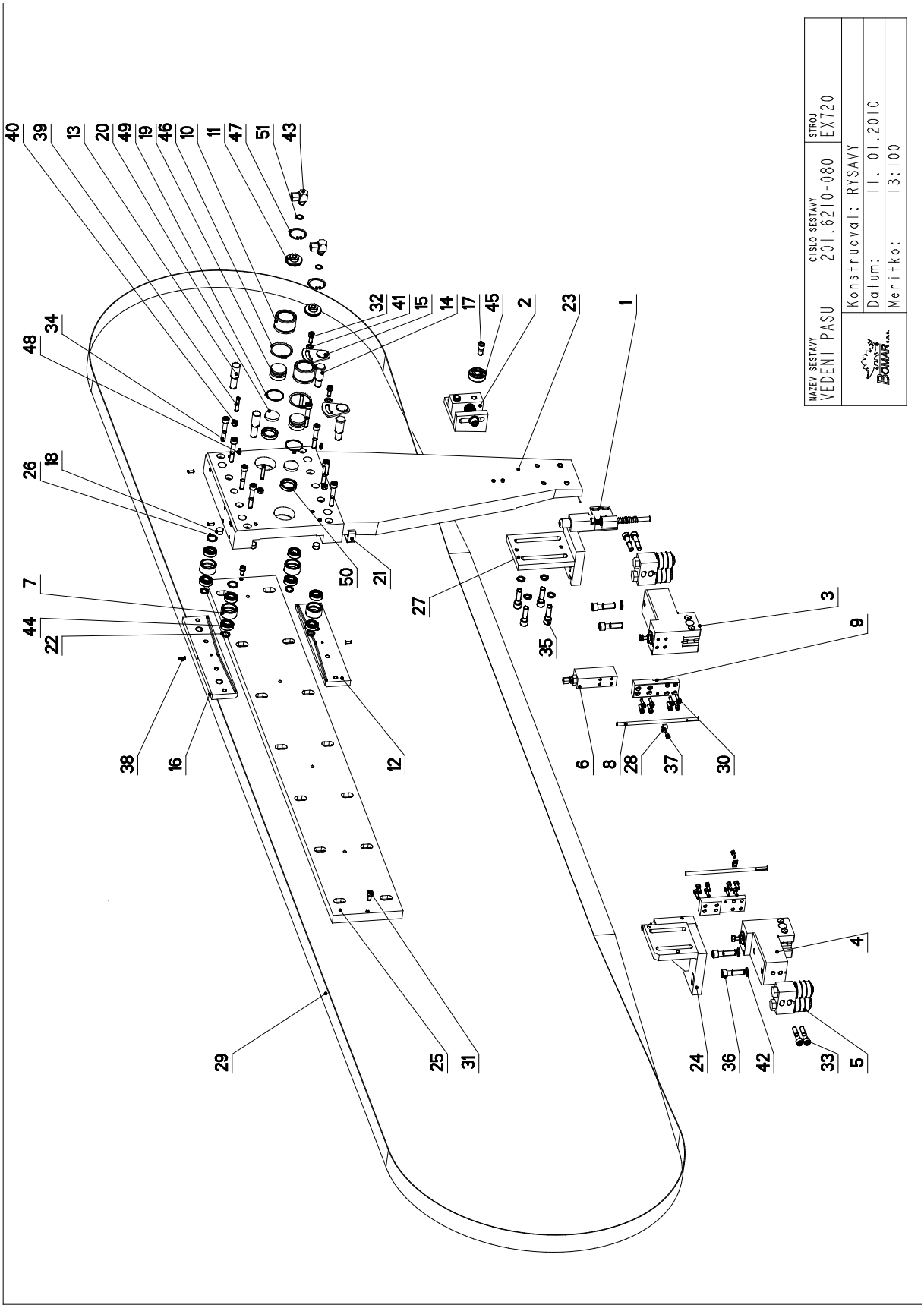


Cislo Sestavy	Ver.	Nazev sestavy
201.6208-100	6208-NAPINANI/NAPINANI/6208-100	

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.6208-003	0	CEP / LUG / BOLZEN	d 25	1
2	30.6208-004	0	SROUB / BOLT / SCHRAUBE	TYC 32	1
3	30.6208-102	0	KOSTKA NAPINANI / TENSIONING CUBE / BANDSPANNUNGSWÜRFEL		1
4	30.6208-104	1	TRMEN / BINDER / BÜGEL		1
5	30.6208-105	2	LISTA / TRIM / LEISTE	TYC 50x30	2
6	30.6208-109 (2)	0	DORAZ / STOP PIECE / ANSCHLAG	D 30	1
7	30.6708-303	1	DRZAK / HOLDER / HALTER	P3x50	1
8	30.6708-304	0	DORAZ / STOP PIECE / ANSCHLAG	P 2x20x76	1
9	30.7508-001	3	CEP NAPINANI / TENSIONING LUG / SPANNUNGSBOLZEN		1
10	30.7508-004	2	LISTA / TRIM / LEISTE	TYC 60x15	2
11	30.7508-005	3	KROUZEK / RING / RING	TR 102x10	2
12	30.7508-006	2	KOLO NAPINACI / TENSIONING WHEEL / UMLENKRAD	KOLO	1
13	30.7508-007	0	CEP / LUG / BOLZEN	TYC 25j6	1
14	90.001.25.007	0	SROUB IMBUS CERNENY / /	M5X10	2
15	90.001.25.009	0	SROUB IMBUS CERNENY / /	M5X16	2
16	90.001.25.040	0	SROUB IMBUS / /	M8X60	1
17	90.001.25.048	0	SROUB IMBUS / /	M10X30	1
18	90.001.25.065	0	SROUB IMBUS / /	M12X80	8
19	90.012.50.006	0	SR. S VALC. HLAV. / ROLLER BOLT / ZYLINDERSCHRAUBE	SROUB M4X25	2
20	90.150.50.006	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 10,5	1
21	90.350.0Z.004	0	TAL.PRUZINA DIN 2093 A / DISC SPRING / TELLERFEDER	50X25.4X3	12
22	91.173.007	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER	-RIWK	1
23	95.001.053	0	LOZISKO / BEARING / LAGER	6317A	2
24	95.801.033	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 180	2
25	95.850.012 (1)	0	MATICE KM / KM NUT / KM-MUTTER	MATICE KM17	1
26	95.855.011 (1)	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	POJISTNA PODLOZKA MB17	1

1 ZRUSENA POLOZKA 90.011.27.016 - 6x, 30.7508-011 - 1x; NOVA POLOZKA - 95.850.012 - 1x, 95,855,011, - 1x
ZM 286-2007 23.6.2007 RYSAVY
2.ZRUS.DORAZOVY SROUB 30.6208-103 A NAHR.30.6208-109. 284/ZM321 8.12.2011 SLEZACKOVA

7.27. Vedení pásu / Sägebandführung / Belt guide -1

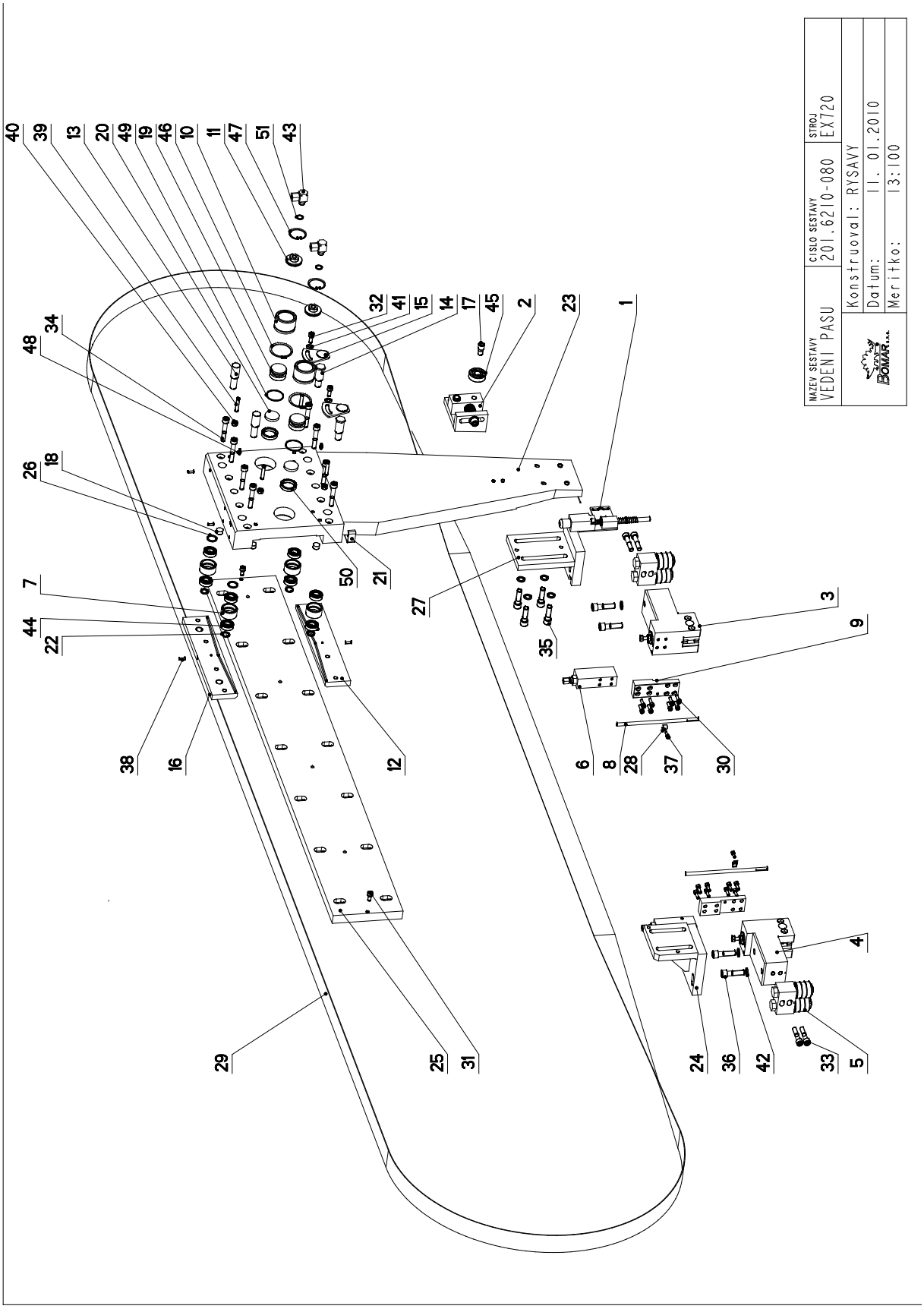


Manual version:1.00 / Apr. 2013
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.6210-080	2	VEDENI PASU/BELT GUIDE/SÄGEBANDFÜHRUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6110-020	1	DORAZ / STOP PIECE / ANSCHLAG		1
2	201.6210-090	0	DORAZ / STOP PIECE / ANSCHLAG		1
3	201.6210-100	3	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
4	201.6210-200	3	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ		1
5	201.6210-300	3	VEDENI PASU / BELT GUIDE / SÄGEBANDFÜHRUNG		2
6	201.6816-100	0	KOSTKA REGULACE / REGULATION CUBE / REGELUNGSWÜRFEL		2
7	30.1503-006	0	KLADKA / PULLEY / ROLLE	d 45	4
8	30.6010-315	0	TRUBKA / TUBE / ROHR	TR 8x 1	2
9	30.6016-002	0	DESKA / BOARD / PLATTE	HR 40x20	2
10	30.6210-053	0	TRUBKA / TUBE / ROHR	TR 52/40	2
11	30.6210-054	0	VIKO / COVER / DECKEL	TYC KR TAZ 42	2
12	30.6210-055	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLEISTE	TYC PL T 65x15	1
13	30.6210-056	0	CEP / LUG / BOLZEN	TYC 22	2
14	30.6210-057	0	CEP / LUG / BOLZEN	TYC 6HR	2
15	30.6210-058	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE		2
16	30.6210-060	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLEISTE	TYC PL T 65x15	1
17	30.6210-061	0	SROUB / BOLT / SCHRAUBE	SROUB 12x20	1
18	30.6210-062	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	TYC 16	4
19	30.6210-063	0	PIST / PISTON / KOLBEN	D 40	2
20	30.6210-064	1	PODLOZKA / WASHER / UNTERLEGSCHEIBE	TYC d 36	2
21	30.6210-065	0	DRZAK / HOLDER / HALTER	P 2 - 18	1
22	30.6210-068	1	KROUZEK DISTANCNI / DISTANCE RING / DISTANZRING	TR 20 x 4	4
23	30.6210-070	0	DRZAK / HOLDER / HALTER		1
24	30.6304-003	1	DRZAK / HOLDER / HALTER		1
25	30.6310-002	2	LISTA / TRIM / LEISTE	HR 180x25	1
26	30.6310-052	0	KROUZEK DISTANCNI / DISTANCE RING / DISTANZRING	TR 25x2.5	2
27	30.6310-053	1	DRZAK / HOLDER / HALTER		1
28	30.9010-003	0	DRZAK / HOLDER / HALTER	P1.5x10	2
29	44.900.013	0	PAS PILOVY / SAW BELT / SÄGEBAND	PAS 54x1,6	1
30	90.001.25.018	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X20	16
31	90.001.25.031	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	2
32	90.001.25.032	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x20	2
33	90.001.25.052	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X50	4
34	90.001.25.054	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X60	8
35	90.001.25.060	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X40	4

7.29. Vedení pásu / Sägebandführung / Belt guide -2

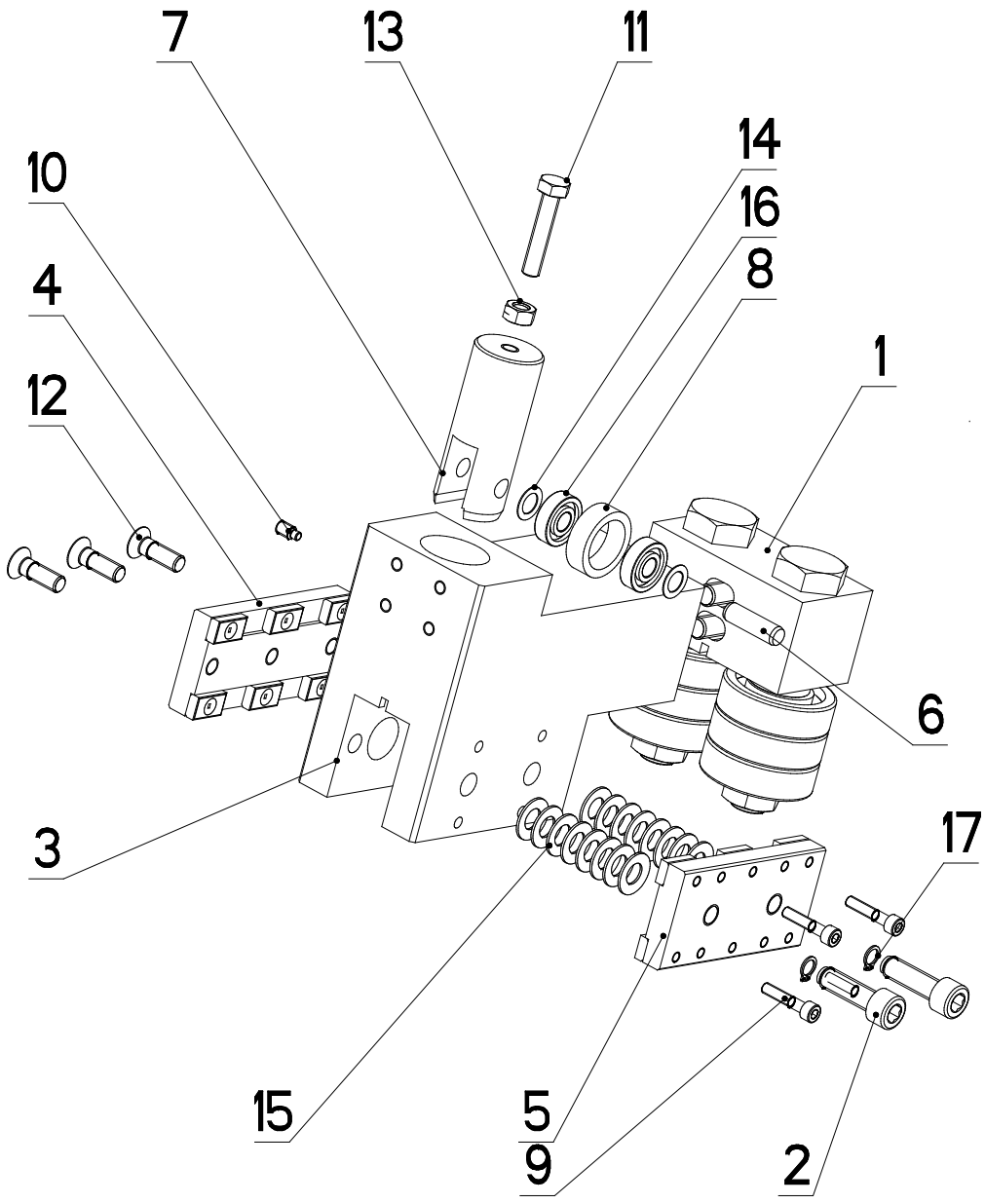


Manual version:1.00 / Apr. 2013
Manual rev.: 1

7.30. Kusovník / Stückliste / Piece list – Vedení pásu / Sägebandführung / Belt guide -2

36	90.001.25.061	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X45	4
37	90.001.25.087	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X14	2
38	90.002.2D.007	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5X16	4
39	90.002.2D.XXX	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M8X40	4
40	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	4
41	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	2
42	90.163.00.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	NORD-LOCK	8
43	92.003.001	0	SROUBENI UHLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	P-RSWS-08LR	2
44	95.001.006	0	LOZISKO / BEARING / LAGER	6002 2RS	8
45	95.001.023	0	LOZISKO / BEARING / LAGER	6302 2RS	1
46	95.800.019	0	SEGR HRIDEL. / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 52	2
47	95.801.005	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 40	2
48	95.860.001	0	HLAVICE MAZACI / HEAD / KOPF	KM5	2
49	96.001.010	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	36X2	2
50	96.042.001	0	TESNENI / SEALING / DICHTUNG	40x30x8 K606	2
51	96.082.002	0	TESNENI / SEALING / DICHTUNG	KROUZEK CU 13/17	2

7.31. Vodící kostka / Führungsklotz / Guiding cube -1

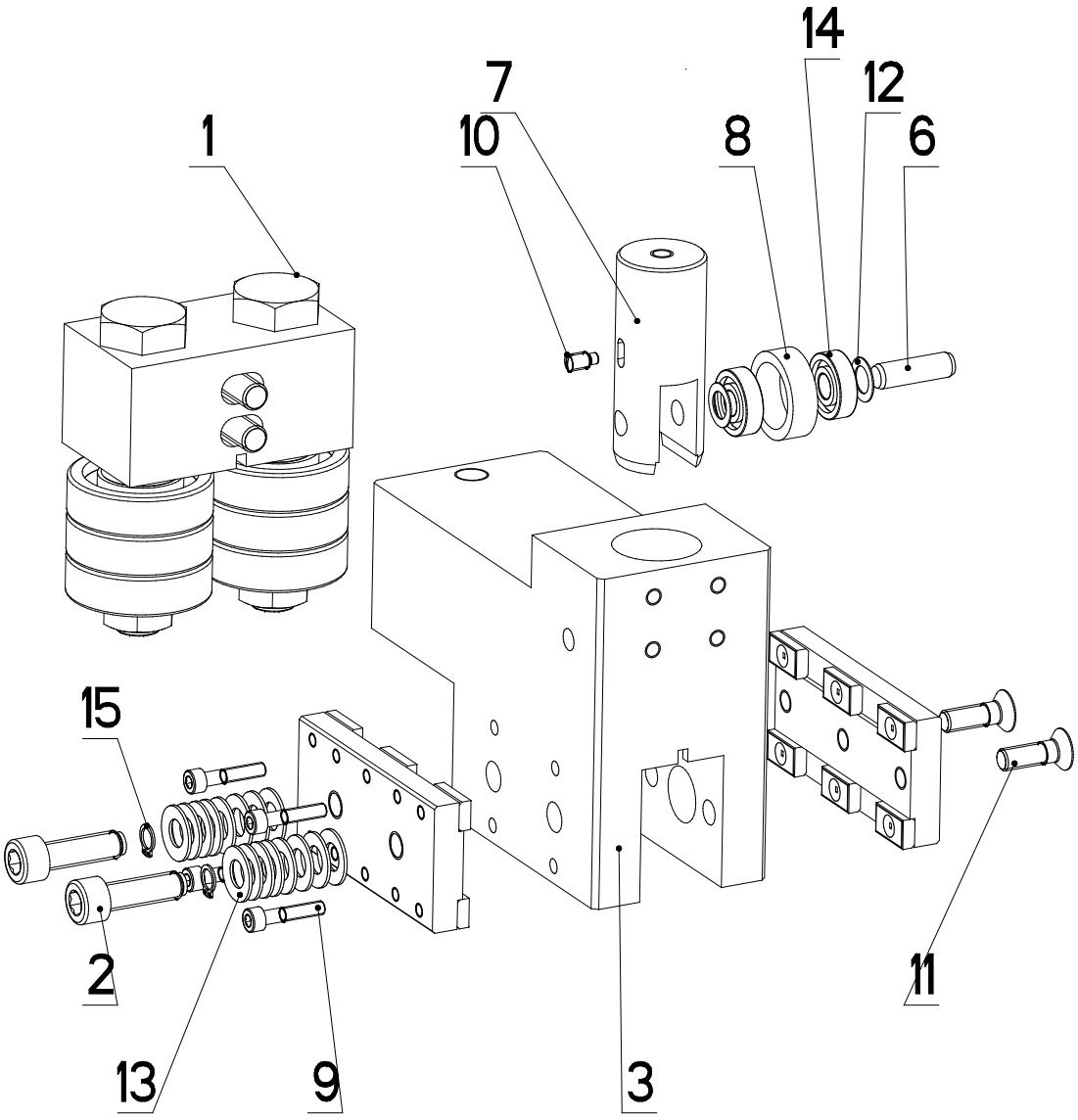


NAZEV SESTAVY	CISLO SESTAVY	STROJ
KOSTKA VODICI	201.6410-050	EX1120
BOMAR s.r.o.	Konstruoval: RYSAVY	
	Datum: 08. 01.2010	
	Meritko: 2:5	

Cislo Sestavy	Ver.	Nazev sestavy
201.6410-050	1	KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.5910-320	0	VEDENI / GUIDE / BACKENFÜHRUNG		1
2	30.6210-107	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X35	2
3	30.6410-051	0	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	TYC 130 x 80	1
4	30.6410-100	0	DRZAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
5	30.6410-200	0	DRZAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.6710-108	1	KOLIK / PIN / BOLZEN	TYC 10	1
7	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
8	30.6710-110	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X25	4
10	90.004.2D.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X12	1
11	90.005.55.019	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8X40	1
12	90.011.27.016	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8X25	3
13	90.100.55.005	0	MATICE DIN 934 / NUT / MUTTER	MATICE _ M8	1
14	90.154.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	10x16x0.50	2
15	90.350.0Z.005	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	20x10.2x1	16
16	95.001.044	0	LOZISKO KUL 1 RADE / BEARING / LAGER	609 2RS	2
17	95.800.002	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 8	2

7.33. Vodící kostka / Führungsklotz / Guiding cube -2

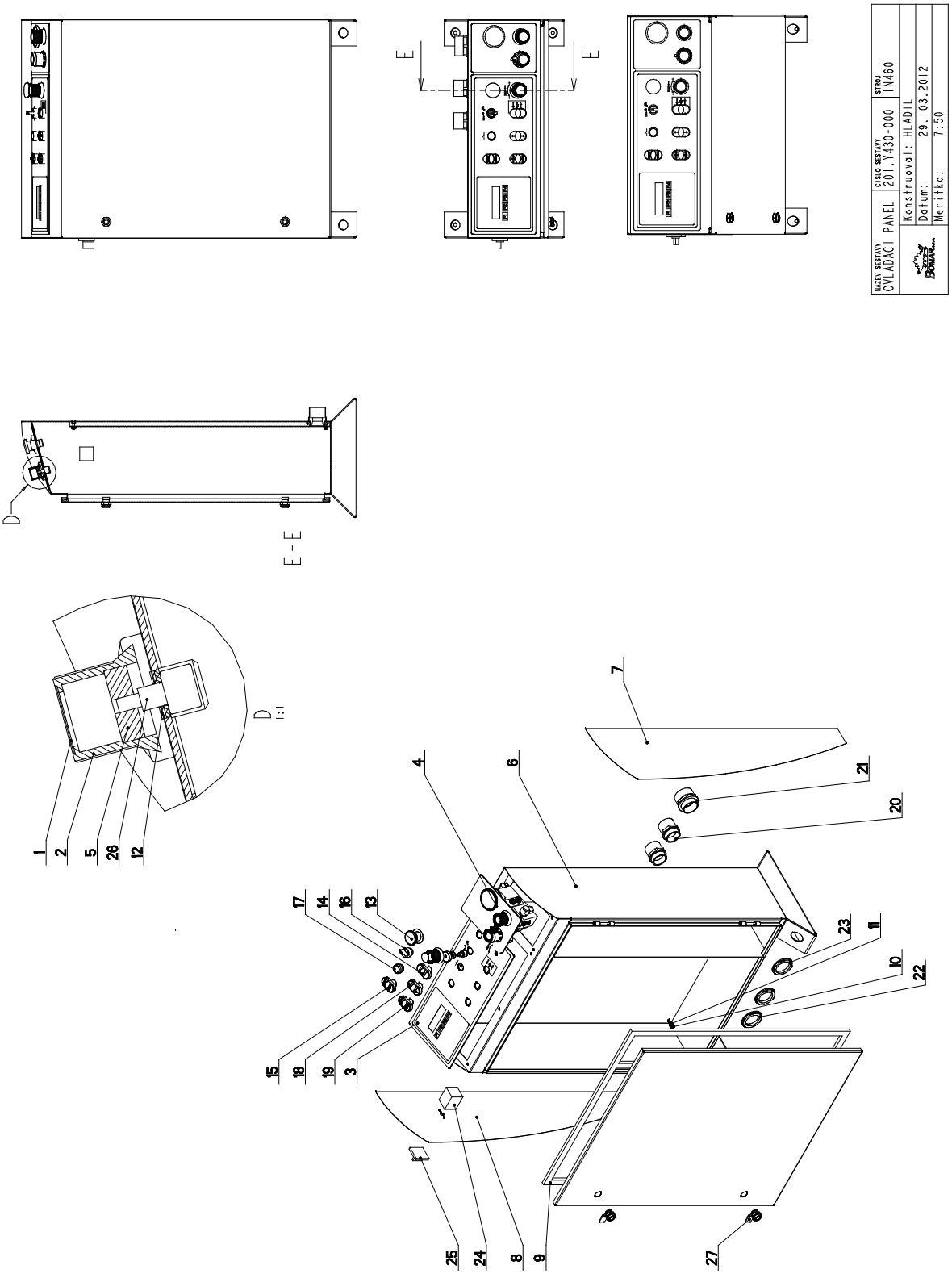


NAZEV SESTAVY	CISLO SESTAVY	STROJ
KOSTKA VODICI	201.6410-060	EX1120
BOMAR s.r.o.	Konstruoval: RYSAVY	
	Datum: 08. 01.2010	
	Meritko: 1:2	

Cislo Sestavy	Ver.	Nazev sestavy
201.6410-060	1	KOSTKA VODICI/LEAD CUBE/FÜHRUNGSKLOTZ

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.5910-320	0	VEDENI / GUIDE / BACKENFÜHRUNG		1
2	30.6210-107	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X35	2
3	30.6410-061	0	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	HR 130 x 80	1
4	30.6410-100	0	DRZAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
5	30.6410-200	0	DRZAK TVRDOKOVU / POA HOLDER / HM-HALTER		1
6	30.6710-108	1	KOLIK / PIN / BOLZEN	TYC 10	1
7	30.6710-109	0	PIST / PISTON / KOLBEN	d 32	1
8	30.6710-110	1	KROUZEK / RING / RING	LH 2403210	1
9	90.001.25.011	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X25	4
10	90.004.2D.002	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X12	1
11	90.011.27.016	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8X25	3
12	90.154.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	10x16x0.50	2
13	90.350.0Z.005	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	20x10.2x1	16
14	95.001.044	0	LOZISKO KUL 1 RADE / BEARING / LAGER	609 2RS	2
15	95.800.002	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 8	2

7.35. Ovládací panel / Bedienpult / Control panel



Manual version:1.00 / Apr. 2013
Manual rev.: 1

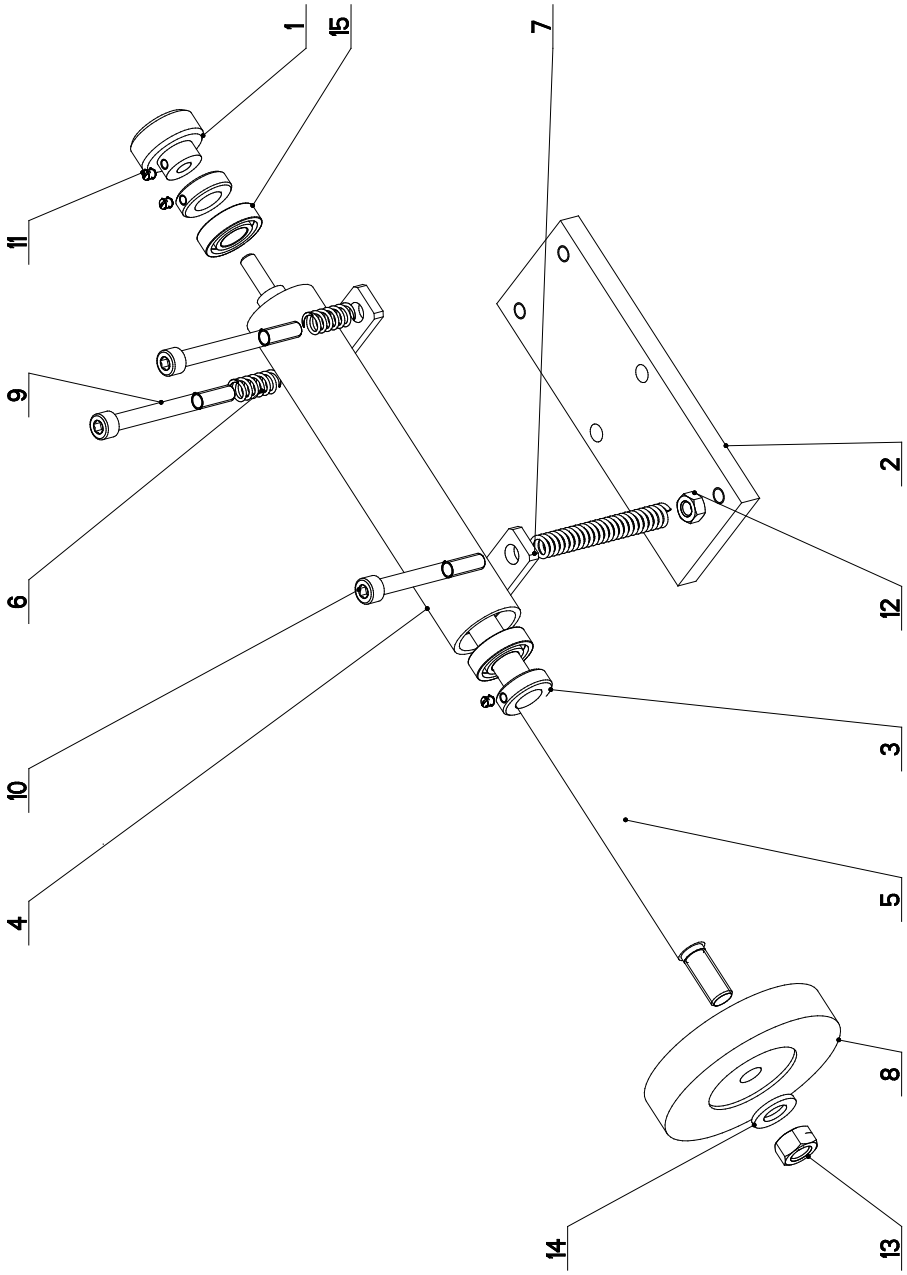
Cislo Sestavy	Ver.	Nazev sestavy
201.Y430-000	1	OVLADACI PANEL/CONTROL PANEL/BEDIENPULT

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.6130-012	0	VIKO / COVER / DECKEL	P 0.5x 30x30	3
2	31.6130-008	0	HLAVICE / HEAD / KOPF		1
3	251.654	0	PANEL ELEKTRO / ELECTRO PANEL / PANEL		1
4	201.R230-220	1	OVLADACI PANEL / CONTROL PANEL / BEDIENPULT		1
5	30.R230-010	0	MEZIKUS / INTERMEDIATE PIECE / PASSSTÜCK	d 32	1
6	30.R230-201	3	SKRIN / BOX / KASTEN		1
7	30.R230-204	0	PLECH / PLATE / BLECH	P 1x220	1
8	30.R230-206	0	PLECH / PLATE / BLECH	P 1x220	1
9	61.352.001	0	TESNENI / SEALING / DICHTUNG	TESNENI 19x10	1
10	90.100.55.004	0	MATICE / NUT / MUTTER	MATICE _ M6	4
11	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6,4	4
12	90.150.50.006	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 10,5	2
13	91.060.030	0	HLAVICE TOTAL STOP / TOTAL STOP HEAD / TASTE TOTAL STOP		1
14	91.060.033	0	HLAVICE / HEAD / KOPF		1
15	91.060.034	0	HLAVICE / HEAD / KOPF	START/STOP	1
16	91.060.051	0	PREPINAC / SWITCH / UMSCHALTER		1
17	91.060.053	0	HLAVICE / HEAD / KOPF		1
18	91.060.054	0	HLAVICE / HEAD / KOPF	NAHORU/DOLU	1
19	91.060.055	0	HLAVICE / HEAD / KOPF	SV. ZAVR/OTEV	1
20	91.071.005	0	PRUCHODKA / LEADTHROUGH / DURCHFÜHRUNG		2
21	91.071.022	0	VYVODKA / BUSHING / TÜLLE		1
22	91.072.008	0	MATICE / NUT / MUTTER		2
23	91.072.016	0	MATICE / NUT / MUTTER		1
24	91.170.003	0	SPINAC VACKOVY / CAM SWITCH / SCHALTER	LE2-12-1763	1
25	91.180.001	0	DESKA SPINACE / ELECTRIC BOARD / PLATINE		1
26	91.283.015	0	POTENCIOMETR / POTENTIOMETER / POTENTIOMETER	TP 195 4K7/N 20A	1
27	99.104.002	0	ZAMEK / LOCK / SCHLOSS	ZAMEK CINSKY	2

1.ZRUS.VIKO 30.R230-203,PANEL 30.R230-202,2xCEP 30.7217-028,2XPOJ.KROUZEK 95.802.003 (PRIDANO DO SKRINE 30.R230-201).
061/ZM110 29.3.2012 SLEZACKOVA

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

7.37. Kartáč / Bürste / Brush



NÁZEV SESTAVY	ČÍSLO SESTAVY	STROJ
KARTAČ	201.6214-250	EX720
	Konstruoval: HOLCNER	
	Datum: 11. 01.2010	
	Měřítko: 1:2	

Cislo Sestavy	Ver.	Nazev sestavy
201.6214-250	0	KARTAC/BRUSH/BÜRSTE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.0814-204	0	KOLECKO / WHEEL / ROLLE	SESTAVA	1
2	30.6114-105	0	DESKA / BOARD / PLATTE	HR.70x12	1
3	30.6114-119	1	KROUZEK / RING / RING	d 28	2
4	30.6114-128	0	DRZAK / HOLDER / HALTER		1
5	30.6214-251	0	HRIDEL / SHAFT / WELLE	D 15	1
6	31.1506-115	0	PRUZINA / SPRING / FEDER	1.6x12x25x7.5	2
7	31.2107-206	0	PRUZINA / SPRING / FEDER		1
8	49.250.017	0	KARTAC / BRUSH / BÜRSTE	SPB 100x12	1
9	90.001.25.067	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X80	2
10	90.001.25.095	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X70	1
11	90.002.2D.003	0	STAVECI S KUZEL / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M5X6	3
12	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE - M8	1
13	90.100.55.007	0	MATICE / NUT / MUTTER	MATICE - M12	1
14	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 13	1
15	95.001.006	0	LOZISKO / BEARING / LAGER	6002 2RS	2

7.39. Odměřování / Gehrungmessung / Measuring

Cislo Sestavy 201.6214-020	Ver. 0	Nazev sestavy ODMEROVÁNI/MEASURING/GEHRUNGSMESSUNG

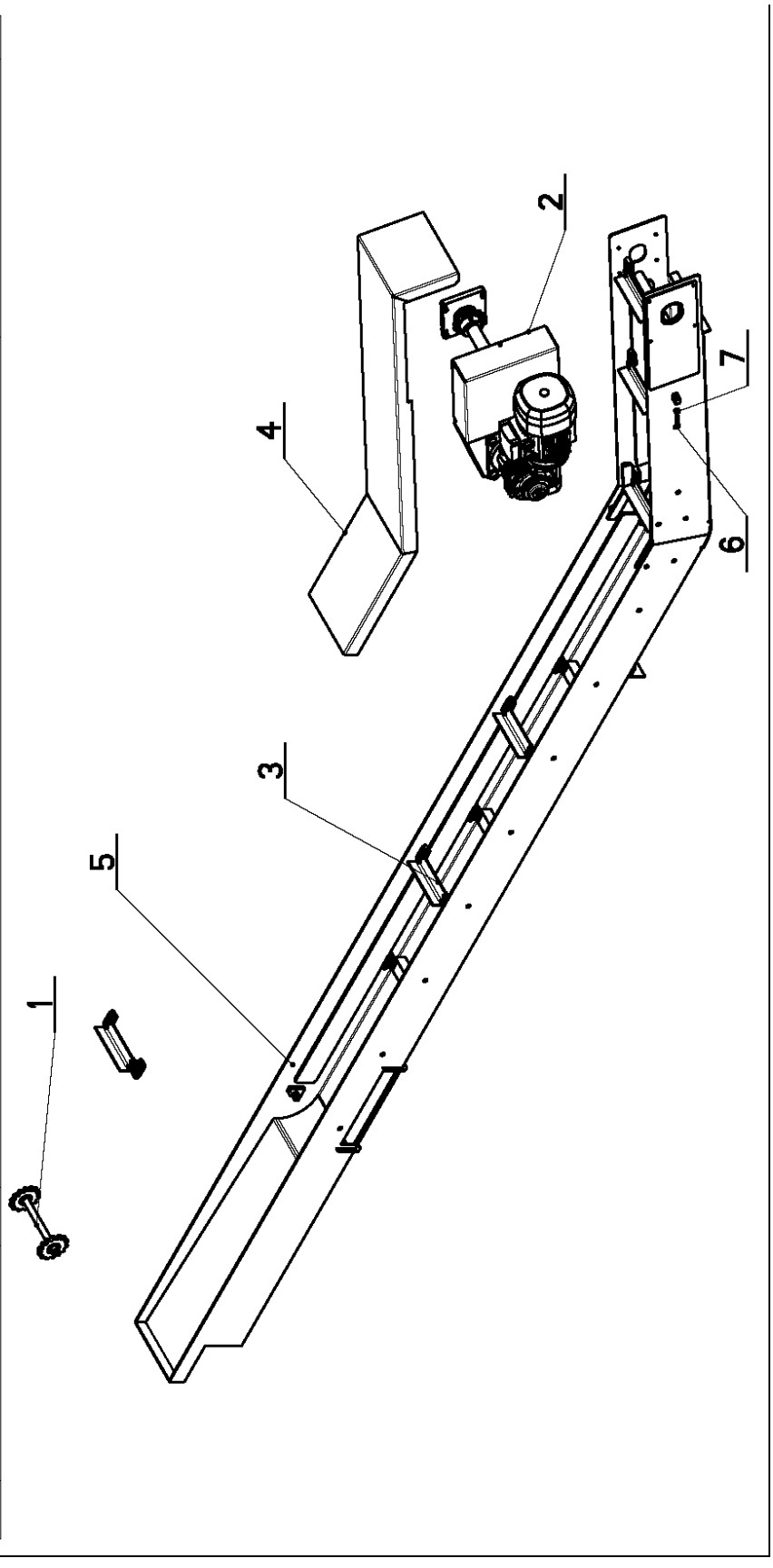
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.2014-001	0	OBJIMKA / CLAMP / KLAMMERSTÜCK		1
2	30.6114-023	0	DRZAK / HOLDER / HALTER	P 3x20	2
3	30.6214-021	0	TYC / POLE / STANGE	d 20	1
4	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X14	4
5	94.007.001	0	SROUB / BOLT / SCHRAUBE	M5x10	1
6	99.120.002	0	PRAVITKO / RULER / SKALENBANDMAß		1

Manual version:1.00 / Apr. 2013
Manual rev.: 1

7.40. Třískový vynašeč / Spanabführung / Chip extractor

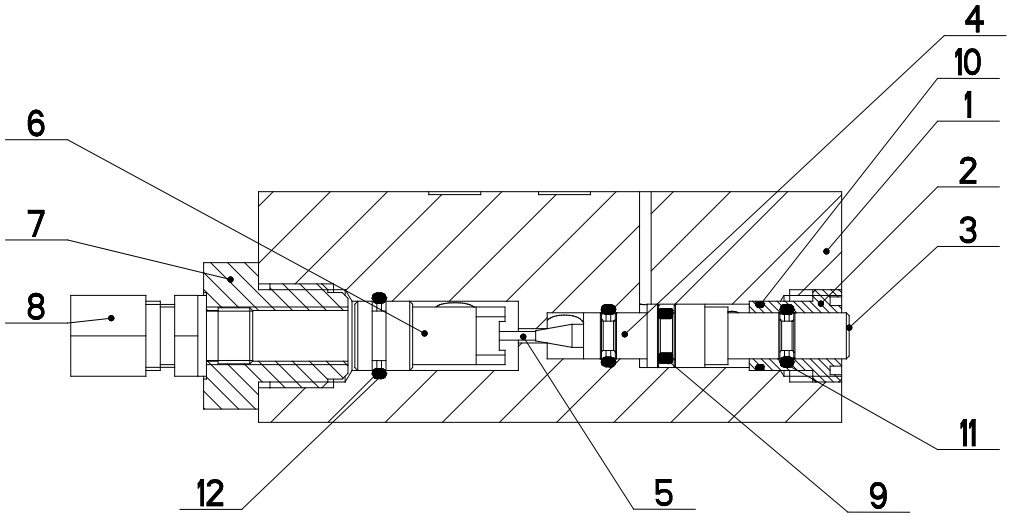
Cislo Sestavy	Ver.	Nazev sestavy
201.6217-100	4	VYNASEC TRISKOVY/CHIP EXTRACTOR/SPANABFÜHRUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.6017-103	0	KOLO NAPINACI / TENSIONING WHEEL / UMLENKRAD		1
2	201.6017-250	1	POHON / DRIVE / ANTRIEB		1
3	201.6717-304	1	RETEZ / CHAIN / KETTE		11
4	30.6217-205	2	KRYT / COVER / ABDECKUNG		1
5	30.6217-301	0	KORYTO / CHANNEL / RINNE		1
6	90.005.55.012	0	6 HR SROUB ZIN / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M6X40	2
7	90.100.55.004	0	MATICE / NUT / NUTTER	MATICE _ M6	2



Cislo Sestavy	Ver.	Nazev sestavy
201.6816-100	0	KOSTKA REGULACE/REGULATION CUBE/REGELUNGSWÜRFEL

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.6816-101	1	KOSTKA REGULACE / REGULATION CUBE / REGELUNGSWÜRFEL	TYC 40x40	1
2	30.6816-104	2	VIKO / COVER / DECKEL	TYC 16	1
3	30.6816-103	0	PIST / PISTON / KOLBEN	TYC 12	1
4	30.6816-108	1	JEHLA / NEEDLE / NADEL	TYC 8	1
5	95.690.001	0	JEHLA / NEEDLE / NADEL	1.5x11.8	1
6	30.6816-106	3	PIST / PISTON / KOLBEN	TYC 12	1
7	30.6816-107	0	VIKO / COVER / DECKEL	TYC 22	1
8	92.002.102	0	SROUBENI / BOLTING / VERSCHRAUBUNG	S-GEV-8LLR	1
9	96.002.003	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	6X2	1
10	96.002.041	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	10x1	1
11	96.001.001	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	4X1,8	2
12	96.001.003	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	8X2	1



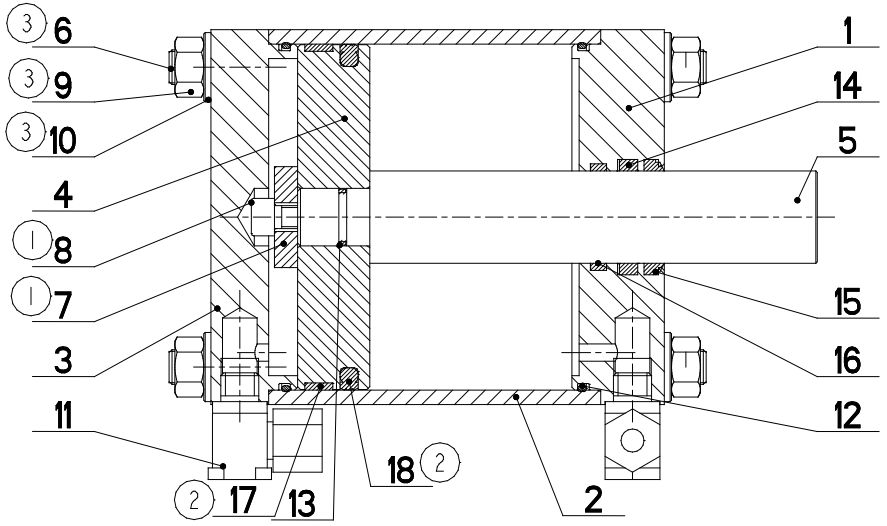
Cislo Sestavy	Ver.	Nazev sestavy
201.6707-400	3	VALEC NAPINACI/TENSIONING CYLINDER/SPANNZYLINDER

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.6707-401	2	VIKO / COVER / DECKEL	HR 130x40	1
2	30.6707-402	0	VALEC / ROLLER / ZYLINDER	TRUBKA 130/120	1
3	30.6707-403	2	VIKO / COVER / DECKEL	HR 130x30	1
4	30.6707-404	1	PIST / PISTON / KOLBEN	d 125	1
5	30.6707-405	1	PISTNICE / PISTON ROD / KOLBENSTANGE	TYC 32	1
6	30.6707-407 (3)	0	TYC ZAVITOVA / THREADED POLE / GEWINDESTANGE	TYC M12	4
7	30.K407-005 (1)	1	PODLOZKA / WASHER / UNTERLEGSCHEIBE	TYC 35	1
8	90.001.25.031 (1)	0	SROUB IMBUS CERNENY / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	1
9	90.100.25.006 (3)	0	MATICE / NUT / MUTTER	MATICE _ M12 _PEVNOSTNI	8
10	90.150.50.007 (3)	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA B13	8
11	92.003.001	0	SROUBENI UHLOVE / ANGLE BOLTING / WINKELVERSCHRAUBUNG	P-RSWS-08LR	2
12	96.001.031	0	KROUZEK O STATICKY / STATIC O RING / O-RING STATISCH	114X3	2
13	96.002.007	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	16X2	1
14	96.042.007	0	TESNENI / SEALING / DICHTUNG	32x40x6.3	1
15	96.060.009	0	KROUZEK STIRACI / SCRAPER RING / ABSTREIFRING	32x40x5x6	1
16	96.084.003	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	GR 6500320	1
17	96.084.014 (2)	0	KROUZEK VODICI / LEAD RING / FÜHRUNGSRING	Páska	1
18	96.900.028 (2)	0	TESNENI KOMBINOVANE / COMBINATION SEALING / KOMBIDICHTUNG		1

1.ZRUS.PODLOZKA 8 90.151.50.005 A NAHR. PODLOZKOU 30.K407-005,
ZRUS.SROUB M8x10A NAHR. SROUBEM M8x16 90.001.25.031.
191/ZM224 4.6.2007 SLEZACKOVA

2.ZRUS."O" KROUZEK 96.002.044 A NAHRAZENO
TESNENI KOMBINOVANE 96.900.028.
ZRUS.PASKA 95.780.001 A NAHR. 96.084.014.
316/ZM337 27.8.2007 SLEZACKOVA

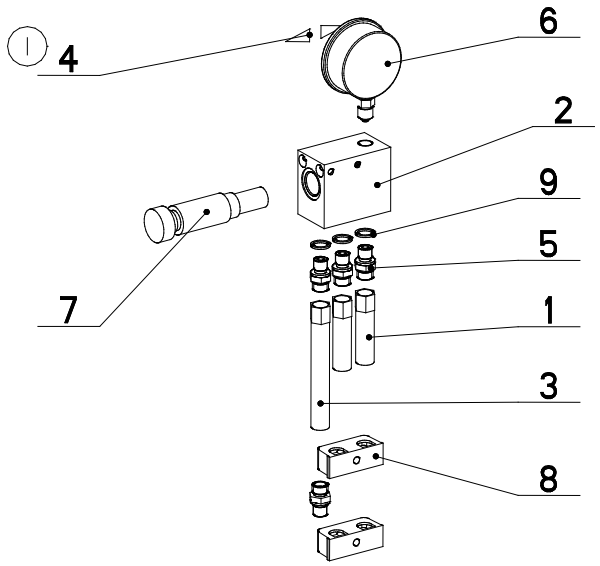
3.ZRUS.TYC 30.6707-406 A NAHR.30.6707-407,
ZRUS.PODLOZKA 90.150.50.006 A NAHR.90.150.50.007,
ZRUS.MATICE 90.100.55.006 A NAHR.90.100.25.006.
37/ZM098 4.5.2011 SLEZACKOVA



Cislo Sestavy	Ver.	Nazev sestavy
201.2115-200	1	REGULACE TL. SVERAKU/VICE PRESSURE REGULATION/SCHRAUBSTOCK-DRUCKREGELUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.1816-102	0	HADICE / HOSE / SCHLAUCH	1000-KP	2
2	30.2115-101	2	KOSTKA / BOARD / PLATTE	HR 60x40	1
3	30.2116-008	0	HADICE / HOSE / SCHLAUCH	1100 KP	1
4	31.0899-004 (1)	0	SAMOLEPKA / STICKER / AUFKLEBER		2
5	92.002.001	0	SROUBENI PRIME / DIRECT BOLTING / GERADE VERSCHRAUBUNG	G 1/4"	4
6	92.080.001	0	MANOMETR_HYDRAULICKY / /		1
7	92.154.001	0	VENTIL REDUKCNI / REDUCTION VALVE / DRUCKMINDERUNGSVENTIL	VENTIL REDUKCNI	1
8	94.204.005	0	DRZAK / HOLDER / HALTER	LBG 14/14-PP	2
9	96.082.002	0	TESNENI / SEALING / DICHTUNG	KROUZEK CU 13/17	3

1.PRID.2xSAMOLEPKA SIPKA 31.0899.004 . 101/ZM131 29.5.2009 SLEZACKOVA



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

7.44. Rošt / Gitter / Grill

Cislo Sestavy	Ver.	Nazev sestavy
201.6218-100	0	ROST/GRILL/GITTER

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.6218-101	1	DRZAK / HOLDER / HALTER		1
2	30.6218-102	1	ROST / GRILL / GITTER		1
3	90.150.50.009	0	PODLOZKA DIN125 / WASHER / UNTERLEGSCHEIBE	PODLOZKA 17	4
4	90.001.25.086	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M16X40	4