Series **Practix**

Practix 285.230 G

Manual/Pulldown

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	Phone: +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:	
1.03 / Feb. 2010 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. In the event of any device modification not approved by us this declaration shall lose its validity.

Name: **Band Saw**

Type range: **Practix 285.230 G Manual**

Serial number:

Manufacturer: **BOMAR, spol. s r.o., Těžební 1236/1, 627 00 Brno**

Product data

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

Description: stand, table, cutting unit with the arm, saw band and drive, manual clamping device, Hydraulic, cooling system, control.

Technical data: cutting rate 35/72 $m.min^{-1}$, cutting angle 0^0 - 60^0,
Total dimensions in mm (l x w x h) 1410 x 915 x1270,
Supply voltage 400 V, total power requirement 1,1 kVA, weight 215 kg

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

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

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

The conformity judging was performed according to §12, par. 3, let. a), of the Law no. 22/1997 Coll. as amended
2) 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 . 00.509.963/09/07/02/0 was issued.

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

Brno, 11.6. 2009	Alfred Pichlmann, managing director	
Point of issue, datum	Name and function of the responsible subject	Signature

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

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

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Name: **Band Saw**

Type range: **Practix 285.230 G Pulldown**

Serial number:

Manufacturer: **BOMAR, spol. s r.o., Těžební 1236/1, 627 00 Brno**

Product data

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

Description: stand, table, cutting unit with the arm, saw band and drive, manual clamping device, Hydraulic, cooling system, control.

Technical data: cutting rate 35/72 $m.min^{-1}$, cutting angle 0°–60°,
Total dimensions in mm (l x w x h) 1410×915×1270,
Supply voltage 400 V, total power requirement 1,1 kVA, weight 215 kg

The applied decrees of governments: **No. 24/2003 Coll. (Directive 98/37/EC)**
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Content

1. Safety notes

Manual version: 1.03/ Feb. 2010
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. Band saw using

The band saw ***Practix 285.230 G Manual*** or ***Practix 285.230 G Pulldown*** is used for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics ***with cutting angles from 0° to 60°***.

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

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

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

1.2. Protective suit and personal safety

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

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

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

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

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

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

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

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

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

1.3. Safety notes for machine operator

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

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

- Do not hold the material for clamping to the vice and for cutting!

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

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

- Do not operate with the buttons and the switches on the control panel, if 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! When repair machine remove power cord from the outlet. Otherwise, there is possibility of hazardous machine starting.

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

Use only recommended type of the hydraulic oils and oils and lubricants.

Do not remove or do not lock the limit switches or safety equipments! Any use of the saw, accessories or machine parts other than that intended by the BOMAR, spol. s r.o. company is not permitted.

The guarantee on this product will be afterward lost and BOMAR, spol. s r.o. takes no responsibility for caused damages!

1.5. Safety machine accessories

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

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

1.5.1. TOTAL STOP button

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

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.

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

1.5.2. Saw arm cover

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

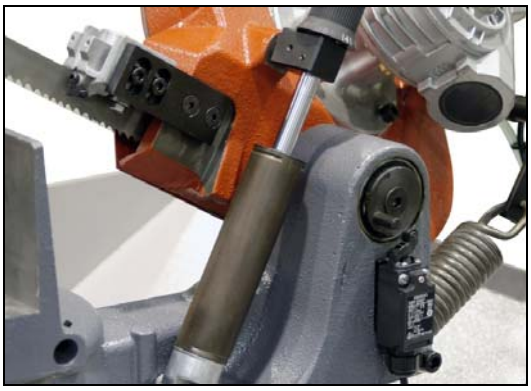
1.5.3. Saw band cover

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

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

1.5.4. Koncový spínač pohonu pásu u stroje typu manual

Verze stroje typu Manual obsahuje koncový spínač pohonu pásu, který odpojí pohon pilového pásu po dořezání materiálu a klesnutí ramene do spodní polohy.



1.6. Safety notes for cooling system

Attention!
Keep notes about work safety for handling cooling liquid!
When handling cooling agents always wear hazardous fluid-proof gloves!
Wear protective goggles! Cooling liquid can get in contact with your eyes and may cause permanent severe injuries.

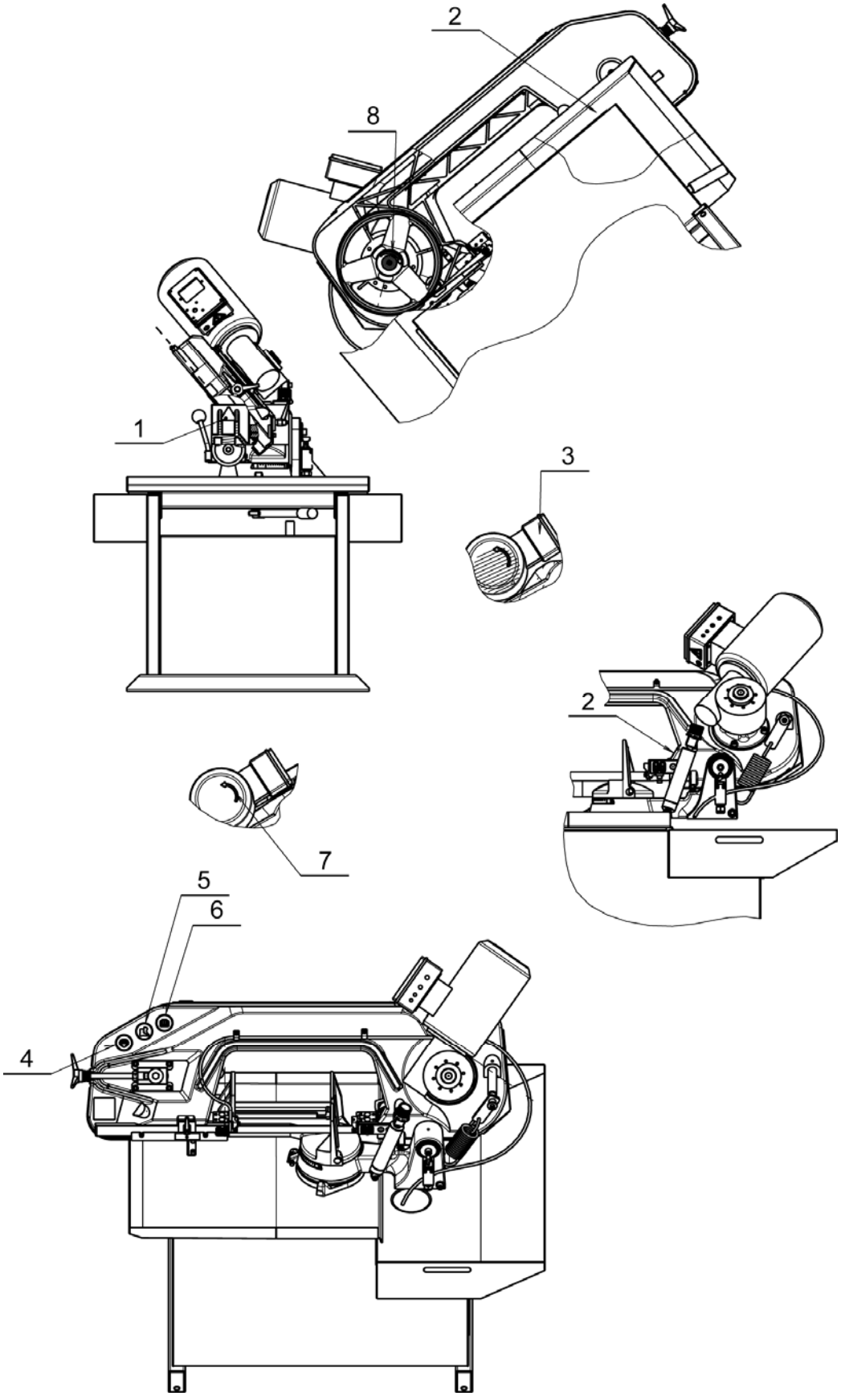
1.6.1. Instructions for first help

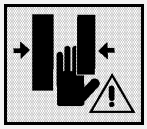
1. Pull off and safely remove polluted, soaked clothing.
2. For breathing, go out in the fresh air or look for first aid treatment.
3. Wash with water or use crèmes for contact with the skin.
4. Flush with water for eyes and look for first aid treatment.
5. For swallowing – drink a lot of water and induce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

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

Štítek stroje umístěn na pilovém rameni, v blízkosti šroubu napínání pásu.

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



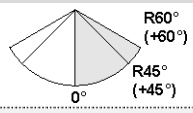
Poz. Pos. Pos.	Obj. číslo Bestell - Nr. Reference No.	Název položky Bezeichnung Item		ks Mng. Pcs.
1	99.900.039	Samolepka / Aufkleber / Self-adhesive label	 NS – Nebezpečí stlačení / Pressunggefahr / Crushing hazard	1
2	99.900.040	Samolepka / Aufkleber / Self-adhesive label	 NR – Nebezpečí říznutí / Schnittgefahr / Cutting or severing hazard	2
3	99.900.045	Samolepka / Aufkleber / Self-adhesive label	 NE – Nebezpečí úrazu elektrickým proudem / Verletzunggefahr vom elektrischen Strom / Electrical hazard	1
4	99.900.047	Samolepka / Aufkleber / Self-adhesive label	 OBS – Noste ochranné brýle a sluchátka / Tragen Sie eine Schutzbrille und Gehörschutz / Wear protective googles and headphones	1
5	99.900.048	Samolepka / Aufkleber / Self-adhesive label	 PO – Noste pevnou pracovní obuv / Tragen Sie Sicherheitsschuhe / Wear fixed protective shoes	1
6	99.900.049	Samolepka / Aufkleber / Self-adhesive label	 CZ – Přečíst návod k použití / Bedienungsanleitung lesen / read the operating instructions	1
7	99.900.050	Samolepka / Aufkleber / Self-adhesive label	 SOL – Směr otáčení doleva / Drehrichtung nach links / direction of rotation left	1
8	99.900.051	Samolepka / Aufkleber / Self-adhesive label	 SOL – Směr otáčení doprava / Drehrichtung nach rechts / direction of rotation right	1
	99.900.053	Samolepka / Aufkleber / Self-adhesive label	 Směr pohybu / Bewegungsrichtung / Direction of motion	1

2. Machine documentation

2.1. Technická data / Technische Daten / Technical data

Hmotnost stroje / Maschinengewicht / Machine weight:	
• Hmotnost / Gewicht / Weight	Manual 215 kg / Pulldown 225 kg
Rozměry stroje / Maschinengröße / Machine size – Practix 285.230 G Manual:	
• Délka / Länge / Lenght	1410 mm
• Šířka / Breite / Width	915 mm
• Výška / Höhe / Height	1270 mm
Rozměry stroje / Maschinengröße / Machine size – Practix 285.230 G Pulldown:	
• Délka / Länge / Lenght	1410 mm
• Šířka / Breite / Width	920 mm
• Výška / Höhe / Height	1520 mm
Akustický tlak / Schalldruckpegel / Acoustic pressure:	
• Practix 285.230 G Manual	L_{Aeqv} = 62,6/69,4 dB … 35 m.min^{-1} / 72 m.min^{-1}
• Practix 285.230 G Pulldown	L_{Aeqv} = 59,5/65,4 dB … 35 m.min^{-1} / 72 m.min^{-1}
Virbrace / Vibration / Vibration:	
• Practix 285.230 G Pulldown	0,08/0,2 m.s^{-2} … 35 m.min^{-1}/72 m.min^{-1}
Pohon / Atrieb / Drive:	
• Typ / Typ / Type	MSD90L-8/4
• Napájení / Versorgungsspannun / Supply voltage	~3×400 V, 50 Hz
• Výkon / Leistung / Output	0,7/1,1 kW
• Jmenovité otáčky / Motornenndrehzahl / Nominal speed	1400/690 min^{-1}
Chladící zařízení / Kühlmiteleinrichtung / Cooling equipment:	
• Typ / Typ / Type	S1
• Napájení / Versorgungsspannun / Supply voltage	~ 1×230V, 50Hz
• Obsah nádrže / Volumen vom Kühlmittel / Capacity	15 l
Rozměr pásu / Sägebanddimension / Band size:	
2720×27×0,90 mm	
Řezná rychlost / Schnittgeschwindigkeit / Cutting speed:	
35/72 m.min^{-1}	

Řezné rozsahy / Schnittbereiche / Cutting size:

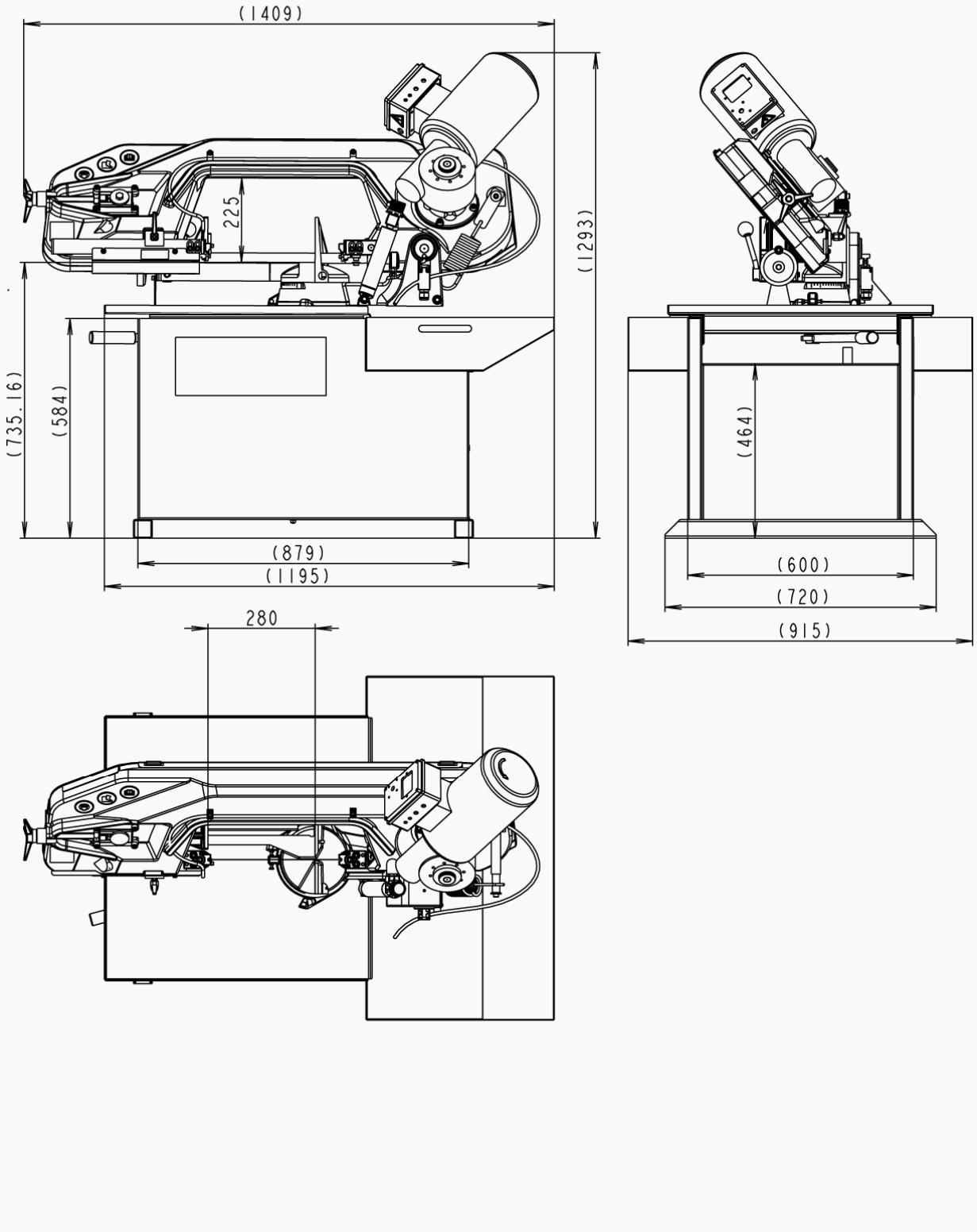


0°	Ø225 mm	280×70 mm	245×225 mm	225×225 mm
R 45°	Ø180 mm	180×125 mm	200×170 mm	170×170 mm
R 60°	Ø120 mm	115×95 mm	95×95 mm	95×95 mm

Level of acoustic pressure – Practix 280.230 G:

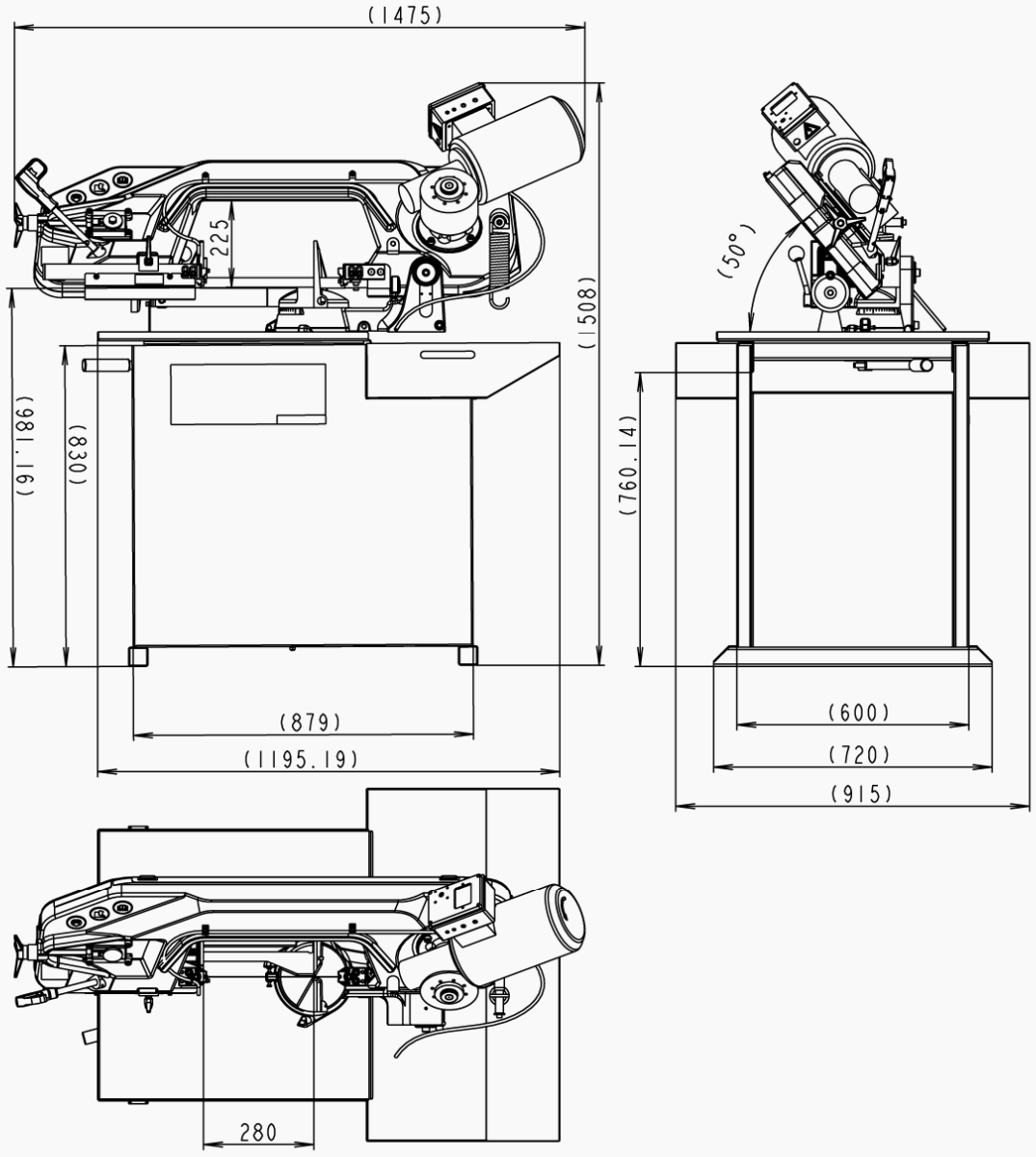
Equivalent level of acoustic pressure A (noise) at operator position are L_{Aeqv}=62,6 / 69,4 dB for 35 m.min^{-1} / 72 m.min^{-1} for Manual version and L_{Aeqv}= 59,5 / 65,4 dB for 35 m.min^{-1} / 72 m.min^{-1} for Pulldown version. Mentioned values are levels of emission which doesn't have to represent 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 – Practix 285.230 G Manual

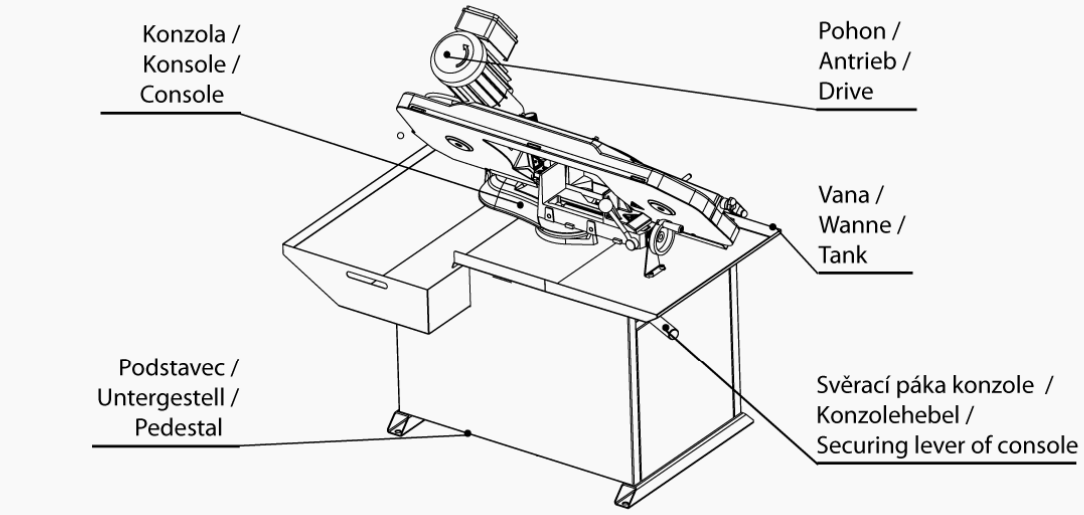


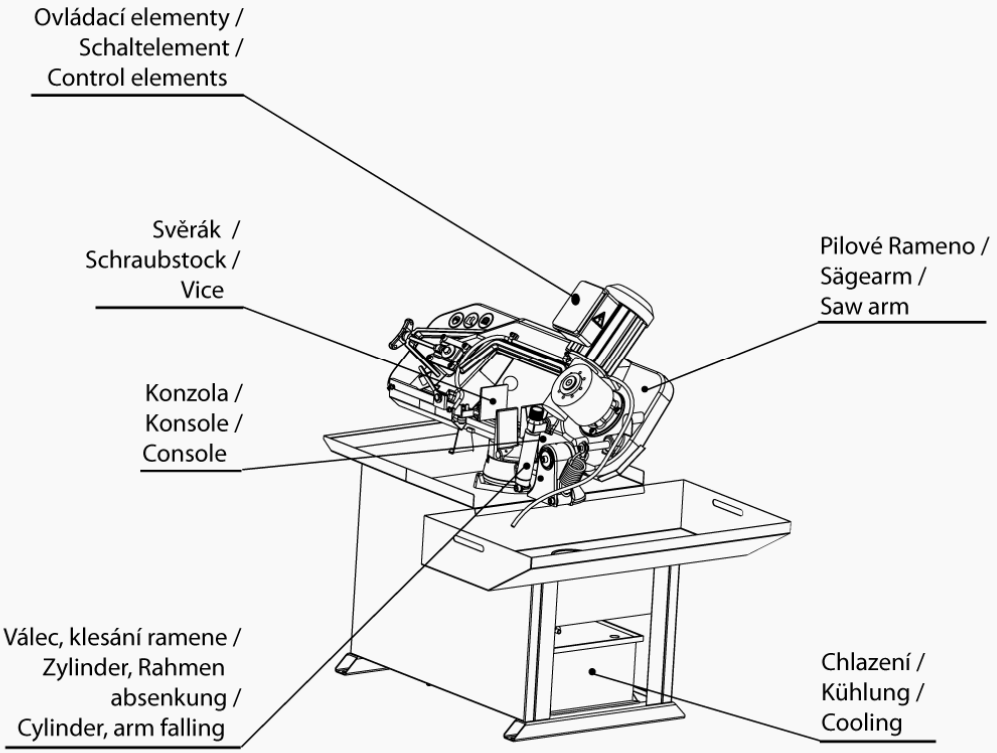
Manual version: 1.03/ Feb. 2010
Manual rev.: 1

2.3. Rozměrové schéma / Aufstellzeichnung / Installation diagram – Practix 285.230 G Pulldown

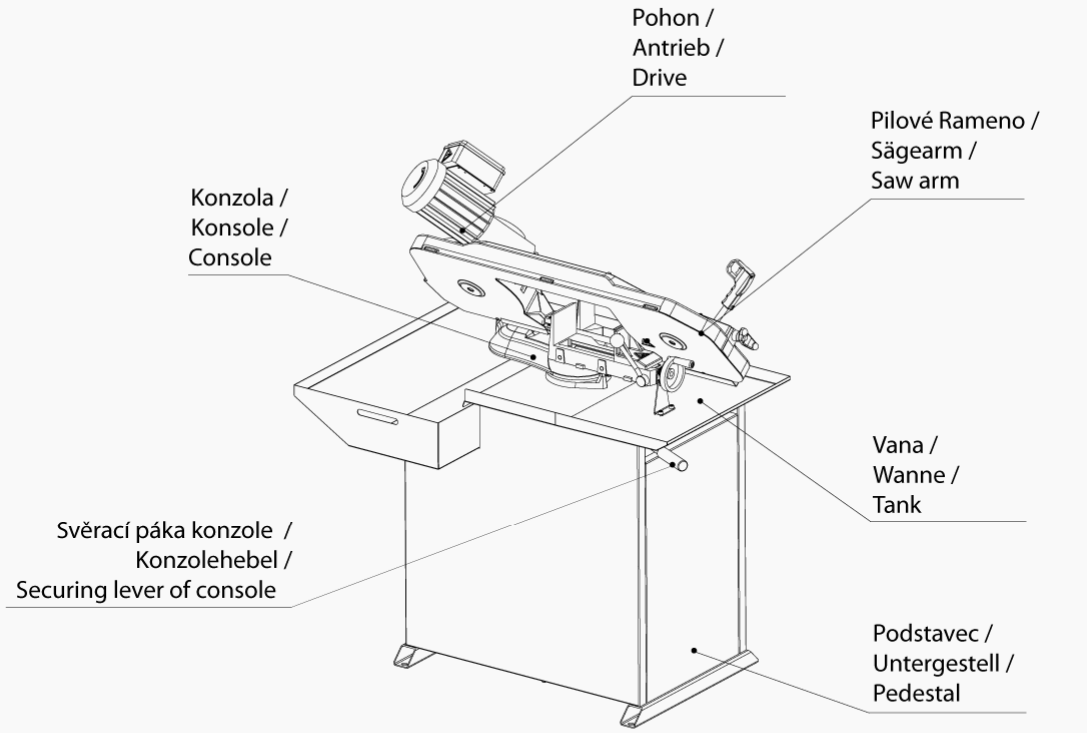


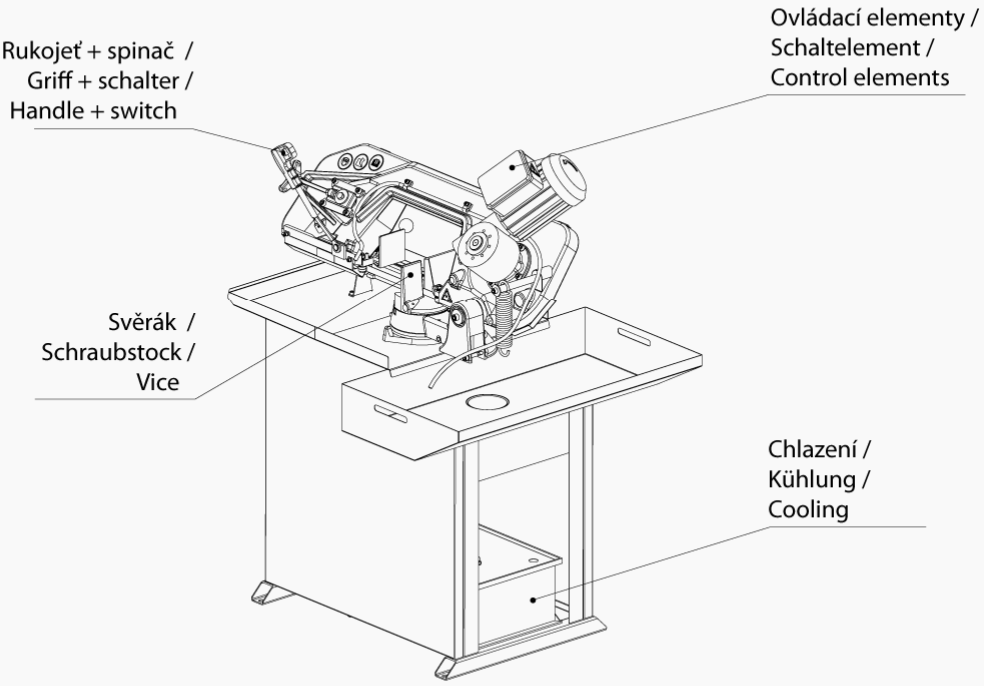
2.4. Popis / Beschreibung / Description – Practix 285.230 G Manual





2.5. Popis / Beschreibung / Description – Practix 285.230 G Pulldown





2.6. Transportation and stocking

2.6.1. 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.

- Do not use a forklift truck for handling the machine, if you do not have license for it!
- Do not move under suspended loads! Fault in lifting device may cause serious injury.
- Keep a safe distance from the machine during the transport.

Conditions for transportation and stocking:

- 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, ultra-violet 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.

2.7. 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.
- The machine has to be screwed to a pallet for the transport!

2.8. Transport and stocking

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

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

Make sure that the van or the trailer had sufficient capacity.

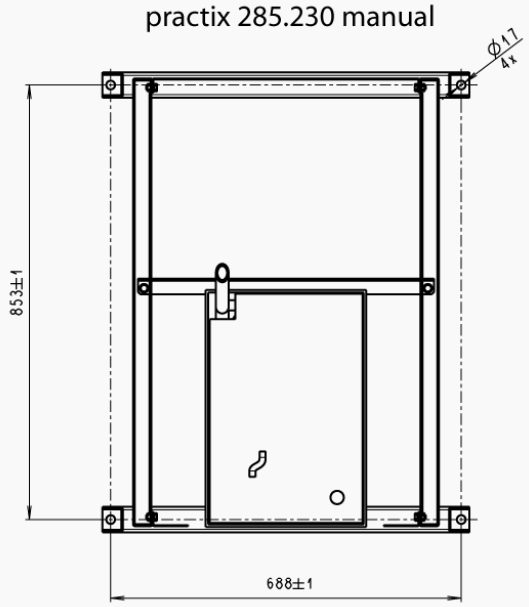
The machine must be secured during transportation. Screw on the palette to the floor of the van or the trailer. Be careful that the machine is not damaged during transportation.

Store the machine only under conditions mentioned in the manual, to avoid damage of the machine.

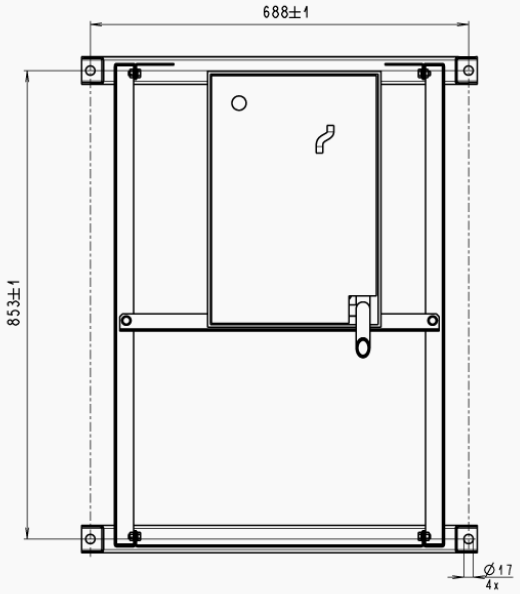
It is forbidden to handle the machine any other way (for example by, lifting by the saw frame of the band saw), than it is written in this operating instructions, the machine can be damaged!

2.9. Kotevní plan / Verankerungsplan / Grounding plan

practix 285.230 manual



practix 285.230 pulldown



Kotvící materiál / Verankerungsmaterial / Grouding material

- 4× Hmoždina / Dübel / Plug – ø14 mm
- Vrtáno do hloubky / In die Tiefe gebohrt / Drilled to – 100 mm
- 4× Šrouby / Schraube / Screws – M12

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

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

± 10 mm / 1 m

2.10. Activation

2.10.1. Machine working conditions

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

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

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

2.10.2. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.

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

2.11. 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 – Practix 285.230 G Manual 215 kg / Pulldown 225 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.

2.12. 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.

2.13. Electrical connection

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: 1,1 kW / 16 A

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

Service voltage must agree with the line voltage!

Crosscut of the supply line must respond with rated current for max. machine load.

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

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

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

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

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

2.13.1. 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.

2.14. Filling of the cooling system

Prepare the mixture of the water and the cooling liquid. Keep the concentration specified by manufacturer.

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**".

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.

Keep by manufacturer specified recommendation for adding the anticorrosive agents, the antifreezes or other agents! For mixture of two different mixes can produce toxic and aggressive mixes, which can threaten your health or damage cooling system of the machine

2.15. 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..

2.16. Saw band

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

2.16.1. Saw band size

2720×27×0,90 mm

2.16.2. 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 recommends use variable tooth systém.

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

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

Footnotes:

Z_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

2.16.3. Saw band running-in

To ensure a full service life of the saw bands, we strongly recommend that you carry out the „RUN-IN“ process.

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

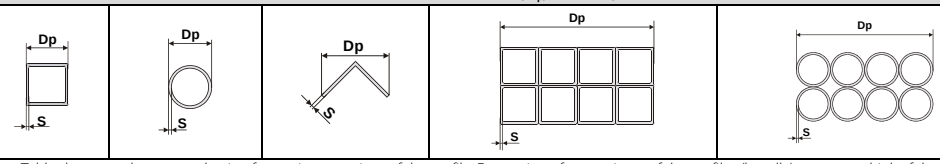
When cutting small pieces run the band until approximately 300 cm2 of material has been cut. When cutting large pieces run the band for 15 minutes approximately.

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

Note:
Run regrinding bands too!

2.16.4. Tables for teeth selection

SHAPED MATERIAL (D_p, S = mm)

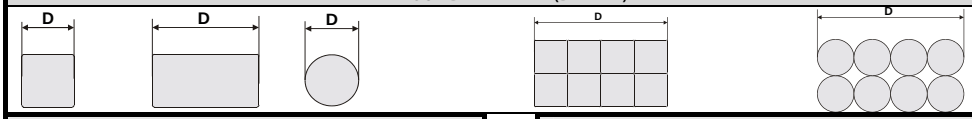


Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S" equates to 2×S). In table, there are tooth systems constant and variable.

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

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

SOLID MATERIAL (D = mm)



Constant tooth system	
length of the cut D	tooth system (Z_pZ)
to 3 mm	32
to 6 mm	24
to 10 mm	18
to 15 mm	14
15–30 mm	10
30–50 mm	8
50–80 mm	6
80–120 mm	4
120–200 mm	3
200–400 mm	2
300–800 mm	1,25
700–3000 mm	0,75

Variable tooth system	
length of the cut D	tooth system (Z_pZ)
to 30 mm	10 –14
20–50 mm	8–12
25–60 mm	6–10
35–80 mm	5–8
50–100 mm	4–6
70–120 mm	4–5
80–150 mm	3–4
120–350 mm	2–3
250–600 mm	1,4–2
500–3000 mm	0,75–1,25

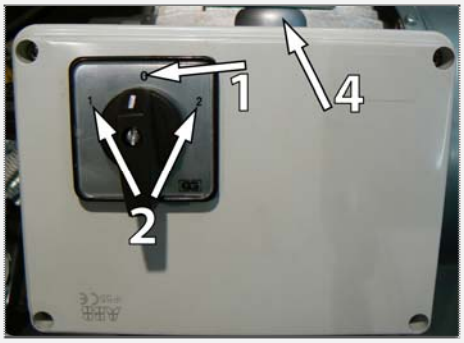
Despite the above recommendations, please follow your supplier's advice!

3. Machine control

3.1. Control elements for Practix 285.230 G Manual

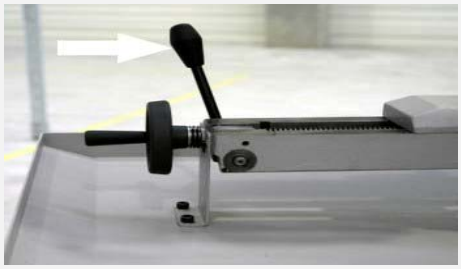
Control elements	Description
	1. **TOTAL STOP button** In emergency causes the machine must be immediately switched off. **Attention!** By pressing *Total Stop* button does not stop sinking of the saw arm! 2. **Switch of the cutting speed** Choice of the cutting speed during cutting (35 or 72 m. min^{-1}).
	3. **Adjustment of saw arm falling** Adjust speed of saw arm sinking during cutting. Turning the wheel switch on the cylinder smoothly changes saw arm sinking speed. Position 0 stops saw arm sinking. Position 1 is for lowest sinking speed and position 4 is for highest sinking speed.

3.2. Control elements for Practix 285.230 G Pulldown

Control elements	Description
	1. **Off saw band drive** Position 0 off saw band drive. **Attention!** Position 0 does not disconnect saw from electrical network 2. **Switch of the cutting speed** Choice of the cutting speed during cutting (35 or 72 m. min^{-1}). 4 **Security circuit** Button on top of switch box turn on security circuit. Security circuit must be switched on before cutting begins after saw was disconnected form electrical network.
	3. **START AND STOP** Button starts and stops saw band drive.

3.3. How to use band saw

3.3.1. Cutting

Picture	What to do
	1. Insert the material to the vice.
	2. Shift the material in claimed length of cutting.
	3. Fix the material by means of clamping wheel. Come with vice approximately 3 mm to material. ***Note:*** Turning the wheel in clockwise direction the vice is tightened. Turning the wheel in counter clockwise direction the vice is loosened.
	4. Vice and clamp the material by means of detent lever
	5. Choose desired cutting speed by turning the switch on the motor. 6. Check the right and tight fixation of material once again.

7. **For Practix 285.230 G *manual***	7. **For Practix 285.230 G *pulldown***
• Turn switch no. 3 to adjust speed of saw arm falling.	• Security circuit must be turn ON by button on pos. 4 before cutting begin. • Security circuit must be switched ON after every disconnection from electrical network
• When material is cut, limit switch stops drive of saw band.	• Start the band saw by pressing button no. „3" (START) positioned on operating lever. If button no. „3" is loosen, driving stops.
• To continue in cutting please repeat points 1–7.	• Is necessary to lead the arm to cut manually. • To continue in cutting, repeat p. 1–7.

Note:
When band drive starts, the coolant pump starts automatically as well. After switching off the band drive, the coolant pump stops as well.

3.3.2. Interruption in cutting with Emergency button TOTAL STOP

Picture	What to do
	• In emergency causes press button *Total Stop* • After pressing *Total Stop* button the band saw stops immediately.

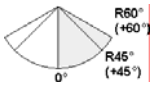
3.3.3. Setting of cutting speed

Saw band speed is changeable between ***35 and 70 m.min^{-1}***.

Picture	What to do
	• speed **35 m.min^{-1}** – turn the speed switch to the position **1** • speed **72 m.min^{-1}** – turn the speed switch to the position **2**

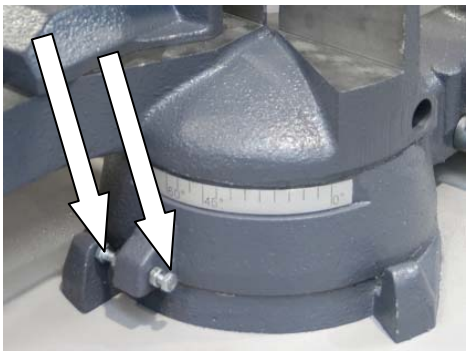
3.3.4. Angular cut setting

The machine enables angular cuts under ***60°***. The cut angle can be set fluently ***from 0° to 60°***.



Picture	What to do
	1. Release securing lever of the console.
	2. Swivel the frame to the desired angle by pulling the stretching star. There is a scale on the console. ***Note:*** When adjusting the angle of the cutting, follow the marking on the console that indicates the current angle on the scale.
	3. Check the setting according to the scale and tighten the securing lever of the console

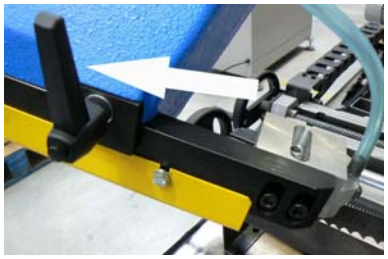
Attention!
Turn carefully with saw arm. *Do not hit hard on the saw arm stops for setting 0 ° and 60 °.*



If you can not properly set up mark on console with 0° and 60° on the scale is necessary to adjust the screws. By screws adjust properly stops at 0° and 60°.

3.3.5. Optimal adjusting of the guide cubes span

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



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

3.4. 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!

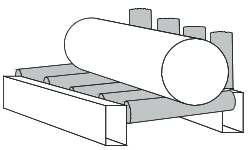
3.4.1. Handling agent selection

- 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!

3.4.2. Insertion

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

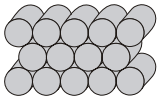
Make sure the conveyor is long enough and the material cannot tip off the conveyor.



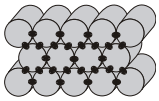
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!

3.4.3. Bundle material cutting

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



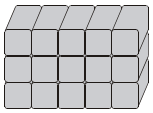
Round material bundle:. Take care especially with round material that the bars are put according to the picture. If the bars are put differently, you may have problems with movement.



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 shapes of material are suitable for cutting in the bundle. Follow recommendations of your saw band supplier for placing material into bundle.

4. Machine service

4.1. Saw band dismantling

1. Unplug the machine from the power supply. It guarantees that the machine does not accidentally start running.

2. Open the protective cover on the rear side of the saw frame. Release the saw band tension using the handle so that the saw band can be taken out easily.

3. Remove the saw band from rotation wheels.
4. Slide out the saw band from the guides.

4.2. Saw band installation

1. Prior to installation, clean all track wheels, guide cubes and inner side of the arm thoroughly of all traces of chips and dirt. ***Keep in mind the teeth direction when installing the saw band.***
2. Insert new saw band in the guide cubes. Make sure the saw band runs between both guide rollers and it is pushed all the way to the top.
3. Put the saw band on both guide wheels. Make sure that the saw band ridge fit tightly to the wheel rim. Then push the saw band as far back as possible.
4. By turning the stretching star to the right, you will stretch the saw band slightly. Now remove the plastic cover of the saw band teeth.
5. Close the rear protective cover.
6. Install the yellow protective cover of the band. The arrow on the cover must match the direction of the arrow on the band. If it does not, turn the band round.

4.3. Saw band stretching and inspection

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

4.3.1. Saw band stretching

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

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

4.3.2. Saw band inspection

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

4. Check, if the saw band is right in the guiding cubes..
5. Switch on the saw band drive and then after 10 seconds switch off saw band drive. If the saw band drive is not possible to switch on, set the limit switch of the saw band stretching.
6. Switch off the main switch.
7. Open cover(s) of the wheels and check position of the saw band on the both wheels..

- If the distance between backside of the saw band and the offset wheel is **1 mm**, setting is right..
- If the distance is bigger than **1 mm**, or the saw band is on the offset of the wheel, set the saw band.

8. Close cover of the saw band.

4.4. Cooling agents and chips disposal

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

4.4.1. Coolant device inspection

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

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

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

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. 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!

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

Manufacturer	Viscosity grade		
	ISO VG 100	ISO VG 220	ISO VG 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

4.6. Machine cleaning

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

- Vice jaws
- Vices guiding
- Feeder
- Stand area

5. Troubleshooting

Manual version: 1.03/ Feb. 2010
Manual rev.: 1

5.1. Mechanical problems

Problem		Possible causes	Repair
1. Slanting cut	-	Wrongly adjusted hard metal guides.	Set according to the chapter „Machine service“
	-	Worn hard metal guides.	Replace to the chapter „Worn pieces replacement“
	-	Wrongly adjusted cubes of the saw band guiding.	Set according to the chapter „Machine service“
	-	Worn bearings of the saw band guiding.	Replace according to the chapter „Worn pieces replacement“
	-	Wrongly adjusted swarf brush.	Set according to the chapter „Machine service“
	-	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 „Machine service“.
	-	Set angle does not match the cut angle.	Check the angle adjustment with a protractor and possibly set it according to chapter „Machine service“.
	-	Insufficient saw band stretching.	Stretch the saw band and set the limit switch according to chapter „Machine service“.
	-	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 „Machine service“.
	-	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 „Machine service“
	-	Over stretched saw band	Lower stretching of the saw band and set the limit switch of the saw band stretching according to chapter „Machine service“
	-	Wrongly adjusted hard metal guides.	Check the adjustment of the hard metal guides and carry out adjustment as described in chapter „Machine service“
	-	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 „Machine service“
	-	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 „Machine service“
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 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 „Machine service“
	-	Pressure switch is defective.	Replace defective parts of the pressure switch.
8. The saw bands are cracked.	-	In stretching wheel is wrong adjusting geometry.	Adjust distance band from recess wheel c.2 mm according to operating instructions.
	-	Hard metal plates of circuit saw band are not adjusting.	Hard metal plates of circuit saw band must be adjusting according to operating instructions.
	-	Guiding cubes are not adjusting (bearings + hard metal circuit)	Guiding cubes must be adjusting (bearings + hard metal circuit) according to operating instructions.
	-	Bearings of guiding cubes are used (rolling elements are damaged or outside ring of bearing has conical form).	Bearings of guiding cubes must be replaced. Bearings must be adjusting according to operating instructions.
9. Damage tooth system of the saw band	-	In gripping the lifting cylinder is backlash.	
	-	Squeezed pin upper or downer holder of the lifting cylinder.	Exchange complete upper or downer holder of lifting cylinder.
10. The saw is cut downing.	-	Geometry of hardmetal guiding cubes is wrong adjusted.	Hardmetal guiding cubes must be adjusted.
	-	Bearings of guiding cubes are used.	Bearings of guiding cubes must be replaced.
11. Cleansing of the saw band is not functional.	-	Elastic wheel of the brush drive is worn-down.	Elastic wheel of the brush must be changed.
	-	Knurling of the driving wheel is worn-down.	Driving wheel must be changed.
	-	The shaft of the brush drive is rusted.	The shaft of the brush must be cleaned and oiled.

Problem		Possible causes	Repair
	-	The brush position and the brush cover is adjusted wrong – with the brush cannot be turned.	The brush cover must be posed, in order to the brush can be turned.
12. The saw arm periodically rise and fall during the cut; this cause short lifetime of the saw band.	-	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. Electrical 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.

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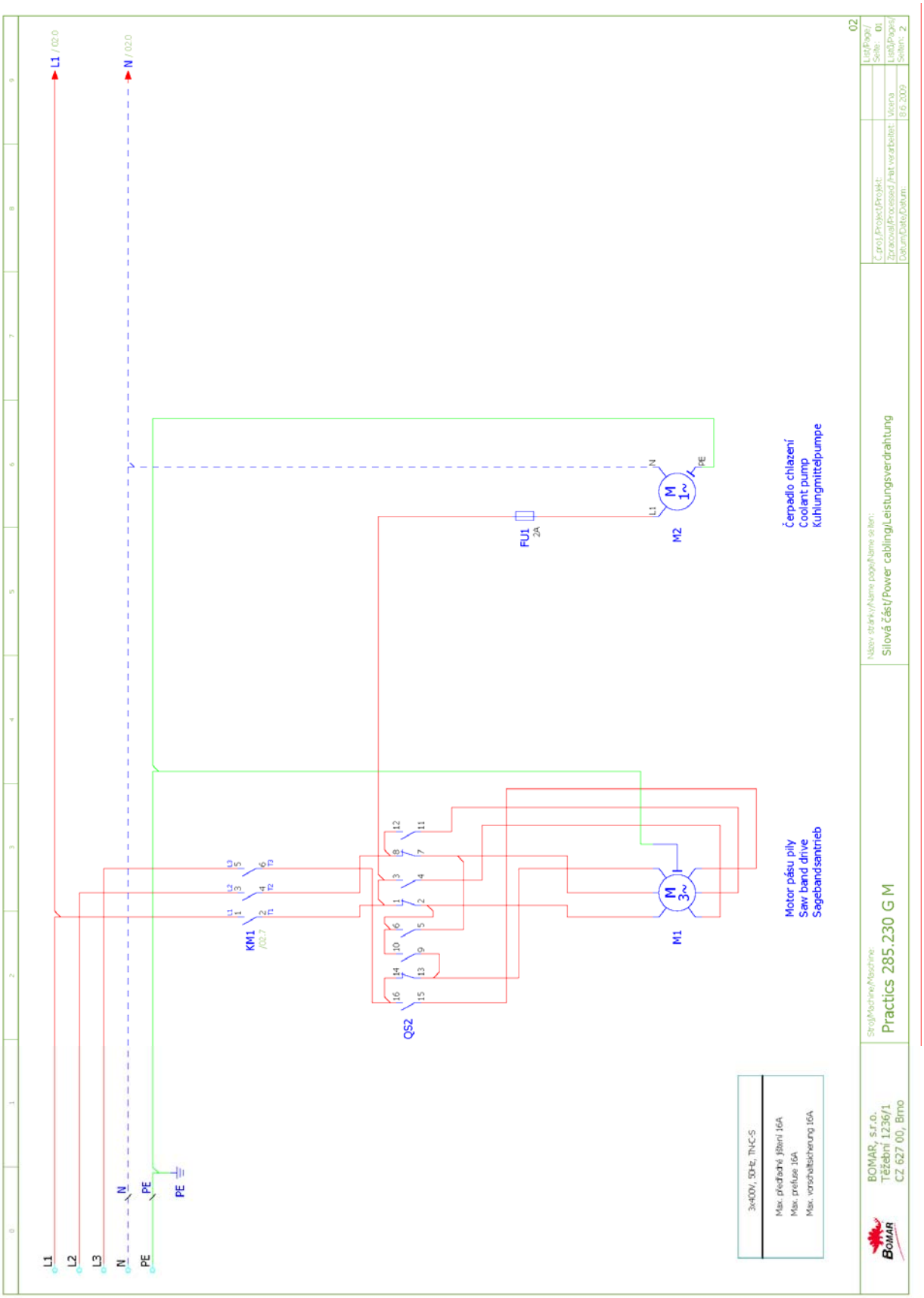
6. Schémata / Schemas / Schematics

6.1. Elektrické schema / Elektroschema / Wiring diagrams – Practix 285.230 G Manual



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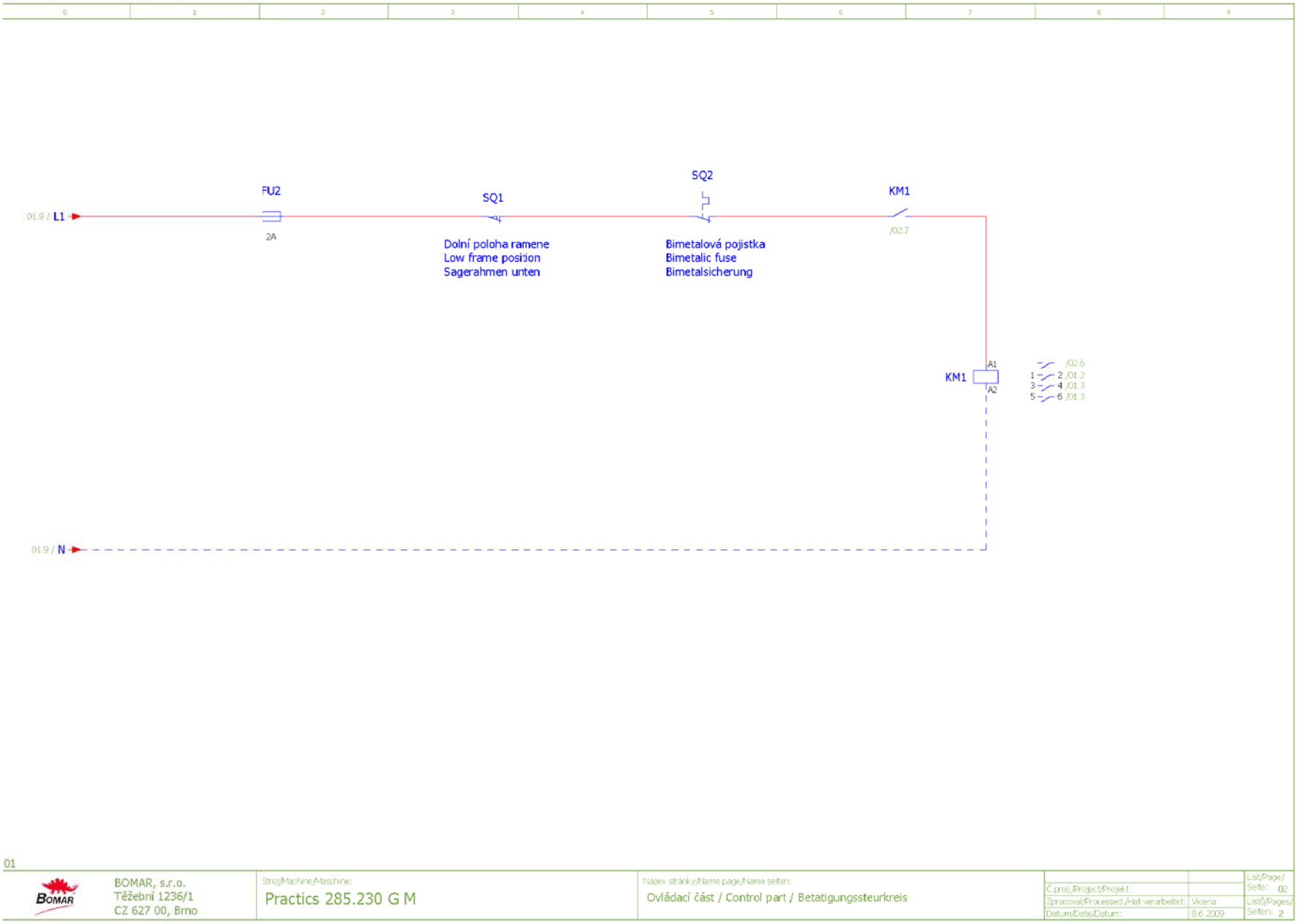
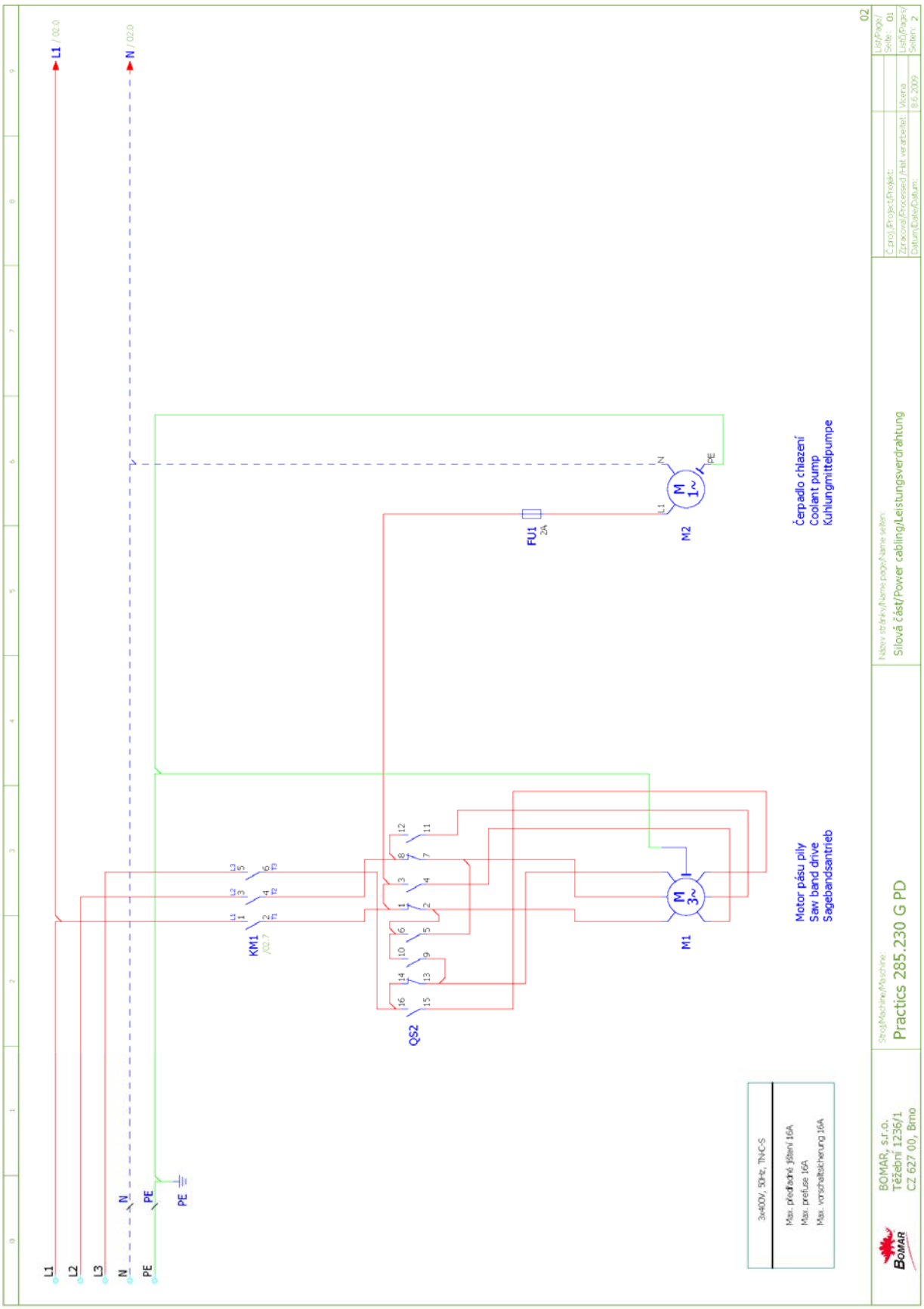


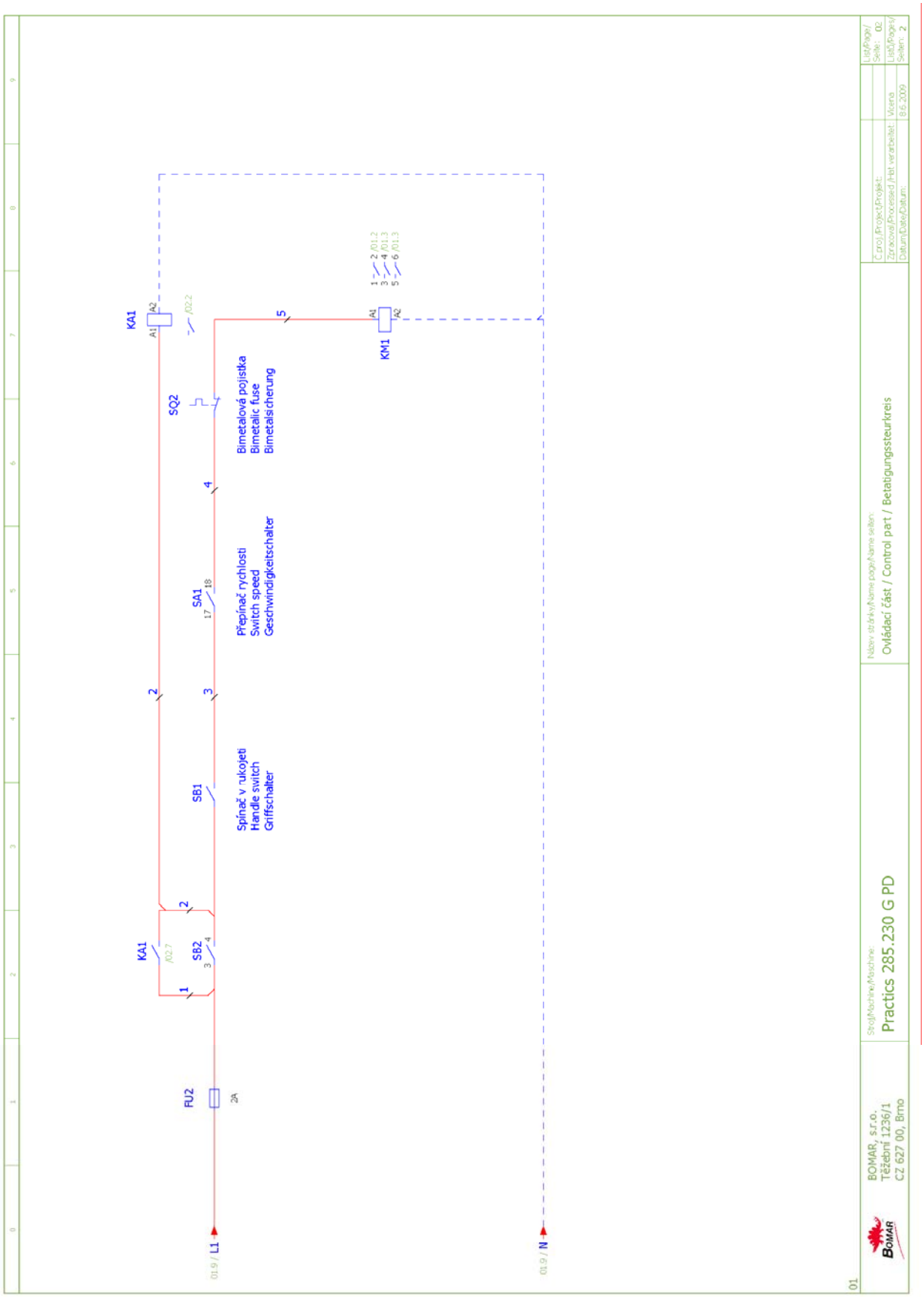
Schémata
Schemas
Schematics

6.1.1. Kusovník elektrosoučástí / Stückliste der Elektroteilen / Piece list of elektroparts – Practix 285.230 G Manual

Obj. číslo Bestell - Nr. Ref. No.	Název položky Bezeichnung Item	Ozn. Sign. Sign.	ks Mng. Pcs.
91.190.031	Krabice elektro / Buchse / Cross		1
91.045.030	Motorový spouštěč / Motor Starter / Motor Starter	KM	1
91.020.008	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump	M2	1
91.020.003	Pohon / Antrieb / Drive	M1	1
91.171.006	Přepínač rychlosti / Geschwindigkeitschalter / Switch speed	QS	1
94.004.003	Spínač / Schalter / Switch V-16-C5	SB	1

6.2. Elektrické schema / Elektroschema / Wiring diagrams – Practix 285.230 G Pulldown





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6.2.1. Kusovník elektrosoučástí / Stückliste der Elektroteilen / Piece list of elektroparts – Practix 285.230 G Pulldown

Obj. číslo Bestell - Nr. Ref. No.	Název položky Bezeichnung Item		Ozn. Sign. Sign.	ks Mng. Pcs.
91.190.031	Krabice elektro / Buchse / Cross			1
91.045.030	Motorový spouštěč / Motor Starter / Motor Starter		KM	1
91.020.008	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump		M2	1
91.020.003	Pohon / Antrieb / Drive		M1	1
91.171.006	Přepínač rychlosti / Geschwindigkeitschalter / Switch speed		QS	1
94.004.003	Spínač / Schalter / Switch	V-16-C5	SB1	1
	Relé + Spínač / Relais + Schalter / Relay + Switch		KA1+SB2	1+1

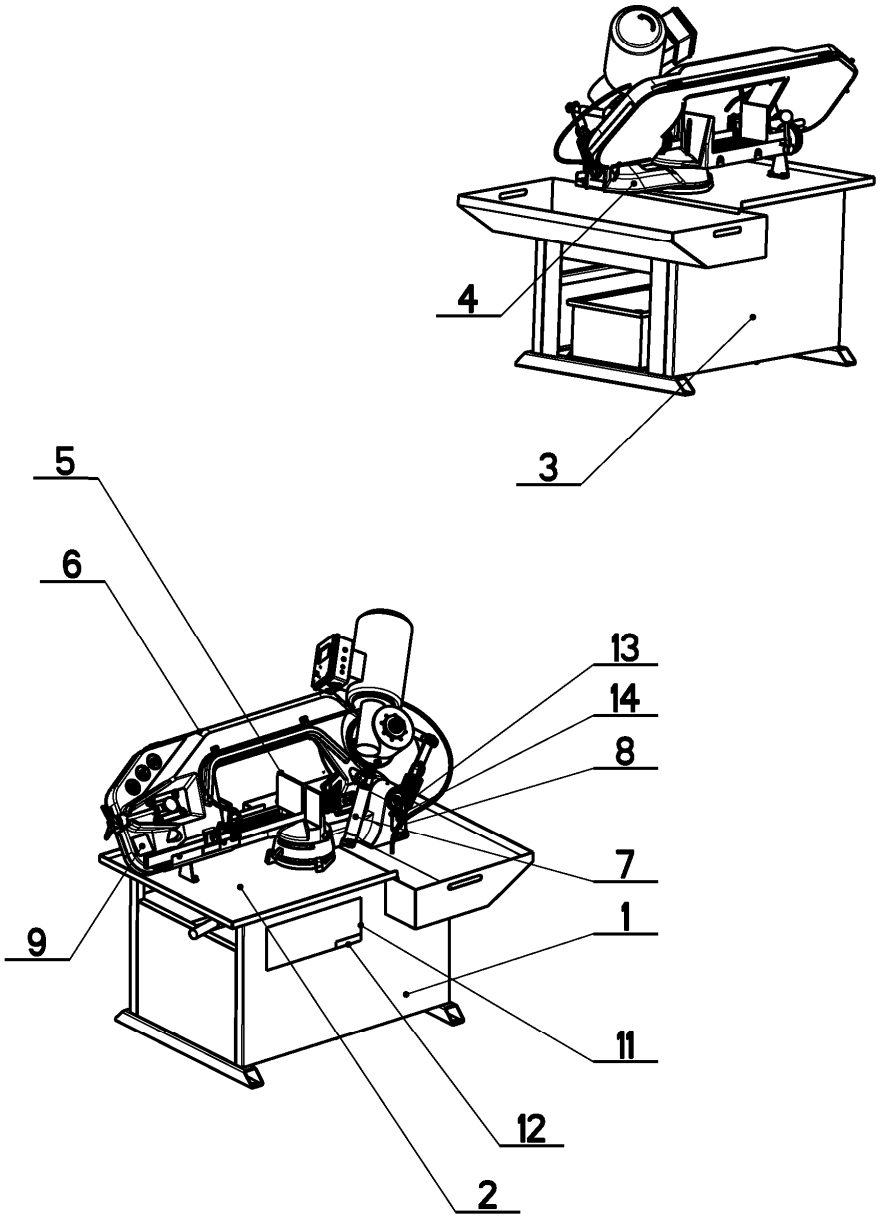
7. Výkresy sestav pro objednání náhradních dílů / Zeichnungen für Bestellung der Ersatzteile / Drawing assemblies for spare parts order

- Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. practix 285.230 G manual) , výrobní číslo (např. 125) a rok výroby (např. 1999).

- In die Bestellung der Ersatzteile führen Sie immer an: Maschinentyp (z. B. practix 285.230 G manual), Serien Nr. (z. B. 125) und Baujahr (z. B. 1999).

- For spare parts order, you must always to allege: type of machine (for example practix 285.230 G manual), serial number (for example 125, see cover page) and year of construction (for example 1999).

7.1. Pila / Säge / Saw – Practix 285.230 G Manual



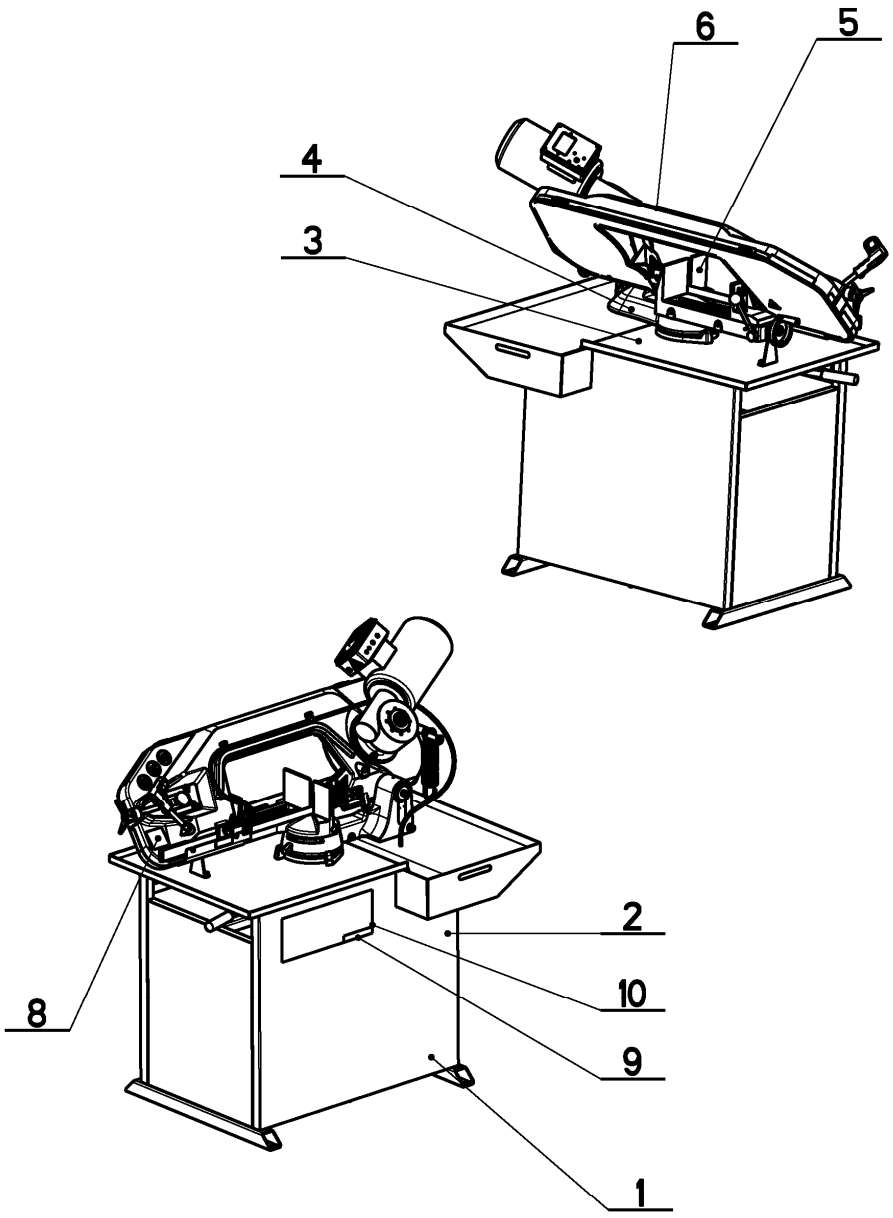
NAZEV SESTAVY	CISLO SESTAVY	STROJ
PILA PASOVA	201.LK00-100	LC 230 M
	Konstruoval:	
	Datum: 22. 01.2010	
	Meritko: 1:20	

Cislo Sestavy	Ver.	Nazev sestavy
201.LK00-100	1	PILA PASOVA/BAND SAW/BANDSÄGE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.LC06-000	2	CHLAZENI / COOLING / KÜHLUNG	SESTAVA	1
2	201.LK01-250	0	ZAKLADNA / BASE / GRUNDLAGE		1
3	201.LK01-360	0	PODSTAVEC / BASE / UNTERSATZ	SESTAVA	1
4	201.LK02-000	0	KONZOLA / CONSOLE / KONSOLE	SESTAVA	1
5	201.LK03-000	0	SVERAK / VICE / SCHRAUBSTOCK	SESTAVA	1
6	201.LK04-150	0	RAMENO / SHOULDER / SÄGERAHMEN	SESTAVA	1
7	201.LK07-050	0	VALEC ZVEDACI / LIFTING CYLINDER / HEBEZYLINDER	SESTAVA	1
8	30.LK04-024	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	HR 30x5	1
9	30.LK99-151	1	STITEK / LABEL / SCHILD	P 0.5x70	1
10	31.1899-004	0	SAMOLEPKA / STICKER / AUFKLEBER	73x25	1
11	31.LK99-053	0	SAMOLEPKA / STICKER / AUFKLEBER	400x155	1
12	31.LK99-152	0	SAMOLEPKA / STICKER / AUFKLEBER	105x24	1
13	90.012.50.008	0	SROUB / BOLT / SCHRAUBE	4x35	2
14	91.173.009	0	SPINAC KONCOVY / END SWITCH / ENDSCHALTER		1
15	99.900.039	0	SAMOLEPKA / STICKER / AUFKLEBER		1
16	99.900.040	0	SAMOLEPKA / STICKER / AUFKLEBER		2
17	99.900.045	0	SAMOLEPKA / STICKER / AUFKLEBER		1
18	99.900.047	0	SAMOLEPKA / STICKER / AUFKLEBER		1
19	99.900.048	0	SAMOLEPKA / STICKER / AUFKLEBER		1
20	99.900.049	0	SAMOLEPKA / STICKER / AUFKLEBER		1
21	99.900.050	0	SAMOLEPKA / STICKER / AUFKLEBER		1
22	99.900.051	0	SAMOLEPKA / STICKER / AUFKLEBER		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

7.3. Pila / Säge / Saw – Practix 285.230 G Pulldown



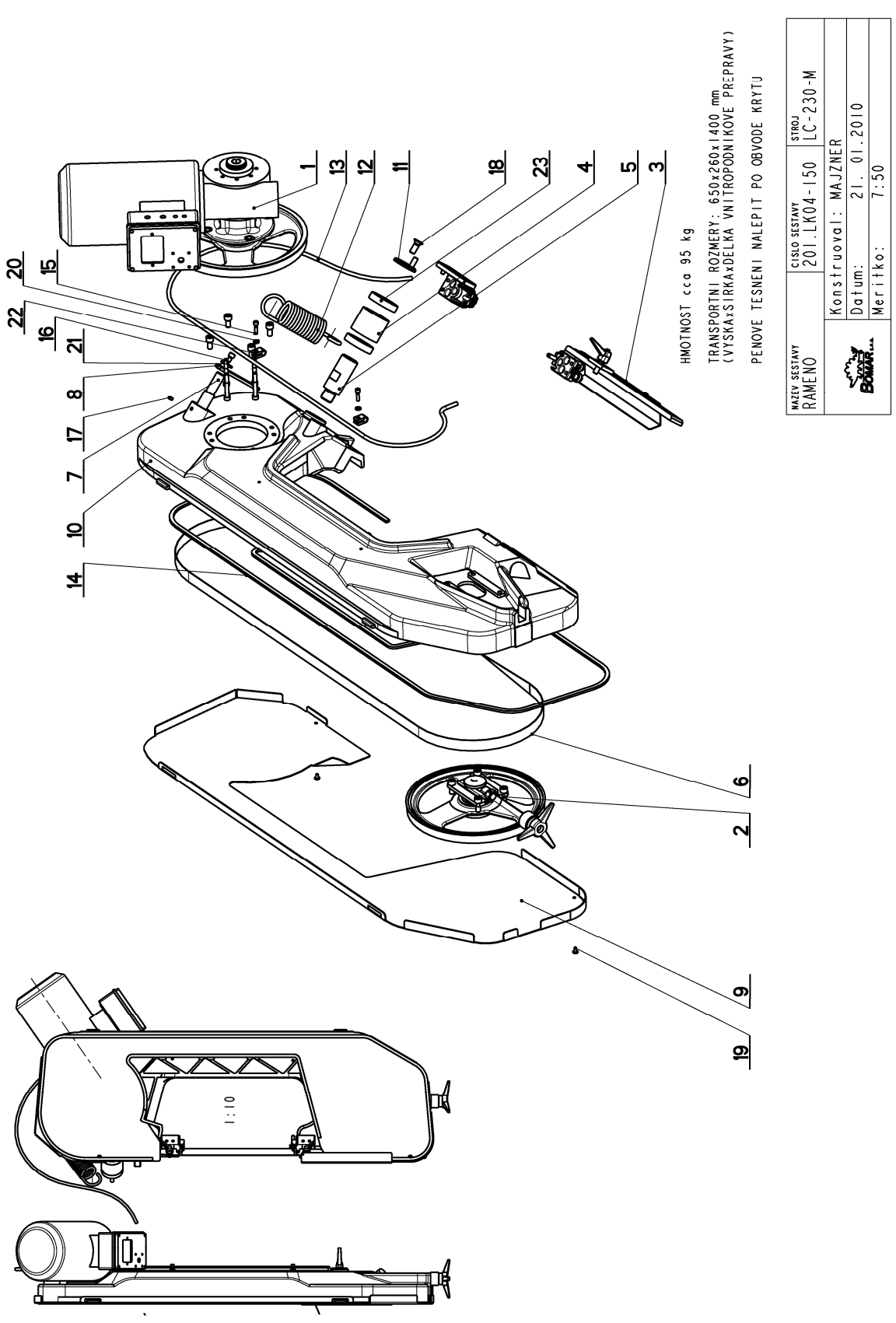
NAZEV SESTAVY	CISLO SESTAVY	STROJ
PILA PASOVA	201.LK00-000	LC-230-PD
	Konstruoval: MAJZNER	
	Datum: 22. 01.2010	
	Meritko: 1:20	

Cislo Sestavy	Ver.	Nazev sestavy
201.LK00-000	0	PILA PASOVA/BAND SAW/BANDSÄGE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.LC06-000	2	CHLAZENI / COOLING / KÜHLUNG	SESTAVA	1
2	201.LK01-200	0	PODSTAVEC / BASE / UNTERSATZ	SESTAVA	1
3	201.LK01-250	0	ZAKLADNA / BASE / GRUNDLAGE		1
4	201.LK02-000	0	KONZOLA / CONSOLE / KONSOLE	SESTAVA	1
5	201.LK03-000	0	SVERAK / VICE / SCHRAUBSTOCK	SESTAVA	1
6	201.LK04-050	0	RAMENO / SHOULDER / SÄGERAHMEN	SESTAVA	1
7	31.1899-004	0	SAMOLEPKA / STICKER / AUFKLEBER	73x25	1
8	31.LK99-051	1	STITEK / LABEL / SCHILD	P 0.5 x 65	1
9	31.LK99-052	0	SAMOLEPKA / STICKER / AUFKLEBER	126x23	1
10	31.LK99-053	0	SAMOLEPKA / STICKER / AUFKLEBER	400x155	1
11	99.900.039	0	SAMOLEPKA / STICKER / AUFKLEBER		1
12	99.900.040	0	SAMOLEPKA / STICKER / AUFKLEBER		2
13	99.900.045	0	SAMOLEPKA / STICKER / AUFKLEBER		1
14	99.900.047	0	SAMOLEPKA / STICKER / AUFKLEBER		1
15	99.900.048	0	SAMOLEPKA / STICKER / AUFKLEBER		1
16	99.900.049	0	SAMOLEPKA / STICKER / AUFKLEBER		1
17	99.900.050	0	SAMOLEPKA / STICKER / AUFKLEBER		1
18	99.900.051	0	SAMOLEPKA / STICKER / AUFKLEBER		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

7.5. Rameno / Arm / Arm – Practix 285.230 G Manual



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Cislo Sestavy	Ver.	Nazev sestavy
201.LK04-150	0	RAMENO/SHOULDER/SÄGERAHMEN

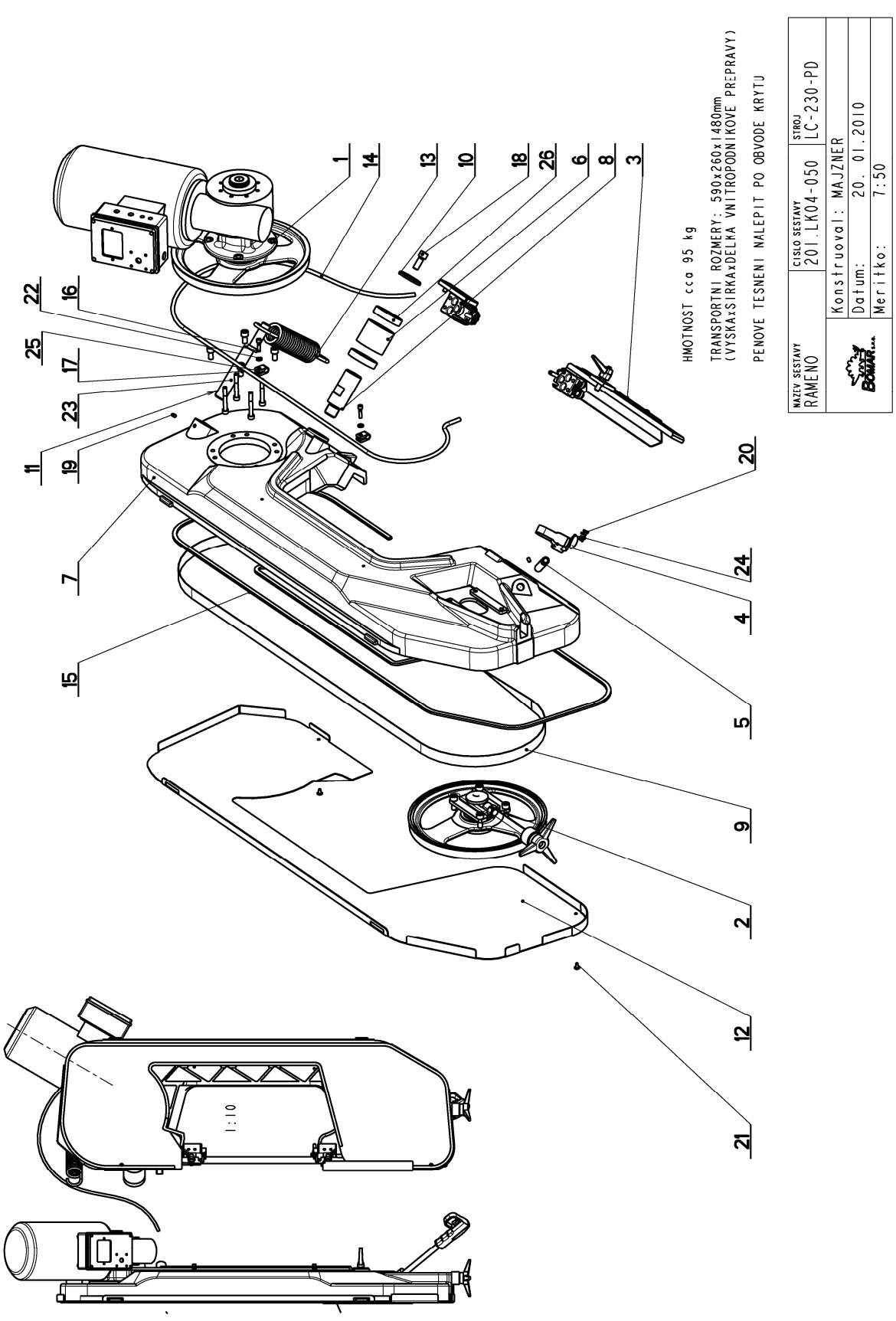
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.LK05-060	1	POHON / DRIVE / ANTRIEB	SESTAVA	1
2	201.LK08-000	1	NAPINANI / TENSIONING / SPANNUNG	SESTAVA	1
3	201.LK10-000	0	VEDENI / GUIDE / BACKENFÜHRUNG	SESTAVA	1
4	30.LK02-004	0	TRUBKA / TUBE / ROHR	TR 70x5	1
5	30.LK04-005	0	CEP / LUG / BOLZEN	d 42	1
6	30.LK04-010	0	PAS PILOVY 230 / SAW BELT / SÄGEBAND	27x0.9	1
7	30.LK04-022	0	DRZAK / HOLDER / HALTER	d 25	1
8	30.LK04-026	0	TAHLO / GUY ROD / ZUGSTANGE	HR 35x6	1
9	30.LK04-028	0	KRYT / COVER / ABDECKUNG		1
10	30.LK04-101	0	RAMENO / SHOULDER / SÄGERAHMEN	ODLITEK	1
11	30.LK04-104	0	DORAZ / STOP PIECE / ANSCHLAG	SVARENO	1
12	31.LM04-006	0	PRUZINA / SPRING / FEDER	d 7.1	1
13	42.020.001	0	HADICE / HOSE / SCHLAUCH	6x1.5	1
14	61.352.003	0	TESNENI / SEALING / DICHTUNG	9x5	1
15	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X25	2
16	90.001.25.029	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X12	1
17	90.002.2D.023	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X10	1
18	90.011.27.014	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M12X30	1
19	90.013.27.020	0	SROUB / BOLT / SCHRAUBE	M5x10	2
20	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6,4	2
21	90.151.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8	1
22	94.204.002	0	DRZAK / HOLDER / HALTER		2
23	95.001.011	0	LOZISKO / BEARING / LAGER	6008 2RS	2

HMOTNOST cca 95 kg

TRANSPORTNI ROZMERY: 650x260x1400 mm
(VYSKAxSIRKAxDELKA VNITROPODNIKOVE PREPRAVY)

PENOVE TESNENI NALEPIT PO OBVODE KRYTU

7.7. Rameno / Arm / Arm – Practix 285.230 G Pulldown



Cislo Sestavy	Ver.	Nazev sestavy
201.LK04-050	0	RAMENO/SHOULDER/SÄGERAHMEN

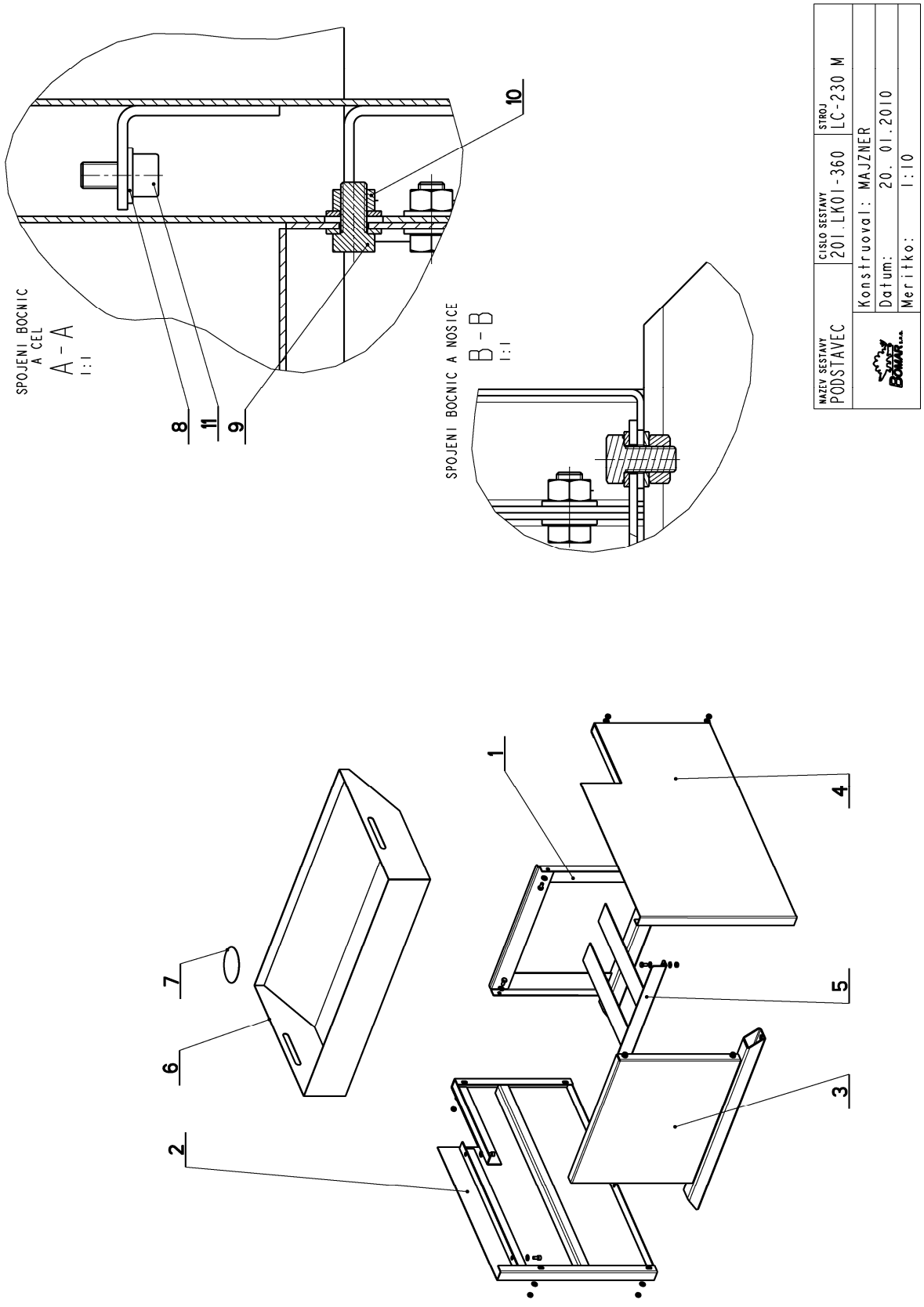
Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	201.LK05-060	1	POHON / DRIVE / ANTRIEB	SESTAVA	1
2	201.LK08-000	1	NAPINANI / TENSIONING / SPANNUNG	SESTAVA	1
3	201.LK10-000	0	VEDENI / GUIDE / BACKENFÜHRUNG	SESTAVA	1
4	30.3104-007	0	RUKOJET / HANDLE / GRIFF		1
5	30.LC04-008	1	TRUBKA / TUBE / ROHR	TR 16x3	1
6	30.LK02-004	0	TRUBKA / TUBE / ROHR	TR 70x5	1
7	30.LK04-001	0	RAMENO / SHOULDER / SÄGERAHMEN	ODLITEK	1
8	30.LK04-005	0	CEP / LUG / BOLZEN	d 42	1
9	30.LK04-010	0	PAS PILOVY 230 / SAW BELT / SÄGEBAND	27x0.9	1
10	30.LK04-019	0	VIKO / COVER / DECKEL	d 55	1
11	30.LK04-027	0	DRZAK / HOLDER / HALTER	SVARENO	1
12	30.LK04-028	0	KRYT / COVER / ABDECKUNG		1
13	31.LK04-021	0	PRUZINA / SPRING / FEDER	d 7.1	1
14	42.020.001	0	HADICE / HOSE / SCHLAUCH	6x1.5	1
15	61.352.003	0	TESNENI / SEALING / DICHTUNG	9x5	1
16	90.001.25.019	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X25	2
17	90.001.25.029	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X12	1
18	90.001.25.058	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X30	1
19	90.002.2D.023	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X10	2
20	90.009.00.002	0	SROUB / BOLT / SCHRAUBE	SROUB 3X10	4
21	90.013.27.020	0	SROUB / BOLT / SCHRAUBE	M5x10	2
22	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6,4	2
23	90.151.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8	1
24	94.004.002	0	KRYT / COVER / ABDECKUNG		1
25	94.204.002	0	DRZAK / HOLDER / HALTER		2
26	95.001.011	0	LOZISKO / BEARING / LAGER	6008 2RS	2

HMOTNOST cca 95 kg

TRANSPORTNI ROZMERY: 590x260x1480 mm
(VYSKAxSIRKAxDELKA VNITROPODNIKOVE PREPRAVY)

PENOVE TESNENI NALEPIT PO OBVODE KRYTU

7.9. Podstavec / Untergestell / Piedestal – Practix 285.230 G Manual



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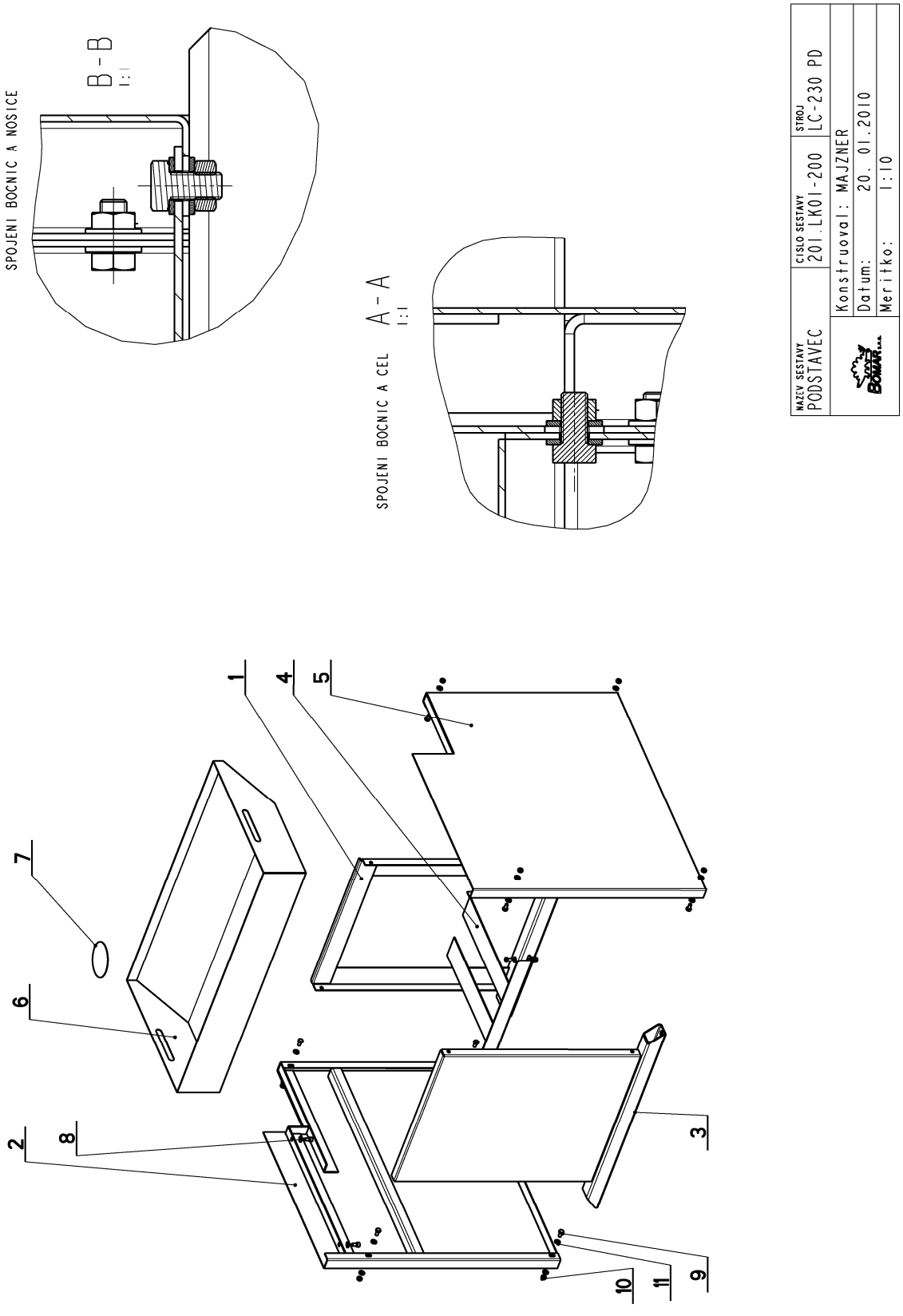
Cislo Sestavy	Ver.	Nazev sestavy
201.LK01-360	0	PODSTAVEC/BASE/UNTERSATZ

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LK01-361	0	CELO / HEAD / STIRN	SESTAVA	1
2	30.LK01-362	0	BOCNICE / SIDE PLATE / SEITENTEIL	SVARENO	1
3	30.LK01-363	0	CELO / HEAD / STIRN	SVARENO	1
4	30.LK01-367	0	BOCNICE / SIDE PLATE / SEITENTEIL	SVARENO	1
5	30.LK01-206	0	DRZAK / HOLDER / HALTER	SVARENO	1
6	30.LM01-305	0	VANA / TANK / WANNE	SVARENO	1
7	30.LM01-308	0	SITO / SIEVE / GITTERWERK	P 1-110	1
8	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	24
9	90.005.55.014	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8X16	10
10	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	10
11	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	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. Podstavec / Untergestell / Piedestal – Practix 285.230 G Pulldown



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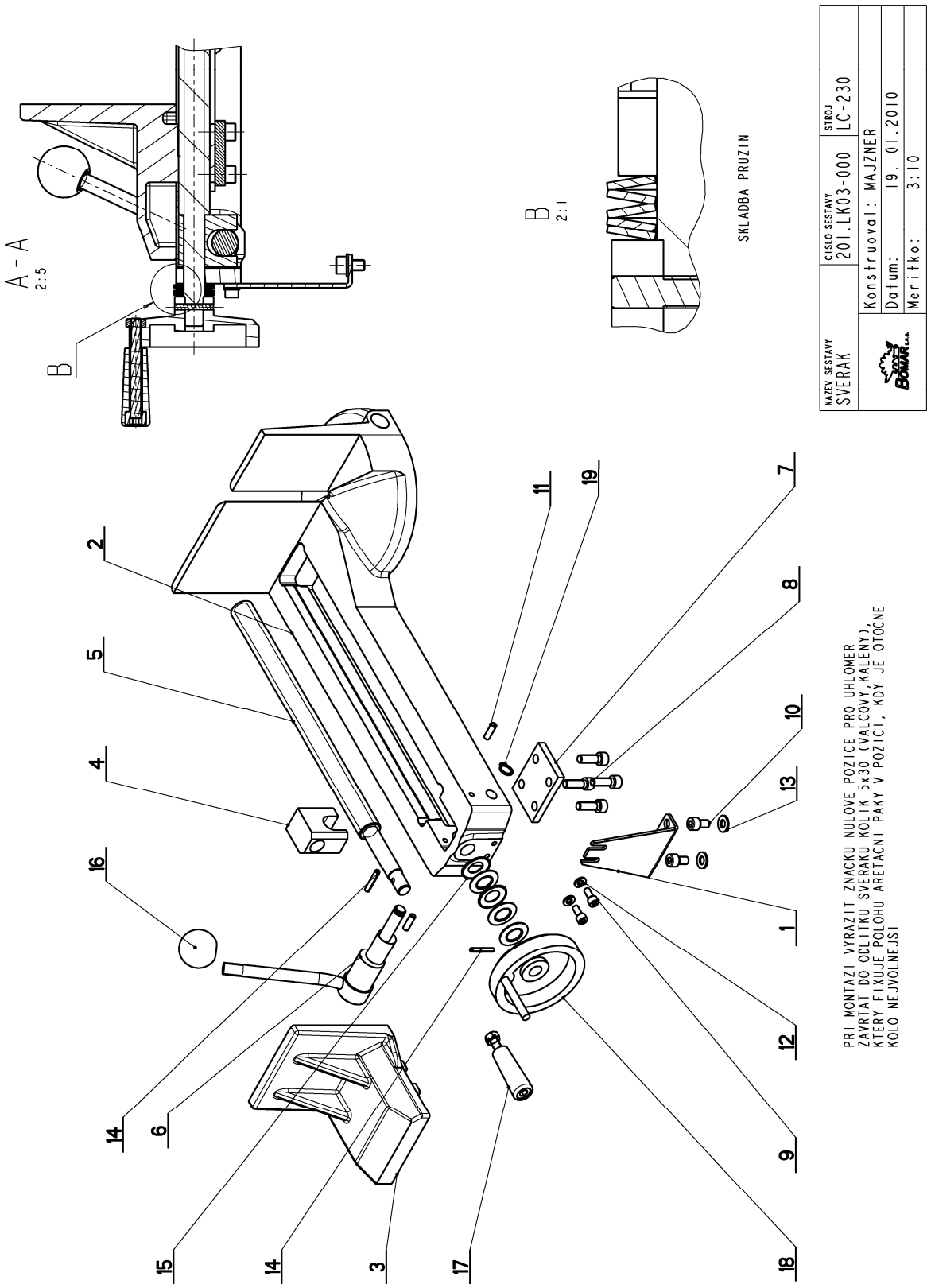
7.12. Kusovník / Stückliste / Piece list
Podstavec / Untergestell / Piedestal –
Practix 285.230 G Pulldown

Cislo Sestavy	Ver.	Nazev sestavy
201.LK01-200	0	PODSTAVEC/BASE/UNTERSATZ

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LK01-201	0	CELO / HEAD / STIRN	SESTAVA	1
2	30.LK01-202	0	BOCNICE / SIDE PLATE / SEITENTEIL	SVARENO	1
3	30.LK01-203	0	CELO / HEAD / STIRN	SVARENO	1
4	30.LK01-206	0	DRZAK / HOLDER / HALTER	SVARENO	1
5	30.LK01-207		BOCNICE / SIDE PLATE / SEITENTEIL	SVARENO	1
6	30.LM01-305	0	VANA / TANK / WANNE	SVARENO	1
7	30.LM01-308	0	SITO / SIEVE / GITTERWERK	P 1-110	1
8	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	4
9	90.005.55.014	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M8X16	10
10	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	10
11	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	24

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. Svěrák / Schraubstock / Vice

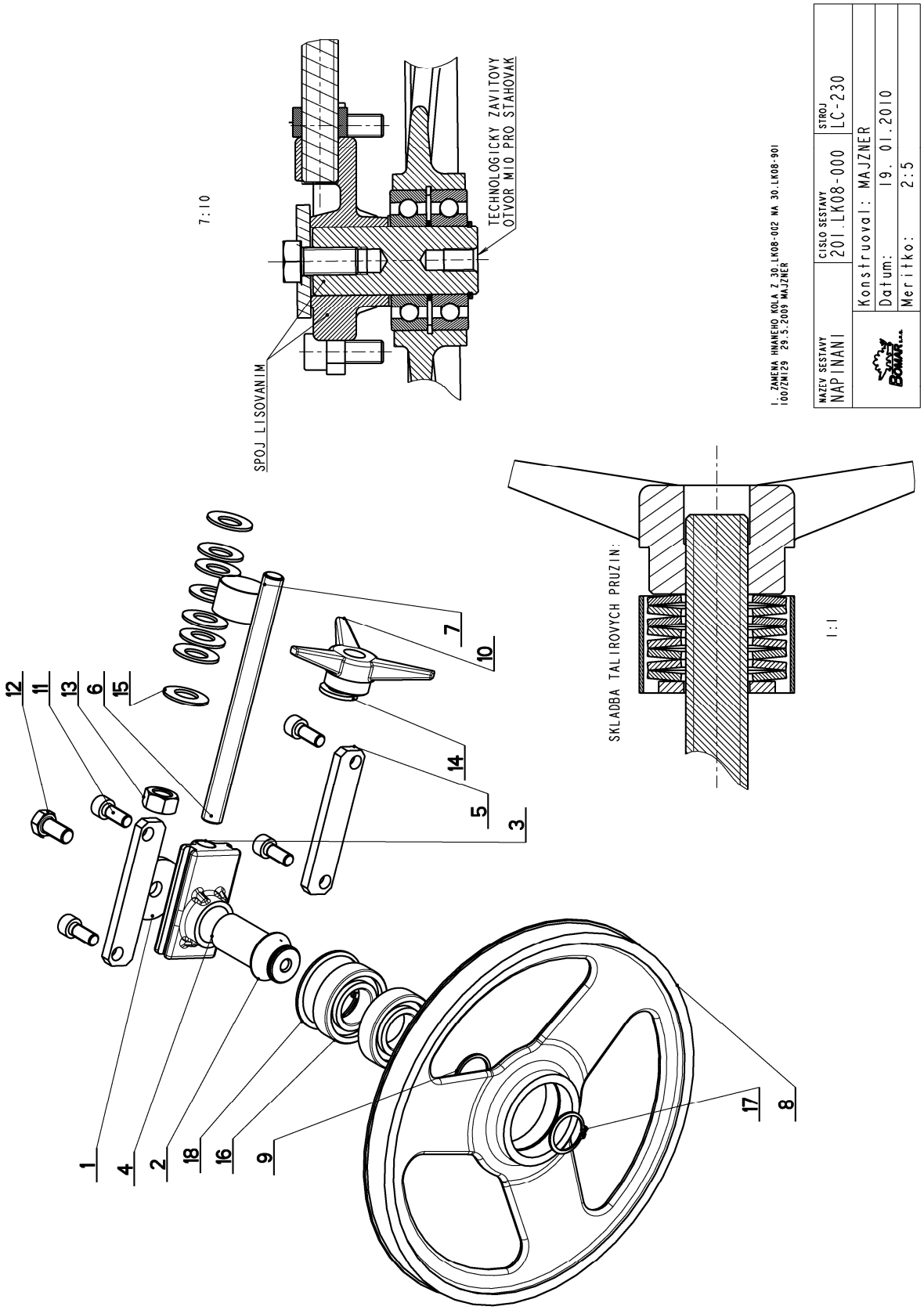


Cislo Sestavy	Ver.	Nazev sestavy
201.LK03-000	0	SVERAK/VICE/SCHRAUBSTOCK

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LC03-007	0	DRZAK / HOLDER / HALTER	P 3 - 70	1
2	30.LK03-001	0	TELESO SVERAKU / VICE BODY / SCHRAUBSTOCKKÖRPER	ODLITEK	1
3	30.LK03-002	0	CELIST POHYBLIVA / MOVING JAW / BEWEGLICHE BACKE	ODLITEK	1
4	30.LK03-003	0	KOSTKA / CUBE / WÜRFEL	HR 40x30	1
5	30.LK03-004	0	SROUB / BOLT / SCHRAUBE	TRAPEZ 24x5 L	1
6	30.LK03-005	0	EXCENTR / CAM / EXZENTER	SVARENO	1
7	30.LK03-006	0	PRILOZKA / STRAP / LASCHE	HR 50x8	1
8	90.001.25.033	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x25	4
9	90.001.25.092	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M6X14	2
10	90.001.55.082	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X14	2
11	90.002.2D.021	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X20	2
12	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6,4	2
13	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	2
14	90.303.0Z.010	0	KOLIK / PIN / BOLZEN	KOLIK 5X28	2
15	90.350.0Z.007	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	31.5x16.3x1.25	5
16	94.001.004	0	HLAVICE / HEAD / KOPF		1
17	94.010.002	0	RUKOJET / HANDLE / GRIFF		1
18	94.010.004	0	KOLO / WHEEL / UMLENKRAD	d 100/14H7	1
19	95.800.004	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 12	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

7.15. Napínání pásu / Sägebandspannung / Saw band tensing



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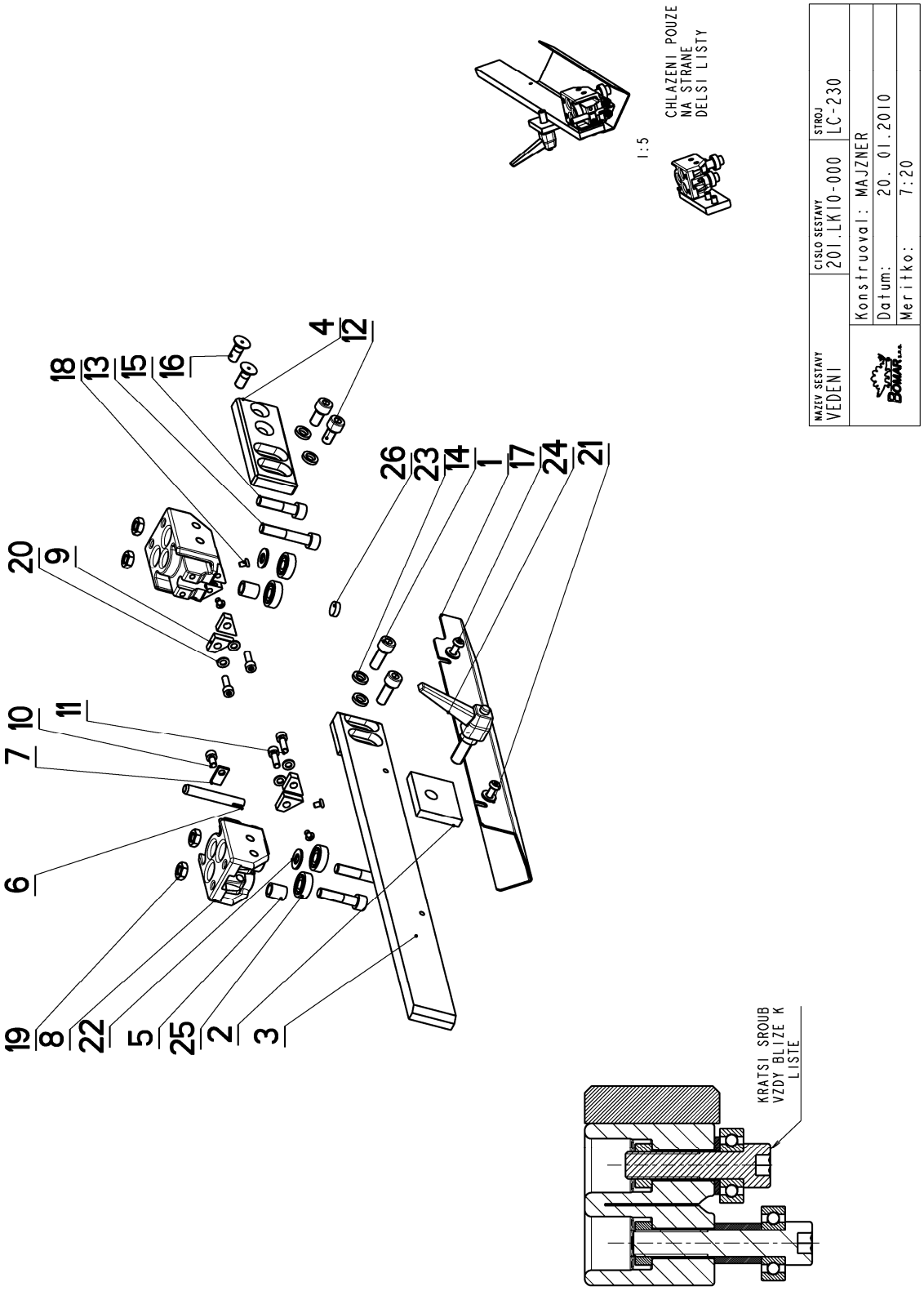
Cislo Sestavy	Ver.	Nazev sestavy
201.LK08-000	1	NAPINANI/TENSIONING/SPANNUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.0502-603	1	PODLOZKA / WASHER / UNTERLEGSCHEIBE	d50	1
2	30.0504-006	0	KROUZEK DISTANCNI / DISTANCE RING / DISTANZRING	VYPALEK	1
3	30.LK08-001	0	KOSTKA / CUBE / WÜRFEL	ODLITEK	1
4	30.LK08-003	0	CEP NAPINANI / TENSIONING LUG / SPANNUNGSBOLZEN	d 32	1
5	30.LK08-004	0	LISTA VODICI / LEAD TRIM / FÜHRUNGSLEISTE	HR 25x8	2
6	30.LK08-007	0	TYC ZAVITOVA / THREADED POLE / GEWINDESTANGE	M 16	1
7	30.LK08-008	0	TRUBKA / TUBE / ROHR	TR 40x2	1
8	30.LK08-901	0	KOLO NAPINACI / TENSIONING WHEEL / UMLENKRAD	ODLITEK	1
9	30.LM08-007	0	KROUZEK / RING / RING	TR 35x6	1
10	31.0104-006	0	HVEZDICE / STAR WHEEL / STERN	PLAST	1
11	90.001.25.047	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X25	4
12	90.005.55.031	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M12X25	1
13	90.100.55.008	0	MATICE / NUT / MUTTER	MATICE _ M16	1
14	90.150.50.009	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 17	1
15	90.350.0Z.002	0	PRUZINA TALIROVA / DISC SPRING / TELLERFEDER	35,5X18,3X2,0X2,8	8
16	95.001.019	0	LOZISKO / BEARING / LAGER	6206 2RS	2
17	95.800.013	0	KROUZEK POJIST.VNEJS / OUTSIDE SAFETY RING / SICHERUNGSRING AUßEN	POJISTNY KROUZEK 30	1
18	95.801.010	0	KROUZEK POJIST.VNITR / INSIDE SAFETY RING / SICHERUNGSRING INNEN	POJISTNY KROUZEK 62	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. Vedení pásu / Bandführung / Band guiding



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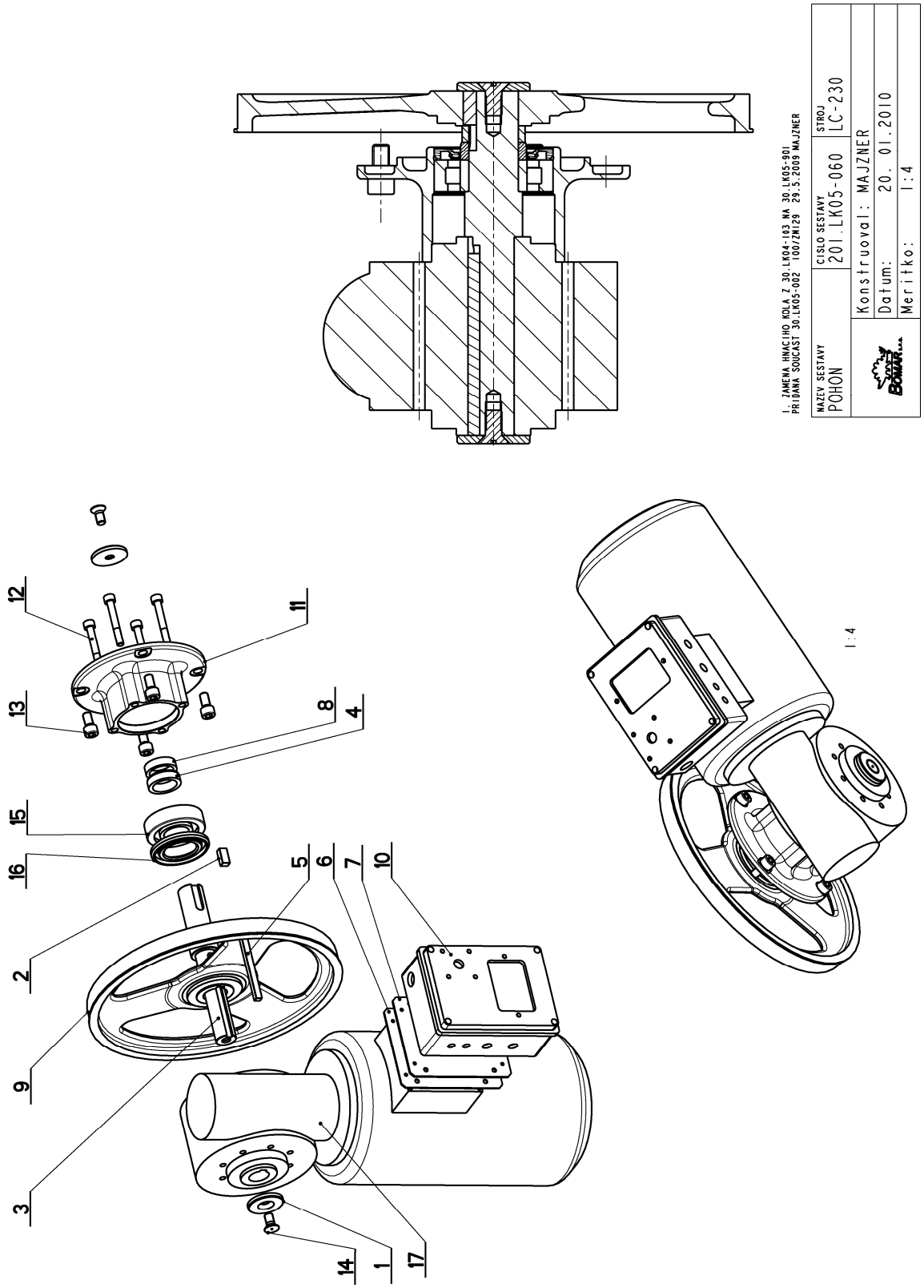
Cislo Sestavy	Ver.	Nazev sestavy
201.LK10-000	0	VEDENI/GUIDE/BACKENFÜHRUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LK10-002	0	KRYT PASU / BELT COVER / BANDABDECKUNG	P 1.5 - 116	1
2	30.LK10-003	0	UPINKA / FASTENER / SPANNEISEN	HR 40x8	1
3	30.LK10-004	0	LISTA / TRIM / LEISTE	SVARENO	1
4	30.LK10-005	0	LISTA / TRIM / LEISTE	HR 40x12	1
5	30.LK10-006	0	TRUBKA / TUBE / ROHR	TR 12x2	2
6	30.LK10-008	1	TRUBKA / TUBE / ROHR	TR 8x1	1
7	30.LK10-109	0	PRILOZKA / STRAP / LASCHE	P 2-10	1
8	30.LK10-201	0	KOSTKA VODICI / LEAD CUBE / FÜHRUNGSKLOTZ	ODLITEK	2
9	31.LK10-007	0	TVRDOKOV / HARD METAL / HM-SEGMENT	VYLISEK	4
10	90.001.25.007	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X10	1
11	90.001.25.009	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M5X16	4
12	90.001.25.031	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	8x16	2
13	90.001.25.037	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X45	2
14	90.001.25.104	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X22	2
15	90.001.55.035	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X35	2
16	90.011.27.027	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M8X20	2
17	90.013.27.004	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M5X12	2
18	90.013.27.017	0	SROUB PULKULATY / HALF ROUND BOLT / HALBRUNDSCHRAUBE	M4x6	4
19	90.101.55.001	0	MATICE / NUT / MUTTER	MATICE M8	4
20	90.150.50.003	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 5,3	4
21	90.150.50.004	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 6,4	2
22	90.150.50.005	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 8,4	2
23	90.163.00.001	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	M8 NORD-LOCK	4
24	94.008.005	0	KLICKA / HANDLE / KURBEL	M10	1
25	95.001.001	0	LOZISKO / BEARING / LAGER	608 2RS	4
26	99.040.002	0	TVRDOKOV / HARD METAL / HM-SEGMENT	d 12	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

7.19. Pohon / Antrieb / Drive



Manual version: 1.03/ Feb. 2010
Manual rev.: 1

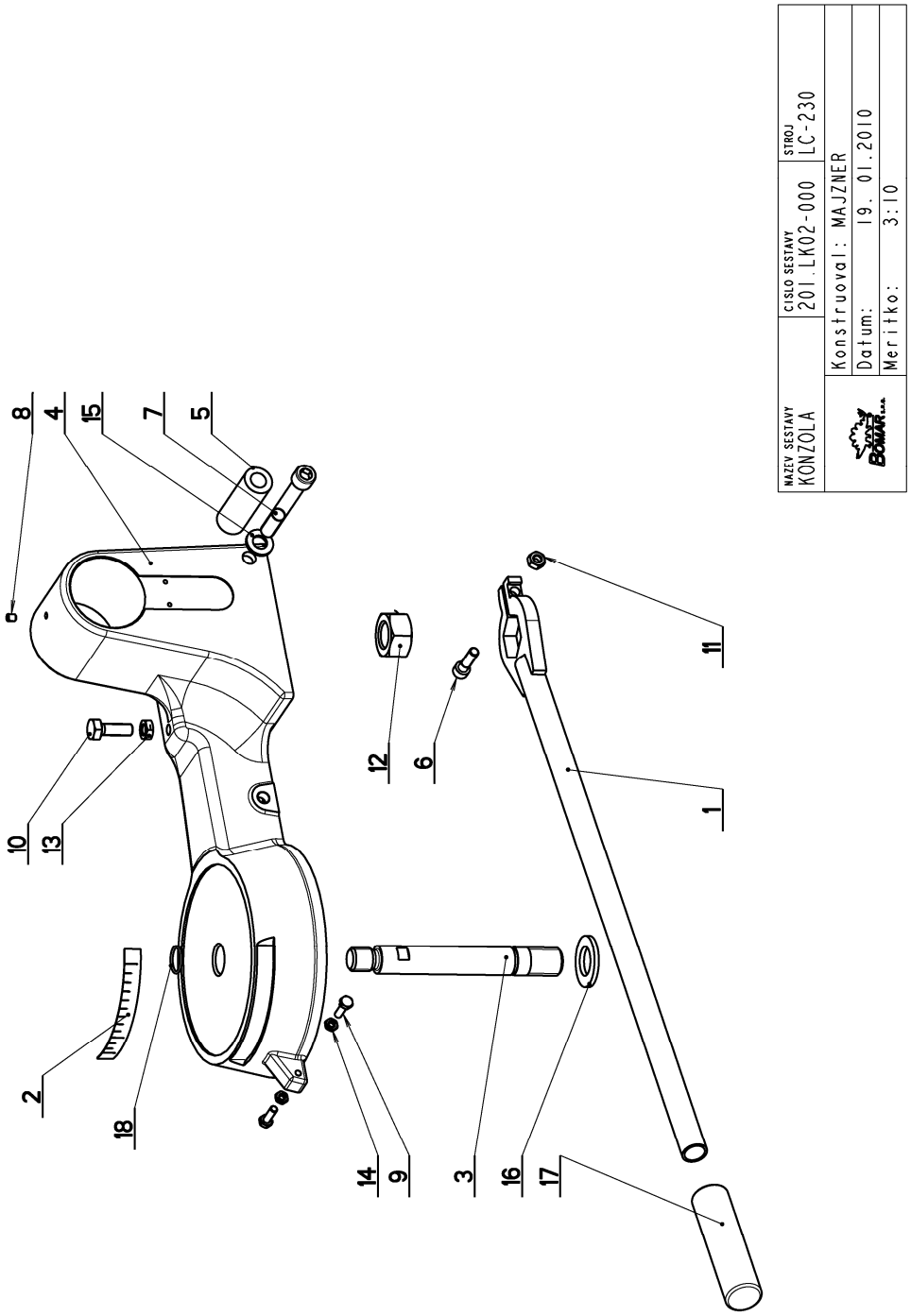
Cislo Sestavy	Ver.	Nazev sestavy
201.LK05-060	I	POHON/DRIVE /ANTRIEB

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
I	30.1502-465	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	d 45	2
2	30.LC04-014	I	PERO / SPRING / FEDER	PERO 10x8	I
3	30.LK04-004	0	HRIDEL / SHAFT / WELLE	d 35	I
4	30.LK04-007	I	KROUZEK / RING / RING	TR 42x10	I
5	30.LK04-012	0	PERO / SPRING / FEDER	PERO 8x7	I
6	30.LK04-117	0	PLECH / PLATE / BLECH	P 1.5-110	I
7	30.LK04-118	0	GUMA / RUBBER / GUMMI	G 2-110	I
8	30.LK05-002	0	KROUZEK DISTANCNI / DISTANCE RING / DISTANZRING	TR 38x4	I
9	30.LK05-901	0	KOLO HNACI / DRIVE WHEEL / ANTRIEBSRAD	ODLITEK	I
10	30.LM04-025	0	KRABICE ELEKTRO / ELECTRO BOX / ELEKTRODOSE	153x110x66	I
11	30.LM04-209	0	PRIRUBA / FLANGE / FLANSCHE	ODLITEK	I
12	90.001.25.040	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X60	4
13	90.001.25.046	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M10X20	4
14	90.011.27.008	0	SROUB ZAPUSTNY / COUNTERSINK BOLT / SENKSCHRAUBE	SROUB M10X20	2
15	95.201.005	0	LOZISKO / BEARING / LAGER	VALECKOVA L. IRADA	I
16	95.830.005	0	GUFERO / GIT SEAL / DICHTUNG	GUFERO 40X72X7	I
17	99.006.004	0	POHON / DRIVE / ANTRIEB	FCPDK063	I

I. ZAMENA HNACIHO KOLA Z 30.LK04-103 NA 30.LK05-901
PRIDANA SOUCAST 30.LK05-002 100/ZM129 29.5.2009 MAJZNER

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

7.21. Konzola / Konsole / Console

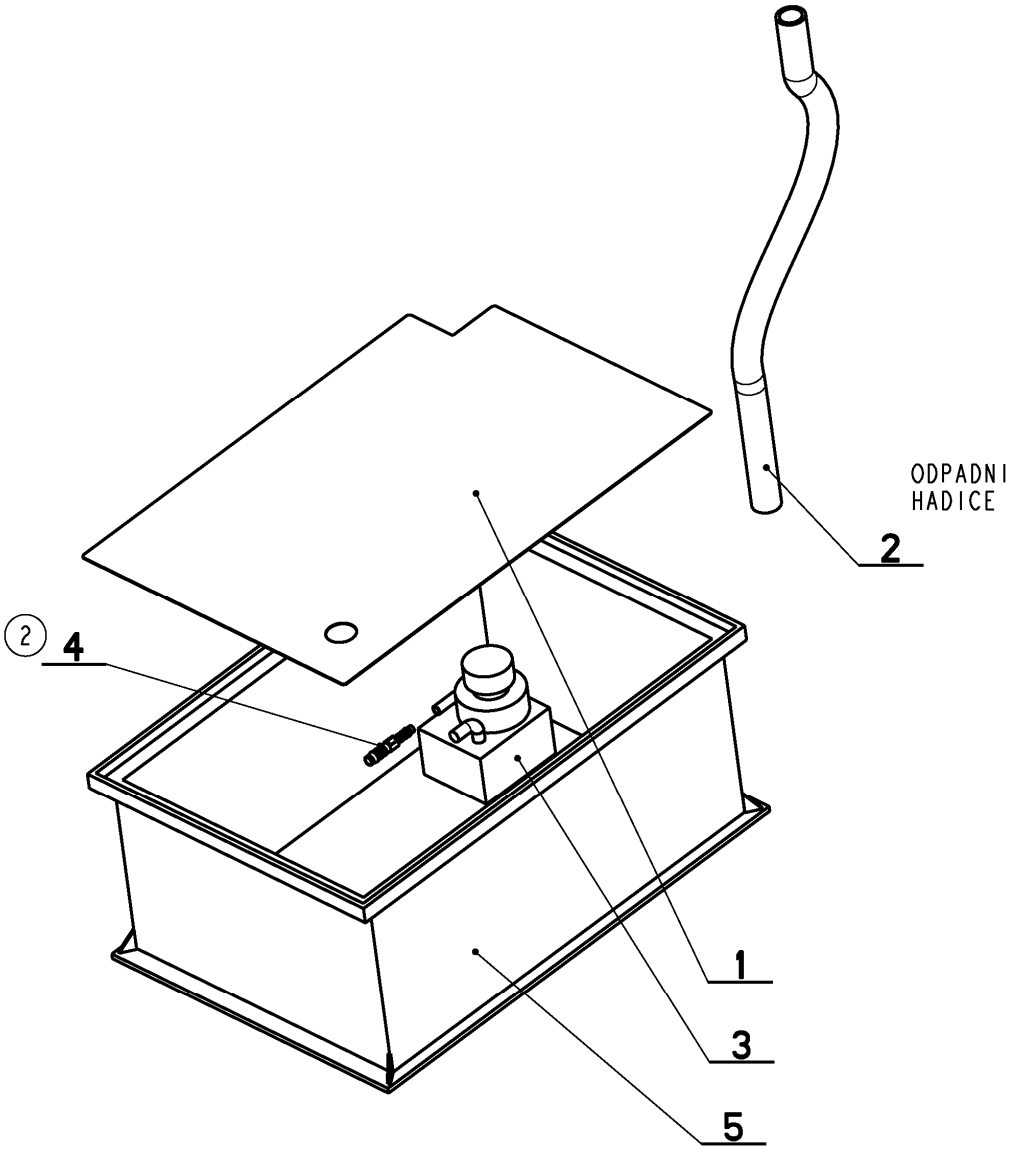


Manual version: 1.03/ Feb. 2010
Manual rev.: 1

Cislo Sestavy	Ver.	Nazev sestavy
201.LK02-000	0	KONZOLA/CONSOLE/KONSOLE

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LK02-003	0	PAKA / LEVER / HEBEL	SVARENO	1
2	30.LK02-005	0	STUPNICE / SCALE / SKALA	P 0.5-15	1
3	30.LK02-006	0	SROUB / BOLT / SCHRAUBE	d 24	1
4	30.LK02-101	1	KONZOLA / CONSOLE / KONSOLE	ODLITEK	1
5	30.LK02-102	0	TRUBKA / TUBE / ROHR	TR 25x5	1
6	90.001.25.034	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M8X30	1
7	90.001.25.072	0	SROUB IMBUS / ALLEN HEAD BOLT / IMBUSSCHRAUBE	M12X90	1
8	90.002.2D.029	0	SROUB STAVECI / ADJUSTMENT BOLT / STELLSCHRAUBE	SROUB M6X8	1
9	90.005.55.008	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M6X20	2
10	90.005.55.XXX	0	SROUB 6HRANNY / 6 SIDED BOLT / SECHSKANTSCHRAUBE	SROUB M10X30	1
11	90.100.55.005	0	MATICE / NUT / MUTTER	MATICE _ M8	1
12	90.100.55.010	0	MATICE / NUT / MUTTER	MATICE _ M24	1
13	90.101.55.002	0	MATICE / NUT / MUTTER	MATICE M10	1
14	90.101.55.008	0	MATICE / NUT / MUTTER	MATICE M6	2
15	90.150.50.007	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	PODLOZKA 13	1
16	90.150.50.016	0	PODLOZKA / WASHER / UNTERLEGSCHEIBE	25 (ZN)	1
17	94.004.502	0	RUKOJET / HANDLE / GRIFF	D22	1
18	96.002.046	0	KROUZEK O DYNAMICKY / DYNAMIC O RING / O-RING DYNAMISCH	20x2 NBR 70Sh p	1

7.23. Chlazení / Kühlung / Cooling



HADICE A ELEKTRICKE KABELY NA VHODNYCH MISTECH SPOJIT LEPICI PASKOU

1.VLOZENA NOVA SOUCAST (REDUKCE ROZVODU), 2.1.06-MAJZNER

2.PRID.REDUKCE ROVNA GRS 8-6 (94.202.009). 095/ZM122
26.5.2009 SLEZACKOVA

NAZEV SESTAVY	CISLO SESTAVY	STROJ
CHLAZENI	201.LC06-000	LC-230 I LC-180-260 I
BOMAR	Konstruoval: MAJZNER	
	Datum: 19. 01.2010	
	Meritko: 1:5	

Cislo Sestavy	Ver.	Nazev sestavy
201.LC06-000	2	CHLAZENI/COOLING/KÜHLUNG

Poz.	Objednaci cislo	Ver.	Nazev polozky	Rozmer	Ks
1	30.LC06-001	2	KRYT / COVER / ABDECKUNG	P 0.8x300	1
2	42.020.004	0	HADICE / HOSE / SCHLAUCH	25x3	1
3	91.020.019	0	CERPADLO CHLAZENI / COOLING PUMP / KÜHLMITTELPUMPE		1
4	94.202.009	0	REDUKCE / REDUCTION / ADAPTOR / REDUKTION		1
5	94.403.002	0	KRABICE / BOX / DOSE	195x315x465	1

1.VLOZENA NOVA SOUCAST (REDUKCE ROZVODU), 2.1.06-MAJZNER

2.PRID.REDUKCE ROVNA GRS 8-6 (94.202.009). 095/ZM122
26.5.2009 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

BOMAR, spol. s r.o.
Těžební 1236/1
627 00 Brno
Česká republika

tel: *+420 533 426 100*
fax: *+420 533 426 109*
e-mail: info@bomar.cz

Záruční list

Stroj:	strojní pásová pila na kov
Typ:	Practix 285.230 G .....
Výrobní číslo:	.....
Datum kontroly:	.....

ZÁRUČNÍ DOBA: 12 měsíců od data *prodeje*, při osmi hodinách provozu denně. U dílů, které nejsou u prodávajícího dále zpracovávány, se záruka stanovuje na základě záručních podmínek stanovených dodavatelem dílu.

Záruka se vztahuje:

- na stroj zakoupený u firmy Bomar, spol. s r.o. nebo u jejího autorizovaného prodejce.
- na poškození z důvodu vady materiálu, konstrukce anebo montáže.
- záruka je platná pouze na území České republiky.

Záruka se nevztahuje:

na poškození vlivem živelných pohrom, nedodržením návodu k obsluze a norem v něm uvedených, umístněním stroje v nevhodném prostředí, dopravou, chybnou a neodbornou obsluhou. Prodávající nenese v tomto případě odpovědnost za škody způsobené závadou stroje a možný ušlý zisk.

Záruka se nevztahuje na spotřební materiál, tj.:

- pilový pás
- čistící kartáček
- pohon čistícího kartáčku
- ložiska vodících kostek
- tvrdokovové vedení pilového pásu
- oběžná kola pilového pásu.

Záruční servis je vždy zajištěn prodávajícím. Zákazník souhlasí, že uhradí cestovní náklady servisního technika související s opravou. Při neopodstatněném využití servisu v záruční době bude tato oprava a cestovní náklady s ní spojené účtovány kupujícímu v plné výši.

Duplikát záručního listu se nevystavuje. Za jeho správnost a originálnost ručí zákazník. Při uplatnění záruční i pozáruční opravy je nutné reklamaci zaslat poštou nebo faxem. V reklamaci musí být uveden přesný popis závady, typ stroje, výrobní číslo stroje a datum dodání. Zároveň s oznámením o reklamaci je nutno zaslat také kopii tohoto záručního listu.

Datum prodeje:

Razítko a podpis prodejce: