



practix 285.230 G manual practix 285.230 G pulldown

Operating Instructions for Band Saw

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



Serial number:

Service and information

1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

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Declaration of Conformity

according to the Directive of the European Parliament and the Council 98/37/EC modified by the Directive of the European Parliament and the Council 98/79/EC (statutory order num. 24/2003 Dig.), according to the Directive of the Council 73/23/EEC modified by the Directive of the Council 93/68/EEC (statutory order num. 17/2003 Dig.) and according to the Directive of the Council 89/336/EEC modified by the Directive 93/68/EEC (statutory order num. 18/2003 Dig.)

Manufacturer: BOMAR, spol. s r.o.
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we hereby declare that the machinery

practix 285.230 G

satisfy all the requirements stated in the above Directives and that the machinery is safe for defined usage. Measures, which ensure conformity with all machinery on the market, were adopted and practiced.

To ensure the conformity, the following directives were applied:

- the Directive of the European Parliament and the Council 98/37/EC modified by the Directive of the European Parliament and the Council 98/79/EC
- the Directive of the Council 73/23/EEC modified by the Directive of the Council 93/68/EEC
- the Directive of the Council 89/336/EEC modified by the Directive of the Council 93/68/EEC

Cross-reference for the harmonized technical standards:

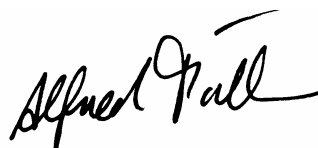
- ČSN EN ISO 12100-1:2004
- ČSN EN ISO 12100-2:2004
- ČSN EN 13898:2004
- ČSN EN 614-1:1997
- ČSN EN 953:1998
- ČSN ISO 3746:1996
- ČSN EN 60204-1:2000
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Alfred Pichlmann,, Managing Director



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The operating instructions must be read by the person, who keeps in touch with the machine before transportation, installation, using, servicing, repair, 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** 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.

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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, 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 pulldown version of 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!

Do not start the machine, if the covers are not on their places!

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.

1.5.1. 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.

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.



Enhanced risk!

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

1.5.2. Saw arm cover

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

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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!

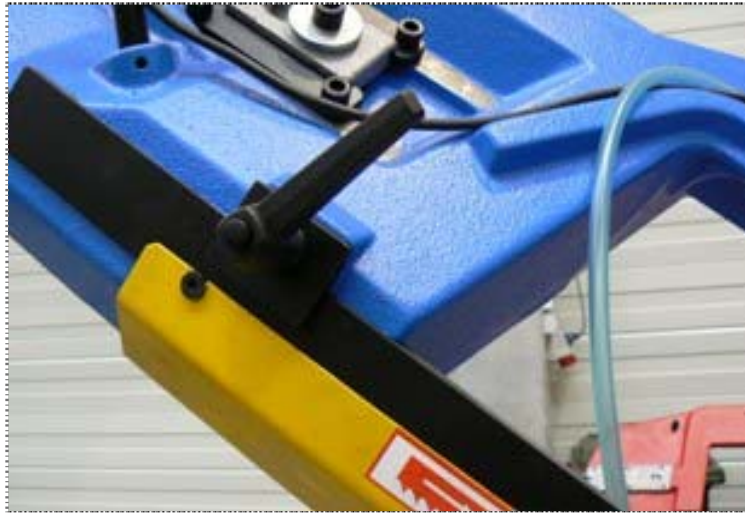


Fig. 1 – Saw band cover

1.5.4. Saw band drive Limit switch in manual version of machine

Manual version of machine includes limit switch on saw band drive which disconnects the drive when cutting is finished and saw arm falls into the lower position

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.

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

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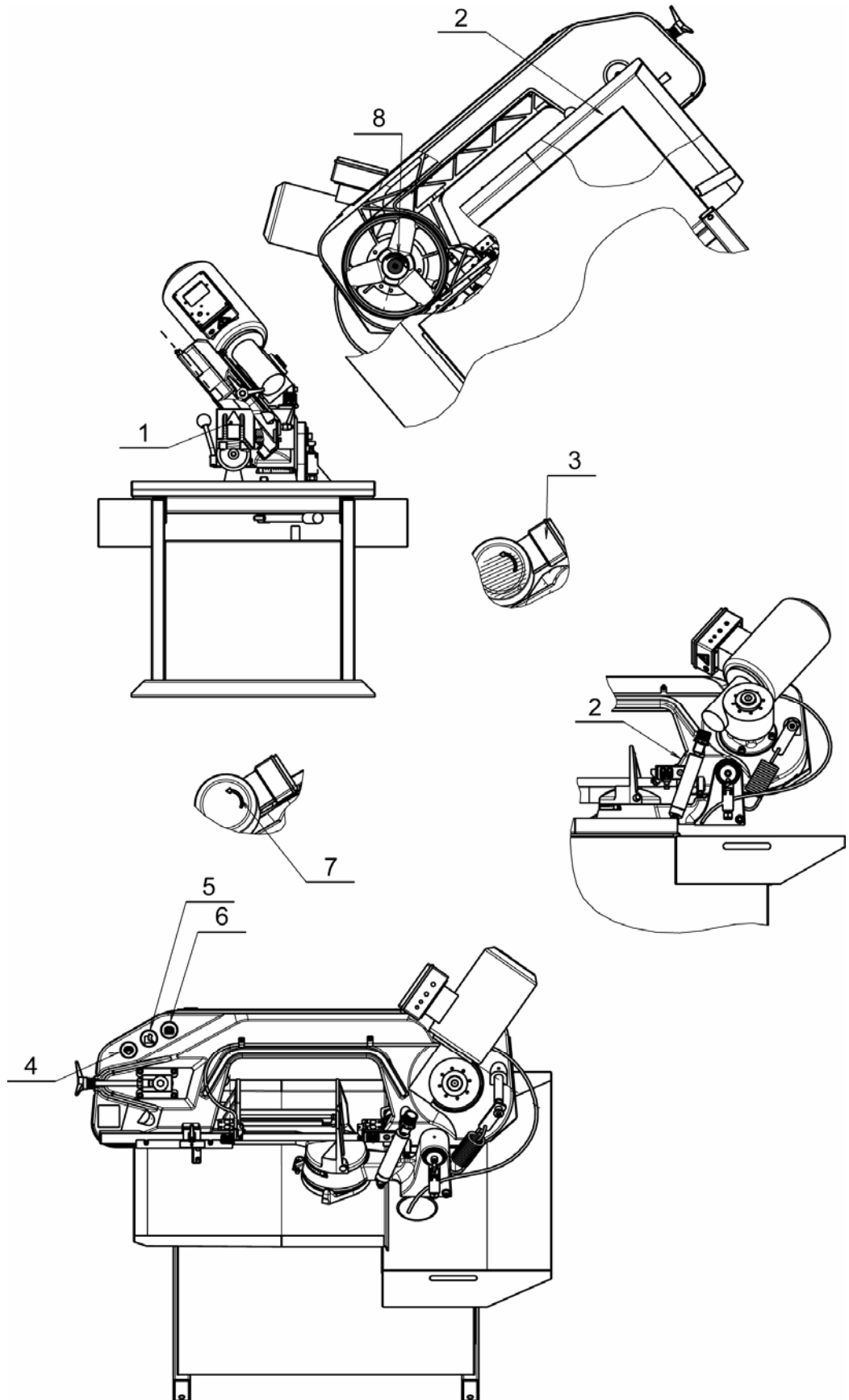
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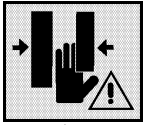








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Poz.	Obj. číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Mng.
Pos.	Reference No.	Item		Pcs.
1	99.900.039	Samolepka / Aufkleber / Self-adhesive label	 NS – Nebezpečí stlačení / Pressungsgefahr / Crushing hazard	1
2	99.900.040	Samolepka / Aufkleber / 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 / Verletzungsgefahr 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 goggles 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

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



Machine label is placed on saw arm near saw band tensing screw.

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2.1. Technical data

Machine weight :

Weight for manual version	215 kg
Weight for pulldown version	225 kg

Machine size practix 285.230 G manual:

Length	1410 mm
Width	915 mm
Height	1270 mm

Machine size *practix 285.230 G pulldown*:

Length	1410 mm
Width	920 mm
Height	1520 mm

Noise level:

Noise for manual version	$L_{Aeqv}=62,6 / 69,4$ dB for 35 m.min ⁻¹ / 72 m.min ⁻¹
Noise for pulldown version	$L_{Aeqv}= 59,5 / 65,4$ dB for 35 m.min ⁻¹ / 72 m.min ⁻¹

Virbrations:

Vibrations for pulldown version	0,08 / 0,2 m.s ⁻² for 35 m.min ⁻¹ / 72 m.min ⁻¹
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Driving engine of the band saw:

Type	MSD90L-8/4
Supply voltage	~ 3×400 V, 50 Hz
Output	0,7/1,1 kW
Revolutions	1400 / 690 min ⁻¹

Cooling pump:

Type	S1
Supply voltage	~ 1×230V, 50Hz
Capacity	15 l

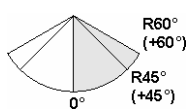

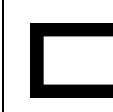


Size of the saw band:

2720×27×0,90 mm

Cutting speed:

35/72 m.min ⁻¹

Cutting angles:

				
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

2.2. Level of acoustic pressure

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.. 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.

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2.3. Rozměrové schéma / Aufstellzeichnung / Installation diagram
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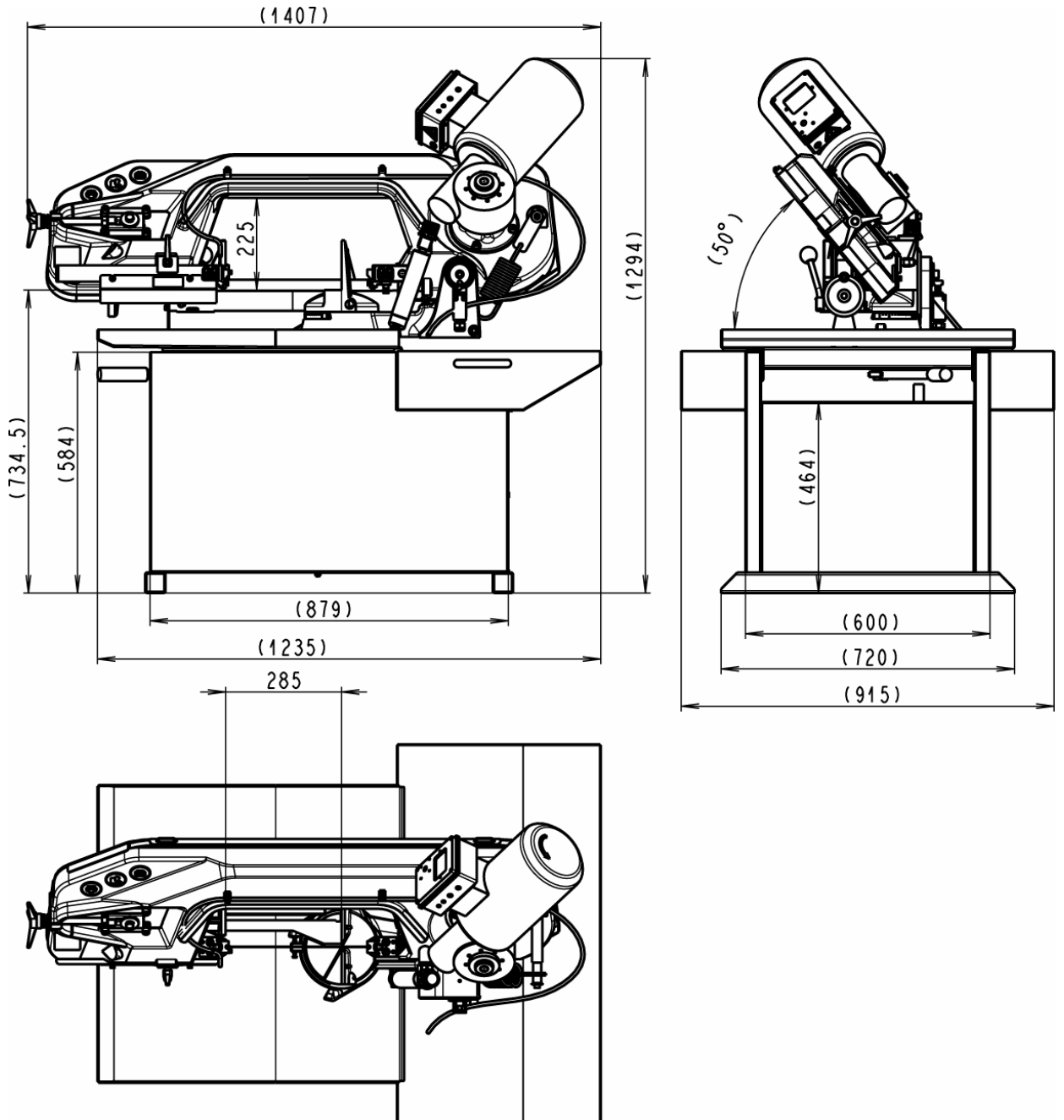
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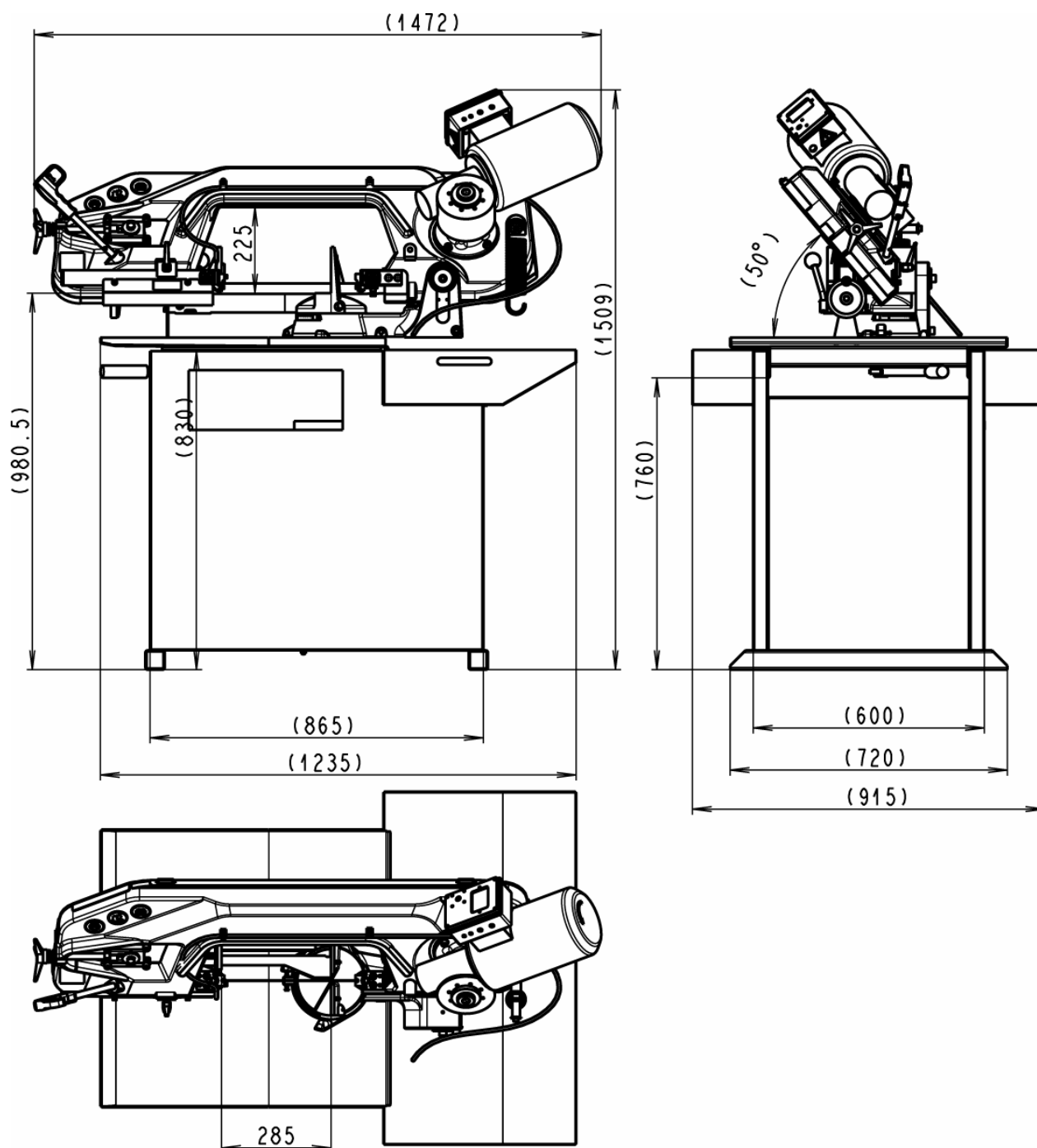
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2.4. Rozměrové schéma / Aufstellzeichnung / Installation diagram
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2.5. Popis / Beschreibung / Description – practix 285.230 G manual

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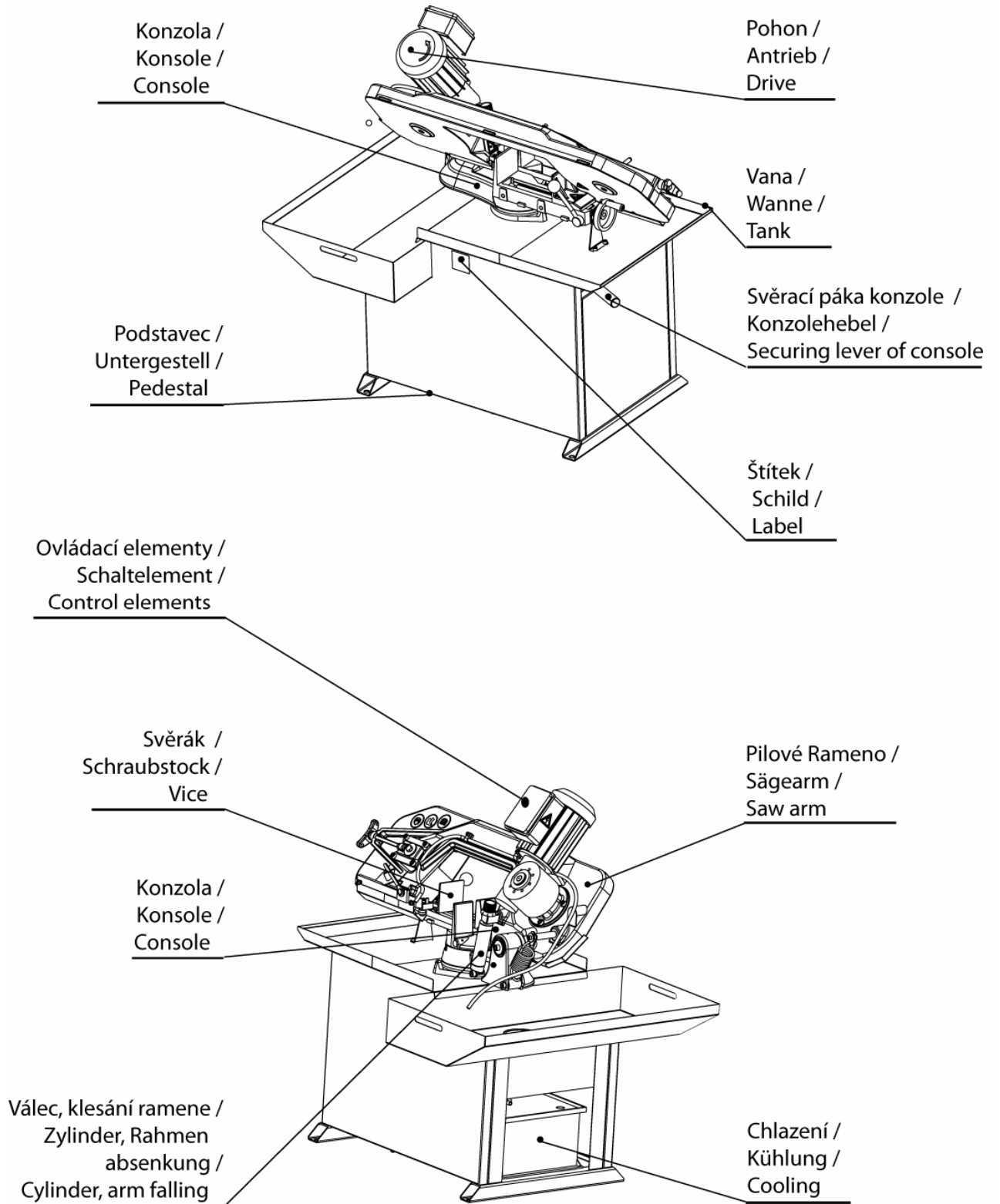
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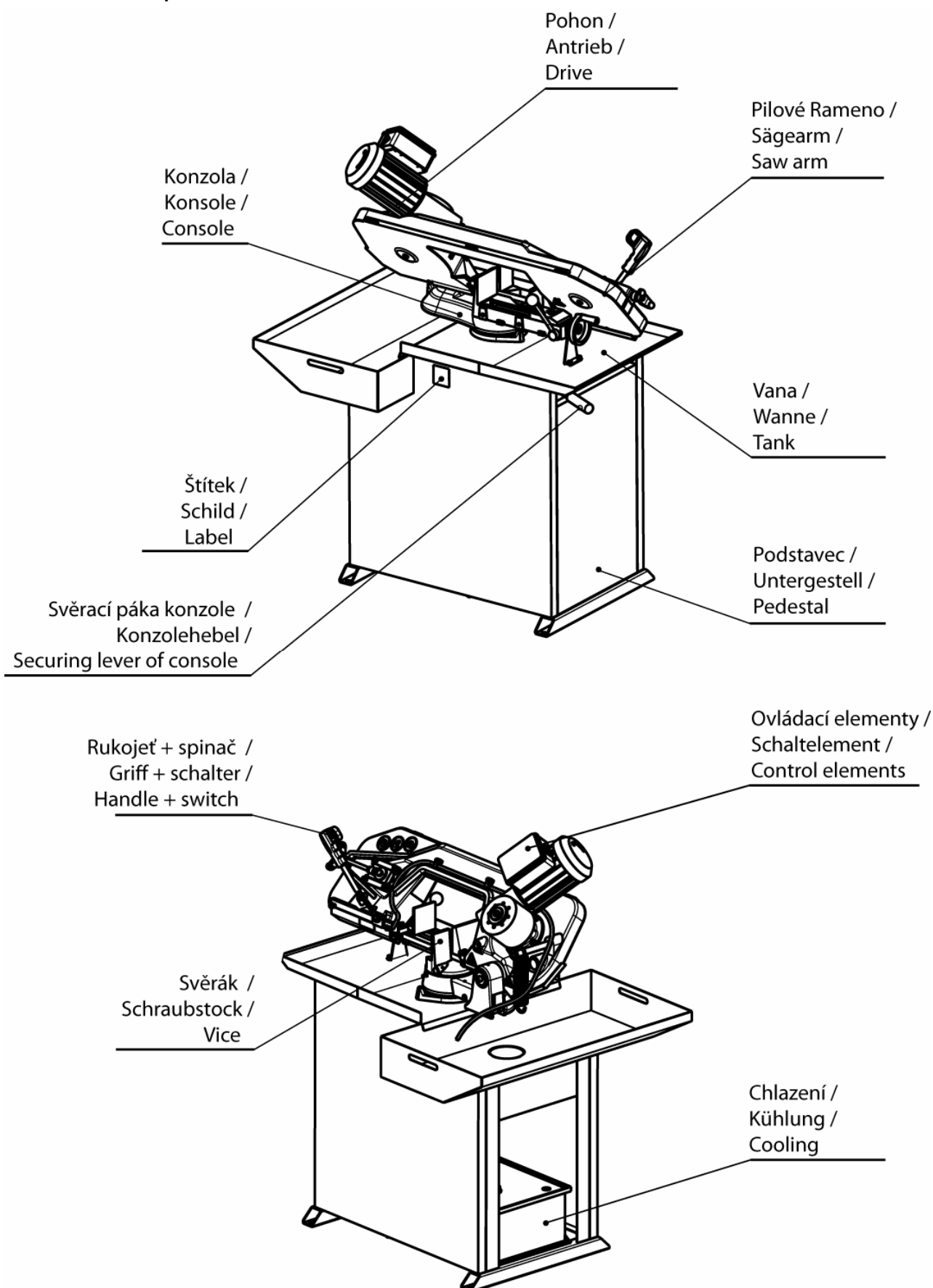
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2.6. Popis / Beschreibung / Description – practix 285.230 G pulldown



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2.7. Transportation and stocking

2.7.1. 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 licence 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.

2.7.2. 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.
- The machine has to be screwed to a pallet for the transport!

2.7.3. 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!

2.8. Activation

2.8.1. 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.

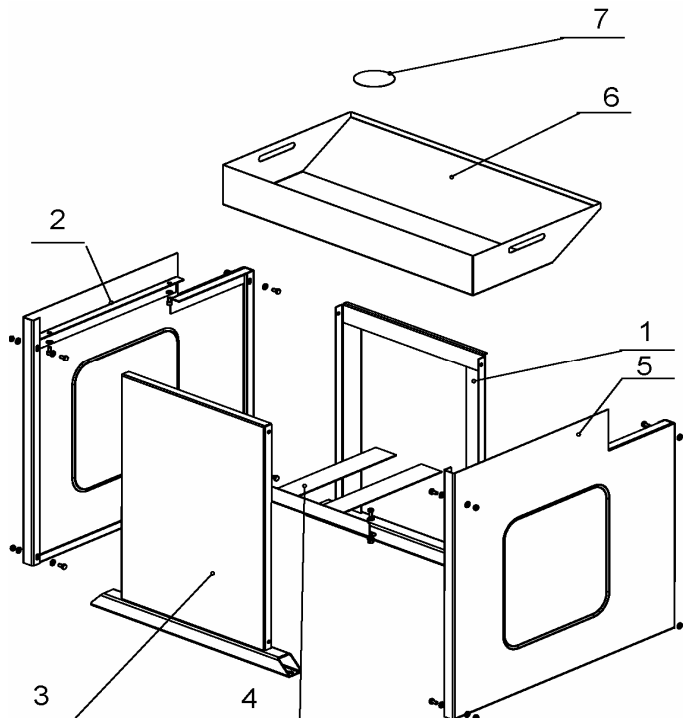
2.8.2. Band saw unpacking and assembling

Remove the packing from the machine and unpack all parts.



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

2.8.3. Pedestal assembly



1. Screw on the partition **(2,5)** and foreheads **(1,3)** together by means of screws and nuts – 8x.
2. Fix the support for cooling **(4)** – 2 screws.
3. Put the tank **(6)** in with sieve **(7)** freely.

2.8.4. Assembly of the band saw onto pedestal

1. Set the base with mounted band saw into pedestal and fix it by four screws (without nuts).
2. Install the motor on the worm gearbox flange – 4 screws.

2.8.5. 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 (chapter Technical data)

+ Weight of accessories

+ Maximum weight of material

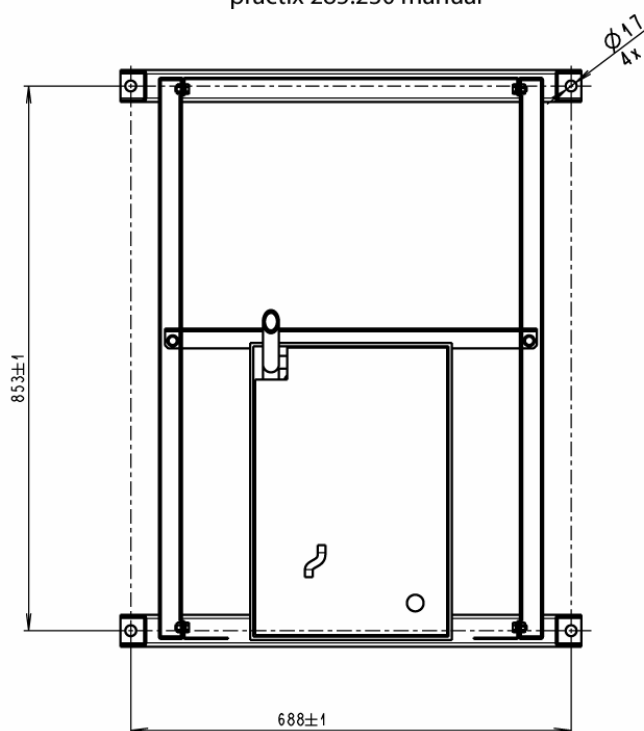
- The machine must be levelled at the horizontal position. All feet of the machine must touch with the floor after levelling.
- The machine must be levelled by means of the calibrated spirit level. Spirit level is put on the vice area. Set the roller conveyors according to the spirit level.
- For machine 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.

2.9. Machine disposal after lifetime

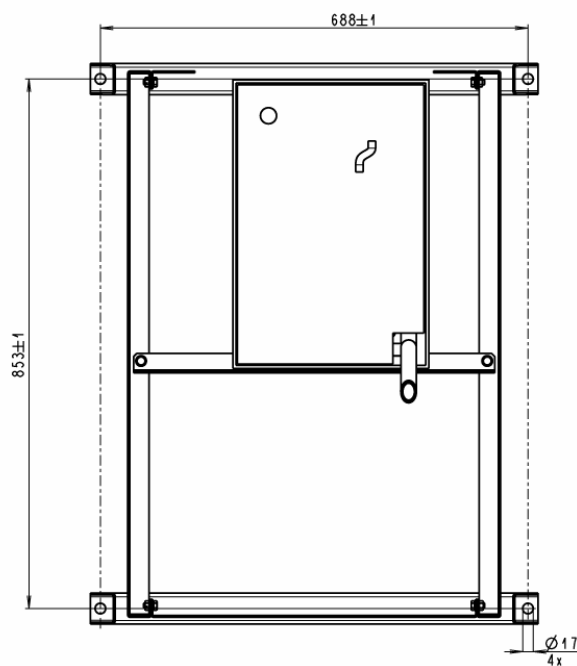
Blown out all service fluids (cooling liquid, hydraulic oil) into designated reservoir. Dismantle machine into separate parts and dispose them in accordance with valid directives.

2.10. Kotevní plan / Verankerungsplan / Grounding plan

practix 285.230 manual



practix 285.230 pull-down



Kotvicí materiál / Verankerungsmaterial / Grounding material

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

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

± 10 mm / 1 m

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2.11. Electrical connection

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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!

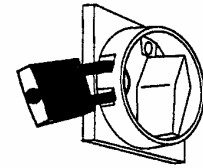
Electrical parameters of the machine:

- Service voltage: ~ 3×400 V, 50 Hz, TN-C-S
- Total input: see Technical data
- Max. fuse: 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.

2.11.1. Check the direction of the saw band!



Fig. 1 – Direction of 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.

2.12. Check machine functions

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 and the feeding vice. Drive the front feeder from the front position to the rear position. 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.

2.13. Saw band

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



2.13.1. Saw band size

2720×27×0,90 mm

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2.13.2. 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.
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.

2.13.3. 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.

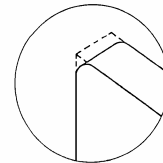
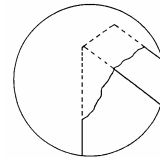
When cutting large pieces run the band for 15 minutes approximately.

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 saw bands too!



2.13.4. Tables for teeth selection:

SHAPED MATERIAL ($D_p, S = \text{mm}$)						
Note: Table shows tooth system selection for cutting one piece of the profile. For cutting of more pieces of the profiles (bundle), you must think of the size of the wall as double size of the wall of one profile (that means, size „S“ equates to 2xS). In table, there are tooth systems constant and variable.						
Size of the wall S [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 ($D = \text{mm}$)						
Constant tooth system		Variable tooth system				
length of the cut D	tooth system (Z_p, Z)	length of the cut D	tooth system (Z_p, Z)			
to 3 mm	32	to 30 mm	10-14			
to 6 mm	24	20-50 mm	8-12			
to 10 mm	18	25-60 mm	6-10			
to 15 mm	14	35-80 mm	5-8			
15-30 mm	10	50-100 mm	4-6			
30-50 mm	8	70-120 mm	4-5			
50-80 mm	6	80-150 mm	3-4			
80-120 mm	4	120-350 mm	2-3			
120-200 mm	3	250-600 mm	1,4-2			
200-400 mm	2	500-3000 mm	0,75-1,25			
300-800 mm	1,25					
700-3000 mm	0,75					

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

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3.1. Control elements for practix 285.230 G manual



Fig. 2 – Control elements of practix 285.230 G manual



Fig. 3 – Arm falling cylinder

1 TOTAL STOP button (see Fig. 2)
 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 (see Fig.2)
 Choice of the cutting speed during cutting (35 or 72 m. min⁻¹).

3 Adjustment of saw arm falling (see Fig. 3)
 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

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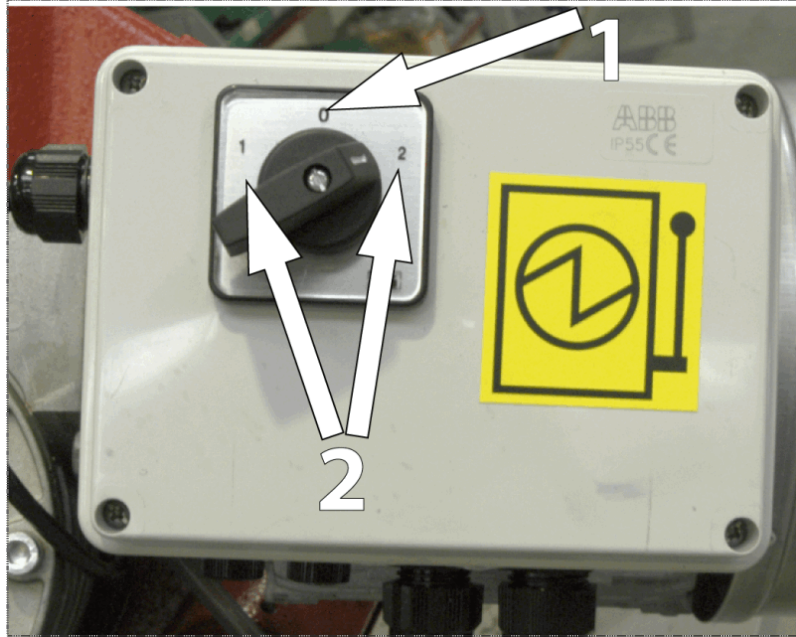


Fig. 4 – Control element for practix 285.230 G pulldown



Fig. 5 – Start and stop control

OFF position (see Fig. 4)

- 1 This position switch off power of saw band drive
Attention! By choosin position 0 does not disconnect machine from electricity network

Positions on for choose cutting speed(see Fig. 4)

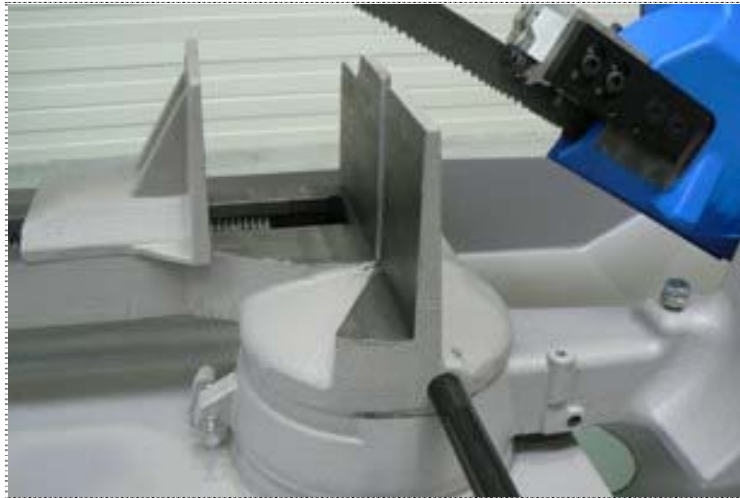
- 2 Choice of the cutting speed during cutting. Position 1 is for 35 m. min⁻¹ and position 2 is for 72 m. min⁻¹.

START AND STOP (see Fig 5)

- 3 Starts and stops saw band drive.

3.3. How to use band saw

3.3.1. Cutting



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.

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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. Cut material. Cutting depends on type your saw:



Important! – applies to practix 285.230 G manual:

Turn switch no. 3 to adjust speed of saw arm falling. When material is cut, limit switch stops drive of saw band. To continue in cutting please repeat points 1–7.



Important! – applies to practix 285.230 G pulldown:

Start the band saw by pressing button no. „3“ (START) positioned on operating lever. If button no. „3“ is loosen, driving stops.

Necessary to lead the arm to cut manually

To continue in cutting please repeat points 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

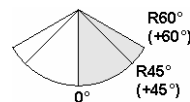
In emergency causes press button **TOTAL STOP „1“**.

After pressing **TOTAL STOP** button the band saw stops immediately.



3.3.3. Angular cut setting

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

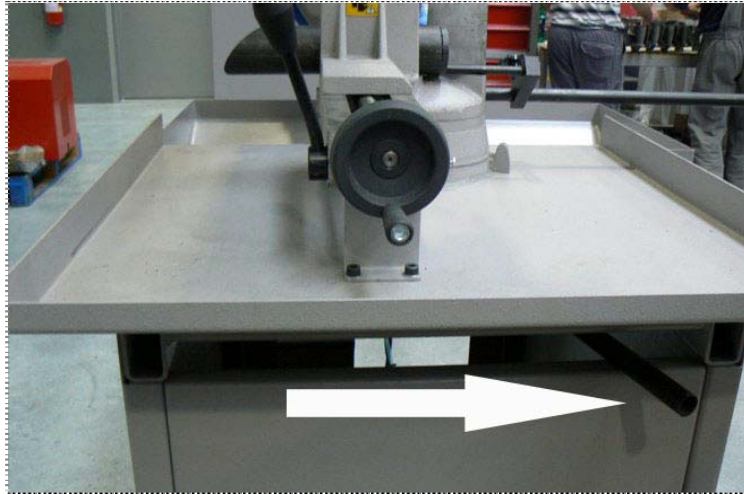


1. Release securing lever of the console.



2. Swivel the frame to the desired angle by pulling the stretching star. There is a scale on the front side of console.

Note: During setting of cutting angle up, follow zero engraved on the vice showing actual angle on the scale.



3. Check the setting according to the scale and tighten the securing lever of the console.

3.3.4. 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.

3.3.5. Setting of cutting speed

Saw band speed is changeable between **35** and **70** m.min⁻¹.

Set the speed as follows:

- speed **35 m.min⁻¹** – turn the speed switch no. 2 to the position **1**
- speed **72 m.min⁻¹** – turn the speed switch no. 2 to the position **2**



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!

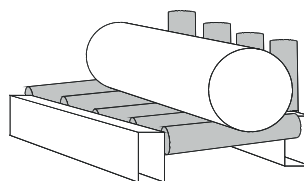
3.4.2. Insertion

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.

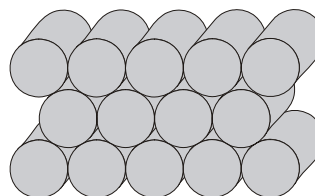
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!



3.4.3. Bundle material cutting

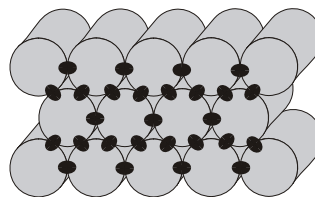
If you want to cut the material in the bundle, there are suggestions for the positioning of bundles

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.

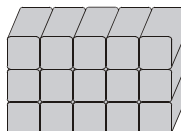


Always weld the material at the rear end of the bundle to secure it from moving.

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:



Angled 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.

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4.1. Saw band dismantling

1. Detach the machine from socket. It is guaranteed that the random start is avoided.



2. Dismantle yellow protective cover of the arm. Two plastic-headed screws fasten the cover.
3. Open protective cover on the back side of the saw frame.



4. Turning the stretching screw (arrow) to the left loose band tension.
5. Take the band down from the swing wheels.
6. Take the band out of guiding cubes carefully.

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.

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5. Close the rear protective cover of the arm. 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.
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.

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

Close cover of the saw band.

4.4. Cooling agents and chips disposal

4.4.1. Cooling liquid preparation

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

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

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

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

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

Note: If the machine is equipped with Microniser, fill the tank of the Microniser by specified cooling liquid. Microniser is ready for the operation.

The quality of the cooling agent will deteriorate due to:

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

If the solution is too weak:

- corrosion protection is diminished
- lubrication decreases
- microbial attack is more likely

If the solution is too strong:

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

4.4.2. Coolant device inspection

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

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

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

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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.

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

4.4.3. Chips disposal

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

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

4.4.4. Cooling liquid inspection

Check the state of the cooling liquid periodically. Keep notes in chapter Cooling agents and chips removal for state checking and cooling liquid filling.

If the cooling liquid is little in the tank, it can cause the damage of the saw band influences insufficient cooling.

The excess liquid can overflow from the tank on the floor, the service worker can slide and he can injure.

4.5. Greases and oils

4.5.1. Gearbox oils

In gearboxes, oil is used for the whole lifetime of the gearbox.

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:

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

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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 isn't 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 „Servicing and adjustment“.

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Problem	Possible causes	Repair
	<ul style="list-style-type: none"> Guiding arm and guiding cube are loosened. 	Fasten the guiding arm and the cube.
	<ul style="list-style-type: none"> Dirt between material and clamping jaw. 	Cleanse the material and mating jaw.
3. Short lifetime of the saw band	<ul style="list-style-type: none"> Insufficient saw band stretching. 	Raise the tightening of the saw band set the scanner of saw band tightening according to chapter „Servicing and adjustment“.
	<ul style="list-style-type: none"> Worn swarf brush. 	Check the swarf brush condition and replace it in case of excessive use as described in chapter „Worn pieces replacement“
	<ul style="list-style-type: none"> Wrongly adjusted swarf brush. 	Check swarf brush adjustment, set it according to chapter „Servicing and adjustment“
	<ul style="list-style-type: none"> 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“
	<ul style="list-style-type: none"> Wrongly adjusted hard metal guides. 	Check the adjustment of the hard metal guides and carry out adjustment as described in chapter „Servicing and adjustment“
	<ul style="list-style-type: none"> 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“
	<ul style="list-style-type: none"> 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“
	<ul style="list-style-type: none"> Wrongly adjusted guiding cubes of the saw band. 	Set guiding cube according to chapter „Servicing and adjustment“
	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Different material quality. 	Adjust feeding and speed of a saw band according to desired material (try cut-test).
	<ul style="list-style-type: none"> Low-class saw band 	Replace the saw band (contact your local accessory supplier for more information)

Problem	Possible causes	Repair
	<ul style="list-style-type: none"> • Wrongly chosen saw band tooth system. • Wrongly adjusted tracking. 	<p>Replace the saw band and keep instructions of the manufacturer on the choice.</p> <p>Check the space between top of a saw band and driving wheel. Perhaps adjust the tracking as described in chapter „Servicing and adjustment“</p>
4. Insufficient cut output.	<ul style="list-style-type: none"> • Worn saw band. 	Replace the saw band and keep instructions of the manufacturer on the choice.
	<ul style="list-style-type: none"> • Wrong saw band tooth system. 	Replace the saw band and keep instructions of the manufacturer on the choice.
	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Wrongly adjusted lower stop point of the saw frame. 	Check lower limit switch and screw.
	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Metal clamps between valve and panel. 	Clamps must be removed and put on the shaft O-Ring about 10x2 mm.
	<ul style="list-style-type: none"> • Metal clams are in body of valve. 	Valve must be cleared or changed.
7. Saw band drive cannot be started.	<ul style="list-style-type: none"> • Pressure switch is adjusted wrong. 	Set the pressure switch according to chapter „Servicing and adjustment“
	<ul style="list-style-type: none"> • Pressure switch is defective. 	Replace defective parts of the pressure switch.
8. The saw bands are cracked.	<ul style="list-style-type: none"> • In stretching wheel is wrong adjusting geometry. 	Adjust distance band from recess wheel c.2 mm according to operating instructions.
	<ul style="list-style-type: none"> • Hard metal plates of circuit saw band are not adjusting. 	Hard metal plates of circuit saw band must be adjusting according to operating instructions.
	<ul style="list-style-type: none"> • Guiding cubes are not adjusting (bearings + hard metal circuit) 	Guiding cubes must be adjusting (bearings + hard metal circuit) according to operating instructions.
	<ul style="list-style-type: none"> • 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.

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Problem	Possible causes	Repair
9. Damage tooth system of the saw band	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Geometry of hardmetal guiding cubes is wrong adjusted. Bearings of guiding cubes are used. 	<p>Hardmetal guiding cubes must be adjusted.</p> <p>Bearings of guiding cubes must be replaced.</p>
11. Cleansing of the saw band is not functional.	<ul style="list-style-type: none"> Elastic wheel of the brush drive is worn-down. Knurling of the driving wheel is worn-down. The shaft of the brush drive is rusted. The brush position and the brush cover is adjusted wrong – with the brush cannot be turned. 	<p>Elastic wheel of the brush must be changed.</p> <p>Driving wheel must be changed.</p> <p>The shaft of the brush must be cleaned and oiled.</p> <p>The brush cover must be posed, in order to the brush can be turned.</p>
12. The saw arm periodically rise and fall during the cut; this cause short lifetime of the saw band.	<ul style="list-style-type: none"> Backlash in driving wheel lodgement on the shaft. Worn channel for spring. 	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.

5.2. Electric and hydraulic problems

Problem	Possible causes	Repair
1. Machine is not possible start.	<ul style="list-style-type: none"> In socket is not voltage 	Line voltage must be checked.
	<ul style="list-style-type: none"> Transfer relay is closed (thermal protector) 	Each FA relay must be checked.
	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Bottom limit switch is adjusted wrong. 	Bottom limit switch must be adjusted according to chapter ADJUSTING.
	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Wrong contactor. 	Replace contactor of engine.
4. The indicator of speed saw band is not functional.	<ul style="list-style-type: none"> Sensor of speed is not adjusted. 	Sensor of speed must be adjusted.
	<ul style="list-style-type: none"> Defective display 	The display must be changed.
	<ul style="list-style-type: none"> Wrong sensor – diode of indicator speed is not light. 	Sensor must be changed and adjusted.
5. Cooling is not active	<ul style="list-style-type: none"> Lack of cooling agent. 	Fill the tank with cooling agent.
	<ul style="list-style-type: none"> Thermal relay is defective 	Change the thermal relay
	<ul style="list-style-type: none"> Input hosepipe is broken or obstructed. 	Check the cooling circuit and perhaps cleanse cooling system.
	<ul style="list-style-type: none"> Cooling pump protection is defective 	Check the protection of cooling pump if need change it.
	<ul style="list-style-type: none"> Cooling pump is defective. 	Replace the cooling pump.

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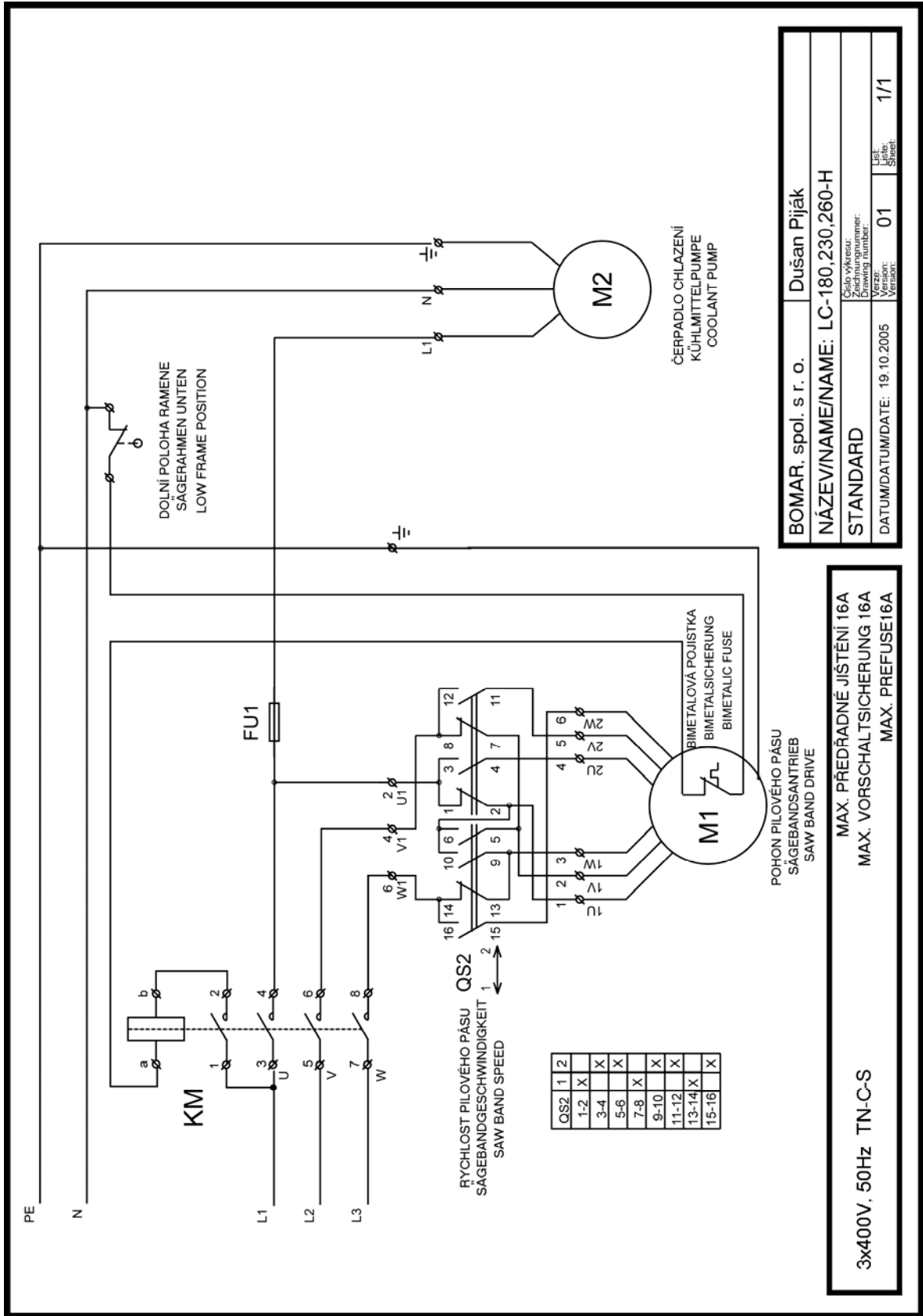
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6.1. Elektrické schéma / Elektroschema / Wiring diagrams – practix
285.230 G manual



BOMAR, spol. s r. o.	Dušan Píják
NÁZEV/NAME/NAME: LC-180,230,260-H	
STANDARD	
DATUM/DATE: 19.10.2005	Verze: 01
	Lišt. číslo: 1/1

3x400V, 50Hz TN-C-S	MAX. PŘEDŘADNÉ JIŠTĚNÍ 16A
	MAX. VORSCHALTSICHERUNG 16A
	MAX. PREFUSE16A

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6.2. Kusovník elektrosoučástí / Stückliste der Elektroteilen / Piece list of electroparts – practix 285.230 G manual

Obj. číslo	Název položky	Ozn.	ks
Bestell - Nr.	Bezeichnung	Sign.	Mng.
Ref. No.	Item	Sign.	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

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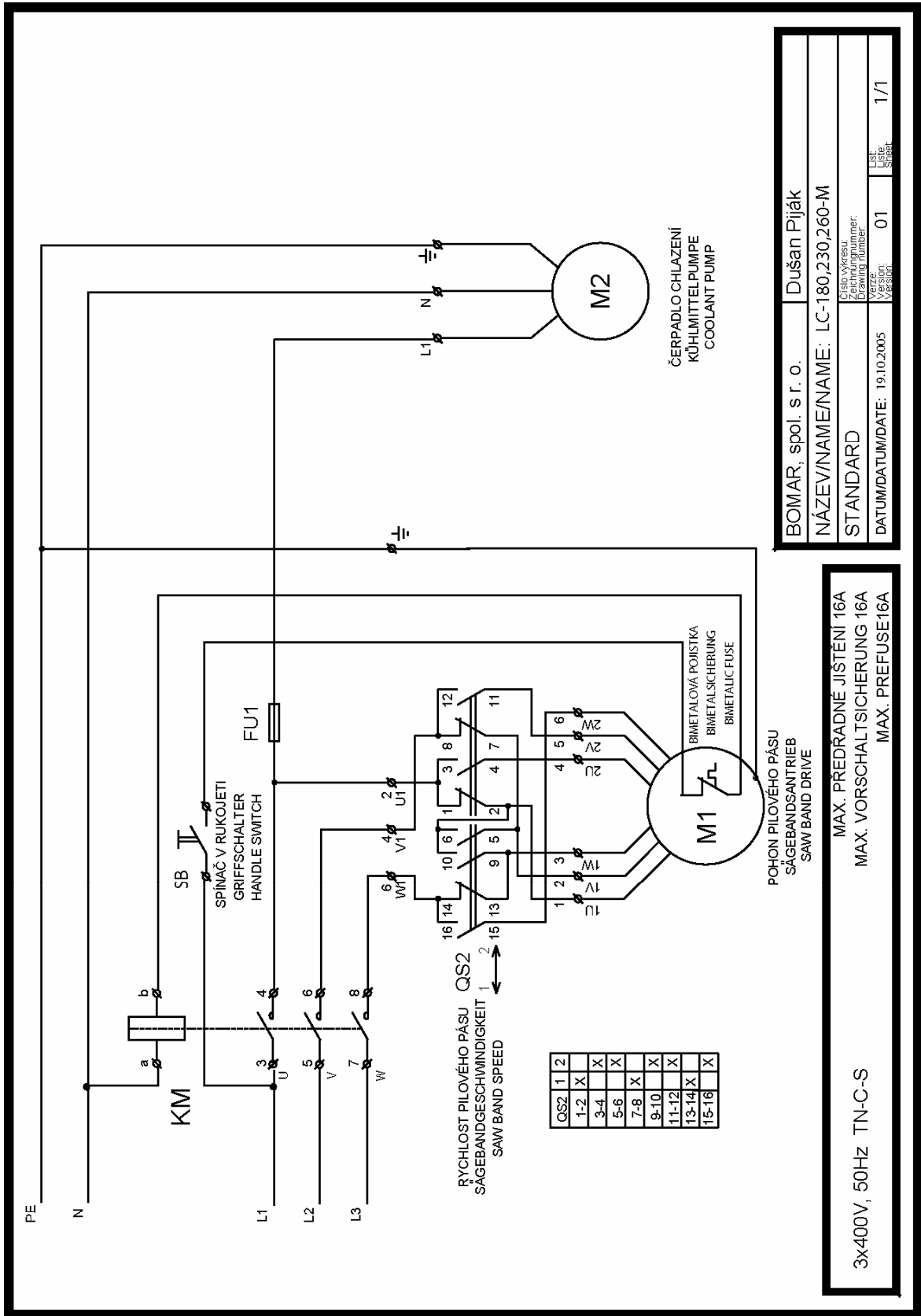
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6.5. Kusovník elektrosoučástí / Stückliste der Elektroteilen / Piece list of electroparts – practix 285.230 G pulldown

Obj. číslo	Název položky	Ozn.	ks
Bestell - Nr.	Bezeichnung	Sign.	Mng.
Ref. No.	Item	Sign.	Pcs.
91.190.031	Krabice elektro / Buchse / Cross		1
91.045.030	Motorový spouštěč / Motor Starter / Motor Starter	KM	1
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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

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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).

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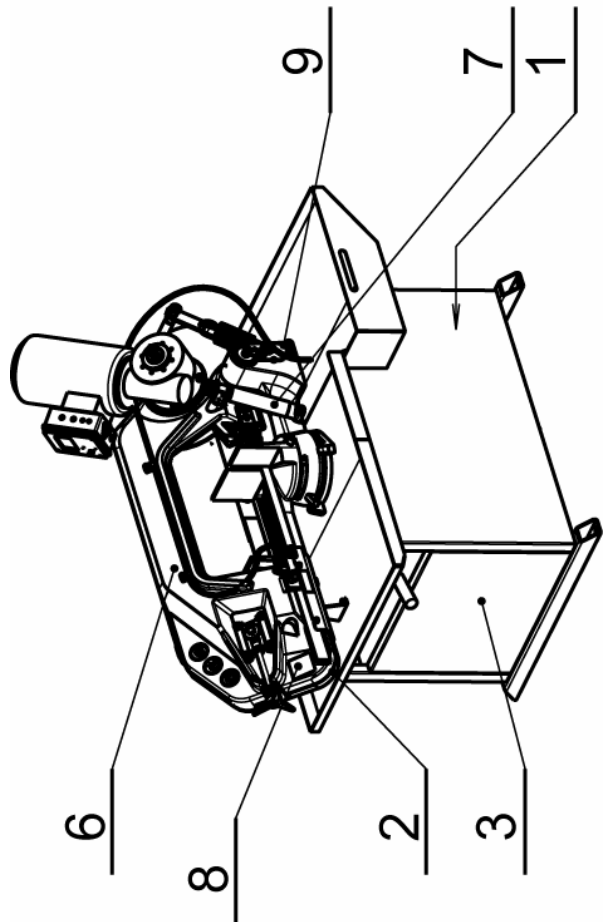
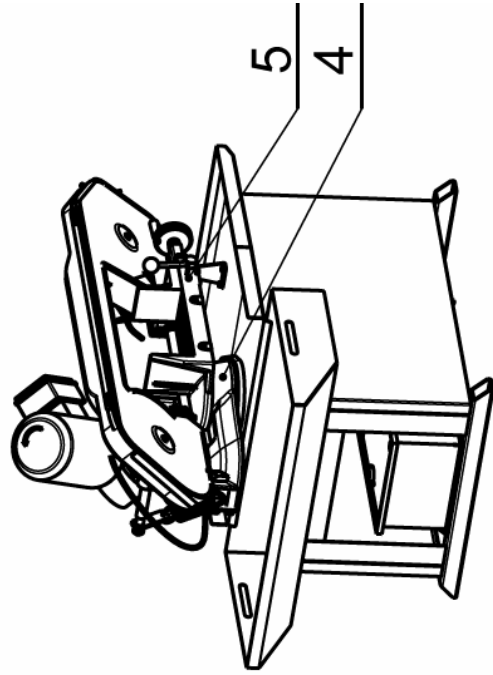
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Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Reference No.	Item	Pcs.
1	201.LC06-000	Chlazení / Kühlung / Cooling	1
2	201.LK01-250	Vana / Wanne / Tank	1
3	201.LK01-360	Podstavec / Untergestell / Pedestal	1
4	201.LK02-000	Konzola / Konsole / Console	1
5	201.LK03-000	Svěrák / Schraubstock / Vice	1
6	201.LK04-150	Rameno / Arm / Arm	1
7	201.LK07-050	Válec / Zylinder / Cylinder	1
8	31.LK99-151	Štítek / Schild / Label	1
9	91.173.009	Koncový spínač / Endschalter / Limit switch	1

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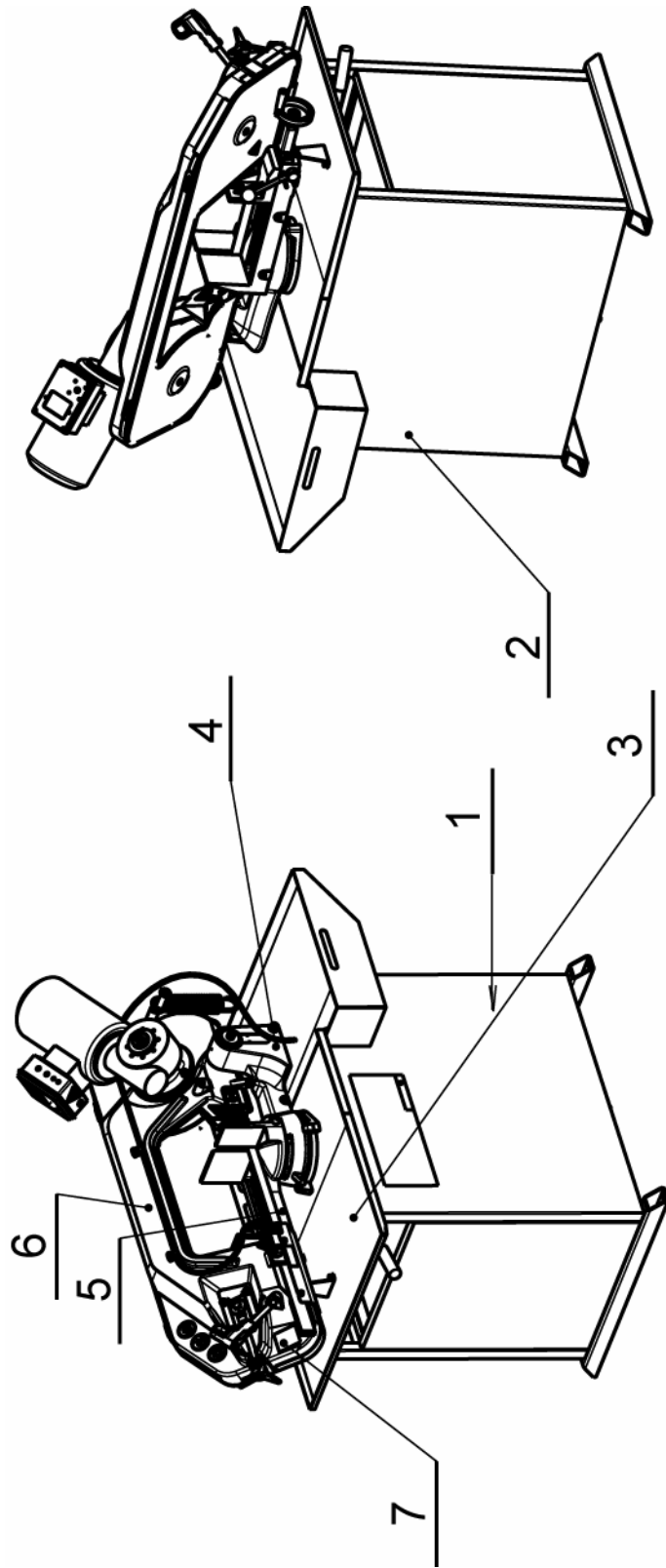
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Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Reference No.	Item	Pcs.
1	201.LC06-000	Chlazení / Kühlung / Cooling	1
2	201.LK01-200	Podstavec / Untergestell / Pedestal	1
3	201.LK01-250	Vana / Wanne / Tank	1
4	201.LK02-000	Konzola / Konsole / Console	1
5	201.LK03-000	Svěrák / Schraubstock / Vice	1
6	201.LK04-050	Rameno / Arm / Arm	1
7	31.LK99-051	Štítek / Schild / Label	1

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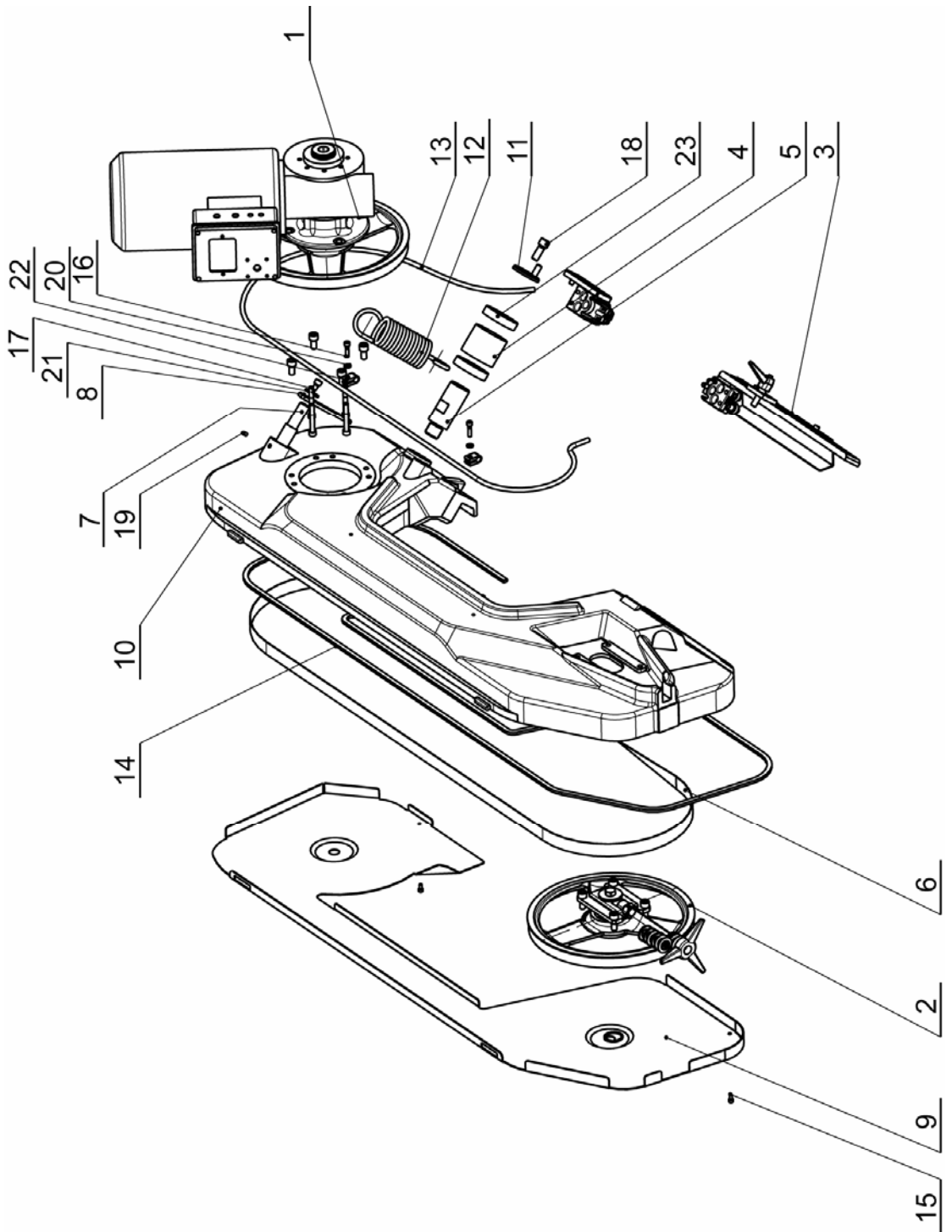
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7.6. Kusovník / Stückliste / Piece list Rameno / Arm / Arm – practix 285.230 G manual

Poz.	Obj. číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Mng.	
Pos.	Ref. No.	Item	Pcs.	
1	201.LK05-060	Náhon / Antrieb / Drive	1	
2	201.LK08-000	Napínání / Spannung / Stretching	1	
3	201.LK10-000	Vedení / Führung / Guide	1	
4	30.LK02-004	Trubka / Rohr / Tube	1	
5	30.LK04-005	Čep / Bolzen / Pivot	1	
6	30.LK04-010	Pilový pás / Sägeband / Saw band	1	
7	30.LK04-022	Čep / Bolzen / Pivot	1	
8	30.LK04-026	Táhlo / Zugstange / Draw bar	1	
9	30.LK04-028	Kryt / Deckel / Cover	1	
10	30.LK04-101	Rameno / Arm / Arm	1	
11	30.LK04-104	Doraz / Anschlag / Length stop	1	
12	31.LM04-006	Pružina / Feder / Spring	1	
13	42.020.001	Hadice / Schlauch / Hose	1	
14	61.352.003	Těsnění / Dichtung / Sealing	1	
15	90.001.25.007	Šroub / Schraube / Screw	M5×10 DIN 912 8,8	2
16	90.001.25.019	Šroub / Schraube / Screw	M6×25 DIN 912 8,8	2
17	90.001.25.029	Šroub / Schraube / Screw	M8×12 DIN 912 8,8	1
18	90.001.25.058	Šroub / Schraube / Screw	M12×30 DIN 912 8,8	1
19	90.002.2D.023	Stavěcí kužel / Stellkegel / Adjusting cone	M6×10	1
20	90.150.50.004	Podložka / Scheibe / Washer	Ø 6,4 DIN125	2
21	90.150.50.005	Podložka / Scheibe / Washer	Ø 8 DIN125	1
22	94.204.002	Držák hadice / Schlauchhalter / Hose holder		2
23	95.001.011	Kuličkové ložisko / Kugellager / Ball bearing	6008 2RS	2

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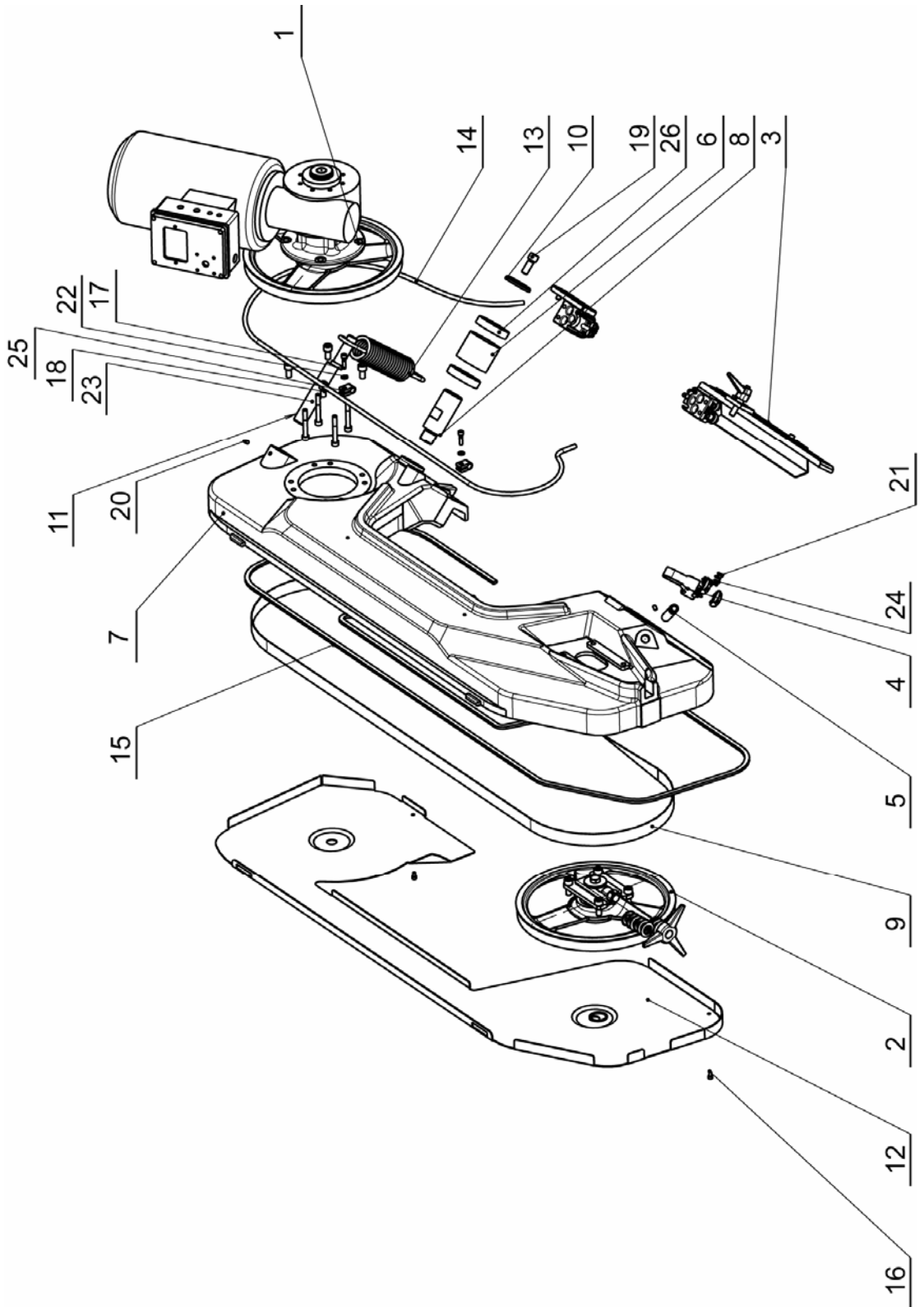
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Poz.	Obj. číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Mng.	
Pos.	Ref. No.	Item	Pcs.	
1	201.LK05-060	Náhon / Antrieb / Drive	1	
2	201.LK08-000	Napínání / Spannung / Stretching	1	
3	201.LK10-000	Vedení / Führung / Guide	1	
4	30.3104-007	Rukojeť / Griff / Handle	1	
5	30.LC04-008	Trubka / Rohr / Tube	1	
6	30.LK02-004	Trubka / Rohr / Tube	1	
7	30.LK04-001	Rameno / Arm / Arm	1	
8	30.LK04-005	Čep / Bolzen / Pivot	1	
9	30.LK04-010	Pilový pás / Sägeband / Saw band	1	
10	30.LK04-019	Podložka / Scheibe / Washer	1	
11	30.LK04-027	Čep / Bolzen / Pivot	1	
12	30.LK04-028	Kryt / Deckel / Cover	1	
13	30.LM04-006	Pružina / Feder / Spring	1	
14	42.020.001	Hadice / Schlauch / Hose	1	
15	61.352.003	Těsnění / Dichtung / Sealing	1	
16	90.001.25.007	Šroub / Schraube / Screw	M5×10 DIN 912 8,8	2
17	90.001.25.019	Šroub / Schraube / Screw	M6×25 DIN 912 8,8	2
18	90.001.25.029	Šroub / Schraube / Screw	M8×12 DIN 912 8,8	1
19	90.001.25.058	Šroub / Schraube / Screw	M12×30 DIN 912 8,8	1
20	90.002.2D.023	Štávecí kužel / Stellkegel / Adjusting cone	M6×10	2
21	90.009.00.002	Šroub / Schraube / Screw	M3×10	4
22	90.150.50.004	Podložka / Scheibe / Washer	Ø 6,4 DIN125	2
23	90.150.50.004	Podložka / Scheibe / Washer	Ø 8 DIN125	1
24	94.004.002	Rukojeť / Griff / Handle		1
25	94.204.002	Držák hadice / Schlauchhalter / Hose holder		2
26	95.001.011	Kuličkové ložisko / Kugellager / Ball bearing	6008 2RS	2

1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.9. Podstavec / Untergestell / Piedestal – *practix 285.230 G manual*

1. Safety notes

2. Machine documentation

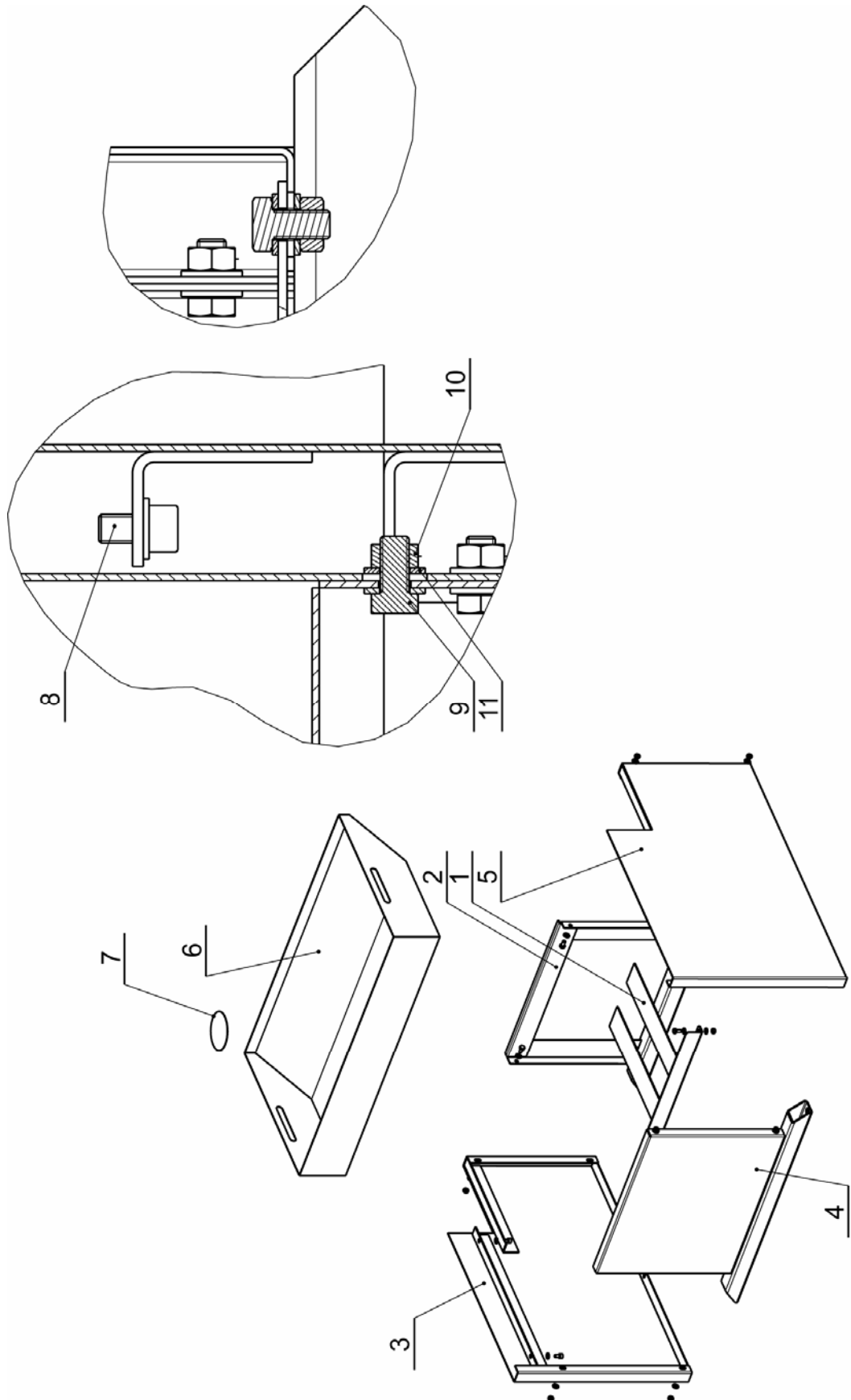
3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists



7.10. Kusovník / Stückliste / Piece list Podstavec / Untergestell / Pedestal – practix 285.230 G manual

Poz.	Obj. číslo	Název položky	ks	
Pos.	Bestell – Nr.	Bezeichnung	Mng.	
Pos.	Reference No.	Item	Pcs.	
1	30.LK01-206	Nosič / Träger / Porter	1	
2	30.LK01-361	Čelo / Stirn / Forehead	1	
3	30.LK01-362	Bočnice L / Seitenteil L/ Side plate L	1	
4	30.LK01-363	Čelo / Stirn / Forehead	1	
5	30.LK01-367	Bočnice P / Seitenteil R/ Side plate R	1	
6	30.LM01-305	Vana / Wanne / Tank	1	
7	30.LM01-308	Síto / Gitterwerk / Sieve	1	
8	90.001.25.030	Šroub / Schraube / Screw	8x14 DIN 912 8,8	4
9	90.005.55.014	Šroub / Schraube / Screw	M8x16	10
10	90.100.55.005	Matice / Mutter / Nut	M8 DIN 934	10
11	90.150.50.005	Podložka / Scheibe / Washer	Ø 8,4 DIN 125	24

1. Safety notes

2. Machine
documentation

3. Machine
control

4. Machine
service

5. Troubleshooting

6. Schematics

7. Drawings
and piece lists

7.11. Podstavec / Untergestell / Piedestal – practix 285.230 G pulldown

1. Safety notes

2. Machine documentation

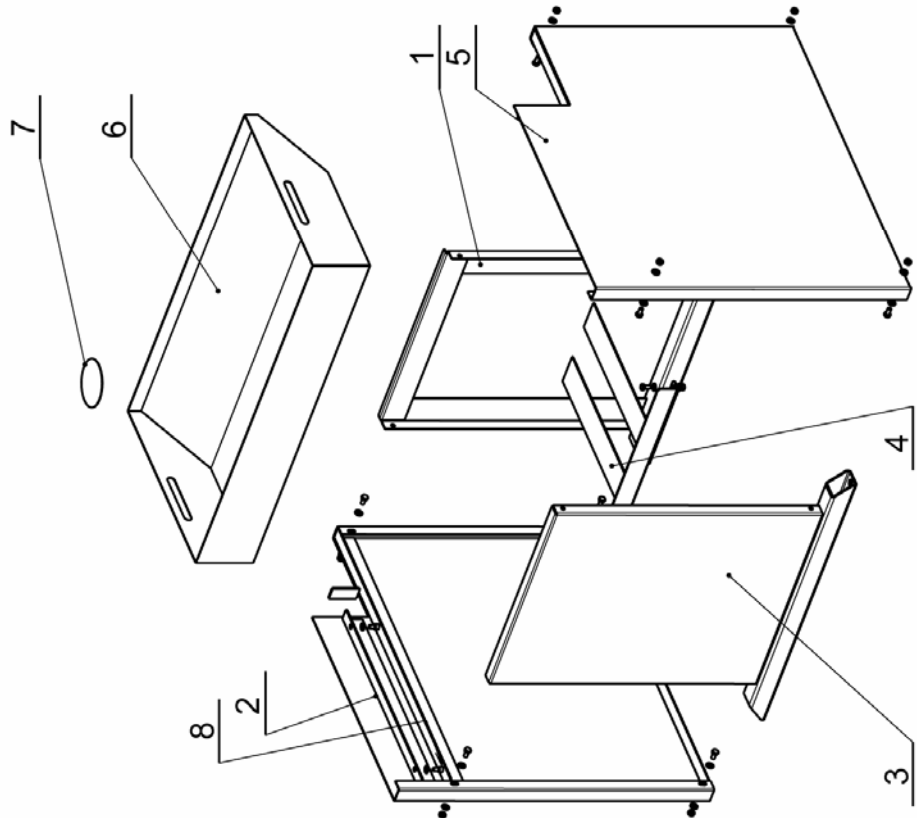
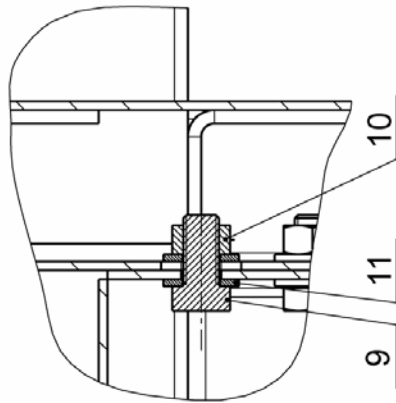
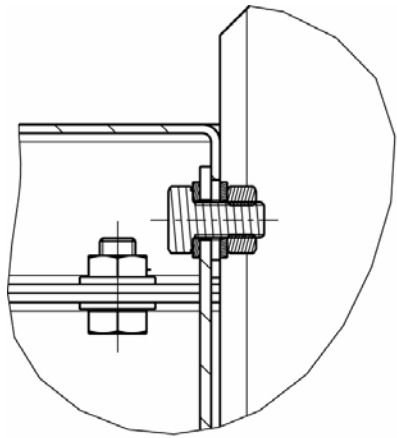
3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists



7.12. Kusovník / Stückliste / Piece list Podstavec / Untergestell / Pedestal – practix 285.230 G pulldown

Poz.	Obj.číslo	Název položky	ks	
Pos.	Bestell – Nr.	Bezeichnung	Mng.	
Pos.	Ref. No.	Item	Pcs.	
1	30.LK01-201	Čelo / Stirn / Forehead	1	
2	30.LK01-202	Bočnice L / Seitenteil L/ Side plate L	1	
3	30.LK01-203	Čelo / Stirn / Forehead	1	
4	30.LK01-206	Nosič / Träger / Porter	1	
5	30.LK01-207	Bočnice P / Seitenteil R/ Side plate R	1	
6	30.LM01-305	Vana / Wanne / Tank	1	
7	30.LM01-308	Síto / Gitterwerk / Sieve	1	
8	90.001.25.030	Šroub / Schraube / Screw	8x14 DIN 912 8,8	4
9	90.005.55.014	Šroub / Schraube / Screw	M8x16	10
10	90.100.55.005	Matice / Mutter / Nut	M8 DIN 934	10
11	90.150.50.005	Podložka / Scheibe / Washer	Ø 8,4 DIN 125	24

1. Safety notes

2. Machine
documentation

3. Machine
control

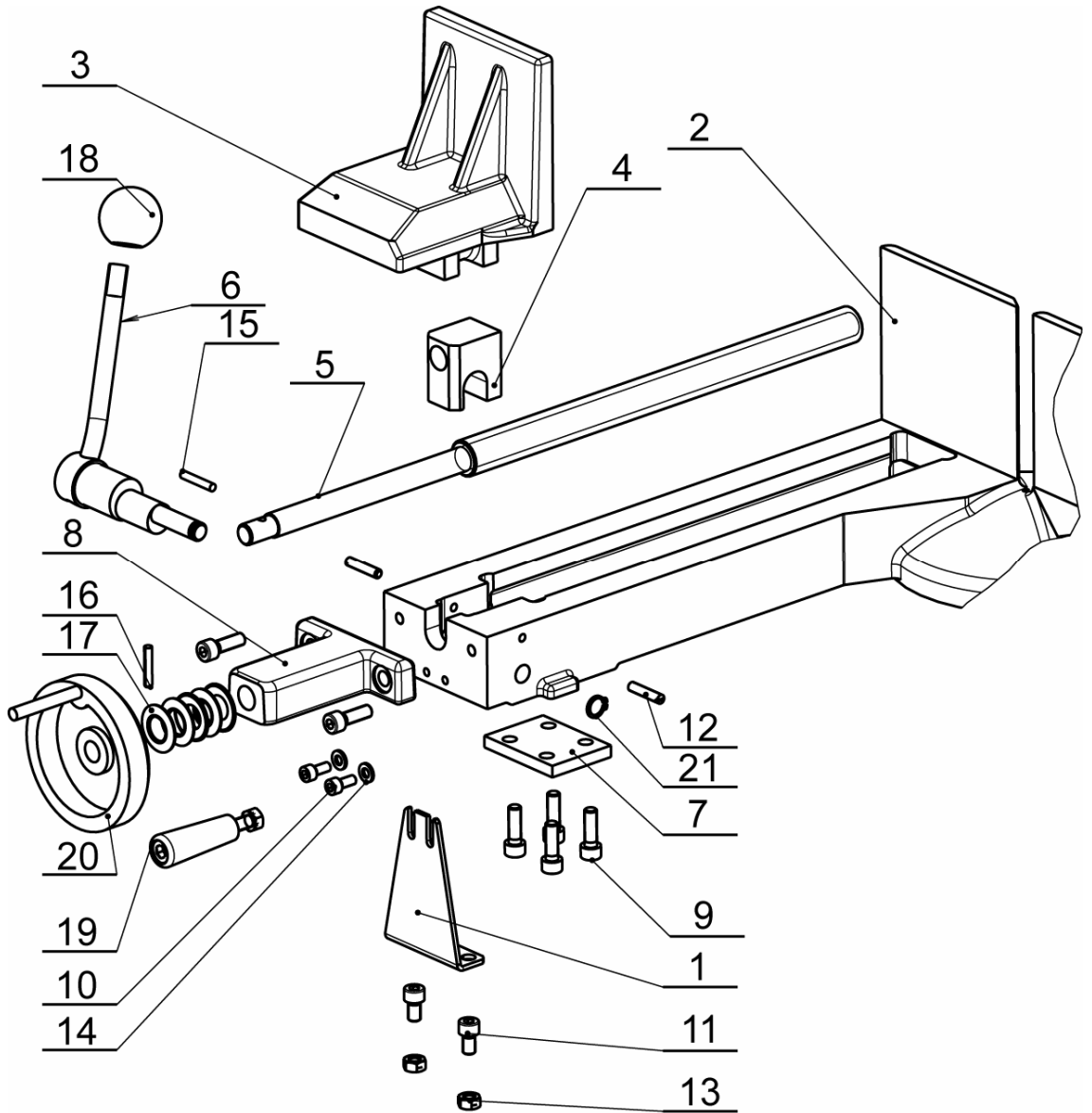
4. Machine
service

5. Troubleshooting

6. Schematics

7. Drawings
and piece lists

7.13. Svěrák / Schraubstock / Vice



1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.14. Kusovník / Stückliste / Piece list Svěrák / Schraubstock / Vice

Poz.	Obj. číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Mng.	
Pos.	Ref. No.	Item	Pcs.	
1	30.LC03-007	Držák / Halter / Holder	1	
2	30.LK03-001	Tělo / Körper / Body	1	
3	30.LK03-002	Čelist pohyblivá / Bewegliche Backe / Movable jaw	1	
4	30.LK03-003	Kostka / Würfel / Cube	1	
5	30.LK03-004	Šroub / Schraube / Screw	1	
6	30.LK03-005	Excentr / Exzenter / Excenter	1	
7	30.LK03-006	Příložka / Lasche / Splice plate	1	
8	30.LK03-009	Vedení / Führung / Guide	1	
9	90.001.25.033	Šroub / Schraube / Screw	8x25 DIN 912 8,8	6
10	90.001.25.092	Šroub / Schraube / Screw	M6x14 DIN 912 8,8	2
11	90.001.55.082	Šroub / Schraube / Screw	M8x15	2
12	90.003.2D.XXX	Šroub / Schraube / Screw	M6x30	2
13	90.100.55.005	Matice / Mutter / Nut	M8 DIN 934	2
14	90.150.50.004	Podložka / Scheibe / Washer	Ø6,4 DIN125	2
15	90.300.0Z.004	Kolík / Bolzen / Pin	5x30	1
16	90.303.0Z.010	Kolík / Bolzen / Pin	5x28	1
17	90.350.0Z.007	Pružina / Feder / Spring	31,5x16,3x1,25	5
18	94.001.004	Koule / Kugel / Ball	M16	1
19	94.010.002	Rukojeť / Griff / Handle		1
20	94.010.004	Kolo / Umlenkrad / Wheel	Ø100/14 H7	1
21	95.800.004	Kroužek pojistný / Sicherungsring / Retaining ring	Ø12	1

1. Safety notes

2. Machine
documentation

3. Machine
control

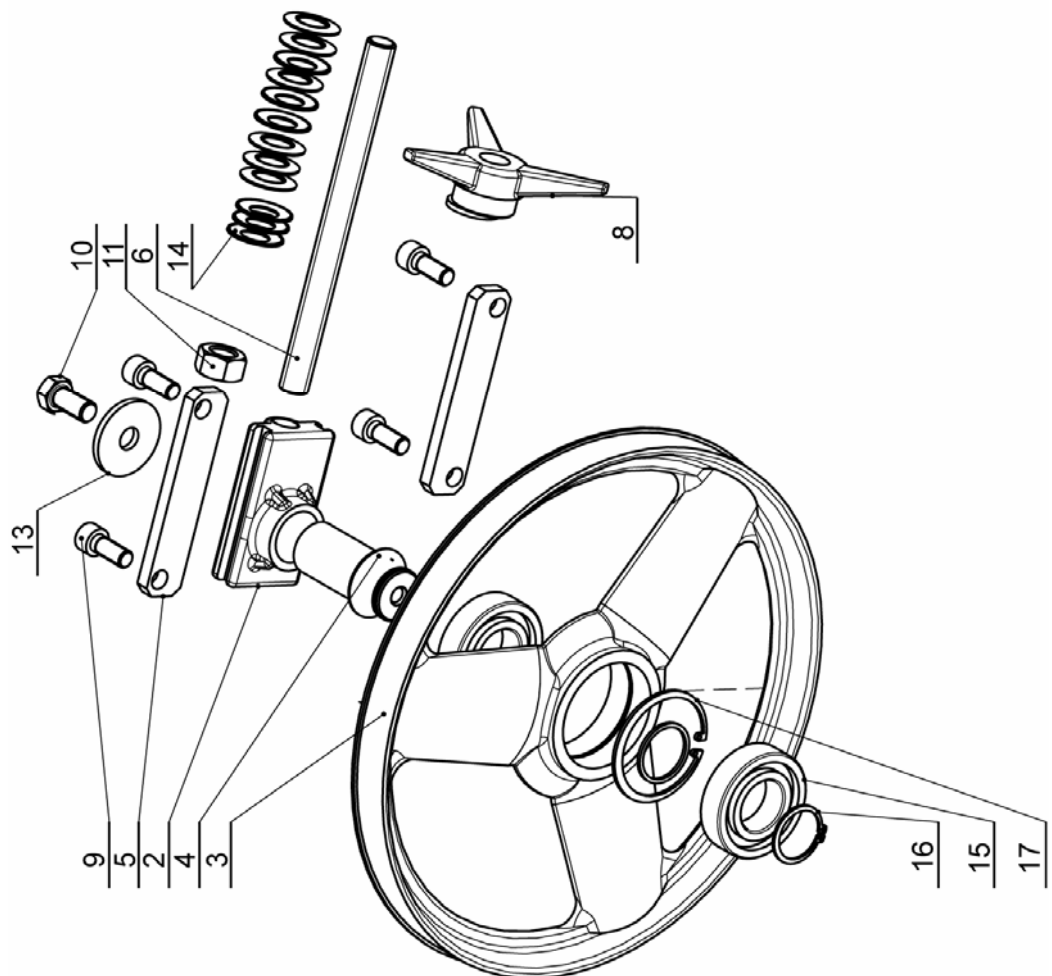
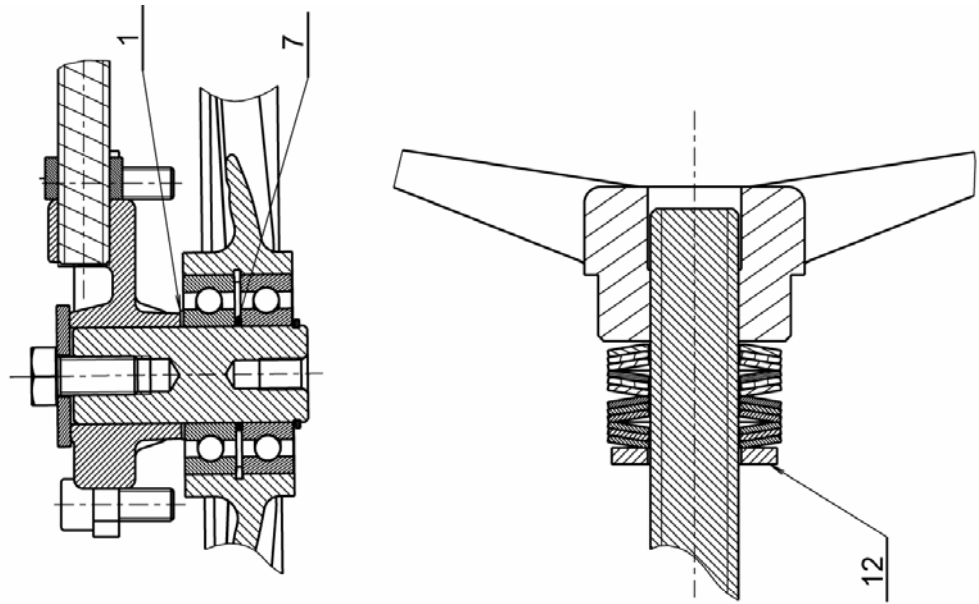
4. Machine
service

5. Troubleshooting

6. Schematics

7. Drawings
and piece lists

7.15. Napínání pásu / Sägebandspannung / Saw band tensing



1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.16. Kusovník / Stückliste / Piece list Napínání pásu / Sägebandspannung / Saw band tensing

Poz.	Obj. číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Mng.	
Pos.	Ref. No.	Item	Pcs.	
1	30.0504-006	Distanční kroužek / Distanzring / Distance ring	1	
2	30.LK08-001	Kostka / Würfel / Cube	1	
3	30.LK08-002	Kolo / Umlenkrad / Wheel	1	
4	30.LK08-003	Čep napínání / Spannungsbolzen / Stretching pivot	1	
5	30.LK08-004	Lišta vodičí / Führungsleiste / Guiding listel	2	
6	30.LK08-007	Tyč / Stange / Bar	1	
7	30.LM08-007	Prstýnek / Ring / Ring	1	
8	31.0104-006	Hvězdice / Stern / Star	1	
9	90.001.25.047	Šroub / Schraube / Screw	M10x25 DIN 912 8,8	4
10	90.005.55.031	Šroub / Schraube / Screw	M12x25	1
11	90.100.55.008	Matice / Mutter / Nut	M16 DIN 934	1
12	90.150.50.009	Podložka / Scheibe / Washer	Ø17 DIN125	1
13	90.151.50.002	Podložka / Scheibe / Washer	Ø12	1
14	90.350.0Z.007	Pružina / Feder / Spring	31.5x16.3x1.25	6
15	95.001.019	Kuličkové ložisko / Kugellager / Ball bearing	6206 2RS	2
16	95.800.013	Kroužek pojistný / Sicherungsring / Retaining ring	Ø 30	1
17	95.801.010	Kroužek pojistný / Sicherungsring / Retaining ring	Ø 62	1

1. Safety notes

2. Machine documentation

3. Machine control

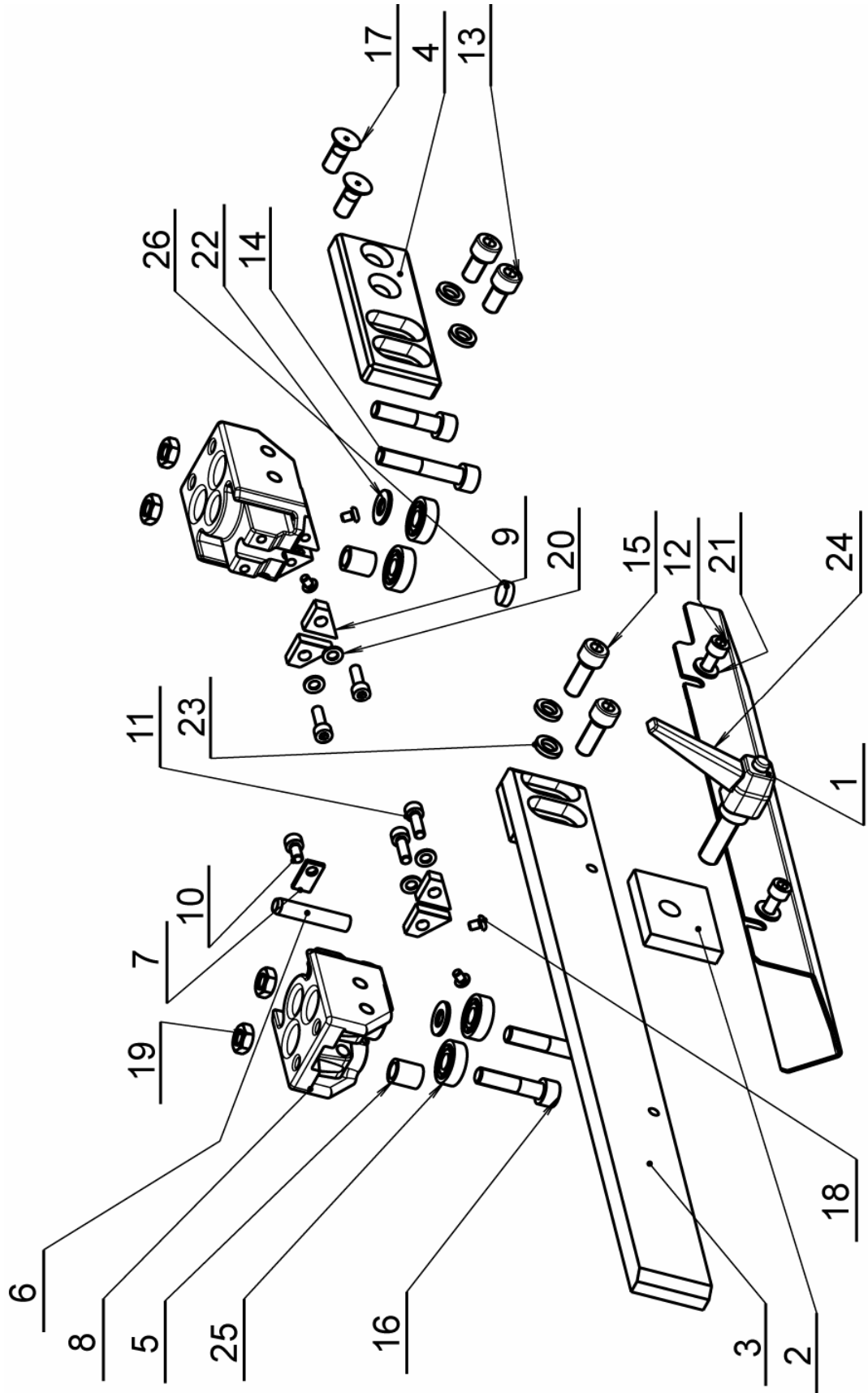
4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.17. Vedení pásu / Bandführung / Band guiding



1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.18. Kusovník / Stückliste / Piece list Vedení pásu / Bandführung / Band guiding

Poz.	Objednáací č.	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Reference No.	Item	Pcs.
1	30.LK10-002	Kryt / Deckel / Cover	1
2	30.LK10-003	Upínka / Spanneisen / Clamp	1
3	30.LK10-004	Lišta / Leiste / Listel	1
4	30.LK10-005	Lišta / Leiste / Listel	1
5	30.LK10-006	Trubka / Rohr / Tube	2
6	30.LK10-008	Trubka / Rohr / Tube	1
7	30.LK10-109	Příložka / Lasche / Splice plate	1
8	30.LK10-201	Kostka vodící / Führungsplatte / Guiding cube	2
9	31.LK10-007	Tvrdokov / HM-Segment / Hardmetal	4
10	90.001.25.007	Šroub / Schraube / Screw M5x10 DIN 912 8,8	1
11	90.001.25.009	Šroub / Schraube / Screw M5x16 DIN 912 8,8	4
12	90.001.25.016	Šroub / Schraube / Screw M6x12 DIN 912 8,8	2
13	90.001.25.031	Šroub / Schraube / Screw M8x16 DIN 912 8,8	2
14	90.001.25.037	Šroub / Schraube / Screw M8x14 DIN 912 8,8	2
15	90.001.25.104	Šroub / Schraube / Screw M8x22 DIN 912 8,8	2
16	90.001.55.035	Šroub / Schraube / Screw M8x35 DIN 912 8,8	2
17	90.011.27.027	Šroub / Schraube / Screw M8x20	2
18	90.013.27.017	Šroub / Schraube / Screw M4x16	4
19	90.101.55.001	Matice / Mutter / Nut M8	4
20	90.150.50.003	Podložka / Scheibe / Washer Ø5.3 DIN 125	4
21	90.150.50.004	Podložka / Scheibe / Washer Ø6,4 DIN 125	2
22	90.150.50.005	Podložka / Scheibe / Washer Ø8,4 DIN 125	2
23	90.163.00.001	Podložka / Scheibe / Washer M8 Nord-locl	4
24	94.008.005	Utahovací páka /Spannhebel / Tightening lever M10	1
25	95.001.001	Kuličkové ložisko / Kugellager / Ball bearing 608 2RS	4
26	99.040.002	Tvrdokov / HM-Segment / Hardmetal	2

1. Safety notes

2. Machine documentation

3. Machine control

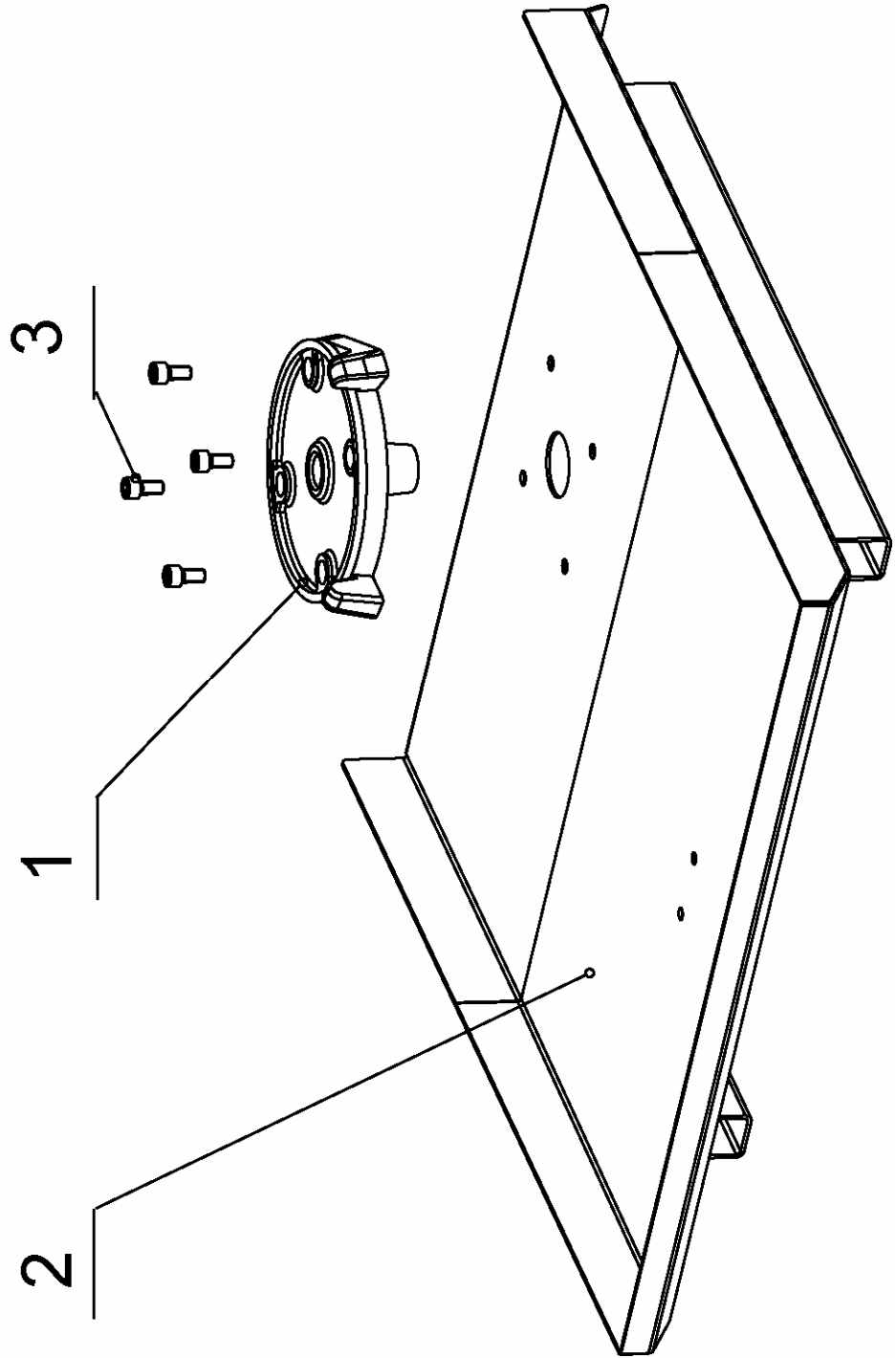
4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.19. Vana / Wanne / Tank



1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.20. Kusovník / Stückliste / Piece list Vana / Wanne / Tank

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Reference No.	Item	Pcs.
1	30.LK01-004	Konzola / Konsole / Console	1
2	30.LK01-251	Základna / Grundlage / Base	1
3	90.001.25.047	Šroub / Schraube / Screw M10x25 DIN 912 8,8	4

1. Safety notes

2. Machine
documentation

3. Machine
control

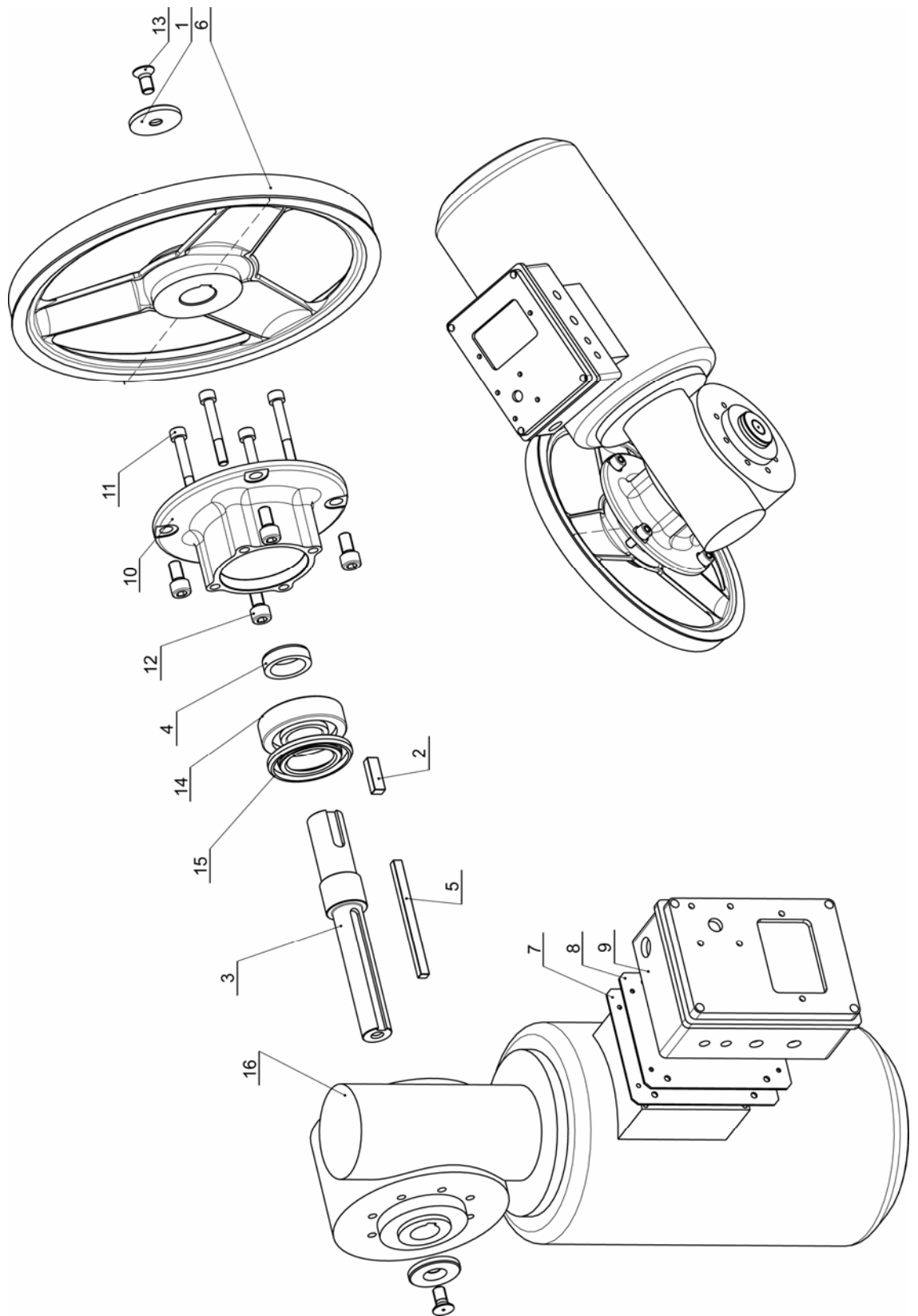
4. Machine
service

5. Troubleshooting

6. Schematics

7. Drawings
and piece lists

7.21. Pohon / Antrieb / Drive



1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

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7.22. Kusovník / Stückliste / Piece list Pohon / Antrieb / Drive

Poz.	Obj. číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Ref. No.	Item	Pcs.
1	30.1502-465	Podložka / Scheibe / Washer	2
2	30.LC04-014	Pero / Feder / Feather	1
3	30.LK04-004	Hřídel / Welle / Shaft	1
4	30.LK04-007	Distanční kroužek / Distanzring / Distance ring	1
5	30.LK04-012	Pero / Feder / Feather	1
6	30.LK04-103	Kolo hnací / Antriebsrad / Driving wheel	1
7	30.LK04-117	Plech / Blech / Metal plate	1
8	30.LK04-118	Guma / Gummi / Gum	1
9	30.LM04-025	Krabice elektro / Buchse / Cross	1
10	30.LM04-209	Příruba / Flansche / Flange	1
11	90.001.25.040	Šroub / Schraube / Screw M8x60	4
12	90.001.25.046	Šroub / Schraube / Screw M10x20	4
13	90.011.27.008	Šroub zápusťný/ Senkschraube / Countersunk screw M10x20	2
14	95.201.005	Kuličkové ložisko / Kugellager / Ball bearing NU306	1
15	95.830.002	Guféro / Dichtung / Sealing 40x72x7	1
16	91.020.008	Pohon / Antrieb / Drive MSD90	1

1. Safety notes

2. Machine
documentation

3. Machine
control

4. Machine
service

5. Troubleshooting

6. Schematics

7. Drawings
and piece lists

7.23. Konzola / Konsole / Console

1. Safety notes

2. Machine documentation

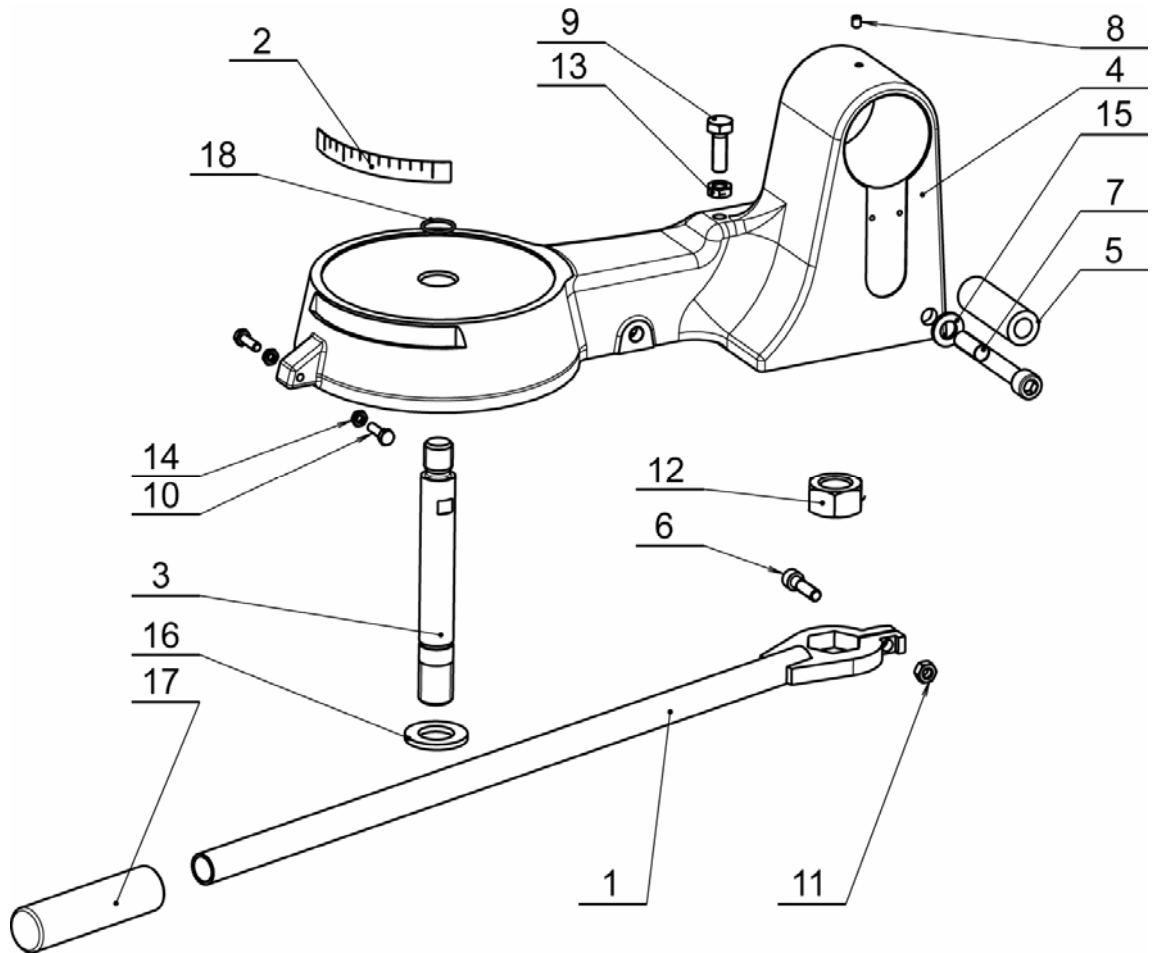
3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists



7.24. Kusovník / Stückliste / Piece list Konzola / Konsole / Console

Poz.	Obj. číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng.
Pos.	Ref. No.	Item	Pcs.
1	30.LK02-003	Páka / Hebel / Lever	1
2	30.LK02-005	Úhломěr / Winkelmesser / Mitre scale	1
3	30.LK02-006	Šroub / Schraube / Screw	1
4	30.LK02-101	Konzola / Konsole / Console	1
5	30.LK02-102	Trubka / Rohr / Tube	
6	90.001.50.034	Šroub / Schraube / Screw M8x30 DIN 912 8,8	1
7	90.001.50.072	Šroub / Schraube / Screw M12x90 DIN 912 8,8	1
8	90.002.2D.029	Stavěcí kužel / Stellkegel / Adjusting cone M6x8	1
9	90.005.55.007	Šroub / Schraube / Screw M10x30	1
10	90.005.55.008	Šroub / Schraube / Screw M6x20	2
11	90.100.55.005	Matice / Mutter / Nut M8	1
12	90.100.55.010	Matice / Mutter / Nut M24	1
13	90.101.55.002	Matice / Mutter / Nut M10x30	1
14	90.101.55.008	Matice / Mutter / Nut M6	2
15	90.150.50.007	Podložka / Scheibe / Washer Ø13 DIN125	1
16	90.150.50.016	Podložka / Scheibe / Washer Ø25	1
17	94.004.502	Rukojeť / Griff / Handle D22	1
18	96.002.010	Kroužek / Ring / Ring 20x3	1

1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists

7.25. Chlazení / Kühlung / Cooling

1. Safety notes

2. Machine documentation

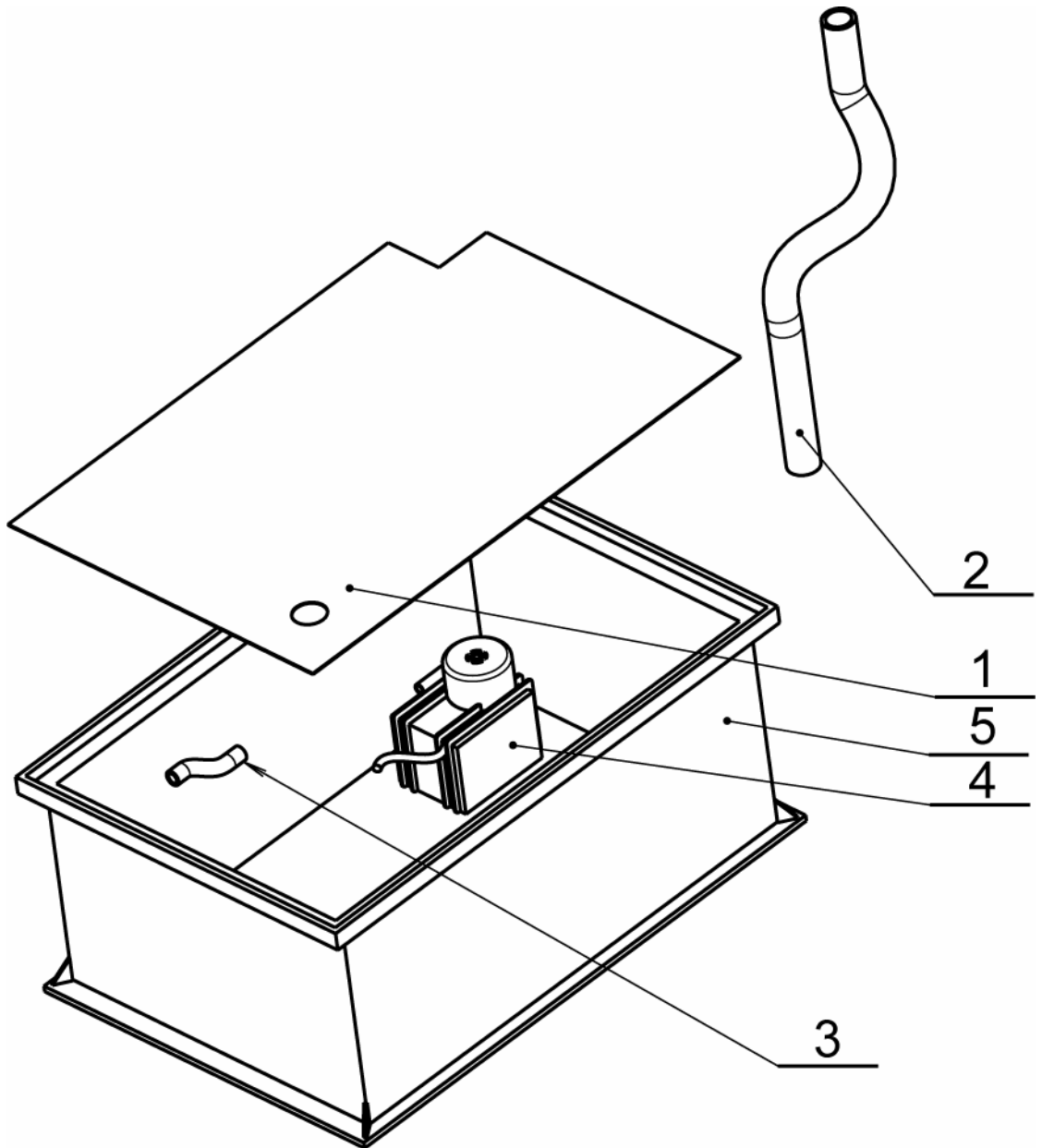
3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists



7.26. Kusovník / Stückliste / Piece list Chlazení / Kühlung / Cooling

Poz.	Objednáací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Mng
Pos.	Reference No.	Item	Pcs.
1	30.LC06-001	Kryt / Deckel / Cover	1
2	42.020.004	Hadice / Schlauch / Hose 25x3	1
3	42.020.006	Hadice / Schlauch / Hose 12x2	1
4	91.020.008	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump 230 V	1
5	94.403.002	Krabice / Buchse / box 195x315x465	1

1. Safety notes

2. Machine documentation

3. Machine control

4. Machine service

5. Troubleshooting

6. Schematics

7. Drawings and piece lists