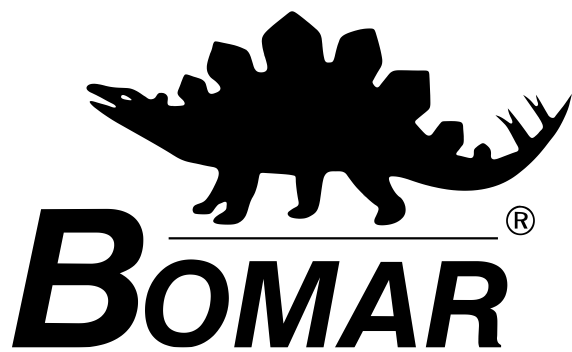




Operating Instructions for Band Saw

individual 410.260 GANC



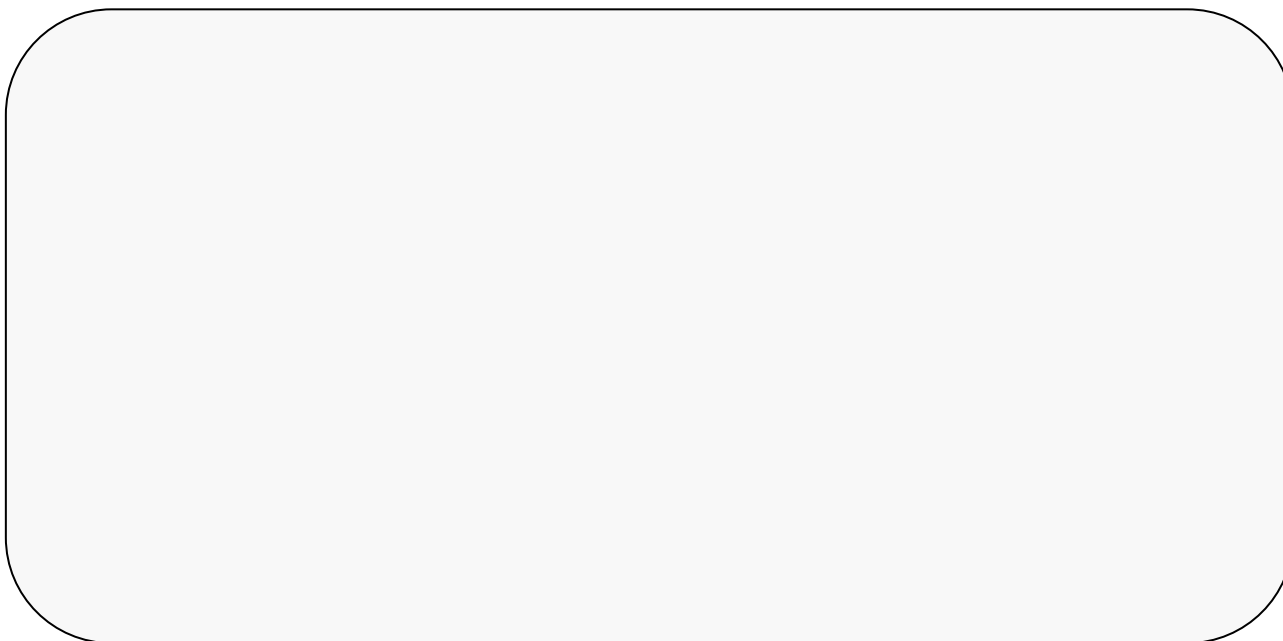
**Before transporting and using the machine, please read
the instructions thoroughly!**

Serial number:



Service and Information

In case of technical difficulties or spare parts order, please contact your dealer:



Or contact Bomar, spol. s r.o. directly:

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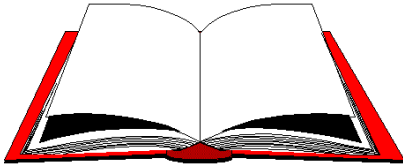
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1. Introduction



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!



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



Attention! The exclamation mark in the yellow triangle signifies a safety warning. The meaning is described next to the symbol.

2. Band saw using

The individual 410.260 GANC is used for cutting and shortening of rolled bars and drawn bars and profiles from steels, stainless steels, non-ferrous metals and plastics.

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

The roller conveyors can be connected with the band saw, which facilitates manipulation with the material. Recommended types and style of connecting are described in chapter „**Roller conveyors and accessories**“.

3. Technical data

Machine weight:

Weight	940 kg
--------	--------

Machine size:

Length	2371 mm
Width	1997 mm
Height	1571 mm

Electrical equipment of the machine:

Supply voltage	~3 x 400V, 50Hz, TN-C-S
Total input	5,7 kVA
Max. fuse	16 A
Protection degree	IP 54

Driving engine of the band saw:

Type	TM90 4X B3
Output	2,2 kW

Cooling pump:

Type	3 – COA2 – 14H
Capacity	75 dm ³

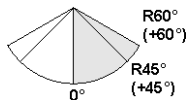
Size of the saw band:

3800 x 25 (27) x 0,90 mm

Cutting speed:

20 - 90 m/min

Cutting angles:

				
0°	Ø260 mm	410 x 260 mm	410 x 260 mm	260 x 260 mm
R 45° (+45°)	Ø260 mm	310 x 140 mm	250 x 260 mm	250 x 250 mm
R 60° (+60°)	Ø180 mm	200 x 130 mm	130 x 260 mm	180 x 180 mm

Attention! In automatic mode can you cut max 45 °by turning of the arm!

4. Safety notes

4.1. General

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.

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

4.2. 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!

4.3. Safety notes for machine operator

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!

4.4. Safety notes for the servicing and repairs

Only a qualified professional can carry out servicing and repairs! Always keep notes about work safety!



ATTENTION! Only a qualified professional can carry out the servicing and repairs of the electric equipment! Take special care during the work with electrical equipment. High voltage shock can have fatal consequences! Always keep notes about work safety! Otherwise, there is possibility of heavy injury.

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

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

Do not remove or do not lock the limit switches or safety equipments!

Any use of the saw, accessories or machine parts other than that intended by the BOMAR, spol. s r.o. company is not permitted. The guarantee on this product will be afterward lost and BOMAR, spol. s r.o. takes no responsibility for caused damages!

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

4.5. 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.



TOTAL STOP button

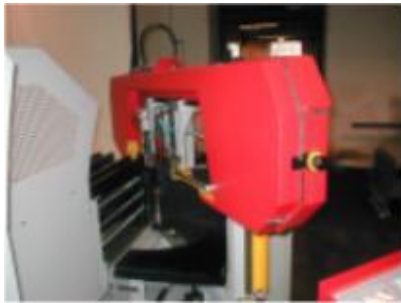


TOTAL STOP button is used for emergency switching – off the machine in case defect or health hazard. By pressing TOTAL STOP button is interrupted the supply of the electrical power.

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.

Saw arm cover



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

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

Saw band stretching and rupture inspection



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

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

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!

5. Transportation and stocking

5.1. 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.

Conditions for transportation and stocking:

- Temperature of the air from -25°C to $+55^{\circ}\text{C}$, for a short term (max. 24 hours) temperature of the air until $+70^{\circ}\text{C}$.
- 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.

5.2. Safety notes

Keep safety notes for the transport!



Always wear protective hardhat to avoid hard injuries during loading and transportation!



Wear protective gloves!
Sharp edges of the machine, pallets and means of transport can injure your hands.



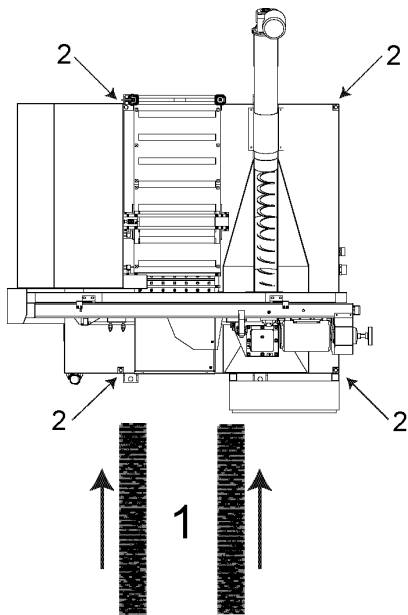
Wear safety boots!
Loose parts and packing materials can cause serious injuries.

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.

5.3. 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!

5.4. Transport and stocking



Handle the machine only with the hand pallet truck or the forklift truck! Use the lifters of the truck according to the schema (num. 1). If the hand pallet truck or the forklift truck is not available it is possible to use suspension cables and the crane. The machine is equipped with screw threads M20 for fixing the shackles (num. 2). Use only shackles with appropriate capacity.
 Make sure that the hand pallet truck; the forklift truck or the crane and the suspension cables 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.

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!

6. Activation

6.1. Machine working conditions

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

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

At temperature air from +5°C to +40°C, the temperature average during 24 hours must not exceed over +35°C.

At relative dampness of the air in the extend from 30% to 95% (not concentrate).

Altitude higher 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.

6.2. Band saw unpacking and assembling

1) Remove the packing from the machine and unpack all parts.



2) Pull the feeding cylinder up.



3) Screw on the feeding cylinder by means of screws (they are added to the band saw).

6.3. 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.

6.4. Electrical connection



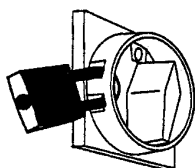
ATTENTION! Only a qualified professional must carry out the servicing and repairs of the electric equipment! Take special care during work with electrical equipment. High voltage shock can have fatal consequences! Always keep notes about work safety!

Electrical parameters of the machine:

Service voltage:	~ 3 x 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 16A 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.



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.

6.5. Filling of the cooling system

If handling cooling liquid, keep the notes about work safety and instructions of the cooling liquid manufacturer!



Wear protective gloves when working with cooling liquids!



Wear protective goggles!
The cooling liquid can get into your eyes and cause serious injury.

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!

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

6.6. Check machine functions

Before starting the check machine functions, you must read the chapter „**Machine operation**“. Do not carry out check machine functions, if you do not comprehend meaning of all buttons and all 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 (see. **Special accessory**), 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.

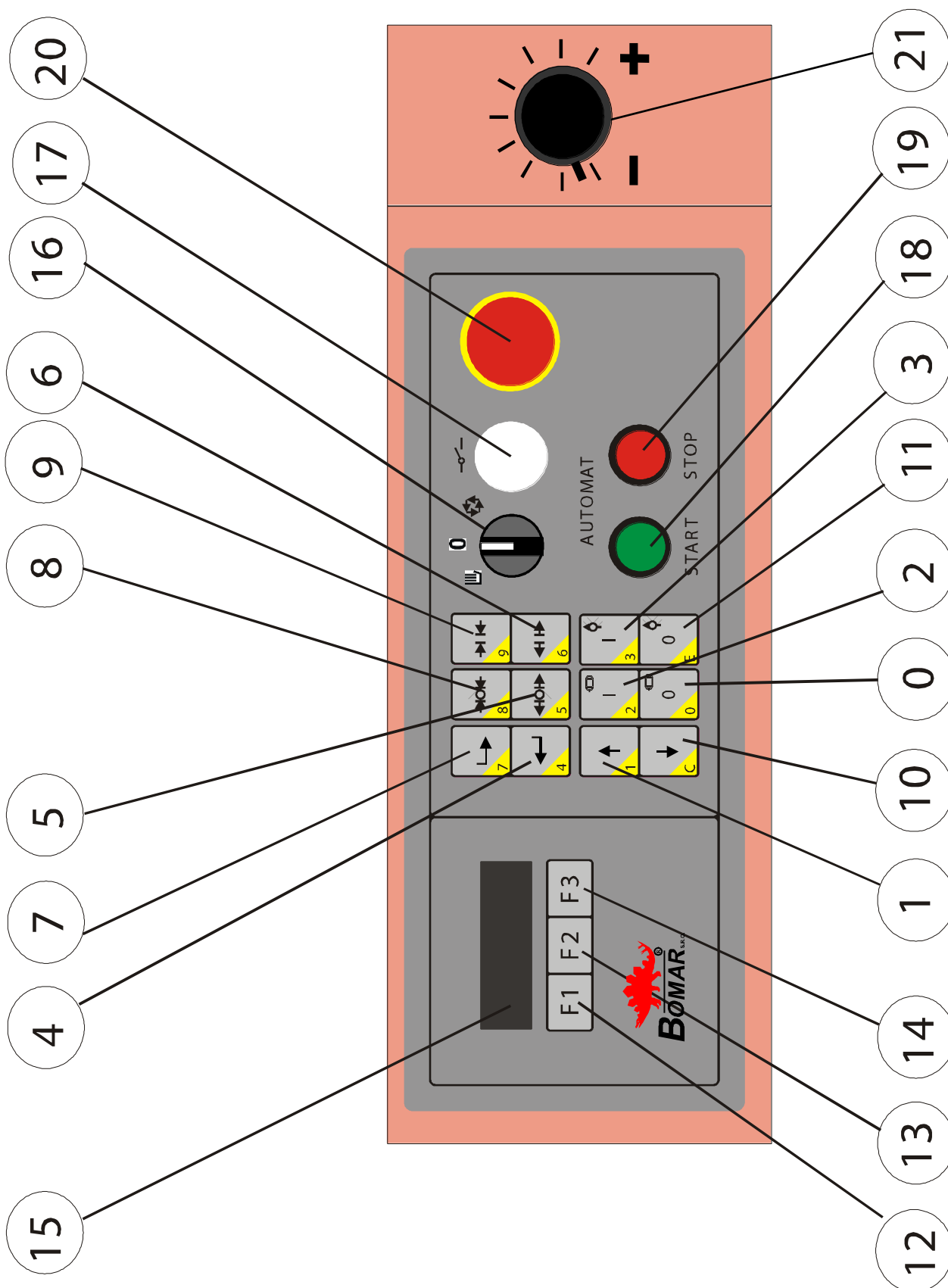
Switch on the main switch and check the motors and systems (saw band drive, hydraulic pump, cooling pump, chips conveyor).

Open and close the main vice and the feeding vice. Drive the front feeder from the front position – GANC model only – 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.

7. Control panel – description



0	Stop the saw band drive
1	Lift the saw frame
2	Start the saw band drive
3	Start the hydraulic aggregate
4	Feeding vice to the back position
5	Open the feeding vice
6	Open the main vice
7	Feeding vice to the forward position
8	Close the feeding vice
9	Close the main vice
10	Saw frame down Press together buttons 10 and 14 (F3) , the frame is sinking quickly.
11	Stop the hydraulic aggregate
12	F1 –Functional button Button function is described below in the text.
13	F2 –Functional button Button function is described below in the text.
14	F3 –Functional button Button function is described below in the text.
15	Display There is depicted operating mode and it allows dialogue with service workers.
16	Switch Operating mode pre-selection.  Semi-automatic mode  Automatic mode 0 Set mode
17	Safety circuit starting Switch on the safety circuit by pressing the button.
18	START button It starts the automatic cycle by pressing button.
19	STOP button It stops the automatic cycle by pressing button.

20

TOTAL – STOP button

Shutting the machine down in emergency situation!

21

Governing valve

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

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

8. Starting the band saw

8.1. Switch on the band saw



Switch on the main switch of the band saw. The main switch is situated on the side of the switchboard.

2) Switch on the safety circuit of the band saw (button 17 – control panel of the band saw).

8.2. Feeder reference position

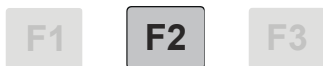
1) Press button **F1**, enter to menu: Reference.

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



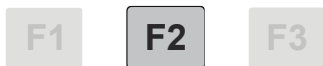
2) Press button **F2**. Feeder drives to the reference position.

```
" AUTOMATIC SETUP OF "
" REFERENCE POSITION "
"      FEEDER        "
"      <START>       "
```



3) As soon as the notice "Feeder reference position is set correctly" appears on the display, press button **F2**. Reference position is set.

```
" REFERENCE POSITION "
"      FEEDER      "
"      SET CORRECTLY "
"      <OK>        "
```



9. Material insertion

9.1. Safety notes

Keep safety notes!



Wear protective gloves!
Material may have sharp edges and may cause cuts.



Wear protective boots!
Falling cut pieces can cause serious injuries.



Wear protective hardhat!
Falling work pieces can cause severe head injuries.

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!

9.2. Handling agent selection

Use the strong handling agents to lift and transfer the material!



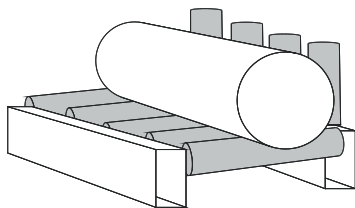
Handle with the material only with the lift truck or use the suspension strands and the crane!
Do not use the lift truck or crane in case that you do not have the licence to handle with it!

9.3. Material 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. The roller conveyors are described in the chapter „**Roller conveyors and accessories**“.

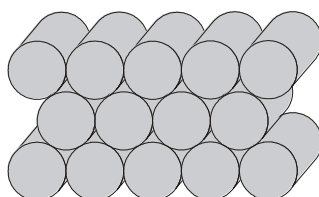
Make sure the conveyor is long enough and the material cannot tip off the conveyor.



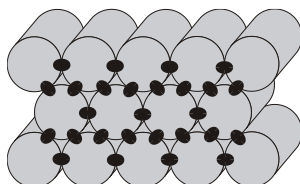
Be especially careful with round materials that it always stays on two vertical rollers and that it cannot fall off the conveyor!

9.4. Bundle material cutting

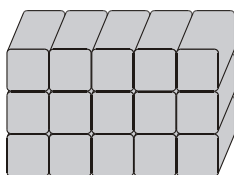
If you want to cut the material in the bundle, there are suggestions for the positioning of bundles



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. **ATTENTION! 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.

10. Band saw adjusting

10.1. Safety notes

Keep the safety notes! Work the machine with the highest safety!

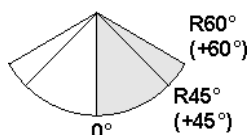


Wear protective boots!
Falling cut pieces can cause serious injuries.



Wear protective hardhat!
Falling work pieces can cause severe head injuries.

10.2. Angular cut setting



The cut angle can be varied from **0°** to **+60°**. Angles **0°** and **+60°** are set by means of the fixed stop.

Attention! In automatic mode can you cut max 45 °by turning of the arm!



1) Release the securing lever.



2) Adjust the desired cutting angle according to display (on the saw pillar) and tighten the lever again.

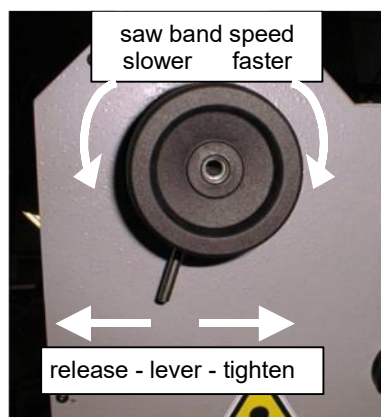


Note: Set the saw frame to the position 0° and press button zeroizing of the angle (on the distribution box under the main switch) after main switch starting of the machine. Angles admeasurement is secured.

10.3. Cutting speed adjustment

The saw band speed is possible to change from 20 to 90 min⁻¹. Makes the cutting speed adjustment:

- 1) Turn switch **16** to position „“.
- 2) Start the saw band drive by button **2**.
- 3) Release the securing lever.
- 4) Adjust the desired band speed.



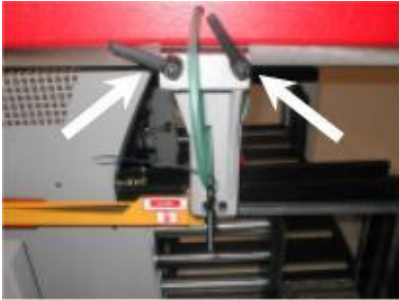
The saw band speed appears on the display (it is situated on the saw arm).

- 5) Tighten the securing lever again.

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

10.4. 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.

10.5. Swarf conveyor operation

Note: The swarf conveyor is supplied to the band saw only by request.

In semi-automatic cycle

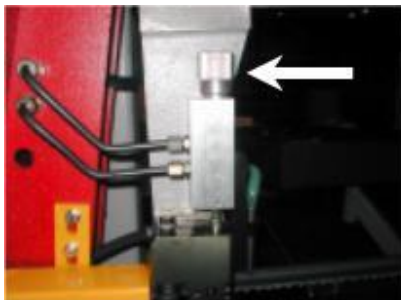
Swarf conveyor ON – press together **F1** and **3** buttons.
Swarf conveyor OFF – press together **F1** and **E** buttons.

In automatic cycle

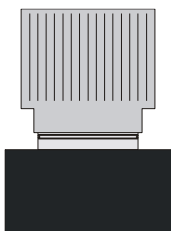
The swarf conveyor operation is adjusted according to chapter Service menu.

10.6. Pressure adjusting to the cut

The band saw **individual 410.260 GANC** is equipped with pressure to the cut on the right guiding cube.

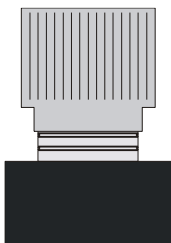


Pressure adjusting is performed with regulating wheel on the guiding cube. Screw on the wheel, the pressure is increased. Screw off the wheel, pressure is lowered.



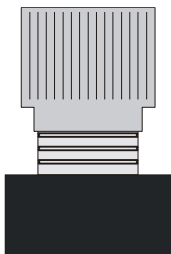
1) One visible neck

Solid material over $\varnothing 200$ mm.



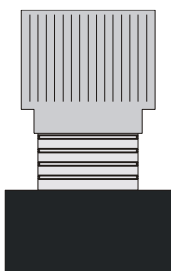
2) Two visible necks

Solid material from $\varnothing 100$ to $\varnothing 200$ mm.



3) Three visible necks

Pipes and shapes material with surface from 10 – 15 mm.
I – shaped material from 200 – 500 mm.
Solid material to $\varnothing 100$ mm.



4) Four visible necks

Pipes and shapes material with surface to 10 mm.
I- shaped material to 200 mm .

11. Semi-automatic cycle

11.1. Safety notes



Keep the safety notes! Work the machine with the highest safety!



Wear protective boots!
Falling cut pieces can cause serious injuries.



Wear protective hardhat!
Falling work pieces can cause severe head injuries.

11.2. Semi-automatic mode

There is possible to make the individual cuts. The adjusting of the desired length is performed semi-automatically.

- 1) Turn switch 16 to position „“.
- 2) Open the main and feeding vice by means of buttons 6 and 5.
- 3) Insert the material to the feeding vice.
- 4) Clamp the material to the feeding vice by button 8.
- 5) Drive the material to the desired length, which you want to cut by buttons 4 and 7.
- 6) Clamp the material to the main vice by button 9.
- 7) Press button START. The band saw cuts the material.
- 8) When material cutting is finished, the saw arm is lifted up and button START starts to blink. Now you can remove the blank.

11.3. Cycle breaking

The cycle can be stopped by 2 ways:

- a) Press button STOP (button 19 – control panel) – the saw interrupts the actual cut, the saw arm lifts to the starting position and it stops.
- b) Press emergency button TOTAL STOP (button 20 – control panel) in emergency causes! The safety circuit is broken and the saw band drive is stopped too.

11.4. Speed adjusting of the arm lowering

Set the speed of the arm lowering to the cut by control valve (position 21 – control panel).

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

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

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

12. Automatic mode

12.1. Safety notes

Keep the safety notes! Work the machine with the highest safety!



Wear protective boots!
Falling cut pieces can cause serious injuries.



Wear protective hardhat!
Falling work pieces can cause severe head injuries.

Attention! In automatic mode can you cut max 45 °by turning of the arm!

12.2. Cycle preset

Turn switch **16** to position „“ to pre-set the automatic cycle.

The band saw allows preset and store 10 programmes. Each of the programs has 20 pre-selections.

Definition explain:

Pre-selection is programme part, which includes the length of blank and pieces number of the set length.

Program consists of 20 pre-selections and it is performed during automatic cycle.

12.2.1. Preset

" Preselection No.: 1 of 20 "
" Length: 0.0 mm "
" Pieces: 0 pcs "
" <BACK> <NEXT> <DONE> "




1) Adjust the length of blank. Press button F2.

" Preselection No.: 1 of 20 "
" Length: 0.0 mm "
" Pieces: 0 pcs "
" <BACK> <NEXT> <DONE> "




2) Adjust the pieces number. Press button F2. Pre-selection number 1 is pre-set.

```
" Preselection No.: 2 of 20 "
" Length:          0.0 mm  "
" Pieces:          0 pcs   "
"<BACK> <NEXT> <DONE> "
[F1] [F2] [F3]
```

3) Pre-set the other pre-selections by repeating points 1 and 2. Press button **F3**. Preset is finished.

Note: Finish the cycle preset by button F3 is impossible, if the length or pieces number has null value in set pre-selection. That means the length and pieces number must be bigger than null.

4) Programme will be effected from beginning to the pre-selection, in which will be finished preset by pressing button **F3 <DONE>**. That means, if you pre-set 3 pre-selections and you finish the preset by pressing button F3, pre-selections 1, 2 and 3 will be effected.

12.2.2. Program storing

The band saw allows storing of 10 different programs.

```
" Preselection No.: 3 of 20 "
" Length:          0.0 mm  "
" Pieces:          0 pcs   "
"<BACK> <NEXT> <DONE> "
[F1] [F2] [F3]
```

1) Press button **F3**

```
" EXTENDED EDITING: "
" 1 = Preselection  "
" 2 = Memory        "
"<BACK>             <DONE> "
[F1] [F2] [F3]
```

2) Press button **2** to enter Memory menu.

```
"***      MEMORY      ***"
" F1 = Load program  "
" F2 = Save program   "
"                   <BACK> "
[F1] [F2] [F3]
```

3) Press button **F2** to store the program.

```
"***      MEMORY      ***"
" Rewrite mem. No:  X  "
"                   "
"<BACK> <OK>          "
[F1] [F2] [F3]
```

4) Set the memory number (**0-9**), where you want to store the program. Press button **F2**.

```
" Cutting program was "
" successfully read   "
" to memory No: X    "
"                   <OK> "
[F1] [F2] [F3]
```

5) Confirm the program storing by pressing button **F2**.

12.2.3. Program selection

```
" Preselection No.: 3 of 20 "
" Length:          0.0 mm  "
" Pieces:          0 pcs.  "
"<BACK> <NEXT> <-FN-> "
[F1] [F2] [F3]
```

1) Press button **F3** to open the program.

```
" EXTENDED EDITING:  "
" 1 = Preselection  "
" 2 = Memory        "
"<BACK>             <DONE> "
```



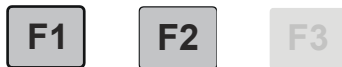
2) Press button **2** to enter Memory menu.

```
"***      MEMORY      ***"
"F1 = Load program  "
"F2 = Save program   "
"                  <BACK> "
```



3) Press button **F1** to open the required program.

```
"***      MEMORY      ***"
" Read memory No:  X  "
"                  "
"<BACK>  <OK>         "
```



4) Set the memory number (**0-9**), from which you want to open the program. Press button **F2**.

```
" Cutting program was  "
" successfully read    "
" from memory No: X    "
"                  <OK> "
```



5) Confirm the program opening by pressing button **F2**.

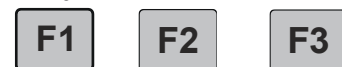
12.2.4. Editing

The length of blank or pieces number is possible to change this way:

1) Open the program in which you want to make a change (see chap. Program selection).

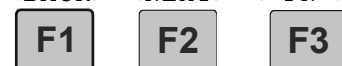
2) Adjust the pre-selection, which you want to change, by pressing buttons **F1** and **F2**.

```
" Preselection No.: 2 of 20 "
" Length:          200.0 mm"
" Pieces:          2 pcs.  "
"<BACK> <NEXT> <-FN->  "
```



3) Adjust the new length of the blank. Press button **F2**. The length of blank is changed.

```
" Preselection No.: 2 of 20 "
" Length:          250.0 mm"
" Pieces:          2 pcs.  "
"<BACK> <NEXT> <-FN->  "
```



4) Adjust the new pieces number. Press button **F2**. The pieces number is changed.

5) You can change the other pre-selections by repeating points 2 - 4. Press button **F3**, editing is finished.

6) Save the program (see chap. Program storing).

12.2.5. New Preselection inserting

The new Preselection inserting is performed this way:

1) Open the program, in which you want to perform the change (see chapter Program selection).

```
" Preselection No.: 3 of 20"
" Length:      200.0 mm"
" Pieces:      2 pcs."
"<BACK> <NEXT> <-FN-> "
```



2) Select the preselection, where you want to insert the new preselection by pressing buttons F1 and F2. The new preselection is inserted in front of the old one.

```
" Preselection No.: 3 of 20 "
" Length:      200.0 mm"
" Pieces:      2 pcs."
"<BACK> <NEXT> <-FN-> "
```



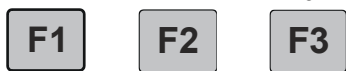
3) Press button F3.

```
" EXTENDED EDITING:  "
" 1 = Preselection  "
" 2 = Memory        "
"<BACK>              <DONE> "
```



4) Press button 1 to enter Preselection menu.

```
"*** PRESELECTION ***"
" F1 = Insert Presel. "
" F2 = Delete Presel. "
"                   <BACK> "
```



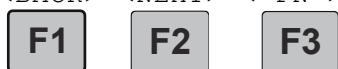
5) Press button F1 to insert the new Preselection to the program. The other Preselections are shifted.

```
" Preselection No.: 3 of 20 "
" Length:      0.0 mm"
" Pieces:      0 pcs."
"<BACK> <NEXT> <-FN-> "
```



6) Set the new length of the blank. Press button F2.

```
" Preselection No.: 3 of 20 "
" Length:      100.0 mm"
" Pieces:      0 pcs."
"<BACK> <NEXT> <-FN-> "
```



7) Set the new number of the pieces. Press button F2.

8) Now, you can insert the other Preselection by repeating points 2 to 7.

9) Store the program according to the chapter Program storing.

12.2.6. Clearing memory

Clear the adjusted Preselection from the memory is possible this way.

1) Open the program, in which you want to perform the change (see chapter: Program selection).

```
" Preselection No.: 3 of 20 "
" Length:      200.0 mm "
" Pieces:      2 pcs. "
"<BACK> <NEXT> <-FN-> "
```



2) Select the Preselection, which you want to clear by pressing buttons **F1** and **F2**.

```
" Preselection No.: 3 of 20 "
" Length:      200.0 mm "
" Pieces:      2 pcs. "
"<BACK> <NEXT> <-FN-> "
```



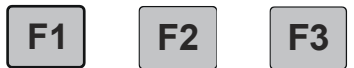
3) Press button **F3**.

```
" EXTENDED EDITING: "
" 1 = Preselection "
" 2 = Memory "
"<BACK> <DONE> "
```



4) Press button **1** to enter Preselection menu.

```
"*** PRESELECTION ***"
" F1 = Insert Presel. "
" F2 = Delete Presel. "
" <BACK> "
```



5) Press button **F2** to clear the selected Preselection from the program. The other Preselections are shifted.

6) Now, you can clear the other Preselections by repeating points 2 to 5.

7) Store the program according to chapter: Program storing.

12.3. Automatic cycle with material cutting

If you want to cut the material end before starting of the automatic cycle pre-set, you must continue this way:

1) Make following after finishing of the automatic cycle pre-set.

```
"SETUP OF THE RETURN  "
"POSITION OF SAW-ARM  "
"(pos. after the cut)"
"<END> <DONE>        "
```



2) Adjust the arm cca 3 cm above the material by pressing buttons „Saw arm up“ (1) and „Saw arm down“ (C). The saw arm will be returned to this height always.

3) Store the adjusted position by pressing button **F2**.

Note: Return to the pre-set by pressing button **F1**.

```
" AUTOMATIC TRIM CUT  "
"                      "
"<YES>                <NO> "
```



4) Press button **F1** <YES> for material trim cut.

```
" AUTOMATIC TRIM CUT  "
" Press the START     "
"                      "
```

5) Press button **START** (18). The saw makes the trim cut.

```
" AUTOMATIC TRIM CUT  "
" Wait until          "
" the cut is finished "
```

6) The report about course of cutting appears on the display during material cutting.

```
" AUTOMATIC CYCLE     "
" Press button        "
" START               "
"                      "
```

7) When the cutting is finished, press button **START** again. The saw makes the pre-set of automatic cycle.

8) Button **START** starts to blink after finishing of the automatic cycle. Now you can remove blanks.

12.4. Automatic cycle without material cutting

If you **do not want** to cut material end before starting of the automatic cycle pre-set, you must continue this way:

1) Make following after finishing of the automatic cycle pre-set.

```
" SETUP OF THE RETURN  "
" POSITION OF SAW-ARM  "
"(pos. after the cut)"
"<END> <DONE>        "
```



2) Adjust the arm cca 3 cm above the material by pressing buttons „Saw arm up“ (1) and „Saw arm down“ (C). The saw arm will be returned to this height always.

3) Store the adjusted position by pressing button **F2**.

Note: Return to the pre-set by pressing button **F1**.

" AUTOMATIC TRIM CUT "

" "

" <YES> <NO> "

F1 **F2** **F3**

4) Now press button **F3** <NO>, you do not want to make the trim cut.

" AUTOMATIC CYCLE "

" Press button "

" START "

" "

5) Press button **START**. The saw makes the pre-set of automatic cycle.

6) Button **START** starts to blink after finishing of the automatic cycle. Now you can remove blanks.

12.5. Cycle breaking

Cycle can be broken by 2 ways:

a) Press button **STOP** (button 19 – control panel) – the saw finishes the actual cut, arm lifts to the starting position and cycle is stopped.

b) Press emergency button **TOTAL STOP** (button 20 – control panel) in emergency causes! The safety circuit is broken and saw band drive is broken too.

12.6. Setting the speed of the saw arm lowering

Set the speed of the arm lowering to the cut by control valve (position 21 – control panel).

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

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

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

13. Blanks removing from the band saw

13.1. Safety notes

Keep the safety notes! Work the machine with the highest safety!



Wear protective gloves!
Material may have sharp edges and may cause cuts.



Wear protective boots!
Falling cut pieces can cause serious injuries.



Wear protective hardhat!
Falling work pieces can cause severe head injuries.

Take care, that there is nobody in the working area of the band saw! The moving material can cause the serious injuries!

13.2. 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 licence to the handle with it!

13.3. Blanks removing

Remove the blanks from the band saw.

14. Service menu

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

14.1. Entrance to service menu

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



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

14.2. Vice parameters

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

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



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

```
" CLAMP OPENING TIME "
" <-]O[-> : x.x sec  "
" <-] [-> : x.x sec  "
"      <NEXT> <MENU> "
```



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

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

14.3. Cooling parameters

You can adjust the type and mode of the band cooling.

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



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

14.3.1. Cooling type

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

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

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

```
"                        "
```

```
"                        <MENU> "
```

F1 F2 **F3**

```
" 1= Water cooling [x]"
" 2= Microniser   [ ]"
" 3= No cooling    [ ]"
"                                <MENU> "
```

F1 F2 **F3**

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

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

button **1** – saw band cooling with the water
button **2** – saw band cooling with Microniser
button **3** – without cooling of the saw band

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

14.3.2. Cooling mode

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

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

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

```
"                        "
```

```
"                        <MENU> "
```

F1 F2 **F3**

```
"1=Top pos shutoff [x]"
"2=Bot.pos shutoff [ ]"
"3=No shutoff      [ ]"
"                  <MENU> "
```

F1 F2 **F3**

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

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

button **1** – stop the saw band cooling after cutting finishing in **top** position of the saw arm.
 Button **2** – stop the saw band cooling after cutting finishing in **down** position of the saw arm.
 Button **3** – **do not stop** the saw band cooling after cutting finishing.

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

14.4. Cutting parameters

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

```
" 1 = Clamp params      "
```

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

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

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

F1 F2 F3

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

```
"1=Top pos shutoff [x]"
"2=Bot.pos shutoff [ ]"
"3=No shutoff [ ]"
"<MENU>"
```



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

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

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

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

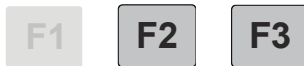
3) Press button **F3**. The selected mode of band stopping is stored you can return to the previous menu.

14.5. Swarf conveyor operation

Note: The swarf conveyor is added to the band saw only by customer request.

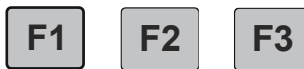
You can select from 3 possibilities of swarf conveyor operation in automatic cycle.

```
" 1 = Clamp params"
" 2 = Cooling params"
" 3 = Cutting params"
"<NEXT><DONE>"
```



1) Press button **F2** – other. Shift to the next menu.

```
" 1 = Machine params."
" 2 = Language"
" 3 = Swarf conve.mode"
"<BACK> <NEXT> <DONE>"
```



2) Press button **3** to enter to menu: Swarf conveyor operation.

```
" 1=Along with band[ ]"
" 2=Manual shut-off[ ]"
" 3=Manual control [x]"
"<MENU>"
```



3) Select the desired swarf conveyor operation. The selected item is marked „X“.

Button **1** – starting and stopping of the swarf conveyor together with saw band.

Button **2** – starting of the swarf conveyor automatically, but stopping of the eliminator is performed manually.

Button **3** – starting and stopping of the swarf conveyor is performed manually.

4) Press button **F3**. The selected mode of swarf conveyor operation is stored, you can return to the previous menu.

14.6. Machine parameters

```
"1 = Machine params."
"2 = Language"
"3 = Swarf conve.mode"
"<BACK> <NEXT> <DONE>"
```



1) Press button **1** – Machine parameters to shift to the next menu, where you can set the required parameter.

2) Set the required parameter:

```
" Correct. =          mm "
```

```
" Feeder   =          mm "
```

```
" F1 = PZH used?    [ ] "
```

```
"                                     <MENU> "
```



Correct - use numerical keyboard to set the required correction value. This value sets correction of feeding in mm/inch by reason of the width of the saw band.

Feeder - use numerical keyboard to set the required feeding length.

Button **F1** – press to use a pressure device.

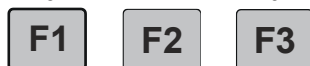
14.7. Language

```
"1 = Machine params. "
```

```
"2 = Language         "
```

```
"3 = Swarf conve.mode "
```

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



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

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

- password: 947

14.8. Length units selection

You can select the length units: millimetres or inches.

```
"1 = Machine params. "
```

```
"2 = Language         "
```

```
"3 = Swarf conve.mode "
```

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



1) Press button **F2** – other. Shift to the next menu.

```
"1 = Regulator        "
```

```
"2 = Length correct   "
```

```
"F1= mm(1) inch(0) [1] "
```

```
"                                     <MENU> "
```



2) Select the length units: millimetres or inches by repeated pressing button **F1**.

1 = millimetres
0 = inches

3) Press button **F3**. The selected parameters are stored and you can return to the previous menu.

14.9. Regulator

```
" 1 = Regulator        "
```

```
" 2 = Length correct   "
```

```
" F1= mm(1) inch(0) [1] "
```

```
"                                     <MENU> "
```



Reserved for the service purposes.

Second level password (service) is required to enter this menu.

14.10. Length correct

In case of multi-feeding it is possible to set a plus or minus correction value. This value sets correction of each other feeding (except the first) in mm/inch.

```
" 1 = Regulator      "
```

```
" 2 = Length correct "
```

```
" F1= mm(1) inch(0) [1] "
```

```
"                  <MENU> "
```



```
" Korekce =      0,2 mm "
```

```
" Korekce = 0,008 inch "
```

```
" F1=0=(t)      1=(-) [1] "
```

```
"                  <MENU> "
```



1) Press button 2 – Length correct to shift to the next menu.

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

- password: 947

2) Use numerical keyboard to set the required correction value.

Press button **F1** to change the plus or minus correction value.

3) Press button F3. The selected parameters are stored and you can return to the previous menu.

14.11. Service menu closing

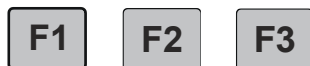
Press button **F3**. Service menu is closed.

```
"1 = Machine params.  "
```

```
"2 = Language         "
```

```
"3 = Swarf conve.mode "
```

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



15. Selection and replacement of the saw band

15.1. Safety notes



Wear protective gloves!

The saw band has sharp teeth and can cause serious injuries to your hands.



Wear protective goggles!

The saw band can snap during assembly and seriously injure your eyes.



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

15.2. Saw band sizes

3800 x 25 (27) x 0,90 mm

15.3. 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:

ZpZ – teeth number on one inch.

S – tooth with zero angle of the teeth.

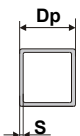
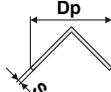
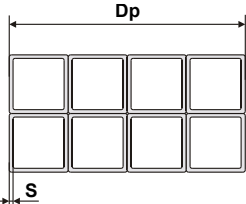
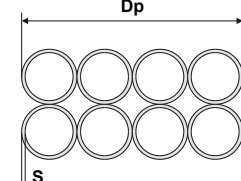
K – tooth with positive angle of the teeth.

Examples of the tooth system marking:

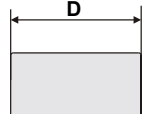
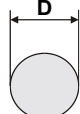
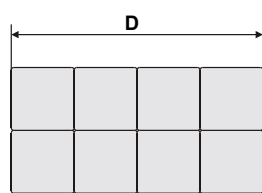
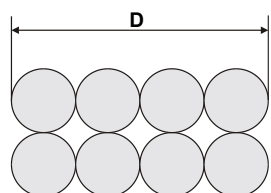
32 S – number „32“ means 32 teeth on one inch (that means constant tooth system), letter „S“ marks teeth with zero angle of the tooth.

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.

Tables for teeth selection:

SHAPED MATERIAL (Dp, 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 x S). In table, there are tooth systems constant and variable.						
Size of the wall S [mm]	Tooth system (ZpZ) Outer diameter of the profile Dp [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 (ZpZ) Outer diameter of the profile Dp [mm]					
	150	200	300	500	750	1000
2	10 – 14 S	10 – 14 S	8 – 12 S	6 – 10 S	5 – 8 S	5 – 8 S
3	8 – 12 S	8 – 12 S	6 – 10 S	5 – 8 S	4 – 6 K	4 – 6 K
4	6 – 10 S	6 – 10 S	5 – 8 S	4 – 6 K	4 – 6 K	4 – 6 K
5	6 – 10 S	5 – 8 S	4 – 6 K	4 – 6 K	4 – 6 K	3 – 4 K
6	5 – 8 S	5 – 8 S	4 – 6 K	4 – 6 K	3 – 4 K	3 – 4 K
8	5 – 8 S	4 – 6 K	4 – 6 K	3 – 4 K	3 – 4 K	3 – 4 K
10	4 – 6 K	4 – 6 K	4 – 6 K	3 – 4 K	3 – 4 K	2 – 3 K
12	4 – 6 K	4 – 6 K	3 – 4 K	3 – 4 K	2 – 3 K	2 – 3 K
15	4 – 6 K	3 – 4 K	3 – 4 K	2 – 3 K	2 – 3 K	2 – 3 K
20	3 – 4 K	3 – 4 K	2 – 3 K	2 – 3 K	2 – 3 K	2 – 3 K
30	3 – 4 K	2 – 3 K	2 – 3 K	2 – 3 K	1,4 – 2 K	1,4 – 2 K
50	2 – 3 K	2 – 3 K	2 – 3 K	1,4 – 2 K	1,4 – 2 K	1,4 – 2 K
75	-	2 – 3 K	1,4 – 2 K	1,4 – 2 K	1,4 – 2 K	0,75 – 1,25 K
100	-	-	1,4 – 2 K	0,75 – 1,25 K	0,75 – 1,25 K	0,75 – 1,25 K
150	-	-	-	0,75 – 1,25 K	0,75 – 1,25 K	0,75 – 1,25 K
200	-	-	-	0,75 – 1,25 K	0,75 – 1,25 K	0,75 – 1,25 K

SOLID MATERIAL (D = mm)

Constant tooth system		Variable tooth system	
length of the cut D	tooth system (ZpZ)	length of the cut D	tooth system (ZpZ)
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!

15.4. Saw band running - in

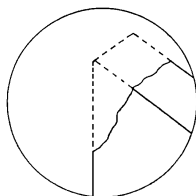
To ensure a full service life of the saw bands, we strongly recommend that you carry out the „RUN-IN“ process.

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

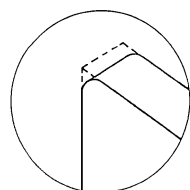
When cutting small pieces run the band until approximately 300 cm² of material has been cut.

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 regrounding saw bands too!

15.5. Saw band dismantling

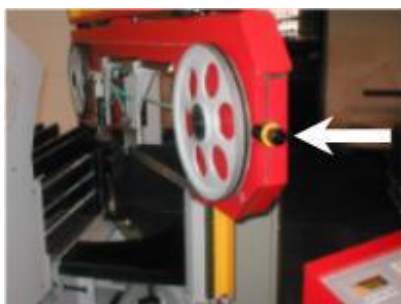
1) Lift the saw arm to the top position.



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



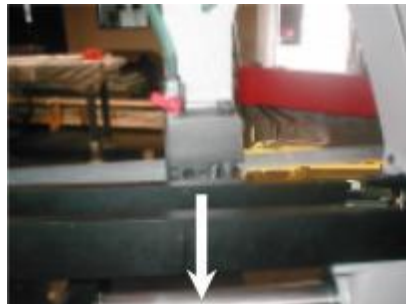
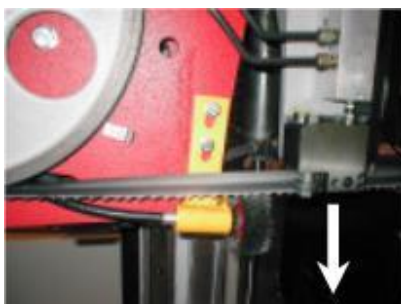
3) Release clasps on arm cover and open it.



4) Turn by stretching star to the left side, release saw band stretching.



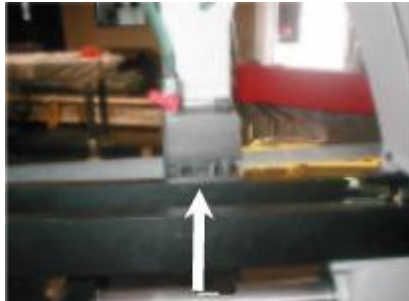
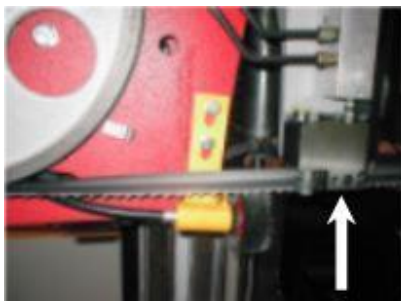
5) Pull saw band from blade wheels.



6) Pull up the saw band from the guiding cubes.

15.6. Saw band installation

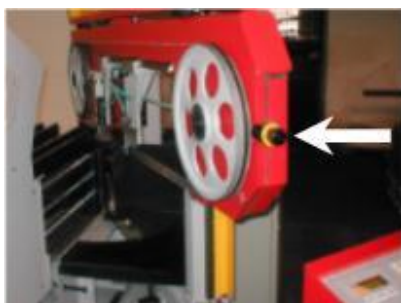
1) Prior to installation, clean all track wheels, guide cubes and inner side of the arm thoroughly of all traces of chips and dirt. Keep in mind the teeth direction when installing the saw band.



2) Insert new saw band in the guide cubes. Make sure the saw band runs between both guide rollers and it is pushed all the way to the top.



3) Put the saw band on both guide wheels. Make sure that the saw band ridge fits tightly to the wheel rim. Then push the saw band as far back as possible.



4) By turning the stretching star to the right, you will stretch the saw band slightly. Remove the plastic cover of the saw band teeth.



5) Close the rear cover of the arm.



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 match, you must turn the band round.

15.7. 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.

15.7.1. 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.

In case of use hydraulic band tensioning, BSPA indicator, you must tighten a blade, **up to green arrow** on the manometer.

15.7.2. 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 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 according to the chapter „**Servicing and adjustment**“.

3) Switch off the main switch.

4) Open cover(s) of the wheels and check position of the saw band on the both wheels.

- if the distance between backside of the saw band and the offset wheel is **1 – 3 mm**, setting is right.

- if the distance is bigger than **3 mm**, or the saw band is on the offset of the wheel, set the saw band according to chapter „**Servicing and adjustment**“.



5) Close cover of the saw band.

16. Cooling agents and chips disposal

16.1. Safety notes



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.

Instructions for first help

Pull off and safely remove polluted, soaked clothing.
For breathing, go out in the fresh air or look for first aid treatment.

Wash with water or use crèmes for contact with the skin.
Flush with water for eyes and look for first aid treatment.
For swallowing, drink a lot of water and induce vomiting.
Look for medical help.

16.2. 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 (see. **Special accessory**), fill the tank of the Microniser by specified cooling liquid. Microniser is ready for the operation.

The quality of the cooling agent will deteriorate due to:

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

If the solution is too weak:

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

If the solution is too strong:

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

16.3. 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:

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.

16.4. 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.

17. Greases and oils

17.1. 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.

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

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

The band saw	Gearbox oil	Capacity
Individual 410.260 GANC	Shell Tivela S 320	0,85 l
Individual 410.260 GH	Shell Tivela S 320	0,85 l
Individual 510.330 GANC	Shell Tivela S 320	1,8 l
Individual 510.330 GH	Shell Tivela S 320	1,8 l
Individual 610.440 GANC	Shell Tivela S 320	2,3 l
Individual 610.440 GH	Shell Tivela S 320	2,3 l
Swarf conveyor	Shell Tivela S 320	0,075 l

Comparative table of the gearbox oils

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

17.2. Hydraulic oils

Note: This chapter is only for the band saws, which has hydraulic equipment.

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

Use oils with specification DIN 51524-HLP, ISO 6743-4 and viscosity grade ISO VG 46 in hydraulic aggregates. Hydraulic oils quantity – see chapter **Hydraulic oil level check**.

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

Comparative table of the hydraulic oils

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

17.3. Lubricant greases

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

Comparative table of the lubricant greases

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

18. Service

18.1. 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 main and feeding vice.
- The guiding of the feeder.
- Loading surface of the main, feeding vice, and area under them.

18.2. Lubrication

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



- The guiding cubes leading – grease with oil from both sides once a week.



- The linear guiding of the saw arm – lubricate with grease once a three months (see chapter **Lubricant greases**). Use 3-5g grease on the every carriage of the linear guiding. Use the grease gun to the lubrication. Drive 3-5 times whole line of the linear guiding during lubrication.

18.3. 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.

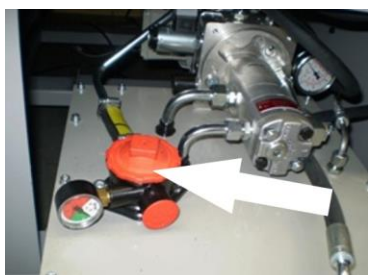
18.4. Hydraulic oil level check

Note: This chapter is only for the band saws, which has hydraulic equipment.

Recommended type of the hydraulic oil is placed in chapter **Hydraulic oils**.



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



Fill the hydraulic oil, if it is necessary (arrow). Use always the filter (25 μm or better) when you fill the oil. You avoid impurities penetration to the hydraulic system and troubles in hydraulic system.

19. Adjustment

19.1. Hard metal guides adjustment

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



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



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



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

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

19.2. Guide cubes adjustment

The guiding cubes are set from the manufacturer. Cubes are secured with two pins. It is not necessary to set the guiding cubes all the while of the lifetime.

19.3. Saw band run adjustment on stretching wheel

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

Saw band run inspection

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

The saw band falls off the wheel

The saw band and protective cover can be damaged.

The saw band runs on the wheel rim

The saw band and wheel rim can be damaged.

- 1) Start and stop saw band drive.
- 2) Stop the main switch!
- 3) Open rear cover of the saw arm.



- 4) Check saw band placing on the wheels.

- If the distance of the rear part of the saw band from wheel rim is **1mm**, setting is right.
- If the distance is bigger than **1mm**, or the saw band runs on the wheel rim, saw band run must be set.

Saw band setting



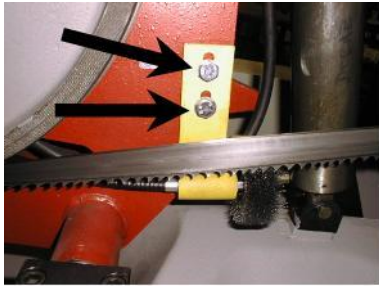
The saw band run is set with screw in the stretching cube on the saw frame. Optimal distance has been determined at **1 – 3 mm**.

- Turn by screw to the right, the saw band approximates to the stretching wheel rim.
- Turn by screw to the left, the saw band departs from the stretching wheel rim.

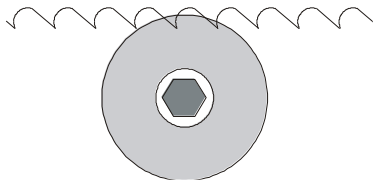
Check saw band run again after setting.

19.4. Brush adjustment

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



1) Release screws on the brush holder.



2) Set the brush to the saw band so, that brush touches with band.

3) Tighten the screws.

19.5. Limit switch setting of the saw band stretching



After the saw band is replaced, the limit switch setting must be checked out. If the limit switch is not set correctly, the band is stretch too much or it is too loose.

1) Stretch the saw band by means of TENZOMAT on the optimal value.

2) Release the nut on the stop screw.

3) Start the driving engine. Two scenarios can occur:



a) If the engine is switched on, but it does not run, turn the screw to the left until the engine starts to run.

b) If the engine runs turn the screw to the right until it stops to run, then turn the screw shortly to the left until the engine starts to run again.

4) Secure the stop screw with nut and check the switch setting once more.

19.6. Limit switch of the saw frame lower position adjustment

Check setting

Lower the saw frame to the bottom position. If the saw frame is on the lower stop and the limit switch was responded, the limit switch adjustment is right. If the limit switch is not right, it must be set.

Limit switch setting



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

19.7. Pressure switch adjustment



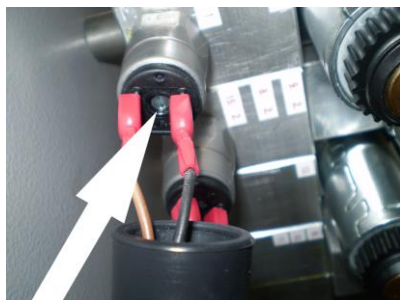
In hydraulic system is residual pressure after hydraulic aggregate stopping!

The pressure switches are in the block of the hydraulic aggregate.



The pressure switch of vice is marked with yellow band **SQ xx** or pressure switch of feeding vice with yellow band **SQ 1** must be adjusted on occasion :

Pull off the elastic cover of the pressure switch (carefully – outlets must not be broken).



Set the sensitivity of the pressure switch by means of the screwdriver.

Turn by screwdriver to the left, the sensitivity is bigger.

Turn by screwdriver to the right, the switch will be clip with higher pressure.

Check limit switches adjustment

The vice is clamped - The pilot light 10.1 of the control system are lighted.

The vice is opened – The pilot light 10.1 of the control system are not lighted.

The vice is on the move – The pilot light are not lighted, they are not winked.

Return the cover on the pressure switch after adjustment.

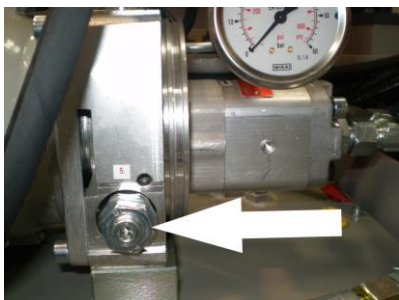
19.8. Pressure adjustment of the hydraulic system



In hydraulic system is residual pressure after hydraulic aggregate stopping!

Pull off the black cover of the pressure valve.

Release the nut of the pressure valve.



Higher pressure – turn the pressure valve to the clock's direction.

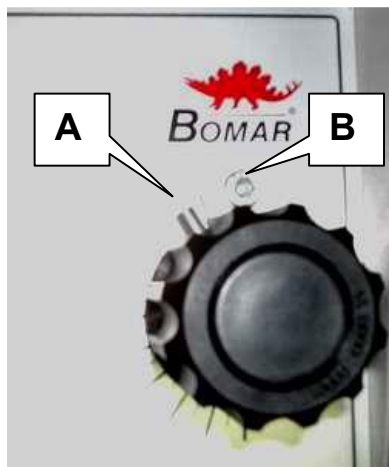
Lower pressure – turn the pressure valve against the clock's direction.

Set the pressure by means of the pressure valve and manometer.

If the pressure is adjusted, tighten the nut.

19.9. Adjustment of a throttle valve

- 1) Switch off the machine by its main switch. Let the sawing head down at the bottom. Close the throttle valve gently.
- 2) The worm screw (pos. A) must be next to the stop (pos. B), when the valve is closed.



Pic. 1



Pic. 2

- 3) Otherwise, you must loosen the worm screw, lift the plastic knob and close the throttle valve to the maximum. Next loosen the worm screw and take off the plastic knob. Put it back so that the worm screw must be next to the stop while the valve is closed. Then tighten the worm screw again.
- 4) Turn the machine on and test the down-feed control.

20. Worn pieces replacement

20.1. Hard metal guides replacement

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

1) Dismantle the saw band. Remove the hosepipe leading the cooling agent. Dismantle guide cube of the saw band.



2) Loosen the adjusting screws of the metal guide.



3) Loosen the binding screw of first metal guide. Remove adjustable hard metal guide.



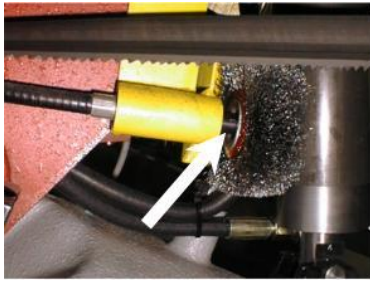
4) Loosen the binding screw of second metal guide. Remove the hard metal guide.

5) Insert new hard metal guides and fasten them tightly.

6) Install the saw band.

20.2. Round brush replacement

If the chip removing brush is so worn, that it does not fulfil its function, the brush must be replaced.



1) Hold brush shaft by key.



2) Release the nut of the brush, exchange old brush to new brush and screw on the nut of the brush.

3) Set the brush to the saw band.

20.3. Saw band guiding rollers replacement

If the saw band is not sufficiently guided by guiding pulleys or if the pulleys are obviously worn, the pulleys should be replaced. **ATTENTION!** Guiding pulleys must be replaced together on both guiding cubes!

1) Dismantle the saw band.

2) Disconnect the hose from the cooling agent, screw off the cutting pressure regulation. Let the cutting pressure regulation connected to the hydraulic system. Dismantle the guiding cube of the saw band.



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

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

4) Screw off nuts from eccentrics.



5) Remove eccentrics from bearings by means of the swager.



6) Change all bearings and other worn parts.



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

ATTENTION! Do not replace the eccentrics placing in the cube.



8) Screw on nuts on both eccentrics and tighten them.



9) Insert the saw band to the guiding cube (cca 15 – 20 cm). Set the eccentrics by means of the wrenches, the saw band must run in the centre. Guide pulleys must not press too much on the band, but must spin freely during the band run.

10) Tighten nuts on both eccentrics.

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

20.4. Stretching wheel replacement

1) Dismantle the saw band.



2) Screw off the screw and remove the washer.

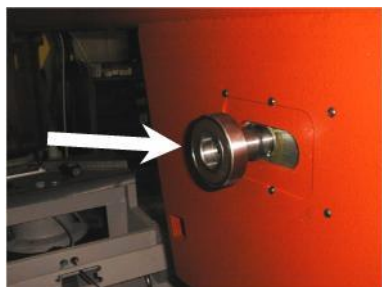


3) Pull the wheel from the shaft by means of wheel puller. If the lower bearing stays on the shaft, remove it too.

4) Check score of the bearings of the stretching wheel and replace them for new.



5) Clean the shaft and grease it with oil. Insert retaining ring to the groove.



6) Install bearing on the shaft and move it to the retaining ring. Insert the distance ring on the shaft and move it to the bearing.



7) Insert the retaining ring to the hole in the wheel.



8) Insert the bearing to the hole in the wheel and press it to the retaining ring.



9) Put the wheel on the shaft and screw on the preparation to the wheel stretching to the hole in the shaft.

10) Pull on the wheel on the shaft.



11) Screw on washer and screw back.

12) Install the saw band. Wheel replacement is ready.

20.5. Driving wheel replacement

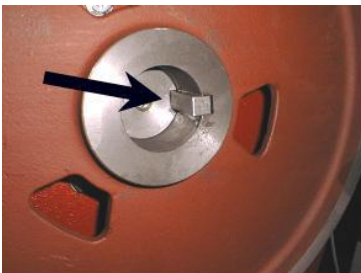
1) Dismantle the saw band.



2) Screw off the screw and remove the washer.



3) Pull off the wheel from the shaft by means of the three-armed puller



4) Install the wheel on the shaft. Insert the feather to the groove.



5) Screw on the preparation to the wheel stretching to the hole in the shaft. Pull on the wheel on the shaft.



6) Screw on washer and screw back.

7) Install the saw band. Wheel replacement is ready.

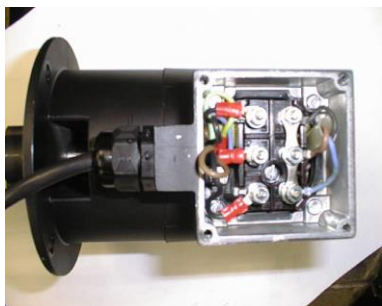
20.6. Cooling pump replacement



**Only a qualified worker can carry out the connection!
High-voltage shock may have fatal results.**

1) Pull the tank with the liquid from the pedestal.

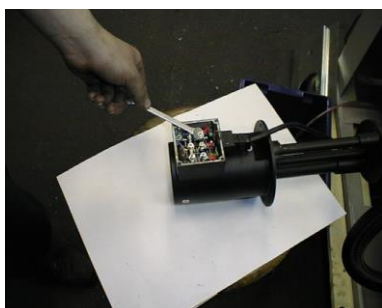
2) Remove the hosepipe leading to the cooling agent from the plug on the pump.
Screw off four screws from the cooling pump flange and pull out the pump from the sheet metal holder.



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



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

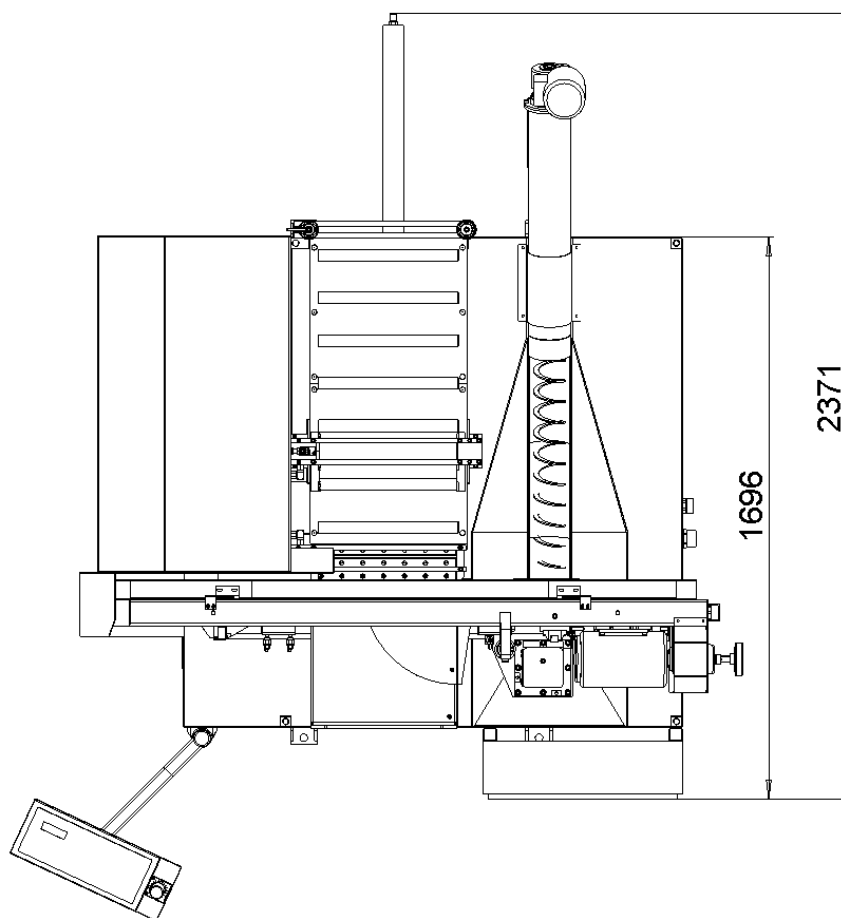
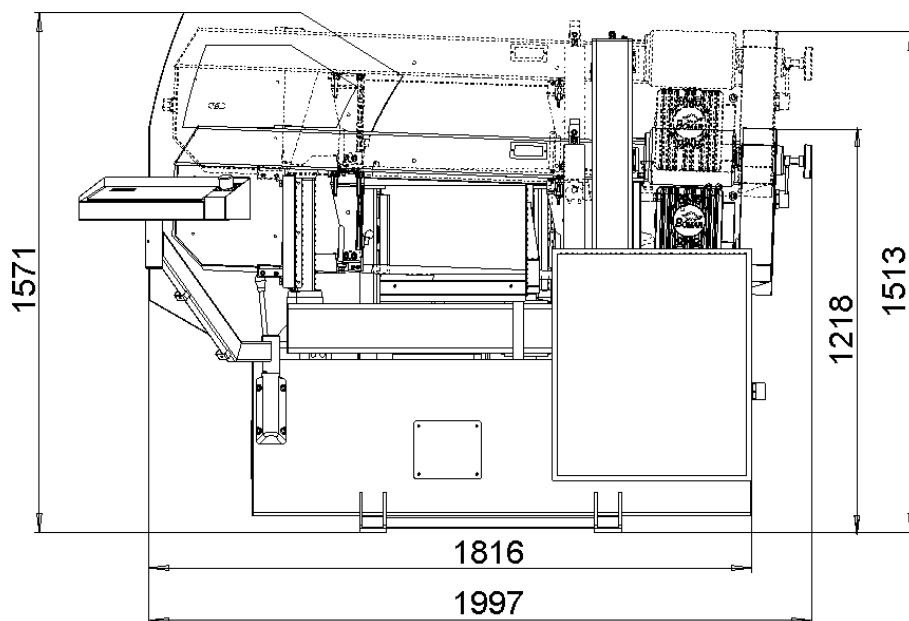


5) Dismantle new pump switchboard cover. Push the cable through the bushing and fasten it.

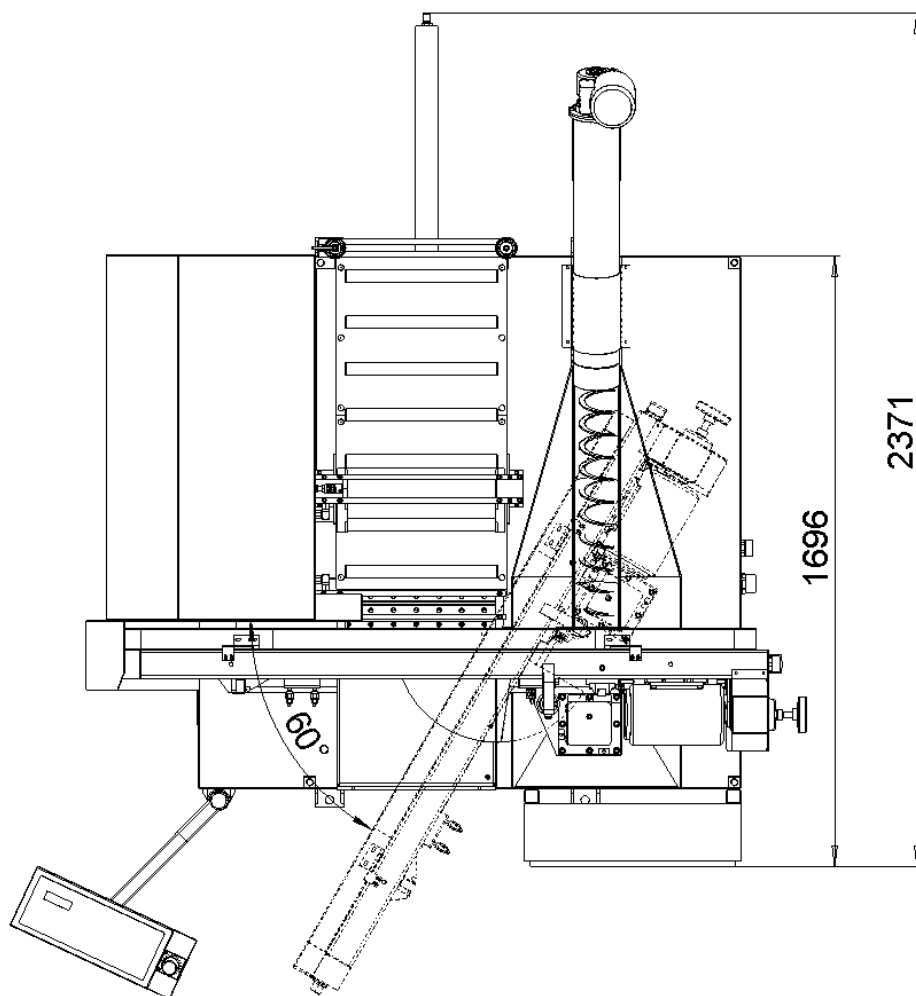
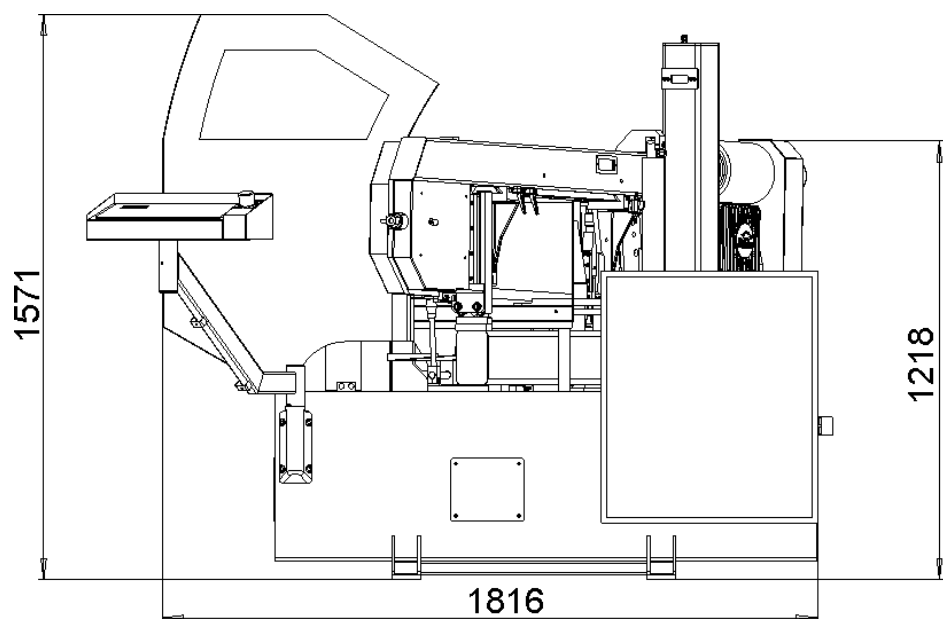


6) Screw on the cable bushing and cover of the terminal block. Do not forget the rubber gasket! Tighten the cooling liquid hose with non-stick tape and screw it again. Install cooling liquid hose, place the pump on the sheet metal holder and screw it.

21. Rozměrové schéma / Aufstellzeichnung / Installation diagram

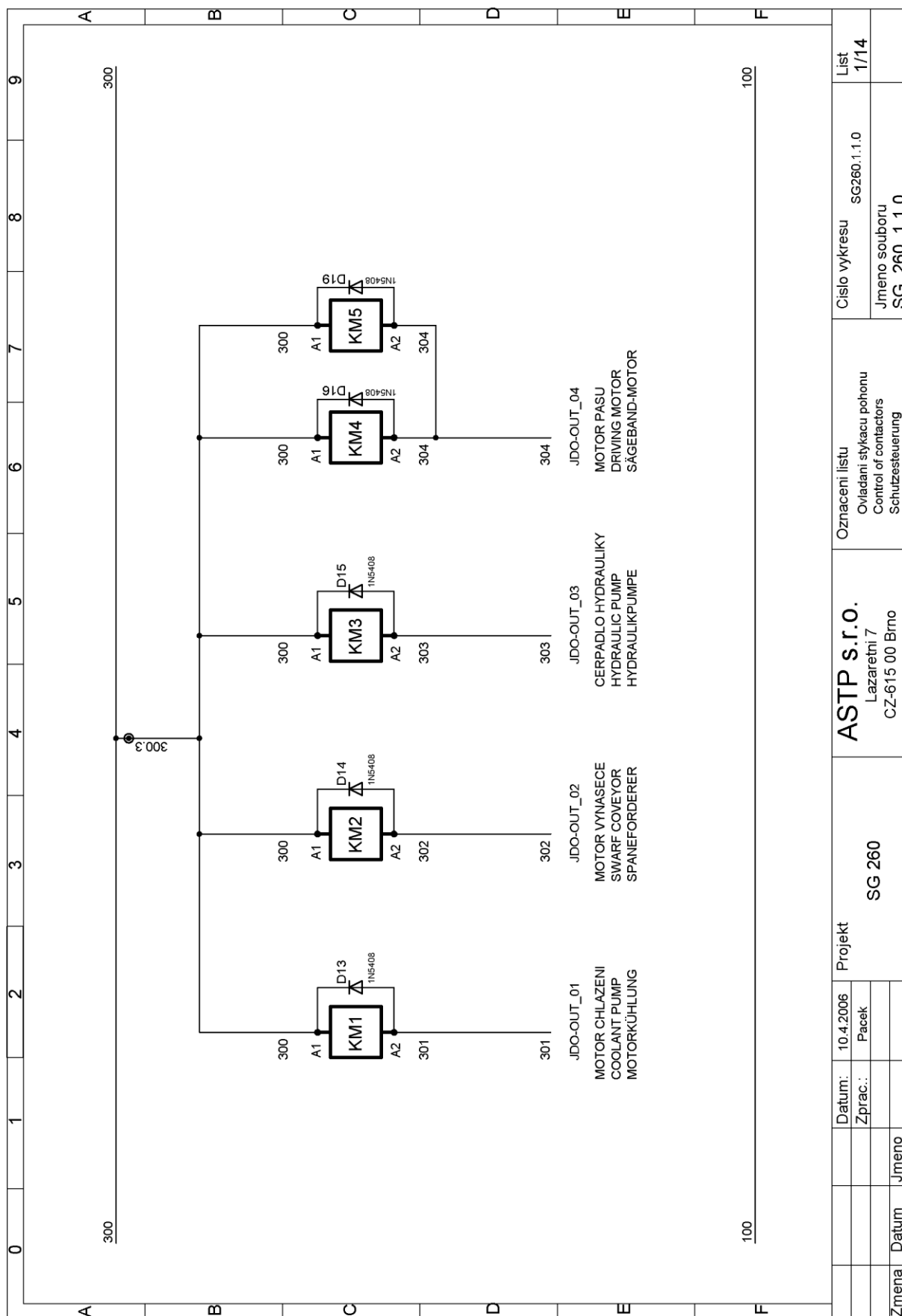


Rozměrové schéma I / Aufstellzeichnung I / Installation diagram I

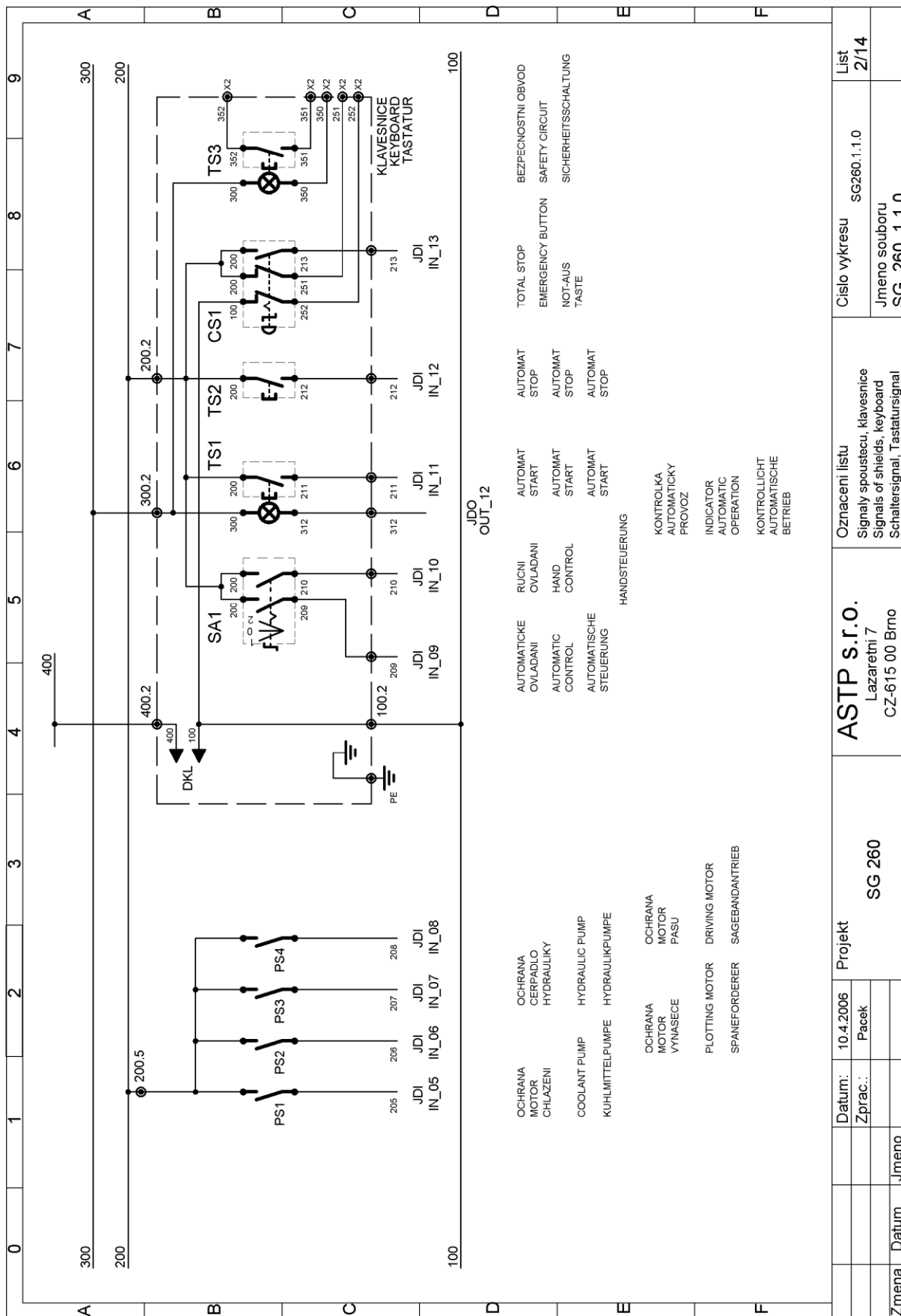


Rozměrové schéma II / Aufstellzeichnung II / Installation diagram II

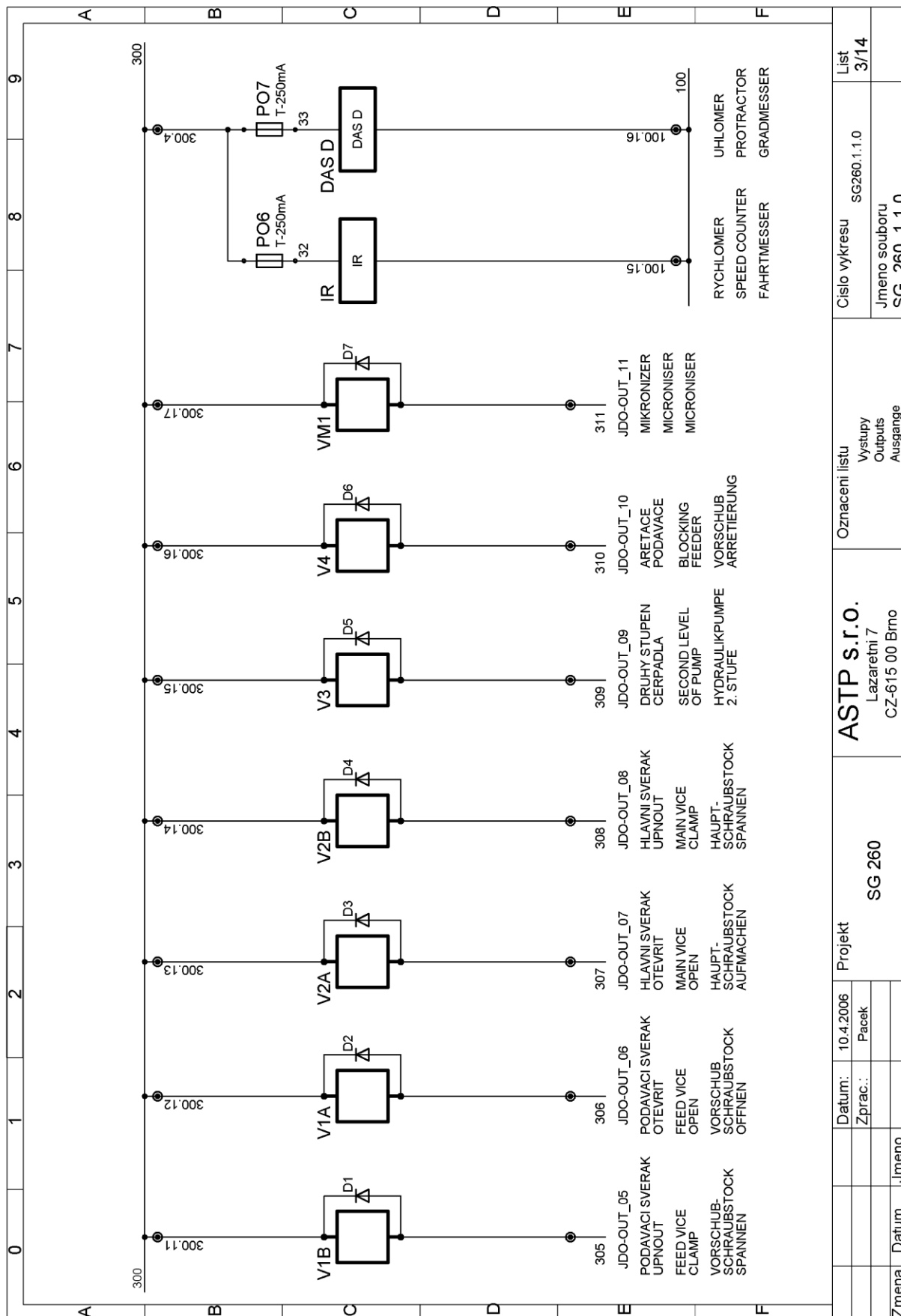
22. Elektrická schémata / Elektroschemas / Wiring diagrams



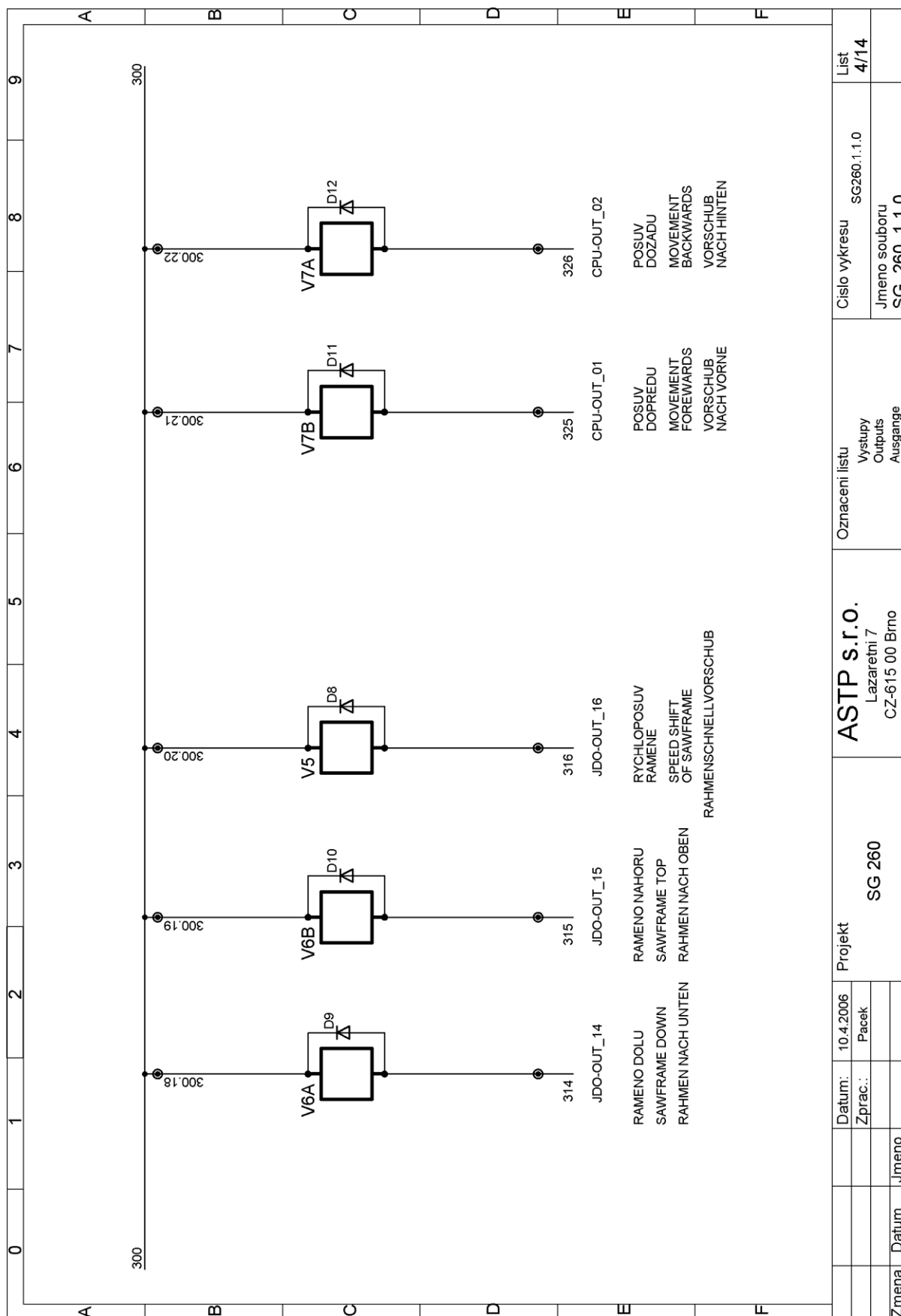
Elektrické schéma 1 / Elektroschema 1 / Wiring diagram 1



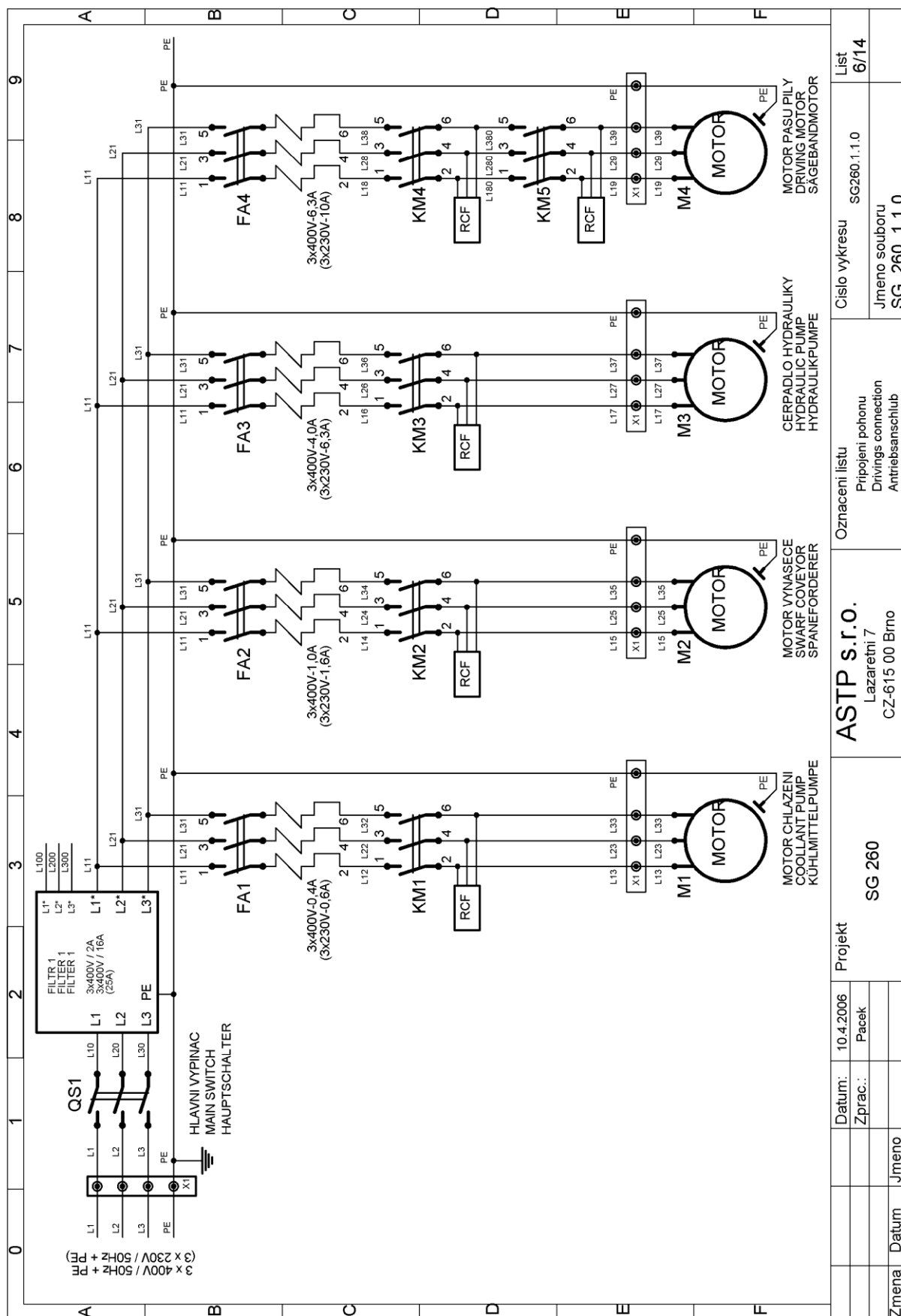
Elektrické schéma 2 / Leitungsschema 2 / Wiring diagram 2



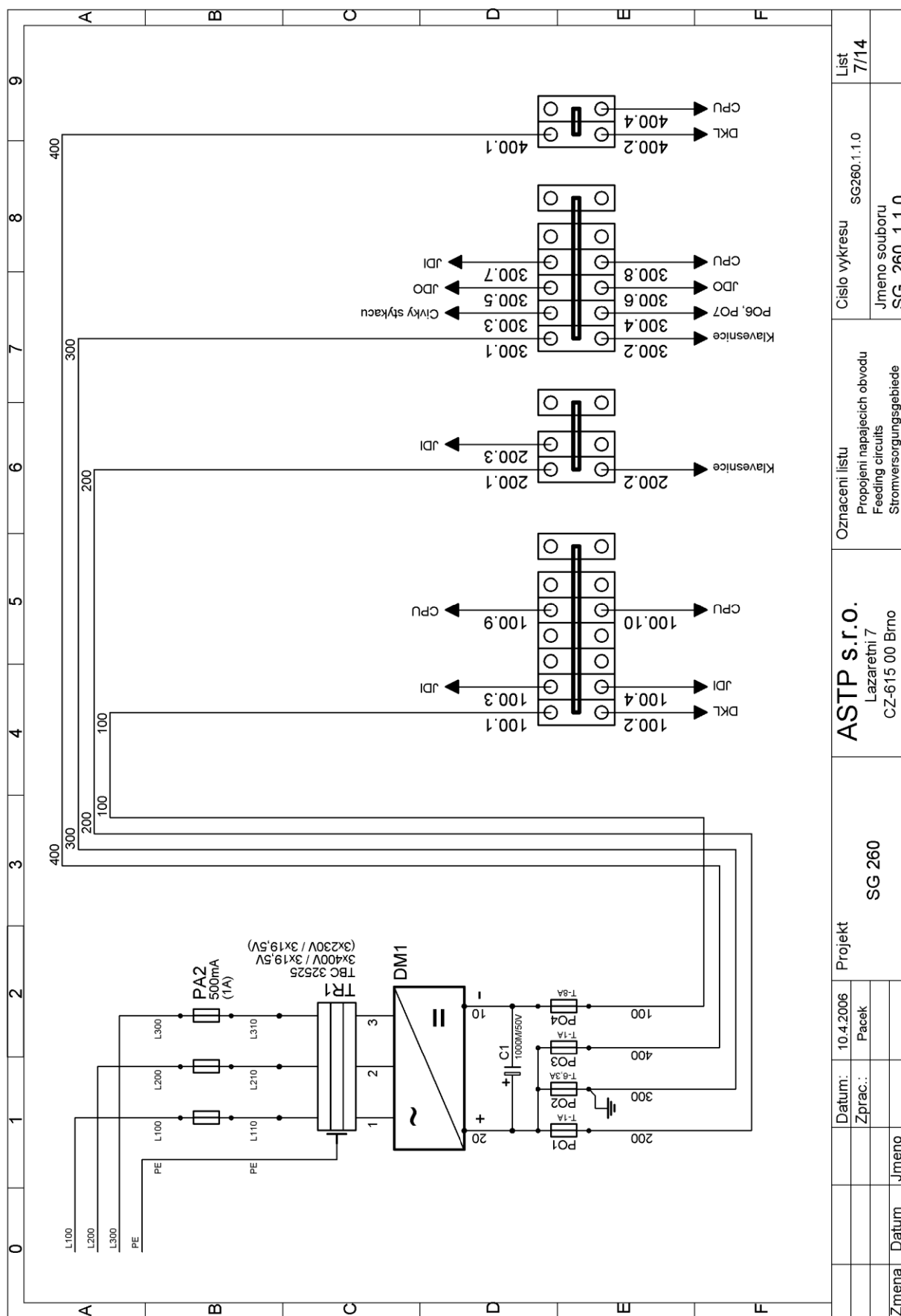
Elektrické schéma 3 / Elektroschema 3 / Wiring diagram 3



Elektrické schéma 5 / Elektroschema 5 / Wiring diagram 5

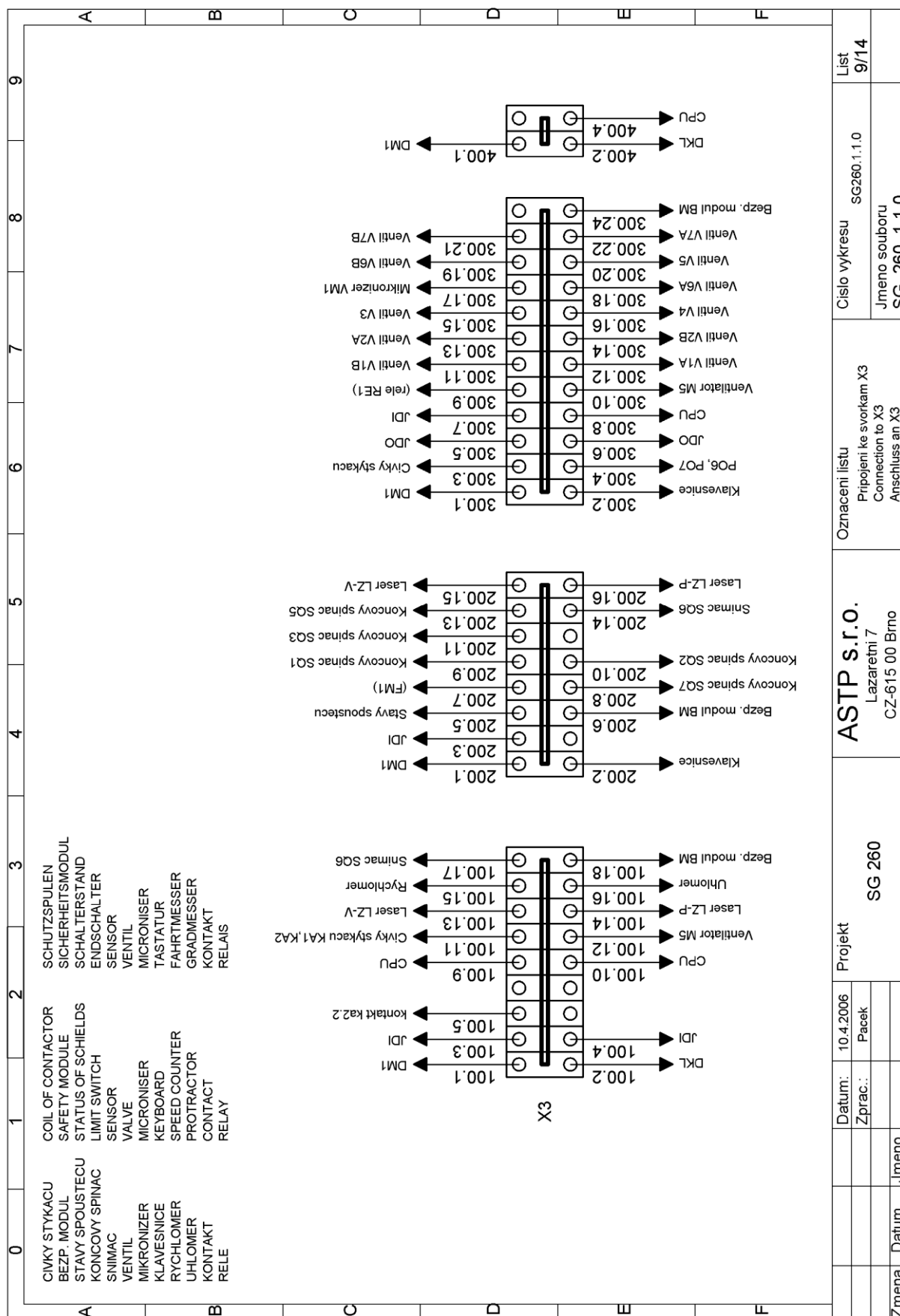


Elektrické schéma 6 / Elektroschema 6 / Wiring diagram 6

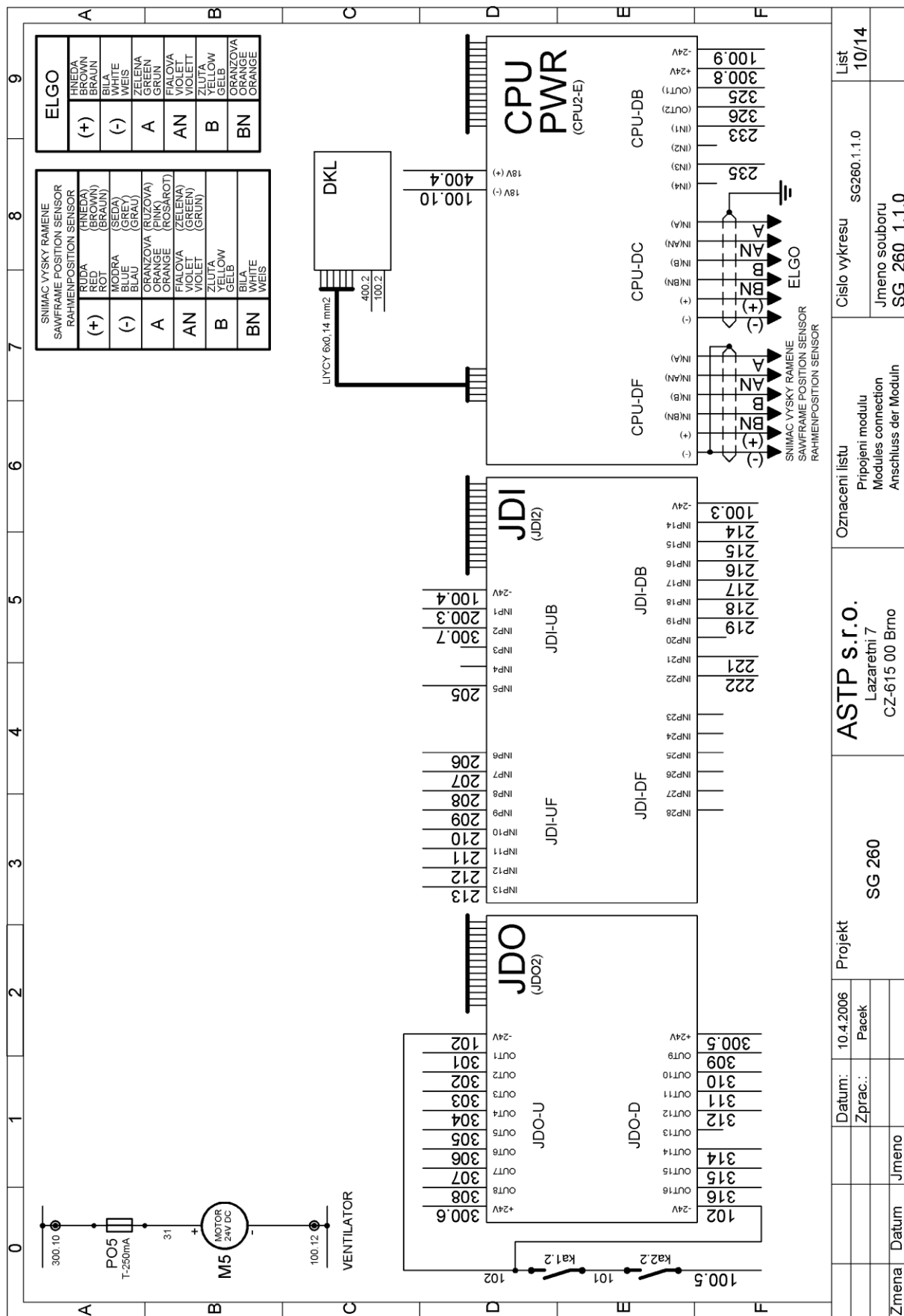


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TLACITKO	BUTTON	TASTE		TLACITKO		BUTTON		TLACITKO		BUTTON		TLACITKO		BUTTON		TLACITKO		BUTTON	
TLAKOVY SPINAC	PRESSURE SWITCH	DRUCKSCHALTER		TLAKOVY SPINAC		PRESSURE SWITCH		TLAKOVY SPINAC		PRESSURE SWITCH		TLAKOVY SPINAC		PRESSURE SWITCH		TLAKOVY SPINAC		PRESSURE SWITCH	
KONCOVY SPINAC	LIMIT SWITCH	ENDSCHALTER		KONCOVY SPINAC		LIMIT SWITCH		KONCOVY SPINAC		LIMIT SWITCH		KONCOVY SPINAC		LIMIT SWITCH		KONCOVY SPINAC		LIMIT SWITCH	
SNIMAC	SENSOR	SENSOR		SNIMAC		SENSOR		SNIMAC		SENSOR		SNIMAC		SENSOR		SNIMAC		SENSOR	
VENTIL	VALVE	VENTIL		VENTIL		VALVE		VENTIL		VALVE		VENTIL		VALVE		VENTIL		VALVE	
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MIKRONIZER	MICRONISER	MIKRONISER		MIKRONIZER		MICRONISER		MIKRONIZER		MICRONISER		MIKRONIZER		MICRONISER		MIKRONIZER		MICRONISER	
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BEZP. MODUL	SAFETY MODULE	SICHERHEITSMODUL		BEZP. MODUL		SAFETY MODULE		BEZP. MODUL		SAFETY MODULE		BEZP. MODUL		SAFETY MODULE		BEZP. MODUL		SAFETY MODULE	

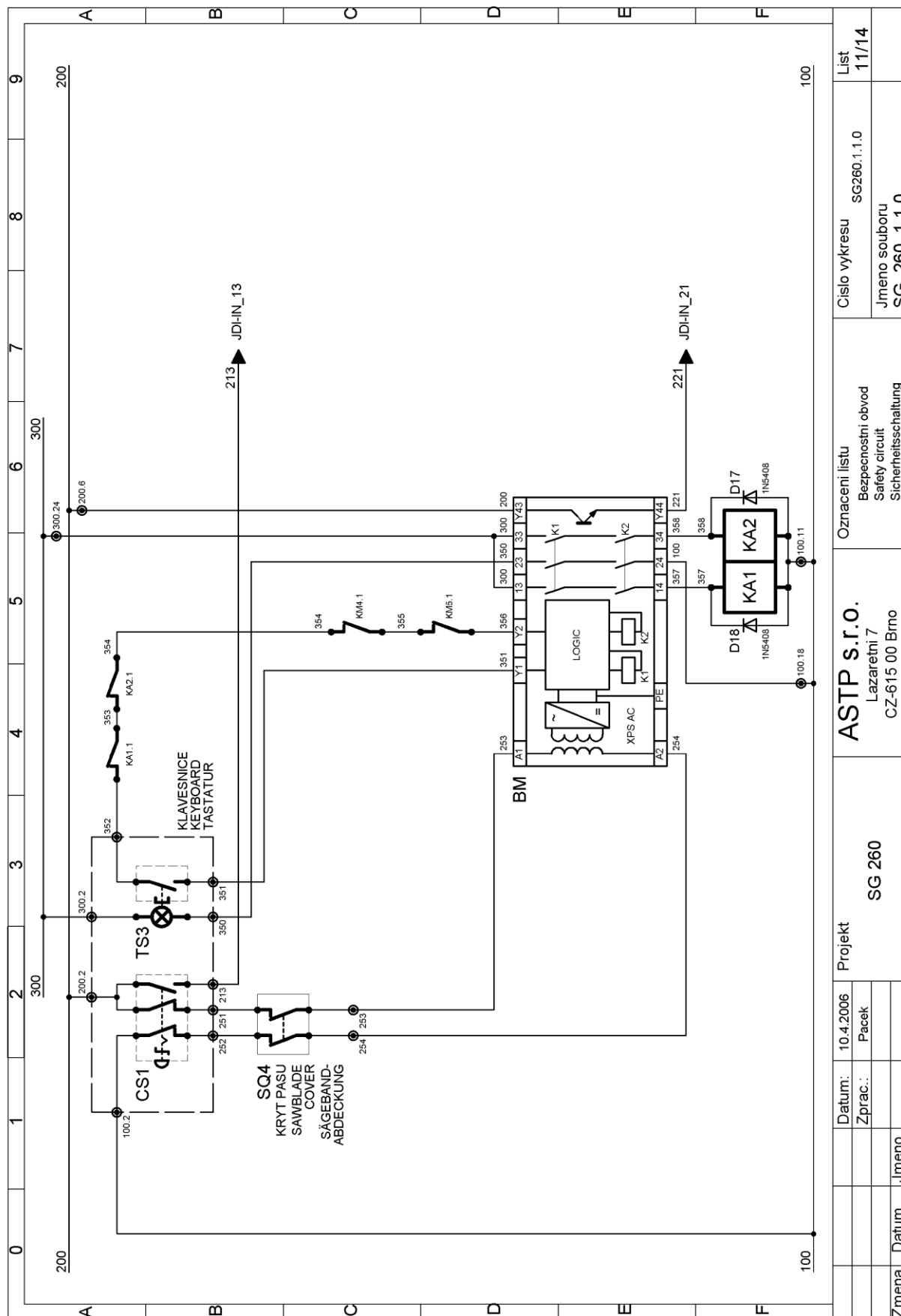
Elektrické schéma 8 / Elektroschema 8 / Wiring diagram 8



Elektrické schéma 9 / Elektroschema 9 / Wiring diagram 9



Elektrické schéma 10 / Elektroschema 10 / Wiring diagram 10



Elektrické schéma 11 / Elektroschema 11 / Wiring diagram 11

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Elektrické schéma 12 / Elektroschema 12 / Wiring diagram 12

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Elektrické schéma 13 / Elektroschema 13 / Wiring diagram 13

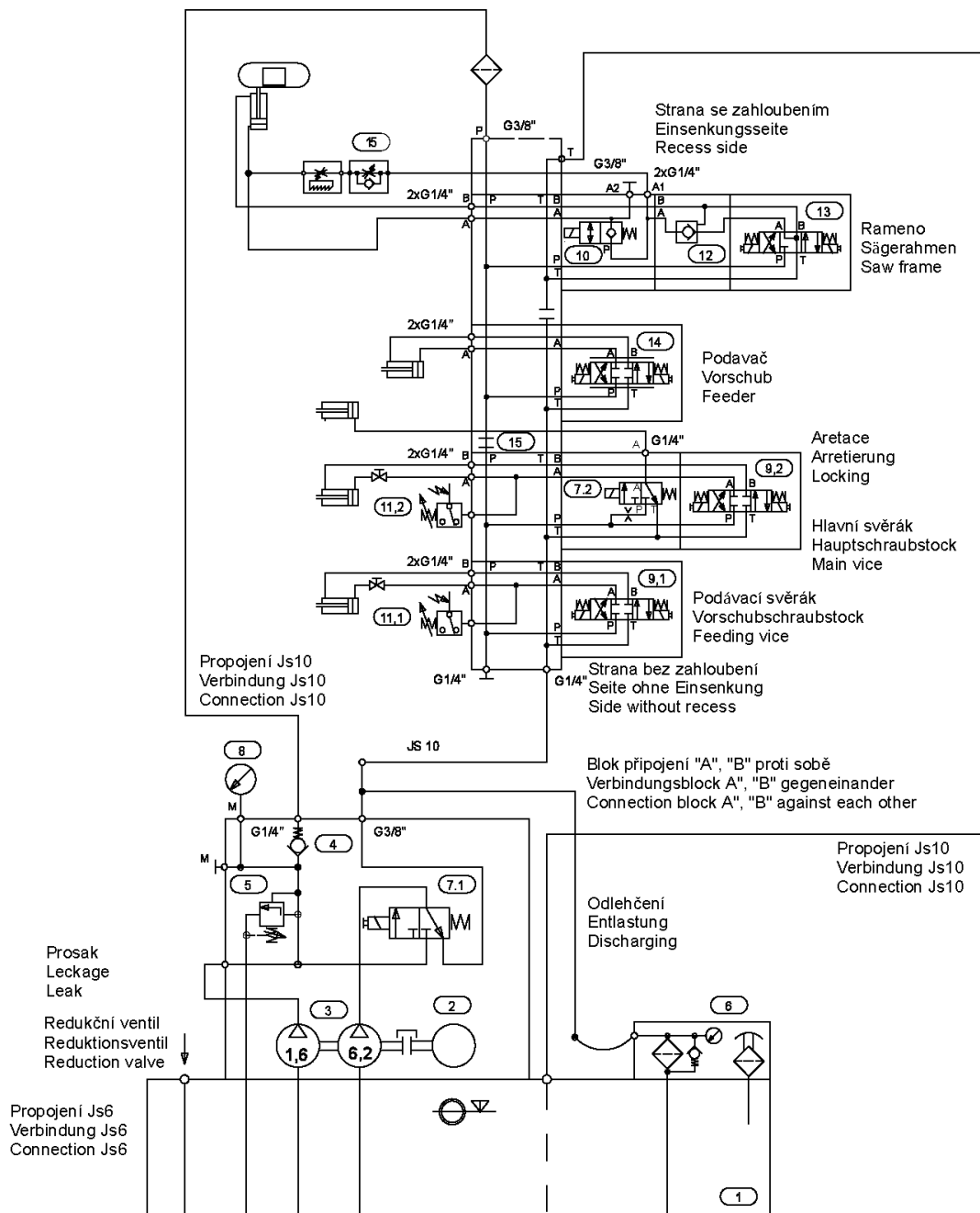
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23. Kusovník elektrosoučástí / Stückliste der Elektroteilen / Piece list of electroparts

ATTENTION! Only qualified person can do the servicing and repairs. For parts changing, use only parts, which are identical with the originals.

Bestell - Nr.	Bezeichnung		Menge	Sign.
Objednáací číslo	Název položky		ks	Ozn.
Reference No.	Item		Pcs.	Sign.
91.001.0xx	Elektromotor/ Elektromotor / Electromotor	TM90 4X B3 2,2 kW	1	M4
91.012.022	Filtr / Filter / Filter	A-1000-Flv3020-RE-B 3kW	1	F
91.280.002	Diodový můstek/ Diodenbrücke / Diode bridge	DB 25A 280V	1	DM1
91.080.022	Transformator / Transformator / Transformator	TBC-32525-019	1	TR
91.041.004	Filtr / Filter / Filter	FZ72460	5	RCF
91.040.004	Stykač / Schütz / Contactor	LP1K0901BD 24Vss	7	KM
91.045.003	Motorový spouštěč / Motor Starter / Motor Starter	MS116-0,4A (ABB)	1	FA1
91.045.005	Motorový spouštěč / Motor Starter / Motor Starter	MS116-1,0A (ABB)	1	FA2
91.045.010	Motorový spouštěč / Motor Starter / Motor Starter	MS116- 10 A (ABB)	1	FA4
91.045.008	Motorový spouštěč / Motor Starter / Motor Starter	MS116 -4,0A (ABB)	1	FA3
91.046.002	Motorový spouštěč / Motor Starter / Motor Starter	HK1-11(ABB)	1	FA
91.995.039	Modul / Modul / Modul	JDI-2/2	1	JDI
91.995.040	Modul / Modul / Modul	JDO-2	1	JDO
91.995.048	Modul / Modul / Modul	DKL-F5	1	DKL
91.995.060	Modul / Modul / Modul	CPU2-E	1	CPU

24. Hydraulické schéma / Hydraulikschema / Hydraulic diagram



Základní technické parametry :

Technische Spezifikation:

Technical specification:

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

Hydraulické schéma:

Hydraulikschema:

Hydraulic diagram:

870-1184

Schéma / Schema / Diagram: 8701184AU-B.DWG

Datum / Datum / Date: 22. 10. 2002

Hydraulické schéma / Hydraulikschema / Hydraulic diagram

Poz.	Název položky	ks
Pos.	Bezeichnung	Menge
Pos.	Item	Pcs.
1	Nádrž / Behälter / Tank N20 - Bomar	1
2	Elektromotor / Elektromotor / Electromotor 1LA7090-4AA	1
3	Hydrogenerátor / Hydraulikaggregat / Hydrogenerator P2-6,2/1,6L66313	1
4	Jednosměrný ventil / Einwegventil / One-way valve VJ01-06/SG-1	1
5	Přepouštěcí ventil / Bypassventil / By pass valve VPP2-04/S-6S	1
6	Zpětný filtr / Filter / Filter FR 043 - 166/0 + DG200-06	1
	Vložka filtru / Filtereinsatz / Enclosure in the filter V3.0510-56	1
7	Rozváděč / Verteilung / Distributor ROX1-042D21/02400E1K5	2
8	Manometr / Manometer / Manometer 0-10 MPa	1
9	Rozváděč / Verteilungsventil / Distributor RPE 3-043Z11/02400E1K5	2
10	Blok rychloposuvu / Eilgangsblock / Block of the speed shift 729-0084	1
11	Tlakový spínač / Druckschalter / Pressure switch SUCO 0166 411 031 043	2
12	Hydraulický zámek / Hydraulisches Schloß / Hydraulic lock VJR1-04/MA	1
13	Rozváděč / Verteilungsventil / Distributor RPE 3-043Y11/02400E1K5	1
14	Proporcionální rozváděč / Wege-Proportionalventil / Proportional distributor PRM 2-043Z11/04-24 MIKRO	1
15	Škrťací ventil / Drosselventil / Throttle valve VSO1-04/R2,5-O	1

Označení hydraulických hadiček / Bezeichnung der hydraulischen Schlauche /Indication of hydraulic hose:

Hydr. hadice	Hadice	Kování	Konc. A	Konc. B	Konc. C	Konc. D	Konc. E	Konc. F	Konc. G	Ks
Hydr. Schlauche	Schlauche	Schmieden	Schlauchtüle A	B	C	D	E	F	G	Menge
Hydr. Hose	hose	forging	terminal A	B	C	D	E	F	G	piece
6AA950	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	2
6AA1070	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	2
6AA850	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	2
6AA1500	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AA4600	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AG6000	42.001.001	92.051.001	92.052.001	-	-	-	-	-	93.01 2.005	1
6AA4900	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6BA600	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AG750	42.001.001	92.051.001	92.052.001	-	-	-	-	-	93.01 2.005	1
6BA2600	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
10BA800	42.003.001	92.051.003	92.052.002	92.053.002	-	-	-	-	-	1
10BB1200	42.003.001	92.051.003	-	92.053.002	-	-	-	-	-	1
10BA1400	42.003.001	92.051.003	92.052.002	92.053.002	-	-	-	-	-	1
PZ	Horní přítlak	Obere Spannung								
6BA970	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	2
6AA850	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	2
SDRA										
6BB1450	42.001.001	92.051.001	-	92.053.001	-	-	-	-	-	1
6BB1100	42.001.001	92.051.001	-	92.053.001	-	-	-	-	-	1

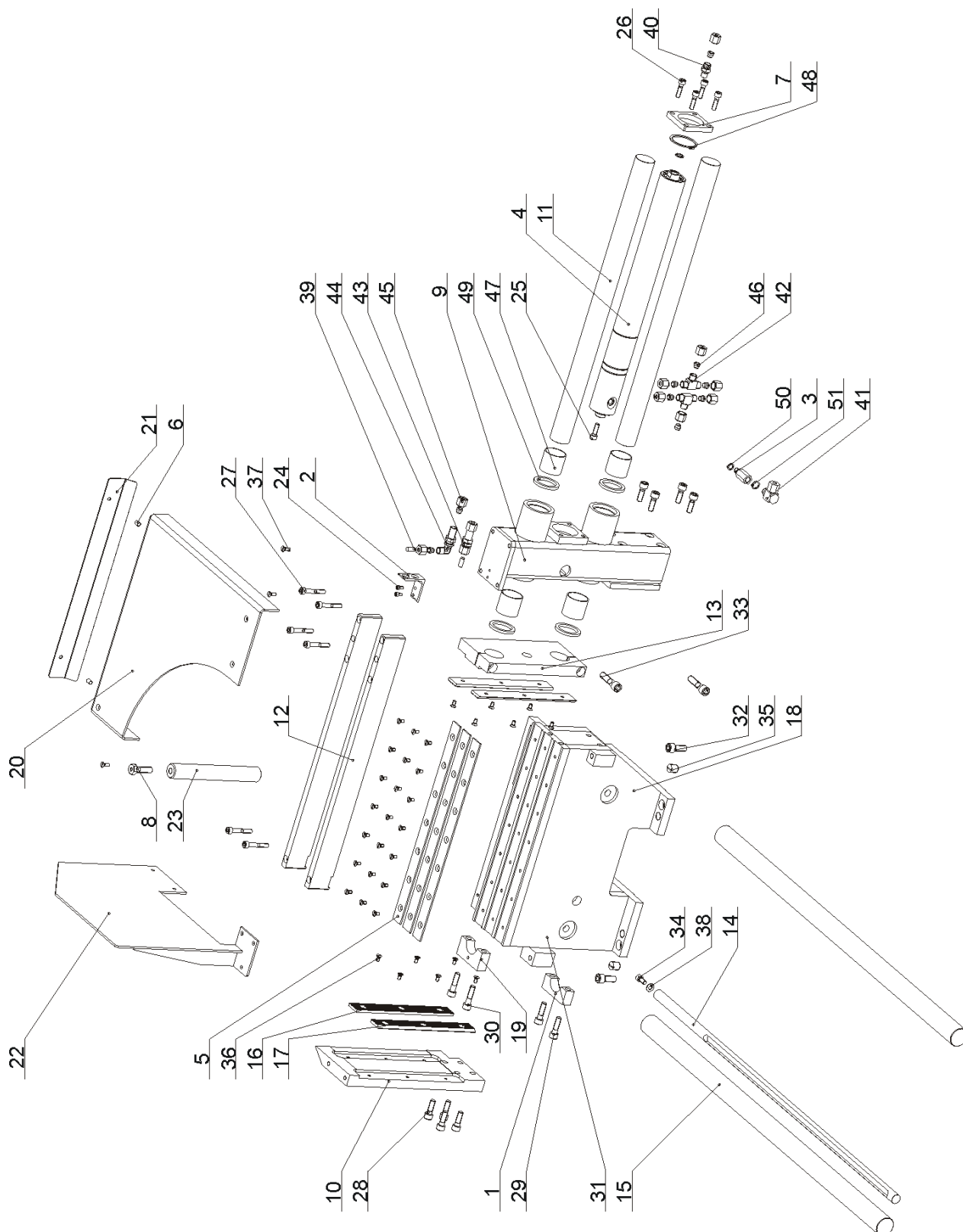
6BB1600	42.001.001	92.051.001	-	92.053.001	-	-	-	-	-	1
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25. Výkresy sestav pro objednání náhradních dílů / Zeichnungen für Bestellung der Ersatzteile / Drawing assemblies for spare parts order

Při objednávání náhradních dílů vždy uvádějte: typ stroje (např. STG 120), výrobní číslo (např. 125) a rok výroby (např. 1999).

In die Bestellung der Ersatzteile führen Sie immer an:
Maschinentyp (z. B. STG 120), Serien Nr. (z. B. 125) und
Baujahr (z. B. 1999).

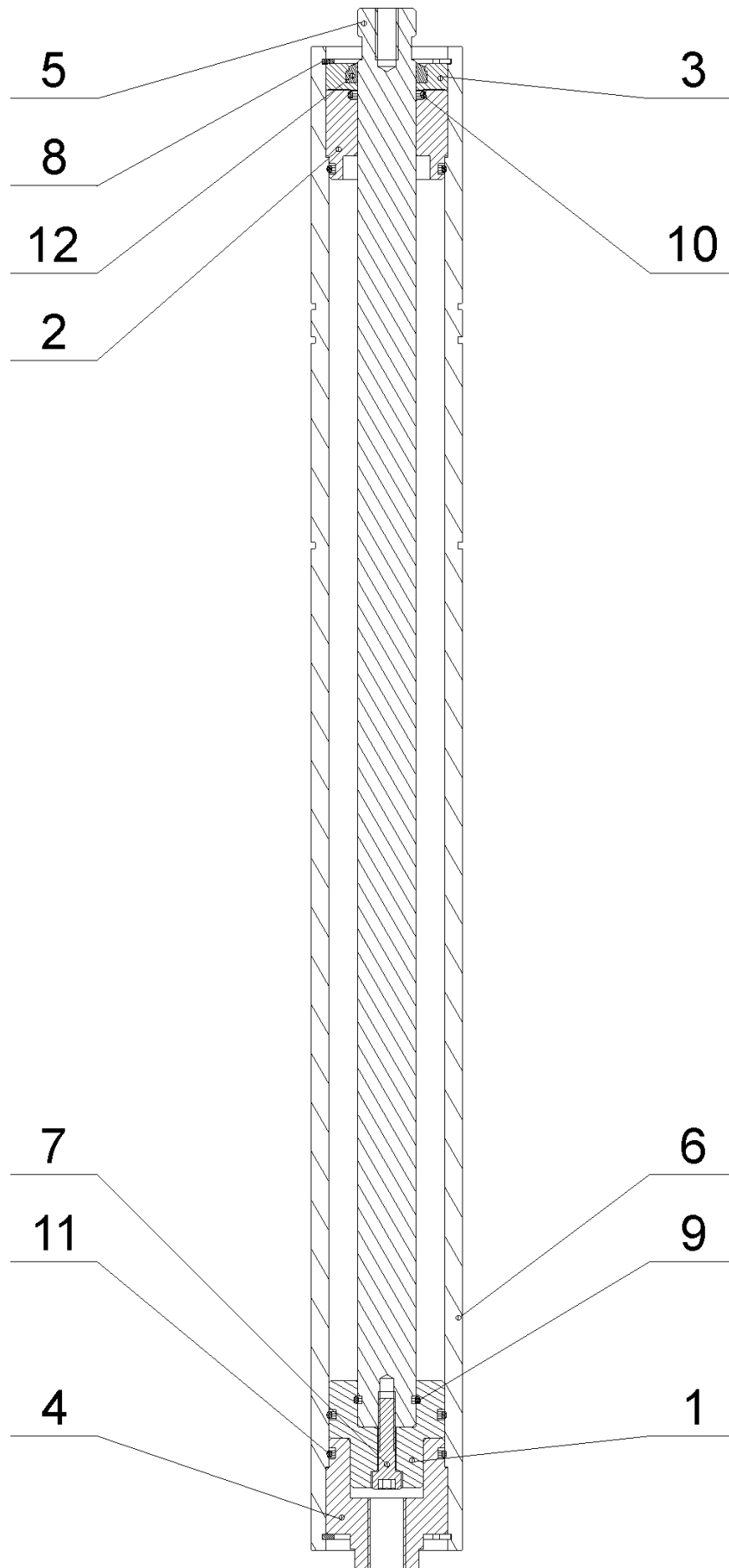
For spare parts order, you must always to allege: type of
machine (for example STG 120), serial number (for example 125)
and year of construction (for example 1999).



25.1. Hlavní svěrák / Hauptschraubstock / Main vice

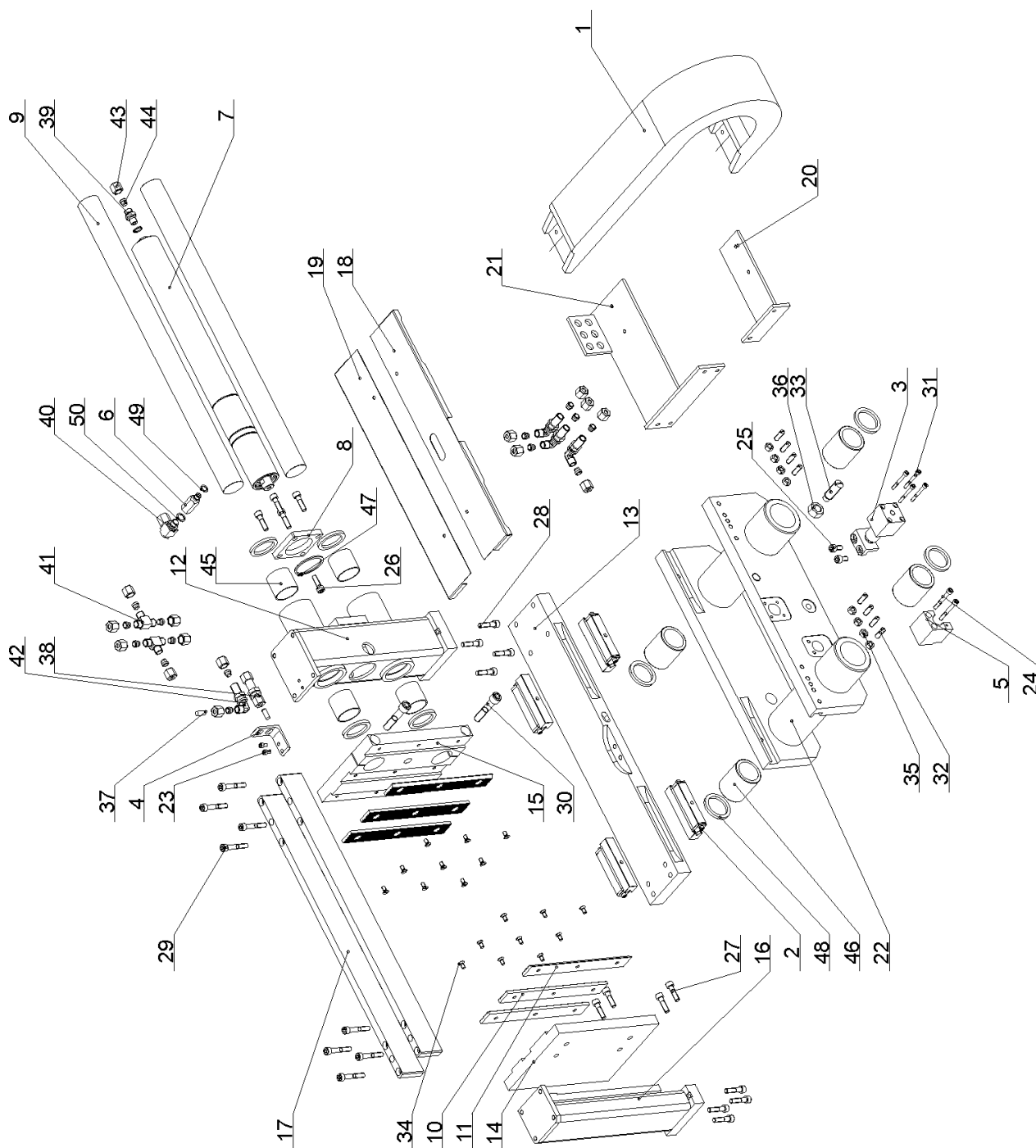
Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.1709-002	Příložka / Lasche / Splice plate	1
2	30.2014-011	Držák hadice / Schlauchhalter / Hose holder	1
3	30.2111-011	Redukce / Reduktion / Reduction	1
4	30.3507-000	Válec / Zylinder / Cylinder	1
5	30.3509-011	Třecí lišta / Leiste / Friction reglet	3
6	30.3509-015	Distanční trubka / Distanzrohr / Distance tube	2
7	30.3511-009	Příložka / Lasche / Splice plate	1
8	30.4114-004	Šroub / Schraube / Screw	1
9	30.4903-002	Sloupek svěráku / Säule / Vice pillar	1
10	30.4903-003	Pevná čelist / Feste Backe / Fixed jaw	1
11	30.4903-004	Vodící tyč / Führungsstange / Guiding bar	2
12	30.4903-005	Lišta / Leiste / Listel	2
13	30.4903-006	Pohyblivá čelist / Bewegliche Backe / Movable jaw	1
14	30.4903-014	Tyč odměřování / Abmessungsstange / Measuring bar	1
15	30.4903-016	Vodící tyč / Führungsstange / Guiding bar	2
16	30.4903-021	Lišta čelisti / Leiste / Jaw listel	2
17	30.4903-025	Lišta čelisti / Leiste / Jaw listel	2
18	30.8303-001	Podstavec svěráku / Untergestell / Vice pedestal	1
19	30.8303-005	Příložka / Lasche / Splice plate	1
20	30.8314-001	Stůl / Tisch / Desk	1
21	30.8314-002	Odkap / Blech / Drain	1
22	30.8314-003	Bočnice / Seitenteil / Side plate	1
23	30.8314-004	Vzpěra / Vzpěra / Raker	1
24	90.001.25.007	Šroub / Schraube / Screw M5x10 DIN 912	2
25	90.001.25.033	Šroub / Schraube / Screw M8x25 DIN 912	1
26	90.001.25.034	Šroub / Schraube / Screw M8x30 DIN 912	4
27	90.001.25.038	Šroub / Schraube / Screw M8x50 DIN 912	6
28	90.001.25.048	Šroub / Schraube / Screw M10x30 DIN 912	8
29	90.001.25.049	Šroub / Schraube / Screw M10x35 DIN 912	2
30	90.001.25.050	Šroub / Schraube / Screw M10x40 DIN 912	2
31	90.001.25.057	Šroub / Schraube / Screw M12x25 DIN 912	2
32	90.001.25.058	Šroub / Schraube / Screw M12x30 DIN 912	4
33	90.001.25.062	Šroub / Schraube / Screw M12x50 DIN 912	2
34	90.001.25.XXX	Šroub / Schraube / Screw M8x18 DIN 912	1
35	90.002.2D.019	Šroub / Schraube / Screw M16x20 DIN 913	2
36	90.011.27.005	Šroub / Schraube / Screw M6x12 DIN 7991	33
37	90.011.27.017	Šroub / Schraube / Screw M6x16 DIN 7991	3
38	90.150.50.005	Podložka / Scheibe / Washer Ø8,4 DIN 125	1
39	90.301.0Z.008	Válcový kolík / Zylinderstift / Cylindrical pin 8x20 DIN 7	2
40	92.002.001	Přímé šroubení / Gerade Verschraubung / Straight screwing GES 08LR	1
41	92.003.001	Natáčecí šroubení / Winkelverschraubung / Swivelling screw RSWS 08LR	1
42	92.006.001	Propojka / Verbindungsstück / Jumper T TS 8L	2
43	92.008.101	Průchodka přímá / Tülle / Direct grommet P-GSV 08L	1
44	92.009.001	Průchodka úhlová / Tülle / Angle grommet WSS 08L M.SKT.M	1
45	92.013.001	Matice / Mutter / Nut M 08L	9
46	92.014.001	Těsnící kroužek / Dichtungsring / Sealing ring P-R 08L/S	9
47	95.700.006	Pouzdro / Buchse / Bush KU 40x40	4
48	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring Ø52 DIN 471	1

49	96.040.003	Stírací manžeta / Abstreifmanschette / Scraper cup	40x52x5	4
50	96.082.001	Těsnící kroužek / Dichtungsring / Sealing ring Cu	10/14	1
51	96.082.002	Těsnící kroužek / Dichtungsring / Sealing ring Cu	13/17	2



25.2. Upínací válec hlavního svěráku / Spannzylinder des Hauptschraubstockes / Main vice clamping cylinder

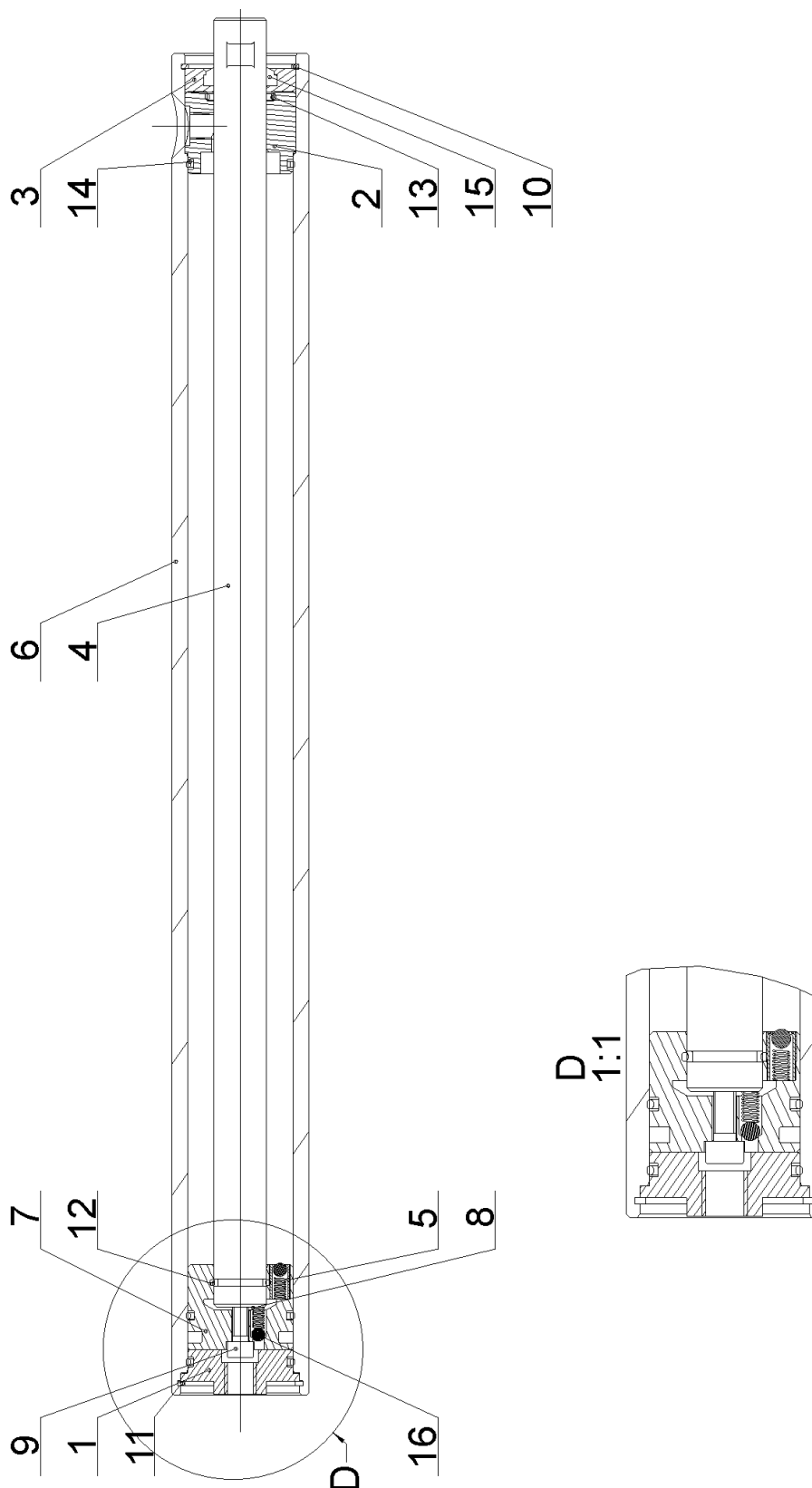
Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.2107-001	Píst / Kolben / Piston	1
2	30.2107-002	Přívod přední / Vordere Zuleitung / Front inflow	1
3	30.2107-003	Víko / Deckel / Cover	1
4	30.2107-004	Víko / Deckel / Cover	1
5	30.3407-102	Pístnice / Kolbenstange / Piston rod	1
6	30.3507-001	Válec / Zylinder / Cylinder	1
7	90.001.25.019	Šroub / Schraube / Screw M6x25 DIN 912 8.8	1
8	95.801.006	Pojistný kroužek / Sicherungsring / Retaining ring Ø42 DIN 472	2
9	96.002.007	O-kroužek / O Ring / O Ring 16x2	1
10	96.002.010	O-kroužek / O Ring / O Ring 20x3	1
11	96.002.017	O-kroužek / O Ring / O Ring 34x3	3
12	96.060.002	Kroužek stírací / Abstreifring / Scraper ring 20x28	1



25.3. Podávací svěrák / Vorschubschraubstock / Feeding vice

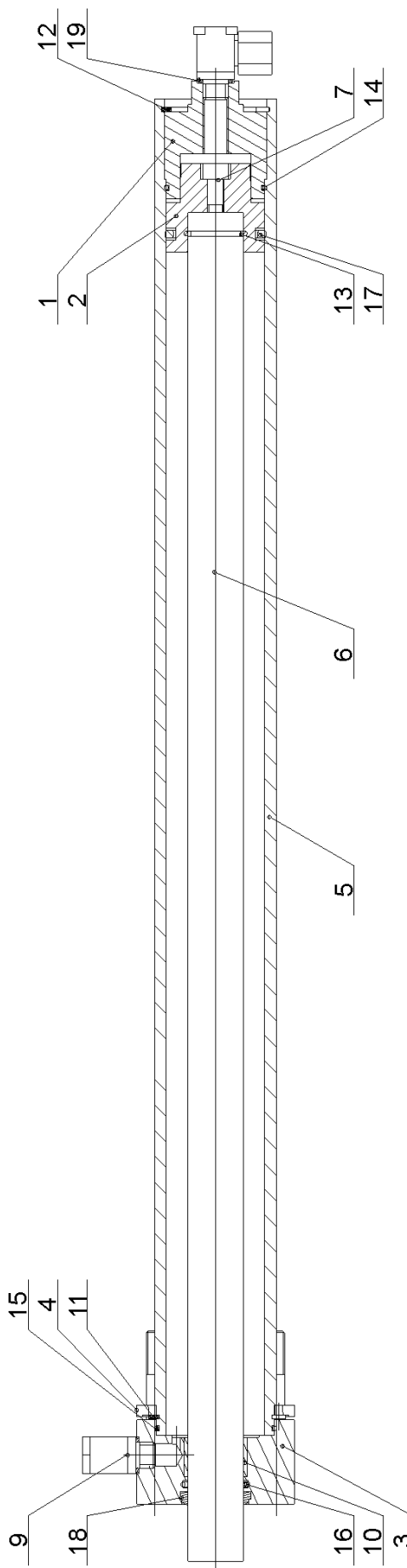
Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	99.170.001	Řetěz energií / Energiekette / Cables leading	1
2	201.2911-200	Válečkový element / Element / Cylindrical element	4
3	201.4307-500	Fixační válec / Fixzylinder / Fixation cylinder	1
4	30.2014-011	Držák hadice / Schlauchhalter / Hose holder	1
5	30.2014-023	Držák snímače / Sensorhalter / Sensor holder	1
6	30.2111-011	Redukce / Reduktion / Reduction	1
7	30.3507-000	Válec / Zylinder / Cylinder	1
8	30.3511-009	Příložka / Lasche / Splice plate	1
9	30.4903-004	Vodící tyč / Führungsstange / Guiding rod	2
10	30.4903-021	Lišta / Leiste / Listel	4
11	30.4903-025	Lišta / Leiste / Listel	2
12	30.4911-002	Základna / Grundlage / Base	1
13	30.4911-003	Základna / Grundlage / Base	1
14	30.4911-004	Čelist / Backe / Jaw	1
15	30.4911-006	Pohyblivá čelist / Bewegliche Backe / Movable jaw	1
16	30.4911-007	Sloup / Säule / Pillar	1
17	30.4911-010	Lišta / Leiste / Listel	2
18	30.4911-023	Kryt / Deckel / Cover	1
19	30.4911-024	Kryt / Deckel / Cover	1
20	30.4911-026	Konzola / Konsole / Console	1
21	30.4911-027	Konzola / Konsole / Console	1
22	30.8311-001	Základna / Grundlage / Base	1
23	90.001.25.007	Šroub / Schraube / Screw M5x10 DIN 912	2
24	90.001.25.023	Šroub / Schraube / Screw M6x50 DIN 912	2
25	90.001.25.031	Šroub / Schraube / Screw M8x16 DIN 912	2
26	90.001.25.033	Šroub / Schraube / Screw M8x25 DIN 912	1
27	90.001.25.034	Šroub / Schraube / Screw M8x30 DIN 912	8
28	90.001.25.035	Šroub / Schraube / Screw M8x35 DIN 912	8
29	90.001.25.038	Šroub / Schraube / Screw M8x50 DIN 912	8
30	90.001.25.063	Šroub / Schraube / Screw M12x60 DIN 912	2
31	90.001.25.XXX	Šroub / Schraube / Screw M5x45 DIN 912	4
32	90.002.2D.013	Šroub / Schraube / Screw M8x25 DIN 913	8
33	90.004.2D.0XX	Šroub / Schraube / Screw M16x40 DIN 915	1
34	90.011.27.022	Šroub / Schraube / Screw M5x16 DIN 7991	18
35	90.100.55.005	Matice / Mutter / Nut M8 DIN 934	8
36	90.100.55.008	Matice / Mutter / Nut M16 DIN 934	1
37	90.301.0Z.008	Válcový kolík / Zylinderstift / Cylindrical pin 8x20 DIN 7	2
38	92.002.001	Šroubení přímé / Gerade Verschraubung / Straight screwing GES 08LR	1
39	92.002.001	Šroubení přímé / Gerade Verschraubung / Straight screwing GES 08LR	1
40	92.003.001	Šroubení natáčecí / Winkelverschraubung / Swivelling screwing RSWS 08LR	1
41	92.006.001	Propojka / Verbindungsstück / Jumper T TS 8L	2
42	92.009.001	Průchodka úhlová / Tülle / Angle grommet	4
43	92.013.001	Matice / Mutter / Nut M 08L	15
44	92.014.001	Těsnící kroužek / Dichtungsring / Sealing ring P-R 08L/S	15
45	95.700.025	Pouzdro / Buchse / Bush KU 40x40	4
46	95.710.001	Pouzdro / Buchse / Bush 40x60 KH	4
	95.860.001	Hlavice mazací/Schmierkopf/Nipple KM5	2
45	95.700.006	Pouzdro / Buchse / Bush KU 40x40	4
46	95.710.001	Pouzdro / Buchse / Bush 40x60 KH	4

47	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring	Ø52 DIN 471	1
48	96.040.003	Stírací manžeta / Abstreifmanschette / Scraper cup	40x52x5	8
49	96.082.001	Těsnící kroužek / Dichtungsring / Sealing ring Cu	10/14	1
50	96.082.002	Těsnící kroužek / Dichtungsring / Sealing ring Cu	13/17	2



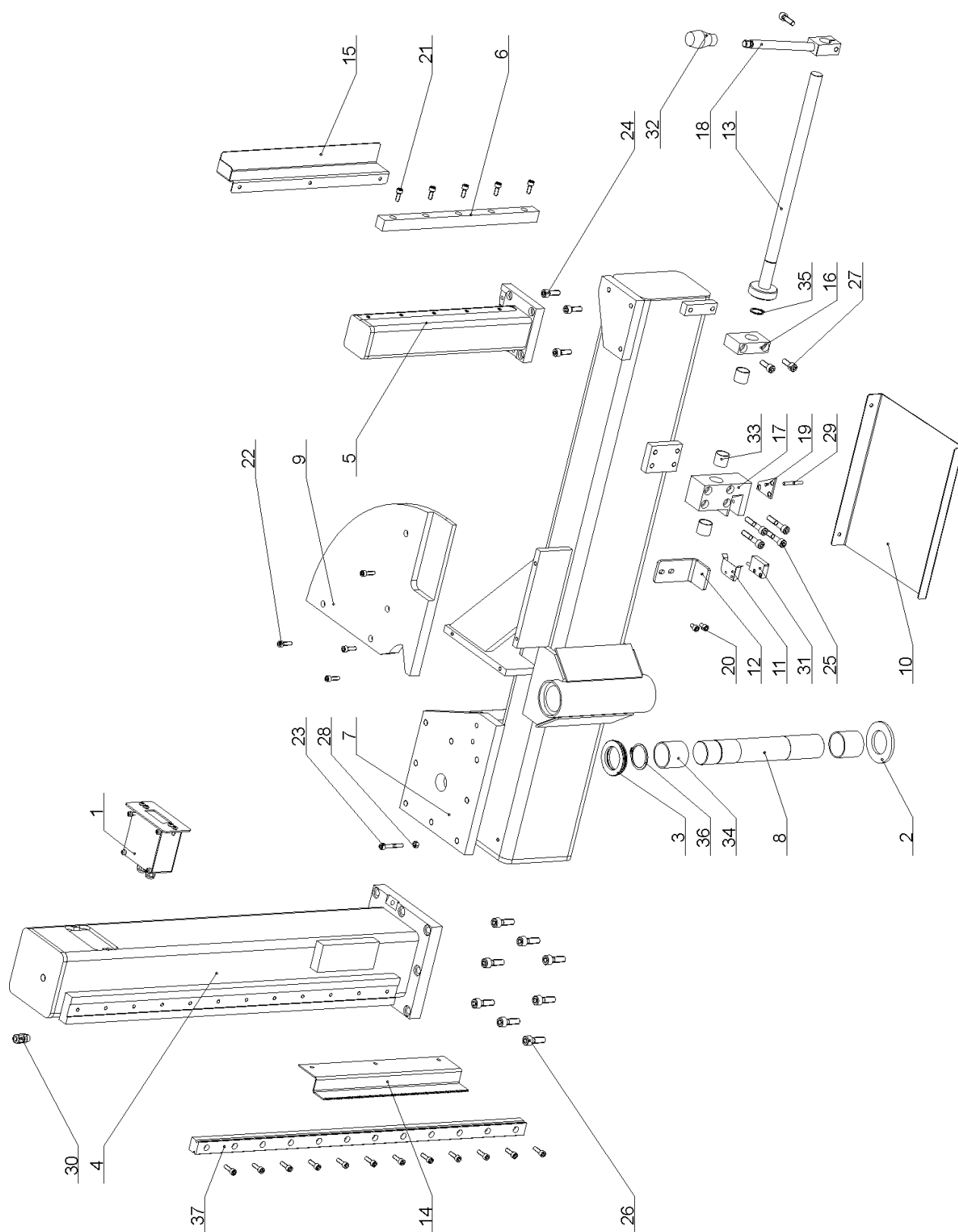
25.4. Upínací válec podávacího svěráku/ Spannzylinder des Vorschubschraubstockes / Feeding vice clamping cylinder

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.1707-104	Víko / Deckel / Cover	1
2	30.2107-002	Přívod / Zufuhr / Inflow	1
3	30.2107-003	Víko / Deckel / Cover	1
4	30.3407-102	Pístnice / Kolbenstange / Piston rod	1
5	30.9307-204	Pouzdro / Büchse / Bush	1
6	30.9607-001	Válec / Zylinder / Cylinder	1
7	30.9607-003	Píst / Kolben / Piston	1
8	31.4403-008	Pružina / Feder / Spring	0.5x4.5x13x8.5 2
9	90.001.25.018	Šroub / Schraube / Screw	M6x20 DIN 912 1
10	95.801.006	Pojistný kroužek / Sicherungsring / Retaining ring	Ø42 DIN 472 1
11	95.801.007	Pojistný kroužek / Sicherungsring / Retaining ring	Ø45 DIN 472 1
12	96.002.007	O kroužek / O Ring / O Ring	16x2 1
13	96.002.010	O kroužek / O Ring / O Ring	20x3 1
14	96.002.017	O kroužek / O Ring / O Ring	34x3 3
15	96.060.002	Stírací kroužek / Abstreifring / Wiping ring	20x28 1
16		Kulička / Kugel / Ball	2



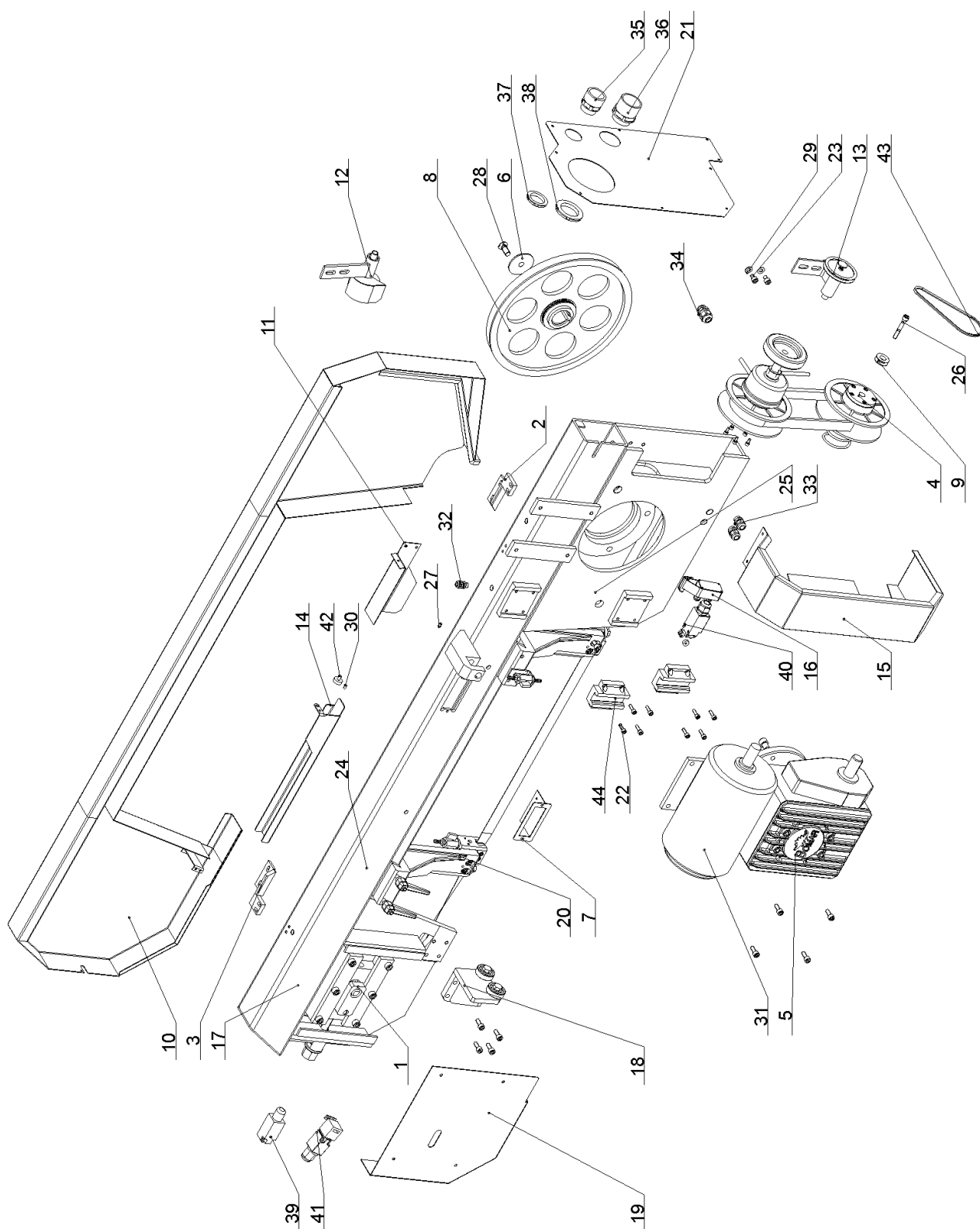
25.5. Válec podávání / Vorschubzylinder / Feeding cylinder - 251.255

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.1807-103	Zadní víko / Hinterer Deckel / Rear panel	1
2	30.1807-105	Píst / Kolben / Piston	1
3	30.2007-101	Víko / Deckel / Cover	1
4	30.2007-103	Příložka / Lasche / Splice plate	1
5	30.3507-101	Válec / Zylinder / Cylinder	1
6	30.3507-102	Pístnice / Kolbenstange / Piston rod	1
7	90.001.25.035	Šroub / Schraube / Screw M8x35 DIN 912	1
8	90.001.25.041	Šroub / Schraube / Screw M8x65 DIN 912	4
9	92.003.001	Šroubení natáčecí / Winkelverschraubung / Swivelling screw	2
10	95.700.005	Pouzdro / Buchse / Bush KU 28x20	1
11	95.800.020	Pojistný kroužek / Sicherungsring / Retaining ring Ø60 DIN 471	1
12	95.801.009	Pojistný kroužek / Sicherungsring / Retaining ring Ø52 DIN 472	1
13	96.001.007	O kroužek / O Ring / O Ring 25x2	1
14	96.001.013	O kroužek / O Ring / O Ring 45x2	1
15	96.001.014	O kroužek / O Ring / O Ring 55x2	1
16	96.002.014	O kroužek / O Ring / O Ring 28x3	1
17	96.020.005	Q kroužek / Q Ring / Q Ring	1
18	96.060.003	Stírací kroužek / Abstreifring / Wiping ring 28x36	1
19	96.082.002	Těsnící kroužek / Dichtungsring / Sealing ring 13/17	2



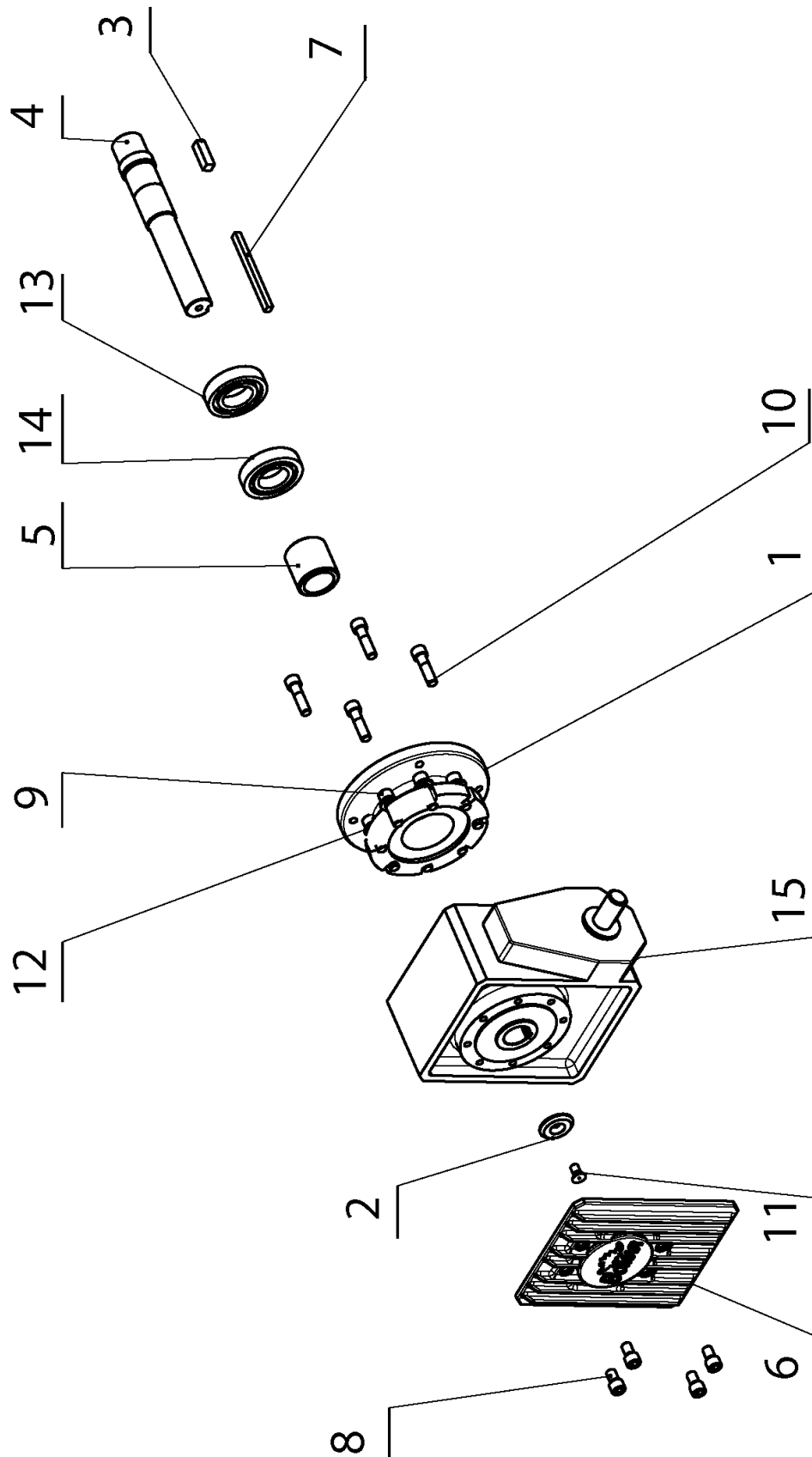
25.6. Otočná konzola / Drehkonsole / Turning console

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1		Display / Display / Display	1
2	30.1702-006	Podložka / Scheibe / Washer	1
3	30.4902-005	Kroužek / Ring / Ring	1
4	30.8301-002	Pravý sloup / Rechte Säule / Right pillar	1
5	30.8301-003	Levý sloup / Linke Säule / Left pillar	1
6	30.8301-004	Lišta / Leiste / Listel	1
7	30.8302-001	Konzola / Konsole / Console	1
8	30.8302-002	Čep konzoly / Bolzen / Console pivot	1
9	30.8302-003	Deska / Platte / Plate	1
10	30.8302-009	Plech / Blech / Metal plate	1
11	30.8302-011	Stírač / Abstreifer / Scraper	1
12	30.8302-012	Držák / Halterung / Holder	1
13	30.8302-018	Tyč brzdy / Stange / Brake rod	1
14	30.8304-010	Hřeben / Kamm / Rack	1
15	30.8314-016	Kryt / Deckel / Cover	1
16	30.8602-017	Kostka / Würfel / Cube	1
17	30.8602-510	Kostka / Würfel / Cube	1
18	30.8602-514	Tyč zpevnění / Stange / Hardening rod	1
19	30.8602-521	Deska / Platte / Plate	1
20	90.001.25.015	Šroub / Schraube / Screw M6x10 DIN 912	2
21	90.001.25.017	Šroub / Schraube / Screw M6x16 DIN 912	5
22	90.001.25.018	Šroub / Schraube / Screw M6x20 DIN 912	16
23	90.001.25.022	Šroub / Schraube / Screw M6x40 DIN 912	1
24	90.001.25.033	Šroub / Schraube / Screw M8x25 DIN 912	4
25	90.001.25.037	Šroub / Schraube / Screw M8x45 DIN 912	4
26	90.001.25.048	Šroub / Schraube / Screw M10x30 DIN 912	8
27	90.001.25.XXX	Šroub / Schraube / Screw M8x22 DIN 912	2
28	90.100.55.004	Matice / Mutter / Nut M6 DIN 934	1
29	90.301.0Z.XXX	Válcový kolík / Zylinderstift / Cylindrical pin M5x40 DIN 7	1
30	91.070.010	Vývodka / Ausführung / Bushing M 12x1.5	1
31	91.270.004	Magnetický sensor / Magnet. Meßgeber / Magnetic sensor	1
32	94.002.001	Rukojeť kuželová / Griffschalter / Handle M12	1
33	95.700.004	Pouzdro / Buchse / Bush 20x20	3
34	95.700.006	Pouzdro / Buchse / Bush 40x40	2
35	95.800.009	Pojistný kroužek / Sicherungsring / Retaining ring Ø20 DIN 471	1
36	95.800.015	Pojistný kroužek / Sicherungsring / Retaining ring Ø40 DIN 471	1
37	99.200.00X	Vedení / Führung / Guide	1



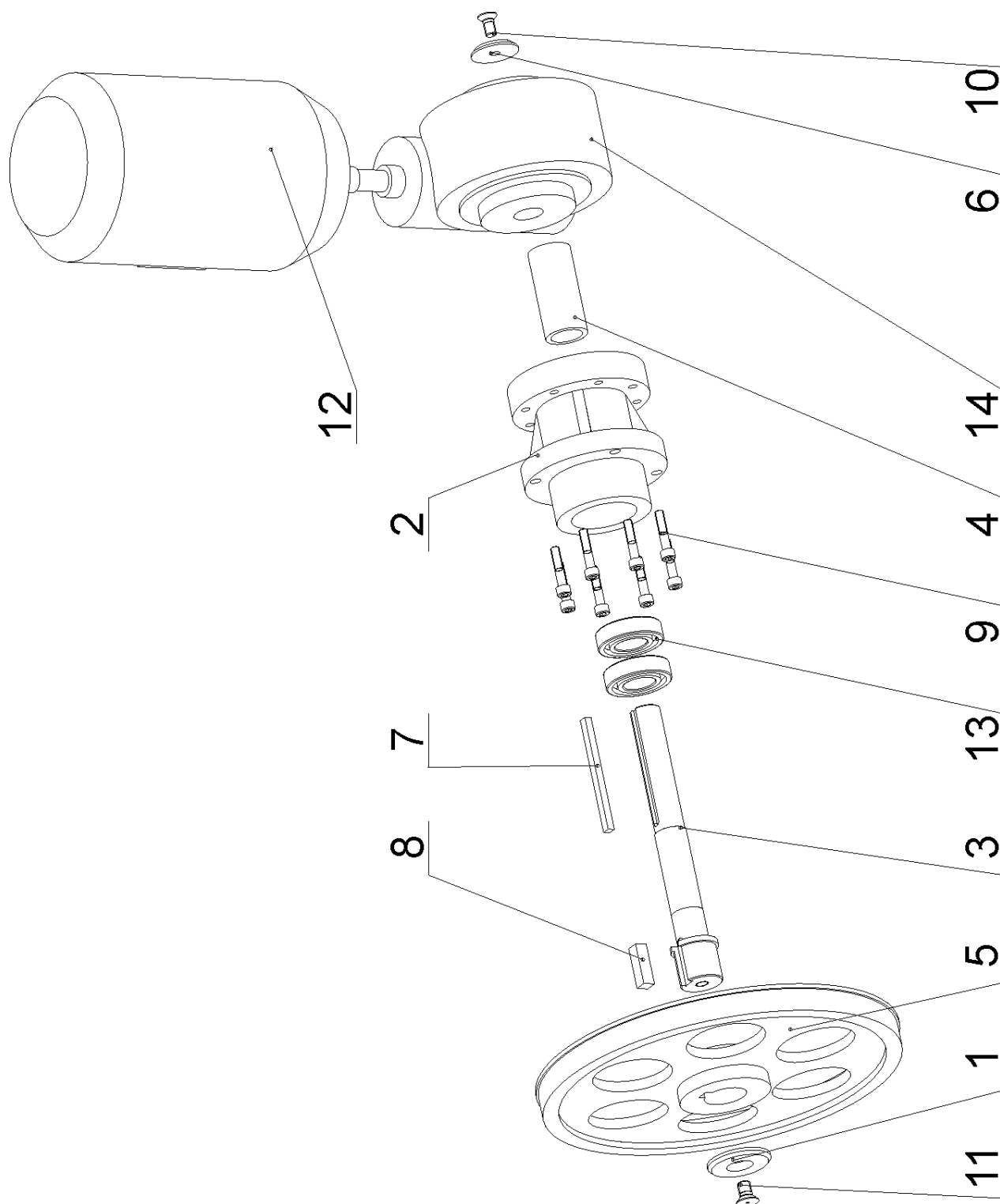
25.7. Pilové rameno / Sägerahmen / Saw arm

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	201.1708-000	Napínání / Sägebandspannung / Stretching	1
2	201.2914-207	Levý pant / Türband / Left hinge	1
3	201.2914-208	Pravý pant / Türband / Right hinge	1
4	201.3005-200	Variátor / Variator / Variator	1
5	201.4905-000	Převodovka / Getriebe / Gearbox	1
6	30.0804-009	Zajištění kola / Radsicherung / Wheel retaining	1
7	30.0814-016	Držák rychloměru / Halter / Speedometer holder	1
8	30.1704-005	Hnací kolo / Antriebsrad / Driving-wheel	1
9	30.2914-401	Řemenice / Riemenscheibe / Band - wheel	1
10	30.3414-203	Kryt ramene / Deckel / Arm cover	1
11	30.3414-209	Kryt kartáčku / Deckel / Brush cover	1
12	201.3414-300	Kartáček / Bürste / Brush	1
13	201.3414-400	Řemenice / Riemenscheibe / Band - wheel	1
14	30.3514-203	Kryt pásu / Deckel / Band cover	1
15	30.4914-205	Kryt variátoru / Deckel / Variator cover	1
16	201.6702-200	Snímač natáčení / Positionsgeber / Turning sensor	1
17	30.8304-001	Rameno / Rahmen / Arm	1
18	20.8304-106	Vodící kladky / Führungsrollen / Guiding pulleys	1
19	30.8304-007	Kryt napínání / Deckel / Stretching cover	1
20	201.3410-000	Vedení pásu / Sägebandführung / Saw band guiding	1
21	81.8314-201	Kryt napínání / Deckel / Stretching cover	1
22	90.001.25.018	Šroub / Schraube / Screw M6x20 DIN 912	8
23	90.001.25.029	Šroub / Schraube / Screw M8x12 DIN 912	2
24	90.001.25.031	Šroub / Schraube / Screw M8x16 DIN 912	1
25	90.001.25.032	Šroub / Schraube / Screw M8x20 DIN 912	10
26	90.001.25.039	Šroub / Schraube / Screw M8x55 DIN 912	1
27	90.002.2D.023	Šroub / Schraube / Screw M6x10 DIN 913	1
28	90.011.27.022	Šroub / Schraube / Screw M5x16 DIN 7991	1
29	90.150.50.005	Podložka / Scheibe / Washer Ø8.4 DIN 125	4
30	90.303.0Z.006	Pružný kolík / Spannstift / Spring pin 5x12 DIN 1481	1
31	91.001.030	Elektromotor / Elektromotor / Electromotor 4AP 90L-4	1
32	91.070.010	Vývodka / Ausführung / Bushing M 12x1.5	1
33	91.070.011	Vývodka / Ausführung / Bushing M 16x1.5	2
34	91.070.012	Vývodka / Ausführung / Bushing M 20x1.5	1
35	91.071.004	Vývodka hadice / Verschraubung Gerade / Hose bushing PG29	1
36	91.071.005	Vývodka hadice / Verschraubung Gerade / Hose bushing PG36	1
37	91.072.007	Matice / Mutter / Nut PG29	1
38	91.072.008	Matice / Mutter / Nut PG36	1
39	91.173.007	Koncový spínač / Endscharter / Limit switch FR 601	1
40	91.173.009	Koncový spínač s kladkou / Endscharter mit Rolle / Limit switch - roller FR 605	1
41	91.173.012	Koncový spínač - zámek / Endscharter mit Klinke / Limit switch - lock	1
42	94.007.002	Plastový šroub / Rändelschraube / Plastic screw M6x10	1
43	96.022.010	Klínový řemen / Keilriemen / V - belt 5x425Li	1
44	99.201.008	Vozík / Wagen / Carriage	2



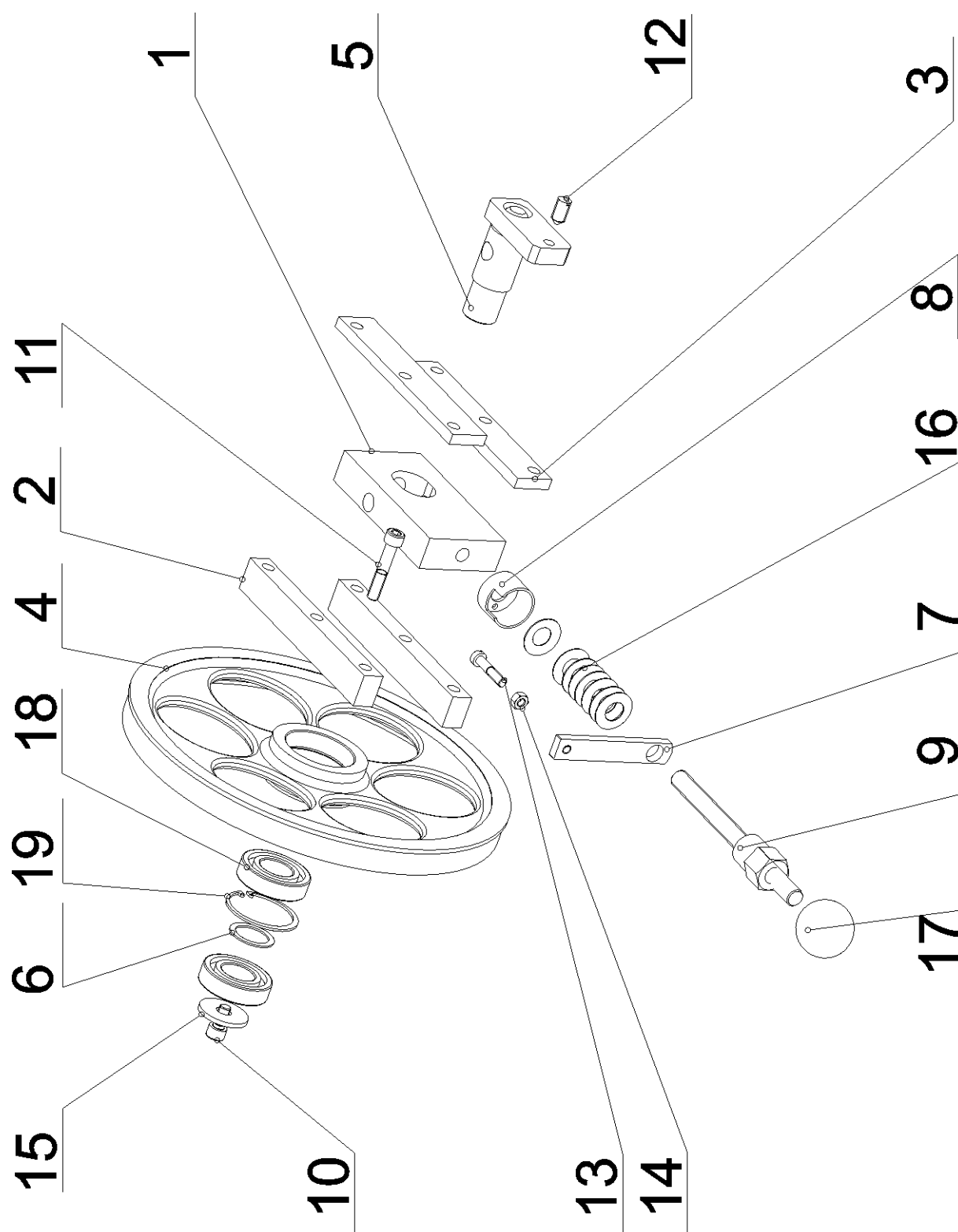
25.8. Převodovka / Getriebe / Gearbox

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.0804-002	Příruba / Flansche / Flange		1
2	30.1704-008	Podložka / Scheibe / Washer		1
3	30.1704-012	Pero / Feder / Feather		1
4	30.4904-003	Hřídel / Welle / Shaft		1
5	30.4904-004	Distanční trubka / Distanzrohr / Distance tube		1
6	30.4904-007	Víko / Deckel / Cover		1
7	30.9205-004	Pero / Feder / Feather		1
8	90.001.25.056	Šroub / Schraube / Screw	M12x20	4
9	90.001.25.060	Šroub / Schraube / Screw	M12x40	8
10	90.001.25.061	Šroub / Schraube / Screw	M12x45	4
11	90.011.27.008	Šroub zápusťný/ Countersunk screw / Senkschraube	M10x20	1
12	90.150.50.007	Podložka / Scheibe / Washer	d13 DIN 125	8
13	95.001.021	Kuličkové ložisko / Kugellager / Ball bearing	6208 2RS	1
14	95.201.001	Ložisko / Lager / Bearing		1
15	99.002.003	Převodovka / Getriebe / Gearbox		1



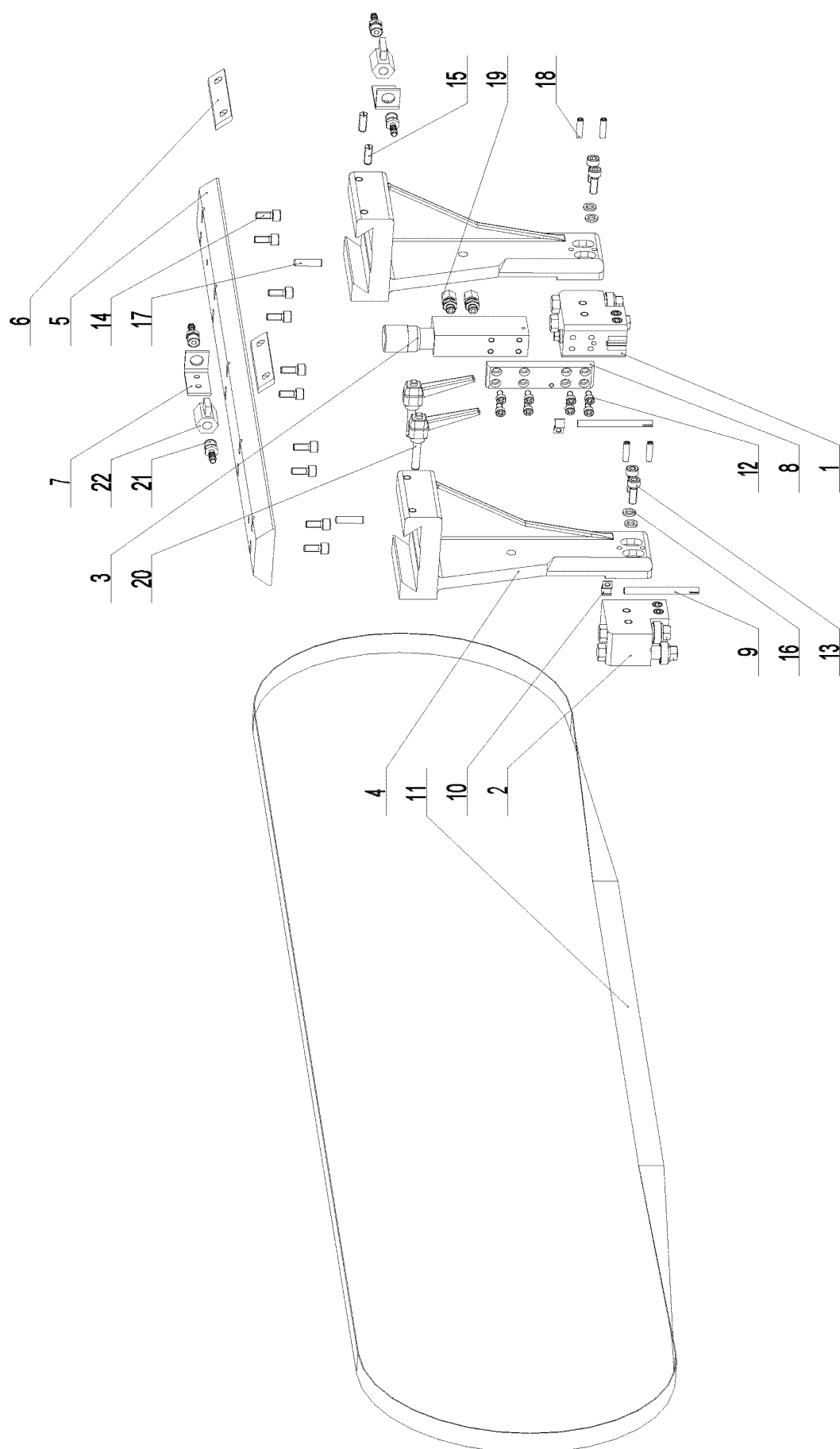
25.9. Pohon pilového pásu / Sägebandantrieb / Saw band drive

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0804-009	Zajištění kola / Zajištění kola / Wheel retaining	1
2	30.1704-002	Příruba / Flansche / Flange	1
3	30.1704-003	Hřídel náhonu / Antriebswelle / Drive shaft	1
4	30.1704-004	Trubka distanční / Distanzrohr / Distance tube	1
5	30.1704-005	Kolo hnací / Antriebsrad / Driving wheel	1
6	30.1704-008	Víko hřídele / Víko hřídele / Shaft cover	1
7	30.1704-011	Pero / Feder / Feather	1
8	30.1704-012	Pero / Feder / Feather	1
9	90.001.25.036	Šroub / Schraube / Screw M8x40 DIN 912 8.8	8
10	90.011.27.008	Šroub / Schraube / Screw M10x20 DIN 7991 10.9	1
11	90.011.27.009	Šroub / Schraube / Screw M12x20 DIN 7991 10.9	1
12	91.001.023	Elektromotor / Elektromotor / Electromotor	1
13	95.001.019	Ložisko / Lager / Bearing 6206 2RS	2
14	99.001.022	Převodovka šneková / Schneckengetriebe / Worm gearbox	1



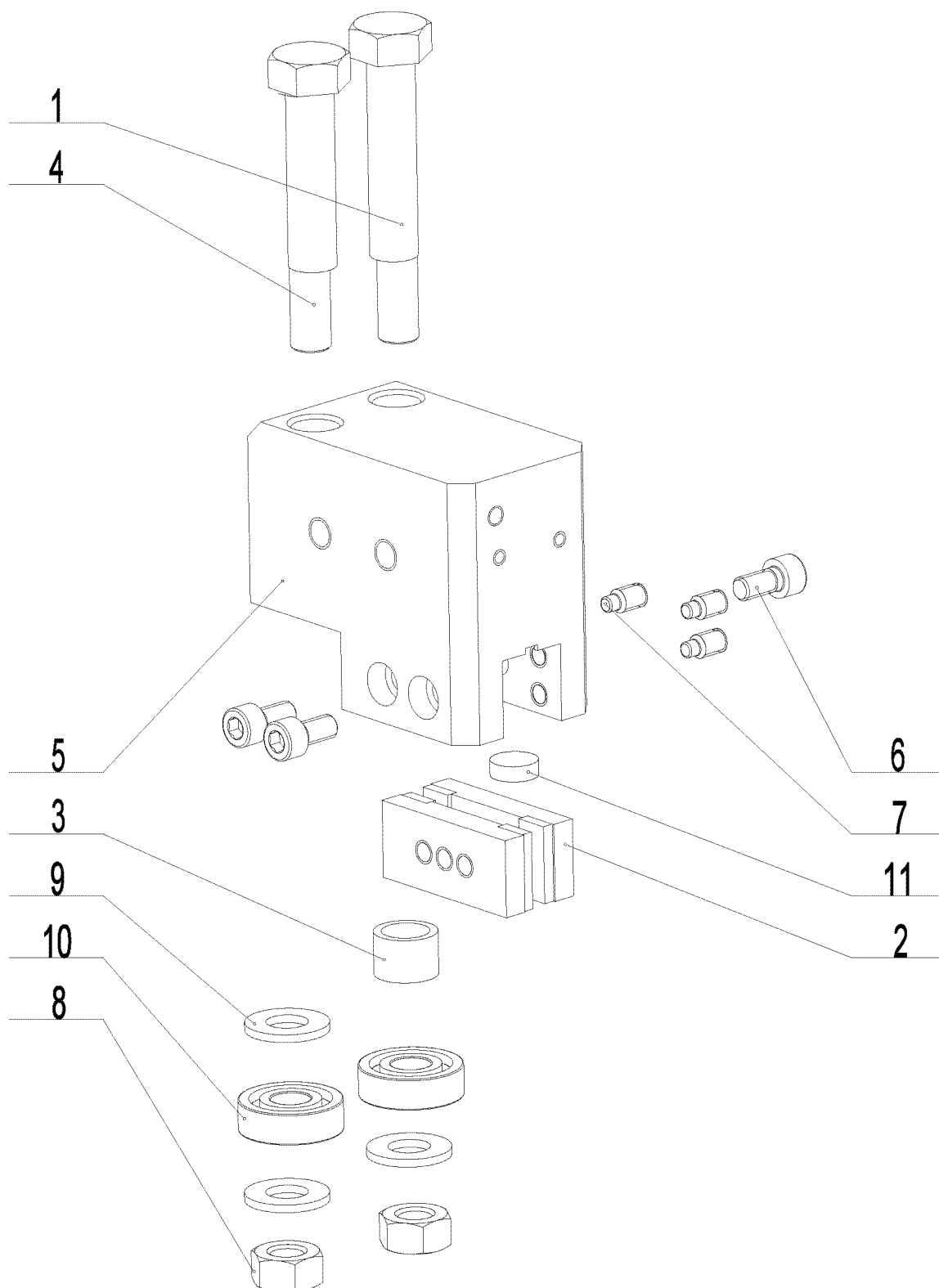
25.10. Napínání pilového pásu / Sägebandspannung / Saw band stretching

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0808-001	Kostka napínání / Bandspannungsklotz / Stretching cube	1
2	30.0808-002	Lišta vodící / Führungsleiste / Guiding cube	2
3	30.0808-006	Lišta / Leiste / Listel	2
4	30.1708-001	Kolo napínání / Umlenkrad / Stretching wheel	1
5	30.1708-002	Čep napínání / Spannbolzen / Spannbolzen	1
6	30.1708-003	Podložka mezi ložiska / Scheibe zwischen den Lagern / Washer between bearings	1
7	30.1708-004	Držák šroubu / Schraubenhalterung / Screw holder	1
8	30.3508-002	Kryt pružiny / Federabdeckung / Spring cover	1
9	30.4108-001	Šroub napínání / Spannschraube / Stretching screw	1
10	90.001.25.046	Šroub / Schraube / Screw M10x20 DIN 912	1
11	90.001.25.053	Šroub / Schraube / Screw M10x55 DIN 912	6
12	90.004.2D.013	Šroub / Schraube / Screw M12x25 DIN 915	1
13	90.005.55.019	Šroub / Schraube / Screw M8x40 DIN 933	1
14	90.100.55.005	Matice / Mutter / Nut M8 DIN 934	1
15	90.151.50.002	Podložka / Scheibe / Washer Ø13 DIN 440	1
16	90.350.0Z.002	Talířová pružina / Tellerfeder / Belleville spring 35.5x18.3x2.0x2.8	8
17	94.001.005	Rukojeť koule / Kugelgriff / Handle round M16	1
18	95.001.019	Ložisko / Lager / Bearing 6206 2RS	2
19	95.801.010	Pojistný kroužek / Sicherungsring / Retaining ring Ø62 DIN 472	1



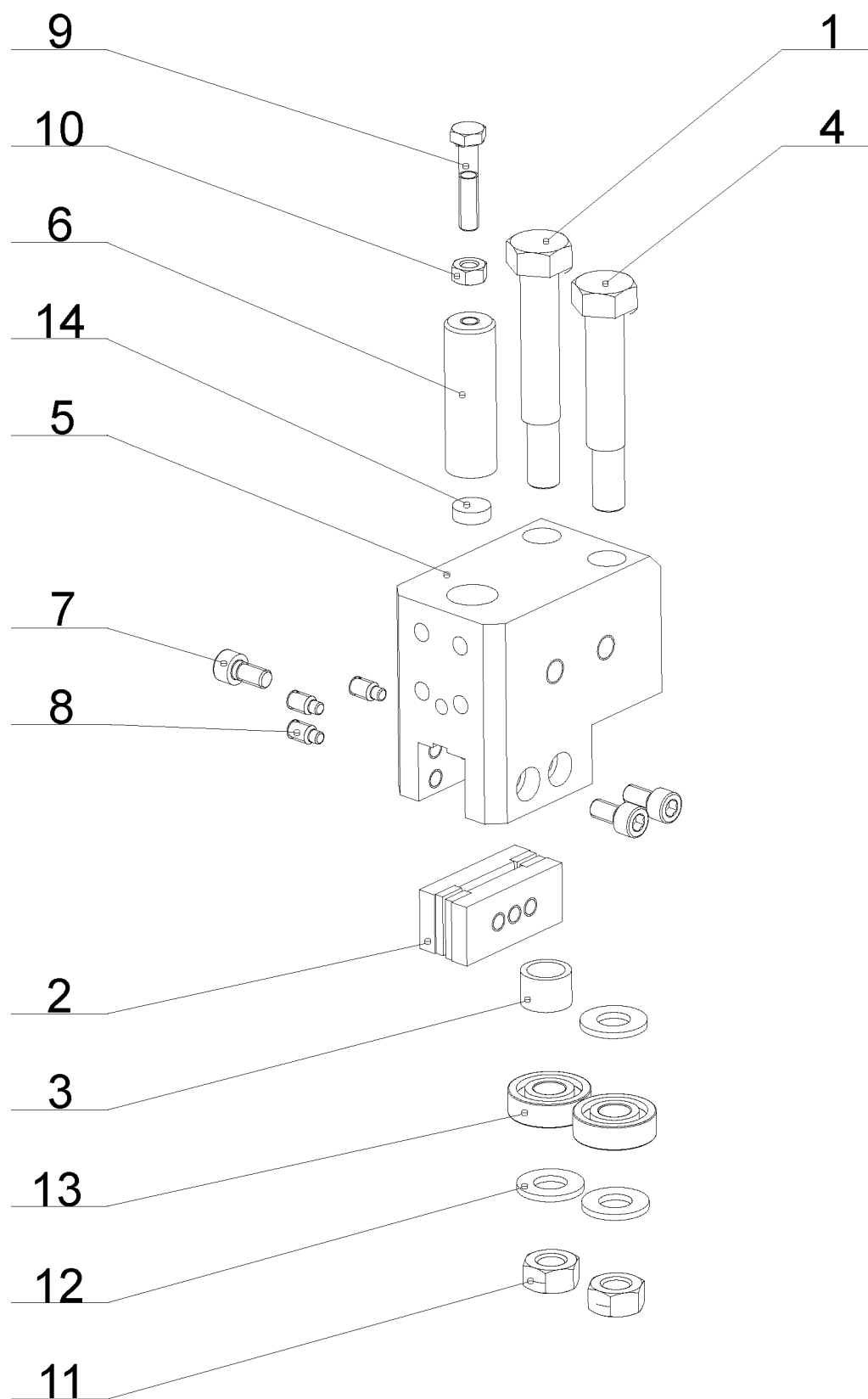
25.11. Vedení pilového pásu 201.3410-000/ Sägebandführung / Saw band guiding

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	201.3510-100	Pravá vodící kostka / Rechter Führungsklotz / Right guiding cube	1
2	201.4110-100	Levá vodící kostka / Linker Führungsklotz / Left guiding cube	1
3	251.077	Regulace přítlaku / Schnittdruckregulation / Cutting pressure regulation	1
4	30.1710-001	Držák / Halter / Holder	2
5	30.1710-002	Lišta / Leiste / Listel	1
6	30.1710-008	Lišta držáku / Leiste / Holder listel	2
7	30.1814-011	Držák ventilu / Halter / Valve holder	2
8	30.3510-003	Deska s regulací přítlaku / Platte / Pressure regulation panel	1
9	30.3510-004	Trubka / Rohr / Tube	2
10	30.9010-003	Držák / Halter / Holder	2
11		Pilový pás / Sägeband / Saw band	1
12	90.001.25.016	Šroub / Schraube / Screw M6x12 DIN 912	8
13	90.001.25.033	Šroub / Schraube / Screw M8x25 DIN 912	4
14	90.001.25.105	Šroub / Schraube / Screw M8x18 DIN 912	10
15	90.002.2D.013	Šroub / Schraube / Screw M8x25 DIN 913	2
16	90.163.00.002	Podložka / Scheibe / Washer M 8 NORD-LOC	4
17	90.302.0Z.002	Kuželový kolík / Kegelbolzen/ Taper pin 8x30 DIN 7978	2
18	90.302.0Z.011	Kuželový kolík / Kegelbolzen/ Taper pin 6x26 DIN 7978	4
19	92.002.102	Šroubení přímé / Gerade Verschraubung / Straight screwing S-GEV 08LLR	2
20	94.008.003	Montážní páka / Klemmhebel / Assembly lever M8x40	2
21	94.202.002	Redukce / Reduktion / Reduction 1/4"-6	4
22	99.260.003	Kulový ventil / Kugelventil / Spherical valve 1/4"	2



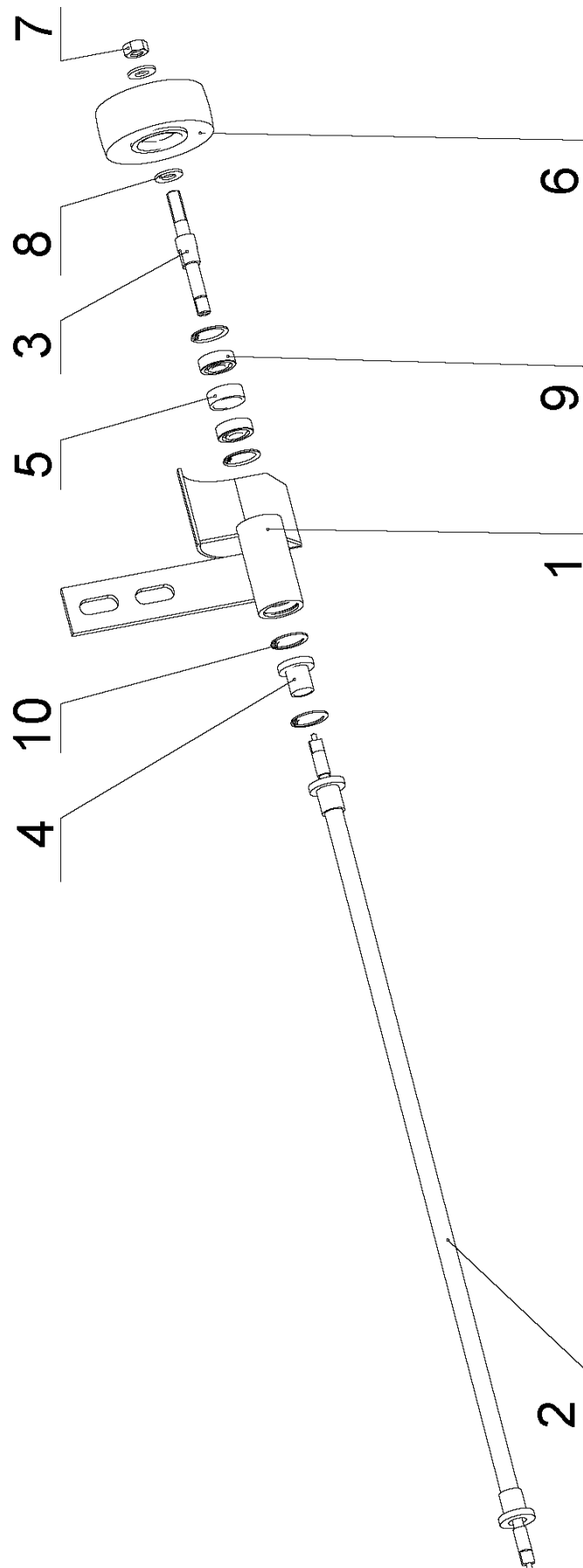
25.12. Levá vodící kostka / Linker Führungsklotz / Left guiding cube

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0810-009	Excentr / Exzenter / Excenter	1
2	30.1710-005	Držák tvrdokovu / HM-Halter / HM holder	2
3	30.1710-006	Distanční kroužek / Distanzring / Distance ring	1
4	30.1710-007	Excentr / Exzenter / Excenter	1
5	30.4110-001	Levá vodící kostka / Linker Führungsklotz / Left guiding cube	1
6	90.001.25.016	Šroub / Schraube / Screw M6x12 DIN 912	3
7	90.004.2D.002	Šroub / Schraube / Screw M6x12 DIN 915	3
8	90.100.55.006	Matice / Mutter / Nut M10 DIN 934	2
9	90.150.50.006	Podložka / Scheibe / Washer Ø10.5 DIN 125	3
10	95.001.004	Ložisko / Lager / Bearing 6000 2RS	2
11	99.040.002	Tvrdokov / HM-Segment / Hardmetal Ø12x4	1



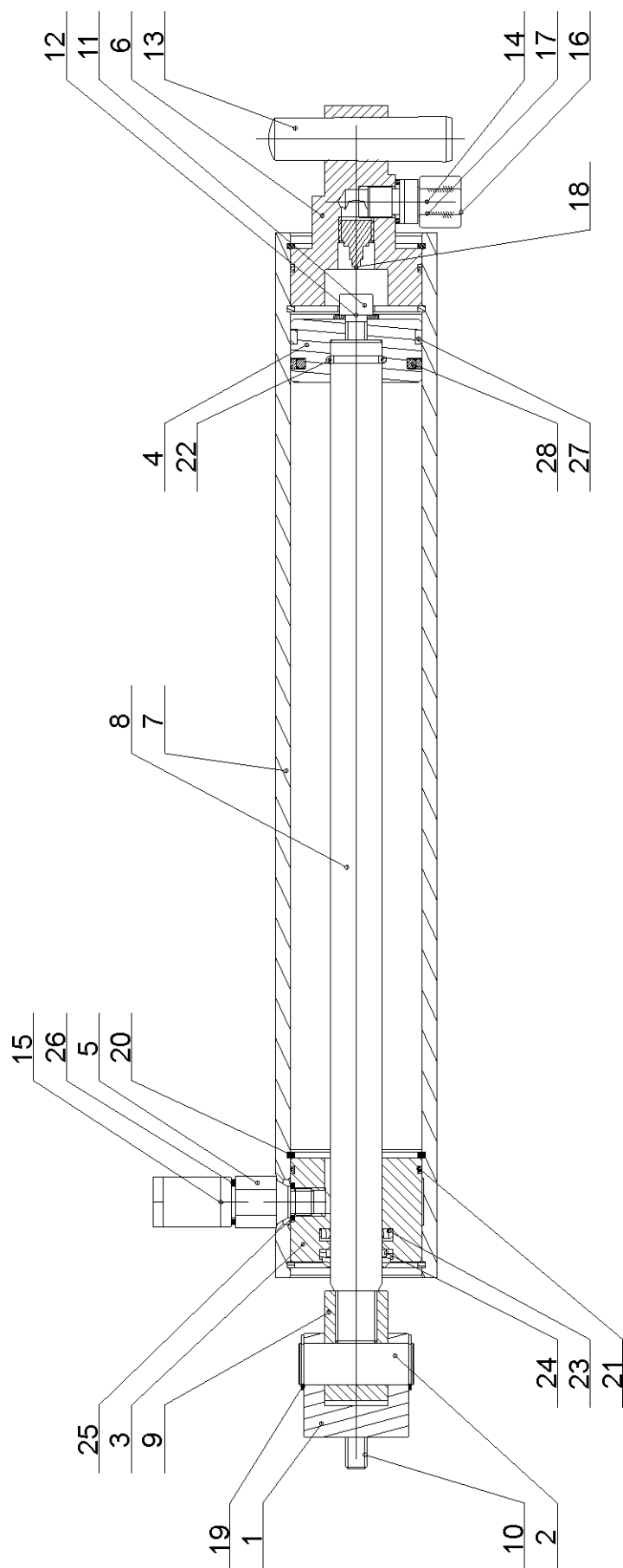
25.13. Pravá vodící kostka / Rechter Führungsklotz / Right guiding cube

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0810-009	Excentr / Exzenter / Excenter	1
2	30.1710-005	Držák tvrdokovu / HM-Halter / HM holder	2
3	30.1710-006	Kroužek distanční / Distanzring / Distance ring	1
4	30.1710-007	Excentr / Exzenter / Excenter	1
5	30.3510-001	Pravá vodící kostka / Rechter Führungsklotz / Right guiding cube	1
6	30.3510-002	Držák tvrdokovu / HM-Halter / HM holder	1
7	90.001.25.016	Šroub / Schraube / Screw M6x12 DIN 912 8.8	3
8	90.004.2D.002	Šroub / Schraube / Screw M6x12 DIN 915 45H	3
9	90.005.55.010	Šroub / Schraube / Screw M6x30 DIN 933 8.8	1
10	90.100.55.004	Matice / Mutter / Nut M6 DIN 934 8.8	1
11	90.100.55.006	Matice / Mutter / Nut M10 DIN 934 8.8	2
12	90.150.50.006	Podložka / Scheibe / Washer Ø10,5 DIN 125	3
13	95.001.004	Ložisko / Lager / Bearing 6000 2RS	2
14	99.040.002	Tvrdokov / HM-Segment / Hardmetal	1



25.14. Kartáček / Spänbürste / Brush

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.3414-301	Držák kartáčku / Bürstenhalterung / Brush holder	1
2	30.2914-703	Hřídel náhonu / Antriebswelle / Drive shaft	1
3	30.4314-002	Hřídel kartáčku / Bürstenwelle / Brush shaft	1
4	30.4314-003	Pouzdro / Büchse / Bush	1
5	30.4314-004	Distanční kroužek / Distanzring / Distance ring	1
6	49.250.005	Kartáček / Bürste / Brush	1
7	90.100.55.005	Matice / Mutter / Nut DIN 934	1
8	90.150.50.005	Podložka / Scheibe / Washer DIN 125 8,4	2
9	95.001.001	Kuličkové ložisko / Kugellager / Ball bearing 608 2RS	2
10	95.801.019	Pojistný kroužek / Sicherungsring / Retaining ring 22	4



25.15. Zvedací válec / Hubzylinder / Lifting cylinder - 251.254

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0807-008	Spodní držák / Unterer Halter / Bottom holder	1
2	30.0807-009	Spodní čep / Unterer Bolzen / Bottom pivot	1
3	30.2807-002	Horní víko / Oberer Deckel / Upper cover	1
4	30.2807-004	Píst / Kolben / Piston	1
5	30.3407-103	Redukce / Reduktion / Reduction	1
6	30.4107-003	Víko / Deckel / Cover	1
7	30.8307-201	Válec / Zylinder / Cylinder	1
8	30.8307-203	Pístnice / Kolbenstange / Piston rod	1
9	30.8307-204	Držák pístnice / Halterung / Piston rod holder	1
10	90.001.25.031	Šroub / Schraube / Screw M8x16 DIN 912	2
11	90.001.25.032	Šroub / Schraube / Screw M8x20 DIN 912	1
12	90.150.50.005	Podložka / Scheibe / Washer Ø8,4 DIN 125	1
13	30.8307-205	Kuželový kolík / Kegelbolzen / Taper pin M16x70 DIN 7978	1
14	92.002.001	Šroubení přímé / Gerade Verschraubung / Straight screwing	1
15	92.003.001	Šroubení natáčecí / Winkelverschraubung / Swivelling screw	1
16	92.013.001	Matice / Mutter / Nut	1
17	92.014.001	Těsnící kroužek / Dichtungsring / Sealing ring	1
18	92.151.001	Pojistný ventil / Sicherungsventil / Retaining valve	1
19	95.800.007	Pojistný kroužek / Sicherungsring / Retaining ring Ø16 DIN 471	2
20	95.801.XXX	Pojistný kroužek / Sicherungsring / Retaining ring Ø50 DIN 472	4
21	96.001.013	O kroužek / O Ring / O Ring 45x2	2
22	96.002.007	O kroužek / O Ring / O Ring 16x2	1
23	96.041.002	Těsnící manžeta / Dichtungsmanschette / Gasket 20x28	1
24	96.060.002	Stírací kroužek / Abstreifring / Wiping ring 20x28	1
25	96.082.001	Těsnící kroužek / Dichtungsring / Sealing ring 10/14	1
26	96.082.002	Těsnící kroužek / Dichtungsring / Sealing ring 13/17	2
27	96.084.001	Vodící kroužek / Führungsring / Guiding ring 50x5.5x2.5x146.9	1
28	96.900.001	Kombinované těsnění / Dichtung / Sealing 50x39x4	1

26. Troubleshooting table

26.1. Mechanical problems

Problem	Possible causes	Repair
1.Slanting cut	- Wrongly adjusted hard metal guides. - Worn hard metal guides. - Wrongly adjusted cubes of the saw band guiding. - Worn bearings of the saw band guiding. - Wrongly adjusted swarf brush. - Worn swarf brush. - Insufficient saw band stretching. - Wrongly chosen tooth system of the saw band. - Worn saw band. - Wrongly balanced roller conveyor. - Dirty feeding board. - Guiding arm and guiding cube are loosened. - Guiding arm and cube are too far from the material. - Too fast cutting rate. - Unexpected oscillation in material quality.	Set according to the chapter „Servicing and adjustment“ Replace to the chapter „Worn pieces replacement“ Set according to the chapter „Servicing and adjustment“ Replace according to the chapter „Worn pieces replacement“ Set according to the chapter „Servicing and adjustment“ Replace according to the chapter „Worn pieces replacement“ Rise the saw band stretching and set the limit switch. Replace the saw band and keep the instructions of manufacturer on new saw band choice. Replace the saw band. Set the roller conveyor. Cleanse the feeding board from debris, chip and residue material. Clamp the guiding arm. Set the guiding cube to the material. Lower the material feeding speed. Set the cut and feeding speed to the relevant material.
2.The cut is not cut upon desired angle	- Securing lever is loosened. - Set angle does not match the cut angle. - Insufficient saw band stretching. - Guiding arm and guiding cube are loosened. - Dirt between material and clamping jaw.	Check the securing lever efficiency and carry out its adjustment according to chapter „Servicing and adjustment“. Check the angle adjustment with a protractor and possibly set it according to chapter „Servicing and adjustment“. Stretch the saw band and set the limit switch according to chapter „Servicing and adjustment“. Fasten the guiding arm and the cube. Cleanse the material and mating jaw.
3.Short lifetime of the saw band	- Insufficient saw band stretching. - Worn swarf brush.	Raise the tightening of the saw band set the scanner of saw band tightening according to chapter „Servicing and adjustment“. Check the swarf brush condition and replace it in case of excessive use as described in chapter „Worn pieces replacement“

	- Wrongly adjusted swarf brush.	Check swarf brush adjustment, set it according to chapter „Servicing and adjustment“
	- Over stretched saw band	Lower stretching of the saw band and set the limit switch of the saw band stretching according to chapter „Servicing and adjustment“
	- Wrongly adjusted hard metal guides.	Check the adjustment of the hard metal guides and carry out adjustment as described in chapter „Servicing and adjustment“
	- Worn hard metal guides of the saw band.	Check the condition of the hard metal guide and if it is too worn, replace hard metal guides according to chapter „Worn pieces replacement“
	- Worn saw band guide bearings.	Check guiding bearings and if you notice some sort of excessive damage, replace them according to chapter „Worn pieces replacement“
	- Wrongly adjusted guiding cubes of the saw band.	Set guiding cube according to chapter „Servicing and adjustment“
	- Wrongly adjusted down feed and saw band speed.	Adjust the feeding and speed of a saw band according to values published by saw band manufacturer.
	- Different material quality.	Adjust feeding and speed of a saw band according to desired material (try cut-test).
	- Low-class saw band	Replace the saw band (contact your local accessory supplier for more information)
	- Wrongly chosen saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly adjusted tracking.	Check the space between top of a saw band and driving wheel. Perhaps adjust the tracking as described in chapter „Servicing and adjustment“
4. Insufficient cut output.	- Worn saw band.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrong saw band tooth system.	Replace the saw band and keep instructions of the manufacturer on the choice.
	- Wrongly set down feed and speed of a saw band.	Set feed and speed of a saw band according to values published by saw band manufacturer.
5. The cut is not finished.	- Wrongly adjusted lower stop point of the saw frame.	Check lower limit switch and screw.
	- Stop point surface is messed-up.	Cleanse stop point surface of the limit switch from debris and residue material.
6. By choke is not possible turn	- Metal clamps between valve and panel.	Clamps must be removed and put on the shaft O-Ring about 10x2 mm.
	- Metal clams are in body of valve.	Valve must be cleared or changed.

7.Saw band drive cannot be started.	- Pressure switch is adjusted wrong. - Pressure switch is defective.	Set the pressure switch according to chapter „Servicing and adjustment“ Replace defective parts of the pressure switch.
8.The saw bands are cracked.	- In stretching wheel is wrong adjusting geometry. - Hard metal plates of circuit saw band are not adjusting. - Guiding cubes are not adjusting (bearings + hard metal circuit) - Bearings of guiding cubes are used (rolling elements are damaged or outside ring of bearing has conical form).	Adjust distance band from recess wheel c.2 mm according to operating instructions. Hard metal plates of circuit saw band must be adjusting according to operating instructions. Guiding cubes must be adjusting (bearings + hard metal circuit) according to operating instructions. 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. - Bearings of guiding cubes are used.	Hardmetal guiding cubes must be adjusted. 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. - 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.	Elastic wheel of the brush must be changed. Driving wheel must be changed. The shaft of the brush must be cleaned and oiled. The brush cover must be posed, in order to the brush can be turned.
12.The saw arm periodically rise and fall during the cut; this cause short lifetime of the saw band.	- Backlash in driving wheel lodgement on the shaft. - 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.

26.2. Electric and hydraulic problems

Problem	Possible causes	Repair
1.Machine is not possible start.	- In socket is not voltage - Transfer relay is closed (thermal protector)	Line voltage must be checked. 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.

27. Roller conveyors and accessories

The rollers conveyors and accessories in this appendage are not standard accessories of the band saw and it is necessary to order them separately.

27.1. Roller conveyors of D type

27.1.1. Roller conveyors

D 440 – 2

Conveyor with steel rolls
Max. load **steel rolls 600 kg/m**
Without legs.
Rolls Ø 70x440mm
Dimension 530x2000mm
Conveyor height 700 – 800mm, 900 – 1000mm



D 440 – 3

Conveyor with steel rolls
Max. load **steel rolls 600 kg/m**
Without legs.
Rolls Ø 70x440mm
Dimension 530x3000mm
Conveyor height 700 – 800mm, 900 – 1000mm

27.1.2. Length stops

HA – 2

Manual length stop of series H for 2m

HA – 3

Manual length stop of series H for 3m



For special lengthens of the length stop HA the price can be set together from the following components:

Trolley HA

Trolley with length stop

Guide way HA

Guide way with connection material for 1m

HDA – 3

Digital Length stop with hand wheel suitable for all conveyors of series H and HP
(Attention! Only mounted on the conveyor and with protective guide ASL-H)



HDA – 6

Digital Length stop with hand wheel suitable for all conveyors of series H and HP
(Attention! Only mounted on the conveyor and with protective guide ASL-H)

Lengthens HDA

For special lengthens of the length stop HDA, use the price of 3m or 6m as basic number and add the costs for 1m.



HNCA – 3

NC-controlled length stop suitable for all conveyors of series H and HP
(Attention! Only mounted on the conveyor and with protective guide ASL-H)

HNCA – 6

NC-controlled length stop suitable for all conveyors of series H and HP
(Attention! Only mounted on the conveyor and with protective guide ASL-H)

Lengthens HNCA

For special lengthens of the length stop HNCA, use the price of 3m or 6m as basic number and add the costs for 1m.



H – VL

NC-controlled Incremental infeed machine

Lengthens Arm

Special order for double side band saws (DG, DGH)

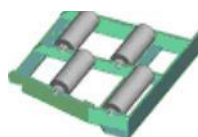
27.1.3. Feeding machines



D-VL

Automatic feeding machine.

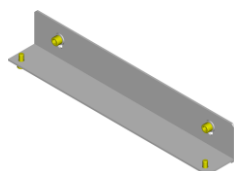
27.1.4. Connection parts



ATR

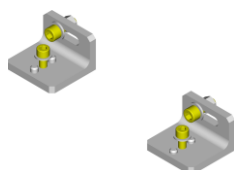
Right connection part for conveyor D 440.

27.1.5. Connection sets



VBS L

Connection set, left side of conveyor D 440.



VBS R

Connection set, right side of conveyor D 440.

27.1.6. Accessories of roller conveyors

VR – D

Set of vertical rollers suitable for all conveyors of series D.



BVR – D

Set of movable vertical rollers suitable for all conveyors of series D.



VPF – D

Preparation leg suitable for all conveyors of series D.
(Attention! At least two pieces have to be used).



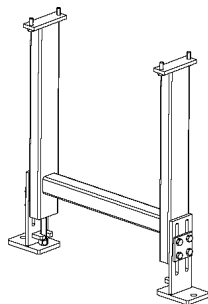
SB-D

Set of securing bolt suitable for all conveyors of series D.

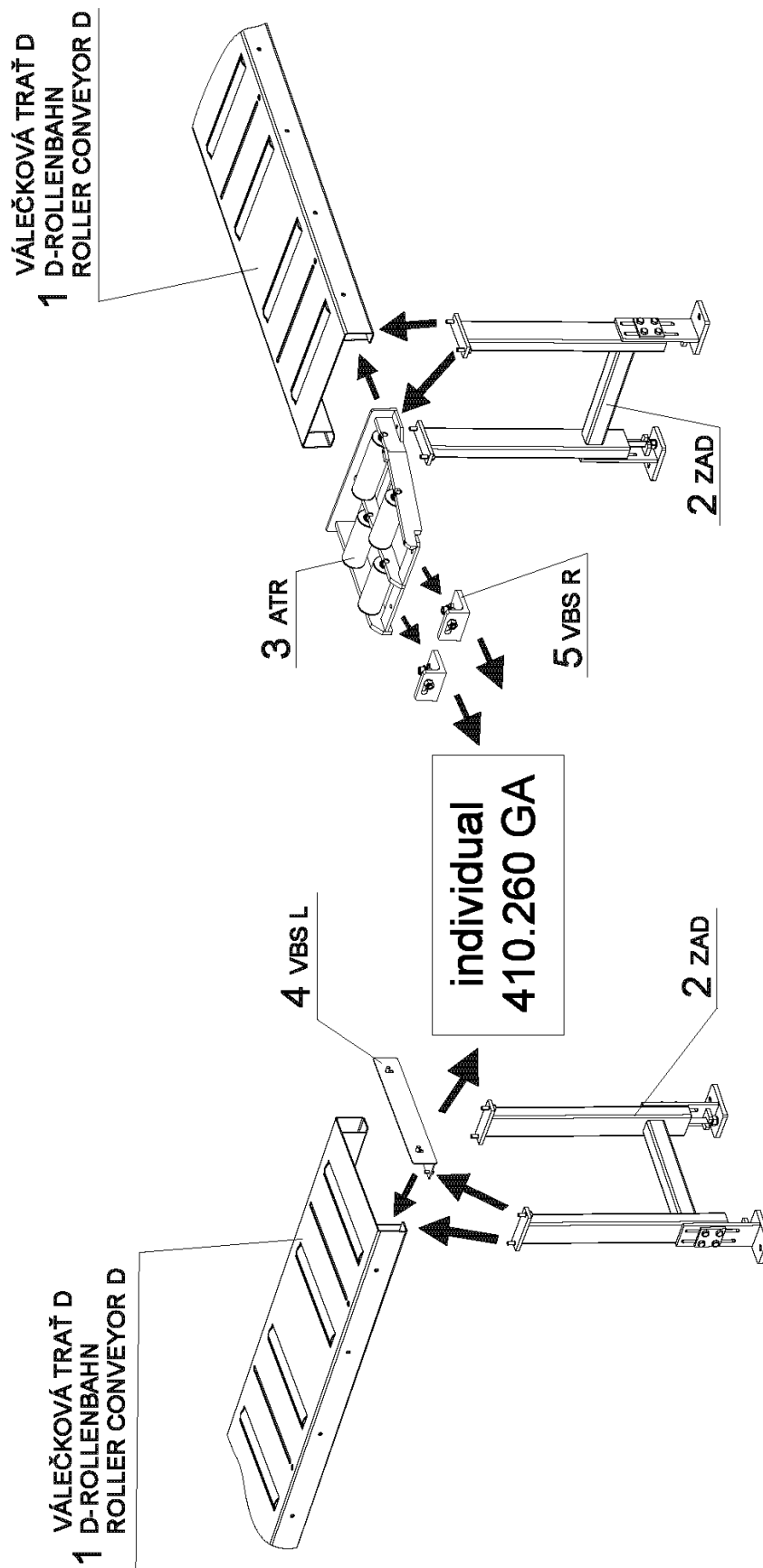


ZA-D 440

Additional leg suitable for conveyors D440/578, adjusted height 700-800 mm and for conveyors D440/778, adjusted height 900-1000 mm.



27.1.7. Connection schema of the roller conveyors to the band saw



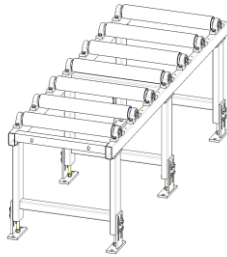
Roller conveyor D 440

Pos.	Number	Sign.	Name
1	253.084	D 440 - 2	Roller conveyor D width 440mm, length 2m
	253.085	D 440 - 3	Roller conveyor D width 440mm, length 3m
2	253.078	ZAD 440	Additional leg width 440mm
	253.079		
3	255.522	ATR	Right connection part width 440mm
4	255.257	VBS L	Left connection set
5	255.761	VBS R	Right connection set

For **individual 410.260 GANC** band saw we advise, height presented groups. The roller conveyors are solved like modules, from which is possible set together roller conveyor from desired length. In case of your questions, please contact your dealer.

27.2. Roller conveyors of H type

27.2.1. Roller conveyors



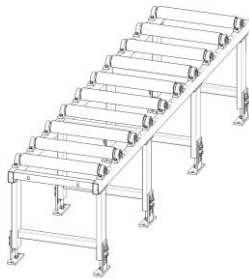
H 450 – 2

Conveyor with steel rolls
Max. Load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x2000mm
Without legs



H 450 – 3W

Conveyor with steel rolls
Max. Load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x3000mm
Without legs



H 450 – 3K

Conveyor with steel rolls
Max. Load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x3000mm
Without legs

27.2.2. Roller conveyors prepared for powering

HP 450 – 2

Conveyor prepared for powering with chains and chain wheels
Max. load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x2000mm
Without legs

HP 450 – 3W

Conveyor prepared for powering with chains and chain wheels
Max. load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x3000mm
Without legs

HP 450 – 3K

Conveyor prepared for powering with chains and chain wheels
Max. load 1200 kg/m
7 Rolls Ø 80x450mm
Dimension 540x3000mm
Without legs

27.2.3. Power and control units for powered conveyors



ARH – M

Power unit for powered conveyors of series HP, including motor, worm gear and manual clutch
Max. load 2500 kg / 1 drive



ARH – P

Power unit for powered conveyors of series HP, including motor, worm gear and pneumatic clutch
Max. load 2500 kg / 1 drive



RSP 1/1

Control unit for powered conveyors of series HP with one – phase frequency converter for one unit ARH

RSP 1/3

Control unit for powered conveyors of series HP with three – phase frequency converter for one unit ARH

RSP 2/1

Control unit for powered conveyors of series HP with one – phase frequency converter for two unit ARH

RSP 2/3

Control unit for powered conveyors of series HP with three – phase frequency converter for one unit ARH



EBS

End-stop unit for combination with powered conveyors of series HP and length stops HDA and HNCA



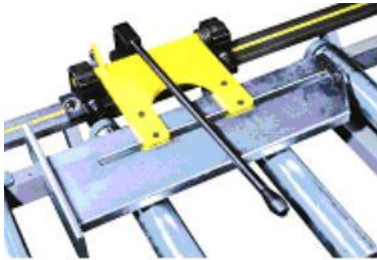
EMG-STOP

Additional emergency-stop unit for powered conveyors of series HP

27.2.4. Length stops

HA – 2

Manual length stop of series H for 2m



HA – 3

Manual length stop of series H for 3m

For special lengthens of the length stop HA the price can be set together from the following components:

Trolley HA

Trolley with length stop

Guide way HA

Guide way with connection material for 1m

HDA – 3

Digital Length stop with hand wheel suitable for all conveyors of series H and HP

(Attention! Only mounted on the conveyor and with protective guide ASL-H)



HDA – 6

Digital Length stop with hand wheel suitable for all conveyors of series H and HP

(Attention! Only mounted on the conveyor and with protective guide ASL-H)

Lengthens HDA

For special lengthens of the length stop HDA, use the price of 3m or 6m as basic number and add the costs for 1m

HNCA – 3

NC-controlled length stop suitable for all conveyors of series H and HP

(Attention! Only mounted on the conveyor and with protective guide ASL-H)



HNCA – 6

NC-controlled length stop suitable for all conveyors of series H and HP

(Attention! Only mounted on the conveyor and with protective guide ASL-H)

Lengthens HNCA

For special lengthens of the length stop HNCA, use the price of 3m or 6m as basic number and add the costs for 1m

H – VL

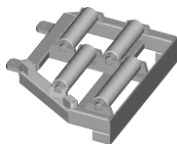
NC-controlled Incremental infeed machine



Lengthens Arm

Special order for double side band saws (DG, DGH)

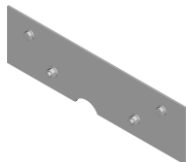
27.2.5. Connection parts



ATH - R

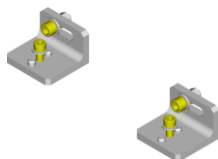
Right connection part for conveyor H 450.

27.2.6. Connection sets



VBS L

Connection set, left side.



VBS R

Connection set, right side.

27.2.7. Accessories of roller conveyors



VR – H450

Vertical roller suitable for all conveyors of series H and HP.



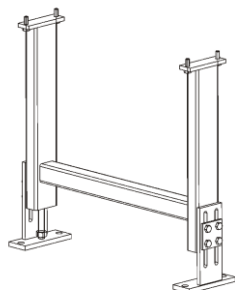
BVR – H

Movable vertical, suitable for conveyors H 450 and HP 450.



VBF – H

Preparative leg suitable for all conveyors of series H and HP.
(Attention! At least two pieces have to be used)



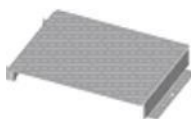
ZA-H450

Additional leg suitable for conveyors H 450 and HP 450,
adjusted height 700-800 mm.

27.2.8. Covers

ADB – H450 – 2

Set cover plates between rolls suitable for H450–2 and HP450–2
(Attention, only suitable for named conveyor)



ADB – H450 – 3W

Set cover plates between rolls suitable for H450–3W and HP450–3W
(Attention, only suitable for named conveyor)

ADB – H450 – 3K

Set cover plates between rolls suitable for H450–3K and HP450–3K
(Attention, only suitable for named conveyor)

ASL-H – 2

Cover for rollers placing from left and right side, it is suitable for conveyors H450–2.



ASL-H – 3W

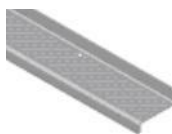
Cover for rollers placing from left and right side, it is suitable for conveyors H450–3W.

ASL-H – 3K

Cover for rollers placing from left and right side, it is suitable for conveyors H450–3K.

ASL-HP – 2

Cover for rollers placing from left and right side, it is suitable for conveyors HP450–2.



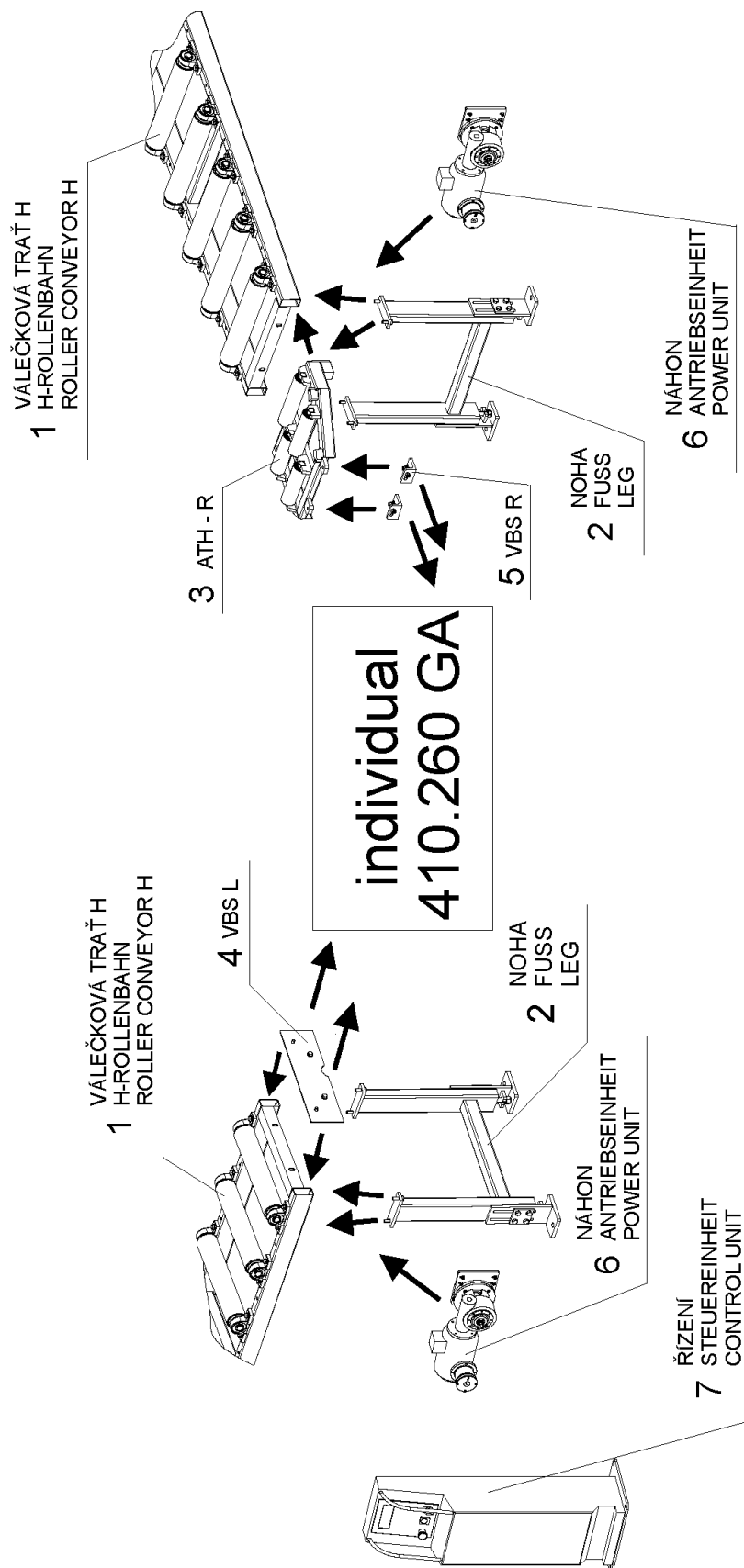
ASL-HP – 3W

Cover for rollers placing from left and right side, it is suitable for conveyors HP450–3W.

ASL-HP – 3K

Cover for rollers placing from left and right side, it is suitable for conveyors HP450–3K.

27.2.9. Connection schema of the roller conveyors to the band saw



Roller conveyor H 450

Pos.	Number	Sign.	Name
1	253.018	H 450 - 2	Roller conveyor H width 450mm, length 2m
	253.028	H 450 - 3W	Roller conveyor H width 450mm, length 3m
	253.019	H 450 - 3K	Roller conveyor H width 450mm, length 3m
2	253.034	ZA - H 450	Additional leg width 450mm
3	255.523	ATH - R	Right connection part width 450mm
4	255.020	VBS L	Left connection set
5	255.761	VBS R	Right connection set

Powered roller conveyor HP 450

Pos.	Number	Sign.	Name
1	253.020	HP 450 - 2	Roller conveyor H width 450mm, length 2m
	253.029	HP 450 - 3W	Roller conveyor H width 450mm, length 3m
	253.021	HP 450 - 3K	Roller conveyor H width 450mm, length 3m
2	253.034	ZA - H 450	Additional leg width 450mm
3	255.523	ATH - R	Right connection part width 450mm
4	255.020	VBS L	Left connection set
5	255.761	VBS R	Right connection set
6		ARH - M	Power unit with manual clutch
		ARH - P	Power unit with pneumatic clutch
7		RSP	Control unit with frequency converter

For **individual 410.260 GANC** band saw we advise, height presented groups. The roller conveyors are solved like modules, from which is possible to set together roller conveyor from desired length. In case of your questions, please contact your dealer.

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.
Těžební 1236/1
615 00 Brno
Czech Republic

we hereby **declare** that the **machinery**

Economic 410.260G, 410.260GH, 410.260GA, 410.260GHK, 410.260GHV,
410.260DG, 410.260DGH, 410.260DGHK, 410.260DGHV,
510.320GA, 510.320G, 510.320GH, 510.320GHK, 510.320GHV,
510.320DG, 510.320DGH, 510.320DGHK, 510.320DGHV
Transverse 410.260DGH, 410.260GANC, 510.330DGH, 510.330GANC, 610.440DGH,
610.440GANC
Individual 410.260GANC, 410.260GH, 510.330GH, 510.330 GANC, 610.440GANC
610.440GH, 640.520GH, 640.520GANC

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 EN 982:1997
- ČSN ISO 3746:1996
- ČSN EN 60204-1:2000
- ČSN EN 61000-6-4:2002 EMC
- ČSN EN 61000-6-2:2002 EMC

Year of the CE put on the product: 06

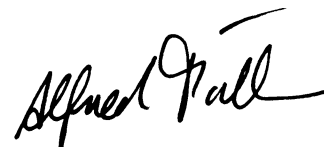
Place and date of issue:

Brno, 26th May 2006

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

Company seal

Alfred Pichlmann,
Managing Director



.....
name, office, signature