

BOMAR[®]

Operating Instructions for Band Saw

ergonomic 290.250 DGA



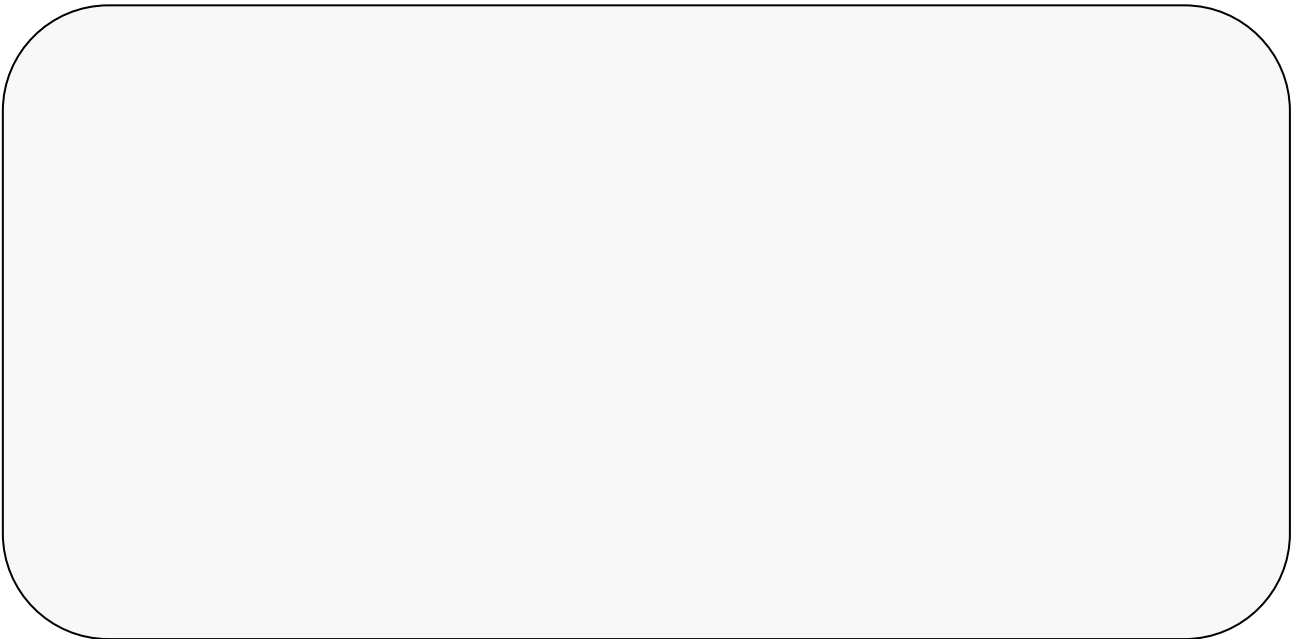
Before transporting and using the machine, please read the instructions thoroughly!

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:

BOMAR, spol. s r.o.
Těžební 1236/1
62700 Brno
CZECH REPUBLIC

Telephone: +420 – 533 426 100
Fax: +420 – 533 426 109

e-mail: info@bomar.cz
WWW: <http://www.bomar.cz>

We are available Mondays to Fridays from 7⁰⁰ to 16⁰⁰.

Content

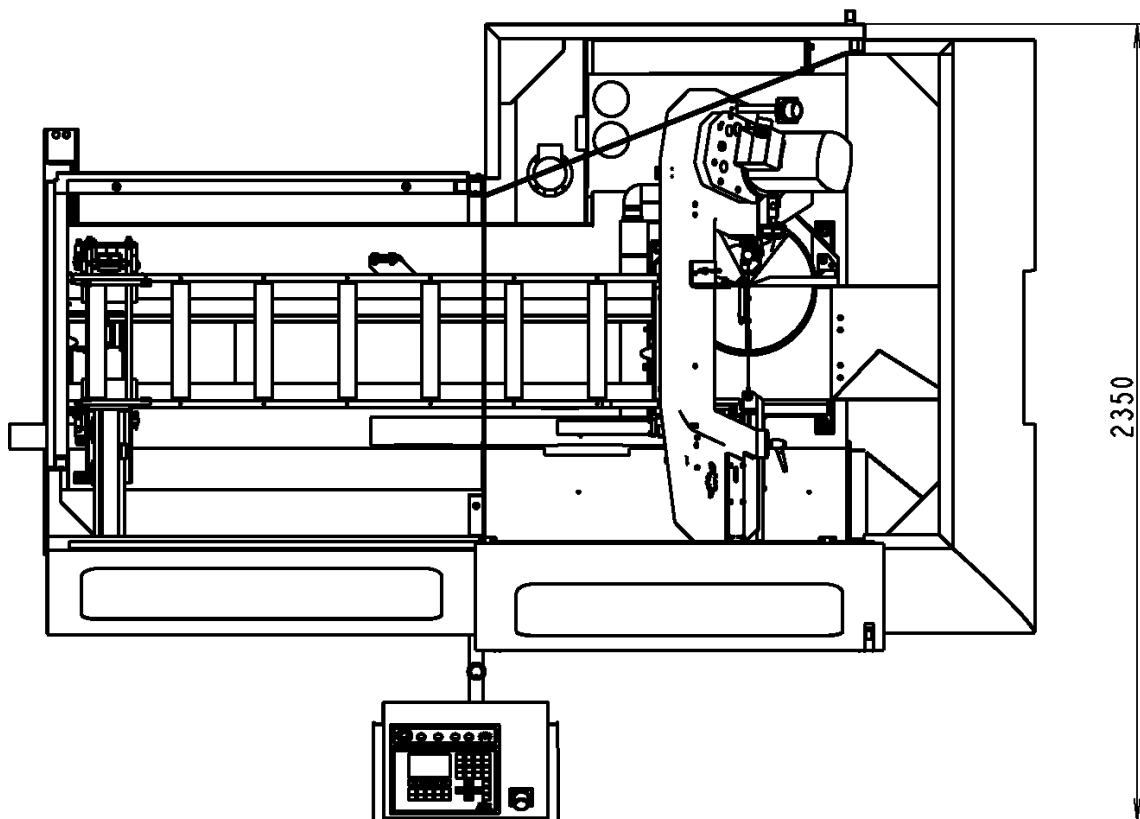
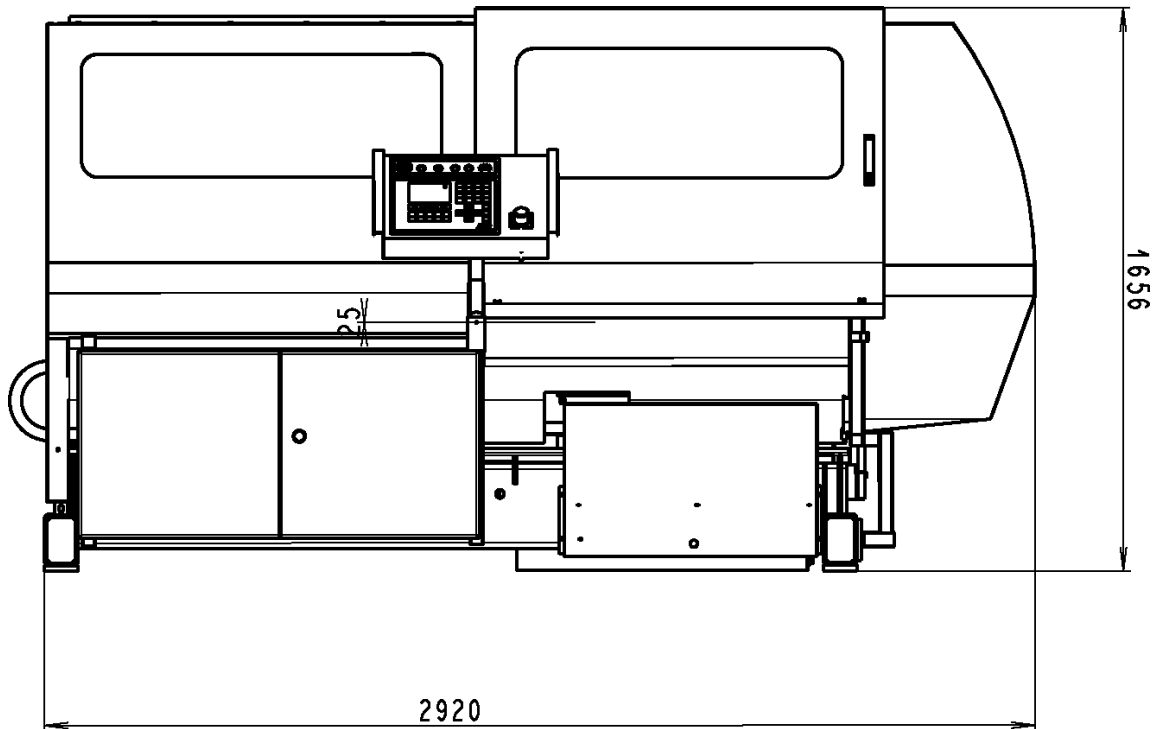
1. INTRODUCTION.....	7
2. BAND SAW USING	7
3. TECHNICAL DATA.....	8
4. SAFETY NOTES.....	9
4.1. GENERAL	9
4.2. PROTECTIVE SUIT AND PERSONAL SAFETY	9
4.3. SAFETY NOTES FOR MACHINE OPERATOR.....	10
4.4. SAFETY NOTES FOR THE SERVICING AND REPAIRS.....	11
4.5. SAFETY MACHINE ACCESSORIES	11
5. TRANSPORTATION AND STOCKING	13
5.1. CONDITIONS FOR TRANSPORTATION AND STOCKING	13
5.2. SAFETY NOTES	13
5.3. TRANSPORT AND STOCKING PREPARATIONS	14
5.4. TRANSPORT AND STOCKING	14
6. ACTIVATION.....	15
6.1. MACHINE WORKING CONDITIONS.....	15
6.2. MACHINE INSTALLING AND LEVELLING.....	15
6.3. ELECTRICAL CONNECTION	15
6.4. FILLING OF THE COOLING SYSTEM.....	17
6.5. COOLANT DEVICE INSPECTION.....	18
6.6. CHIPS DISPOSAL	18
7. CHECK MACHINE FUNCTIONS	20
8. MATERIAL INSERTION.....	21
8.1. SAFETY NOTES	21
8.2. HANDLING EQUIPMENT SELECTION.....	21
8.3. MATERIAL INSERTION.....	21
8.4. BUNDLE MATERIAL CUTTING	22
9. BAND SAW ADJUSTING.....	23
9.1. SAFETY NOTES	23
9.2. OPTIMAL ADJUSTING OF THE GUIDE CUBES SPAN	23
9.3. SAW BEND CUTTING SPEED.....	23
9.4. PRESSURE ADJUSTING TO THE CUT	24
10. MATERIAL REMOVING FROM THE BAND SAW	25
10.1. SAFETY NOTES	25
11. SELECTION AND REPLACEMENT OF THE SAW BAND	26
11.1. SAFETY NOTES	26
11.2. SAW BAND SIZE	26
11.3. SELECTION OF THE SAW BAND TOOTH SYSTEM:.....	26
11.4. SAW BAND RUNNING - IN.....	28
11.5. SAW BAND DISMANTLING	29

11.6.	SAW BAND INSTALLATION	30
11.7.	SAW BAND STRETCHING AND INSPECTION	31
11.7.1.	<i>Saw band stretching</i>	31
11.7.2.	<i>Saw band inspection</i>	31
12.	COOLING AGENTS AND CHIPS DISPOSAL	32
12.1.	SAFETY NOTES	32
12.2.	COOLING LIQUID PREPARATION	32
13.	GREASES AND OILS	33
13.1.	GEARBOX OILS.....	33
13.2.	HYDRAULIC OILS	34
13.3.	LUBRICANT GREASES	34
14.	SERVICE	35
14.1.	MACHINE CLEANING	35
14.2.	LUBRICATION	35
14.3.	COOLING LIQUID INSPECTION	35
14.4.	HYDRAULIC OIL LEVEL CHECK.....	36
15.	ADJUSTMENT	37
15.1.	HARD METAL GUIDES ADJUSTMENT	37
15.2.	GUIDE CUBE ADJUSTMENT	37
15.3.	SAW BAND RUN ADJUSTMENT ON STRETCHING WHEEL	38
15.4.	BRUSH ADJUSTMENT.....	39
15.5.	ADJUSTING THE LIMIT SWITCH OF THE SAW BAND STRETCHING.....	40
15.6.	SAW FRAME LOWER POSITION STOP ADJUSTMENT	40
15.7.	ADJUSTMENT OF THE LIMIT SWITCH OF SAW FRAME LOWER STOP POINT	41
15.8.	ADJUSTMENT OF A THROTTLE VALVE	42
16.	CONTROL PANEL	43
17.	MACHINE OPERATION.....	48
17.1.	MANUAL MODE	48
17.1.1.	<i>Presumptions</i>	48
17.1.2.	<i>Referencing the machine.</i>	48
17.1.3.	<i>The basic menu display.</i>	49
17.2.	STARTING IN MANUAL MODE	49
17.2.1.	<i>Angle orientation</i>	51
17.3.	SEMI-AUTOMATIC MODE.....	51
18.	BAND SAW SETTING	52
18.1.	HOW TO NAVIGATE THROUGH THE SELECTED MENU	53
18.2.	USER'S DATA MENU	53
18.3.	SERVICE MENU	54
18.4.	PRODUCTION MENU	56
18.4.1.	<i>Offsets for correct length</i>	57
18.4.2.	<i>Saw arm offset</i>	57
18.4.3.	<i>Saw band offset</i>	58
18.5.	CROSS OVER REFERENCE POINT - MEASUREMENT.....	58
18.6.	FEEDERS TRAVEL LENGTH - MEASUREMENT.....	60
18.7.	SAVING THE INITIAL VALUES.....	60
18.8.	LOADING THE INITIAL VALUES	60
18.8.1.	<i>List of error messages</i>	60
19.	CUTTING RECORDS,.....	62

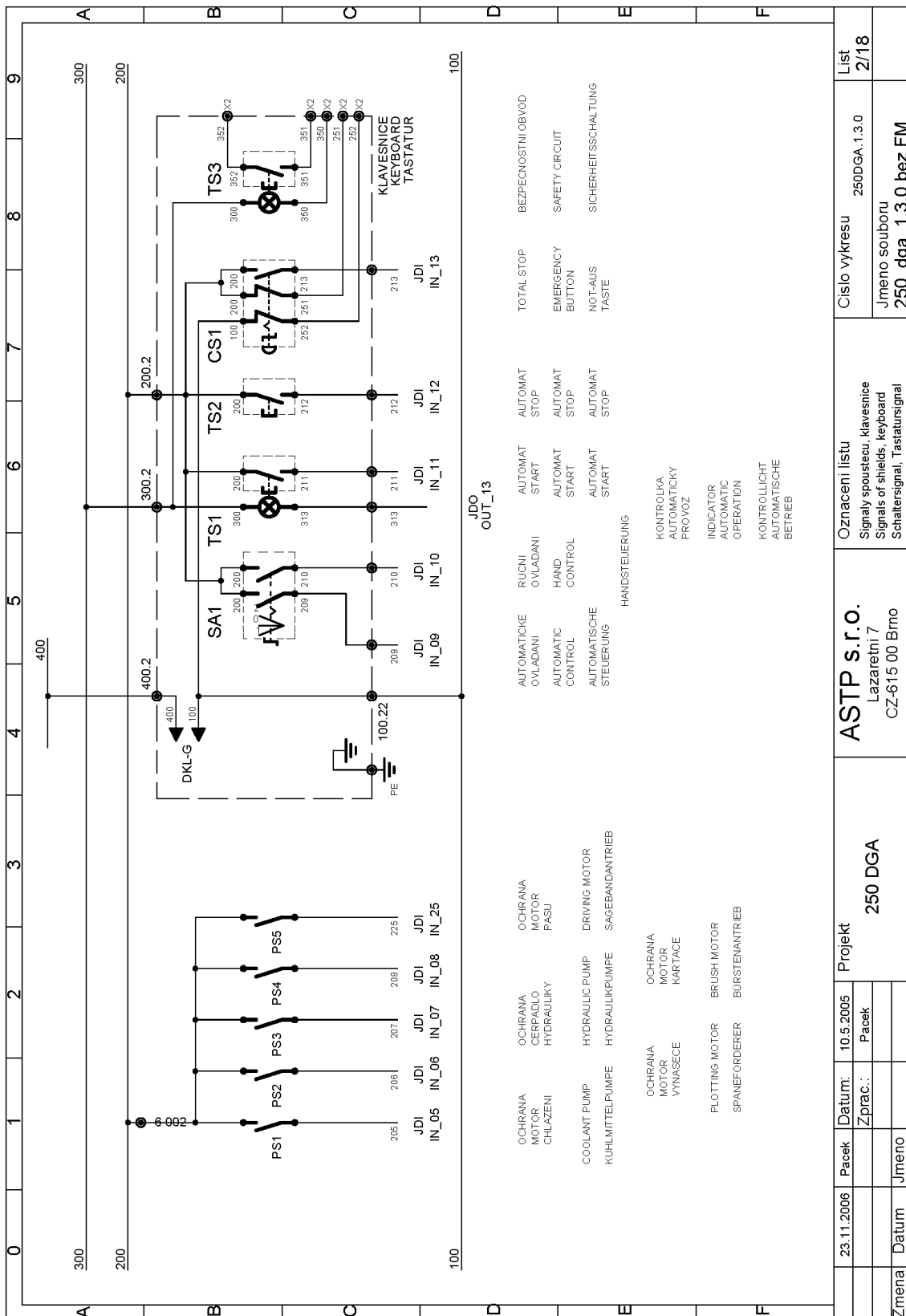
19.1.	OUTAGE EVALUATION.....	62
19.2.	WORKING WITH TABLE.....	62
19.3.	SETTING VALUES FOR THE CUTTING PROGRAM.....	63
19.4.	EDITING TABLE FOR CUTTING RECORDS.....	64
19.5.	PROGRAMS PROCEDURES.....	66
19.5.1.	<i>Cutting records confirming</i>	68
20.	PREPARATION FOR AUTOMATIC CYCLE.....	69
20.1.	PROGRAM WAS INTERRUPTED.....	69
20.2.	SELECT THE WAY HOW TO START AUTOMATIC CYCLE.....	70
20.2.1.	<i>Load material in vice automatically</i>	70
20.2.2.	<i>Cut off at the beginning of the material</i>	71
21.	AUTOMATIC CYCLE START.....	72
21.1.	AUTOMATIC CYCLE DISPLAY.....	73
21.2.	AUTOMATIC CYCLE ATTENDANCE.....	73
21.2.1.	<i>Cycle suspension</i>	73
21.2.2.	<i>Cycle interruption</i>	74
21.3.	OUT OF MATERIAL.....	74
21.4.	END OF PROGRAM.....	74
21.5.	ELECTRICAL OUTAGE.....	74
21.5.1.	<i>Proceeding after electrical outage</i>	75
22.	WARNING MESSAGES.....	75
23.	WORN PIECES REPLACEMENT.....	81
23.1.	HARD METAL GUIDES REPLACEMENT.....	81
23.2.	ROUND BRUSH REPLACEMENT.....	81
23.3.	SAW BAND GUIDING ROLLERS REPLACEMENT.....	82
23.4.	STRETCHING WHEEL REPLACEMENT.....	83
23.5.	DRIVING WHEEL REPLACEMENT.....	85
23.6.	COOLING PUMP REPLACEMENT.....	86
24.	ROZMĚROVÉ SCHÉMA / AUFSTELLZEICHNUNG / INSTALLATION DIAGRAM.....	88
24.1.	ROZMĚROVÉ SCHÉMA / AUFSTELLZEICHNUNG / INSTALLATION DIAGRAM.....	88
25.	ELEKTRICKÁ SCHÉMATA / ELEKTROSCHEMAS / WIRING DIAGRAMS.....	89
25.1.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 1.....	89
25.2.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 2.....	90
25.3.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 3.....	91
25.4.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 4.....	92
25.5.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 5.....	93
25.6.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 6.....	94
25.7.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 7.....	95
25.8.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 8.....	96
25.9.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 9.....	97
25.10.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 10.....	98
25.11.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 11.....	99
25.12.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 12.....	100
25.13.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 13.....	101
25.14.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 14.....	102
25.15.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 15.....	103
25.16.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 16.....	104
25.17.	ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 17.....	105

25.18. ELEKTRICKÉ SCHÉMA / ELEKTROSCHEMA / WIRING DIAGRAM 18	106
26. KUSOVNÍK ELEKTROSOUČÁSTÍ / STÜCKLISTE DER ELEKTROTEILEN / PIECE LIST OF ELEKTRAPARTS	108
27. HYDRAULICKÉ SCHÉMA / HYDRAULIKSCHEMA / HYDRAULIC DIAGRAM	109
28. VÝKRESY SESTAV PRO OBJEDNÁNÍ NÁHRADNÍCH DÍLŮ / ZEICHNUNGEN FÜR BESTELLUNG DER ERSATZTEILE / DRAWING ASSEMBLIES FOR SPARE PARTS ORDER	112
28.1. PÁSOVÁ PILA / BANDSÄGE / BAND SAW	113
28.2. SKLUZ / RUTSCH / GLIDE	115
28.3. PODAVAČ / VORSCHUB / FEEDER	117
28.4. ODMĚŘOVÁNÍ RAMENE / RAHMENABMESUNG / ADMEASUREMENT OF ARM	120
28.5. SVĚŘÁK HLAVNÍ / HAUPTSCHRAUBSTOCK / MAIN VICE	122
28.6. VÁLEC UPÍNÁNÍ SVĚŘÁKU / SPANNSTOCKZYLINDER / VICE CYLINDER	124
28.7. POHON PODAVAČE / ANTRIEB / DRIVE	126
28.8. KRYTY / DECKEL / COVERS	128
28.9. KONZOLA OTOČNÁ / DREHKONSOLE / TURNING CONSOLE	130
28.10. PANEL / PANEL / PANEL	132
28.11. PODSTAVEC / UNTERGESTELL / PEDESTAL	134
28.12. VÁLEC FIXAČNÍ / ZYLINDER FIX / CYLINDER	137
28.13. VÁLEC / ZYLINDER / CYLINDER	139
28.14. VÁLEC POMOČNÝ / ZYLINDER / HELP CYLINDER	141
28.15. VEDENÍ PÁSU / BANDFÜHRUNG / BAND GUIDING	143
28.16. VÁLEČKOVÁ TRAŤ / ROLLENBAHN / ROLL CONVEYOR	145
28.17. ZÁVORA OPTICKÁ / LICHTSPERRE / LASER BEAM	147
28.18. RAMENO / SÄGERAHMEN / SAW BAND - 251.038	149
28.19. NAPÍNÁNÍ PILOVÉHO PÁSU / SÄGEBANDSPANNUNG / SAW BAND STRETCHING	152
28.20. LEVÁ VODÍCÍ KOSTKA / LINKER FÜHRUNGSKLOTZ / LEFT GUIDING CUBE	154
28.21. PRAVÁ VODÍCÍ KOSTKA / RECHTER FÜHRUNGSKLOTZ / RIGHT GUIDING CUBE	156
28.22. KARTÁČEK / SPÄNBÜRSTE / BRUSH	158
28.23. ZVEDACÍ VÁLEC / ZYLINDER / CYLINDER	160
28.24. Kladka / Rolle / Pulley	162
28.25. CHLAZENÍ / KÜHLUNG / COOLING	164
29. TROUBLESHOOTING TABLE	166
29.1. MECHANICAL PROBLEMS	166
29.2. ELECTRIC AND HYDRAULIC PROBLEMS	168
30. SPECIAL ACCESSORY	170
30.1. VICE PRESSURE REGULATION	170
30.2. FREQUENCY CONVERTER	170
30.3. MICRONISER	170
30.4. TENZOMAT	170
DECLARATION OF CONFORMITY	173

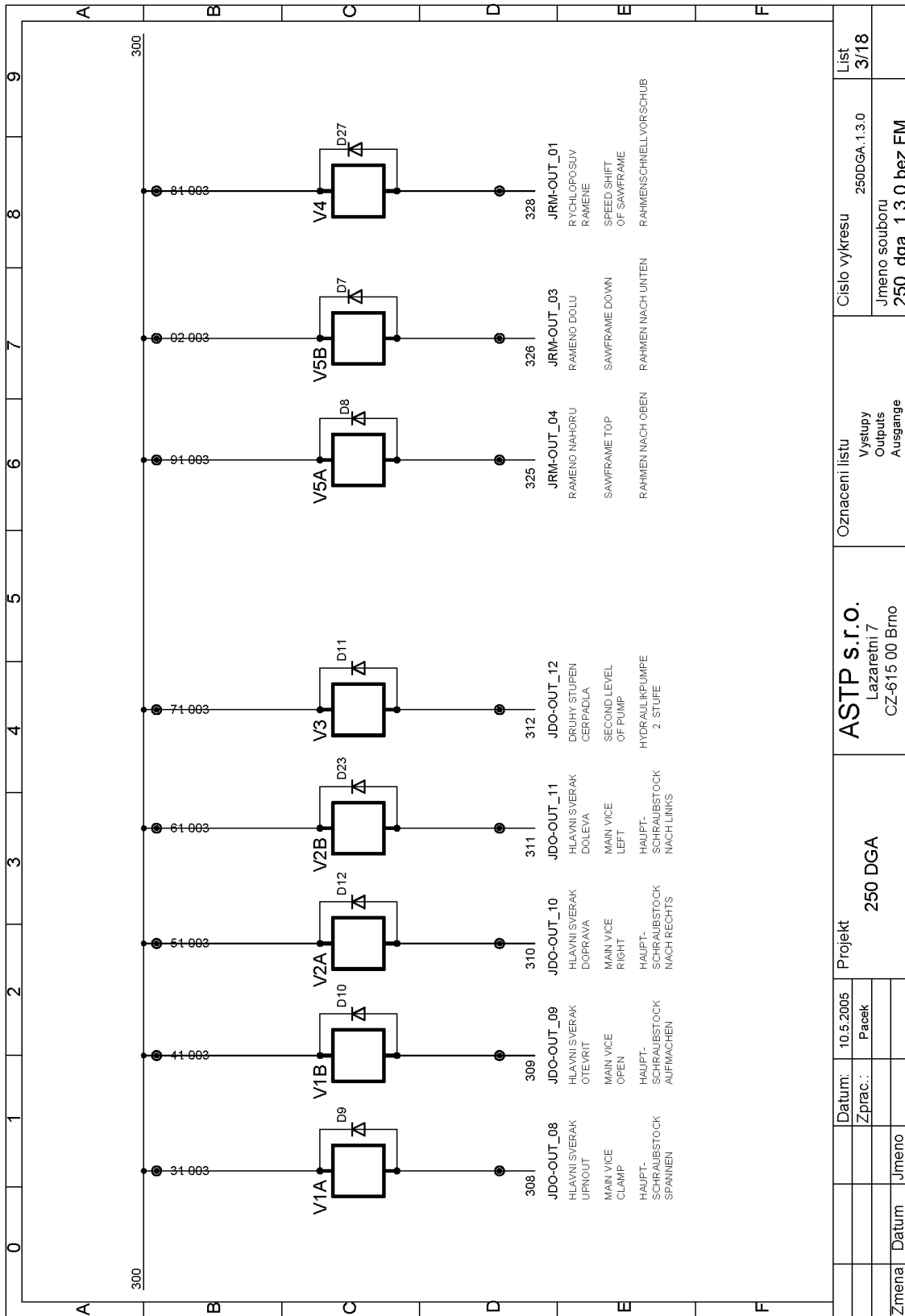
24. Rozměrové schéma / Aufstellzeichnung / Installation diagram



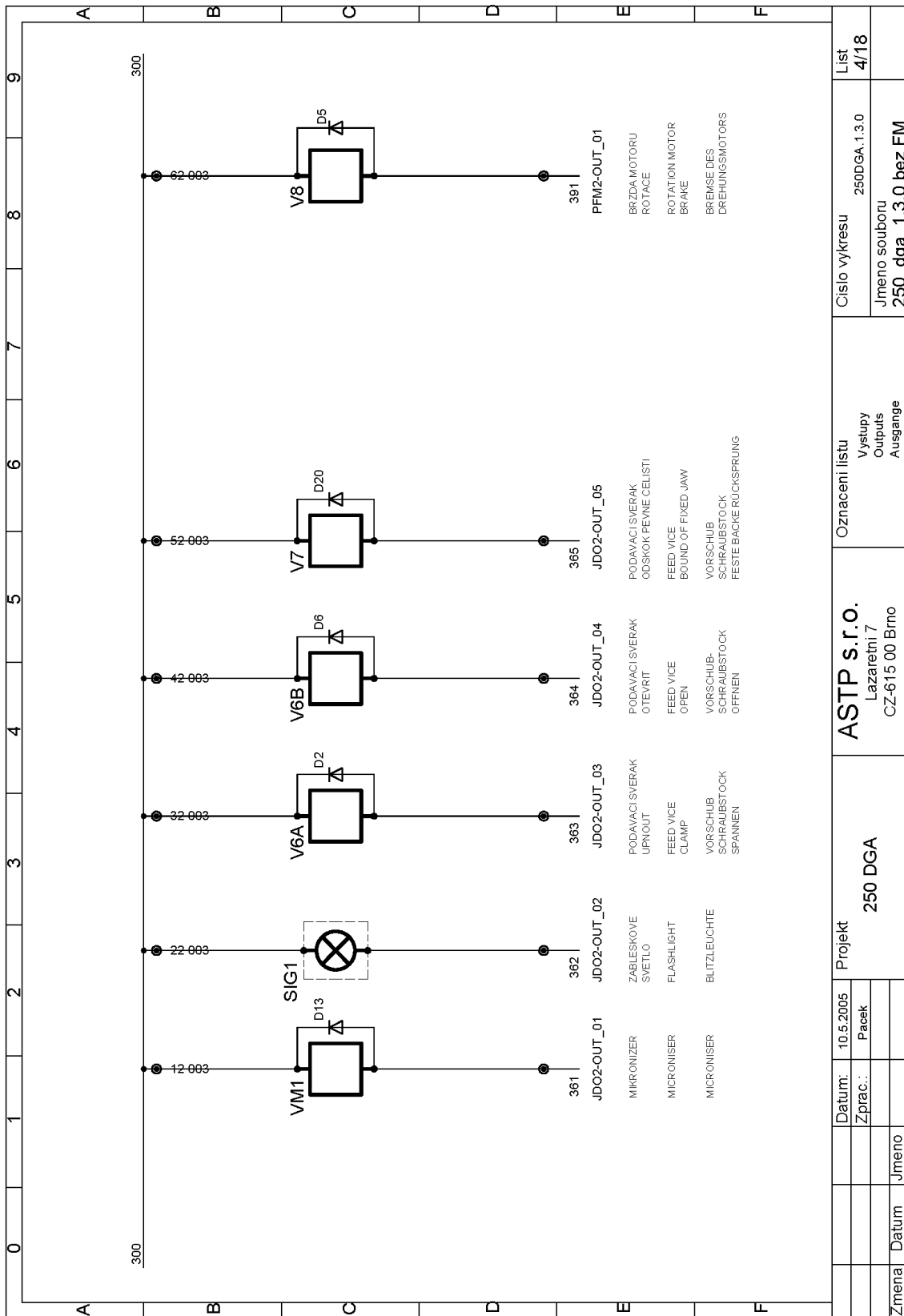
24.1. Rozměrové schéma / Aufstellzeichnung / Installation diagram



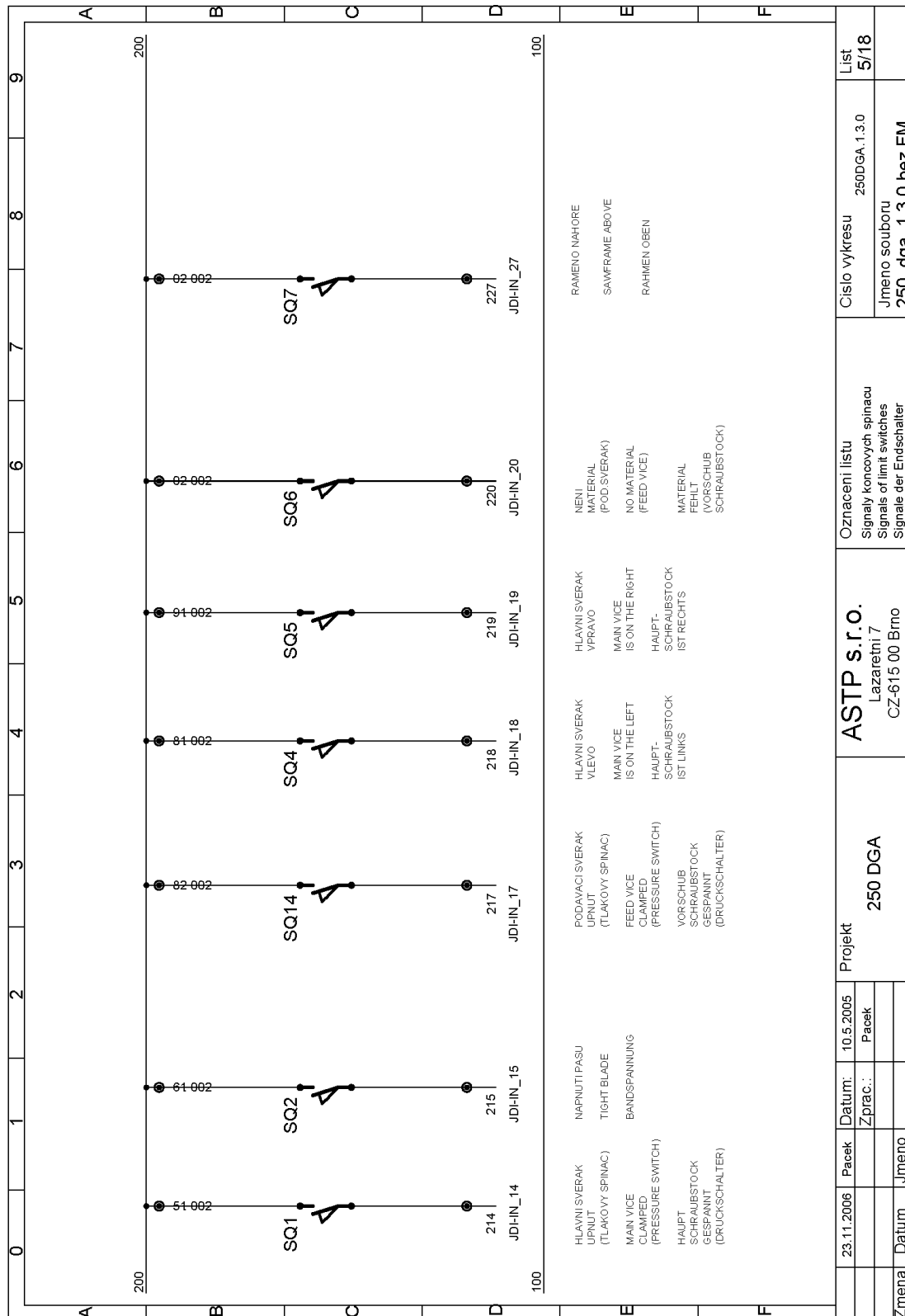
25.2. Elektrické schéma / Elektroschema / Wiring diagram 2



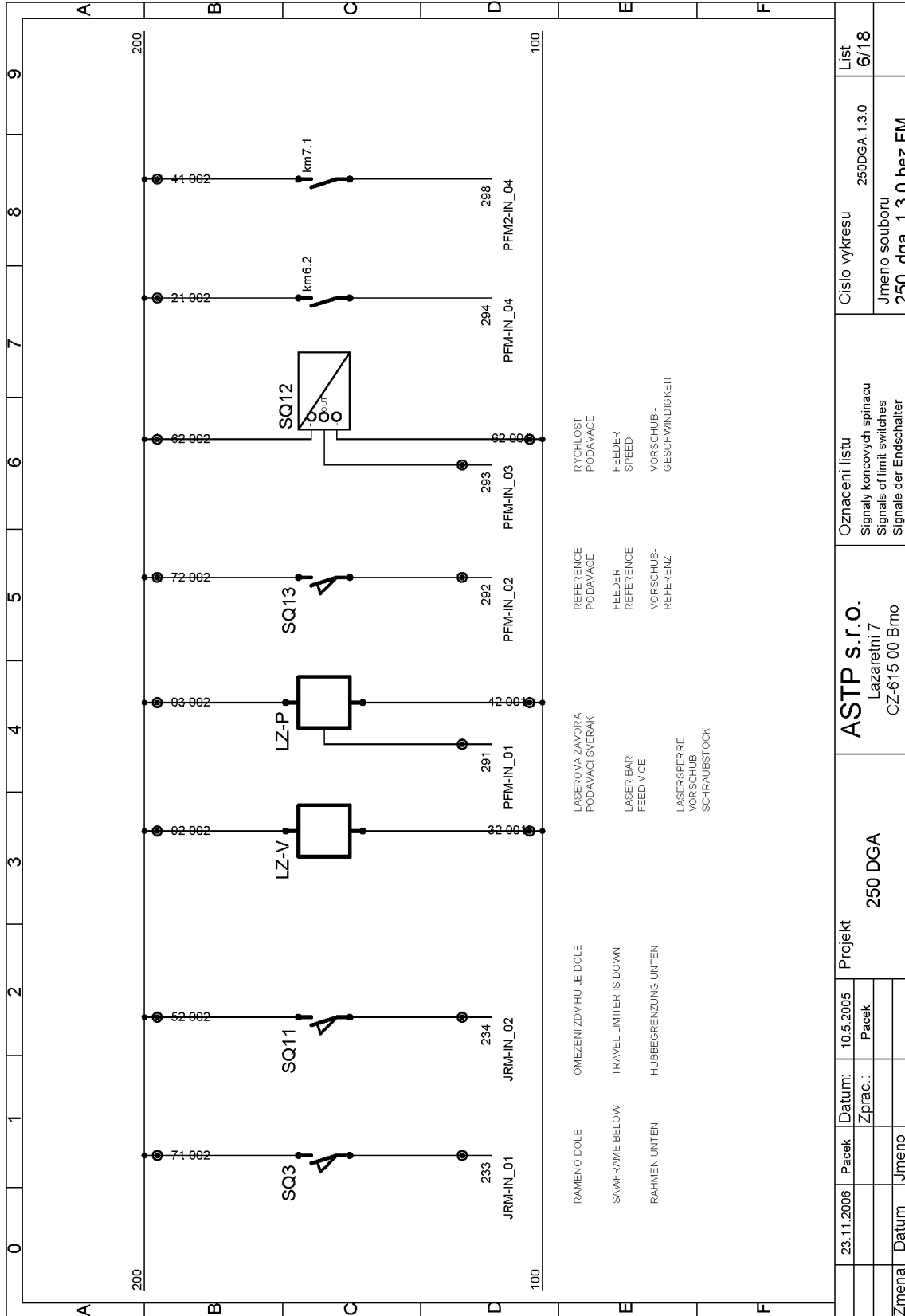
25.3. Elektrické schéma / Elektroschema / Wiring diagram 3



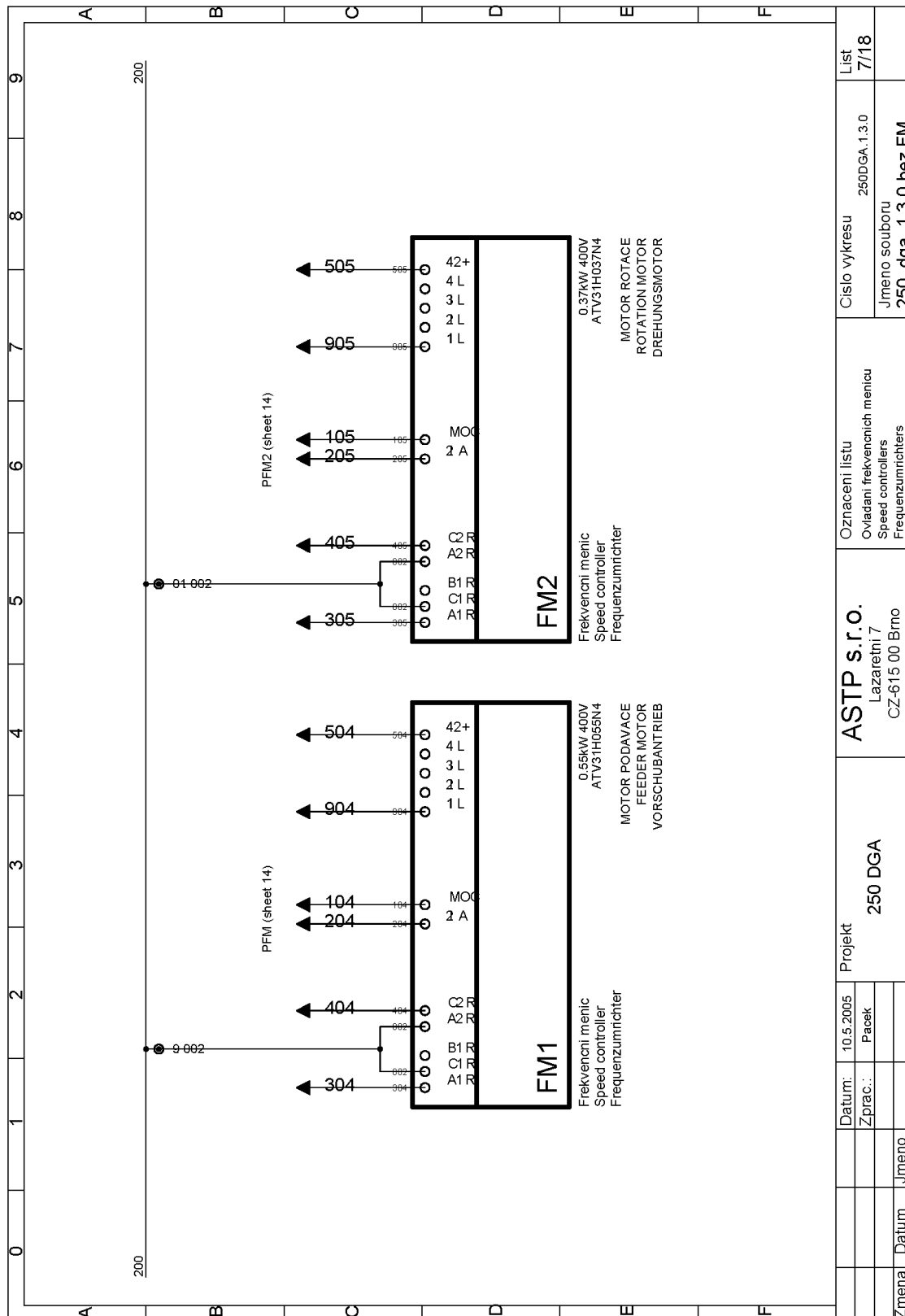
25.4. Elektrické schéma / Elektroschema / Wiring diagram 4



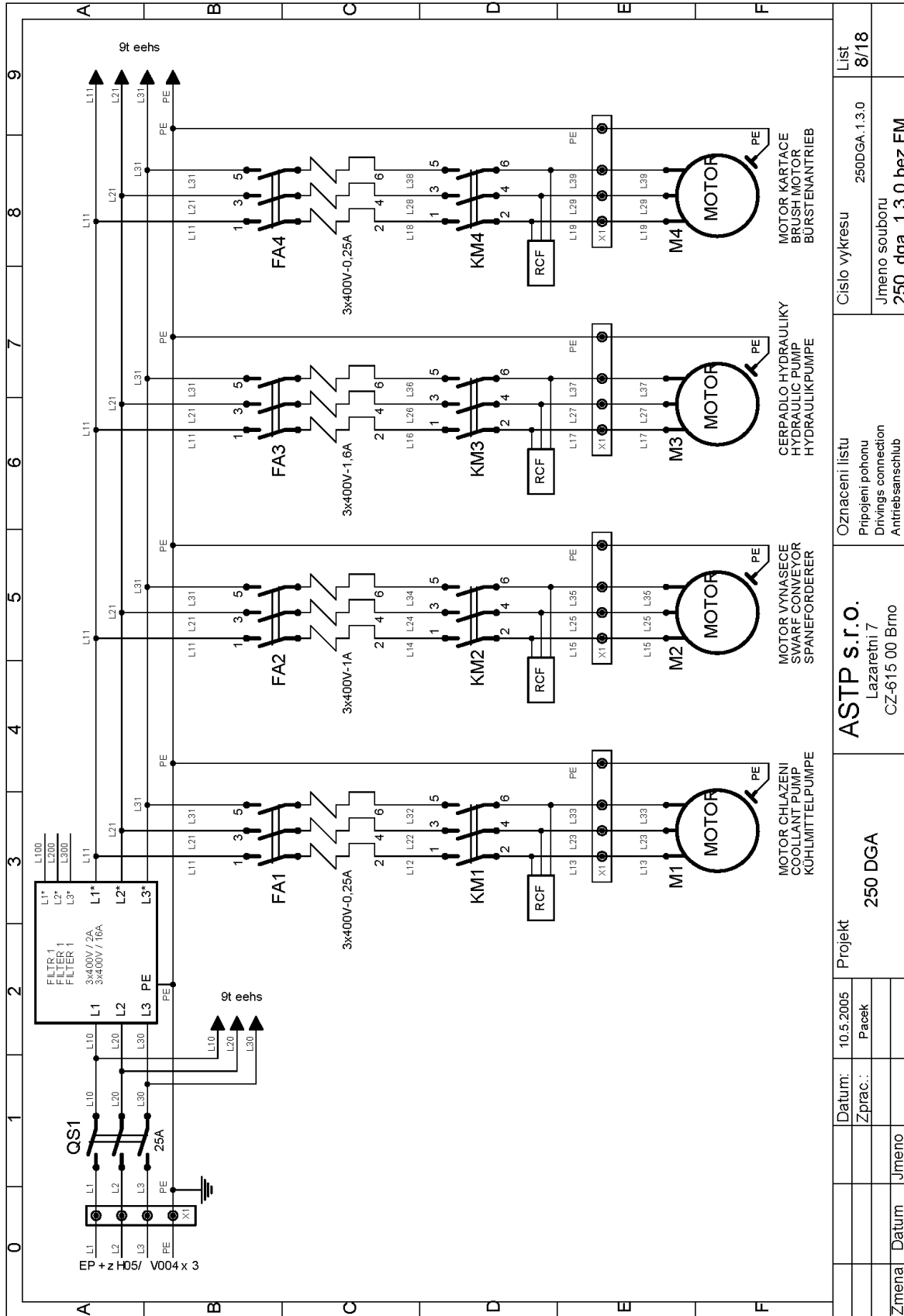
25.5. Elektrické schéma / Elektroschema / Wiring diagram 5



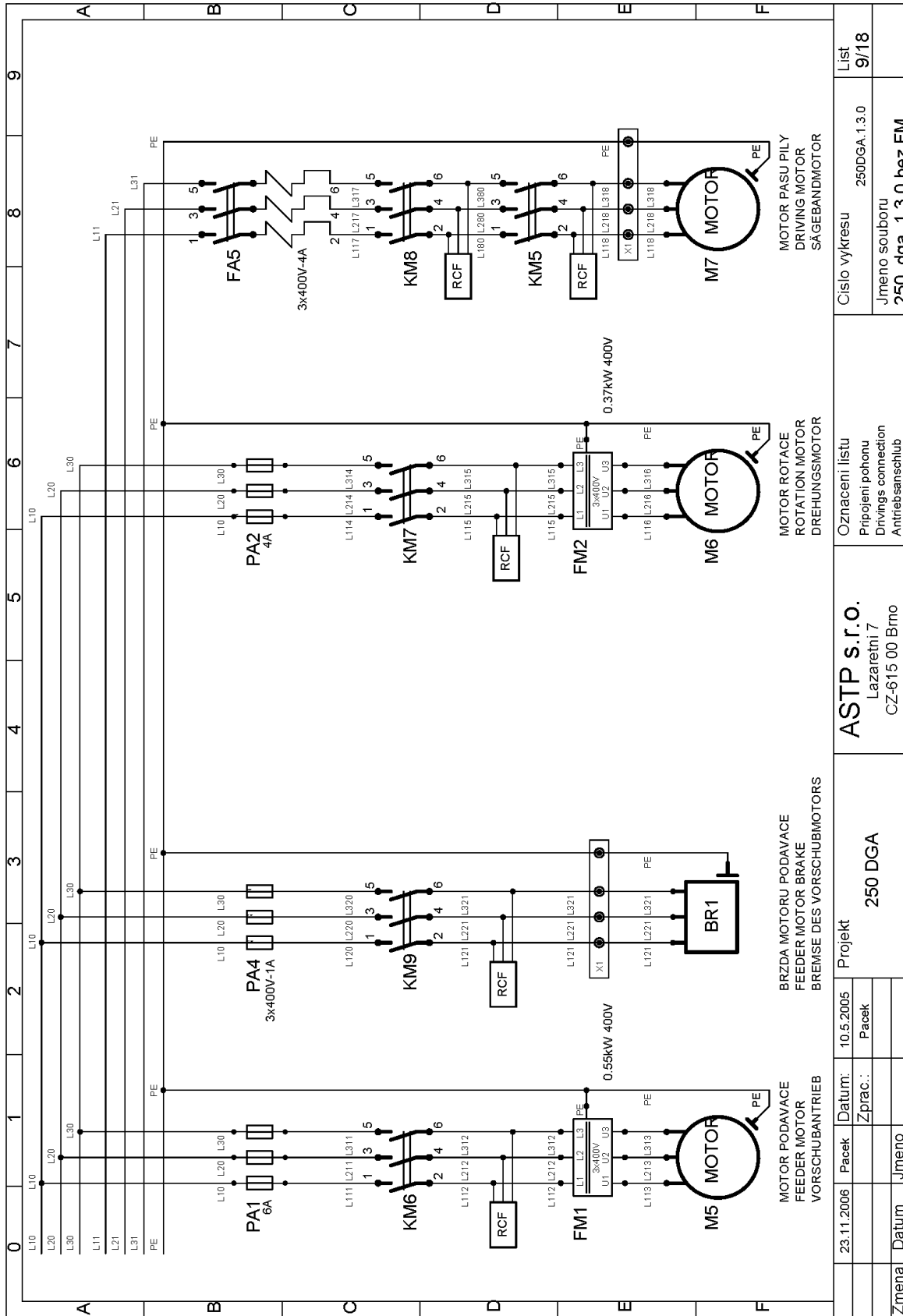
25.6. Elektrické schéma / Elektroschema / Wiring diagram 6



25.7. Elektrické schéma / Elektroschema / Wiring diagram 7

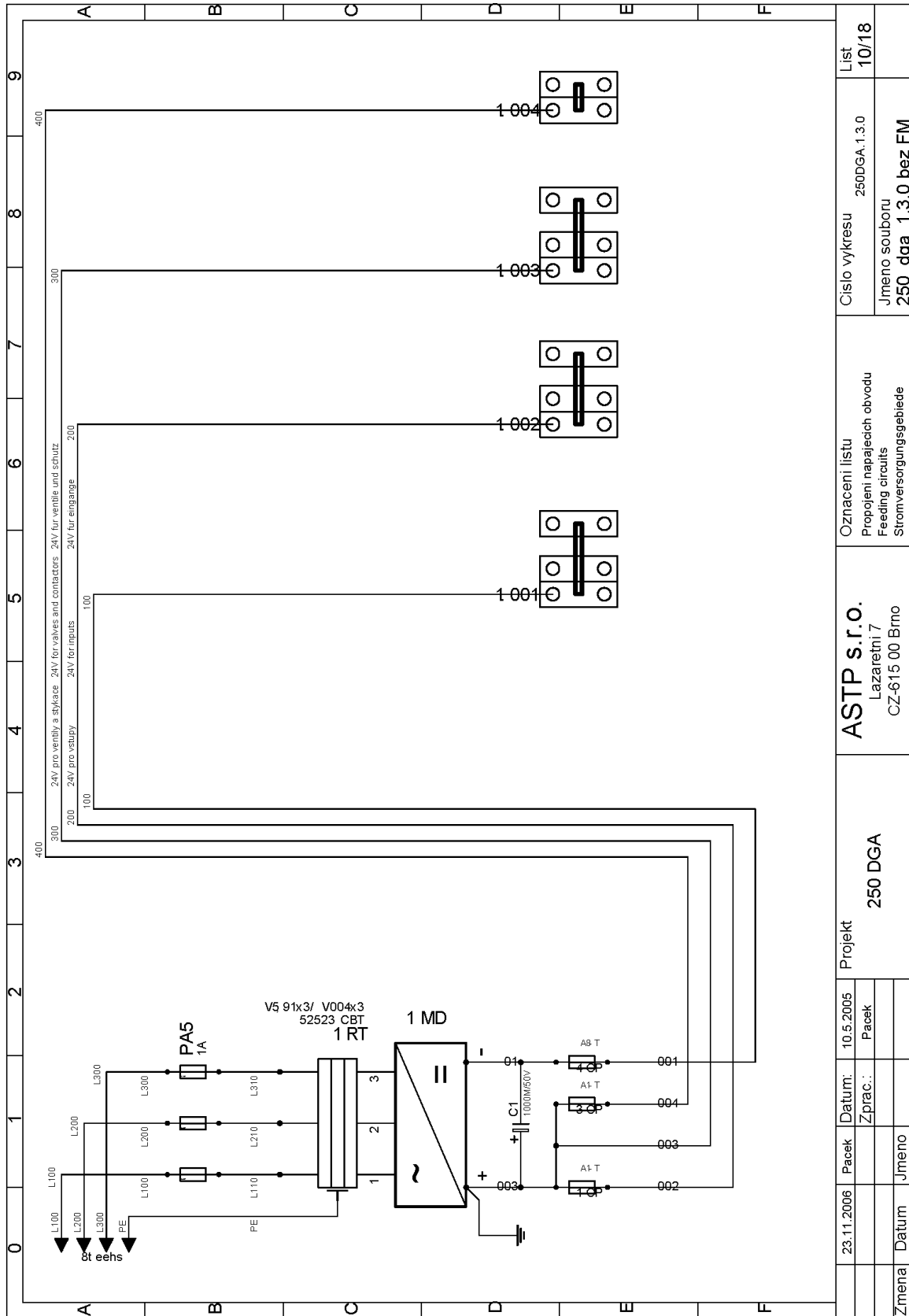


25.8. Elektrické schéma / Elektroschema / Wiring diagram 8

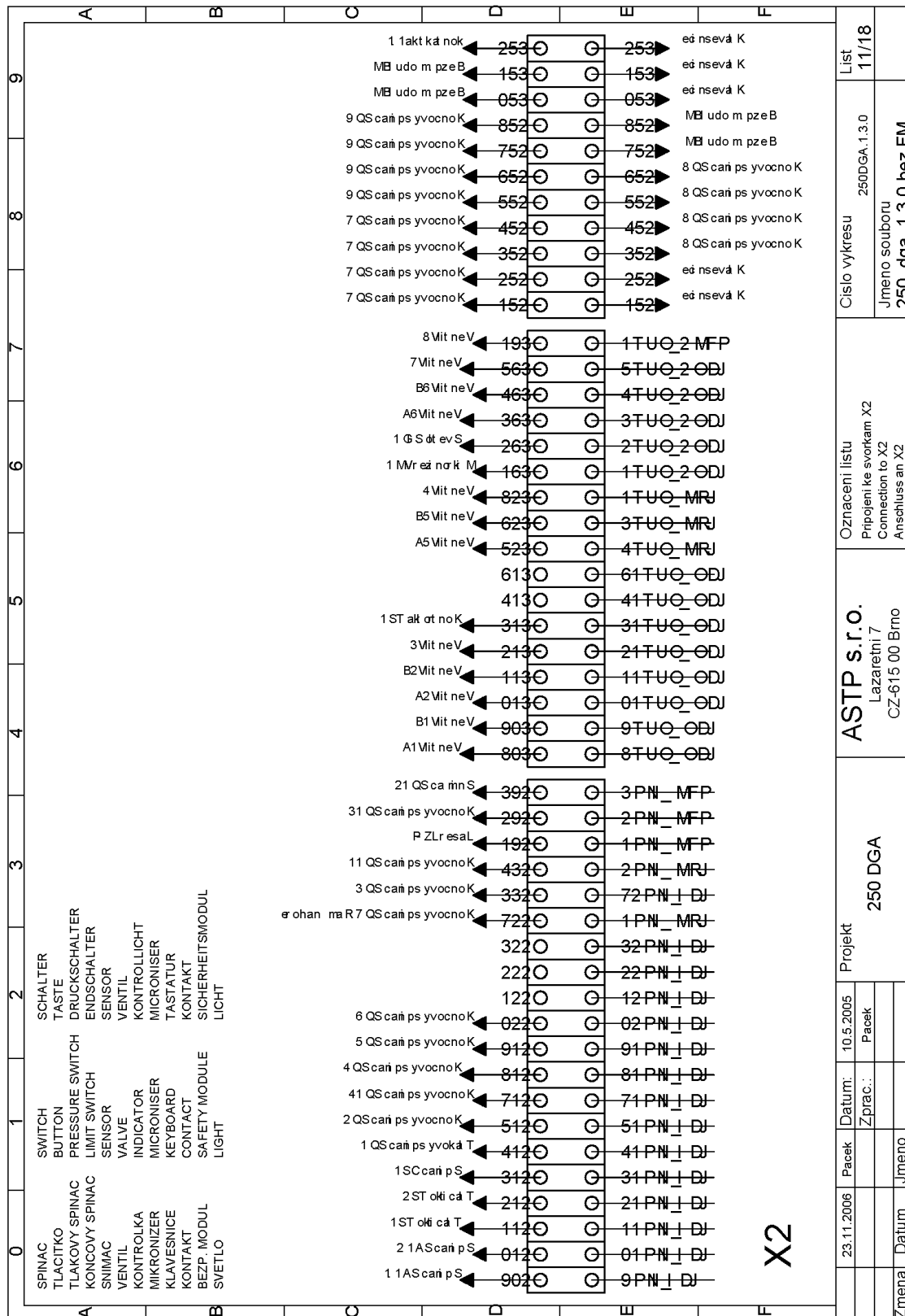


Označení listu Pripojení pohonu Drivings connection Antriebsanschluß		Císlo vykresu 250DGA.1.3.0	List 9/18
ASTP s.r.o. Lazaretní 7 CZ-615 00 Brno		Jmeno souboru 250_dga_1.3.0 bez FM	
Projekt 250 DGA			
Datum: 23.11.2006	Pacek	Datum: 10.5.2005	
Zprac.:	Fack	Zprac.:	
Zmena	Datum	Jmeno	

25.9. Elektrické schéma / Elektroschema / Wiring diagram 9

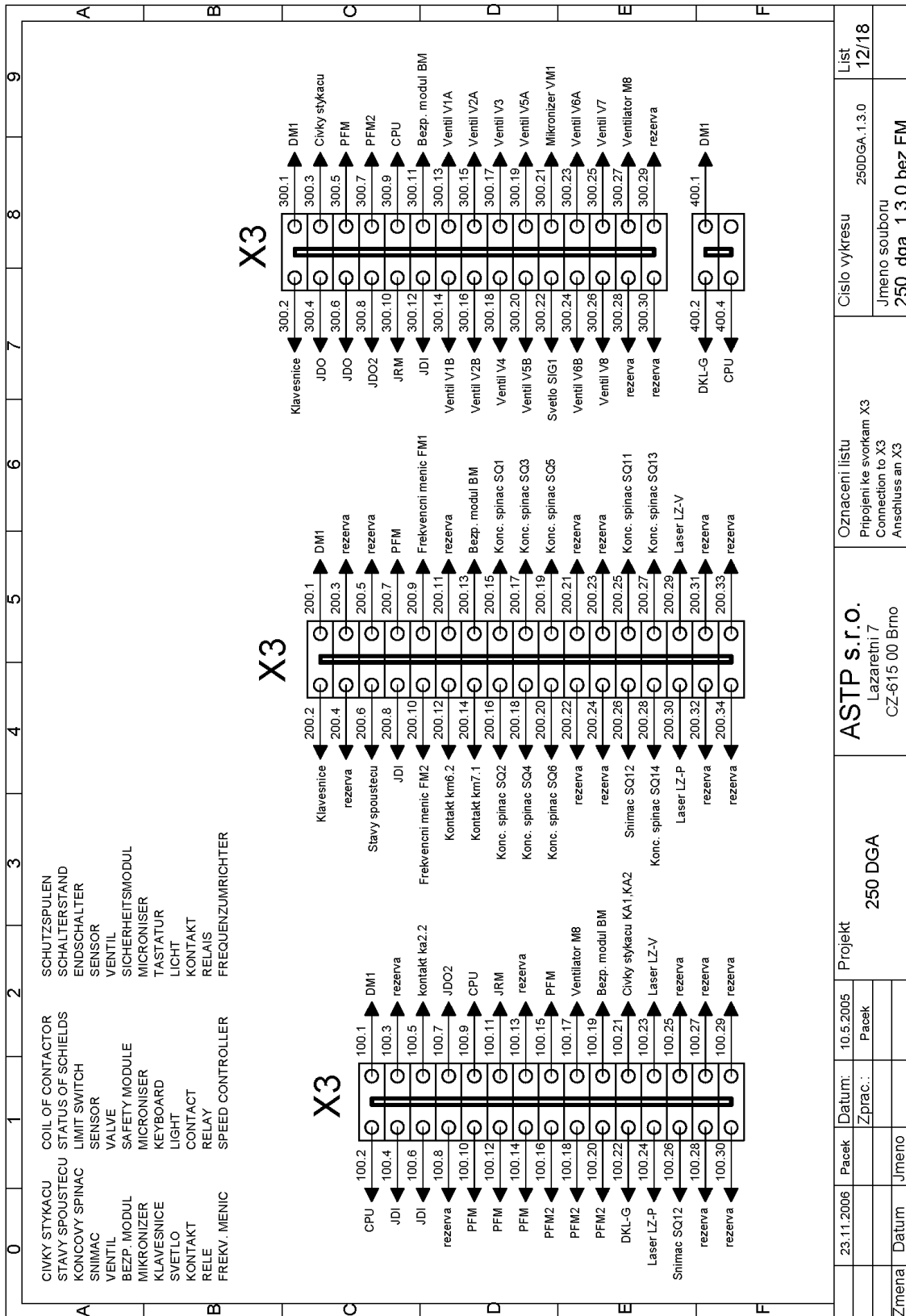


25.10. Elektrické schéma / Elektroschema / Wiring diagram 10

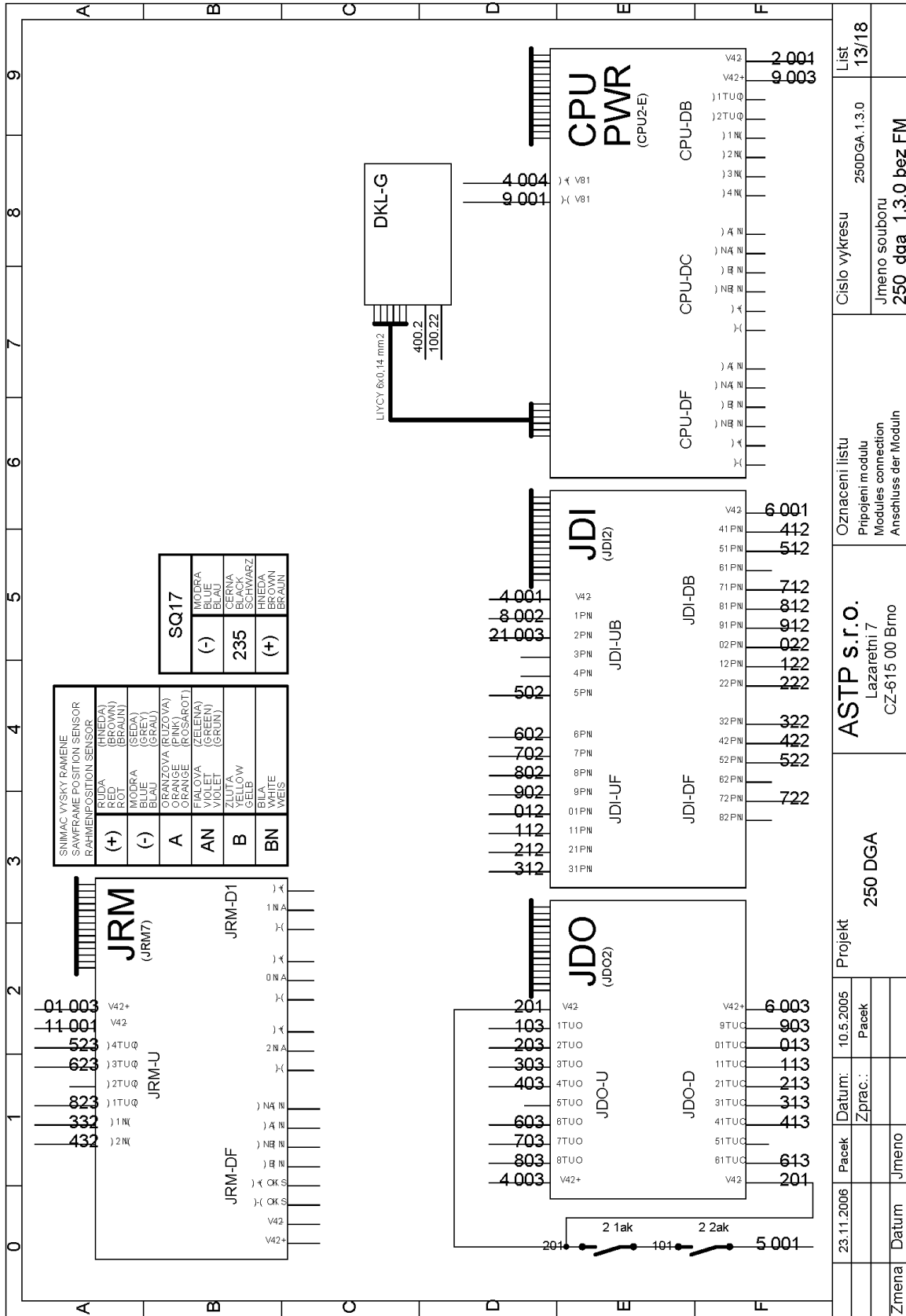


X2

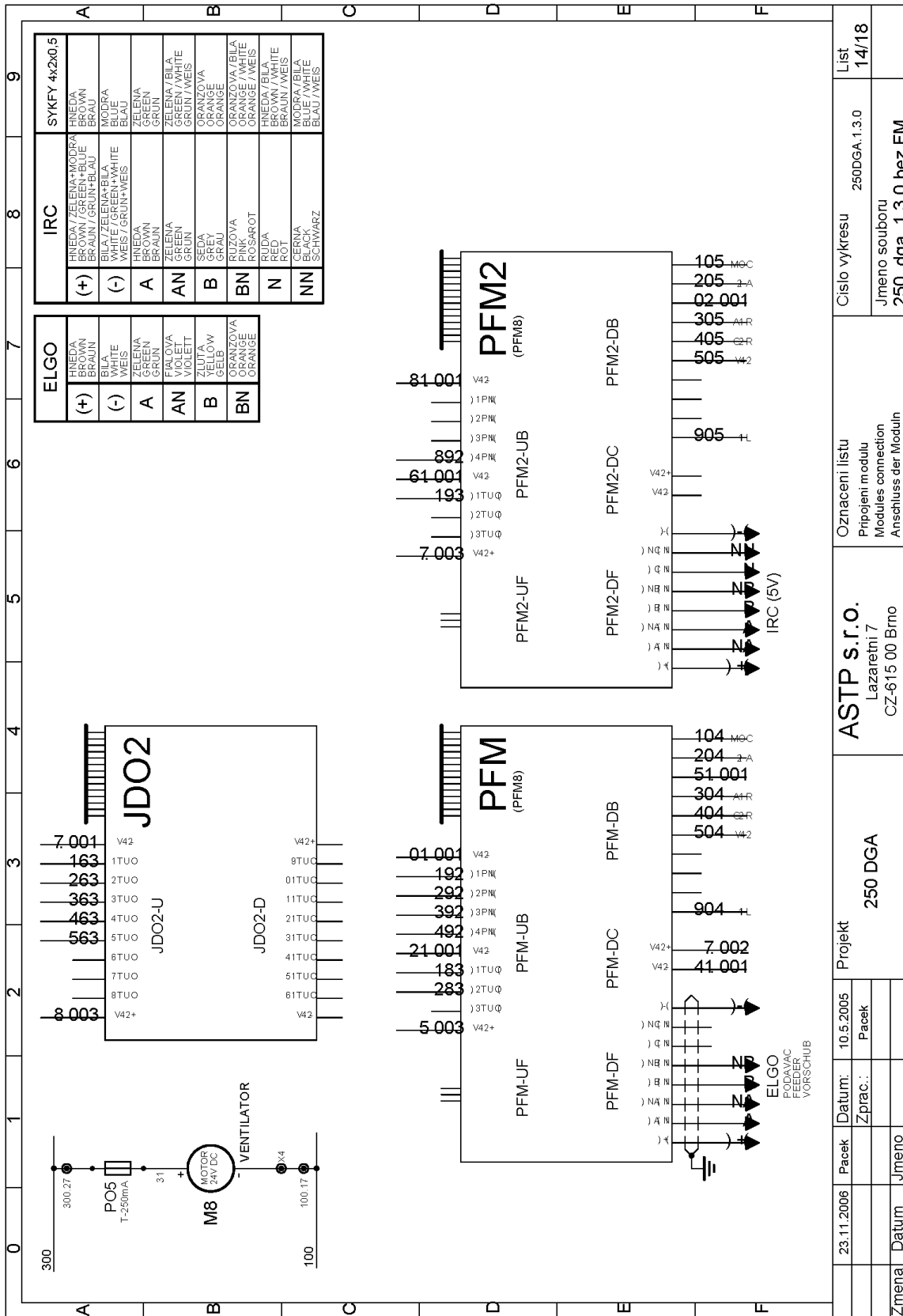
25.11. Elektrické schéma / Elektroschema / Wiring diagram 11



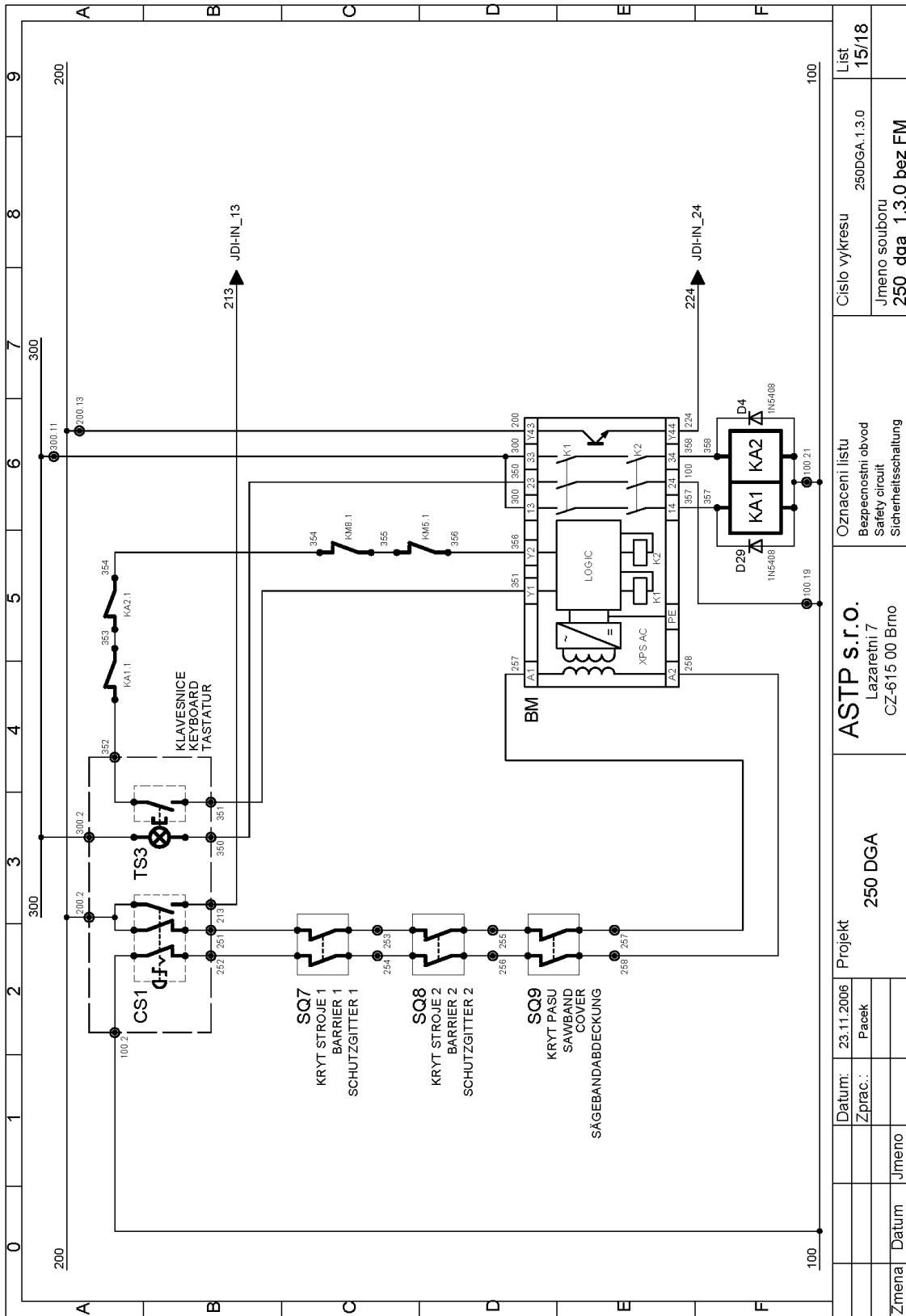
25.12. Elektrické schéma / Elektroschema / Wiring diagram 12



25.13. Elektrické schéma / Elektroschema / Wiring diagram 13



25.14. Elektrické schéma / Elektroschema / Wiring diagram 14



25.15. Elektrické schéma / Elektroschema / Wiring diagram 15

	0	1	2	3	4	5	6	7	8	9		
A	JDO - Signalizace stavu vystupu											
	16	tlacitko uvolнено										
	15	tlacitko stisknuto										
	14	Pas pily je napnuty										
	13	Hlavní sverak upnut										
	12	Total stop aktivovan										
	11	Stop automatickeho rezimu										
	10	Aktivovat pohyb hlavni sverak vpravo										
	9	Aktivovat pohyb hlavni sverak vpravo										
	8	Otevrit hlavni sverak										
	7	Upnout hlavni sverak										
	6	Zapnout motor pasu										
	5	Zapnout motor rotace										
	4	Zapnout motor kartace										
	3	Zapnout cerpadlo hydrauliky										
	2	Zapnout motor vynasece										
1	Zapnout motor chlazení											
B	JDI - Signalizace stavu vstupu											
	16	tlacitko uvolнено										
	15	tlacitko stisknuto										
	14	Pas pily je napnuty										
	13	Hlavní sverak upnut										
	12	Total stop aktivovan										
	11	Stop automatickeho rezimu										
	10	Start automatickeho rezimu										
	9	Koncovy spinac - Rameno nahore										
	8	Aktivovano ruchi ovladani										
	7	Aktivovano automaticke ovladani										
	6	Ochrana motoru kartace OK										
	5	Ochrana cerpadla hydrauliky OK										
	4	Ochrana motoru vynasece OK										
	3	Ochrana motoru chlazení OK										
	2	Neni material (podavaci sverak)										
1	Hlavní sverak je vpravo											
C	JDO2 - Signalizace stavu vystupu											
	16	tlacitko uvolнено										
	15	tlacitko stisknuto										
	14	Pas pily je napnuty										
	13	Hlavní sverak upnut										
	12	Total stop aktivovan										
	11	Stop automatickeho rezimu										
	10	Aktivovat pohyb hlavni sverak vpravo										
	9	Aktivovat pohyb hlavni sverak vpravo										
	8	Otevrit hlavni sverak										
	7	Upnout hlavni sverak										
	6	Zapnout motor pasu										
	5	Zapnout motor rotace										
	4	Zapnout motor kartace										
	3	Zapnout cerpadlo hydrauliky										
	2	Zapnout motor vynasece										
1	Zapnout motor chlazení											
D	CPU - Signalizace stavu jednotky											
	12	Napajeni 5V										
	11	Napajeni 5V-KOM										
	10	Interni CAN - TXD										
	9	Interni CAN - RXD										
	8	Externi CAN - TXD										
	7	Externi CAN - RXD										
	6	Komunikace s PFM2										
	5	Komunikace s PFM										
	4	Komunikace s JRM										
	3	Komunikace s JDI										
	2	Komunikace s JDO2										
	1	Komunikace s JDO										
	1...6 bilka rychle - vypadek faze 1...6 bilka pomalu - chyba komunikace s GD (display)											
	E	JRM - Signalizace stavu jednotky										
		12	Komunikace s CPU									
11		Signal ze snimace vysky ramene										
10		Komunikace s ATMEGA										
9		Chyba komunikace s ATMEGA										
8		Reference ramene je nastavena										
7		Rameno je nad hlav. sverakem										
6		Rameno bylo pri rezu dole										
5		Rameno je nad materialem										
4		Rameno je dole										
3		Rychloposuv ramene										
2		Rameno nahoru										
1		Rameno dolu										
F		PFM2 - Signalizace stavu jednotky										
		12	Komunikace s CPU									
		11	Signal ze snimace vysky ramene									
	10	Komunikace s ATMEGA										
	9	Chyba komunikace s ATMEGA										
	8	Reference ramene je nastavena										
	7	Rameno je nad hlav. sverakem										
	6	Rameno bylo pri rezu dole										
	5	Rameno je nad materialem										
	4	Rameno je dole										
	3	Rychloposuv ramene										
	2	Rameno nahoru										
	1	Rameno dolu										
	1...6 bilka rychle - vypadek faze 1...6 bilka pomalu - chyba komunikace s GD (display)											
	PFM - Signalizace stavu jednotky											
	12	Komunikace s CPU										
11	Zapnout motor podavace											
10	Deaktivovat brzdu motoru podavace											
9	Povel CPU - provadi se / chyba (bilka)											
8	Komunikace s ATMEGA (bilka)											
7	Komunikace s CPU (bilka)											
6	Impuls snimace rychlosti podavace											
5	Laserova zavora zadlonena											
4	Podavac je na spinaci reference											
3	FM1 zapnut											
2	Presnost polohovani											
1	Presnost polohovani											
Cislo vykresu 250DGA.1.3.0												
Jmeno souboru 250_dga_1.3.0 bez FM												
List 16/18												

25.16. Elektrické schéma / Elektroschema / Wiring diagram 16

0	1	2	3	4	5	6	7	8	9																																																																																																																																																																										
<table border="1"> <thead> <tr> <th colspan="10">JDO - Output State Signalization</th> </tr> </thead> <tbody> <tr><td>16</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td>Switch on the aut. cycle indicator</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td>Shift the pump into second stage</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td>Activ. the main gripper move left</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Activ. the main gripper move right</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>Open the main gripper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Close the main gripper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Turn on the band motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Turn on the rotation motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Turn on the brush motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>Turn on the hydraulic pump</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Turn on the swarf-removal motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Turn on the cooling motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										JDO - Output State Signalization										16										15										14										13	Switch on the aut. cycle indicator									12	Shift the pump into second stage									11	Activ. the main gripper move left									10	Activ. the main gripper move right									9	Open the main gripper									8	Close the main gripper									7	Turn on the band motor									6	Turn on the rotation motor									5										4	Turn on the brush motor									3	Turn on the hydraulic pump									2	Turn on the swarf-removal motor									1	Turn on the cooling motor								
JDO - Output State Signalization																																																																																																																																																																																			
16																																																																																																																																																																																			
15																																																																																																																																																																																			
14																																																																																																																																																																																			
13	Switch on the aut. cycle indicator																																																																																																																																																																																		
12	Shift the pump into second stage																																																																																																																																																																																		
11	Activ. the main gripper move left																																																																																																																																																																																		
10	Activ. the main gripper move right																																																																																																																																																																																		
9	Open the main gripper																																																																																																																																																																																		
8	Close the main gripper																																																																																																																																																																																		
7	Turn on the band motor																																																																																																																																																																																		
6	Turn on the rotation motor																																																																																																																																																																																		
5																																																																																																																																																																																			
4	Turn on the brush motor																																																																																																																																																																																		
3	Turn on the hydraulic pump																																																																																																																																																																																		
2	Turn on the swarf-removal motor																																																																																																																																																																																		
1	Turn on the cooling motor																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">JDI - Input State Signalization</th> </tr> </thead> <tbody> <tr><td>16</td><td>button released</td><td>button pushed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td>The sawband is tight</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td>Main gripper is closed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td>Total stop activated</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td>Automatic mode stopped</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Automatic mode started</td><td>Endswitch - Frame in upper position</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>Manual control activated</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Automatic control activated</td><td>Band motor protection is OK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Brush motor protection is OK</td><td>Security circuit is closed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Hydraulic pump protection is OK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>Swarf-removal motor protection is OK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Cooling motor protection is OK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td>No material (feeding gripper)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Voltage on 300 OK</td><td>Main gripper on the right</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Voltage on 200 OK</td><td>Main gripper on the left</td><td>Feeding gripper is closed</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										JDI - Input State Signalization										16	button released	button pushed								15										14	The sawband is tight									13	Main gripper is closed									12	Total stop activated									11	Automatic mode stopped									10	Automatic mode started	Endswitch - Frame in upper position								9	Manual control activated									8	Automatic control activated	Band motor protection is OK								7	Brush motor protection is OK	Security circuit is closed								6	Hydraulic pump protection is OK									5	Swarf-removal motor protection is OK									4	Cooling motor protection is OK									3		No material (feeding gripper)								2	Voltage on 300 OK	Main gripper on the right								1	Voltage on 200 OK	Main gripper on the left	Feeding gripper is closed						
JDI - Input State Signalization																																																																																																																																																																																			
16	button released	button pushed																																																																																																																																																																																	
15																																																																																																																																																																																			
14	The sawband is tight																																																																																																																																																																																		
13	Main gripper is closed																																																																																																																																																																																		
12	Total stop activated																																																																																																																																																																																		
11	Automatic mode stopped																																																																																																																																																																																		
10	Automatic mode started	Endswitch - Frame in upper position																																																																																																																																																																																	
9	Manual control activated																																																																																																																																																																																		
8	Automatic control activated	Band motor protection is OK																																																																																																																																																																																	
7	Brush motor protection is OK	Security circuit is closed																																																																																																																																																																																	
6	Hydraulic pump protection is OK																																																																																																																																																																																		
5	Swarf-removal motor protection is OK																																																																																																																																																																																		
4	Cooling motor protection is OK																																																																																																																																																																																		
3		No material (feeding gripper)																																																																																																																																																																																	
2	Voltage on 300 OK	Main gripper on the right																																																																																																																																																																																	
1	Voltage on 200 OK	Main gripper on the left	Feeding gripper is closed																																																																																																																																																																																
<table border="1"> <thead> <tr> <th colspan="10">JRM - Unit State Signalization</th> </tr> </thead> <tbody> <tr><td>12</td><td>Communication with CPU</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td>Signal from arm-position sensor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Communication with ATMEGA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>Communication error with ATMEGA</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Arm reference position set</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Arm is over the main gripper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Arm was down during cutting</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>Arm is over the material</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Arm is down</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>Arm high speed move</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Put the arm up</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Put the arm down</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										JRM - Unit State Signalization										12	Communication with CPU									11	Signal from arm-position sensor									10	Communication with ATMEGA									9	Communication error with ATMEGA									8	Arm reference position set									7	Arm is over the main gripper									6	Arm was down during cutting									5	Arm is over the material									4	Arm is down									3	Arm high speed move									2	Put the arm up									1	Put the arm down																																																
JRM - Unit State Signalization																																																																																																																																																																																			
12	Communication with CPU																																																																																																																																																																																		
11	Signal from arm-position sensor																																																																																																																																																																																		
10	Communication with ATMEGA																																																																																																																																																																																		
9	Communication error with ATMEGA																																																																																																																																																																																		
8	Arm reference position set																																																																																																																																																																																		
7	Arm is over the main gripper																																																																																																																																																																																		
6	Arm was down during cutting																																																																																																																																																																																		
5	Arm is over the material																																																																																																																																																																																		
4	Arm is down																																																																																																																																																																																		
3	Arm high speed move																																																																																																																																																																																		
2	Put the arm up																																																																																																																																																																																		
1	Put the arm down																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">JFM2 - Unit State Signalization</th> </tr> </thead> <tbody> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Deactivate the rotation motor brake</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>CPU command - in progress / error (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Communication with ATMEGA (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Communication with CPU (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Feeder speed sensor impulse</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>Laser beam is broken</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Feeder is on reference switch</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>FM1 set on</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										JFM2 - Unit State Signalization										12										11										10	Deactivate the rotation motor brake									9	CPU command - in progress / error (blink)									8	Communication with ATMEGA (blink)									7	Communication with CPU (blink)									6	Feeder speed sensor impulse									5	Laser beam is broken									4	Feeder is on reference switch									3	FM1 set on									2	Position control accuracy									1	Position control accuracy																																																
JFM2 - Unit State Signalization																																																																																																																																																																																			
12																																																																																																																																																																																			
11																																																																																																																																																																																			
10	Deactivate the rotation motor brake																																																																																																																																																																																		
9	CPU command - in progress / error (blink)																																																																																																																																																																																		
8	Communication with ATMEGA (blink)																																																																																																																																																																																		
7	Communication with CPU (blink)																																																																																																																																																																																		
6	Feeder speed sensor impulse																																																																																																																																																																																		
5	Laser beam is broken																																																																																																																																																																																		
4	Feeder is on reference switch																																																																																																																																																																																		
3	FM1 set on																																																																																																																																																																																		
2	Position control accuracy																																																																																																																																																																																		
1	Position control accuracy																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">PFM2 - Unit State Signalization</th> </tr> </thead> <tbody> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Deactivate the rotation motor brake</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>CPU command - in progress / error (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Communication with ATMEGA (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Communication with CPU (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Index found / no initialization (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>FM2 current limit relay</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>FM2 failure relay on state</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>FM2 set on</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										PFM2 - Unit State Signalization										12										11										10	Deactivate the rotation motor brake									9	CPU command - in progress / error (blink)									8	Communication with ATMEGA (blink)									7	Communication with CPU (blink)									6	Index found / no initialization (blink)									5	FM2 current limit relay									4	FM2 failure relay on state									3	FM2 set on									2	Position control accuracy									1	Position control accuracy																																																
PFM2 - Unit State Signalization																																																																																																																																																																																			
12																																																																																																																																																																																			
11																																																																																																																																																																																			
10	Deactivate the rotation motor brake																																																																																																																																																																																		
9	CPU command - in progress / error (blink)																																																																																																																																																																																		
8	Communication with ATMEGA (blink)																																																																																																																																																																																		
7	Communication with CPU (blink)																																																																																																																																																																																		
6	Index found / no initialization (blink)																																																																																																																																																																																		
5	FM2 current limit relay																																																																																																																																																																																		
4	FM2 failure relay on state																																																																																																																																																																																		
3	FM2 set on																																																																																																																																																																																		
2	Position control accuracy																																																																																																																																																																																		
1	Position control accuracy																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">PFM - Unit State Signalization</th> </tr> </thead> <tbody> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td>Turn on the feeder motor</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td>Deactivate the feeder motor brake</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td>CPU command - in progress / error (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td>Communication with ATMEGA (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td>Communication with CPU (blink)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td>Feeder speed sensor impulse</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>Laser beam is broken</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Feeder is on reference switch</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>FM1 set on</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Position control accuracy</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										PFM - Unit State Signalization										12										11	Turn on the feeder motor									10	Deactivate the feeder motor brake									9	CPU command - in progress / error (blink)									8	Communication with ATMEGA (blink)									7	Communication with CPU (blink)									6	Feeder speed sensor impulse									5	Laser beam is broken									4	Feeder is on reference switch									3	FM1 set on									2	Position control accuracy									1	Position control accuracy																																																
PFM - Unit State Signalization																																																																																																																																																																																			
12																																																																																																																																																																																			
11	Turn on the feeder motor																																																																																																																																																																																		
10	Deactivate the feeder motor brake																																																																																																																																																																																		
9	CPU command - in progress / error (blink)																																																																																																																																																																																		
8	Communication with ATMEGA (blink)																																																																																																																																																																																		
7	Communication with CPU (blink)																																																																																																																																																																																		
6	Feeder speed sensor impulse																																																																																																																																																																																		
5	Laser beam is broken																																																																																																																																																																																		
4	Feeder is on reference switch																																																																																																																																																																																		
3	FM1 set on																																																																																																																																																																																		
2	Position control accuracy																																																																																																																																																																																		
1	Position control accuracy																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">JDO2 - Output State Signalization</th> </tr> </thead> <tbody> <tr><td>16</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td>Bound the fixed jaw (feeding gripper)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td>Open the feeding gripper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td>Close the feeding gripper</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Activate the flash light</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>1</td><td>Activate the microniser</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										JDO2 - Output State Signalization										16										15										14										13										12										11										10										9										8										7										6										5	Bound the fixed jaw (feeding gripper)									4	Open the feeding gripper									3	Close the feeding gripper									2	Activate the flash light									1	Activate the microniser								
JDO2 - Output State Signalization																																																																																																																																																																																			
16																																																																																																																																																																																			
15																																																																																																																																																																																			
14																																																																																																																																																																																			
13																																																																																																																																																																																			
12																																																																																																																																																																																			
11																																																																																																																																																																																			
10																																																																																																																																																																																			
9																																																																																																																																																																																			
8																																																																																																																																																																																			
7																																																																																																																																																																																			
6																																																																																																																																																																																			
5	Bound the fixed jaw (feeding gripper)																																																																																																																																																																																		
4	Open the feeding gripper																																																																																																																																																																																		
3	Close the feeding gripper																																																																																																																																																																																		
2	Activate the flash light																																																																																																																																																																																		
1	Activate the microniser																																																																																																																																																																																		
<table border="1"> <thead> <tr> <th colspan="10">ASTP s.r.o.</th> </tr> </thead> <tbody> <tr> <td colspan="10">Lazaretní 7</td> </tr> <tr> <td colspan="10">CZ-615 00 Brno</td> </tr> </tbody> </table>										ASTP s.r.o.										Lazaretní 7										CZ-615 00 Brno																																																																																																																																																					
ASTP s.r.o.																																																																																																																																																																																			
Lazaretní 7																																																																																																																																																																																			
CZ-615 00 Brno																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Oznaceni listu</th> </tr> </thead> <tbody> <tr> <td colspan="10">Description of LED diodes signalization</td> </tr> </tbody> </table>										Oznaceni listu										Description of LED diodes signalization																																																																																																																																																															
Oznaceni listu																																																																																																																																																																																			
Description of LED diodes signalization																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Cislo vykresu</th> </tr> </thead> <tbody> <tr> <td colspan="10">250DGA_1.3.0</td> </tr> </tbody> </table>										Cislo vykresu										250DGA_1.3.0																																																																																																																																																															
Cislo vykresu																																																																																																																																																																																			
250DGA_1.3.0																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Jmeno souboru</th> </tr> </thead> <tbody> <tr> <td colspan="10">250_dga_1.3.0 bez FM</td> </tr> </tbody> </table>										Jmeno souboru										250_dga_1.3.0 bez FM																																																																																																																																																															
Jmeno souboru																																																																																																																																																																																			
250_dga_1.3.0 bez FM																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Projekt</th> </tr> </thead> <tbody> <tr> <td colspan="10">250 DGA</td> </tr> </tbody> </table>										Projekt										250 DGA																																																																																																																																																															
Projekt																																																																																																																																																																																			
250 DGA																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Datum:</th> </tr> </thead> <tbody> <tr> <td colspan="10">10.5.2005</td> </tr> </tbody> </table>										Datum:										10.5.2005																																																																																																																																																															
Datum:																																																																																																																																																																																			
10.5.2005																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Pacek</th> </tr> </thead> <tbody> <tr> <td colspan="10">Pacek</td> </tr> </tbody> </table>										Pacek										Pacek																																																																																																																																																															
Pacek																																																																																																																																																																																			
Pacek																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Zprac.:</th> </tr> </thead> <tbody> <tr> <td colspan="10"></td> </tr> </tbody> </table>										Zprac.:																																																																																																																																																																									
Zprac.:																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Datum</th> </tr> </thead> <tbody> <tr> <td colspan="10"></td> </tr> </tbody> </table>										Datum																																																																																																																																																																									
Datum																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">Jmeno</th> </tr> </thead> <tbody> <tr> <td colspan="10"></td> </tr> </tbody> </table>										Jmeno																																																																																																																																																																									
Jmeno																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th colspan="10">List</th> </tr> </thead> <tbody> <tr> <td colspan="10">17/18</td> </tr> </tbody> </table>										List										17/18																																																																																																																																																															
List																																																																																																																																																																																			
17/18																																																																																																																																																																																			

25.17. Elektrické schéma / Elektroschema / Wiring diagram 17

	0	1	2	3	4	5	6	7	8	9	
A	JDO - Ausgabe - Standardanzeige										
	16		Taste gelöst	Taste gedrückt							
	15		Sägeband gespannt								
	14		Hauptschraubstock gespannt								
	13		Kontrollleuchte (aut. Betrieb) aktiv.								
	12		Zweite Stufe der Hydraulikp. aktiv.								
	11		Bewegung der Hauptschraub. nach links aktiv.								
	10		Bewegung der Hauptschraub. nach rechts aktiv.								
	9		Hauptschraubstock öffnen	Erdschalter - Rahmen in obere Position							
	8		Hauptschraubstock spannen	Manuelles Bedienen aktiviert							
	7		Sägebandantrieb einschalten	Automatisches Bedienen aktiviert							
	6		Drehungsmotor einschalten	Schutz der Bürstestromotor OK							
	5		Bürstestromotor einschalten	Schutz der Hydraulikpumpe OK							
	4		Hydraulikpumpe einschalten	Schutz des Spänpförderers OK							
	3		Spänpförderer einschalten	Material fehlt (Vorschubschraubstock)							
	2		Kühlmittelpumpe einschalten	Hauptschraubstock steht rechts							
1		JDO2 - Ausgabe - Standardanzeige	Hauptschraubstock steht links								
B	JRM - Ausgabe - Einheitsstand										
	12		CPU - Ausgabe - Einheitsstand	JRM - Ausgabe - Einheitsstand							
	11		Versorgung 5V	Kommunikation mit CPU							
	10		Versorgung 5V-KOM	Signal des Sägerahmenhubhöhesensors							
	9		Intern CAN - TXD	Kommunikation mit ATMEGA							
	8		Extern CAN - RXD	Kommunikationsfehler mit ATMEGA							
	7		Extern CAN - TXD	Referenzposition der Sägerahmen eingestellt							
	6		Kommunikation mit PFM2	Sägerahmen befindet sich über Hauptschraub.							
	5		Kommunikation mit JRM	Sägerahmen war während des Schnittes unten							
	4		Kommunikation mit JDI	Sägerahmen befindet sich über Material							
	3		Kommunikation mit JDO2	Sägerahmen befindet sich unten							
	2		Kommunikation mit JDO	Eilgang des Sägerahmens							
1			Sägerahmen heben								
C	PFM2 - Ausgabe - Einheitsstand										
	12		Vorschubschraubstock spannen	Kommunikation mit JDO							
	11		Blitzleuchte aktivieren	1...6 blinkt schnell - Phase Ausfall							
	10		Microniser aktivieren	1...6 blinkt langsam - Kommunikationsfehler mit GD (Display)							
	9										
	8										
	7										
	6										
	5										
	4										
	3										
	2										
1											
D	PFM - Ausgabe - Einheitsstand										
	12		Vorschubantrieb einschalten	PFM - Ausgabe - Einheitsstand							
	11		Bremse des Vorschubmotors deaktivieren								
	10		CPU-Befehl - in Betrieb / Fehler (blinkt)								
	9		Kommunikation mit ATMEGA (blinkt)								
	8		Kommunikation mit CPU (blinkt)								
	7		Impuls aus Vorschubgeschwindigkeit Sensor								
	6		Laserstrahl unterbrochen								
	5		Vorschub ist an Referenzschalter								
	4		FM1 eingeschaltet								
	3		Genauigkeit der Positionierung								
	2		Genauigkeit der Positionierung								
1		Genauigkeit der Positionierung									
E	Cislo vykresu 250DGA.1.3.0										
	12										
	11										
	10										
	9										
	8										
	7										
	6										
	5										
	4										
	3										
	2										
1											
F	Jmeno souboru 250_dga_1.3.0 bez FM										
	12										
	11										
	10										
	9										
	8										
	7										
	6										
	5										
	4										
	3										
	2										
1											

25.18. Elektrické schéma / Elektroschema / Wiring diagram 18

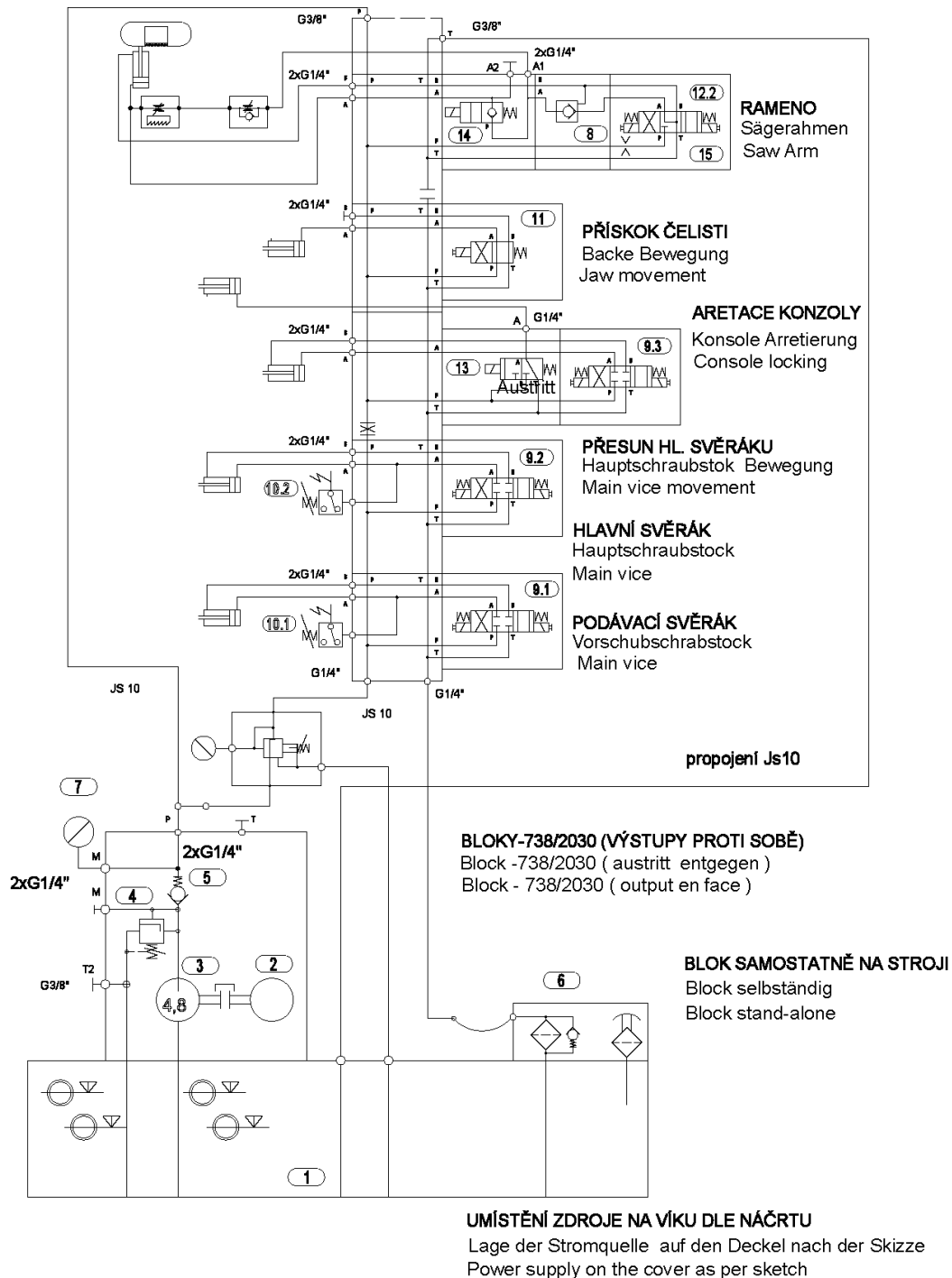
Projekt	250 DGA	ASTP s.r.o. Lazaretní 7 CZ-615 00 Brno	Označení listu LED Standardanzeige	Cislo vykresu 250DGA.1.3.0	List 18/18
Změna	Datum	Jmeno		Jmeno souboru 250_dga_1.3.0 bez FM	

26. 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.
Objednací číslo	Název položky		ks	Ozn.
Reference No.	Item		Pcs.	Sign.
91.041.004	Filtr / Filter / Filter	FZ72460	9	RCF
	Stykač / Schütz / Contactor	LP1K0901BD 24Vss	10	KM
91.040.004	Stykač / Schütz / Contactor	LP1K0910BD 24Vss	1	KM
91.280.002	Diodový můstek / Diodenbrücke / Diode bridge	DB25A280V	1	DM1
91.045.002	Motorový spouštěč / Motor Starter / Motor Starter	MS116-0,25 (ABB)	2	FA3
91.045.005	Motorový spouštěč / Motor Starter / Motor Starter	MS116-1A(ABB)	1	FA
91.045.006	Motorový spouštěč / Motor Starter / Motor Starter	MS116-1,6A(ABB)	1	FA
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)	5	FA1
91.995.039	Modul / Modul / Modul	JDI-2/2	1	JDI
91.995.040	Modul / Modul / Modul	JDO-2	1	JDO
91.995.042	Modul / Modul / Modul	JRM7	1	JRM
91.995.051	Modul / Modul / Modul	PFM8	2	PFM
91.995.060	Modul / Modul / Modul	CPU2-E	1	CPU
91.080.022	Transformator / Transformator / Transformator	TBC-32525-019	1	TR
91.020.005	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump	3COA 2-17	1	M2
91.001.007	Motor /Motor / Motor	TM90 2/4S B5 1500 /1100W	1	M1

27. Hydraulické schéma / Hydraulikschema / Hydraulic diagram



Základní technické parametry
Technische Spezifikation
Technical specification

Q ₁	6.3	dm ³ min ⁻¹	Rev.	1390	min ⁻¹
P _{max}	4	MPa	P	0.55	kW

Hydraulické schéma	870-1229	Schéma / Schema / Diagram	8701922A.DWG
Hydraulikschema		Datum / Datum / Date	20.10.2005
Hydraulic Diagram			

Poz.	Název položky		ks
Pos.	Bezeichnung		Menge
Pos.	Item		Pcs.
1	Nádrž / Behälter / Tank	30 dm special (750/7264)	1
2	Elektromotor / Elektromotor / Electromotor	MA-AL80 400/230V -50Hz	1
3	Hydrogenerátor / Hydraulikaggregat / Hydrogenerator	P2-4.8L 66017 4.8cub./rev.	1
4	Jednosměrný ventil / Einwegventil / One-way valve	VJO1-06/SG-1	1
5	Přepouštěcí ventil / Bypassventil / By pass valve	VPP2-04/S-6 4 Mpa	1
6	Zpětný filter /Regressivfilter / Reverse filter	FR 043- 166/0 10 μ m	1
	Vložka ve filtru / Filtereinlage / Filter lining	V3.0510-56 10 μ m	
7	Manometer / Manometer /Manometer	Ř 68 with Glycerin 0-6 MPa	1
8	Hydraulický zámek / Hydrauliksschloss / Hydraulic lock	VJR-04/MA	1
9	Rozváděč / Verteilungsventil / Distributor	RPE3-043Z11/02400E1K1	1
10	Tlakový spínač / Druckschalter / Pressure Switch	SUCO 0166 411 031 043	1
11	Rozváděč / Verteilungsventil / Distributor	RPE3-42R11/02400E1K1	1
12	Rozváděč / Verteilungsventil / Distributor	RPE3-043Y11/02400E1K1	1
13	Blok aretace / Arretierungblock / Locking Block	731-9002 Keine düse/No Nozzle	1
14	Blok rychloposuvu / Eilgangblock / Rapid feed blocking	729-0084	1
15	Tryska / Düse / Nozzle	Ř 1mm	1

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

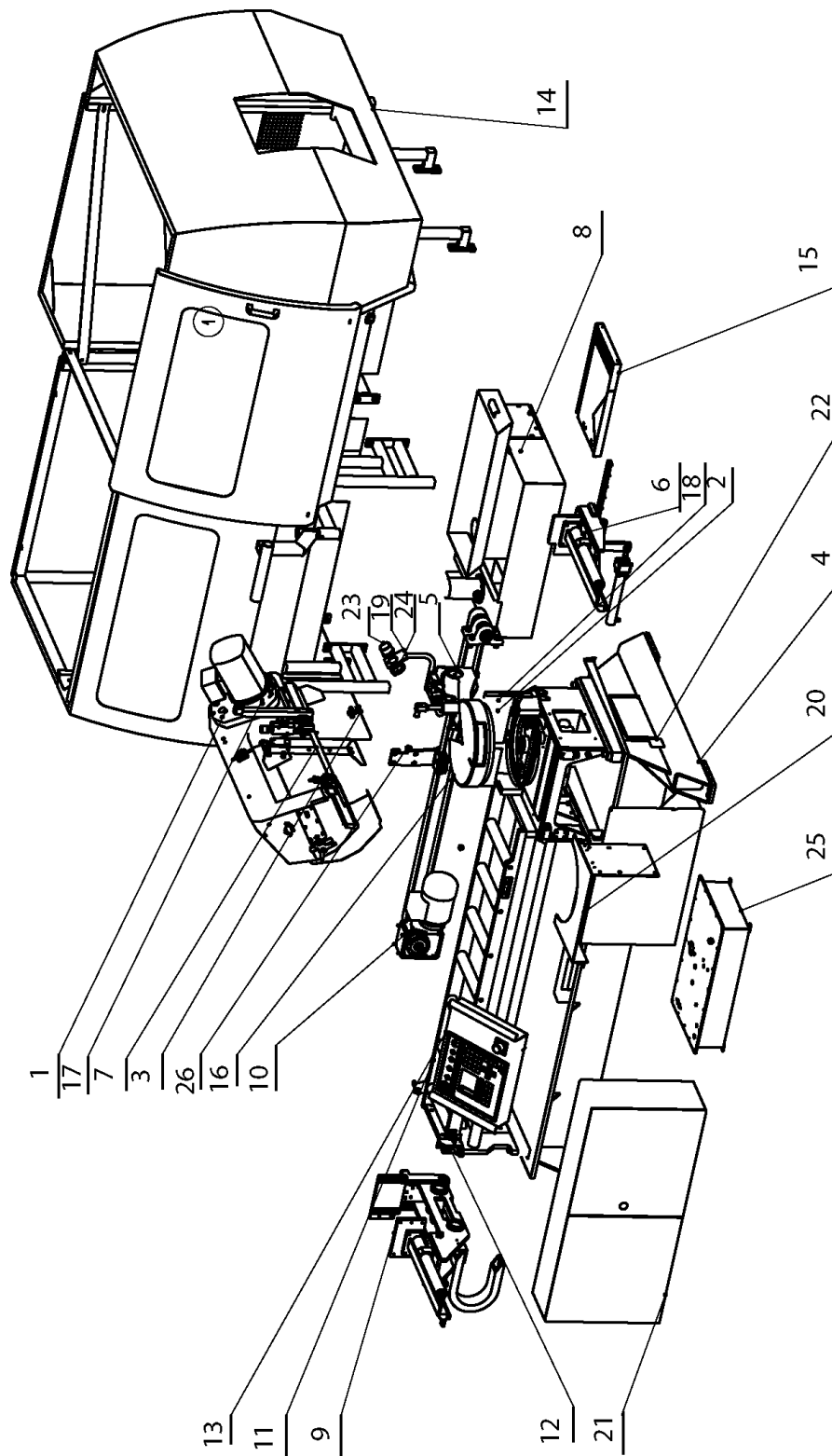
Hydr. hadice	Hadice	Kováni	Konc. A	Konc. B	Konc. C	Konc. D	Konc. E	Konc. F	Konc. G	Ks
Hydr. Schlauche	Schlauche	Schmieden	Schlauchtüle A	B	C	D	E	F	G	Menge
Hydr. Hose	hose	forging	terminal A	B	C	D	E	F	G	piece
10BB640	42.003.001	92.051.003	-	92.053.002	-	-	-	-	-	1
10BB500	42.003.001	92.051.003	-	92.053.002	-	-	-	-	-	1
10B900	42.003.001	92.051.003	-	92.053.002	-	-	-	-	-	1
6BF2700	42.001.001	92.051.001	-	92.053.001	-	-	-	93.012.006	-	1
6AG380	42.001.001	92.051.001	92.052.001	-	-	-	-	-	93.012.005	1
6AA1300	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6BF2850	42.001.001	92.051.001	-	92.053.001	-	-	-	93.012.006	-	1
6AG4000	42.001.001	92.051.001	92.052.001	-	-	-	-	-	93.012.005	1
6AA1830	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AA1500	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AB1900	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AA530	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AB970	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AA630	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AB600	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AB450	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AB600	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AB760	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AA530	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6BB470	42.001.001	92.051.001	-	92.053.001	-	-	-	-	-	1
6AA1300	42.001.001	92.051.001	92.052.001	-	-	-	-	-	-	1
6AB330	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6AB330	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	2
6AB600	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1
6BA150	42.001.001	92.051.001	92.052.001	92.053.001	-	-	-	-	-	1

28. 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).

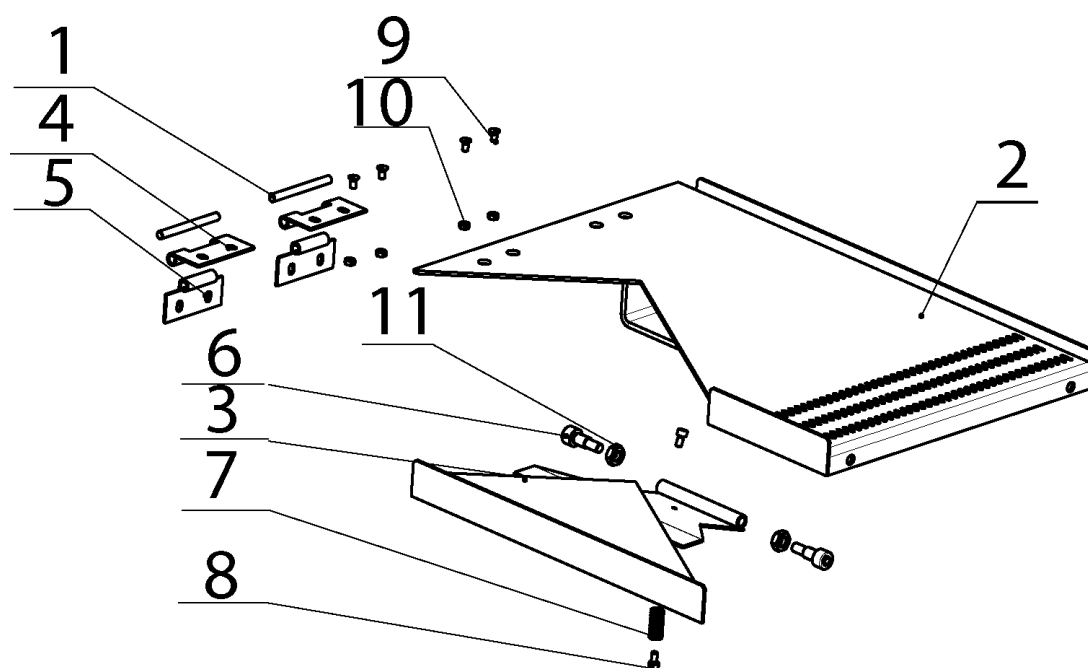
In die Bestellung der Ersatzteile führen Sie immer an:
Maschinentyp (z. B. STG 120), Serien Nr. (z. B. 125) und
Baujahr (z. B. 1999).

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).



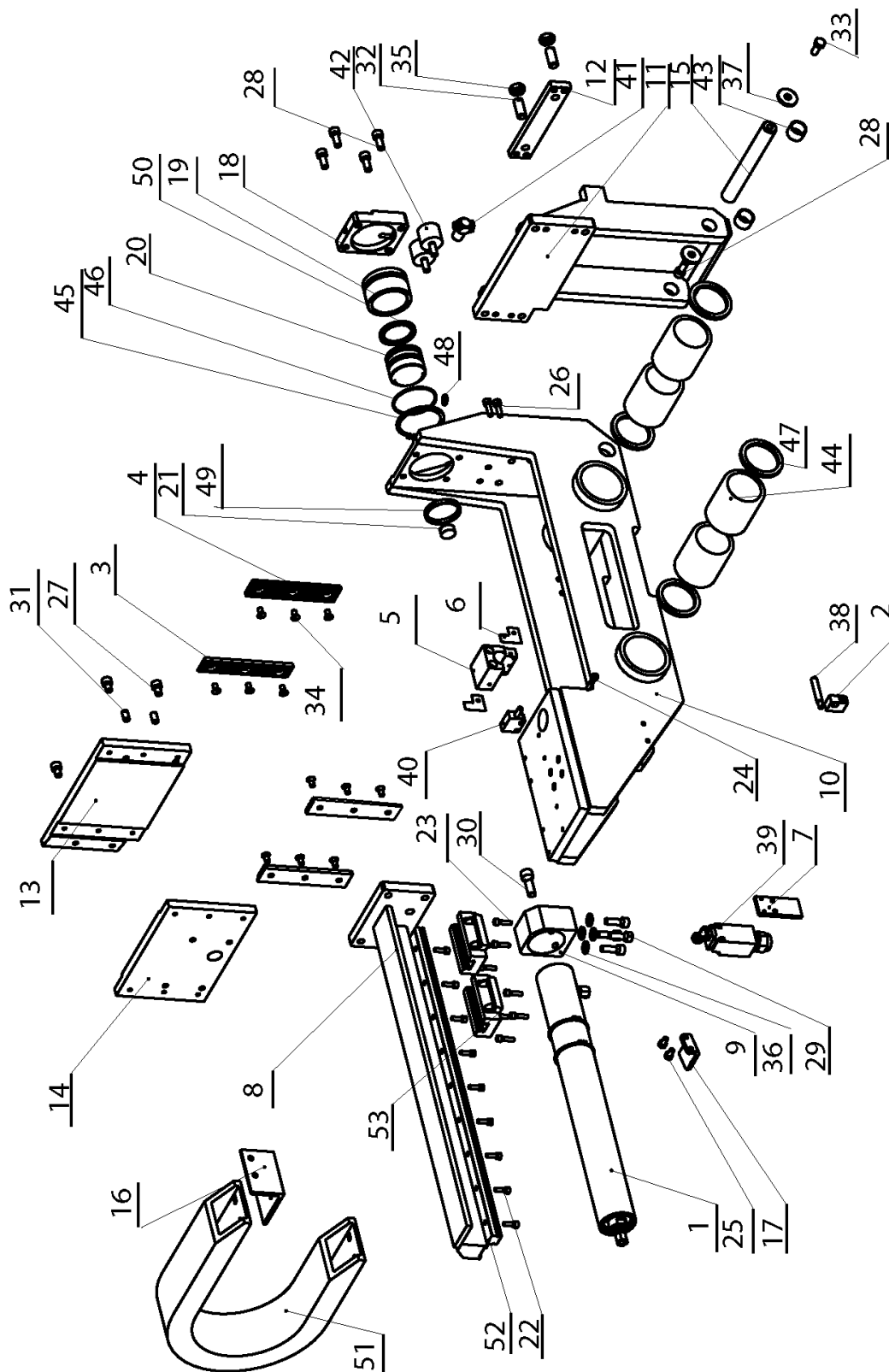
28.1. Pásová pila / Bandsäge / Band saw

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.0504-900	Rameno / Arm / Arm		1
2	201.0507-910	Hydraulický válec / Hydraulischer Zylinder / Hydraulic cylinder		1
3	201.0704-100	Kartáček / Bürste / Brush		1
4	201.7901-100	Podstavec / Untergestell / Pedestal		1
5	201.7902-000	Konzola / Konsole / Console		1
6	201.7903-000	Svěrák hlavní / Hauptschraubstock / Main vice		1
7	201.7904-100	Odměrování / Abmessung / Admeasurement		1
8	201.7906-100	Chlazení / Kühlung / Cooling		1
9	201.7911-000	Podavač / Vorschub / Feeder		1
10	201.7911-100	Pohon / Antrieb / Drive		1
11	201.7911-200	Válečková trať / Rollenbahn / Roll conveyor		1
12	201.7911-310	Závora optická / Lichtsperre / Laser beam		1
13	201.7913-000	Panel ovládání / Panel / Panel		1
14	201.7914-150	Kryty / Deckel / Cover		1
15	201.7914-210	Skluz / Rutsch / Glide		1
16	202.0714-300	Horní upínání / Obere Spannung / Top clamping		1
17	30.0504-754	Kryt napínání / Bandspannungsdeckel / Stretching cover		1
18	30.0514-603	Držák kartáčku / Bürstenhalterung / Brush holder		1
19	30.7913-050	Konzola / Konsole / Console		1
20	30.7914-201	Stůl / Tisch / Desk		1
21	31.7930-001	Rozvaděč / Schaltschrank / Switchboard		1
22	31.7999-001	Štítek / Schild / Label		1
23	91.071.005	Vývodka / Ausföhrung / Bushing		1
24	91.072.008	Matice / Mutter / Nut		1
25	92.001-030	Agregát hydraulický / Hydraulischeaggregat / Hydraulic aggregate		1
26	94.007.002	Šroub / Schraube / Screw		2



28.2. Skluz / Rutsch / Glide

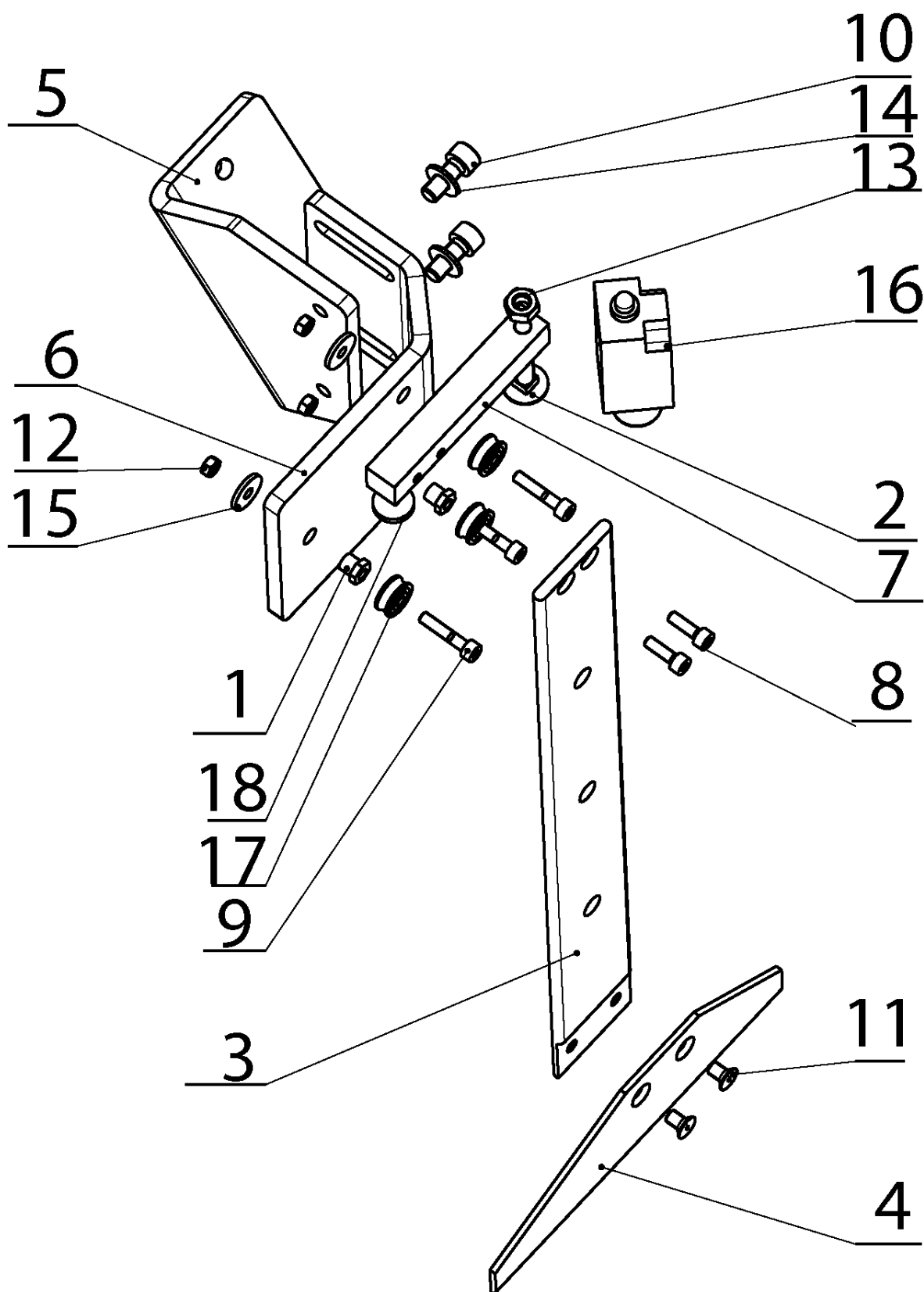
Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.7217-028	Čep / Bolzen / Pivot		2
2	30.7914-211	Skluz / Rutsch / Glide		1
3	30.7914-212	Stůl / Tisch / Desk		1
4	30.7914-213	Pant / Türband / Hinge		2
5	30.7914-214	Pant / Türband / Hinge		2
6	30.7914-305	Šroub / Schraube / Screw		2
7	31.6061-003	Pružina / Feder / Spring		1
8	90.001.25.007	Šroub / Schraube / Screw	M5x10 DIN 912 8,8	2
9	90.011.27.003	Šroub zápuštný/ Countersunk screw / Senkschraube	M5x10	4
10	90.100.55.003	Matice / Mutter / Nut	M5 DIN 934	4
11	90.101.55.002	Matice / Mutter / Nut	M10	2



28.3. Podavač / Vorschub / Feeder
ergonomic 290.250 DGA

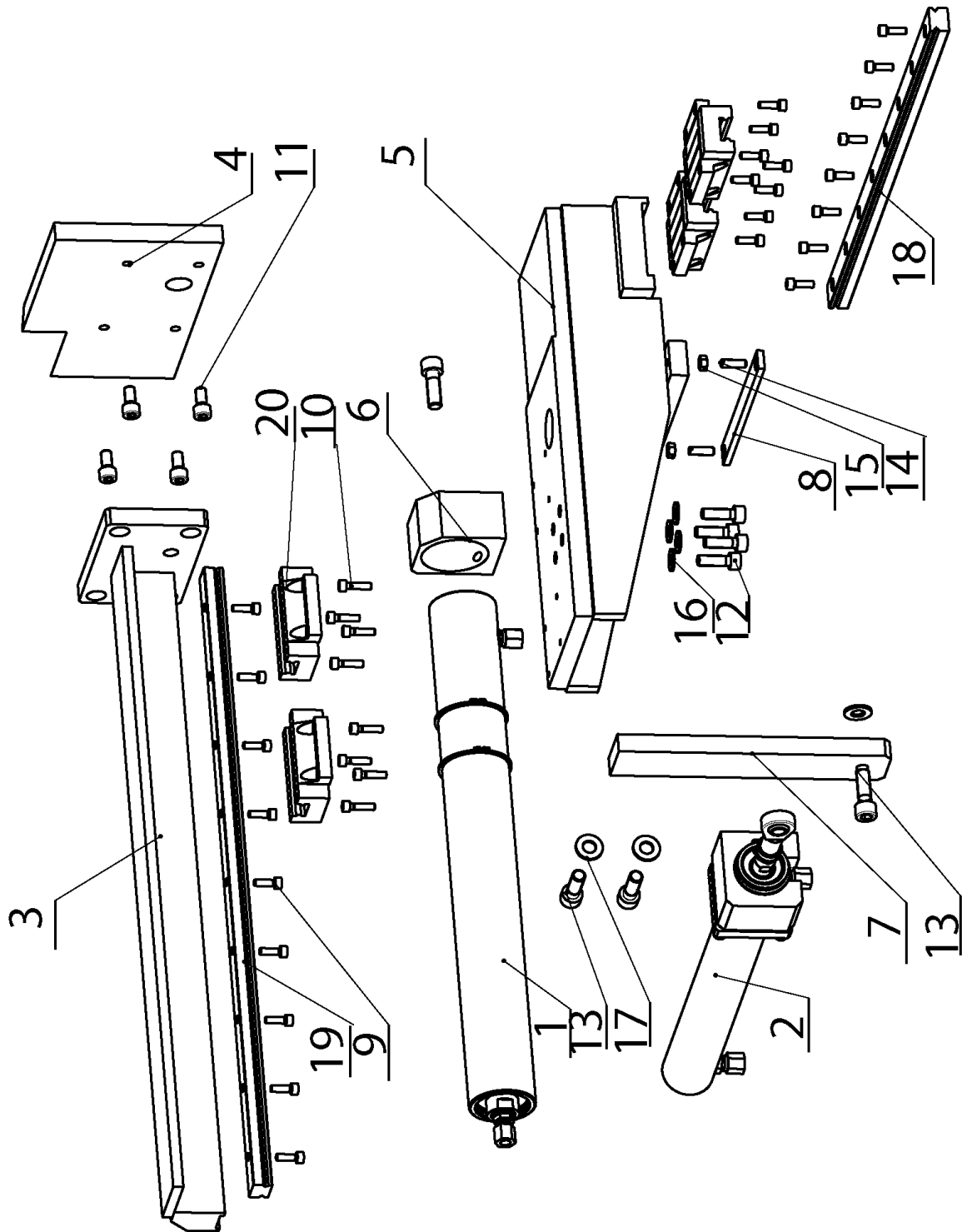
Poz.	Objednáací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.7907-200	Válec svěráku / Spannstockzylinder / Vice Cylinder		1
2	30.2114-001	Držák / Halter / Holder		1
3	30.2803-006	Lišta čelisti / Backenleiste / Jaw listel		2
4	30.2811-011	Lišta čelisti / Backenleiste / Jaw listel		2
5	30.2911-029	Držák / Halter / Holder		1
6	30.2911-030	Stěrač / Abstreifer / Scraper		2
7	30.7901-032	Držák / Halter / Holder		1
8	30.7903-001	Vedení / Führung / Guide		1
9	30.7903-004	Kostka / Würfel / Cube		1
10	30.7911-001	Těleso / Körper / Body		1
11	30.7911-002	Čelist pohyblivá / Bewegliche Backe / Movable jaw		1
12	30.7911-003	Příložka / Lasche / Splice plate		1
13	30.7911-005	Deska / Platte / Plate		1
14	30.7911-006	Deska / Platte / Plate		1
15	30.7911-008	Čep / Bolzen / Pivot		1
16	30.7911-014	Držák / Halter / Holder		1
17	30.7911-015	Narážka / Anschlag / Stop		1
18	30.7911-051	Víko / Deckel / Cover		1
19	30.7911-052	Trubka / Rohr / Tube		1
20	30.7911-053	Píst / Kolben / Piston		1
21	30.7911-058	Tvrdokov / HM-Segment / Hardmetal		1
22	90.001.25.009	Šroub / Schraube / Screw	M5x16 DIN 912	9
23	90.001.25.010	Šroub / Schraube / Screw	M5x20 DIN 912	8
24	90.001.25.011	Šroub / Schraube / Screw	M5x25 DIN 912 8,8	1
25	90.001.25.015	Šroub / Schraube / Screw	M6x10 DIN 912 8,8	2
26	90.001.25.018	Šroub / Schraube / Screw	M6x20 DIN 912 8,8	4
27	90.001.25.029	Šroub / Schraube / Screw	M8x12 DIN 912 8,8	4
28	90.001.25.032	Šroub / Schraube / Screw	8x20 DIN 912 8,8	5
29	90.001.25.033	Šroub / Schraube / Screw	8x25 din 912 8,8	4
30	90.001.25.048	Šroub / Schraube / Screw	M10x30 DIN 912	1
31	90.002.2D.012	Šroub stavěcí / Stellschraube / Setscrew	M8x16	4
32	90.002.2D.020	Šroub stavěcí / Stellschraube / Setscrew	M12x30	2
33	90.005.55.015	šroub se šestihrannou hlavou / Sechskantschraube / Hex head screw	M8x20	1
34	90.011.27.005	Šroub zápusťný/ Countersunk screw / Senkschraube	M6x12	12
35	90.101.55.006	Matice / Mutter / Nut	M12	2
36	90.150.50.005	Podložka / Scheibe / Washer	d8,4 DIN 125	4
37	90.151.50.005	Podložka / Scheibe / Washer	d8 DIN 125	2
38	91.172.001	Spínač indukční/Induktiver Schalter/Switch inductive	BES MO8MI	1
39	91.173.009	Koncový spínač / Endschalter / Limit switch		1
40	91.270.006	Senzor /Sensor / Sensor		1
41	93.007.002	Šroubení natáčecí / Winkelverschraubung / Swivelling screw	G1/8-8/6	1
42	94.700.002	Silentblok	80,1	4
43	95.700.003	Pouzdro / Büchse / Bush	20x15	3
44	95.710.002	Pouzdro / Büchse / Bush	50x70	4

45	95.800.021	Pojistný kroužek / Sicherungsring / Retaining ring	62	1
46	96.001.030	O-Kroužek / Ring / ring	58x2	1
47	96.040.004	Manžeta / Manschette / Sleeve	50x62x5	4
48	96.082.001	Kroužek těsnící / Dichtungsring / Sealing ring	X.14	1
49	96.084.001	Kroužek vodící / Führungsring / Guiding ring	GP6500500-T47	1
50	96.900.001	Těsnění / Dichtung / Sealing	Zurkon Wynseal	1
51	99.170.012	Řetěz energií / Energiekette / Cables leading	EFK04455	1
52	99.200.047	Vedení / Führung / Guide	LGR20R-0460	1
53		Vozík / Wagen / Carriage	LGW20CC	2



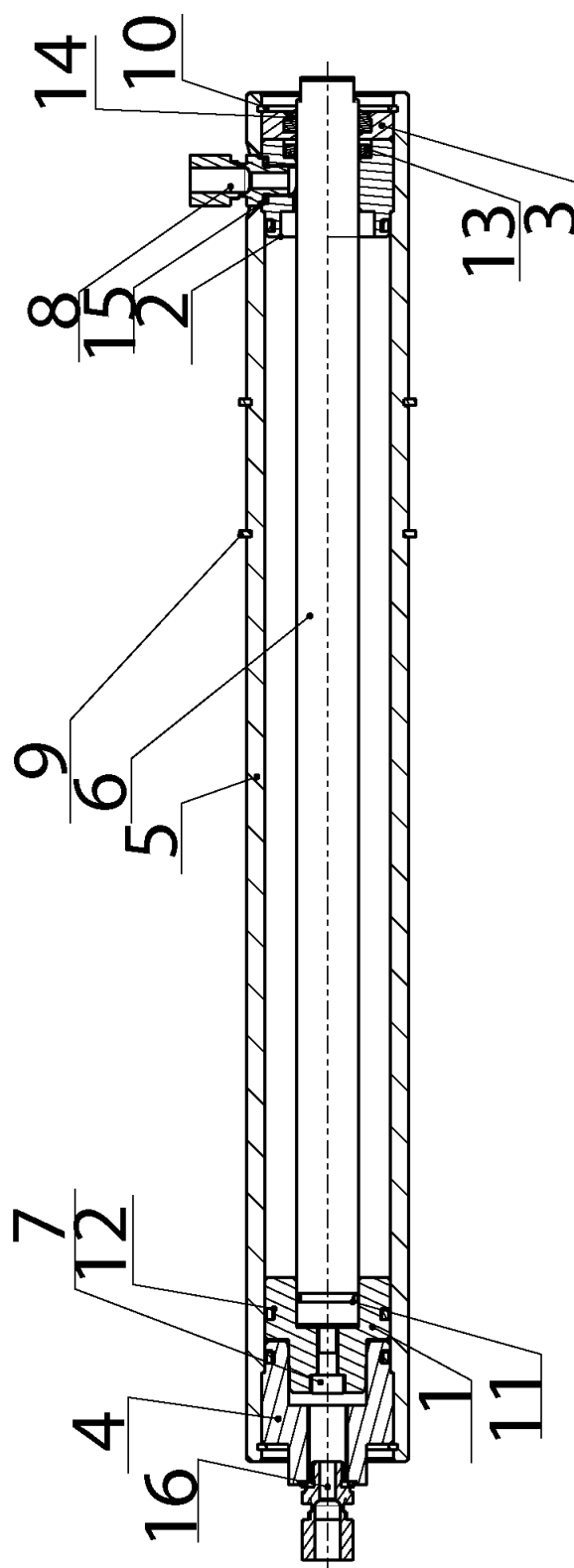
28.4. Odměrování ramene / Rahmenabmessung / Admeasurement of arm

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.0104-018	Excentr / Exzenter / Excenter		3
2	30.0702-013	Šroub / Schraube / Screw		1
3	30.7904-102	Vedení / Führung / Guide		1
4	30.7904-103	Lišta / Leiste / Listel		1
5	30.7904-106	Držák / Halter / Holder		1
6	30.7904-107	Držák / Halter / Holder		1
7	30.7904-108	Kostka / Würfel / Cube		1
8	90.001.25.009	Šroub / Schraube / Screw	M5x16	2
9	90.001.25.011	Šroub / Schraube / Screw	M5x25	3
10	90.001.25.032	Šroub / Schraube / Screw	8x20	2
11	90.011.27.004	Šroub zápusťný/ Countersunk screw / Senkschraube	M6x10	2
12	90.100.55.003	Matice / Mutter / Nut	M5	3
13	90.100.55.005	Matice / Mutter / Nut	M8	1
14	90.150.50.005	Podložka / Scheibe / Washer	d8,4 DIN 125	2
15	90.151.50.006	Podložka / Scheibe / Washer	d5	3
16	91.173.007	Koncový spínač / Endschalter / Limit switch	RIWK	1
17	95.008.001	Ložisko / Lager / Bearing	YTLR	3
18	99.060.003	Magnet / Magnet / Magnet		1



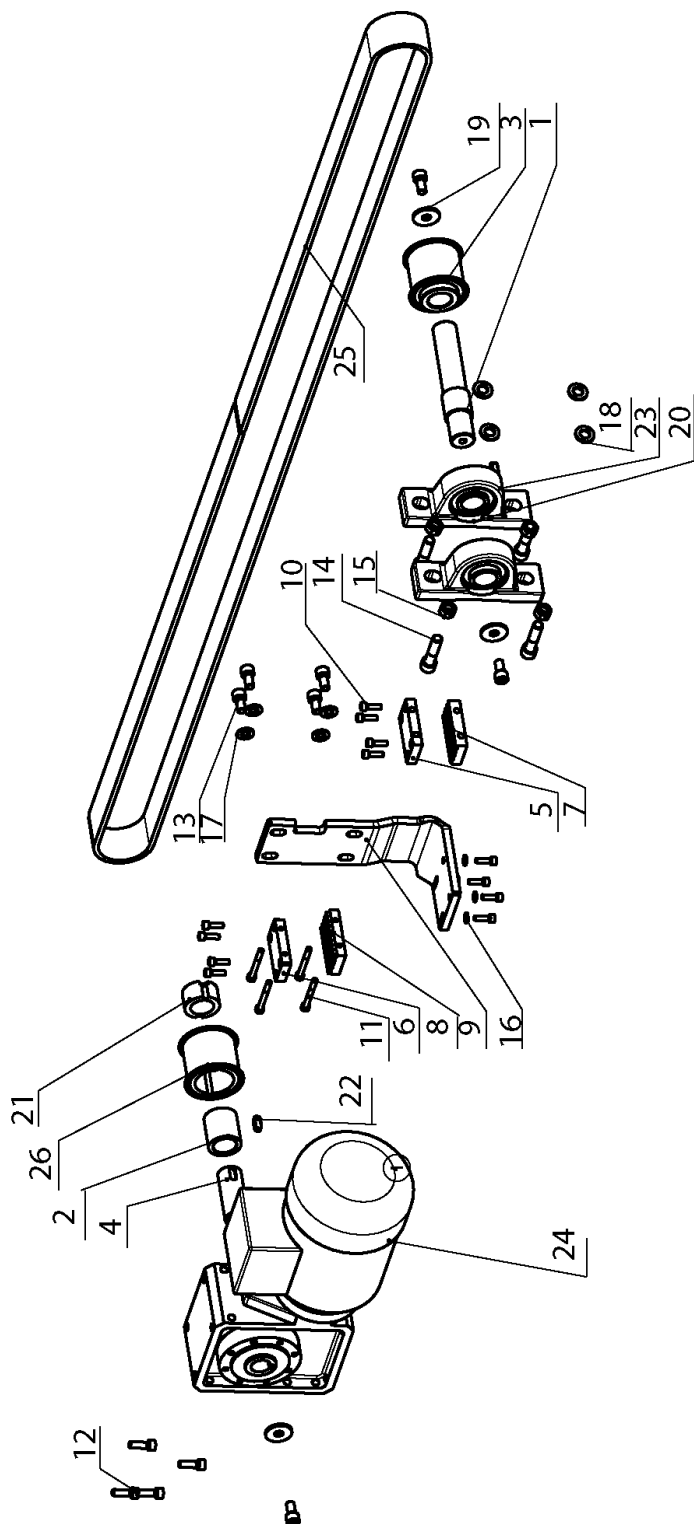
28.5. Svěrák hlavní / Hauptschraubstock / Main vice

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.7907-200	Válec upínací / Spannzyylinder / Clamping cylinder		1
2	201.7907-400	Válec / Zylinder / Cylinder		1
3	30.7903-001	Vedení / Führung / Guide		1
4	30.7903-002	Deska / Platte / Plate		1
5	30.7903-003	Těleso svěráku / Spannstockkörper / Vice body		1
6	30.7903-004	Okno / Auge / Eye		1
7	30.7903-007	Páka / Hebel / Lever		1
8	30.7903-016	Lišta kluzná / Leiste / Listel		1
9	90.001.25.009	Šroub / Schraube / Screw	M5x16 DIN 912	25
10	90.001.25.010	Šroub / Schraube / Screw	M5x20 DIN 912	8
11	90.001.25.031	Šroub / Schraube / Screw	8x16 DIN 912 8,8	4
12	90.001.25.033	Šroub / Schraube / Screw	8x25 din 912 8,8	4
13	90.001.25.047	Šroub / Schraube / Screw	M10x30 DIN 912	4
14	90.002.2D.021	Šroub stavěcí / Stellschraube / Setscrew	M6x20	2
15	90.100.55.004	Matice / Mutter / Nut	M6 DIN 934	2
16	90.150.50.005	Podložka / Scheibe / Washer	d8,4 DIN 125	4
17	90.150.50.006	Podložka / Scheibe / Washer	d10,5 DIN 125	3
18	99.200.021	Vedení / Führung / Guide	LGR20R-0460	1
19	99.200.047	Vedení / Führung / Guide	LGR20R-0460	1
20	99.201.012	Vozík / Wagen / Carriage	HGW20CC	4



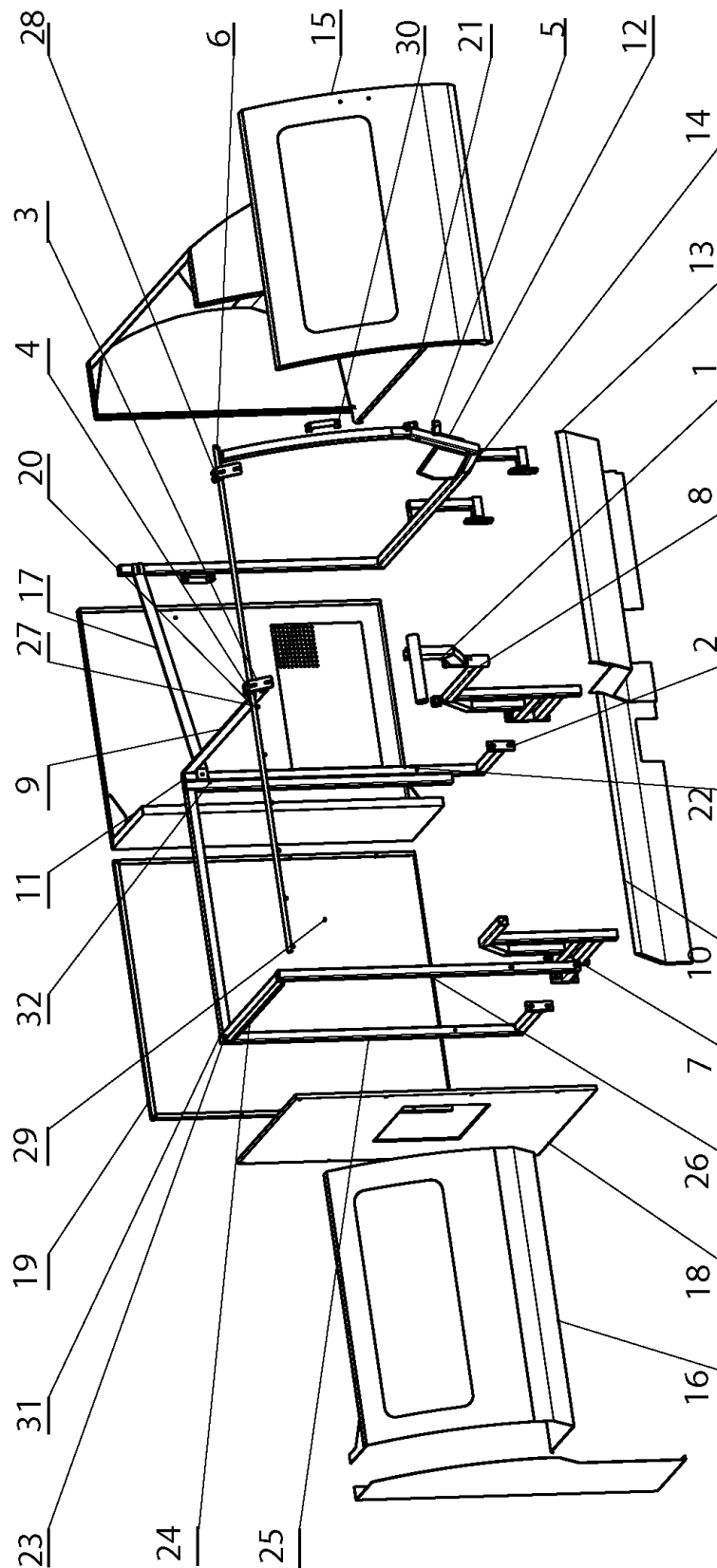
28.6. Válec upínání svěráku / Spannstockzylinder / Vice cylinder

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 / Zufuhr / Inflow		1
3	30.2107-003	Víko / Deckel / Cover		1
4	30.2107-004	Víko zadní / Deckel / Cover		1
5	30.7907-201	Válec Hydraulický / Hydraulikzylinder / Hydraulic cylinder		1
6	30.7907-202	Pístnice / Kolbenstange / Piston rod		1
7	90.001.25.019	Šroub / Schraube / Screw		1
8	92.002.102	Šroubení / Schraubung / Screwing	S-GEV-8LLR G1/8-8	2
9	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring	d52	2
10	95.801.006	Pojistný kroužek / Sicherungsring / Retaining ring	d42	2
11	96.002.007	O-Kroužek / Ring / Ring	16x2	1
12	96.002.017	O-Kroužek / Ring / Ring	34x3	3
13	96.041.002	U-Manžeta / Manschette / Sleeve	20x28x4	1
14	96.060.002	Kroužek stírací / Abstreifring / Wiping ring	20	1
15	96.082.001	Kroužek těsnící / Dichtungsring / Sealing ring	.10/14	1
16	96.082.002	Kroužek těsnící / Dichtungsring / Sealing ring	13/17	1



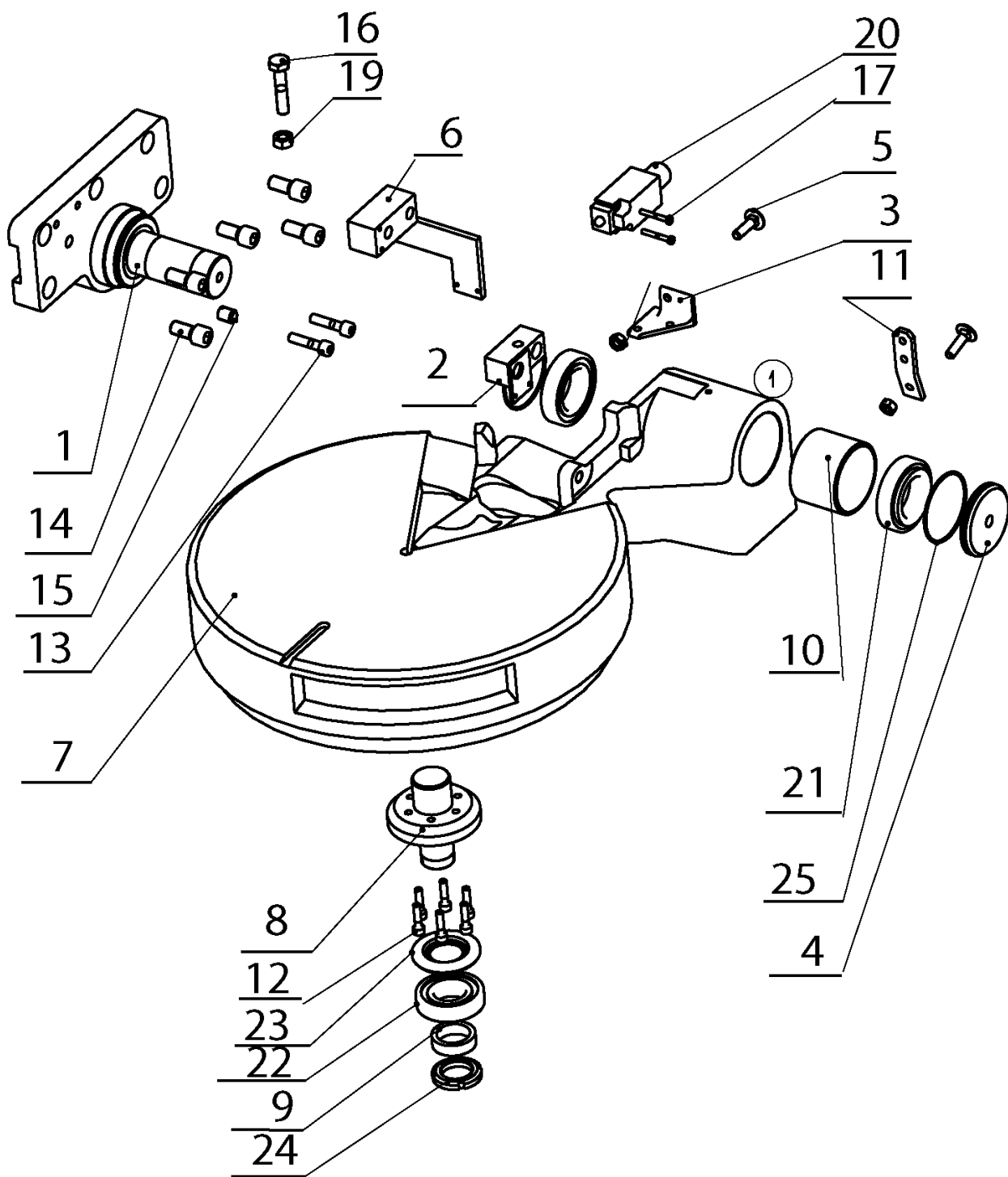
28.7. Pohon podavače / Antrieb / Drive

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.7911-102	Hřídel / Welle / Shaft		1
2	30.7911-103	Kroužek distanční / Distanzring / Distance ring		1
3	30.7911-104	Řemenice / Riemenscheibe / Band - wheel		1
4	30.7911-106	Hřídel / Welle / Shaft		1
5	30.7911-108	Deska / Platte / Plate		1
6	30.7911-109	Deska / Platte / Plate		1
7	30.7911-111	Deska / Platte / Plate		1
8	30.7911-112	Deska / Platte / Plate		1
9	30.7911-114	Držák / Halter / Holder		1
10	90.001.25.018	Šroub / Schraube / Screw	M6x20 DIN 912 8,8	12
11	90.001.25.024	Šroub / Schraube / Screw	M6x55 DIN 912	4
12	90.001.25.033	Šroub / Schraube / Screw	M8x25 DIN 912	4
13	90.001.25.046	Šroub / Schraube / Screw	M10x20 DIN 912 8,8	7
14	90.001.25.062	Šroub / Schraube / Screw	M12x50 DIN 912 8,8	4
15	90.100.55.007	Matice / Mutter / Nut	M12x50 DIN 934	4
16	90.150.50.004	Podložka / Scheibe / Washer	d6,4 DIN125	4
17	90.150.50.006	Podložka / Scheibe / Washer	d10,5 DIN125	4
18	90.150.50.007	Podložka / Scheibe / Washer	d13 DIN125	4
19	90.151.50.001	Podložka / Scheibe / Washer	d10	3
20	95.160.002	Ložisko / Lager / Bearing	206	2
21	95.710.004	Pouzdro / Büchse / Bush	1210	1
22	95.810.006	Pero / Feder / Feather	20	1
23	95.810.010	Pero / Feder / Feather	40	1
24	99.001.030	Převodovka šneková / Schneckengetriebe / Worm gearbox	BN 80A 230/40	1
25	99.024.006	Řemen ozubený / Gezahnte Riemen / Toothed belt	HTD 8M 50	1
26	99.280.014	Řemenice / Riemenscheibe / Band - wheel	28-8M-50F HTD T	1



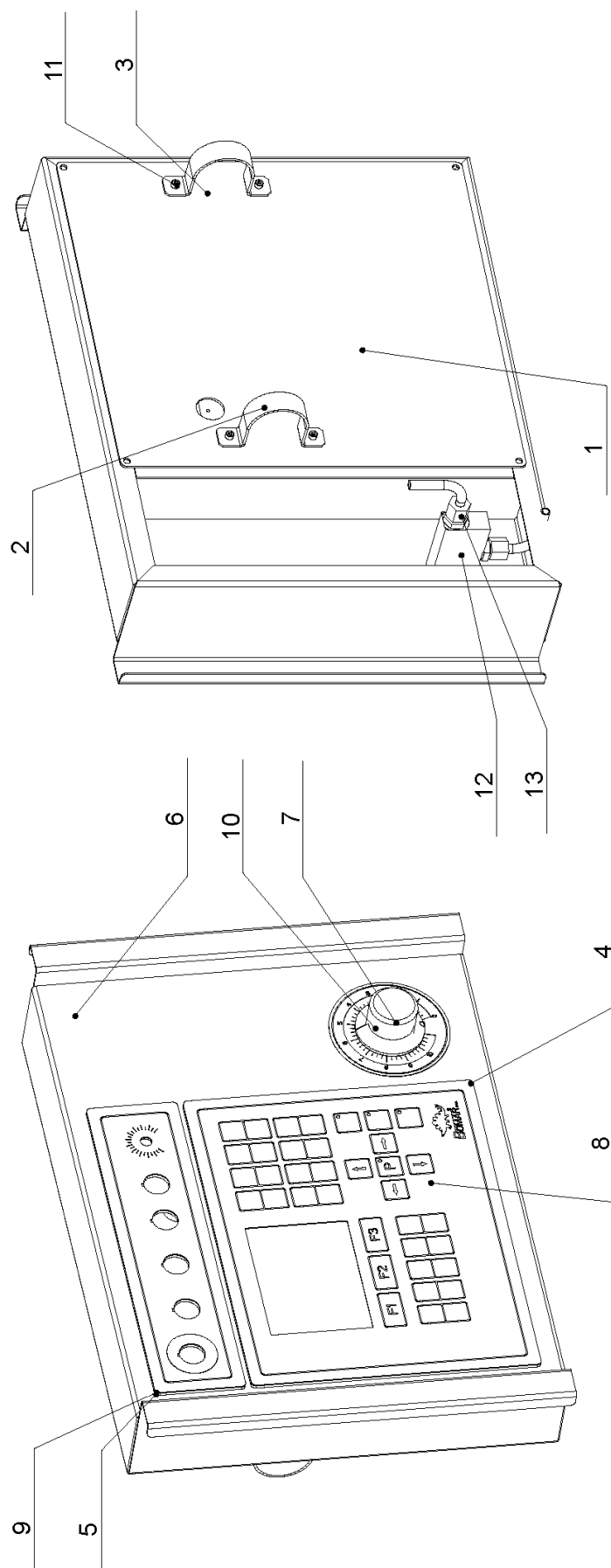
28.8. Kryty / Deckel / Covers

Poz.	Objednáací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.7914-120	Kladka / Rolle / Pulley		2
2	30.6714-647	Držák / Halter / Holder		5
3	30.7914-108	Držák / Halter / Holder		2
4	30.7914-109	Kostka / Würfel / Cube		1
5	30.7914-113	Kostka / Würfel / Cube		1
6	30.7914-117	Podložka / Scheibe / Washer		8
7	30.7914-126	Konzola / Konsole / Console		1
8	30.7914-127	Konzola / Konsole / Console		1
9	30.7914-141	Plech / Blech / Metal plate		1
10	30.7914-144	Křídlo / Flügel / Wing		1
11	30.7914-146	Stojina / Säule / Pillar		1
12	30.7914-148	Plech / Blech / Metal plate		1
13	30.7914-149	Odkap / Blech / Drain		1
14	30.7914-151	Konzola / Konsole / Console		1
15	30.7914-152	Dveře / Tür / Door		1
16	30.7914-153	Kryt / Deckel / Cover		1
17	30.7914-154	Plech / Blech / Metal plate		1
18	30.7914-155	Kryt / Deckel / Cover		1
19	30.7914-156	Kryt / Deckel / Cover		1
20	30.7914-157	Tyč vodící / Führungsstange / Guiding bar		1
21	30.7914-158	Kryt / Deckel / Cover		1
22	30.7914-159	Dveře / Tür / Door		1
23	30.7914-161	Držák / Halter / Holder		1
24	30.7914-162	Držák / Halter / Holder		1
25	30.7914-163	Stojina / Säule / Pillar		1
26	30.7914-164	Stojina / Säule / Pillar		1
27	90.001.25.018	Šroub / Schraube / Screw	M6x20	6
28	90.005.55.008	šroub se šestihrannou hlavou / Sechskantschraube / Hex head screw	M6x20	8
29	90.150.50.004	Podložka / Scheibe / Washer	d 6,4 DIN 125	15
30	94.012.001	Rukojeť / Griff / Handle		2
31	94.101.005	Zátka / Stopfen / Stopper	40x40x3	2
32	99.100.007	Pant / Türband / Hinge		3



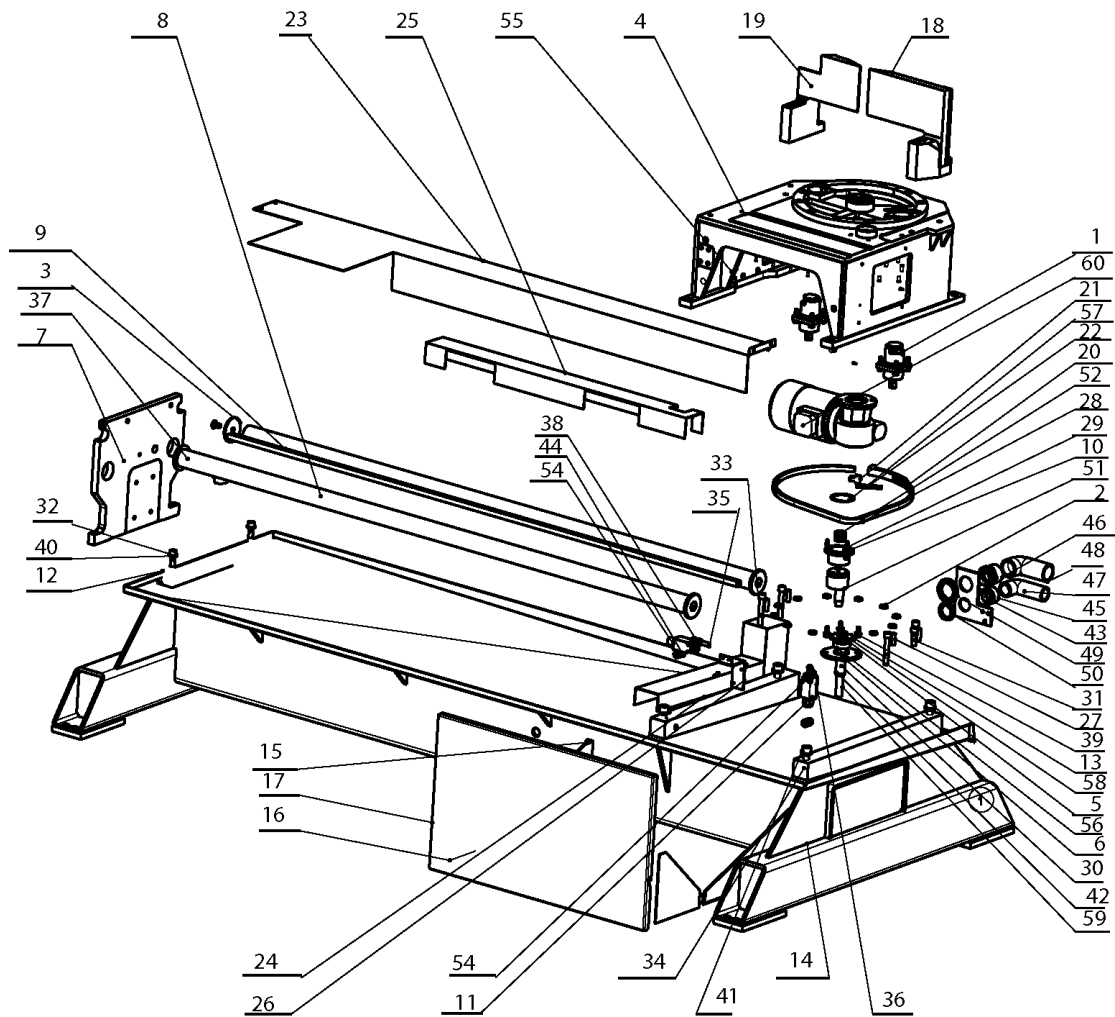
28.9. Konzola otočná / Drehkonsole / Turning console

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.0502-604	Držák ramene / Arm Halter / Arm Holder		1
2	30.0502-610	Držák koncáku / Halter / Holder		1
3	30.0702-008	Pouzdro / Büchse / Bush		1
4	30.0702-012	Víko / Deckel / Cover		1
5	30.0702-013	Šroub / Schraube / Screw		2
6	30.7901-105	Držák / Halter / Holder		1
7	30.7902-001	Konzola otočná / Drehkonsole / Turning console		1
8	30.7902-002	Čep / Bolzen / Pivot		1
9	30.7902-005	Kroužek distanční / Distanzring / Distance ring		1
10	30.7902-008	Držák / Halter / Holder		1
11	30.7902-011	Držák / Halter / Holder		1
12	90.001.25.019	Šroub / Schraube / Screw	M6x25	6
13	90.001.25.035	Šroub / Schraube / Screw	M8x35	2
14	90.001.25.057	Šroub / Schraube / Screw	M12x25	5
15	90.002.2D.017	Šroub / Schraube / Screw	M12x16	1
16	90.005.55.007	Šroub / Schraube / Screw	M10x50	1
17	90.012.50.007	Šroub / Schraube / Screw	M4x30	2
18	90.100.55.005	Matice / Mutter / Nut	M8 DIN 934	2
19	90.100.55.006	Matice / Mutter / Nut	M10 DIN 934	1
20	91.173.007	Koncový spínač / Endschalter / Limit switch		1
21	95.300.002	Ložisko / Lager / Bearing	32008AX	2
22	95.300.009	Ložisko / Lager / Bearing	30206A	1
23	95.830.007	Gufero		1
24	95.850.011	Matice / Mutter / Nut	KM6	1
25	96.001.018	Těsnění / Dichtung / Sealing		2



28.10. Panel / Panel / Panel

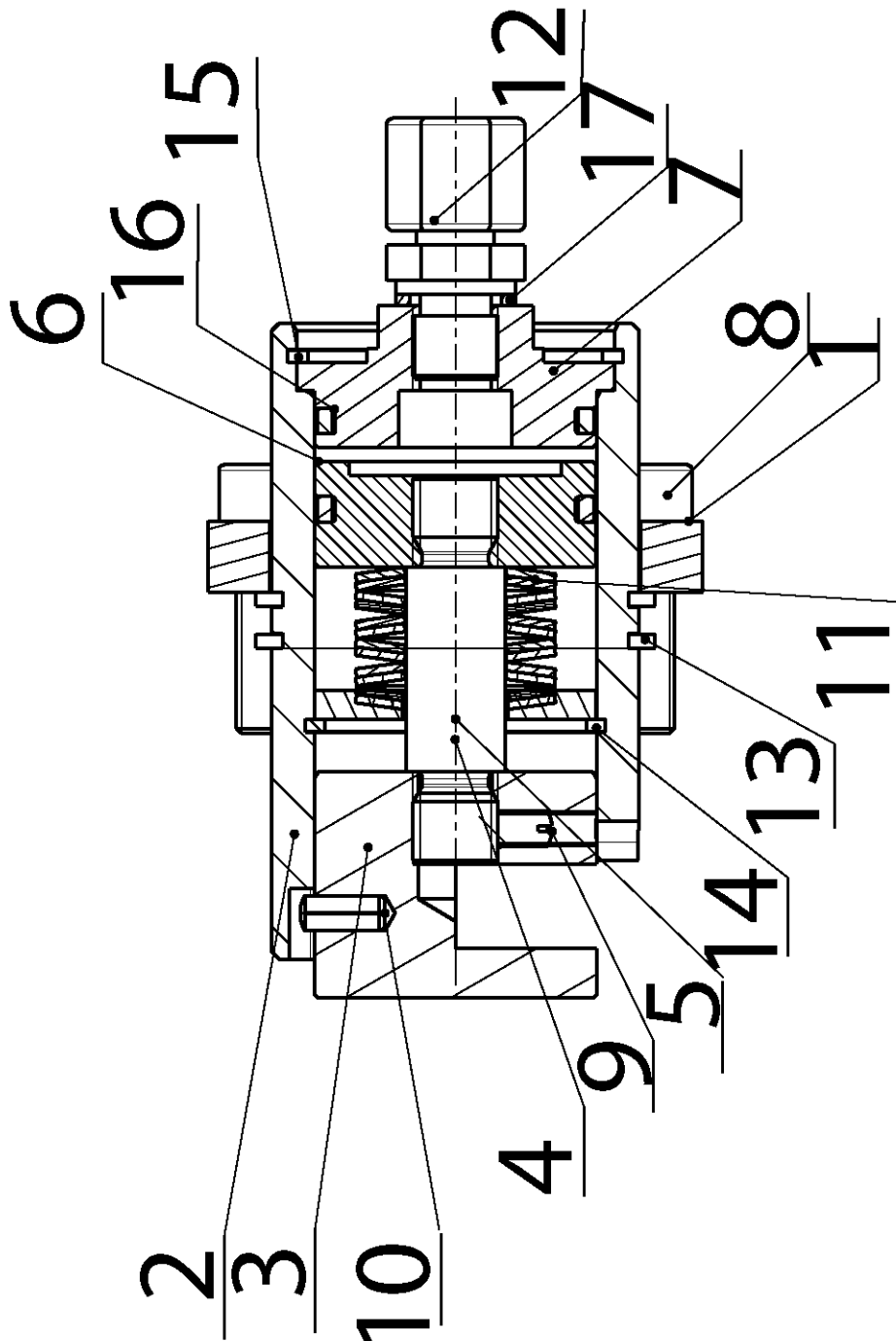
Poz.	Objednací číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Menge	
Pos.	Reference No.	Item	Pcs.	
1.	30.7913-004	Kryt / Deckel / Cover	1	
2.	30.7913-005	Objímka / Klammerstück / Socket	2	
3.	30.7913-006	Příložka / Lasche / Splice plate	2	
4.	30.7913-007	Deska panelu / Deckel / Cover	1	
5.	30.7913-008	Deska panelu / Deckel / Cover	1	
6.	30.7913-009	Pult / Pult / Board	1	
7.	30.8814-207	Kolečko / Rolle / Wheel	1	
8.	31.7913-001	Klávesnice / Tastatur / Keyboard	1	
9.	31.7913-002	Panel tlačítek / Panel / Panel	1	
10.	31.0699-003	Štítek / Schild / Label	1	
11.	90.001.25.016	Šroub / Schraube / Screw	M6x12 DIN 912	4
12.	92.152.001	Ventil škrtící / Drosselventil / Throttle-valve	VS01-04/R 2,5-0	1
13.	93.006.003	Šroubení / Schraube / Screw	G 1/4" - 8/6	2



28.11. Podstavec / Untergestell / Pedestal

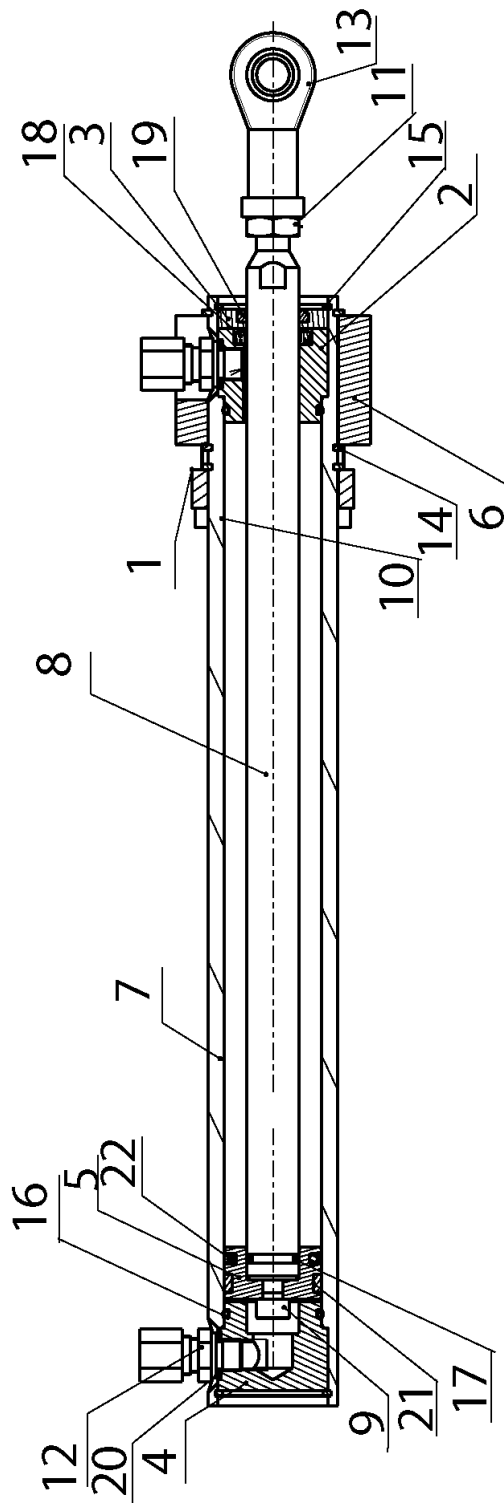
Poz.	Objednáací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.7907-500	Válec / Zylinder / Cylinder		2
2	30.0509-608	Podložka třecí / Scheibe / Washer		12
3	30.1804-010	Podložka jistící / Scheibe / Washer		4
4	30.7901-002	Podstavec / Untergestell / Pedestal		1
5	30.7901-005	Hřídel / Welle / Sh		1
6	30.7901-006	Příruba / Flansche / Flange		1
7	30.7901-014	Čelo / Stirn / Forehead		1
8	30.7901-020	Tyč vodící/ Stange / Bar		2
9	30.7901-022	Tyč odměřování / Stange / Bar		1
10	30.7901-031	Příruba / Flansche / Flange		1
11	30.7901-032	Držák / Halter / Holder		1
12	30.7901-101	Podstavec / Untergestell / Pedestal		1
13	30.7901-103	Kolo / Umlenkrad / Wheel		1
14	30.7901-116	Držák / Halter / Holder		1
15	30.7901-117	Držák / Halter / Holder		1
16	30.7901-118	Konzola / Konsole / Console		2
17	30.7901-120	Kryt / Deckel / Cover		1
18	30.7902-006	Čelist pevná / Feste Backe / Fixed jaw		1
19	30.7902-007	Čelist pevná / Feste Backe / Fixed jaw		1
20	30.7902-104	Držák řetězu / Kettehalter / Chain holder		1
21	30.7902-106	Držák řetězu / Kettehalter / Chain holder		1
22	30.7902-107	Tyč / Stange / Bar		1
23	30.7914-128.3	Kryt / Deckel / Cover		1
24	30.7914-129	Kryt / Deckel / Cover		1
25	30.7914-130	Kryt / Deckel / Cover		1
26	30.7914-131	Konzola / Konsole / Console		1
27	40.302.0Z.006	kolík kuželový / Kegelbolzen / Taper pin		4
28	49.200.020	Řetěz / Kette / Chain		1
29	90.001.25.007	Šroub / Schraube / Screw	M5x10 DIN 912 8,8	3
30	90.001.25.032	Šroub / Schraube / Screw	8x20 DIN 912 8,8	6
31	90.001.25.060	Šroub / Schraube / Screw	M12x40 DIN 912 8,8	2
32	90.001.25.061	Šroub / Schraube / Screw	M12x45 DIN 912 8,8	2
33	90.001.25.065	Šroub / Schraube / Screw	M12x80DIN 912 8,8	3
34	90.001.25.074	Šroub / Schraube / Screw	M16x45 DIN 912 8,8	4
35	90.005.55.028	šroub se šestihrannou hlavou / Sechskantschraube / Hex head screw	M10x50	1
36	90.011.27.003	Šroub zápuštěný/ Countersunk screw / Senkschraube	M5x10	2
37	90.011.27.009	Šroub zápuštěný/ Countersunk screw / Senkschraube	M12x20	4
38	90.100.55.006	Matice / Mutter / Nut	M10	1
39	90.150.50.005	Podložka / Scheibe / Washer	d8,4	4
40	90.150.50.007	Podložka / Scheibe / Washer	d13	2
41	90.150.50.009	Podložka / Scheibe / Washer	d17	4

42	90.151.50.005	Podložka / Scheibe / Washer	d8	2
43	90.7914-128-2	Konzola / Konsole / Console	P5	1
44	91.070.011	Vývodka / Ausführung / Bushing	M16x1,5	5
45	91.071.004	Vývodka / Ausführung / Bushing	PG29	1
46	91.071.005	Vývodka / Ausführung / Bushing	PG36	1
47	91.071.025	Průchodka úhlová / Winkeltülle / Angle feed through		1
48	91.071.028	Průchodka úhlová / Winkeltülle / Angle feed through		1
49	91.072.007	Matice / Mutter / Nut	PG29	1
50	91.072.008	Matice / Mutter / Nut	PG36	1
51	91.103.101	Čidlo / Sensor / Sensor	IRC GO356.B2551	1
52	91.103.102	Spojka / Konjunktion / Conjunction		1
53	91.173.007	Spínač koncový /Endschalter / Limit switch - lock		1
54	91.173.008	Spínač koncový /Endschalter / Limit switch - lock		1
55	94.700.001	Doraz / Anschlag / Length stop		2
56	95.001.008	Kuličkové ložisko / Kugellager / Ball bearing	6005 2RS	1
57	95.801.010	Pojistný kroužek / Sicherungsring / Retaining ring		1
58	95.810.005	Pero těsné / Passfeder / Feather		1
59	95.810.xxx	Pero těsné / Passfeder / Feather		2
60	99.001.029	Převodovka šneková / Schneckengetriebe / Worm gearbox	MVF44/F20-0,37	1



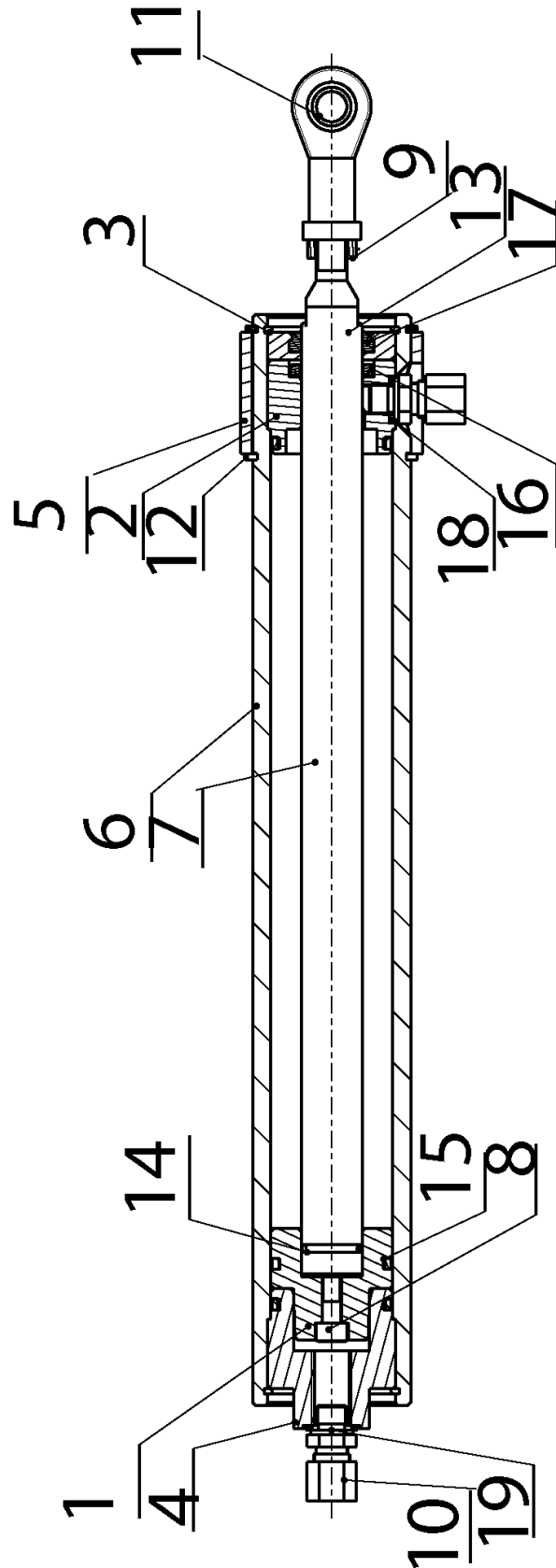
28.12. Válec fixační / Zylinder fix /Cylinder

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.3511-009	Příložka / Lasche / Splice plate		1
2	30.7907-501	Trubka / Rohr / Tube		1
3	30.7907-503	Píst / Kolben / Piston		1
4	30.7907-504	Táhlo / Zugstange / Draw bar		1
5	30.7907-505	Podložka / Scheibe / Washer		1
6	30.7907-507	Píst / Kolben / Piston		1
7	30.7907-508	Víko / Deckel / Cover		1
8	90.00125.034	Šroub / Schraube / Screw	M8x30	1
9	90.003.2D.003	Šroub / Schraube / Screw	M5x12	4
10	90.303.0Z.006	Kolík / Bolzen / Pin	5x12	1
11	90.350.0Z.014	Pružina / Feder / Spring	28x14x2x1,25	12
12	92.002.101	Šroubení přímé / Gerade Verschraubung / Straight screwing		1
13	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring	d52	2
14	95.801.005	Pojistný kroužek / Sicherungsring / Retaining ring	d40	1
15	95.801.007	Pojistný kroužek / Sicherungsring / Retaining ring	d45	1
16	96.002.017	O-Kroužek / Ring / Ring	34x3	2
17	96.082.002	Kroužek těsnící / Dichtungsring / Sealing ring	13/17	1



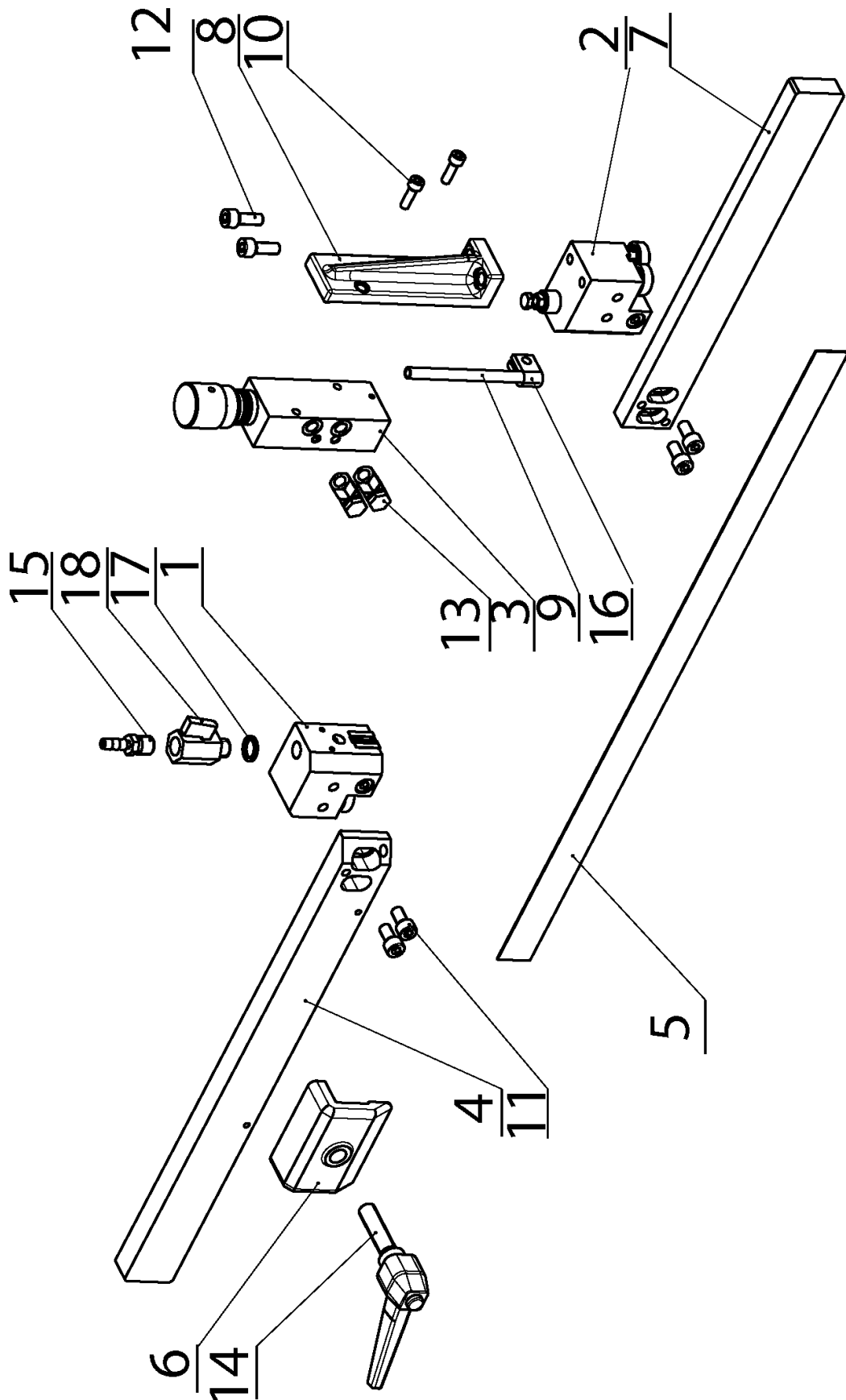
28.13. Válec / Zylinder / Cylinder

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.6803-006	Víko / Deckel / Cover		1
2	30.6807-103	Víko / Deckel / Cover		1
3	30.6807-104	Víko / Deckel / Cover		1
4	30.6807-105	Víko / Deckel / Cover		1
5	30.6807-106	Píst / Kolben / Piston		1
6	30.7903-015	Kostka / Würfel / Cube		1
7	30.7907-401	Válec / Zylinder / Cylinder		1
8	30.7907-402	Pístnice / Kolbenstange / Piston rod		1
9	90.001.25.017	Šroub / Schraube / Screw	M6x16 DIN 912 8,8	1
10	90.001.25.018	Šroub / Schraube / Screw	M6x20 DIN 912 8,8	4
11	90.101.55.009	Matice / Mutter / Nut	M10x1,25	1
12	92.002.102	Šroubení / Schraubung / Screwing	S-GEV-8LLR G1/8-8	2
13	95.170.001	Hlavice / Kopf / Jugulum	M10x1,25	1
14	95.800.015	Pojistný kroužek / Sicherungsring / Retaining ring	d40	3
15	95.801.026	Pojistný kroužek / Sicherungsring / Retaining ring	d34	2
16	96.001.008	O-Kroužek / Ring / Ring	26x2	2
17	96.002.006	O-Kroužek / Ring / Ring	12x2	1
18	96.041.001	U-manžeta	16x24x4	1
19	96.060.001	Kroužek stírací / Abstreifring / Wiping ring	16x22	1
20	96.082.001	Kroužek těsnící / Dichtungsring / Sealing ring	.10/14	2
21	96.084.002	Kroužek vodící / Führungsring / Guiding ring	D 30	1
22	96.900.007	Těsnění / Dichtung / Sealing	PW 4100300	1



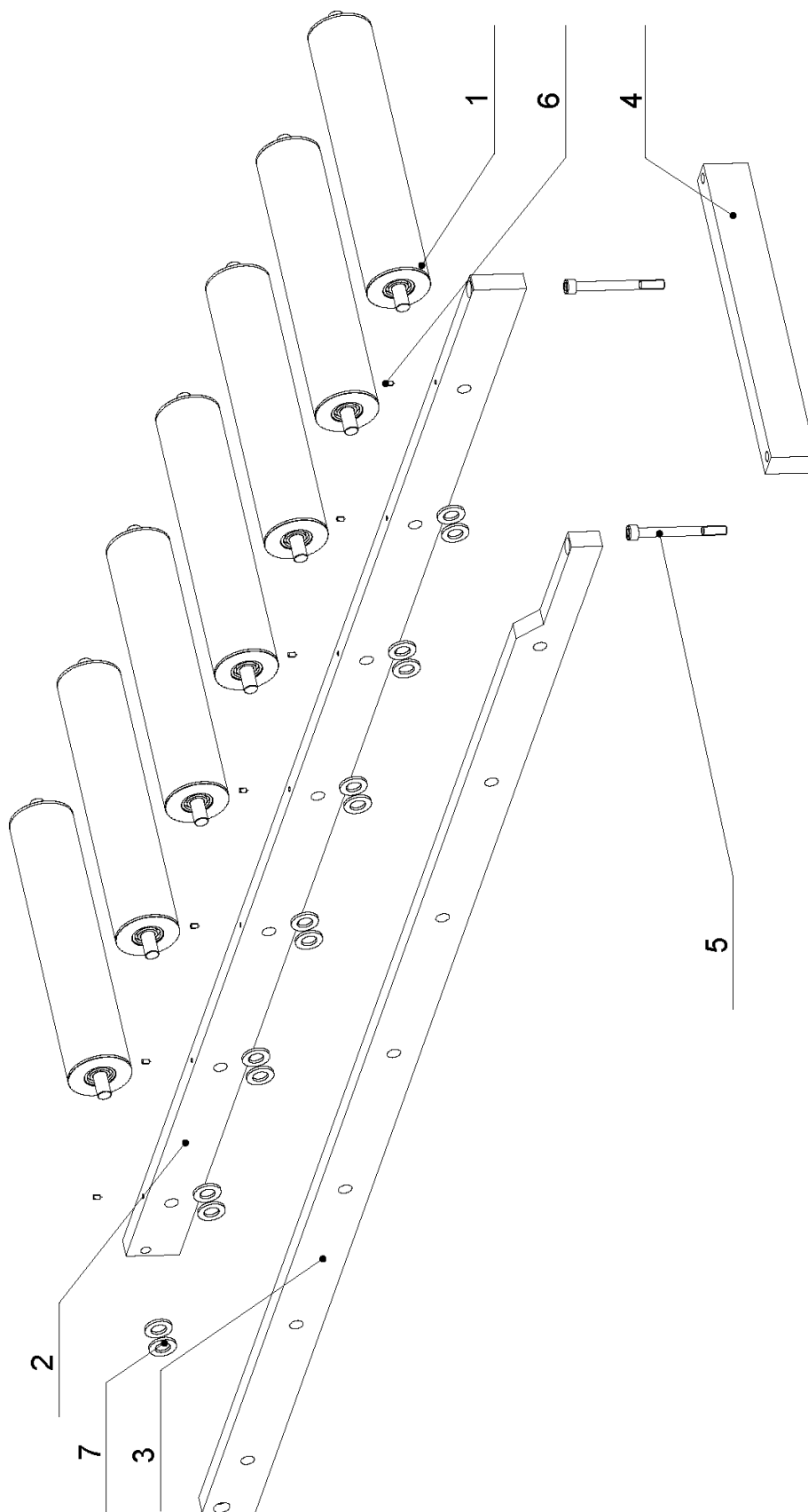
28.14. Válec pomocný / Zylinder / Help cylinder

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 / Zufuhr / Inflow		1
3	30.2107-003	Víko / Deckel / Cover		1
4	30.2107-004	Víko zadní / Deckel / Cover		1
5	30.7903-015	Kostka / Würfel / Cube		1
6	30.7907-101	Válec Hydraulický / Hydraulikzylinder / Hydraulic cylinder		1
7	30.7907-102	Pístnice / Kolbenstange / Piston rod		1
8	90.001.25.019	Šroub / Schraube / Screw		1
9	90.101.55.009	Matice / Mutter / Nut	M10x1,25	1
10	92.002.102	Šroubení / Schraubung / Screwing	S-GEV-8LLR G1/8-8	2
11	95.170.001	Hlavice / Kopf / Jugulum	M10x1,25	1
12	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring	d52	2
13	95.801.006	Pojistný kroužek / Sicherungsring / Retaining ring	d42	2
14	96.002.007	O-Kroužek / Ring / Ring	16x2	1
15	96.002.017	O-Kroužek / Ring / Ring	34x3	3
16	96.041.002	U-Manžeta / Manschette / Sleeve	20x28x4	1
17	96.060.002	Kroužek stírací / Abstreifring / Wiping ring	20	1
18	96.082.001	Kroužek těsnící / Dichtungsring / Sealing ring	.10/14	1
19	96.082.002	Kroužek těsnící / Dichtungsring / Sealing ring	13/17	1



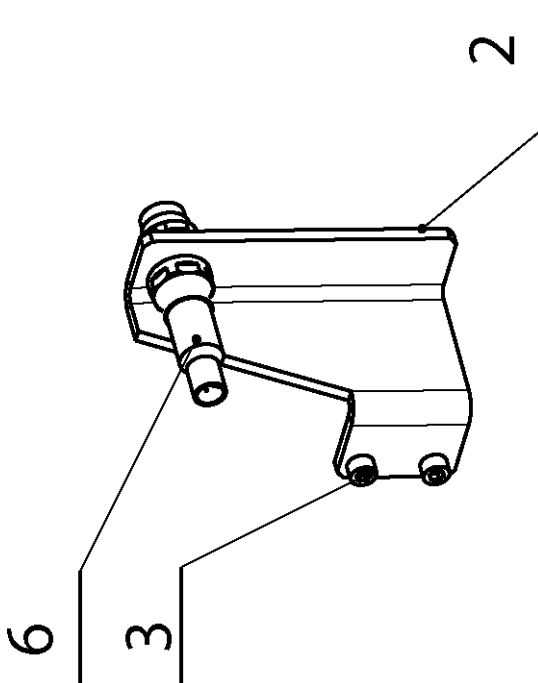
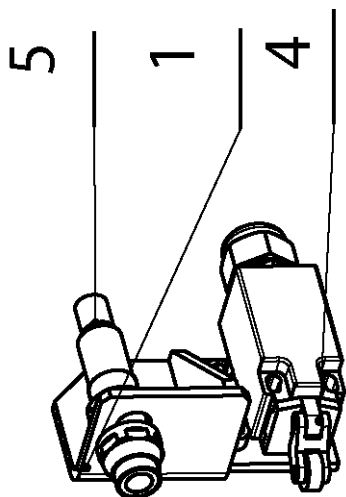
28.15. Vedení pásu / Bandführung / Band guiding

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.0110-100	Kostka vodící levá/ Linke Führungsplatte / Left guiding cube		1
2	201.2810-200	Kostka vodící pravá / Rechte Führungsplatte / Right guiding cube		1
3	251.218	Regulace přtlaku / Schnittdruckregulation / Pressure regulation		1
4	30.0104-015	Lišta / Leiste / Listel		1
5	30.0504-961	Pás / Band / Band		1
6	30.0704-010	Upínka / Spanneisen / Clamp		1
7	30.0704-014	Lišta / Leiste / Listel		1
8	30.2804-001	Držák / Halter / Holder		1
9	30.3510-004	Trubka / Rohr / Tube		1
10	90.001.25.018	Šroub / Schraube / Screw		2
11	90.001.25.031	Šroub / Schraube / Screw		4
12	90.001.25.104	Šroub / Schraube / Screw		2
13	92.003.104	Šroubení natáčecí / Winkelverschraubung / Swivelling screw		1
14	94.008.009	Utahovací páka / Spannhebel / Tightening lever		1
15	94.202.002	Redukce / Reduktion / Reduction		1
16	94.204.001	Držák hadice / Schlauchhalter / Hose holder		1
17	96.080.001	Kroužek / Ring / Ring		1
18	99.260.001	Ventil kulovy / Kugelventil / Ball valve		1



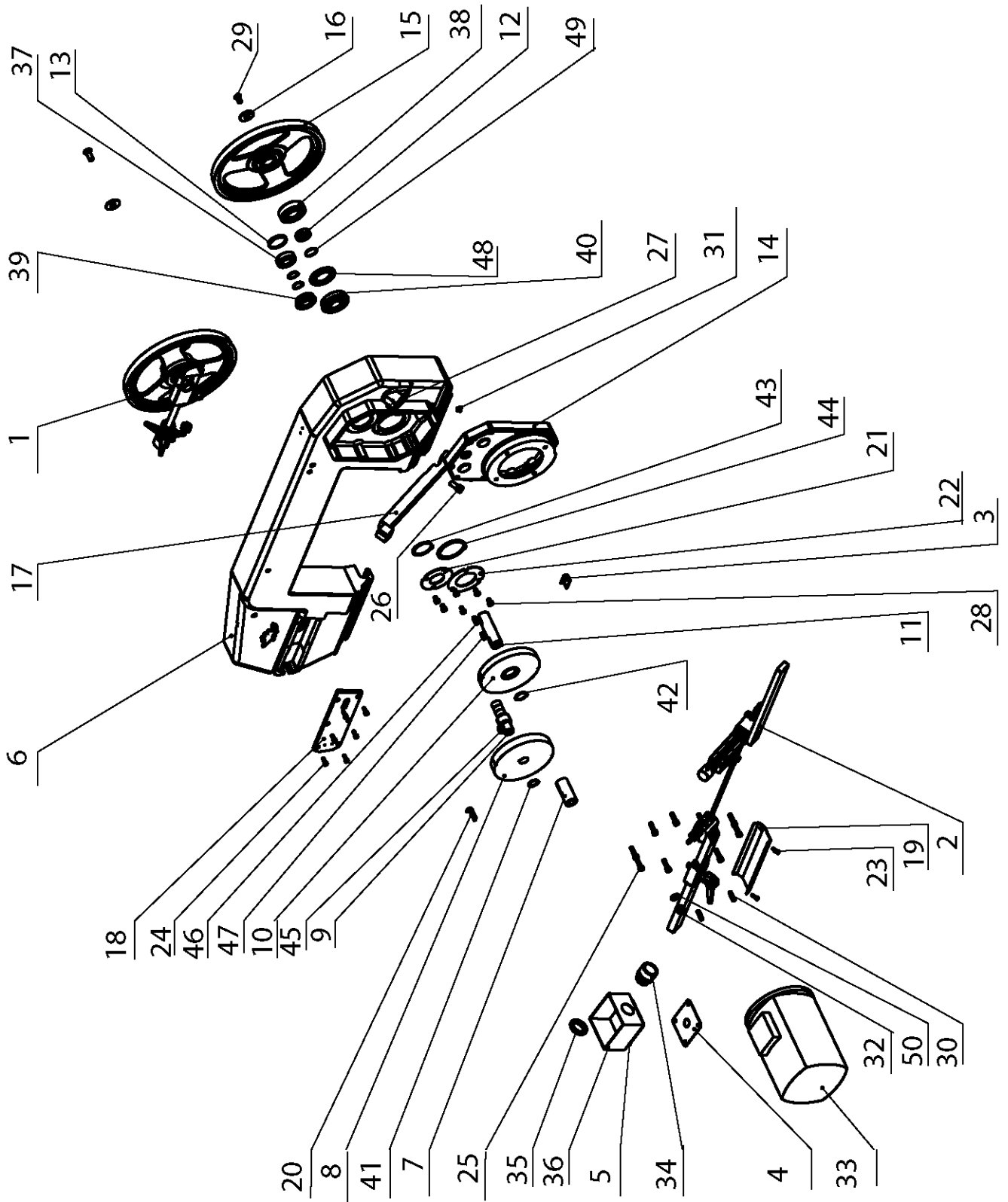
28.16. Válečková trať / Rollenbahn / Roll conveyor

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	201.7911-210	Váleček / Rolle / Roller	7
2	30.7911-201	Tyč / Stange / Bar	1
3	30.7911-202	Tyč / Stange / Bar	1
4	30.7911-203	Hranol / Prisma / Prism	1
5	90.001.25.069	Šroub / Schraube / Screw M10x100 DIN 912	2
6	90.003.2D.002	Šroub / Schraube / Screw M5x10 DIN 914	7
7	90.150.50.009	Podložka / Scheibe / Washer d17 DIN 125	21



28.17. Závora optická / Lichtsperre / Laser beam

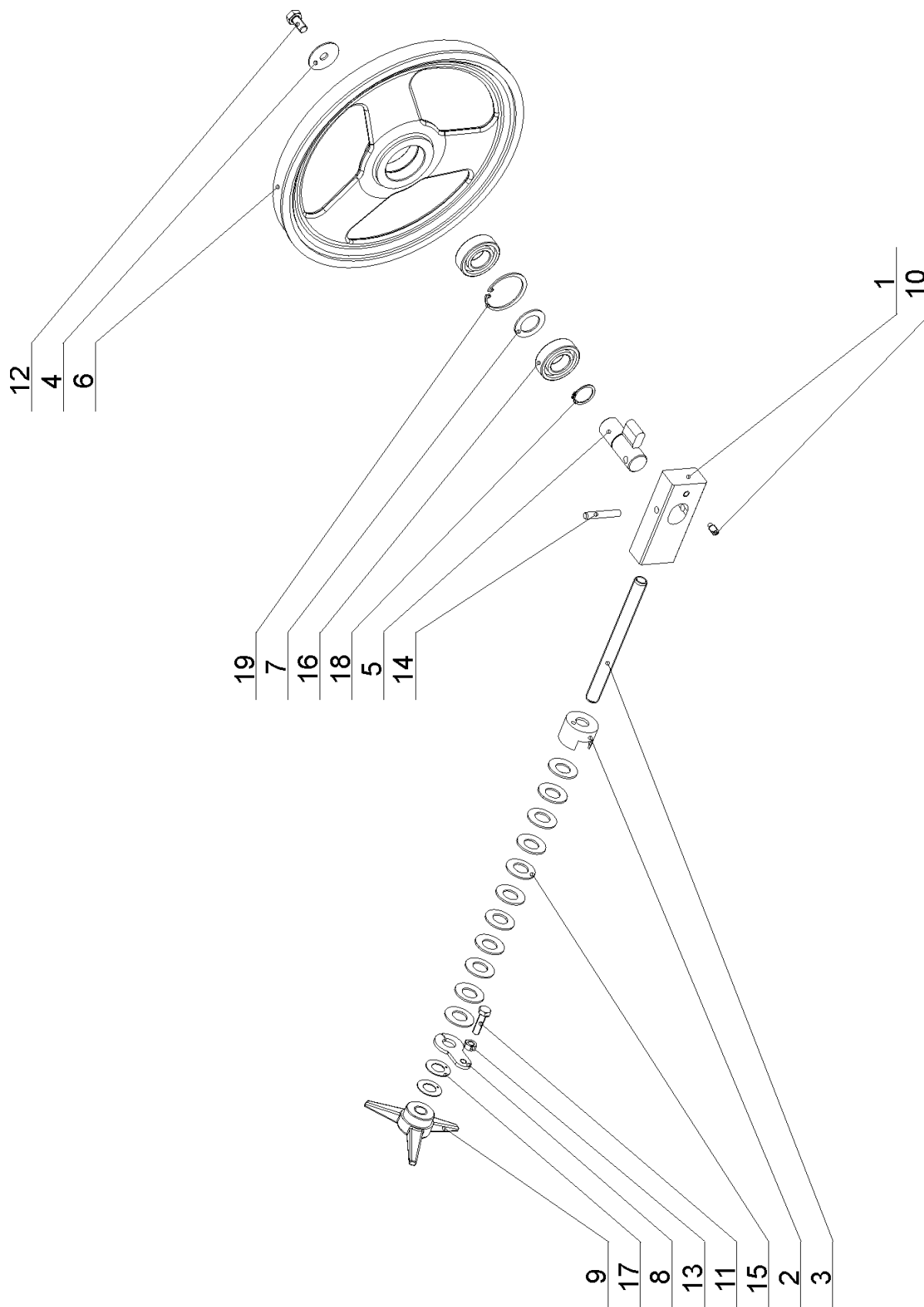
Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.7911-311	Držák / Halter / Holder		1
2	30.7911-312	Držák / Halter / Holder		1
3	90.001.25.015	Šroub / Schraube / Screw	M6x10 DIN 912 8,8	4
4	91.173.009	Koncový spínač / Endschalter / Limit switch		1
5	91.400.001	Snímač / Sensor / Sensor		1
6	91.400.002	Snímač / Sensor / Sensor		1



28.18. Rameno / Sägerahmen / Saw band - 251.038

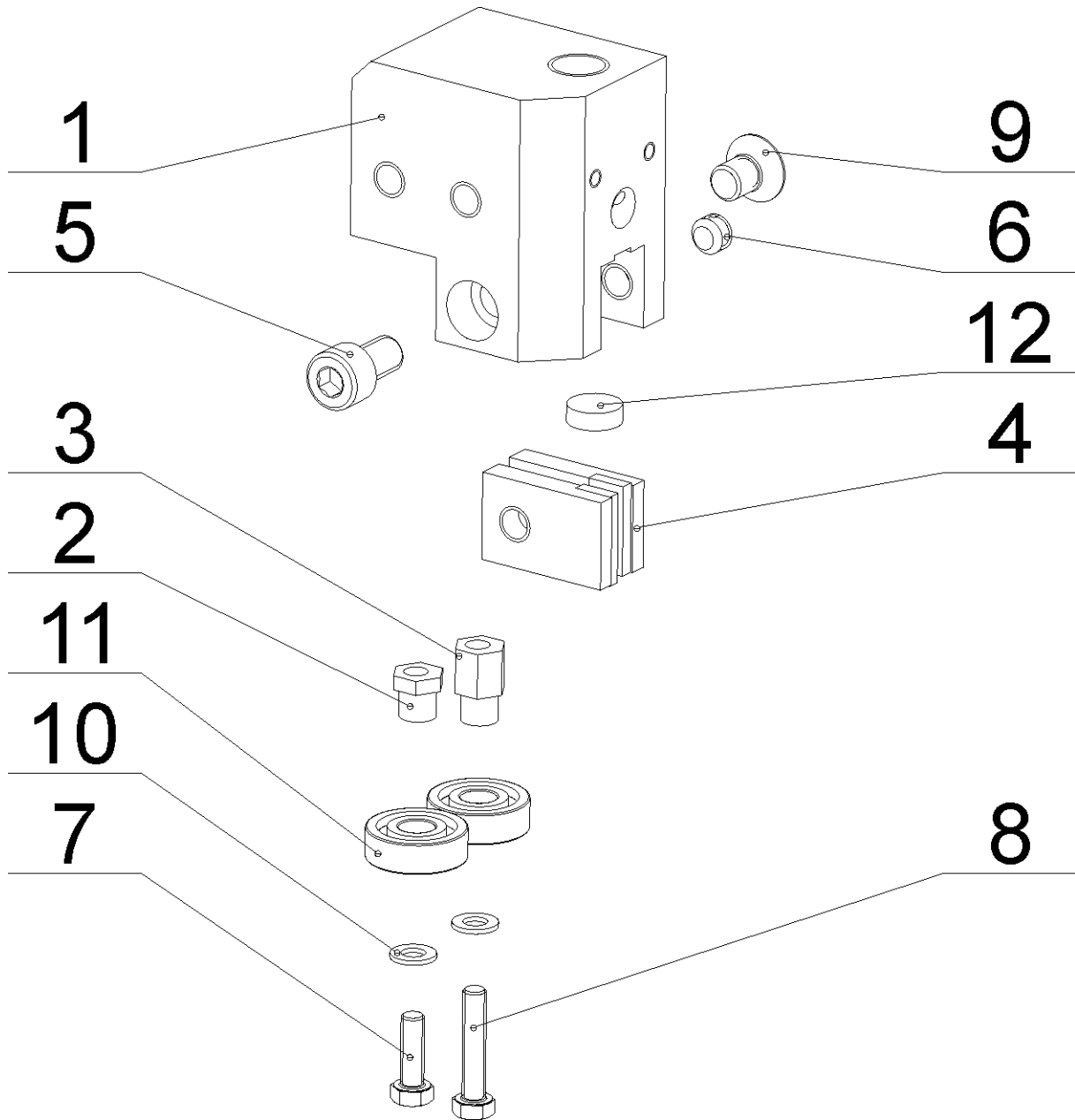
Poz.	Objednáací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	201.0508-000	Napínání / Spannung / Stretching		1
2	201.2810-000	Vedení pásu / Bandführung / Band guiding		1
3	30.0104-029	Úchytka / Halter / Angle		1
4	30.0504-010	Plech elektro/ Blech / Metal plate		1
5	30.0504-011	Guma /Gummi / Gum		1
6	30.0504-751	Rameno / Sägerahmen / Saw arm		1
7	30.0505-002	Pastorek / Ritzel / Pinion		1
8	30.0505-003	Kolo / Umlenkrad / Wheel		1
9	30.0505-004	Předloha / Vorgelege / Countershaft		1
10	30.0505-005	Kolo / Umlenkrad / Wheel		1
11	30.0505-007	Hřídel / Welle / Shaft		1
12	30.0505-009	Kroužek / Ring / Ring		1
13	30.0505-013	Zátka převodovky / Stopfen / Stopper		1
14	30.0505-201	Víko převodovky / Deckel / Gearbox cover		1
15	30.0505-701	Kolo hnací / Antriebsrad / Driving wheel		1
16	30.0508-002	Podložka / Scheibe / Washer		1
17	30.0514-901	Držák / Halter / Holder		1
18	30.0704-007	Víko napínání / Sägebandspannungsdeckel / Stretching cover		1
19	30.0704-021	Kryt pásu / Banddeckel / Band cover		1
20	30.0704-032	Příložka / Lasche / Splice plate		1
21	81.0105-007	Příložka / Lasche / Splice plate		1
22	81.0505-010	Příložka / Lasche / Splice plate		1
23	90.001.25.009	Šroub / Schraube / Screw	M5x16 DIN 912 8,8	2
24	90.001.25.017	Šroub / Schraube / Screw	M6x16 DIN 912 8,8	6
25	90.001.25.034	Šroub / Schraube / Screw	M8x30 DIN 912 8,8	10
26	90.001.25.057	Šroub / Schraube / Screw	M12x25 DIN 912 8,8	2
27	90.004.2D.001	Šroub / Schraube / Screw	M6x8	1
28	90.005.55.013	šroub se šestihrannou hlavou / Sechskantschraube / Hex head screw	M8x12	6
29	90.011.27.008	Šroub zápusťný/ Countersunk screw / Senkschraube	M10x20	1
30	90.302.0Z.002	Kolík / Bolzen / Pin	8x30	2
31	90.400.5Z.001	Zátka / Stopfen / Stopper	10x1 DIN 908	1
32	90.400.5Z.002	Zátka / Stopfen / Stopper	16x1,5 DIN 908	1
33	91.001.007	Motor / Motor / Motor		1
34	91.071.004	Matice / Mutter / Nut		1
35	91.072.007	Vývodka / Ausführung / Bushing	PG29	1
36	91.190.004	Krabice elektro / Buchse / Cross		1
37	95.001.018	Kuličkové ložisko / Kugellager / Ball bearing	6205 2RS	1
38	95.001.025	Kuličkové ložisko / Kugellager / Ball bearing	6306 2RS	1
39	95.003.002	Ložisko / Lager / Bearing	6205AN	1
40	95.003.003	Ložisko / Lager / Bearing	636AN	1
41	95.800.012	Pojistný kroužek / Sicherungsring / Retaining ring	d25 DIN 471	3
42	95.800.013	Pojistný kroužek / Sicherungsring / Retaining ring	d30 DIN471	1
43	95.800.019	Pojistný kroužek / Sicherungsring / Retaining ring	d52DIN 471	1

44	95.800.026	Pojistný kroužek / Sicherungsring / Retaining ring	d72 DIN 471	1
45	95.810.006	Pero těsné / Passfeder / Feather	20	1
46	95.810.007	Pero těsné / Passfeder / Feather	8x7x25	1
47	95.810.023	Pero těsné / Passfeder / Feather	8x7x22	1
48	95.830.005	Gufero / Dichtung / Sealing	40x72x7	1
49	96.002.034	O-Kroužek / Ring / Ring	30x2	1
50	96.081.001	Kroužek těsnící / Dichtungsring / Sealing ring	25x15x3	1



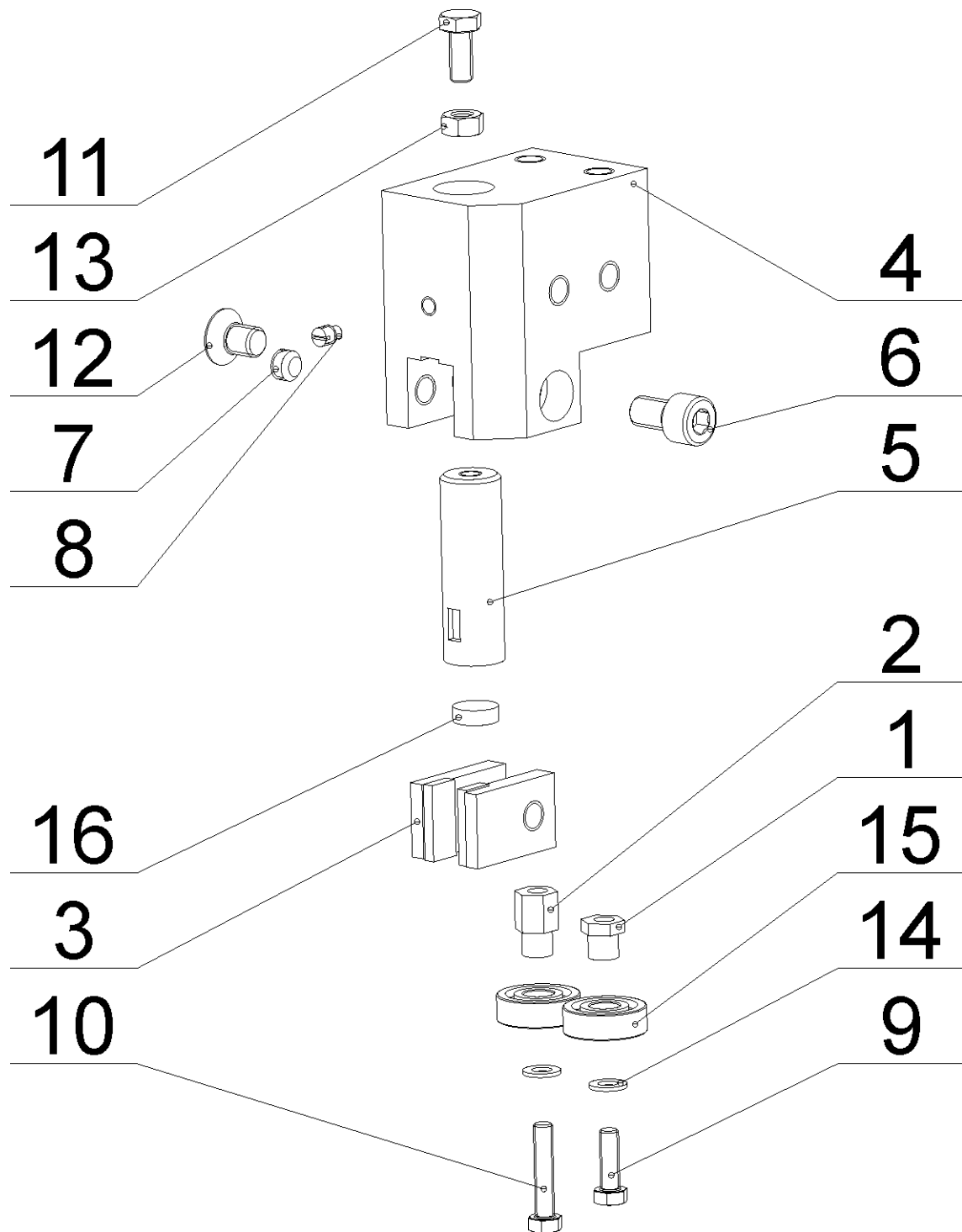
28.19. Napínání pilového pásu / Sägebandspannung / Saw band stretching

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0104-002	Hranol / Prisma / Prism	1
2	30.0104-004	Držák pružiny / Federhalter / Spring holder	1
3	30.0303-005	Šroub / Schraube / Screw M16	1
4	30.0505-011	Podložka / Scheibe / Washer	1
5	30.0508-004	Čep napínání / Spannungsbolzen / Stretching pivot	1
6	30.0508-701	Napínací kolo / Umlenkrad / Stretching wheel	1
7	30.0702-023	Distanční kroužek / Distanzring / Distance ring	1
8	30.0704-025	Příložka / Lasche / Splice plate	1
9	31.0104-006	Hvězdice / Stern / Star	1
10	90.004.2D.008	Šroub / Schraube / Screw M8x16 DIN 915	1
11	90.005.55.017	Šroub / Schraube / Screw M8x30 DIN 933	1
12	90.005.55.023	Šroub / Schraube / Screw M10x20 DIN 933	1
13	90.100.55.005	Maticice / Mutter / Nut M8 DIN 934	1
14	90.300.0Z.012	Válcový kolík / Zylinderstift / Cylindrical pin 8x50 DIN 6325	1
15	90.350.0Z.002	Talířová pružina / Tellerfeder / Belleville spring 35.5x18.3x2.0x2.8	11
16	95.001.018	Ložisko / Lager / Bearing 2RS 6205	2
17	95.750.001	Kroužek / Ring / Ring Cu 16x1	2
18	95.800.012	Pojistný kroužek / Sicherungsring / Retaining ring Ø25 DIN 471	1
19	95.801.009	Pojistný kroužek / Sicherungsring / Retaining ring Ø52 DIN 472	1



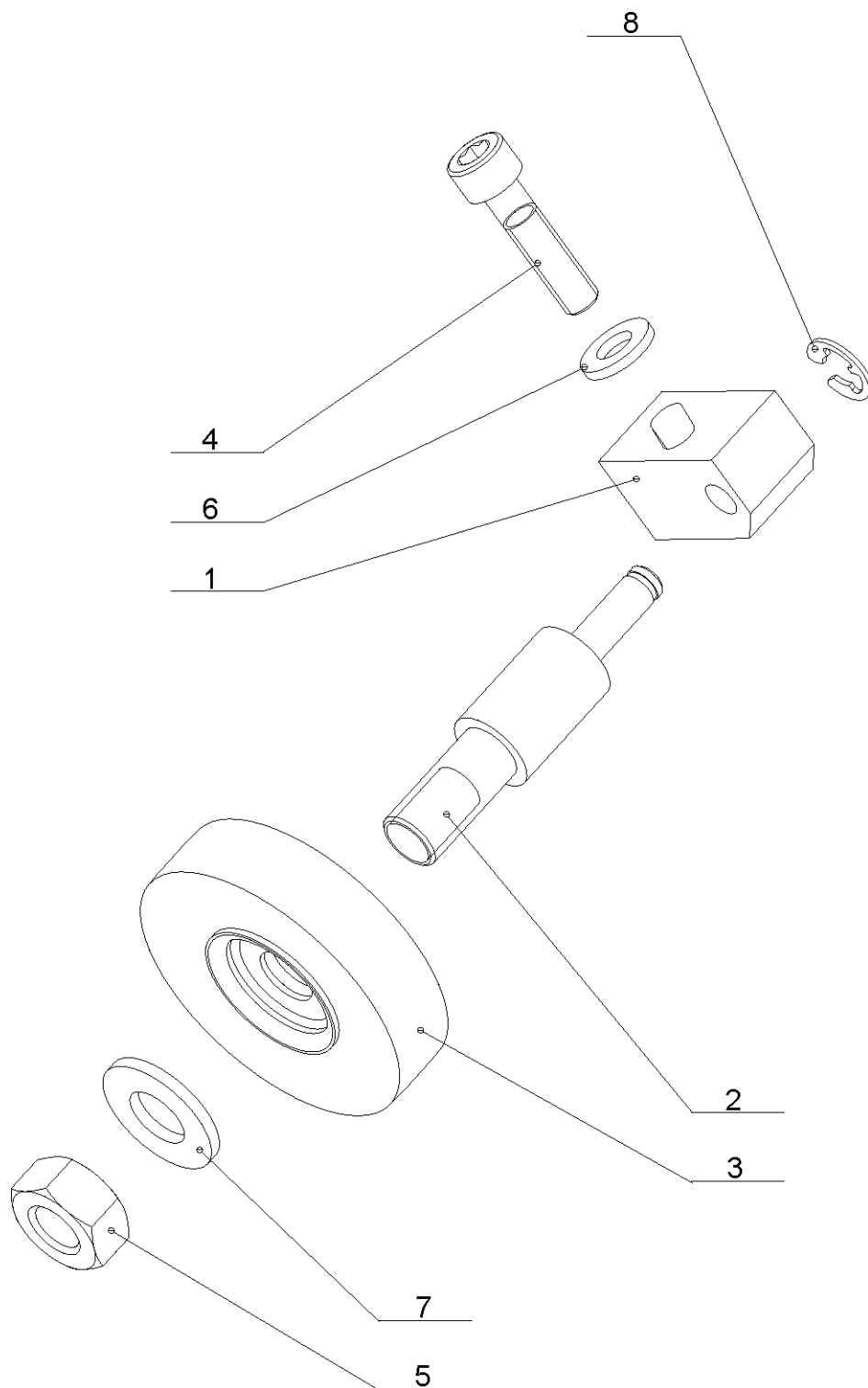
28.20. Levá vodící kostka / Linker Führungsklotz / Left guiding cube

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0104-017	Levá vodící kostka / Linker Führungsklotz / Left guiding cube	1
2	30.0104-018	Excentr / Exzenter / Eccentric	1
3	30.0104-019	Excentr / Exzenter / Eccentric	1
4	30.0104-020	Držák tvrdokovu / HM-Halter / HM holder	2
5	90.001.55.082	Šroub / Schraube / Screw M8x14 DIN 912 8.8	1
6	90.002.2D.009	Šroub / Schraube / Screw M8x6 DIN 912 45H	1
7	90.005.55.003	Šroub / Schraube / Screw M5x16 DIN 933 8.8	1
8	90.005.55.005	Šroub / Schraube / Screw M5x25 DIN 933 8.8	1
9	90.011.27.007	Šroub / Schraube / Screw M8x12 DIN 7991 10.9	1
10	90.150.50.003	Podložka / Scheibe / Washer Ø5,3 DIN 125	2
11	95.001.001	Ložisko / Lager / Bearing 608 2RS	2
12	99.040.002	Tvrdokov / HM-Segment / Hardmetal Ø12x4	1

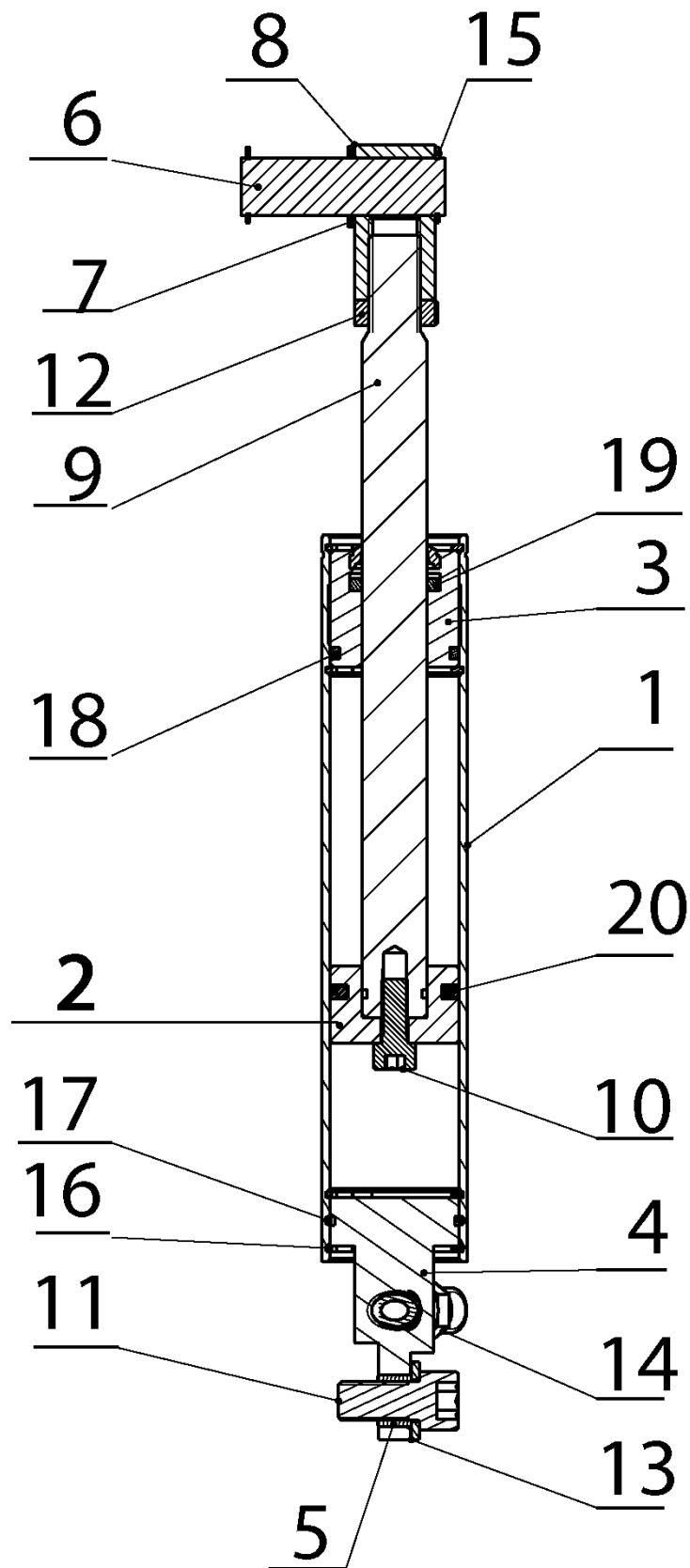


28.21. Pravá vodící kostka / Rechter Führungsklotz / Right guiding cube

Poz.	Objednací číslo	Název položky	ks
Pos.	Bestell - Nr.	Bezeichnung	Menge
Pos.	Reference No.	Item	Pcs.
1	30.0104-018	Excentr / Exzenter / Eccentric	1
2	30.0104-019	Excentr / Exzenter / Eccentric	1
3	30.0104-020	Držák tvrdokovu / HM-Halter / HM holder	2
4	30.2804-002	Pravá vodící kostka / Rechter Führungsklotz / Right guiding cube	1
5	30.3510-002	Držák tvrdokovu / HM-Halter / HM holder	1
6	90.001.55.082	Šroub / Schraube / Screw M8x14 DIN 912 8.8	1
7	90.002.2D.009	Šroub / Schraube / Screw M8x6 DIN 912 45H	1
8	90.004.2D.017	Šroub / Schraube / Screw M5x8 DIN 915 45H	1
9	90.005.55.003	Šroub / Schraube / Screw M5x16 DIN 933 8.8	1
10	90.005.55.005	Šroub / Schraube / Screw M5x25 DIN 933 8.8	1
11	90.005.55.007	Šroub / Schraube / Screw M6x16 DIN 933 8.8	1
12	90.011.27.007	Šroub / Schraube / Screw M8x12 DIN 7991 10.9	1
13	90.100.55.004	Matice / Mutter / Nut M6 DIN 934 8.8	1
14	90.150.50.003	Podložka / Scheibe / Washer Ø5,3 DIN 125	2
15	95.001.001	Ložisko / Lager / Bearing 608 2RS	2
16	99.040.002	Tvrdokov / HM-Segment / Hardmetal Ø12x4	1

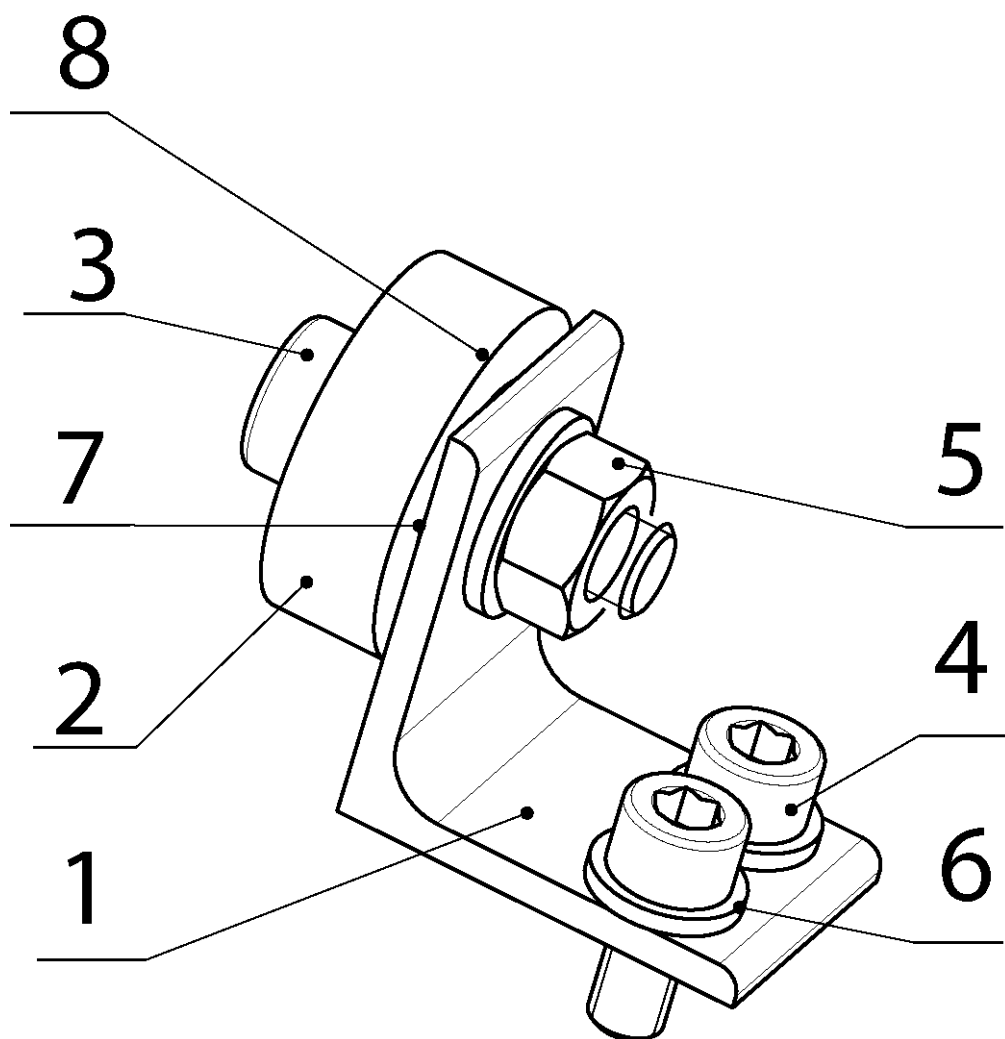
**28.22. Kartáček / Spänbürste / Brush**

Poz.	Objednací číslo	Název položky	ks	
Pos.	Bestell - Nr.	Bezeichnung	Menge	
Pos.	Reference No.	Item	Pcs.	
1	30.0104-022	Držák kartáčku / Bürstenhalterung / Brush holder	1	
2	30.0704-029	Hřídel kartáčku / Bürstenwelle / Brush shaft	1	
3	31.0704-031	Kartáček / Bürste / Brush	1	
4	90.001.25.019	Šroub / Schraube / Screw	M6x25 DIN 912	1
5	90.100.55.006	Maticice / Mutter / Nut	M10 DIN 934	1
6	90.150.50.004	Podložka / Scheibe / Washer	Ø6,4 DIN 125	1
7	90.150.50.006	Podložka / Scheibe / Washer	Ø10,5 DIN 125	1
8	95.800.001	Pojistný kroužek / Sicherungsring / Retaining ring	Ø6 DIN 471	1



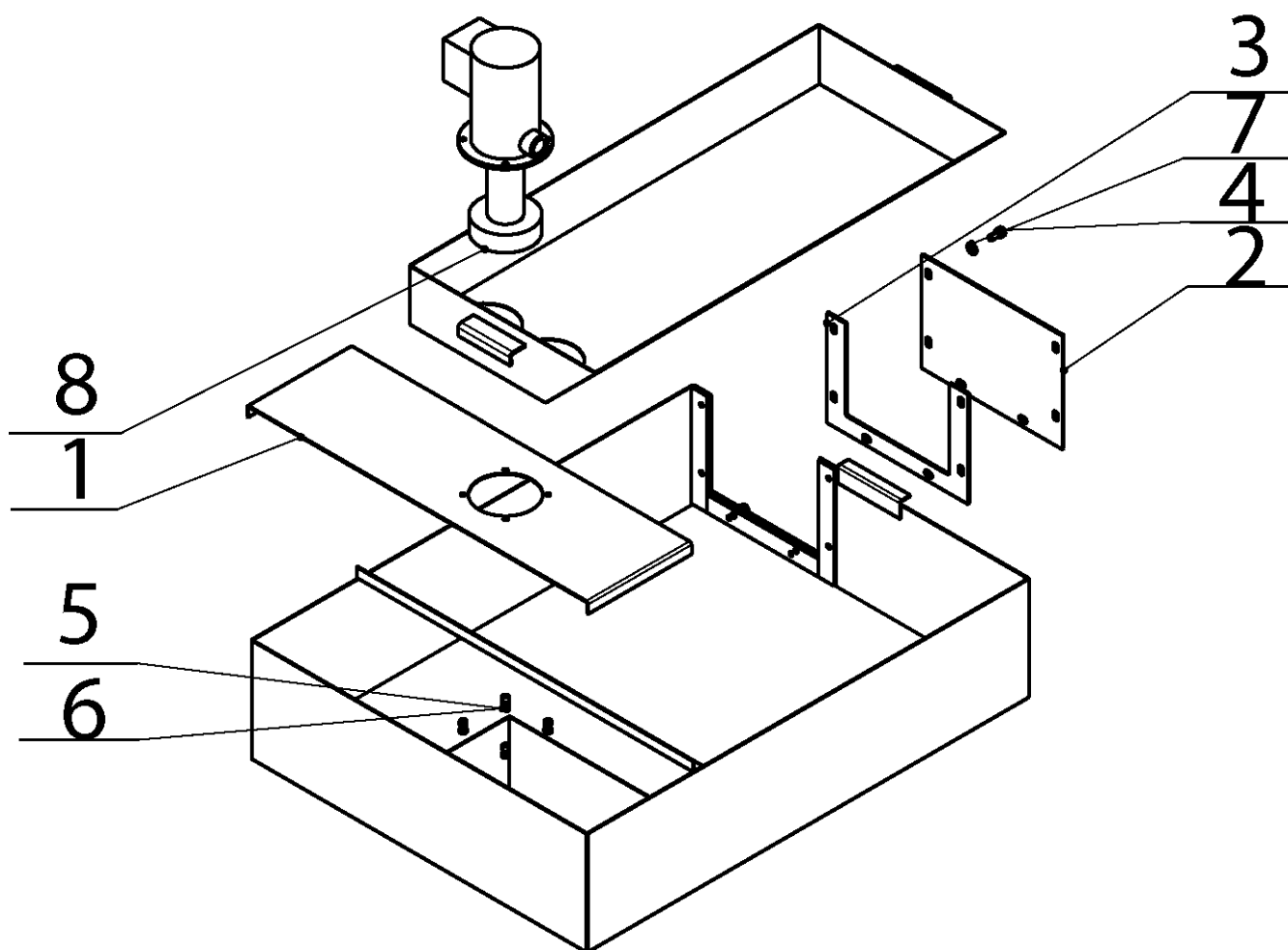
28.23. Zvedací válec / Zylinder / Cylinder

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.0507-901	Válec / Zylinder / Cylinder		1
2	30.0507-902	Píst / Kolben / Piston		1
3	30.0507-903	Víko horní / Deckel / Top cover		1
4	30.0507-904	Držák / Halter / Holder		1
5	30.0507-913	Pouzdro / Büchse / Bush		1
6	30.0514-904	Čep / Bolzen / Pivot		1
7	30.0514-905	Kroužek distanční / Distanzring / Distance ring		1
8	30.0807-006	Držák pístnice / Kolbenstangehalter / Piston rod holder		1
9	30.2807-003	Pístnice / Kolbenstange / Piston rod		1
10	90.001.25.032	Šroub / Schraube / Screw		2
11	90.001.25.057	Šroub / Schraube / Screw		1
12	90.101.55.003	Matice / Mutter / Nut		1
13	90.150.50.007	Podložka / Scheibe / Washer		1
14	92.002.001	Šroubení / Schraubung / Screwing		1
15	95.800.008	Pojistný kroužek / Sicherungsring / Retaining ring		2
16	95.801.005	Pojistný kroužek / Sicherungsring / Retaining ring		4
17	96.001.010	O kroužek / O Ring / O Ring		1
18	96.002.017	O kroužek / O Ring / O Ring		1
19	96.041.002	Těsnící manžeta / Dichtungsmanschette / Gasket		1
20	96.900.002	Těsnění / Dichtung / Sealing		1



28.24. Kladka / Rolle / Pulley

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.7914-121	Držák / Halter / Holder		1
2	30.7914-122	Kladka / Rolle / Pulley		1
3	90.001.25.033	Šroub / Schraube / Screw	M8x25	1
4	90.001.25.092	Šroub / Schraube / Screw	M6x14	2
5	90.100.55.005	Maticice / Mutter / Nut	M8x25 DIN 934	1
6	90.150.50.004	Podložka / Scheibe / Washer	d6,4 DIN 125	2
7	90.150.50.005	Podložka / Scheibe / Washer	d8,4	3
8	95.001.001	Kuličkové ložisko / Kugellager / Ball bearing	608 2 RS	1

**28.25. Chlazení / Kühlung / Cooling**

Poz.	Objednací číslo	Název položky		ks
Pos.	Bestell - Nr.	Bezeichnung		Menge
Pos.	Reference No.	Item		Pcs.
1	30.7906-102	Víko / Deckel / Cover		1
2	30.7906-104	Víko / Deckel / Cover		1
3	31.7217-032	Těsnění / Dichtung / Sealing		1
4	90.001.25.031	Šroub / Schraube / Screw	8x16 DIN 912 8,8	6
5	90.00125.092	Šroub / Schraube / Screw	M6x14 DIN 912 8,8	4
6	90.100.55.004	Matice / Mutter / Nut	M6 DIN 934	4
7	90.150.50.005	Podložka / Scheibe / Washer	d8,4 DIN 125	6
8	91.020.005	Čerpadlo chlazení / Kühlmittelpumpe / Coolant pump	3COA 2-17	1