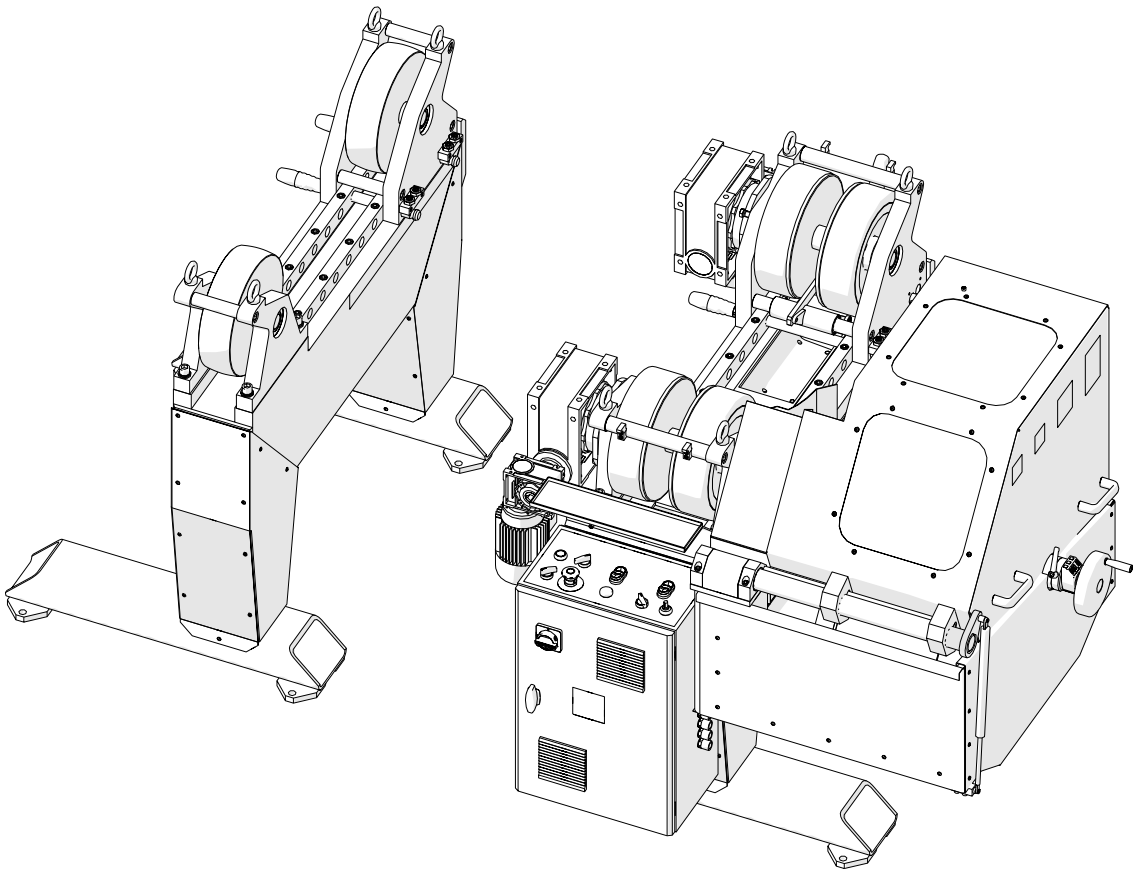
The tools of innovation.

OPERATOR'S MANUAL

PBM-1000

STATIONARY
PIPE BEVELING MACHINE



15335 E. Fremont Drive, Centennial, CO 80112
1–87STEELMAX, FAX 303–690–9172
www.steelmax.com sales@steelmax.com

Contents

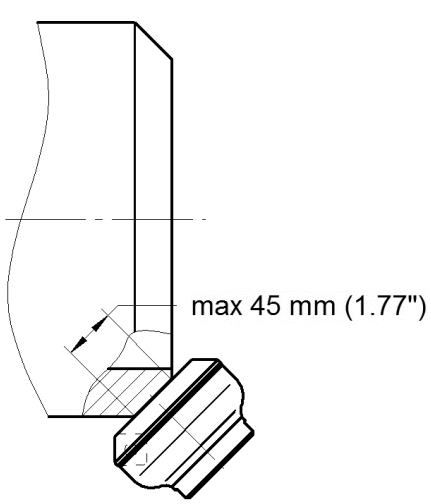
1. GENERAL INFORMATION

1.1. Application

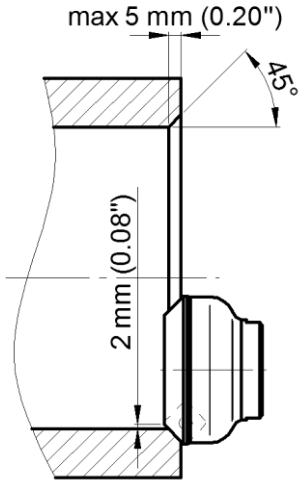
The PBM-1000 is a stationary pipe bevelling machine designed to bevel pipes made of carbon or stainless steel. The machine can bevel edges of pipes with outer diameters of 200–1016 mm (8–40'') at an angle of 0–60°, can bevel internal edges at 45° with the bevel depth of up to 5 mm (0.20''), and can perform facing.

The machine must be connected either to a 3-phase power source with phase-to--phase voltage of 208–230 V or to a 1-phase source with phase voltage of 208-230 V (see point 3.1 for the wiring diagram).

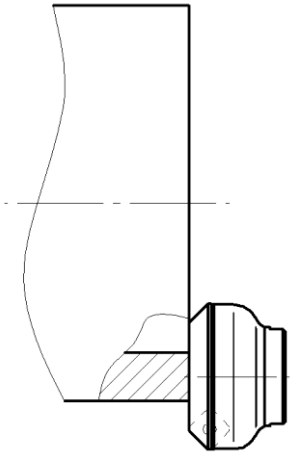
Optional milling heads allow the machine to establish J-bevels with the radius of 6 mm (0.24'') or 8 mm (0.31'') and to bevel internal edges at 0–60° with the bevel width of up to 20 mm (0.79''). Using optional steel rollers increases carrying capacity to 5000 kg (11 000 lbs) per support, while an attachment allows for machining oval pipes.



Beveling at 0–60º

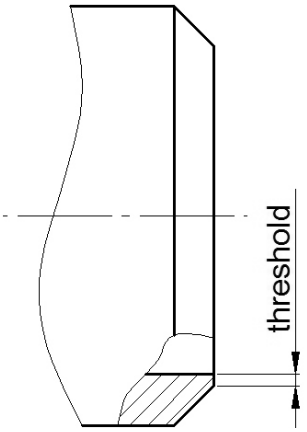


Internal beveling at 45º



Facing

The value of the obtained threshold will be variable for pipes of variable wall thickness.



1.2. Technical data

Voltage	1~ 208–230 V, 50/60 Hz 3~ 208–230 V, 50/60 Hz
Total power	2000 W
Spindle power	1500 W
Permitted outer pipe diameter of pipes 400–830 mm long (15.7–32.7'')	200–600 mm (7.87–23.62'')
Permitted outer pipe diameter of pipes longer than 830 mm (32.7'')	200–1016 mm (7.87–40'')
Peripheral speed	0.1–1.1 m/min
Rotator speed	0.1–1.2 rpm
Spindle rotational speed	1400 rpm (for 50 Hz) 1680 rpm (for 60 Hz)
Protection level	IP 20
Protection class	I
Milling speed (for standard milling head)	197 m/min (650 ft/min, for 50 Hz) 237 m/min (800 ft/min, for 60 Hz)
Maximum bevel width (*b*)	45 mm (1.77'', Fig. 1)
Bevel angle (ß)	0–60° (Fig. 1)
Minimum pipe wall thickness	5 mm (0.20'')
Active support carrying capacity	5000 kg (11 000 lbs)*
Passive support carrying capacity	5000 kg (11 000 lbs)*
Maximum allowed pipe weight	10 000 kg (22 000 lbs)*
Machine weight	1100 kg (2400 lbs)
* For steel rollers of the active support (not included in standard equipment). For plastic rollers (standard) of the active support, the carrying capacity of each support is 3000 kg (6600 lbs) and the maximum allowed pipe weight equals 6000 kg (13 200 lbs).	

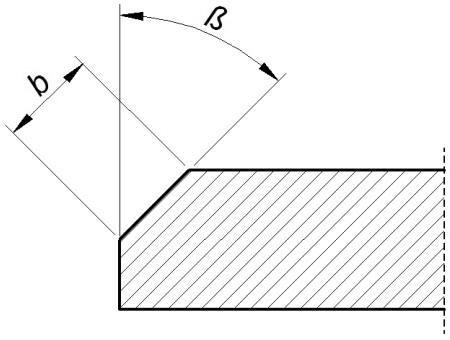


Fig. 1. Bevel dimensions

1.3. Design

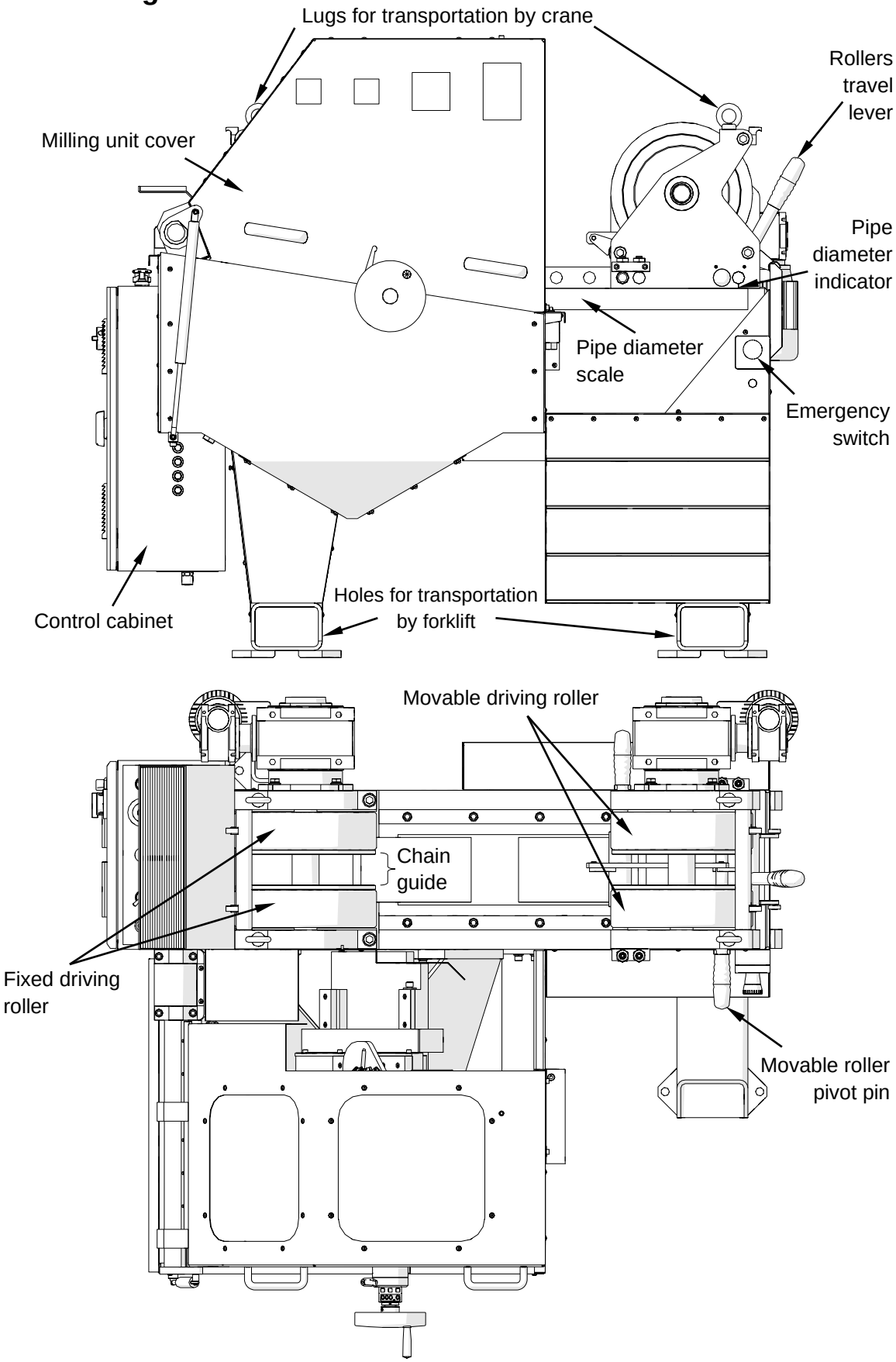


Fig. 2. View of the active support

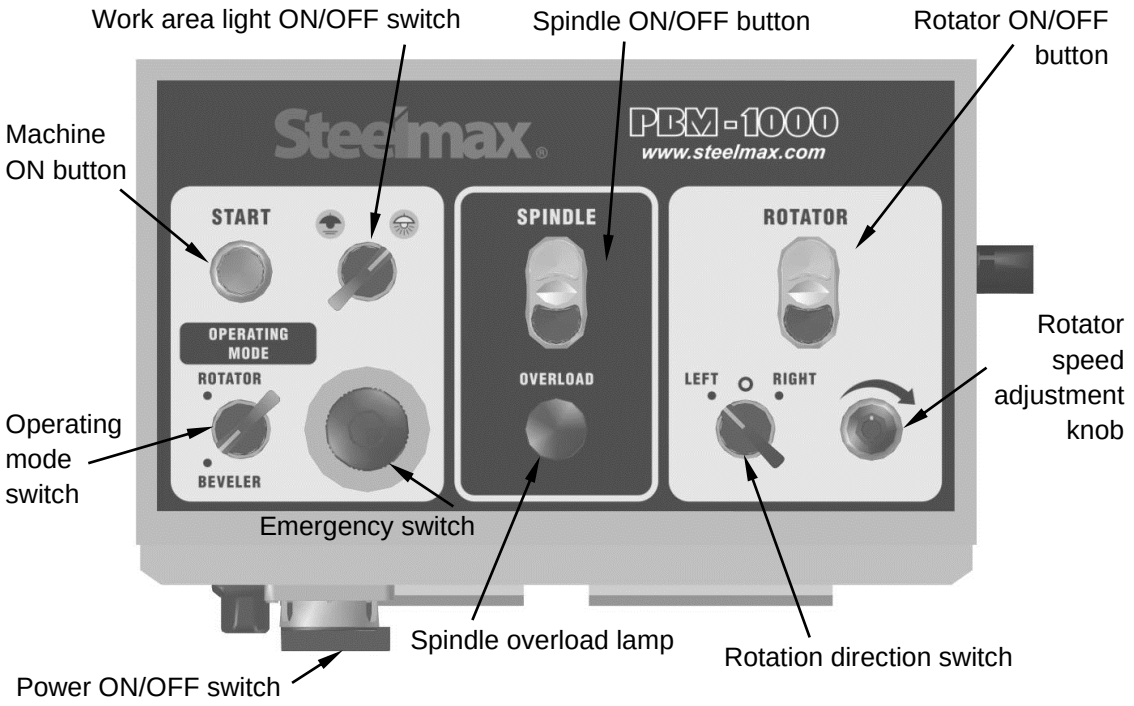


Fig. 3. View of the control panel

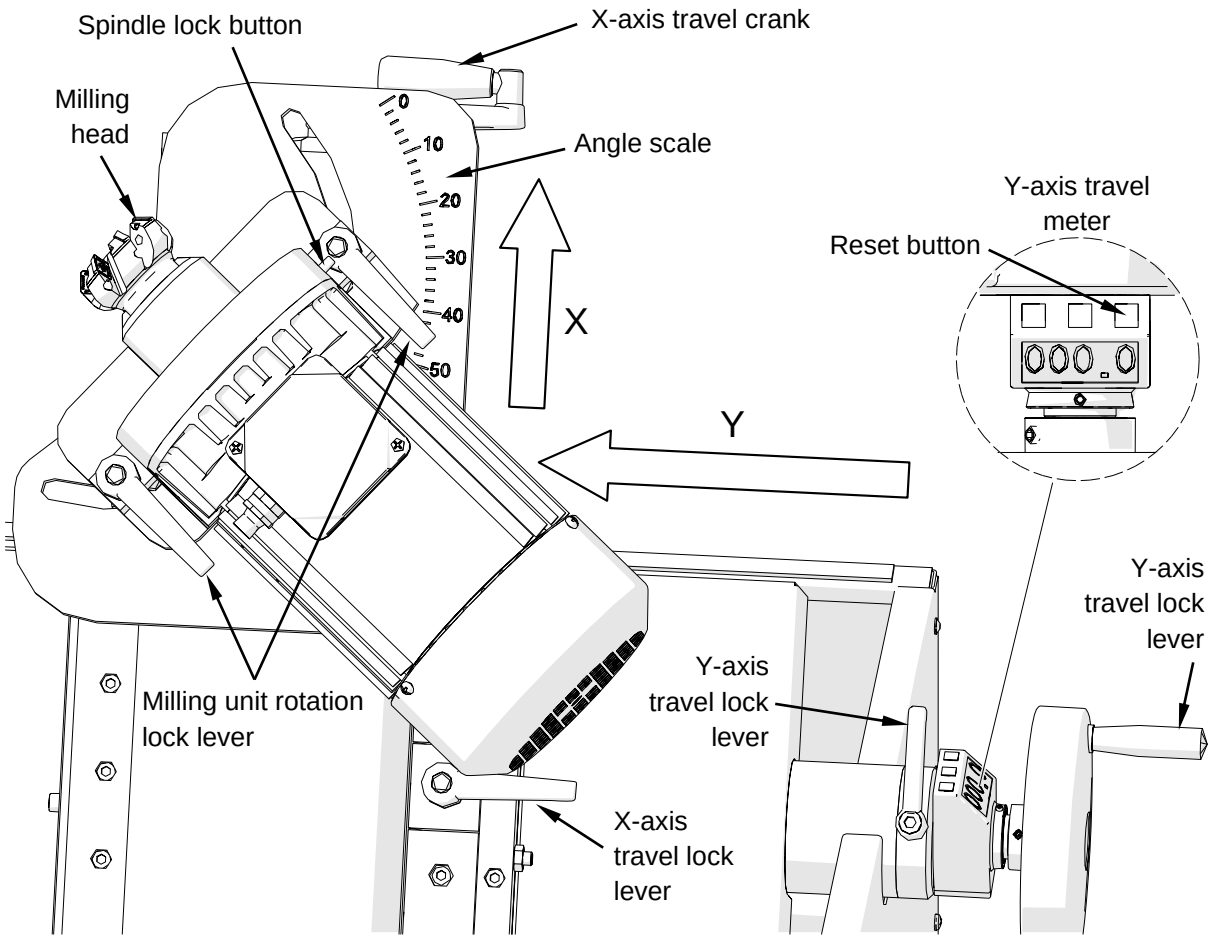


Fig. 4. View of the milling unit

1.4. Equipment included

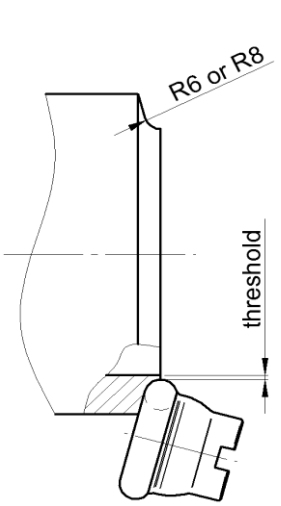
The PBM-1000 is supplied including the following equipment.

	PBM-1000 standard	PBM-1000 with tracking
Stationary pipe beveling machine	1 unit	1 unit
• Active support (with plastic rollers)		
• Passive support (with steel rollers)		
Wooden box	1 unit	1 unit
Standard milling head with 7 cutting inserts	1 unit	1 unit
Guiding chain	1 unit	1 unit
10 mm hex wrench	1 unit	1 unit
8 mm hex wrench	1 unit	1 unit
5 mm hex wrench	1 unit	1 unit
T15P torx screwdriver	1 unit	1 unit
Support with oval attachment	–	1 unit
Operator's Manual	1 unit	1 unit

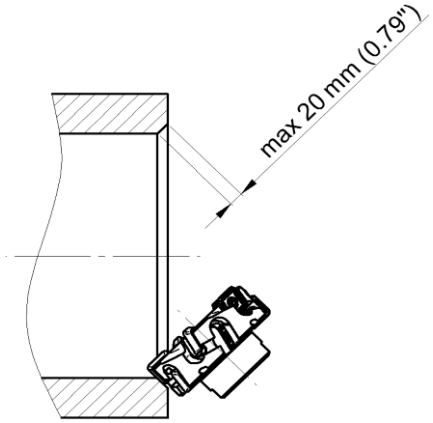
1.5. Accessories

Also available are milling heads to establish J-bevels with the radius of 6 mm (0.24'') or 8 mm (0.31'') and a head to bevel internal edges at 0–60° with the bevel width up to 20 mm (0.79''). Steel rollers provide carrying capacity of 5000 kg (11 000 lbs) per support, while a clamp is designed to balance short pipes. Additionally, it is possible to machine oval pipes and stainless steel. The optional equipment is as follows.

Part name	Part number
Milling head for beveling (with mounting screws; 7 inserts required)	GLW-000013
Cutting insert for beveling (sold 10 per box)	PLY-000282
Mounting screw for inserts of the milling head for beveling	SRB-000311
J-beveling milling head for R6 round cutting inserts (with mounting screws; 6 inserts required)	GLW-000014
R6 round cutting insert (sold 10 per box)	PLY-000198
Mounting screw for inserts of the J-beveling R6 milling head	SRB-000297
J-beveling milling head for R8 round cutting inserts (with mounting screws; 5 inserts required)	GLW-000015
R8 round cutting insert (sold 10 per box)	PLY-000201
Mounting screw for inserts of the J-beveling R8 milling head	SRB-000367
Milling head for internal beveling (with mounting screws, and a screw and a retaining ring for the milling head; 10 inserts required)	GLW-0436-19-00-00-0
Cutting insert for internal beveling (sold 10 per box)	PLY-000282
Mounting screw for inserts of the milling head for internal beveling	SRB-000311
T15P torx screwdriver for mounting screws	WKT-000005
Steel roller (4 required)	KOL-0436-23-00-00-0
Pipe clamp	DCS-0436-12-00-00-0
Support with oval attachment	WSP-0436-24-00-00-0
Set for stainless steel	ZST-0436-25-00-00-0



J-beveling



Internal beveling at 0–60º

2. SAFETY PRECAUTIONS

1. Before beginning, read this Operator's Manual and complete proper occupational safety and health training.
2. Use the machine only in applications specified in this Operator's Manual.
3. The machine must be complete and all parts must be genuine and fully operational.
4. The specifications of the power source must conform to those specified on the rating plate.
5. Plug the machine into a properly grounded power source.
6. Never pull the power cord as this may damage it and result in electric shock.
7. Place the machine in vertical position during transportation and operation.
8. Place the machine on flat foundations with a deviation not more than 5 mm (0.2'') from level over length. An improperly prepared surface may lead to damage, incorrect operation of the machine and may cause injuries to persons in close proximity.
9. Untrained bystanders must not be present near the machine.
10. Before beginning, make sure that the correct is the condition of the machine, power source, power cord, plug, control panel components, and milling tools.
11. Before every use, inspect the machine to ensure it is not damaged. Check whether any part is cracked or improperly fitted. Make sure to maintain proper conditions that may affect the operation of the machine.
12. Wait at least 3 minutes before you do work near inverters in the control cabinet. Make sure that there is no voltage on the connections of the inverters.
13. After the power is off, always wait 60 seconds before you turn the power on.
14. Keep the machine dry. Exposure to rain, snow, or frost is prohibited.
15. Keep the work area well lit, clean, and free of obstacles.
16. Never use the machine near flammable liquids or gases, or in explosive environments.
17. Always use safety goggles, hearing protection, gloves, and protective clothing during operation. Do not wear loose clothing.
18. Using the spindle lock button during operation is prohibited.
19. Use only tools specified in this Operator's Manual.
20. Never use tools that are dull or damaged.
21. Do not touch moving parts or metal chips formed during milling. Prevent objects from being caught in moving parts.

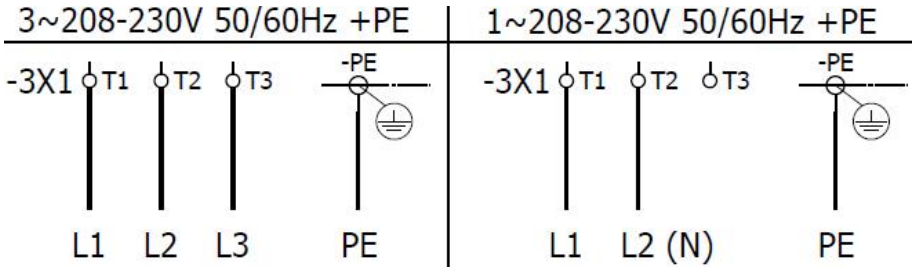
22. Install the cutting inserts and milling head securely. Remove adjusting keys and wrenches from the work area before connecting the plug to the power source.
23. If the cutting edge of an insert is worn, rotate the insert in the socket by 90° or, if all edges are worn, replace with new insert specified in this Operator's Manual.
24. After every use, remove metal chips from the machine, especially from the milling head. Never remove chips with bare hands. Clean the machine with a cotton cloth without using any agents.
25. Cover steel parts with a thin anti-corrosion coating to protect them against rust when not in use for any extended period.
26. Maintain the machine and install/remove parts and tools only when the power cord is unplugged from the power source.
27. Repair only in a service center appointed by the seller.
28. If the machine is wet or has any other damage that could affect the technical state of the machine, stop the operation and immediately send the machine to the service center for inspection and repair.

3. STARTUP AND OPERATION

All safety precautions must be closely observed.

3.1. Connecting the machine and positioning the supports

Connect the machine using 3G2.5 mm^2 power cord either to a 3-phase power source with phase-to-phase voltage of 208–230 V (left scheme) or to a 1-phase source with phase voltage of 208-230 V (right scheme).



Place the machine on foundations that ensure balance and can transmit loads exerted by the machine and pipe. Machine pipes with length of 400–830 mm (15.7–32.7'') using the active support. For pipes longer than 830 mm (32.7'') use also the passive support, positioning it in relation to the active support in such a manner that will prevent the pipe from moving during rotation. This can be done by ensuring the equality of diagonals between the active and passive support using a 50×15 mm drawing flat bar (Fig. 5). Fasten the machine to the foundations through the holes in both supports.

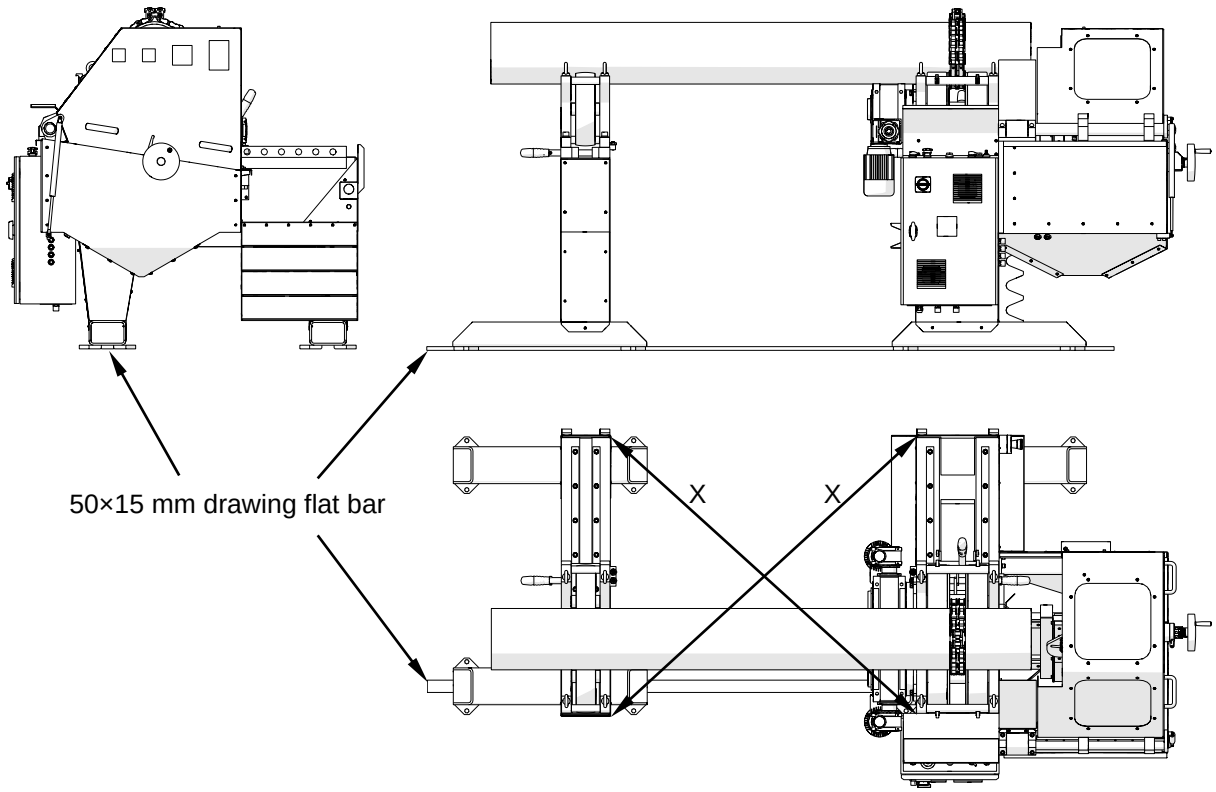


Fig. 5. Positioning the supports for beveling pipes longer than 830 mm (32.7'')

3.2. Operating modes

The machine can operate in “rotator” or “beveler” mode, set by the switch located on the control panel (Fig. 3). The “rotator” mode enables you to start the rotator and to adjust its rotational speed using the speed adjusting knob. The rotation of the spindle is inactive in this mode.

The “beveler” mode enables you, with the milling head cover closed (Fig. 2), to start the spindle and then the rollers. If the spindle becomes overloaded during operation, the red overload lamp will illuminate. In such a case, immediately decrease either the milling head penetration in the workpiece (using the Y-axis travel crank) or the rotational speed of the rollers (using the rotator speed adjusting knob). Further increasing of the spindle load will trigger the safety circuit and turn off the rotator (spindle rotation will not stop). In this case, before restarting the rollers, retract the milling unit along the Y-axis and press the rotator OFF button. This will turn off the overload lamp and allow for starting the rotator with the ON button. If the cover becomes open during beveling, the spindle and rotator will immediately stop.

3.3. Placing the pipe

Set the movable driving rollers in such a way to match the pipe diameter indicator (red line) with the value of diameter shown on the scale. To do this, remove the pivot pins, lower the rollers travel lever as far as possible, and use the lever to manually move the rollers to a proper position. Then, raise the lever and reinsert pins. Proceed as described also for the passive support if this is required for the pipe length.

Before placing the pipe, open the cover and use the X-axis travel crank to lower the milling unit to prevent damage that may occur because of a possible collision with the pipe.

Place the pipe on the rotator in such a way to maintain a distance of 160–260 mm (6–10’’) between the pipe face and the side surface of the rollers on the active support, as in Fig. 6 and 7. Because the position of the working edge differs from the position of the pipe support, any pipe shape deviation will cause inconsistency of the bevel or threshold. To diminish such errors, place the pipe as close to the rollers as permitted (160 mm, 6’’). Additionally, you may need to use the clamp, guiding chain, or both.

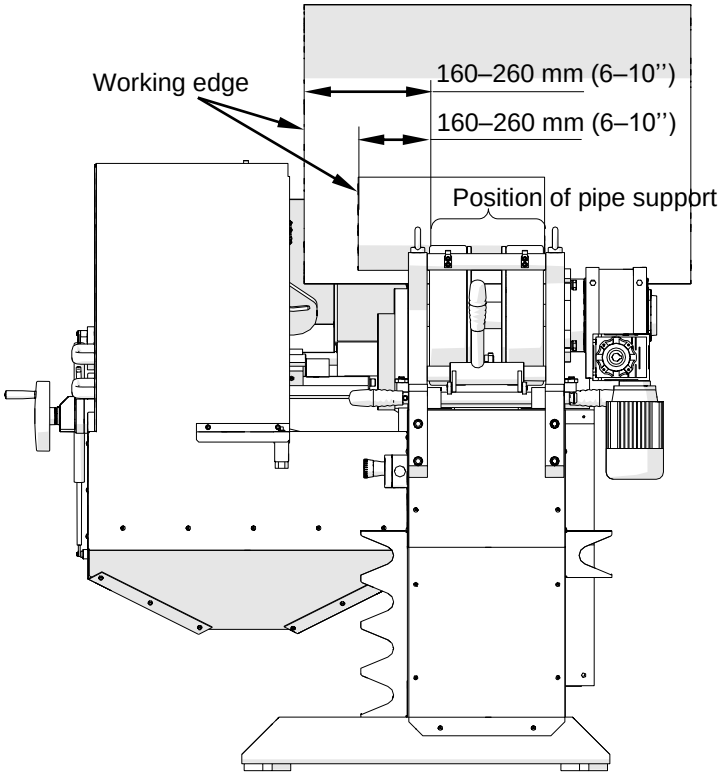


Fig. 6. Placing a pipe shorter than 830 mm

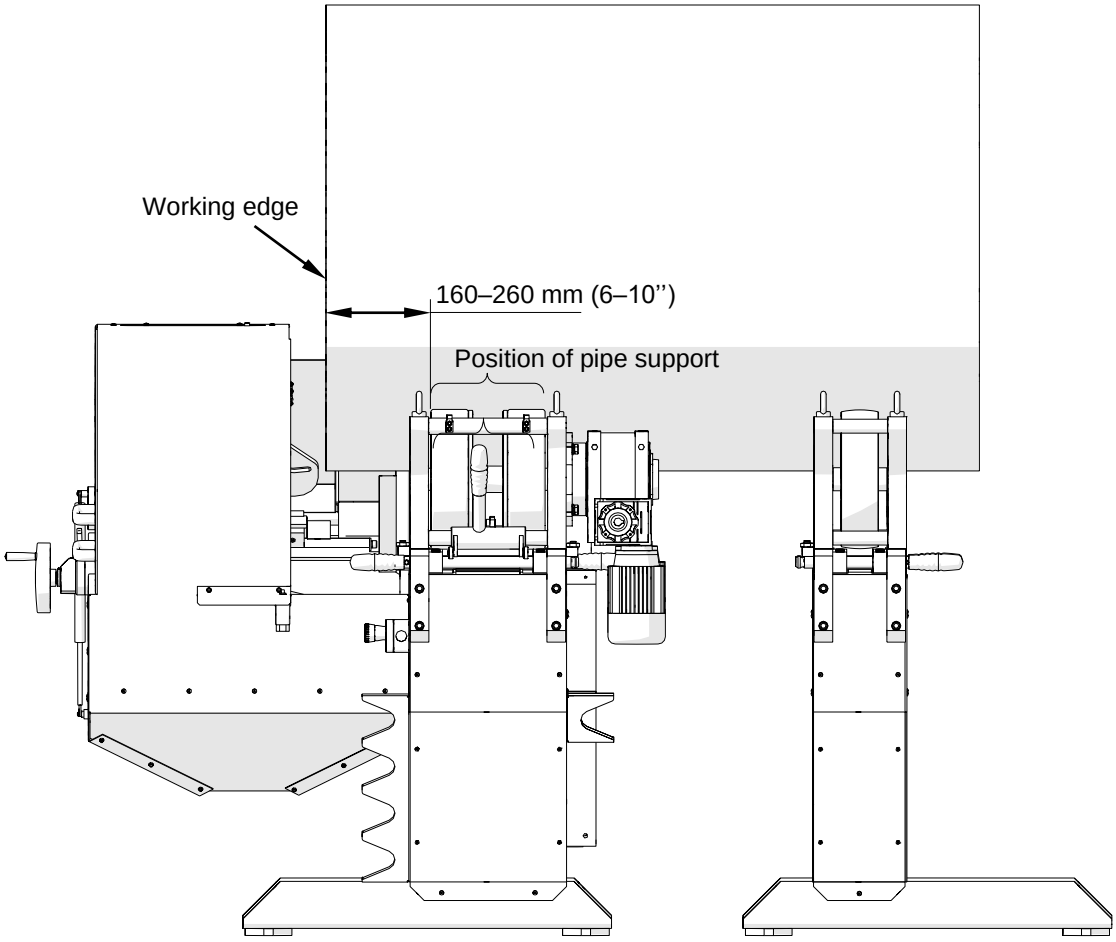


Fig. 7. Placing a pipe longer than 830 mm

3.3.1. Using the clamp (optional)

Use clamp (Fig. 8) if the pipe is short and light or not balanced during machining. To do this, place the pipe on the machine and install the clamp, catching it by the hooks located at both sides of the machine. Then, slightly tighten the nut manually.

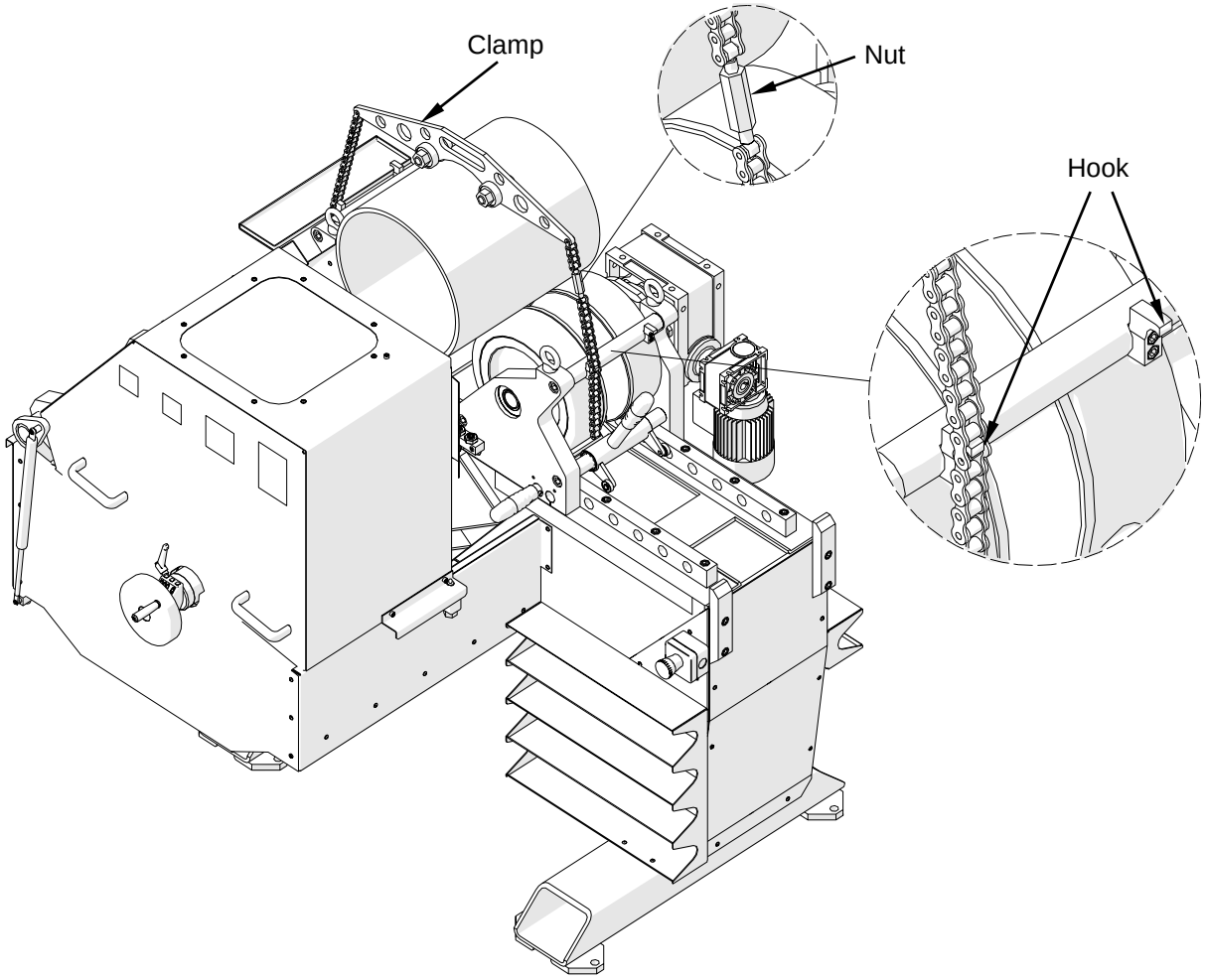


Fig. 8. Using the pipe clamp

3.3.2. Using the guiding chain

If the pipe moves along its axis during milling, use a guiding chain to provide balance. To assemble the chain for a pipe of an outer diameter, use the basic segment “B” and a combination of 3-, 6-, 9-, 18-, 36-, 72-link additional segments (Fig. 9a). Their proper interconnection sequence to assemble the chain is shown in Tab. 1 (columns from left to right), while the basic “B” segment must be first and is required in all cases. Because the 3-link segment must not be last, for pipes with diameter of 223–251 mm (8.78–9.88’’) place the 3-link segment within the segment “B” after removing links from the connector using the 5 mm hex wrench (Fig. 9b).

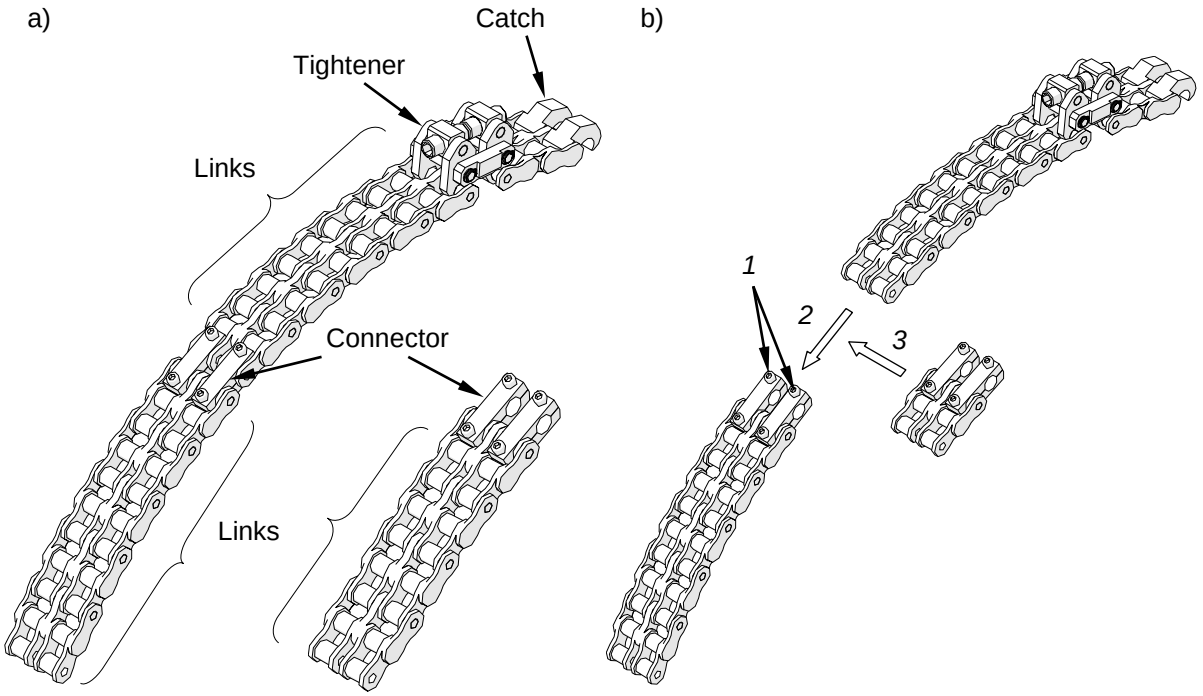


Fig. 9. View of the basic and the 9-link segment (a); assembling the chain for a pipe with the outer diameter of 223–251 mm (b)

3.3.3. Using the guiding chain (example)

To create a guiding chain for a pipe with the outer diameter of 390 mm (15.35''), connect the basic segment "B" to the additional segments "18" and "3" using connectors (Fig. 9a) and the 5 mm hex wrench. The proper interconnection sequence in this case is: "B", "3", and "18" (Fig. 10).

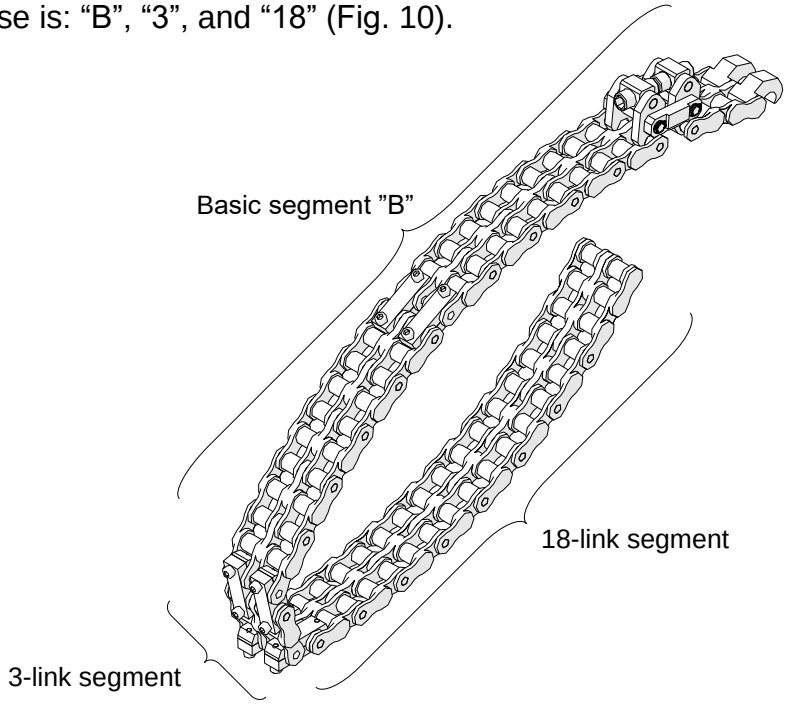


Fig. 10. Design of the guiding chain for pipe with the outer diameter of 390 mm (15.35'')

Basic segment	Additional segments				Outer diameter	
					[mm]	[in]
B	–	–	–	–	199–227	7.83–8.94
B	3	–	–	–	223–251	8.78–9.88
B	6	–	–	–	248–275	9.76–10.83
B	9	–	–	–	272–300	10.71–11.81
B	3	9	–	–	296–324	11.65–12.76
B	6	9	–	–	320–348	12.60–13.70
B	18	–	–	–	345–372	13.58–14.65
B	3	18	–	–	369–397	14.53–15.63
B	6	18	–	–	393–421	15.47–16.57
B	9	18	–	–	417–445	16.42–17.52
B	3	9	18	–	442–469	17.40–18.46
B	6	9	18	–	466–494	18.35–19.45
B	36	–	–	–	490–518	19.29–20.39
B	3	36	–	–	514–542	20.24–21.34
B	6	36	–	–	539–566	21.22–22.28
B	9	36	–	–	563–591	22.17–23.27
B	3	9	36	–	587–615	23.11–24.21
B	6	9	36	–	611–639	24.06–25.16
B	18	36	–	–	636–663	25.04–26.10
B	3	18	36	–	660–688	25.98–27.09
B	6	18	36	–	684–712	26.93–28.03
B	9	18	36	–	708–736	27.87–28.98
B	3	9	18	36	733–760	28.86–29.92
B	6	9	18	36	757–785	29.80–30.91
B	72	–	–	–	781–809	30.75–31.85
B	3	72	–	–	805–833	31.69–32.80
B	6	72	–	–	830–858	32.68–33.78
B	9	72	–	–	854–882	33.62–34.72
B	3	9	72	–	878–906	34.57–35.67
B	6	9	72	–	903–930	35.55–36.61
B	18	72	–	–	927–955	36.50–37.60
B	3	18	72	–	951–979	37.44–38.54
B	6	18	72	–	975–1003	38.39–39.49
B	9	18	72	–	1000–1027	39.37–40.43

Tab. 1. Proper segments interconnecting sequence for specific pipe diameters

Place the guiding chain between the driving rollers, and then place the pipe and hook up the chain on the pipe perimeter as shown in Fig. 11. Hook the catch on the last link, second, or third from the end, and put the free links upward (Fig. 12). Use the tightener and the 10 mm hex wrench to slightly tighten the guiding chain to maintain a small clearance. Then, turn on the power using the power switch and start the machine using START button, which will illuminate the button after about 5 seconds.

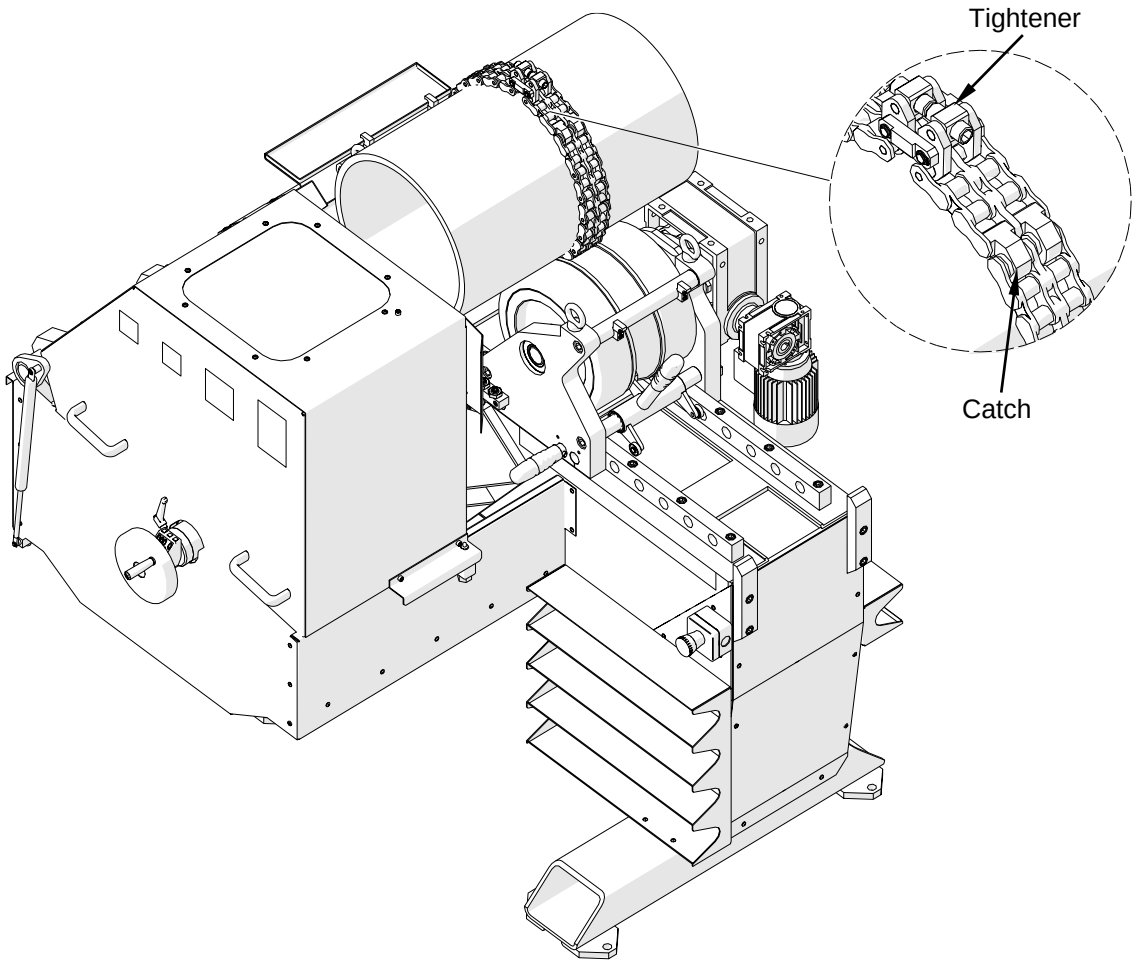


Fig. 11. Installing the guiding chain

Set the operating mode switch to the “rotator” position, start the rotation of the rollers using the rotator ON button, and perform one complete rotation to ensure good alignment of the guiding chain. Then, stop the rotator with the rotator OFF button, and tighten the guiding chain completely.

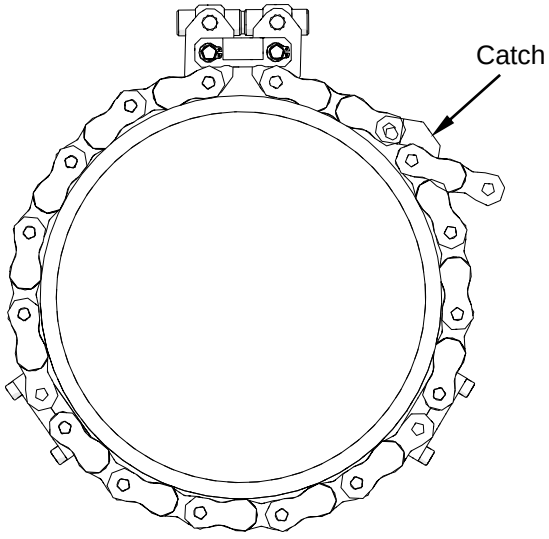


Fig. 12. View of the chain wrapped around a sample pipe

3.4. Preparing

Before starting, loosen the rotation lock levers, set the milling unit at the required angle on the scale, and lock the rotation again using the levers. Unlock the X-axis travel lever, move the milling unit to the specific height using the X-axis travel crank and lock again. Set the crank in the horizontal position and fold its handle to prevent a collision with the cover. Then, close the cover and slide it toward the pipe to the distance of 5 mm (0.2'') from the pipe face.

3.5. Beveling the pipes

Use the rotation direction switch to select left (recommended) or right direction of the rotator and set the required speed using the speed adjustment knob. Then, use the ON buttons to start the spindle and the rotator. Unlock the milling unit using the Y-axis travel lock lever. Rotate the Y-axis travel crank to bring the tool close to the workpiece, start milling, and lock the Y-axis travel lock lever again. The bevel will be established after one complete rotation. To increase the bevel width, use the Y-axis travel crank to increase the tool penetration in the workpiece.

In an emergency, press one of the emergency switches. To restart the machine, remove the cause of the emergency. Then, wait 60 seconds, unlock the switch, and press START.

After the power is off, always wait 60 seconds before you turn the power on.

Clean the machine with a cotton cloth without using any agents.

3.6. Beveling the oval pipes

To install the oval attachment, unscrew the handles (*1*, Fig. 13) from the nuts *2* and remove the motor. Unlock the lever *3*, use the 8 mm hex wrench to undo the screw *4*, and rotate the crank *5* to slide out the standard support. Then, screw in the support with the oval attachment by rotating the crank *6*, and then screw in the screw *7* and lock the lever *8*. Finally, screw the handles *1* into the nuts *2*.

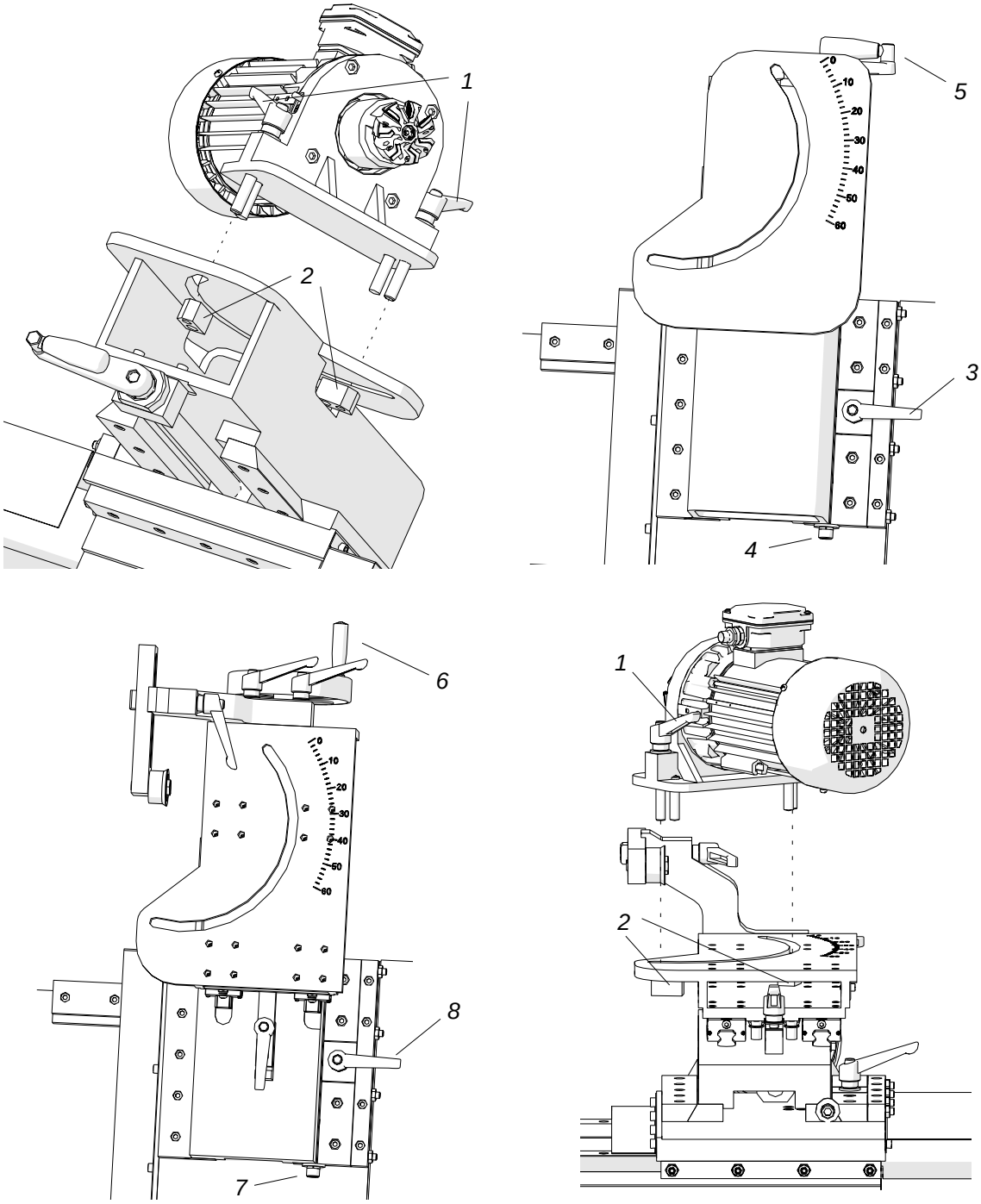


Fig. 13. Removing the standard support and installing the support with oval attachment

Position the milling unit at the required angle and height in the manner described before.

Unlock the levers *1, 2*, and *3* (Fig. 14), and then rotate the crank *4* to bring the milling unit closer to the pipe. Adjust the roller arm position and lock the levers *5*. Next, rest the roller on the smallest inside diameter of the pipe (*6*) and lock the lever *7*. Finally, rotate the crank *8* in such a way to align the arrows (*9*) and lock the lever *2*.

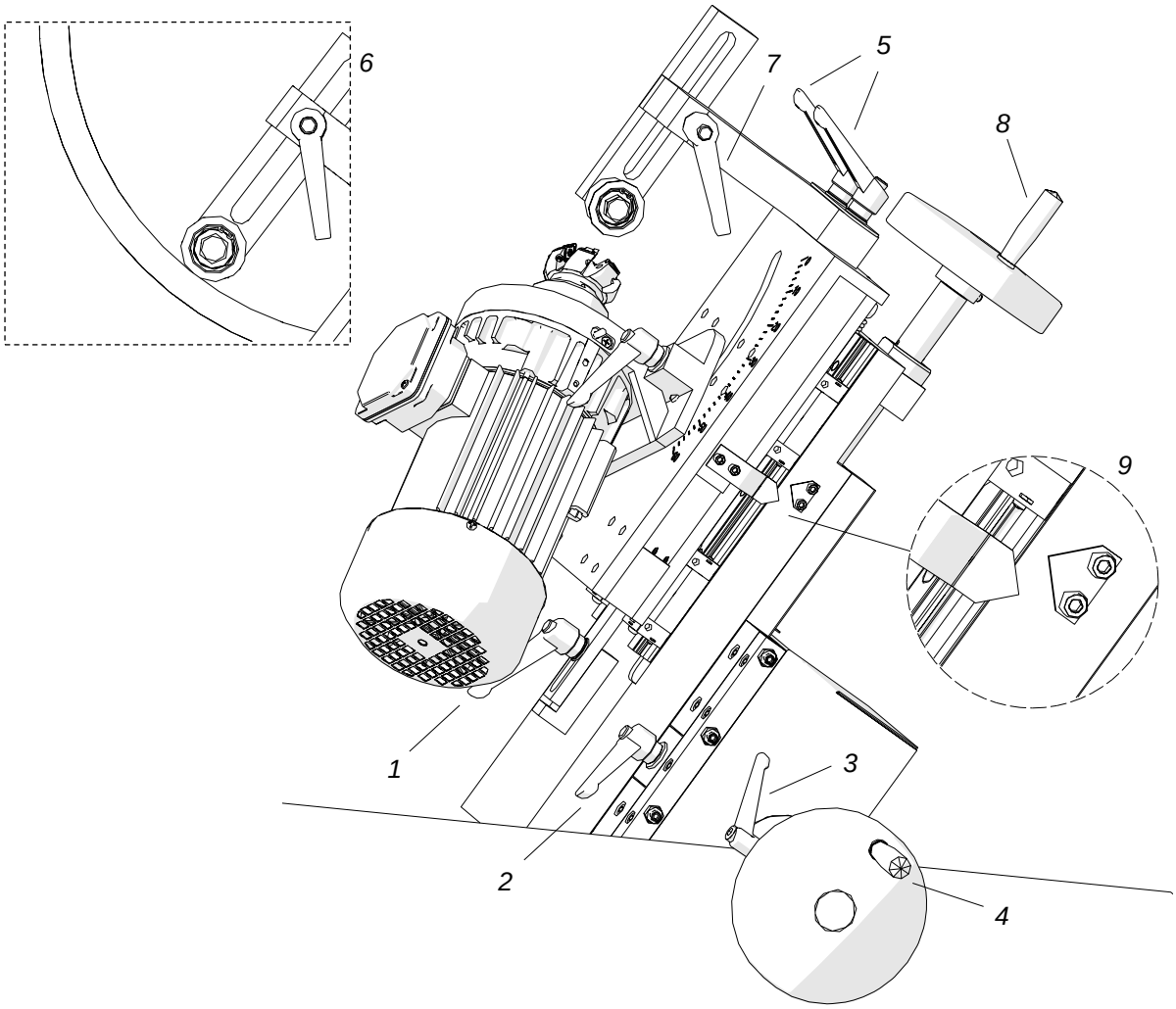


Fig. 14. Adjusting the support with oval attachment

Start milling, and lock the travel using the lever *3*.

After the work is finished, raise the milling unit using the crank *8*, and then retract the unit from the pipe. Lock the lever *1* if the attachment for oval pipes is not in use.

3.7. Beveling the pipes made of stainless steel (optional)

To mill pipes made of stainless steel up to the weight of 6 000 kg (13 200 lbs), replace two standard rollers of the passive support (Fig. 15a, 15b) with their counterparts which are part of the set for stainless steel. In the machine with tracking also replace the guiding roller (Fig. 15c). Use only the chain and clamp included in the set.

To replace the rollers of the passive support, remove two pivot pins securing the movable roller unit (Fig. 15a) and unscrew four screws securing the fixed roller unit using the 14 mm hex wrench (not included in standard equipment). Then, remove both roller units from the support and position them as in Fig. 15b, after which unscrew the screws using the 14 mm hex wrench and install in reverse order the rollers of the set for stainless steel.

To replace the guiding roller from the attachment for oval pipes, remove the roller using the 18 mm hex wrench (not included in standard equipment) in order shown in Fig. 15c and install in reverse order the guiding roller of the set for stainless steel.

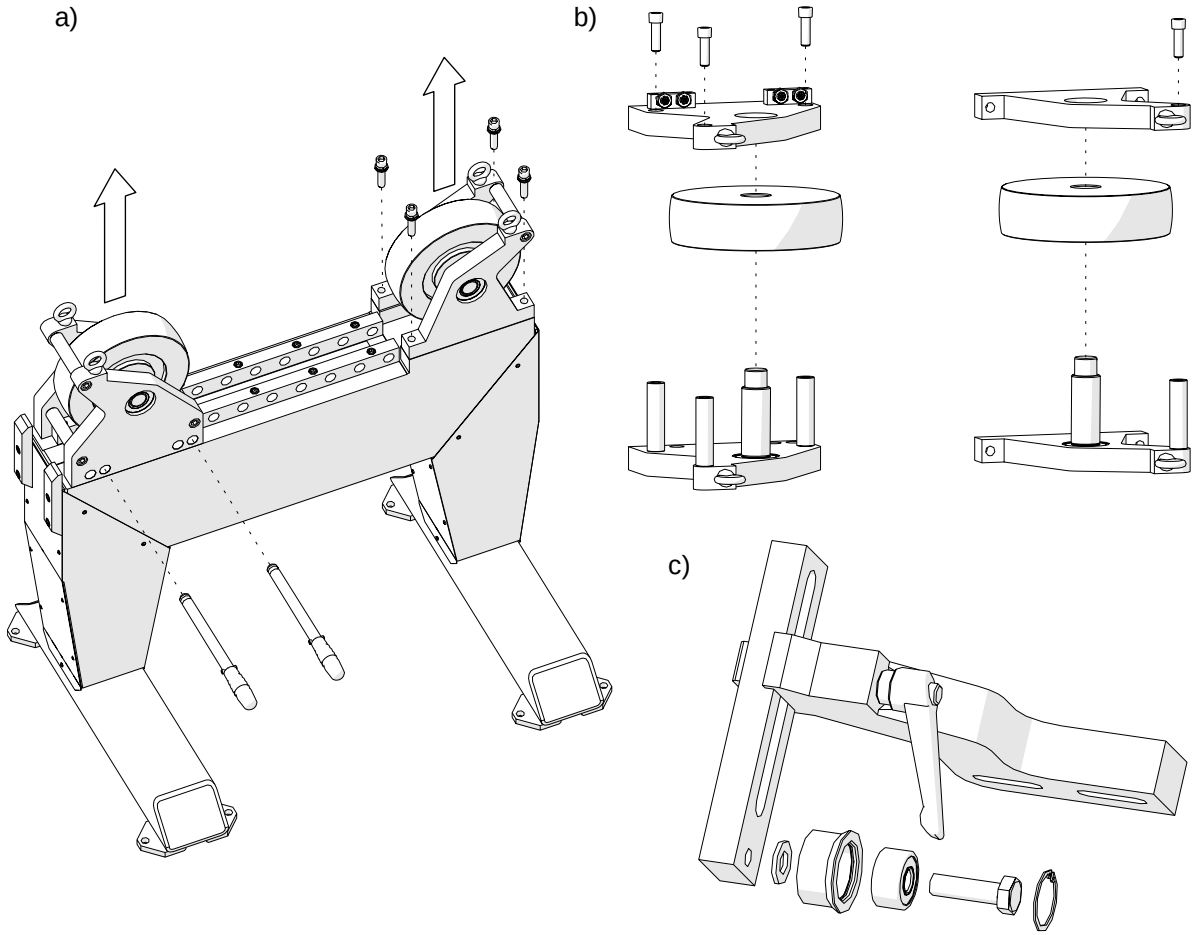


Fig. 15. Adapting the machine to work with stainless steel: removing the rollers of the passive support (a, b), removing the guiding roller (c)

3.8. Replacing the cutting inserts

The inserts can be replaced or rotated. To replace or rotate an insert, unplug the power cord from the power source and use the supplied screwdriver to unscrew the screw in the manner shown in Fig. 16, remove the insert, and clean the socket. Then, place the rotated insert again or replace with a new one if all four edges are worn. Finally, secure with the screw.

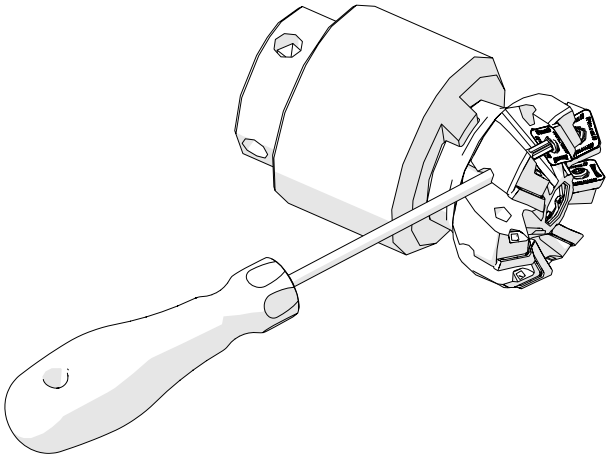


Fig. 16. Replacing the cutting inserts

3.9. Replacing the milling head

Unplug the power cord from the power source. Press and hold the spindle lock button (Fig. 17) and loosen the mounting screw using a hex wrench of the size dependent on the type of the installed head. Then, release the button and remove the head. Install in reverse order.

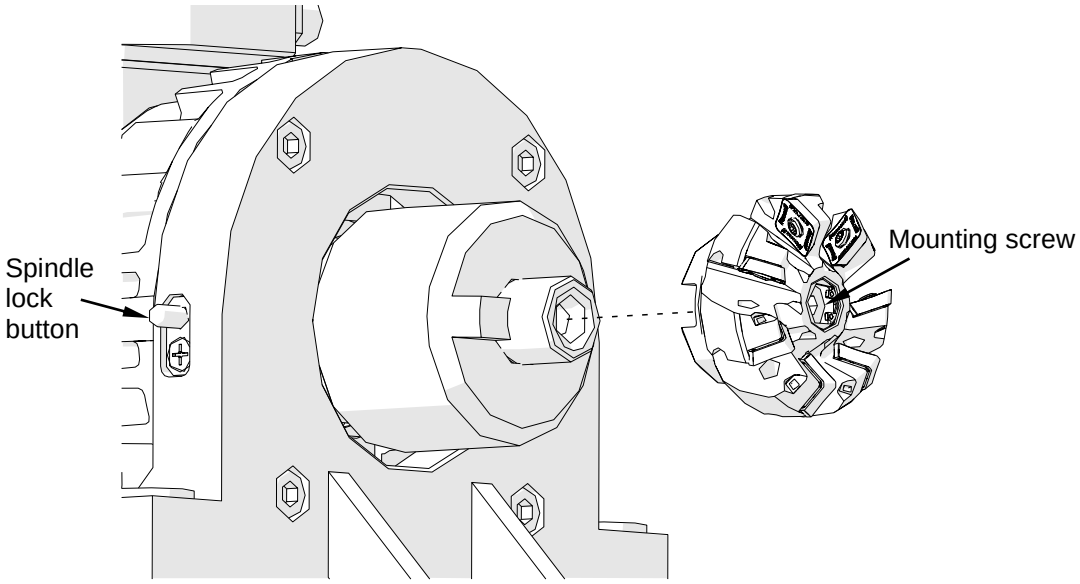


Fig. 17. Removing the milling head

3.10. Replacing the rollers of the active support

To increase carrying capacity of the machine, replace the plastic rollers of the active support with steel rollers. To do this, unplug the power cord from the power source and gently remove the gear motors (Fig. 18) by unscrewing eight screws using the 18 mm flat wrench (not included in standard equipment). Then, remove two pivot pins securing the movable roller unit, remove the console cover by unscrewing four screws with the 5 mm hex wrench, use the 14 mm hex wrench (not included in standard equipment) to unscrew four screws securing the fixed roller unit, and then remove both roller units from the support.

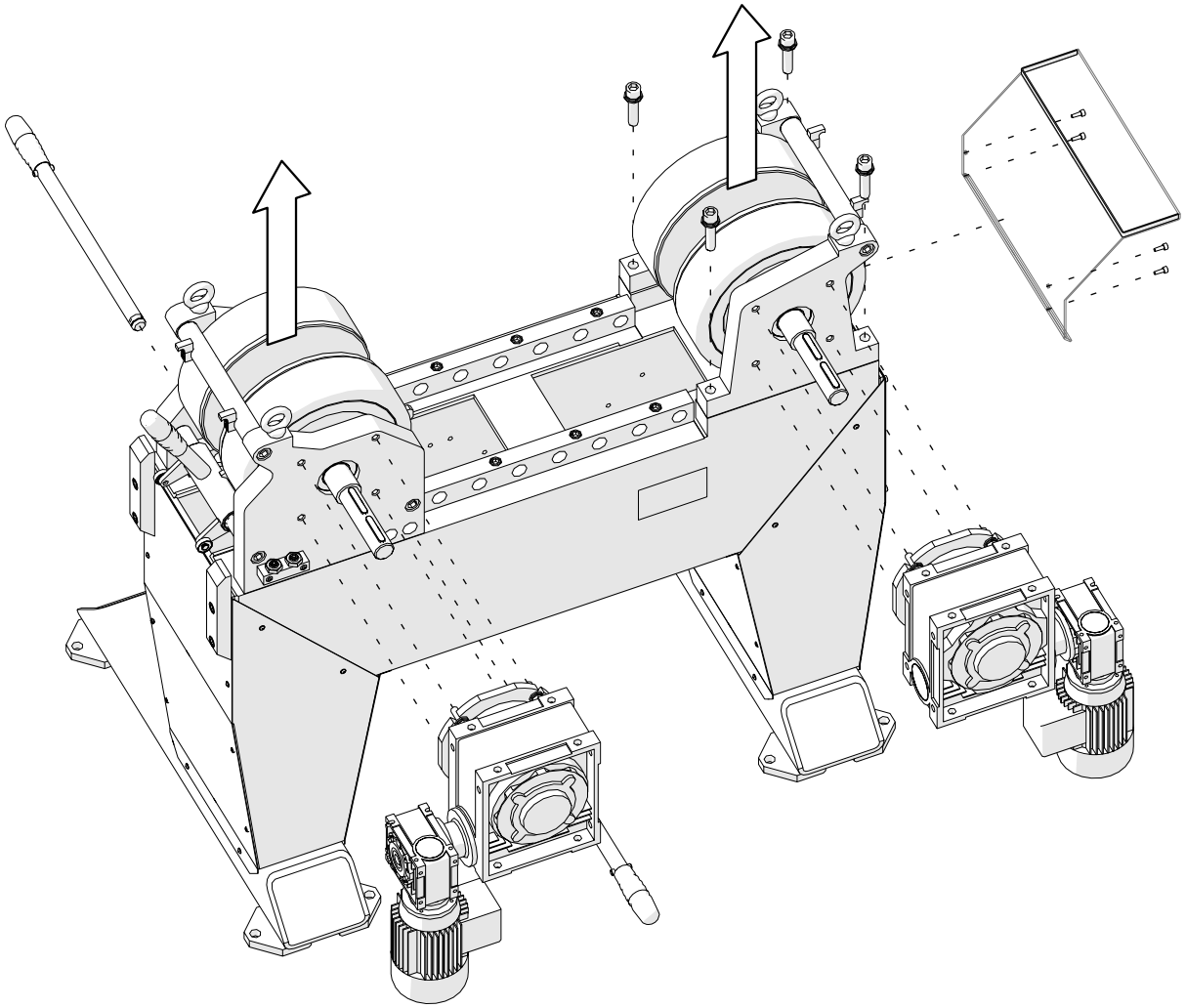


Fig. 18. Removing the roller units

Position the roller units as shown in Fig. 19 and remove the rollers in specified order. Unscrew the mounting screws using the 14 mm hex wrench. Replace with steel rollers and install in reverse order.

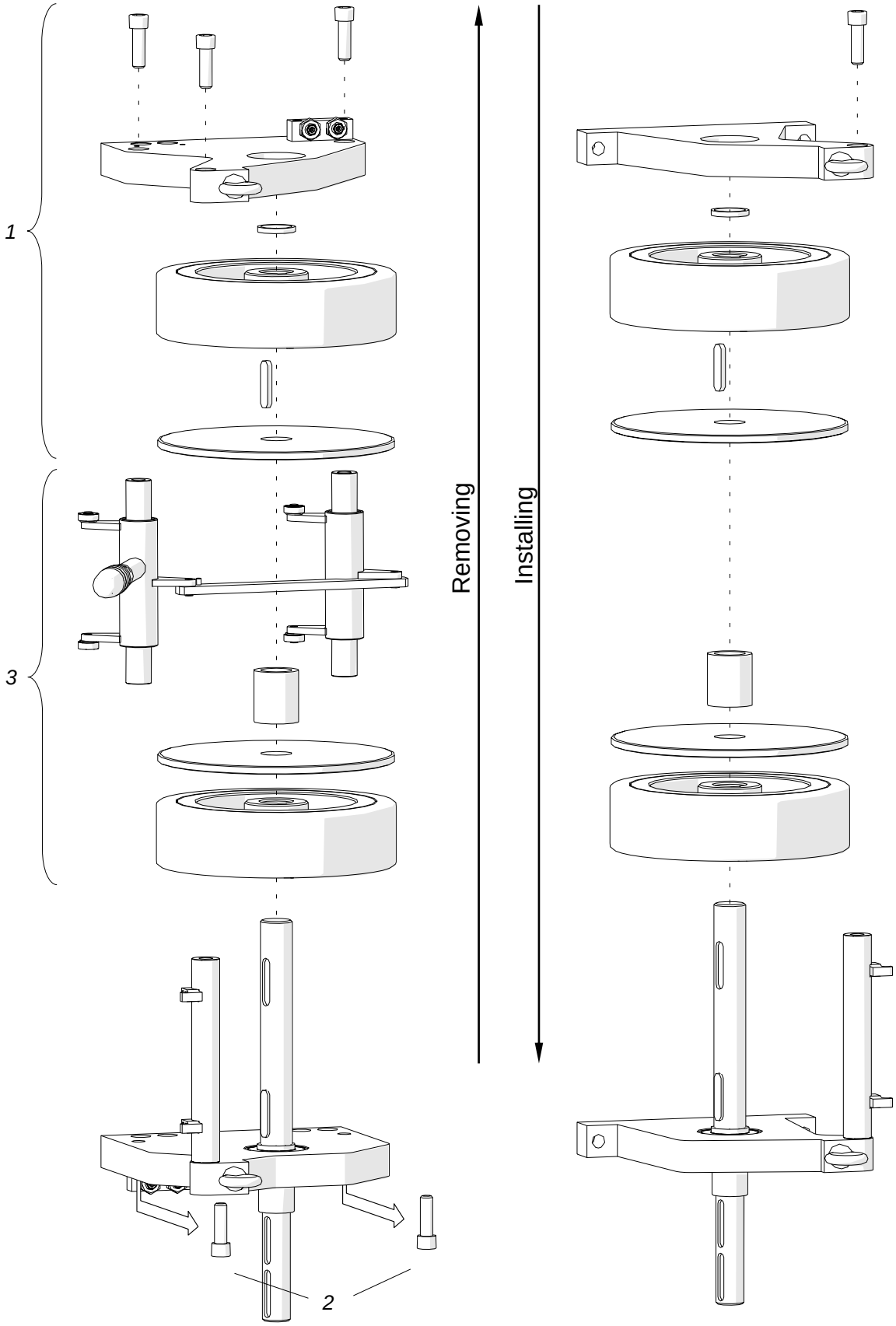
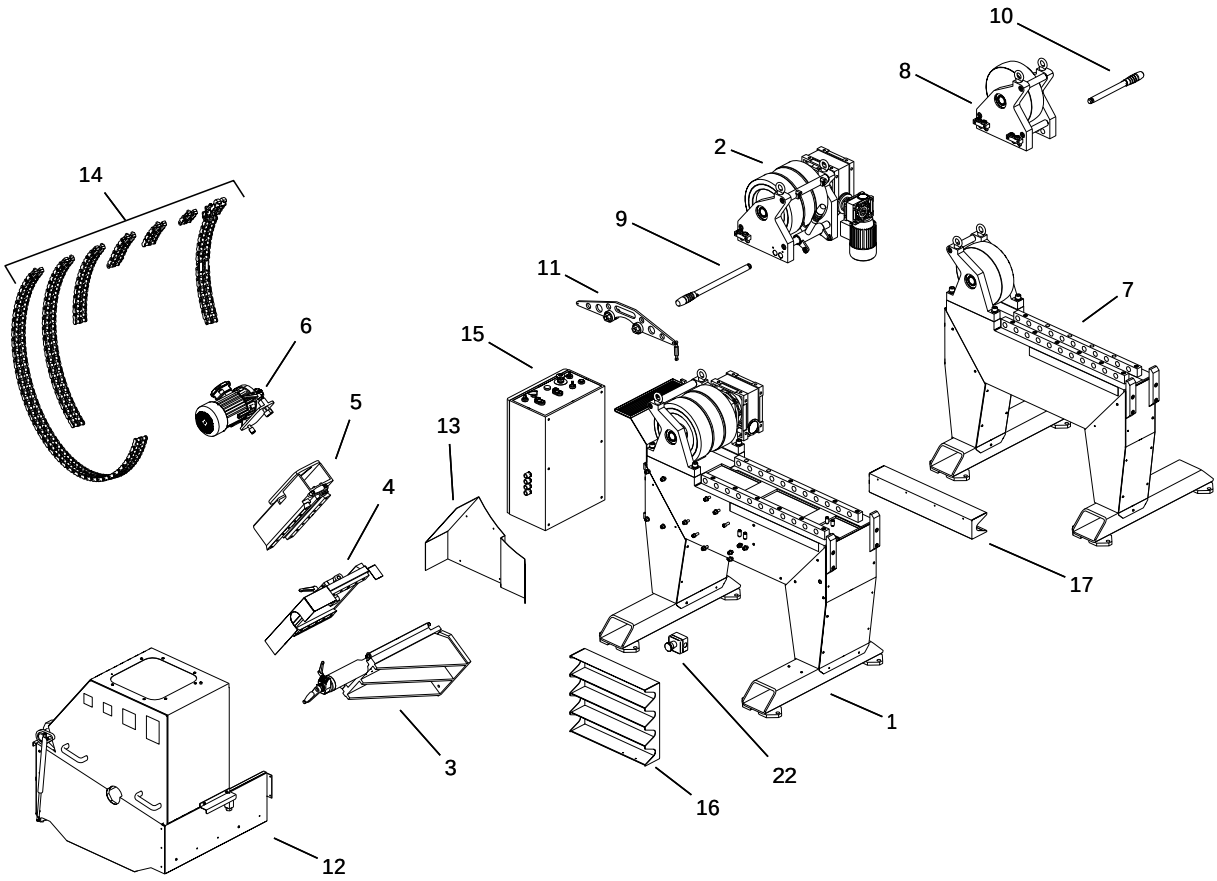


Fig. 19. Removing and installing the rollers of movable unit (left) and of fixed unit (right)

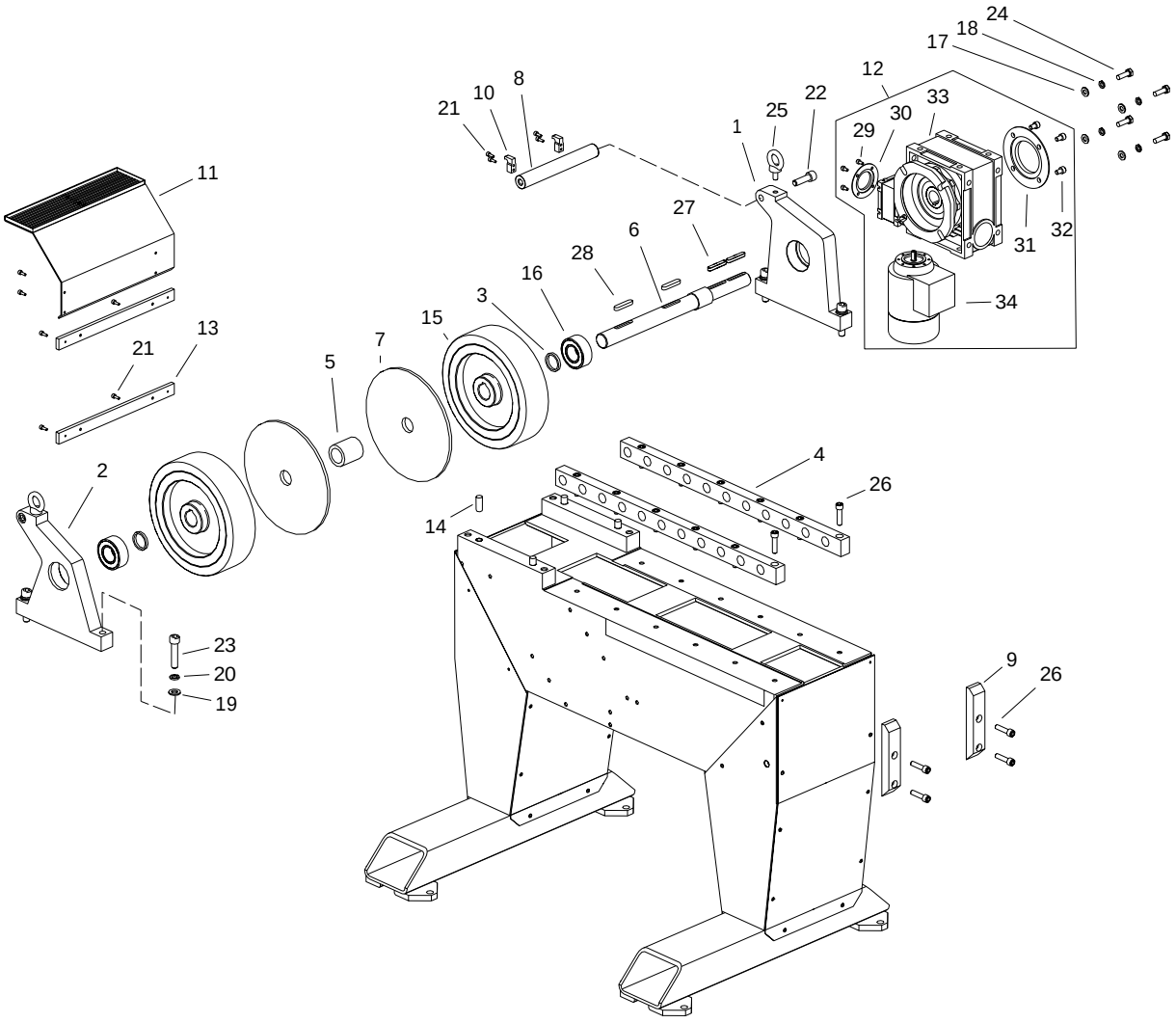
4. EXPLODED DRAWINGS AND PARTS LIST



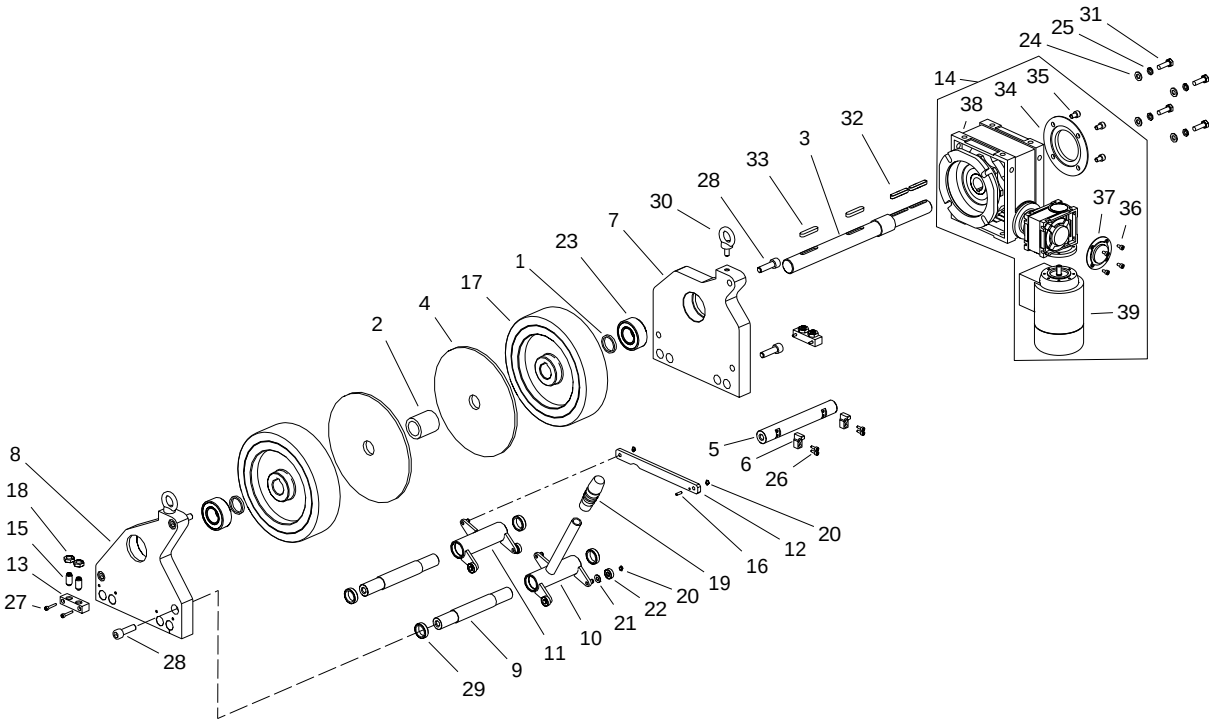
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	ZSP-0436-01-00-00-0	ACTIVE SUPPORT	1
2	ZSP-0436-02-00-00-0	MOVABLE ROLLERS UNIT	1
3	STL-0436-03-00-00-0	SIDE TABLE COMPLETE	1
4	STL-0436-04-00-00-0	CROSS TABLE COMPLETE	1
5	WSP-0436-05-00-00-0	MILLING UNIT BRACKET COMPLETE	1
6	ZSP-0436-06-00-00-1	MILLING UNIT	1
7	ZSP-0436-08-00-00-0	PASSIVE SUPPORT	1
8	ZSP-0436-09-00-00-0	MOVABLE ROLLERS UNIT OF PASSIVE SUPPORT	1
9	SWR-0436-10-00-00-0	LONG PIVOT PIN COMPLETE	2
10	SWR-0436-11-00-00-0	SHORT PIVOT PIN COMPLETE	2
11	DCS-0436-12-00-00-0	TOP CLAMP ASSY	1
12	KPL-0436-15-00-00-0	MILLING UNIT COVER FULL SET	1
13	OSL-0436-16-00-00-0	COVER	1
14	LNC-0436-17-00-00-0	CHAIN COMPLETE	1
15	SZF-0436-18-00-00-0	CONTROL CABINET	1
16	PJM-0436-21-01-00-0	CHAIN CONTAINER	1
17	PJM-0436-22-00-00-0	CLAMP CONTAINER	1
18*	PDK-000021	ROUND WASHER 6.4	4
19*	PDK-000026	ROUND WASHER 10.5	14
20*	PDK-000052	SPRING WASHER 10.2	14
21*	WKR-000096	HEX SOCKET BUTTON HEAD SCREW M5x10	18

ITEM	PART NUMBER	DESCRIPTION	Q-TY
22*	PRC-000014	EMERGENCY BUTTON	1
23*	PDK-000046	SPRING WASHER 6.1	4
24*	SRB-000101	HEX SOCKET HEAD CAP SCREW M6x10	4
25*	SRB-000048	HEX SOCKET HEAD CAP SCREW M10x35	14
26*	KLC-000008	5 MM HEX WRENCH	1
27*	KLC-000011	8 MM HEX WRENCH	1
28*	KLC-000004	10 MM HEX WRENCH	1
29*	WKT-000005	T15P TORX PLUS SCREWDRIVER	1
30*	OPK-000001	PLASTIC BOX	1

* not shown in the drawing

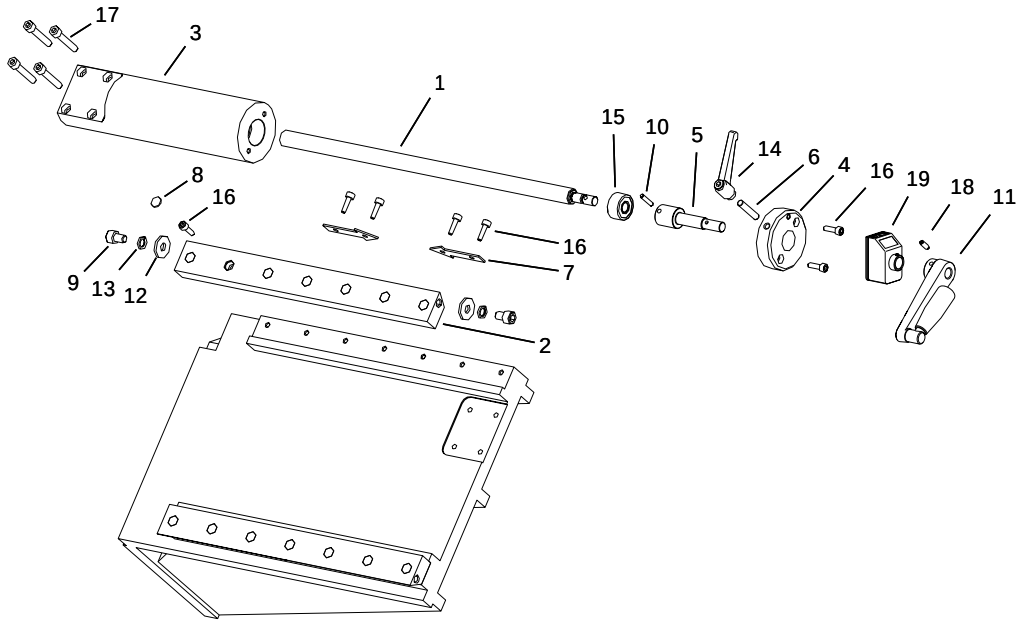


ZSP-0436-01-00-00-0		ACTIVE SUPPORT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	OPR-0436-01-02-00-0	BEARING MOUNTING I	1
2	OPR-0436-01-03-00-0	BEARING MOUNTING II	1
3	DYS-0436-01-04-00-0	WHEEL SPACER	2
4	PRW-0436-01-05-00-0	GUIDE	2
5	TLJ-0436-01-06-00-0	SPACER SLEEVE	1
6	WLK-0436-01-07-00-0	DRIVE SHAFT	1
7	PRW-0436-01-08-00-1	CHAIN GUIDE	2
8	LCZ-0436-01-09-00-0	CONNECTOR	1
9	ZDR-0436-01-15-00-0	BUMPER	2
10	ZCZ-0436-01-16-00-0	HOOK	2
11	OSL-0436-01-17-00-0	CONSOLE COVER COMPLETE	1
12	MTR-0436-01-18-00-1	GEAR-MOTOR	1
13	WSP-0436-14-00-00-0	CABINET BRACKET	2
14	KLK-000098	DOWEL PIN 16n6x40	4
15	KOL-000077	WHEEL WITH TIRE	2
16	LOZ-000122	DOUBLE-ROW ANGULAR BALL BEARING 40x80x30	2
17	PDK-000118	ROUND WASHER 13	4
18	PDK-000053	SPRING WASHER 12.2	4
19	PDK-000180	ROUND WASHER 17	4
20	PDK-000154	SPRING WASHER 16.2	4
21	SRB-000106	HEX SOCKET HEAD CAP SCREW M6x16	12
22	SRB-000316	HEX SOCKET HEAD CAP SCREW M16x50	2
23	SRB-000317	HEX SOCKET HEAD CAP SCREW M16x70	4
24	SRB-000195	FULL THREAD HEX HEAD CAP SCREW M12x35	4
25	SRB-000168	EYE BOLT M12	2
26	SRB-000054	HEX SOCKET HEAD CAP SCREW M12x45	16
27	WPS-000073	ROUNDED PRISMATIC KEY 10x8x60	2
28	WPS-000032	PRISMATIC KEY 12x8x60	2
29	SRB-000102	HEX SOCKET HEAD CAP SCREW M6x12	4
30	PKR-000124	COVER PCV 40	1
31	PKR-000125	COVER PCV 90	1
32	SRB-000464	HEX SOCKET HEAD CAP SCREW M10x16	4
33	RDK-000012	GEARBOX	1
34	SLN-000201	MOTOR	1



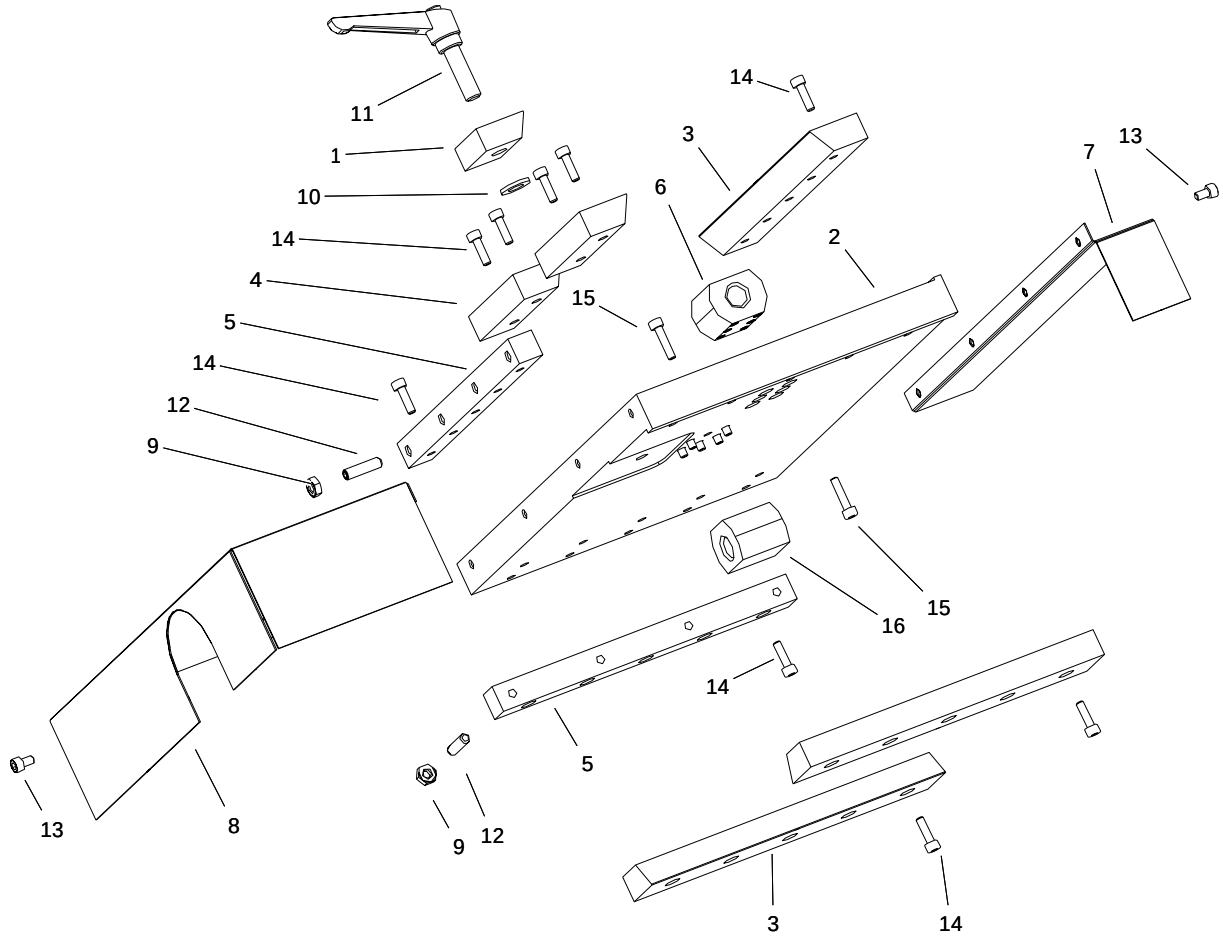
ZSP-0436-02-00-00-0		MOVABLE ROLLERS UNIT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	DYS-0436-01-04-00-0	WHEEL SPACER	2
2	TLJ-0436-01-06-00-0	SPACER SLEEVE	1
3	WLK-0436-01-07-00-0	DRIVE SHAFT	1
4	PRW-0436-01-08-00-1	CHAIN GUIDE	2
5	LCZ-0436-01-09-00-0	CONNECTOR	1
6	ZCZ-0436-01-16-00-0	HOOK	2
7	OPR-0436-02-01-00-0	BEARING MOUNTING I	1
8	OPR-0436-02-02-00-0	BEARING MOUNTING II	1
9	LCZ-0436-02-03-00-0	CONNECTOR	2
10	KRP-0436-02-04-00-0	LIFTING UNIT BODY	1
11	KRP-0436-02-05-00-0	LIFTING UNIT BODY II	1
12	CGN-0436-02-06-00-0	STRING	1
13	OPR-0436-02-07-00-0	CATCH MOUNTING	2
14	MTR-0436-02-08-00-1	GEAR-MOTOR	1
15	ZTR-0167-18-00-00-0	BALL CATCH COMPLETE	4
16	KLK-000083	DOWEL PIN 6n6x18	1
17	KOL-000077	WHEEL WITH TIRE	2
18	NKR-000084	LOW HEX NUT M16x1.5	4
19	OSL-000147	HANDLE COVER	1
20	PRS-000002	EXTERNAL RETAINING RING 10z	6
21	PDK-000026	ROUND WASHER 10.5	4
22	LOZ-000034	BALL BEARING 10x26x8	4
23	LOZ-000122	DOUBLE-ROW ANGULAR BALL BEARING 40x80x30	2
24	PDK-000118	ROUND WASHER 13	4
25	PDK-000053	SPRING WASHER 12.2	4
26	SRB-000106	HEX SOCKET HEAD CAP SCREW M6x16	4
27	SRB-000118	HEX SOCKET HEAD CAP SCREW M6x30	4
28	SRB-000316	HEX SOCKET HEAD CAP SCREW M16x50	6
29	TLJ-000016	SLIDE BUSHING 32x40x10	4

ZSP-0436-02-00-00-0		MOVABLE ROLLERS UNIT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
30	SRB-000119	HEX SOCKET HEAD CAP SCREW M6x30	4
31	SRB-000316	HEX SOCKET HEAD CAP SCREW M16x50	6
32	SRB-000195	FULL THREAD HEX HEAD CAP SCREW M12x35	4
33	SRB-000107	HEX SOCKET HEAD CAP SCREW M6x16	4
34	PKR-000125	COVER PCV 90	1
35	SRB-000464	HEX SOCKET HEAD CAP SCREW M10x16	4
36	SRB-000102	HEX SOCKET HEAD CAP SCREW M6x12	4
37	PKR-000124	COVER PCV 40	1
38	RDK-000013	GEARBOX	1
39	SLN-000201	MOTOR	1



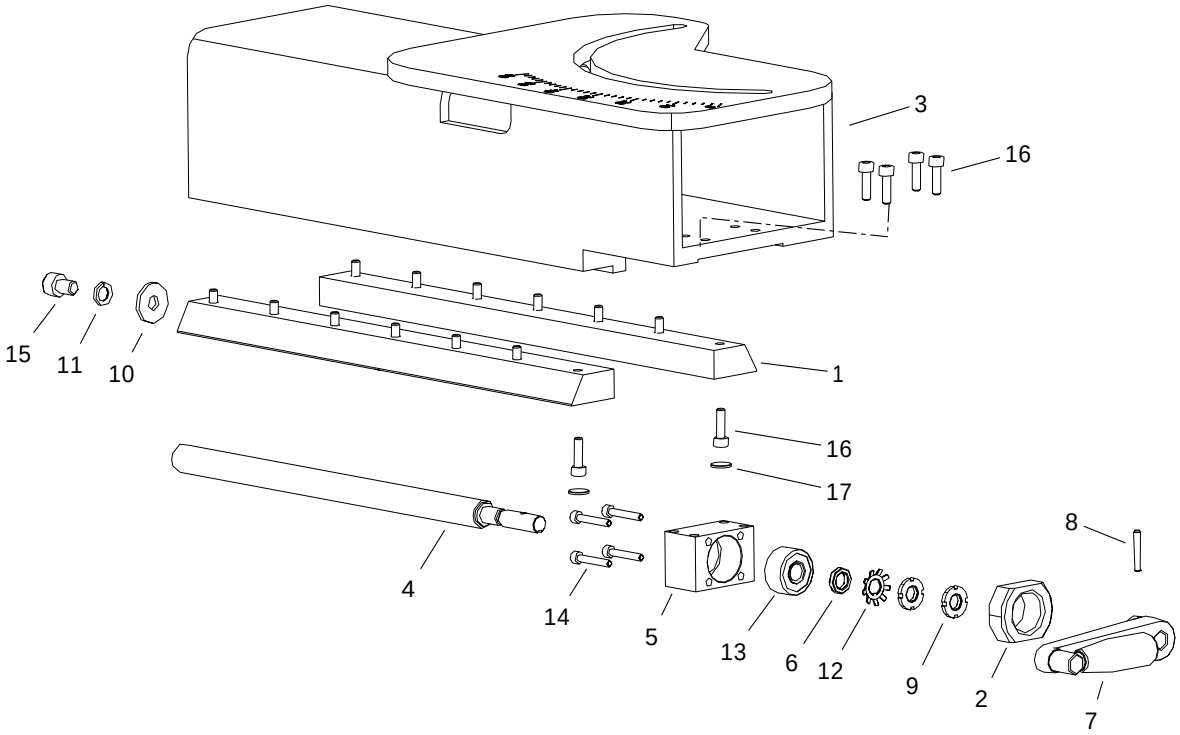
STL-0436-03-00-00-0		SIDE TABLE COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	SRB-0436-03-05-00-0	SCREW Y	1
2	PRW-0436-03-02-00-0	GUIDE Y	2
3	OPR-0436-03-07-00-0	BEARING MOUNTING	1
4	PKR-0436-03-08-00-1	COVER	1
5	WLK-0436-03-09-00-1	SHAFT	1
6	SRB-0436-03-10-00-0	CLAMPING SCREW	1
7	WSK-0436-03-11-00-0	ARROW	2
8	ZLP-0436-03-12-00-0	CAP	14
9	SRB-000319	HEX SOCKET HEAD CAP SCREW M10x14	2
10	KLK-000091	DOWEL PIN 5n6x25	1
11	KBA-000001	CRANK	1
12	PDK-000109	ROUND WASHER 10.5	2
13	PDK-000052	SPRING WASHER 10.2	2
14	RKJ-000010	HANDLEVER M8-SW	1
15	LOZ-000091	DOUBLE-ROW ANGULAR BALL BEARING 12x32x15.9	1

STL-0436-03-00-00-0		SIDE TABLE COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
16	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	20
17	SRB-000225	HEX SOCKET HEAD CAP SCREW M8x45	4
18	WKR-000351	HEX SOCKET SET SCREW WITH DOG POINT M6x16	1
19	WSK-000019	ELECTRONIC TRAVEL METER	1

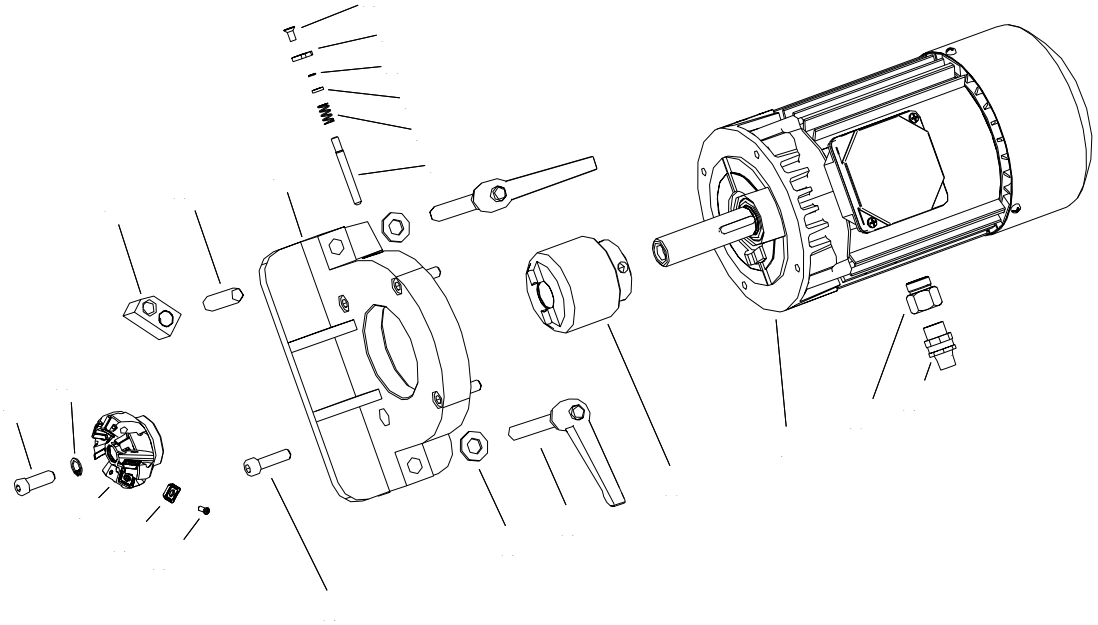


STL-0436-04-00-00-0		CROSS TABLE COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	BLD-0436-03-04-00-0	LOCK Y	1
2	PLY-0436-04-01-00-0	MAIN BOARD	1
3	PRW-0436-04-02-00-0	GUIDE X	3
4	PRW-0436-04-03-00-0	GUIDE X II	2
5	DCS-0436-04-04-00-0	CLAMP	2
6	NKR-0436-04-08-00-0	NUT	1
7	OSL-0436-04-06-00-0	LEFT COVER	1
8	OSL-0436-04-07-00-0	RIGHT COVER	1
9	NKR-000092	LOW HEX NUT M8	8
10	PDK-000118	ROUND WASHER 13	1
11	RKJ-000054	HANDLEVER M12-SW	1
12	WKR-000061	HEX SOCKET SET SCREW WITH FLAT POINT M8x30	8
13	SRB-000101	HEX SOCKET HEAD CAP SCREW M6x10	8

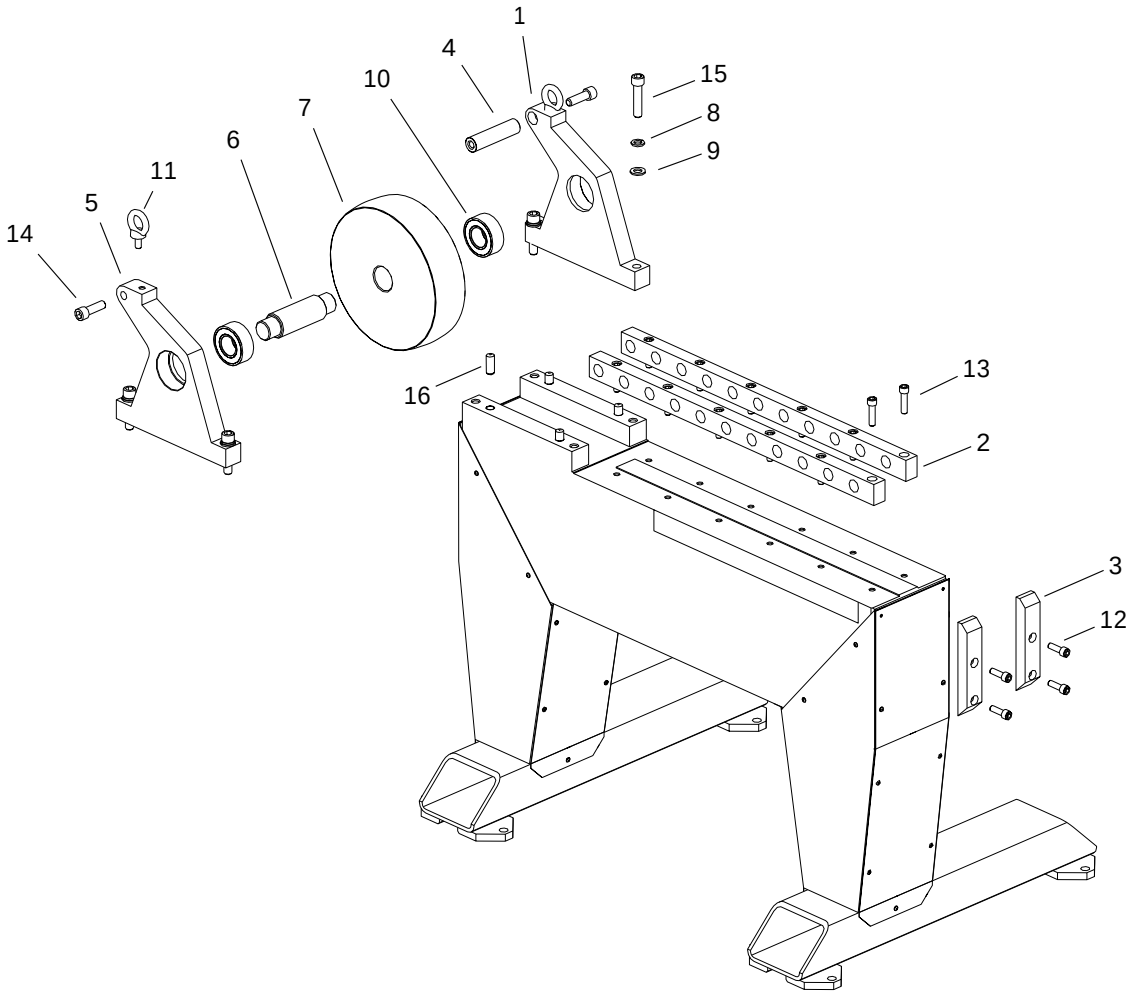
STL-0436-04-00-00-0		CROSS TABLE COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
14	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	29
15	SRB-000115	HEX SOCKET HEAD CAP SCREW M6x25	12
16	NKR-0436-04-05-00-0	NUT	1



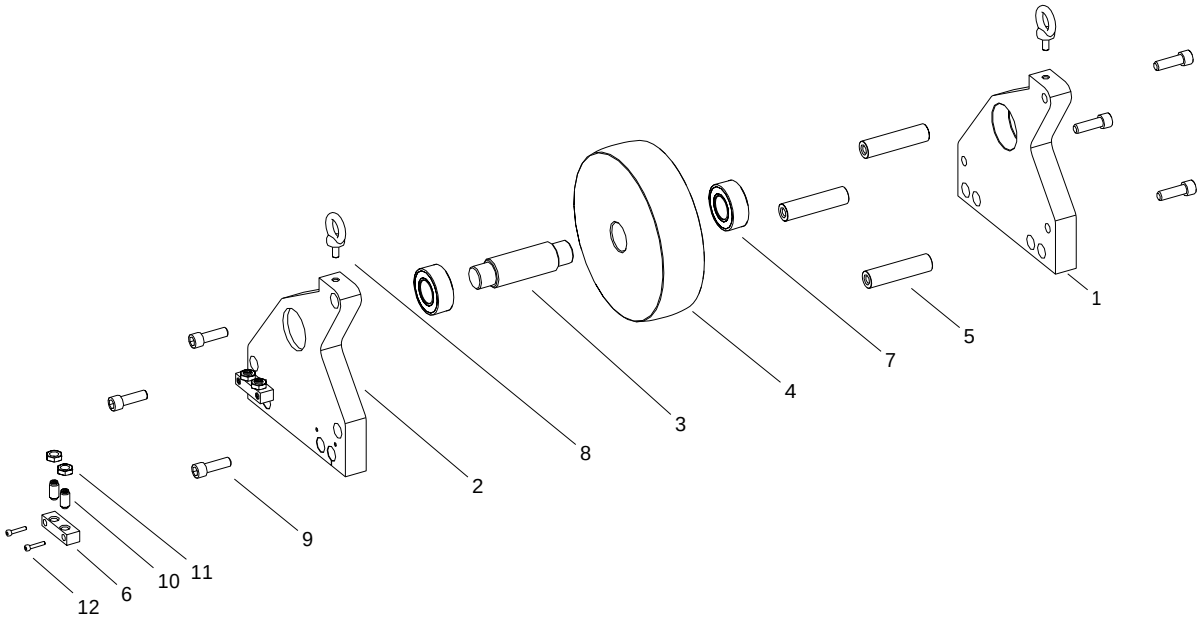
WSP-0436-05-00-00-0		MILLING UNIT BRACKET COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	PRW-0436-03-02-00-0	GUIDE Y	2
2	PKR-0436-03-06-00-0	COVER	1
3	WSP-0436-05-01-00-0	MILLING UNIT BRACKET	1
4	SRB-0436-05-03-00-0	SCREW X	1
5	OPR-0469-20-05-00-0	MAIN BEARING MOUNTING	1
6	TLJ-0469-20-12-00-0	SCREW SPACER SLEEVE	1
7	KBA-000001	CRANK WITH FOLDABLE HANDLE	1
8	KLK-000050	DOWEL PIN 5n6x28	1
9	NKR-000135	BEARING NUT M12x1	2
10	PDK-000026	ROUND WASHER 10.5	1
11	PDK-000052	SPRING WASHER 10.2	1
12	PDK-000179	BEARING TOOTHED WASHER	1
13	LOZ-000091	DOUBLE-ROW ANGULAR BALL BEARING 12x32x15.9	1
14	SRB-000089	HEX SOCKET HEAD CAP SCREW M5x30	4
15	SRB-000319	HEX SOCKET HEAD CAP SCREW M10x14	1
16	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	18
17	ZLP-0436-03-12-00-0	CAP	14



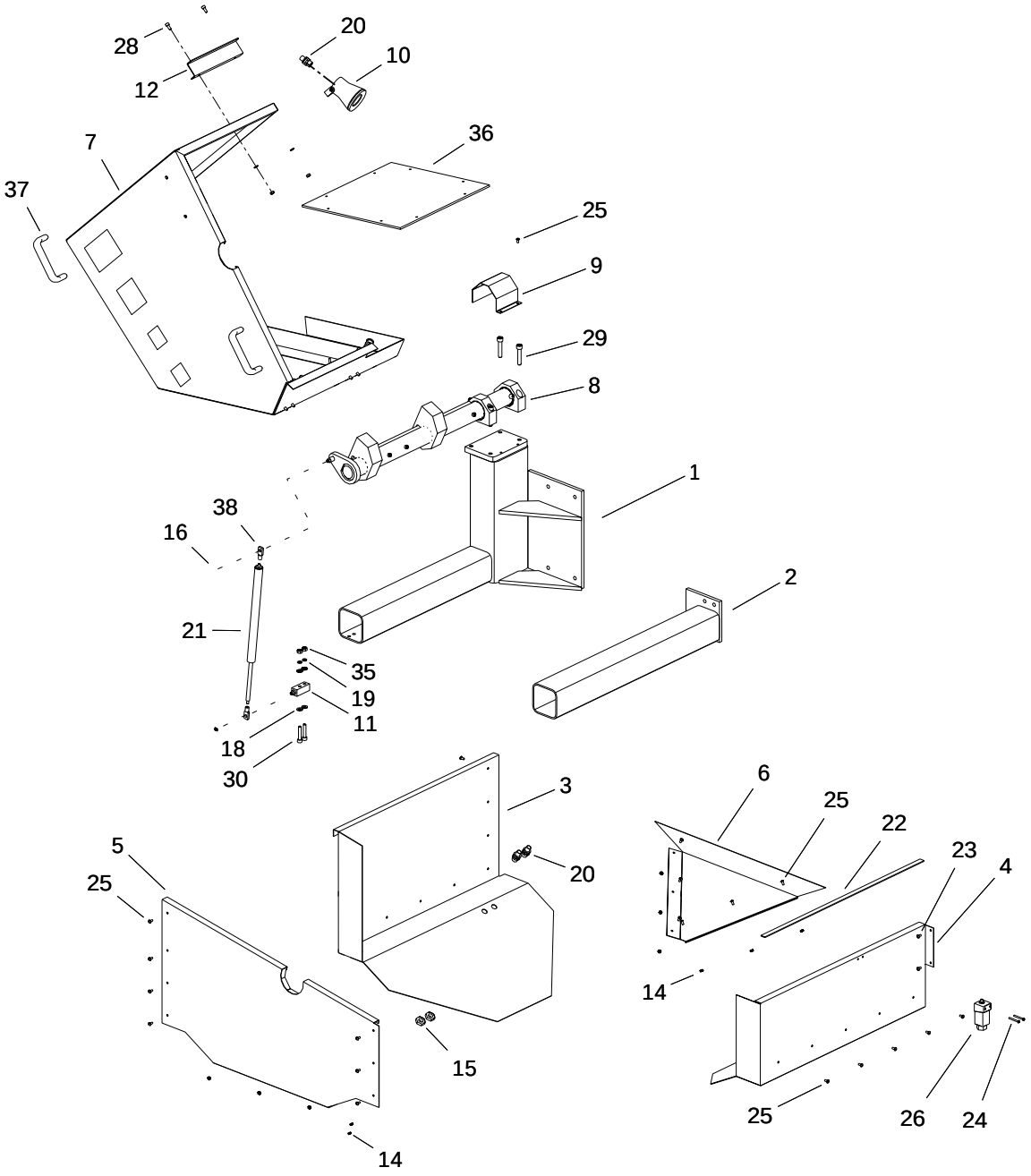
ZSP-0436-06-00-00-1		MILLING UNIT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	BLD-0152-02-02-03-1	MILLING HEAD LOCK	1
2	PLY-0152-02-02-04-1	MILLING HEAD LOCK PLATE	1
3	SPR-0152-02-02-05-0	SPRING 8x14.5x0.8	1
4	PRS-0152-02-02-08-1	MILLING HEAD LOCK RING	1
5	SRB-0152-02-11-00-1	SPECIAL LOW HEAD HEX SOCKET SCREW M10x25	1
6	KRP-0436-06-01-00-0	MILLING UNIT BODY	1
7	NKR-0436-06-02-00-0	NUT	2
8	SLN-0436-06-03-02-0	SPINDLE MOTOR COMPLETE	1
9	GLW-0152-02-12-00-0	MILLING HEAD ASSY WITH INSERTS	1
10	KLK-000097	DOWEL PIN 12n6x50	2
11	PRS-000260	INTERNAL RETAINING RING 14w	1
12	PRS-000250	EXTERNAL PROTECTIVE SPRING RING 6x0.8	1
13	PDK-000118	ROUND WASHER 13	2
14	RKJ-000053	HANDLEVER M12-80	2
15	WKR-000155	CROSS RECESSED COUNTERSUNK HEAD SCREW M5x10	1
16	SRB-000155	HEX SOCKET HEAD CAP SCREW M8x30	4
17	ZBI-0152-02-04-00-1	MILLING HEAD DOG	1
18	ZLC-000069	METAL ROTATIONAL COUPLING M16x1.5	1
19	PLY-000282	CUTTING INSERT 13	7
20	SRB-000311	MOUNTING SCREW T15P	7
21	ZLC-0436-06-03-03-0	REDUCER PG11-M16x1.5	1



ZSP-0436-08-00-00-0		PASSIVE SUPPORT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	OPR-0436-01-03-00-0	BEARING MOUNTING II	1
2	PRW-0436-01-05-00-0	GUIDE	2
3	ZDR-0436-01-15-00-0	BUMPER	2
4	LCZ-0436-08-02-00-0	SHORT CONNECTOR	1
5	OPR-0436-08-03-00-0	BEARING MOUNTING	1
6	WLK-0436-08-04-00-0	SHAFT	1
7	KOL-0436-08-06-00-0	PASSIVE SUPPORT WHEEL	1
8	PDK-000180	ROUND WASHER 17	4
9	PDK-000154	SPRING WASHER 16.2	4
10	LOZ-000122	DOUBLE-ROW ANGULAR BALL BEARING 40x80x30	2
11	SRB-000168	EYE BOLT M12	2
12	SRB-000308	HEX SOCKET HEAD CAP SCREW M12x35	4
13	SRB-000054	HEX SOCKET HEAD CAP SCREW M12x45	12
14	SRB-000316	HEX SOCKET HEAD CAP SCREW M16x50	2
15	SRB-000317	HEX SOCKET HEAD CAP SCREW M16x70	4
16	KLK-000098	DOWEL PIN 16n6x40	4

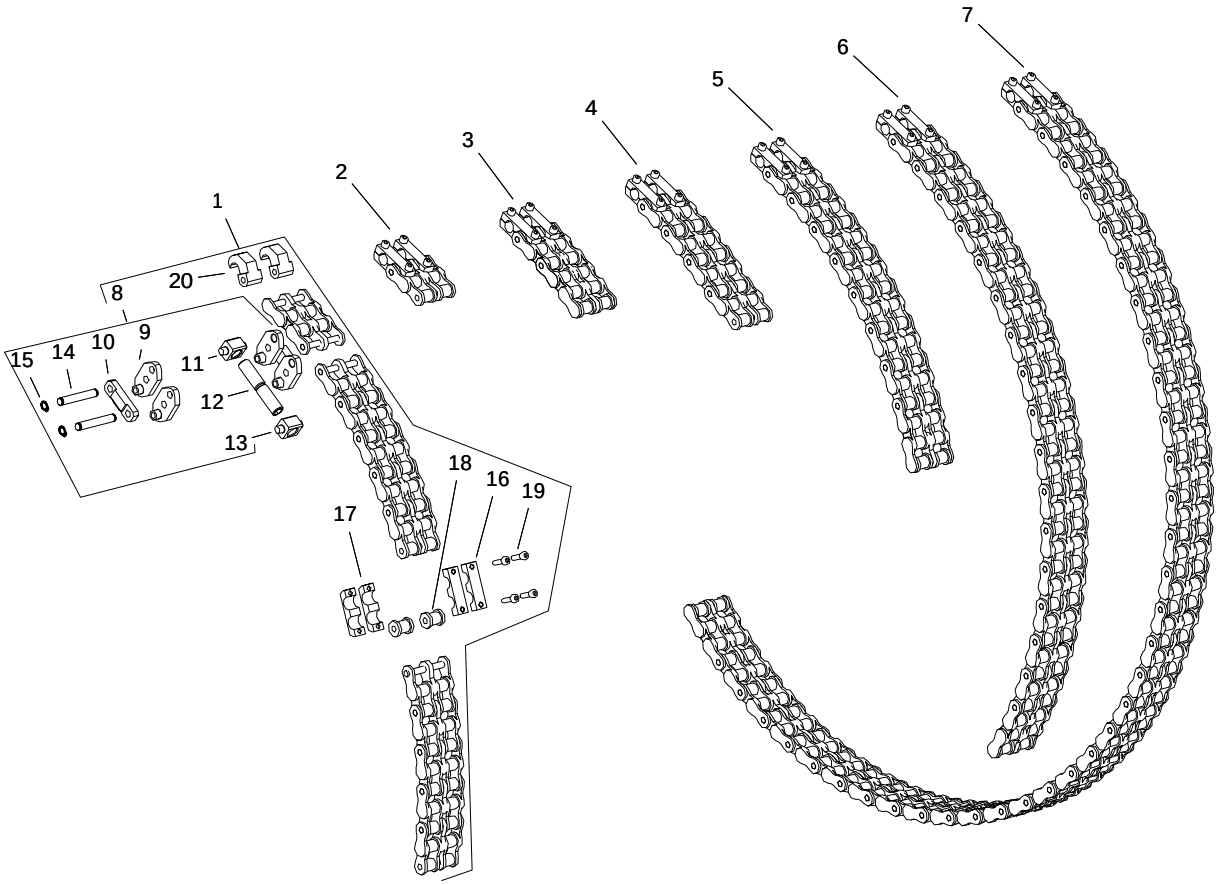


ZSP-0436-09-00-00-0		MOVABLE ROLLERS UNIT OF PASSIVE SUPPORT	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	OPR-0436-09-01-00-0	BEARING MOUNTING I	1
2	OPR-0436-02-02-00-0	BEARING MOUNTING II	1
3	WLK-0436-08-04-00-0	SHAFT	1
4	KOL-0436-08-06-00-0	PASSIVE SUPPORT WHEEL	1
5	LCZ-0436-08-02-00-0	SHORT CONNECTOR	3
6	OPR-0436-02-07-00-0	CATCH MOUNTING	2
7	LOZ-000122	DOUBLE-ROW ANGULAR BALL BEARING 40x80x30	2
8	SRB-000168	EYE BOLT M12	2
9	SRB-000316	HEX SOCKET HEAD CAP SCREW M16x50	6
10	ZTR-0167-18-00-00-0	BALL CATCH COMPLETE	4
11	NKR-000123	LOW NUT M16	4
12	SRB-000118	HEX SOCKET HEAD CAP SCREW M6x30	4



KPL-0436-15-00-00-0		MILLING UNIT COVER FULL SET	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	WSP-0436-15-01-00-0	LEFT COVER BRACKET	1
2	WSP-0436-15-02-00-0	RIGHT COVER BRACKET	1
3	OSL-0436-15-03-00-0	LEFT COVER	1
4	OSL-0436-15-04-00-0	RIGHT COVER	1
5	OSL-0436-15-05-00-0	FRONT COVER COMPLETE	1
6	OSL-0436-15-06-00-0	BACK COVER	1
7	OSL-0436-15-07-00-0	TOP COVER ASSY	1
8	ZWS-0436-15-08-00-0	HINGE COMPLETE	1
9	OSL-0436-15-09-00-0	HINGE COVER	1
10	LMP-0436-15-10-00-0	LAMP COMPLETE	1
11	WSP-0436-15-12-00-0	SPRING BRACKET	1

KPL-0436-15-00-00-0		MILLING UNIT COVER FULL SET	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
12	ZDR-0436-15-13-00-0	BUMPER	1
13	NKR-000017	HEX NUT M6	3
14	NKR-000016	HEX. NUT M5	19
15	NKR-000084	LOW HEX. NUT M16x1.5	2
16	PRS-000041	EXTERNAL RETAINING RING 8z	2
17	PDK-000021	ROUND WASHER 6.4	11
18	PDK-000022	ROUND WASHER 8.4	4
19	PDK-000051	SPRING WASHER 8.2	2
20	ZLC-000069	METAL ROTATIONAL COUPLING M16x1.5	3
21	SPR-000024	GAS SPRING	1
22	OSL-0436-15-14-00-0	TARNAMID COVER	1
23	WKR-000096	HEX SOCKET BUTTON HEAD SCREW M5x10	2
24	WKR-000452	CROSS RECESSED PAN HEAD SCREW M4x35	2
25	WKR-000096	HEX SOCKET BUTTON HEAD SCREW M5x10	34
26	LCZ-000024	LIMIT SWITCH	1
27	PDK-000046	SPRING WASHER 6.1	11
28	SRB-000105	HEX SOCKET HEAD CAP SCREW M6x14	11
29	SRB-000232	HEX SOCKET HEAD CAP SCREW M10x50	4
30	SRB-000157	HEX SOCKET HEAD CAP SCREW M8x40	2
35	NKR-000019	HEX NUT M8	2
36	SZY-0436-15-07-03-0	TOP WINDOW	2
37	UCW-000214	HANDLE	2
38	PLW-000001	GAS SPRING BRACKET	2



LNC-0436-17-00-00-0		CHAIN COMPLETE	
ITEM	**PART NUMBER**	**DESCRIPTION**	**Q-TY**
1	SGM-0436-17-01-00-0	BASIC SEGMENT	1
2	SGM-0436-17-04-00-0	3-LINK SEGMENT	1
3	SGM-0436-17-05-00-0	6-LINK SEGMENT	1
4	SGM-0436-17-06-00-0	9-LINK SEGMENT	1
5	SGM-0436-17-07-00-0	18-LINK SEGMENT	1
6	SGM-0436-17-08-00-0	36-LINK SEGMENT	1
7	SGM-0436-17-09-00-0	72-LINK SEGMENT	1
8	NPN-0436-17-03-00-0	CHAIN TIGHTENER	1
9	RAM-0436-17-03-01-0	ARM	4
10	LCZ-0436-17-03-02-0	LINK	2
11	NKR-0436-17-03-03-0	NUT	1
12	SRB-0436-17-03-04-0	TWO-SIDED BOLT	1
13	NKR-0436-17-03-06-0	LEFT NUT	1
14	SWR-0436-17-03-05-0	PIVOT PIN	2
15	PRS-000002	EXTERNAL RETAINING RING 10z	4
16	LCZ-0436-17-01-01-0	TOP LINK	2
17	LCZ-0436-17-01-02-0	BOTTOM LINK	2
18	TLJ-0436-17-01-05-0	SLEEVE	2
19	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
20	ZCZ-0436-17-02-00-0	CATCH	2

5. DECLARATION OF CONFORMITY

EC Declaration of Conformity

We

PROMOTECH sp. z o.o.
ul. Elewatorska 23/1
15-620 Bialystok
Poland

declare with full responsibility that:

PBM-1000 STATIONARY PIPE BEVELING MACHINE

is manufactured in accordance with the following standard:

- EN 60204-1

and satisfies safety regulations of the guidelines: 2006/95/EC, 2006/42/EC.

Bialystok, 21 October 2011

_____

Marek Siergiej
CEO

6. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of Manufacturer warrants the PBM-1000 Stationary Pipe Beveling Machine to be free of defects in material and workmanship under normal use for a period of 12 months from the date of sale.

This warranty does not cover cutting inserts as well as damage or wear that arise from misuse, accident, tempering, or any other causes not related to defects in workmanship or material.

Serial number .....

Date of sale .....

Signature of seller.....

1.04 / 28 January 2019

WE RESERVE THE RIGHT TO MAKE CHANGES IN THIS MANUAL WITHOUT NOTICE