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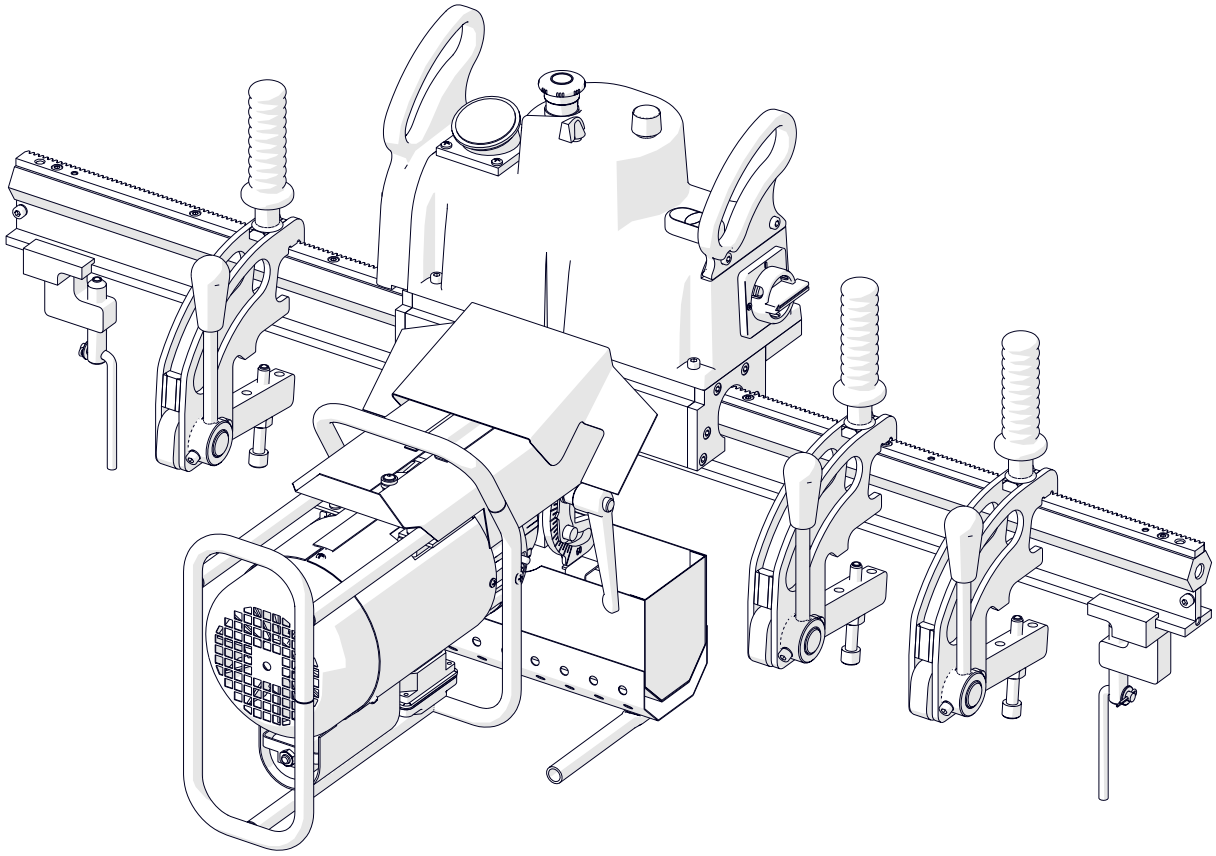
OPERATOR'S MANUAL

ABM-28

Auto Feed Beveling Machine

for Plate Edges



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

Contents

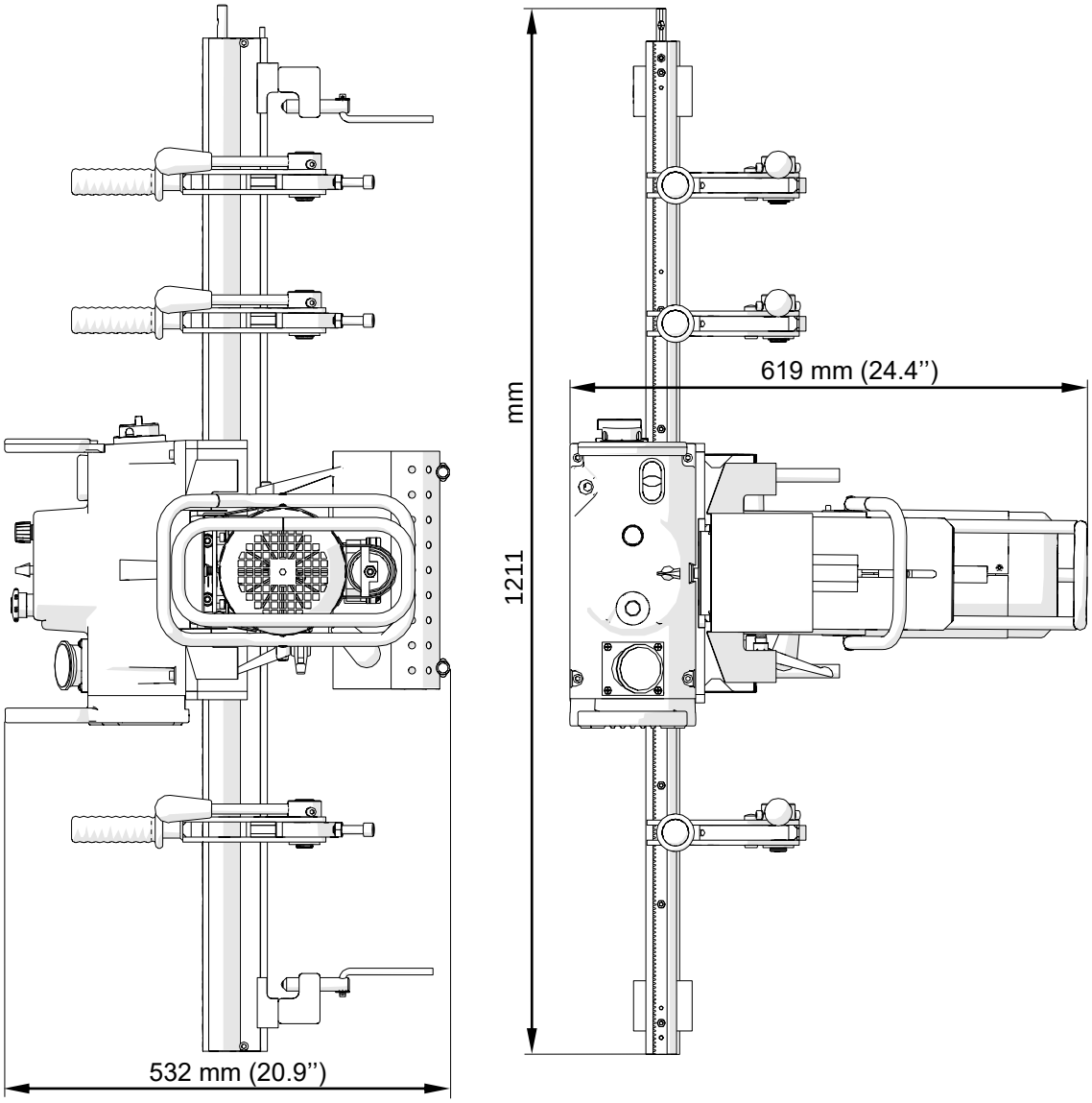
1. GENERAL INFORMATION

1.1. Application

The ABM-28 is a beveling machine designed to mill edges of plates with the thickness of up to 35 mm (1.38''). The beveling angle can be set in the entire range from 60° to –60°, including facing at 0°. The feed is performed automatically after starting the machine.

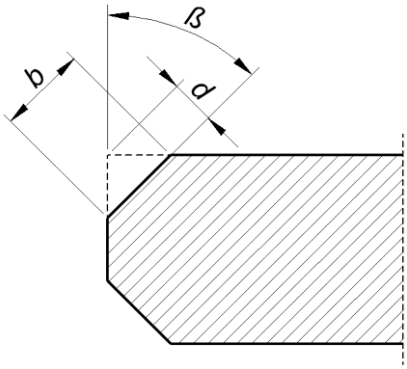
Accessories allow beveling of 36–70 mm (1.38–2.76'') thick plates at the angle set in the entire range from 0° to 60° (including facing) or from 0° to –60°. It is also possible to establish J-bevels in 20–70 mm (0.79–2.76'') thick plates and to remove clad of up to 5 mm (0.2'') depth from plates with a thickness of up to 127 mm (5'').

1.2. Technical data



Voltage	1~ 220–240 V, 50–60 Hz
Power	1600 W
Rotational speed (without load)	2780 rpm
Protection level	IP 20
Protection class	I
Bevel angle (ß)	60 to –60° (Fig. 1)
Maximum bevel width (*b*)	35 mm (1.38’’, Fig. 1)
Feed speed	250–500 mm/min (10–20 in/min)
Minimum plate thickness	10 mm (0.39’’)
Minimum plate width*	110 mm (4.33’’)
Weight	78.5 kg (173 lbs)

* The plate and the guide must be well fixed, and the machine must be balanced.



β	0°	30°	45°	60°
b	35 mm	30 mm	28 mm	30 mm

Fig. 1. Bevel dimensions; maximum bevel width depending on the angle

1.3. Design

The ABM-28 beveling machine consists of a milling unit, milling unit support, guide, a carriage for moving the milling unit along the guide, two clamps for fixing a plate, and three track clamps for positioning the guide and fixing it to the plate. The detailed design is shown in Fig. 2.

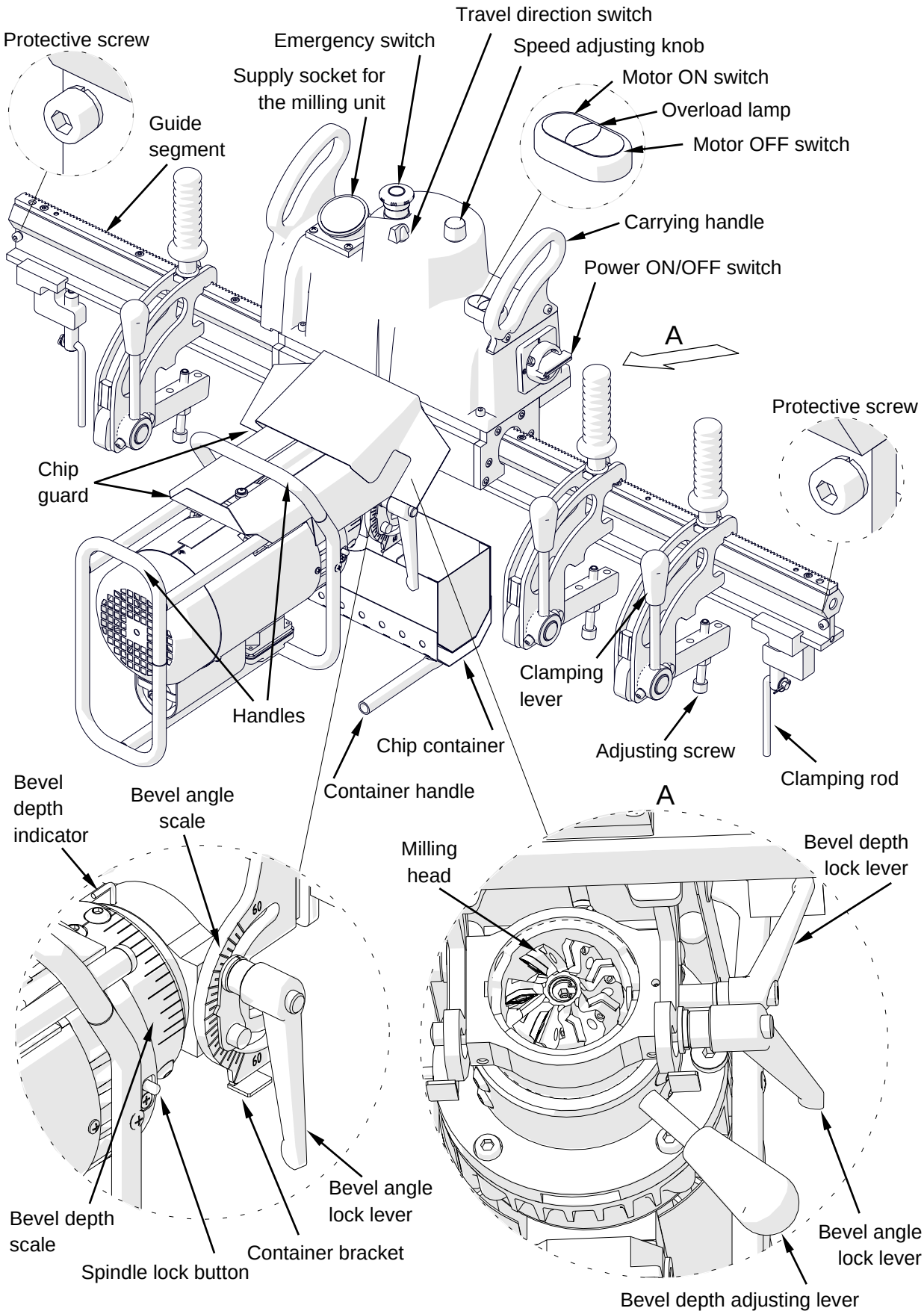


Fig. 2. View of the machine

1.4. Equipment included

The ABM-28 is supplied including the following elements.

Carriage installed on a guide track	1 unit
Wooden box	1 unit
Additional guide track	1 unit
Clamp for 10–35 mm (0.39–1.38'') plates	2 units
Track clamp for 10–35 mm (0.39–1.38'') plates	3 units
Milling unit support for beveling 10–35 mm (0.39–1.38'') plates at 60° to –60°	1 unit
Milling unit (includes milling head with 7 cutting inserts)	1 unit
Chip container	1 unit
Tool container	1 unit
4 mm hex wrench	1 unit
5 mm hex wrench	1 unit
6 mm hex wrench	1 unit
8 mm hex wrench	1 unit
13/17 mm flat wrench	1 unit
T15P torx screwdriver	1 unit
Nut, spring washer, and round washer for installing the milling unit support	2 sets
Grease for screws	1 unit
Operator's Manual	1 unit

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. The machine must be plugged into a properly grounded power source.
6. Never pull the cords as this may damage them and result in electric shock.
7. Untrained bystanders must not be present near the machine.
8. Before beginning, ensure the correct condition of the machine, power source, power cord, plug, control components, milling head, and cutting inserts.
9. Make sure that protective screws are present at the both ends of the guide.
10. Keep the machine dry. Exposure to rain, snow, or frost is prohibited.
11. Keep the work area well lit, clean, and free of obstacles.
12. Never use machine near flammable liquids or gases, or in explosive environments.
13. Use only tools specified in this Operator's Manual.
14. Never use cutting inserts that are dull or damaged.
15. Install the cutting inserts and milling head securely. Remove adjusting keys and wrenches from the work area before connecting the cord to the power source.
16. If the cutting edge of an insert is worn, rotate the insert in the socket by 90° or, if all the edges are worn, replace with a new insert specified in this Operator's Manual.
17. 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.
18. Always use safety goggles, hearing protection, protective shoes, and protective clothing during operation. Do not wear loose clothing.
19. Do not touch moving parts or chips formed during milling. Prevent objects from being caught in moving parts.
20. After every use, remove chips from the machine, especially from the milling head. Do not remove chips with bare hands. Clean the machine with a cotton cloth without using any agents.
21. Carry the chip container using the handles.

22. Cover steel parts with a thin anti-corrosion coating to protect the machine from rust when not in use for any extended period.
23. Maintain the machine and install/remove parts and tools only when the machine is unplugged from the power source.
24. Repair only in a service center appointed by the seller.
25. If the machine falls from any height, 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

3.1. Assembling

The carriage set on the guide in the leftmost position must be placed on the plate between two clamps in the manner shown in Fig. 3a. If needed, extend the guide length by connecting additional guide segments, and tighten the set screws using the 4 mm hex wrench (Fig. 3b). Then, install the protective screws *1* and *2* at the both ends of the guide, and position the guide using track clamps in such a way to align the track clamps with respective surfaces of the guide and plate. Fix the track clamps using levers (*3*, *4*, *5*), and tighten the clamp screws by rotating the clamping rods (*6*, *7*). To adjust the pressing force of the track clamps depending on the plate thickness, use the adjusting screws *8* which can be located in one of three track clamp holes.

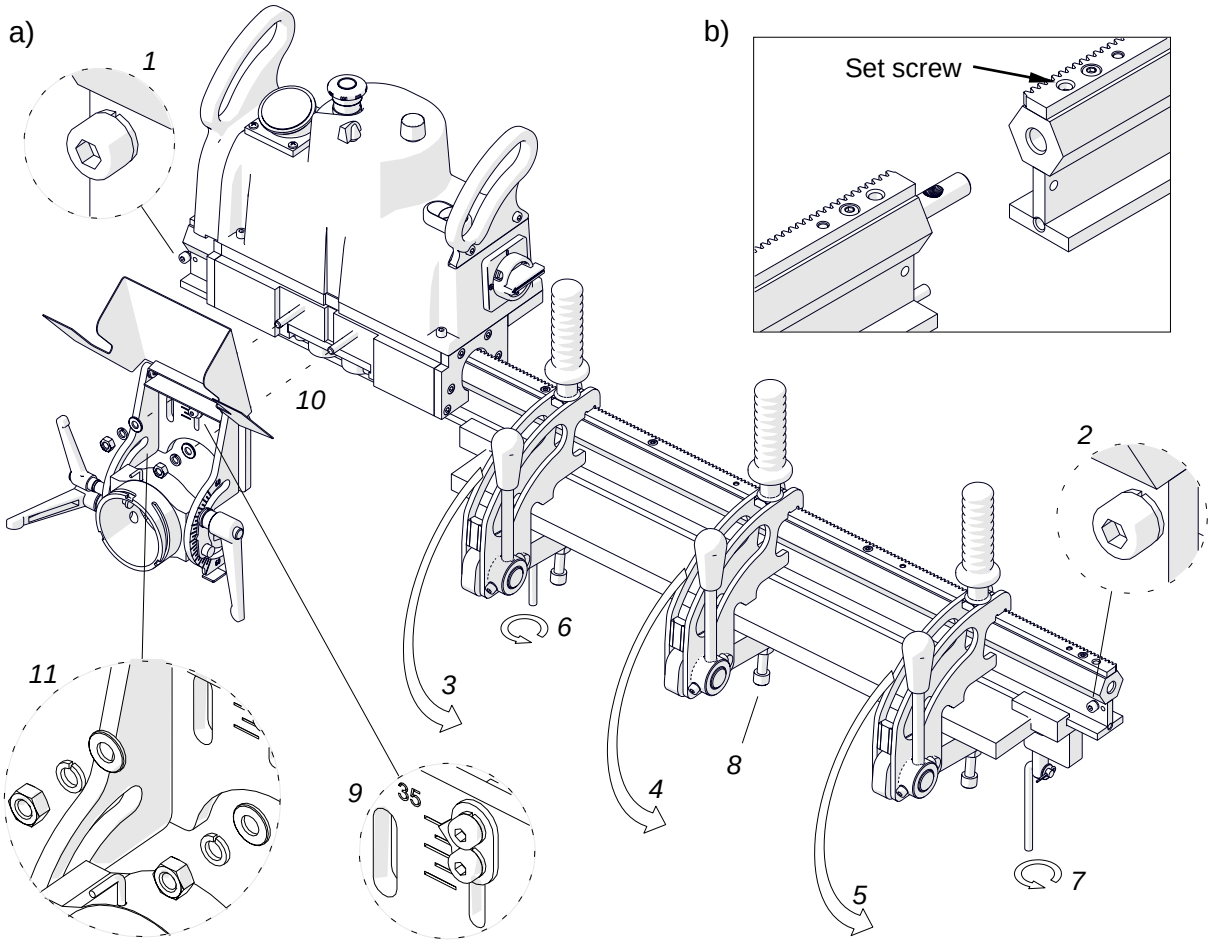


Fig. 3. Placing the machine on the plate (a); installing additional guide segments (b)

If the plate is to be machined at a negative angle (from the bottom), loosen two milling unit support screws using the 4 mm hex wrench and set the indicator to the value of the plate thickness (*9*). Position the milling unit support on the screws (*10*), in the shown order place the washers under the nuts (*11*), and tighten the nuts using the 13 mm flat wrench.

Set the lever *1* in the position as in Fig. 4, insert the milling unit horizontally into the support (*2*), and lock the bevel depth lock lever (*3*). If the plate is to be machined at a positive angle (from the top), set the chip container on the brackets (*4*).

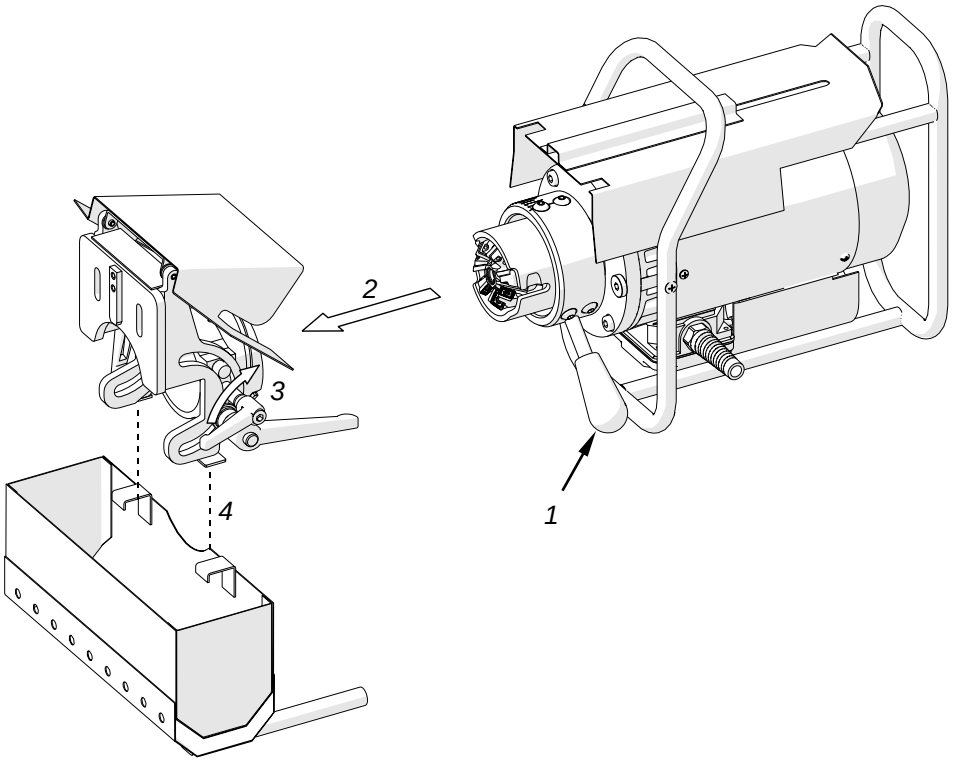


Fig. 4. Installing the milling unit

3.2. Setting the bevel parameters

Loosen the lever *1* (Fig. 5), rotate the lever *2* to set a proper milling head penetration in the workpiece indicated on the scale *3* (one graduation equals 1 mm, 0.04''), and then lock the position using the lever *1*.

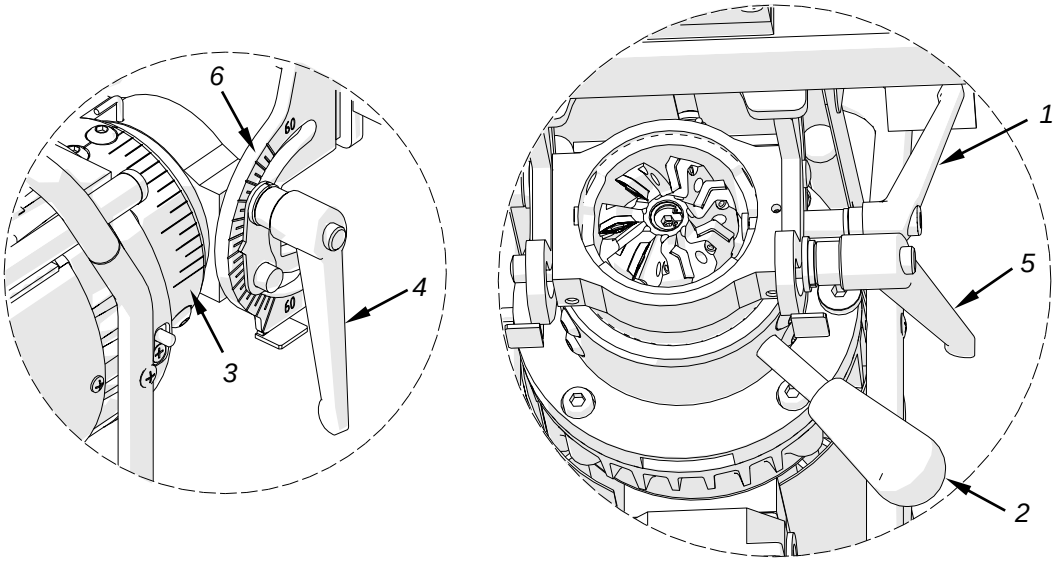


Fig. 5. View of the milling unit

Next, loosen the levers *4* and *5*, rotate the milling unit in such a way to set a proper bevel angle on the scale *6*, and then lock the levers *4* and *5*.

Start beveling with the milling head retracted as far as possible, especially when milling at the angle of 0°.

Proceed with caution if the milling unit is inclined at a high negative angle. In such a case when readjusting the milling head penetration near the maximal retraction, hold the handles tightly not to allow the milling unit to slip down from the support after the bevel depth lock lever *1* is unlocked.

3.3. Operating

Plug the milling unit power cord into the socket *1* (Fig. 6), and connect the cord *2* to the power source. Then, set the power switch *3* to the position 'I' and use the knob *4* to change the travel speed of the carriage to the least possible value. Select "right" direction of the travel using the switch *5*, and start the motor with the button *6*.

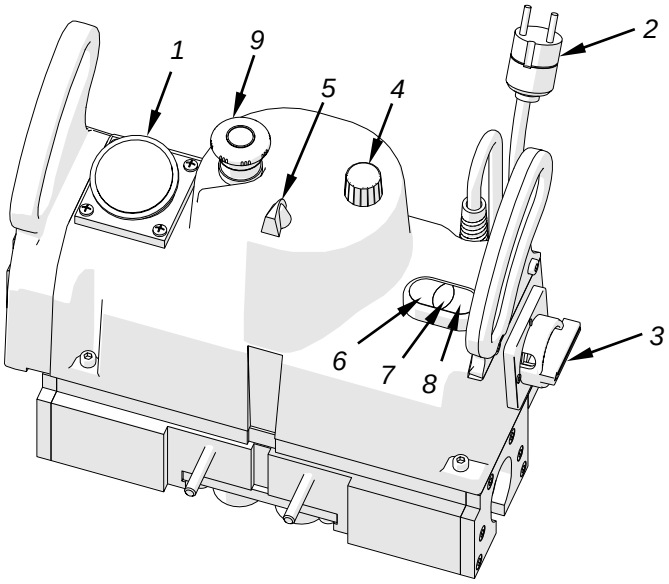


Fig. 6. View of the control panel

After the travel is started, set a speed that will ensure sufficient milling performance and prevent the overload of the motor and excessive wear of the cutting inserts. Good effects are achieved with a speed at which the overload lamp *7* will not flash.

The plate must be at all times pressed by two track clamps positioned as close to the current position of the carriage as possible. When the carriage approaches the track clamp, relocate the track clamp to the other side of the carriage.

Establish bevels in several passes and not exceed 4 mm (0.16'') of the milling head penetration *d* (Fig. 1) in a single pass. When the carriage reaches the plate end, either toggle the switch *5* to the opposite travel direction or first stop the carriage with the button *8* and then readjust the bevel depth or angle.

In an emergency, use the emergency switch *9* to shut off the power. To restart the operation in such a case, remove the cause of the shutdown, unlock the emergency switch, and start the machine using the button *6*.

If the speed is too high for the bevel width and depth that are set, the machine will stop and start cyclically. In such a case, decrease the travel speed or milling head penetration in the workpiece.

If the machine becomes overloaded, for instance when the bevel width is too large for the material being machined, when the cutting inserts are dull, or when the travel speed and bevel depth are too high, the spindle will stop automatically. In such a case, hold the button *6*, which will start the travel in the opposite direction and enable the operator to retract the milling head from the workpiece. Next, release the button *6*, press the button *8*, and then remove the cause of the shutdown and restart the motor using the button *6*.

If the carriage stops as a result of reaching one of the protective screws, set the switch *5* to the opposite travel direction before restarting.

Operating near the overload (with the overload lamp flashing) is allowed; however, never allow the motor temperature to exceed 85°C (185°F) because this can lead to damage of the motor windings. After every hour of operating under full load, stop the motor for 10–15 minutes. Never cool the motor by running without load because it will become heated even faster than when working with load.

After the work is finished, stop the motor using the button *8*, set the power switch to the position ‘O’, and then unplug the power cord from the power source.

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

3.4. Replacing the cutting inserts

The inserts may be replaced or rotated. To do this, unplug the power cord from the power source and unplug the cable connecting the milling unit to the carriage. Next, loosen the bevel depth lock lever (*1*, Fig. 7), set the lever *2* in the position shown in the figure, and then remove the milling unit (*3*).

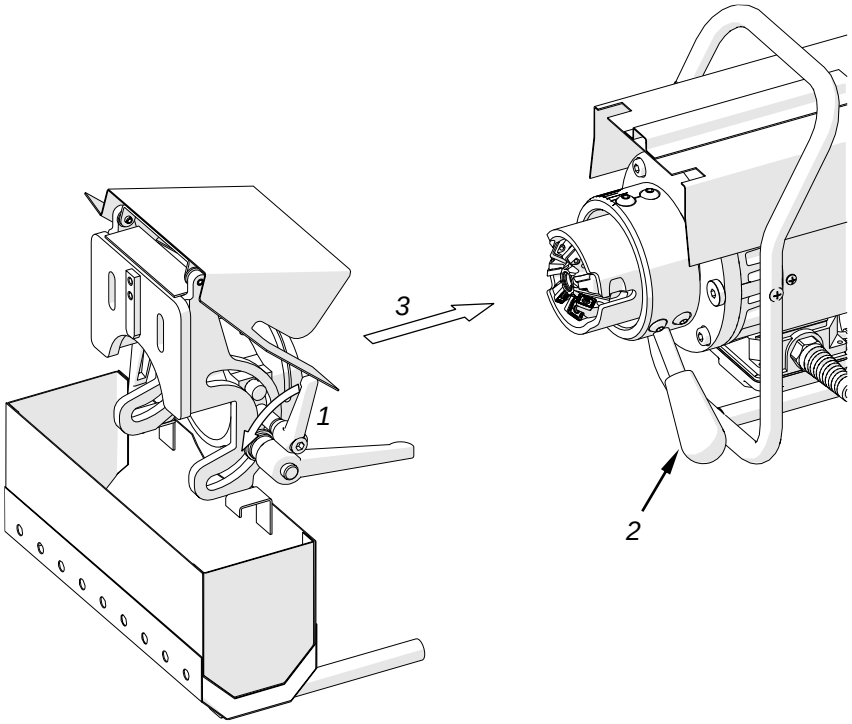


Fig. 7. Removing the milling unit

Next, unscrew the set screw in the manner shown in Fig. 8, remove the insert, and clean the socket. Next, rotate the insert by 90° and install again or replace with a new one if all four edges are worn, securing with the set screw.

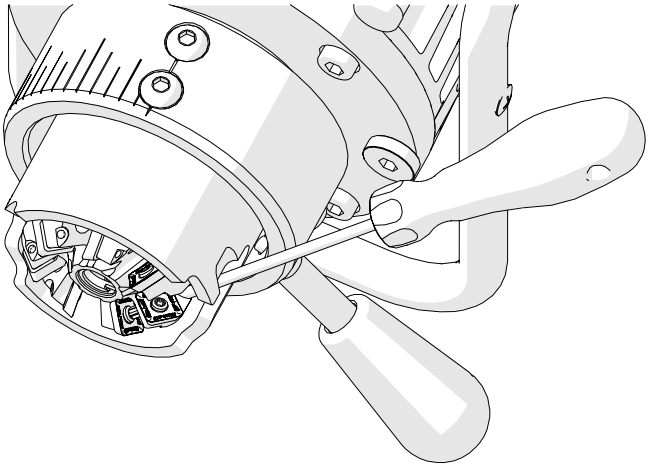


Fig. 8. Replacing the cutting inserts

3.5. Replacing the milling head

Unplug the power cord from the power source, and unplug the cable connecting the milling unit to the carriage. Remove the milling unit in the manner shown in Fig. 7, hold the spindle lock button, and use 5 mm hex wrench to loosen the screw (Fig. 9). Then, release the lock button and remove the head. Install in reverse order.

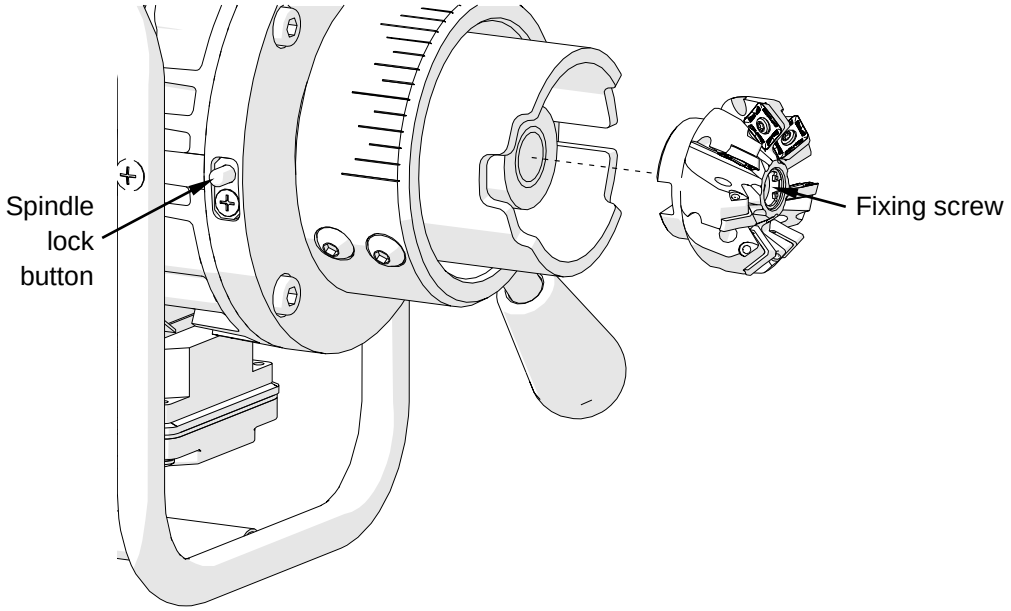


Fig. 9. Replacing the milling head

3.6. Using optional milling unit supports

To install a milling unit support, unplug the power cord, unplug the cable connecting the milling unit to the carriage, and remove the milling unit as shown in Fig. 7.

Then, unscrew the nuts using the 13 mm flat wrench (*1*, Fig. 10), and remove the installed support (*2*). Before installing the support for beveling 36–70 mm thick plates at the angle of 0° to –60°, loosen two screws (*3*) using the 4 mm hex wrench and set the indicator to the thickness of the plate to be machined. Position the milling unit support on the screws (*4*), in the shown order place the washers under the nuts (*1*), and tighten the nuts afterward.

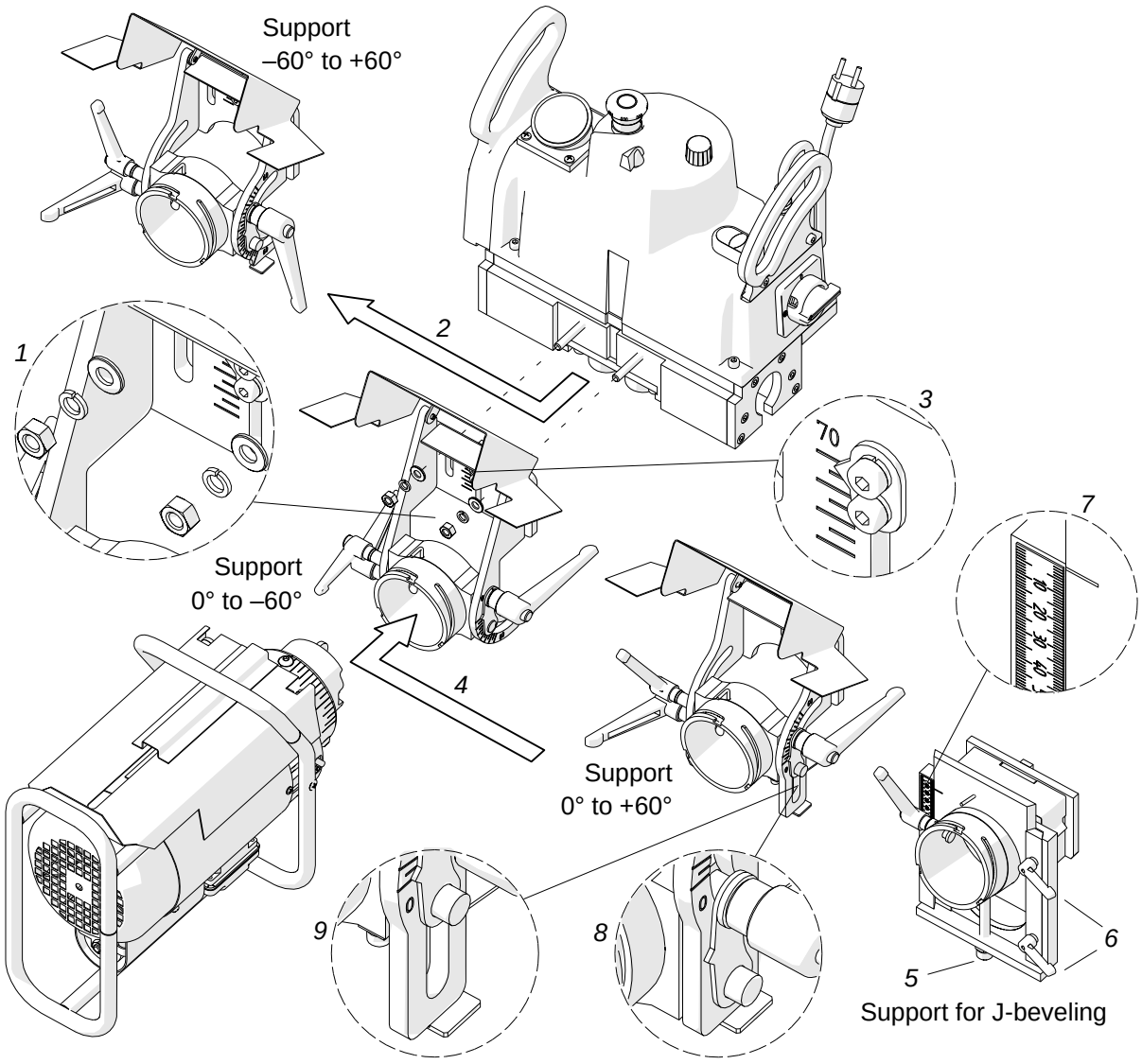


Fig. 10. Replacing the milling head support

To install the support for J-beveling, loosen the screw *5* using the 8 mm hex wrench and loosen two lock levers *6*, set the body to a proper height indicated by the scale *7*, and tighten the screw and levers. Then, install the milling head for J-beveling in the manner shown in Fig. 9.

Install the milling unit in the manner shown in Fig. 4.

To face the plate using the support for beveling 36–70 mm plates at the angle of 0° to +60°, perform the first pass with the milling unit in the lowest position (*8*, Fig. 10), and then the second pass at the indication of '0' (*9*).

Before J-beveling, prepare the plate as shown in Fig. 11 using the standard milling head. Then, replace the milling head to a special R6 or R8 milling head for J-beveling. During J-beveling, the carriage must travel to the left, which will reduce vibrations, increase the life of the cutting inserts, and improve the quality of the surface. When performing multiple passes, before every next pass, place the carriage again on the right side of the plate, and increase the penetration of the milling head in the workpiece. Establishing J-bevels may require several stages (Fig. 11) depending on the plate thickness. After completing every stage, lower the milling unit, secure the support in this new position, and perform the next stage. Proceed as described until the J-bevel is established.

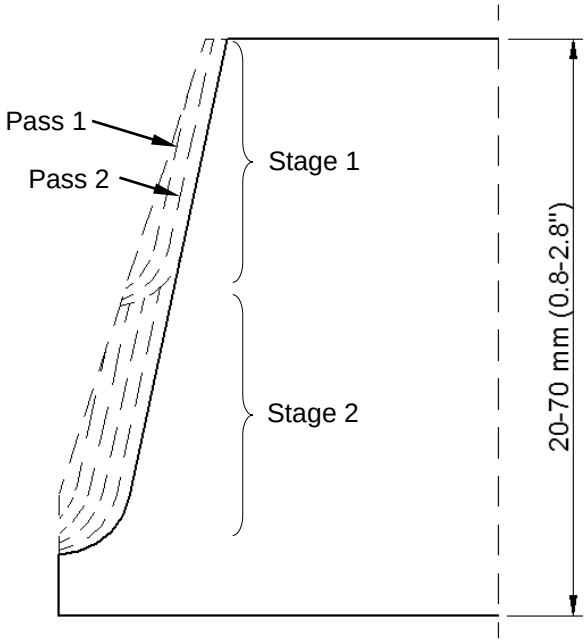
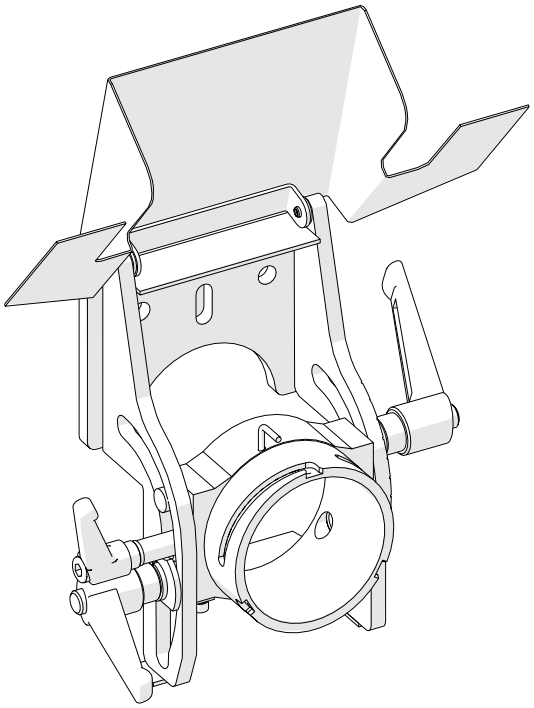


Fig. 11. Sample method of J-beveling of 20-70 mm plates

4. ACCESSORIES

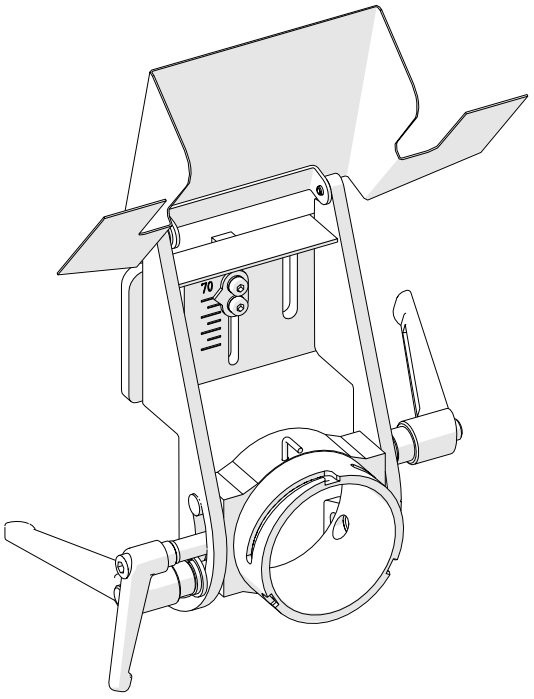
4.1. Support for beveling 36–70 mm plates at 0° to 60°

Part number:
WSP-0518-04-00-00-0

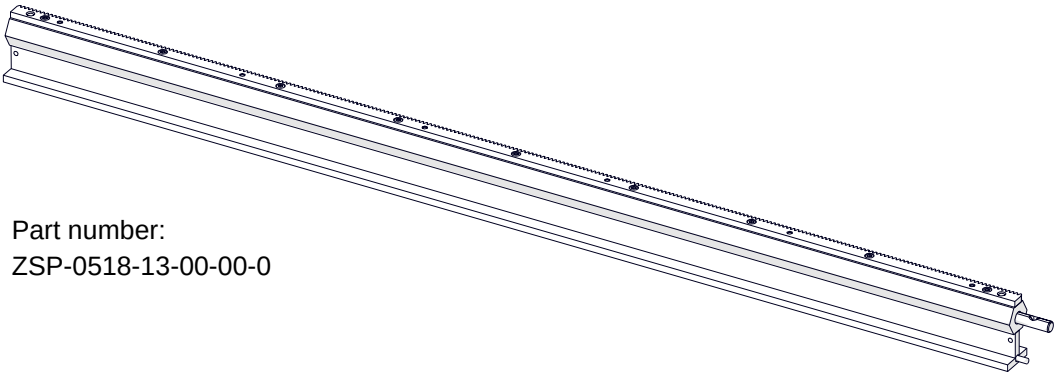


4.2. Support for beveling 36–70 mm plates at 0° to –60°

Part number:
WSP-0518-05-00-00-0

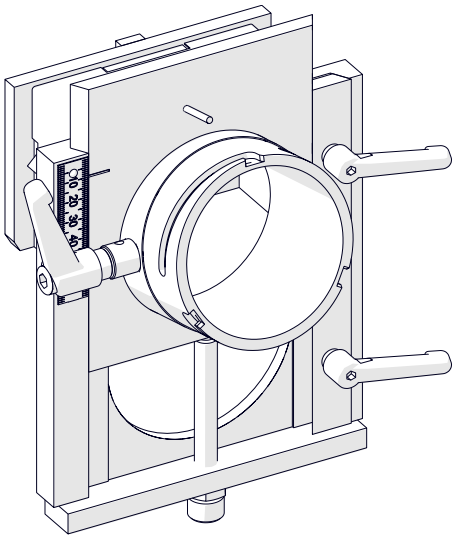


4.3. 1.2 m (47’’) guide track



Part number:
ZSP-0518-13-00-00-0

4.4. Support for J-beveling 20–70 mm plates

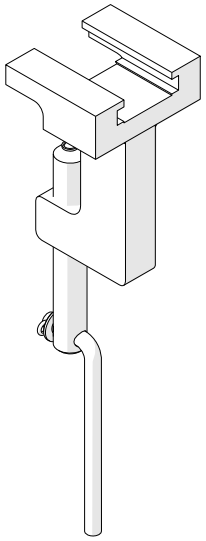


Part number:
ZST-0518-07-00-00-0
(includes: milling unit support for J-beveling WSP-0518-07-01-00-0 and chip guard OSL-0518-07-02-00-0)

Part name	Part number
J-beveling R6 milling head (with fixing screw SRB-000284 and retaining ring PRS-000006; without cutting inserts, 6 required)	GLW-0518-07-03-00-0
Cutting insert for J-beveling R6 milling head	PLY-000422
J-beveling R8 milling head (with fixing screw SRB-000284 and retaining ring PRS-000006; without cutting inserts, 5 required)	GLW-0518-07-04-00-0
Cutting insert for J-beveling R8 milling head	PLY-000424

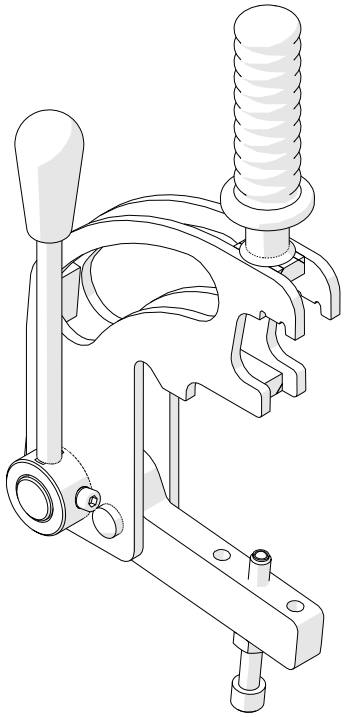
4.5. Clamp for 36–70 mm plates

Part number:
ZCS-0152-99-01-00-0
(2 required)



4.6. Track clamp for 36–70 mm plates

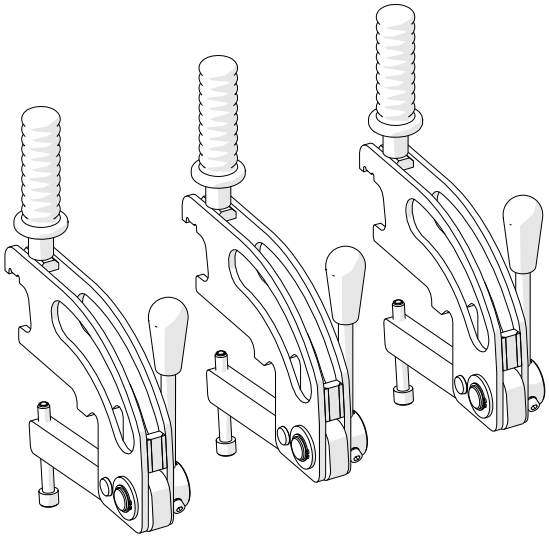
Part number:
UST-0152-15-01-00-1
(3 required)

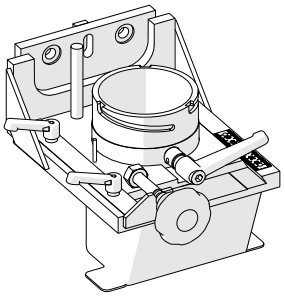


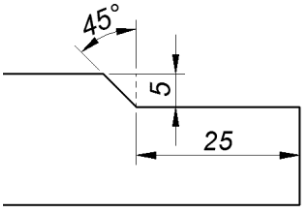
4.7. Clad removal attachment

Allows removing clad whose shear strength R_m is up to 700 MPa (100,000 psi).

Part number:
ZST-0518-09-00-00-0
(includes: milling unit support for clad removal WSP-0518-10-00-00-0, and three track clamps of clad removal attachment for up to 35 mm plate UST-0518-11-00-00-0)







Maximum milling depth	5 mm (0.2'')
Maximum milling width	25 mm (1'')
Support weight	4.5 kg (10 lbs)
Track clamp weight	3.2 kg (7 lbs)

Position the carriage on the plate in the standard manner but using the track clamps of the attachment. Then, position the support on the screws, placing the washers in the order shown in Fig. 12, and tighten the nuts using the 13 mm flat wrench. Set the depth adjusting lever in the position shown in the figure and vertically insert the milling unit into the support. Set the chip container on the support.

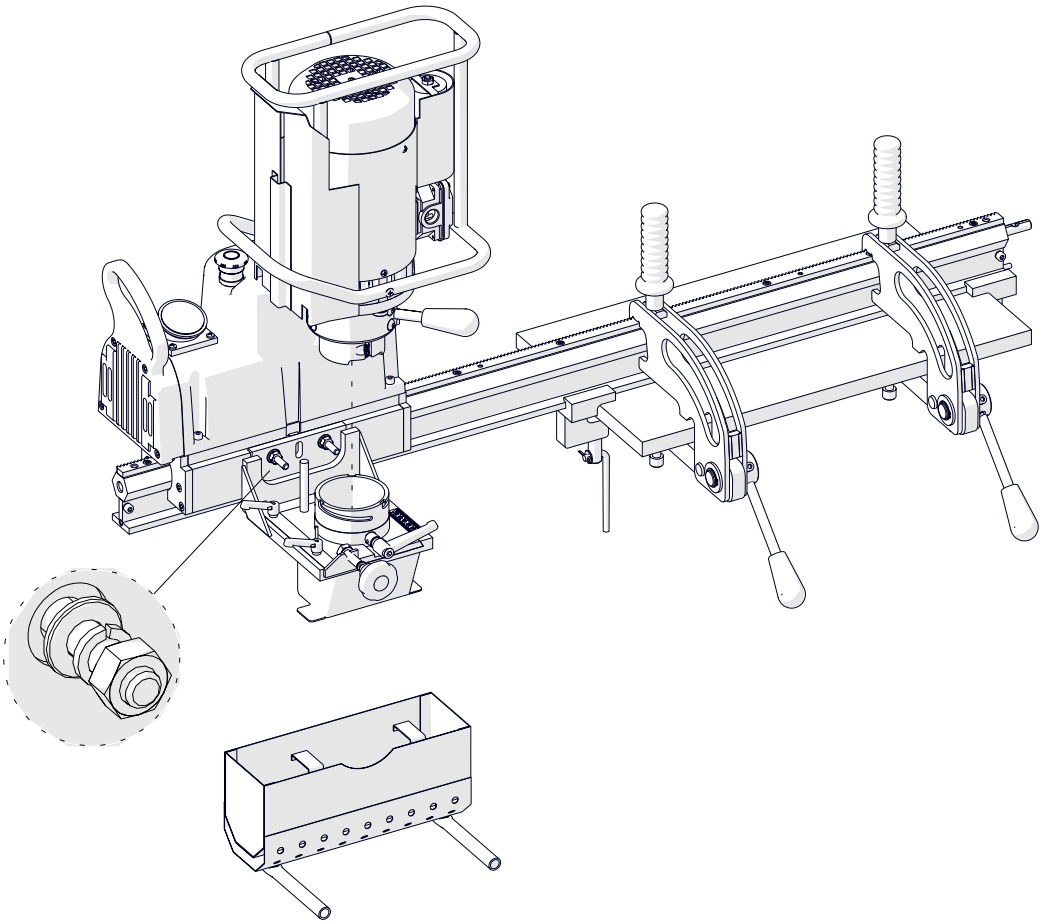


Fig. 12. Installing the support

Use the depth adjusting lever and the milling unit shift knob to set a proper milling depth and width. Lock this position using lock levers. Operate by traveling the carriage from left to right.

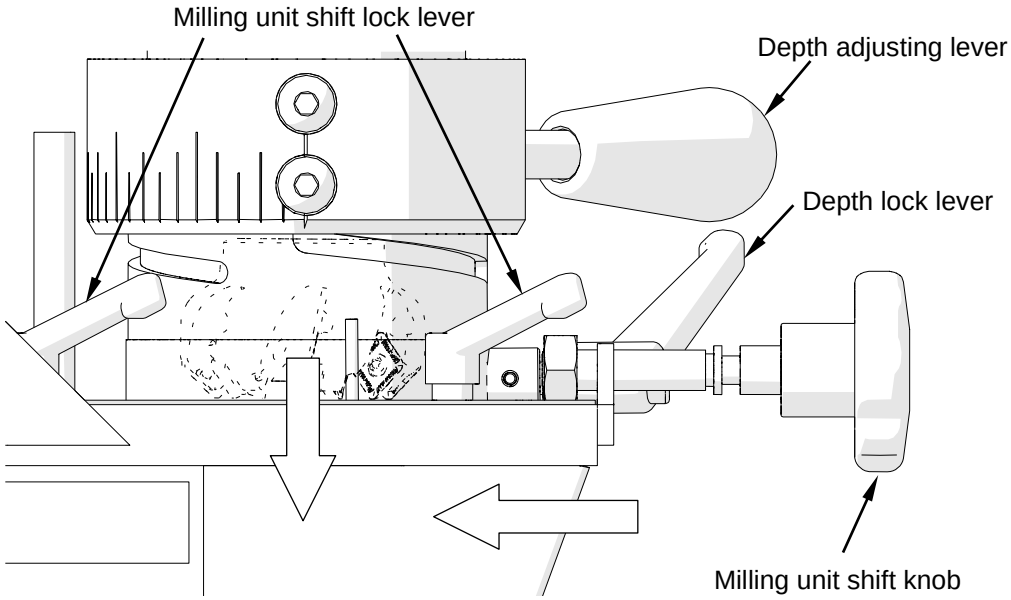
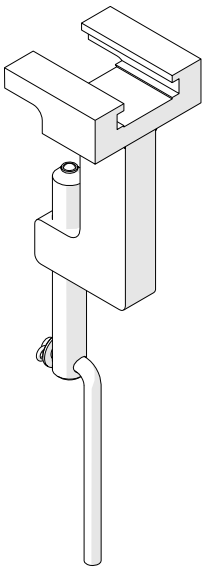
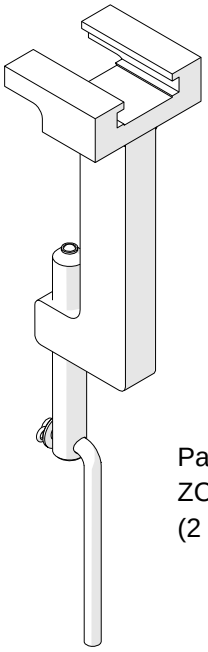


Fig. 13. Adjusting the milling depth and width

4.8. Clamp of clad removal attachment for 36–80 mm and 81–127 mm plates

Part number:
ZCS-0518-08-02-00-0
(2 required)

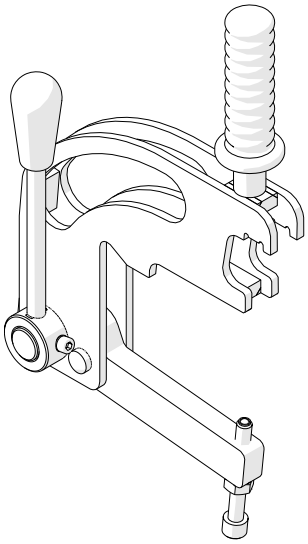




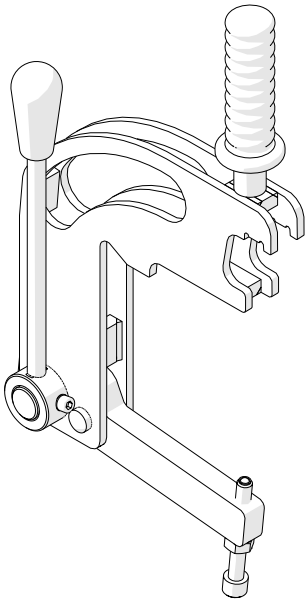
Part number:
ZCS-0518-08-02-00-1
(2 required)

4.9. Track clamp of clad removal attachment for 36–80 mm and 81–127 mm plates

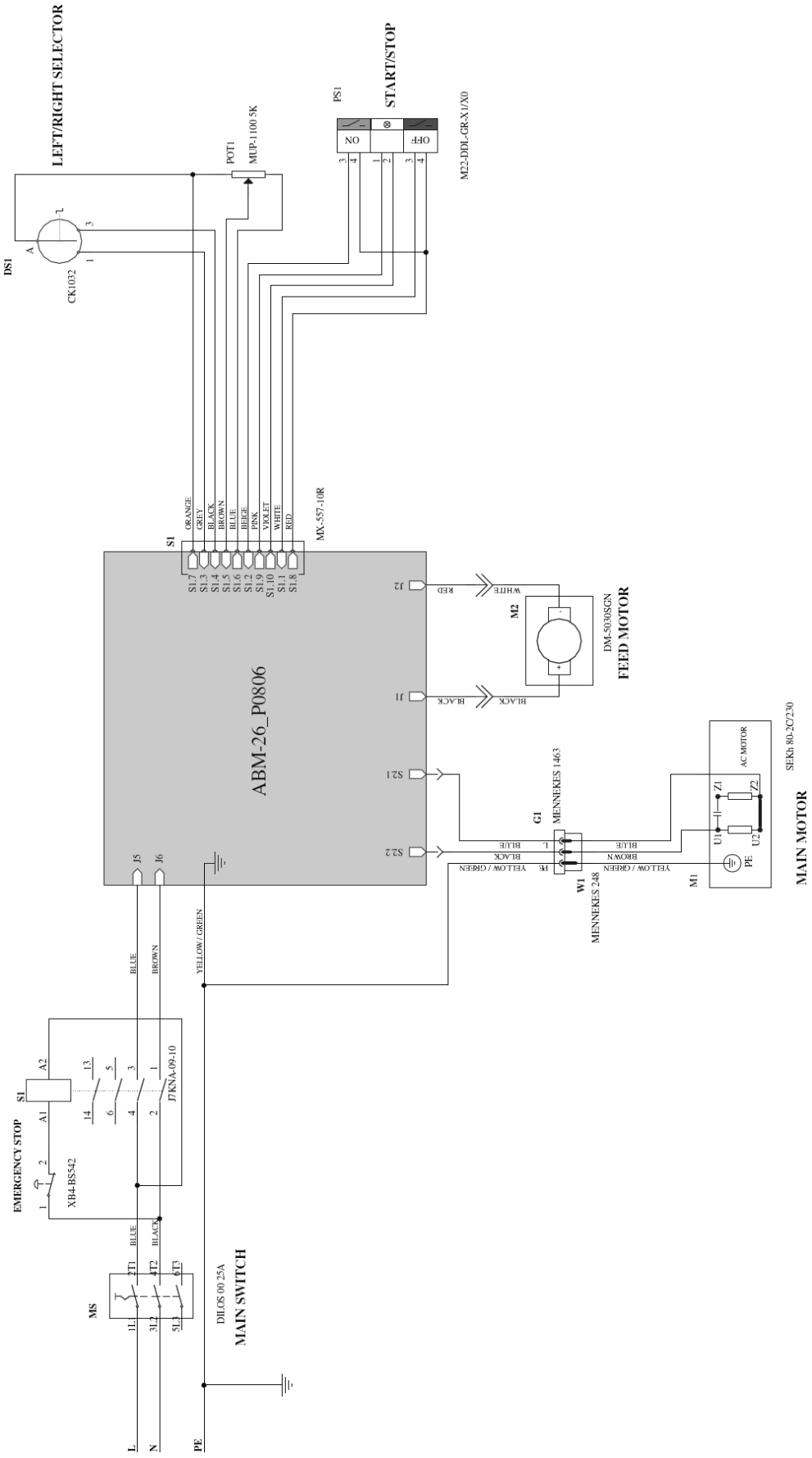
Part number:
UST-0518-11-00-00-1
(3 required)



Part number:
UST-0518-11-00-00-2
(3 required)



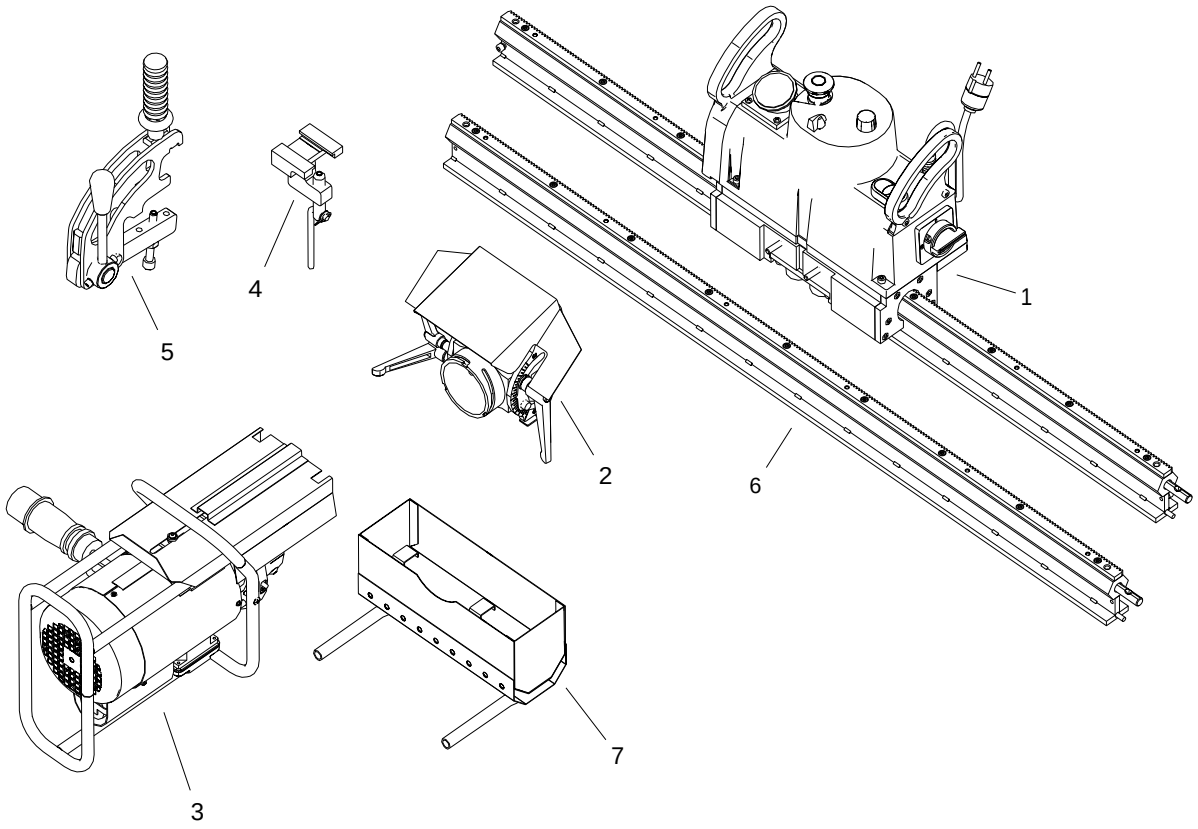
5. WIRING DIAGRAM



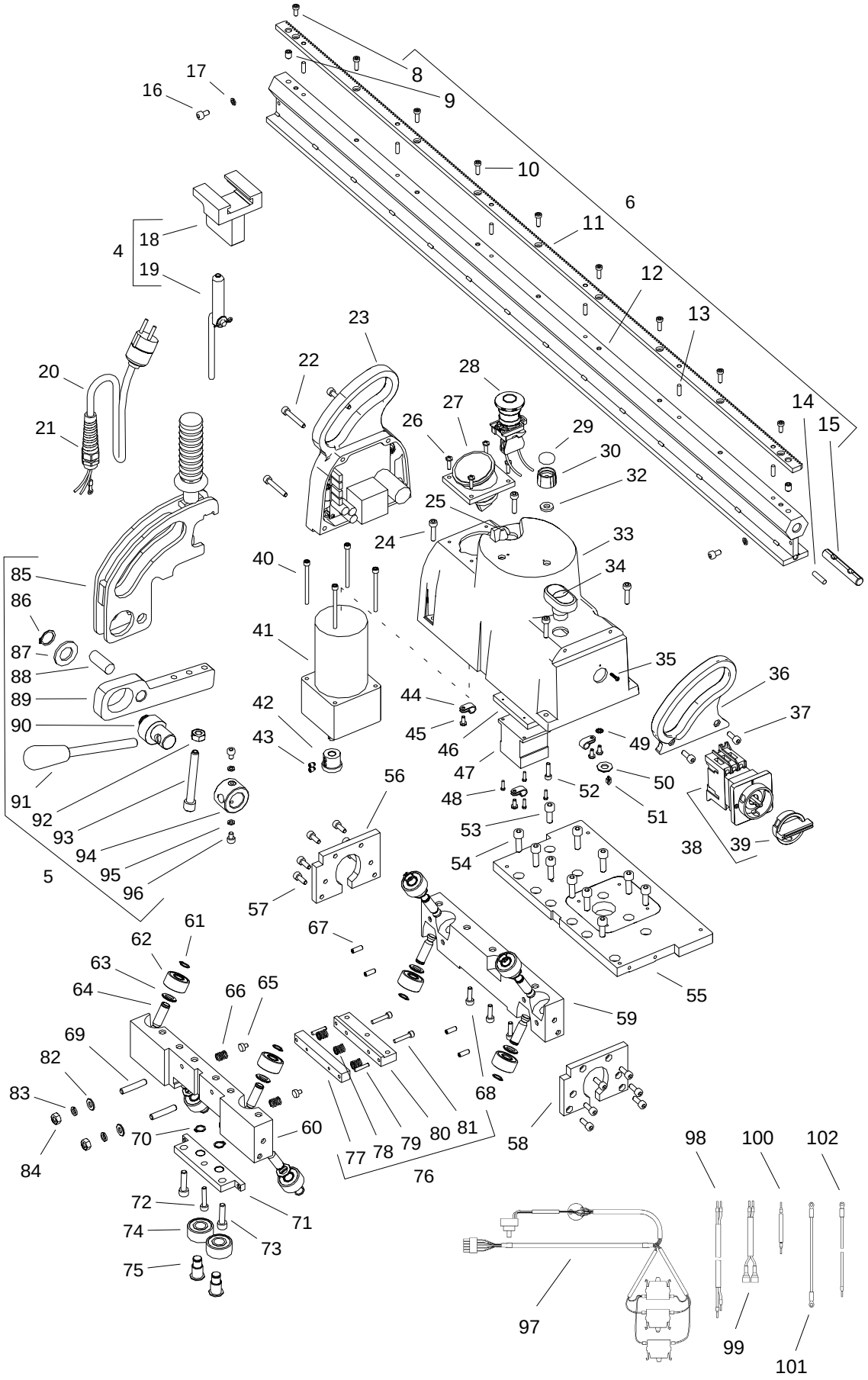
6. SPARE AND WEARING PARTS

Name	Number
Milling head (includes fixing screws, screwdriver, and grease; 7 inserts required)	GLW-000013
Cutting insert (sold 10 per box)	PLY-000282
Fixing screw for inserts	SRB-000311
T15P torx screwdriver for fixing screws	WKT-000005
Grease for screws (5 g, 0.17 oz)	SMR-000005

7. EXPLODED DRAWINGS AND PARTS LIST



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	WOZ-0518-01-00-00-0	CARRIAGE ON A GUIDE SEGMENT ASSY	1
2	WSP-0518-03-00-00-0	MILLING UNIT SUPPORT FOR BEVELING 10-35 MM THICK PLATES AT –60° TO +60° ASSY	1
3	ZSP-0518-02-00-00-0	MILLING UNIT ASSY	1
4	ZCS-0152-99-00-00-0	CLAMP FOR 10-35 MM THICK PLATES ASSY	2
5	UST-0152-99-02-00-0	TRACK CLAMP FOR 10-35 MM THICK PLATES ASSY	3
6	ZSP-0518-13-00-00-0	GUIDE SEGMENT ASSY	1
7	PJM-0518-06-00-00-0	CHIPS CONTAINER ASSY	1
–	SKR-0518-12-00-00-0	WOODEN BOX ASSY	1
–	KLC-000040	13/17 FLAT KEY	1
–	KLC-000007	4 MM HEX WRENCH	1
–	KLC-000008	5 MM HEX WRENCH	1
–	KLC-000009	6 MM HEX WRENCH	1
–	KLC-000011	8 MM HEX WRENCH	1
–	PJM-000010	TOOLS CONTAINER	1
–	TRN-000025	AUTOTRANSFORMER 115V/230V	1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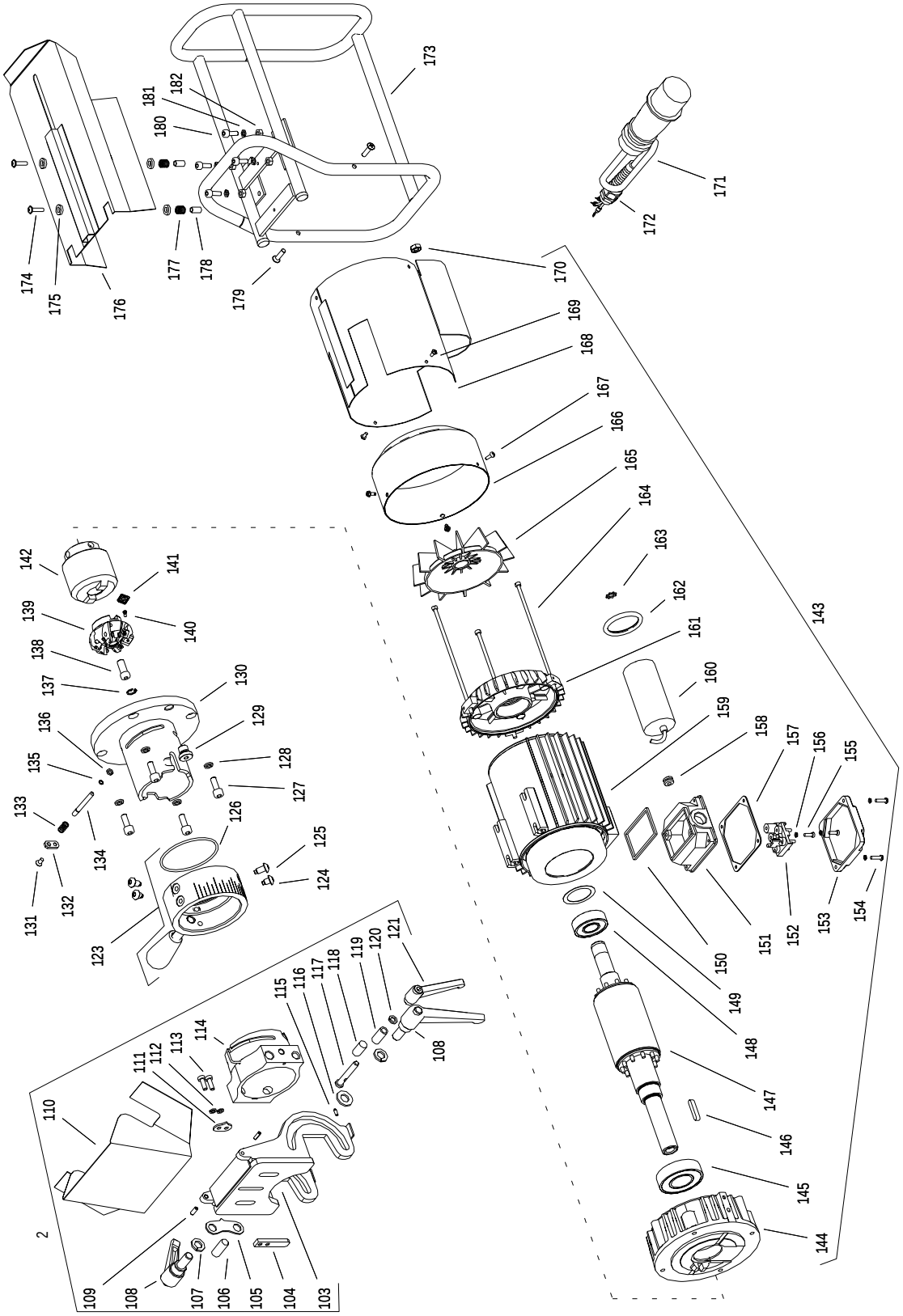
ITEM	PART NUMBER	DESCRIPTION	Q-TY
8	SRB-000340	HEX SOCKET LOW HEAD BOLT M5x12	2
9	WKR-000069	HEX SOCKET SET SCREW WITH CONE POINT M8x12	2
10	SRB-000174	HEX SOCKET LOW HEAD BOLT M5x16	7
11	LST-0518-13-01-01-0	GEAR RACK	1
12	SGM-0518-13-10-00-0	GUIDE SEGMENT	1
13	KLK-000047	DOWEL PIN 5n6x16	6
14	KLK-000061	DOWEL PIN 6n6x25	1
15	LCZ-0152-04-01-03-1	GUIDE SEGMENT CONNECTOR	1
16	SRB-000101	HEX SOCKET BOLT M6x10	2
17	PDK-000046	SPRING WASHER 6.1	2
18	ZCS-0152-04-02-10-1	CLAMP WELDED	1
19	SRB-0152-04-02-20-1	CLAMPING SCREW WITH BALL ASSY	1
20	SZN-0212-10-02-00-2	POWER CORD 230V 3x1.5 WITH STRAIN RELIEF ASSY	1
20	PWD-0212-10-02-00-6	POWER CORD 230V 3x1.5 WITH STRAIN RELIEF ASSY (INDIA)	1
21	DLW-000007	CABLE GLAND WITH STRAIN RELIEF PG11	1
22	SRB-000124	HEX SOCKET BOLT M6x40	4
23	ZSP-0152-01-05-00-0	ELECTRONIC CONTROL SYSTEM ASSY	1
24	SRB-000115	HEX SOCKET BOLT M6x25	4
25	PKT-000013	TRAVEL DIRECTION SWITCH	1
26	WKR-000197	CROSS RECESSED PAN HEAD SCREW M5x16	4
27	GNZ-000023	SOCKET 16A	1
28	WZK-0152-01-09-05-0	EMERGENCY SWITCH WITH WIRES	1
29	ZLP-000011	KNOB PLUG fi20	1
30	PKT-000022	POTENTIOMETER KNOB fi20	1
32	WKL-0152-01-09-10-0	POTENTIOMETER BRAKING INSERT	1
33	OBD-0152-01-09-01-1	CARRIAGE HOUSING	1
34	NPD-000004	DUAL PUSHBUTTON DRIVE M22	1
35	WKR-000379	PAN HEAD SCREW FOR PLASTIC 2.9x16	2
36	UCW-0152-01-10-00-1	CARRIAGE HANDLE	1
37	SRB-000106	HEX SOCKET BOLT M6x16	2
38	RZL-000005	3-GEAR DISCONNECTOR 25A	1
39	PKT-000024	RED YELLOW HANDLE	1
40	SRB-000219	HEX SOCKET BOLT M5x65	4
41	SLN-000062	MOTOR	1
42	KOL-0152-01-04-02-0	DRIVE WHEEL z=16, m=1,5	1
43	WKR-000022	HEX SOCKET SET SCREW WITH DOG POINT M6x8	2
44	OBJ-000001	CABLE HOLDER 9	3
45	WKR-000450	CROSS RECESSED PAN HEAD SCREW M5x10	4
46	PDS-0152-01-09-02-0	CONTACTOR BASE	1
47	STY-000003	MOTOR CONTACTOR	1
48	WKR-000179	CROSS RECESSED PAN HEAD SCREW M3x12	4
49	PDK-000063	EXTERNAL TOOTH LOCK WASHER 5.3	1
50	PDK-000026	ROUND WASHER 10.5	1
51	BLD-000002	CABLE CLAMP A2	1
52	SRB-000086	HEX SOCKET BOLT M5x20	2

ITEM	PART NUMBER	DESCRIPTION	Q-TY
53	SRB-000148	HEX SOCKET BOLT M8x20	3
54	SRB-000153	HEX SOCKET BOLT M8x25	8
55	PLY-0152-01-06-00-0	CARRIAGE MAIN PLATE	1
56	LCZ-0152-01-08-00-0	CARRIAGE GUIDE LEFT CONNECTOR	1
57	SRB-000106	HEX SOCKET BOLT M6x16	12
58	LCZ-0152-01-07-00-0	CARRIAGE GUIDE RIGHT CONNECTOR	1
59	LST-0152-01-02-01-0	BACK BAR	1
60	LST-0518-01-01-01-0	FRONT BAR	1
61	PRS-000003	EXTERNAL RETAINING RING 12z	8
62	LOZ-000091	DOUBLE-ROW ANGULAR BALL BEARING 12x32x15.9	8
63	PDK-000104	SMALL ROUND WASHER 13	8
64	WLK-0152-01-01-02-0	GUIDING BEARING SHAFT	8
65	PRT-0152-01-01-06-0	SPRING ROD	2
66	SPR-0130-20-07-00-0	SPRING 1.5x10x15	2
67	WKR-000051	HEX SOCKET SET SCREW WITH FLAT POINT M6x16	4
68	SRB-000114	HEX SOCKET BOLT M6x20	3
69	SRB-000380	TWO-SIDED BOLT M8x25	2
70	PRS-000003	EXTERNAL RETAINING RING 12z	2
71	OBS-0152-01-01-03-0	THRUST BEARING HOLDER	1
72	SRB-000118	HEX SOCKET BOLT M6x30	1
73	SRB-000155	HEX SOCKET BOLT M8x30	2
74	LOZ-000092	DOUBLE-ROW ANGULAR BALL BEARING 15x35x15.9	2
75	WLK-0152-01-01-04-0	THRUST BEARING SHAFT	2
76	AMR-0152-01-03-00-1	SHOCK ABSORBER ASSY	1
77	SLZ-0152-01-03-02-1	SHOCK ABSORBER SLIP	1
78	SPR-0130-20-07-00-0	SPRING 1.5x10x15	3
79	KLK-000096	PIN 5n6x22	2
80	KRP-0152-01-03-01-1	SHOCK ABSORBER BODY	1
81	SRB-000087	HEX SOCKET BOLT M5x25	2
82	PDK-000022	ROUND WASHER 8.4	2
83	PDK-000051	SPRING WASHER 8.2	2
84	NKR-000019	HEX NUT M8	2
85	KRP-0152-04-04-01-3	TRACK CLAMP BODY WELDED	1
86	PRS-000011	EXTERNAL RETAINING RING 20z	1
87	PDK-000148	ROUND WASHER 21	1
88	KLK-000098	PIN 16n6x40	1
89	RAM-0152-04-04-02-0	TRACK CLAMP ARM	1
90	LCZ-0152-04-04-03-0	TRACK CLAMP ECCENTRIC	1
91	DZW-0152-04-04-05-0	LEVER ASSY	1
92	NKR-000002	HEX NUT M10	1
93	SRB-0152-04-05-00-0	SPECIAL SCREW WITH BALL	1
94	TLJ-0152-04-04-04-0	ECCENTRIC SLEEVE	1
95	PDK-000046	SPRING WASHER 6.1	2
96	SRB-000291	HEX SOCKET BOLT M6x8	2
97	WZK-0152-01-09-03-0	CONTROLLER WIRES ASSY	1
98	WZK-0152-01-09-04-0	MAIN SWITCH-CONTACTOR WIRES ASSY	1

ITEM	PART NUMBER	DESCRIPTION	Q-TY
99	WZK-0152-01-09-06-0	MOTOR SOCKET WIRES	1
100	PWD-0152-01-09-07-0	CONTACTOR WIRE ASSY	1
101	PWD-0152-01-09-08-0	BODY GROUNDING WIRE ASSY	1
102	PWD-0152-01-09-09-0	MOTOR SOCKET GROUNDING WIRE	1



ITEM	PART NUMBER	DESCRIPTION	Q-TY
103	WSP-0518-03-01-00-0	FIXED 120° SUPPORT WELDED	1
104	WPS-0518-03-01-30-0	MOVABLE PIN	1
105	WSK-0518-03-01-50-0	ANGLE INDICATOR	1
106	KLK-000127	DOWEL PIN 12m6x30	1
107	PDK-000053	SPRING WASHER 12.2	2
108	RKJ-000056	HANDLEVER M12	2
109	KLK-000126	SPRING PIN 5x14	2
110	OSL-0518-03-01-70-0	SUPPORT COVER ASSY	1
111	WSK-0518-03-01-40-0	HEIGHT INDICATOR	1
112	PDK-000046	SPRING WASHER 6.1	2
113	SRB-000327	HEX SOCKET LOW HEAD BOLT M6x16	2
114	WSP-0518-03-02-00-0	MOVABLE SUPPORT WELDED	1
115	WKR-000457	HEX SOCKET SET SCREW WITH DOG POINT M4x10	1
116	PDK-000118	ROUND WASHER 13	1
117	BLD-0518-03-01-20-0	TUBE LOCK	1
118	KLK-000094	DOWEL PIN 12n6x24	1
119	TLJ-0518-03-01-60-0	LONG SLEEVE	1
120	PDK-000051	SPRING WASHER 8.2	1
121	RKJ-000010	HANDLEVER M8	1
123	PRS-0518-99-00-01-0	DRIVING RING ASSY	1
124	WKR-0152-02-02-07-0	SPECIAL SCREW M8x12	3
125	WKR-0152-02-02-06-0	SPECIAL SCREW M6x16	3
126	PRS-000232	SEAL O-RING 77x3	1
127	SRB-000148	HEX SOCKET BOLT M8x20	4
128	PDK-000051	SPRING WASHER 8.2	4
129	KRK-000009	PLUG 1/4"	1
130	KRP-0518-02-01-20-0	MILLING HEAD BODY WELDED	1
131	WKR-000155	CROSS RECESSED COUNTERSUNK HEAD SCREW M5x10	1
132	PLY-0152-02-02-04-1	MILLING HEAD LOCK PLATE	1
133	SPR-0152-02-02-05-0	SPRING 8x14.5x0.8	1
134	BLD-0152-02-02-03-1	MILLING HEAD LOCK	1
135	PRS-000250	EXTERNAL PROTECTIVE SPRING RING 6x0.8	1
136	PRS-0152-02-02-08-1	MILLING HEAD LOCK RING	1
137	PRS-000260	INTERNAL RETAINING RING 14w	1
138	SRB-0152-02-11-00-0	SPECIAL LOW HEAD HEX SOCKET BOLT M10x25	1
139	GLW-000013	MILLING HEAD ASSY	1
140	SRB-000311	MOUNTING BOLT	7
141	PLY-000282	CUTTING INSERT	7
142	ZBI-0152-02-04-00-1	MILLING HEAD DOG	1
143	SLN-0518-02-02-00-0	MAIN MOTOR ASSY 230V	1
144	TRC-0518-02-02-01-2	MAIN MOTOR DISK MANUFACTURE	1
145	LOZ-000140	BALL BEARING 30x62x16	1
146	WPS-000015	PRISMATIC PIN 6x6x32	1
147	WRN-000049	ROTOR	1

ITEM	PART NUMBER	DESCRIPTION	Q-TY
148	LOZ-000139	BALL BEARING 20x47x14	1
149	PDK-000040	CLEARANCE REMOVAL SPRING WASHER	1
150	USZ-000030	SEAL	1
151	PDS-000033	TERMINAL BOX BASE	1
152	TBL-000032	4-TERMINAL PLATE	1
153	PKR-000045	TERMINAL BASE COVER	1
154	WKR-000187	CROSS RECESSED PAN HEAD SCREW M4x16	2
155	WKR-000210	PAN HEAD SCREW M4x12	2
156	PDK-000043	SPRING WASHER 4.1	4
157	USZ-000039	TERMINAL BOX COVER SEAL	1
158	PRP-000003	SNAP BUSHING LA6	1
159	KDL-000007	STATOR BODY 230V	1
160	KND-000116	CAPACITOR 40uF	1
161	TRC-000003	MOTOR BEARING DISK P	1
162	PRS-000235	SEAL O-RING 44x6	1
163	PDK-000065	EXTERNAL TOOTH LOCK WASHER 8.4	1
164	SRB-000349	DRAWBOLT M5x165	3
165	WNT-000008	FAN	1
166	OSL-000184	FAN COVER	1
167	WKR-000467	SELF-TAPPING SCREW M4x12	3
168	OSL-0518-02-02-02-0	MAIN MOTOR COVER ASSY	1
169	WKR-000193	CROSS RECESSED PAN HEAD SCREW M4x8	2
170	NKR-000036	LOW HEX NUT M8	1
171	PWD-0518-02-04-00-0	MAIN MOTOR CABLE ASSY	1
172	DLW-000007	CABLE GLAND WITH STRAIN RELIEF	1
173	UCW-0518-02-03-00-0	HANDLE ASSY	1
174	WKR-000395	HEX SOCKET ROUND HEAD SCREW WITH FLANGE M5x20	2
175	PDK-000151	NYLON WASHER SR1940	4
176	OSL-0518-02-05-00-0	CHIPS GUARD ASSY	1
177	SPR-000030	PUSH SPRING	2
178	TLJ-0399-06-00-00-0	BOTTOM SLEEVE	2
179	WKR-000463	CROSS RECESSED OVAL COUNTERSUNK HEAD SCR. M6x22	2
180	SRB-000106	HEX SOCKET BOLT M6x16	4
181	PDK-000046	SPRING WASHER 6.1	4
182	NKR-000017	HEX NUT M6	4

8. DECLARATION OF CONFORMITY

Declaration of Conformity

We

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

declare with full responsibility that:

ABM-28 Auto Feed Beveling Machine for Plate Edges

is manufactured in accordance with the following standard:

- EN 60204-1

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

Person authorized to compile the technical file:
Marek Siergiej, ul. Elewatorska 23/1, 15-620 Białystok

Bialystok, 16 November 2012

_____
Marek Siergiej
CEO

9. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of Manufacturer warrants the ABM-28 Auto Feed Beveling Machine for Plate Edges 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.

Date of production .....

Serial number .....

Date of sale .....

Signature of seller.....

1.14 / 30 November 2018

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