

PIPE NOTCHER

OPERATOR'S MANUAL



TBN075

Ver: 1.0

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I .General Security Instruction

- 1. Operation manual:** The Tube and Profile Grinder can only be used for grinding ends of tube sections and de burring ground tube section ends. For your own security read the operation manual before starting the machine .The operation manual should be kept in a secure place. You should know about how to handle the machine ,its limits and its specific dangers.
- 2. Keep your working place clean:** Disorder on your working place will result in danger. Take that your working place is free from chips and dirt. Use only the right tools to clean your machine from chips. Keep your working place free from obstacles.
- 3. Machinery must be anchored to the floor.**
- 4. Check if the there are any damages at the machine:** Before you start the machine check the function of the security equipment. Check the function of all moveable parts. All parts have to be mounted correctly. Damaged security parts should be repaired or exchanged by after sales service. .
- 5. Take care about outer conditions:** Don't use the machine in dangerous areas. Take care, that electrical parts don't get humid or wet .Work only with a good illumination . Don't removed mechanical or electrical security parts .Check if all security parts are mounted and adequately functioning.
- 6. Wear only suitable clothes:** Don't wear large clothes, wristwatches or jewels. For your own security always wear working shose while working .If you have long hair always wear a hairnet. While working with the machine you have to wear security glasses .If you have work under dusty condition you have to wear a dust protection breathing mask.
- 7. Keep incompetent persons away from the working area:** Take care ,that there are no persons in your working area who could be exposed to danger. Children and visitors should away from the machine. Don't let other people touch the machine or the cable of the machine. Make sure that only that only authorized persons can reach the workshop.
- 8. Take care about the power supply cable:** Before connection the power supply cable to the wall socket. Take care, that there is switched off. Don't use the cable to pull the plug out of the socket. Take care, that there is no tensile force on the cable. Beware the power supply cable from heat, oil and sharp edges. Control the plug and cable regular and in case of damage let it repair by the after sales service. Please control also the extension cable. Never use the machine without Protection Earth.
- 9. Unplug the machine :**If you don't use and while servicing the machine pull off the power supply plug. This is necessary because the machine should not run unintentionally and to protect you from electric shock. Avoid accidental starts by being sure the start switch is "OFF" before plugging in the machine.
- 10. Be careful with your tools :**Keep your tools sharp and clean to work good and secure. Follow the instruction for tool exchange and servicing.
- 11. Don't forget tools inside the machine:** Before starting making sure that there are no tools inside the machine which could be hurled out of the machine. Make sure ,that there are no loosen parts which could be dangerous.
- 12. Take care about your hands:** Make sure ,that tools and fasten tools and work pieces. This is more secure than to fasten the work piece with hand, and you have two hands to handle the

machine.

- 13. Pay attention to your balance:** Take care about the position and of your feed .Never climb on the machine ,because dangerous injury may result from falling down or contacting moving parts.
- 14. Accessories and accessory parts:** Only use accessories and accessory parts which are specified by the operation manual or the supplier. The use of other accessories and accessory parts may result in dangerous injury and damage the machine. Only use accessories and accessory parts for the right tasks.
- 15. Electrical parts:** The electrical parts confirm to the determination of electrical security .Mending may only be done by electrical specialist to prevent accidents for user.
- 16. Leaving the machine:** Never leave the machine while it is running.
- 17. Alcohol medicaments drugs:** Never use the machine under influence of alcohol, medicaments or drugs.
- 18. Danger of fire:** To avoid the risk of fire, ensure that there are no flammable materials within an extended area of sparks, when grinding metal. Don't use highly inflammable fluids. Before you work with cleaning solvent you should read the instruction of the fluid, to prevent accidents.

II. Technical Specifications

A survey of the roller available: Roller diameters from ϕ 20 up to incl. ϕ 60 mm increasing by 2mm steps. Roller diameters ϕ 76mm; 1/4", 1/2";3/4",1";1 1/4;1 1/2;2"and 2 1/2".Other diameters between ϕ 20 and ϕ 76mm are available on request from your dealer.

Type of grinding belt:

Diameter Grinding roller	STEEL		RVS		ALUMINIUM	
	TYPE	GRAIN	TYPE	GRAIN	TYPE	GRAIN
ϕ 20— ϕ 40	R822	36	R981	150	R822	36
ϕ 40— ϕ 76	R845	36	R981	36	R822	36

Measurements of the grinding belt: length \times width=2000 \times 100 (79" \times 4")

Survey of the switches and zero voltage coils for certain voltages:

Tension 230Volt switches:PKZM1-10+coil U-pkzm1-230

Tension 400Volt switches:PKZM1-6+coil U-pkzm1-400

Motor :Short-circuit armature motor SG100L-213,0KW 2895/Min 230 or 400volt.The motor is provided with a thermal protection and a zero voltage coil.

III. Mechanical Operating

A. INSTALL

1. Remove the detachable parts (scrap bin, with the spare parts, box with grinding belts and the ordered grinding rollers) from the packing.
2. Dismount the two fixing bolts, by which pipe notcher is fixed to the under frame of packing. Remove also the four wooden screws by which the column and under frame are fixed to the crate.
3. Take the column and under frame out of the packing and mount these together. (see ill.No.2)

Attention!! The grinding belts, scrap bin, sphere handle, fastening bolt, and lever are included in the column.

4. Take the pipe notcher from its packing by means of the rope connected to it. (see ill.No.1)



Illustration 1



Illustration 2

5. Open the side flap and position the pipe notcher by a rope (see ill.No.2) on the column. Fasten the machine to the column by the two M12 bolts. Place the scrap bin under the notcher.
6. Mount the sphere handle A and the lever B to the front and under the clamp (see ill.No.3)
7. Check the voltage, which is mentioned on the machine. When the voltage is not correct this has to be altered. See for instructions chapter "Connection of 230 or 400Volt".
8. A plug has to be mounted the cable. Please check, after you have connected the plug, if the driving roller of Tube and Profile End Grinder rotates in the rotating direction indicated on the driving roller. If this is not the case, you have to change the threads in question in the plug.
9. Lead the cable to the power supply socket in a way that nobody can stumble over it.
10. To increase the stability of the machine an adjusting screw has been mounted underneath the under frame. To achieve an even better stability we advise you to anchor the machine to the floor.

B. (DIS) MOUNTING OF THE GRINDING BELT

- => Before removing the grinding belt, it must completely come to a standstill.
- => Rotate the compound tables as far as possible from the machine.
- => Open the side flap and the top flap.
- => pull the handle A, loosen the belt (see ill.No.4).

=>Now position the grinding belt, please see to it, that the arrow on the inside of the grinding belt and the arrow on the power roller are heading the same direction. Start to replace the grinding belt at the side of the grinding roller. For the execution and type of a new grinding belt we refer to the technical information.



Illustration 3



Illustration 4

=>Then the grinding belt has to be brought to the correct tension. This can be achieved maintaining the handle A at the upper position, pushing the motor to the left to the right position, pushing down the handle A to the lowest position, so far, that the space between the cylinder and the plate is between the 3 and 5mm. (see ill.No.4).

C. .(DIS) MOUNTING OF THE GRINDING ROLLER

Before changing the grinding roller the grinding belt has to be removed first, this is shown in the chapter "Changing of the grinding belt".

=>Remove the grinding roller by pulling it to you. (see ill.No.5).

=>Clean the bearing holders well, this prevents the problem that the grinding roller does not clamp.

=>Position the new grinding roller. Remark: Additionally we can supply roller diameters. See the technical information for the different dimensions.

ATTENTION:

The bearings which are assembled on the grinding roller, must be handle very carefully, because there are very sensitive for damages.

We advise you, when you see a grinding roller smaller than $\varnothing 30\text{mm.}$, to take a grinding belt which first has been used with a bigger grinding roller diameter. This is because otherwise the grinding belt will crack, because it is very tough.

D. ADJUSTING OF THE GRINDING BELT/-ROLLER

When putting into use and changing a grinding roller you always have to check the following adjustments:

- The side wards movement of the grinding belt should be prevented.
- The centerline height of the grinding roller has to be equal to the tube section, which has to be grounded.

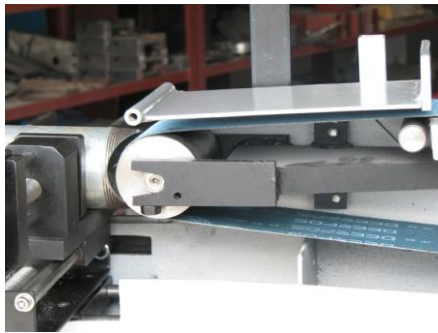


Illustration5

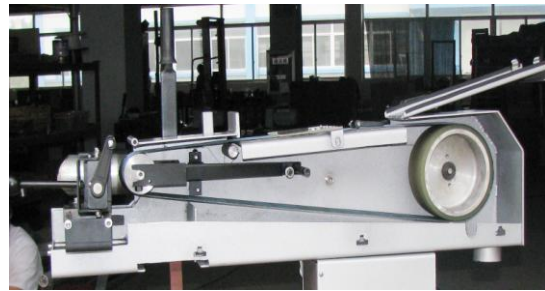


Illustration6

When the adjustments are not correct, they have to be adjusted as follows to here by.

- a. The side wards movement of the grinding belt.

For the first rough adjustment the grinding belt has to be turned manually. For a more specific adjustment the motor can be turned on (see to it that side flap E is closed). (see ill.No.6).

- b. The height adjustment of the grinding roller.

The height of the grinding roller has been adjusted by the manufacturer. When the centerline of the tube section is not situated on the centerline of the grinding roller, the height of the grinding roller has to be adjusted by unscrew the hexagonal bolts and adjust the height. After this, the bolts have to be fastened again. (see ill.No.7).



Illustration7

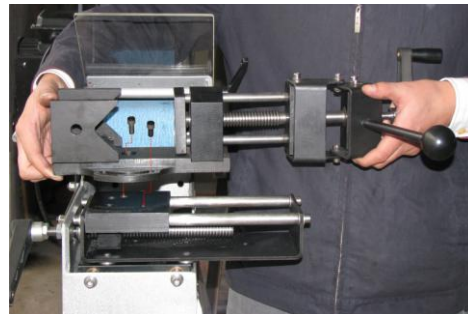


Illustration8

E.OPERATING INSTRUCTION MANUAL

- a. Operation of the compound table.

You can move the compound table forwards and backwards by means of the lever. By moving the sphere handle a quarter turn to the left first you can move the clamp to left or to the right.

- b. To tighten the product.

The clamp is suitable for the roller diameters from 018mm till 076mm. For the use of tubes you have to see to it, that the centerline of the tube is at the same height as the centerline of the pressure roller. It is possible to use a filling cheek. (see ill.No.8).

- c. Adjusting the angle

By means of the graduation on the compound table you can turn the stretch block simply and

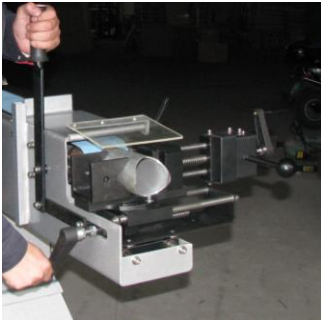


Illustration11

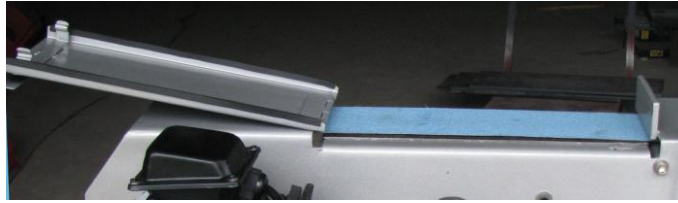


Illustration9

fast between 90 and 30. During the adjusting of the angle the hollow-head bolts B and C have to be unscrewed, after which the right angle can be adjusted. The hollow-head bolts have to be fastened firmly.

d. Stop

Underneath the compound table of the clamp is a block, by which the standard stop can be adjusted. (see ill.No.3). This stop is for moving the product towards the grinding roller. On the flat of the stretch block there are two M8 threaded holes to which a length stop can be fixed.

e. Grinding.

After the profile has been stretched the compound table is to be positioned in such so that the compound table is to be positioned in such so that the profile to be ground is straight in front of the pressure roller. Then the profile can be grounded by moving the lever B towards the machine.

Attention: see to it that the grinding width is not exceeding that of the grinding belt.

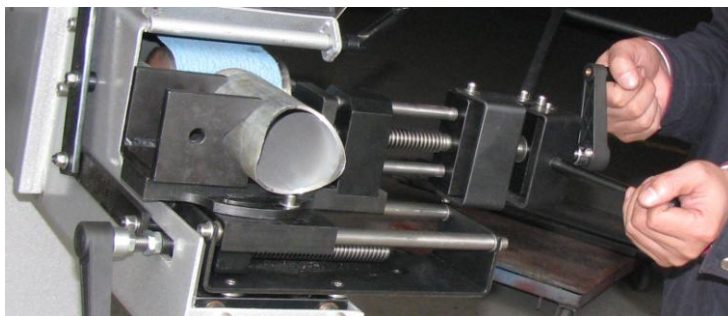


Illustration10

f. Deburring.

The machine pipe can be deburred at once. This is possible by opening the flap on top of the machine (ill.9.), so that the grinding belt is free, on which the pipes can be deburred.

IV. Electric Connection OF 230 OR 400 Volt

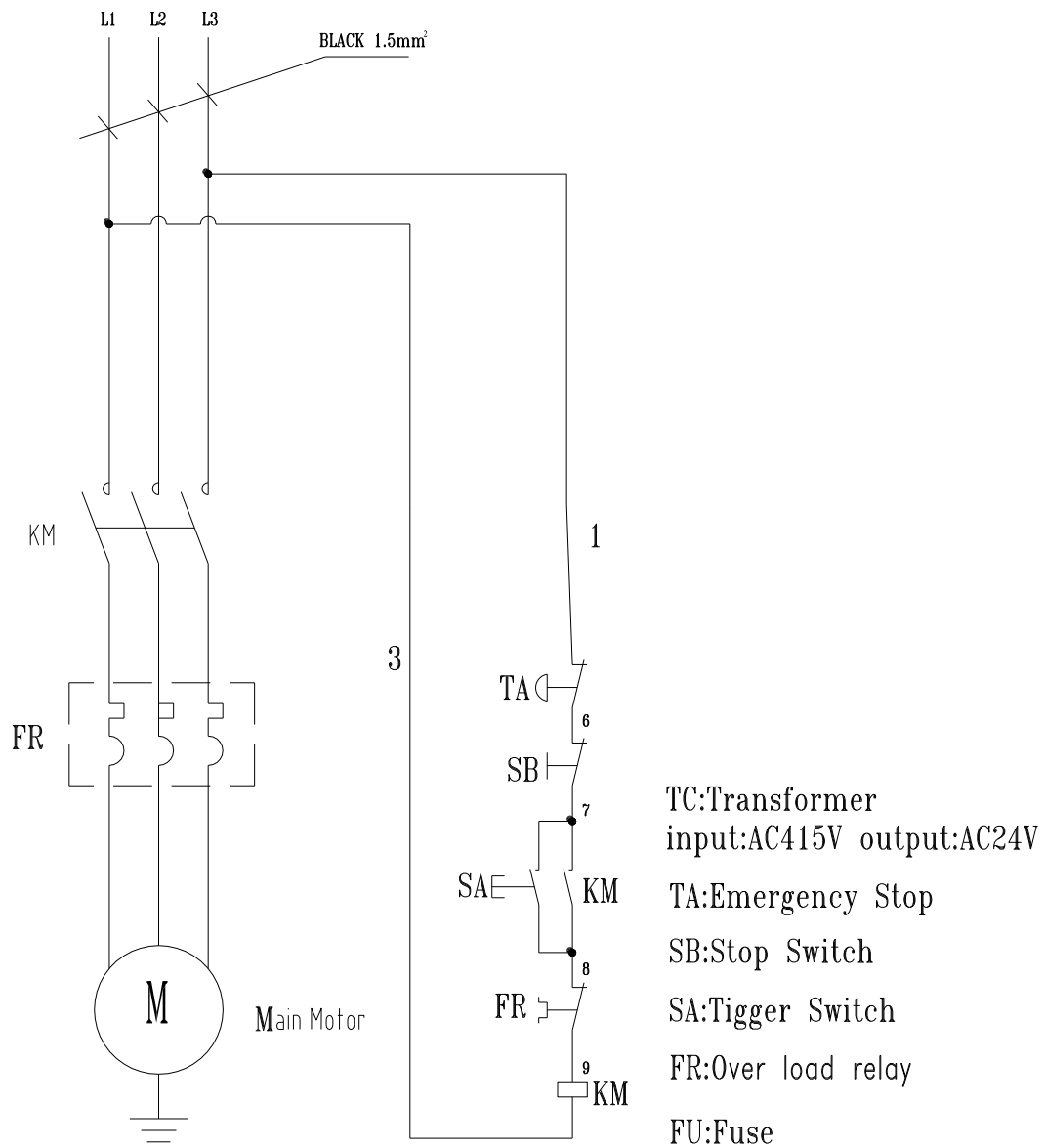
A pipe notcher can be delivered with "Euro-voltage" motor. This means the motor can be

connected to either 230 volt phases or to 400 volt 3 phases with an upper or tolerance of 10%. Check the type plate to see whether the machine is connected to the voltage desired. If this is not so, open the motor junction box and then connect the wiring as per the ill. shown below.

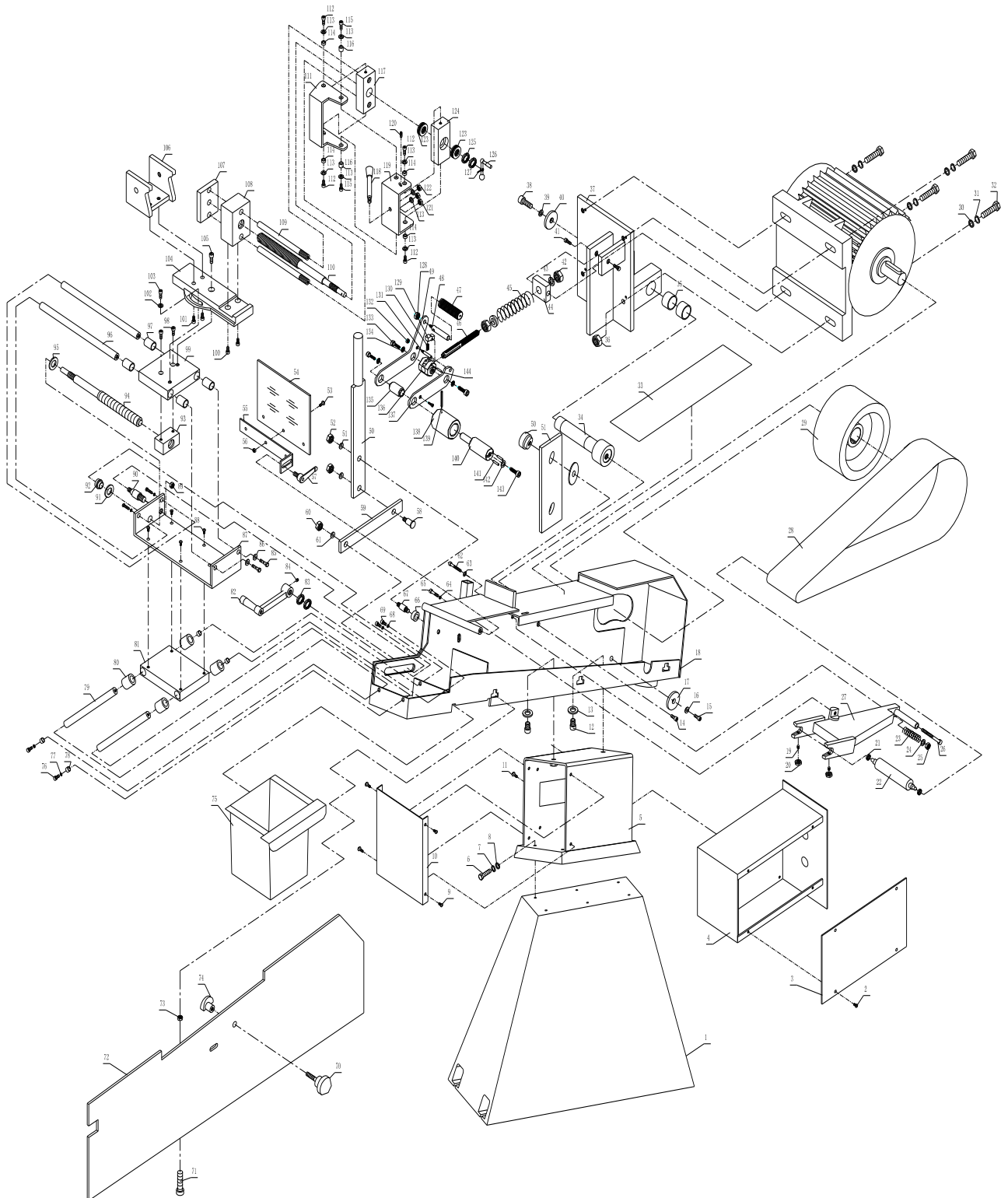
The switch, the zero voltage coil and the type plate have to be replaced too. This is necessary because every switch and zero voltage coil are destined for a certain voltage and this also applies to the type plate. These parts are to be had supplied by the supplier of the machine.

For the construction of the switch and the zero voltage coil we refer to the chapter "Technical Specification".

V Electrical Schematic diagram



VI Parts drawing and lists



Part No.	Description	Qty	Part No.	Description	Qty
1	Base	1	41	Screw M10×20	2
2	Screw M4×6	4	42	Nut M16	2
3	Electrical installation board	1	43	Washer 16	2
4	Electric box	1	44	Fix block	1
5	connecting seat	1	45	Spring 1.4×20×35	1
6	Bolt M8×20	6	46	Arbor	1
7	Spring washer 8	6	47	Handle sleeve	1
8	Plain washer 8	6	48	handle	1
9	Screw M5×8	4	49	Connecting rod	1
10	Front plate	1	50	Control handle	1
11	Screw M6×10	4	51	Washer 10	2
12	Screw M12×35	2	52	Nut M10	2
13	Plain washer 12	2	53	Screw M5×8	3
14	Screw M12×30	1	54	Safety guard	1
15	Screw M12×50	1	55	Protecting plate support	1
16	Spring washer 12	1	56	Nut M5	3
17	Washer	1	57	Adjustable locking handle	1
18	Body	1	58	Screw	1
19	Set screw	2	59	Connecting rod	1
20	Nut M10	2	60	Washer 8	1
21	Bearing 608-2Z	2	61	Nut M8	1
22	Belt shaft	1	62	Screw M8×100	1
23	Spring 1×12×19	1	63	Washer 8	1
24	Washer 8	1	64	Washer 10	2
25	Nut M8	1	65	Screw M12×35	2
26	Screw M8×100	1	66	Spacer	1
27	Belt bracket	1	67	Double bolt	1
28	Belt	1	68	Washer 8	4
29	Drive pulley	1	69	Bolt M8×25	4
30	Spring washer 10	4	70	Screw M8×12	1
31	Washer 10	4	71	Screw M5×12	3
32	Screw M10×4	4	72	Side cover	1
33	Black lead belt	1	73	Nut M5	3
34	Shaft	1	74	Locking block	1
35	Copper cover	2	75	Chip box	1
36	Nut M10	1	76	Screw	4
37	Motor seat	1	77	Washer 8	4
38	Screw M10×20	1	78	Bush	4
39	Washer 12	1	79	Slide bar	2
40	Washer 10	1	80	Copper cover	2
81	Slide bar seat	1	123	Ball thrust bearing 51101	2

82	Adjustable locking handle	1	124	Fixed block	1
83	Round nuts M12×1.25	2	125	Round nuts M12×1.25	2
84	Screw M6×8	1	126	Single crank handle A-10×32	1
85	Bolt M8×25	4	127	Pin 3×22	1
86	Washer 8	4	128	Acorn nut M10	1
87	Baseboard	1	129	Pawl	1
88	Screw M6×12	4	130	Spring 0.9×7×15	1
89	Nut M12	1	131	Backing pin	1
90	Sipper rod	1	132	Acorn nut M8	1
91	Washer 14	1	133	Screw M8×14	4
92	Spacer	1	134	Big washer 8	3
93	Nut	1	135	Supporting sleeve	1
94	Lead screw	1	136	Rotation shaft	1
95	Washer 14	1	137	Connecting rod B	1
96	Round guide	2	138	Positioning sleeve	1
97	Copper cover	4	139	Spring pin 6×50	1
98	Screw M8×40	2	140	Supporting shaft	1
99	Slide block	1	141	Pin 6×16	2
100	Screw M8×30	2	142	Big washer 12	1
101	Screw M8×20	2	143	Screw M12×30	1
102	Washer 8	1	144	Pin 5×20	1
103	Screw M8×20	1			
104	Rotary table	1			
105	Screw M10×35	1			
106	Jaw	1			
107	Clamp	1			
108	Nut	1			
109	Lead rod	2			
110	Lead screw	1			
111	Interlocking block A	1			
112	Screw M6×16	4			
113	Washer 6	8			
114	Bush A	4			
115	Screw M6×20	4			
116	Bush B	4			
117	Moving block	1			
118	Long rotation handle M8×125×20	1			
119	Interlocking block B	1			
120	Screw M3×10	1			
121	Nut M8	1			
122	Nut M8	4			

Note: This manual is only for your reference. We reserve the right to improve the machine without notice. Please note the local voltage for operating this electric machine .