Contents

1. Use

This sealer can seal plastic films made from various materials, which is widely used in fields of food, medicine, chemicals, daily use and vegetable seeds etc. It is ideal sealing equipment for packing batch products in factories and shops.

2. Safety Instructions

2.1 Ensure that the adopted power supply is correct. The machine adopts single-phase three wire system (AC 220V/50HZ). The wire whose color alternates between yellow and green is leakage protection ground wire, which should be earthed and cannot be removed. The power line should be prevented from pressing, please tidy away when it is not in use.

2.2 After being connected to power supply, do not touch any electric device.

2.3 Never touch any transmission parts when the machine is running, or personal injury may occur.

2.4 Never touch the heating block when the machine is running.

2.5 Never operate the machine in corrosive environment or with high humidity.

2.6 Do not change any parts of the machine without being duly authorized by the Manufacturer's technician.

2.7 Keep the machine clean both inside and outside and clear dirt from sealing belt in time.

2.8 Fill and exchange oil in worm-gear case regularly. Meanwhile, remember to oil gear and sprocket (YP7408 semi-liquid gear oil).

2.9 Cut off the power supply when the machine is not in use.

2.10 Keep this operation manual with care for easy reference.

3. Specifications

Model / Parameter / Item	FRB-770 I (Horizontal type)	FRB-770 II (Vertical type)	FRB-770 III (Console type)
Voltage(V/Hz)	AC 220/50　110/60		
Motor power(W)	50		
Sealing power(W)	300×2		
Sealing speed(m/min)	0~12 (0~16)		
Sealing width(mm)	8 、10		
Temperature control range(℃)	0~300（℃）(Stepless adjustable)		
Distance from sealing center to conveyor table（mm）	10~40	150~270	10~40
Film thickness(monolayer) mm	≤0.08		
Max. single package loading of conveyor (Kg)	1		
Max. overall loading of conveyor (Kg)	3		
External dimensions (LXWXH)（mm）	840×380×320	840×380×550	840×550×800
Net weight (Kg)	32	37	40

Note: For FRB-770 series, the bag is fed-in from right. For FR-770 series, the bag is fed-in from left.

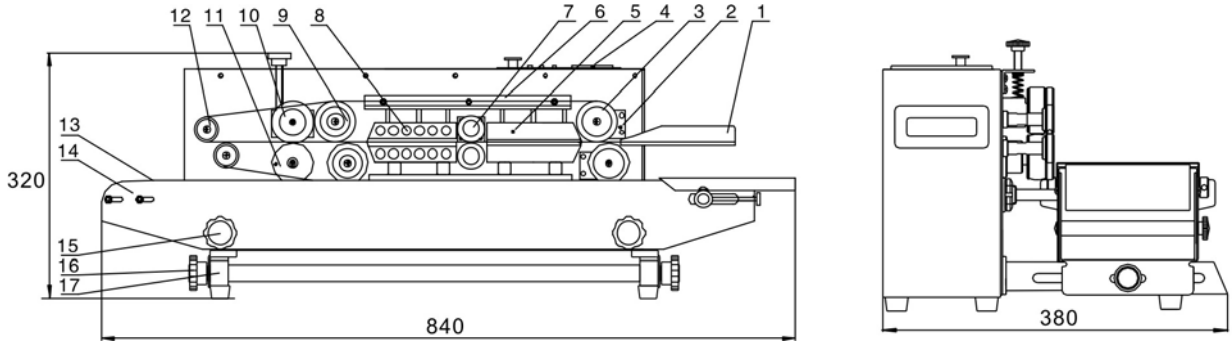
4. Performance Features

4.1 This sealer, adopting electronic thermostat control unit and stepless speed-regulation transmission mechanism, can seal various plastic film bags made from different materials and can also be equipped with varied packaging production lines. The machine has no limitation on sealing length, featured by high efficiency for continuous sealing, reliable sealing quality, rational structure and convenient operation etc.

4.2 This series provides three models, including horizontal type, vertical type, console type. The horizontal type suits for packaging dry materials, while vertical type suits for packaging materials in powder shape or liquid shape.

5. Structure & Working Principle

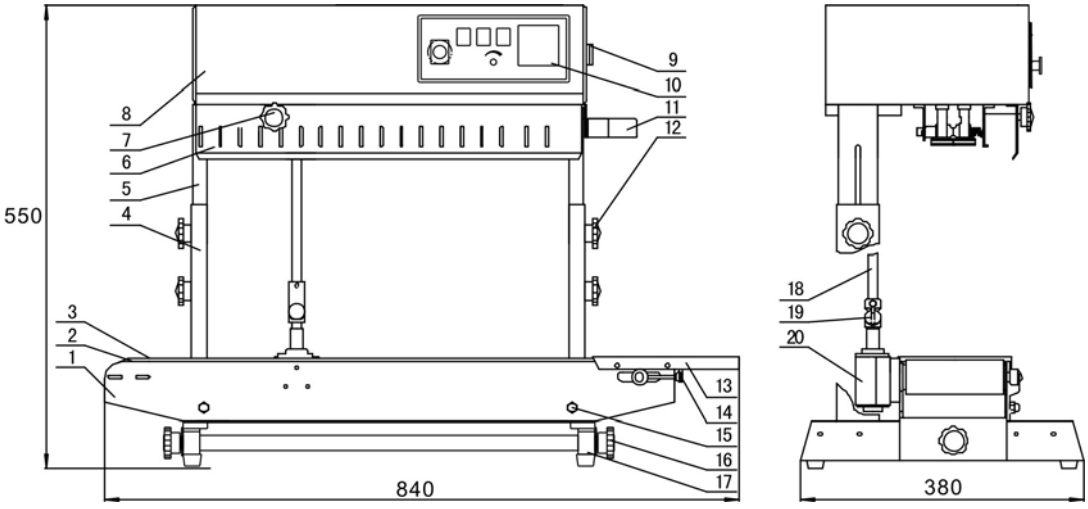
5.1 This machine is made up of rack, speed-regulating mechanism, sealing temperature control system, transmission and conveying system etc. (see following figures)



FRB-770I

Figure 1

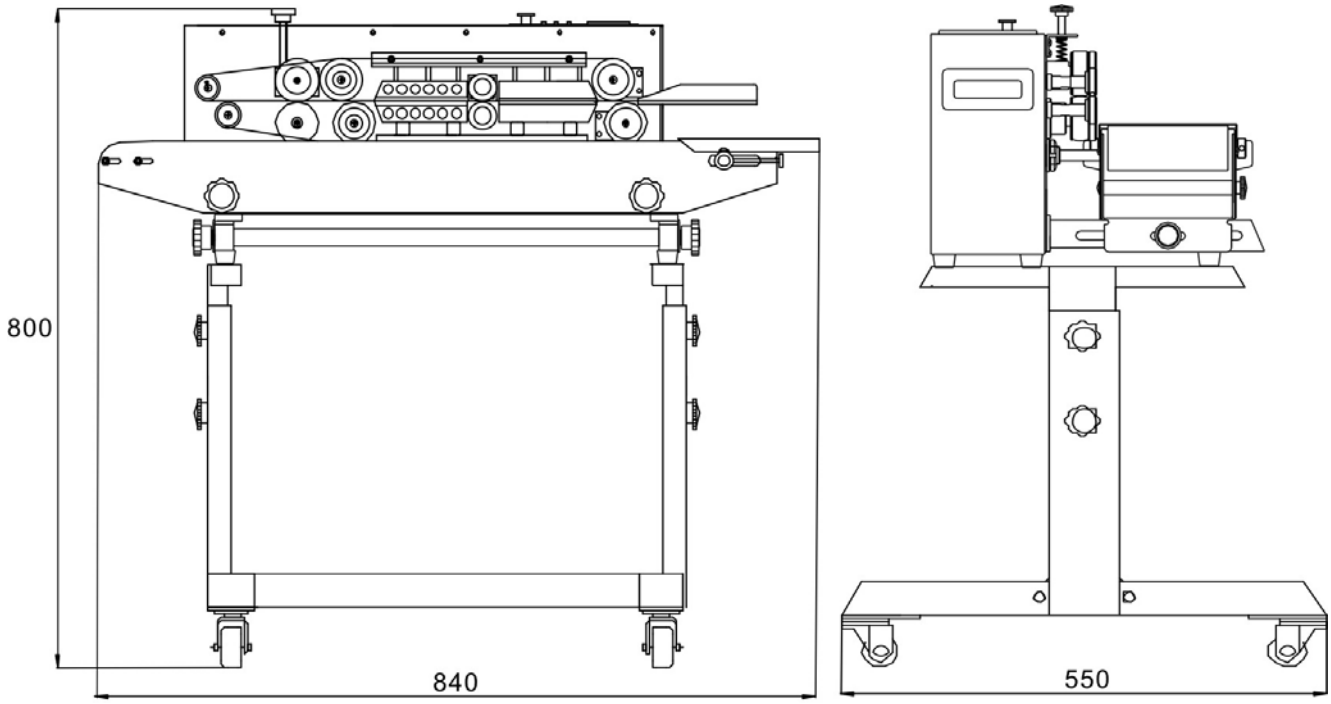
1.feed opening 2.driven wheel seat (adjusting block) 3.driven wheel 4.control panel 5.heating block 6.holding plate 7.pinch roller 8.cooling block 9.driving wheel 10.embossing roller 11.silicone wheel 12.guiding wheel 13.conveyor belt 14.conveyor table 15.fastening knob for elevating table 16.transverse tightening knob for conveyor table 17.ledge



FRB-770II

Figure 2

1.conveyor table 2.driving roller 3.conveyor belt 4.fixed bracket 5.slip bracket 6.safety cover 7.adjusting knob for embossing roller 8.housing 9.air switch 10.control panel 11.feed opening 12.fastening knob 13.worktable 14.adjusting knob for conveyor belt 15.tightening nut 16.transverse tightening knob for conveyor table 17.rack 18.vertical shaft 19. gimbal assembly 20. bevel gear assembly



FRB-770III

Figure 3

5.2 After power supply being connected, electrothermal elements start to produce heat, which leads to rapid temperature rise of both upper and bottom heating blocks. Adjust temperature controller and speed-regulating mechanism to get the required temperature and speed respectively. The sealing area of plastic packing bag is conveyed into the clearance between two sealing belts by conveyor belt first, then clamped by two sealing belts and delivered into the heating area. The plastic film is heated and fuses. Under the pressure from pinch roller, the film binds. After this, the sealing area will be conveyed into the cooling area for cooling and figuration, and then to be pressed by embossing roller for making stripe or netted pattern.

The running of transmission part of the sealer is started by motor, which drives sealing belts, guiding belts and conveyor belt through gears to run synchronously.

6. Operation Instruction

6.1 Control panel (see Fig. 4)

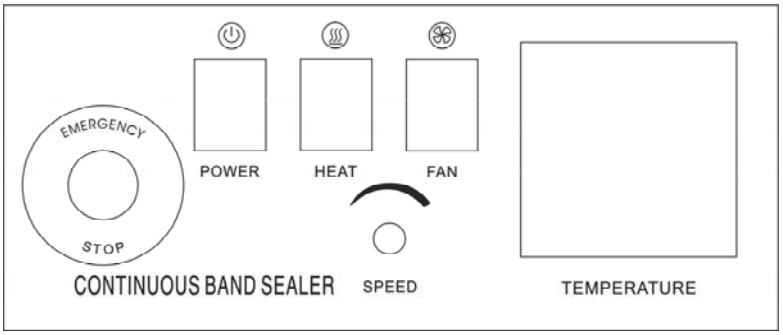


Figure 4

6.2 Prepare the machine before use

6.2.1 This machine is equipped with grounded socket. Please check whether it is well connected so as to ensure operation safety.

6.2.2 First-time use or too long intermission will make the electronic heating elements moistened, so several minutes' low-temperature preheating is necessary before normal operation.

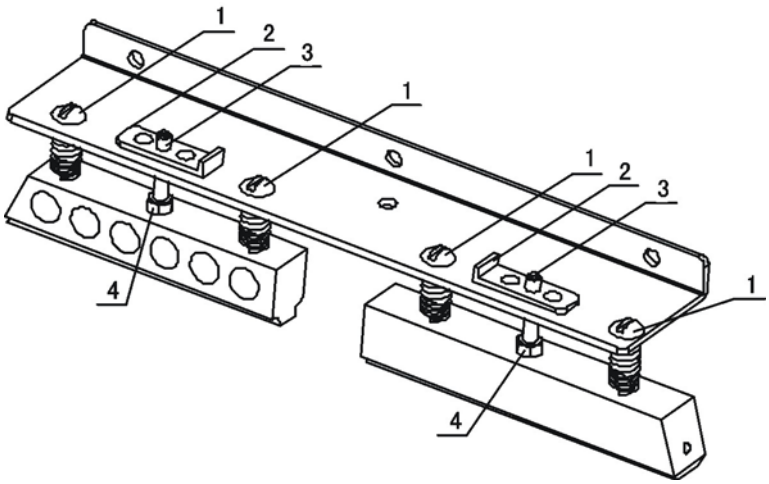
6.2.3 Adjust the conveyor table's height and horizontal position to meet the packing requirement.

6.2.4 According to the distance from sealing line to the edge of bag opening, regulate the position of feed opening.

6.2.5 According to the material and the thickness of the object to be sealed, adjust the clearance between upper heating block and bottom heating block, as well as the clearance between upper cooling block and bottom cooling block. Adjust the clearance between two sealing belts by adjusting stopping flakes 2 according to Fig.5, specifically, turn the stopping flake clockwise to raise block (increase clearance) or counterclockwise to lower block (decrease clearance). The clearance between two sealing belts should be equal to the thickness of the packing bag in one layer approximately, which must guarantee sealing fastness, high-definition embossing and ensure proper length extended from two ends of sealing area as well.

6.2.6 Exchange and adjust the sealing belt

6.2.6.1 Remove the safety cover, after the heating block get cool, turn stopping flakes on both upper heating block and upper cooling block by 90° to lift both two blocks, then loosen the springs on both embossing roller and pinch roller, meanwhile, remove the guiding belt, so as to make it ready for removing sealing belts. (see Fig. 5)



1. screw 2. stopping flake 3. fastening screw 4.nut

Figure 5

6.2.6.2 Move the driven wheel seat (adjusting block) towards heating block, and remove the sealing belt.

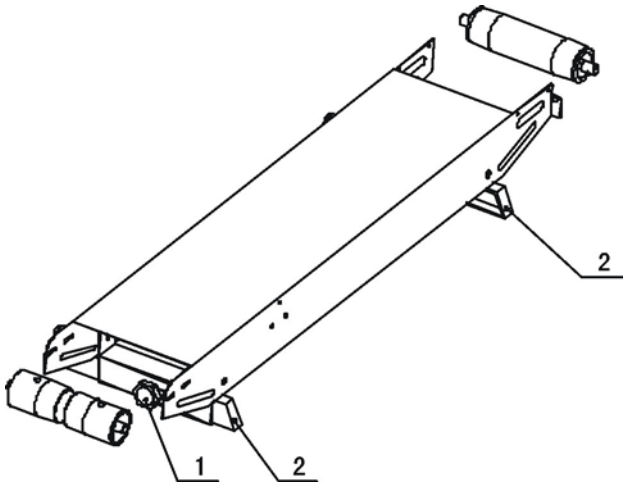
6.2.6.3 Replace with a new sealing belt and install the guiding belt back.

6.2.6.4 Put the driven wheel, heating and cooling blocks, and pinch roller etc to the original position.

6.2.6.5 Connect to the power supply to test the machine.

6.2.6.6 Install the safety cover. When the temperature reaches the set temperature, the machine is ready for working.

6.2.7 The transverse adjustment of conveyor table: loosen the adjusting knobs 1 on both sides first, and then move the conveyor table in the long slot along the foot rest 2. Tighten the knobs on both sides after finishing the adjustment.

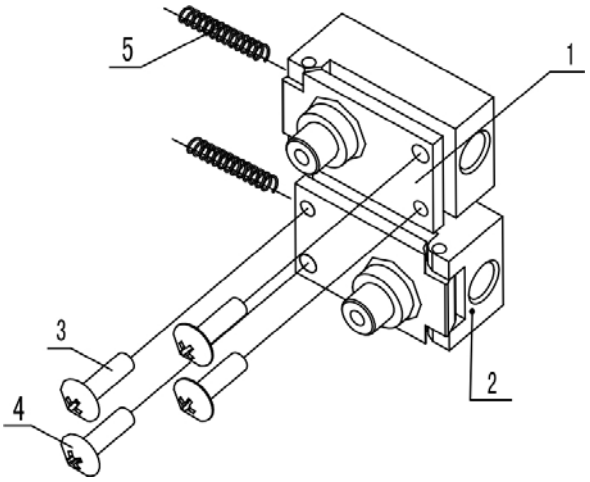


1. adjusting knob 2.foot rest

Figure 6

6.3 Regulate the adjusting block of driven wheel

If the sealing belt is off tracking, regulate the adjusting screws on driven wheel seat (adjusting block), shown as Fig. 7.



1. driven wheel seat (adjusting plate) 2. driven wheel seat (adjusting block) 3/4. adjusting screw 5. spring

Figure 7

6.4 Starting procedure

6.4.1 Connect to the power supply and press Start switch, indicating light will be on, and then adjust the speed-adjusting knob. All transmission parts start to run synchronously.

6.4.2 Fine tune the knob of embossing roller to make that wheel swivel, after getting the proper pressure, fix limiting screw.

6.4.3 Once turn Heat Seal switch ON, the green light of the electronic temperature controller will light. According to the material and thickness of the packing bag, adjust the temperature controller to the necessary temperature. When the heating blocks begin to preheat, the machine needs to be started meanwhile and kept running at low speed.

6.4.4 That whether it is necessary to turn on the fan for cooling depends on the material and thickness of packing bag.

6.4.5 Flatten and align sealing opening, then feed the bag by aligning the bag opening with the feed opening. When the bag opening is gripped by the sealing belts, which makes the bag move forward automatically, at that moment, please do not push it in or pull it out by force, otherwise irregular sealing or breakdown will happen.

6.4.6 If it is found that there is dirt attached to the sealing belt or the heating block, stop the sealer and clear it. Never clear the dirt with your hand when the temperature is high.

6.5 Stop operation

In order to prolong the service life of the sealer, please remember, before shutting down the machine, you should return the temperature-regulating knob to 0 position first, then turn on the fan, at this time, the temperature on the indicator begins to fall and the sealing belt should still be in state of running. About several minutes' later, when the temperature drops below 100℃, only can you turn off the fan and main power.

6.6 Emergency Stop switch

In case of emergency, press Emergency Stop switch to stop machine immediately. It is a kind of self-lock switch.Release it by turning it by 120 °clockwise.

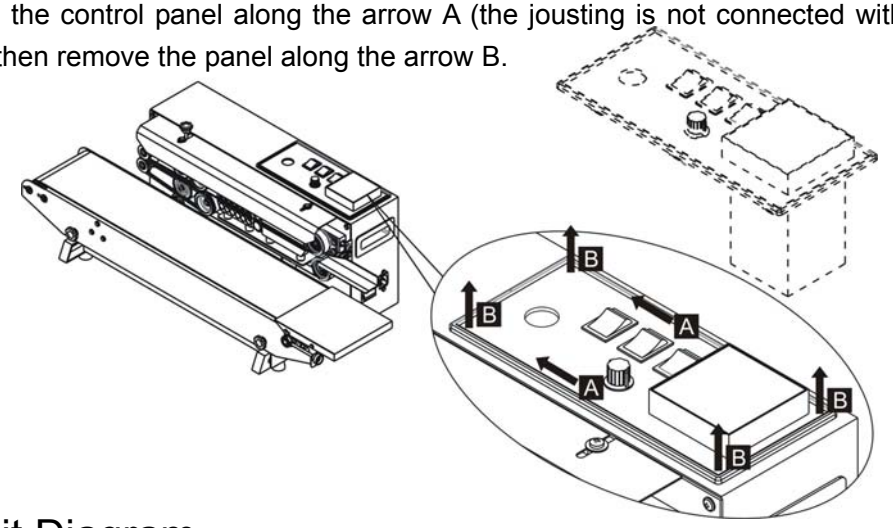
6.7 The unloading method of the control panel:

6.7.1 Remove the rear cover of the housing.

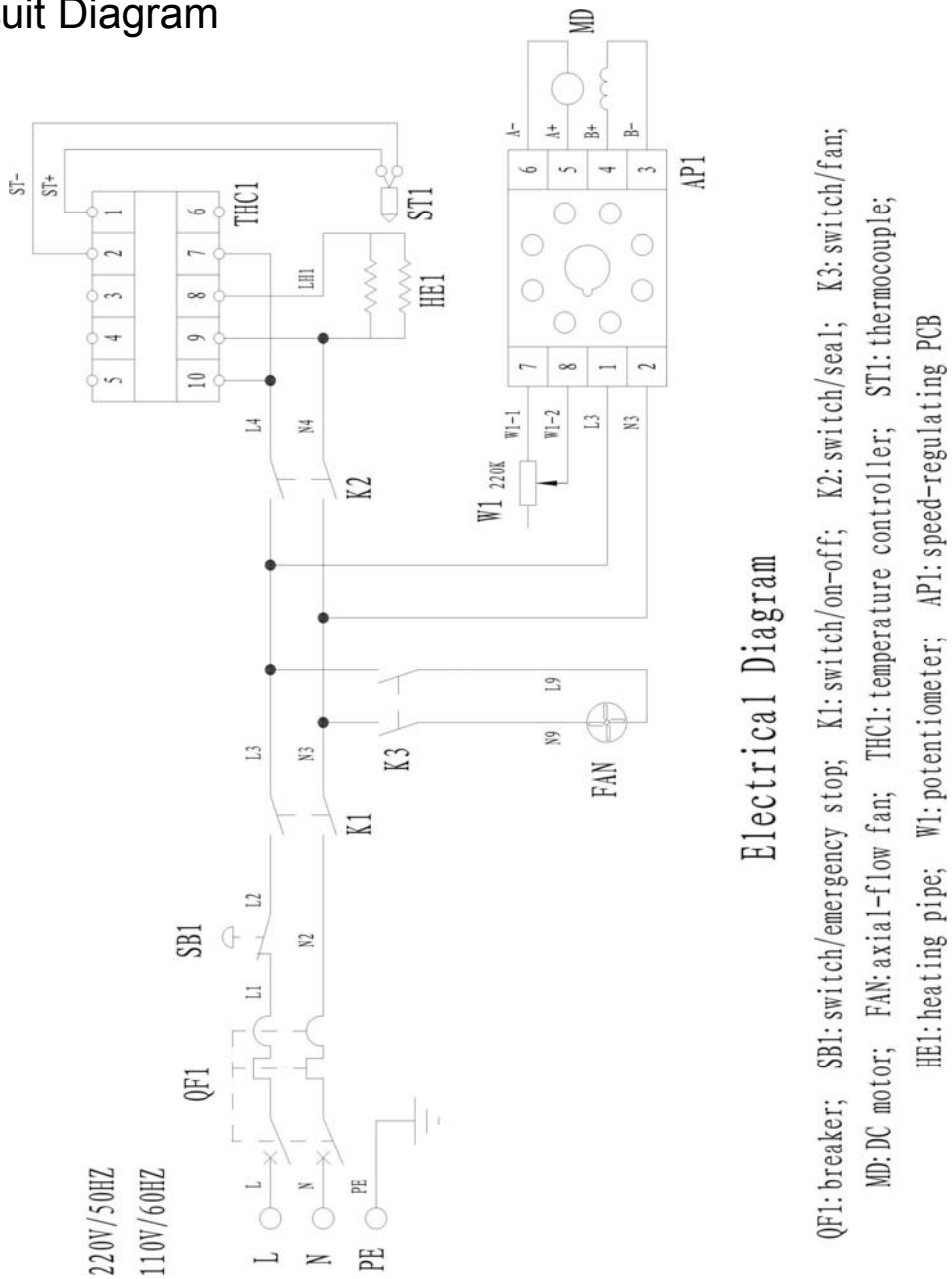
6.7.2 Remove the Emergent Stop Switch (Rotate the red knob on the emergent stop switch anticlockwise and remove. Then rotate the silver snap spring under the red knob

anticlockwise and remove), then remove the pins in the front and back of the temperature controller.

6.7.3 Push the control panel along the arrow A (the jousting is not connected with the panel now.), then remove the panel along the arrow B.



7. Circuit Diagram



8. Breakdown Drawing of Sealing Unit

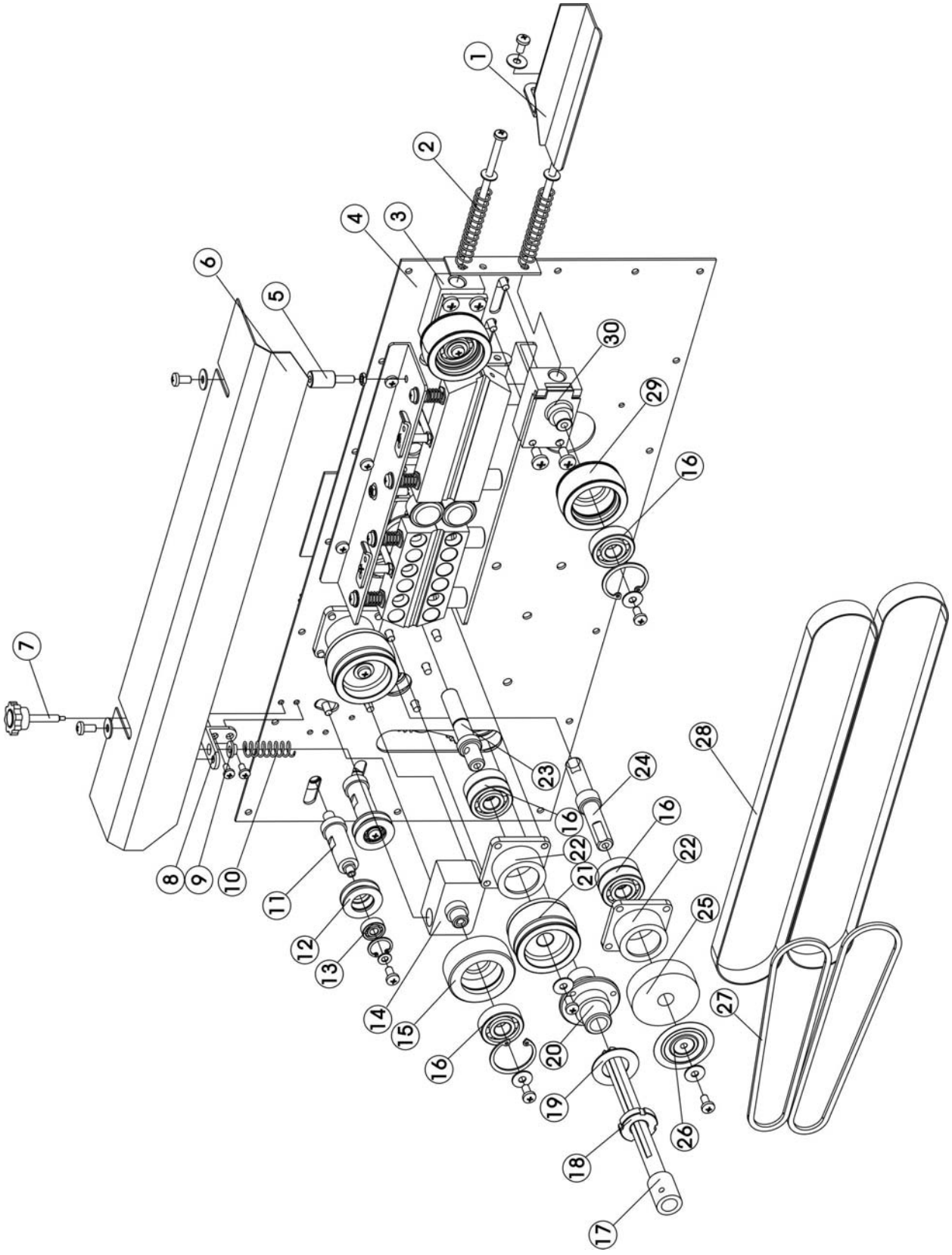


Figure 8

Item	Description	Quantity	Remark
1	feed opening	1	
2	spring for driven wheel seat	2	
3	upper driven wheel seat	1	
4	bottom board	1	steel: 102102-3
5	support for safety cover	1	880
6	safety cover	1	
7	672 corrugated knob （M8X35）	1	adjusting knob for embossing roller
8	supporting board for adjusting embossing roller	1	
9	spring seat of embossing roller	1	
10	spring of embossing roller	1	
11	small pulley shaft	2	
12	small pulley	2	
13	606-2Z bearing	2	
14	embossing roller seat	1	
15	embossing roller	1	
16	6201-Z bearing	9	
17	transmission shaft	1	
18	round nut	1	
19	big washer	1	
20	connection shaft	1	
21	driving wheel	2	
22	square bearing seat	3	
23	driving wheel shaft	2	
24	silicone wheel shaft	1	
25	silicone wheel	1	
26	silicone wheel cover	1	
27	guiding belt	2	428X6X4(40°)
28	sealing belt	2	770X15X0.2
29	driven wheel	2	
30	bottom driven wheel seat	1	
31			

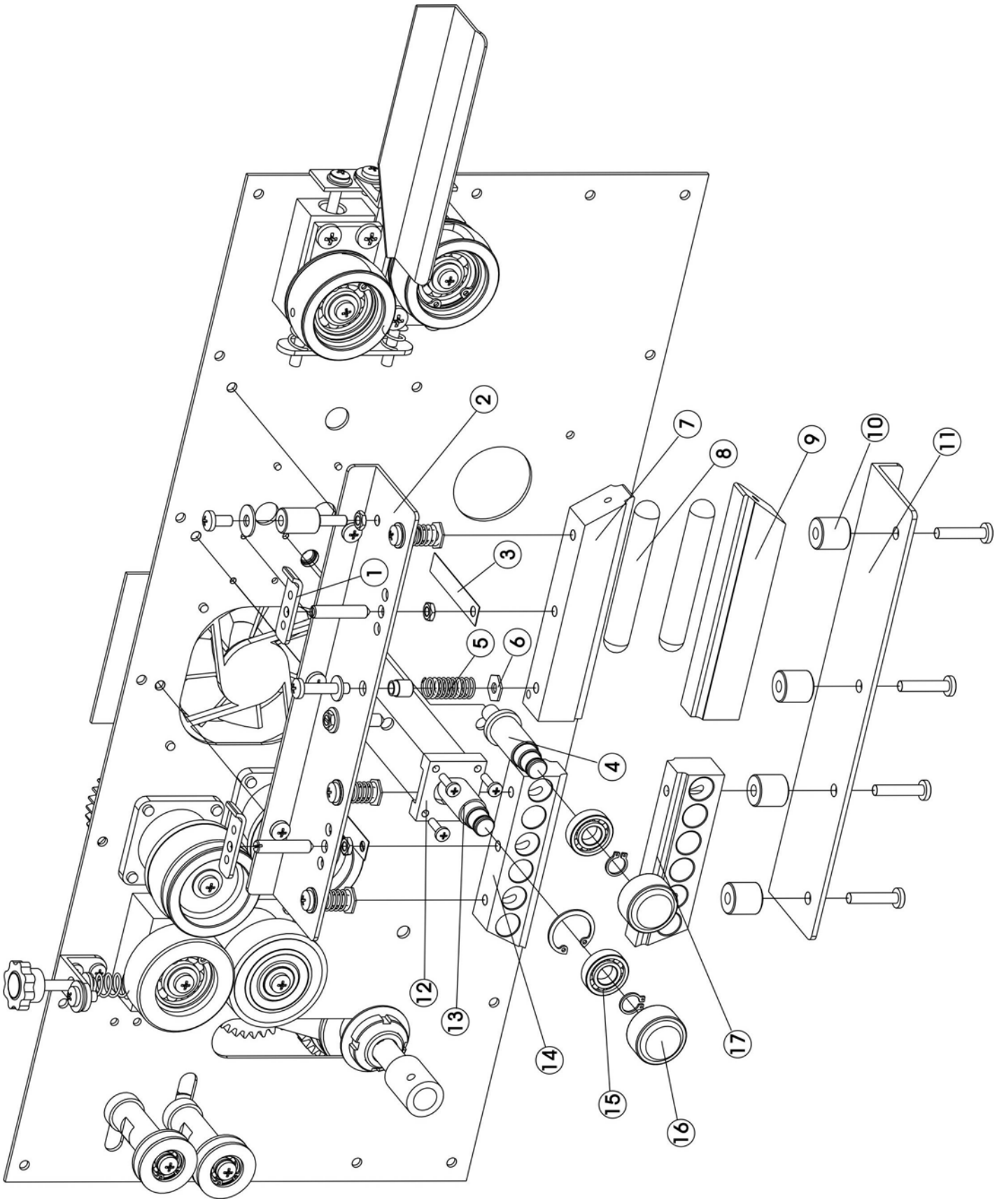


Figure 9

Item	Description	Quantity	Remark
1	stopping flake	2	
2	upper holding plate	1	
3	hanger plate of copper block	2	
4	guiding sleeve for upper holding plate	4	
5	spring for copper block	4	
6	self-made hexagon thin nut	4	
7	upper heating block (770)	1	
8	300W/220V（Φ12×95） heating pipe for sealing	2	
9	bottom heating block (770)	1	
10	copper block cushion	4	
11	bottom holding plate	1	
12	slider	1	
13	upper pinch roller shaft	1	
14	upper cooling block	1	
15	61900-2Z bearing	2	
16	pinch roller	2	
17	bottom cooling block	1	

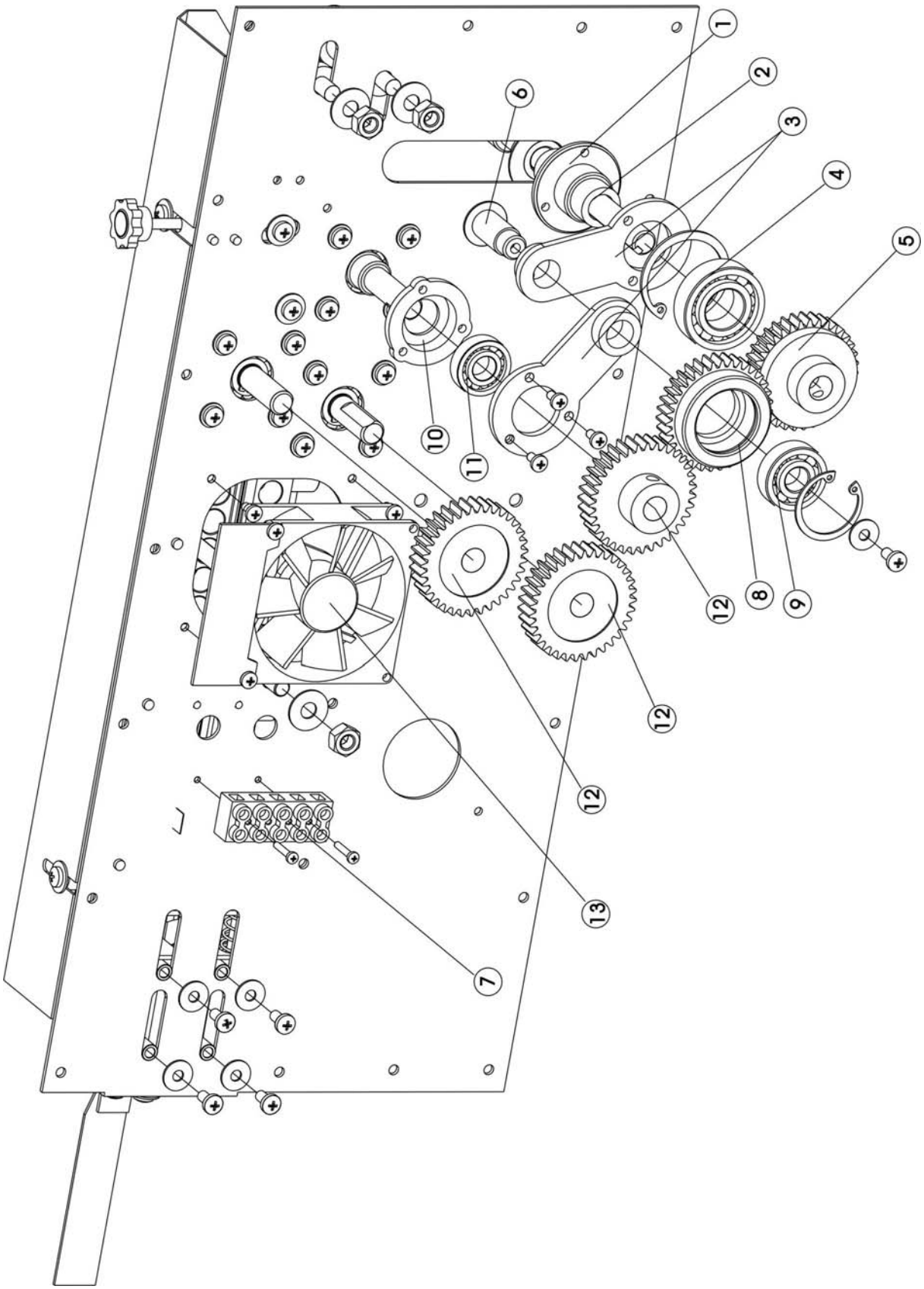


Figure 10

Item	Description	Quantity	Remark
1	connection shaft	1	
2	transmission shaft	1	
3	connection board II	1	
4	6004-2Z bearing	1	
5	steel gear	1	
6	gear shaft	1	
7	10 pin wiring terminal（orange）	1	
8	middle gear	1	
9	6201-Z bearing	1	
10	bearing seat（three-hole）	1	
11	6001-2Z bearing	1	
12	driven gear	3	
13	axial fan	1	

9. Breakdown Drawing of Conveyor Table

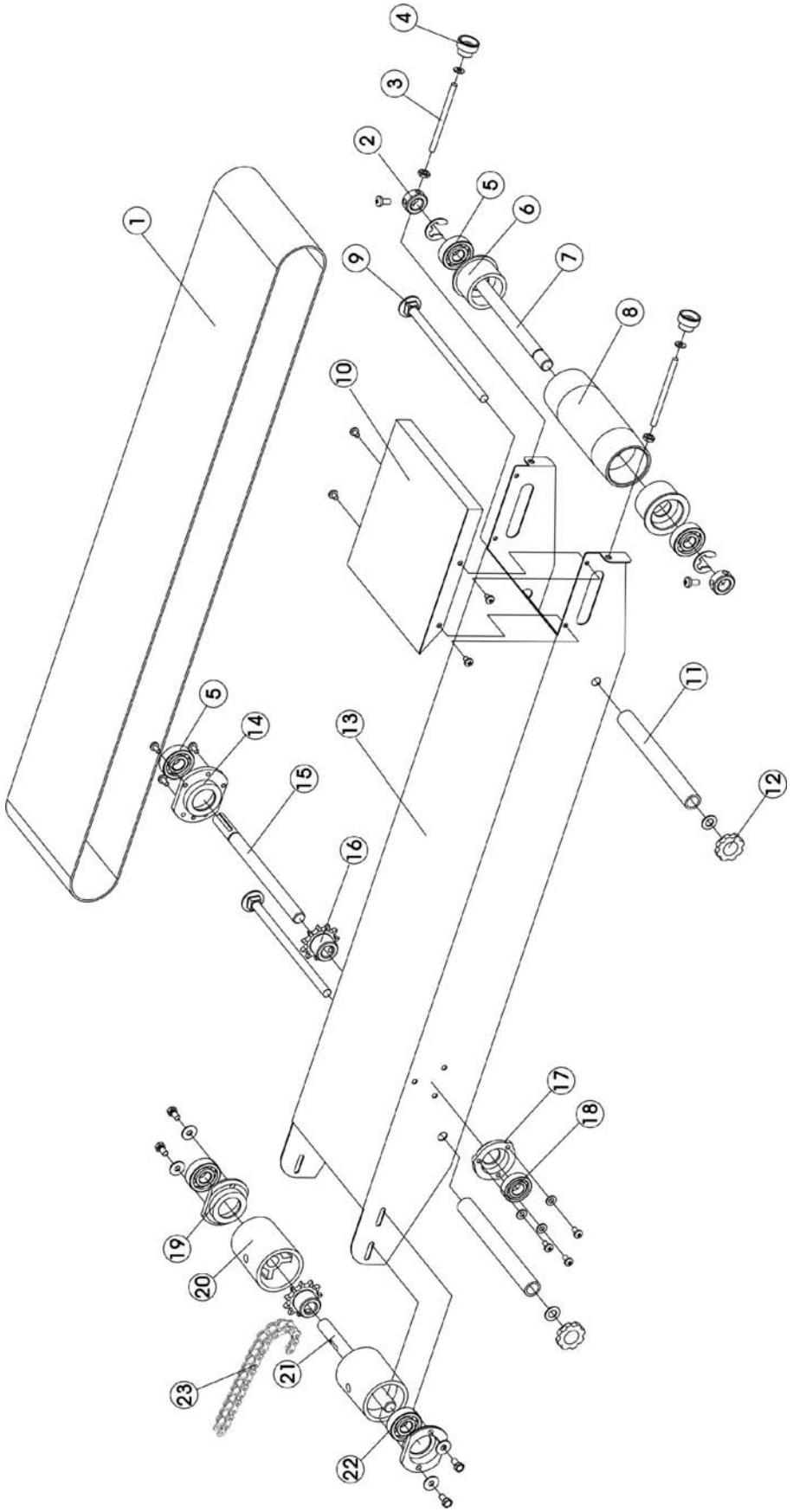


Figure 11

Item	Description	Quantity	Remark
1	conveyor belt	1	1580X135
2	adjusting block for conveyor belt	2	
3	double end bolt	2	M5X55
4	adjusting knob for conveyor table	2	M5
5	6201-Z bearing	3	
6	bearing seat of rear roller	2	
7	rear shaft of conveyor table	1	
8	rear roller of conveyor table	1	
9	half-round square neck bolt	2	M8X160
10	worktable	1	
11	plastic spacer	2	
12	knob（674-M8 star handle）	2	
13	conveyor table	1	
14	bearing seat（58）	1	
15	middle shaft of conveyor table	1	
16	sprocket of conveyor table	2	
17	bearing seat (three-hole)	1	
18	6001-2Z bearing	1	
19	two-eye bearing seat	2	used for front roller
20	front roller of conveyor table	2	
21	front shaft of conveyor table	1	
22	6201-2Z bearing	2	
23	chain (48 segments)	1	（06B-1X48L）

10.Breakdown Drawing of Worm-gear Box

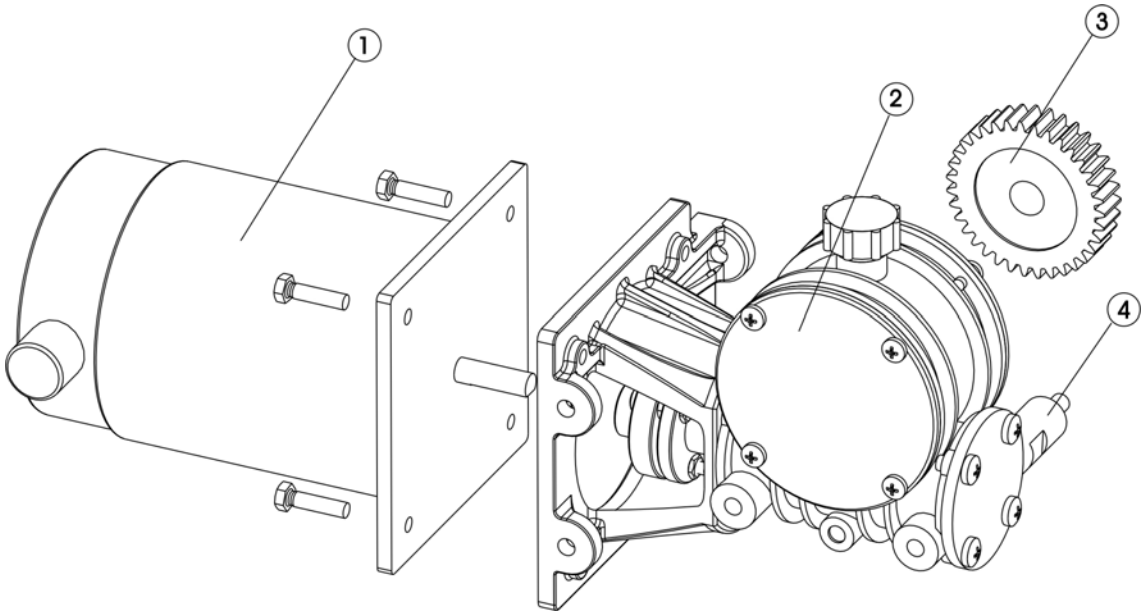


Figure 12

Item	Description	Quantity	Remark
5-1	50W/220V DC Motor	1	
5-2	Worm-gear Case Assembly（16m）	1	
5-3	Driving Gearwheel	1	
	Pig Iron Gearwheel		

11. Breakdown Drawing of Body

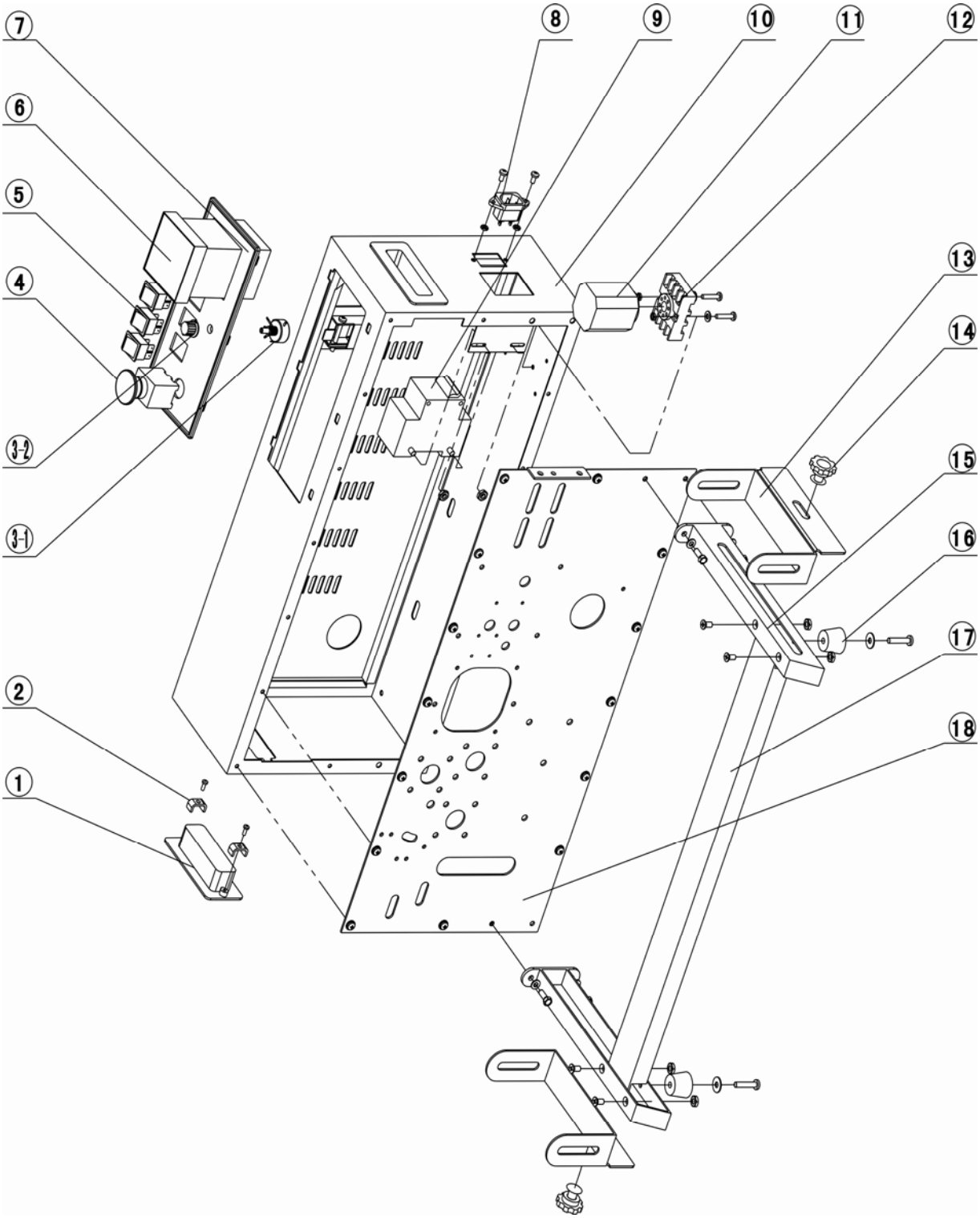


Figure 13

Item	Description	Quantity	Remark
6-1	Handle Support	2	
6-2	Handle Clamp	4	
6-3-1	Carbon-film Potentiometer 220K	1	(2.0W-220 K)
6-3-2	K18-2 Knob	1	
6-4	Emergent stop switch	1	
6-5	Springboard Switch	3	(KCD2-201N)
6-6	2301 Temperature controller	1	
6-7	Plastic Panel	1	
6-8	10ª Socket		
	Socket		
6-9	DZ47-2P/5A Breaker	1	
6-10	Housing	1	
6-11	Speed-regulating Plate	1	
6-12	PF083A Socket	1	
6-13	Transition Table Support	2	
	Adjustable Sheft		
6-14	(674 Knob) Handle	2	
6-15	Foot	2	
6-16	Rubber Foot Pad	2	
6-17	Rail	1	
6-18	Soleplate (Electrophoresis)	1	Steel: 102102-3

12.Breakdown Drawing of transition Part of FRB-770II

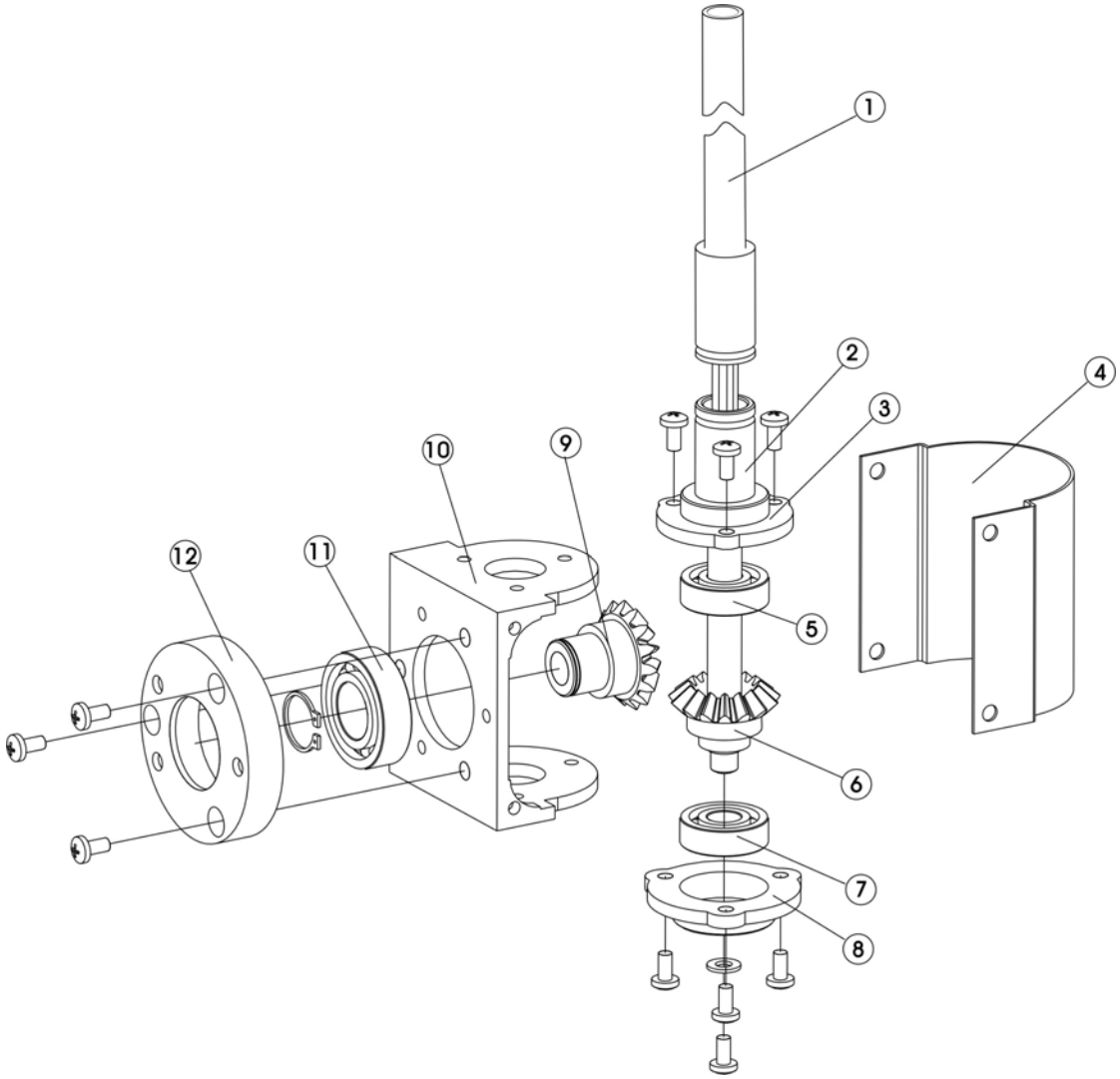


Figure 14

Item	Description	Quantity	Remark
7-1	Driving Shaft I	1	
7-2	Driving Shaft II	1	
7-3	Bearing Support (Big)	1	Double-purpose Bearing Support (Middle)
7-4	Conical Gear Support Cover	1	
7-5	6000-2Z Bearing	1	
7-6	Short Conical Gear	1	
7-7	608 Bearing	1	Φ22XΦ8X7
7-8	Bearing Support (Small)	1	Double-purpose Bearing Support (Small)
7-9	Long Conical Gear	1	
7-10	Conical Gear Support	1	
7-11	6003-2Z Bearing	1	
7-12	Double-purpose Bearing Support (Big)	1	

13. Troubleshooting

Problem	Reason	Solution
Sealing belt is off tracking.	Driving wheel shaft is not parallel to driven wheel shaft.	Adjust two adjusting screws on driven wheel seat.
Sealing belt is easy to break.	1. Too much tension on sealing belt. 2. Sealing belt is off tracking. 3. Crease on sealing belt. 4. Film or other dirt attached to the surface of sealing belt. 5. Sealing belt is easy to burn.	1. Adjust the vertical adjusting screw on driven wheel seat to decrease tension on sealing belt. 2. （see the point above） 3. No crease on sealing belt. 4. Clean its surface in time. 5. Clearance between two heating blocks is too small or temperature is too high.
Embossing is in low definition.	1. Embossing roller is worn out. 2. Pressure spring on embossing roller is not tightened to enough degree.	1. Replace embossing roller 2. Adjust the embossing roller's tightening spring.
There is resistance when the sealing belt is conveying.	The clearance between heating blocks or cooling blocks is too small, so the friction is too much.	Adjust the clearance between sealing belts properly, which should be about thickness of packing bag in one layer. So that not only ensure the sealing fastness, high-definition embossing, but not make the two ends of sealing area extend too long.
There is block or folding phenomenon when the packing bag is conveyed to pinch roller or embossing roller.	Too much pressure caused by pinch roller or embossing roller.	1. Adjust proper pressure for the pinch roller or embossing roller, so as to make the clearance between two sealing belts be about thickness of packing bag in one layer so that not only ensure sealing fastness, high-definition embossing, but not make the two ends of sealing area extend too long. 2. Adjust limiting screw after adjusting clearance.
Conveying belt is off tracking.	The driving roller shaft is not parallel to driven roller shaft.	Adjust two adjusting screws for driven roller shaft (rear shaft) on conveyor.
Conveyor belt and sealing belt don't move synchronously.	Too small tension on conveyor belt.	1. Tighten the chain of driving roller shaft (front shaft) and middle shaft properly. 2. Tighten the conveyor belt properly.

14. Spare Parts List

Item	Part Code	Description	Unit	Quantity
1	910802	guiding belt (428 x 6 x 4)	pc	4
2	910902-2	sealing belt (770 x 15 x 0.20)	pc	20
3	920205	power line	pc	1
4	920461-05	fuse tube (5×20 3A)	pc	2
5	930101	cross screwdriver	pc	1
6	930102	slotted screwdriver	pc	1
7	930124	M6 inner hexagon spanner	pc	1
8	930132	8-10 solid wrench	pc	1
9	930133	12-14 solid wrench	pc	1
10	930138	38-42 crescent wrench	pc	1
11	940801-11	speed-regulating PCB assembly	pc	1
12	930308-21	printing wheel	pc	1

Warranty Card

1. According to the national regulates, we promise three guarantees to users since the day the products sold. The details are as following:
   1.1 The users should read the manual in details and operate according to the manual.
   1.2 Warranty time: one year for machine parts, six months for electrical components.
   1.3 During the warranty time, we don't guarantee the problems if the user operate and maintain the machine without the instruction or remove the parts privately. We do reparation for the machine, while the buyer pays for the repairing.
2. please check the model type of the machine according to the invoice and the warranty card after purchasing. If the model type doesn't unify with each other please contact us promptly and we will correct it.
3. please keep safely the purchasing invoice and the warranty card. There is no replacement of these two if lost. Private modification is invalid. Please present the invoice and the warranty card when repairing.

User			
User's detailed address			
Area code and telephone		Area code and fax	
Post code		Contact	
Distributor			
Model type		Machine No.	
Purchasing date		Invoice No.	

	Date	Problems	Maintenance condition	Repairer
Maintenance record				

Note: The warranty card is valid only when sealed by the distributor.