CLEVELAND
EQUIPMENT & MACHINERY COMPANY

CE-2500-HVE

Continuous Sealer

Operation Manual

866-888-6327
sales@clevelandequipment.com
3889 E Raines Rd
Memphis, TN 38118
www.clevelandequipment.com

Contents

I. Use

This sealer is suitable for sealing all kinds of plastic films, which is widely used in fields of food, medicine, chemicals, etc. It is the best sealing equipment for packing batch products from factories and shops.

II. Safety Precautions

2.1. Make sure the adopted power supply is correct.

The machine adopts AC 110V. The yellow and green wire is the ground wire and cannot be removed.

2.2. After the power is connected, do not touch any electrical parts.

2.3. .

2.4. When the machine is on, do not touch any moving parts.

2.5. When the machine is on, do not touch heating blocks or ink roller heating block.

2.6. Do not operate the machine in a corrosive environment.

2.7. Do not change any parts of the machine.

2.8. Keep the machine clean (both inside and outside), and clear of dirt from sealing belt.

2.9. Oil the gear and sprocket with semiliquid gear oil. Fill and exchange oil in worm-gear box regularly.

2.10. Turn off the power when not use. Allow the machine to run long enough to cool down.

2.11. Keep this manual near the machine, for easy reference.

III. Main Specification

Model / Items	Horizontal Mode	Vertical Mode
Voltage	AC 220V/50 110/60	
Power	50W	
Sealing Power	300×2（W）	
Sealing Speed	0~12 （m/min）	
Sealing Width	8 - 10（mm）	
Temperature Controller	0~300（℃）（Stepless adjustable）	
Height From Sealing Center To Conveyor	10~40 （mm）	150~270 （mm）
Film Thickness(Monolayer)	≤0.08 mm	
Max. Single Conveyor Loading	≤1 Kg	
Max. Overall Conveyor Loading	≤3 Kg	
Dimension(LXWXH)	840×380×320（mm）	840×380×550（mm）
Net Weight	32 Kg	37 Kg

IV. Performance Features

This sealer uses an electronic thermostat control unit and stepless speed-adjusting transmission mechanism. It can seal various plastic film bags in different materials and can also be used with varied packaging production lines. The machine has no limitations on sealing length with high efficiency continuous sealing, reliable sealing quality, and convenient operation.

This series provides two models, including a horizontal and a vertical type. The horizontal type is suited for packaging dry materials, while the vertical type is suited for packaging materials in powder or liquid form.

V. Structure & Working Principle

This machine is made up of the machine frame, speed regulator, sealing temperature control system, transmission and conveyor system, and printing device (see Diagram).

The sealing and printing transmission are driven by one motor, which drives the sealing belts, guiding belts and conveyor belt to work synchronously, as well as make printing mechanism working intermittently.

5.1 Once the power is turned ON, the electrothermal elements start to produce heat, which leads to a rapid temperature rise of both upper and lower heating blocks.

5.2 Adjust the temperature control and speed control to the required temperature and speed for your application.

5.3 The plastic packing bag is transferred by the conveying belt, and its sealing part will be guided into the clearance between two sealing belts,

5.4 The bag is clamped by two sealing belts and conveyed into the heating area.

5.5 Sealing belts are pressed by two heating blocks and impressing wheels which fuse the plastic film together.

5.6 The sealed bag is conveyed into the cooling area for cooling.

5.7 The sealed bag is pressed by embossing wheel to make stripe or netted pattern.

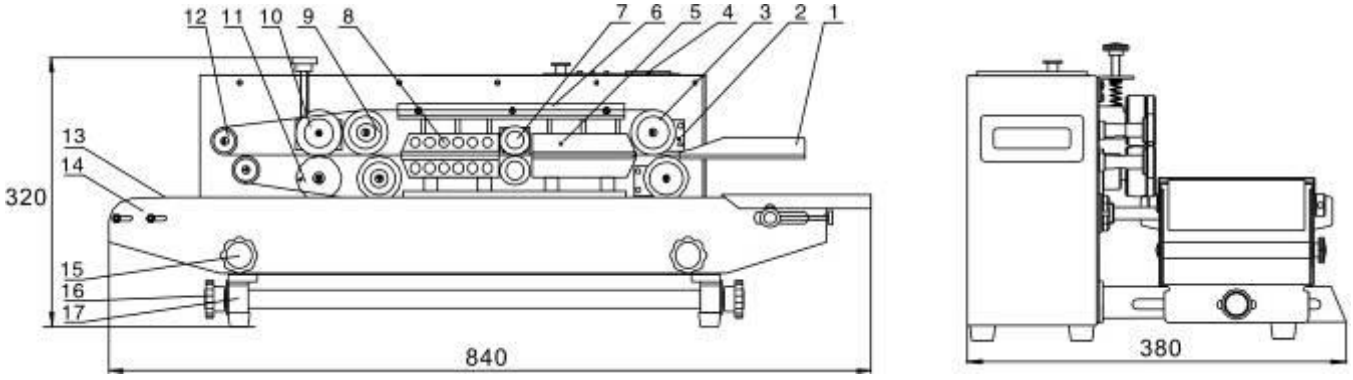


Diagram 5.1

1	101035	Guide Plate	9	101024	Driving Wheel
2	101035	Drive Wheel Adjusting Block Upper	10	101018	Embossing Roller
2	101023	Drive Wheel Adjusting Block Lower	11	101036	Silicone Wheel
3	101024	Driven Wheel	12	101014	Guiding Wheel
4	THC1	Control Panel	13	910701	Conveyor Belt
5	930305-U 930305-L	Heating Block	14	101333	Conveyor Table
6	102007	Holding Plate	15	930109-11	Fastening Knob for Elevating Table
7	102003	Pinch Roller	16	101334	Transverse Tightening Knob for Conveyor Table
8	930306-U 930306-L	Cooling Block	17	101335	Ledge

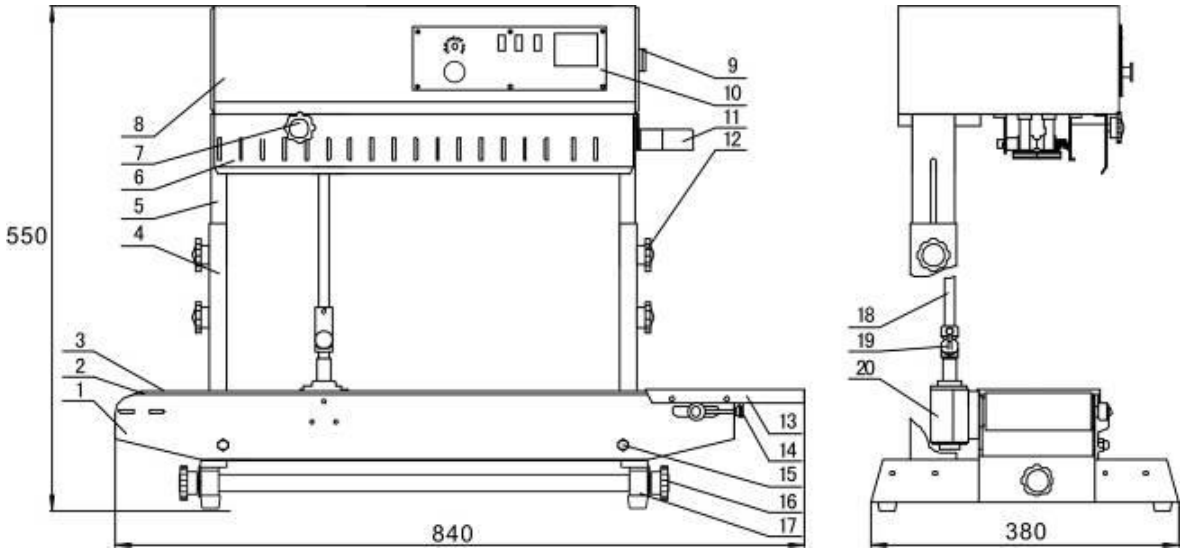


Diagram 5.2

1	101333	Conveyor Table	11	101035	Guide Plate
2	101012	Driving Roller	12	101341	Fastening Knob
3	910701	Conveyor Belt	13	101006	Worktable
4	101335	Fixed Bracket	14	930109-01	Adjusting Knob for Conveyor Belt
5	101336	Slip Bracket	15	930109-11	Tightening Nut
6	101337	Safety Cover	16	101334	Conveyor Table Transverse Tightening Knob
7	101338	Embossing Roller Adjusting Knob	17	101335	Rack
8	101339	Housing	18	101342	Vertical Shaft
9	QF1	Breaker	19	101343	Gimbal Assembly
10	101340	Control Panel	20	101344	Bevel Gear Assembly

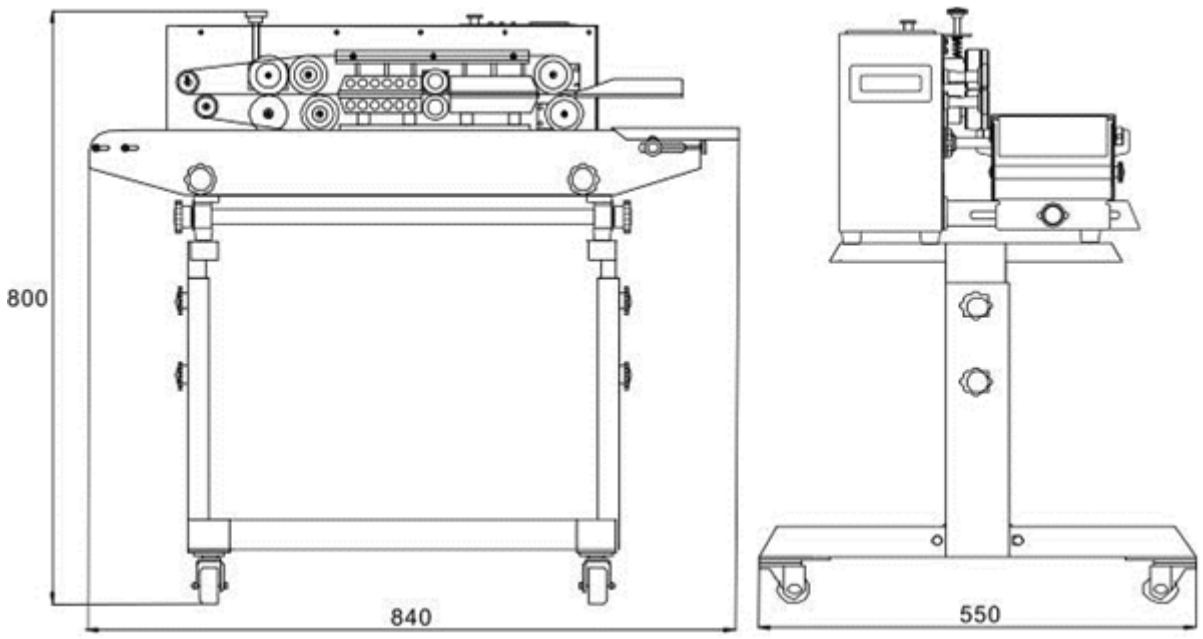


Diagram 5.3

VI. Operational Use

6.1. Control Panel (See Diagram 6.1)

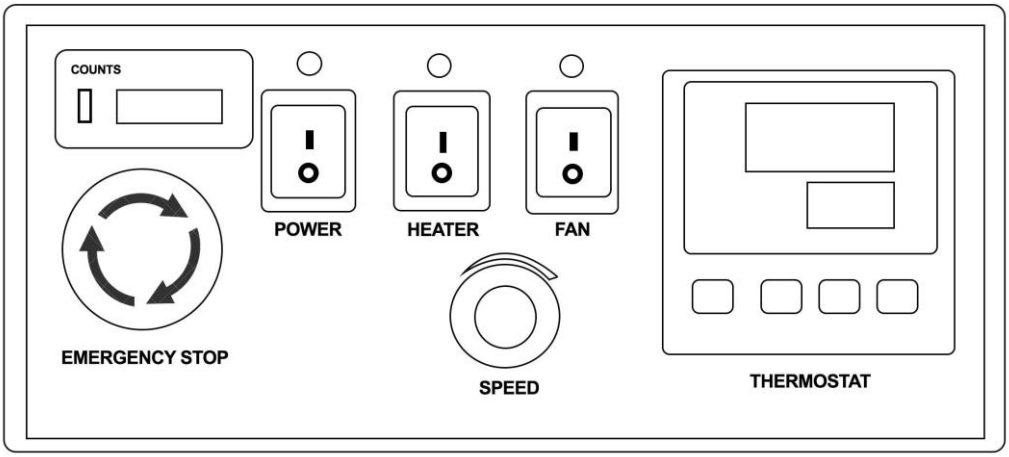


Diagram 6.1

6.2. Prepare the machine for use

6.2.1. This machine is equipped with a three-prong grounded socket. Be sure that the socket is well connected for safe operation.

6.2.2. First-time use or too long intermission will make the heating elements damp. It is necessary to preheat at lower temperature for several minutes before the normal operation.

6.2.3. Adjust the height and position of the conveyor table to get the required sealing position for your application.

6.2.4. Adjust the position of feed opening according to the external size from sealing line to bag opening.

6.2.5. According to the thickness and material that to be sealed, adjust the clearance between two heating blocks and two cooling blocks, so that both clearances are approximately equal to the thickness of packing bag in one layer. This will guarantee sealing firmness and high definition of embossing, and ensure a suitable length extended from the two ends of seal.

6.3. Sealing Belt Adjustment / Replacement

6.3.1. Remove the safety cover, after the heating blocks cool, turn stopping flakes on both upper heating block and upper cooling block by 90° to lift both, then loosen the springs on both embossing roller and pinch roller, meanwhile, remove the guiding belt, to prepare it for removing sealing belts. (see Diagram 6.2)

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

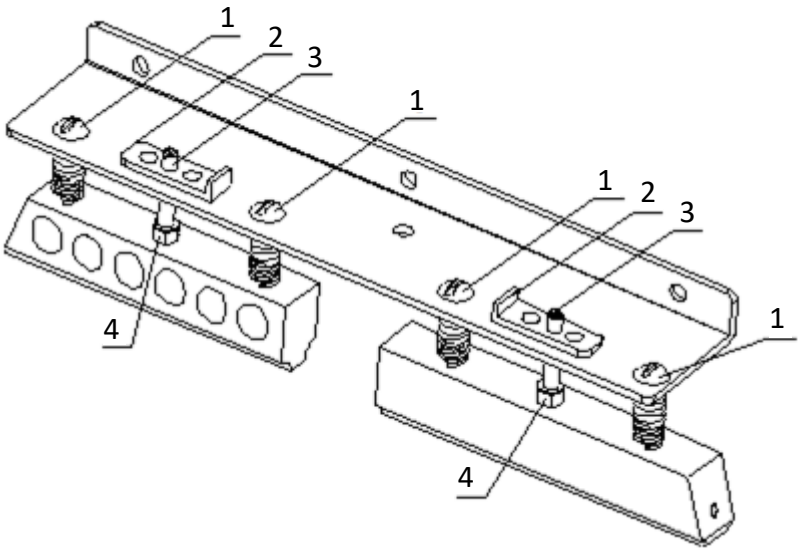
6.3.3. Replace with a new sealing belt and install the guiding belt back.

6.3.4. Put the driven wheel, heating/cooling blocks, and pinch roller to the original position.

6.3.5. Connect to the power supply to test the machine. If irregular sealing appears on the belt, make adjustment by adjusting screws on the driven wheel seat (adjusting block)(see Diagram 6.3).

6.3.6. Install the safety cover. When the temperature reaches the set temperature, the machine is ready.

Diagram 6.2



1	101347	Bolt
2	101348	Withdraw Stopping Flake
3	101345	Tightening Bolt
4	101345	Tightening Bolt

6.4. Drive Wheel Block Adjustment

If the sealing belt is off tracking, adjust the screws on driven wheel seat (adjusting block), shown as Diagram 6.4.

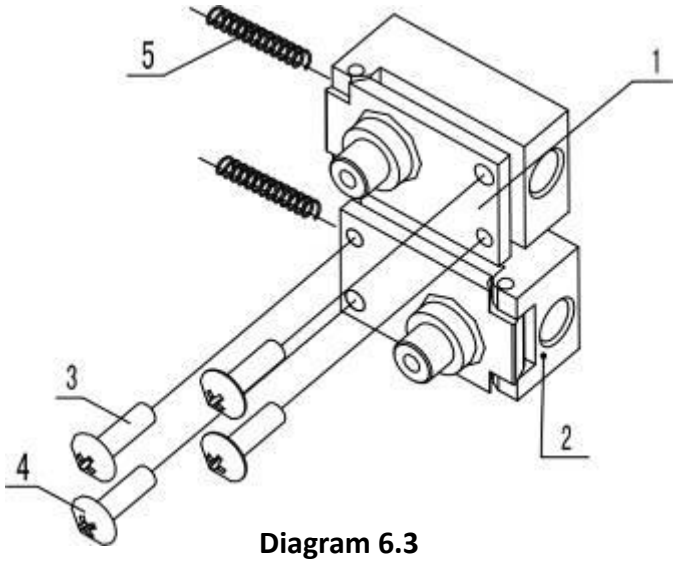


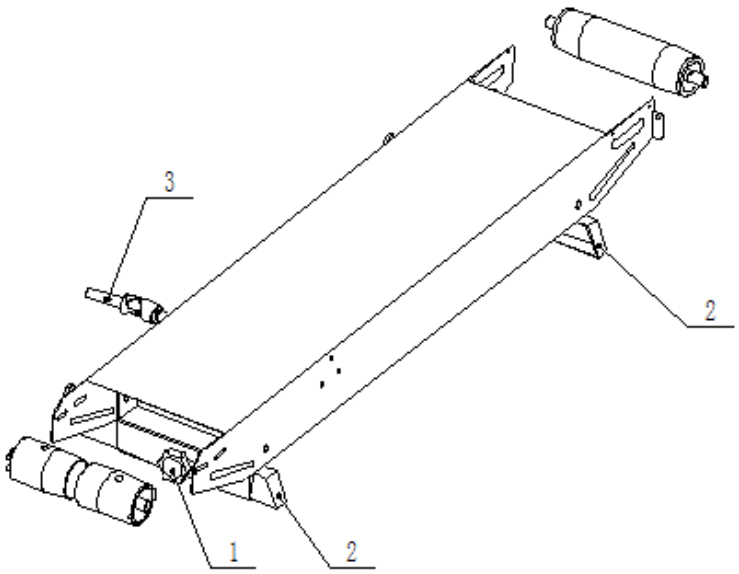
Diagram 6.3

1	101035	driven wheel seat adjusting plate - Upper
	101023	driven wheel seat adjusting plate - Lower
2	101035	driven wheel seat adjusting block - Upper
	101023	driven wheel seat adjusting block -Lower
3 / 4	101349	adjusting screw
5	9361112-117-60S	spring

6.5. Conveyor Belt Adjustment / Replacement

When making adjustments to the conveyor table, loosen two nuts (1) at the bottom of the conveyor table. There are three location holes on the housing (2), insert bolts in them as needed, then fasten the nuts. Then move the conveyor table and equip the connecting shaft (3) that would be in the spare parts into the universal joints. (see diagram 6.4).

Diagram 6.4



1	101334	Adjusting Knob
2	101335	Foot Rest

6.6. Starting procedure

6.6.1. Connect to the power supply and press the Start switch, which will turn the indicator light on. You can then adjust the speed controller knob to the desired speed. All transmission parts start to run synchronously.

6.6.2. Fine tune the knob of embossing roller to make the wheel swivel and acheive the proper pressure.

6.6.3. Turn Heat Seal switch ON, the green light of the electronic temperature controller will light up. 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 and kept running at low speed.

6.6.4. According to the material and thickness that is being sealed, turn on the cooling fan if your application requires.

6.6.5. Flatten and align the bag opening, then feed the bag by aligning the bag opening with the guide plate. The bag opening is gripped by the sealing belts, which will make the bag move forward automatically. At that momento, do not push it in or pull it out by force, otherwise irregular sealing or breakdown will happen.

6.6.6. 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.

6.6.7. Stop operation

6.6.8. In order to prolong the service life of the sealer, before shutting down the machine, you should return the temperature setting to “0” and turn on the fan. The temperature on the indicator will begin to fall and the sealing belts should still be running. Once the temperature drops below 100℃, can you turn off the fan and main power.

6.6.9. 6.6.8 Emergency stop switch:

6.6.10. At any time, the machine can be stopped immediately by pressing the emergency stop switch. The emergency stop switch is a self-locking switch, and needs to rotate clockwise 120 degrees to open after self-lock.

VII. CE-2500-HVE Horizontal to Vertical Guide

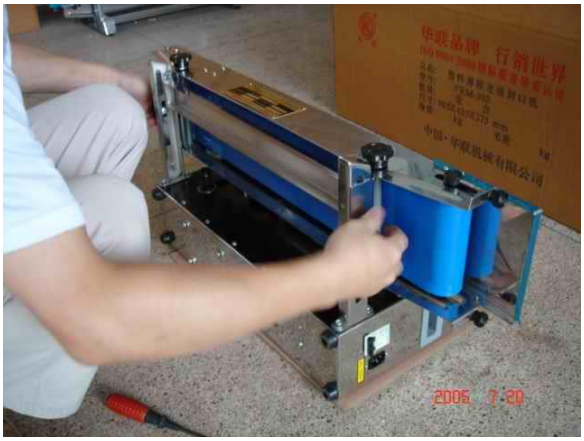
Step 1

Step 4

Step 2

Step 5

Step 3



Step 6

Step 7

Step 10

Step 8

Step 11

Step 9

Step 12

Step 13

VIII. Stand Assembly

Included Parts:

Assembl

Stand Assembly

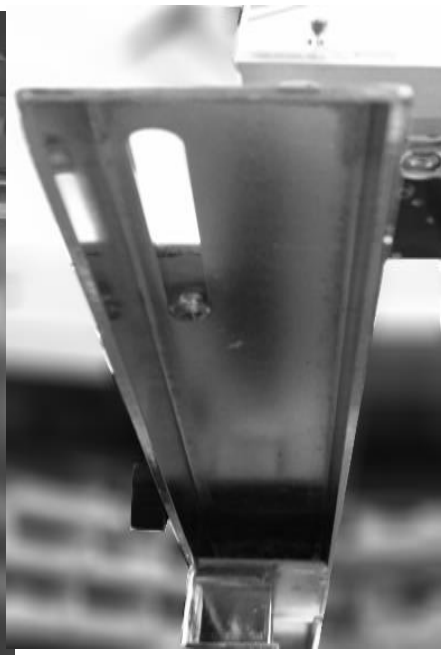
Included are
2 each - Legs
-Look like a “T” with two holes drilled into the long end.

2 each - Risers
- Look like a “T” with a slit cut into the long end.

These two pieces slide together using the long ends, the slotted T is in top and slides into the inside of the bottom T.

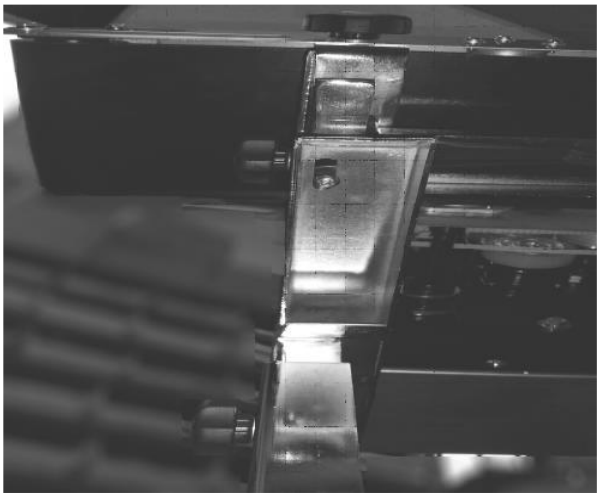
4 knobs
4 screws with round backs
4 washers

Use these together through the two holes on the risers of the “T”s and you will end up with two matching sides that look like Upper Case “I”s .



Support Bar(s) – CE-2500 (Qty 1)
CE-3000 (Qty 2)

On the 2500 you have one other large piece in the kit and for the 3000 you will have 2 pieces. These pieces will go between the two sides with the short end with the holes to the sides. On the side pieces you will find corresponding holes 2 on each side for the 2500 and 4 on each side for the 3000. Use the provided long bolts through the outside and into the threads on the middle supports.



Also included are screws that screw into the bottom of the machine where the rubber feet usually are. Unscrew the feet from the machine and screw the Philips head screw through the bottom of the top of the stand and into the holes that held the feet.

IX. Electrical Diagram

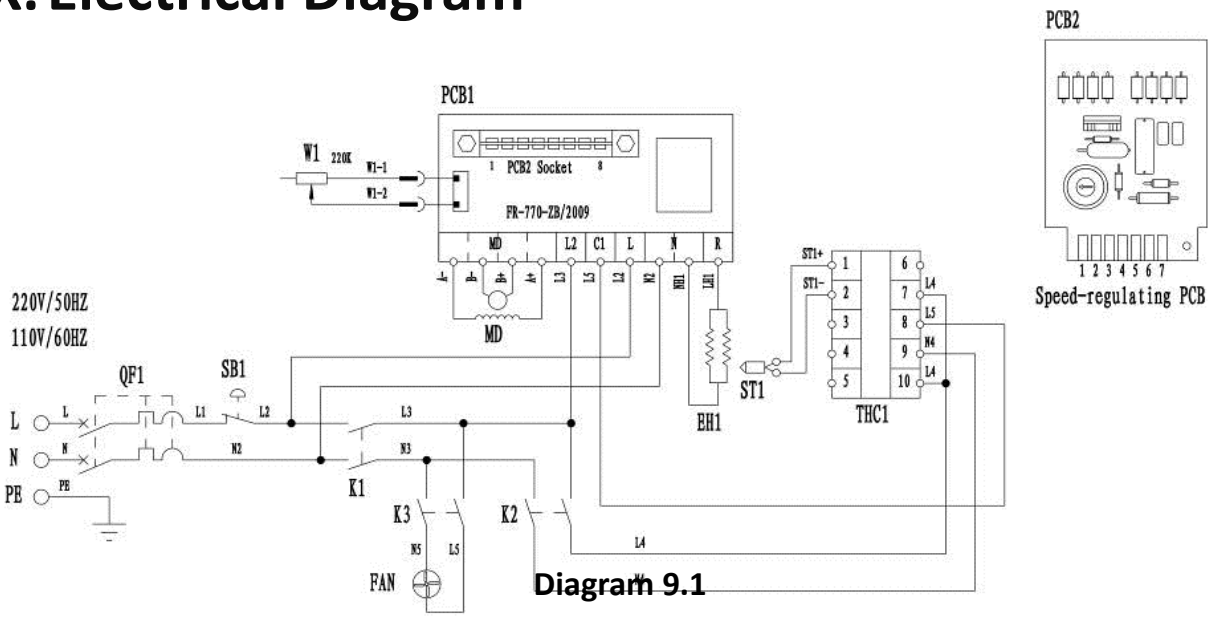
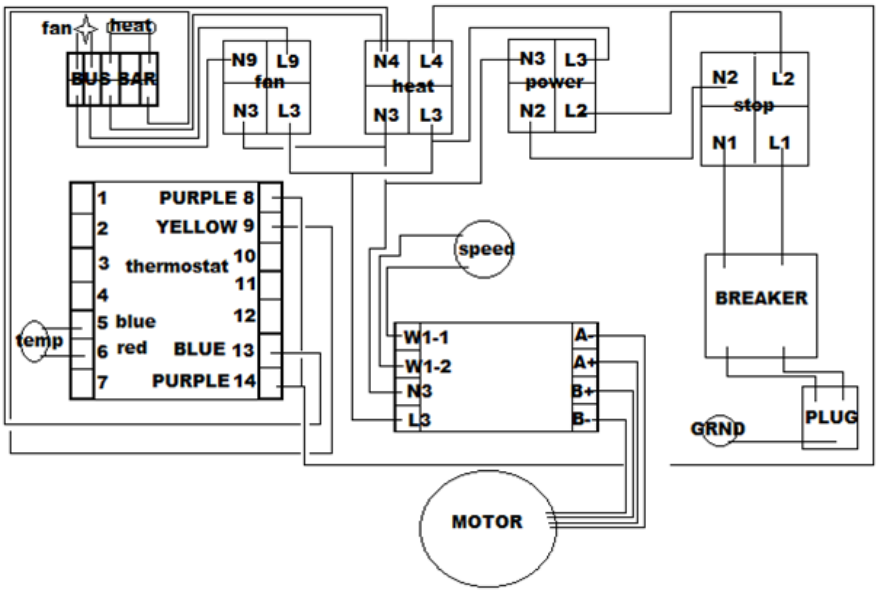


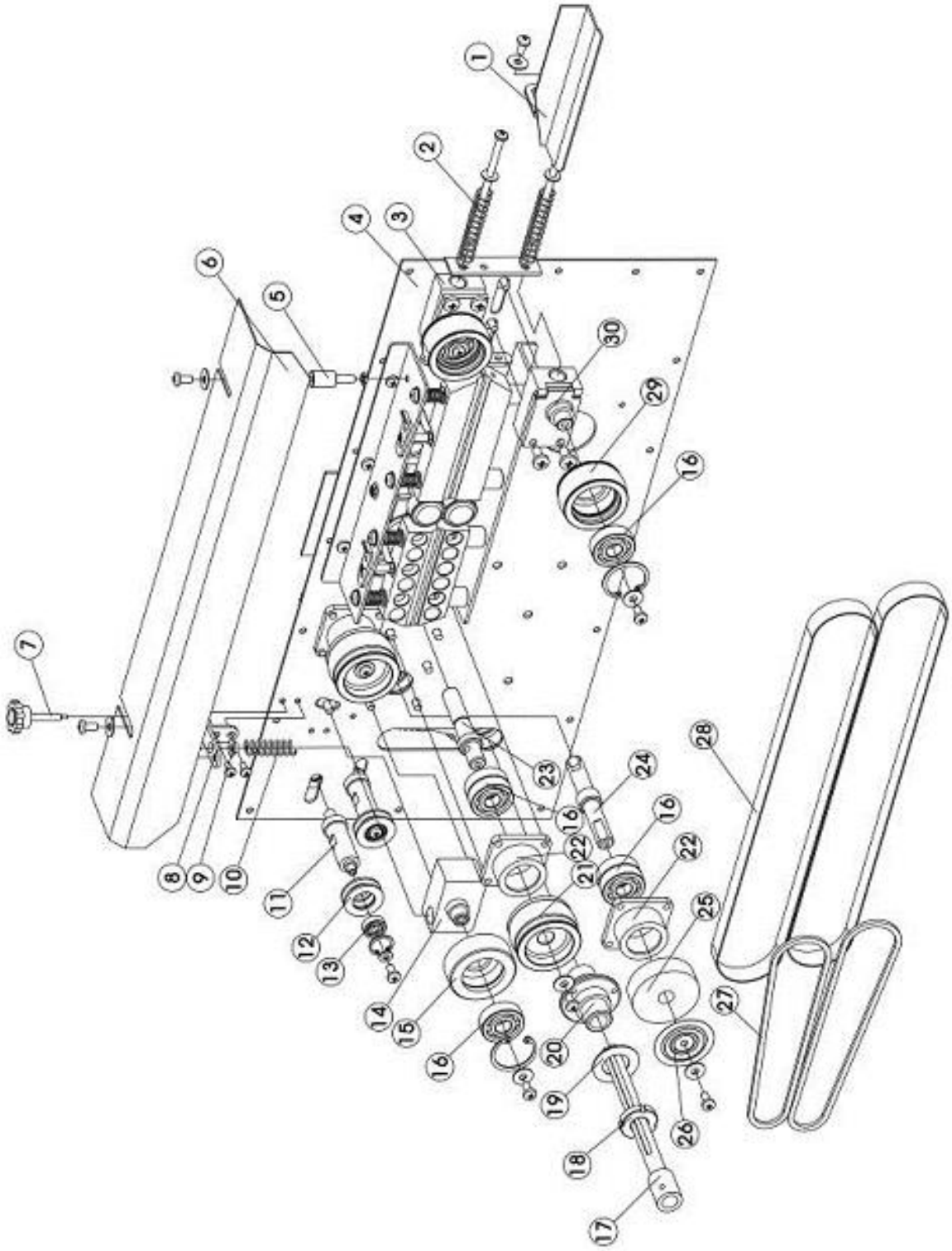
Diagram 9.1



QF1	Breaker	THC1	Temperature Controller
SB1	Switch / Emergency Stop	ST1	Thermocouple
K1	Switch on/off	EH1	Heating Pipe
K2	Switch / Seal	W1	Potentiometer
K3	Switch / Fan	PCB1	PCB Assembly
MD	DC Motor	940801-11	Speed Regulating PCB
FAN	Axial Flow Fan	MDJ	Motor Junction Piece
BC1	Bag Counter		
BC2	Bag Counter Clicker		

X.Sealing Unit Parts List

Diagram 10.**1**

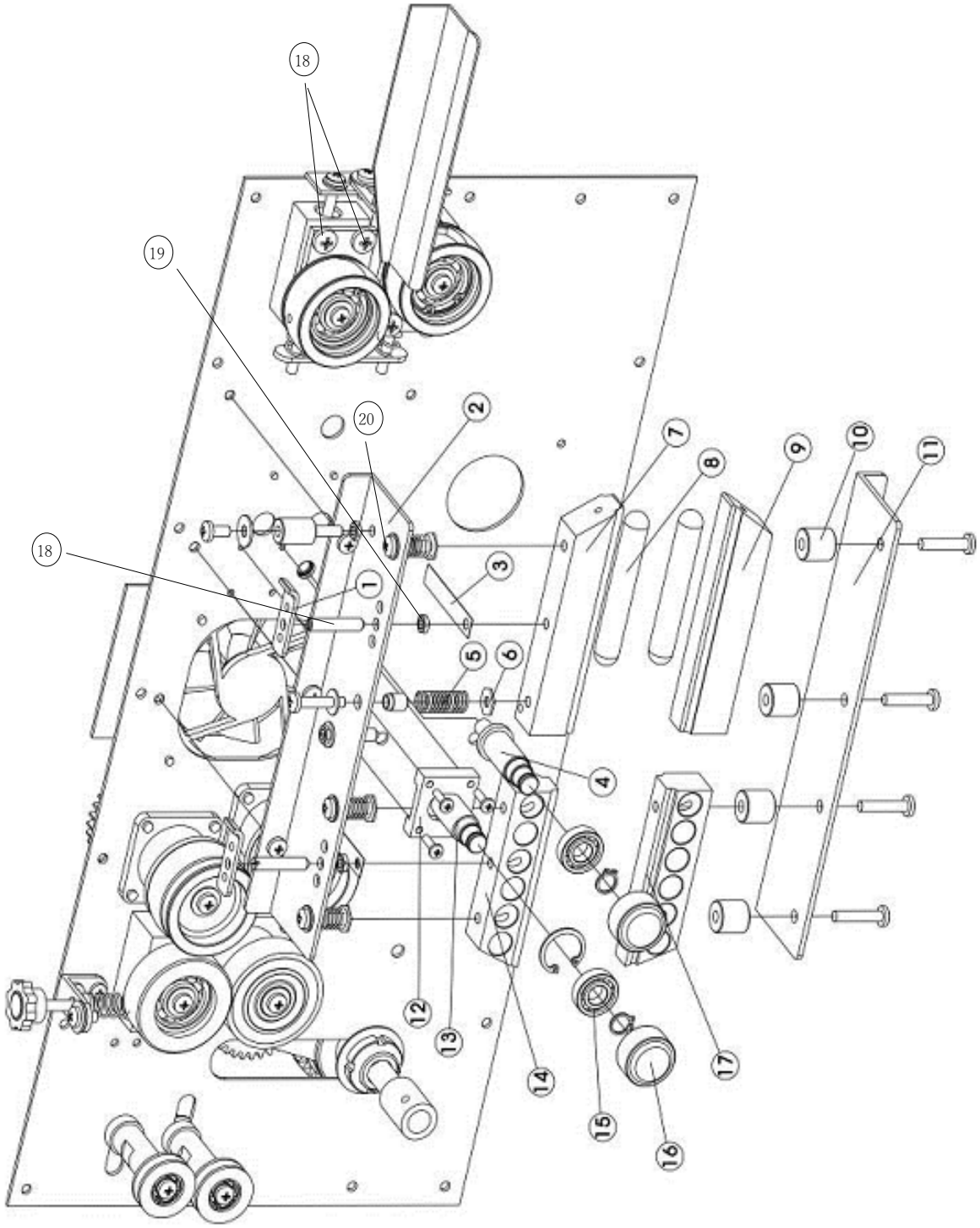


Sealing Unit Parts List

Item	Part Code	Quantity	Description	Remark
1	101035	1	guide plate	
2	936111.2-11.7-60S	2	spring for driven wheel seat	
3	101023	1	upper driven wheel seat	
4	102102	1	bottom board	steel: 102102-3
5	102008	1	support for safety cover	880
6		1	safety cover	
7	930108-11	1	672 corrugated knob	adjusting knob for embossing roller
			（M8X35）	
8	101016	1	supporting board for adjusting embossing roller	
9	101351	1	spring seat of embossing roller	
10	936111.2-10.8-50	1	spring of embossing roller	
11	101015	2	small pulley shaft	
12	101014	2	small pulley	
13	935601-6	2	606-2Z bearing	
14	101017	1	embossing roller seat	
15	101018	1	embossing roller	
16	930512	9	6201-Z bearing	
17	101011	1	transmission shaft	
18	930251	1	round nut	
19		1	big washer	
20	101033	1	connection shaft	
21	101024	2	driving wheel	
22	101026	3	square bearing seat	
23	101027	2	driving wheel shaft	
24	101034	1	silicone wheel shaft	
25	101036	1	silicone wheel	
26	101037	1	silicone wheel cover	
27	910802	2	guiding belt	428X6X4(40°)
28	910902	2	sealing belt	770X15X0.2
29	101024	2	driven wheel	
30	101023	1	bottom driven wheel seat	
31	101350	1	teflon belt adjust screw	

XI. Conveyer Parts List

Diagram 11.1

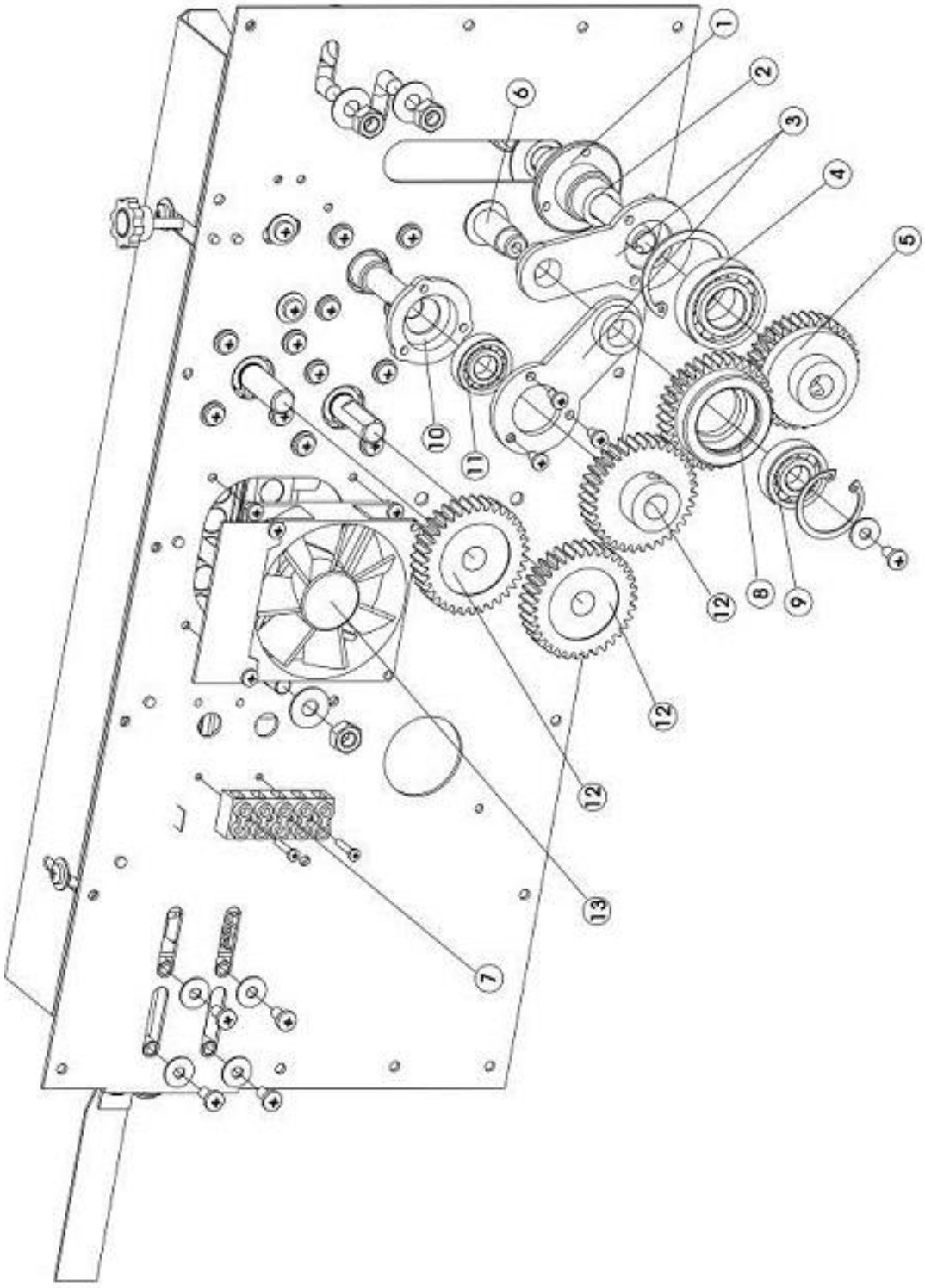


Conveyer Parts List

Item	Part Code	Quantity	Description
1	101348	2	stopping flake
2	102007	1	upper holding plate
3	101352	2	hanger plate of copper block
4	101353	4	guiding sleeve for upper holding plate
5	936111-10-25S	4	spring for copper block
6	101354	4	self-made hexagon thin nut
7	930305	1	upper heating block (770)
8	921304	2	300W/220V（Φ12×95）
9	930305	1	bottom heating block (770)
10	101050	4	copper block cushion
11	102007	1	bottom holding plate
12	105017	1	slider
13	102001	1	upper pinch roller shaft
14	930306	1	upper cooling block
15	935619-00	2	61900-2Z bearing
16	102003	2	pinch roller
17	930306	1	bottom cooling block

XII. Component Parts List

Diagram 12.1

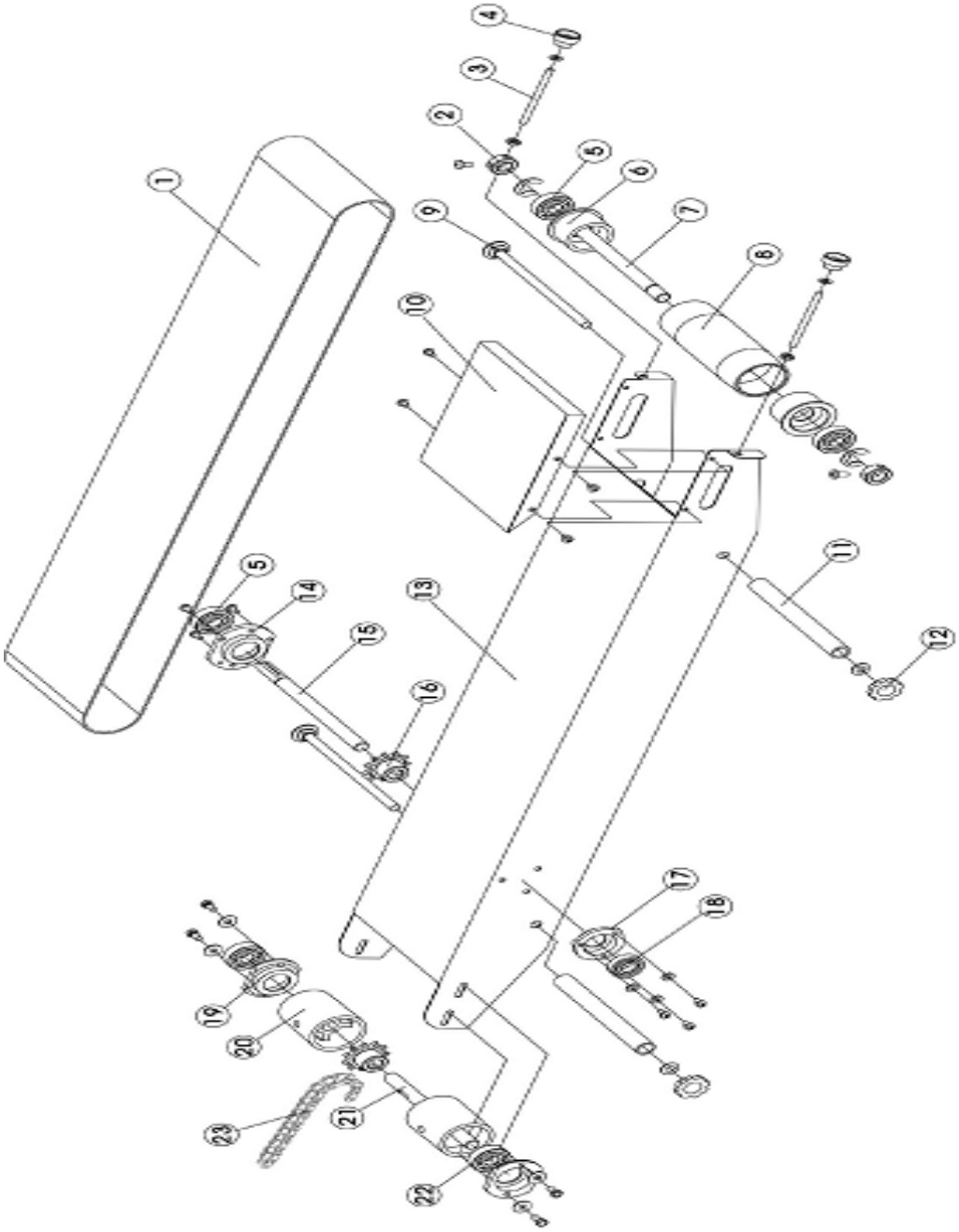


Component Parts List

Item	Part Code	Quantity	Description
1	101033	1	connection shaft
2	101011	1	transmission shaft
3	101029	1	connection board II
4	935601-04	1	6004-2Z bearing
5	101031	1	steel gear
6	101028	1	gear shaft
7	920415-22	1	10 pin wiring terminal（orange）
8	101030	1	middle gear
9	935602-01-1	1	6201-Z bearing
10	101013	1	bearing seat（three-hole）
11	935601-01	1	6001-2Z bearing
12	101032	3	driven gear
13	921101	1	axial fan

XIII. Conveyor Table Parts List

Diagram 13.1



Conveyor Table Parts List

Item	Part Code	Quantity	Description	Remark
1	910701	1	conveyor belt	1580X135
2	101007	2	adjusting block for conveyor belt	
3	101355	2	double end bolt	M5X55
4	930109-01	2	adjusting knob for conveyor table	M5
5	935602-01-1	3	6201-Z bearing	
6	101012	2	bearing seat of rear roller	
7	101008	1	rear shaft of conveyor table	
8	101005	1	rear roller of conveyor table	
9	GB12-1988	2	half-round square neck bolt	M8X160
10	101006	1	worktable	
11	101049	2	plastic spacer	
12	930109-11	2	knob（674-M8 star handle）	
13	101333	1	conveyor table	
14	101009	1	bearing seat（58）	
15	101004	1	middle shaft of conveyor table	
16	101010	2	sprocket of conveyor table	
17	101013	1	bearing seat (three-hole)	
18	935601-01	1	6001-2Z bearing	
19	101003	2	two-eye bearing seat	used for front roller
20	101012	2	front roller of conveyor table	
21	101002	1	front shaft of conveyor table	
22	935602-01-2	2	6201-2Z bearing	
23	930603-13	1	chain (48 segments)	（06B-1X48L）

Miscellaneous Parts

Item	Part Code	Description	Unit	Quantity
3	920205	power line	pc	1
4	920461	fuse tube (5×20 3A)	pc	2
7	930124	M6 inner hexagon spanner	pc	1
11	940801-11	speed-regulating PCB assembly	pc	1
12	930308-21	printing wheel	pc	1

XIV. CE-2500-HVE Parts Kit

Included with the CE-2500 HVE Continuous Band Sealer is a parts kits with the following:

Item#	Qty.	Part#	Description
1	2	910802	Guiding Belt (Rubber Belt with teeth) - 428x6x4mm
2	**2**	910902	Sealing Belt (Teflon) – 770x15x0.2mm
3	1	2500-EMBKit	Embossing Kit
4	**1**	W1	Potentiometer (Speed Dial)
5	**1**	PCB2	Speed Regulating PCB

XV. Preventive Maintenance Checklist

Each use:

- Visually inspect bands for excessive wear
- Check for heating on both element blocks
- Check switches to ensure proper operation (everything turns on etc.)

General routine maintenance:

- Replace Teflon belts if needed
- Inspect rubber belts
- Check both heating elements for proper heating
- Clean and blow out machine thoroughly including behind the blocks
- Check all of the rollers that drive the belts and that emboss or print for excessive play side to side generally you will see a belt walking off or riding up or down as a symptom.
- Check gears on the inside of machine after dusting clean off old grease and apply new
- (for non/food applications use any gear grease,
  for food grade applications you will need an h1 food grade grease)
- Check all electrical connections for loose junctions and all ice cube relays for corrosions or discolored connectors
- Check motor brushes for wear
- Check motor gear head for movement and put oil in via the plastic nut installed into the top
- (for food grade some type of food grade oil or pack the same h1 grease into the head,
  nonfood any machine oil or grease will do fine)

- Check the conveyor belt, table and adjusters for wear and proper use
- Check and grease the chain in the conveyor (same grease as the inside gears)
- Check conveyor rollers for wear and bearing health

XVI. 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 the thickness of a packing bag in one layer. This ensures fast sealing, high-definition embossing, but not allow the two ends of the sealing area to extend too long.
There is blockage or folding when the packing bag is conveyed to pinching the roller or embossing roller.	Too much pressure is being applied by pinch roller or embossing roller.	1. Adjust proper pressure for the pinch roller or embossing roller, so as to make the clearance between the two sealing belts be the same thickness of a packing bag in one layer so as to ensure sealing fastness, high-definition embossing, but also prevent the two ends of sealing area from extending too long. 2. Adjust the limiting screw after adjusting clearance.
Conveying belt is off track.	The driving roller shaft is not parallel to driven roller shaft.	Adjust the 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 the driving roller shaft (front shaft) and the middle shaft properly. 2. Tighten the conveyor belt properly.

XVII. Helpful Links

Scan the QR code or enter the web address in your browser to view these helpful links for setup videos and more information on the CE-2500-HVE Continuous Band Sealer.

	CE-2500-HVE band sealer product page on the website http://clevelandequipment.com/ce-2500-hve-continuous-band-sealer.html	
	CE-2500 HVE General Information General Information Video for CE-2500-HVE Band Sealer https://www.youtube.com/watch?v=g0vaNhNVZGs	
	CE-2500 HVE Belt Adjustment Belt adjustment video for CE-2500-HVE Band Sealer https://www.youtube.com/watch?v=B6z8y5BBE1w	
	CE-2500 HVE Embossing Wheel This is the video for how to setup the embossing wheel. https://www.youtube.com/watch?v=C6FGyFWcCqA	
	CE-2500 HVE Roller Adjustment How to Adjust the roller for the Teflon bands. https://www.youtube.com/watch?v=zzw6p1rnYvc	
	CE-2500 HVE Emergency Stop Switch Replacement How to change the Emergency Stop Switch https://www.youtube.com/watch?v=xgRYpKASfCc	
	CE 2500 CE 3000 Band Sealer Portable Stand Assembly Assembly Instructions for the CE2500/CE3000 Band Sealer Stand https://www.youtube.com/watch?v=LqBA3V2-GDk