CLEVELAND
EQUIPMENT & MACHINERY COMPANY

CE-4500-HVE

Continuous Sealer

Operation Manual

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CE-4500-HVE Band Sealer

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

Voltage	110v/60hz
Motor power	245W
Sealing power	300×2W
Printing power	40×2W
Sealing speed	0~10m/min
Sealing width	10mm
Temperature control range	0~300（℃）（Stepless adjustable）
Printing type	Solid ink Color ribbon
Distance from sealing center to conveyor table	100-700 (mm)
Size of conveyor table	1460x250mm
Thickness of film(monolayer)	≤0.12mm
Conveyor loading for single package	≤5kg
Overall loading of conveyor	≤15kg
External dimension (LxWxH)	1430×680×1480mm
Net weight	136kg

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.

The sealer uses a solid-ink roller to print the desired colored label on a bag while sealing; with the characteristics of high definition, instant print and instant dry, and strong adhesion. The roller cylinder can accept typeface in longitude / horizontal arrangement (R arrange) and jn axial / vertical arrangement (T arrange). For typefaces in R arrange, the machine can print two lines in font size two (18PT) and three lines in font size five (10.5PT), and 20 typeface characters can be arranged in each line.

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.

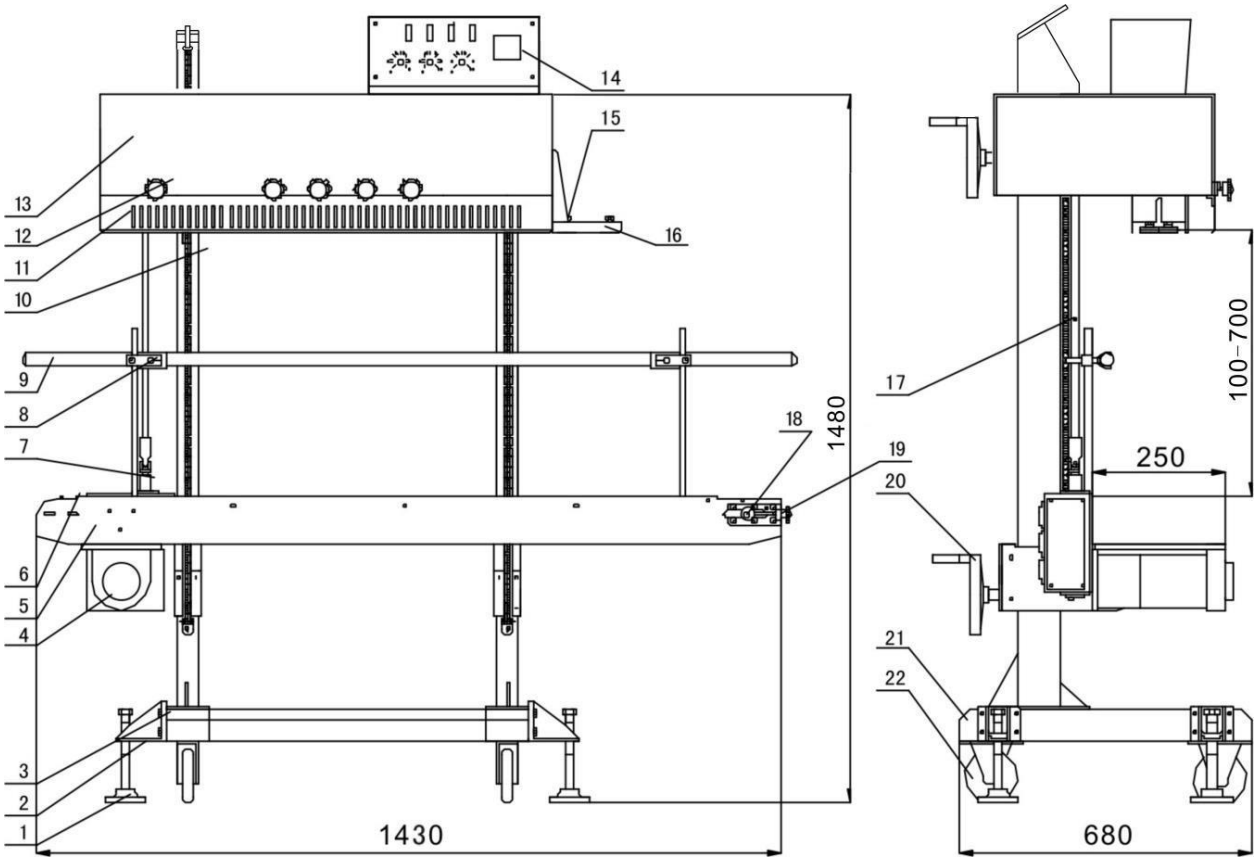
5.3 The plastic packing bag is transferred by the conveying belt, and its sealing part will be guided into the clearance between two sealing belts,

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.



1.1.1

Diagram 5.1

1	pedal plate	12	adjusting knob
2	pedal plate bolt	13	housing case
3	pedal plate bracket	14	control panel
4	gear box	15	in-guiding wheel bracket
5	conveyor table	16	in-guiding wheel
6	conveyor belt	17	vertical shaft
7	baffle support	18	adjusting seat for conveyor belt
8	support rod bracket	19	adjusting knob
9	baffle rod	20	lifting handwheel for conveyor table
10	stand column	21	base plate
11	shield	22	castor

VI. Operational Use

6.1. Control Panel (See Diagram 6.1)

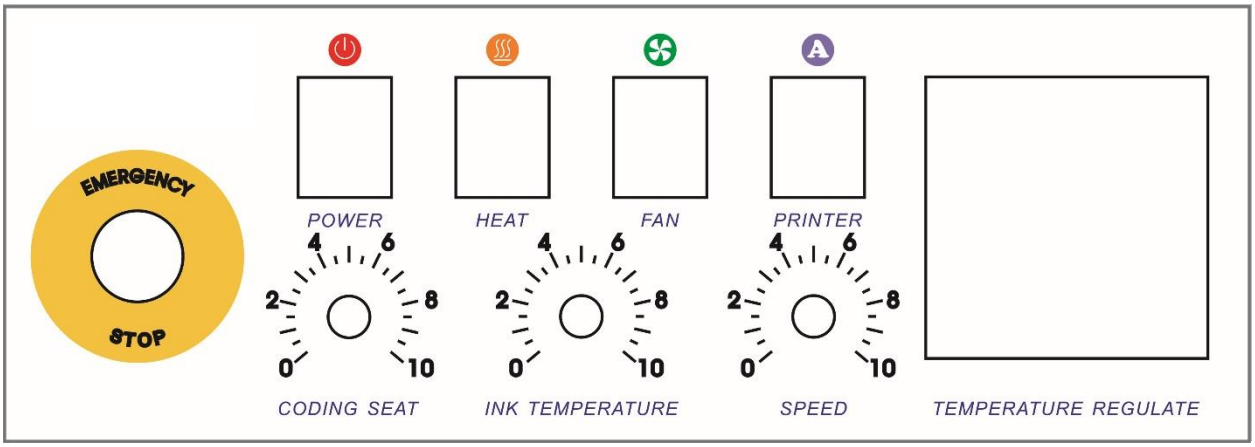


Diagram 6.1

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 30° 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.

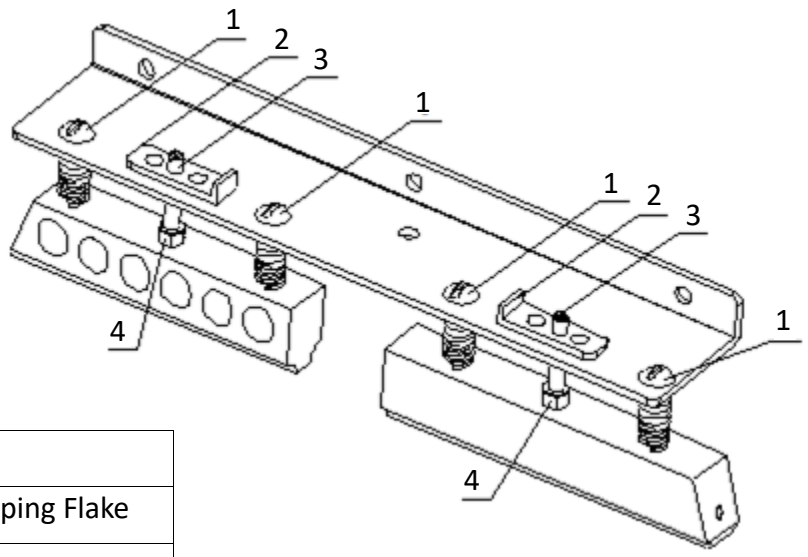
6.3.3 Replace with a new sealing belt and install the guiding belt back.

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	Bolt
2	Withdraw Stopping Flake
3	Tightening Bolt
4	Nut

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.

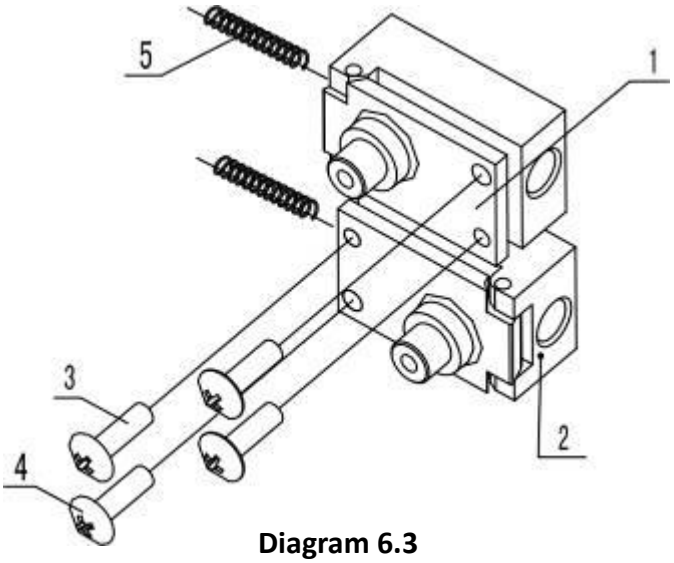


Diagram 6.3

1	driven wheel seat adjusting plate - Upper
	driven wheel seat adjusting plate - Lower
2	driven wheel seat adjusting block - Upper
	driven wheel seat adjusting block -Lower
3 / 4	adjusting screw
5	spring

6.5 Conveyor Belt Adjustment / Replacement

Steps for replacing conveyor belt by dismantling conveying table (see Diagram 6.5):

1.1.2 First, dismantle the platens (10) in left and right sides of the conveying board and the discharge plate (11).

1.1.3 Then rotate the adjustment knob (9) counterclockwise and remove it. Move the driven roller shaft to the far left end of the slot.

1.1.4 Then remove screw (1) (total 6 pcs), loosen screw (3) (front two pcs) to drag off the front baseplate (6) and motor safety cover (4).

1.1.5 At this point, the conveyor belt is in a fully loosened state

1.1.6 Finally, unload the conveyor belt.

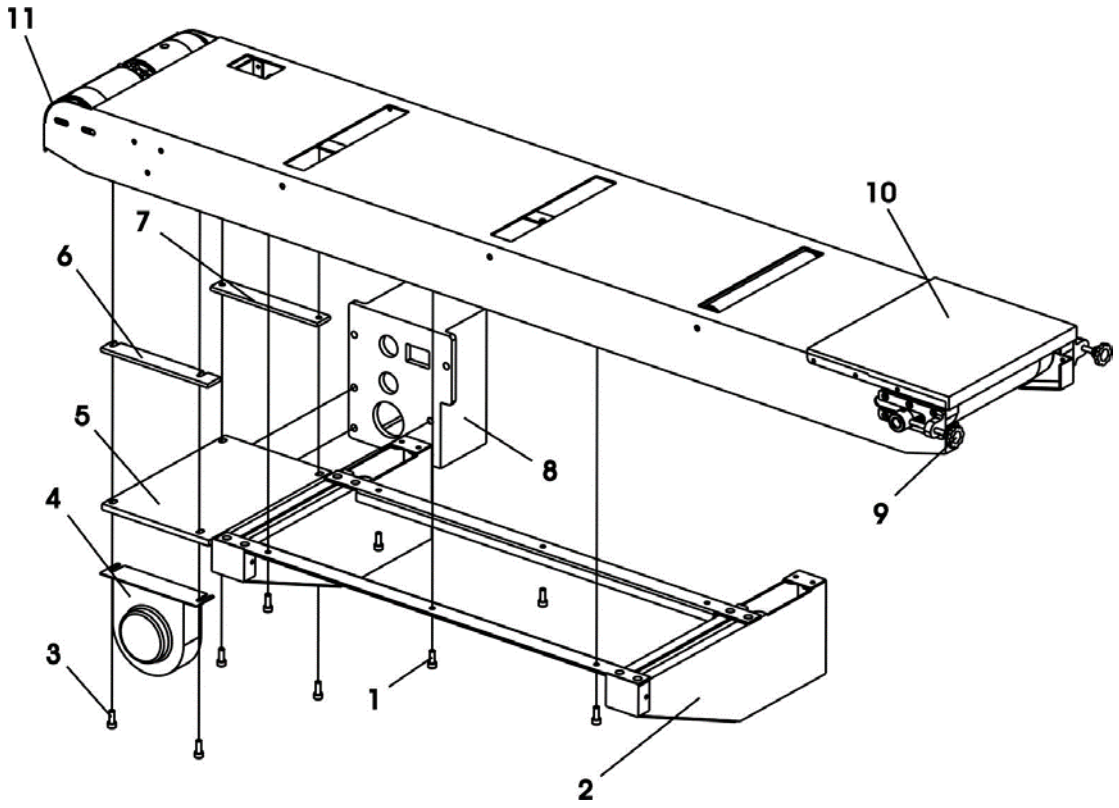


Diagram 6.5

1	Hexagon socket headbolt	6	Front base plate
2	Conveyor Table Bracket	7	Back base plate
3	Hexagon socket headbolt	8	gearbox
4	Motor safety cover	9	Adjusting knob
5	Motor mounting Plate		

6.6 Print Wheel Setup

This machine uses a solid-ink roller coding mechanism which is controlled by electromagnetic clutch intermittent mechanism.

6.6.1. Typeface Wheel Arrangement

The “R” Arrange typeface wheel has a horizontal / longitude text arrangement.

The “T” Arrange typeface wheel has a vertical, axial arrange text arrangement.

T arrange **R arrange**

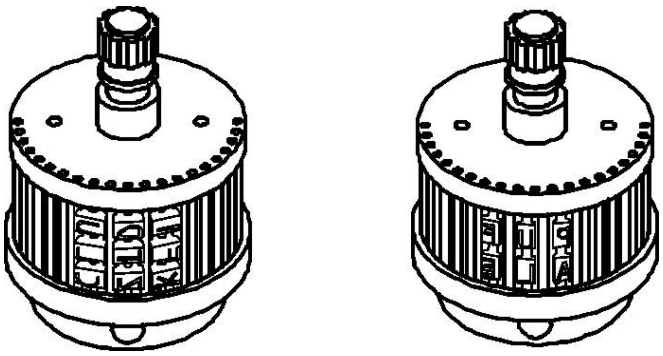


Diagram 6.6

6.7 Print Wheel Typeface Setup

Setting typeface on print wheel (see Diagram 6.7):

6.7.1. Turn the holding latch on the printing wheel cover to twist the traverse pin out of the groove, the printing wheel cover will then pop up. To remove its cover, press the silicon rubber bar. Replace the traverse pin into the groove of the cover and turn to fasten.

6.7.2. Then press the silicone bar on it and put printing wheel cover.

6.7.3. At last, insert the traverse pin back into the groove, and rotate for fastening.

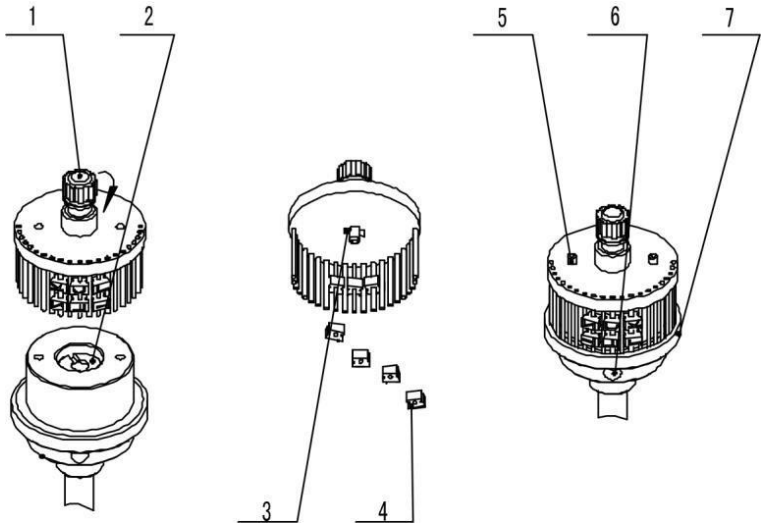


Diagram 6.7

1	Holding Latch	5	Fixed Locating Pin
2	End Cover	6	Print Wheel Set Screw
3	Traverse Pin	7	Print Wheel
4	Typeface Letters		

6.8. Ink Roller and Print Wheel Clearance Adjustment

Adjust the adjusting screw (5) for the ink roller's swing pole, rotate the printing wheel, and make the types' surface touch the ink roller's (1) surface slightly. If the ink roller can be easily driven by rotating the printing wheel with hand, it should be ok (see Diagram 6.8).

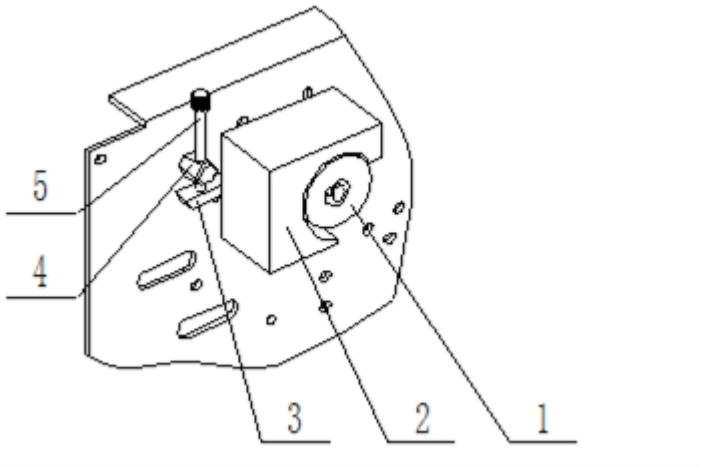


Diagram 6.8

1	Ink Roller	4	Adjusting Strut
2	Ink Roller Heating Block	5	Adjusting Screw
3	Swing Pole		

6.9. Print Wheel and Silicone Wheel Pressure Adjustment

The typefaces on the print wheel should not touch the silicone wheel when it is not in printing process. They only touch each other when the printing imprint is in process.

6.9.1. Loosen the screw (4) in the front of the silicone wheel, then rotate the eccentric sleeve (3), so as to make the types' surface slightly touch the silicone wheel's (2) surface.

6.9.2. If the machine is used to print relatively thicker packing bag, the screw should be loosened accordingly and the pressure may not be oversized, fasten the screw (4) after making adjustment (see Diagram 6.9).

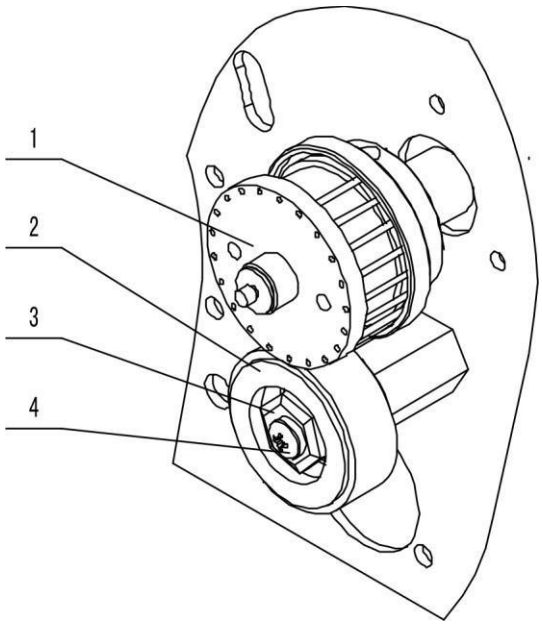


Diagram 6.9

1	Print Wheel
2	Silicone Wheel
3	Eccentric Cover
4	Bolt

6.10. Print Wheel and Ink Roller Temperature Adjustment

6.10.1. All the knobs of this machine are set to position 0 before leaving factory. Users need to make adjustments suitable to their specific application.

6.10.2. For a new ink roller or when there is extended time between previous use, the temperature should be relatively lower.

6.10.3. After a period of operation time, the temperature can be raised to higher degree, which can make the deep-seated ink ooze and prolong the ink roller's life-span.

6.10.4. When the ink roller reaches the working temperature, use a piece of white paper to touch the ink surface. As long as it can stick a little ink, it should be in position. The temperature can't be too high or too low.

6.10.5. The ink roller that is suited for this machine is specified in following table, including colors of white, yellow, red, blue, green, brown and black.

6.10.6. If the packing bag needs steam cooking after printing, you should choose the ink rollers of moderate temperature or high temperature.

Model	Outer diameter (mm)	Height (mm)
Low temperature series 120-150℃ (NO:935)	Φ36	16
	Φ36	32
	Φ36	40
Moderate temperature series 135-165℃ (NO:932)	Φ36	16
	Φ36	32
	Φ36	40
High temperature series 150-175℃ (NO:930)	Φ36	16
	Φ36	32
	Φ36	40

6.11. Adjustment of coding position

Users can set the coding position by adjusting the coding position knob according to the length of bag opening.

6.12. Adjustment of number of lines in printing label

Arrange types within stipulated range in **Section IV Performance Features**, and then use the provided silicone bar to secure the typefaces in required axial position.

6.13 Starting procedure

6.13.1 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.

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

6.13.3 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.

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

6.13.5 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.

6.13.6 If 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.

6.13.7 Stop operation

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.

6.13.8 Emergency stop switch:

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. Electrical Diagram

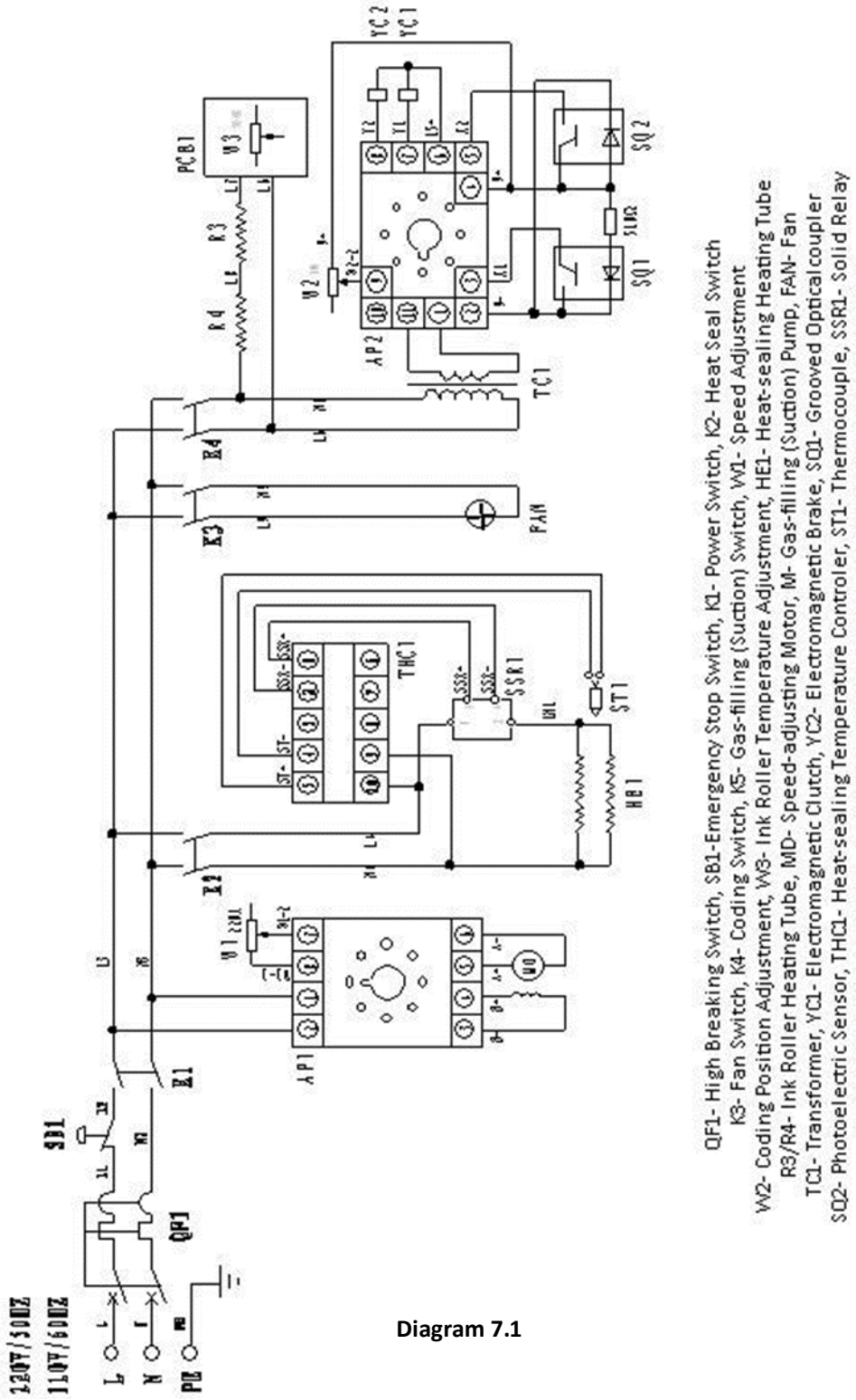


Diagram 7.1

VIII. Controller Box Parts List

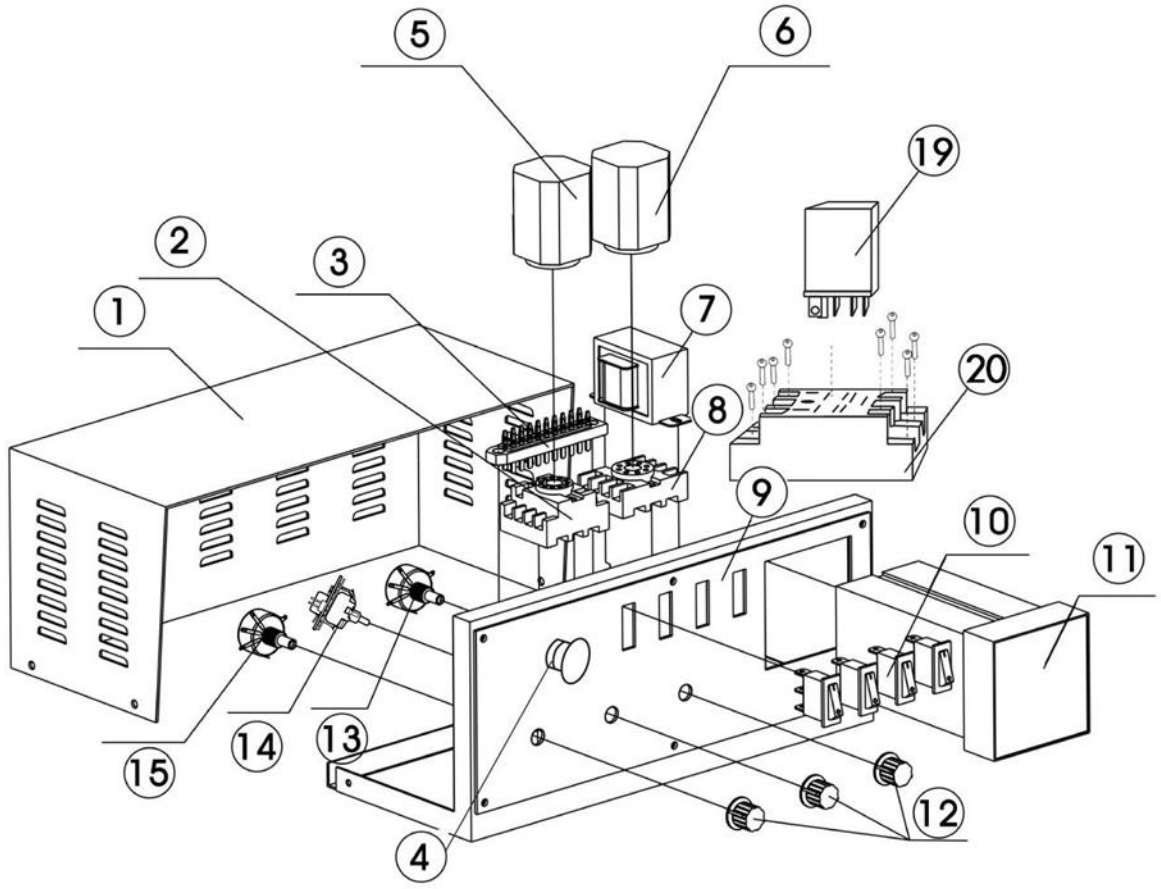


Diagram 8.1

Controller Box Parts List

Item #	Part #	Quantity	Description	Comments
1		1	rear cover of electric cabinet	
2	**BS-45B**	1	PF113A relay holder	
3	**FRM-1120C-56**	1	20 pin socket	
4	**BS-22A**	1	emergency stop	
5	**BS-52C**	1	main control PCB	
6	**BS-52A**	1	speed regulating PCB	
7	**BS-66A**	1	transformer BK-10/220-13.5V	
8	**BS-45A**	1	PF083 relay holder	
9		1	control panel	
10	**BS-22**	1	control switch	specify large or small
11	**TMC-XMTE-1000-2**	1	temperature controller	determine version by taking temp controller out
	TMC-XMTE-1000-2-O	1	temperature controller	determine version by taking temp controller out
	TMC-E5CSL-QTC-FRM-1120	1	temperature controller	
12	**BS-25A**	1	knob	
13	**BS-25**	1	speed potentiometer 100K	
14	**BS-50A**	1	ink temperature potentiometer wih pc board	
	BS-25	1	potentiometer 100K	
15	**BS-51**	1	coding potentiometer 1.0M	
19	**R-JQX-13F**	1	Relay	
	R-JG3NA	1	Relay	
20	**BS-74A**	1	Seat for relay	

IX. Sealing Unit Parts List

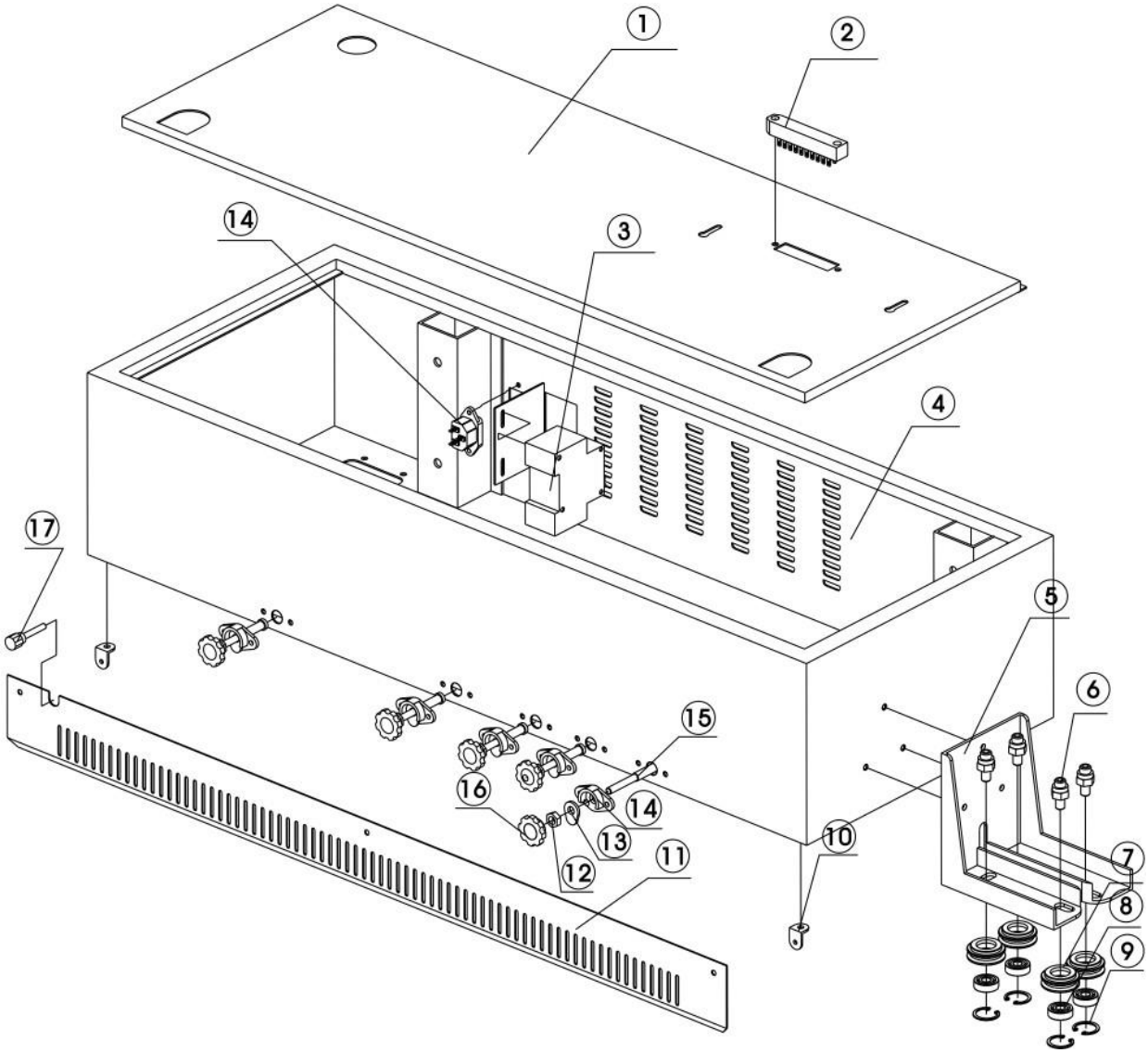


Diagram 9.1

Sealing Unit Parts List

Item #	Part #	Quantity	Description	Comments
1		1	upper cover of housing	
2	**BS-14**	1	socket connector	
3	**BS-27**	1	DZ47-2P/5A small breaker	
4		1	housing	
5		1	idler pulley support / guide	
6		1	idler pulley shaft	
7	**FRM-1120LD-6a_gen 1.0 or FRM-1120LD-6a_gen2.0**	1	idler pulley	**Includes #7, 8, 9**
8	**FRM-1120LD-6a_gen 1.0 or FRM-1120LD-6a_gen2.0**	1	bearing	**Includes #7, 8, 9**
9	**FRM-1120LD-6a_gen 1.0 or FRM-1120LD-6a_gen2.0**	1	circlip	**Includes #7, 8, 9**
10		1	support of guard plate	
11		1	guard plate	
12		4	hexagon nut	
13	**FRM-1120C-28A, 28B, or 28C**	4	adjusting steel disc	**(Includes #13-16) A = 65mm, B = 77mm, C = 92mm**
14	**FRM-1120C-28A, 28B, or 28C**	4	screw holder	**(Includes #13-16) A = 65mm, B = 77mm, C = 92mm**
15	**FRM-1120C-28A, 28B, or 28C**	4	dolly bar	**(Includes #13-16) A = 65mm, B = 77mm, C = 92mm**
16	**FRM-1120C-28A, 28B, or 28C**	4	knob of screw	**(Includes #13-16) A = 65mm, B = 77mm, C = 92mm**
17	**BS-62**	1	adjusting knob for ink roller's swing pole	

X. Sealer Body Front Parts List

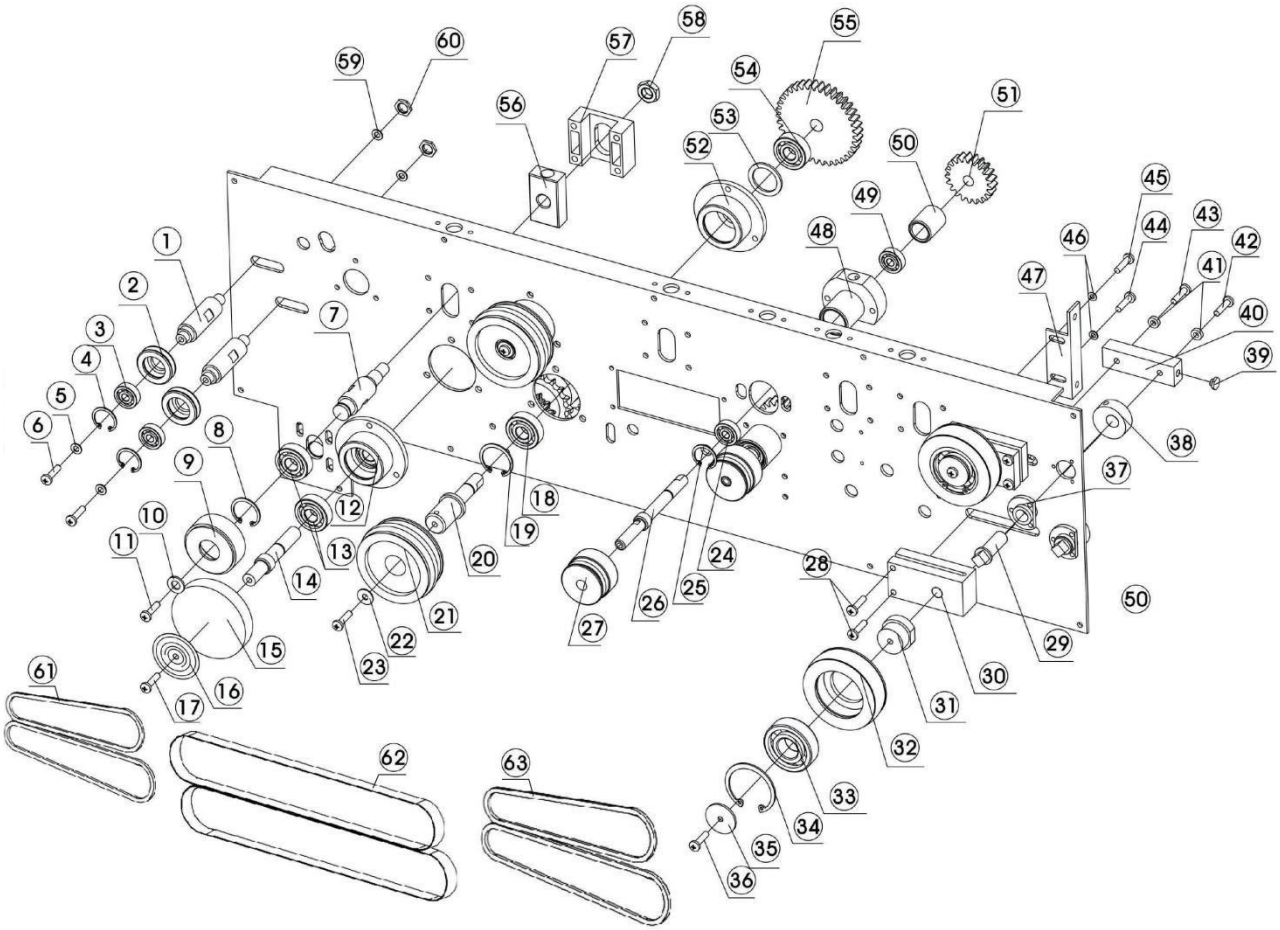


Diagram 10.1

Sealer Body Front Parts List

Item	Part #	Quantity	Description	Reference	Comments
1	**FRM-1120LD-6b**	2	small pulley shaft	106002	
2	**FRM-1120C-6A**	2	small pulley	106003	**Includes #2-4**
3	**FRM-1120C-6A**	2	bearing (626)	GB/T276-1994(626)	**Includes #2-4**
4	**FRM-1120C-6A**	2	circlip for hole	GB/T893.1-1986	**Includes #2-4**
5	**Washer-M5x16**	2	flat washer	GB/97.1-2002	**M5x16**
6	**Screw-M4x8**	2	screw	GB/T818-2000	**M4x8**
7		1	embossing wheel shaft	106006	
8	**FRM-1120C-3**	1	circlip for hole	GB/T893.1-1986	**Includes #8, 9**
9	**FRM-1120C-3**	1	embossing wheel	106007	**Includes #8, 9**
10	**WasherM5x16**	1	flat washer	GB/T97.1-2002	**M5x16**
11	**Screw-M4x8**	1	screw	GB/T818-2000	**M4x8**
14		1	silicone wheel shaft	106011	
15	**FRM-1120C-2**	1	silicone wheel assembly	106010	
16		1	silicone wheel cover		
17	**Screw-M4x8**	2	screw	GB/T818-2000	**M4x8**
18	**FRM-1120C-6-50-56**		bearing (6201)	GB/T276-1994(6201)	**Includes #18-20, 52-54**
19	**FRM-1120C-6-50-56**		circlip	GB/T893.1-1986	**Includes #18-20, 52-54**
20	**FRM-1120C-6-50-56**		driving wheel shaft		**Includes #18-20, 52-54**
21	**FRM-1120C-6**	2	driving wheel	106012	
22	**Washer-M5x28**		flat washer		**M5x28**
23	**Screw-M4x8**		screw	GB/T818-2000	**M4x8**
24	**FRM-1120C-21**		bearing (6201)	GB/T276-1994(6201)	**Includes #24, 25, 27**
25	**FRM-1120C-21**	2	circlip for shaft	GB/T894.1-1986	**Includes #24, 25, 27**
26	**FRM-1120LD-21-26**	1	upper pressing wheel shaft	106023	
27	**FRM-1120C-21**	2	pressing wheel	106025	**Includes #24, 25, 27**
28	**Screw-M4x8**		screw	GB/T818-2000	**M4x8**
29	**FRM-1120C-13-36**	2	cam shaft	106032	
30	**FRM-1120C-13**	1	driven wheel seat (adjusting block)	106026	
31	**FRM-1120C-12a**	2	driven wheel shaft	106030	
32	**FRM-1120C-12**	2	driven wheel	106029	
33		2	bearing (6201)	GB/T276-1994(6201)	

Sealer Body Front Parts List

Item	Part #	Quantity	Description	Reference	Comments
34		2	circlip for hole	GB/T893.1-1986	
35	Washer-M5x28		flat washer		M5x28
36	Screw-M4x8		screw	GB/T818-2000	M4x8
37			cam shaft seat	106033	
38	FRM-1120C-13-38	2	cam	106031	
39		2	hexagonal bolt		
40	FRM-1120C-13-40	2	pressing plate for adjusting block	106027	
41	FRM-1120C-13-41	4	spacing ring of pressing plate	106028	
42	Screw-M4x8	1	screw	GB/T818-2000	M4x8
43	Screw-M4x8	1	screw	GB/T818-2000	M4x8
44	Screw-M4x8	1	screw	GB/T818-2000	M4x8
45	Screw-M4x8	1	screw	GB/T818-2000	M4x8
46	Washer-M5x16	2	flat washer	GB/97.1-2002	
47		1	spring seat	106034	
48	FRM-1120LD-21-48	2	bearing seat of upper pressing wheel		
49	FRM-1120LD-21-49	2	bearing (6201)	GB/T276-1994(6201)	
50	FRM-1120LD-21-50	2	spacing ring of upper pressing wheel		
51	FRM-1120LD-21-51	2	gear of pressing wheel		
52	FRM-1120C-6-50-56	3	bearing seat	106008	Includes #18-20, 52-54
53	FRM-1120C-6-50-56	2	spacing ring of bearing	106009	Includes #18-20, 52-54
54	FRM-1120C-6-50-56	6	bearing (6201)	GB/T276-1994(6201)	Includes #18-20, 52-54
55	FRM-1120C-35B	5	gear	106014	
56		2	slide block	106005	
57	FRM-1120C-28-49	2	single slide block seat	106004	
58		2	hexagon nut		
59	Washer-M5x16	2	flat washer	GB/97.1-2002	
60		2	hexagon nut		
61	FRM-1120C-26	2	driving belt (#678)		
62	FRM-1120C-10	2	sealing belt (#1120)		
63	FRM-1120LD-26-2a	2	driving belt (#980)		Determine 2a or 2b
	FRM-1120LD-26-2b	2	driving belt (#960)		Determine 2a or 2b

XI. Sealer Body Back Parts List

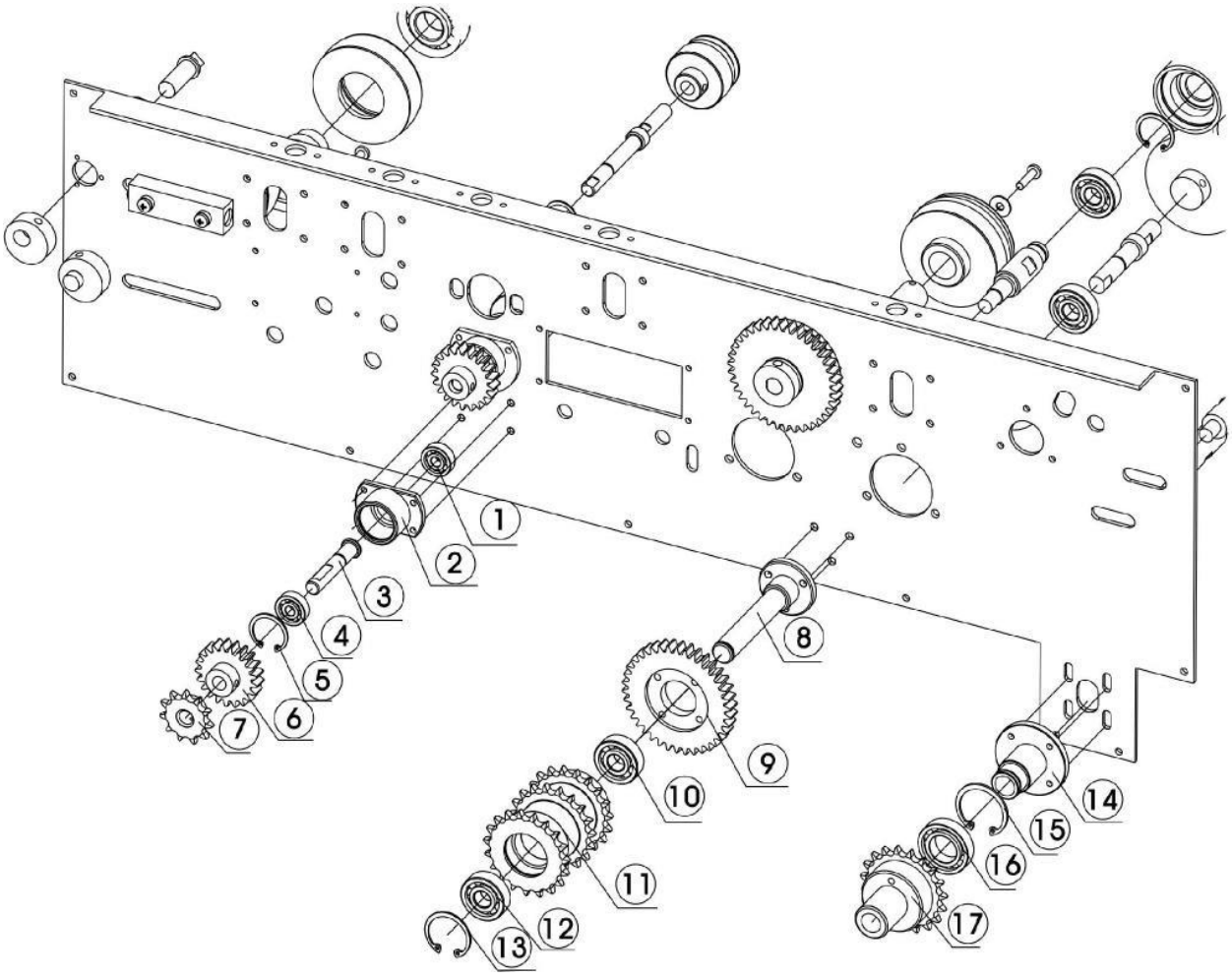


Diagram 11.1

Sealer Body Back Parts List

Item	Part #	Description	Reference	Comments
1		bearing (626)	GB/T276-1994(626)	
2		bearing seat of drive sprocket		
3		drive sprocket shaft		
4		bearing (626)	GB/T276-1994(626)	
5		circlip for hole	GB/T893.1-1986	
6		gear of pressing wheel		
7		drive sprocket		
8		driving gear shaft		
9		driving gear		
10		bearing (6201)	GB/T276-1994(6201)	
11		triple sprocket		
12		bearing (6201)	GB/T276-1994(6201)	
13		circlip for hole	GB/T893.1-1986	
14		sprocket shaft		
15		circlip for hole	GB/T893.1-1986	
16		bearing (6201)	GB/T276-1994(6201)	
17		drive sprocket		

XII. Heating/Cooling Blocks & Dry Ink Coder Parts List

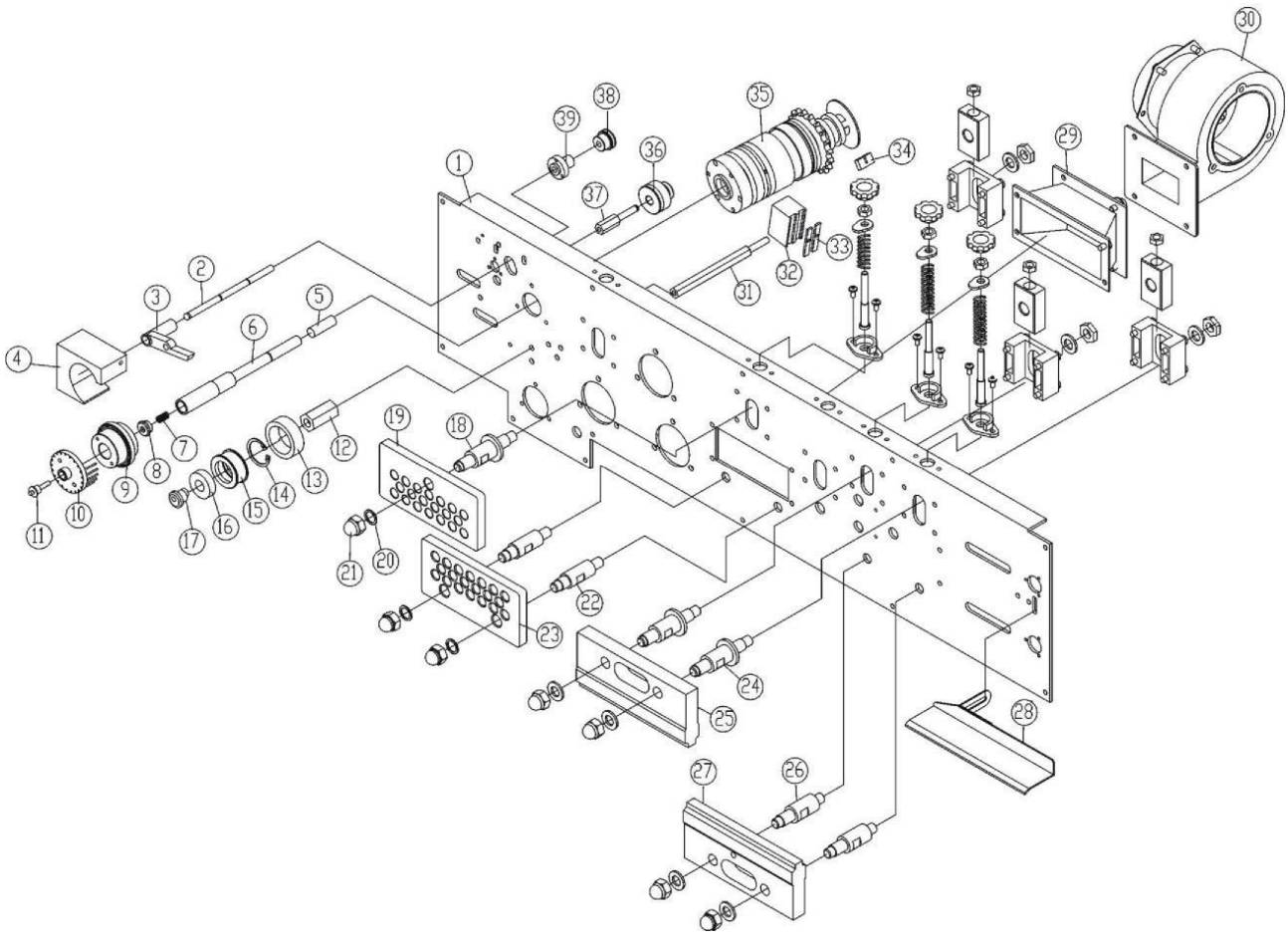


Diagram 12.1

Heating/Cooling Blocks & Dry Ink Coder Parts List

Item	Part #	Quantity	Description	Reference	Comments
1		1	bottom board	106042	
2	BS-46	1	ink roller shaft	105036	
3	BS-62E-FRM	1	swing pole of ink roller	201007	
4	FRM-1120C-47	1	heating block of ink roller	201002	
5	BS-48C	1	heating pipe 110v/40w	921301	
6		1	printing wheel shaft	106071	
7	BS-48-7	1	spring of holding latch on printing wheel		
8	BS-48-8	1	cover for printing wheel shaft	201015	
9	BS-48B	1	printing wheel	201013	
10	BS-48A	1	printing wheel cover	201014	Includes #10, #11
11	BS-48A	1	holding latch for printing wheel	201016	Includes #10, #11
12		1	printing-silicone wheel shaft	201010	
13	BS-57A	1	silicone ring	910107	
14	BS-57	1	circlip for hole	GB/T893.1-1986	Includes #14-17
15	BS-57	1	core of silicone wheel	201011	Includes #14-17
16	BS-57	1	bearing	GB/T276-1994	Includes #14-17
17	BS-57	1	eccentric sleeve	201012	Includes #14-17
18	FRM-1120LD-8-18	1	upper cooling block shaft	201019	
19	FRM-1120C-8	2	upper cooling block	201015	Includes #19, #23, sold as pair
20		7	flat washer	GB/97.1-2002	
21		7	cap nut	GB/923-1988	
22	FRM-1120LD-8-22	1	lower cooling block shaft	106020	
23	FRM-1120C-8	1	lower cooling block	106016	Includes #19, #23, sold as pair
24	FRM-1120LD-9-24	2	upper heating block shaft	106021	
25	FRM-1120C-9A-SS	1	upper heating block	106017	Includes #25, #27, sold as pair
26	FRM-1120LD-9-26	2	lower heating block shaft	106022	
27	FRM-1120C-9A-SS	1	lower heating block	106018	Includes #25, #27, sold as pair
28					
29		1	wind catcher	106058	
30	FRM-1120C-32	1	fan		
31	BS-64B	1	support for brush	106073	
32	BS-64A	1	carbon brush holder	920423	
33	BS-64	2	pressing plate of brush	201009	
34	BS-65	1	groove sensor		
35	BS-139-FRM-1120C	1	electromagnetic clutch assembly	A10501	
36	BS-54B	1	middle pulley	105032	
37	BS-54B-35	1	middle pulley shaft	105035	
38	BS-54C-34	1	ink roller shaft pulley	105041	
39	BS-54C	1	seat for ink roller swing pole shaft	201006	

XIII. Conveyor Table Parts List

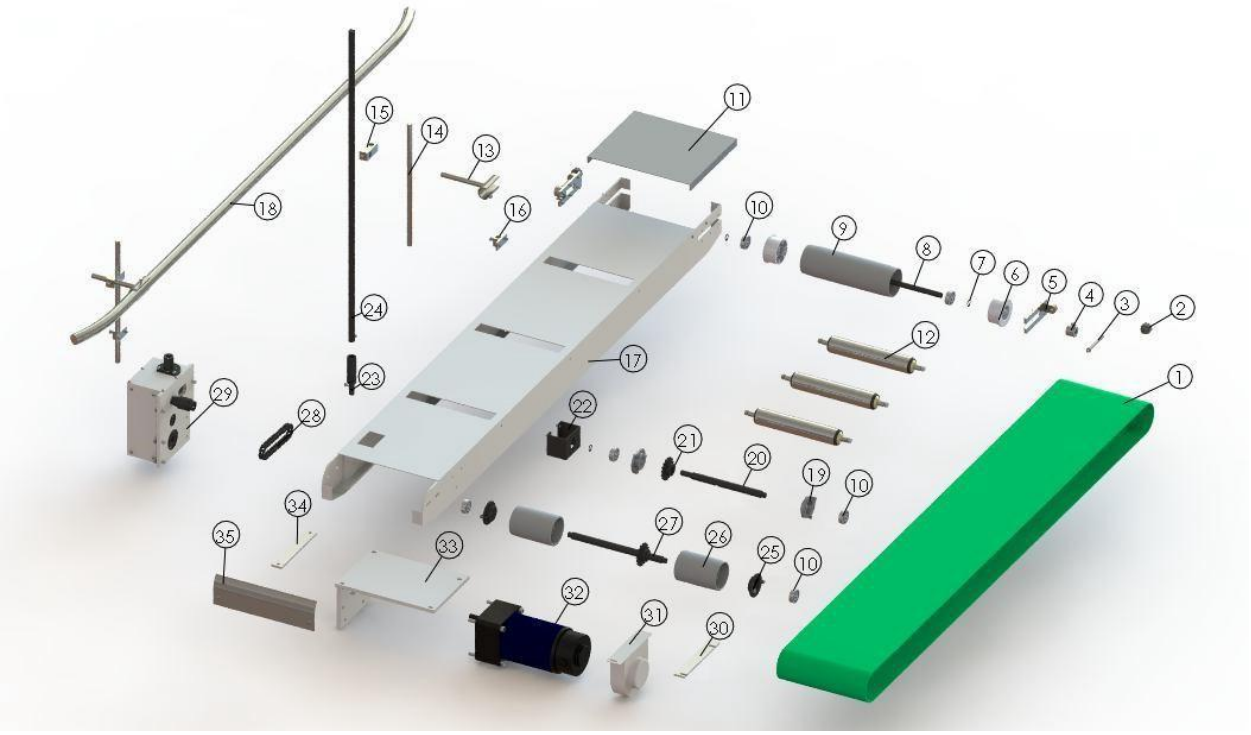


Diagram 13.1

Conveyor Table Parts List

Item #	Part #	Quantity	Description	Comments
1	**FRM-1120LD-1**	1	Conveyor Belt	
2		2	Five-Star (Bakelite)Handle	M6×Φ30
3	**FRM-1120LD-16**	2	Adjustment Screw	**Includes #3, 4**
4	**FRM-1120LD-16**	2	Adjusting Ring	**Includes #3, 4**
5	**FRM-1120LD-16-15**	2	Conveyor Belt Adjust Seat	
6	**FRM-1120LD-36**	2	Rear Roller Plug	**Includes #6, 7, 8, 9**
7	**FRM-1120LD-36**	2	Circlip for Shaft (Φ12mm)	**Includes #6, 7, 8, 9**
8	**FRM-1120LD-36**	1	Rear Roller Shaft	**Includes #6, 7, 8, 9**
9	**FRM-1120LD-36**	1	Rear Roller	**Includes #6, 7, 8, 9**
10		6	Deep Groove Ball Bearing	6201-2RS
11	**FRM-1120LD-15**	1	Working Table	
12	**FRM-1120LD-36.12**	3	Intermediate Roller (Long) Assembly	
13		2	Baffle Support Rod	
14		2	Guide Rod	
15		2	Support Rod Support	
16		2	Guide Rod Support	
17		1	Conveyor Table	
18	**FRM-1120LD-1-11521040605**	1	Baffle Support	
19	**FRM-1120LD-41**	2	Conveyor Table Middle Shaft Bearing Seat I	**Includes #29, 20, 21, 22**
20	**FRM-1120LD-41**	1	Conveyor Table Middle Shaft	**Includes #29, 20, 21, 22**
21	**FRM-1120LD-41**	2	Conveyor Table Chain Wheel	**Includes #29, 20, 21, 22**
22	**FRM-1120LD-41**	1	Middle Shaft Pad	**Includes #29, 20, 21, 22**
23		1	Half-Universal Joint Assembly	
24		1	Vertical Shaft	
25	**FRM-1120LD-37**	2	Front (Left) Roller Bearing Seat	**Includes #25, 26, 27**
26	**FRM-1120LD-37**	2	Front (Left) Roller	**Includes #25, 26, 27**
27	**FRM-1120LD-37**	1	Front (Left) Roller Shaft	**Includes #25, 26, 27**
28		1	Three-joint Chain	(06B-1×42L) 42 segment
29	**FRM-1120LD-30**	1	Gear Box	
30	**FRM-1120LD-1-30**	1	Front Baseplate	
31		1	Motor Safety Cover	
32	**FRM-1120LD-29**	1	Reducer Motor	100ZYT-08-40GK/220V
33		1	Reducer Installing Board	
34	**FRM-1120LD-1-34**	1	Rear Subplate	
35	**FRM-1120LD-1-1**	1	Outfeed Board	

XIV. Sealer Rack Parts List

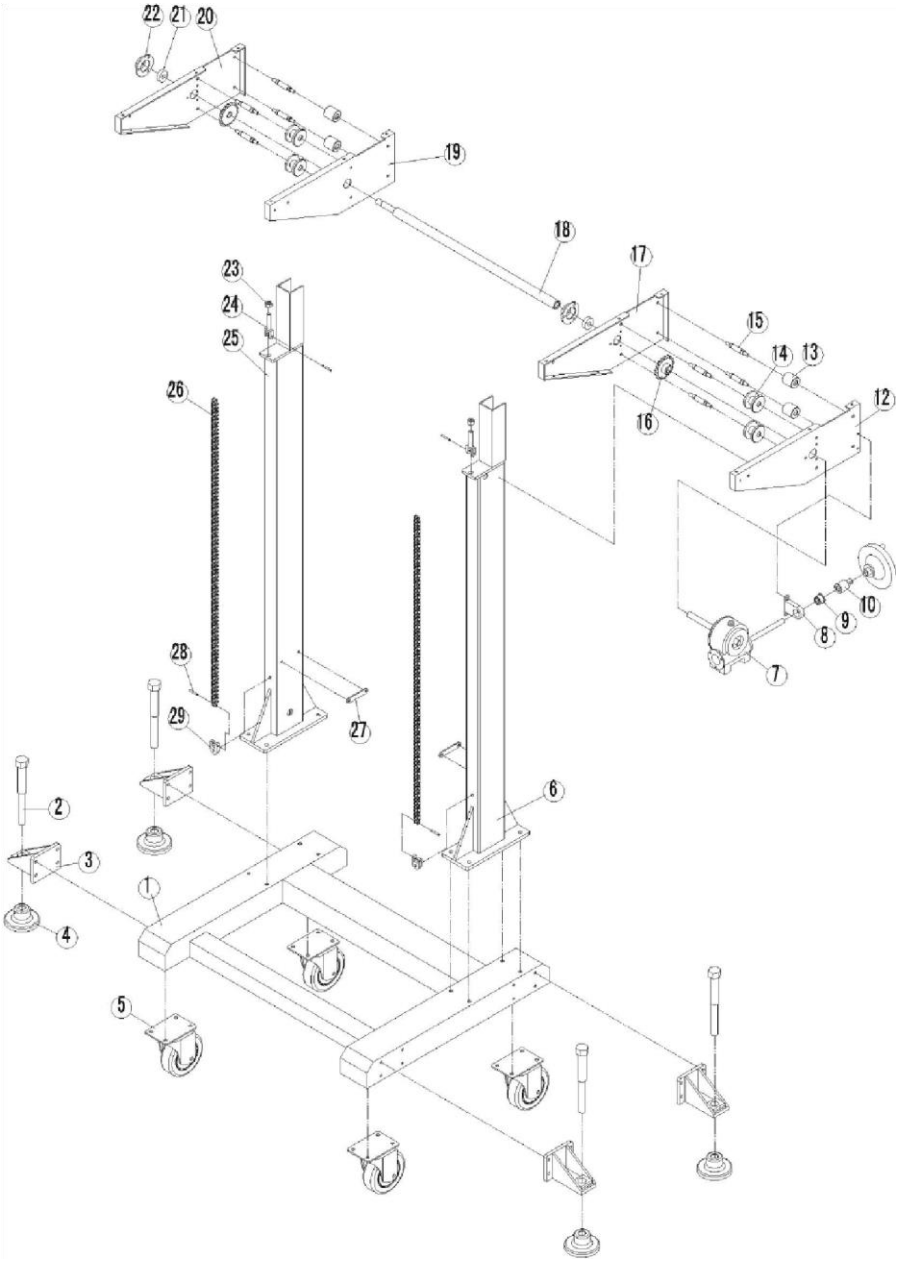


Diagram 14.1

Sealer Rack Parts List

Item #	Part #	Quantity	Description	Reference	Comments
1		1	chassis		
2		4	foot plate bolt		
3		4	foot plate support		
4		4	foot plate		
5		4	caster	910205	
6		1	right upright post		
	FRM-1120LD-29	1	motor		**Not shown**
	BS-29A_FRM-1120LD	2	motor brush		**Not shown**
7	**FRM-1120LD-30**	4	wormgear case assembly		
8		1	worm support seat	111077	
9		1	worm bushing	111078	
10		1	connecting head of handle	111086	
11		1	handwheel	930107-2	
12		1	right-out support plate for conveyor table		
13		4	rear roller	111071	
14		4	front roller	111070	
15	**FRM-1120LD-72-15**	8	lifting roller shaft	111072	
16	**FRM-1120LD-72-16**	2	lifting sprocket	111080	
17		1	right-inner support plate for conveyor		
18	**FRM-1120LD-72-18**	1	lift sprocket shaft	111079	
19		1	left inner support board of conveyor table		
20		1	left out support board of conveyor table		
21	**FRM-1120LD-72-21**	2	shaft sleeve of lift sprocket	111082	
22	**FRM-1120LD-72-22**	2	bearing seat for lift sprocket	111081	
23		2	nut	GB/T41-2000	
24	**FRM-1120LD-72-24**	2	screw rod	111085	
25		1	left upright post		
26	**FRM-1120LD-72-26**	2	chain	930603	
27		2	limiting plate for conveyor table		
28		4	chain pin	111084	
29		2	chain seat	111083	

XV. Motor Maintenance

11.1 Stop machine when any abnormality occurs to motor, continue to use till problem solved.

11.2 Dedust and clean motor at regular intervals. Avoid using alcohol, gasoline and liquid with benzene chemicals, otherwise it will affect the paint of the motor cover.

11.3 Carbon brush is designed to be used 2500 hours continuously and commutator 2500 hours. The internal motor and external commutator should be cleaned every 120 hours after use. (Using alcohol to clean commutator). Replace carbon brush and commutator immediately when they are worn out.

11.4 Avoid damages like friction, rain, and chemical corrosion…etc. Use motor under normal environment.

11.5 Contact suppliers if motor is used under bad conditions such as corrosion or temperature above 30℃ or under 5℃.

XVI. Troubleshooting

Problem	Reason	Solution
Fails to work	1. Power supply disconnected 2. Fuse broken or Circuit breaker tripped 3. Emergency Switch fail to reset after being Pressed	1. Check the power socket 2. Replace fuse or circuit breaker 3. Reset the Emergency Switch
Sealing belt is off-track.	The Driving wheel shaft is not parallel to the 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 track. 3. Crease on sealing belt. 4. Adhesive film or other dirt attached to sealing belt surface. 5. Sealing belt is easy to burn.	1. Adjust the vertical adjusting screw on driven wheel seat, to loosen sealing belt. 2. （see the point above） 3. No crease on sealing belt. 4. Clean sealing belt surface. 5. Clearance between two heating blocks is too small or temperature is too high.
Embossing is not clear	1. Embossing wheel is worn out. 2. Pressing spring on embossing wheel is not tightened enough.	1. Replace embossing wheel 2. Adjust the embossing wheel's tightening spring
There is resistance when the sealing belt is conveying.	The clearance between heating blocks or cooling blocks is too small, the friction is too much.	Adjust the clearance between sealing belts properly, which should be about the thickness of the packing bag in one layer, to ensure strong sealing and clear printing, and prevent sealing ends from extending too long.
There is a block or fold phenomenon when the packing bag is conveyed to the pressing wheel or embossing wheel.	Too much pressure is caused by the pressing wheel or embossing wheel.	1. Adjust the pressing wheel or embossing wheel to the proper pressure, which should be about the thickness of the packing bag in one layer, to ensure strong sealing and clear printing, and prevent sealing ends from extending too long. 2. Adjust the limiting screw after adjusting clearance.
Conveyor belt is off-track.	The driving roller shaft is not parallel to the driven roller shaft.	Adjust the two adjusting screws of the driven roller shaft (rear shaft) on conveyor.
Conveyor belt and sealing belt don't move synchronously.	Tension on conveyor belt is loose.	1. Tighten the chain of driving roller shaft (front shaft) and middle shaft properly. 2. Tighten the conveyor belt properly.
Ink roller printing mechanism doesn't work.	1. The power supply is not connected. 2. Main control PC board is not inserted in place or poor contact. 3. Main control PC board is damaged.	1. Check whether the power line is connected and indicating light is on. 2. Check whether plug for PC board is inserted in place or wire end falls off. 3. Check and replace PC board.

Problem	Reason	Solution
Printing wheel doesn't work.	1. Start sensor's touching head is blocked. 2. Start sensor is not clean, whose hole is blocked by dust. 3. Main control PC board has been damaged 4. Round pin on clutch falls off or is damaged. 5. Electromagnetic clutch's wire is broken.	1. Clean the obstacle. 2. Clean the dust on sensor's surface. 3. Check and replace PC board. 4. Repair round pin. 5. Repair clutch.
Printing wheel doesn't stop.	1. Sensor (groove sensor) is damaged, moved, or its surface covered by dust. 2. Main control PC board is damaged.	1. Replace or correct position of sensor or clean its surface. 2. Check PC board and replace it.
The speed is a little lower	The speed potentiometer is not exact	Adjust the speed switch
The noise of reducer has risen	Replace the greasel of reducer	add #000 great wall extreme pressure lithium grease
The bag can`t feed to heating area	The gap between lower and upper heating block is too small	adjust the switch of upper heating block and change the pressure of spring

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-3000 Continuous Band Sealer.

**The information for the CE-2500-HVE is general and applicable to the CE-3000-HVE also.

	CE-4500-HVE band sealer product page on our website https://clevelandequipment.com/ce-4500hve-vertical-band-sealer.html	
	CE-4500-HVE Demo Video https://www.youtube.com/watch?v=iP3JBOgt0kM