FR900 SERIES

CONTINUOUS SEALER

PRODUCT MANUAL

※Make sure to carefully read and fully understand
the instructions before use

※Please safekeeping of the instructions

Table of Contents

1. Purpose of the product

The machine is suitable for sealing and bag-making of various plastic films. As the best sealing equipment for bulk packaging in factories or shops, it is widely used in such sectors as food, pharmaceutical, chemical industry, commodity, seeds, etc.

2. Safety notes

2.1 Please check the power source prior to starting the machine.
The machine is designed for single-phase three wire system（AC220 V/50 Hz), the yellow/green earth cable shall be earthed separately and reliably. Do not remove the earth cable.
Do not place any heavy objects on the power supply wire, which shall be wound into a coil when unused.

2.2 It is forbidden to touch electrical units when the machine is switched on.

2.3 It is forbidden to touch any drive part while the machine is running, otherwise, it may cause injury to personnel.

2.4 It is forbidden to touch heaters while the machine is running, otherwise, it may cause scald hurt.

2.5 Do not use it in corrosive and damp place.

2.6 Do not arbitrarily replace any piece part.

2.7 Please keep the machine clean inside and outside, and immediately remove dirt adherent to the sealing braid surface.

2.8 Please cut off the power supply when the machine is not in use.

2.9 Please keep this manual in a safe place for future reference.

2.10 1000 hours of machine work required to replace carbon brushes, otherwise it will shorten the motor was ordered to .

2.11 770 hours of machine work need to replace the motor turbine, so as not to affect the normal use.

3. Main technical parameters

Parameter / Model / Item	FR−900 I Horizontal type continuous sealing machine	FR−900 II Vertical type continuous sealing machine	FR−900III Stand type continuous sealing machine
Power (V/Hz)	AC 220/50 110/60		
Transmission power (W)	70		
Sealing power (W)	300×2		
Sealing speed (m/min)	0-21 (0-30)		
Sealing width (mm)	8, 10		
Temp. range: (℃)	0-300 (Stepless adjustable)		
Distance from the sealing center to the conveyor station (mm)	10-40	150-270	10-40
Max. single layer film thickness (mm)		≤0.08	
Max. conveyor station loading for single bag (Kg)		≤1	
Overall conveyor station loading (Kg)		≤3	
Dimension (L×W×H) (mm)	840×380×270	840×380×550	840×550×800
Net weight (Kg)	20	22	30

Note: FR-770 series machine is right-hand feed sealing machine and FRB-770 series machine is left-hand feed sealing machine.

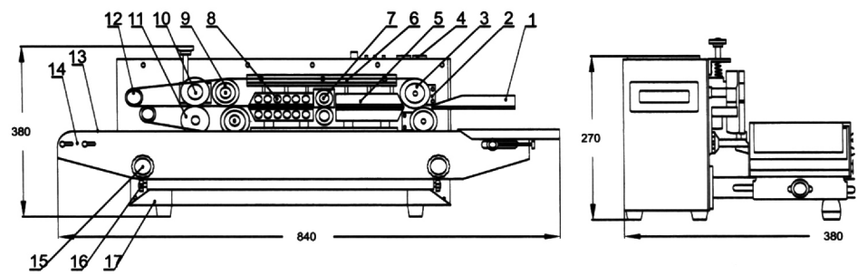
4. Performance and characteristics

4.1 With the electronic thermostatical control and stepless speed regulating transmission mechanism, the machine can make various kinds of plastic film bags in different material and be used for setting of various packing lines without limiting the sealing length; having the characteristics of high effectiveness, continuous sealing, reliable quality, reasonable structure, convenient operation, etc.

4.2 Of the series machines there are horizontal type, vertical type and stand type; the horizontal type is used for packing and sealing of drying goods; the vertical one is used for packing of powdery or liquid goods.

5. Structure and working principle

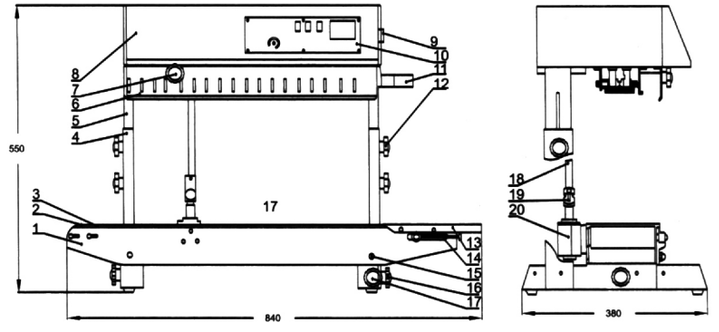
5.1 The machine consists of frame, speed controller, temperature controller, driver and convey devices, etc. See the figures as below:



FR-770I

Figure (1)

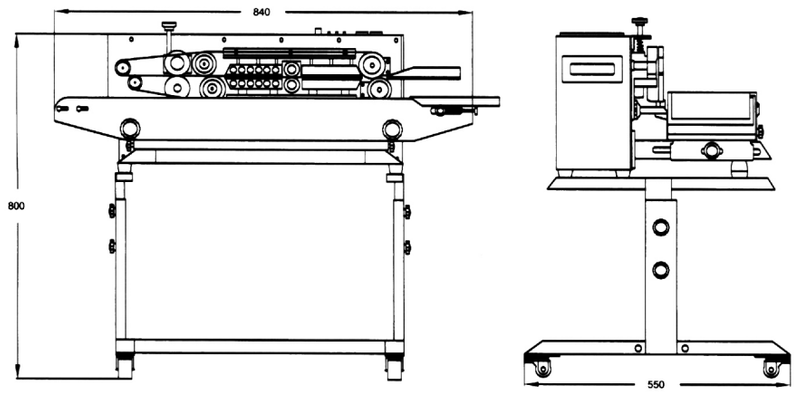
1. Feeding hole2. Driven wheel seat (adjuster) 3. Driven pulley4. Control panel
5. Heating block6. Upper plate of the heating unit 7. Pressure wheel8. Cooling block
9. Driving pulley 10. Printing wheel 11. Rubber wheel12. Lead wheel
13. Conveyor belt 14. Conveyor station 15. Fixing knob of the elevating platform
16. Transverse adjustment knob of the conveyor station 17. Horizontal beam



FR-770II

Figure (2)

1. Conveyor station2. Front wheel of the conveyor belt3. Conveyor belt
4. Fixed support5. Sliding support6. Safety guard
7. Adjust knob of the printing wheel8. Shell9. Air switch
10. Control panel11. Feeding hole 12. Fixing knob13. Working table
14. Adjusting knob of the conveyor belt15. Clamp nut
16. Transversely fixing knob of the conveyor station 17. Frame18. Vertical shaft
19. Universal joint assembly20. Umbrella gear assembly



FR-770III
Figure (3)

5.2 When it turns on, the electrothermal component makes the temperature on both upper and lower heaters promptly rise. Adjust the temperature and speed necessary for the sealing material through the temperature control meter and the speed controller. The sealing part of plastic packing bag is sent into between the two running sealing braids by the conveyor belt and is softened by heat in heating area to have the plastic film bound after being pressed by the pressure wheel. Then the bag cooled in cooling area, its sealing part, rolled by the pattern rollers, is made out with stripes or netted veins on the sealing part. The drive part consists of sealing braid, lead belt and conveyor belt all in synchronistical running driven by a motor.

6. Way to use

6.1 Control box panel (see figure 4)

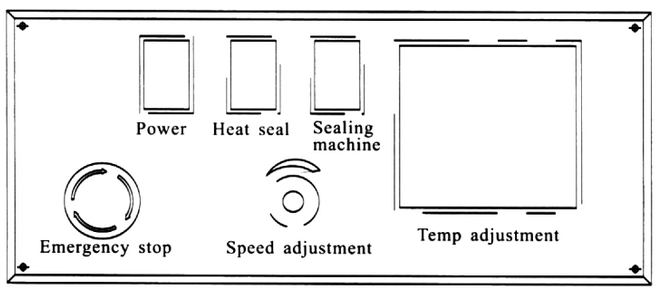


Figure (4)

6.2 Preparation, adjustment and check prior to starting the machine:

6.2.1 The machine is equipped with a shell-grounded triples socket to make sure of safe production in use.

6.2.2 The electrothermal component should be preheated with low temperature for a few minutes before normal operation for it may be wetted in initial use or after long interval unused.

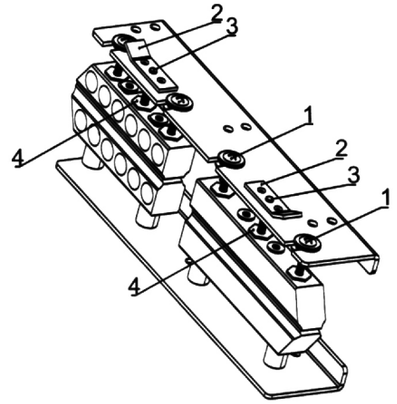
6.2.3 Adjust the height and the front-and-back position of the conveyor station to fit the packing needs.

6.2.4 Adjust the position of the feeding hole according to exterior sizes from sealing line to bag opening.

6.2.5 Adjust the spaces between the upper and lower heaters and the upper and lower coolers according to the sealing material and its thickness; the space between two sealing braids shall be adjusted to nearly the thickness of a single layer of packing bag by rotating the retainer piece 2 according to figure (5), the space is increased by rotating it clockwise, the space is reduced by rotating it anticlockwise, so as to ensure sealing is firm, sealing pattern is clear and both ends of the sealing part are not extended too long.

6.2.6 Way to change and adjust the sealing braid

6.2.6.1 Take out the safety guard, rotate the retainer piece on the upper heater and upper cooler 90 degrees and then lift them up when the heaters are cooled down; loosen springs in the printing wheel and the intermediate pressure wheel, take out the lead belt and make preparation for taking out the sealing braids (see the figure 5):



1. Bolt 2. Support piece 3. Set screw 4. Nut
Figure (5)

6.2.6.2 Push the driven wheel seat (adjuster) toward the heaters and take out the sealing braids.

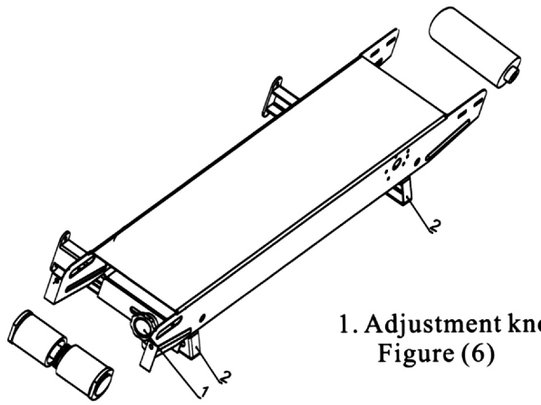
6.2.6.3 Change with a new sealing braid and install the lead belt.

6.2.6.4 Place the driven wheel, the heater, the cooler, the pressure wheel and so on in their original positions.

6.2.6.5 Turn on the power and start a trial.

6.2.6.6 Install the safety guard, then the machine works after the heaters reach the setting temperature.

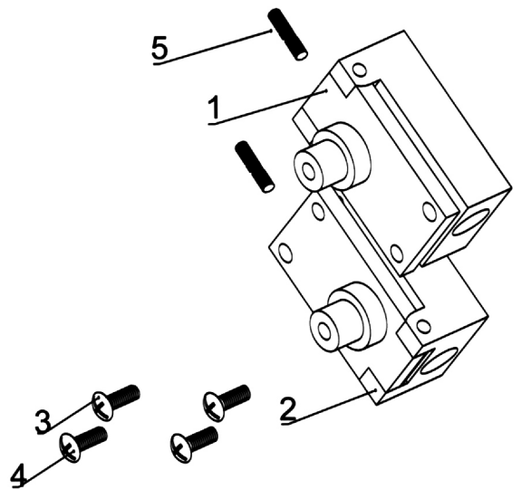
6.2.7 Transverse adjustment of the conveyor station: loosen knob 1 on both sides and move the conveyor station back and forth inside the elongated slot along the foot rest 2, and tighten the knobs after adjustment.



1. Adjustment knob 2. Foot rest
Figure (6)

6.3 Adjust the adjuster of the driven pulley

When sealing braid is slippery, please adjust the adjusting screw on the driven pulley seat (adjuster) (see figure 7).



1. Driven wheel seat（adjusting plate） 2.Driven pulley seat (adjuster) 3/4 Adjusting screw 5. Spring
Figure (7)

6.4 Operation

6.4.1 The indicator lights after plugging in and pressing the start switch, and all wheels begin their synchronistical running after adjusting speed through the speed adjustment knob.

6.4.2 Slightly adjust the knob of printing wheel to have it rotated, and then tighten the limit screw after adjusting it to suitable pressure.

6.4.3 Turn on the heating switch, the green lamp on the electronic temperature control meter lights. Adjust the meter to required temperature according to the material and the thickness of the packing bag, the machine will run at low speed while preheating the heaters.

6.4.4 Determine if the blower needs turning on for cooling according to the thickness of the sealing material.

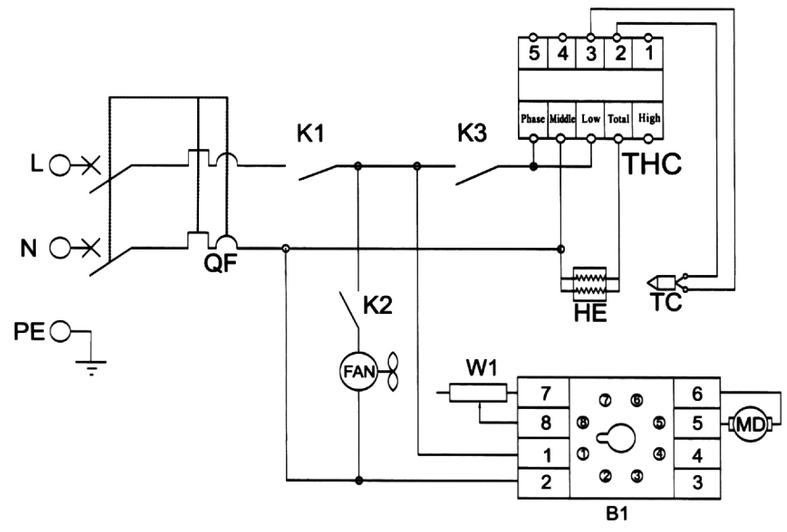
6.4.5 The sealing part of the bag should be aligned and flatly laid. Push the adjuster place for sealing sides in and at the moment when the part is gripped by sealing braids and self-moved forwards, neither pushing nor stopping with force can be done, otherwise uneven sealings or faults may result.

6.4.6 It must be done to stop and clean when something dirty with or adherent to the sealing braid and the heater was found. Do not remove it directly using hand when it is overheated.

6.5 Stop the machine

In order to prolong the duration of the sealing braid, prior to stopping the machine, return the temperature adjustment knob to zero level and then turn on the blower. At the moment, the temperature pointer begins falling down slowly and the sealing braid is still running. It cannot be done to turn off the blower and the master power switch until the temperature becomes less than 100 ℃ several minutes later.

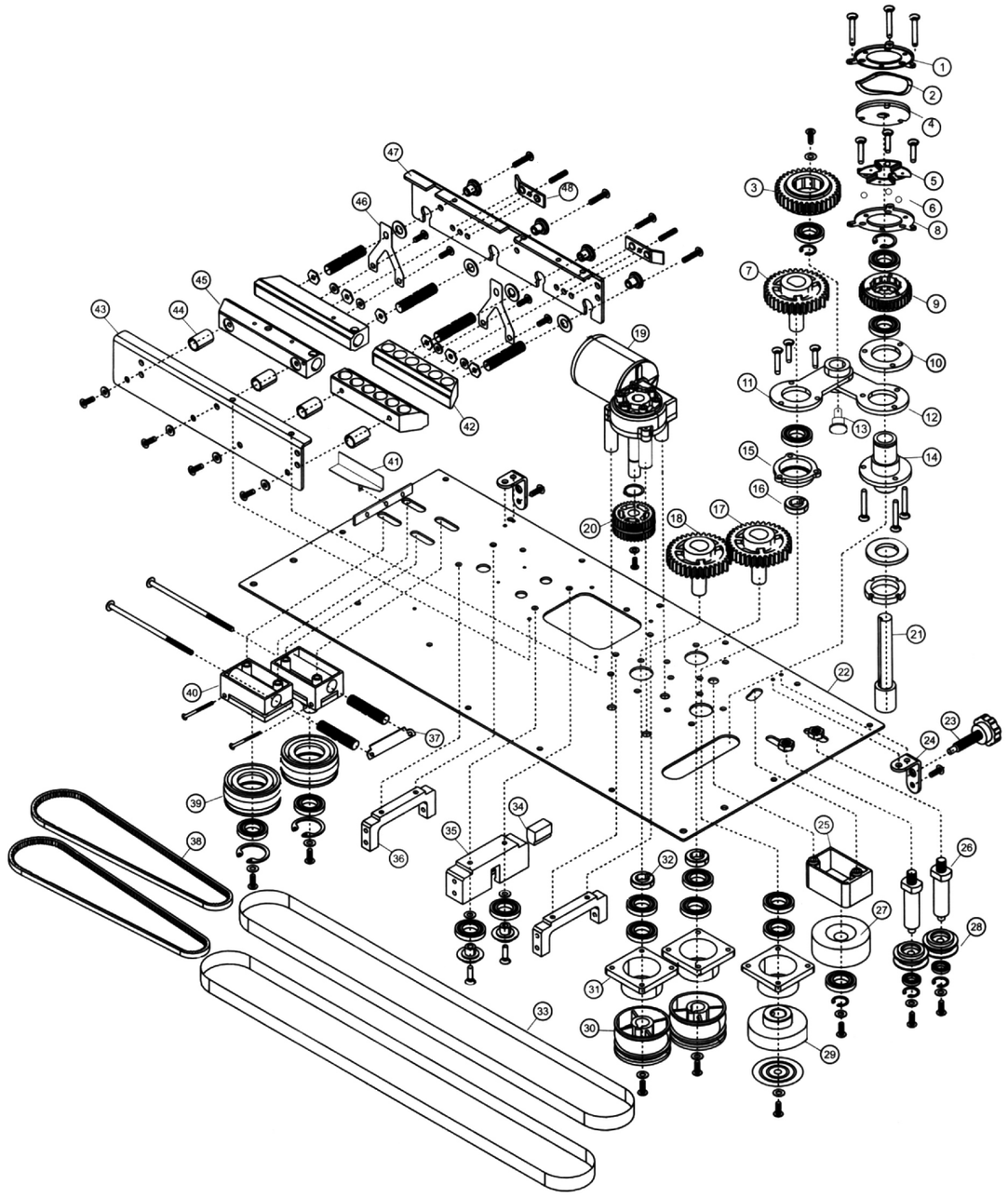
7. Circuit diagram



QF	Circuit breaker	DZ47-60 5A
K1	Power switch	KCD3-102N
K2	Blower switch	KCD3-102N
K3	Heat sealing switch	KCD3-102N
MD	DC motor	Z80/20-220
FAN	Axial-flow blower	15W

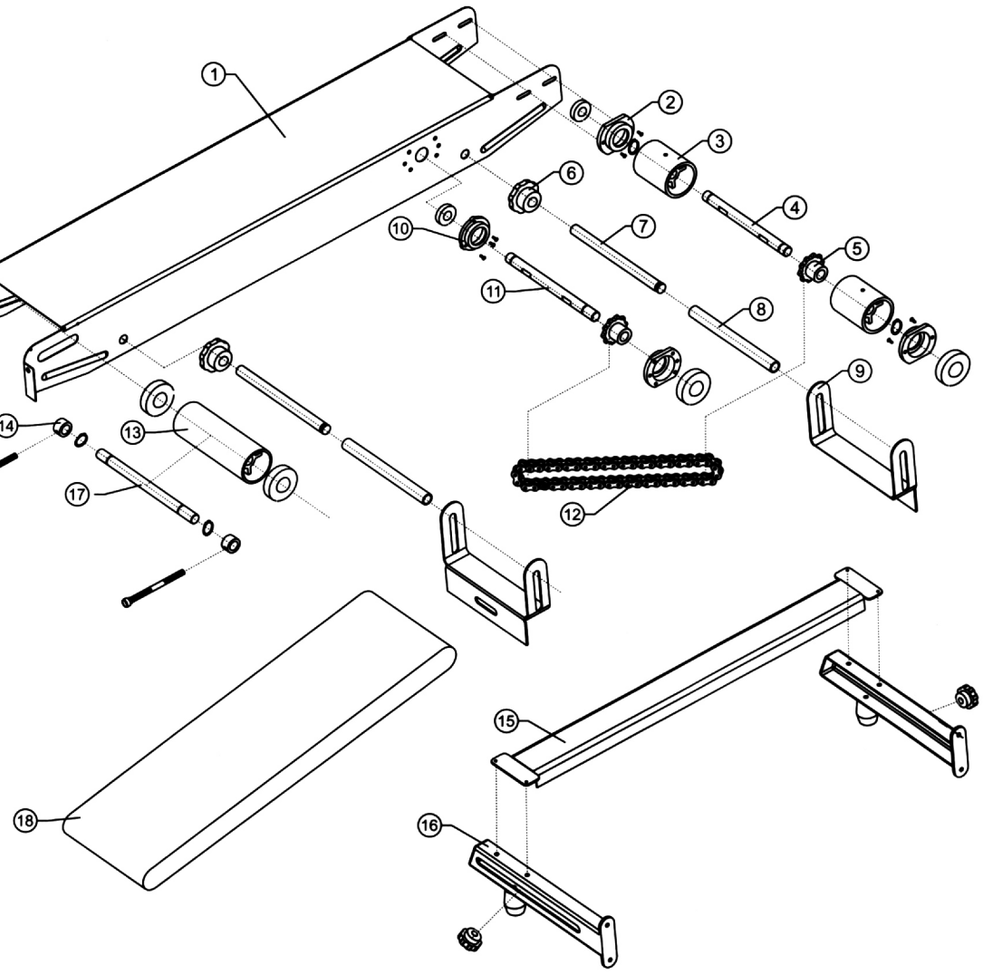
THC	Temperature control meter	TEQD-2301
TC	Thermocouple	EA1
HE	Heating tube	300W × 2
W1	Potentiometer	100K 2W
B1	Speed adjustment plate	

8. Decomposition map of body



No.	Name	Quantity	Part No.	No.	Name	Quantity	Part No.
1	Clutch cover	1	3111064	37	Driven wheel seat film row	1	3111060
2	Butterfly spring	1	41340045	38	Lead belt	2	4610002
3	Carrier gear	1	3111013	39	Driven wheel	2	3111002
4	Clutch piece	1	3111044	40	Driven wheel base	2	3111020
5	Torque pad	1	3111043	41	Feeder hole	1	3311081
6	Steel ball	3	41520006	42	Cooling block	2	3111025 (6)
7	Printing gear	1	3111011	43	Lower plate of heating set	1	3311072
8	Clutch bearing cover	1	3111042	44	Steel pad tube	2	3111027
9	Clutch gear	1	3111014	45	Heating block	2	3111023 (4)
10	Torque ring	1	3111041	46	Y-shaped reed	2	3111059
11	Connecting plate	1	3111016	47	Upper plate of heating set	1	3311071
12	Connecting plate M	1	3111058	48	Support piece	2	3111048
13	Connecting shaft	1	3111015	49			
14	Output shaft	1	3111017	50			
15	Three-hole bearing base M4	1	3111037	51			
16	Washer 8	1	3111049	52			
17	Driving gear shaft	1	3111010	53			
18	Driving gear shaft	1	3111010	54			
19	Motor set	1	4340001	55			
20	35 Gear	1	3111009	56			
21	Torque shaft	1	0311010	57			
22	Mechanical panel	1	3311070	58			
23	Adjust knob of the printing wheel	1	4011001	59			
24	Front cover bracket	2	3111040	60			
25	Printing wheel base	1	3111019	61			
26	Rear guide shaft	2	3111018	62			
27	Printing wheel	1	3111005	63			
28	Rear guide wheel	2	31110031	64			
29	Rubber wheel	1	3111004	65			
30	Driving wheel	2	3111001	66			
31	Four-hole bearing base	2	3111022	67			
32	Wheel washer 5.5	2	3111050	68			
33	Sealing braid	2	4610001	69			
34	Middle-wheel slider	1	3111028	70			
35	Middle-wheel slide rail	1	3111029	71			
36	U-shaped frame	2	3111057	72			

9. Decomposition map of conveyor station



No.	Name	Quantity	Part No.	Remarks
1	Conveyor station base	1	3111078	
2	Two-hole bearing base	2	3111030	
3	Transmission front wheel	2	3111054	
4	Front shaft of the conveyor belt	1	3111031	
5	Transmission chain wheel	2	3111056	
6	Hand wheel of the conveyor station supporting foot	4	4011003	
7	Big square ear M8×155	2	411608155	
8	Plastic pipe of supporting foot	2	3111062	
9	Supporting foot of conveyor station	2	3111079	
10	Three-hole bearing base	1	3111037	
11	Transmission chain shaft	1	3111032	
12	Transmission chain belt	1	4320001	
13	Transmission rear wheel	1	3111055	
14	Adjustment block of conveyor belt	2	3111035	
15	Foot rest beam	1	3111077	
16	Foot rest	2	Left 3111076	Right 3311104
17	Transmission rear shaft	1	3111033	
18	Conveyor Belt	1	4320001	
19	M5×55 double-head screw	2	41140555	

10. Failure analysis and elimination

Faults	Cause	Way to deal with
Sealing braid being slippery	The driving shaft does not run in parallel with the driven shaft.	Properly adjust two adjusting screws on the driven wheel seat.
The sealing braid easy to break	1. The sealing braid is too tight. 2. The sealing braid is slippery. 3. The sealing braid surface is uneven. 4. Film residual or something dirt is adherent to the sealing braid. 5. The sealing braid is likely to be melted.	1. Properly adjust the longitudinal adjustment screw on the driven wheel seat and keep the sealing braid under proper tension. 2. (See above). 3. The surface of the sealing braid shall be smooth and even. 4. Remove dirt on the sealing braid immediately. 5. The space between the upper and lower heaters is too short or it is overheated.
Knurling pattern unclear	1. The knurl wheel is frayed. 2. The pressure spring on the knurl wheel seat is too loose.	1. Change the knurl wheel. 2. Adjust the pressure spring on the knurl wheel.
Conveying resistance of the sealing braid	The space between heaters or coolers is too narrow, and the friction force is too large.	Properly adjust the space between heaters or coolers, and the space between two sealing braids shall be about equal to the thickness of a single layer of packing bag; ensure sealing firmness and clearness of sealing pattern, at the same time, both ends of the sealing part shall not be extended too long.
Bag is blocked or deflected when transmitted to intermediate pressure wheel or printing wheel	The bag is pressed too tight by intermediate pressure wheel or knurl wheel.	1. Properly adjust the pressure of the intermediate pressure wheel or the knurl wheel, the space between two sealing braids shall be about equal to the thickness of a single layer of packing bag; ensure sealing firmness and clearness of sealing pattern, at the same time, both ends of the sealing part shall not be extended very long. 2. Adjust the limit screw after adjusting the space
Conveyor belt being slippery	The drive roller does not run in parallel with the driven roller.	Adjust two adjusting screws on the driven roller (rear roller) of the conveyor station.
Conveyor belt doesn't run synchronously with the sealing braid	The conveyor belt is too loose.	1. Properly tighten the chains on drive roller (front shaft) and intermediate shaft. 2. Properly tighten the conveyor belt.

11. Table of attached accessories

No.	Accessories code	Product Name and Specification	Unit	Quantity
1	4610002	Triangle belt 428×5. 5	pcs	2
2	4610001	Sealing braid 770×15	pcs	2
3	4520001	1.8m black power cord	pcs	1
4	4510012	Fuse tube (fuse)	pcs	2
5	4610004	800 Printing wheel assembly	Set	1

Warranty card

I. We implement the policy of 3-Rs (Return, Replacement and Repair at no charge) from the purchase date according to the relevant regulations of the state, and the contents are as follows:

1. Please carefully read the manual before using the machine and operate it in accordance with the instructions outlined in this manual.
2. in the warranty period, the user does not press the manual for proper operation, use, maintenance, service, or cause damage to the machine without permission replaceable parts or seal oil, sauce, powder and corrosive materials, not covered by your warranty . However, the Company shall be repaired, the cost borne by the user.
3. During the warranty period, any damage caused by incorrect operation, use, maintenance, arbitrary replacement or disassembly of parts are not covered by free maintenance; in these cases, user shall bear maintenance costs if they contact us for repair.

II. Upon receiving the machine, users shall carefully check if the product model and number are in accordance with invoices and the warranty card, if it is inconsistent, please contact us immediately.

III. Please properly keep the purchasing invoices and the warranty card as proof of guarantee, which are invalid if altered in any way, and we shall not be responsible for the loss of them.

User Name:			
Detailed user's address			
Area code and telephone		Area Code and Fax	
Zip code		Contact	
Distribution unit			
Product type		Machine No.	
Date of purchase		Invoice number	

Maintenance records	Date	Repair failure	State of repair	Repairer

Note: The warranty card is only valid with the stamp of the selling unit.