



Cleveland Equipment

CE-215

Thermal Shrink Packaging Machine

Operation Manual



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Contents

I. FOREWORD 1

II. FUNCTION 1

III. SPECIFICATION 1

IV. FEATURES 2

VI. OPERATIONAL PROCESS..... 3

VII. REFERENCE OF SHRINK TEMPERATURE AND TIME..... 4

VIII. CAUTION 5

IX. COMMON MALFUNCTION 6

X. MAINTAINANCE..... 7

XI. SPARE PARTS LIST..... 7

XII. CIRCUIT DIAGRAM 8



I. FOREWORD

The CE-215 Thermal Shrink Packaging Machine has the advantage of high heating efficiency, accurate temperature control and stable performances.

II. FUNCTION

The thermal shrink packing method is a popular and economical packaging method in the packing industry. There is an increasing demand for its economical, simple packing and aesthetically pleasing appearance. The product is wrapped with the shrink film and then shrunk and molded to product by heat. The package conforms to the shape of the product and is transparent to show product clearly. The shrink film helps ensure product is protected from moisture, pollution, and scratching or marring.

III. SPECIFICATION

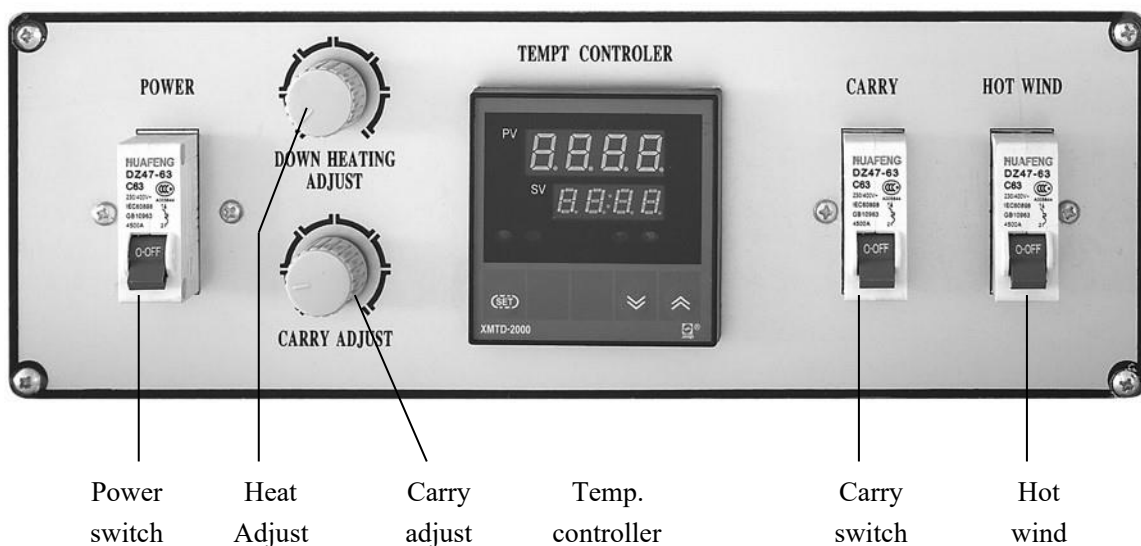
Model	Voltage	Power	Conveyor speed	Conveyor loading	Tunnel size
CE-215	220V 50-60HZ	8.5 KW	0-10m/min	8 Kg 17.64 lbs.	830 x 450 x 250 mm 32.67 x 17.71 x 9.84 in.



IV. FEATURES

1. It adopts a Far-infrared radiant heating method with quartz tube. While working, it produces far-infrared radiation continuously; circulated hot airflow promoted by fan creates an even temperature inside of shrink tunnel and saves electricity consumption.
2. Conveyor driven by high quality motor (AC) with adjustable speed can be run with stable performance for long continuous runs under required loading weight limits.
3. The transport conveyor adopts rollers with independent rotation to improve the shrink effect of the object on the bottom.
4. Functional structure design promotes easy maintenance.
5. Intelligent temperature control devices, together with solid-boost make the temperature inside of shrink tunnel accurate and stable.
6. All of the machine parts adopt the brand products to ensure the quality of the machine.

CONTROL PANEL





VI. OPERATIONAL PROCESS

1. Place the machine on the level ground and unpack it; make sure to complete the ground connection for the safety of operator. (Notice: Grounding plate is displayed in the picture on the right; it can be found on one of 3 power wires if it is single phase; it can be found on the body of machine if it is 3 phase with 4 power wires)

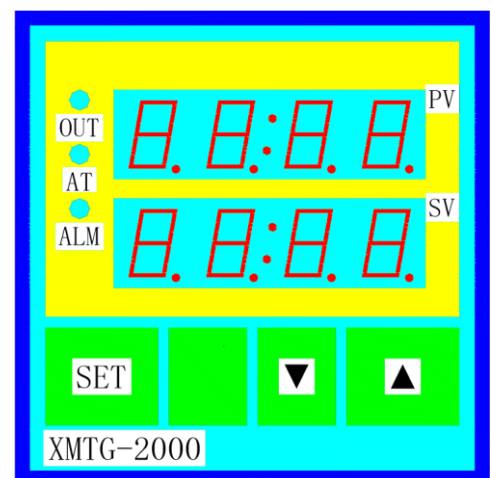


2. Confirm the power supply requirement of machine, and plug in the machine with right power source as noted on the index tag.

3. Turn on the Power switch; temperature meter will show practical value and set value; set required temperature according to the dimension of packing products and thickness of film etc., normally 150-170°C. Turn on the Hot Wind switch for protection of heating pipe.

The method of adjusting intelligent temperature meter is below:

- The upper line of number in red shows the practical value (PV), and the down line of number in green shows the set value (SV).
- Press the SET button, the green light flashes.
- Press ▲ to increase or press ▼ to decrease the temperature.
- After setting the temperature, press down the SET button again. It starts to work when the green light stops flashing.



Notice: When setting temperature, use a soft touch as the intelligent meter is sensitive.



4. Turn the down heating adjustment knob of heat shrink tunnel all the way to the right to Maximize. Once it reaches temperature, adjust the knob according to practical shrink effect and packing requirement. For instance, increase the down heating if film does not shrink enough on the bottom.
5. Turn on the Carry switch and adjust it into appropriate speed. Generally, make it to be in the middle first, and then adjust it while testing.
6. When it reaches set value (SV), we can start testing or working.
7. During the process of shrinking, adjust the temperature, conveyor speed and down heating according to practical case. If there are some wrinkle, which means too low temperature or too fast speed, we can increase its temperature or lower the speed. In the contrary, it means too high temperature or too low speed if the film is broken. Adjust these three factor--- temperature, conveyor speed and down heating, until shrink effect is satisfied.
8. After finish packing, it's better to lower the temperature and let conveyor and fan run for a while in order to cool down the shrink tunnel to prolong the life of machine.

VII. REFERENCE OF SHRINK TEMPERATURE AND TIME

SHRINK MEMBRANE	THICKNESS (MM)	SHRINKING TIME (S)	TEMPERATURE (°C)
POF	0.02-0.10	8-16	130-170
PP	0.02-0.04	6-12	130-170
PVC	0.02-0.06	5-10	110-130
POP	0.02-0.10	8-16	130-170



VIII. CAUTION

1. The electrical input power rate must be higher than the Rated power of the machine to ensure proper function. The power source must be the same as noted on the tag to avoid any circuitry or electrical shock or fire hazard.
2. The electrical wiring must be connected properly to prevent any damage to machine or safety risk to the operator.
3. The machine must have the ground connection installed and secured properly. It is easy to get electric shock for operator without earth connection.
4. Do not set temperature above 200°C, higher temperatures can damage the heating pipe or shorten its life.
5. The machine should be installed in a level position to extend the life of the electric thermal pipe.
6. Every three months, check the wire and heating pipe in the tunnel wear due to aging and heat from shrink tunnel; replace if necessary.
7. Do not touch conveyor or stretch hands into shrink tunnel to avoid burning, while the machine is working.
8. In order to prolong the life of heating pipes, follow the operation guide according to following steps:
 - a) When starting machine, turn on the heating device and hot fan together at the same time.
 - b) When stopping machine, cut off the heating device first and let fan run for a while to cool down.



9. The carbon brush of fan & conveyor motor is located under a small cap and should be checked periodically for wear. Check the carbon brush when the speed of motor is getting slower; the carbon brush wears off gradually during usage. Replace it if carbon brush is worn, and clean up brush powder inside of motor.

IX. COMMON MALFUNCTION

Case	Cause	Method
No heat in the tunnel	Heating switch broken	Replace
	Heating pipe or circuitry broken	Replace or repair
	AC contactor, Solid-booster or temperature meter broken	Replace
	Heat adjustment is in the lowest position	Adjust
The temperature of the tunnel is too low	Some heating pipes broken	Replace
	Heat adjustment is too low	Increase
	The temperature is set too low	reset
	One of the 3 fire wires loose	Re-connect
Conveyor motor stop running	Switch or Adjuster broken	Replace
	The motor burned	Replace
	Carry adjustment is in the lowest position	Adjust
	Block on the driving unit	Adjust or mend
The fan motor does not work	The switch of the fan broken	Replace
	The motor of the fan broken	Replace
	Circuitry broken	Mend
Stop suddenly	Power loose or fuse pipe broken	Replace



X. MAINTAINANCE

1. Switch off power while doing maintenance service. Professional technician is required, or ask us for assistance.
2. During guarantee period of one year, when the case happens because of quality problem, our company will offer broken parts for free, excluding short-life parts. If it is because of improper operating method or by natural accident, we will charge for spare parts and service.
3. Our company provides parts with charge if self-repair is made.

XI. SPARE PARTS LIST

NO.	ITEMS	QTY.	NO.	ITEMS	QTY.
1.	Inner-hexagon spanner 4,5,10 mm	1 Each	2.	Spanner 8*10,17*19mm	1 Each
3.	Test pen	1 Pc	4.	Cross-head screwdriver	1 Pc
5.	Solid-booster (75A)	1 Pc	6.	Motor speed adjusting circuit board	1 Pc



XII. CIRCUIT DIAGRAM

