BP 600
Rotary cup sealing machine

OPERATION MANUAL

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Contents

I. Usage and Feature

BP 600 Semi-automatic Rotary Sealing Machine has the functions of manual turn rotary board, automatic filling/foil placing and sealing. It adopts intelligent temperature controller, the temperature error < ± 1%, strong sealing function. It uses JAPANESE OMRON PLC. Fuselage of Stainless steel is up to food standard. The usage of pneumatic parts simplifies the mechanical structure., decrease the breakdown. The performance of the machine is more stable and safe. Automatic flow filling without spray or leaking, excellent sealing, increase the capacity and longer the machine life.

The machine can use aluminum foil or aluminum film or roll of plastic film, it is widely used in beverage, milk and food industries.

II. Main Parameter

Rotary speed: 10 rounds/min
Output: 600 cups/hour

Heating power consumption: l kw
Air consumption: 0.3 m^3/min
Voltage: 220V 50HZ
Machine size: 800mm x 600mm x 800mm
Weight: 90Kg

III. Structure and Principle

1. Structure

Refer to Whole machine structure (FIG 1) and Sealing and Cutting Structure

The whole machine is composed of main body, automatic gravity filling system, automatic sealing system. The cup is put manually in the cup mould on the aluminum board, the board turned manually one station ahead, the filling piston begins to work (filling volume can be adjusted by the cylinder valve), the sealing works at the same time, the cup taken out manually.

Heating system: It is composed of intelligent temperature controller, heating element, solid booster and thereto couple. The heating temperature can be adjusted between 0300 .

The machine connects 220V 50HZ Single phase alternating currents, the capacity of air compressor must be bigger than 0.4 m^a /h.

2. Principle and Usage

As Pic 1 and Pic 3 shows

Turn on "power" switch, the power indicating light is on. Connect the air compressor to the machine, adjust the air filter pressure to 0.65Mpa (it is adjusted before going out the factory), the whole machine is on the original working condition.

Turn on Heating switch, the heating indicating light is on. Set the temperature to 150 °C, when the temperature reaches the setting temperature, then adjust the temperature

to 160-250°C (set the temperature according to the material and thickness of the foil/film, the thicker the foil/film, the higher the temperature is). The average temperature is 180°C .

The sealing time can be adjusted in PLC, adjust the time according to the sealing effect.

The filling volume can be adjusted by the valve.

When operating the machine, check the working condition such as running of the spare parts, the fixing of the screws, air pipe connection. If anything wrong, stop the machine immediately and fix it, then restart the machine.

When the temperature reaches the setting temperature, put the cups into the cup mould, install the film on the film set or put the foils in the foil setting system, turn the rotary board, the indicating light is on, the machine is on automatically filling and sealing, the finished products should be taken out manually.

IV. Installation and Adjustment

1. After opening the package, check the spare parts first to make sure you get all the parts. Check the screws tight or loose, check the operation of the parts.
2. Adjust the temperature according to the thickness of the film/aluminum foil. Adjust the volume by the cylinder valve. The temperature time and sealing time can be adjustable.

V. Maintaining

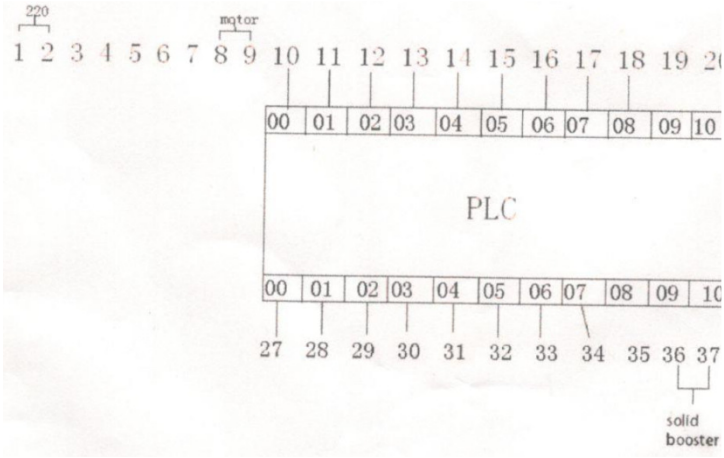
1. Check the air source pressure before running, the average air pressure should be 0.6-0.7Mpa. To insure the good working of the cylinder, drain the waste water in thefilter regularly.
2. After working, let the heating part cool on room temperature. Clean the filling tank with hot water and drain the water. Clean the aluminum board to prevent corrosion and aging.
3. Clean the heating part to better the sealing effect.
4. Connect the machine earth wire properly to safe using.
5. Set the sealing temperature from low to high to insure the sealing temperature more even and better sealing effect.
6. Stop the machine immediately when breakdown happens, the whole machine is on reset condition, shut down the power and check the breakdowns. After fixing, restart the machine.

VI. Breakdown and Solutions

Breakdown	Cause	Solution
The power indicating light is off when turn on "power" switch	A. power switch bad contact B. the light breaks down or welding loose	A. change the switch or fix the switch touch point B. change the light or re-welding
Filling volume inaccurate	A. valve not adjust properly B. filling solenoid valve core has stain or coil burned	A. Readjust the valve B. Clean the core and change the solenoid valve
Bad sealing	A. sealing temperature too low B. sealing spring ages C. the film and the material of the cup not match	A. adjust the sealing temperature B. change the sealing spring C. change the film
Temperature controller not work	A. the temperature switch burned B. heater burned C. temperature controller breaks D. thermo couple not connect properly or breaks	A. change the switch B. change the heater C. repair the temperature controller or change it D. reconnect the wire or change the thermo couple

VII. Electronic Diagram and Electronic Parts List

Electronic Diagram



2. Electronic parts list

No.	Part Name
1	Solid booster
2	PLC
3	Button with indicating light
4	Intelligent temperature controller
5	Thermo couple
6	heater
7	Power switch