BP-8170-B

LABORATORY PRESS MACHINE/ PLC CONTROL/ INTEGRATION OF ELECTRIC HEATING AND WATER COOLING

The material is placed in the mould and clamped between the electric-heating flat plates to apply pressure and temperature, making the material shape, testing and serving as the basis for the ingredient of mass production. This machine is equipped with PLC program control color touch screen. The human-machine interface operating system can set pressure, temperature, time and exhausting frequency. The vulcanization process is instantly displayed and monitored. The mould pressing procedure is set to be completed fully automatically. The machine is simple in structure, intelligent and efficient.

1. Capacity: 20 tons
2. Working mode: With two working modes: manual and automatic
3. Temperature range: RT～300℃
4. Temperature accuracy:±2℃
5. Controller: PLC programmable color touch screen, man-machine interface operating system, vulcanization curve interface intuitively, dynamic display and monitoring of mold pressure process, can control all mold pressure circulation.
6. Heating method: Electro-thermal tube
7. Size of the pressing plate:300×300×60mm
8. Distance of pressing plate:150mm
9. Material of pressing plate: SKD chrome molybdenum alloy
10. Surface of pressing plate: HRC60 mirror chrome plating
11. Working layer: One work layer. The upper and lower plates both have heating and cooling system function.
12. Cooling method: Tap water cooling. after the heating process is finished, the system automatically switches to the cooling process and cooling at full pressure (without mold opening) (Water connection port supplied by customer).
13. Gradient pressure: 2 stages, 1st and 2nd stage pressure can be preset
14. Exhausting frequency: 0～10 times can be set.
15. Exhausting pause: Yes
16. Sensor: 0-15 Mpa, Specially configured
17. Valve plate in special type: Specially configured
18. Double proportional valve: Specially configured
19. Oil pressure system: The proportional hydraulic flow valve circulation control system has the functions of automatic pressure compensation, pressure maintaining and oil pump delayed shutdown. Dual speed working mode, which uses high approach speed for low pressure and low approach speed for high pressure. Multiple exhaust times can be set to ensure that the template pressure reaches saturation.
20. Oil pressure media: Mobil 30# anti-freezing hydraulic oil （provided by the customer）
21. Speed of oil tank: Two-speed function of 11~50mm/s, close the mould quickly and lock it slowly.
22. Security protection: Self locking safety glass door, opening the door panel can cut

off all running actions

23. Volume: 950×500×1470(W×D×H)mm
24. Power supply: 3 ϕ , AC380V, 20A, three-phase and five-line（The connection port is provided by the customer.）
25. Weight: About 658kg
26. PLC programmable controller function introduction:

This machine has two modes: manual and automatic.

1) Standard automatically mode:

Set the required parameters for the molding action:

→Heating temperature and cooling temperature;

→The first stage pressure (pre-pressure) and the second stage pressure (pressurization);

→The time of the first pressure operation and the time of the second pressure operation;

→Exhaust number N and exhaust time S.

2) Standard operating procedure:

Start the program (only when the temperature rises to the requirement) → the mold plate is automatically clamped → the first stage of pressure (pre-pressure) starts → this period of time is reached → automatic exhaust (the number and time of exhaust can be arbitrarily set) → the second section pressure (supercharging) starts → this period of time is reached → water cooling → cooling time is reached → the molding plate is automatically opened, and the operation is over.

3) Time setting: vulcanization time is in minutes, exhaust time is in seconds, both have optional functions

■Accessory: Stainless steel mirror retainer plate 300×300×1*2 pieces

■Files: Manual and Product quality assurance card

Feature

Two pieces of pressing plates are made of SKD chromium-molybdenum steel. With the surface-layer processing of carburization, chromium plating and polishing, the hardness reaches 60HRC , making the plates durable and never rust.

High-strength, precise guide pillars bear the mould locking device of two-layer mould pressing plate with stable loading and durability. The visible doors with toughened glass are set around the pressing plates. Once opening the door, all the mould pressuring actions will be stopped , which is secure .

Import high-precision pressure sensor to sense pressure and the pressure can be adjusted steplessly

The patented heating control technology, according to the diameter of the heating tube and the heat transfer tube of the heat density distribution, can ensure the uniform temperature distribution on the surface of the heating plate.

The integration of electric heating and water cooling makes the mould pressing plate have two functions of heating and cooling. The parallelism between the pressing

plates is extremely high, which can meet the requirements of high-precision pressure pieces. The upper layer and the lower layer of the mould pressing plate are equipped with multiple rows of heat transfer tubes and S-shaped cooling tube with stable heating and quick temperature drop. After heating, the system will switch to the cooling process automatically and cool it in full pressure. After the cooling, the program will descends automatically and open the mould pressing plate with high automation degree

Combination valve of proportion hydraulic flow can control hydraulic system with the functions of automatic compensation and time delay stopping of the fuel tank and the pressure can be adjusted . This hydraulic system is equipped with the double-speed work model, that is, adopt high approach speed in low pressure and low approach speed in high pressure. Multiple exhausting frequencies can be set to ensure template pressure has reached to saturation.

The human-machine interface operating system of PLC programmable LCD touch screen can set and display all the mould parameters easily. Exhausting time, exhausting frequency, heating temperature, vulcanization time and the pressure degree can be set and displayed at will. The mould process can be displayed dynamically and be monitored in due time. The interface of vulcanization curve is visualized with accurate and reliable data. Equipped with a USB data output interface, which can be connected to a computer for remote monitoring and printing results


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