

LABORATORY BOTTLE BLOW MOLDING MACHINE/PLC CONTROL

Blowing bottle is the process of extruding and melting resin, then pushing out a tubular billet through the mold head and entering the blowing bottle mold, then inflated with compressed air, cooled and shaped to obtain a product that is completely same to the shape of the mold cavity.

I. Single screw extruder

1. Output: about 3-6kg/h, specific according to the raw material process formula
2. Temperature range: $\sim 300^{\circ}\text{C}$
3. Temperature accuracy: $\pm 1^{\circ}\text{C}$
4. Screw Diameter: 20mm
5. Length diameter ratio: 1:28, other length diameter ratio is optional
6. Screw speed: 0-95rpm frequency control
7. Screw material: It is made of 38CrMoAl chromium-molybdenum steel. With the surface-layer processing of tempering, nitriding, chroming, polishing and super-precision grinding, roughness $Ra \leq 0.4\mu\text{m}$, nitriding depth $\geq 0.6\text{mm}$, the hardness HRC55~60.
8. Barrel material: It is made of 45# carbon structural steel, the surface is treated by quenching and tempering, nitriding, chrome plating, polishing and ultra-fine grinding, the roughness $Ra \leq 0.4\mu\text{m}$, the depth of the nitride layer reaches $\geq 0.6\text{mm}$, and the hardness is HRC55~60.
9. Heating zone: 3 zone heaters for barrel, 2 zone heaters for machine head, external covered with safety protective wind hood
10. Cooling device: 3 groups of multi wing fans with super static forced air cooling
11. Hopper: 304 stainless steel material material, equipped with slide rail type rapid discharge device
12. Melt temperature: High precision melt temperature sensor monitors melt temperature changes
13. Melt pressure: 0-40MPa high precision melt pressure sensor detects changes in head pressure, interlock loop control of the host running
14. Drive motor: Precision gear reduction motor
15. Electric control system: PLC programmable color touch screen, man-machine interface operation system, can dynamically display and monitor extrusion process, including temperature control, driving, speed, pressure, interlocking and intercontrol function
16. Safety protection: The melt pressure is interlocked with the host for overpressure alarm protection; the melt temperature is interlocked with the host for low temperature start-up protection
17. Power: 3 ϕ , AC380V, 50Hz Three-phase and five-line
18. Dimension: 1425 \times 550 \times 940 (W \times D \times H)mm (excluding adjustable electric cabinet)

19. Weight: About 175kg

II. Blowing bottle auxiliary machine

1. Product capacity: 50~100ml
2. Quantity of product: 1 pcs
3. Clamping mold times: 60~200 times/hour
4. Template size: 150×200×280mm
5. Mini. mold thickness: 80mm
6. Maximum template spacing: 180mm
7. Max clamping force: 10T
8. Cutting method: Manipulator
9. Blowing method: Blow air upwards
10. Cooling device: Strong cooling by fan
11. Air consumption: 0.3m³/min
12. Power: 3 φ , AC380V, 16A
13. Dimension: 1750×550×1500 (W×D×H) mm
14. Weight: About 300kg

Feature

1. Suitable for LDPE、HDPE、PP、PS、PVC and other materials
2. The volume of blown plastic bottle shall not exceed 250 mL
3. Single screw extruder with diameter of 16mm、20mm or 25mm can be connected
4. The standard bottle is round on one side and square on the other side. Other options are available.
5. Logo on bottle body can be designed according to customers' plans
6. There are full-automatic, semi-automatic, manual and other operation modes
7. Rapid and perfect cutting process of bottle blank hot cutting blade
8. Additional bottle holding device ensures the most adequate cooling and setting of the bottle
9. Flexible control panel integrated operation button, simple and easy to use
10. The front door of the machine is made of transparent resin glass with safety interlock

