BP-8176-F

LABORATORY SMALL SPINNING MACHINE/ DESKTOP TYPE EQUIPMENT CONTROL

This machine is used to test and study the spinning performance of PE, PP, PA, PET, PPS, PVDF and other polymers. Can be used for LOY, POY and FDY to simulate all possible forms of filament production.

I. Single Screw Extruder/Desktop type

1. Output: according to the raw material process formula
2. Temperature range: ~300℃
3. Temperature accuracy: ±1℃
4. Screw Diameter: 20mm
5. Length diameter ratio: 1:28
6. Screw speed: 0-125rpm 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≤0.4μm, nitriding depth≥0.6mm, 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≤0.4 μm, the depth of the nitride layer reaches ≥ 0.6mm, and the hardness is HRC55～60.
9. Heating zone: 3 zone heaters for barrel, 1 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 pressure: Dynisco high precision pressure sensor monitors head pressure changes
13. Melt temperature: Dynisco high precision temperature sensor monitors melt temperature changes
14. 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
15. Electric control system: PID/LED/RKC intelligent digital display temperature controller, high precision digital instrument shows all of the extrusion parameters, including temperature control, driving, speed, pressure, interlocking and intercontrol function
16. Power: 3∮，AC380V，50Hz Three-phase and five-line
17. Dimension: 760×712×727 (W×D×H)mm (excluding adjustable electric cabinet)
18. Weight: About 125kg

II. Melt pump

1. Throughput：0.6cc/rev
2. Rotation speed：50rpm frequency control
3. Temp.：≤350℃
4. Pressure：35Mpa

III. Pressure sensor

1. Inlet pressure：10Mpa (Brand: America Dynisco)
2. Outlet pressure：35Mpa (Brand: America Dynisco)
3. Pressure accuracy: within ±0.1%

IV. Spinneret plate

1. Spinneret diameter: Φ64
2. Number of holes: 12-150 optional

V. Wind cabinet

1. Horizontal and vertical filtering are optional
2. Blowing area: 200 × 1000mm
3. Consisting of stainless steel air duct, the front plate can be opened or closed by hinge connection
4. Air flow control device with damper
5. Centrifugal fan, 0.5 ~ 1.5m/min speed variable frequency
6. Cooling device: 3HP chiller

VI. Stretching roller group

1. Temperature range: RT~250℃
2. Heating method: Electromagnetic induction
3. Hot roller diameter: Ø100 × L130 surface ceramic
4. Roller speed: 100 ~ 500m/min variable frequency adjustable
5. Tensile ratio: 5% FS

VII. Winding

1. Line arranger: Flat pull sliding cable arranger
2. Traction speed: 800m/min
3. Winding roller: Ø94×Ø108×L290mm
4. Winding speed: Automatic tension winding

VIII. Electric control system

PID/LED/RKC intelligent digital display temperature controller, high precision digital instrument shows all of the extrusion parameters, including temperature control, driving, revolution, speed regulation, winding, pressure, interlocking and intercontrol function

Feature

1. The screw diameter is optional: 16\20\25\30 and the length of ratio: 10-30 times can be optional, expanding the scope of processing.
2. The screw barrel is made of 38CrMoAl special tool steel. With the processing of nitriding, tempering, chroming and super-precision gringing, it becomes hard and wear-resistant, extremely corrosion-resistant.
3. The screw equipped with feeding section, transportation section, compression zone and mixing head can process all sorts of materials, achieving the best dispersion effect.
4. It is 0-80rpm stepless frequency control to meet extrusion process requirements of different materials.
5. Electric lap heater is used to heat charging barrel, easy to maintain and install. The independent heating of five areas can ensure the temperature meet the requirements. The barrel adopts 4 groups of multi-wing ultra-quiet fans to cool forcedly.
6. The die head adopts quick connecting loop, fast to remove head and easy to connect with downstream equipments, time-saving and energy-saving during test conversion.
7. PLC programmable color touch screen, man-machine interface operation system, extrusion process dynamically can be displayed dynamically and monitored. Equipped with USB data output interface, easy to input and print.