BP-8178-T

LAB FILM BLOWING MACHINE/EQUIPMENT CONTROL SYSTEM/BENCH-TOP TYPE

This machine structure is compact, simple operation, can be used for single and multi-layer blown film, can be applicable to all polymer dispersion research.

I. Single-Screw Extruder

1. Output: about 1-4kg/h, specific according to the raw material process formula
2. Temperature range: ~300℃
3. Temperature accuracy: ±1℃
4. Screw diameter: 16mm
5. Length ratio: 1:28
6. Rotation speed of screw: 0-95rpm frequency control
7. Screw material: It is made of 38CrMoAl chromium-molybdenum steel. With the surface-layer processing of quenching and tempering, nitriding, chroming, polishing and super-precision grinding, roughness Ra≤0.4μm, nitriding depth≥0.6mm, hardness HRC55~60.
8. Barrel material: It is made of 45# carbon structural steel. With the surface-layer processing of quenching and tempering, nitriding, chroming, polishing and super-precision grinding, roughness Ra≤0.4μm, nitriding depth≥0.6mm, hardness 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, equipped with slide rail type rapid discharge device
12. Melt pressure: 0-35MPa high precision melt pressure sensor detects changes in head pressure, interlocking control host running
13. Melt temperature: High precision melt temperature sensor monitors melt temperature changes
14. Quick change chuck: C-type snap ring connection, easy for quick connection with downstream equipment
15. Drive motor: 0.75kw precision gear reduction motor
16. 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, pressure, interlock intercontrol function
17. 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

II. Die head

1. Die diameter: Φ 20
2. Die structure: spiral flow channel
3. Material: S136 alloy

4. Installation method: upward blowing method

III. Film Blowing Tower

1. Wind ring: single-layer air outlet structure
2. Film thickness: 0.05 ～ 0.10mm adjustable
3. Maximum folding diameter: 100mm
4. Blowing gas: Compressed air 0-5bar
5. Cooling gas: Blast flow rate 20L/min
6. Traction rubber roller: Ø 60 × L300mm
7. Winding steel roller: Ø 60 × L300mm inflatable shaft
8. Traction speed: 0.5~2m/min, adjustable by frequency conversion
9. Winding speed: automatic tension winding without paper core
10. Traction motor: 90W
11. Winding motor: 2.5N.m
12. Blower: 0.15KW
13. Observations box: LED light source
14. Electric control system: PID/LED/RKC intelligent digital temperature control, high-precision digital instrument display all extrusion parameters including temperature control, driving, traction, winding, speed, pressure and interlock intercontrol function
15. Volume: 1580×785×1588 (W×D×H) mm
16. Power supply：3 ∮, AC380V, 15A
17. Weight：About 155kg

Feature

1. This machine has compact design and a small body, not occupying too much indoor area.
2. The host and auxiliary machines are of easy assembly with few raw material. The maximum folded diameter of the thin film can reach 200mm.
3. Equipped with C-type quick change head, easy to connect with other devices, such as calendering, casting, granulation, filtration, etc. Also saving time and effort for test conversion.
4. Single-layer or double-layer cooling vane and the closed-loop control of creasing width ensure reliable product quality.
5. The height of the filming blow tower can be adjusted arbitrarily to meet test requirements.
6. The extrusion, traction and rolling have the property of stepless speed regulating, ensuring requirements of film blowing technology to be met.
7. Pneumatic paperless mandrel winding film device is adopted, which is easy to wind and convenient to replace the paper core.
8. Can connect 12.5mm, 16mm, 20mm, 25mm, 30mm, 40mm and 45mm single screw extruder.
9. Die head diameter 20-190mm, optional insert for die gap.
10. The single-layer blown film die has a spiral flow channel structure to ensure uniform melt distribution; the multi-layer co-extrusion die has a “muffin type”

structure to ensure uniform distribution of each layer. The inner flow channel has no dead corners, is highly polished and nickel plated, and the die is chrome plated.

11. Integrated inspection light box facilitates quick and real-time observation of film defects.
12. Perfect safety protection configuration, in accordance with CE safety standards.