

BP-8176-P

LABORATORY SINGLE SCREW PLASTIC SHEET EXTRUSION LINE

It is suitable for precision sheet extrusion of all thermoplastic PE, PP, PS, PVC, PA, PC, PET, EVA, ABS and so on.

I. Single Screw Extruder/Movable

1. Capacity: According to the process formula of raw material
2. Temperature range: $\sim 300^{\circ}\text{C}$
3. Temperature accuracy: $\pm 1^{\circ}\text{C}$
4. Screw diameter: $\Phi 20\text{mm}$, mixed and dispersed type
5. Length diameter ratio: 1:28 optional
6. Screw rotation speed: 0-150rpm frequency control
7. Screw material: 38CrMoAl chromium-molybdenum alloy, the surface is treated by process of quenching and tempering, nitriding, chrome plating, polishing and ultra-fine grinding, roughness $R_a \leq 0.4 \mu\text{m}$, depth of nitride layer $\geq 0.6\text{mm}$, hardness HRC55 $\sim$ 60
8. Barrel material: 45# carbon structural steel, the surface is treated by process of quenching and tempering, nitriding, chrome plating, polishing and ultra-fine grinding, the roughness $R_a \leq 0.4 \mu\text{m}$, the depth of the nitride layer reaches $\geq 0.6\text{mm}$, and the hardness is HRC55 $\sim$ 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. Drive motor: Precision heavy duty gear reduction motor, constant torque power output control
13. 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
14. Control system: PLC programmable color touch screen, man-machine interface operation system, extrusion process can be displayed and monitored dynamically, including temperature control, driving, speed, pressure, interlocking and intercontrol function
15. Power: 3 ϕ , AC380V, 50Hz Three-phase five-wire
16. Dimension: 1425 $\times$ 550 $\times$ 950 (W $\times$ D $\times$ H) mm
17. Weight: About 175 kg

II. Sheet mould/Movable

1. Die head form: Hanger type
2. Die head material: 5CrNiMoA alloy steel
3. Die head hardness: HRC65

4. Flow channel surface: The inner mirror surface is chrome plated and polished, with no dead corners or marks treated
5. Mold lip adjustment: Manual full push elastic fine adjustment of upper lip, overall structure of lower lip
6. Sheet width: 150mm, can be specified
7. Sheet thickness: 0.5~1mm adjustable
8. Heater: Stainless steel heating rod, equipped with aviation socket
9. Heating power: 5 zones heating, 3KW per zone power
10. Support form: Equipped with horizontal adjustable support frame
11. Installation method: Horizontal installation with rollers

III. Calender unit

1. Temperature range: Room temperature~140 °C(Optional)
2. Mold temperature machine: Standard with tap water cooling, heating and chiller units(Optional)
3. Connection method: Built-in independent valve and rotary joint
4. Roller diameter: $\Phi 150\text{mm} \times L320\text{mm}$
5. Number of rollers: 3 in total, front, middle, and rear
6. Roller material: 38CrMoAl chrome molybdenum alloy material
7. Roller surface: HRC60 mirror chrome plating
8. Roller speed: 0~15 rpm servo speed regulation
9. Compression method: Manual or pneumatic fine adjustment compression
10. Combination method: Horizontally installed with the mold head

IV. Winding unit

1. Conveying rollers: Multi row aluminum hard oxygen roller combination
2. Traction rollers: Pneumatic clamping combination of rubber roller and mirror roller
3. Traction speed: 0 ~ 10 m/min servo speed regulation
4. Traction motor: 0.4KW servo motor
5. Tension type: Automatic control by tension controller
6. Main winding: automatic winding without paper core tension
7. Edge cutting device: Install pneumatic slide rail tool holder for edge material cutting
8. Waste edge winding: automatic winding without paper core tension
9. Electric control system: High performance PLC programmable 15-inch color LCD touch screen, multi screen display of man-machine interface, control all process parameters, such as temperature, speed, drive, traction, winding, pneumatic, braking, etc, interlock and intercontrol function.
10. Power supply: 3 ϕ , AC380V, 50Hz
11. Volume: 1300×500×1470 (W×D×H) mm
12. Weight: About 485Kg

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 grinding, 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. Flow distribution plate and filter mask can be installed to prevent non-molten particles and impurities, in other to improve the melt pressure to ensure plasticizing quality.
8. 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.

