

TWIN SCREW EXTRUDER/BENCHTOP TYPE/ EQUIPMENT CONTROL

The machine is suitable for small batch material mixing, plasticizing and dispersing, with functions of plasticizing homogeneity, color proofing, filling modification and others.

1. Output: 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: 1:25
6. Screw direction: Rodent type, parallel and same direction rotation
7. Screw speed: 0-300rpm frequency control
8. Screw material: The mandrel is made of 40CrNiMoA chromium-molybdenum alloy tool steel, and the threaded components are made of W6Mo5CR4V2 wear-resistant alloy steel, with a hardness of HRC60, with conveying blocks, mixing blocks, shearing blocks, banburying blocks, kneading blocks, countercurrent blocks, building block series components, and the mandrel is gradually splined and can be combined according to any material ratio to meet the needs of different extrusion processes
9. Barrel material: The 3-section barrel is made of 45# nitriding steel forgings, lined with a301 wear-resistant alloy sleeve, with hardness of HRC60, and treated by nitriding, quenching and tempering and ultra precision grinding, with surface roughness $R_a \leq 0.4 \mu\text{m}$. Wear and corrosion resistance
10. Combination method: The combination mode of the screw suite is building block spiral and the machine barrel is multi-section type, with self-cleaning function
11. Heating region: Charging barrel area has 3 aluminum heaters, 1 heater in the handpiece and the outside covered by safety fan cowl
12. Cooling system: 3 groups of multi wing fans with super static forced air cooling
13. Melt pressure: Dynisco high precision pressure sensor to detect the change of head pressure, interlocking control host running
14. Melt temperature: Dynisco high precision temperature sensor to monitor the melt temperature change
15. Feeding device: Adopting double screw metering type forced feeding, equipped with a horizontal mixer, the feeding is uniform and stable, and it is not easy to bridge. The feeding speed is adjustable by frequency conversion from 0-50rpm, and a sliding rail type fast discharge device is installed
16. Reduction gearbox: High speed heavy duty hard tooth surface gear transmission, gear reduction and torque distribution box is integration structure, internal transmission parts adopt imported high load bearing and oil seal, oil-immersed splash lubrication, smooth operation

17. Drive motor: Heavy duty gear reduction motor, constant torque power output control
 18. Safeguard: Safeguard functions include: Melt pressure is interlocked with the host for overpressure alarm protection; Melt temperature is interlocked with the host for startup and shutdown protection; Feeding and host interlocking for startup sequence protection.
 19. Electric control system: PID/LED/RKC intelligent digital temperature control, high precision digital instrument display all extrusion parameters including temperature control, driving, speed, pressure and interlocking and intercontrol function
 20. Power supply: 3 ϕ ,AC380V, 50Hz three-phase and five-line
 21. Dimension: 1390×820×1120(W×D×H)mm
 22. Weight: About 215KG
- Information: Manual and Product quality assurance card

Feature

1. The screw diameters are 16、20、25、30 (optional) , and the length diameter ratio is 10-30 times can be optional.
2. The material of the screw and the charging barrel is 40CrNiMo special tool steel which is hard and wear resistant and has been processed through nitriding, tempering, chromeplate and super-precision grinding.
3. The twin screw adopts the compound mode of build block, including the conveying building block of screw thread, kneading building block, shear building block and remilling etc. The screw suite consisting of these kneading blocks of different alternate angles and width can meet different shearing forces and mixing effects required by multi materials production and can carry out the craft scheduled combination in accordance with any material.
4. The twin screw component combination has the self clean function like mutual cleaning up etc. At high-speed rotating, reducing material wastes during the experimental process and saving clean-up time.
5. The charging barrel is heated by the cast copper heater which is simply maintained and easily installed and costs little heating time and high heat rate, ensuring the required temperature. The charging barrel adopts soft water circulation cooling with a good cooling effect.
6. The host machine transmission box and torque divider are put into one of tight structure, steady operation and large torque, appropriate for any output of power of high shear rate.
7. The handpiece is equipped with a quick converter and a high precision melt temperature and pressure transducer, the pressure of the detecting handpiece being accurate and reliable. The interlock joint control intelligent pressure control system has the function of automatic alarm and automatically-controlled stop.

