

Mini Scientific 16 mm Twin-Screw Extruder

We're pleased to announce the latest addition to our compounding lineup: the upgraded 16 mm Twin-Screw Extruder, also part of our mini line, designed to meet specialized laboratory needs and masterbatch producers with precision and versatility. With a maximum output of 5 kg/hour, it is perfect for handling a range of materials, including fine powders (starch-based polymers, PVA), heat-sensitive (PET, TPE), corrosive polymers (chlorinated polymers), and high-temperature plastic resins (PEEK, PI). Despite its compact size, this machine performs all the complex tasks of a full-scale extruder, making it a powerful tool for research and development.



Modular Customization for Versatile Use

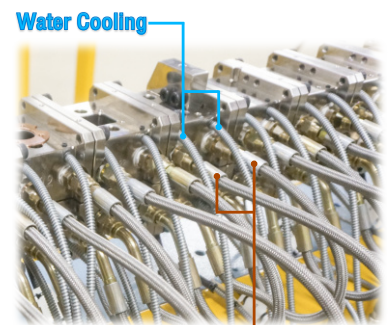
The modular design enables customization of barrel sections, positioning of side feeders, and adjustment of liquid dosing ports to meet specific formulation requirements.

Variable processing length configurations (up to L/D ratio of 60) support the addition of multiple feeders or dosing units as needed.



Advanced Thermal Regulation Mechanism

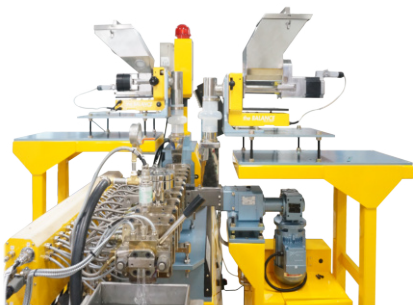
Featuring a built-in water cooling block and four cartridge heaters within a modular barrel, this design allows precise and rapid adjustments that improve temperature control and enable smooth transitions for processing sensitive materials.



Cartridge Heaters

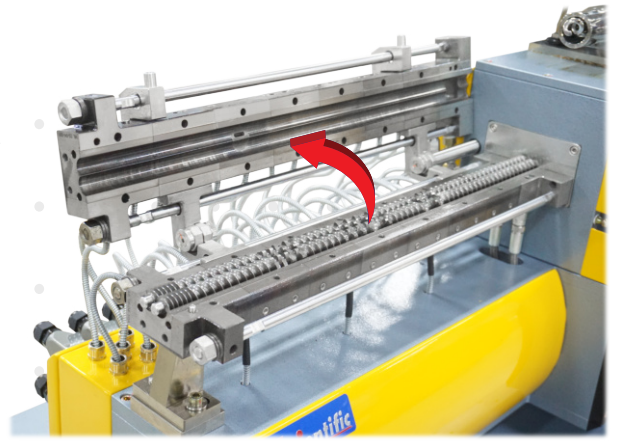
Compatible with Side Feeders and Liquid Dosing Options

The side feeder system enhances the versatility of mini twin-screw extruders by introducing additional materials during extrusion. Through its modular design, the LTE 16 mm integrates both side feeders and liquid dosing ports, adapting to various processing needs. Multiple side feeders can be positioned along the barrel based on the extruder's length. These feeders synchronize with the main feeder and liquid dosing ports, ensuring accurate mixing ratios and consistent uniformity in the extrudate, particularly for complex formulations.



Unique Clamshell Barrel Design

Inspired by our standard lab-line types, the 16 mm Twin-Screw Extruder features a clamshell barrel that allows easy access for cleaning and maintenance. Unlike other extruders on the market, this clamshell barrel design is exclusive to Labtech Engineering, making it a unique feature you won't find with any other manufacturer.



Flexible Screw and Barrel Materials:

The standard version is designed for processing commodity plastics but can be customized for more demanding materials in advanced applications beyond these polymers.

- Standard: High-Grade Steel Coated Nitride
- Option: High Wear-Resistant Steel
- Option: Medium Corrosion-Resistant Steel
- Option: High Corrosion and Heat-Resistant Steel

Safety-Enhanced Design:

Our machine is integrated with comprehensive safety systems to protect users and ensure consistent operation.

- Torque Limitation Device
- Emergency Stop Pushbutton
- Heat Shield Barrel Cover
- Temperature Monitoring and Interlock Systems
- Pressure Relief Mechanisms

Fully Computerized Control (Option):

- 10-inch touch screen interface for easy operation
- Control all system functions, including screw temperature, extruder screw speed, and hopper screw speed
- Torque and die pressure monitoring
- Control downstream units such as the water bath, air cooling conveyor, and pelletizer when connected



16 mm Twin-Screw Extruder Type LTE16

Screw Diameter	16 mm
L/D Ratio (min-max)	32 - 60
Mode of Operation	Co-Rotating Screws
Screw Speed Range	0 to 800 RPM
Maximum Barrel Temp (standard)	400°C
Motor Power	2.2 kW
Melt Pressure (alarm)	200 bar
Water Pressure (min) and Consumption	3 bar and 20 L/min
Approximate Maximum Output (LDPE)	5.5 kg/hr
Dimensions (length x height x width)	1824 mm x 1949 mm x 786 mm