

MC Xperience Line

Reliable Compounding | Cost-Effective R&D

Accessible R&D Solution

The MC Xperience Line is a **high-integrity laboratory micro-compounder designed to deliver professional R&D performance at a more accessible price point.**

By working with small material volumes, it reduces waste, cost, and development time while maintaining precise control and robust construction. Its compact design fits on a laboratory bench or inside a standard fume hood, eliminating the need for additional infrastructure.

Precision & Control

- **Reliable Performance:** Enables stable processing of challenging materials, ensuring consistent mixing and reliable results.
- **Advanced Drive System:** Ensures precise shear rate control with continuous torque monitoring for consistent, and data-driven results.
- **Excellent Mixing:** Designed for excellent dispersion and uniform distribution, delivering highly reproducible material performance.

Flexible Workflow

- **Processing Modes:** Batch compounding and continuous extrusion.
- **Integrated Feeding:** Optional single continuous pellet feeder enables accurate and automated dosing for continuous extrusion processes, ensuring stable material throughput and consistent dimensional quality.
- **Direct Post-Processing & Shaping:** Compatible with Xplore's post-die add-ons, such as injection moulding, cast film extrusion, fiber spinning, impregnation, or pelletizing.

System Capabilities

- **Stable Feeding & Residence Time:** A water-cooled top hopper and precise temperature zones come as standard to prevent premature melting and ensure stable residence time.
- **Durability:** Features abrasion-resistant barrel and robust housing for longevity. Suitable for processing a wide range of polymers, from PE to high-performance materials such as PEEK or PPS.
- **Smart Upscaling:** Incorporates proprietary rheological software capable of producing in-line rheological data, providing enhanced understanding of structure evolution during compounding and facilitating reliable scale-up to industrial/pilot extrusion systems.
- **Minimized Cleaning Downtime:** An optional cooling jacket enables rapid barrel cooling within a short time as part of Xplore's integrated cleaning cycle, facilitating reliable cleaning procedures.
- **Atmosphere Control:** An optional inert gas supply prevents thermo-oxidative degradation, preserving material integrity during high-temperature processing.



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more info

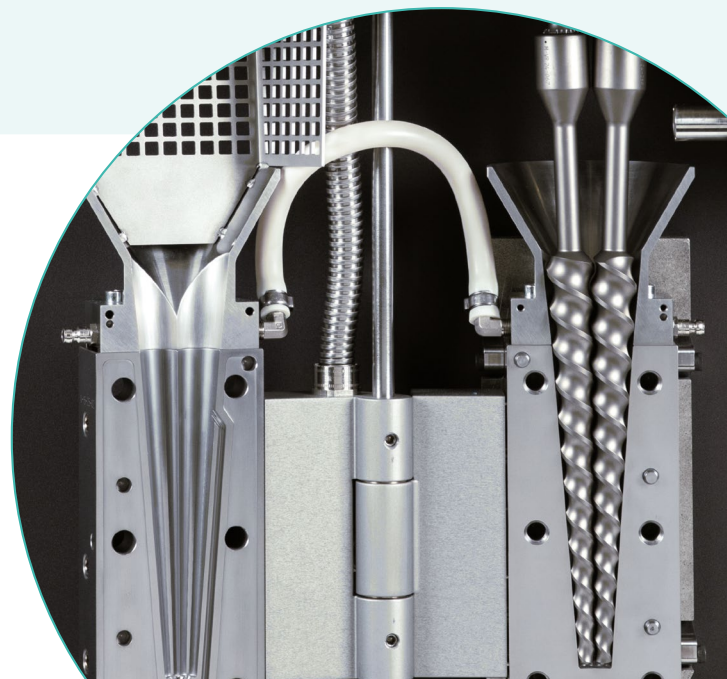
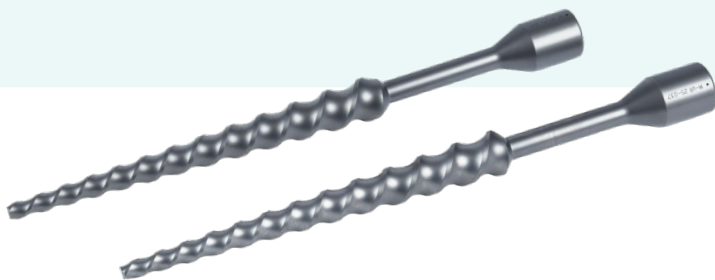


Water-cooled jacket



Technical Specifications

- Batch volume: 5 or 15 ml (custom volumes possible)
- Recirculation channel volume: 1.7 ml or 2.7 ml, respectively
- Continuous or batch operation
- Mixing screws: Fully intermeshing, detachable, nitrated coating with a hardness of 1100 ± 100 HV
- Barrel: Abrasion-resistant, hardness 53 ± 1 HRC, coating hardness 2000 ± 100 HV
- Maximum melt torque (optional):
 - Standard 10 Nm (optional 15 Nm) for MCX 5
 - Standard 15 Nm (optional 20 Nm) for MCX 15
- Maximum pressure: 600 bar
- Gearbox: Standard co-rotating (optional counter-rotation)
- Screw speed: 1–425 RPM, continuously variable with 1 RPM incremental steps
- Maximum operating temperature: Standard 350°C (optional 425°C)
- Temperature control and heating: Front and rear barrel with 3 heating zones, 6 heating cartridges, 8 thermocouples
- Heating time (80°C → 240°C): <10 min
- Cooling time (240°C → 80°C) with optional water-cooling jacket: <15 min
- Operation control: Integrated 10-inch touchscreen or USB interface
- Software: Data acquisition and instrument control (rheological software available as a future upgrade)
- Main drive power: 1350 W
- Power supply:
 - 380–415 Vac / 50–60 Hz, 3 phase, 16 A
 - 190–208 Vac / 50–60 Hz, 3 phase, 20 A
- Utility connections:
 - Cooling water inlet/outlet: Min. 5 l/min, 0–6 bar (chiller connectivity is also possible)
 - Optional purge gas inlet: N₂, Ar, etc., with 0–6 bar inlet pressure
- Dimensions (H × W × D): 93 cm × 60 cm × 45 cm
- Weight: 125 kg



Contact us at
xplore-together.com