



SINGLE-SCREW EXTRUSION TORQUE RHEOMETER

QualiTR-SCE Series

Single-Screw Extrusion Torque Rheometer

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Series Single-Screw Extrusion Torque Rheometer is a powerful system designed to simulate real-world polymer extrusion processes in a controlled laboratory environment.

By combining the QualiTR-300 Main Drive Unit with a modular single-screw extrusion attachment, this system allows for precise analysis of material flow, extrusion behavior, and processing stability.

This versatile extrusion torque rheometer is ideal for R&D, formulation development, process optimization, and quality control in industries such as plastics, cable manufacturing, packaging, and polymer composites.

Available Models:

- QualiTR-SCE20
- QualiTR-SCE25
- QualiTR-SCE30



FEATURES/ADVANTAGES

Highly Customizable Extrusion Setup

Featuring interchangeable screw diameters (20mm, 25mm, and 30mm), standard length-to-diameter (L/D) ratios of 25:1 with additional configurations, and various compression ratios (2.4:1 and 3.6:1). This flexibility allows users to accurately simulate diverse processing scenarios and material behaviors during extrusion.

Wide Range of Mold Compatibility

The QualiTR-SCE offers extensive compatibility with various extrusion molds, supporting applications like pipe extrusion, sheet and film production, wire formation, and cable insulation coating. This versatility enables effective material testing and product simulation in research, development, and pre-production settings.

Comprehensive Testing Applications

Designed for advanced extrusion studies, the system supports simulation of thermoplastics and elastomers, material formulation comparisons, melt pressure and rheological flow analysis, and development of high-performance products such as films, wires, cables, and micro-extruded components. It is an essential tool for polymer innovation, quality control, and academic research.

Flexible Modular System Design

The flexible modular system design allows for the addition of auxiliary components, enabling users to simulate real-world manufacturing processes in a lab. This enhances test accuracy, repeatability, and relevance for scale-up or validation.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DETAILS
Screw Diameter Options	20 mm / 25 mm / 30 mm
Length-to-Diameter Ratio	Standard 25:1 (customizable on request)
Compression Ratio	2.4:1 / 3.6:1 (customizable)
Screw Speed	Up to 200 rpm
Maximum Temperature	350°C
Heating Method	Four-zone electric heating
Pressure Measurement Range	0-100 Mpa



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Connect with us

Contact our **QualiTeam** today to find out how we can help your organization **select the most suitable testing solution** for your application, requirements, and budget.

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