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QUALITEST™

MELT FLOW TESTER - MELT FLOW INDEXER - MFI - EXTRUSION PLASTOMETER



STANDARDS

ASTM D1238

ISO 1133

Melt Flow Tester - Melt Flow Indexer - MFI - Extrusion Plastometer

QualiFi™ series is a precision Melt Flow Indexer or well known as extrusion plastometer line designed for laboratories and quality control environments to determine the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastic resins. Operating on the extrusion plastometer principle defined by ISO 1133 and ASTM D1238, these instruments measure the flow properties of polymers by forcing molten material through a standard die under a defined dead-weight load.

Capable of testing across a wide temperature control range of 50-450°C, a QualiFi™ Melt Flow Index Tester can evaluate everything from commodity plastics to high-temperature engineering resins. The series provides measurement capabilities across a range of 0.1-100 g/10min for MFR and an extended range of 0.01-3000 cm³/10min for MVR, delivering highly accurate data on material viscosity and flowability.

Application

A reliable Melt Flow Tester is critical for characterizing material performance across various B2B laboratory and industrial environments. Key applications for these instruments include:

- **Plastics Raw Material Production:** Conducting incoming and outgoing quality control testing of polyolefin, specialty resin batches, and engineering plastics against established MFR/MVR specification limits.
- **Petrochemical Industry:** Performing product QualiFi™ cation and process monitoring of polymer melts sourced from compounding lines and polymerization reactors.
- **Polymer Research & Development:** Screening new polymer formulations, additive systems, and blends for MFR, MVR, and melt density during material development.

- **Plastics Product Manufacturing:** Verifying production lots and conducting incoming material inspections for extruded, injection-molded, and blow-molded plastic components.
- **Pharmaceutical & Medical Grade Testing:** Characterizing the flow properties of medical-grade thermoplastics for material specification compliance and regulatory documentation.
- **Commodity Inspection & Certification:** Executing regulatory compliance verification and third-party laboratory testing against national and international polymer standards.

Product Table Comparison

Feature	QualiFi™ 2000 Series	QualiFi™ 5000	QualiFi™ 6000SA	QualiFi™ 6000A
Best For	Entry-level / Low-cost manual testing	Standard Labs / Compact automation	High-Frequency QC / Operator safety	Flagship R&D / Max throughput
Primary Method	MFR (2000A and 2000AB) / MVR (2000AB)	MFR & MVR (A/B)	MFR & MVR (A/B)	MFR & MVR (A/B)
Loading Mode	Manual	Automatic Weight Lifting	Auto Lifting + Pneumatic Compaction	Full Software-Controlled Variable Load
Temp. Range	100 - 450 °C	50 - 450 °C	50 - 450 °C	50 - 450 °C
Form Factor	Benchtop	Compact Benchtop	Floor-standing	Floor-standing
Cleaning	Manual	Manual	Pneumatic (Air-assisted)	Pneumatic (Air-assisted)
Timer Res.	0.01 s	0.001 s	0.001 s	0.0005 s

Why Choose QualiFi™ for your Melt Flow Indexer?

- **World-Class Measurement Accuracy:** Every QualiFi™ Melt Flow Index Tester is manufactured with core components (oven, die, and piston) made from corrosion-resistant, low-thermal-expansion metal alloys that fully satisfy ISO 1133 hardness and dimensional requirements.

- International Certification & Proficiency: The entire series delivers reliable performance backed by CE certification (EN 61010-1, EN 61326-1) and has achieved consecutive satisfactory results in CNAS interlaboratory proficiency testing, maintaining Z-scores between -0.07 and +0.11.
- Advanced Thermal Management: An intelligent dual PID temperature control algorithm ensures fast, overshoot-free heating. The system maintains a temperature gradient of less than $\pm 0.1^{\circ}\text{C}$ along the barrel wall and achieves a rapid post-loading recovery time of under 2 minutes.
- Ergonomic and Durable Design: The instruments feature an innovative 15° body tilt and rotating upper assembly for comfortable loading, observation, and cleaning. The all-aluminum exterior utilizes advanced surface treatment technology to provide strong resistance to salt spray in industrial environments.
- Seamless Data Management: Streamline your workflow with 8 customizable test plans, automatic effective test interval identification, and built-in USB storage capable of saving 5,000 groups of test results. The included DMS data management software enables easy export and formatted report generation for all your melt flow index data.



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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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