

INNOVATIVE TECHNOLOGIES

Extrusion Plastometer MFI Melt Flow Tester / Indexer

ToronMFI-V



TORONTECH



Extrusion Plastometer – MFI Melt Flow Tester / Indexer

The ToronMFI-V Extrusion Plastometer – MFI Melt Flow Tester / Indexer is a compact, cost-effective tabletop device engineered for **precision measurement** of **melt mass-flow rate (MFR)** and **melt volume-flow rate (MVR)** in thermoplastic materials such as granules and film strips.

This instrument plays a critical role in quality control during thermoplastic manufacturing. It enables the evaluation of materials with varying filler content and allows direct comparison between filled and unfilled thermoplastics. MFR values can be accurately calculated from MVR data when the melt density at the test temperature and pressure is known.

The system supports simultaneous capture of multiple parameters in a single test, including MFR, MVR, density, apparent viscosity, shear stress, and shear rate. Designed to meet and exceed both national and international standards, the ToronMFI-V complies with **ASTM D1238** and **ISO 1133**, ensuring reliable performance for melt flow rate testing across global applications.

FEATURES/ADVANTAGES

➤ **Smart and User-Friendly Interface**

Operated via a tablet computer, the system offers intuitive control with built-in software for configuring test parameters, managing temperature, performing automatic cuts, and exporting data.

➤ **Call-in-One Multi-Parameter Testing**

Operated via a tablet computer, the system offers intuitive control with built-in software for configuring test parameters, managing temperature, performing automatic cuts, and exporting data. .Simultaneously measures MFR, MVR, density, apparent viscosity, shear stress, and shear rate in a single test—

➤ **Smart and User-Friendly Interface**

Operated via a tablet computer, the system offers intuitive control with built-in software for configuring test parameters, managing temperature, performing automatic cuts, and exporting data.

➤ **Precision and Accuracy**

A microprocessor ensures tight temperature control within $\pm 0.5^{\circ}\text{C}$, while the automated scraper delivers high-precision cutting with timing accuracy of ± 0.1 second.

➤ **Fast Heating and Reliable Safety**

Rapid heating with minimal overshoot allows quick return to set temperatures. Integrated safety features include over-temperature protection, audible alerts, and recovery time monitoring.

➤ **Smart and User-Friendly Interface**

Operated via a tablet computer, the system offers intuitive control with built-in software for configuring test parameters, managing temperature, performing automatic cuts, and exporting data.

TECHNICAL SPECIFICATIONS


SPECIFICATIONS	DETAILS
Model	ToronMFI-V
Operating Temperature	50°C to 450°C
Temperature Control Accuracy	≤0.2°C
Temperature Display Resolution	0.1°C
Control Mode	Tablet Computer
MVR Displacement Accuracy	0.02mm
Temperature Recovery Time	< 4 min
Voltage	220V 50Hz (110V is also available)
Communication Port	RS485 / USB
Temperature Measuring Points	2
Measurement Range	(0.1-100)g/10min and (0.01-350)cm³/10min
STANDAR CONFIGURATION	
Piston Rod	
Die	
Die Cleaning Tool	
Cut-Off Knife	
Cylinder Cleaning Tool	
Sample Charging Tool	
Lever Meter	
Cylinder	
Weights: up to 21.6kg (47.6 lbs)	

Test Record				
Test Number: T0002		Standard: ASTM		
From ID: -		From:		
Produce:		Specimen Name: -		
Material Type:		Batch number: -		
Sample No.:		Preparation: -		
Test environment: 23℃		Pretreatment: -		
Delivery Date: 2023-07-15		Test Date: 2023-07-15		
Equipment No.:		Model: -		
Checker: -		Work Orders: -		
Remark: -				
Load: 2.160 Kg		Die type: 8*2.095		
Temp.: 190.0		Times: 4		
Time interval: 30				
	Brands No	Batch Number	Add quality	Density
-1	PET	111111	3	0.738
	MFR	MFR	Shear stress	Shear rate
1	39.877	29.429	19360.3 Pa	73.624 1/s
	Apparent viscosity	M W		
1	262.962 Pa.s	16772.7		



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