



TORONTECH

EXTRUSION PLASTOMETER - MFI MELT FLOW TESTER / INDEXER - TORONMFI™ V



Extrusion Plastometer – MFI Melt Flow Tester / Indexer - ToronMFI-V is a compact, cost-effective tabletop instrument designed to measure the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of various thermoplastic materials in forms such as granules or film strips. It's especially valuable for quality control testing in thermoplastic production.

MVR is particularly helpful when analyzing materials with varying filler content, as well as when comparing filled and unfilled thermoplastics. MFR values can also be derived from MVR data if the melt density at the testing temperature and pressure is known.

The system allows for multiple parameters to be captured in a single test, including MFR, MVR, density, apparent viscosity, shear stress, and shear rate.

FEATURES

- Capture multiple results from a single test, including MFR, MVR, density, apparent viscosity, shear stress, and shear rate.
- The MFI unit is operated via a tablet computer for convenience and precision.
- The integrated software supports parameter configuration, temperature control, cutting, calibration, timing, result display (MFR/MVR), melt density calculation, as well as data retrieval and export.
- To enhance security and prevent accidental changes, key functions require password confirmation.
- Features a rapid heating system with minimal overshoot and high temperature stability. The system quickly returns to the set testing temperature and includes safety features such as over-temperature protection, voice prompts for temperature status, and recovery time alerts.

High Accuracy

A built-in microprocessor ensures precise temperature control within $\pm 0.5^{\circ}\text{C}$ and allows for quick ramp-up to the target temperature. The integrated scraper mechanism automatically cuts the extruded material at preset intervals, accurate to

within ± 0.1 second.

Easy to Operate

Measuring melt flow rate is now more straightforward and cost-effective than ever. The tester comes fully equipped with all necessary accessories and weights for operation and upkeep. No additional purchases required—just plug it in and start testing.

THEORY & METHOD

Extrusion Plastometer – MFI Melt Flow Tester / Indexer - ToronMFI-V exceeds all national and international standards for melt flow rate testing, including ASTM D1238, ISO 1133.

TECHNICAL SPECIFICATIONS

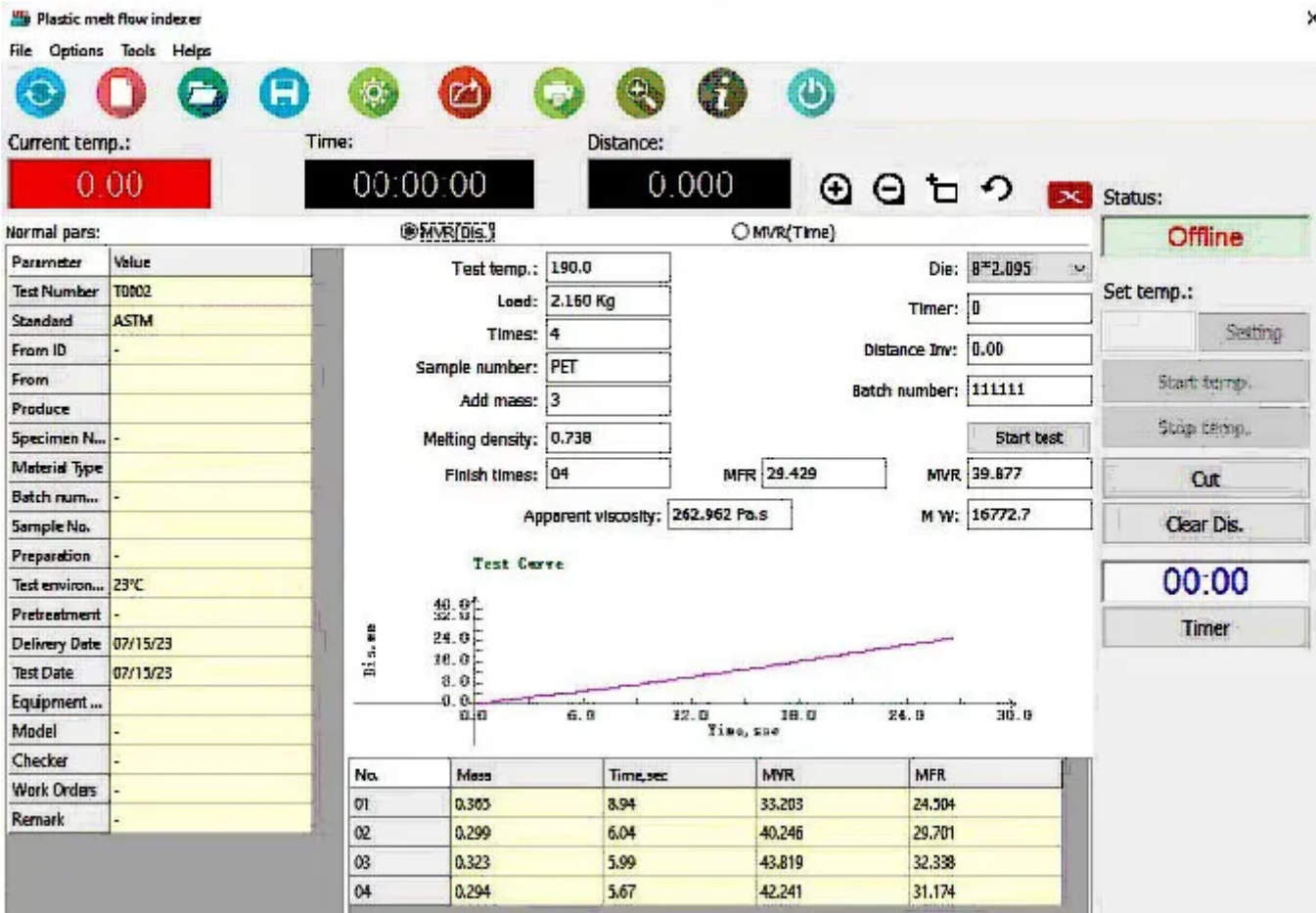
Model	ToronMFI-V
Operating temperature	50°C to 450°C
Temperature control accuracy	$\leq 0.2^{\circ}\text{C}$
Temperature display resolution	0.1°C
Control mode	Tablet computer
MVR displacement accuracy	0.02mm
Temperature recovery time	$\square$ 4 min
Voltage	220V 50Hz (110V is also available)

Model	ToronMFI-V
Communication port	RS485 / USB
Temperature measuring points	2
Measurement range	(0.1-100)g/10min and (0.01-350)cm ³ /10min

Standard configuration

1. Piston Rod
2. Die
3. Die Cleaning Tool
4. Cut-off Knife
5. Cylinder Cleaning Tool
6. Sample Charging Tool
7. Lever Meter
9. Cylinder
10. Weights (up to 21.6kg)

Image



Test Report

Image

Test Record

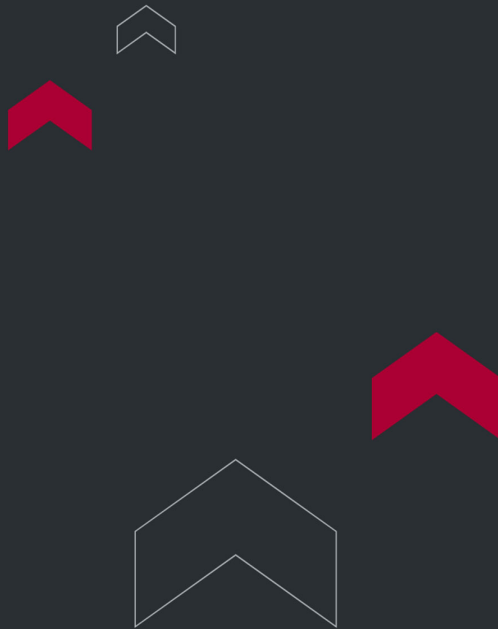
Test Number: T0002	Standard: ASTM
From ID: -	From:
Produce:	Specimen Name: -
Material Type:	Batch number: -
Sample No.:	Preparation: -
Test environment: 23℃	Pretreatment: -
Delivery Date: 2023-07-15	Test Date: 2023-07-15
Equipment No.:	Model: -
Checker: -	Work Orders: -
Remark: -	

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

	MVR	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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