

POLYMER TESTING

Melt Flow Index Tester

Model TXL-GEN-013

MFR + MVR

ISO 1133-1

ASTM D1238

3 models: ECO · AL · PRO

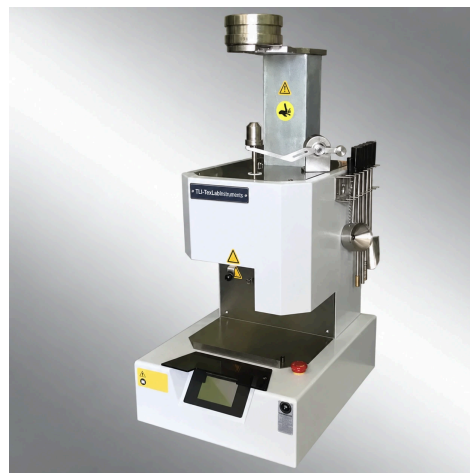
50–450 °C

DESCRIPTION

Measures the melt flow rate of thermoplastics. A weighed sample is melted in the heated barrel and extruded through a standard die under a set temperature and load; the mass extruded in a given time gives the melt mass-flow rate (MFR, g/10 min). A piston-travel encoder also gives the melt volume-flow rate (MVR, cm³/10 min).

Used for goods-inwards control of polymer granulate, batch-to-batch quality assurance and raw material control for fibre, film and composite production. Samples of the same polymer are compared under identical temperature and load.

Three models: ECO with manual weight loading, AL with automatic weight loading, and PRO with automatic weight loading and an integrated automatic weighing module.



TXL-GEN-013

TECHNICAL SPECIFICATIONS

Test methods	ISO 1133-1 Method A and B; ASTM D1238 Procedure A and B
Results	MFR in g/10 min; MVR in cm ³ /10 min (piston-travel encoder)
Temperature range	50 °C to 450 °C
Total test loads (piston included)	0.325 / 1.2 / 2.16 / 3.8 / 5 / 10 / 21.6 kg
Control panel	4.3-inch touchscreen PLC/HMI
Extrudate cutting	Automatic cutter, standard on all models

MODEL	ECO	AL	PRO
Weight loading	Manual	Automatic	Automatic
Flow-stop plug with electromagnetic release	Optional	Standard	Standard
Integrated automatic weighing	– (external balance for MFR)	– (external balance for MFR)	Standard

INSTALLATION DATA (APPROXIMATE)

Electrical supply	Approx. 220–240 V AC, 50/60 Hz, single phase
Connected load	Approx. 500–1,200 W
Dimensions (W × D × H)	Approx. 550 × 450 × 800 mm
Net / gross weight	Approx. 40–70 kg / 69–113 kg
Site requirements	Suitable ventilation or fume exhaust

Approximate values are engineering estimates for planning; final values are confirmed with the order configuration and packing list.

STANDARDS

Test methods and apparatus requirements

The apparatus requirements of each method, as summarised from the standards. Test temperature and load are set by the material standard of the polymer tested.

STANDARD	APPLICATION	APPARATUS REQUIREMENTS	METHOD COVERED
ISO 1133-1	Melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics	Cylinder bore 9.550 ± 0.007 mm; piston head 9.474 ± 0.007 mm $\times$ 6.35 ± 0.10 mm; standard die 8.000 ± 0.025 mm long, bore 2.095 ± 0.005 mm; temperature setting step ≤ 0.1 °C	✓
ASTM D1238	Melt flow rates of thermoplastics by extrusion plastometer	Combined piston and load mass within ± 0.5 % of the selected load; Procedure A timer accuracy 0.1 s; extrudate weighed on a balance reading to 0.001 g	✓

Always apply the current edition of the standard. Die, piston and cylinder dimensions are those of the extrusion assembly, not of the complete instrument.

TYPICAL TEST SEQUENCE

- **Heat:** bring the barrel to the test temperature of the polymer
- **Charge:** load the weighed sample and compact it
- **Load:** apply the specified load (manual on ECO, automatic on AL and PRO)
- **Cut & weigh:** automatic cutting at fixed intervals; weighing on an external balance, or integrated on PRO
- **Report:** MFR (g/10 min) and MVR (cm³/10 min) with temperature and load

SUPPLY AND SERVICE

- One (1) year warranty
- Operating manual and technical documentation
- Standard supply: MFR/MVR measurement, encoder, 4.3-inch PLC/HMI, automatic cutter and a weight set for the seven total test loads
- Spare dies, pistons and weights; calibration and service from Istanbul

APPLICATIONS

- Goods-inwards control of polymer granulate
- Batch-to-batch consistency in production
- Raw material control for fibre, film and composite production
- Recycled polymer evaluation

WHY TLI-TEXLABINSTRUMENTS

- Built in our own Istanbul workshop
- CE marked instruments
- ISO 9001 / 14001 / 45001 certified manufacturer

Datasheet and quotation

Tell us the polymers and the test conditions (temperature / load) you apply.

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