TXL-MBR-002 / 27 October 2026 · One-year manufacturer warranty

Water Vapour Transmission Rate Tester (WVTR-01A)

Single-station compact automatic gravimetric water vapour transmission rate tester. A single fixed test cup, built-in 0.1 mg weighing system and PC-based process control run long WVTR tests with minimal operator intervention. Wet Cup and Dry Cup methods to ASTM E96/E96M.

Model technical data

1	Reference standard: ASTM E96/E96M — gravimetric water vapour transmission rate.
2	Single-station benchtop design; no rotary table or cup transport mechanism.
3	Common test cup with Ø76 mm clear opening for Wet Cup and Dry Cup; 45.36 cm² test area.
4	Specimen: approx. Ø90 mm cut.
5	Test environment: controlled 20-50 °C and 40-95% RH.
6	Built-in balance with 0.1 mg readability; automatic mass tracking without opening the chamber.
7	The balance body sits in a dry lower service compartment, isolated from the humid test volume.
8	Mass-time curve, linear regression, WVTR calculation and reporting.

Physical specifications and utilities

Electrical supply	Approx. 220–240 V AC, 50/60 Hz, single phase; build-dependent.
Power / connected load	Approx. 1500–3000 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 800 × 750 × 1300 mm (W × D × H).
Instrument weight	Approx. 90–160 kg net.
Gross / shipping weight	Approx. 124–225 kg gross; estimated packing allowance.
Lab requirements	Ventilated installation; purified water and drain for humidification options. Separate conditioning plant depends on order scope.

Dimension order and approximate values are stated in each row. Packaging data are separate from instrument dimensions and net mass. Approx. rows are preliminary engineering estimates based on comparable equipment and function/capacity; they are not verified manufacturing measurements or standard requirements. Installation and shipment are finalised against the approved drawing and nameplate. Estimate scope: base product / one unit; external computer, bench and auxiliary plant excluded.

Specifications, dimensions, and power requirements are approximate and subject to change without prior notice for continuous design improvements.

Product technical specifications and images may vary according to manufacturing conditions and applicable standards.

Test and configuration

Measured output / function	Water vapour transmission; g/(m²·day) or method-specific index
Parameters selected for the method	Cup area, temperature, humidity, sealing and weighing interval
Verification points	Balance, temperature-humidity, cup area and blank test

Control and recording specification

Method-specific software and recording requirements follow. Delivered software modules are defined by the order scope.

• Method code and edition, specimen ID, operator and selected test parameters are linked to the record.

• For WVTR, mass-time slope / effective area; cup method, time unit and temperature-humidity conditions are stored with the result.

• Raw measurements, units, valid/invalid test flags and the reported result remain traceable.

• Calculations are checked against known inputs and an independent calculation; sensor channels are checked against calibration values.

Related test methods

ASTM E96

Listed methods are application references. Suitability is established by assessing hardware, method edition and calibration together.

Test parameters for the reviewed method

The values below were reviewed in selected clauses of the stated source edition. They are not a declaration of equivalence to a later edition or independent instrument verification.

ASTM E96/E96M-16 / 6.1-6.3, 11-13

1	Cup method: opening at least 3000 mm²; air velocity over the specimen 0.02-0.3 m/s. Balance sensitive to less than 1% of the steady-period mass change. Calculate WVTR = mass-time slope / area from at least six suitable steady points; equivalence to edition 24a is not assumed.