

TXL-MBR-007 / 28 October 2026 · One-year manufacturer warranty

# Oxygen Transmission Rate Tester (OTR-01)

A single test-cell instrument that determines the oxygen transmission rate (OTR) of packaging films, laminates and coated flexible materials. 50 cm<sup>2</sup> test area per cell (approximately Ø79.8 mm aperture), 7-inch touchscreen PLC/HMI; results in cm<sup>3</sup>/(m<sup>2</sup>·day), reported with test temperature and relative humidity. For material comparison, packaging development and quality control in food and pharmaceutical packaging. ASTM D3985, ASTM F1927 and ISO 15105-2 methods.



## Model technical data

|   |                                                                                                                               |
|---|-------------------------------------------------------------------------------------------------------------------------------|
| 1 | Configuration: 1 test cell; the same product family offers 1-, 2- and 3-cell models.                                          |
| 2 | Interface: 7-inch touchscreen PLC/HMI.                                                                                        |
| 3 | Sample format: flat films, laminates and coated flexible materials.                                                           |
| 4 | Test area: 50 cm <sup>2</sup> per cell; approximately Ø79.8 mm aperture.                                                      |
| 5 | Reported quantity: oxygen transmission rate (OTR), cm <sup>3</sup> /(m <sup>2</sup> ·day), reported with the test conditions. |
| 6 | Method references: ASTM D3985-24, ASTM F1927-20, ISO 15105-2:2025.                                                            |
| 7 | Enclosure finish: RAL 7016 / RAL 7035.                                                                                        |

## Physical specifications and utilities

|                               |                                                                                                                                                                                                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical supply             | Approx. 220–240 V AC, 50/60 Hz, single phase; verify on the delivery nameplate.                                                                                                                           |
| Power / connected load        | Approx. 300–800 W connected load for preliminary planning.                                                                                                                                                |
| Overall instrument dimensions | Approx. 600 × 450 × 300 mm (W × D × H).                                                                                                                                                                   |
| Instrument weight             | Approx. 25–40 kg net.                                                                                                                                                                                     |
| Gross / shipping weight       | Approx. 40–65 kg gross including packing allowance; not a weighed shipment value.                                                                                                                         |
| Lab requirements              | Regulated oxygen test gas and nitrogen carrier gas supply for the coulometric method; stable room temperature and ventilated installation. Gas purity and flow are stated in the technical specification. |

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; test gas cylinders, regulators, 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         | Oxygen transmission rate (OTR); cm³/(m²·day)                                  |
| Parameters selected for the method | Test temperature, relative humidity, specimen preparation and number of cells |
| Verification points                | Cell area, temperature-humidity, sealing and reference film                   |

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.
- The OTR result is stored with test temperature, relative humidity and specimen preparation conditions.
- Raw measurements, units, valid/invalid test flags and the reported result remain traceable.

Related test methods

ASTM D3985 · ASTM F1927 · ISO 15105-2

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