

TXL-YAN-013 / 27 October 2026 · One-year manufacturer warranty

Non-Combustibility Test Furnace for Building Materials

Evaluates temperature rise, mass loss and sustained flaming in a heated tube furnace to EN ISO 1182:2020. Four type K thermocouples (two furnace, specimen surface and specimen centre) are included as standard and each channel is recorded every 0.5 s. A 7-inch touchscreen and PC software are standard. For R&D and internal quality control of mineral and fiberglass-based products, including membrane formulations with binders, treatments and pigments. Test method used for EN 13501-1 Class A1 / A2 classification.



Model technical data

1	Method reference: EN ISO 1182:2020 non-combustibility test.
2	Nominal furnace temperature 750 °C.
3	Nominal specimen size Ø45 × 50 mm; preparation according to the test method.
4	Temperature channels: 4 included — two furnace, one specimen surface and one specimen centre.
5	Thermocouples: Type K, Class 1; 1.5 mm sheath; insulated hot junction.
6	Recording interval: 0.5 s per channel (2 Hz); live temperature curves.
7	Reported quantities: temperature rise ΔT , mass loss Δm and flaming duration t_f .
8	Operator interface: 7-inch touchscreen PLC/HMI with separate control console.
9	PC software: data acquisition, result evaluation and reporting; included as standard. Computer hardware is optional and quoted separately.
10	Mechanical arrangement: tube furnace, manual specimen lift, stabilising cone and draft screen.
11	Protective functions: independent overtemperature cutout and emergency stop.
12	Main assembly: furnace, stand, airflow cone and draft screen; specimen holder, manual guide and viewing mirror; four thermocouples and measurement electronics; 7-inch touchscreen console and PC software.
13	Accessories & services: furnace profile verification and calibration tools; external balance, conditioning oven and desiccator; spare specimen holders, thermocouples and heater; installation, operator training and calibration services.
14	Mass loss is determined by weighing before and after exposure; sustained flaming is observed and timed by the operator.
15	Other accessories and services are specified in the quotation.

Physical specifications and utilities

Electrical supply	Approx. 380–415 V AC, 50 Hz, three phase; 60 Hz is a separate build option.
Power / connected load	Approx. 3500–6000 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 900 × 800 × 1600 mm (W × D × H).
Instrument weight	Approx. 100–180 kg net.
Gross / shipping weight	Approx. 135–250 kg gross; estimated packing allowance.
Lab requirements	Suitable ventilation / process exhaust; external fan and duct loads are excluded from this preliminary estimate.

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	Temperature rise, mass loss and sustained flaming
Parameters selected for the method	Specimen geometry, furnace conditions and temperature channels
Verification points	Thermocouples, temperature profile, balance and timing

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.
- Each temperature channel, initial/final mass and duration of sustained flaming are recorded separately.
- 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

ISO 1182

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.

ISO 1182:2020 — selected apparatus clauses / 4.2.1, 4.3.1, 4.4

1	2020 apparatus: furnace tube height 150 ± 1 mm, internal diameter 75 ± 1 mm, wall 10 ± 1 mm. Normal specimen holder 15 ± 2 g, not instrument mass. Two furnace thermocouples, K/N class 1; junctions 10 ± 0.5 mm from wall. Annex C specimen thermocouples are assessed separately.
---	---