

TXL-YAN-001 / 27 October 2026 · One-year manufacturer warranty

Vertical Flame Spread Tester

Testing ignition and flame spread of vertically mounted textile specimens. Configure specimen holder and timing channels for the selected test method.



Model technical data

1	Different test methods can be loaded via the touch-screen control unit and computer connection.
2	With dedicated fixtures, flammability tests on toys, curtains, covers and upholstery are also possible.

Physical specifications and utilities

Electrical supply	Manufacturer PW-VFT-01 brochure: 230 V AC, 50/60 Hz. Confirm phase, total connected load and protection rating against the order wiring diagram/nameplate.
Power / connected load	Approx. 50–200 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 900 × 700 × 1500 mm (W × D × H).
Instrument weight	Approx. 50–100 kg net.
Gross / shipping weight	Approx. 80–150 kg gross; estimated packing allowance.
Gas requirements	The ASTM configuration requires a methane source (99% purity) and external hood; avoid drafts at the specimen. Select the gas/burner set for the method; accessories for other methods are not assumed included.
Lab requirements	Method-specified test gas, regulator and exhaust / fume hood; gas type and flow follow the selected method and burner.

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	Afterflame, afterglow and damaged length
Parameters selected for the method	Vertical holder, method-specific burner and flame application time
Verification points	Burner/gas flow, geometry 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.
- The calculation and endpoint are defined by the selected method edition; instrument signals and operator assessments are kept distinct.
- 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.
- The BS 5438 recipe records edition/amendment, face/bottom-edge ignition, conditioning/test-start times, flame application, afterflame and afterglow separately. Deleted tests are not selectable as active recipes of this edition; dedicated fixtures and delivered modules depend on order scope.

Related test methods

ASTM D6413 · BS 5438 · ISO 15025 · ISO 6940 · ISO 6941

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

Historical method references: BS 5438

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.

TS EN ISO 15025:2006 / 6.5-6.6

1	specimen template 200 × 160 mm; flame-application timer adjustable in 1 s steps with accuracy 0.2 s or better. Afterflame and afterglow are measured on separate channels with readability 0.2 s or better.
ASTM D6413-99 / 6.2-6.8, 8.2	
1	Vertical-flame method: burner bore 10 mm, length 76 ± 6 mm; methane purity 99% and inlet pressure 17.2 ± 1.7 kPa. Flame application 12 ± 0.2 s; burning times measured with 0.2 s readability.
ISO 6941:2003 / TS EN ISO 6941:2007 translation / 5.1, 5.4, 5.6, 8	
1	Specimen size is 560 by 170 mm with ±2 mm cutting tolerance. Provide separate timing channels for three marker threads, readable to 0.2 seconds or better and stopping automatically when each thread breaks. Record ignition and flame-spread procedures distinctly.
ISO 6940:2004 / 5.1-5.6	
1	Vertical ease-of-ignition method uses a holder with 190 × 70 mm pin spacing and a 200 × 80 mm specimen template. Flame application adjusts in 1 s steps with error no greater than 0.2 s; afterflame timing 0.2 s or better. Select the propane/butane setup separately from methane ASTM fixtures.

BS 5438:1989 + Amd.6509:1990 + Amd.8308:1994 / 3.1–3.2, 4, 5.1–5.4.2, Figures 1–2; preview ends printed p.4

1	1989 + Amd.1/2 edition: condition at least 24 h at 20 ± 5 °C and $65 \pm 5\%$ RH; start each test within 2 min of removal from conditioning or sealed storage. Test at $15\text{--}30$ °C, $55 \pm 20\%$ RH; initial air movement <0.2 m/s. Restore the test atmosphere after smoke extraction.
2	Test 2A/2B holder pin rectangle 190×150 mm; pins maximum $\varnothing 2$ mm, minimum length 27 mm. Adjacent spacer stubs $\varnothing 2$ mm, minimum length 20 mm. These are specimen-holder dimensions, not cabinet exterior size. Burner mounts vertical/horizontal or 30° to vertical; stand-by tip at least 50 mm in front of the specimen.
3	Commercial butane to BS 4250; Figure 2 gas-jet orifice $\varnothing 0.19 \pm 0.02$ mm and burner-tube length 40 mm. Select this gas/burner configuration separately; no equivalence to a general Bunsen head is assumed. The 1994 amendment deleted 1A/1B and 3A/3B; verify the remaining setup and procedure for retained 2A/2B separately.