TORONTECH

UPHOLSTERED SEATING TESTER - FURNITURE DURABILITY TESTER

Upholstered Seating Tester - Furniture Durability Tester — ToronFT™ FP-CC

The ToronFT™ FP-CC Furniture Durability Tester is a full-scale fire performance testing instrument designed for the ignitability performance qualification of furniture, seat cushions, and chairs. Compliant with BS 5852 and ISO 7176-16 standard requirements, the ToronFT™ FP-CC provides the standardized ignition exposure environment, burning chamber, and multi-fire ignition source infrastructure required for comprehensive furniture seating fire performance testing — covering everything from cigarette smoldering (No. 0 fire) through high-intensity open flame exposures (No. 4, 5, 6, and 7 fires).

The Furniture Durability Tester features a stainless steel burning chamber with a 20 m^3 internal volume, an integrated smoke exhaust system for post-test chamber cleaning, and three sets of point-source ignition sources covering seven fire types — making it one of the most complete, versatile furniture fire performance test platforms available.

APPLICATIONS

Upholstered Seating Tester - Furniture Durability Tester — ToronFT™ FP-CC Applications

- Upholstered furniture and seating manufacturers: fire performance qualification for sofas, chairs, and seat cushions per BS 5852 and ISO 7176-16
- Third-party fire testing and certification laboratories: furniture ignitability testing for product listing and regulatory compliance

- Healthcare and accessibility equipment manufacturers: wheelchair and special seating fire performance qualification per ISO 7176-16
- Public building procurement programs: fire performance verification for contract furniture used in hotels, offices, theaters, and transportation environments
- R&D departments: evaluation of new upholstery fabric, foam filling, and fire barrier material combinations for furniture fire performance improvement

Standards

The ToronFT™ FP-CC supports cushion and chair fire performance testing in compliance with internationally recognized furniture fire safety standards, including:

- ISO 7176-16: Wheelchairs — Requirements and test methods for resistance to ignition

FEATURES

Cushion and Chair Fire Performance Tester — ToronFT™ FP-CC Key Features

- Applicable to furniture, seat cushions, and chairs — comprehensive seating product fire performance coverage
- Burning chamber: stainless steel construction; internal volume 20 m^3 — accommodating full-size upholstered chair and sofa specimens
- Smoke exhaust system: installed at top of chamber; automatically discharges smoke and dust from the burning chamber after each test
- Three sets of point ignition sources covering seven fire types: No. 0 (cigarette smoldering), No. 1, No. 2, No. 3 (small flames), and No. 4, No. 5, No. 6, No. 7 (higher intensity flames)
- Compliant with BS 5852 and ISO 7176-16 — the primary British and international standards for furniture and wheelchair fire performance testing

THEORY & METHOD

Theory and Method

Furniture ignitability testing evaluates the response of upholstered seating components — including the composite seat, back, and arm assemblies — to a defined ignition source applied to the junction between the seat and back (the standard ignition location). The ToronFT™ FP-CC applies each of the seven fire types in sequence or as required by the applicable standard, ranging from the mildest exposure (No. 0 — cigarette smoldering simulation) through progressively more severe flame sources (Nos. 1, 2, 3 — small flames of defined output) to the most demanding ignition sources (Nos. 4, 5, 6, and 7 — larger flame sources simulating real fire scenarios).

The 20 m^3 stainless steel burning chamber provides an enclosed test environment of sufficient volume to accommodate full-size upholstered chair or sofa specimens. The smoke exhaust system installed at the top of the chamber automatically evacuates combustion gases and smoke after the test is complete, reducing inter-test turnaround time and maintaining a safe working environment for laboratory personnel.

TECHNICAL SPECIFICATIONS

Upholstered Seating Tester - Furniture Durability Tester — ToronFT™ FP-CC Technical Specifications

Parameter	Specification
Applicable Products	Furniture, seat cushions, chairs (upholstered seating)
Burning Chamber Material	Stainless steel
Burning Chamber Internal Volume	20 m^3
Smoke Exhaust System	Installed at chamber top; automatic post-test discharge

Parameter	Specification
Ignition Source Sets	3 sets of point sources
Fire Types Covered	No. 0 (cigarette smoldering), No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 7
Standard Compliance	ISO 7176-16

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