



WIRE AND CABLE BURNING TESTER

Wire and Cable Burning Tester - ToronFT™ WC 1581

ToronFT™ WC 1581 Wire and Cable Burning Tester is a versatile laboratory instrument designed to evaluate the flame resistance performance of wire and cable insulation in both vertical and horizontal orientations. This wire cable burning tester is an essential tool for wire and cable manufacturers, testing laboratories, and inspection departments who require reliable, standardized flammability data for product qualification and certification.

The ToronFT™ WC 1581 operates in strict compliance with UL 1581-2016 Sections 1061 and 1090, and UL 2556-2015 Section 9.2. It features dedicated vertical and horizontal combustion boxes (each with internal dimensions of 305 mm × 355 mm × 610 mm), precision spark nozzles at both 20° (vertical) and 90° (horizontal) angles, and supports both manual and automatic operation modes — making it a comprehensive and flexible wire and cable burning tester platform for North American certification programs.

APPLICATIONS

Wire and Cable Burning Tester - ToronFT™ WC 1581 Applications

The ToronFT™ WC 1581 Wire and Cable Burning Tester is applicable for flame resistance testing of:

- Building wire, power cables, and control cables for UL 1581 flame resistance certification
- Flexible cords, appliance wiring materials (AWM), and equipment wire requiring UL 1581 and UL 2556 wire and cable burning compliance
- Single conductors and cable assemblies for vertical and horizontal wire cable burning performance characterization
- Instrumentation cables, communication cables, and data cables for vertical and horizontal burning tester qualification
- Wire and cable products undergoing UL listing, CSA certification, or international market approval requiring wire cable burning test evidence

- Production-line quality assurance wire and cable burning sampling to verify ongoing flame resistance compliance



Standards

The ToronFT™ WC 1581 is designed to comply with the following international wire and cable burning standards:

- UL 1581-2016: Reference Standard for Electrical Wires, Cables, and Flexible Cords (Sections 1061 and 1090)
- UL 2556-2015: Wire and Cable Test Methods (Section 9.2)

FEATURES

Wire and Cable Burning Tester - ToronFT™ WC 1581 Key Features

- Dual-orientation wire and cable burning tester — separate dedicated vertical (305 mm × 355 mm × 610 mm internal) and horizontal (305 mm × 355 mm × 610 mm internal) combustion boxes enable standardized wire cable flame resistance testing in both orientations per UL 1581 and UL 2556
- Vertical spark nozzle with a 20° nozzle angle and dedicated gas control valve delivers the standardized flame impingement geometry required for vertical wire and cable burning tests
- Horizontal spark nozzle with a 90° nozzle angle and dedicated gas control valve delivers the correct flame impingement angle for horizontal wire cable burning test configurations
- Selectable vertical or horizontal nozzle mode enables a single instrument to perform both vertical and horizontal wire and cable burning tests — maximizing laboratory versatility and minimizing equipment investment
- Manual and automatic operating modes support both operator-supervised single-shot burning tester tests and fully automated production-line wire cable flammability sampling sequences
- Automatic test stop when preset timing or data thresholds are reached — improving operator safety and ensuring consistent, reproducible wire and cable burning test durations
- Methane fuel gas (customer-supplied) provides a clean, stable, and standardized ignition source for wire cable flame resistance testing compliant with UL 1581 and UL 2556 requirements

- Complies with UL 1581-2016 and UL 2556-2015, providing wire and cable burning test results recognized by UL, CSA, and certification bodies in North America

THEORY & METHOD

Theory and Method

Wire and cable burning tests evaluate the ability of insulation and jacket materials to resist ignition and limit flame propagation when exposed to a defined ignition source. Vertical burning tests assess upward flame propagation — the most hazardous orientation — while horizontal burning tests evaluate lateral flame spread. Both orientations are critical for characterizing the fire performance of wire cable products across the full range of installation configurations encountered in buildings and equipment.

In the ToronFT™ WC 1581, the wire or cable specimen is mounted in the appropriate combustion box (vertical or horizontal) and exposed to the calibrated spark nozzle flame. The 20° angle vertical spark nozzle and 90° angle horizontal spark nozzle (each with gas control valves) deliver the specified flame at the correct impingement angle for each wire cable burning test configuration. The instrument supports vertical or horizontal nozzle selection, and manual or automatic test modes — with automatic test stop when preset timing or measurement data thresholds are reached. Fuel gas is methane, prepared and supplied by the customer.

TECHNICAL SPECIFICATIONS

Wire and Cable Burning Tester - ToronFT™ WC 1581 Technical Specifications

Parameter	Specification
Product Name	Wire and Cable Burning Tester — ToronFT™ WC 1581
Vertical Combustion Box Internal Size	305 mm × 355 mm × 610 mm (per UL 1581 standard)
Horizontal Combustion Box Internal Size	305 mm × 355 mm × 610 mm (with UL 1581 standard)
Vertical Spark Nozzle Angle	20°; with gas control valve
Horizontal Spark Nozzle Angle	90°; with gas control valve
Nozzle Selection	Vertical or horizontal (selectable)
Operating Mode	Manual / Automatic
Auto-Stop	Yes — stops when preset data is reached
Fuel Gas	Methane (customer-supplied)
Compliance Standards	UL 1581-2016 (Sections 1061, 1090); UL 2556-2015 (Section 9.2)

For more information, pricing, or to request a quotation, please contact ToronFT. Specifications are subject to change without prior notice.



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