



## OPTICAL FIBRE CABLE TESTING EQUIPMENT (OFC TESTERS)

# Optical Fibre Cable Testing Equipment (OFC Testers)

Torontech is a global leader in providing a full range of Optical Fibre Cable Testing Machines (OFC Testers), engineered with cutting-edge Canadian technology to deliver the highest precision, durability, and performance in the industry. Our advanced OFC testing solutions are trusted worldwide by fiber optic cable manufacturers, telecom companies, and research institutions for ensuring the mechanical, environmental, and optical performance of both indoor and outdoor fiber optic cables.

Torontech's Optical Fibre Cable Testing Machines are specifically designed to comply with the stringent requirements of IEC 60794 standards, which define the mechanical and environmental performance criteria essential for maintaining the reliability and longevity of optical fiber cables in diverse applications from telecommunications and data centers to military networks and industrial automation.

## Compliance with IEC 60794 Standards

The IEC 60794 series is the cornerstone of optical fiber cable testing, outlining standardized methods to evaluate the mechanical strength, environmental resilience, and long-term durability of fiber optic cables. Torontech's OFC Testers are fully compliant with this critical standard, covering key performance tests such as:

1. Tensile Strength Test (IEC 60794-1-2 E1): Determines the maximum tensile load a fiber optic cable can withstand without compromising optical performance during installation and operation.
2. Crush Resistance Test (IEC 60794-1-2 E3): Assesses the cable's ability to resist compressive forces, crucial for underground installations and high-pressure environments.
3. Impact Test (IEC 60794-1-2 E4): Simulates mechanical impacts to evaluate the cable's robustness against sudden shocks or drops during handling.
4. Repeated Bending Test (IEC 60794-1-2 E6): Tests the cable's flexibility and resistance to mechanical fatigue under continuous bending cycles.
5. Torsion Test (IEC 60794-1-2 E7): Evaluates the cable's mechanical integrity under twisting forces, ensuring durability in dynamic environments.

6. Temperature Cycling Test (IEC 60794-1-2 F1): Measures the cable's performance under extreme temperature variations, verifying thermal stability over time.
7. Water Penetration Test (IEC 60794-1-2 F5B): Assesses the cable's resistance to water ingress, vital for outdoor and submarine applications.
8. Abrasion Resistance Test (IEC 60794-1-2 E2): Evaluates the outer sheath's durability against wear and mechanical abrasion.
9. Kink Resistance Test (IEC 60794-1-2 E10): Determines the cable's susceptibility to kinking, which can lead to signal loss or physical damage.

## **Torontech's Comprehensive Range of OFC Testing Equipment**

Torontech offers a complete lineup of Optical Fibre Cable Testing Equipment and Machines designed for precise and reliable performance testing:

1. Tensile Testing Machine for Outdoor Optical Fibre Cables: Ensures cables can withstand mechanical stress during installation in harsh environments.
2. Tensile Testing Machine for Indoor Optical Fibre Cables: Tailored for lightweight, flexible indoor cables, focusing on tensile strength and durability.
3. Repeated Bending Tester: Simulates repeated bending to assess the cable's flexibility and fatigue resistance over time.
4. Crush Resistance Tester: Measures the cable's ability to withstand compressive forces without deforming or losing functionality.
5. Impact Tester: Tests the cable's resilience to sudden mechanical impacts, mimicking real-world handling conditions.
6. Torsion Tester: Evaluates performance under torsional stress to ensure mechanical integrity during installation and use.
7. Temperature Cycling Chamber: Simulates extreme temperature fluctuations to verify the cable's thermal stability and performance.
8. Water Penetration Tester: Assesses resistance to moisture intrusion, essential for outdoor and underwater applications.
9. Abrasion Resistance Tester: Measures the durability of the cable sheath against external wear and tear.
10. Flame Retardancy Tester: Evaluates the cable's fire-resistant properties to ensure compliance with safety regulations.
11. Kink Resistance Tester: Identifies the cable's tendency to kink, which can affect signal transmission quality.
12. Cable Flexing Tester: Simulates continuous flexing conditions to ensure durability under dynamic mechanical stress.

13. Compound Flow (Drip Test) Kit: Tests the flow characteristics of the cable's filling compounds under specified temperature conditions to evaluate thermal stability and compound integrity.

## Why Choose Torontech's Optical Fibre Cable Testing Machines?

1. Proudly Canadian Technology with globally recognized excellence.
2. Unmatched Precision & Performance, trusted worldwide.
3. Fully Compliant with IEC 60794 Standards for reliable, standardized testing.
4. Comprehensive Range of OFC Testers for both indoor and outdoor cables.
5. Robust Design for long-term durability and consistent performance.
6. Global Support & Service Network for seamless customer experience.

Ensure the quality, safety, and longevity of your fiber optic cables with Torontech's world-class Optical Fibre Cable Testing Equipment and Machines, designed with advanced Canadian engineering and trusted for their precision, performance, and reliability in the most demanding environments.

## Theory/Method

|   |                                                             |                    |
|---|-------------------------------------------------------------|--------------------|
| 1 | IEC 60794-1-2 Method E1: Tensile performance                | TT-OFCT-OD Series  |
| 2 | IEC 60794-1-2 Method E1: Tensile performance                | TT-OFCT- ID Series |
| 3 | IEC 60794-1-2 Method E2: Abrasion                           | TT-OFCA Series     |
| 4 | IEC 60794-1-2 Method E3/ E12: Crush/ Cut-through resistance | TT-OFCCC Series    |
| 5 | IEC 60794-1-2 Method E4: Impact                             | TT-OFCI Series     |
| 6 | IEC 60794-1-2 Method E6: Repeated bending                   | TT-OFCRB Series    |
| 7 | IEC 60794-1-2 Method E7: Torsion                            | TT-OFCTO Series    |
| 8 | IEC 60794-1-2 Method E8: Flexing                            | TT-OFCE Series     |

|    |                                             |                  |
|----|---------------------------------------------|------------------|
| 9  | IEC 60794-1-2 Method E10: Kink              | TT-OFCK Series   |
| 10 | IEC 60794-1-2 Method E11: Bend              | TT-OFWB Series   |
| 11 | IEC 60794-1-2 Method F1:Temperature Cycling | TT-OFTCC Series  |
| 12 | IEC 60794-1-2 Method F5:Water Penetration   | TT-OF CWP Series |



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