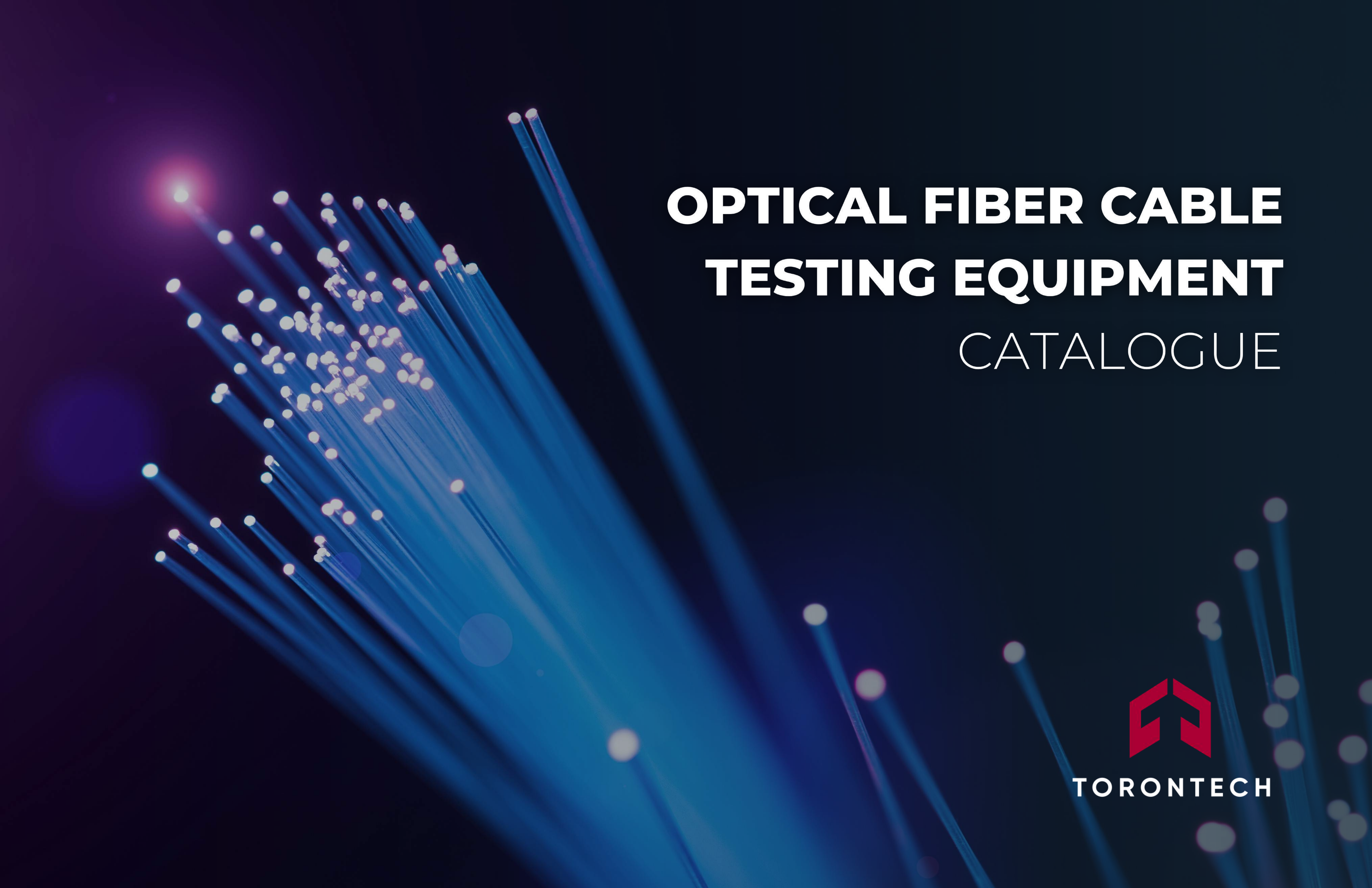




OPTICAL FIBER CABLE TESTING EQUIPMENT CATALOGUE



TORONTECH



Optical Fiber Cable Testing Machines (OFC Testers)

Canadian Technology for Superior Precision and Performance

Torontech is a global leader in providing a full range of Optical Fiber 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 Fiber 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:

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.

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.

Impact Test (IEC 60794-1-2 E4):

- Simulates mechanical impacts to evaluate the cable's robustness against sudden shocks or drops during handling.

Repeated Bending Test (IEC 60794-1-2 E6):

- Tests the cable's flexibility and resistance to mechanical fatigue under continuous bending cycles.

Torsion Test (IEC 60794-1-2 E7):

- Evaluates the cable's mechanical integrity under twisting forces, ensuring durability in dynamic environments.

Temperature Cycling Test (IEC 60794-1-2 F1):

- Measures the cable's performance under extreme temperature variations, verifying thermal stability over time.

Water Penetration Test (IEC 60794-1-2 F5B):

- Assesses the cable's resistance to water ingress, vital for outdoor and submarine applications.

Abrasion Resistance Test (IEC 60794-1-2 E2):

- Evaluates the outer sheath's durability against wear and mechanical abrasion.

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 Fiber Cable Testing Machines designed for precise and reliable performance testing:

Tensile Testing Machine for Outdoor Optical Fiber Cables:

- Ensures cables can withstand mechanical stress during installation in harsh environments.

Tensile Testing Machine for Indoor Optical Fiber Cables:

- Tailored for lightweight, flexible indoor cables, focusing on tensile strength and durability.

Repeated Bending Tester:

- Simulates repeated bending to assess the cable's flexibility and fatigue resistance over time.

Crush Resistance Tester:

- Measures the cable's ability to withstand compressive forces without deforming or losing functionality.

Impact Tester:

- Tests the cable's resilience to sudden mechanical impacts, mimicking real-world handling conditions.

Torsion Tester:

- Evaluates performance under torsional stress to ensure mechanical integrity during installation and use.

Temperature Cycling Chamber:

- Simulates extreme temperature fluctuations to verify the cable's thermal stability and performance.

Water Penetration Tester:

- Assesses resistance to moisture intrusion, essential for outdoor and underwater applications.

Abrasion Resistance Tester:

- Measures the durability of the cable sheath against external wear and tear.

Flame Retardancy Tester:

- Evaluates the cable's fire-resistant properties to ensure compliance with safety regulations.

Kink Resistance Tester:

- Identifies the cable's tendency to kink, which can affect signal transmission quality.

Cable Flexing Tester:

- Simulates continuous flexing conditions to ensure durability under dynamic mechanical stress.

Compound Flow (Drip Test) Kit:

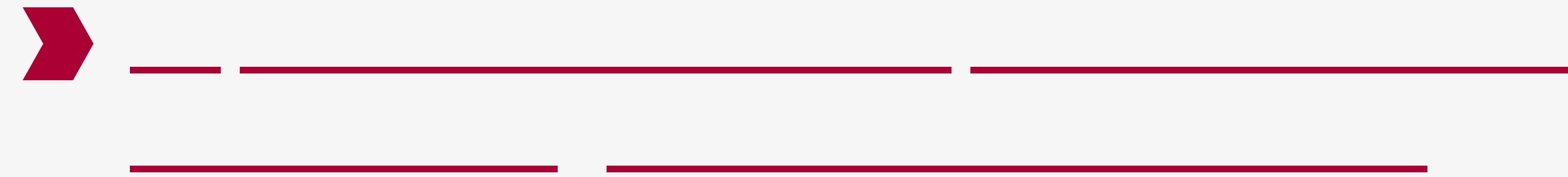
- Tests the flow characteristics of the cable's filling compounds under specified temperature conditions to evaluate thermal stability and compound integrity.

Why Choose Torontech's Optical Fiber Cable Testing Machines?

- **Proudly Canadian Technology**
with globally recognized excellence.
- **Unmatched Precision & Performance,**
trusted worldwide.
- **Fully Compliant with IEC 60794 Standards**
for reliable, standardized testing.
- **Comprehensive Range of OFC Testers**
for both indoor and outdoor cables.
- **Robust Design**
for long-term durability and consistent performance.
- **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 Fiber Cable Testing Machines, designed with advanced Canadian engineering and trusted for their precision, performance, and reliability in the most demanding environments.

TENSILE TESTING MACHINE - INDOOR CABLE



Torontech's Optical Fiber Cable Tensile Testing Machine - Indoor Cable (for Bow Type Cables) is **designed specifically for indoor optical cables to apply tensile force on indoor optical cables**; it also has an extensometer to measure the cable elongation for optical cable under tension. This series complies with the IEC-60794-1-2 Method E1 standard, ensuring accurate and reliable testing of indoor optical cables according to industry standards.



TENSILE TESTING MACHINE - OUTDOOR CABLE

► <https://torontech.com/optical-fiber-cable-tensile-testing-machine-outdoor-cable/>

Torontech's TT-OFCT-OD **Optical Fiber Cable Tensile Testing Machine - Outdoor Cable** is designed in accordance to IEC-60794-1 Method E1 for tensile testing of outdoor Optical Fiber Cables.

This measuring method applies to optical fiber cables which are tested at a particular tensile strength in order to **examine the behavior of the attenuation and/or the fiber elongation strain as a function of the load on a cable which may occur during installation.**

This method is intended to be non-destructive (the tension applied shall be within the operational values).



REPEATED BENDING TESTING MACHINE



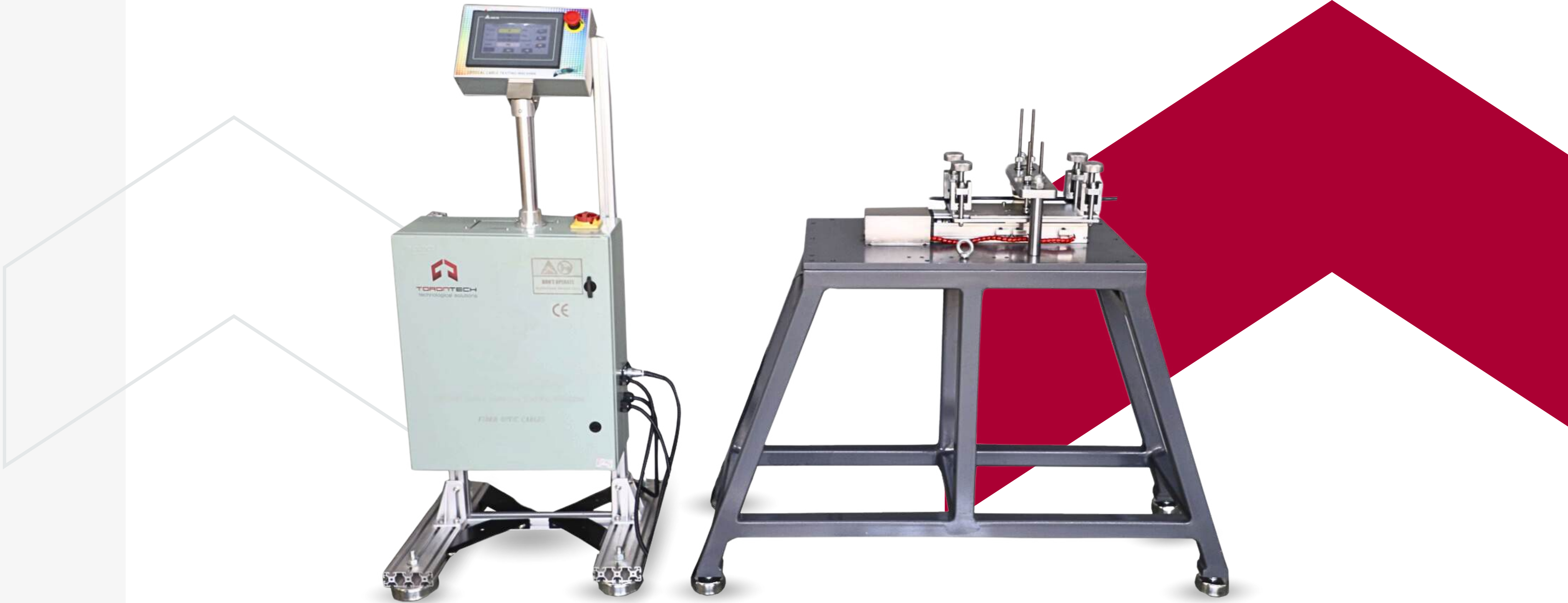
The Optical Fiber Cable Repeated Bending Tester determines a cable's ability to endure cyclic flexing, meeting the IEC 60794-1-2-E6 standard. It assesses cable durability under 180° bending while subjected to a tensile load, featuring a secure bending arm to prevent fiber damage. Replaceable cushioning reels ensure precise bending radius control at 30 cycles per minute.



ABRASION TESTING MACHINE



The Optical Fiber Cable Abrasion Testing Machine TT-OFCA is designed to determine the ability of an optical fiber cable sheath and markings to resist abrasion. This machine complies with the IEC-60794-1-2-E2A and IEC-60794-1-2-E2B standards, **ensuring accurate and reliable testing of optical fiber cable abrasion resistance according to industry specifications.**



CRUSH & CUT THROUGH TESTING MACHINE

► <https://torontech.com/optical-fiber-cable-crush-cut-through-testing-machine/>

Torontech's Optical Fiber Cable Crush & Cut Through Testing Machine **utilizes IEC-60794-1-2 Method E3/E12 standards for compression (Crush) testing of optical cables.**

The cable is compressed according to detailed specifications, and fiber optic attenuation is then measured. It employs a servo-controlled system to apply compressive force at a constant speed and maintains this force for a specified period.

A movable crosshead with a plate mounted on the bottom allows for uniform application of crushing force along the length of the cable sample.



IMPACT TESTING MACHINE

► <https://torontech.com/optical-fiber-cable-impact-testing-machine/>

Torontech's TT-OFCI Optical Fiber Cable Impact Testing Machine is **specifically engineered to gauge a cable's ability to withstand impact.**

Torontech presents the Optical Fiber Cable Impact Testing Machine — **a breakthrough solution for assessing the endurance of optical fiber cables in alignment with IEC-60794-1-2-E4 standards.**

This advanced testing apparatus stands as a critical tool for manufacturers and quality control entities seeking to validate the durability and performance of their optical fiber cable offerings.



TORSION TESTER

► <https://torontech.com/optical-fiber-cable-torsion-tester/>

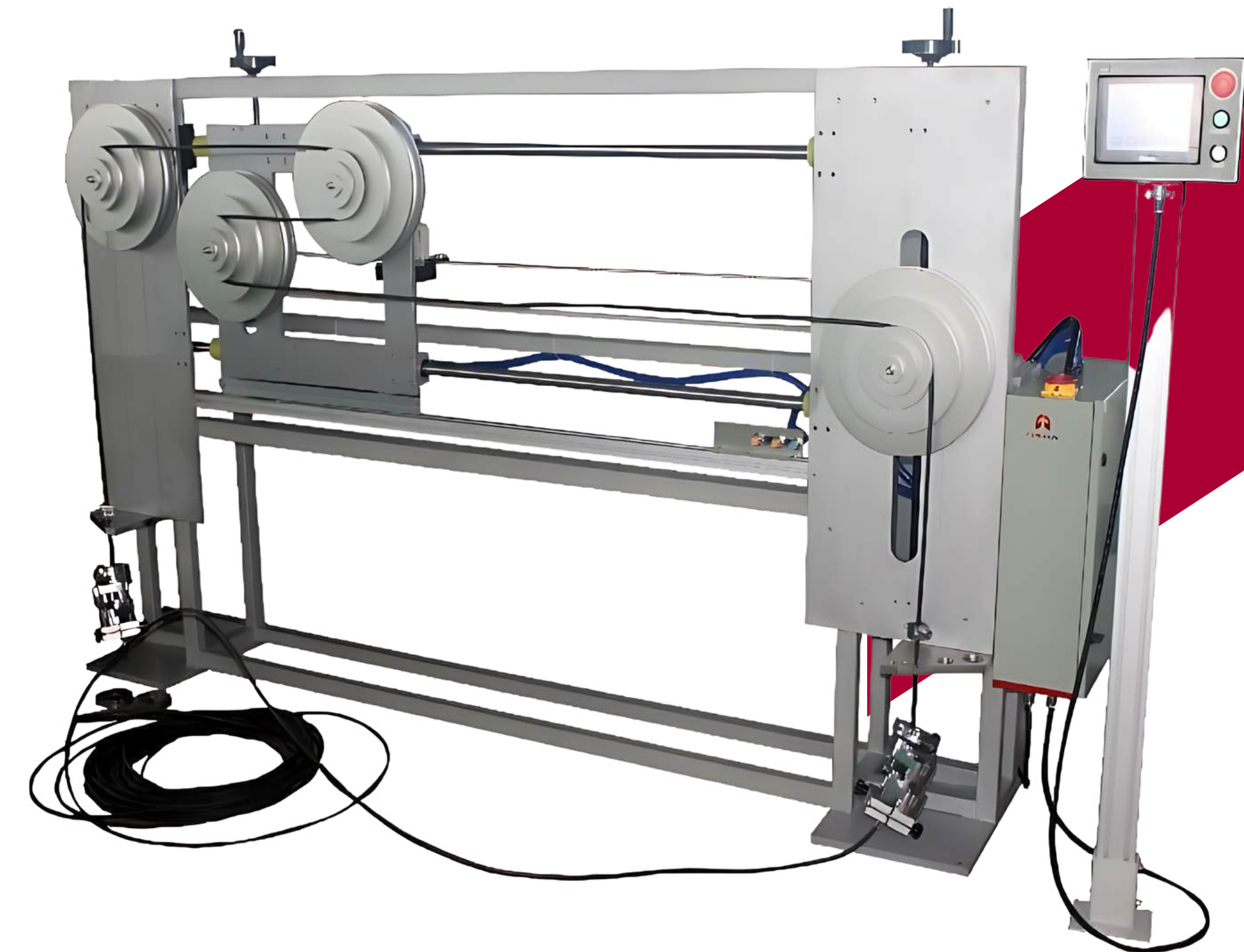
Torontech's Optical Fiber Cable Torsion Tester is specially crafted in accordance with IEC-60794-1-2-E7 standards, ensures the reliability and durability of optical fiber cables in the face of torsional stress. This testing methodology allows manufacturers and quality control entities to evaluate and enhance the cable's performance under real-world torsional stresses.



FLEXIBILITY TESTING MACHINE

► <https://torontech.com/optical-fiber-cable-flexibility-testing-machine/>

Torontech's Optical Fiber Cable Flexibility Testing Machine determines the ability of an optical fiber cable to withstand repeated flexing for elevator cable and similar application. The test confirms to IEC 60794-1-2-E8 standard. Designed with pulleys having a semicircular shaped groove for circular cables and a flat groove for flat cables. Restraining clamps are fixed so that the pull is always applied by the weight from which the carriage is moving away.



KINK TESTING MACHINE

► <https://torontech.com/optical-fiber-cable-kink-testing-machine/>

Torontech's Optical Fiber Cable Kink Testing Machine, meticulously engineered to determine the loop diameter at the onset of kinking in optical fiber cables.

This advanced testing machine aligns with the stringent guidelines outlined in IEC-60794-1-2-E10, ensuring precision and reliability in assessing the kink resistance of optical fiber cables.



TEMPERATURE CYCLING CHAMBER

► <https://torontech.com/optical-fiber-cable-temperature-cycling-chamber/>

The Optical Fiber Cable Temperature Cycling Chamber assesses attenuation stability during temperature changes. Featuring precise temperature control and a large test chamber with minimal fluctuations, it simulates storage, transportation, and usage conditions. This test evaluates fiber integrity within the cable structure across a wide temperature range.



WATER PENETRATION TESTER

► <https://torontech.com/optical-fiber-cable-water-penetration-tester/>

The Optical Fiber Cable Water Penetration Tester evaluates a cable's ability to prevent water migration along a specified length. Compliance is checked using either Method F5A or F5B. Method F5A tests for water migration between the optical core and outer sheath, while Method F5B tests for migration across the entire cross-section designed to be water-blocked.



COMPACT TEMPERATURE CYCLING CHAMBER

► <https://torontech.com/compact-temperature-cycling-chamber-for-optical-fibre-cables-ttoftcc-1000-series/>

The TTOFTCC-1000 Series is designed for precise temperature cycling of optical fiber cables. This process evaluates how cable attenuation responds to temperature variations, ensuring long-term stability and reliability. The chamber features a spacious testing area, advanced temperature control, and minimal temperature fluctuations to deliver accurate and consistent results.



COMPOUND FLOW (DRIP) TEST KIT

► <https://torontech.com/compound-flow-drip-test-kit/>

The TT-CF300 Compound Flow (Drip) Test Kit simulates controlled temperature conditions to evaluate the compound flow in optical fiber cables. It determines the amount of filling compound that melts and drips into the collector after a minimum test duration of 24 hours.





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