

METAL WIRE TORSION TESTING MACHINE TORONWTT™ -10



Metal Wire Torsion Testing Machine ToronWTT™-10 is a digital metal wire torsion testing machine designed for precision and reliability. It features a horizontal structure with loading, driving, afterburner, and tracking components.

This machine is ideal for testing the torsion and winding performance of steel, copper, aluminum, and alloy wires with nominal diameters ranging from $\Phi 1$ to $\Phi 10$ mm. It offers adjustable rotation speeds of 15, 20, 30, and 60 r/min. The system evaluates a wire's ability to withstand one-way and two-way torsion, assesses plastic deformation, and detects surface and internal defects.

APPLICATIONS

- **Metallurgical Industry** - Analysis of torsional properties and plastic deformation resistance of steel, copper, aluminum, and alloy wires with diameters up to 10mm.
- **Quality Control & Inspection** - Detection of surface and internal defects to ensure compliance with mechanical performance standards and industry regulations.
- **Cable & Electrical Industry** - Performance testing of medium- to large-diameter conductive wires for durability, flexibility, and mechanical integrity.
- **Research & Development** - Material testing for new alloy formulations, structural analysis, and innovation in wire production technologies.
- **Automotive & Aerospace** - Verification of torsional reliability in thicker metal wires used in critical safety, engine, and lightweight structural applications.
- **Educational & Training Institutions** - Hands-on demonstrations and practical training for students in materials science, metallurgy, and mechanical engineering.

FEATURES

Main Unit: Designed with a horizontal framework, the main structure provides exceptional rigidity. The core rod is crafted from high-quality alloy structural steel, featuring a smooth surface and high durability to ensure long-term performance.

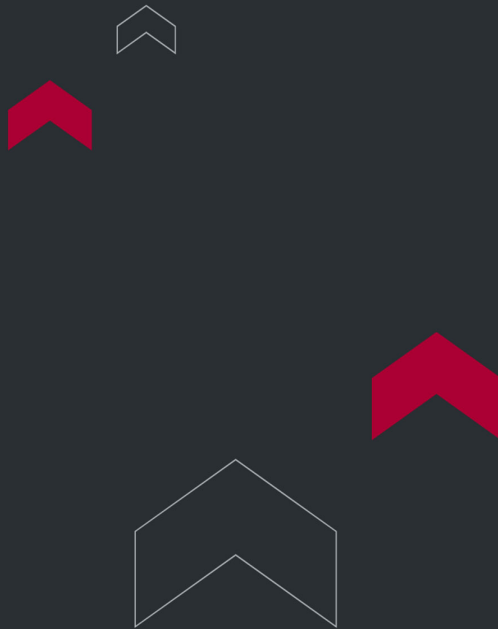
Drive System: Powered by a motor drive, the system delivers high rotational torque with even load distribution, ensuring smooth and stable operation without sudden impacts.

Transmission: Utilizes a precision reducer drive to maintain uniform transmission, enhance stability, and achieve high transmission accuracy.

TECHNICAL SPECIFICATIONS

Testing machine level	1
Torsion angle indication relative error	$\pm 1^{\circ}$
Maximum distance between the two chuck	500mm
Rotation speed	15, 20, 30, 60 RPM
Hardness of the jaws	HRC50 ~ 60
Test machine working noise	<70db
Wire diameter	$\Phi 1\text{-}\Phi 10\text{mm}$
Power supply	380V, 50Hz
Appearance size (length × width × height)	1490×410×1010 (mm)
Machine weight	450kg

Environment and working conditions	A) Temperature of 10 °C ~ 35 °C; B) Placed on a firm basis; C) In a vibration-free environment; D) Non-corrosive medium around;
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