

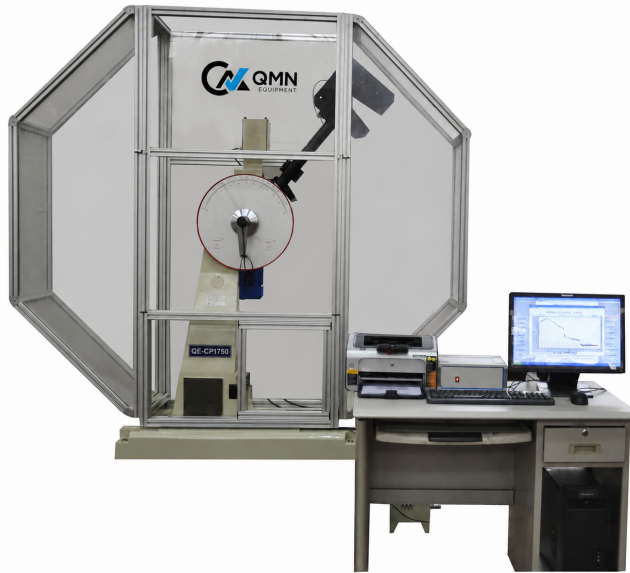
HIGH-ENERGY CHARPY IMPACT TESTING

QE-CPI750

750 J Computerized Pendulum Impact Tester

A guarded, computer-controlled Charpy system for measuring the absorbed impact energy of high-toughness metallic specimens in production, research and quality-control laboratories.

150-750 J	5.24 m/s	150 deg	40 mm
Selectable energy	Impact velocity	Initial angle	Support span



CANADIAN SALES, APPLICATION SUPPORT, INSTALLATION AND SERVICE

High-Energy Charpy Testing for Metallic Materials

The QE-CPI750 uses selectable pendulum configurations from 150 J through 750 J to measure the energy absorbed when a notched metallic specimen fractures. Computerized acquisition, powered pendulum raising, controlled release and automatic return support efficient, repeatable high-energy testing.

Up to 750 J

Select 150, 300, 450, 600 or 750 J pendulum capacity to match the expected absorbed energy and material toughness.

Computerized Operation

Digital acquisition records impact energy while powered raising and return improve repetitive-test workflow.

Standard Charpy Geometry

A 40 mm support span, precision anvils and interchangeable strikers support recognized metallic impact methods.

Full Safety Enclosure

A rigid frame, interlocked swing-area guard and stable base support safe day-to-day high-energy operation.

Computerized Test Sequence

Stage	Operation
1. Configure	Install the required pendulum, striker and anvil geometry for the governing method.
2. Verify	Check zero, friction loss, dial position and machine condition before specimen testing.
3. Position	Center the conditioned notched specimen on the 40 mm supports with the notch correctly oriented.
4. Release	Use the remote control to release the pendulum from the 150 degree initial position.
5. Read	Record absorbed energy from the digital system and review the test result.
6. Reset	The powered lifting system returns the pendulum to the ready position for the next specimen.

Typical Materials and Uses

- ✓ Carbon and low-alloy steels
- ✓ Structural and pressure-vessel steels
- ✓ Forgings and cast metallic products
- ✓ Heat-treatment process validation
- ✓ Stainless and tool steels
- ✓ Pipeline materials
- ✓ Weld metal, HAZ and base metal
- ✓ Incoming and production quality control

Technical Specifications

Characteristic	QE-CPI750 Standard Configuration
Test method	Charpy pendulum impact test for metallic materials
Nominal energy configurations	150, 300, 450, 600 and 750 J
Pendulum moments	80.3848, 160.7695, 241.1543, 321.5390 and 401.9238 N.m
Impact velocity	5.24 m/s
Initial pendulum angle	150 degrees
Pendulum axis to impact point	750 mm
Specimen support span	40 mm
Support anvil radius	R1.0 to R1.5 mm
Standard striker radius	R2.0 to R2.5 mm
Optional ASTM striker radius	R8 mm
Striker included angle	30 degrees
Striker blade thickness	16 mm
Specimen support surface angle	11 degrees
Standard specimen	55 x 10 x 10 mm, notched
Supported sub-size thicknesses	7.5 mm and 5 mm with matching centering fixtures
Pendulum operation	Powered raising, controlled release, braking and automatic return
Energy display	Computerized digital result display; analog dial retained for reference
Approximate net weight	900 kg
QMN requested electrical service	110 V, 60 Hz; factory-approved power solution required
Warranty	12 months

Published base-machine electrical data is 380 V, 50 Hz, approximately 1 kW. QMN's 110 V, 60 Hz requirement therefore needs a factory-approved alternate build or properly engineered transformer/power-conversion package. Final phase, current and circuit requirements must be confirmed before order.

Operating and Safety Features

- ✓ Motorized pendulum raising
- ✓ Powered return for the next test
- ✓ Computerized test-data acquisition
- ✓ Guarded pendulum swing area
- ✓ Controlled electrical release
- ✓ Remote operating control
- ✓ Pendulum safety locking provision
- ✓ Rigid floor-mounted frame

Standards, Supply and Support

Applicable Standards

Standard	Application
ASTM E23-24	Notched-bar impact testing of metallic materials using the required Charpy configuration
ISO 148-1:2016	Charpy V-notch and U-notch pendulum impact test method for metallic materials
ISO 148-2:2016	Verification of Charpy pendulum impact testing machines
ISO 14556:2023	Instrumented Charpy V-notch testing when the optional instrumented system is installed

What's Included

- ✓ QE-CPI750 main impact tester
- ✓ Selected lower-energy pendulum(s)
- ✓ Motorized pendulum lifting system
- ✓ 40 mm specimen support assembly
- ✓ Standard R2 striker
- ✓ Maintenance tool kit
- ✓ Operating manual
- ✓ 12-month warranty
- ✓ 750 J pendulum configuration
- ✓ Analog reference energy dial
- ✓ Computer workstation and software
- ✓ V-notch specimen centering fixture
- ✓ Full interlocked safety enclosure
- ✓ Anchor and levelling hardware
- ✓ QMN certificate of conformity

Optional Accessories and Services

- ✓ R8 striker for ASTM configurations
- ✓ Sub-size specimen centering fixtures
- ✓ Insulated specimen transfer tongs
- ✓ Verification reference specimens
- ✓ Lower-energy pendulums
- ✓ Installation and anchoring
- ✓ Additional striker and anvil sets
- ✓ Low-temperature conditioning bath
- ✓ Charpy notch broaching machine
- ✓ Instrumented impact package
- ✓ Calibration and verification
- ✓ Operator training

**NEED HELP SELECTING THE RIGHT
CHARPY CONFIGURATION?**

Phone: 647-948-7714
Fax: 647-948-6667
Email: info@qmnequipment.com

Configuration notice: confirm the standard edition, striker radius, required pendulum energies, expected absorbed-energy range, specimen size, conditioning temperature, verification plan, foundation and electrical service before ordering.