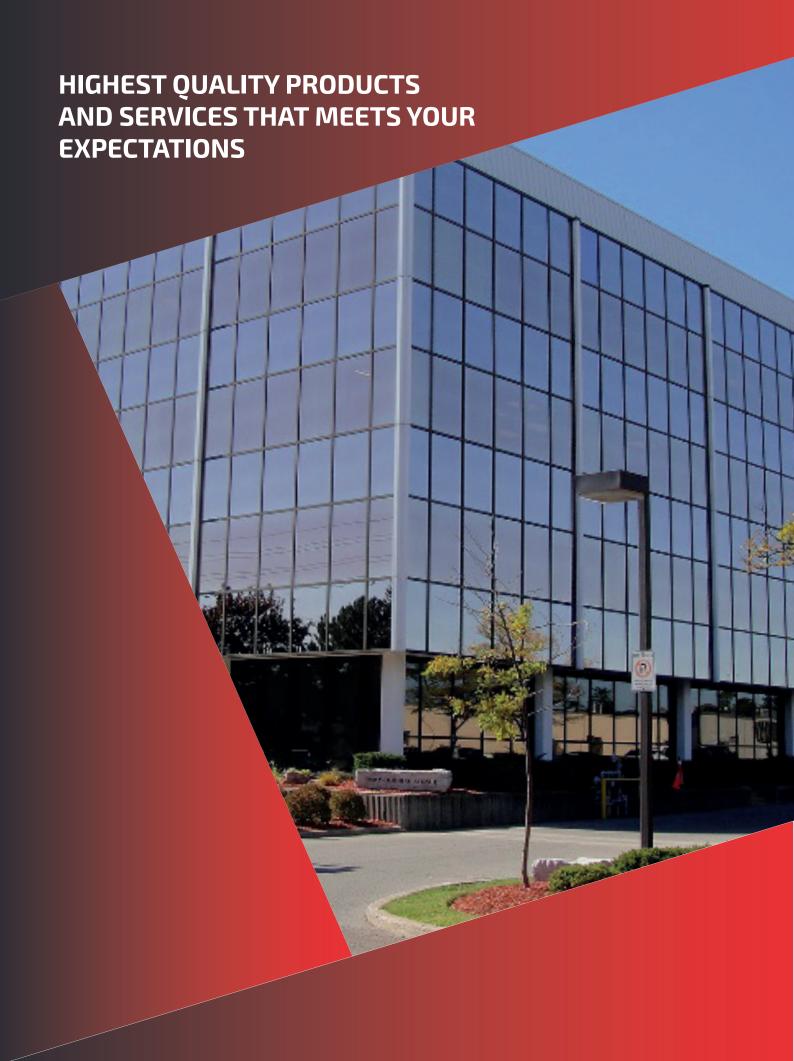


Materials Testing & Analytical Division











ABOUT TORONTECH

Since our founding, Torontech has become one of the world's leading diversified manufacturers of specialized industrial equipment, consumables, and related service businesses. Torontech products and solutions are at work all over the world, in various industries. Our global network ensures our quality support towards our goal in providing the latest technologies in related fields globally presentable to our clients. We are never, whether we know it or not, more than a few steps from an innovative and yet cost-effective Torontech solution.

Throughout the past many years, at Torontech we've had the privilege of serving many top-ranking clients in North America and around the globe. Our fast growing customer base include many governmental institutions and organizations, universities and academic institutions, hospitals, manufacturing facilities, oil & gas companies, steel mills, Cement plants and Construction companies, as well as pharmaceutical industries, hospitals and healthcare organizations. To name a few, US Steel Corp, Morgan State University, Mitsubishi Cement, New Jersey Dept. of Transportation, Nucor Steel, Tubesa SA De CV, and Carrefour Group are amongst our VIP customers.

OUR VALUES

CUSTOMER COMMITMENT

We deliver quality products and services which sustain and grow successful business partnerships with our external & internal customers.

We cres

We create a winning outcome for people and our customers.

OUR PEOPLE

We provide leadership and commitment to our people through strong teams dedicated to safety, equity, recognition and respect for all.

MANAGING EXCELLENCE

SUCCESS

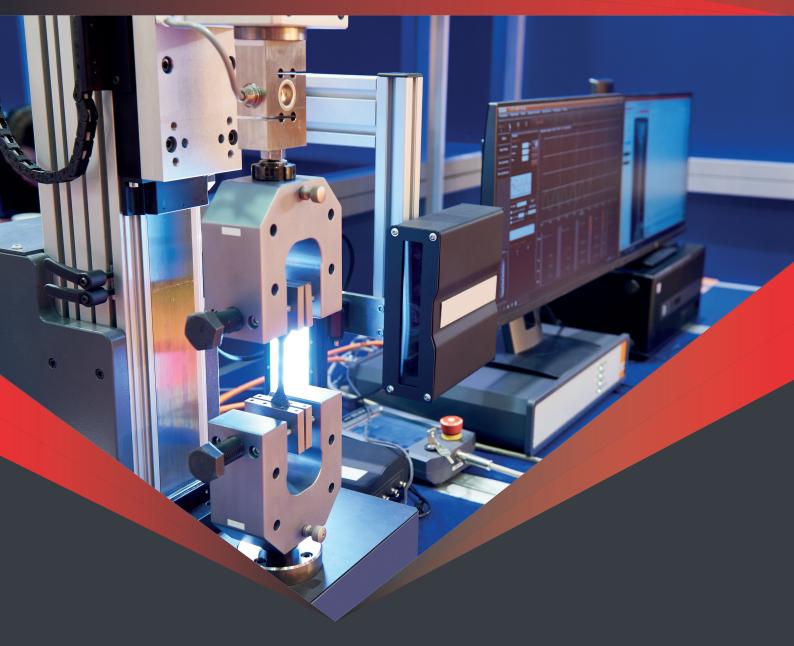
We achieve best practice through dedication, new ideas and professionalism.

INTEGRITY

We commit to supporting an environment that fosters honest and ethical behaviour.

COMMUNICATION

We foster and grow an organisation which supports open, honest and effective personal two-way communication with our clients.



MATERIALS TESTING DIVISION

Torontech Materials Testing Division is focused on supplying quality manufactured materials testing instruments throughout the globe. We offer an extensive range of solutions and products for the testing and evaluation of various materials and products made of metals, plastics, rubber, cement, concrete, paper and textiles.

MATERIAL TESTING INSTRUMENTS

- UTM Universal Testing Machine
- Impact Tester
- Optical Fiber Cable Testing Equipment
- Metallography Equipment
- Environmental Test Chamber
- Vibration Testing System

- Prestressed Concrete Strand Testing
- Concrete & Cement Testing Equipment
- Sample Preparation Equipment
- Industrial Testing Machines
- NDT and Ultrasonic Testing
- Densimeter/Specific Gravity Tester

MATERIAL TESTING INSTRUMENTS





Electromechanical Universal Testing Machine

https://www.torontech.com/electromechanical-universal-testingmachine

Capacity: 5 - 500 KN

Universal Testing Machine - TT Series is mostly used for static testing in a tensile or compression mode within a single frame. The test types include tensile, compression, shear, flexure, peel, tear, cyclic, and bend tests. Capacities for the TT-series range from low-load forces of 2kN (448 lbf) up to high-capacity 1000 kN (225,000 lbf) test frames.



Servo Hydraulic Universal Testing Machine

https://www.torontech.com/servo-hydraulic-universal-testing-machine

Capacity: 600 - 3000 KN

This servo-hydraulic Universal Testing Machine is ideal for high-capacity tension, compression, bend/ flex, and shear testing. It is in accordance with the EN, ISO, ASTM, JIS, GB and many other standards. These frames feature dual spaces so users can quickly change between tension and compression testing without having to remove heavy fixtures.

Torontech's High Strength Frame Dual Space Servo Hydraulic UTM is used to verify various mechanical properties of:

Metal: Pipe, tube, wire, rod, strip, plate and strip Fasteners: Tensile, proof, single and double shear Construction materials: Rebar, wire strand, mesh, folding, compression of concrete and components.



Charpy Impact Tester for Metals

https://www.torontech.com/charpy-impact-tester-metals

Capacity: 300 - 750 |

The Charpy Impact Tester is a high-performance impact tester for Charpy pendulum impact test method is used to determine the energy absorbed in an impact test of metallic materials.

Torontech provides a complete solution to ensure your needs of analyzing the quality of material.

- Broaching/Charpy Specimen Preparation Machines
- Notch Gauges
- Notch Profile Projector
- Low-Temperature Chambers/Baths
- Impact Fracture Analyzers
- Certified Samples for calibration of Impact Tester



Drop Weight Tear Tester - DWTT

https://www.torontech.com/charpy-impact-tester-metals

The advanced and popular Drop Weight Tear Impact Testing Machines - DWTT-API-30/40/50K series can test 10 samples consecutively, utilizing a user-friendly and automatic feeding and control system. By initiating the test process by the operator, the samples are automatically inserted via a manipulator from the low-temperature chamber to the impact area, and then the test is carried out and the broken samples are being collected with a fully automatic cycle. DWTT-API-30/40/50K series system also can be operated manually, thus making it easy to maintain the machine and control the step by step test procedure.



Charpy Impact Broaching Machine

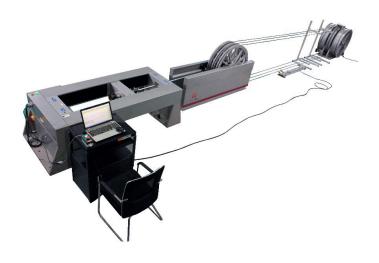
https://www.torontech.com/charpy-impact-broaching-machine

Torontech's TTCB-MI Manual Charpy Broaching Machines is a manual single station Charpy Broaching machine ideal operations that require few specimens

Torontech's TTCB-HII Hydraulic Charpy Broaching Machine are hydraulically driven with electric control of broaching tool movement wherein the broaching speed can be adjusted. Lubrication of the blade tooth is simultaneous to the movement of the broaching tool.

Torontech's TTCB-BSII & TTCB-BSIII Motorized (Ball Screw) Charpy Broaching Machines are built with tough ball screws, linear guide support track for ensuring structural stability of the broach and geometric precision of the notch.

TORONTECH TORONTECH



Optical Fiber Cable Testing Equipment

https://www.torontech.com/optical-fiber-cable-testing-equipment

Torontech Advanced Testing Technologies are the most reliable and cost-effective solutions for Optical Fiber Cable Testing. Torontech offers you a complete selection of testing machines for Optical Fiber Cable Testing.

We can supply competitive optical fiber cable testing solutions such as Optical Fiber Cable Repeated Bending testing machines, testing machines for determining Tensile & Crush as well as Torsion, Impact, Abrasion and many more testing machines complying to various National and International standards.



Metallography Equipment

https://www.torontech.com/metallography-equipment

Torontech's Metallography equipment offers its customers value and accuracy at an affordable price. Our range of Metallography machines and instruments includes Cutting, Grinding & Polishing machines, Metallurgical Microscopes and Mounting press machines.



NDT and Ultrasonic Testing

https://www.torontech.com/ndt-and-ultrasonic-testing

Torontech offers Non-destructive testing (NDT) techniques & machines to evaluate the properties of a material, component or system without causing damage.

X-Ray Pipeline Crawling systems is an important instrument used to detect the quality of welding in long distance pipelines. Finding porosity and cracks in pipes made of different materials is one the most important task of the pipeline inspector in oil and gas industry.

Torontech also provides storage tank NDT system which is most innovative and ultimate above ground storage tank inspection tool.



Environmental Test Chamber

https://www.torontech.com/environmental-test-chamber

Test Chambers are used widely in temperature variation tests, cold resistance tests, and for low-temperature storage in the areas of aerospace and aviation, electronic instruments, electrical products, materials, parts, and components.

- Temperature & Humidity Test Chamber
- Benchtop Environmental Chamber
- Thermal Shock Test Chamber
- Salt Spray Corrosion Test Chamber
- Accelerated Weathering Test Chamber
- Dust and Rain Test Chamber
- Ozone Resistance Test Chamber
- · Noxious Gas Test Chamber
- Industry Drying Oven
- · Walk-in Test Chamber



Vibration Testing Chamber

https://www.torontech.com/vibration-testing-system

Torontech is now offering reliable and cost-effective Vibration Test Systems, Shock Test Systems, Bump Test Systems, Drop Tester, and Packaging Transportation Simulators.

- Electrodynamic Shaker Vibration Test System
- Shock Test System
- Mechanical Vibration Tester
- Bump Test Machine
- Transportation Simulator



Prestressed Concrete Strand Testing

https://www.torontech.com/prestressed-concrete-strand-testing

Torontech manufactures and services a wide range of advanced prestressed concrete strand testing machines and accessories.

- Prestressed Concrete Rebar Tensile Tester
- PC Strand Universal Testing Machine
- Isothermal Stress Relaxation Tester
- PC Strand Deflection Tensile Testing Machine
- Rebar Bend & Re-bend Testing Machine
- Axial Load Fatigue Testing Machine
- PC Strand Stress Corrosion Testing Machine



Concrete & Cement Testing

https://www.torontech.com/concrete-cement-testing-equipment

Torontech offers many Concrete & Cement Testing Equipment which are built to the highest quality and standards.

- Concrete Compression Tester
- Cement Compression & Flexural Testing Machines
- Automatic Vicat Needle Apparatus
- Blaine Apparatus Air Permeability Tester
- Automatic Concrete Grinding Machine
- Los Angeles Abrasion Tester
- Bitumen Content Oven Ignition Method
- Concrete Pipe Testing Machine



Solid Sample Preparation Equipment

https://www.torontech.com/sample-preparation-equipment

Torontech's Sample Preparation Equipment is the superlative selection for sample preparation of powdered samples of raw material and final product to recognize your product quality control factors.

Suitable for application of sample preparation for below materials:

- Metals
- Minerals (Soil, Ore, Stones, Quartz, Coal, Silicate, Lime, etc.)
- Glass & Ceramics
- Construction materials (Sand, Cement, Brick, Clay, Granite, etc.)
- Pharmaceutical (Tablets, Pills, etc.)
- Agriculture (Plant roots, Stem, Leaf, Grain, Seed, Fibers, Fertilizers, Pesticides, etc.)
- · Animal tissues and Biological wastes
- Synthetic material (Plastics & Synthetic polymers)
- Electronic components and wastes



Industrial Testing Machines

https://www.torontech.com/industrial-testing-machines

Torontech offers accuracy industrial testing machines which are widely used in scientific research and quality inspection.

- Torsion Testing Machine for Fasteners
- Automatic 3D Coordinate Measuring Machine
- Optical Vertical Profile Projector
- Stress Relaxation Tester
- Ultra-Low Temperature Laboratory Freezer
- TRI-Cylinder Bend Testing Machine
- Horizontal Tensile Testing Machine for Overhead Conductors
- Drop Tower Test Machine for Cable Impact Testing
- Rebar Bend & Re-bend Testing Machine



- XRF Analyzer XRF Spectrometers Atomic Absorption Analyzer Optical Emission Analyzer Fourier Transform Infrared Spectroscopy
- Carbon and Sulfur Analyzer
- UV-VIS Spectrophotometer

- Optical & Laboratory Instruments Chromatography Instruments Water Purification Equipment



XRF Analyzer - XRF Spectrometer

https://www.torontech.com/xrf-analyzer-xrf-spectrometers

XRF Analyzers: X-ray fluorescence (XRF) provides one of the simplest, most accurate and economical methods for multi-element analysis. X-ray fluorescence (XRF) is basically the emission of characteristic "secondary" (or fluorescent) X-rays from a material that has been excited by bombarding with high-energy X-rays or gamma rays. The phenomenon is widely used for elemental analysis and chemical analysis, particularly in the investigation of metals, glass, ceramics and building materials, and for research in geochemistry, forensic science, and archaeology.



Atomic Absorption Spectrophotometer

https://www.torontech.com/atomic-absorption-analyzer-aas

Atomic Absorption Spectroscopy - Atomic Absorption Spectrometer (AAS) measures light that is absorbed due to lamp and atomization of excited samples.

Atomic Absorption Spectrophotometer - TWFX2000 is the newest design for analyzing metal samples by determining the presence and concentration of metals with stable performance.



Optical & Laboratory Instruments

https://www.torontech.com/optical-laboratory-instruments

Optical instruments that Torontech offers are excellent tool to detect simple properties of samples.

- Desk Sputter Coater
- Auto Video Melting Point Apparatus
- Microwave Digestion System
- Automatic Lab Titrator
- Refrigerated and Heating Circulators
- Automatic Refractometer
- Automatic Polarimeter



Optical Emission Analyzer - OES

https://www.torontech.com/optical-emission-analyzer-oes

Optical emission spectroscopy (OES), plasma, spectroscopy & spark or arc emission all work on a similar principle where either plasma, arc or spark is used to excite the sample by heating it and detecting the emitted spectrum.



Fourier Transform Infrared Spectroscopy - FTIR

https://www.torontech.com/fourier-transform-infrared-spectroscopy-ftir

Fourier Transform Infrared Spectroscopy (FTIR) is a technique used to obtain an infrared spectrum of absorption, emission, photoconductivity or Raman scattering of a solid, liquid or gas. An FTIR spectrometer simultaneously collects high spectral resolution data over a wide spectral range. This confers a significant advantage over a dispersive spectrometer which measures intensity over a narrow range of wavelengths at a time.



Carbon and Sulfur Analyzer

https://www.torontech.com/carbon-and-sulfur-analyzer

Carbon and Sulfur Analyzer which can be used to detect the content of carbon or sulfur in metals, alloys and organic materials.

Dual Combustion Furnace Infrared Carbon and Sulfur Analyzer is a high-end combined infrared carbon and sulfur analyzer of world-leading technology. Due to the diversity of specimens of users and analytical methods, the instrument is equipped with two sets of sample pre-treatment units, i.e. high-frequency induction furnace and tubular resistance furnace. The resistance furnace and the high-frequency induction furnace share the same infrared detection system for the detection of content of output gases to be detected. It is easy to switch between the two furnaces.



UV-VIS Spectrophotometer

https://www.torontech.com/double-beam-uv-vis-spectrophotometer

Spectrophotometry is the quantitative measurement of the reflection or transmission properties of a material as a function of the wavelength that deals with visible light, nearultraviolet, and near-infrared. Spectrophotometers can measure a light beam's intensity as a function of its color (wavelength). Important features of spectrophotometers are spectral bandwidth (the range of colors it can transmit through the test sample), the percentage of sample-transmission and the logarithmic range of sample-absorption.



Chromatography Instruments

https://www.torontech.com/chromatography-instruments

Chromatography Instruments are an excellent analytical tool. We offer high-Performance Liquid Chromatography (HPLC) is used for applications in the analytical chemistry, biochemistry and many other industries.



Water Purification Equipment

https://www.torontech.com/water-purification-equipment

Water Purification Equipment / Water Purification System offers tap water inlet, integrating various advanced water purification technology and process control methods, our water purification systems can completely meet, even exceed, the pure water standard of ASTM, NCCLS Class I etc. The ultra pure water resistivity is assured to reach 18.2 $\mbox{M}\Omega\text{-cm}$. It can meet the need of advanced lab water use for a different purpose. It can be widely used in the field of chemistry, biology, pharmacy, medicine, microelectronics, semiconductor etc, meeting the application requirements of spectral analysis, chromatographic analysis, cell culture, protein purification and molecular biology.



Tablet Hardness Tester

https://www.torontech.com/tablet-hardness-tester

To ensure that pharmaceutical pills and tablets have the ideal casing, a tablet hardness tester is required to accurately analyze the mechanical integrity of a tablet. At Torontech we offers wide range of advanced Tablet Hardness Testers. from the dosage form.



Disintegration Tester

https://www.torontech.com/2-stations-disintegration-tester-ttdisintgra-series

Pharmaceutical Disintegration Testers are used to break down the tablet into small particles or granules for testing of tablet to be readily available to the body.



Dissolution Tester

https://www.torontech.com/dissolution-tester

A dissolution test is a means of identifying and proving the availability of active drug materials in their delivered form.



Leak Tester

https://www.torontech.com/leak-tester

Leak Tester meets USP and package specifications. It is deal for checking leakage of packed strips, blisters, small sachets and amp

PHARMACEUTICAL INSTRUMENTS



Tap Density Tester

https://www.torontech.com/tap-density-tester

Leak Tester supports USP 1 (300 taps per min) & USP 2 (250 taps per min) and ASTM test methods



Friability Tester

https://www.torontech.com/friability-tester

Friability Tester complies with USP, IP, Ph. Eur. specifications



Gelatin Capsule Hardness Tester

https://www.torontech.com/gelatin-capsule-hardness-tester

The Gelatin Capsule Hardness Tester is a microcomputercontrolled hardness tester. Designed for determination of the hardness and resistance on flexible materials such as gelatin, gelatin capsules, play dough, etc.



Electromagnetic Sieve Shaker

https://www.torontech.com/electromagnetic-sieve-shaker

Electromagnetic Sieve Shaker is used in research and development, quality control of raw materials, interim and finished products as well as in product quality monitoring.



Manual Powder Flow Tester (EFT)

https://www.torontech.com/manual-powder-flow-tester-eft

Manual Powder Flow Tester provides a simple, repeatable flow ability index of powders and granules.

