METAL TESTING EQUIPMENT

- TENSILE TESTING EQUIPMENT
- PORTABLE HARDNESS TESTING EQUIPMENT
- BENCHTOP HARDNESS TESTING EQUIPMENT
- LABORATORY METALLOGRAPHY EQUIPMENT
- IMPACT TESTING EQUIPMENT
- TENSILE SAMPLE PREPARATION EQUIPMENT

NEXTGEN
MATERIAL TESTING

May 2021

International Toll Free Number

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NEXTGEN MATERIAL TESTING

The NextGen testing frames incorporate precision electromechanical load frame equipment to meet all of your testing needs. Built according to industry standards, the NextGen EML line features or latest TestPilot software which comes pre-programmed with some of the latest testing methods. TestPilot is designed for users to reach the most accurate results while providing an easy to use interface for even the most inexperienced users. The EML line is broken down into Class A, B, C and D covering a wide variety of laboratory configurations.

NextGen EML units can come equipped in the following variations:
- 50N-5kN Single Column Bench Top Units for Low Capacity Applications
- 1kN-10kN Dual Column Bench Top Units for Medium Capacity Applications
- 20kN-50kN Dual Column Floor Standing Units for High Capacity Applications
- 50kN-600kN Dual Column Floor Standing Units with High Rigidity for the Highest of Capacity Applications

Repeatable results are constantly achieved through the NextGen EML series.
From advanced Aerospace Industries to Educational facilities, NextGen EML Electromechanical Universal Testing Machines are found across the industry.

Class A

Single Column Bench Top Units - 50N-5kN Universal Tensile Testing Machine

The single column Class A testing systems are suited for tension, compression, flexure and other testing applications where specimens require less than 5 kN and where lab space is limited. The system is equipped with 1/500,000 Force Resolution the system is capable to providing +/- 1% down to 0.2N.

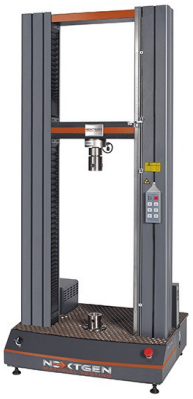
MORE INFO

Class B

Dual Column Bench Top Units - 1kN-10kN Universal Tensile Testing Machine

The dual column Class B testing systems are suited for tension, compression, flexure and other testing applications where load range requirements are between 10N to 10kN. This bench top model offer a user-friendly compact solution for your universal testing needs.

MORE INFO



Class C

Dual Column Floor Standing Units - 20kN-50kN Universal Tensile Testing Machine

The dual column Class C testing systems are suited for tension, compression, flexure and other testing applications where load range requirements are between 20kN to 50kN. The advanced load cell system offers ±0.5% accuracy down to 0.4% of capacity.

MORE INFO

Class D

Dual Column Floor Standing Units - 50kN-600kN Universal Tensile Testing Machine

The dual column Class D testing systems are suited for tension, compression, flexure and other testing applications where load range requirements are between 50kN to 600kN. This heavy duty system offers ±0.5% reading accuracy as well as position accuracy down to 0.021µm.

MORE INFO

Advanced Test Pilot Data Acquisition Software

NextGen NG-EML Test Pilot software provides a versatile, easy-to-use platform with a large and growing library of standards-compliant test methods (ASTM, ISO, DIN, EN, BS, and more) to fully control your NG-EML series Electromechanical Testing Machine.

MORE INFO

The NextGen testing frames provide a solution for high-capacity applications for a wide range of high-strength materials to meet all of your testing needs. Built according to industry standards, the NextGen SHM line features or latest TestPilot software which comes pre-programmed with some of the latest testing methods. TestPilot is designed for users to reach the most accurate results while providing an easy to use interface for even the most inexperienced users.

The SHM line is broken down into Class A, B, C, D and DP covering a wide variety of laboratory configurations. Each unit is built with different applications in mind for your benefit. Speak with a representative today to understand our complete line of servo hydraulic systems.

Repeatable results are constantly achieved through the NextGen SHM series combined with the TestPilot professional software. Suitable for high force applications, these units are offered with performance driven hydraulic packages with a complementary line of fixtures and accessories.

NG-SHM Class A
Servo Hydraulic Testing Machine

200kN-2000kN - Servo-Hydraulic Universal Testing Machine 4 or 6 column, servo-controlled hydraulic.

MORE INFO

NG-SHM Class B
Servo Hydraulic Testing Machine

300kN-3000kN - Servo-Hydraulic Universal Testing Machine 6 column, servo-controlled hydraulic

MORE INFO

NG-SHM Class C
Servo Hydraulic Testing Machine

600kN-1000kN - Servo-Hydraulic Universal Testing Machine 6 column, servo-controlled hydraulic

MORE INFO

NG-SHM Class D -
Servo Hydraulic Testing Machine

600kN-2000kN - Servo-Hydraulic Universal Testing Machine 2/4 columns, servo-controlled hydraulic

MORE INFO

NG-SHM CLASS DP -
Servo Hydraulic Testing Machine

600kN-2000kN - Servo-Hydraulic Universal Testing Machine - Side Action Wedge Grip 2/4 columns, servo-controlled hydraulic

MORE INFO

NG - EML Test Pilot Series
TestPilot Software

TestPilot is designed to enhance your ability to perform accurate and repeatable mechanical testing of materials, components and finished goods across a full spectrum of applications.

MORE INFO

Portable hardness testing allows for on site and field production testing on a wide variety of metals and specimen configurations. Portable hardness testers are available in a variety of scales including Rockwell, Brinell, Vickers, Leeb and Webster.

NextGen provides the most up to date portable hardness testing equipment meeting the latest industry standards. Contact us today to determine the most suitable hardness testing solution for your portable testing requirements

NG – LeebGen 3000

Leeb Rebound Portable Hardness Tester

MORE INFO

LeebGen3000- Leeb Portable Rebound Tester is a non-destructive precision metal hardness tester developed according to the latest industry standards. LeebGen 3000 is equipped with features which provide the instrument with a combination of a user-friendly interface and exceptional test result accuracy. This in turn allows for ease of operation and an accurate conversion display of virtually any metal hardness testing value.

The Leeb Portable Rebound Tester LeebGen 3000 is designed to replace the traditional stationary metal hardness testers, such as Vickers, Brinell and Rockwell. Its portable design allows to draw the most accurate test data regardless of the direction of the hardness test measurement. This is accomplished with a built-in 360° automatic angle adjustment system. LeebGen 3000 utilizes the latest in advanced micro-electronic technology, and provides you with a fast, convenient and a cost effective quality testing solution.

NEXTGEN TELEBRINELLER

BRINELL HARDNESS TESTING SYSTEM

MORE INFO

Telebrineller - Measuring Brinell Hardness anywhere in the field, the plant or the laboratory. A test bar of known BHN (Brinell Hardness Number), approximating the hardness of the specimen to be tested, is selected. Consistent accuracy is maintained when the test bar BHN is within + or -15% of the specimen BHN and is of the same general material.

The Telebrineller instrument is complete with test bar, the anvil, encased in a soft molded rubber head, rests on the test bar. The rubber head and a similar resting block, provide non-skid footing. Below the test bar, a steel impression ball , secured in the base of the rubber head, is in contact with both the test bar and the specimen. The anvil is struck sharply with a two to five pound hammer. The impact, regardless of force, is transmitted equally to the test bar and, through the impression ball to the specimen metal (6),making impressions in both.

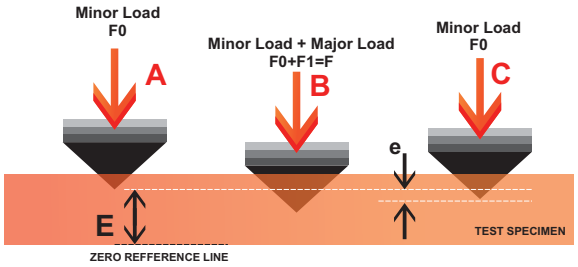
ULTRASONIC CONTACT IMPEDANCE

HARDNESS TESTER UH200

MORE INFO

The UH200 non-destructive ultrasonic hardness tester, relying on the principle of ultrasonic vibration sensor rod, can easily and swiftly detect the material hardness of several metals without any damage. This method produces no indentation and it has both high precision and speed. It makes use of a single chip technology and advanced sensing system which makes it better than the usual ultrasonic hardness testers in both function and structure. UH200 support value conversion among HV, HB, HRC, and others and the average of the multipoint measurement can be derived. Accurate display and printing of the results is also possible. It is popularly used in testing hardness of metal foil, finished workpiece, metal thin layer (electroplating layer, carburizing layer, nitriding layer, etc.), the special shape parts are easy to dismantle but the hard parts are difficult to move. It is a good equipment for testing precision to save cost and improve production pass rate.

Rockwell hardness tester is defined as the indentation resistance and determined by measuring the permanent depth of an indentation after undergoing a preliminary force. The more shallow the indentation, the harder the material. Rockwell testing is defined with the ASTM E18 industry standard for the testing procedure. The Rockwell hardness measurement is calculated by first applying a preliminary test force, called a preload, for a specific period of time, called dwell time.
The preload penetrates through the surface of the material to eliminate any interference caused by the surface finish of the test specimen. This point reached represents the zero point, also known as the reference point.



NG-ROCKGEN ANALOG SERIES - MANUAL AND ELECTRONIC MODELS

The NG-RockGen Analogue Rockwell Hardness Tester is designed to test the hardness of metals by determining the depth of penetration of an indenter under a large load compared to the penetration made by a preload according to the Rockwell regular scales. NG-RockGen Analogue Rockwell Hardness Tester is capable of testing the following Rockwell Regular Scales: HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK. The NG-RockGen Analogue Rockwell hardness tester is also capable of testing the following Rockwell Superficial Scales: HR15N, HR30N, HR45N, HR15T, HR30Tand HR45T.

MORE INFO

NG-ROCKGEN DGEN SERIES - ROCKWELL REGULAR, SUPERFICIAL AND TWIN DIGITAL MODELS

The NG RockGen Digital Series provides an automatic, digital, high accuracy solution to your Rockwell testing requirements. The Digital series is completely automated and is available in Rockwell Regular scales, Rockwell Superficial scales and TWIN Rockwell Regular and Superficial scale configurations.

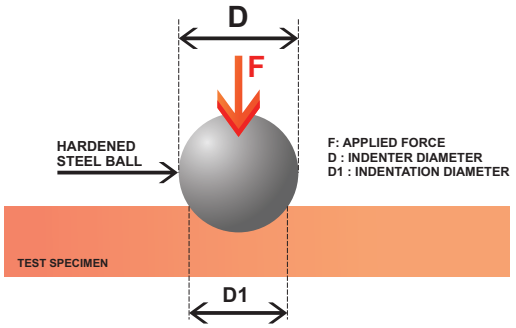
MORE INFO

GENROCK NG-150 SERIES – ADVANCED ROCKWELL HARDNESS TESTER – MANUAL AND AUTOMATIC ROCKWELL HARDNESS TESTING SYSTEM

GenRock NG-150 Series - Advanced Rockwell Hardness Tester is the leading Rockwell Hardness Testing system on the market. This German quality system allows is built for exceptional precision, user-friendliness and high volumes of Rockwell hardness testing requirements. Packed with the latest innovative user-friendly software, the GenRock NG-150 Series - Advanced Rockwell Hardness Tester is the machine to get the job done in the quickest and most accurate way.

MORE INFO

The Brinell hardness test is described as the method for testing permanent change of metal specimens using a tungsten carbide ball indenter of various sizes. It measures the resistance of the material to permanent deformation. The diameter of the indentation having deformed the material is then used to calculate the Brinell hardness value. The Brinell indentation is commonly measured using a manual 20x/40x magnification microscope or through the use of CCD optics for removing all aspects of human error.
The Brinell Hardness Test is a destructive unit of hardness calculations and is conducted according to the ASTM E10 and the ISO 6506 industry standard.



BRINGEN-3000 SERIES -

DIGITAL AND AUTOMATIC CLOSED LOOP BRINELL HARDNESS TESTER

BrinGen 3000 - Digital Brinell Hardness Tester is designed to test the resistance of a metal specimen for indentation. A fixed force (load) is applied against the specimen by an indenter to determine the material hardness. The smaller the indentation, the stronger the specimen is. According to the ASTM E-10 BrinGen - Digital Brinell Hardness Tester is commonly used on surfaces of materials that are too rough to be tested by any other test method. The test load ranges are from 62.5kgf to 3000kfg. BrinGen 3000 Series - Digital Brinell Hardness Testing system is equipped with a closed loop system for the absolute highest accuracy load control. Closed loop driven system provides precise control of test force application.

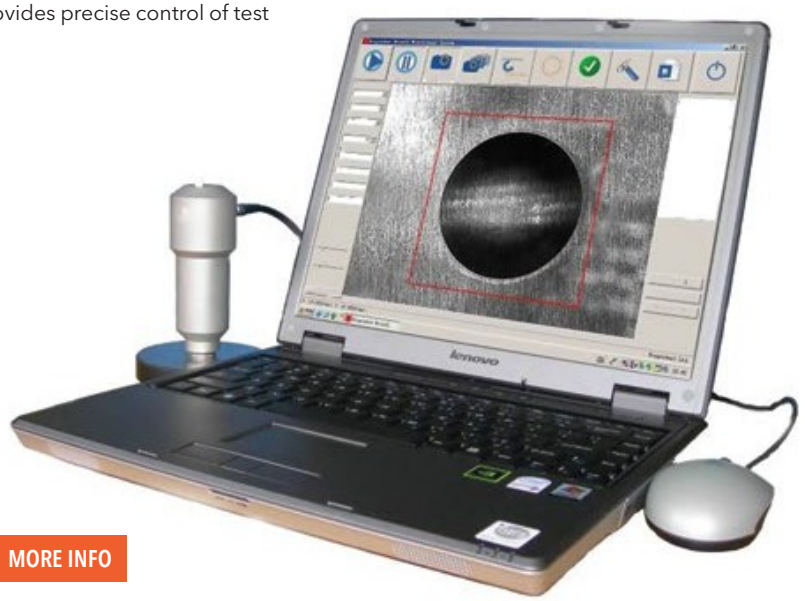
MORE INFO

BRINGEN SCOPE -

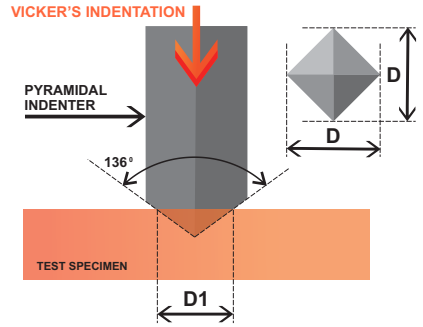
OPTICALLY ADVANCED CCD BRINELL MEASURING SCOPE

BrinGen 3000 Series - Digital Brinell Hardness Testing systems are standalone units that can easily be upgraded to include the NG-Scope - Brinell Hardness Image Automatic Measuring system - for the most accurate results through an optical Analysis Software. Simply use our advanced BrinGen software and the BrinGen Scope for measurements within 0.001mm.

MORE INFO



The Vickers Hardness Test is a method for measuring the hardness of metals, both ferrous and non-ferrous. The purpose of this metal hardness testing is to identify the material's resistance to deformation and permanent depth change. It is the most unique method of hardness testing due to its independent testing nature. The Vickers test allows for a uniform hardness testing value along the complete range of testing loads; regardless of which force is applied on any given material.
The Vickers Hardness Value, symbolized as HV, or the Diamond Pyramid Hardness Value, symbolized as DPH are the units of hardness in Vickers Hardness Testing. The Vickers Hardness Scale has a very extensive load range to cover all possible testing applications.



NEXTGEN MICRO
VICKERS/KNOOP HARDNESS TESTER

The NG-1000 - Micro Vickers and Knoop Hardness tester is the most advanced hardness tester for accurate measurements and ease of use. The NG-1000 - Micro Vickers and Knoop Hardness tester comes standard with a motorized turret and is available in three (3) different configurations to suit all requirements. The series includes the NG-1000 - Micro Vickers and Knoop Hardness tester AGEN - Analogue Vickers Hardness Tester, DGEN - Digital Vickers Hardness Tester and CCD - Digital Vickers Hardness Tester with CCD Optical Analysis Software.

MORE INFO

NEXTGEN MACRO
VICKERS HARDNESS TESTER

NG-5000 Series Macro Vickers Hardness tester is the most advanced model for accurate measurements and ease of use. The NG5000 - Macro Vickers Hardness tester is equipped with a motorized turret and an optional CCD camera and software to take out all possibilities of human error. This testers are equipped with a large display and a built in printer. The unit can be connected to a computer with the included USB/RS-232 cord for easy data transfer. The files can be easily exported to either a word or excel format for easy printing.

MORE INFO

NEXTGEN MICRO
VICKERS/KNOOP HARDNESS TESTER

Automated Vickers/Knoop and low load Brinell hardness testers are available with complete automation for CHD curves and detailed hardness analysis. Complete with automated stages, optional overview cameras and optical zoom, the NG automated series is capable of analyzing your materials with high precision and accuracy.

MORE INFO

NextGen metallography equipment is focused on the structure refining of metals and alloys. It specializes in different methods of specimen preparation including cutting, polishing and grinding. The process of evaluating physical properties of the specimen is made easy using the NextGen Metallography equip-ment. The final evaluation of the materials properties are analyzed with the use of a microscope (optical or electron).

The GenCut series is focused on precision and abrasive cutting of materials ranging from soft to hard metals. The cutting equipment is designed to shape specimens into your exact size for further analysis. The GenGrind series is used to achieve the desired surface finish of your materials based on your application. Grinding and polishing equipment is often used to remove the damage caused by the cutting blades of the abrasive saws upon extraction of the desired specimen size.

ABRASIVE AND PRECISION CUTTING EQUIPMENT

The GenCut Series offers a range of equipment to match your specific cutting requirements. The GenCut systems are equipped with the highest level of cutting accuracy and have a user friendly interface for ease of operation.





MORE INFO

MOUNTING PRESSES

The GenPress Series is designed to alleviate the user from the challenge of handling difficult specimen shapes and sizes during sample preparation procedures. The equipment is also used to protect the edges and any other defects found on the surface of the samples. A thermoplastic medium is required for stability to support the sample in the process of grinding and polishing.







MORE INFO

GRINDING AND POLISHING EQUIPMENT

The GenGrind Series is our Grinding and Polishing equipment utilized for achieving the highest precision of surface finish on a wide variety of samples. The GenGrind systems can be configured with either a single or a dual wheel as well as an automated option for low to high volume applications.





MORE INFO

Pendulum Charpy/Izod Impact Testing is a high strain-rate test to determine the amount of energy absorbed by a material during fracture.The Impact tester involves a pendulum of known mass and length which is dropped from a known height to strike an Impact Specimen. Impact specimens are of standard or subsize dimensions that can be found in a variety of industry standards including ASTM E23, ASTM A370, EN 10045-1 and ISO 148. Various strikers and specimen vises are available to suit all requirements of Charpy or Izod Testing. Specimens are notched using a broaching machine to specific dimensions and geometries. The energy transferred to the material after impact can be inferred by comparing the change in height of the hammer before and after striking the specimen.

Class C

Single Column Charpy Impact Tester
150J, 300J or 450J

NextGen's Class C – Single Column Charpy Impact Testing system provides an economical single column solution for measuring Charpy Pendulum Impact Testing. This durable system is designed for Charpy Testing with capacities of 150J, 300J and 450J. The ISO and ASTM strikers are available along with a variety of protective barriers from half to fully enclosed. The standard analogue display can be upgraded to a touch screen interface.

MORE INFO

Class D

Dual Column Charpy Impact Tester
150J, 300J, 450J, 600J or 750J

NextGen's Class D – Dual Column Charpy Impact Testing system provides a high level of rigidity and specimen testing capacity. This Charpy Impact tester has a minimum capacity of 150J and a maximum capacity of 750J. The system comes standard with a digital display with software upgrade function for data plotting. The Class D impact system can also include automatic specimen feeding, cooling and heating systems as optional upgrades.

MORE INFO

Class G

Servo-Motor Single Column Charpy/Izod Impact Tester – 150J, 300J or 450J

NextGen's Class G – Servo-Motor Single Column Charpy and Izod Impact Testing system is commonly used in R&D laboratories. The system offers the ultimate versatility of testing 150J, 300J or 450J capacities based on both Charpy and Izod test methods. The unit comes standard equipped with a servo motor and is designed to test at any preset angle. Additionally, this impact tester includes automatic braking of the pendulum. The standard analogue display can be upgraded to a touch screen interface. The Class G impact system can also include automatic specimen feeding, cooling and heating systems as optional upgrades.

MORE INFO

Class H

Servo-Motor Dual Column Charpy Impact Tester
300J, 450J, 600J or 750J

NextGen's Class H – Servo-Motor Dual Column Charpy Impact Testing system offers of an exceptional combination of versatility and robust build. This impact system provides our most durable options designed with a dual column configuration. The system offers the ultimate versatility of testing 300J, 450J, 600J and a maximum of 750J capacities based on both Charpy and Izod test methods. The unit comes standard equipped with a servo motor and is designed to test at any preset angle.

MORE INFO

Specimen Notching/

Broaching Machine

NextGen offers an economical solution for Specimen notching and broaching for Charpy and Izod specimens. This certified system complies with ASTM ISO148, EN10045, ASTM E23, DIN 50115 standards. This automated, motorized solution is capable of preparing two specimens at any one given time up to 46 HRC. A variety of broaches are available for different geometries of notches.

MORE INFO

FLAT TENSILE SAMPLE PREPARATION MACHINES

Preparing flat specimens for tensile testing has never been easier. Our line up of TensileMill CNC's Flat Specimen Preparation Machines offers exceptional user-friendliness, precision & repeatability and cost-effective solutions for all of your in-house tensile specimen preparation needs.

TENSILEMILL CNC MINI

COMPACT FLAT TENSILE SPECIMEN PREPARATION MACHINE

The newly enhanced TensileMill CNC MINI has quickly climbed through the ranks as the optimal tensile sample preparation system in the global market place. Since the recent upgrades, the MINI surpasses our Classic model by virtually all parameters. Due to the MINI's small footprint, this compact tensile sample preparation system is ideal for accommodating smaller space requirements. The machine can also prepare virtually all types of tensile specimen standards, as well as it has a full scope of all purpose CNC machining capabilities.

MORE INFO

TENSILEMILL CNC XL

FLAT SPECIMEN PREPARATION

TensileMill CNC XL - Flat Specimen Preparation is a powerful and dynamic addition to any manufacturing floor. High powered spindle and servos increase material removal rates. Mach4 based CNC control and substantial memory make large, complex programs easy to load and execute. For smaller jobs, wizards make on machine programming fast and easy. Quickly create pockets, hole patterns, text engraving and more.

MORE INFO

ROUND TENSILE SAMPLE PREPARATION MACHINES

Preparing round specimens for tensile testing has never been easier. Our line up of TensileTurn CNC's Round Specimen Preparation Machines offers exceptional user-friendliness, precision & repeatability and cost-effective solutions for all of your in-house tensile specimen preparation needs. Contact us today to identify which machine would be the optimal fit for your laboratory.

TENSILETURN CNC

ROUND SPECIMEN PREPARATION

This classic tensile sample preparation machine is designed to accommodate round tensile specimen requirements from both round and square stocks as well as other CNC machining requirements. The standard tensile software included with the unit allows for round tensile milling results in seconds with a push of a button. This industrial, user-friendly machine can accommodate medium to large volume of daily round tensile or other round CNC requirements. TensileTurn CNC is an ideal solution for medium to larger size laboratories and manufacturing facilities.

MORE INFO

TENSILETURN CNC XL

HEAVY DUTY ROUND SPECIMEN PREPARATION

TensileTurn CNC XL is the upgraded version of our TensileTurn CNC classic unit. This powerful lathe is capable of turning round, square and irregular stock of tougher materials in the marketplace. The machine comes equipped with a robust tooling fixture, precision tailstock, and a high powered spindle. TensileTurn CNC XL is no doubt the ultimate round tensile test sample preparation machine capable of both tensile specimen preparation and advanced CNC machining. The unit is capable of meeting high capacity and high quantity output requirements for medium to large size laboratories and manufacturing facilities.

MORE INFO

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MATERIAL TESTING

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