Industrial Series

Excellence in High-Capacity Materials Testing

INSTRON®


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Industrial Series - Excellence in High-Capacity Materials Testing

The trend toward high-strength, lightweight materials for the aerospace, energy, construction, and transportation industries requires materials testing systems to be durable, yet maintain precise control while generating critical test data. Software user interfaces must be easy to use, yet flexible enough to meet the increasing demands of the testing world. The Industrial Series delivers exceptional performance packaged in reliable, innovative system designs that offer superior accuracy and repeatability, improved safety, and an overall enhanced user experience.

The global expertise of Instron® came about through the merging of recognized materials testing equipment companies including Schenck, Wolpert/Amsler, Riehle, Baldwin, and SATEC™. The Industrial Series leverages this proud heritage with a load cell measuring system, instrumentation, control electronics, accessories, and industry-preferred materials testing software to provide the ultimate high-capacity testing platform.

Our mission at Instron® is to be recognized as the world's leader in mechanical testing instrumentation. Our goal is to provide our customers the best ownership experience by delivering the highest quality products, expert support, and world-class service. With more than 100 years in the materials testing industry, Instron Industrial Series systems are routinely used for testing all types of metals specimens including rebar, plate, pipe & tube, stranded cable, and fasteners, as well as concrete products. For the most up-to-date information on your specific application, visit Testing Solutions at www.instron.com.

The Industrial Series is comprised of high-capacity, hydraulic testing systems for tension and compression applications. Ranging from 300 kN up to 2000kN, standard models feature large diameter columns and rugged frame components for superior frame stiffness and durability. Understanding the critical importance of operator safety, these models incorporate high-quality materials, components, and craftsmanship.

INDUSTRIAL SERIES

At a Glance

Dual Test Space Frames

Separate test spaces for tensile and compression testing

Available in capacities from 300 - 600 kN (67,500 - 135,000 lbf), the DX Model's hydraulic power supply and controller are located in the machine base. The HDX Models offer a longer test stroke and are available in 1,000 kN (225,000 lbf) and 1,500 kN (337,500 lbf) capacities.

DX Models

HDX Models

KPX Models

LX Models

Single Test Space Frames

One test space accommodates tension or compression testing

Available in capacities from 300 - 600 kN (67,500 - 135,000 lbf), the LX Model's hydraulic power supply and controller are located in the machine base. The KPX Models offer a long test stroke and high-speed actuator and are available in capacities from 600 - 2,000 kN (135,000 - 450,000 lbf).

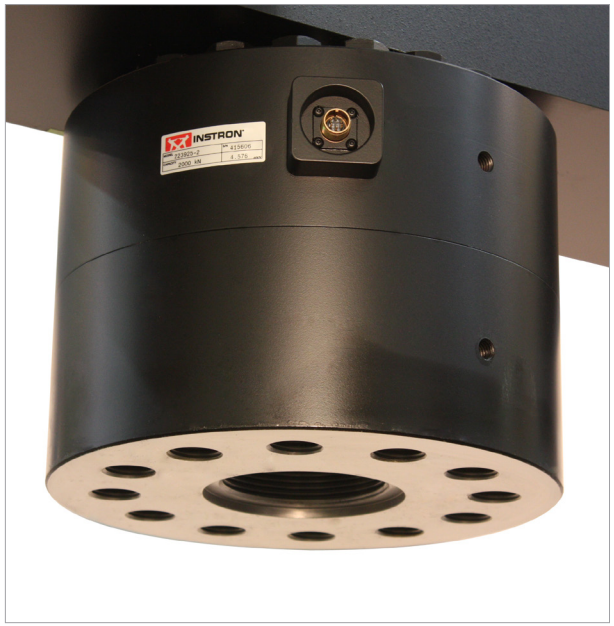
INSTRON® PERFORMANCE

Are testing efficiency and operator safety important in your lab?

Designed with an open front, the hydraulic grips and crossheads provide an efficient gripping solution. Specimens can be loaded without jogging the actuator or adjustable crosshead. Jaw faces cover a wide range of specimen sizes and are prevented from extending outside the grip or crosshead.

- Improved operator safety with fully visible specimen engagement
- Efficient loading and removal of test specimens and jaw faces

At the core of the Industrial Series lies advanced technology and modern design. Precision load cells, sophisticated control electronics, eco-friendly power supplies, and advanced grip designs combine to form a superior testing system.



Are you concerned about data integrity?

Critical load data is measured directly from the center of the loading axis by a precision strain gauge load cell system. Load data is unaffected by actuator friction allowing the hydraulic drive system to be sealed.

- Accurate and repeatable load readings over the entire travel of the load frame
- Hydraulic system protected from contamination
- Load readings less susceptible to off-center specimen loading

Does your application require precise machine control?

The Industrial Series control electronics offer unsurpassed responsiveness. An integrated 5900 control platform provides high speed, closed-loop servo control, and data acquisition on Load, Extension, and 3 optional input channels. Standard features include a single-range measuring system, Ethernet communications, and automatic calibration and recognition of transducers.

- Accurate control on any available measurement channel including strain
- Real-time capture of quick test events, such as yield behavior or specimen failure
- Fast and reliable communication between load frame and PC

Would you like to save on energy costs?

The V-Series variable pressure pumping system supplies pressure on demand. During the test, the pump output increases as the testing load is increased. Between tests, the system remains at a low idle pressure. The V-Series also provides operating pressure for the hydraulic grips.

- Reduced heat generation, noise levels, maintenance, and operational costs
- Improved operator safety from lower pressure external supply lines
- No need for a secondary grip pumping unit

POWER AT YOUR FINGERTIPS

Convenient, Easy-To-Use Features

5900 Productivity Panel

Adjustable user control panel provides multiple function keys and displays that allow the operator to interact with the testing system before, during, and after the test. While working at the load frame, users can perform common testing functions, as well as view key test information, such as live measurement data and calculation results, without returning to the computer workstation.

View Real-time Data and Results

Constantly monitor vital measurements and real-time results throughout the test, on the 4 user-defined live displays.

4 User Defined ‘Soft Key’ Buttons

Toggle display to enable a variety of operator initiated test actions.

Protect your Specimen

Specimen protect prevents the load from exceeding a set threshold — protecting your valuable specimens from damage.

Precise Positioning

The fine position adjustment wheel moves the actuator in very small increments, allowing operators to load specimens without the risk of overload.

Hydraulic Grip Controls

Hydraulic grips are provided with an intelligent control handset for operator productivity and safety. This ergonomic handset features a separate 3-position switch for each grip and a magnetic back for convenient operator placement.

Bluehill® Universal

Built for touch interaction from the ground up, the new portrait layout offers the most comprehensive view of the test workspace on the Operator Dashboard, a stunning large-format monitor.

Effortless Workflows

An easy-to-use touch interface optimizes your testing workflow.

Increased Efficiency

Console functions and numerical keypads are conveniently located and accessible, making your testing faster and easier.

Advanced Capability

Powerful architecture gives you complete control over how you set up test methods, allowing you to achieve optimal test results.

Pre-loaded Templates

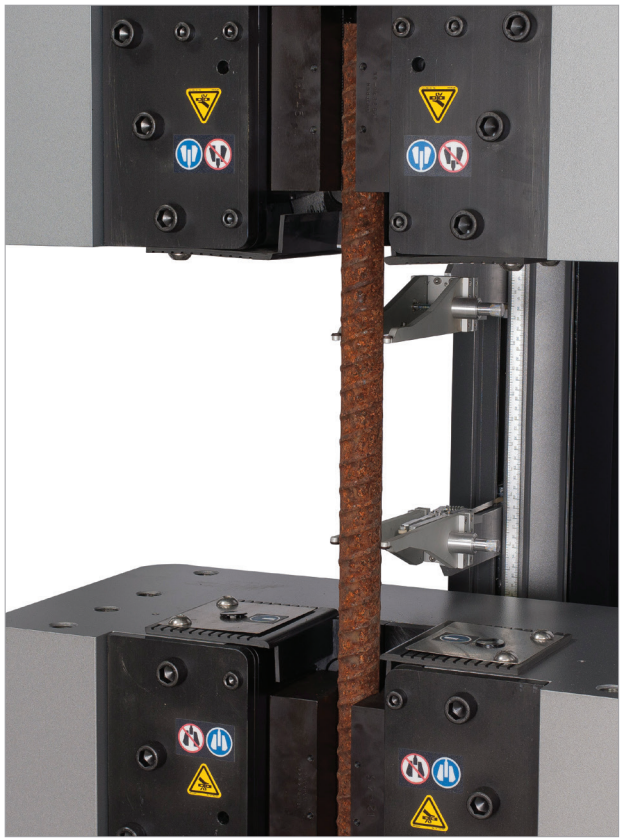
An extensive library of pre-configured methods for the most commonly used ASTM, ISO, and EN standards is included and packaged in modules that are specific to your testing application.

Exporting Tools

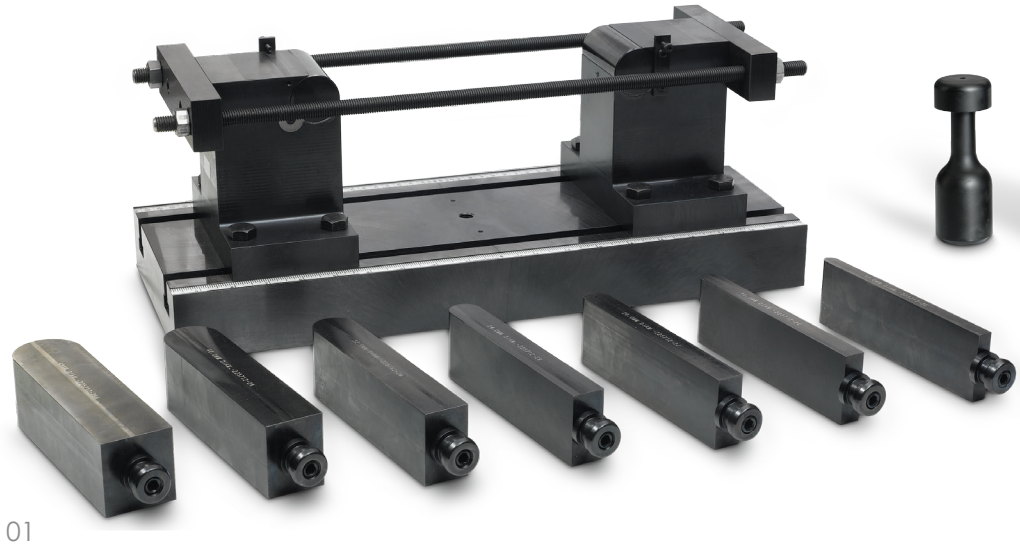
Bluehill Universal's exporting tools have the flexibility to output results, user inputs, raw data, graphs and more in a wide variety of formats, including .csv, html, pdf, and Microsoft Word®, as well as customized files to integrate with your Lab Information Management System (LIMS).

ACCESSORIES

Grips, Fixtures, and Instrumentation



Industrial Series systems can be extended with various accessories to meet the changing needs of your laboratory. Standard accessories — grips, fixtures, and instrumentation — may be fit to your system to perform common materials tests including tensile, compression, bend/flex, and shear. Customized fixtures are also available for specialized testing applications.



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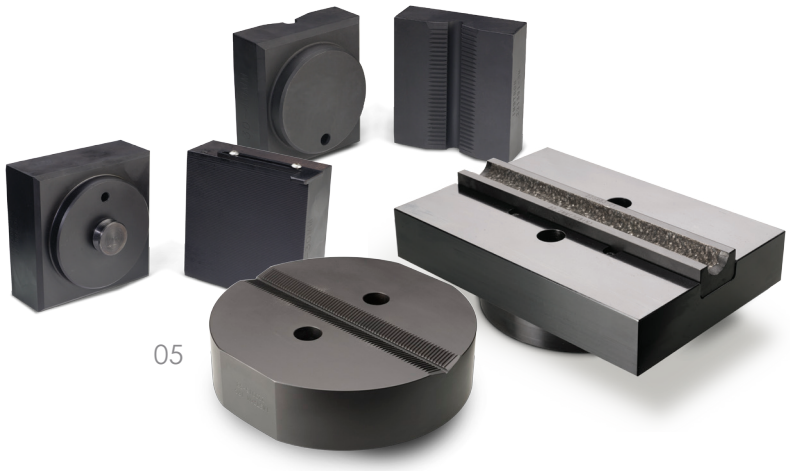

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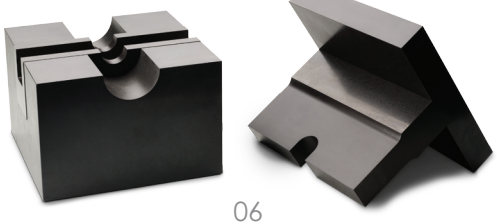

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01 Bend/Flex Fixtures and Loading Mandrels

02 Fastener Testing Fixtures

03 Spherical and Plane Compression Platens

04 Rigid and Spherical Adapters

05 Grip Jaws for Hydraulic Wedge- and Side-Action

06 Shear Fixtures

07 Extensometers

08 Grip Block Tension Adapters

TECHNICAL HIGHLIGHTS

DX Models

HDX Models

KX Models

KPX Models

LX Models

The Industrial Series meets the requirements for the European CE mark and for ISO 13849.

For detailed system specifications visit www.instron.com and search on frame model.

Dual Test Space

Model	Capacity			Maximum Test Speed		Actuator Stroke	
	kN	kgf	lbf	mm/in	in/min	mm	in
300DX	300	30000	67500	76	3	152	6
600DX	600	60000	135000	76	3	152	6
1000HDX	1000	100000	225000	100	3.9	254	10
1500HDX	1500	150000	337500	114	4.5	305	12

Single Test Space

600KX/KPX	600	60000	135000	203	8	508	20
1000KX/KPX	1000	100000	225000	203	8	610	24
1500KX/KPX	1500	150000	337500	203	8	610	24
2000KPX	2000	200000	450000	203	8	610	24
300LX	300	30000	67500	152	6	305	12
600LX	600	60000	135000	76	3	305	12

SUPPORT FOR THE LIFE OF YOUR EQUIPMENT

Instron® is the largest supplier of materials testing machines in the world. Our reliable testing systems can run 24 hours a day, 7 days a week, 365 days of the year. However, if something does go wrong, or you have a question, we offer a variety of resources to ensure you receive the assistance you need as soon as you need it.

You can count on us

- Represented in more than 160 countries, speaking 40 different languages
- Our on-site and laboratory calibration and verification processes are ISO 17025 accredited throughout Europe, North America, Brazil, Australia, China, Japan, Korea, Singapore, India, Thailand, and Taiwan

Enhanced technical support a "touch" away

- Instron Connect provides easy remote screen sharing and service request submissions to reduce support times
- Built in verification reminders in Instron Connect minimize risk for delayed certifications
- Instron Connect allows simple test method and file transfers as well as software updates
- Instron Connect's remote audio support capability provides easy talking instructions and guidance through the Bluehill Universal Dashboard
- Additional services like preventative maintenance, calibration, training, emergency repair, and service parts insure confidence that you can keep systems running and get date in a timely fashion

Stay at the forefront of materials science

- Training courses available on-site, online, or in one of our Regional Training Centers
- Utilize our Applications Engineering Lab or Custom Engineered Solutions Group for the latest technological advances in materials testing
- Our state-of-the-art Calibration Laboratory offers a comprehensive range of accredited calibration and verification services complying with ASTM, ISO, and Nadcap standards for: Force, Speed, Strain (extensometers), Displacement, Impact, Temperature, Torque, Creep, Strain Gauge Channel, Alignment, and Verification of all CEAST Instruments.

Resources at your fingertips • www.instron.com

- Our *Testing Solutions* section provides answers to your most current testing challenges
- WSA is a dedicated support website, providing web-based delivery of information specific to your system
- Access to our complete online Accessories catalog

We build more than testing systems; we build relationships.

“True innovation occurs when product designers and developers show relentless curiosity towards the needs of their customers. This builds an understanding that allows them to anticipate and create a new suite of solutions that are Simpler, Smarter, and Safer.”

Yahya Gharagozlou

Group President
ITW Test & Measurement

www.instron.com

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