

Bluehill[®] 3 | Testing Software





What's Inside...

Although there are other suppliers of materials and components testing instruments, none have invested as much in the software as Instron®. We strongly believe that one of the key factors in achieving accuracy, repeatability, and efficiency in testing lies in the interface between the instrument and the user. The following pages are designed to show users at all levels how Bluehill® 3 can help you perform your test and get the results you expect, even better than before.

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What is Bluehill 3 and How Does it Work?

The one-page software demonstration.

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What Can Bluehill 3 Do for Me?

A spotlight on features that address specific user needs and challenges. Spotlights include:

- Laboratory Technicians
- Laboratory Managers
- Quality Engineers
- R&D Engineers
- Educators and Students

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What if I Need Help?

Bluehill users at all levels are bound to have questions — Bluehill 3 puts the answers right at your fingertips with its comprehensive help system.

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What Software Options Will I Need?

Bluehill software is configured into common application areas with optional advanced test control and data analysis options.

The One-Page Demo

A quick introduction to Bluehill® Software and an overview of how it works in just 4 easy steps!

Step 1 - Select Test

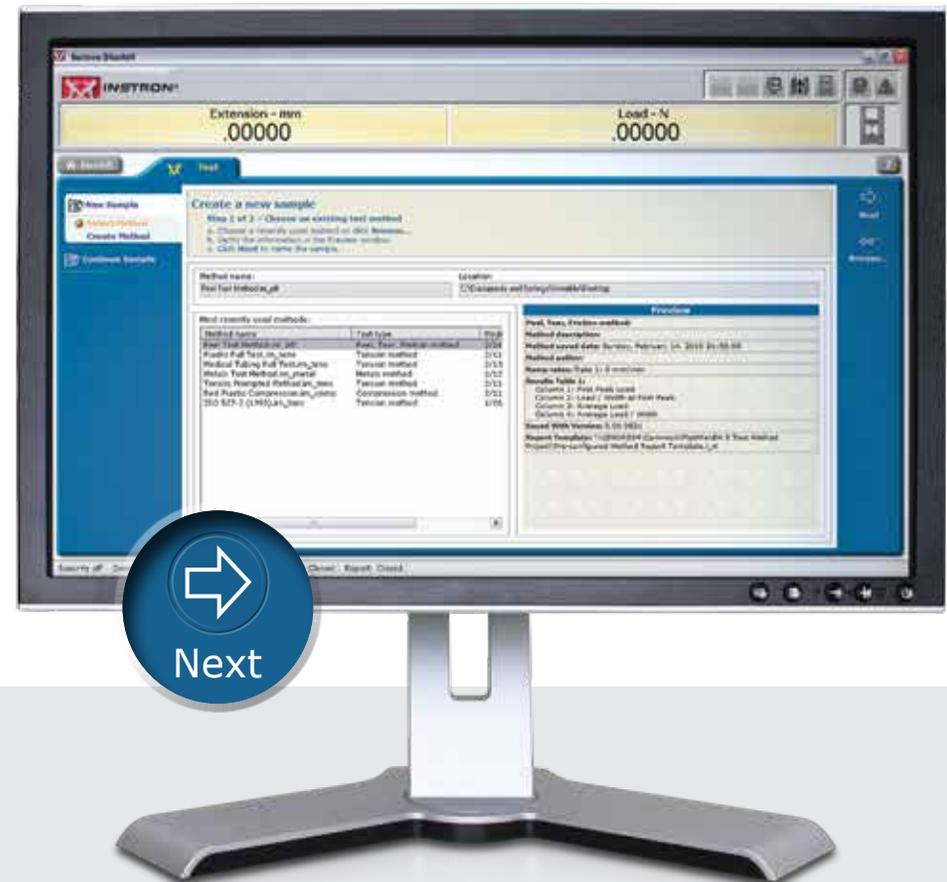
To start a test, click [Test](#) from the homescreen.



The homescreen is the starting place for all Bluehill tasks – running tests, creating methods, adding security, and more.

Step 2 - Choose Method

A preview screen helps you identify and choose a pre-configured method. Select method and click [Next](#).



Bluehill 3 has an extensive library of pre-configured methods to some of the most commonly used ASTM, ISO, and EN standards.

Step 3 - Load Specimen & Start

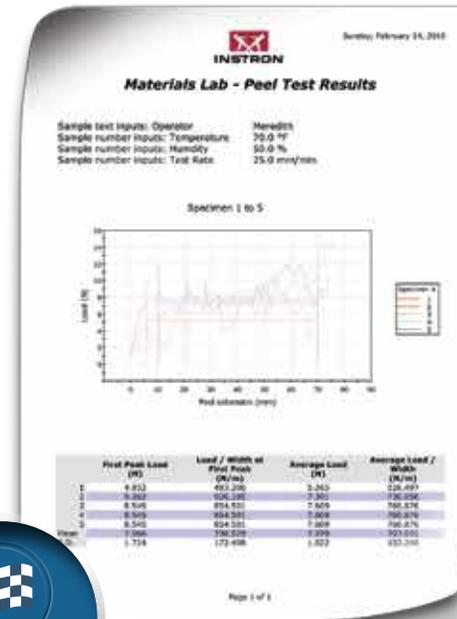
Once the specimen is loaded in the instrument, click **Start** when ready. Real-time graphs, test results, and statistics are available for viewing.



Notice throughout the following pages that this test user-interface screen is completely customizable!

Step 4 - Finish

When all the specimens are tested, click **Finish** to export your data and then print or save the report.



Customize the report with your company's logo (include it on the homescreen as well).

Laboratory Technicians

“When I am running tests, I want to set up, start testing, and print the report as quickly as possible. I want to get into my rhythm without being slowed down with extra steps.”



What Can

The Console

Appears on all Bluehill® screens providing system level tools, feedback, soft keys and displays to the user at all times. Gain quick access to www.instron.com by clicking on the Instron logo.

Set up a Choice Input With Linked Parameters

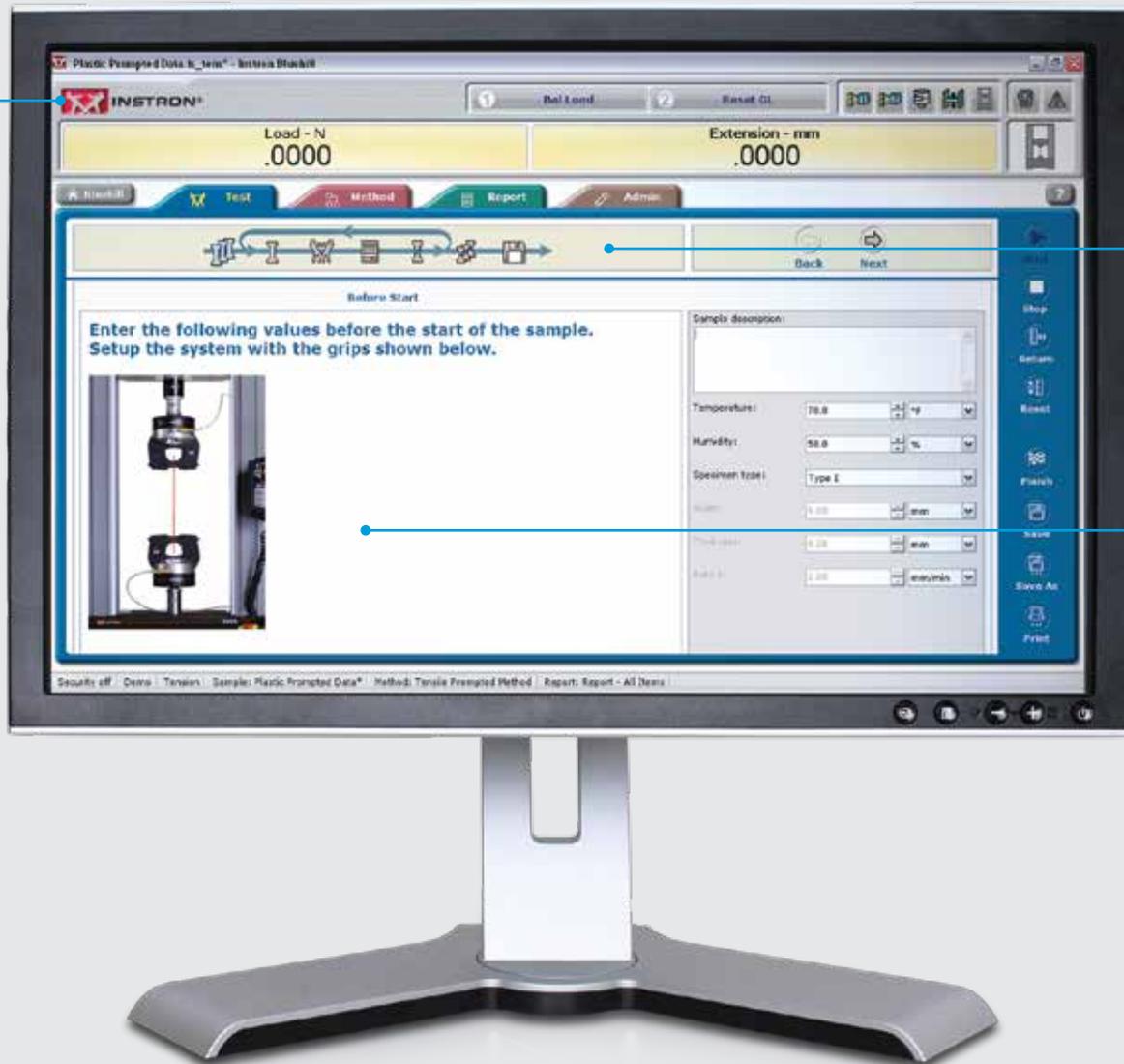
Choice inputs provide users with a preconfigured list of options that minimize data entry and chance of error for commonly used inputs, such as operator name, color or specimen type. Additionally, each choice can be linked with other parameters, such as test rate or dimensions.

Specimen type:	
Type I	▼
Type I	
Type II	
Type III	
Type IV	
Width:	5.00 mm ▼
Thickness:	0.25 mm ▼
Rate 1:	1.00 mm/min ▼

The Automatic Specimen Measuring Device can be integrated with Bluehill 3. It eliminates the need to manually enter specimen dimensions, saves time, and increases the accuracy of results.

Bluehill® 3 Do for Me?

Enhance operator efficiency and provide confidence that test procedures are followed correctly



Bluehill is With You Every Step of the Way

Prompted Methods

Provides step-by-step guidance throughout the entire testing process.

Auto Start Test

Configure the test method to automatically start when the pneumatic grips close or a digital line is triggered.

Pictures and Video

Use in prompted test methods to provide additional guidance for operators. Add a video that shows how to measure specimen dimensions or a picture to highlight a unique test setup.

Audio Alerts

Program an Audio Alert to inform you of a test event, such as when to remove an extensometer or when a limit is tripped.

Automatic Export of Results or Reports

At test 'Finish', results and reports are automatically sent to your email, printer, database, or network drive.

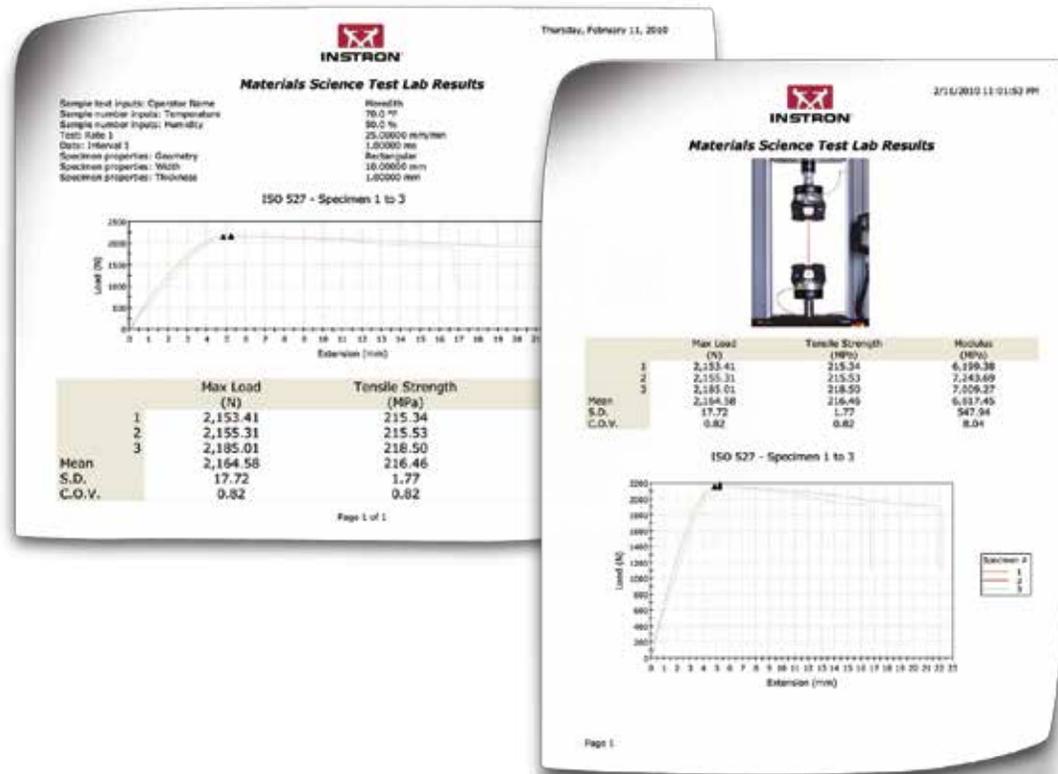
Laboratory Managers

“My reputation depends on the quality of the results produced in the lab. Unfortunately, I can't be with the technicians when they run every test. I need to trust the results are right and the report can be sent directly to a customer.”

What Can

Report Generator

Create customized report templates that ensure professional looking reports for your customers.



Three Levels of Security

Ensure that only your technicians have access to Bluehill 3 files and prevent their access to method editing and administrative changes.

Bluehill® 3 Do for Me?

Assure Laboratory Managers by increasing the accuracy and professionalism of test results

Transducer Identification

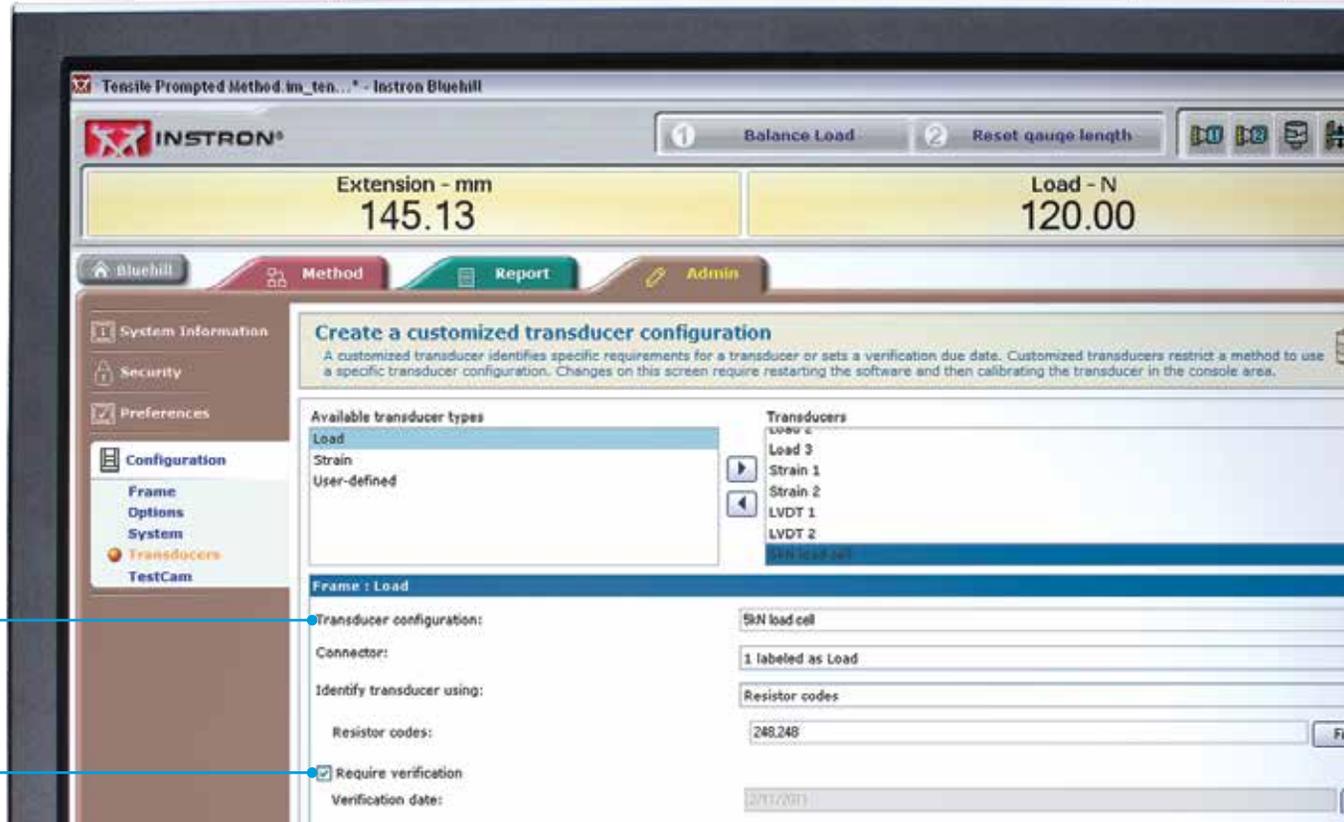
Identify a transducer by R-code or serial number and give it a name that is easily remembered.

Track Verification

Document and track verification due dates to guarantee that all devices meet specification.

Link with Methods

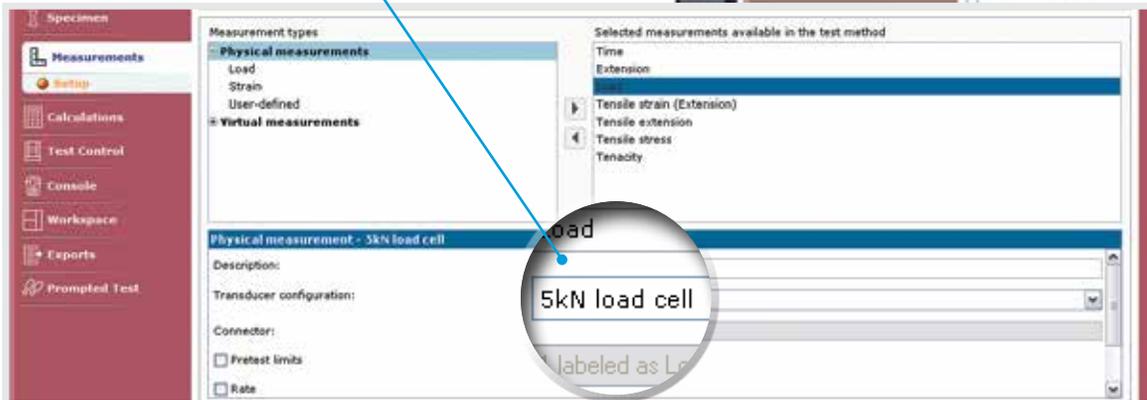
Your named transducers can be found within the Method, ensuring the correct device is used every time.



Transducer Identification

Link with Methods

Track Verification



er settings when using upper test space

er settings when using lower test space

nsile Prompted Method* | Report: Report - All Items

Quality Engineers

“Data that is produced in our testing lab needs constant analysis and immediate reporting to ensure that the product ships on time. If there is discrepancy in the data, I need to identify the source of that problem immediately. The quicker I can analyze the data and reports, the better.”

What Can

Bluehill® 3 has several different options for data analysis

Continue

Choose to add more test specimens to a data file or edit the original test method to update calculations.

Replay*

Analyze previously tested data in any method. Each customer may want a specific set of calculations and results. Replaying a data set (sample file) through different methods allows users to quickly and easily create customized test results for different audiences.

Recalculate

Modify or add new calculations at any time and click recalculate to see a live update of all results and graphs.

Copy and Paste

Copy and paste graphs, results or raw data directly into Microsoft® Word or Excel®, eliminating otherwise necessary steps of opening applications and searching for files.

*A feature of the Analysis advanced option

Bluehill® 3 Do for Me?

Allow Quality Engineers to analyze test results more quickly



Right-Click Menu

- ✓ Show excluded specimens
- Edit cursor-selected points...
- Enable data point selector
- Recalculate all
- Auto size column widths
- Reset columns to default width
- Column properties...
- ✓ View results and statistics
- View results only
- View statistics only
- Copy table
- Print table...

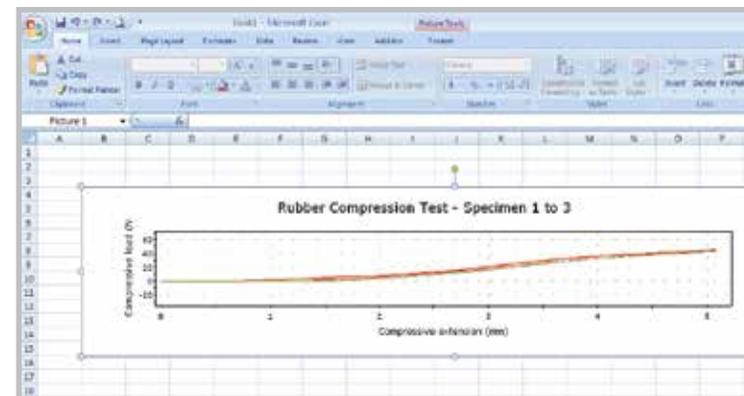
Export your data

Automatic

Use the Application Programming Interface (API) to program an automatic export of results from Bluehill to your own LIMS.

Manual

Customize the format of raw data or test results to import into your own data analysis tools.



Copy graph and/or table directly into Excel® or other Microsoft® applications.



Do you feel more comfortable doing analysis at your desk?

Software licenses for method development and data analysis are available for individuals (Bluehill for You) or for your entire lab (Bluehill for Your Lab), allowing access to Bluehill Software in a setting more comfortable than in front of the test instrument.

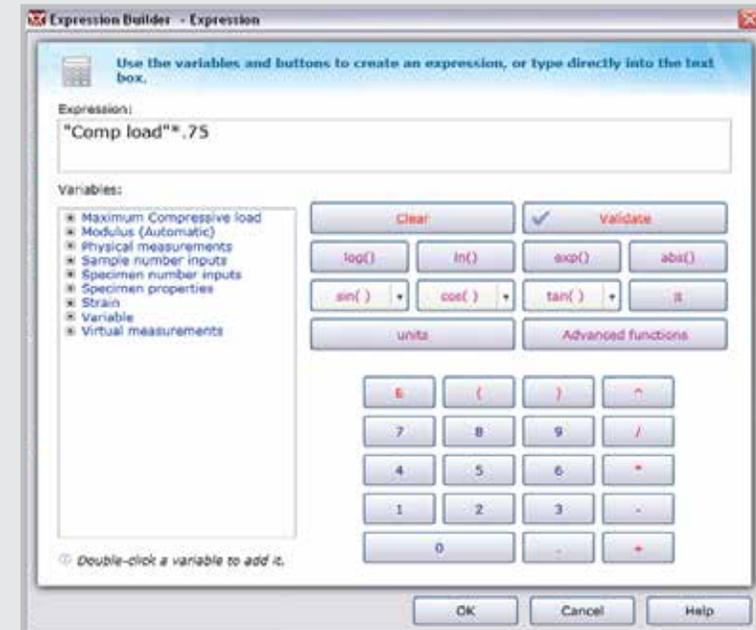
R&D Engineers

"Our dynamic product development process requires that our testing equipment will keep up with our changing test requirements and specimens, today and in the future."

What Can

Expression Builder

Provides the ability to build your own formulas (in addition to the hundreds of standard calculations) using a list of available variables for defining test control ramp rate and events, virtual measurements, calculations, and calculation domains.



Bluehill® 3 Do for Me?

Provides R&D Engineers with power and flexibility for demanding testing environments

Extra Live Displays

With real-time calculations, results, and measurements available for display, sometimes the 4-console displays might not be enough.

TestProfiler*

Displayed graphically on the screen, it enables fast and easy cyclic test development, and allows you to build blocks that link together and define the test.

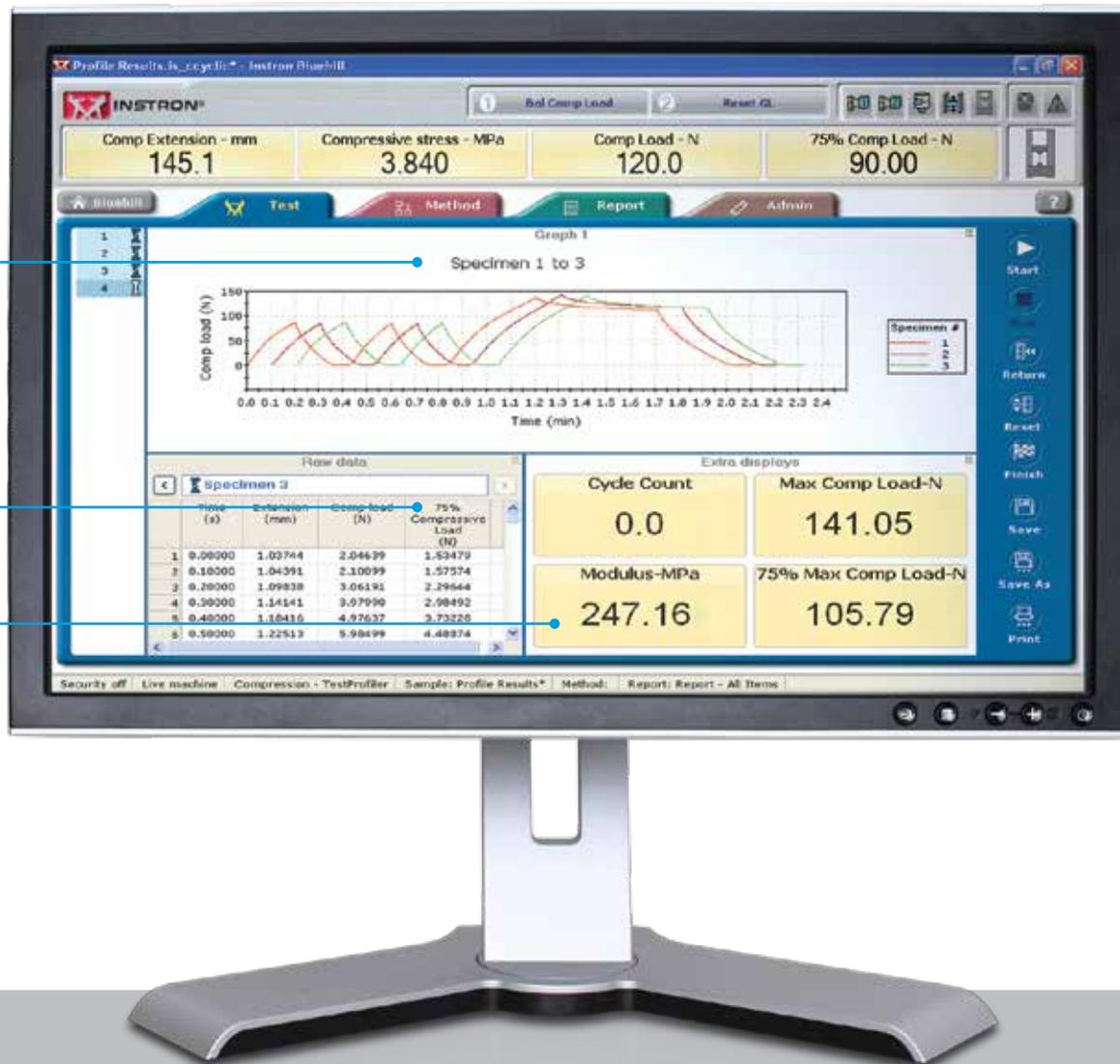
Virtual Measurements

Define a measurement using a mathematical expression with variables, such as other measurements or number inputs. Performed in real-time, these measurements can be shown in live displays, plotted on graphs, and used for calculations.

Real-Time Calculations in Live Displays

Know results as soon as they happen. For example, the real-time modulus allows you to stop the test before material yield if the modulus result isn't as expected.

*Advanced option



Did you want to see what happened during a test?

Try the Bluehill TestCam Module (highlighted on page 14).

"My students' learning of materials science and mechanics is significantly enhanced with hands-on demonstrations and experiments they conduct on the Instron® equipment. The concept of elastic modulus comes to life when the student can see the slope on the graph change and the results calculate differently for different plastic composites."

ENERGY = Area under curve

STRAIN - (ϵ)

UNIFORM ELONGATION

TOTAL ELONGATION

What Can

Test Method Suite*

Have access to more than 50 different pre-configured test methods and data sets for demonstration and analysis.

Calculations Library

Flexibility to choose from an extensive list of calculations to analyze your data. Modify or add calculations at any time. Recalculate function to update results, tables, and graphs.

Raw Data Viewer

Examine every data point for any measurement. It's like looking right into Microsoft® Excel® without the extra steps.

TestCam*

Allows for the connection of a webcam or other video capture device, giving students the ability to experience point-by-point playback of the specimen throughout the test.

Graph Zoom In and Out

Get a detailed view of material behavior, such as yield point, by zooming in on a detailed region of the graph.

*Advanced option

Bluehill[®] 3 Do for Me?

Help students learn materials science

The screenshot displays the Bluehill 3 software interface. At the top, there is a 'Raw data' window for 'Specimen 1'. Below this is a table with the following data:

	Time (s)	Extension (mm)	Load (N)
1	0.00000	0.89586	1.03516
2	0.00200	1.02053	1.32895
3	0.00400	1.18200	1.47625
4	0.00600	1.35893	1.53421
5	0.00800	1.54160	1.72955
6	0.01000	1.72586	1.98666
7	0.01200	1.90986	2.21670
8	0.01400	2.09293	2.44488

Below the table is a 'TestCam' window showing a video feed of a specimen being tested. To the right of the data table is a vertical toolbar with the following icons and labels: Start, Stop, Return, Reset, Finish, Save, Save As, and Print.



Try the Bluehill Classroom Edition to simulate testing without a test system.

This standalone version of Bluehill Software includes a full library of pre-configured test methods and data sets to demonstrate the basic principles of materials science with your students without having to run the tests on your own.

What if I Need Help?

User-Assisted Text

Quick tips and reminders on every page to assist users through the method development process.

Hyperlinks

Users shouldn't waste time searching for fields in the method. Each method page includes hyperlinks that show you where inputs are used and gets you there in a click.

Context Sensitive Help

No matter where you are in the software, you can click the  or **F1** key for in-depth reference help and procedures that are specific to the page you are currently visiting.

Animations

With so many calculations to choose from, it can be difficult to know which is right. Calculation animations visually show the differences between calculations and parameters that need to be defined.

Calculations Library

Provides significant guidance on how the calculation is set up, what the variables are, and an example of how the algorithm works.

Navigation Assistance

Easily navigate through all sections of a method using the forward and backward buttons at the bottom of the screen.



How Can Instron® Help?

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



We are only a phone call away

- Technical support hotline accessible anywhere in the world
- Expert consultants provide tailored solutions to meet your testing needs
- Preventative maintenance, calibration, emergency repair, system refurbishment services, training, and parts



Resources at your fingertips • www.instron.com

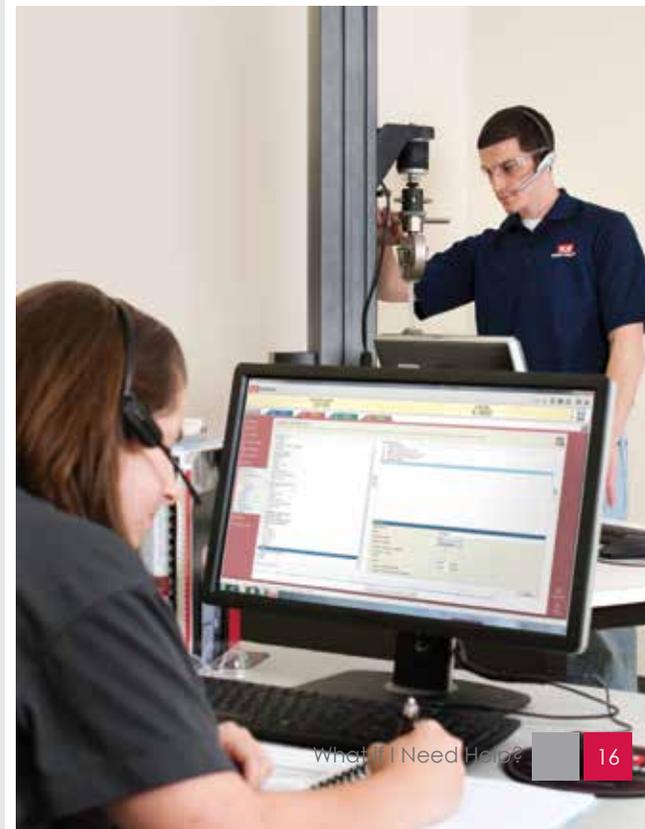
- Our *Testing Solutions* section provides answers to your most current testing challenges
- WSA is a dedicated support website, providing web-based delivery of information specific to your system
- Access to our complete online Accessories catalog



Stay at the forefront of materials science

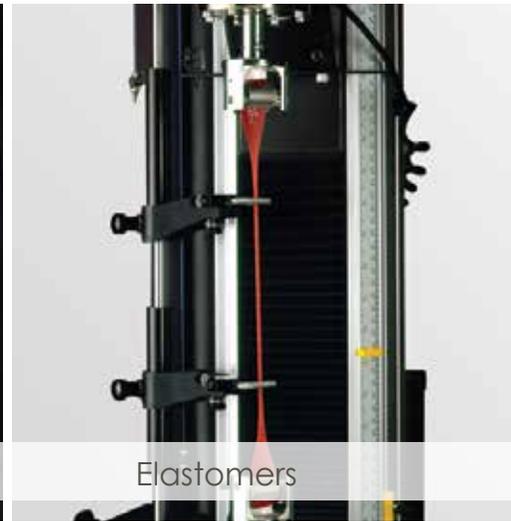
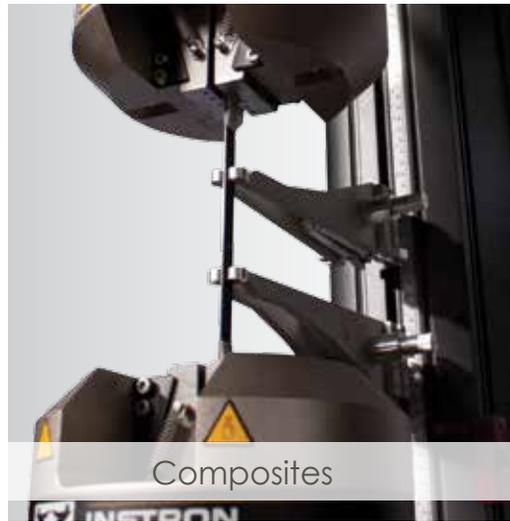
- Training courses available on-site or in one of our Regional Training Centers
- Utilize our Applications Engineering Lab or Custom Engineered Solutions Group for the latest technological advances in materials testing
- Our state-of-the-art Calibration Laboratory offers a comprehensive range of accredited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

We build more than testing systems; we build relationships.



What Software Options Will I Need?

Bluehill® 3 can be customized to meet your needs

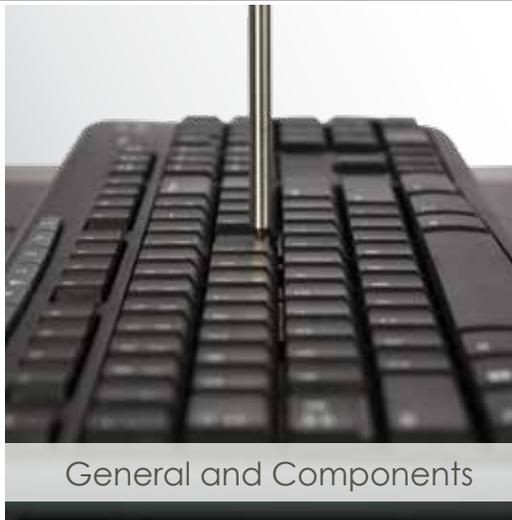


Application Modules

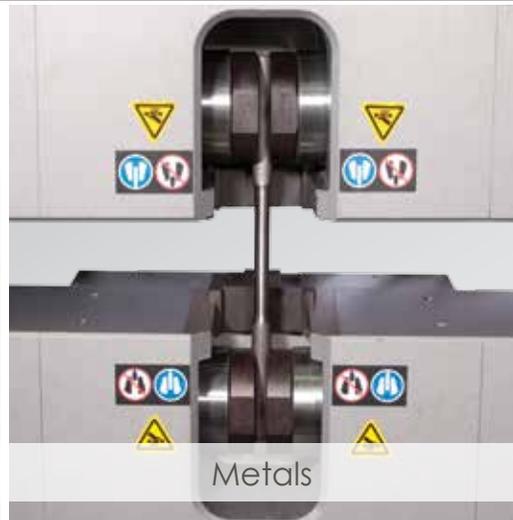
Bluehill 3 Software is packaged into 8 different application modules. Each of these modules include the test control, calculations, and results needed for that specific application, as well as a collection of pre-configured test methods defined by standards such as ASTM and ISO. Further, each method is accompanied by a Test Method Brief, which describes the types of modifications that may be needed after installation and the hardware required by the standard.

For more information on a specific application area, please visit the **Testing Solutions** section of our website. Here you will find a collection of notes explaining how we solved a multitude of testing challenges for various materials, industries, and components in accordance with international standards, such as ASTM, ISO, EN, and more.

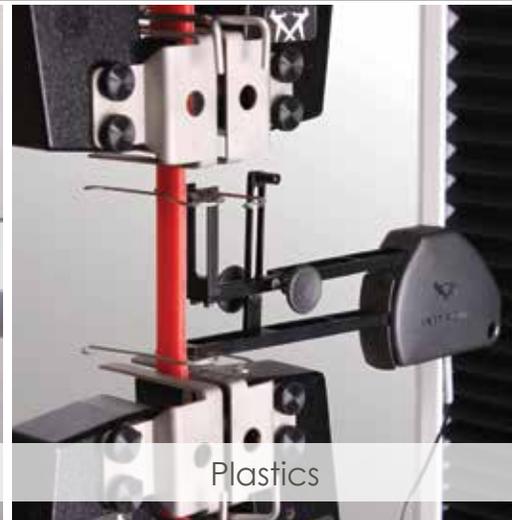
For assistance with configuring a testing system to meet your requirements, please contact your local Instron Sales Support office or visit us at www.instron.com.



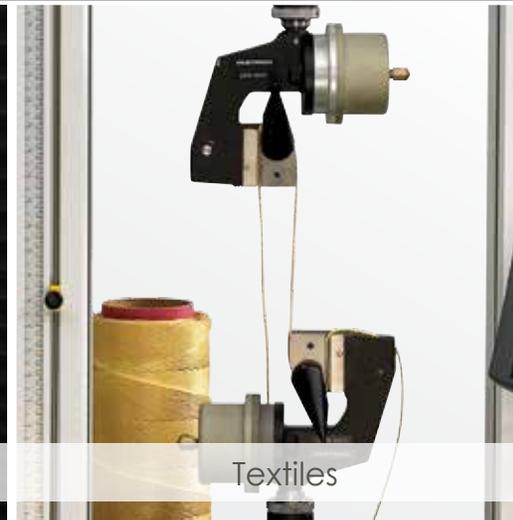
General and Components



Metals



Plastics



Textiles

Advanced Options

Test Method Suite

A library of pre-configured test methods for all applications.

TestProfiler

Provides the ability to create custom test routines for cyclic and complex testing.

TestCam

Record and replay the actual test event associated with each test curve.

Enhanced Analysis Package

Reanalyze a previously tested sample using a different test method without enabling the test instrument.

Classroom Edition

Pre-configured test methods and demos provided for basic data analysis and teaching of materials science principals. (No test frame required for a classroom setting; a CD supplied).

Off-line Programming and Data Analysis

Licenses for any version of Bluehill®, Bluehill Lite, Merlin™ or Series™ IX Software, Bluehill for You (single license), Bluehill for Your Laboratory (unlimited number of licenses).

Is Bluehill 3 Compatible With My System?

Supplied with all 5900 Series Systems, Bluehill 3 is also compatible with 5500 and 3300 systems that may be operating with older versions of Bluehill, Series IX, or Merlin software. More than 1000 customers have already upgraded their old testing software to Bluehill 3, resulting in satisfied lab managers that have addressed their test workflow and data management challenges.

Additionally, the latest version of Bluehill 3 - version 3.51 - allows dynamic systems, such as the 8800 and ElectroPuls™, to take advantage of Bluehill 3's versatility and ease of use for setting up a variety of static tests.

If your system is not directly compatible it may still be possible to benefit from Bluehill 3 by retrofitting with new electronics. Please contact Instron for further advice.

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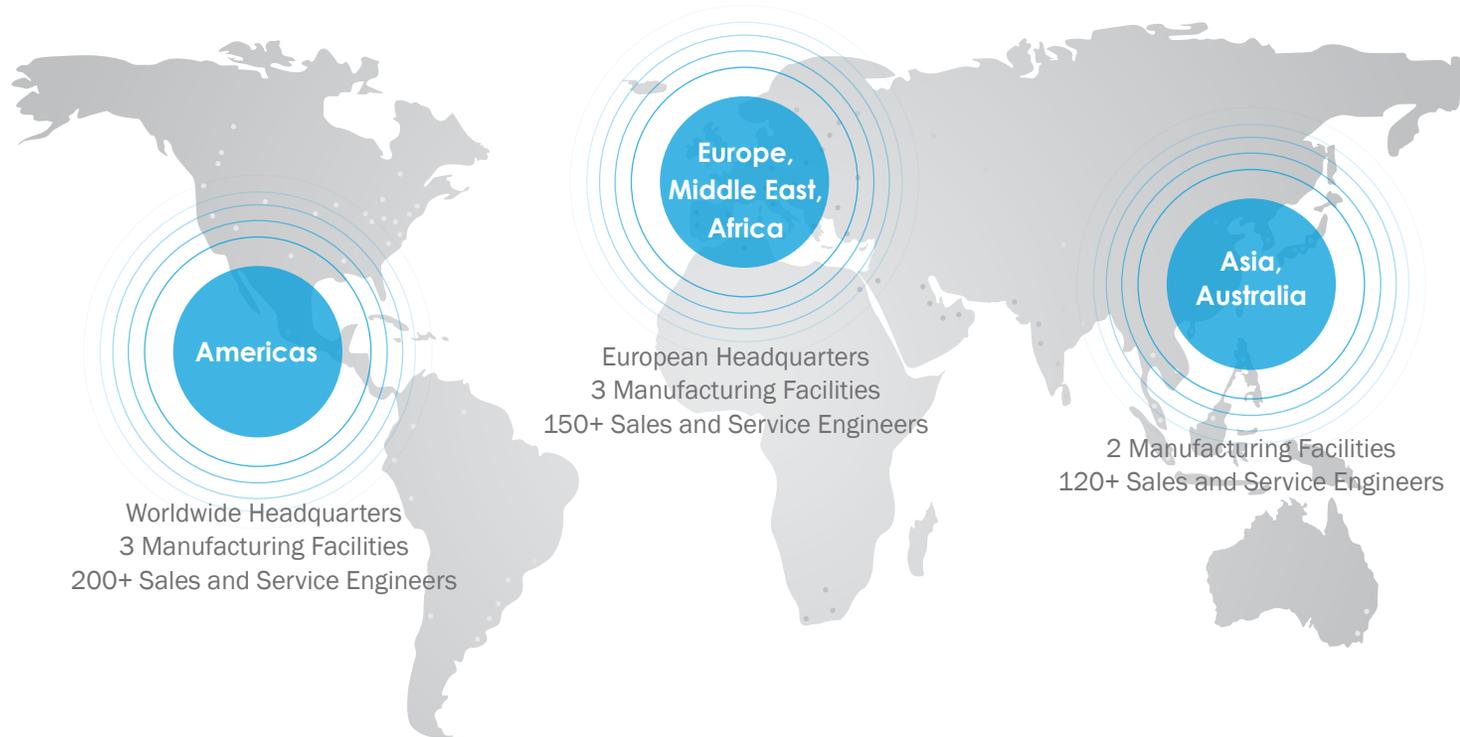
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For additional country contacts visit go.instron.com/locations



Global Support that is Local to You

Instron® has a global infrastructure that is local to you and remains committed to being the leader in mechanical testing instrumentation.

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