



The UniVert system is ideal for a wide range of mechanical testing applications. A small footprint and affordable pricing allows users to have testing capabilities when and where they are needed. The easy-to-use software and interchangeable components make the system ideal to use without the need for extensive training or supervision.

The system is capable of tension, compression, and bending testing at forces up to 200N. A wide range of grips and fixtures are available to accommodate different specimens and testing modes.

Force Capacity	200N
Available Load Cells	10, 20, 50, 100, 200N
Force Resolution	1mN
Maximum Grip Separation	140mm
Maximum Velocity	20mm/s
Maximum Cycle Frequency	2Hz
Maximum Data Rate	100Hz
Actuator Stroke	60mm

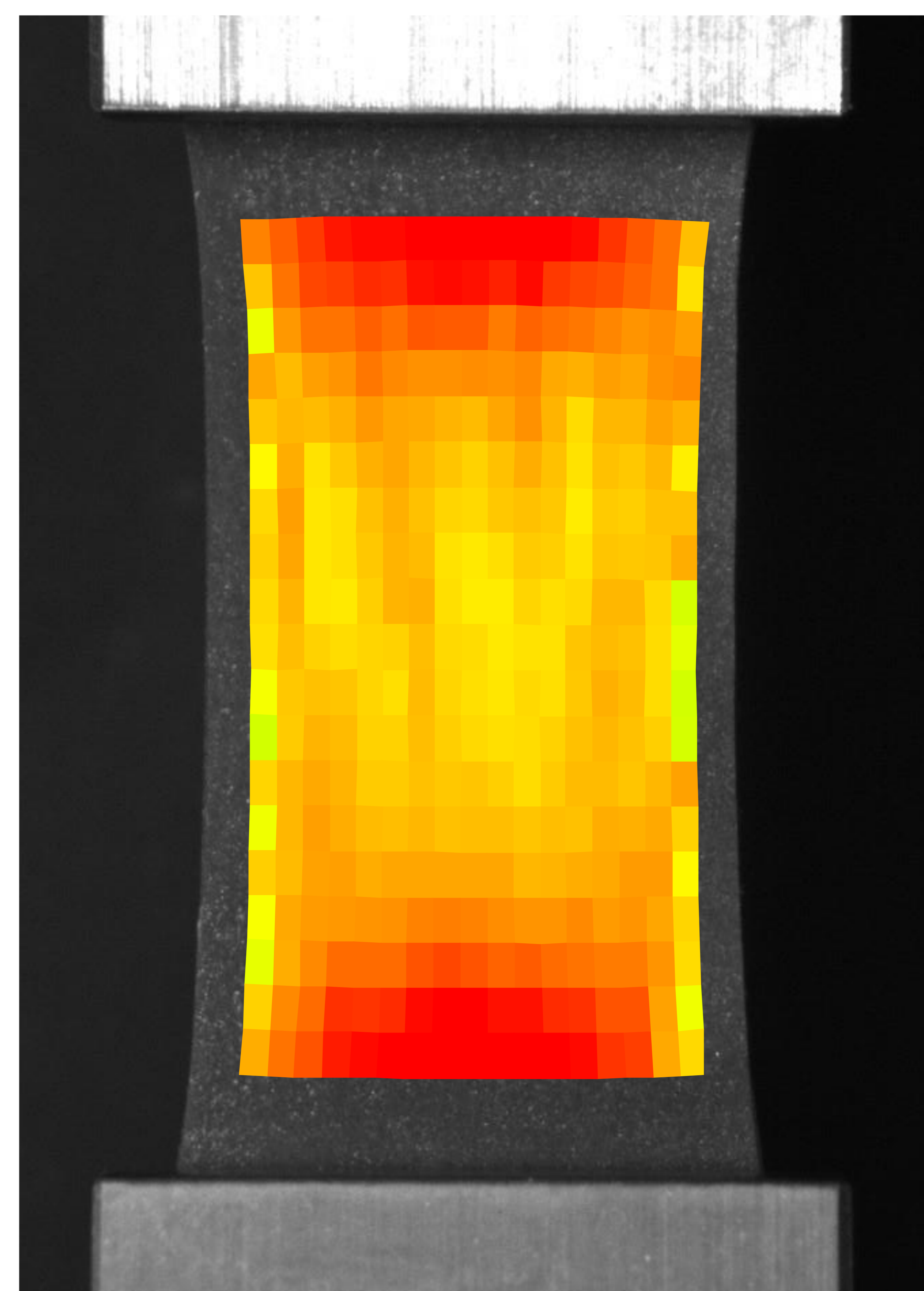
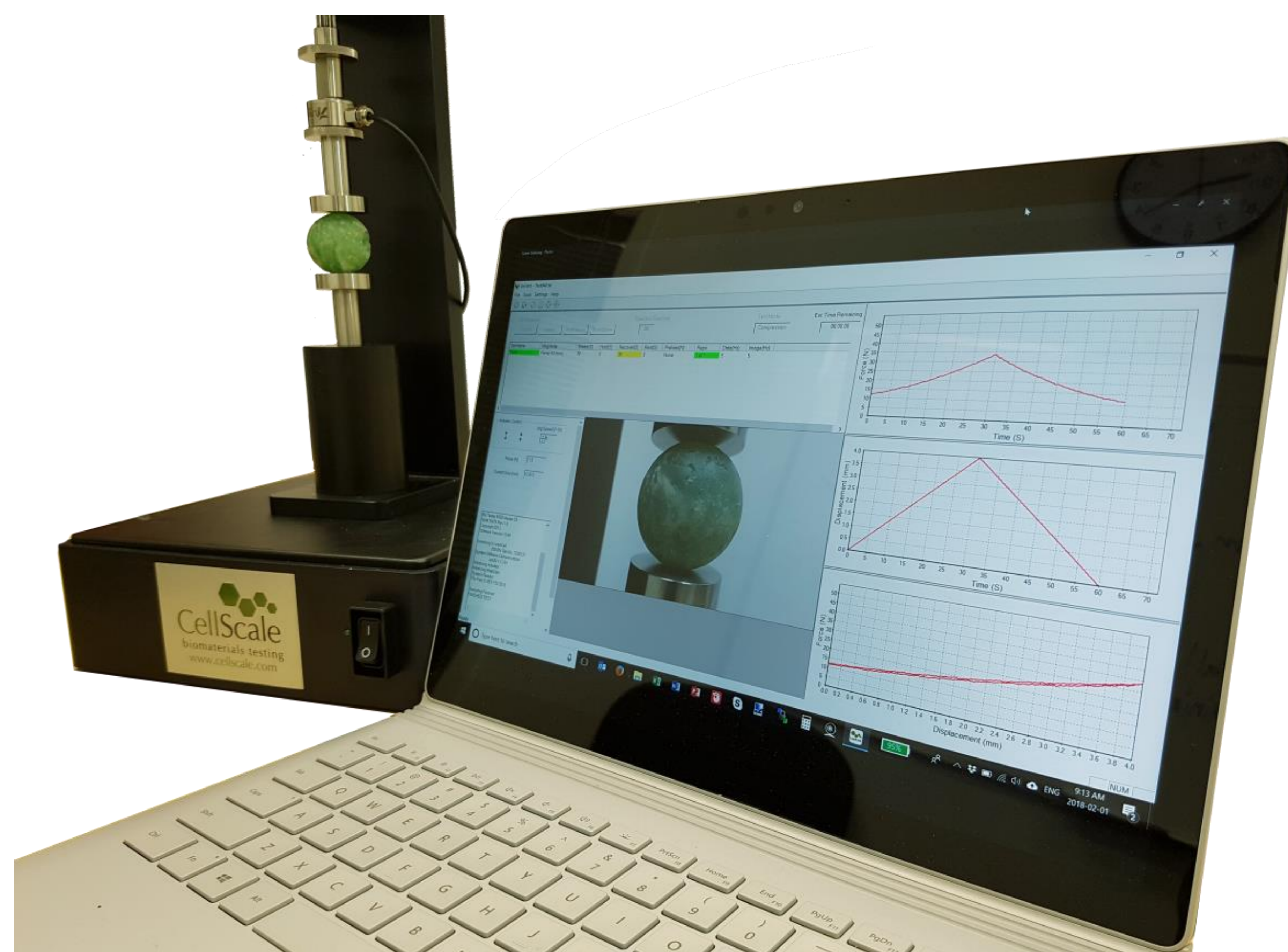
The UniVert control software enables users to specify every aspect of the test including system settings, test protocol, and output data.

During the test, onscreen video and real-time results graphing provide operator feedback while the desired data is recorded for further analysis.

After test completion, an analysis and review software module enables image and data analysis. Time synchronized force/displacement and image data make it easy to correlate qualitative visual information with numerical test data.

When equipped with the scientific camera and digital image correlation software package, the system can be used to measure the strains across the specimen surface during the deformation process. This data can be exported as directly-measured strain data rather than relying on grip/platen motions.

All on-screen displays can be exported as images or videos, creating useful visuals for communicating research in print and presentation formats.



Catalogue #	Description
UV-SW-01	Upgraded camera with image tracking and analysis software for UniVert System

Fluid bath

The UniVert system can be equipped with a temperature-controlled fluid bath to ensure sensitive biomaterials are tested under the appropriate conditions. As part of an integrated system, the test protocol can be set to provide user-specified setpoint warnings and the temperature of the bath can be logged along with the test data to document that the test was completed correctly.



Catalogue #	Description
UV-200-08	Temperature-controlled media bath 600mL volume Dimensions: 75 X 85 X 185 mm Materials: Polycarbonate, 316 stainless steel

Load Cells

To facilitate a wide range of applications, a range of load cells are available that can be easily exchanged. A simple dead weight calibration is all that is required to ensure proper function before resuming testing.



Catalogue #	Description
UV-LC-10	10 N Load Cell
UV-LC-20	20 N Load Cell
UV-LC-50	50 N Load Cell
UV-LC-100	100 N Load Cell
UV-LC-200	200 N Load Cell

Tension Grips



Soft materials are easily damaged by over-clamping, but it is also important to have sufficient clamping force to prevent slippage. Using spring-closure clamps ensures a consistent force with every test.

For stiffer specimens, screw-closure clamps may be needed to provide the necessary force.

All standard clamps have serrated clamping surfaces but custom grips can also be manufactured to meet specific testing needs.

Catalogue #	Description
UV-305	Spring-closure tensions grips Material: POM polymer Width: 22mm Spring closing force options: 1.5, 6.0, 15.0 N
UV-315	Screw-closure tensions grips Material: 316 stainless steel Width: 22mm

Compression Platens

Catalogue #	Description
UV-306	Stainless steel compression plates for UniVert system
UV-307	Plastic compression plates for UniVert system

Standard compression platens are made from 316 stainless steel for M5 threads (50, 100, 200N load cells) or POM polymer for M3 threads (10, 20N load cells). Compression surface is 30mm in diameter.



3-Point Bend Fixtures



The standard UniVert 3-point bend fixture is made from 316 stainless steel and supports a variety of pin diameters. The maximum pin spacing is 80mm and the maximum specimen deflection is 15mm.

Catalogue #	Description
UV-308	3-point bend fixture



Feel free to reach out for any additional information.

We'd love to hear from you!

info@cellscale.com



[CellScale Biomaterials Testing](#) is the industry leader for precision biomaterial and mechanobiology test systems. Our products are being used at world-class academic and commercial organizations in over 30 countries around the globe.

Our [mechanical test systems](#) allow researchers to characterize the mechanical properties of biomaterials. Our [mechanobiology technologies](#) provide insights into the response of cells to mechanical stimulation.

[CellScale's technologies](#) are improving human health by helping researchers discover the causes of disease, improve medical treatments and devices, and advance regenerative medicine and other basic science research.

[Visit our website](#) or [contact us](#) to learn how our innovative products can help you achieve your research and development goals.