

# MechanoCulture TM



**The MechanoCulture product group** allows researchers to culture cells in a mechanically active environment. Configurations of these culture systems support single or parallel tests using a variety of flexible substrates and scaffolds. On-board controllers enable PC-independent execution of user-defined motion protocols.

All MechanoCulture systems can be operated in an incubator environment. All cell-contacting components are made from autoclavable materials.

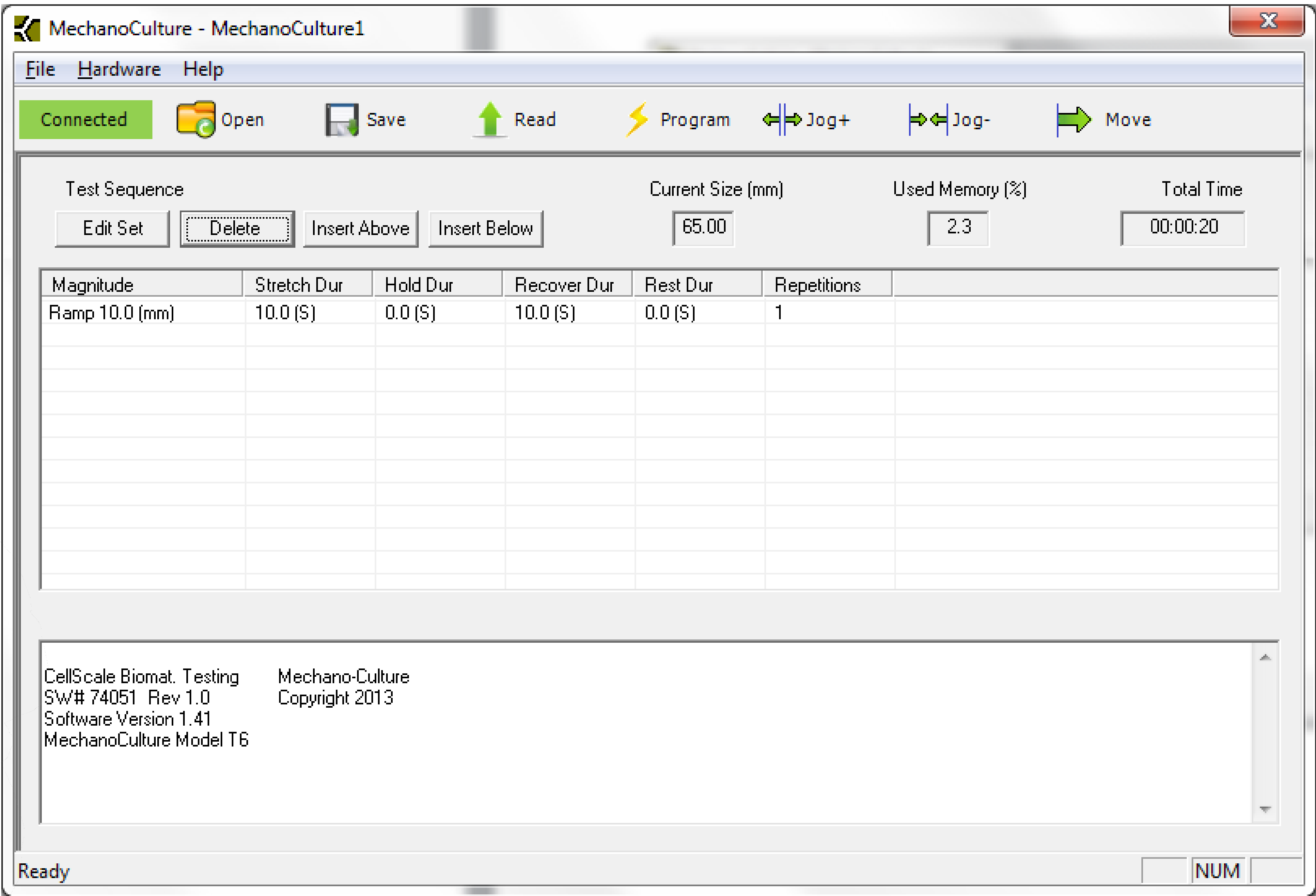
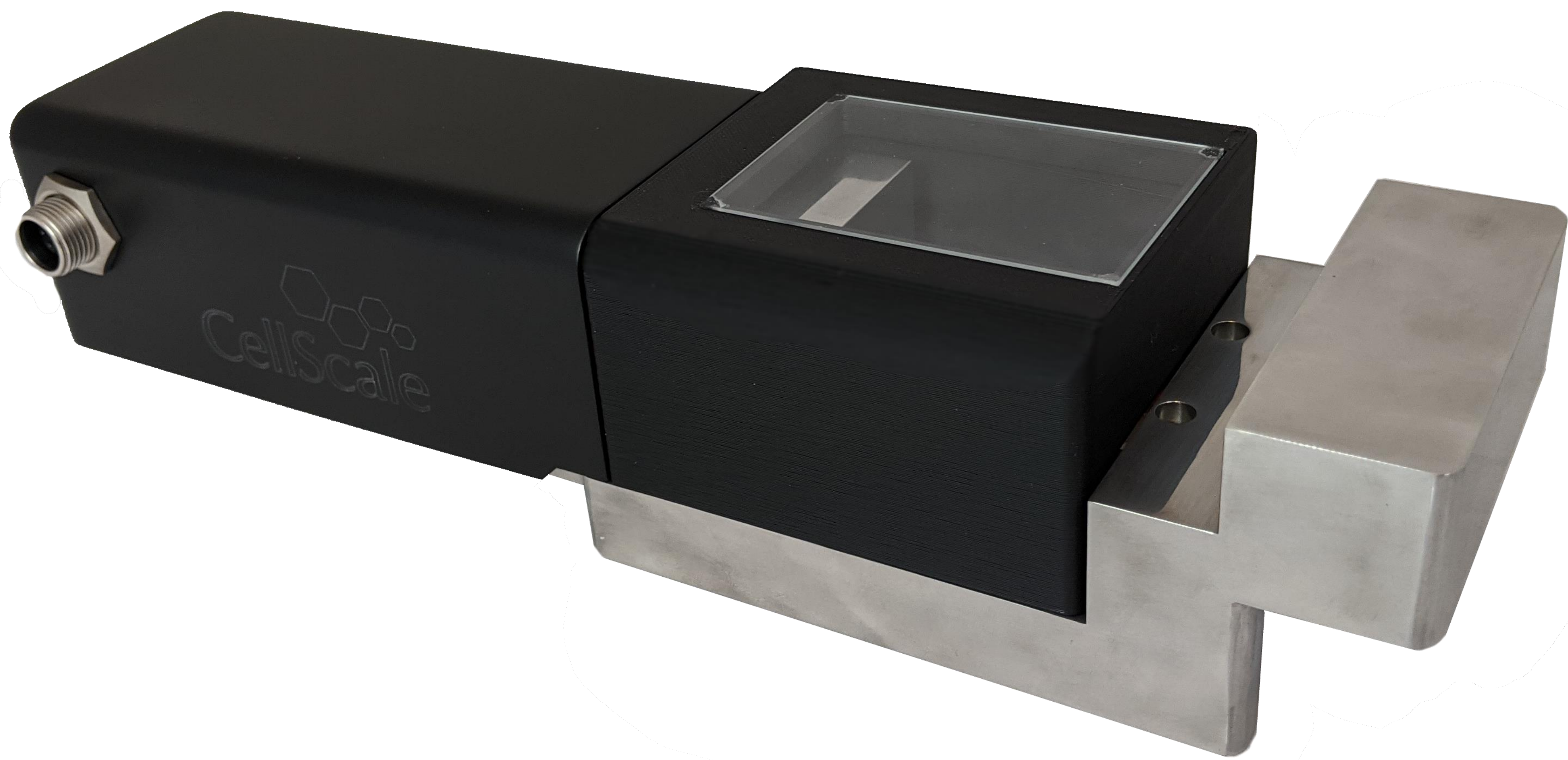
**The MechanoCulture TM** uses a unique clamping system to form a flat bottom chamber from a thin membrane. Cells adhered to this membrane can be stretched according to a user-supplied protocol inside an incubator and/or while collecting images using an inverted microscope. A variety of membrane materials and coatings can be used to suit the particular application.







The MechanoCulture TM can be programmed to run constant velocity or sinusoidal stretch patterns. Magnitudes, frequencies, rest periods, and cycle counts can all be specified in the software application and programmed to the device.



Possible applications are studying the effect of mechanical stimulation on

- cell differentiation
- gene expression
- production of extracellular matrix
- chemical signaling
- cell alignment

Dimensions	300 X 70 X 70 mm
Weight	2 kg
Stimulation Mode	Uniaxial tension
Configuration	Cell monolayer
Culture area	30mm X 30mm
Maximum Strain	100%
Maximum Velocity	10 mm/s
Maximum Cycle Frequency	2 Hz
Loading capacity	30 N
Media volume	5-10 mL



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.

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