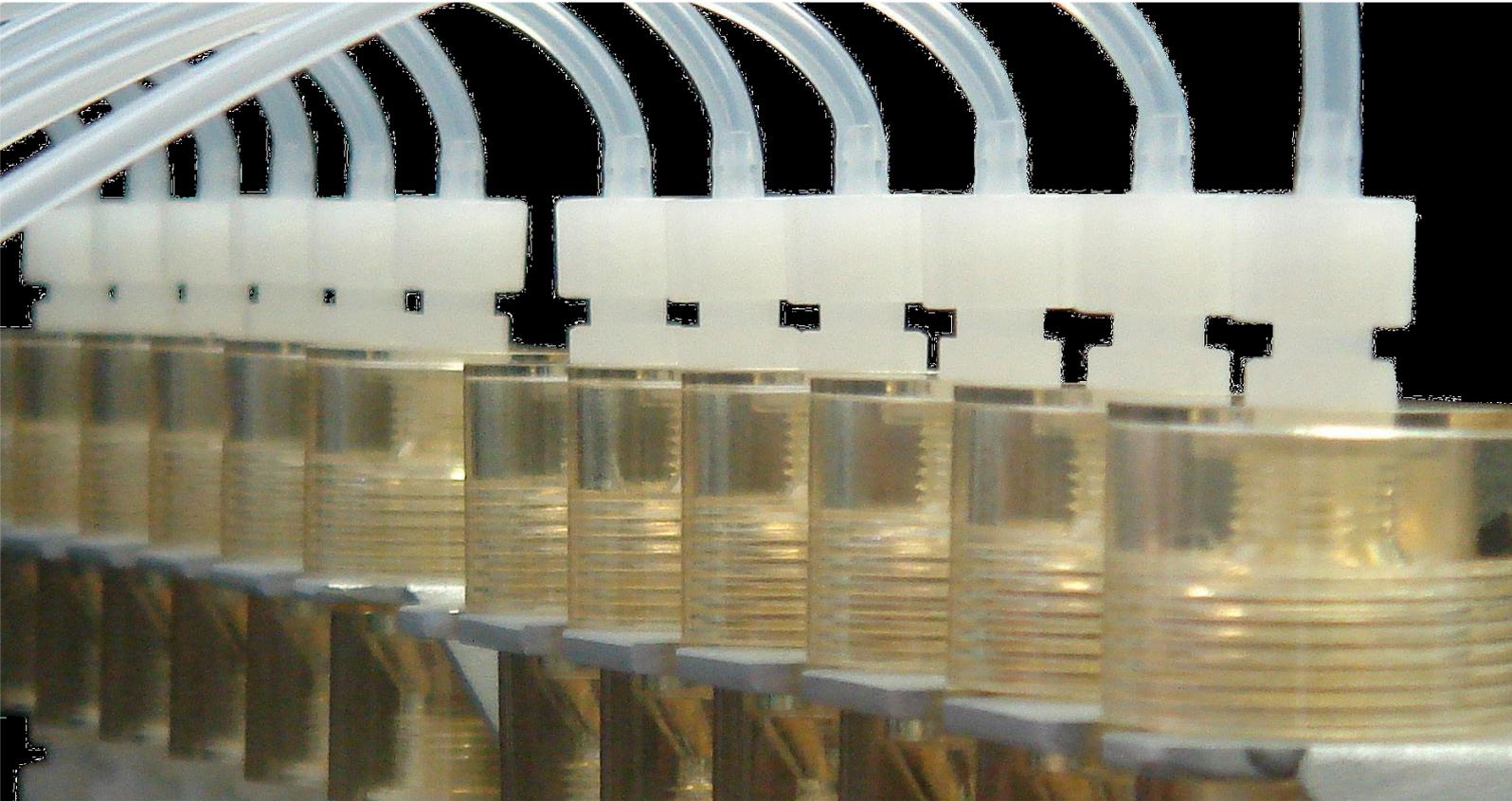


OsteoGen | Perfusion Stimulation Bioreactor



BiSS® bioreactors provide a controllable, 3D environment for stimulating physiological conditions in vitro. The OsteoGen system perfuses media and can deliver shear stresses to 3D samples. Applications include investigating cell function, modulating the growth and development of engineered tissues, or acting as a test bed for drug and regenerative medicine technologies.

OsteoGen

The OsteoGen provides a physiologic support system to enhance metabolic conditions for cell growth and maintenance in a 3D environment. Physiologic pressure parameters are feedback-controlled for culture reproducibility. The flexible hardware and computer control systems allow for a wide variety of automated experimental protocols with varying levels of complexity (pressure magnitude and frequency) and can accommodate scaffolds up to 10 mm in length.

The perfusion-only OsteoGen can accommodate up to 12 samples with individual flow loops and separate media reservoirs. The perfusion pump can deliver flow rates as low as 0.06 ml/min.

Chamber

The three-piece OsteoGen Bioreactor chamber directs media perfusion through cell-seeded cylindrical scaffolds. The chamber can hold samples up to 10 × 10 mm. This autoclavable chamber incorporates x-ray windows that allow mineral quantification by micro-computed tomography during a perfusion experiment

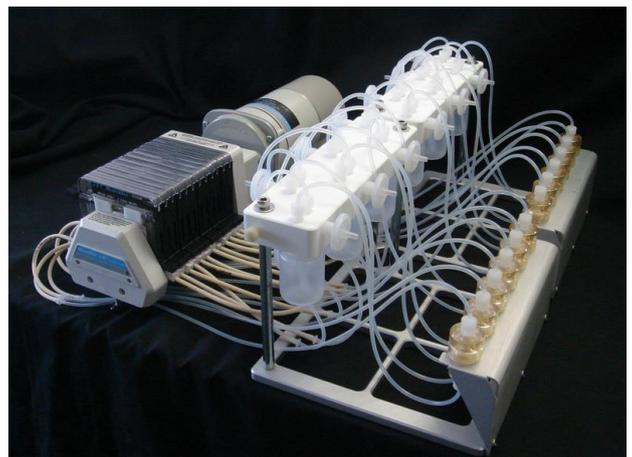
1O OsteoGen

The 1O system has been designed as a single sample bioreactor system that is able to support a wide range of cell and tissue growth experiments. This chamber can accommodate a single sample with a maximum size of 10 mm diameter x 10 mm thick. Optional features such as: transducers, non-contact micrometers, pressure sensors, etc., and/or modules to customize the instrument to specific needs can be added to accommodate the research application.

12O OsteoGen. The 12O system has been designed as a single sample multi-chamber bioreactor system that is able to support a wide range of cell and tissue growth experiments via user defined stimulation protocols. This chamber can accommodate a single sample with a maximum size of 10 mm diameter x 10 mm thick. A custom manifold integrates up to 12 chambers with individual flow loops. Optional features such as; transducers, non-contact micrometers, pressure sensors, etc., and/or modules to customize the instrument to specific needs can be added to accommodate the research application.



OsteoGen Bioreactor Chamber



OsteoGen Bioreactor System

Stimulator Specifications

Footprint (H × W × D)	in	18 × 15 × 9
	mm	457.2 × 381 × 228.6



Tissue Growth Technologies (TGT), a premier supplier of commercial bioreactors to grow and stimulate developing tissues is now part of BiSS. With this, BiSS will be providing solutions for tissue engineering and regenerative medicine fields.

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