

BIOMECHANICAL TESTING

GLP-Compliant Mechanical Testing of Biomaterials and Biological Tissues

Mechanical testing of biomaterials and biological tissues can be critical in the design and evaluation of medical devices. Mechanical integrity of biomaterials used in medical devices is a critical design consideration. Conversely, the decline in mechanical properties of biodegradable materials can contribute to understanding the degradation process. Beyond this, the maintenance or deterioration of mechanical properties of host tissues can be used to evaluate efficacy and/or safety of devices after implantation.

CBSET houses the Instron ElectroPuls E1000, an electrodynamic test instrument, which allows for a variety of testing solutions that are compliant with Good Laboratory Practice (GLP) regulations including:

- Tensile Testing
- Compression/Ball-Burst Testing
- Bend/Flexure Testing
- Fatigue Testing
- Static/Monotonic Testing
- Dynamic Testing
- Environmental Testing
- Custom Testing Design

Beyond standard testing of biomaterials, biological tissues, and medical devices, CBSET will collaborate with partners in developing methodologies for novel testing and analysis. We can provide the expertise and equipment necessary for the successful evaluation of almost any type of sample. Typical biomedical applications include static and fatigue testing of:

- Healing Bone and Bone/Implant Constructs
- Hernia Meshes
- Stent Materials and Structures
- Polymeric and Metal Biomaterials
- Skin Defects and Wound Repair
- Intact and Repaired Tendon
- Various Other Tissues and Biomaterials



ABOUT CBSET

CBSET is a state-of-the-art biomedical research institute located in Lexington MA.

Our mission is to advance biomedical research, through innovative, high-quality services. We combine top-tier research with operational expertise. Since our inception, CBSET has continued to develop technical and scientific acumen through collaborative projects in the medical device, pharmaceutical and academic communities. Our 40,000 square foot, GLP-compliant, AAALAC-accredited facility includes vivaria, procedure rooms, catheterization / imaging labs, surgical and necropsy suites, histopathology, SEM, and a range of other technologies.

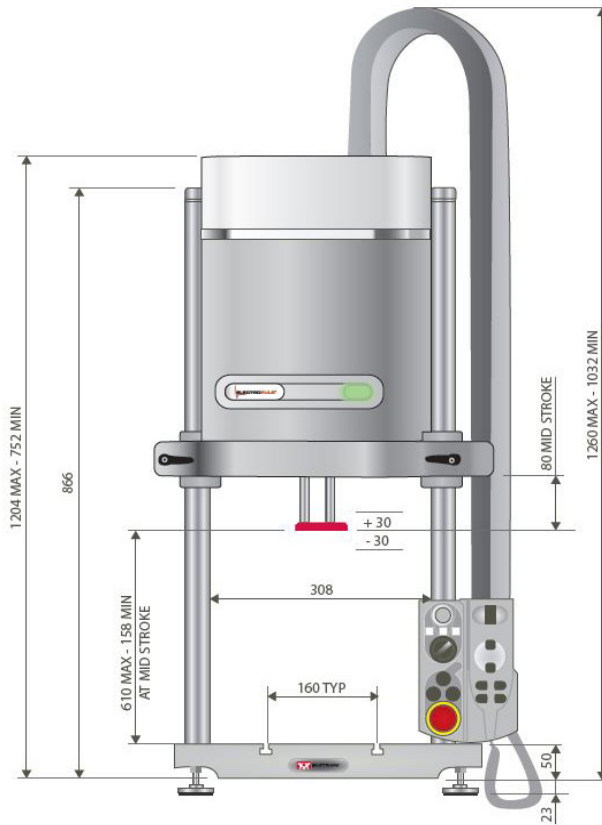
Why CBSET?

- **Credibility.** We are recognized as unbiased experts, bringing independent credibility to your regulatory filings.
- **Culture.** Our culture is science rather than commerce; we welcome unprecedented models and creative collaboration.
- **Mission.** As a 501(C3), non-profit corporation, our motivation is to enable your success; your product is our mission.
- **Integrated resource.** Our multidisciplinary team includes board-certified veterinary, quality, biological and quantitative sciences expertise, as well as board-certified pathologists – all in one facility.

CBSET, Inc.
 500 Shire Way
 Lexington, MA 02421 USA
 +1 781 541 5555
 info@cbset.org
 www.cbset.org



Instron E1000 Specifications and Dimensions



- Dynamic Capacity ± 1000 N (± 225 lbf)
- Static Capacity ± 710 N (± 160 lbf)
- Stroke 60 mm (2.36 in)
- Daylight Opening 610 mm (24 in) Maximum
- Load Cells: ± 2 kN, ± 250 N, and ± 10 N Load Cells
- Bluehill Universal Software for Static Testing
- WaveMatrix2 Software for Dynamic and Fatigue Testing
- Compliant with Good Laboratory Practice (GLP) Regulations

Integrated Preclinical Research Platform

