

NEW! FX-6000™ Tension System (FX-6000T)

Apply equibiaxial or uniaxial tension to cells in 2D or 3D culture.

- Computerized, vacuum-operated instrument that applies a defined controlled, static or variable duration cyclic tension to cells growing *in vitro*.
- Utilizes regulated vacuum **and** positive air pressure to deform cells cultured on flexible-bottomed culture plates.
- Simulate *in vivo* tissue strains and frequencies in cells from muscle, lung, heart, blood vessels, skin, tendon, ligament, cartilage, and bone.
- Contains state-of-the-art digital valve to automatically regulate and maintain vacuum **and** positive air pressure to provide the specified strain regimen.
- Multiple frequency, amplitude and waveform changes can be programmed in one regimen.
- Waveforms available: static, sinusoidal, heart stimulation, triangular, square, custom (Fig. 2).
- Supplied with cylindrical Loading Posts to provide equibiaxial strain, to be used with 6-well **BioFlex® culture plates** (page 19) for 2D cell constructs or with 6-well **Tissue Train® Circular Foam culture plates** (page 22) for 3D cell constructs.
- Optional Arcangle® Loading Posts to provide uniaxial strain, to be used with 6-well **UniFlex™ culture plates** (page 22).
- Optional Baseplate Kits (page 10) to use the FX-6000T with more than one Tension Baseplate, for Tissue Train® applications, for uniaxial strain, or for high-throughput tests.
- Drives up to four independent FlexLink® remote compression and/or tension controllers.
- Works with microscopy devices **StageFlexer®**, **StageFlexer® Jr.** (page 12), and **FlexFlow™** (page 13).

- FX-6000™ Tension System includes:
 - Laptop computer with FlexSoft FX-6000™ software
 - FX-6K™ Tension FlexLink®
 - BioFlex® baseplate and four gaskets
 - BioFlex® Loading Stations™ with 25 mm Loading Posts
 - Four BioFlex® culture plates and four Cell Seeders™
 - Drying filter, water trap, vacuum tubing, and grease/lubricant

Please note: For operation, the FX-6000T requires a vacuum pump, and either a compressor or, if an in-house positive air source is available, a Regulator Kit.



Figure 1. FX-6000™ Tension System

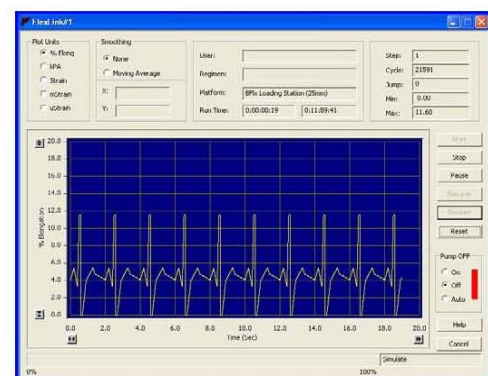


Figure 2. Waveform plot showing typical heart waveform

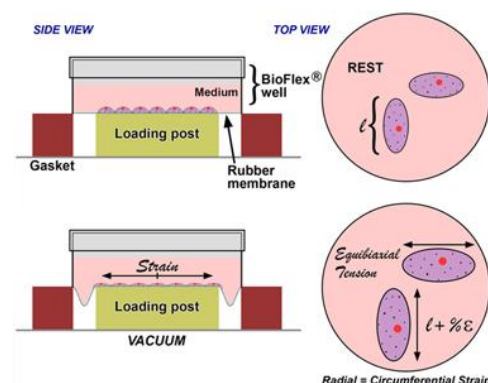


Figure 3. Equibiaxial strain application to cells in a well of a BioFlex® culture plate