

FX-5000™ Compression System (FX-5000C)

Apply cyclic or static compression to cells in 3D culture.

- Computerized, pressure-operated instrument that applies a defined controlled, static or variable duration cyclic compression to cells growing *in vitro*.
- Utilizes regulated air pressure to deflect flexible-bottomed **BioPress™ culture plates** (page 28) compressing a tissue sample or 3D culture between a piston and a stationary platen (Fig. 11).
- Can apply up to 14 pounds of applied force.
- Simulate *in vivo* tissue forces 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 pressure for a specified compression regimen.
- Multiple frequency, amplitude and waveform changes can be programmed in one regimen (Fig. 10).
- Waveforms available: static, sinusoidal, heart stimulation, triangular, square, custom.
- Drives up to four independent FlexLink® remote compression and/or tension controllers.
- Works with **StagePresser™** microscopy device (SP-3000), a single-well embodiment of the Compression apparatus (page 14).

- FX-5000™ Compression System includes:
 - Host computer with flat panel monitor
 - FlexSoft FX-5000™ software
 - FX5K™ Compression FlexLink®
 - Biopress™ Baseplate and four gaskets
 - Compression clamping system
 - Four BioPress™ culture plates
 - Tubing and quick disconnects

Please note: For operation, the FX-5000C System requires a compressor.



Figure 9. FX-5000™ Compression System

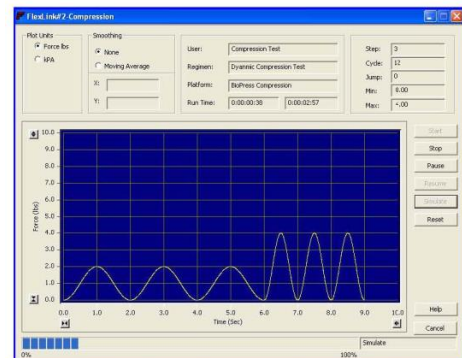


Figure 10. Waveform plot showing a sine wave with various frequency and amplitude changes

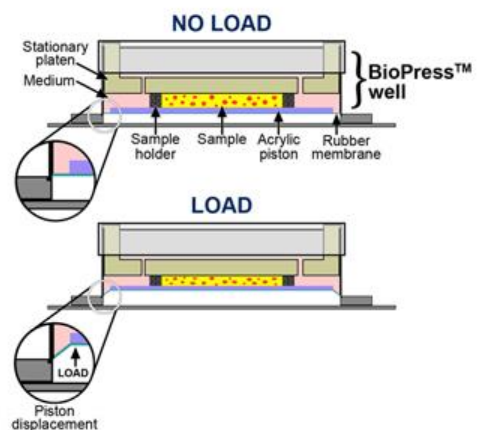


Figure 11. Application of unconfined compression to cells in a well of a BioPress™ culture plate