Inverted StageFlexer I® Microscopy Device (ISF 5000)

Observe cells stretching in real time with either an upright or inverted microscope!

- Designed to strain cells in monolayer while observing the cellular activity with either an upright or inverted microscope.
- Device can be directly attached to any microscope stage.
- Device can be used with FX-5000™ and FX-6000™ Tension Systems, FX-5000™ and FX-6000™ Tissue Train® System, and Flex Jr. Tension System that allow the control of strain frequency, amplitude, waveform, and cycles (or time period).
- Cells are grown and stretched on a 54 mm diameter silicone elastomer membrane, which has 22.9 cm^2 total cell growth area.
- Membrane stretch ranges from 1.6 % up to 12 %.
- Membranes (page 25) are moved across a cylindrical Loading Post (equibiaxial strain).
- Requires smaller Z-direction measurement to meet focal distance needs.
- Easy to use and set-up (5 component parts).
- Assembly of the StageFlexer I® will require a small screwdriver. The provided components include (see Fig. 24):
  - Inverted StageFlexer I® device
  - Sterile StageFlexer I® Membrane with protective Mylar
  - Inverted StageFlexer I® Top Ring
  - 60 mm culture plate lid
  - Top Screws (6x)

Figure 22. StageFlexer I® for use with an inverted microscope objective

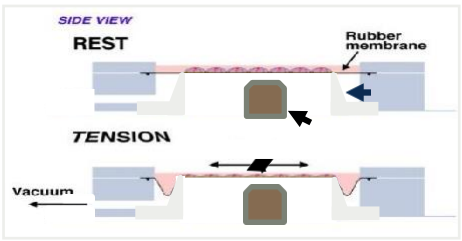

Figure 23. Strain application to cells in a StageFlexer® device

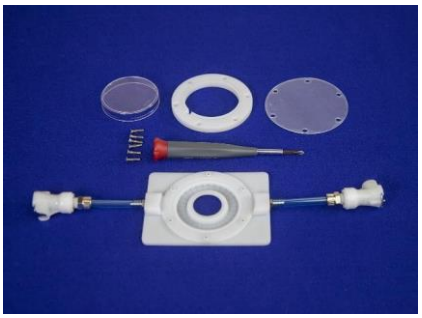

Figure 24. StageFlexer I® components prepared for assembly.

➢ Plating and Viewing cells with inverted StageFlexer I®

Note that only the cells that are situated directly in the center of the membrane will receive uniform strain. Therefore, it is best to plate, view or test the cells only in the uniformly strained area. Any cells outside of this circle will not receive uniform strain.

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