



HT BioFlex Plate & Flexcell® FX-4000™ Tension System

**Specifications
Instructions for Updating .ini File
Conversion Chart**

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Culturing Cells in a Mechanically Active Environment™
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HT BIOFLEX® CULTURE PLATE

- 24-well flexible silicone elastomer bottomed culture plate with total growth surface area of 37.47 cm² (1.56 cm²/well).
- Optically clear for direct viewing of cells with inverted or upright microscopes (membrane thickness: 0.254 mm).
- Apply up to 14% equibiaxial strain to cells in monolayer culture with Flexcell Tension system and 10 mm diameter 24-well Loading Stations.
- Covalently bonded surfaces: Amino, Collagen (Type I or IV), Elastin, ProNectin (RGD), Laminin (YIGSR).
- Available in black or white.

24-WELL LOADING STATION™ SPECIFICATIONS

HT 24 Well Plate with Cylindrical Loading Stations™ (equibiaxial strain):

Minimum achievable % elongation with the FX-4000T™: 1.2%

Maximum achievable % elongation with the FX-4000T™: 14.7%



Instructions for updating your FX4000 .ini file

NOTE: This only applies to customers with serial numbers from 30016096 and Higher.

Adding a Baseplate to the Flexcell Configuration File: -

1. Go to C:\Windows
2. Open Fx3000.ini (This file will open in Windows Notepad)



3. Go to line 14 (including line breaks) “NumberOfBaseplates=”

```
File Edit Format View Help
[FX3000_Configuration]
LogFile=fx3000.log

[FlexConfiguration]
SerialBoardType=PCI
PowerOnTimeout=100
ResetTimeout=500
PacketDelay=50
PacketTimeout=50
CommandDelay=50
CommandTimeout=50
WaveformSampleRate=1000.0
DataSampleRate=200.0
NumberOfBaseplates=16
RetryCount=1
```

4. And increase this value by 1

For example

- Original value: NumberOfBaseplates=16
- Updated value: NumberOfBaseplates=17

NOTE: These values might differ from the customer configuration file depending on if Baseplate configurations have been deleted by users

```
File Edit Format View Help
[FX3000_Configuration]
LogFile=fx3000.log

[FlexConfiguration]
SerialBoardType=PCI
PowerOnTimeout=100
ResetTimeout=500
PacketDelay=50
PacketTimeout=50
CommandDelay=50
CommandTimeout=50
WaveformSampleRate=1000.0
DataSampleRate=200.0
NumberOfBaseplates=17
RetryCount=1
```



5. Scroll down to the final Baseplate in the configuration file
 - The final Baseplate will be the **original** “NumberOfBaseplates” value
 - In this example the final Baseplate is [Baseplate16]

```
[Baseplate15]
BaseplateName=Tissue Train Plate (24mm Arctriangle LS)
Description=Tissue Train Plate (24mm uniaxial width), 0-90kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=6.07402590535526,-0.27943393003463,0.00785786104614
KPAs=0.10625890058176,0.00506078554947,-0.00003744234571

[Baseplate16]
BaseplateName=UniFlex Plate (24mm Arctriangle LS)
Description=UniFlex Plate (24mm uniaxial width), 0-90kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=13.25457353813560,-1.01961146821313,0.04213110178810
KPAs=0.04345918551095,0.00192175118879,-0.00000908378684

[FlexUsers]
NumberOfUsers=3
User1=Compression Testing
User2=Shutdown
User3=Strain Testing
```

6. On the first line break after final Baseplate configuration add an additional line break
7. Copy and Paste the following information into the space: -

```
[BaseplateXX]
BaseplateName=HT 24-Well Plate (Cylindrical LS)
Description=HT 24-Well Plate (Cylindrical), 0-90 kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=9.54637768493740,-0.6027750938320,0.02505778969111
KPAs=0.0739268666667,0.00253837000000,-0.00001707916667
```

```
[Baseplate16]
BaseplateName=UniFlex Plate (24mm Arctriangle LS)
Description=UniFlex Plate (24mm uniaxial width), 0-90kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=13.25457353813560,-1.01961146821313,0.04213110178810
KPAs=0.04345918551095,0.00192175118879,-0.00000908378684

[BaseplateXX]
BaseplateName=HT 24-well Plate (cylindrical LS)
Description=HT 24-well Plate (cylindrical), 0-90 kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=9.54637768493740,-0.6027750938320,0.02505778969111
KPAs=0.0739268666667,0.00253837000000,-0.00001707916667

[FlexUsers]
NumberOfUsers=3
User1=Compression Testing
```

8. Change the Baseplate number, [BaseplateXX], of the copied information to correspond with the **new** value entered in “NumberOfBaseplates”
 - In this example [BaseplateXX] = [Baseplate17]

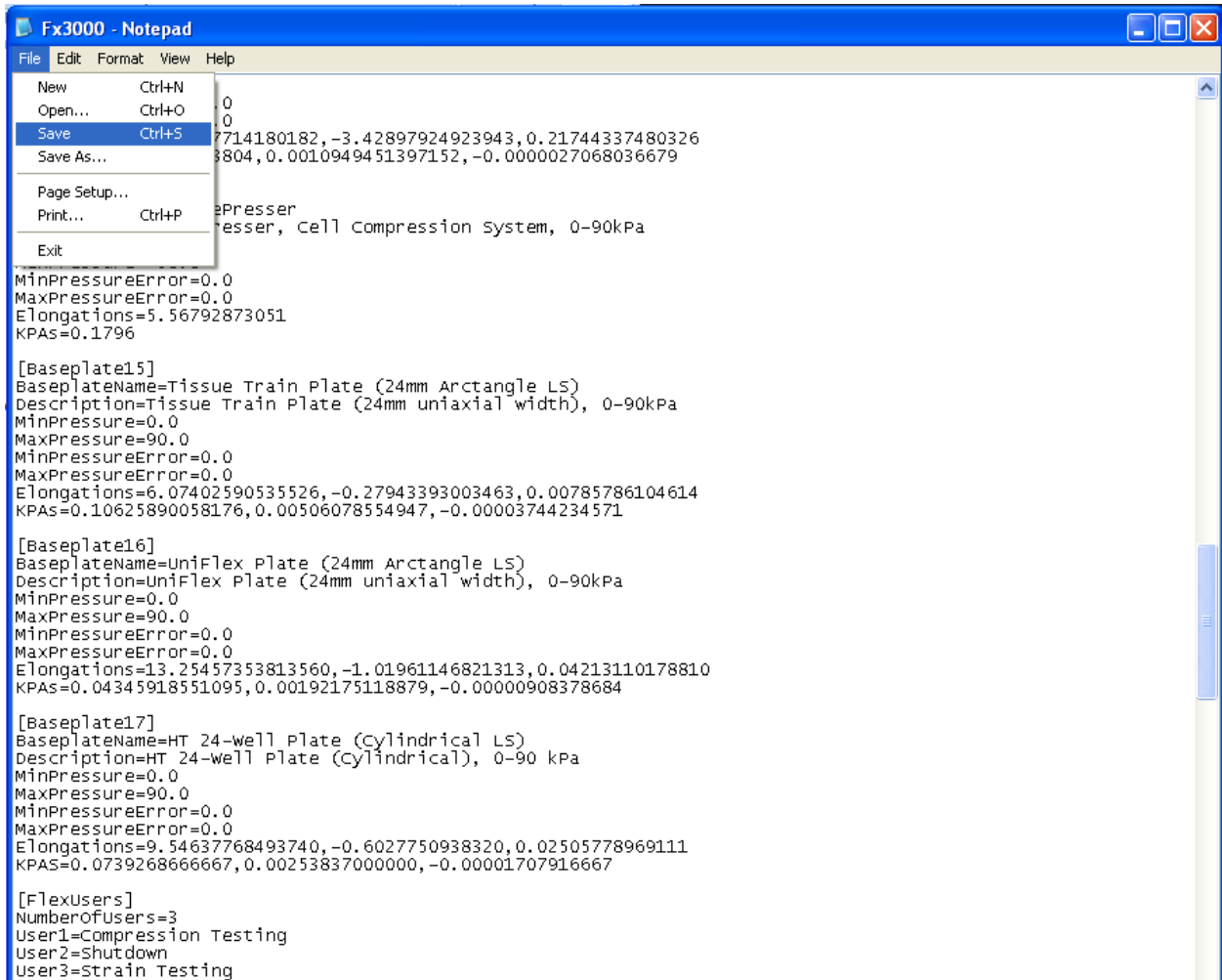


```
[Baseplate16]
BaseplateName=UniFlex Plate (24mm Arctangle LS)
Description=UniFlex Plate (24mm uniaxial width), 0-90kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=13.25457353813560,-1.01961146821313,0.04213110178810
KPAs=0.04345918551095,0.00192175118879,-0.00000908378684

[Baseplate17]
BaseplateName=HT 24-well Plate (Cylindrical LS)
Description=HT 24-well Plate (Cylindrical), 0-90 kPa
MinPressure=0.0
MaxPressure=90.0
MinPressureError=0.0
MaxPressureError=0.0
Elongations=9.54637768493740,-0.6027750938320,0.02505778969111
KPAs=0.0739268666667,0.00253837000000,-0.00001707916667

[FlexUsers]
NumberOfUsers=3
```

9. Left click on **File**
10. Left Click on **Save**



The FX4000 configuration file (Fx3000.ini) is now updated. The customer will now see “24-Well Plate (Cylindrical LS)” when assigning a Baseplate in the FX4000 software.



FX-4000T High Throughput BioFlex Cylindrical Loading Station Conversion Chart

Press (-kPa)	% Elong	Strain	Press (-kPa)	% Elong	Strain	Press (-kPa)	% Elong	Strain
0.00	0.0	0.000	37.92	5.4	0.054	64.36	10.8	0.108
0.95	0.1	0.001	38.44	5.5	0.055	64.89	10.9	0.109
1.89	0.2	0.002	38.96	5.6	0.056	65.43	11.0	0.110
2.81	0.3	0.003	39.47	5.7	0.057	65.97	11.1	0.111
3.72	0.4	0.004	39.98	5.8	0.058	66.51	11.2	0.112
4.63	0.5	0.005	40.49	5.9	0.059	67.06	11.3	0.113
5.52	0.6	0.006	40.99	6.0	0.060	67.62	11.4	0.114
6.40	0.7	0.007	41.49	6.1	0.061	68.18	11.5	0.115
7.26	0.8	0.008	41.99	6.2	0.062	68.74	11.6	0.116
8.12	0.9	0.009	42.48	6.3	0.063	69.31	11.7	0.117
8.97	1.0	0.010	42.98	6.4	0.064	69.89	11.8	0.118
9.81	1.1	0.011	43.47	6.5	0.065	70.47	11.9	0.119
10.63	1.2	0.012	43.95	6.6	0.066	71.06	12.0	0.120
11.45	1.3	0.013	44.44	6.7	0.067	71.65	12.1	0.121
12.25	1.4	0.014	44.92	6.8	0.068	72.25	12.2	0.122
13.05	1.5	0.015	45.40	6.9	0.069	72.86	12.3	0.123
13.83	1.6	0.016	45.88	7.0	0.070	73.47	12.4	0.124
14.61	1.7	0.017	46.36	7.1	0.071	74.09	12.5	0.125
15.38	1.8	0.018	46.84	7.2	0.072	74.71	12.6	0.126
16.13	1.9	0.019	47.31	7.3	0.073	75.35	12.7	0.127
16.88	2.0	0.020	47.79	7.4	0.074	75.98	12.8	0.128
17.62	2.1	0.021	48.26	7.5	0.075	76.63	12.9	0.129
18.35	2.2	0.022	48.74	7.6	0.076	77.29	13.0	0.130
19.07	2.3	0.023	49.21	7.7	0.077	77.95	13.1	0.131
19.79	2.4	0.024	49.68	7.8	0.078	78.62	13.2	0.132
20.49	2.5	0.025	50.15	7.9	0.079	79.29	13.3	0.133
21.19	2.6	0.026	50.62	8.0	0.080	79.98	13.4	0.134
21.87	2.7	0.027	51.09	8.1	0.081	80.67	13.5	0.135
22.55	2.8	0.028	51.57	8.2	0.082	81.37	13.6	0.136
23.23	2.9	0.029	52.04	8.3	0.083	82.08	13.7	0.137
23.89	3.0	0.030	52.51	8.4	0.084	82.80	13.8	0.138
24.55	3.1	0.031	52.98	8.5	0.085	83.53	13.9	0.139
25.20	3.2	0.032	53.46	8.6	0.086	84.26	14.0	0.140
25.84	3.3	0.033	53.93	8.7	0.087	85.01	14.1	0.141
26.47	3.4	0.034	54.41	8.8	0.088	85.76	14.2	0.142
27.10	3.5	0.035	54.88	8.9	0.089	86.53	14.3	0.143
27.72	3.6	0.036	55.36	9.0	0.090	87.30	14.4	0.144
28.34	3.7	0.037	55.84	9.1	0.091	88.08	14.5	0.145
28.95	3.8	0.038	56.32	9.2	0.092	88.87	14.6	0.146
29.55	3.9	0.039	56.80	9.3	0.093	89.67	14.7	0.147
30.14	4.0	0.040	57.29	9.4	0.094			
30.73	4.1	0.041	57.77	9.5	0.095			
31.32	4.2	0.042	58.26	9.6	0.096			
31.90	4.3	0.043	58.75	9.7	0.097			
32.47	4.4	0.044	59.25	9.8	0.098			
33.04	4.5	0.045	59.74	9.9	0.099			
33.60	4.6	0.046	60.24	10.0	0.100			
34.15	4.7	0.047	60.75	10.1	0.101			
34.71	4.8	0.048	61.25	10.2	0.102			
35.25	4.9	0.049	61.76	10.3	0.103			
35.79	5.0	0.050	62.27	10.4	0.104			
36.33	5.1	0.051	62.79	10.5	0.105			
36.87	5.2	0.052	63.31	10.6	0.106			
37.39	5.3	0.053	63.83	10.7	0.107			

