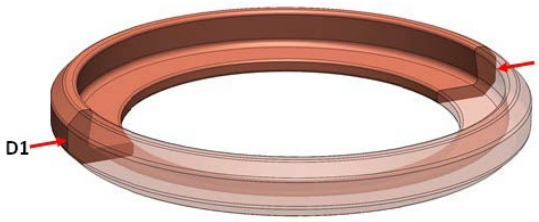
MiTeGen Autogrid Ring Quality Report

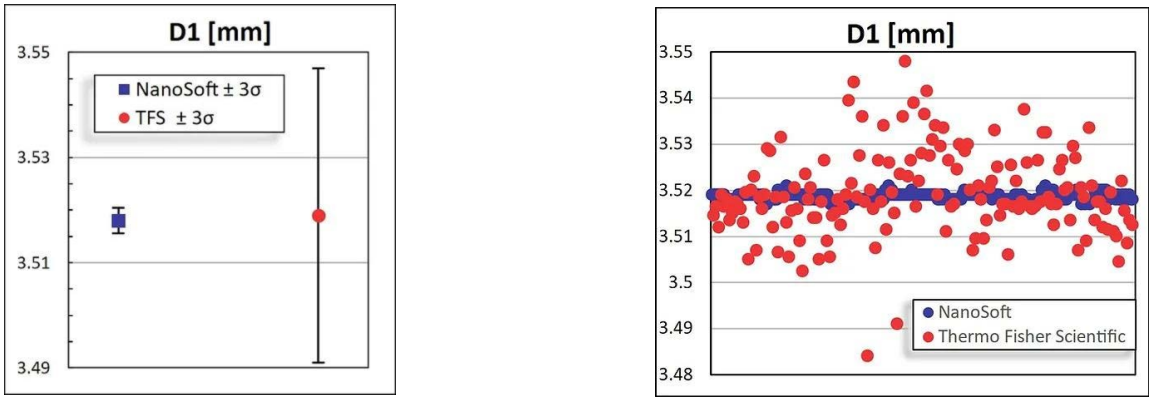
Nanosoft Autogrid Ring Quality Report

MiTeGen has partnered with Nanosoft to offers its autogrid ring, also referred to as a c-clip ring, that is compatible with Thermo Fisher Scientific (TFS) autoloaders.

Significant time was invested into analyzing the TFS version, including both the material and geometry, such that NanoSoft has been able to produce an autogrid ring that is functionally identical. Furthermore, NanoSoft has developed a world-class manufacturing and quality process, using the most advanced machines and tools, to ensure that NanoSoft autogrid rings are as reliable, if not more so, than the TFS version. The below data suggests that NanoSoft autogrid rings are much less variable, indicating incredible manufacturing and quality control, ensuring that they will not lead to any issues during clipping or use in the autoloader or TEM column. Autogrid rings are not the driving factor in break downs and downtime in cryoEM systems, and the NanoSoft autogrid ring is even less likely to cause issues than the TFS version with this part quality that is achieved. One note: the data shown here for TFS rings are from a random sampling of rings from 2021-2022. They may or may not be representative of the latest production processes used by TFS.

NanoSoft has measured key dimensions of the autogrid ring across significant populations of both the TFS and NanoSoft versions to ascertain the quality of manufacturing. Below are graphs showing the average dimensional value for 4 features for both autogrid ring versions, along with error bars showing 3 standard deviations, indicating that 99.7% of manufactured parts fall within that range. There are also scatter plots showing the full population of measurements for 2 features that are considered most critical for interaction with the autoloader.





Figures 1: Average Dimensional Value for Diameter 1 (D1)

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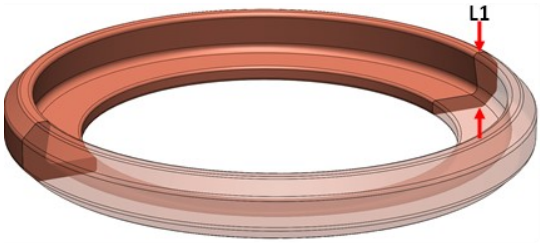
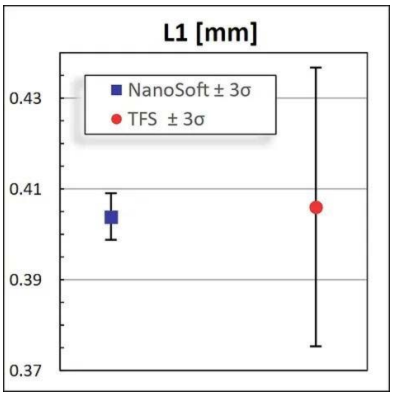
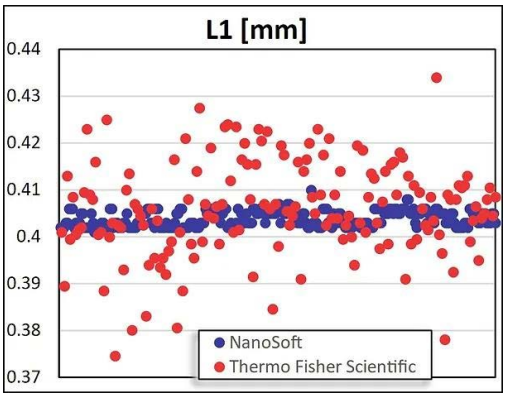
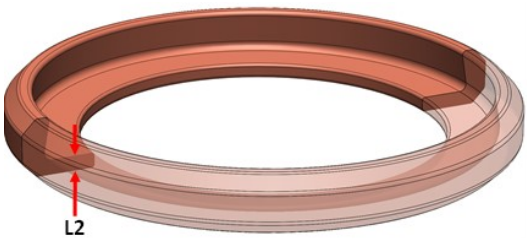
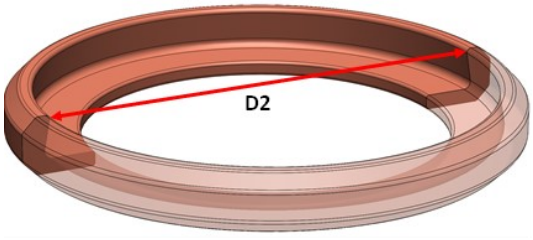


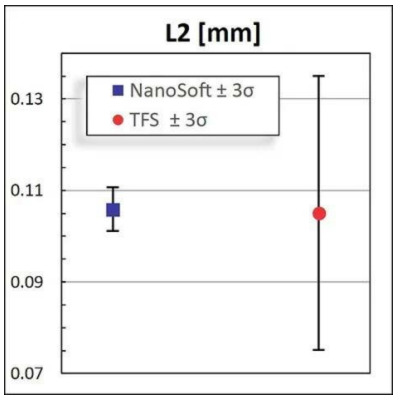




Figures 2: Average Dimensional Value for Length 1 (L1)







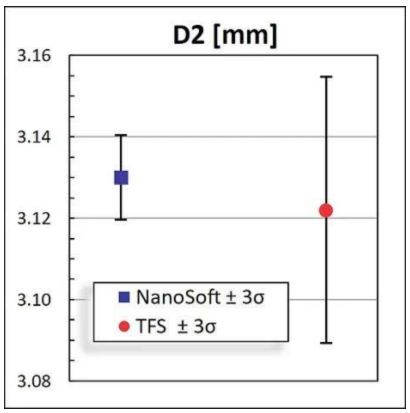


Figure 3: Average Dimensional Value for Length 2 and Diameter 2 (L2 and D2)

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