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TECHNICAL NOTES

FIB AUTOGRID RINGS

Product No. 47000-652

 NanoSoft's patent (pending) FIB AutoGrid Rings are a superior alternative for clipping FIB grids for use in Thermo Fisher Scientific (TFS) Cryo-FIB systems, and offer several major improvements over standard TFS FIB rings:

MARKINGS

These FIB AutoGrid Rings have high contrast orientation marks, making correct visual orientation easy without the need to manually mark the ring with a marker, as is often the case with less visible markings of standard TFS FIB rings (*Figure 1*). These improved FIB AutoGrid Rings also have matching marks on the

"topside", so you can see the orientation of the ring when clipping a grid.



Figure 1: Comparison of markings between NanoSoft and TFS FIB AutoGrid Rings



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ANGLED FACE

These FIB AutoGrid Rings have a significantly increased area of the grid accessible for ion beam milling (*Figure 2*). Typical FIB rings have a small angled notch on the flat "backside" of the ring to allow for shallow-angled ion beam milling on a limited portion of the grid. Alternatively, the "backside" of these improved FIB AutoGrid Rings have an angled face around their entire circumference, providing a substantial increase in milling area, reclaiming valuable sample/cells on your grid (*Figure 3*).



Figure 2: NanoSoft FIB AutoGrid Ring imaged at 10 degree angle in Aquilos 2 to show angled face of ring for better shallow angle milling



Figure 3: Comparison of available milling area between NanoSoft and TFS FIB AutoGrid Rings in Aquilos 2



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RING ORIENTATION GUIDE

The orientation marks on the FIB AutoGrid Rings, shown in *Figure 4*, can be utilized to the preference of the user:



Figure 4:

Above are examples of some recommended orientations for a few systems that utilize these rings. The orientation marks on the "topside" and "backside" of the rings mirror each other, as indicated by the colored rectangles.