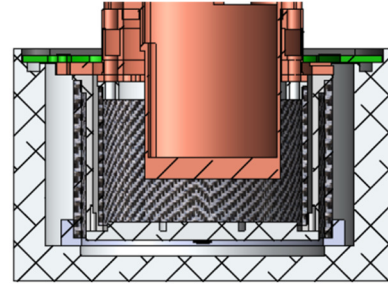


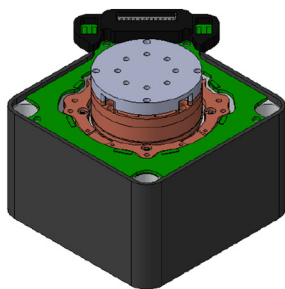
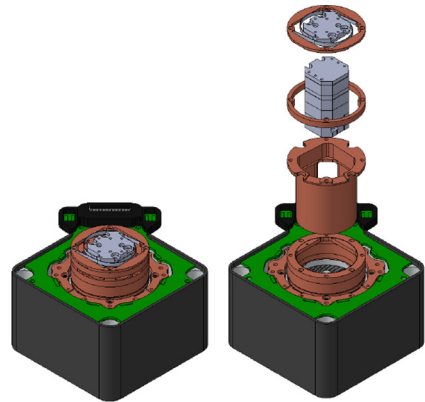
Piezo Ready Option	Doc-112
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The **Cryostation** is available with provision for integrated piezo translation stages. These stages are generally recessed into a “pocket” below the main interface plane of the sample chamber. A cross section of the sample chamber base with the pocket installed is shown at the right. The copper colored rectangle is shown extending down into the base chamber.

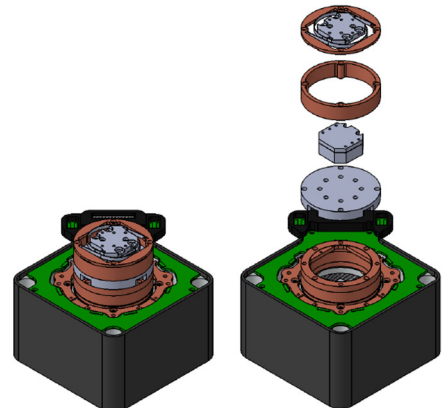


The image to the right shows the Attocube ANP-101 series XYZ positioners inserted into the recessed pocket. The image shows the assembled view along with an exploded view. Here the Z stage is on the bottom, with the horizontal stages arranged as X and Y stages in the center of the sample chamber. At the top of the stack is the flexible thermal link. It is held at the right height by surrounding ring. The sample is placed on the small platform which is bolted to the top of the stack. This platform is thermally connected to the outer ring, which is cooled to about 3K. The thermal connections to the sample plate on top of the stack are necessary because the piezo stages are weak thermal conductors. The thermal connections provided are specially designed to be very flexible and allow stage motion in any direction.

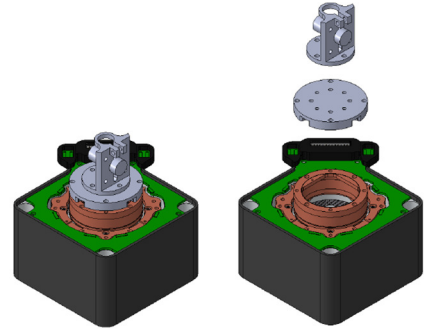


The piezo ready version is also supplied with a flat mounting platform for applications where the pocket is too deep or the stages may extend up towards the top optical port. See the image at the left.

The Attocube stages don't need to be recessed in the pocket. One or more stages can be configured on top of the flat mounting platform. The image at the right shows a single Attocube stage mounted on the platform. Note again the use of the flexible thermal connection on the top of the stage with a supporting ring.



The user of a piezo-ready Cryostation isn't required to use the Attocube stages at all. The standard sample mount may be mounted on top of the flat plate. This mount will be higher than the standard mounting location, due to the thickness of the flat platform. The image at the right shows this configuration.



Note that there are many models of the Attocube stages with allow motion in X, Z, rotation or tilt for example. The most common options are the XYZ stack or a rotation stage in combination with linear motion. The use of motion stages will affect your sample vibrations dependent on the stages used and your base temperature slightly. Talk to the engineers at Montana Instruments about your motion needs.

Below are some images of the components for both the recessed installation with pocket and the flat platform installation.

