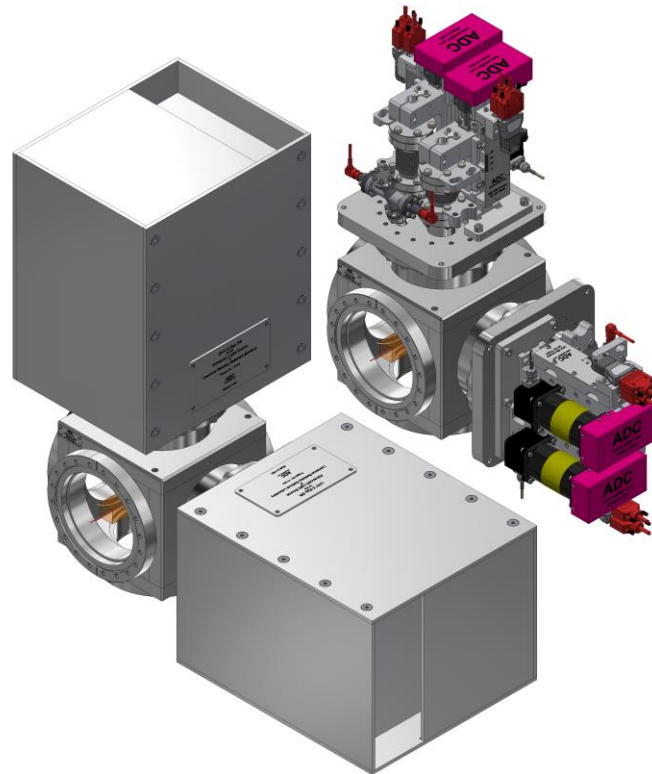
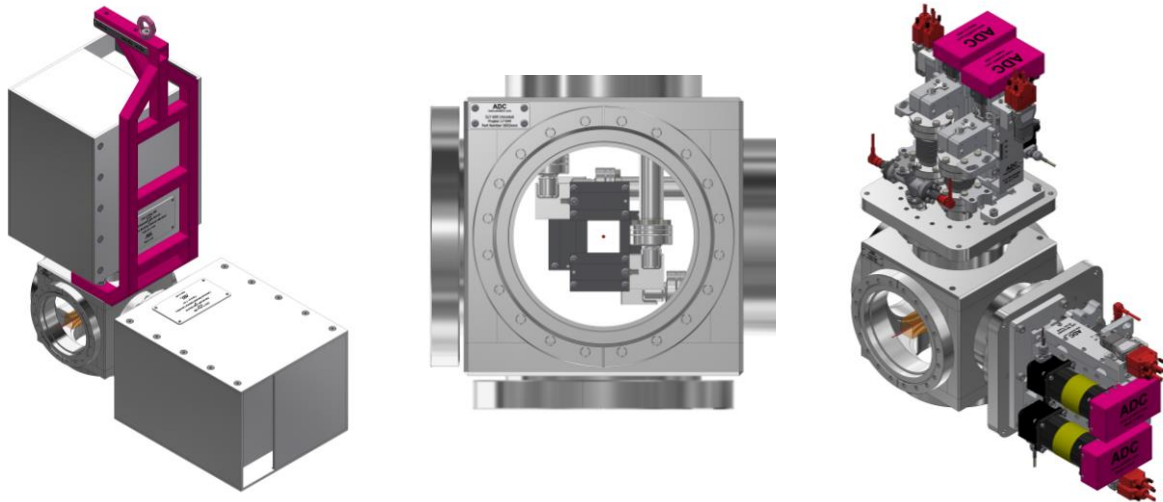


## SLT-600 UHV Slit Systems Project 17-044 for LBNL



Two of ADC's SLT-600 UHV X-ray Slits were delivered to researchers at Lawrence Berkeley National Laboratory (LBNL) for adjustment of X-ray beam spot size and spot edge clarity in the Advanced Light Source (ALS) synchrotron. One slit system was equipped with water cooling, while the other was not. Both systems were equipped with drain current monitoring from the electrically isolated blades, allowing the position of the X-ray beam to be monitored from the intensity of radiation striking each of the four slit blades.

While the SLT-600 system uses a common layout and a common design for the out-of-vacuum blade actuators (an actuator originally developed for, and used successfully on, ADC's SLT-400 system), each SLT-600 is tailored to the requirements of the particular beamline on which it is to be installed. Examples have been made for a close side-by-side fit on two parallel beams, with unique chambers to operate on a beam very close to a nearby wall, and with a variety of monitoring and cooling options. The greatest design challenge with these particular slits for LBNL was the requirement of a chamber with 8-inch CF flanges, the smallest water-cooled SLT-600 system made by ADC to date. In addition, one of the two slit systems required a stainless steel shielding box around the actuators to prevent leakage of radiation from the lantern-like bellows.



### Key Specifications:

Description	Value
Aperture Maximum	25 mm Square
Aperture Minimum	Full Overlap
Encoder Resolution	0.1 $\mu$ m
System Mass (Each)	180 kg
Flange Connection	8" CF (DN150)