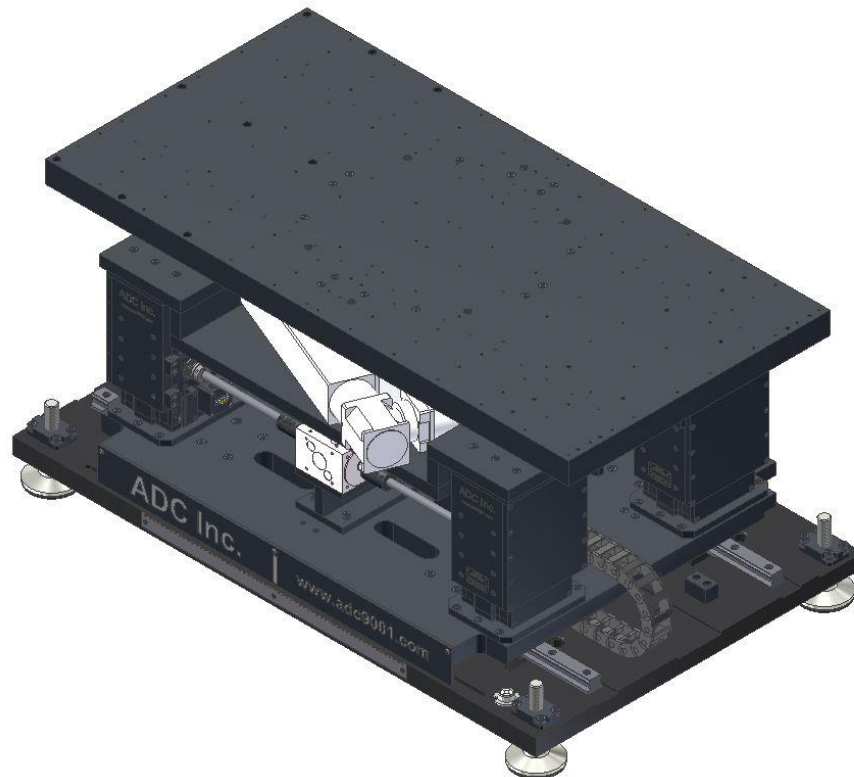


Cornell High Energy Synchrotron Source (CHESS) Three Degree of Freedom Optical Table



Customer:
Cornell University
Wilson Synchrotron Lab and Ring
161 Synchrotron Dr
Ithaca NY, 14853



This optical table is a 3 axis motion system and was designed for G-Line at CHESS. The horizontal motion based on linear slide that ADC has continually improved in the past few years to meet the high demands of the industry. The linear motion is supported by THK HSR35 guide rails and bearings. A preloaded 20x5 mm ball screw coupled to a NEMA 23 motor and a 10:1 gear reduction allows the unit to have a 2.5 μm resolution. The vertical motion consists of 4 ADC 5kN Utility Jacks that are geared to be driven off of one motor. The one motor approach is preferred to avoid the potential binding of the jacks that is common with driving each jack individually. NB SVS 4160 crossed roller bearings provide a stable and smooth platform for the vertical motion. The rotary motion for this optical table provides a full 360° rotation, and is equipped with fully adjustable limit switches to set travel limits as necessary. A 2 in thick aluminum bread board is mounted on top of the rotary stage which provides a stable base for mounting equipment as necessary.