Thermally controlled aperture and slits

McPherson Inc. has developed thermally controlled aperture and slit systems to measure and tune specific wavelengths over a wide photon range of the electromagnetic spectrum down into highly energetic regions of $1 \times 10^{-9}$ meters.

To assure high performance, McPherson’s monochromators, spectrometers and synchrotron monochromator beam lines utilize extremely precise, adjustable and actively cooled aperture designs for entrance occulting and dispersion controlling slits and masks. These designs, intended for use on third generation synchrotron storage rings, and in conjunction with high power lasers and X-ray beam shapers, manage applications where extreme localized heating is encountered. The designs assure maintenance of performance characteristics of given apertures.

The features of direct thermal relief of aperture blades, providing cooled occulted zones, guarantee maintenance of calibrated openings. Manipulation and adjustability from 5 micron to 10 mm and aperture blade length of up to 65 mm provide the variety to accommodate a wide range of applications. The available versions for horizontal, vertical, odd angle and grossed beam shaping tasks make these aperture systems important tools for beam size and trajectory control in high-energy endeavors.

The bakeable systems are RGA tested and, prior to shipment, certified to operate in the $10^{-10}$ range. Apertures and blades are precision ground and lapped stainless steel, molydenemum, or other materials. These can be supplied in electrically isolated designs for close looped beam positioning.
Micrometer controls and opening indicators are standard and fit optional encoders and motor drives for remote control. The units can be equipped with view ports, visualizing screens, beam current monitors, transaction stages, xyz roll, pitch and yaw (adjustable) supports, floor stands, and more.

For more information, please contact: Erik Schoeffel, McPherson, Inc., 7A Stuart Road, Chelmsford, MA 01824, USA. Tel: +1-978-256-4512. Fax: +1-978-250-8625. E-mail: mcp@mcphersoninc.com. Web: www.McPhersonInc.com

High-precision stages for automations and robotics

Advanced Design Consulting has introduced a new family of high-precision stages for automations and robotics. These stages include high-precision slides, vertical (Jacks), goniometer (Tilt), rotation, and actuators in different sizes and load capacities.

Customers can now download CAD drawings directly from the company website and use them in their models. Advanced Design Consulting’s custom design applications include: fabrication and assembly of gantry tables, spectrometers, hex poles, machine tool assembly, and packaging applications.

For more information, please contact: Advanced Design Consulting, P.O. Box 187, 126 Ridge Road, Lansing, NY 14882, USA. Tel: +1-607-533-3531. Fax: +1-607-533-3618. E-mail: acd@acd9001.com. Web: www.adc9001.com

The descriptions of the new products listed in this section are based on information supplied to us by the manufacturers, and in some cases by independent sources. Synchrotron Radiation News can assume no responsibility for their accuracy.