



Slits are required for use under vacuum in spectrometers, imaging systems and interferometers operating at far UV, extreme UV and soft X-ray photon energies.

Model VSA-200 vacuum slit assemblies are used in all Hettrick Scientific spectrometers, and are now available for separate purchase.

## Product Details

This assembly is mounted inside a 4.5 inch (ICF114) double-sided (1.50 inch thickness) electroless nickel coated aluminum chamber, with knife-edge flange faces which may be sealed using TEFLAT™ or BLACKFLAT™ gaskets or rectangular cross-section o-rings. A slit mask consisting of 6 slits travels on a preloaded crossed roller slide under vacuum, driven by an o-ring sealed linear feedthrough shaft of a precision micrometer with 1 micron digital readout. This mechanism provides for both selection of the slit and fine adjustment of its position in the beam.

To avoid illumination of other than the selected slit, a removable light baffle plate having a central opening covers the entrance port. A high resolution slit mask provides nominal widths of 5, 10, 20, 50, 100 and 200 microns and length of 20 mm. The actual calibrated slit widths are given for each mask to within 10%. An optional low resolution slit mask provides widths of 75, 100, 150, 200, 300 and 400 microns and length of 15 mm. The chamber is machined true and square with external sides precisely oriented (parallel and perpendicular) relative to the internal slits, enabling a convenient and accurate mechanical reference.

The tapped hole mounting pattern on both sides of the chamber, using stainless steel helicoil inserts for maximum strength and cleanliness, mates to commercially available English size knife edge flanges. To allow the slit chamber to be bolted directly to a tapped hole chamber, counterbored clearance holes on a 3.75 inch square pattern are also available at the corners of the chamber, as shown in the photograph. Threaded holes (1/4-20) in the slit chamber side also provide for mounting on a table bracket (optional). All materials residing inside vacuum are vented and cleaned for compatibility with high vacuum (low  $10^{-8}$  torr).