

Ion Deflectors / Energy Filters

Ion Deflectors are versatile Ion Guides that can be used as System Design Components, Energy Filters and Noise Reduction Devices. They have high ion signal transmission and can be used as components in new systems or as a way to upgrade and enhance the capabilities of existing systems.

System Design Components: As System Design Components, Deflectors can be used to provide right angle configurations, as a way to introduce Molecular Beams and Lasers into systems, as a platform for mounting multiple Ionization Sources or as an ion-switching device for Multi-technique systems.

Energy Filters: As Energy Filters they combine high ion signal transmission with energy resolution of 0.6 eV and can fit into places other types of Energy Filters cannot.

Noise Reduction Devices: The deflector's right angle design make it ideal for reducing noise from sources as electrons, high energy ions and fast neutrals in applications such as Plasma Analysis, Molecular Beam Work and Flow Tube and Drift Cell Experiments.

Ion Deflectors are used to turn ions 90° and Extrel offers two types, Large (Figures C and D) and Compact (Figures E and F). The Compact Deflector can be used to turn ions 90° in one direction from the entry axis and the large deflector can be used to turn ions 90° in two directions from the entry axis.

Both can be tuned to allow the ions to travel through deflector along the entry axis. The ions will encounter a field free region in this mode and lose focus.

Power can be supplied from the Merlin Automation 3500, 5500 and 5221 Series Controllers using the Power Supplies. The customer can also supply the appropriate voltages from any stable DC power supply.

For more information request Product Notes GP-201, "RF/DC and RF only Power Supplies" and GP-160, "Ion Guides".

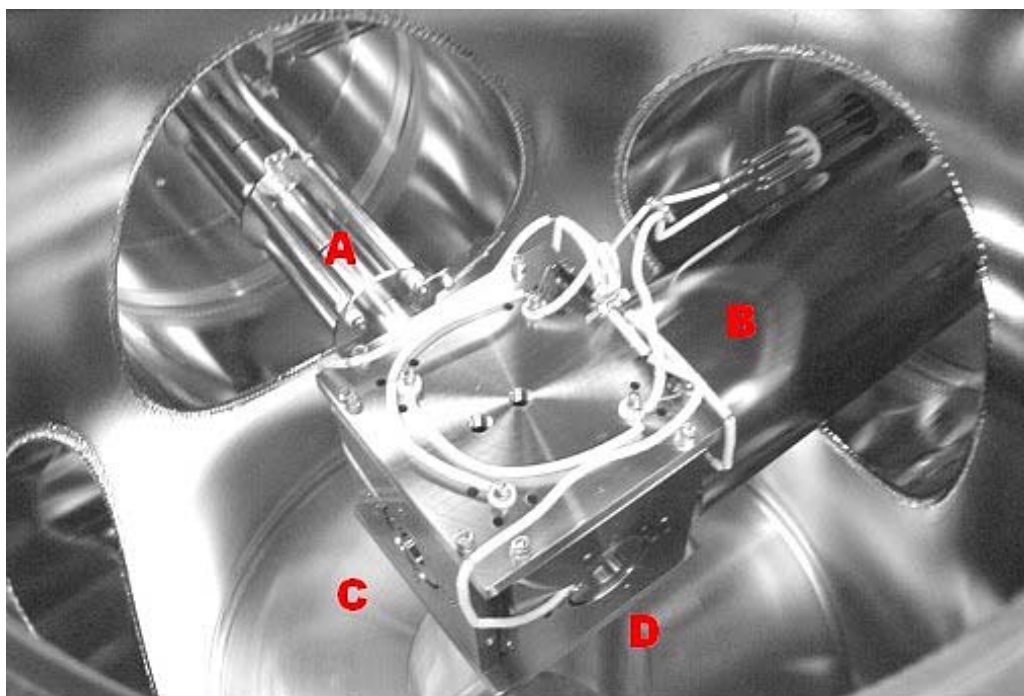


Figure 1

Large Deflector in Multi-Technique System. Shown with Special Ion Optics (A) and a 19 mm Quadrupole Mass Filter (B) attached. The two open apertures, (C) and (D) can be used to admit a Laser or attached to other Techniques or Ionization Sources.

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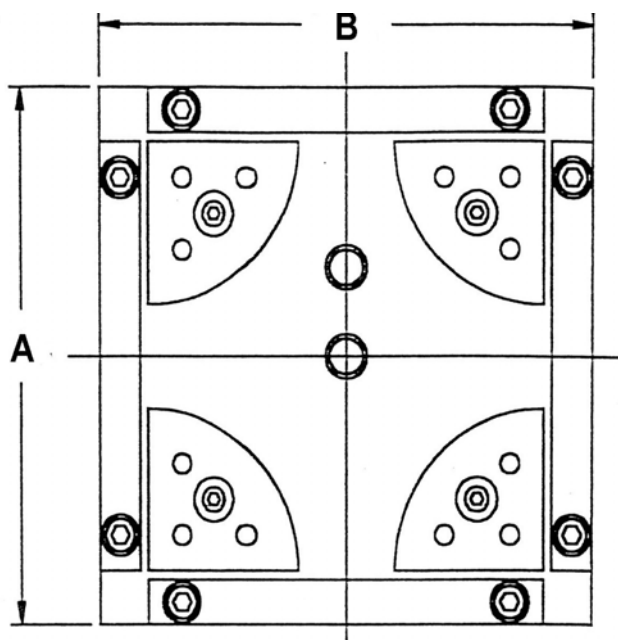


Figure C: Large Deflector Top View

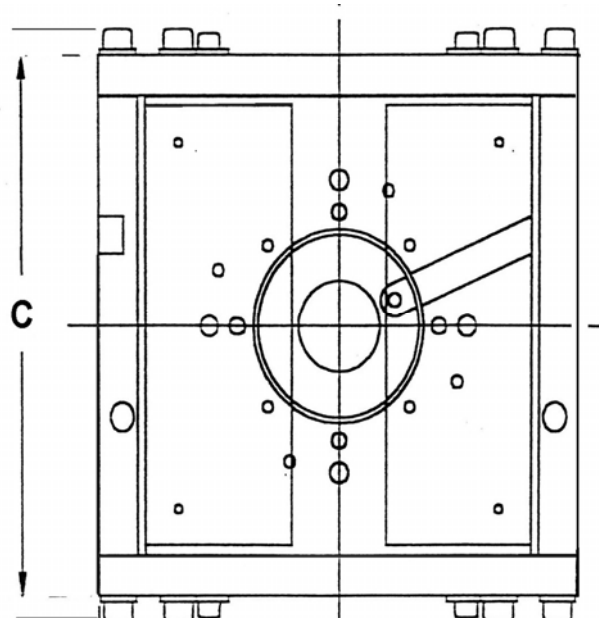


Figure D: Large Deflector Side View

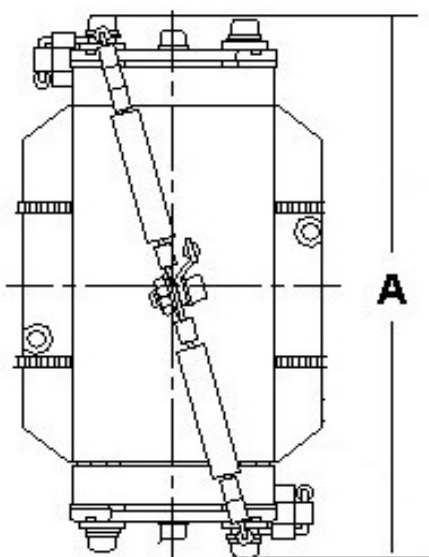


Figure E: Small Deflector Top View

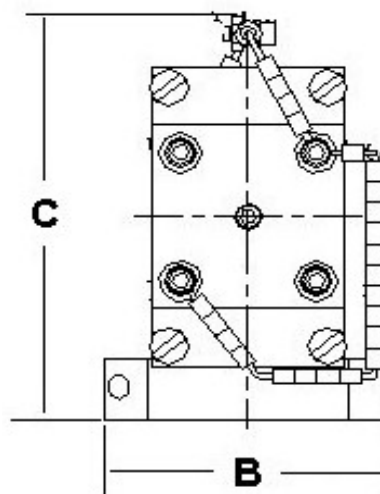


Figure F: Small Deflector Side View

Table 17: Deflector Dimensions in mm					
Type	Part Number	A	B	C	Minimum I.D.
Large 90°, 180°, 270°	811989	76.20	76.20	76.20	101
Small 90° only	814715	78.74	41.07	62.10	101

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