

Ion Guides MS/MS Components

Extrel CMS manufactures a range of Ion Guides for a number of different applications. These include Octupoles, Hexapoles, Quadrupoles and Einzel Lenses. Each device has a unique set of performance characteristics that make it ideal for the demands of a specific application yet, all have the flexibility to perform well in many applications. Two or more of the devices are often combined together for the best possible performance. All of Extrel's Ion Guides are rugged, high precision devices built and tested to the most exacting specifications. They have standard configurations with several options and most can be customized to fit your application.

Octupole and Hexapole Ion Guides: The Ion Guides are RF-only devices designed to move ions from point A to point B with little or no loss of signal. They can be used for both ion transport and pressure reduction. They are offered with and without Housings and Entrance Exit Lenses and in standard and custom lengths.

Octupoles are recommended when the highest ion signal transmission is required.

Hexapoles are recommended if the device is to be installed after a high pressure point source for ions, such as an ESI source. Uses Phase Space Compression to reduce ions produced by a high pressure point source from 4.5 mm to 3 mm.

Hexapole Collision Cell: The Extrel Hexapole Collision Cell was designed to couple a high pressure point source of ions, such as an Electrospray Spray Source, to a Mass Analyzer. It is conductance limited with a gas inlet port to introduce a buffer gas. The buffer gas can be used for either Collision Induced Dissociation or for Phase Space Compression to collisionally damp the ion beam into a smaller cross sectional area. For more detailed information please ask for Product Note CP-102C

Quadrupole Mass Filters: Quadrupole Mass Filters are recommended for use as Ion Guides in situations where there will also be a need for Mass Selection of ions or Mass Range Rejection for noise reduction. We

offer a number of Quadrupole Mass Filter sizes and configurations with a range of performance characteristics and mass ranges.

For more detailed information please ask for Product Note GP-101D

Einzel Lens Stacks: Einzel Lens Stacks are a series of electrostatic lenses used to transport, focus and collimate ions. When a very fine spot size or a well collimated beam is required an Einzel Lens Stack is recommended. A short Einzel Lens Stack is often used before or after another Ion Guide. They are available in both standard and custom lengths.

Power Supplies: Extrel manufactures a number of RF-only and RF/DC Power Supplies for our Ion Guides. The RF/DC Power Supplies can be run in both RF-only and RF/DC modes.

Optional Lens Supply Upgrade: The Optional Power Board has three DC Power Supplies to power Entrance and Exit Lenses and provide a Pole Bias voltage. It works only with the RF-only Power Supply. It will not work with the RF/DC Power Supplies.

The different Ion Guides are only a few of a number of unique, high precision MS/MS components built by Extrel. If you would like more information or a complete list of all our products, ask for Product Note GP-110 or contact your local Extrel Representative.



Figure 1 : Hexapole Ion Guide

Extrel CMS

575 Epsilon Drive Pittsburgh, Pennsylvania 15238-2838 USA
Tel: (412) 963-7530 FAX: (412) 963-6578 Web: www.extrel.com E-mail: info@extrel.com

Ion Guide Dimensions										
Device	Part Number	Fig.	A	B RF	C Posts	D	E	F	G Gas	H Ports
6 mm Quadrupole without housing	xxxxxx	A	219.2	37.12	52.22	101	N/A	N/A	N/A	N/A
6 mm Quadrupole with Housing, Entrance and Exit Lenses	☉	A	219.2	47.75	62.73	101	15.24	15.24	N/A	N/A
9.5 mm Quadrupole without housing	813859	A	219.2	78.61	93.85	101	N/A	N/A	N/A	N/A
9.5 mm Quadrupole with Housing, Entrance and Exit Lenses	☉	A	219.2	77.21	92.45	101	15.24	15.24	N/A	N/A
19 mm Quadrupole without housing	814191	A	228.6	62.73	76.96	101	N/A	N/A	N/A	N/A
19 mm Quadrupole with Housing, Entrance and Exit Lenses	☉	A	228.6	72.13	86.36	101	15.24	15.24	N/A	N/A
Octupole Ion Guide without Housing	xxxxxx	A	199.39	N/A	N/A	54	9.52	9.52	N/A	N/A
Octupole with Standard Housing, Entrance and Exit Lenses	xxxxxx	A	219.2	156	171.45	101	5.4	5.4	N/A	N/A
Octupole with Vented Housing, Entrance and Exit Lenses	xxxxxx	A	219.2	156	171.45	101	5.4	5.4	N/A	N/A
Octupole Collision Cell	xxxxxx	A	219.2	156	171.45		2.8	2.8	47.75	109.47
Hexapole Ion Guide without Housing	xxxxxx	A	205.48	N/A	N/A	54	4.8	4.8	N/A	N/A
Hexapole with Standard Housing, Entrance and Exit Lenses	xxxxxx	A	219.2	156	171.45	101	5.4	5.4	N/A	N/A
Hexapole with Vented Housing, Entrance and Exit Lenses	xxxxxx	A	219.2	156	171.45	101	5.4	5.4	N/A	N/A
Hexapole Collision Cell	815409	A	219.2	156	171.45	101	2.8	2.8	47.75	109.47
Einzel Lens Stack		N/A	27.94	N/A	N/A	70	12.70	12.70	N/A	N/A
Large Deflector	811989	B	76.20	76.20	76.20	101	12.70	12.70	N/A	N/A
Small Deflector	814715	B	78.74	41.07	62.10	101	12.70	12.70	N/A	N/A

1 Please contact Extrel for complete dimensions ☉ Please contact Extrel for complete list of part numbers
 Note: All dimensions are for reference only ! Contact Extrel for final dimensions

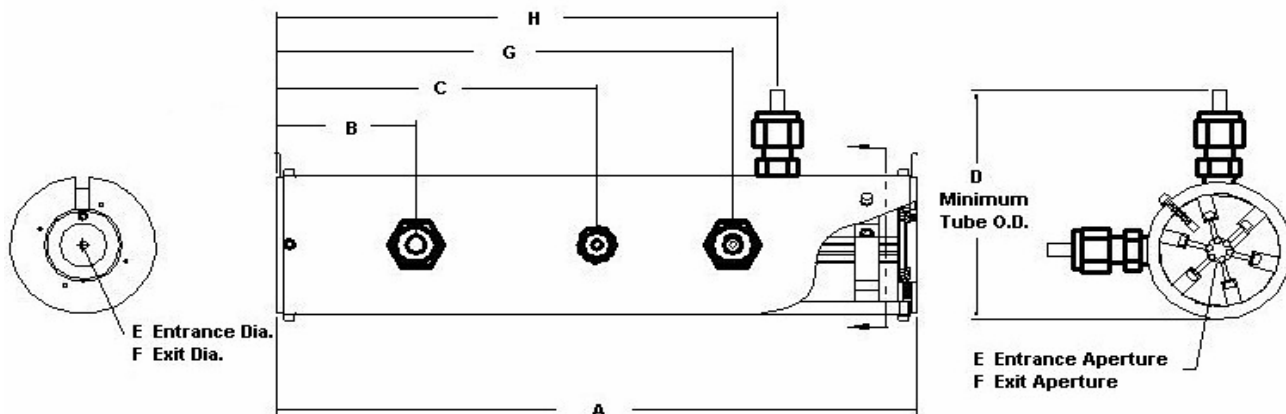


Figure A: Hexapole Collision Cell shown

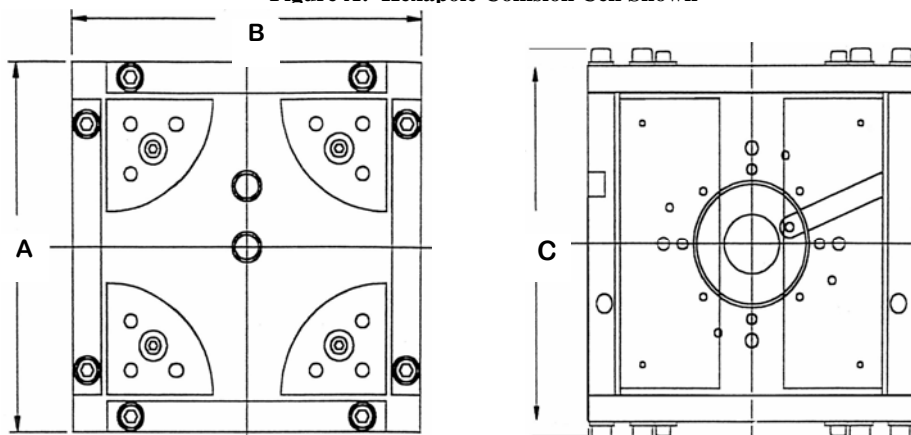


Figure B: Large Deflector shown

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