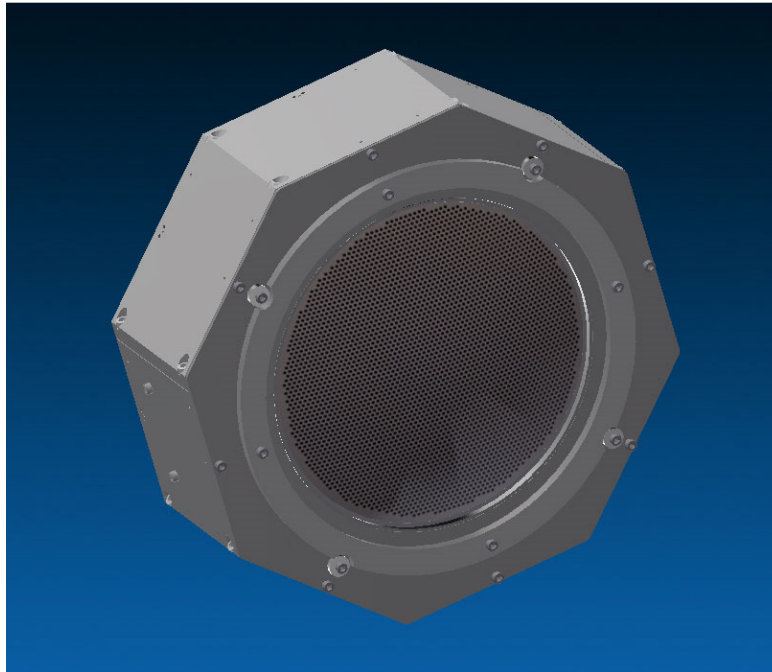




plasma process group

23 cm RF Ion Beam Source



Features

- **RF Discharge (no filament)**
- **Variety of Process Gases**
- **Variety of Grid options**
- **Easy Maintenance**
- **Dramatically Improved Mounting Options**

Applications

- **Etching**
- **Ion Beam-Assisted Deposition**
- **Web and Roll Coating**
- **Materials Research**
- **Sputter Deposition**

Description

Plasma Process Group offers a 23 cm RF ion beam source for larger scale, high current processes. This RF source is ideal for etch or assist applications. The 23 cm ion source is typically used in production environments.

Using RF discharge (no filaments) minimizes maintenance requirements, and enables use with typical process gases including many reactive species. Molybdenum grids are available for this ion source in a variety of configurations.

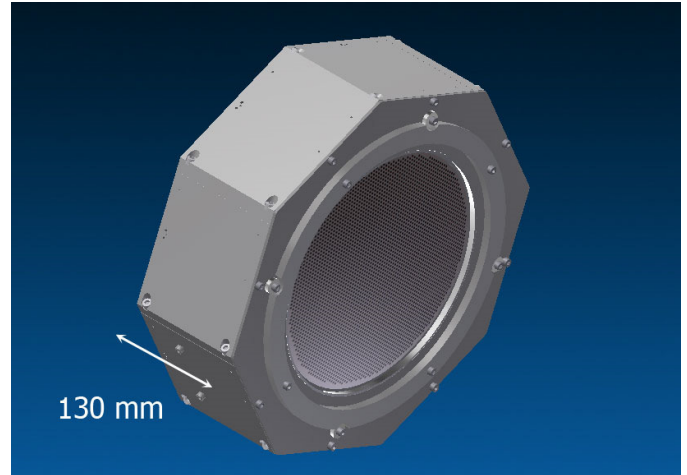
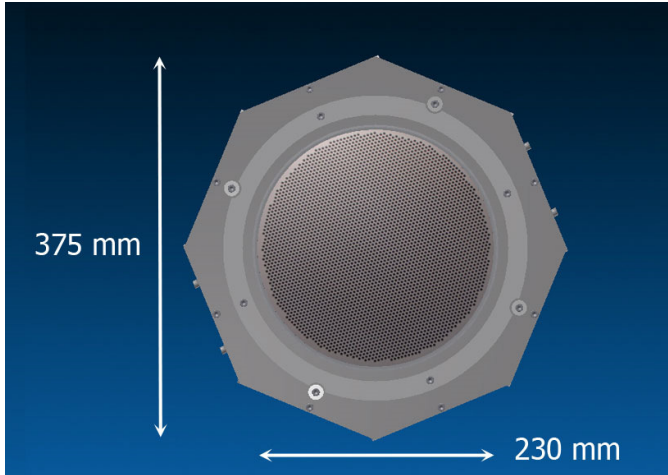
Whether you're in research or production, Plasma Process Group is committed to providing the best support possible. Help is just a phone call away (or email if you prefer). Our people have many years of experience with ion beam sources, systems, and applications, and we're happy to share that with you. Give us a call.

The 23 cm ion source is typically internal-mounted, but flange mounting is available. Grid assemblies can be custom designed to shape the beam for your specific substrate and vacuum chamber.

Every ion beam installation is unique so we're ready to help meet the requirements of your specific application. Ion source refurbishment services are also available for your new or existing ion sources.

Specifications

23 cm RF Source



Ion source	23 cm RF
Model number	23RF
Beam size at grids	230 mm
Beam current	200 – 1500 mA
Beam energy	100 – 1250 eV
Grid material	Molybdenum
Beam neutralization	Water cooled RF Neutralizer (sold separately)
Cooling	Water cooled antenna only
Power supply	I-BEAM™ 701 with 1kW RF generator
Weight	22 Kg (48 lbs)

Typical run data 66 cm divergent grids on Argon gas

Gas Flow Source	Gas Flow RFN	Gas Type	Chamber Pressure	Beam Current	Beam Voltage	Accel Current	Accel Voltage	RF FWD	RF REF	Neutralizer Emission	Neutralizer RF FWD
[sccm]	[sccm]		[x 10 ⁻⁴ Torr]	[mA]	[V]	[mA]	[V]	[W]	[W]	[mA]	[W]
25.0	5.0	Argon/Ox	5.0	200	250	14	300	70	0	244	65
25.0	5.0	Argon/Ox	5.0	750	250	51	750	269	1	937	65
25.0	5.0	Argon/Ox	5.0	200	500	13	200	70	1	225	40
25.0	5.0	Argon/Ox	5.0	750	500	48	500	280	0	935	50
25.0	5.0	Argon/Ox	5.0	200	750	13	200	70	0	250	40
25.0	5.0	Argon/Ox	5.0	750	750	41	250	280	0	941	50
25.0	5.0	Argon/Ox	5.0	1250	750	55	300	520	0	1562	60
25.0	5.0	Argon/Ox	5.0	200	1000	12	150	60	0	250	40
25.0	5.0	Argon/Ox	5.0	750	1000	34	150	260	0	924	50
25.0	5.0	Argon/Ox	5.0	1250	1000	54	250	490	0	1560	60
25.0	5.0	Argon/Ox	5.0	1500	1000	59	250	640	0	2000	95
25.0	5.0	Argon/Ox	5.0	250	1250	14	150	87	2	298	40
25.0	5.0	Argon/Ox	5.0	750	1250	32	150	250	0	940	50
25.0	5.0	Argon/Ox	5.0	1250	1250	50	200	490	0	1564	60
25.0	5.0	Argon/Ox	4.9	1500	1250	60	250	630	1	2000	95

Ordering Information: The 23 cm RF Ion beam source is available with options such as flange or internal mounting kits to facilitate installation. A variety of grid designs are available for your output ion beam. Please contact us to configure your ion source.

Suggested Accessories:

- IBEAM 701-6-0-2 I-BEAM™ 701 RFS Power Supply 1500mA/1250V
- 504424B RF Neutralizer
- 504552A / 504553A ATN-10 Matching Network for source / PT-II Auto Controller for Matching Network



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