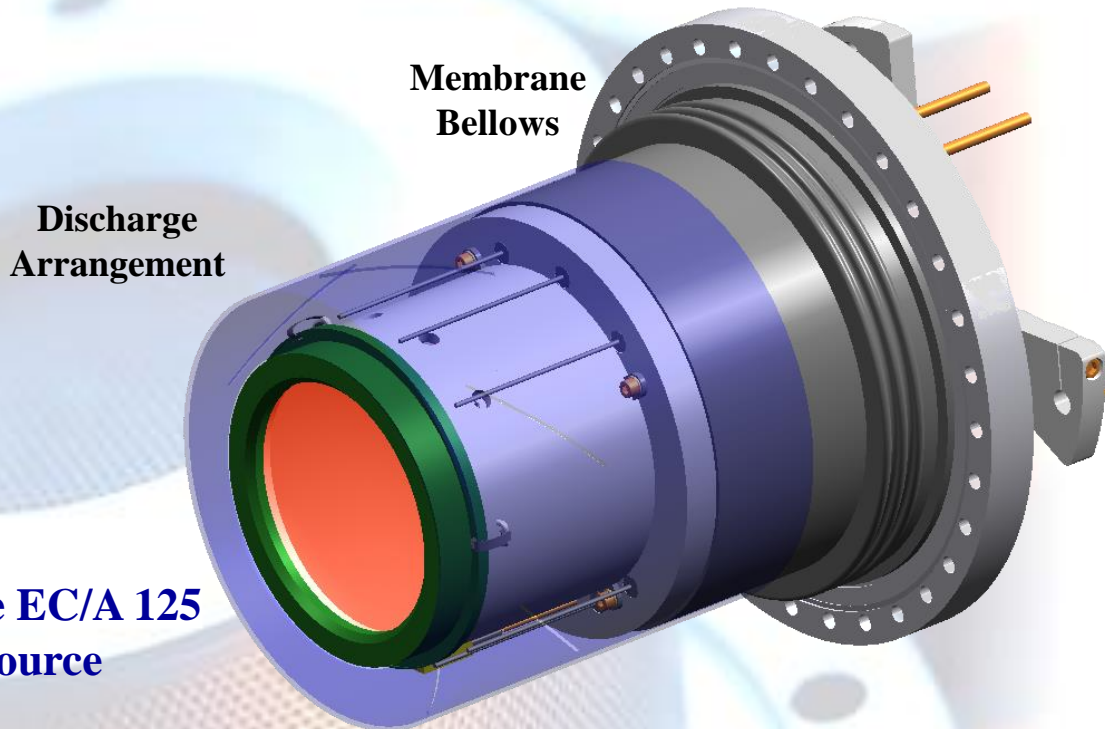


Adjustable ECR Broad Beam

Ion Sources

EC/A 125



Key Design Features

- **Filamentfree source operation** based on a simple, compact **microwave power coupling**
- **Permanent magnets** for use of the Electron Cyclotron Resonance (**ECR**)
- **Functional ceramics** for easy and quick maintenance
- Special **grid insulation and adjustment system**

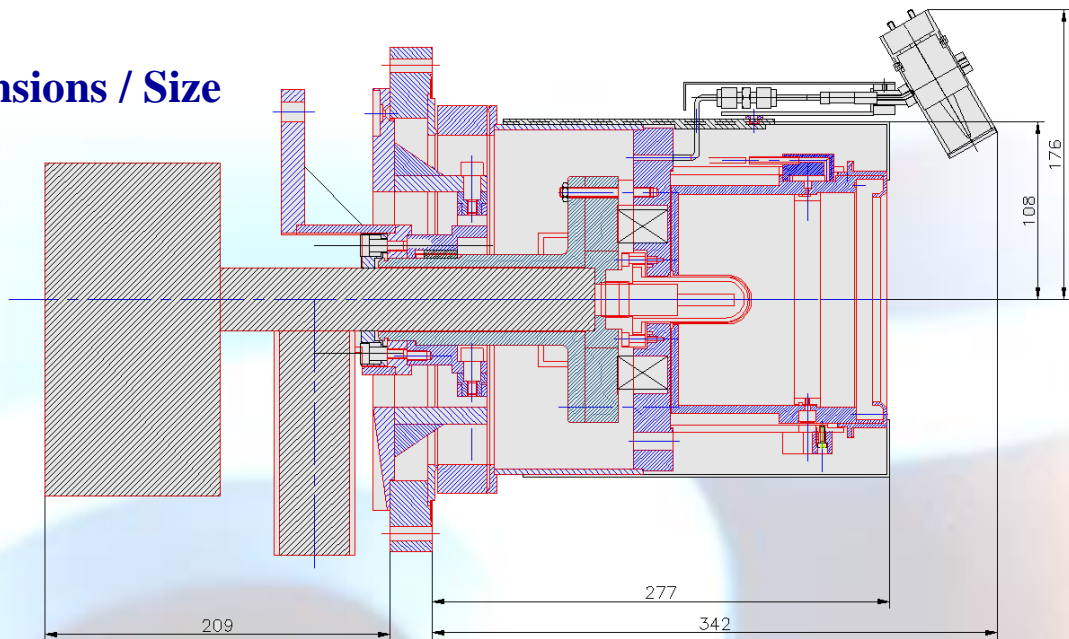
Advantages

- Fully noble gas, and oxygen; restricted for **reactive gases**
- **Grid systems** from different shape and material for optimum process adaptation
- **Minimum maintenance** and long lifetime, maintenance cycles over 300 h
- **Mechanical adjustment system** by universal joint (10 grd in each direction)

The best solution for filament free ion beam processing on large scale!



Dimensions / Size



EC/A 125 with PBN

Technical Specification

	<u>EC/A 125</u>	<u>EC/F 125</u>
Type:	Flange mounted adjustable ECR ion source with multiapertur extraction grids	Flange mounted ECR ion source with multiapertur extraction grids
Source materials:	Discharge lining: Al ₂ O ₃ Grids: Graphite or Molybdenum Vacuum separation of the microwave antenna: SiO ₂ cup Permanent magnets: NdFeB Housing: Stainless steel Magnetic shield: Ni coated steel	
Grid types:	2 or 3 grid system 2 standard systems with different focusing length	
Size:	Insertion depth: 280 mm (without PBN) Diameter: 220 mm (without PBN)	Insertion depth: 135 mm (without PBN) Diameter: 220 mm (without PBN)
Weight:	~14.5 kg	~11.5 kg
Flange:	DN 250	DN 200
Microwave power:	~125 to 400 W at 2.45 GHz	
Ion current:	Maximum 180 mA (Dependent on grid type and operation condition)	
Ion energy:	~100 to 2000 eV	
Accelerator voltage:	0 to -1000 V	
Process gases:	Noble gases, N ₂ (No restrictions) O ₂ , and Halogen containing gases (Grid lifetime reduced)	
Gas flow :	5 to 20 sccm, Fitting: 1/8" Swagelock	
Cooling water:	1.5 l/min Fitting: 6 mm Swagelock	



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