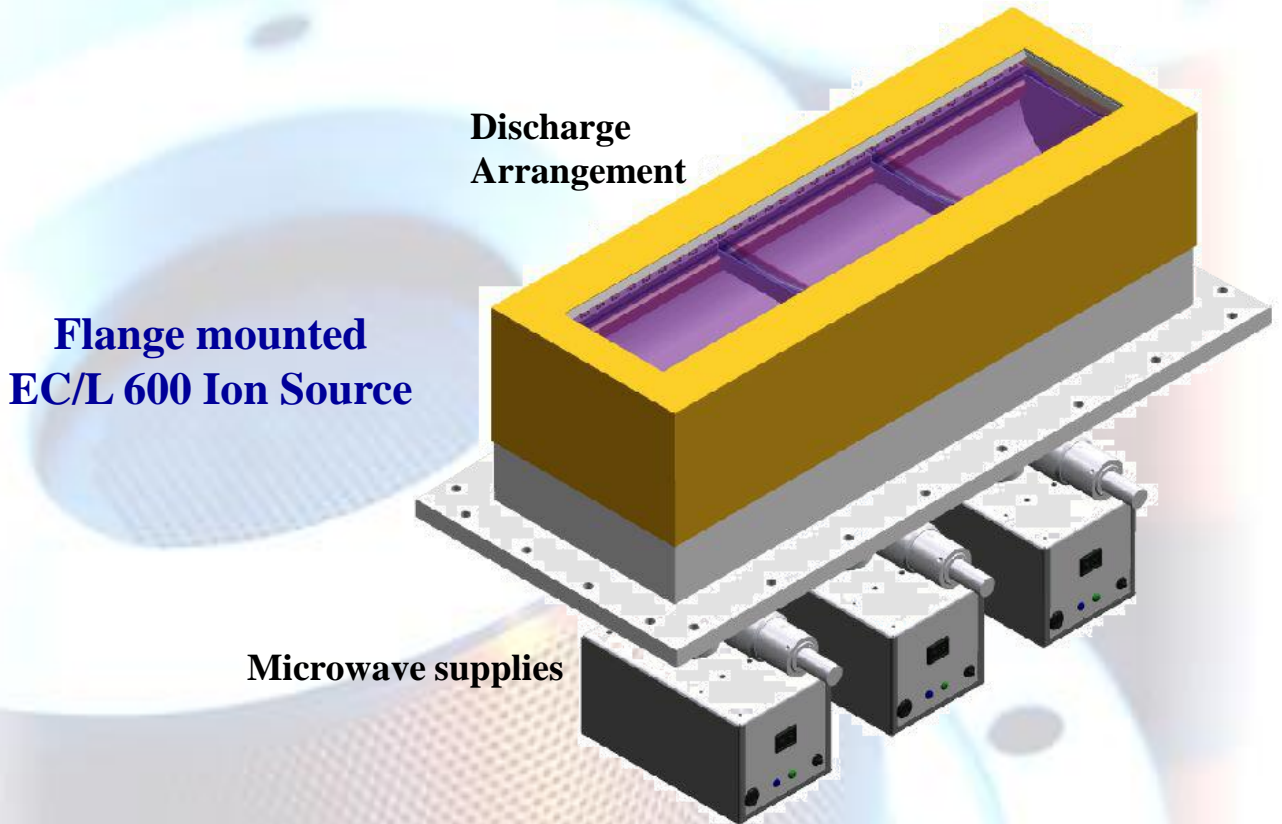


Linear ECR Broad Beam Ion Sources

The Modular EC/L XXX Ion Source



Key Design Features

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

Advantages

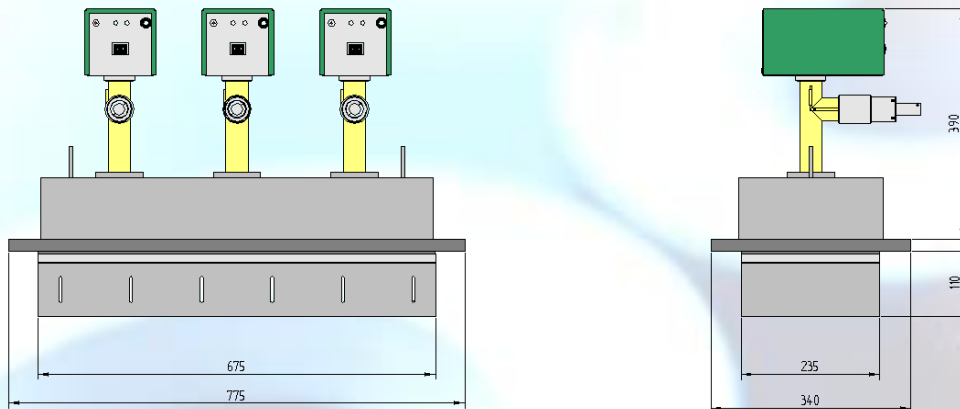
- Fully noble gas; restricted for oxygen, and other reactive **gas capability**
- **Grid systems** from different shape and material for optimum process adaptation
- **Modular concept** up to 2 m length
- **Minimum maintenance** and long lifetime, maintenance cycles over 300 h
- **Homogeneous beam profile** over the total length, 65%

The unique solution for large scale ion beam processing !



Dimensions / Size

EC/L 600



Technical Specification

EC/L 600

Type:	Flange mounted microwave excited ion source with multiapertur extraction grids
Discharge modules:	1
Source materials:	Discharge lining: Al ₂ O ₃ Grids: Graphite 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:	Immerse depth: standard 110 mm (adjustable to 250 mm) 235 mm x 675 mm (without flange)
Weight:	~75 kg
Flange:	Non-standard rectangular flange with O-ring seal 340 mm x 775 mm
Microwave power:	~125 to 400 W at 2.45 GHz for each module
Ion current:	Maximum 1 A
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 for each module, Fitting: 1/8" Swagelock
Cooling water:	1.5 l/min, Fitting: 6 mm Swagelock



IOT – Innovative Oberflächentechnologien GmbH

Geschäftsführer: Dr. Carsten Riedel
Permoserstraße 15 – D-04318 Leipzig

www.iot-gmbh.de

Tel.: ++49 (0) 341 235 3611 Fax: ++49 (0) 341 235 2453

++49 (0) 173 579 5223 E-Mail: ionbeam@iot-gmbh.de