

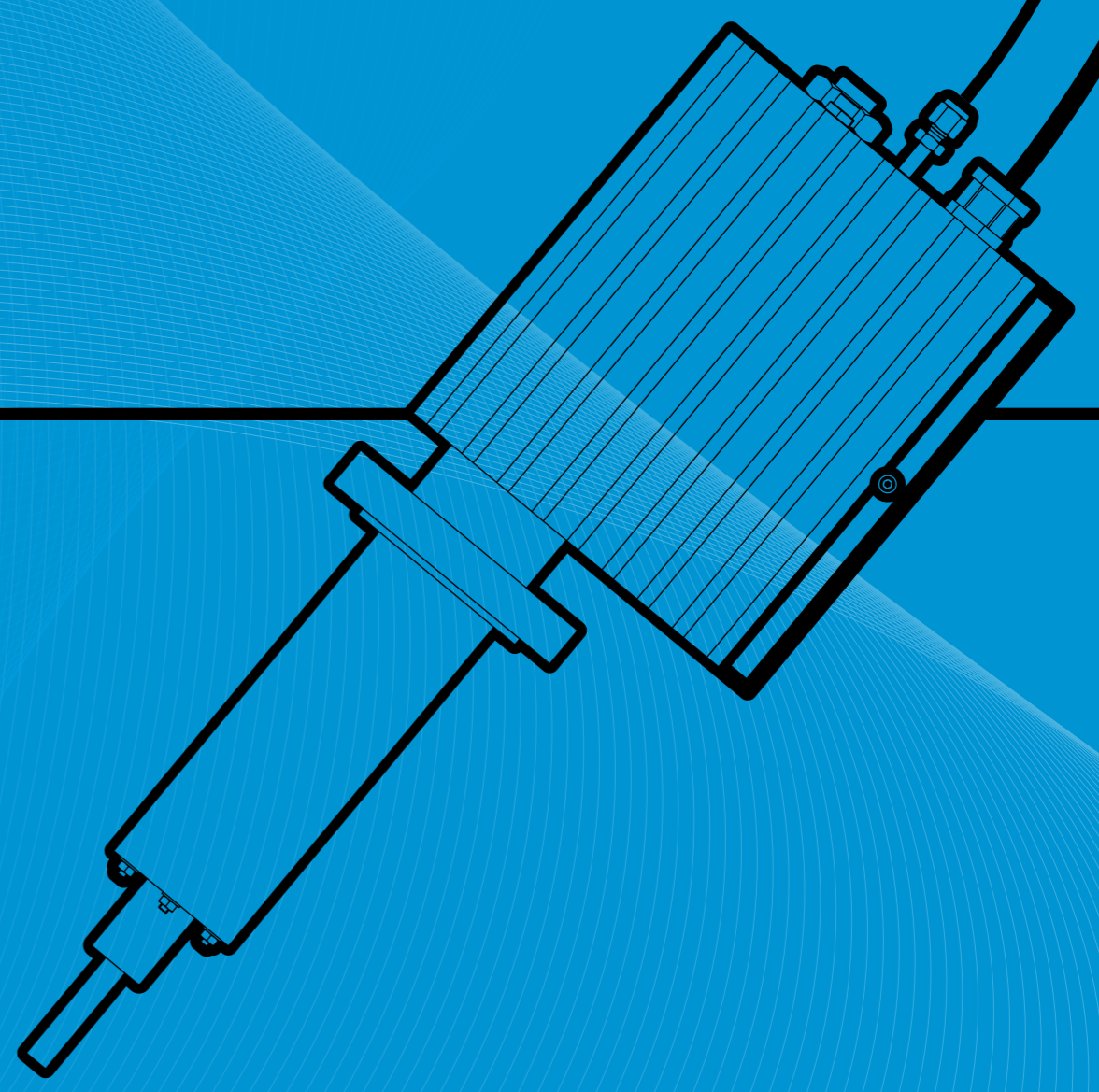


PPD Source

OS PPD GUN SERIES

Technical information

• OS PPD GUN model
(OS PPD GUN GEN III Advanced below)

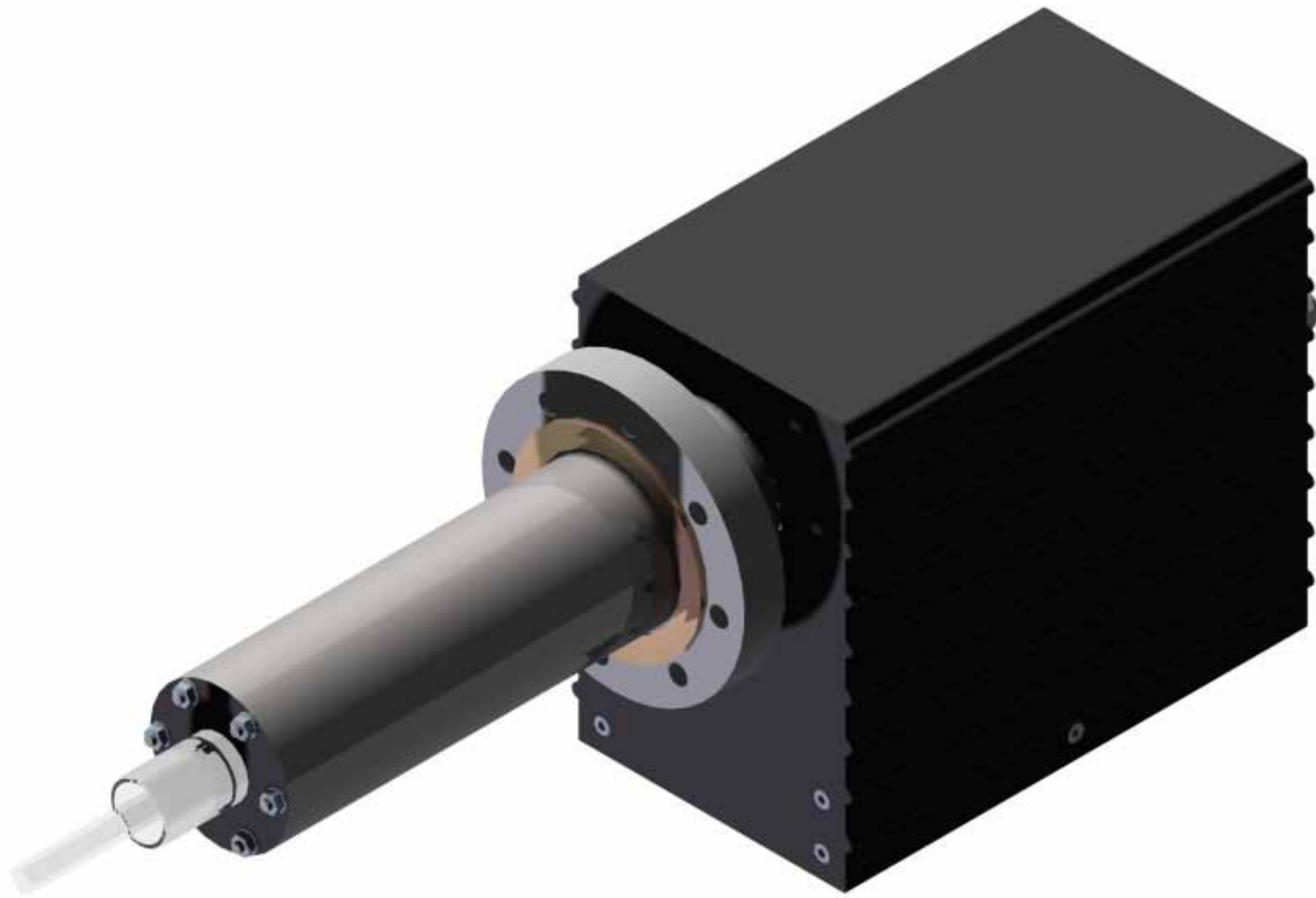


Product features

OS PPD GUN SERIES

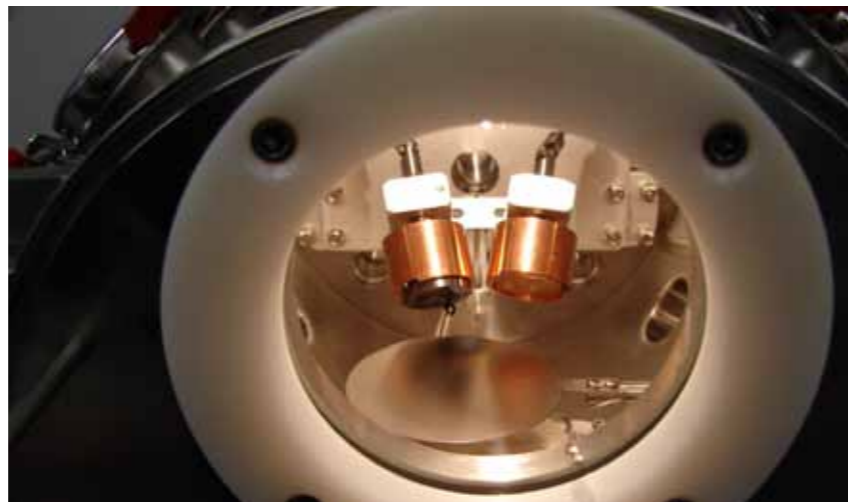
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- p04 OS PPD GUN GEN III ADVANCED
- p06 OS PPD GUN GEN III STANDARD



GENERATION III ADVANCED

The OS PPD GUN GEN III Advanced electron/plasma source is the latest evolution of the OS PPD GUN GEN III with improved performances in terms of repetition rate, efficiency and roughness.

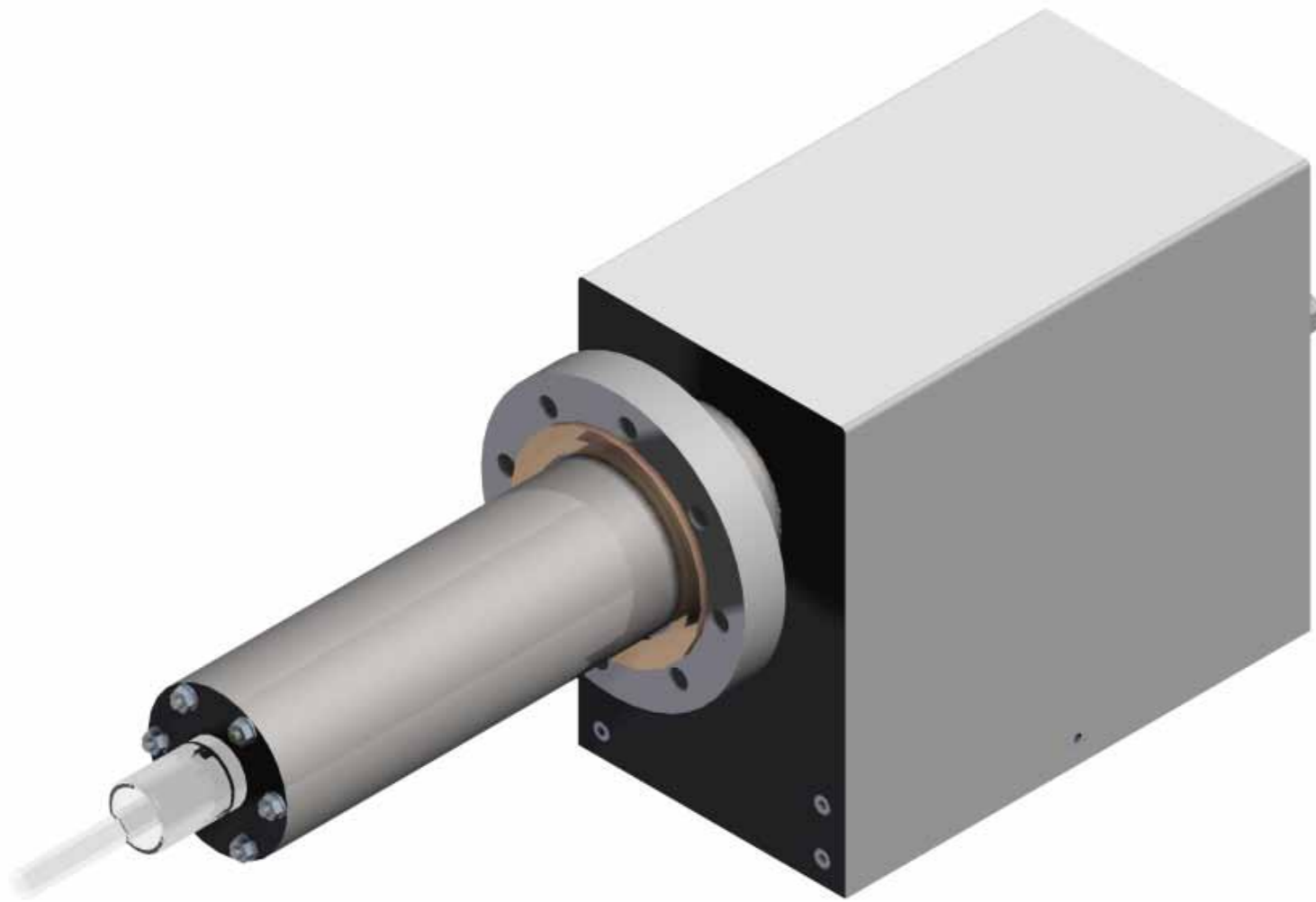


CHARACTERISTICS

Rugged construction		
Small geometrical form factor	cylindrical diam 63 mm	suitable for parallel close packing
Compact layout (gun electronics)		
Independent triggering system		
Stainless steel gas inlet flow		
Adjustable cathode gas inlet flow		
Low electromagnetic noise		
Gas pressure regulation unit and control board		
Replaceable capillary for extended lifetime		
Adjustable depth in vacuum chamber	up to 150 mm	
Two or more PPD guns can be synchronized		

SPECIFICATIONS

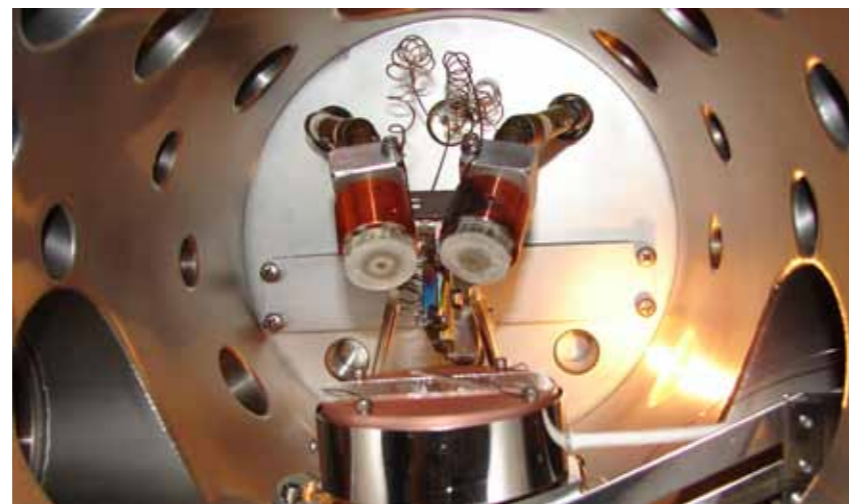
Mounting	CF 63 UHV flange	
Ablation depth	0.5 ÷ 2 µm	depending on the material
Deposition rate	100-200 angstrom/minute	depending on the material
Efficiency	> 30%	input power (capacitors), output power (beam)
Deposition operating pressure	5x10 ⁻³ - 2x10 ⁻⁵ mbar	
X Y Z alignment; Z alignment range	180 mm	optional
Max. Rep. Rate	30 Hz	
Beam cross energy	3 - 12 mm ²	according to capillary dimension
Mean electron energy	2 kV	
Max. electron energy	20 kV	
Pulse power density	4 - 300 MW/cm ²	
Max. pulse energy	> 2 J	
Min. pulse energy	< 0.1 J	
Cathode lifetime	5x10 ⁹ shots	
Max. temperature of PPD GUN GEN III	~ 80° C	
Input voltage	115 - 230 VAC, 50/6 Hz	single phase
Control software		voltage, pressure, repetition rate
Operating voltage	8-25 KV	solide state
HV power supply	0-25 KV, 10mA	



GENERATION III STANDARD

The OS PPD GEN III STANDARD is a rugged Electron/Plasma Source in operation since 2007.

It is mounted on a variety of systems with one and two sources. Simple operation and low maintenance cost.



CHARACTERISTICS

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Independent triggering system		
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Adjustable cathode gas inlet flow		
Low electromagnetic noise		
Gas pressure regulation unit and control board		
Replaceable capillary for extended lifetime		
Adjustable depth in vacuum chamber	up to 150 mm	
Two or more PPD guns can be synchronized		

SPECIFICATIONS

Mounting	CF 63 UHV flange	
Ablation depth	0.5 ÷ 2 µm	depending on the material
Deposition rate	100-200 angstrom/minute	depending on the material
Efficiency	> 30%	input power (capacitors), output power (beam)
Deposition operating pressure	5x10 ⁻³ - 2x10 ⁻⁵ mbar	
X Y Z alignment; Z alignment range	180 mm	optional
Max. Rep. Rate	15 Hz	
Beam cross energy	3 - 12 mm ²	according to capillary dimension
Mean electron energy	2 kV	
Max. electron energy	20 kV	
Pulse power density	4 - 300 MW/cm ²	
Max. pulse energy	> 2 J	
Min. pulse energy	< 0.1 J	
Cathode lifetime	5x10 ⁹ shots	
Max. temperature of PPD GUN GEN III	~ 80° C	
Input voltage	115 - 230 VAC, 50/6 Hz	single phase
Control software		voltage, pressure, repetition rate
Operating voltage	8-25 KV	solide state
HV power supply	0-25 KV, 10mA	



OS PPD GUN SERIES

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