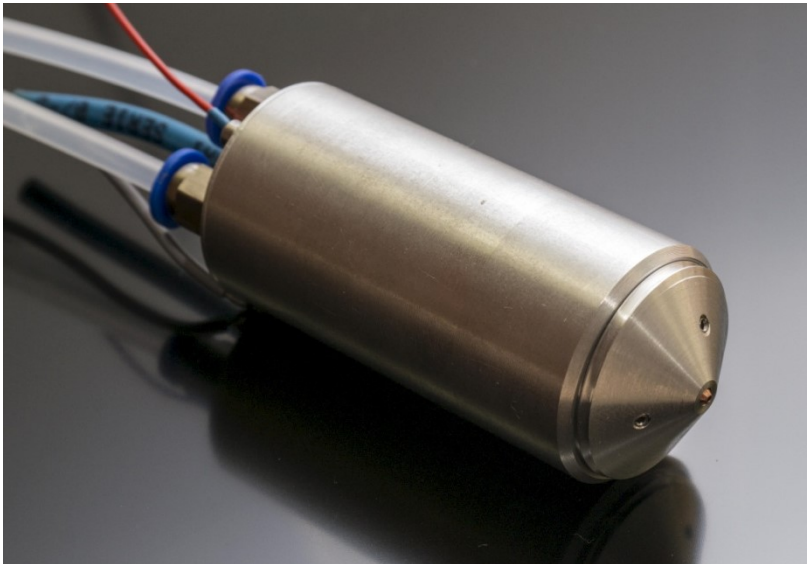




THINKING AHEAD



Aurion Atmospheric Pressure Sputter Source MeCoSput



Coating by sputtering at atmospheric pressure:

From a DC plasma at atmospheric pressure, ions are accelerated onto a metal wire and remove metal atoms from the central target wire, which are deposited on the workpiece by a process gas stream of helium or helium and argon and thus form a layer.

Thanks to its compact design, the MeCoSput offers a handy and very flexible instrument for easily integrating this new technology into many processes. Water cooling dissipates the heat from the source and thus ensures a low system temperature, even if several sources are operated at the same time.





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Technical Data:

Dimensions	approx. 380 x 220 x 130 mm
Protection DIN EN 60529	IP20
Ambient temperature	0 - 40 °C
Supply voltage	110 – 240 V _{eff} / 50-60 Hz
Separation of potential	Yes ¹
Fuse	5x20mm fuse 3 A, fast Operation at an RCD recommended
EMI (2014/30/EU)	Not tested
Maximum output power	100 W
Output voltage	200 – 1000 V
Ignition voltage	1000 V
Maximum output current	1 A
Set points	Power, voltage, current
Arc recognition	Yes
Arc suppression/turn off	Yes
Physical interfaces	WiFi/WLAN 802.11 b/g/n Ethernet Analog I/O on demand
Automation via	Modbus TCP SCPI RESTful API on demand
User interface	Operating panel PC (via web browser)

1. Realized on supply side.





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Process parameters:

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Gas flow (He)	ϕ	<i>N46 Helium</i>	50	250	2000	<i>ccm</i>
Helium content	k_{gas}		80	94	100	%
Power	P_{in}	$\phi = 250ccm$	5	50	80	<i>W</i>
Distance to substrate	d_{sub}		0.01	0.2	10	<i>mm</i>
Static deposition rate*	<i>SDR</i>	$P_{in} = 60W, \phi = 0.7 mm$ 6% Ar	-	65**	500	<i>nm/s</i>
Profile diameter	$\emptyset$		0.6	1	20	<i>mm</i>
Pull-out Target-Anode ***	d_{TA}		10	150	1500	μm
Conductivity	% _{Bulk}	<i>Substrate at 230°C</i>	60	70	85	%

Parameter are for Gold and no guarantee. Source must be cleaned after a given time.

**Values depending on process temperature*

***typ. conducting layers approx. 50-60% of bulk value*

****Influences the sputter yield*



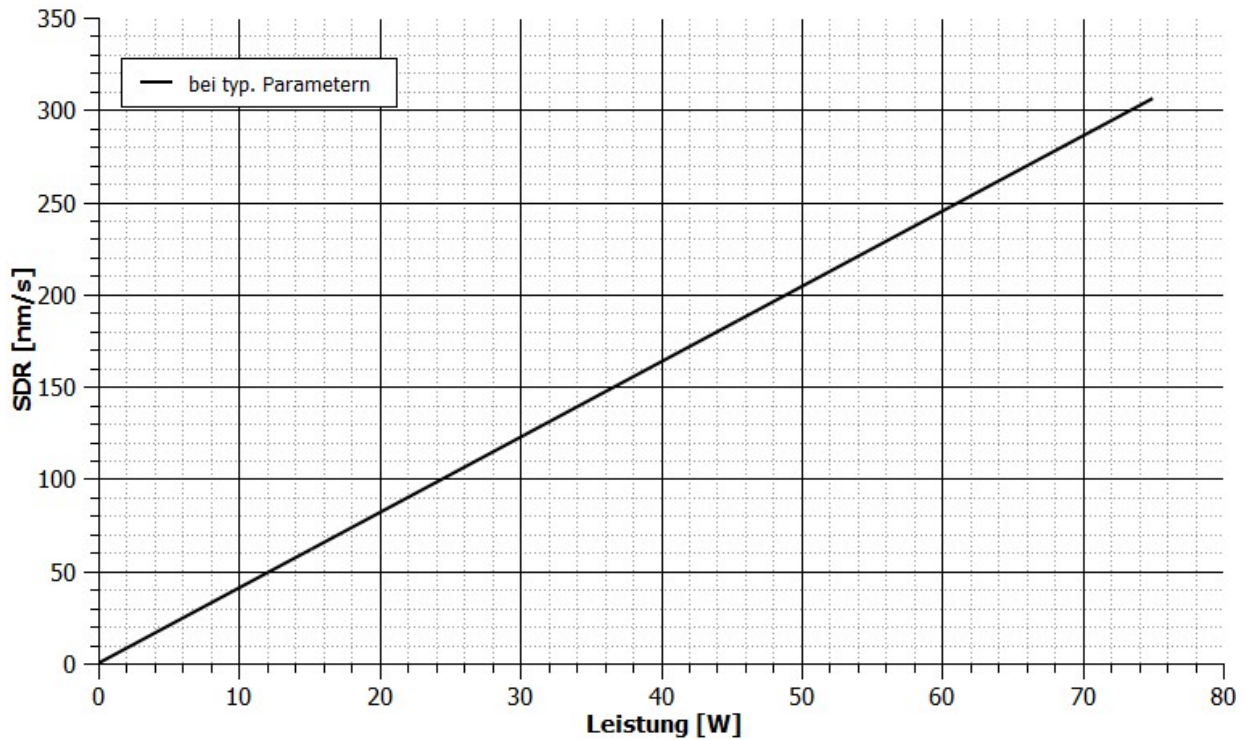


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Typical characteristics:

Static deposition rate:

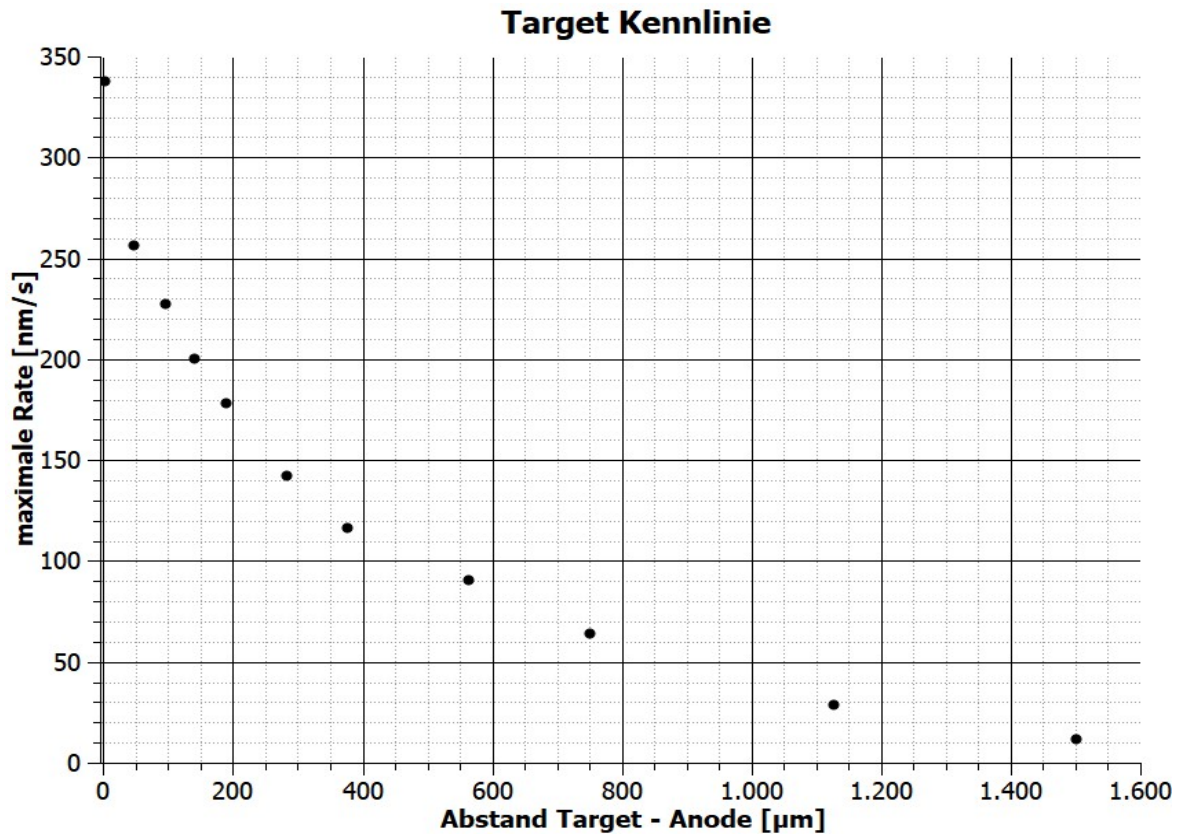




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Target characteristics:



With Gold as Target material

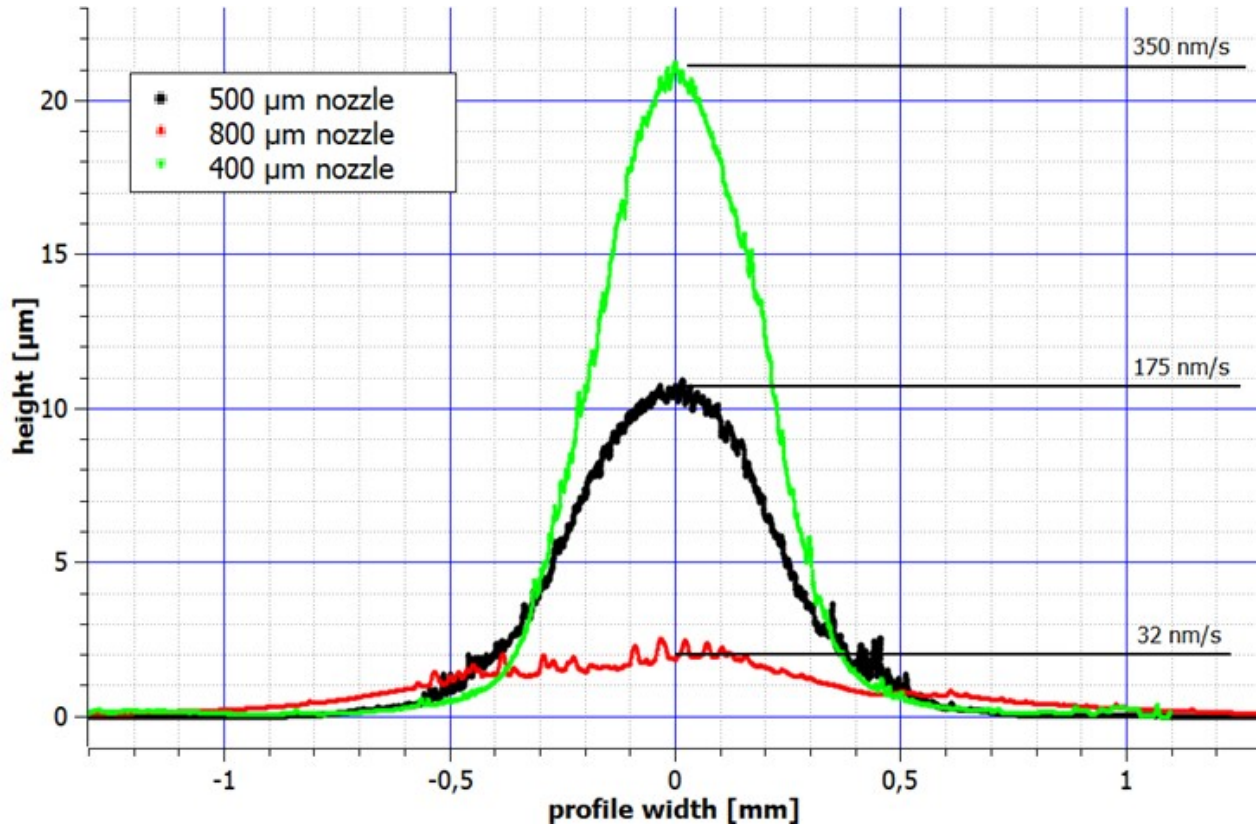




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Deposition profile:





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Dimensions sputter head:

