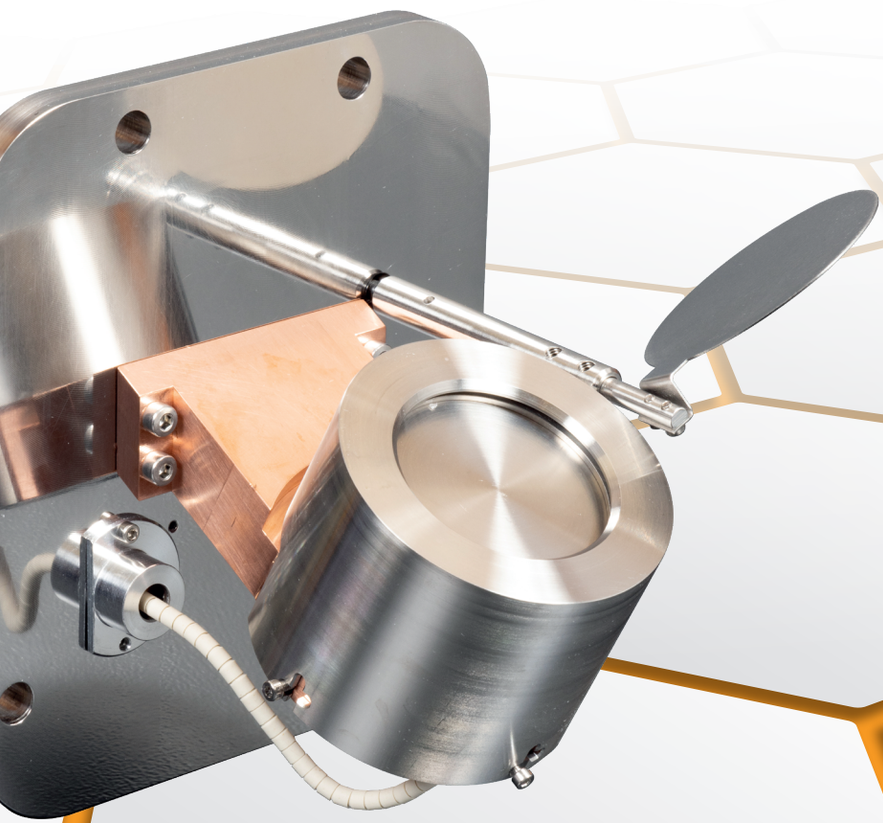
KORVUS TECHNOLOGY

FISSION

MAGNETRON
SPUTTERING
SOURCE



Metallisation
Dielectric films
Multilayers

RF/DC Sputtering
High target useage

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FISSION

Sputter deposition is a widely-used technique for the deposition of thin films. A plasma is ignited above a negatively-biased 'target' which has the effect that ions are drawn from the plasma and accelerated towards the target material. On impact, the argon ions eject atoms/molecules from the surface - a process known as sputtering. The sputtered material forms a vapour, which re-condenses on a substrate to form a thin film.

The Fission magnetron sputtering source enables rapid, contaminant-free deposition of metal or dielectric films in the HEX modular deposition system. Water-cooling and gas connections are made using quick-release connectors, removing the need for specialist tools to dismount the source and eliminating the hazard and inconvenience of draining coolant-water each time the source is removed from the chamber. Source mounting is also efficient and simple, without the need for specialist tools.

The Fission source can be operated in DC mode for conducting materials and RF mode for insulating materials. Gas introduction is through the gas hood, allowing a higher partial pressure to be achieved near the target surface and thereby reducing the overall chamber pressure required during deposition. The source can be equipped with manual or motor-driven shutters and can be controlled using our PC automation option.

Reactive sputtering can be enabled either by introducing additional gases directly with the sputtering gas or with a separate gas feed in the chamber.

Magnetic materials can be sputtered using an optional strong magnet set which allows targets up to 1mm thick to be sputtered.

The Fission source can be used to sputter all (solid) metals, insulators and semiconductors. Multiple sources may be used in one system in order to grow multilayer or composite material films.

Target Diameter	50mm (2")
Maximum Target Thickness	6mm (1mm magnetics with strong magnets)
DC Power Supply	720W (600V, 1.2A)
RF Power Supply	300W (13.56MHz)
Gas Feed	Integral through gas hood
Cooling	Water (min 0.5l/min)