

CRYOFOX COMPONENTS

After several years as a system manufacturer a range of modular standard sputtering magnetrons and deposition stages are now available as replacement components or for your customisation of your own equipment. All Cryofox components are designed, developed & tested under controlled laboratory conditions at Polyteknik AS in Denmark.

MAGNETRONS

Based on years of experience with sputtering and manufacturing of sputtering systems, a line of superior magnetron sources has been developed and patented to satisfy our and our customers' needs. The sources are available in circular or linear versions and are compatible with most know sputtering processes like DC, RF, HiPIMS, and Pulsed DC. Furthermore, our design ensures the fastest target change on the market in combination with superior target cooling – valuable properties in both R&D and production.



MIW₂-MIW₆ SPUTTER MAGNETRON

This patented planar magnetron sputtering source is compact and easy to install. Target change in less than 2 minutes and superior target cooling!

All of the MIW™ sputter sources (2, 3, 4, 6 and 8 inch) provide shielded electrical paths which allow RF as well as DC power to the cathode with minimum line losses and low reflection of RF power.

The MIW sputter source has a unique feature of allowing low operational pressures (1×10^{-3} mbar) as well as high operational pressures (1×10^{-1} mbar) without loosing the focused plasma to the target.

Benefits:

- Superior target cooling using directly cooled cathode (>85% efficient)
- Available with balanced/un-balanced magnetic setup
- Small footprint (mounts on KF, ISO or installs through a quick coupler)
- Large operational window from 1×10^{-3} mbar to 1×10^{-1} mbar
- No mechanical target clamping – simple magnetic target keeper
- Easy to service and maintain
- Provides high magnetic flux density at target surface
- Strong magnet setup allows for sputtering of magnetic materials
- Easy connection of power and cooling through quick connectors
- Fast target change, without breaking cooling water circuit
- Easy positioning, and depending on housing rotation, angular and distance
- HV or UHV versions



Type	Target size	Mounting	Options	Max DC	Max RF	Target thickness	Deposition rate**	Cooling water flow
MIW ₂	2"	CF, KF, QC	Shutter, Tilt, Flex, Angled	1000 W	400 W	Cu 2-12mm	10 Å/s 500W DC	100-200 l/hr
MIW ₃	3"	CF, KF, QC*	Shutter, Tilt, Flex, Angled	2000 W	750 W	Cu 2-12mm	16 Å/s 1000W DC	150-350 l/hr
MIW ₄	4"	CF, KF, QC*	Shutter, Tilt, Flex, Angled	3000 W	1200 W	Cu 2-12mm	11 Å/s 2000W DC	300-400 l/hr
MIW ₆	6"	CF, KF, QC*	Shutter, Tilt, Flex, Angled	6000 W	2000 W	Cu 2-12mm	10 Å/s 3000W DC	300- 500 l/hr

*QC: Quick Coupler, ** Rate for Cu at target distance and 6.7×10^{-3} mbar

