

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

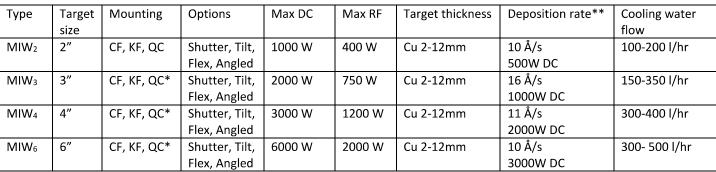
This patented planar magnetron sputtering source is compact and easy to install. Target change in less than 2 minutes and superior target cooling!

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 ($1x10^{-3}$ mbar) as well as high operational pressures ($1x10^{-1}$ 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 1x10⁻³ mbar to 1x10⁻¹ 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



^{*}QC: Quick Coupler, ** Rate for Cu at target distance and 6.7x10⁻³ mbar



MIW₈ SPUTTERING MAGNETRON

- High target utilization due to the dual race-track design
- High substrate film thickness uniformity
- Superior target cooling using directly cooled copper cathodes
- Small footprint / low profile
- Large operational window from 1x10⁻³ mbar to 1x10⁻¹ mbar
- No mechanical target clamping
- Easy to service and maintain
- Provides high magnetic -flux density at target surface
- Easy connection of power and cooling through quick connectors
- Fast change of target without breaking cooling water circuit



Main dimensions	240 x 225 mm Dia x H (ISO K-version)
Max power	DC 7000W
Max current	A 17.5A
Required water flow	350L/Hr - 600L/Hr
Mounting	ISO DN200, KF40 or Ø32mm (quick coupler)
Target diameter/thickness	200mm / 2- 25mm (Copper target)
Rate	21nm/sec Cu @ 5000W (5x10 ⁻³ mbar)
Weight	30 kg

LINEAR SPUTTERING MAGNETRONS

- Patented design
- Easy change of target without breaking cooling water
- DC/RF/HiPIMS/Pulsed DC
- Strong magnet setup allows for sputtering of magnetic materials
- Cut to length
- Two standard target width's 40 mm and 80 mm
- CUSTOM MAGNETRON DESIGN ON REQUEST



	Standard size – showcase model	
Main dimensions	150 x 160 x 750 mm W x H x L	
Max power	At least DC 6000 W	
Max current	15 A	
Required water flow	250 l/hr – 500 l/hr	
Target size/thickness	730 mm x 80 mm / 2-6mm (Copper target)	
Weight		

