



## MeiVac: Versatile Vacuum Deposition

### THE LLNL TECHNOLOGY

Magnetron sputtering source designs and the magnetic attachment of a sputter target assembly for thin-film processes. A unique design allows for compactness, improved operating characteristics, greater versatility and lower fabrication costs.

### COMPANY

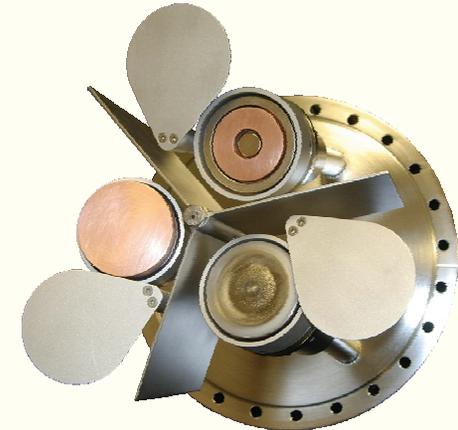
MeiVac, a San Jose, California company, bought the license from US Inc, the initial licensee, in May 2006. MeiVac has 30 years of experience designing and manufacturing vacuum deposition components and systems for high-technology, process-intensive, R&D and manufacturing. MeiVac builds complex vacuum systems that serve a variety of industries and is best known for its Al<sub>2</sub>O<sub>3</sub> sputter deposition tools, which are widely used in the manufacture of thin film heads for computer hard disk drives. MeiVac's variable vane throttle valves are a highly linear, low profile method for pressure control in vacuum chambers. With over 6,000 units delivered throughout the world, MeiVac is known as a leading supplier of sputter deposition sources, power supplies and substrate heaters.

### PRODUCT

MeiVac products based on LLNL technology include a range of MAK\* sputtering sources. Advantages over other systems are many. There is no direct contact between the high voltage path and the water channel or magnets. The target does not require clamping or bonding, and target change does not require source disassembly. The source uses only one vacuum seal, and water is not needed to vacuum them. The source operates in DC or RF modes without modification. The source can operate in process pressures from 0.5 m Torr – 600 mTorr. Finally, the source is available in HV or UHV configurations.

### IMPACT

The MAK design is noted for its innovative simplicity, ease of use and high reliability. It presents the smallest sputter head profile possible while delivering higher sputter deposition rates than comparable sputter sources. MeiVac-designed source mounting fixtures offer an array of flexible and in-situ adjustments for linear and angular positioning.



*MeiVac's MAK Sputtering source based on LLNL technology*

“ *The success of the LLNL Industrial & Commercialization partnership was a key issue for MeiVac when we looked at acquiring US, Inc. in 2006. Their long history with LLNL, the strength of the MAK's market position and its technology were definite assets in our eyes* ”

David A. Meidinger,  
*MeiVac President*

