Rectangular magnetron

VTFLEX rectangular magnetron sputter cathode

Unlimited flexibility for tuning uniformity of sputtered layers to the sub 1% range.

The Genco VTech range of products are variable magnetic field products and include the VT, VTR and the new VTF (VTFLEX) for easy and precise film uniformity adjustments.
Increased target usage and lifetime

The VTFLEX has the ability to tune the magnetic field strength independently on small segments down both sides of the plasma racetrack. The different segments are adjusted by a manual digital locator that increases or reduces the field strength in the local region. The segments can be retracted or tilted in either direction, which allows smooth or ‘sharp’ changes in field strength over the racetrack.

The ability to adjust the field strength will result in changes to the plasma density and hence the amount of material sputtered onto the substrate. As the possible changes in strength are wide ranging, the VTF magnetrons can be used to correct for uniformity at the end of an in-line system or as an independent source to offer much better uniformity than standard.

The total flexibility allows uniformities of less than 1% to be achieved with relative ease. Adjustments can also be made during the process to correct shifts in uniformity with time.

The VTF magnetrons are particularly useful where high uniformity from large area RF sputtering processes are required. The more common DC and MF type power modes can likewise be adjusted to achieve the higher uniformity demanded of certain products.