

PRESS RELEASE

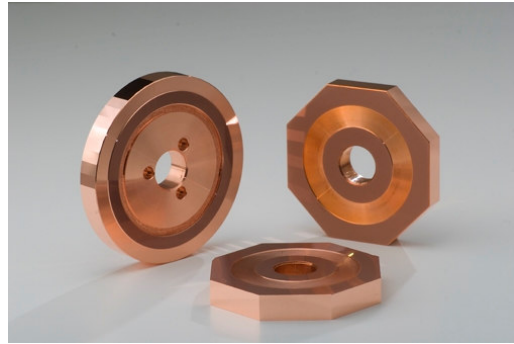
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NEW 'KW SERIES' POLYGONAL SCANNERS UTILISE COPPER MIRRORS TO IMPROVE PERFORMANCE OF HIGH-POWER LASERS IN MATERIAL PROCESSING APPLICATIONS

Phoenix-based **Lincoln Laser Company** has introduced the '*KW Series*' Polygonal Laser Scanner featuring copper mirrors developed for material processing applications utilizing high energy laser sources.

Lasers utilised in material processing applications are rapidly becoming more powerful. As a result heat dissipation on galvanometer mirrors has become an issue in some applications. When galvanometer mirrors are enlarged to compensate for high-power lasers, the scan rate inherently slows down.

Lincoln Laser Company's new 'KW Series' Polygonal Scanners dissipate heat more efficiently and produce faster scan rates than are possible with galvanometer-based scanners. The heart of the 'KW Series' scanner is a solid copper polygonal mirror. The copper substrate conducts heat very efficiently, acting as a large heat sink which draws heat away from the mirror facets. Additional heat dissipation occurs naturally as the polygonal mirror rotates allowing the laser beam to transfer rapidly from facet to facet minimising dwell time experienced on any singular facet.



In typical applications, a 'KW Series' Polygonal Scanner can safely handle beam power densities of 1,000 watts (1kilowatt) per square millimetre.

'KW Series' copper polygonal mirrors are available for many of Lincoln Laser Company's standard precision scanning motors. Depending upon the mirror/motor combination, one can achieve active scan angles of greater than 120 degrees or scan rates of over 10 KHz. 'KW Series' Polygonal Scanners can also be custom designed to meet thermal, optical, speed and accuracy requirements for lasers of all wavelengths and power levels.

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