



Synova's Laser Cutting System MCS 500 & Makino's EDBV EDM machine



HybridCell by Synova and Makino

Hole-Drilling and Diffuser-Machining Solution for Aerospace & Power Generation Industries

- Combines Synova's unique water jet guided Laser MicroJet® technology (LMJ) and Makino's high performance EDM with rotating electrodes
- Flexible production cell with advanced data transfer between two machines ensuring high precision - no need of second touch-probing
- MCS 500 processes turbine blades and vanes with non-conducting thermal barrier coating (TBC) in one single step
- No cracks or delamination in ceramic coating and extremely low recast
- Makino water-based EDBV-Series EDM drills deep through holes and non-line-of-sight holes (NLOS) at high speed with fully submerged operation
- Integrated break-through sensor and back-strike control



Laser MicroJet®	EDM Drilling
Drills through TBC	Deep holes
Diffuser shaping & through drilling	NLOS holes

General Specifications

MCS 500

B axis		-100° to 50°
C axis		360°
Max. stroke	mm (X, Y, Z)	760 x 400 x 500
Working volume	mm (W x D x H)	500 x 400 x 500
Accuracy	μm	+/- 1.5
Repeatability	μm	+/- 1
Max. XY speed	m/min	60

EDBV 8

A axis		360°
B axis		-110° to 30°
Max. stroke	mm (X, Y, Z)	800 x 600 x 750
W axis	mm	500
Max. Work Piece Size	mm	500 Ø x 635 (Rotary Table)
Max. Work Piece Weight	kg	50 (150 Opt) Rotary Table

The specifications are subject to change without notice due to technical changes. The MCS machine incorporates the worldwide patented technology of water jet guided laser, invented at the Swiss Federal Institute of Technology in Lausanne, Switzerland. The machine conforms to CE regulations.



Synova S.A., headquartered in Duillier, Switzerland, manufactures leading-edge laser cutting systems since 1997 that incorporate the proprietary water jet guided laser technology (Laser MicroJet®) in a true industrial CNC platform. Customers benefit from significant yield and quality improvements in cutting, as well as enhanced capabilities for micro-machining a wide range of materials. Synova is a privately owned company with subsidiaries in North America and the Asia/ Pacific region.



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