

Machining round tool

LaserPlusS successfully continues conversion of RayCutter equipment for micro processing

After LASERPLUS AG ceased operations in January 2020, the complete service department at the Idar-Oberstein site was taken over by the Global Retool Group and integrated into the group of companies. With its subsidiaries SVQ and WEMA VOGTLAND, the Global Retool Group offers an innovative range of products and services worldwide in the fields of retooling, welding, laser processing and automation.

The former LASERPLUS service department recognized this transition as a chance for a new start and focused on services for its customers at the beginning. Thus, even as a small team, it gained the trust of all its customers. In order not to move too far away from the roots, it was decided to run the team under the name LaserplusS again. Even after 2 years of "independence", LaserplusS has not lost any of its previous customers.

Quite the contrary. Parallel to the service business and an extensive customer support, which includes application support and user training, the team was also able to do development work. LaserplusS

continued the work of the former LASERPLUS AG and successfully implemented the conversion of its RayCutter systems from water-cooled laser sources to a fiber laser.

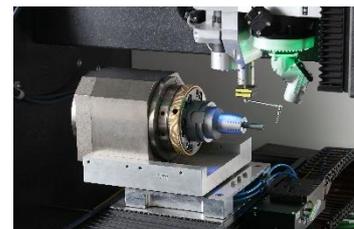
Laser technology specially developed for the processing of diamond tools, highly dynamic component positioning and intuitive operator software form the basis of the RayCutter series. As a result, perfect cutting edge qualities are achieved on diamond-tipped tools. The zero-point clamping system allows the machine to be quickly and easily converted from insert machining to round machining (rotary axis). A solid granite frame is the basis of the machine, which accommodates all motion axes in with high thermal stability and outstanding precision. As a standard, the machine is offered with four axes. By adding a rotary axis, five-axis machining is possible.

With the machines of the RayCutter series the materials PCD-/CVD, PcBN, carbide, MCD and ceramics can be processed.

Today, the conversion of RayCutter S systems with water-cooled laser source to RayCutter HS with air-cooled fiber laser and adaptive optics is successfully offered to existing customers. The converted RayCutter HS systems achieve significantly better material removal rates using adaptive optics and can thus reduce the processing times of PCD, CBN and also CVD tipped tools by up to 50% compared to previous processing times.



HMI/Operator panel



Rotary axis for machining of round tools

Since May 2021, at several customers "old equipment" has been converted to the new technology and successfully integrated into production.

Thus, in the 3rd quarter of 2021, the company KOMET Deutschland GmbH at Besigheim, which is part of the Luxembourg-based CERATIZIT Group, also dealt with this topic and began discussions with LaserPlusS about a possible conversion of its systems.

Within the CERATIZIT Group, KOMET Deutschland GmbH is the competence center for the development and production of highly complex special and drilling tools for the machining sector. With innovative tooling concepts and comprehensive production solutions KOMET Deutschland GmbH has made a decisive contribution to CERATIZIT being an internationally recognized innovation and technology leader also in the field of precision drilling. KOMET was founded in 1918 by Robert Breuning as an independent company. Since October 2017 KOMET has been part of the globally successful CERATIZIT Group. The plant in Besigheim now serves as an important production site

for the group's international production network.

KOMET Deutschland GmbH has already been using the previous LASERPLUS Ray-Cutter S systems for many years. Convinced by the technology and quality of the RayCutter HS systems, KOMET very quickly decided to convert the "old" water-cooled RayCutter S systems to the RayCutter HS type with fiber laser. The first conversion was implemented in January 2022. While the converted and functionally extended system is already working successfully again in production operation, another KOMET system is currently being rebuilt.

Driven by this success, Laser-plusS has decided to build new RayCutter HS systems again with immediate effect and also to sell them worldwide.

The RayCutter HS is first choice for the complete machining of diamond tools. Machining time is reduced enormously because the roughing cut can be integrated into the machine. This reduces

This performance is achieved by means of specially dev-

eloped adaptive beam shaping which automatically adjusts the laser beam profile to the operating mode.



Pallet machining of inserts



AMF zero point clamping system for pallet change

Compared to classic grinding or eroding operations, the RayCutter HS is much more economical while offering significantly better product qualities.

The RayCutter HS is used for pre-cutting and finish machining of cutting edges and clearance angles, edge rounding, chip grooves and marking.

RayCutter HS features and benefits

- Pre-cutting and finish machining on one system
- All machining operations in one setup
- Ideal for pallet machining
- Short set-up times thanks to quick clamping system
- Breakout-free cutting edges with minimal filleting up to 2 µm
- Compact installation dimensions of the entire system
- Laser processing independent of the PCD material
- Parameters can be individually adjusted by the operator
- Labeling of the tools
- Production management optional with job manager
- Remote monitoring of the production from external workstation also for several machines

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