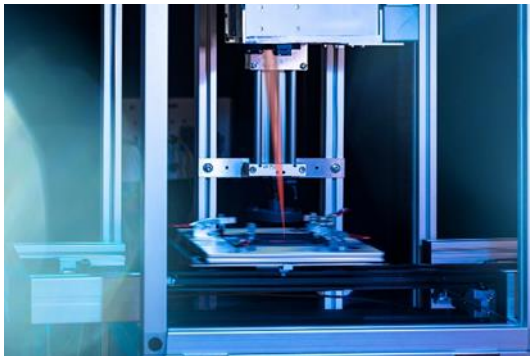


PRESS RELEASE

More Efficiency for Laser Welding in the eMobility Segment

OTF MotionSync permits safe endless manufacturing with process control

Garching, Germany, June 23, 2023 – Blackbird Robotersysteme GmbH, manufacturer of system solutions for remote laser welding, is presenting a new functionality for industrial ‘on-the-fly’ welding processes at the Laser World of Photonics 2023 exhibition in Munich. OTF MotionSync enables automated manufacturing processes with high throughput, as required, for example, for electro-mobility. The special feature provided is the new software, which enables welding processes to be carried out precisely, even though the scan system is moved at the same time or the components themselves are transported under the scanner on a conveyor belt. This ensures that manufacturing processes with extreme accuracy requirements, such as the welding of batteries or bipolar plates for fuel cells, can be controlled very efficiently and traceable in the future.



For decades, large quantities have been normal in the automotive industry. Due to the demand for more sustainability, this development has also reached the electro-mobility area. The demand and therefore the quantities increase rapidly and the manufacturers of batteries, fuel cells, power electronics, and other components are emphatically looking for cost-efficient solutions that increase throughput and at

the same time meet the highest quality standards. In addition, the volume of components manufactured with laser welding processes is far greater than it used to be in the automotive industry. An efficient process design is therefore more important than ever.

Blackbird's core competence for many years has been precise laser welding with scan systems that are permanently mounted or guided by industrial robots. The company has done genuine pioneering work when it comes to ‘mobile’ laser welding – called on-the-fly (OTF). By using the new OTF MotionSync software, this knowledge is now transferred to the precise processing of moving components. The innovative software determines the exact position of the scanner and the component by reading the high-frequency position data from up to two channels. The data are processed during the laser process and compared with the welding geometry. Therefore, the software can always guarantee precise welded joints.

The new software solution makes it possible to reliably implement rapid component sequences and high throughput, for example in battery or bipolar plate production. Conveyor systems with up to two linear axes can be used for the welding process.

OTF MotionSync, which can be combined with all 2D and 3D scan systems offered by Blackbird's sister company SCANLAB, are presented in Munich at the end of June. Beta versions for industrial-scale test installations are available now.

Printable images are available under
<https://www.blackbird-robotics.de/en/company/news-press/picture-library>

Upcoming Events

Laser World of Photonics 2023, Munich / Germany, June 27 – 30, 2023 -
Hall A3, booth 229

About Blackbird Robot Systems:

Blackbird Robotersysteme GmbH manufactures system solutions for remote laser welding with scanning optics. The mirror-based beam deflection units can be seamlessly integrated into industrial manufacturing systems, particularly robot cells. Blackbird's core competencies include the development of powerful control technology, intuitive user software and additional process monitoring solutions.

Combined with 2D and 3D scan systems of the sister company SCANLAB, Blackbird offers machine and plant manufacturers a broad range of highly efficient, pre-integrated solutions for series production in automotive manufacturing, the electro mobility sector and in numerous other industrial sectors.

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