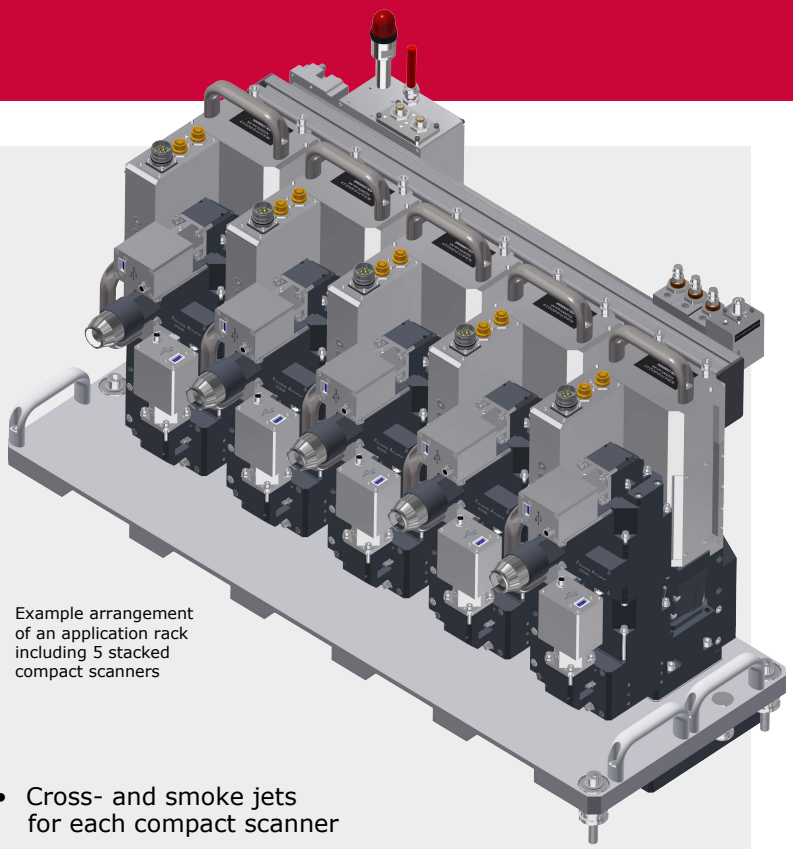
scansonic

FAST COMPONENT WELDING (FCW)

BY MEANS OF STACKABLE
COMPACT SCANNERS

FUNCTION

For high productivity requirements, welding speeds become necessary that cannot be achieved with standard laser processes. The FCW system technology, consisting of several compact scanners on an application rack, allows a simple and cost-effective parallelisation of laser processes. In this way, high welding speeds can be achieved while the individual joining process remains controllable and can be evaluated by means of quality assurance.



Example arrangement of an application rack including 5 stacked compact scanners

APPLICATION RACK (APR)

- Depending on the application, adapted arrangements of the compact scanners possible (parallel, star-shaped, etc.)
- Distribution for compressed air, cooling water, voltage and field bus. Compressed air incl. switching valves
- Cross- and smoke jets for each compact scanner
- Storage skids and handles
- Reproducible assembly points for gantries and robots

Bipolar plates for fuel cells

Surface cooler for car battery trays

Battery contacting

Prismatic Cells

Hair-Pins for E-Motors

ADVANTAGES

Scaled Productivity: New productivity dimension through on-demand parallelisation of laser processes.

Tailored for Application: The solution is tailored to the customer's application.

Reasonable Invest: Reduce of equipment costs by using rack laser beam sources.

Ready to Weld: Each compact scanner is individually calibrated and can be quickly integrated into the system network.

Ready for Production: Plant and machine manufacturers receive a standardised and fully adjusted FCW system. This simplifies automation and customisation on site.

Quick Restart:
Quick restart after a malfunction.

FUNCTIONS COMPACT SCANNER (CSC)

3D SCANNER UNIT

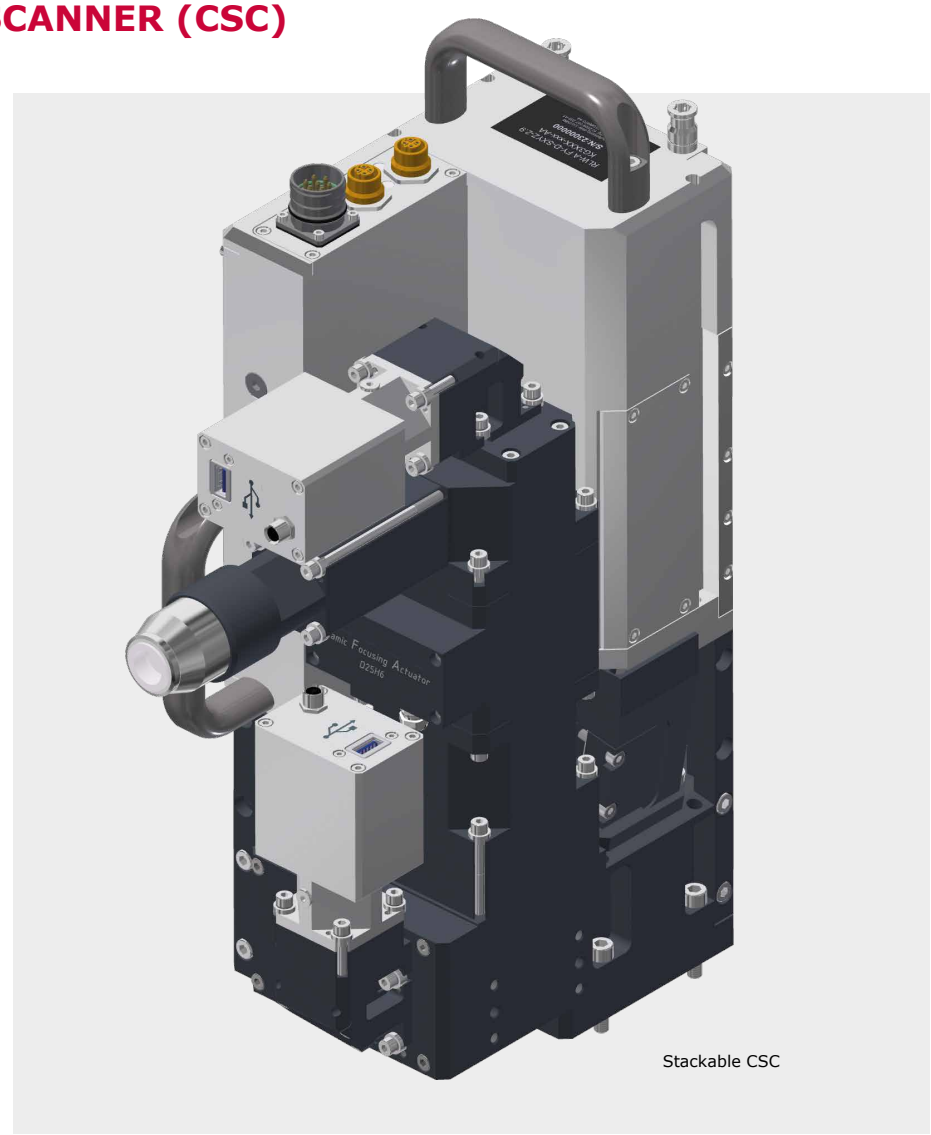
- Beam deflection in x and y direction.
- Focus correction in z offers comparable high dynamics like the scanners.

QUALITY SENSORS

- 3x camera ports available.
- From static to guided in all machining axes. Can be expanded with suitable sensors depending on the application.

FOOTPRINT

- Smallest footprint and best stacking options of the compact scanners.



Stackable CSC

TECHNICAL DATA

Laser source	IR, Singlemode, Multimode
Laser power	Max. 6 kW
Imaging ratios	1:2.9, 1:3.7, 1:4.2, 1:6.0
Total angles of acceptance	110 mrad Singlemode, 250 mrad Multimode
Focal lengths	294 mm oder 420 mm
Scanfield sizes	From 160 mm x 160 mm to 400 mm x 310 mm
Working distance	Up to 586,5 mm from the lower edge of the compact scanner body to TCP

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