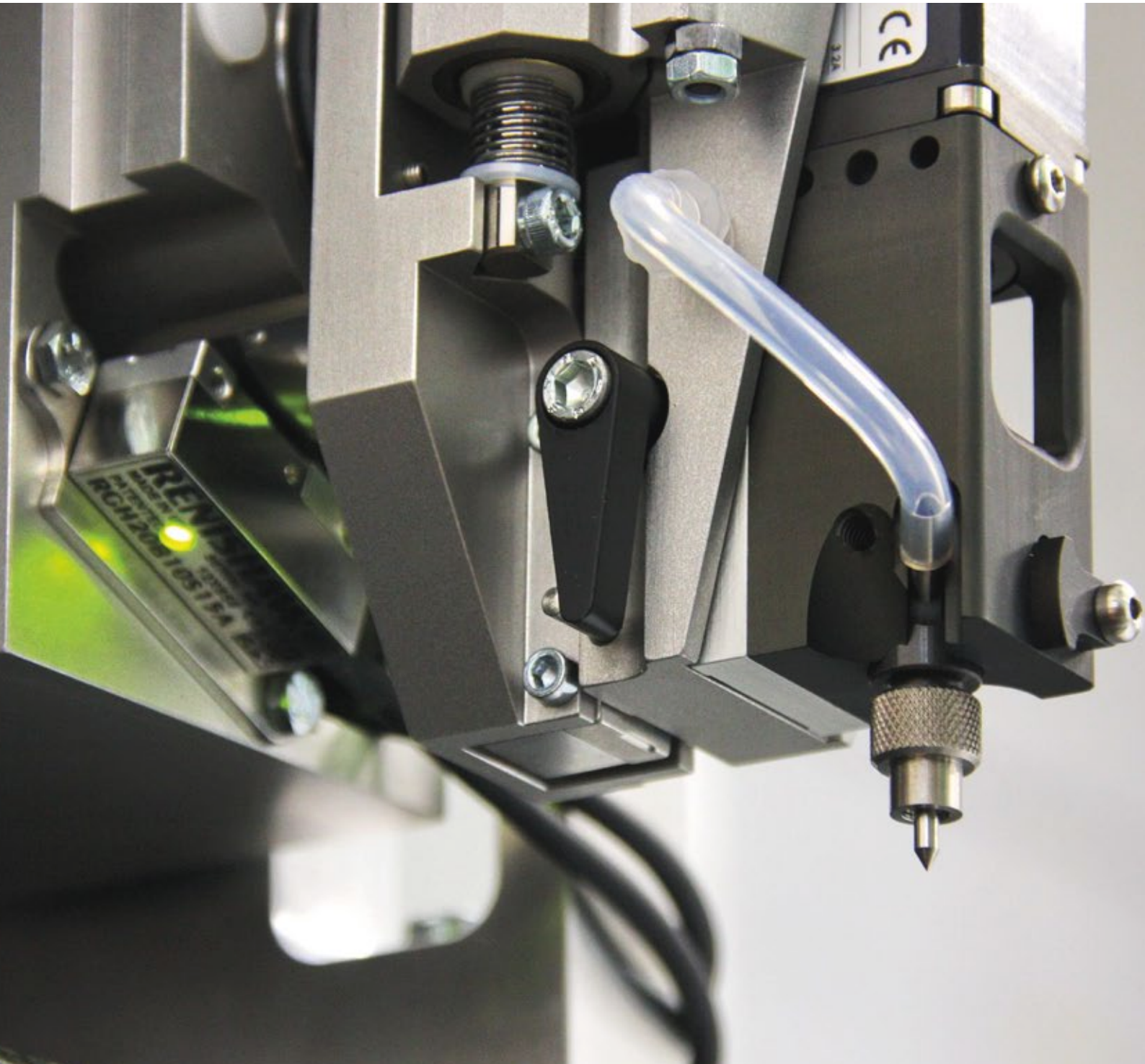


High-speed XYZ Glue unit - NXP ITEC



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A high-speed XYZ manipulator was designed and built to print glue lines for semiconductor die bonding.

A new technology in the semiconductor industry is to glue IC components to lead frames. To apply the glue accurately a high precision XYZ manipulator is needed. A new concept is developed with the aid of predictive modeling. MI-Partners has manufactured, assembled and tested the first OEM modules.

Challenges:

- High-speed X Y Z positioning module with high accuracy
- Proto phase skipped by means of predictive modeling. The first module is the first of the production series with all the robustness and lifetime requirements

Key Competences:

- Predictive modeling (mode shapes in control loop)
- Concept design

Results:

- A High-speed XYZ Glue unit with:
- Working area of 8 x 8 x 8 mm³
- Accuracy of 5 μm
- Accelerations of 50 m/s²
- Controller implemented on NXP's FlexDMC drive

Cooperation:

- NXP ITEC (Specifications and reviews)
- Renishaw/Lasertec (development xy-sensor)

