- Enhanced process stability
- Robot speed up to 600 mm/s
- High availability
- Resource-friendly sealant usage

Q-GAGE3D

High-precision 3D edge scanning for sealing applications

ISRA VISION

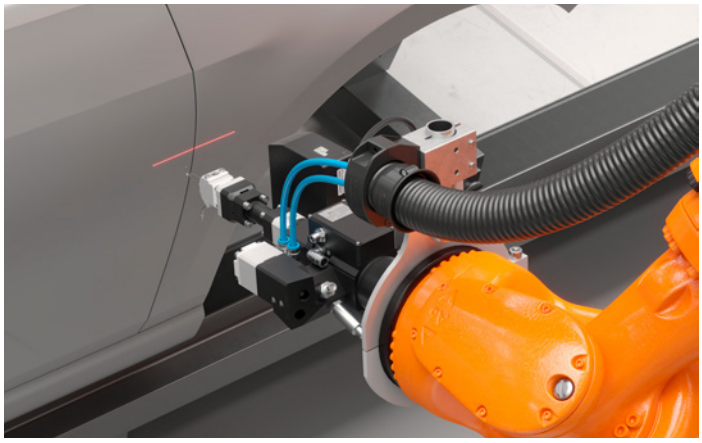
Part of Atlas Copco Group

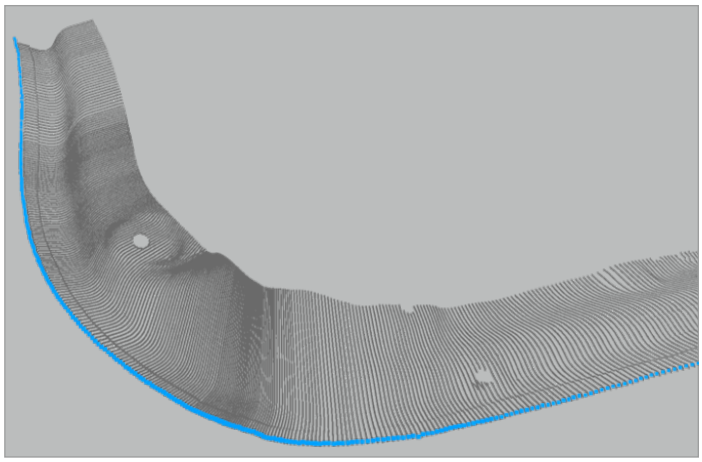
ABOUT Q-GAGE3D

Q-GAGE3D is a 3D edge scanning sensor specifically designed for sealing path correction in the automotive industry. With its comprehensive scanning capabilities over multiple edge types, it also performs gap and flush checks to secure process stability.

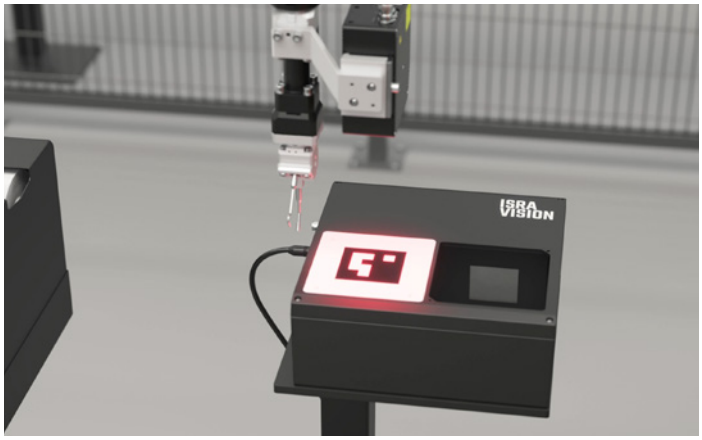
Enabling robot speeds of up to 600 mm/sec, Q-GAGE3D supports short cycle times while ensuring optimal sealing performance.

Q-GAGE3D offers unmatched versatility and efficiency in seal path correction with a 150 ± 25 mm measurement distance and large measurement volume.





Tailgate with measurement points



KEY FEATURES

- **3D high-speed scanning**
- **Large measurement volume**
- **Broad variety of edge types**
- **Gap & flush quality check**

APPLICATIONS

Robot guidance for sealing automation

For example:

- Hood
- Trunk
- Door
- Roof ditch

HIGH ROBUSTNESS AND ACCURACY

Q-GAGE3D is based on 3D point cloud technology with hundreds of measurement positions. It reduces errors by effectively disregarding single outliers, ensuring consistent precision and reliability.

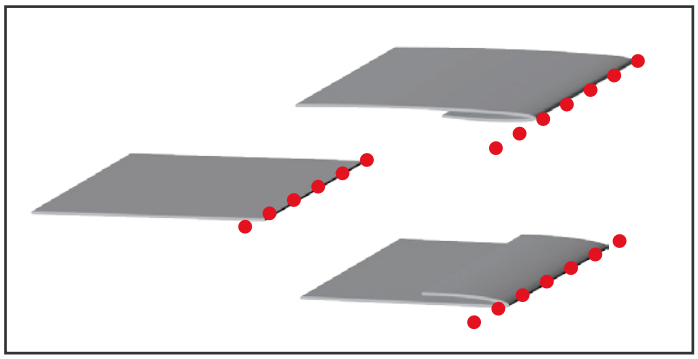
SENSOR CALIBRATION

Automatic extrinsic calibration streamlines the process by determining sensor TCP across 16 robot positions with different views of the calibration target.

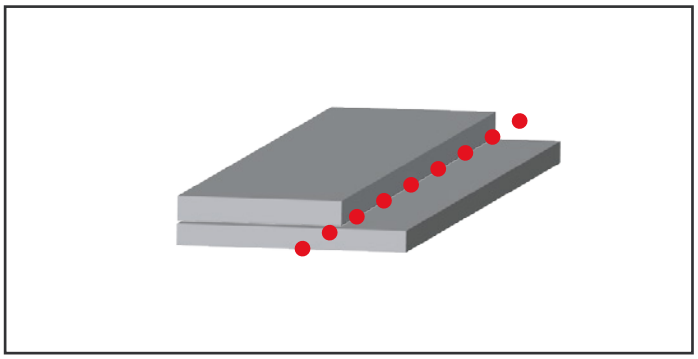
The target requires no teach-in as its unique orientation eliminates ambiguity. Once triggered by the robot, the results of the calibration process are displayed on the robot panel, increasing efficiency without the need for manual intervention.

EDGE TYPES

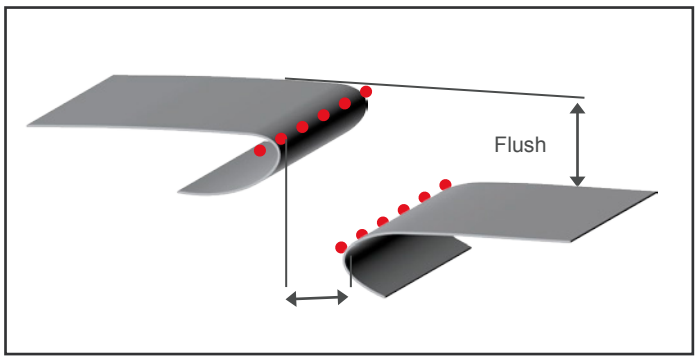
High flexibility to measure various car types or components



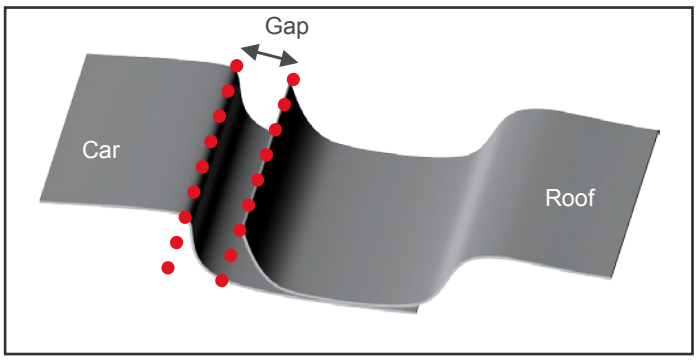
Cut-off edge



Lapped edge

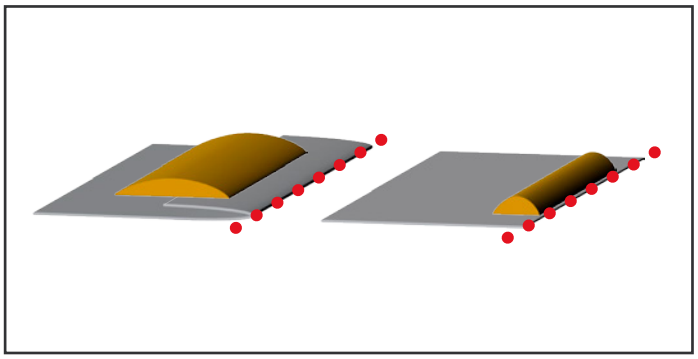


Gap and fl ush



Roof ditch

Technical Data	
Sensor type	Q-GAGE3D with integrated FPGA
Measuring principle	Laser line triangulation
Dimensions	103 × 120 × 55 mm3
Weight	900 g
Measurement distance	165 ± 25 mm
Measurement volume	120 × 94 mm² (Focus plane)
Measurement frequency	500 Hz
Resolution	X 0.08 Y 0.08 Z 0.1
Repeatability	< 0.15 mm (without robot)
Laser	1× Line (red, 660 nm)
Laser class	2M
Area lightning	4× LED (red, 660 nm)
Techpackage available	KUKA, YASKAWA, FANUC, ABB



Applied seam

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