LGE



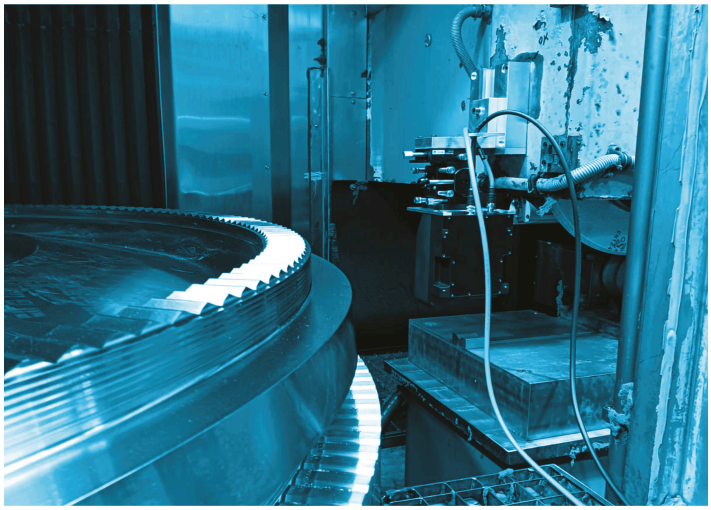
LSeries

Industrial process control solutions for inline and no contact thickness, shape and dimensions

For more visit
lgeweb.com >

LSerie is a state of the art solution to identify shape, dimensions and visible defects during the manufacturing processes of mechanical off-line parts, in line movingparts, flat and long products, pipes, profiles and hollow profiles.

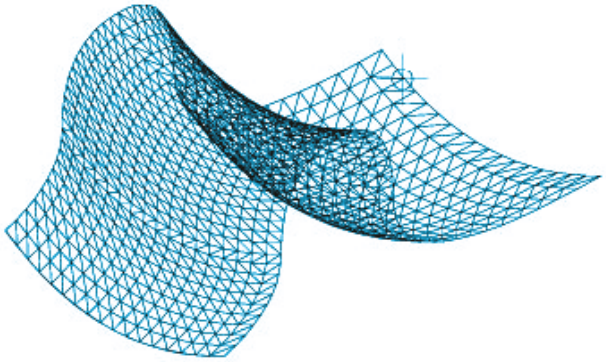
It finds its natural application in the measurements of dimensions and its **deviation from the standard** of profiles, hollow profiles, rods, pipes, boxed profiles, IPE beams and billets compared to the expected, but it is used as an extremely realible non contact metrology tool as well and for **robots** drive.



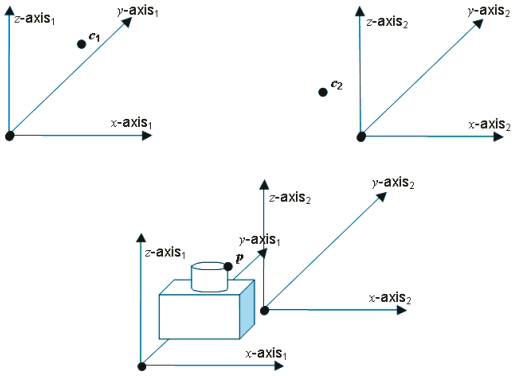
Gas turbines gears in line measurement

LSerie is a full range solution for metals making, mechanical workshops, automotive parts providers and non metals industries

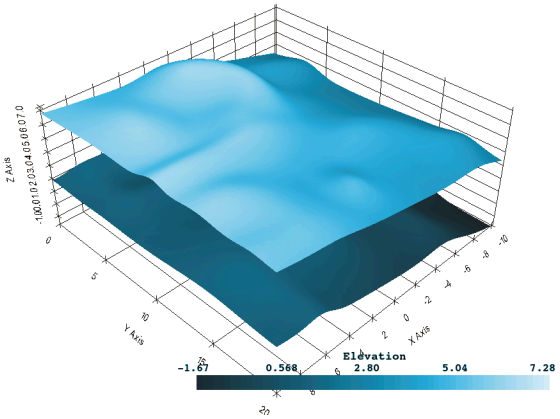
Virtual shape rebuilding



Mesh Mapping



Spatial coordinates

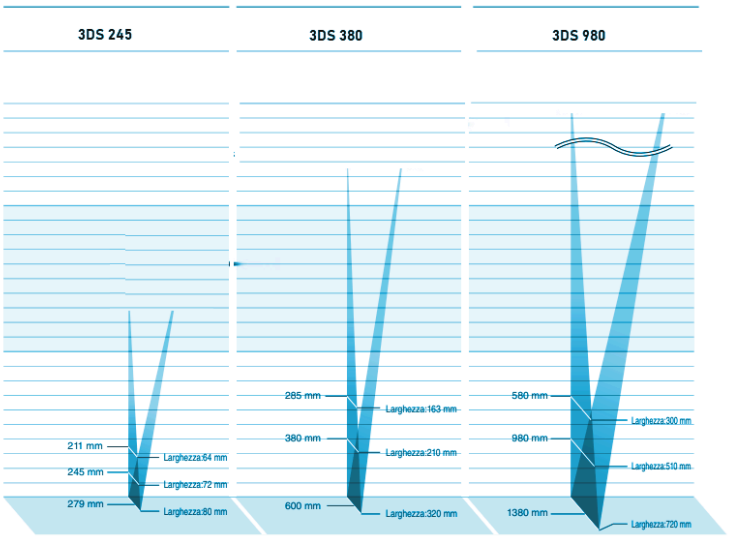


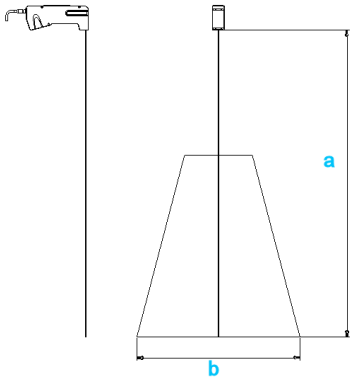
Distance Vectors

The detection of the shape and the quantification of the dimensions occurs through the determination of the distance of the object from the measurement sensor. The reconstruction of the distance vector represents the shape of the linear / conical / rounded surface measured.

The data acquisition from the sensors and the processing and presentation software is carried out by a PAC system, which is a PLC integrated with a PC.

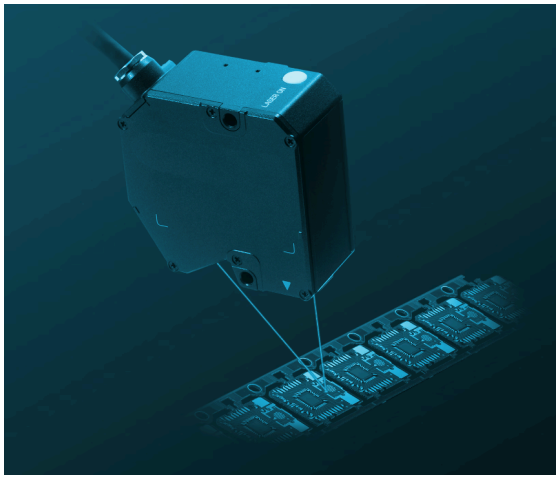
The data received from the controllers in the form of vectors are organized in such a way as to be integrated with each other by reconstructing the profile of the section of the object and evaluating its physical dimensions.





Distances and working ranges

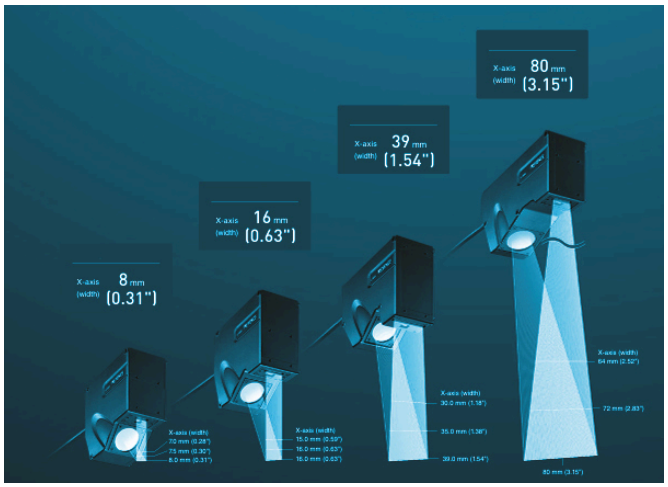
TYPE	VARIABLE
Mono-dimensional	
Triangulation (G1)	DISTANCE
Confocal (P1)	THICKNESS
Bi-dimensional	
3DS 245	SHAPE
3DS 380	DIMENSIONS
3DS 980	**POSITION**
Tridimensional	VOLUME
3DS-Z 245	COORDINATES
3DS-Z 380	PRESENCE
3DS-Z 980	



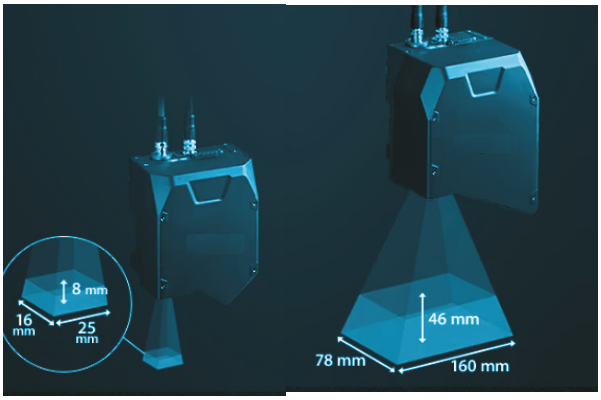
Monodimensional

- *Thickness*
- *Distance*
- *Presence*

- *Position*
- *Shape*
- *Dimensions*

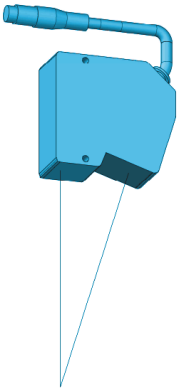


Bidimensional



Tridimensional

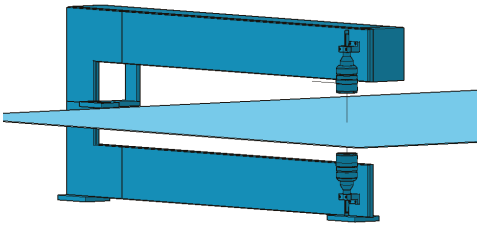
- *Shape*
- *3D Rendering*
- *Coordinates*



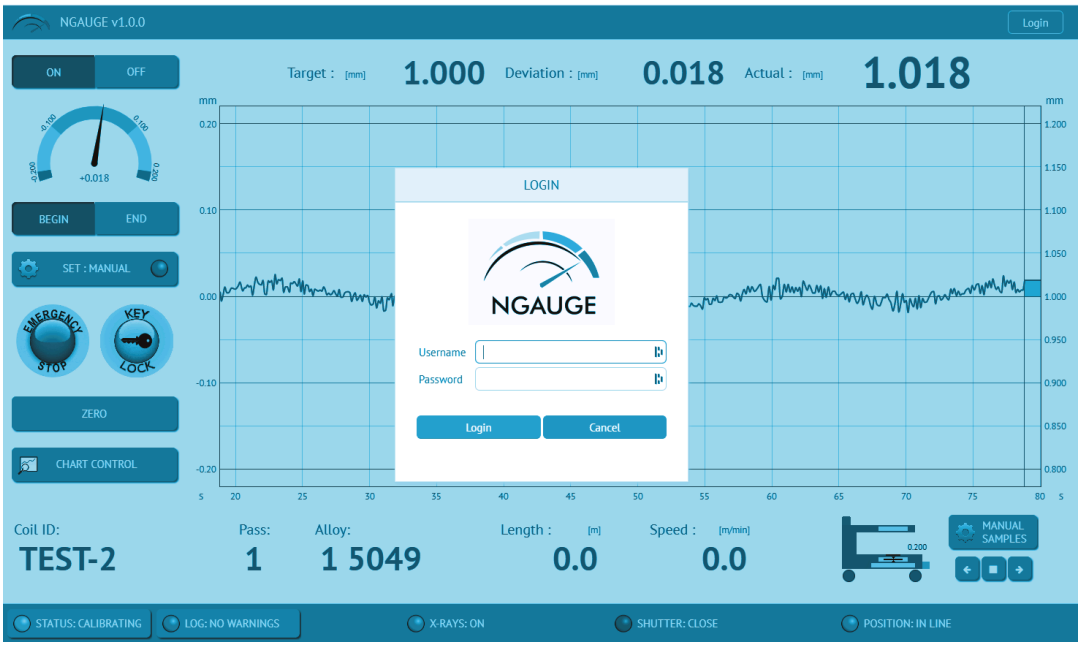
Triangulation

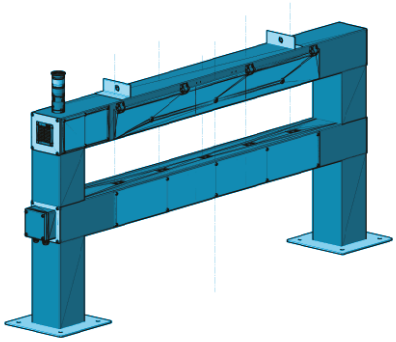


Thickness measurement on flat products, in moderate harsh enviroments

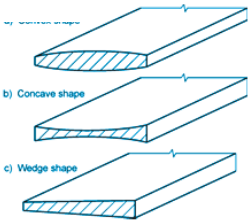


Confocal



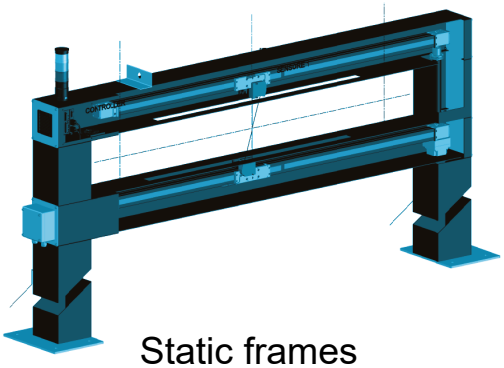


Static sensors

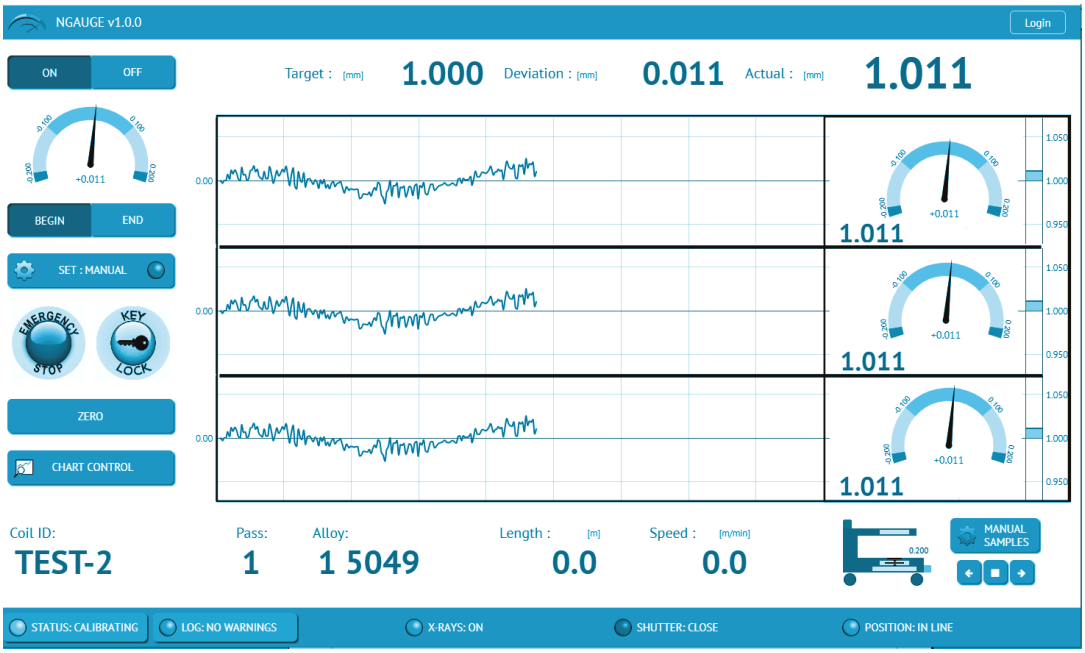


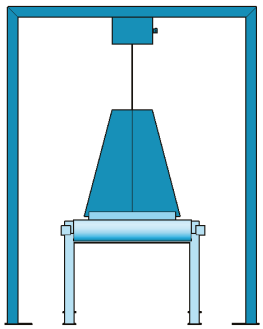


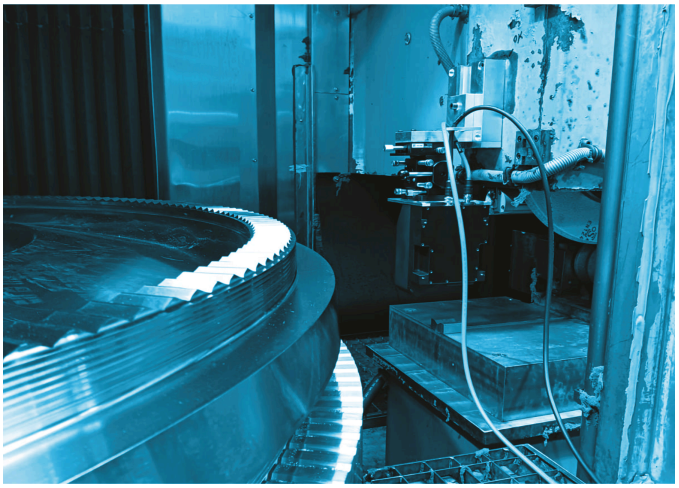
Thickness profile measurement on flat products, in moderate harsh enviroments



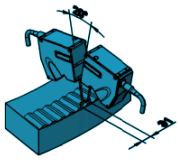
Static frames



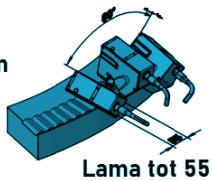




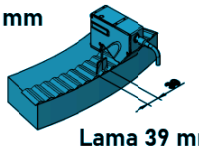
Accurate online **dimensions measurements** on components and static mechnical parts



Lama tot 31 mm
con overlap 1 mm

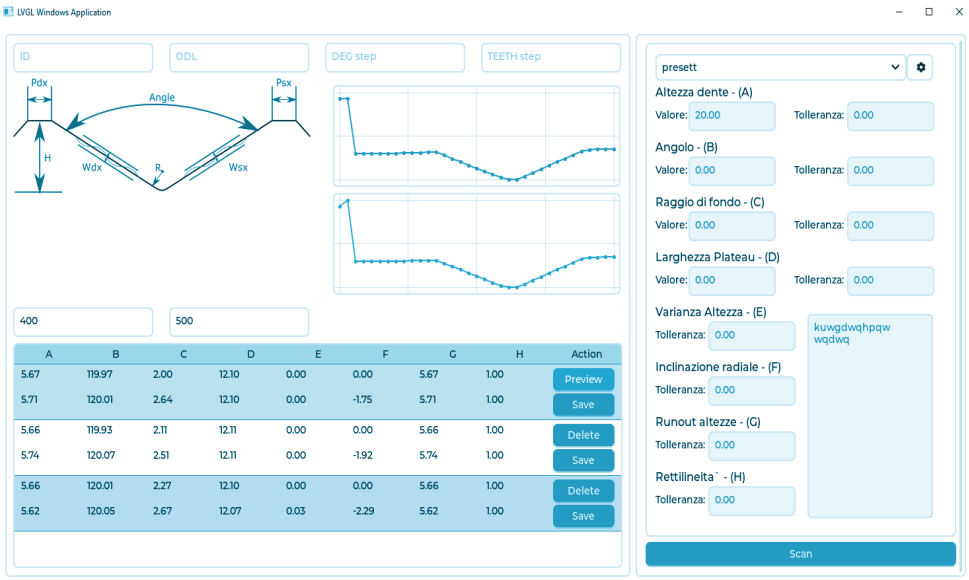


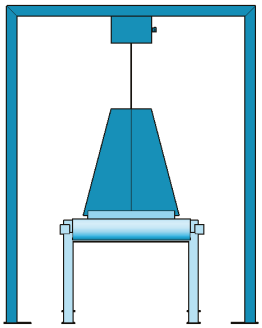
Lama tot 55 mm
con overlap 15 mm

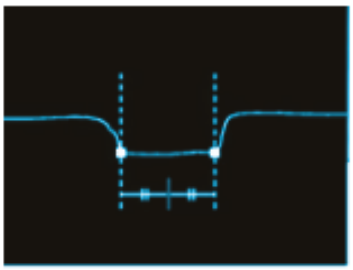


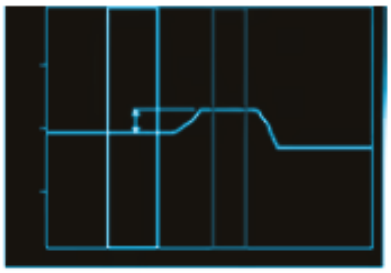
Lama 39 mm

Combined beams



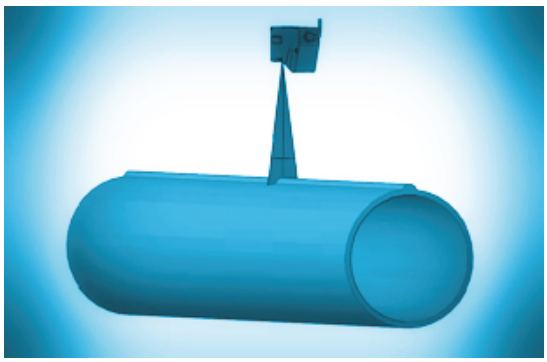






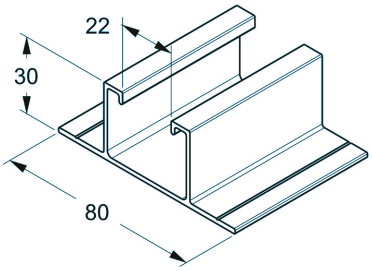
Real time dimension calculation, inflection points mathematical approximation for curves and angles



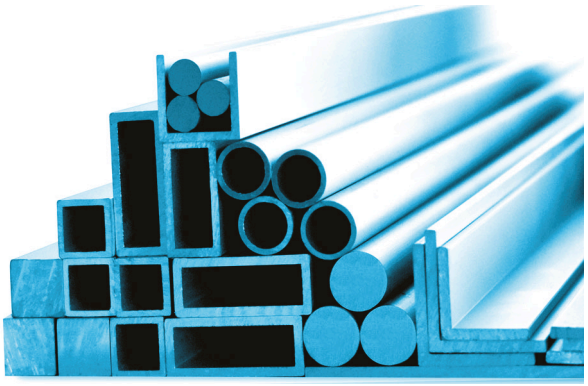


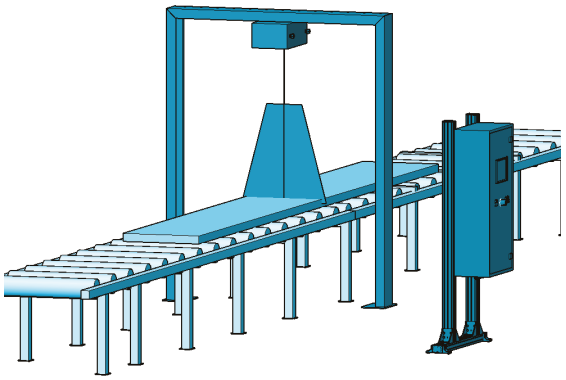
Profiles details

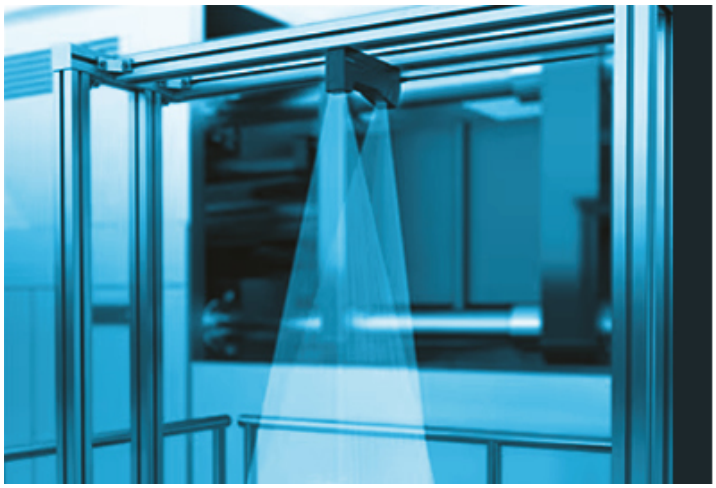
Online **dimensional measurements** on moving components and small mechnical parts



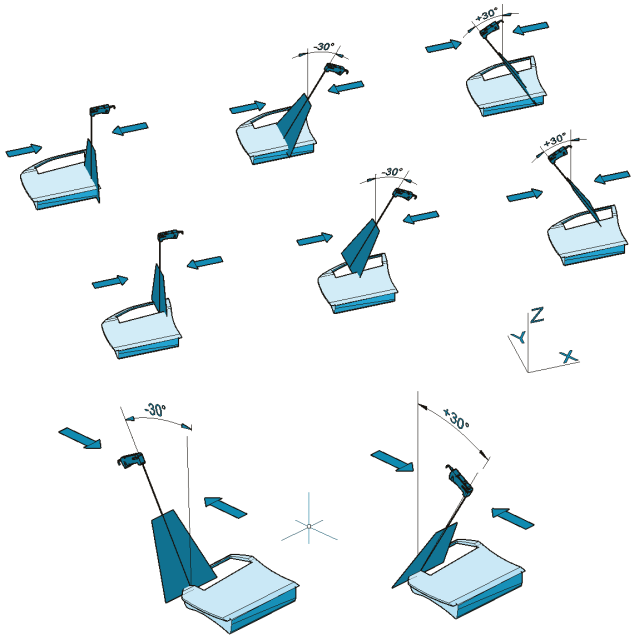
Accurate no contact measurements



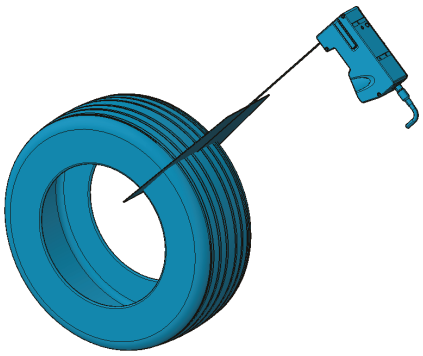


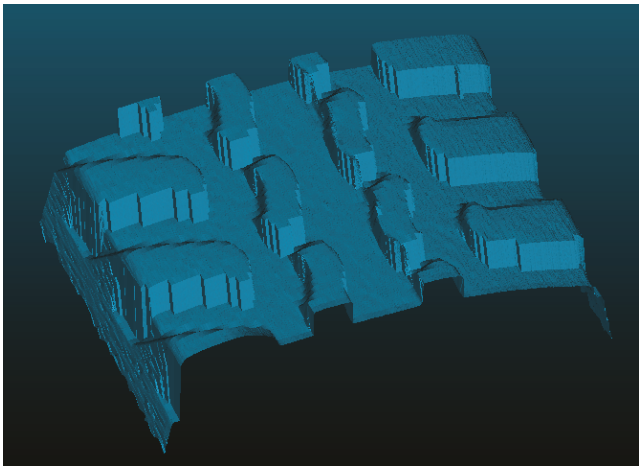


Online measurements on static or moving components and mechnical parts of relevant dimensions



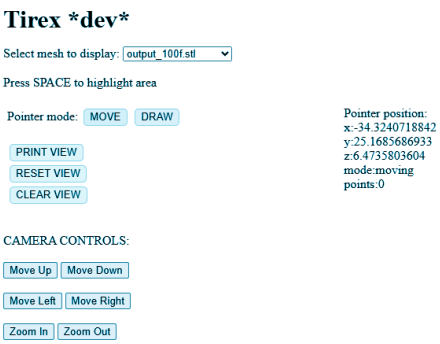
Real time dimension calculation and output coordinates for robots

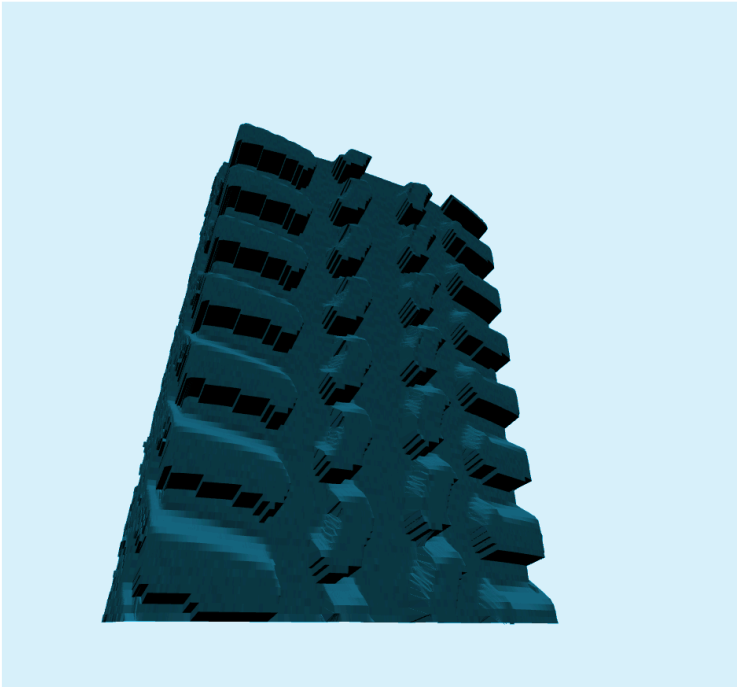




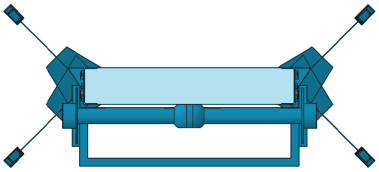
Complex obects shaping and dimension calculation on large parts

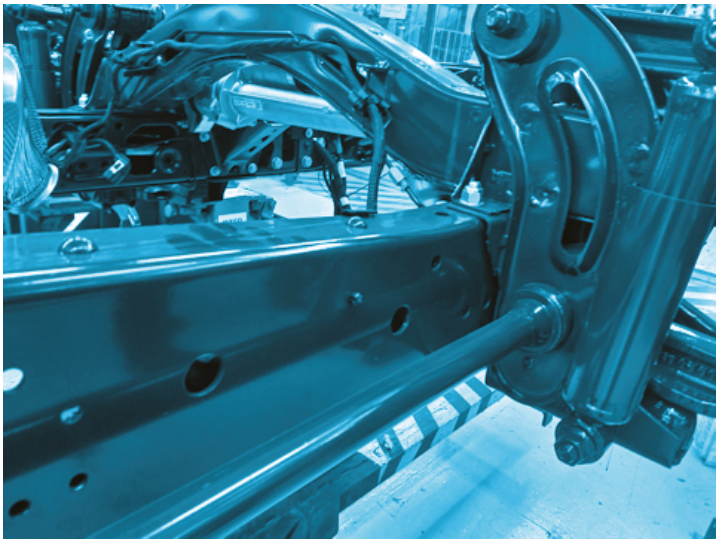
Output coordinates for robots using AI





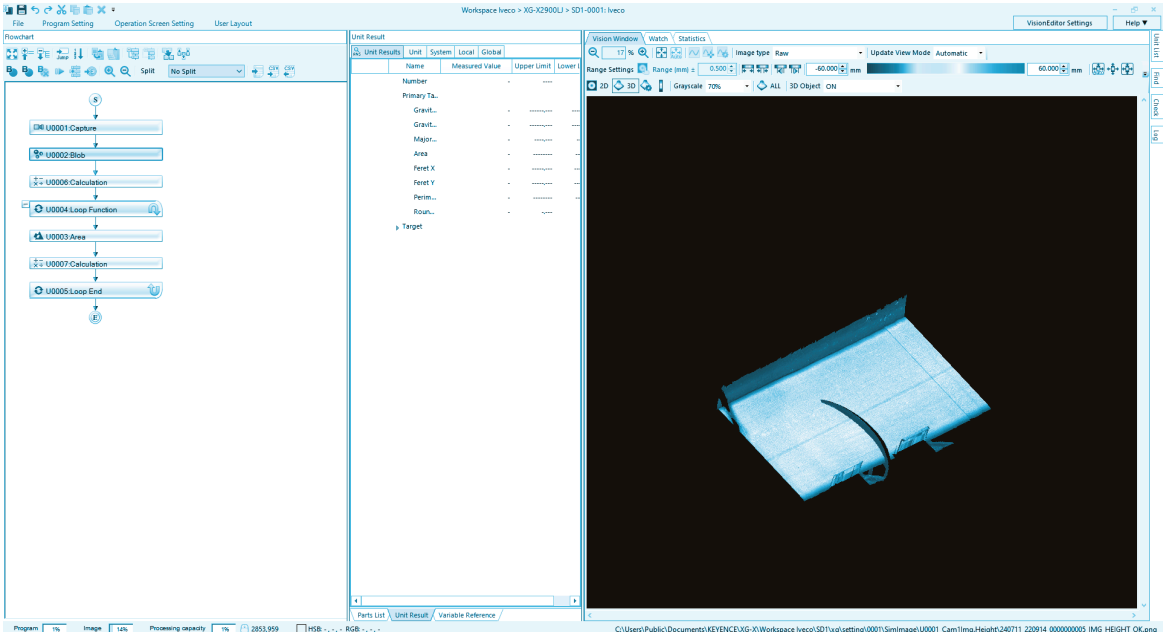
Shape **virtual reconstruction** of components and mechnical parts of relevant dimensions

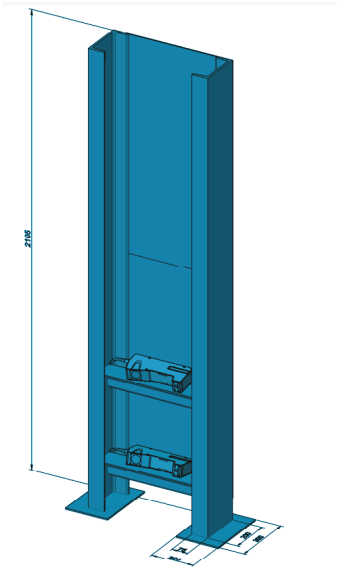


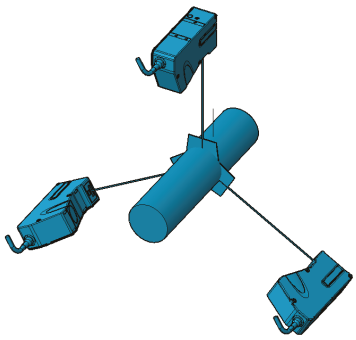


Shape reconstruction
online on big mechanical parts and coordinates generation for robots

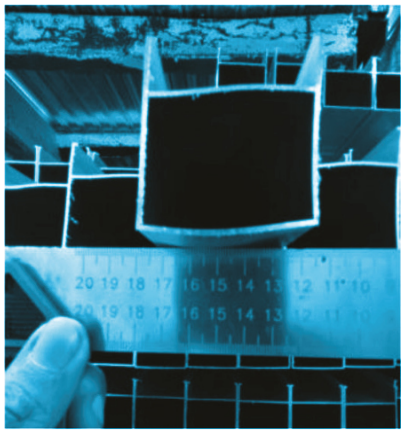
Output coordinates for robots using AI



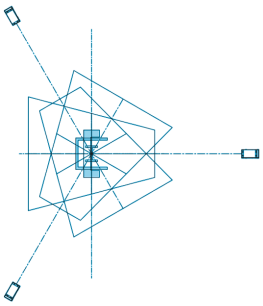


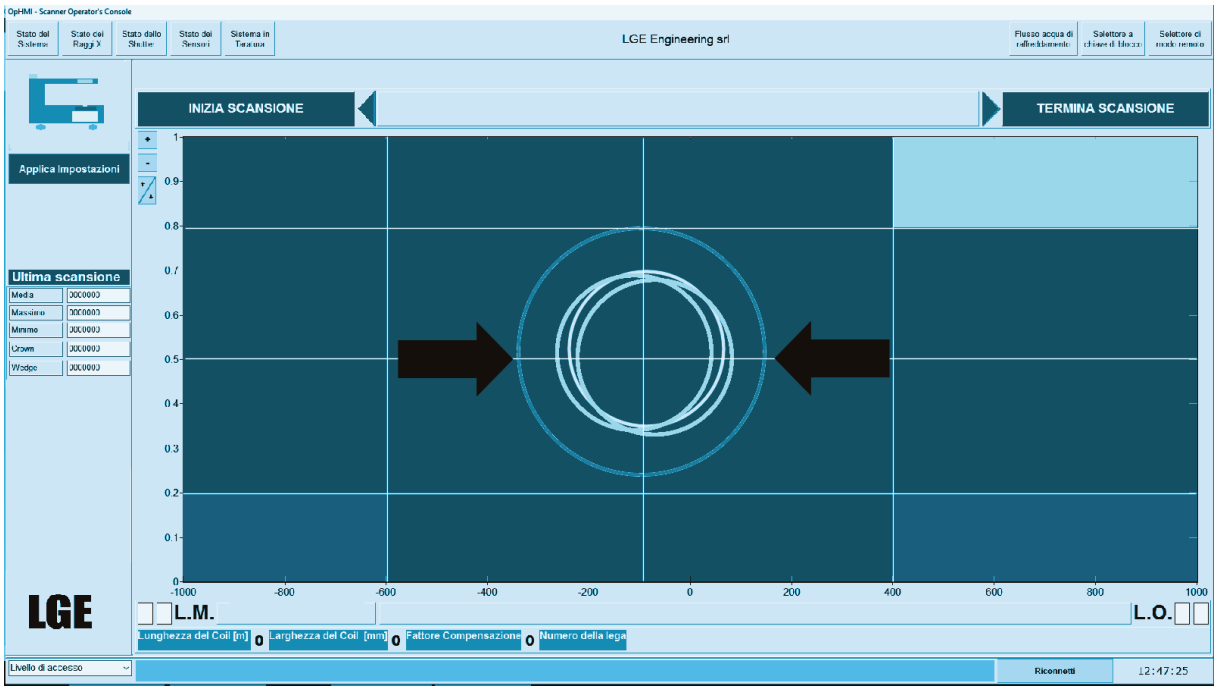


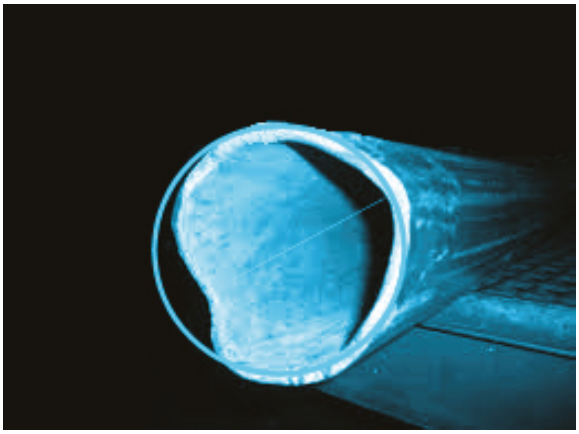


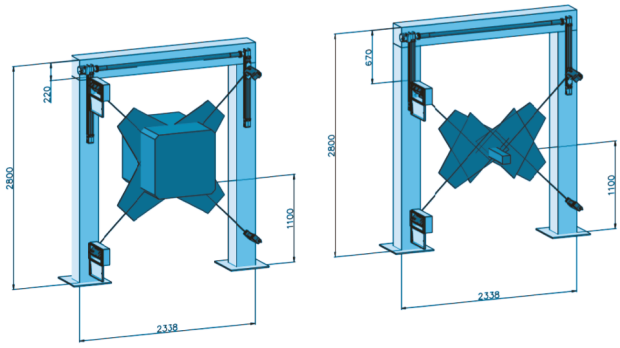


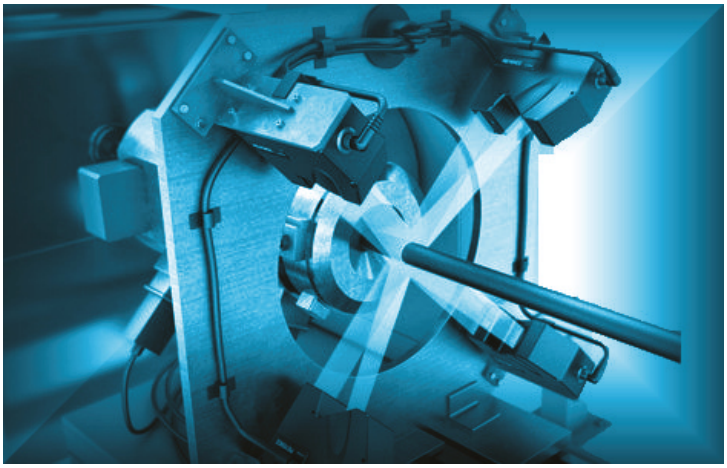
Shape and section dimension
calculation for long products, pipes and hollow profiles



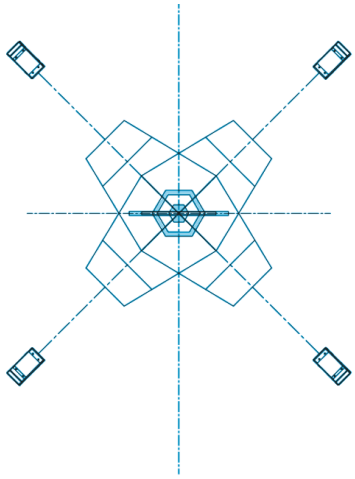


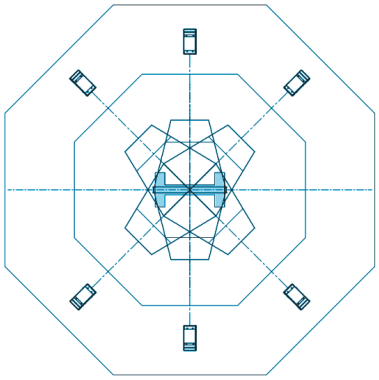




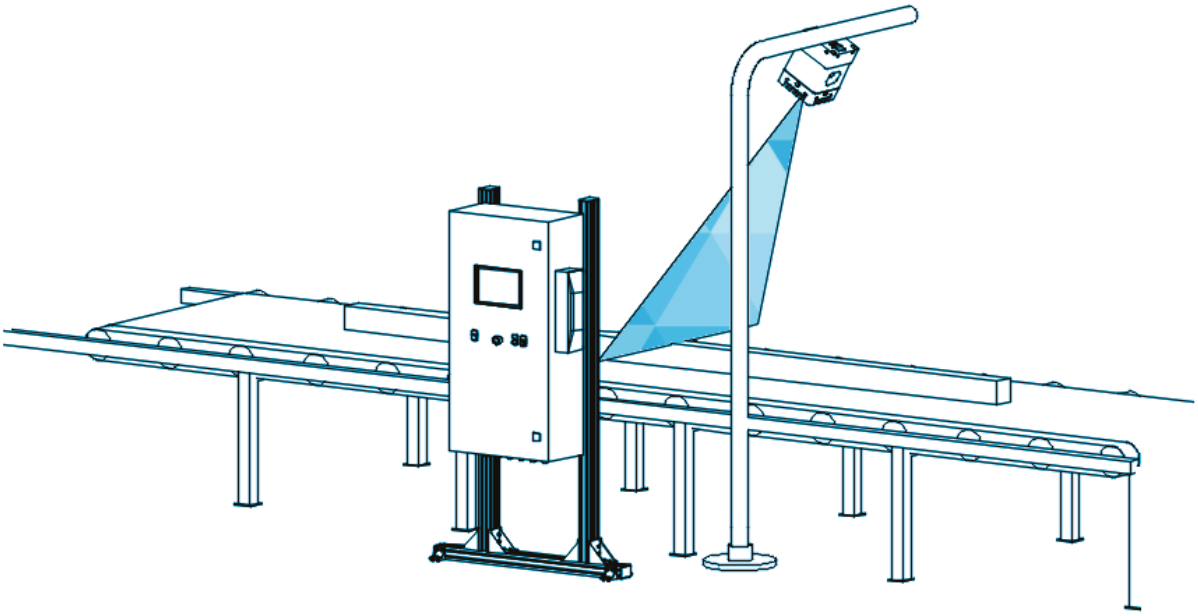


Shape and dimensions for profiles with relevant, asymmetric, complicate or narrow sections

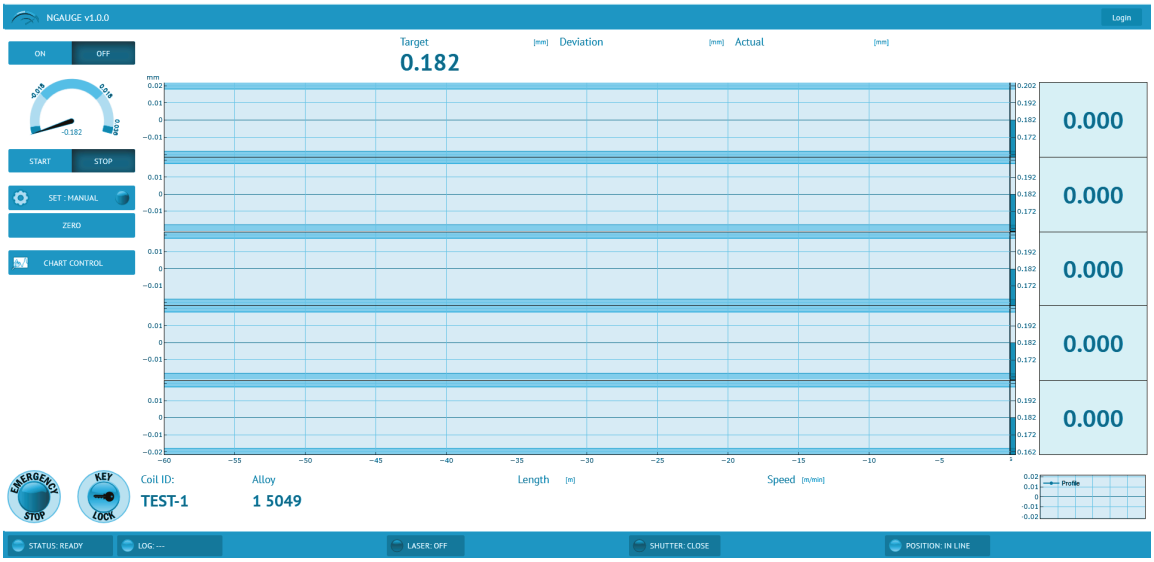


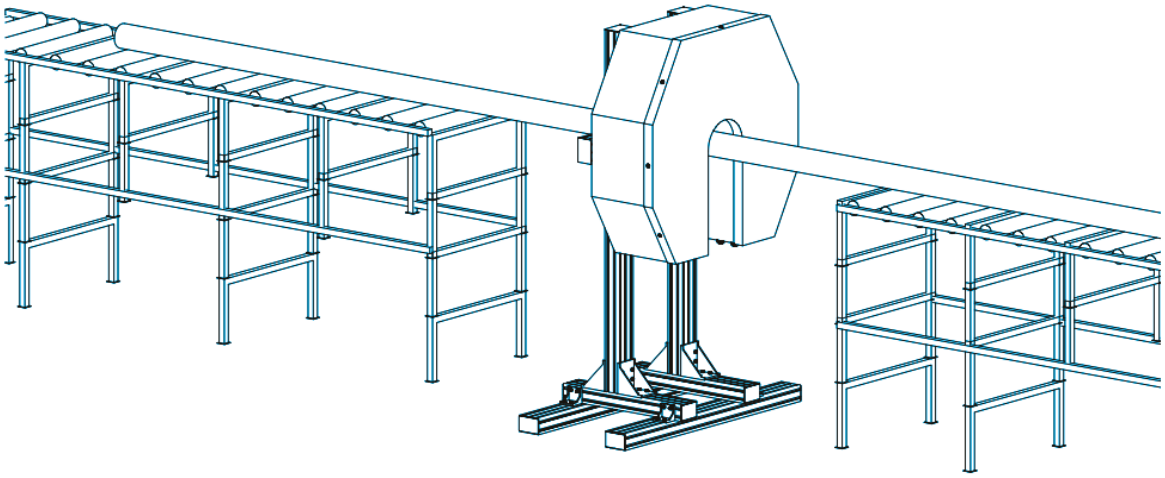


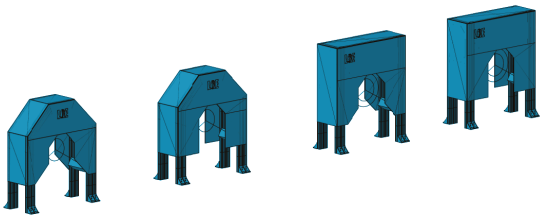




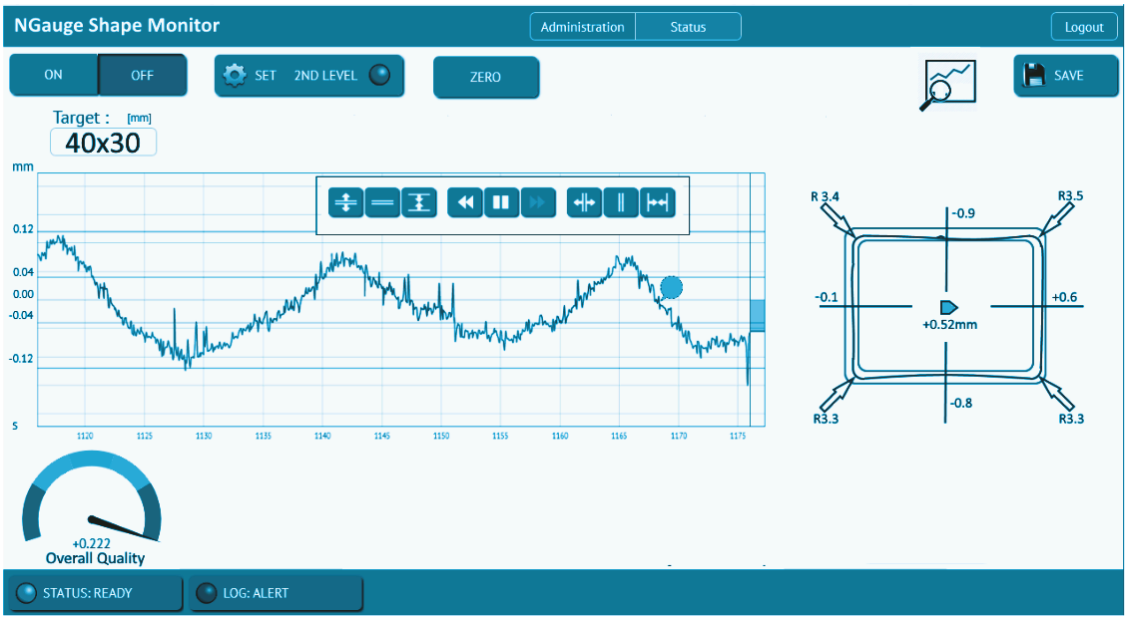
Shape, position, width, length, welding presence and dimensions for long products and profiles

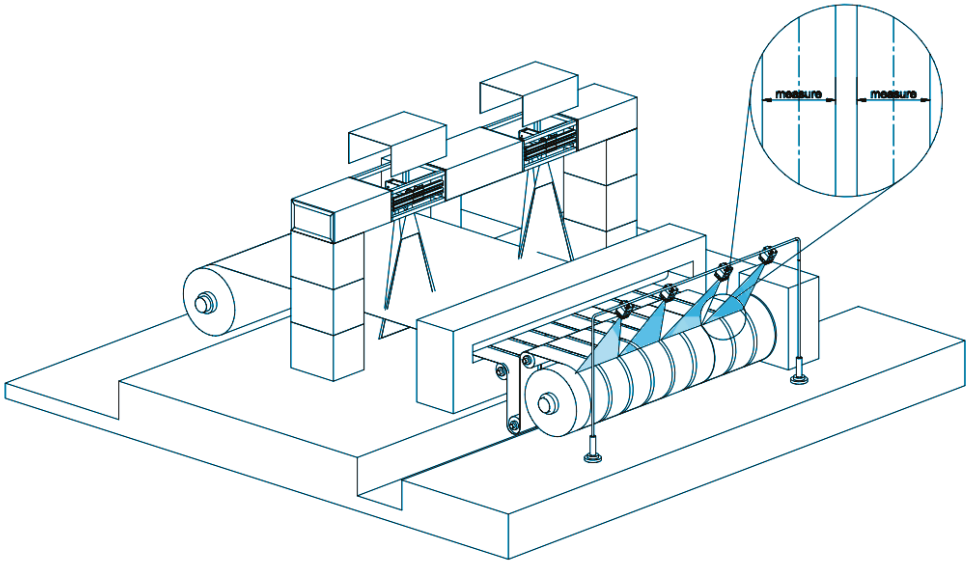




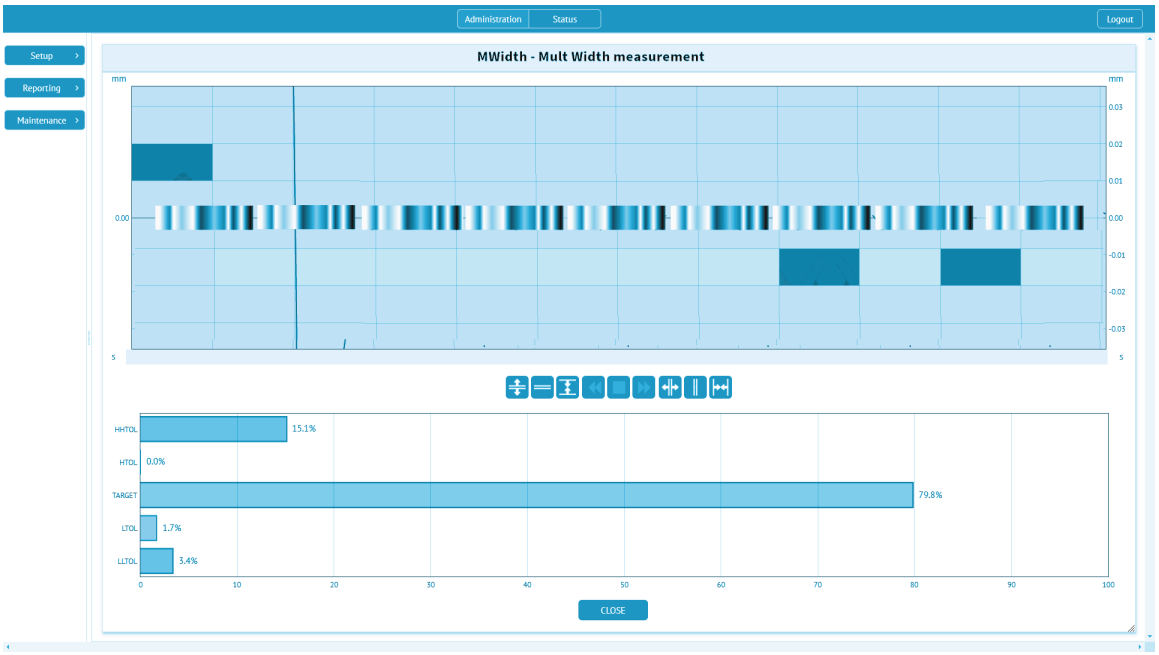


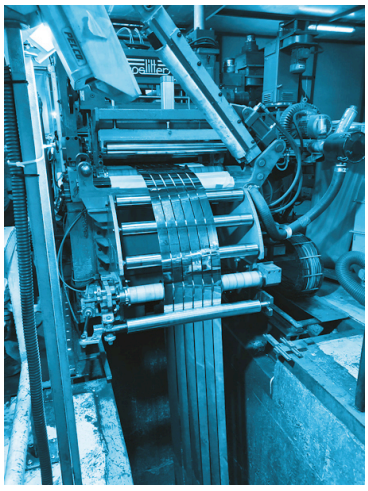
Shape, length, straigthness for long products, pipes and hollow profiles

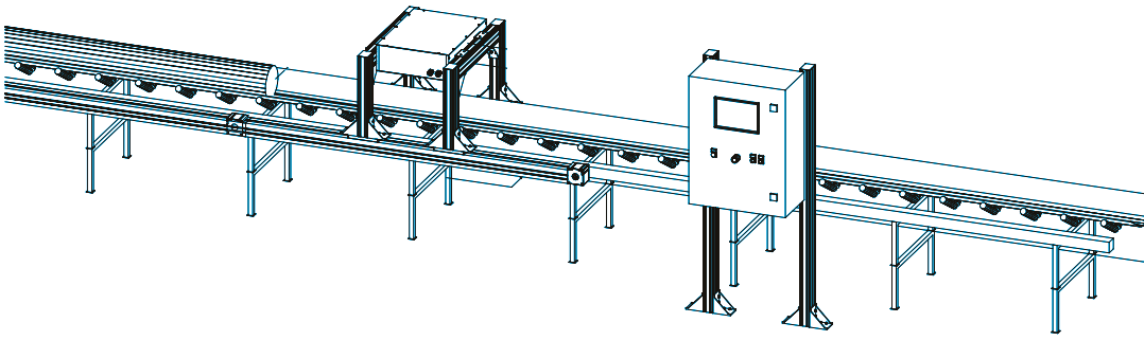




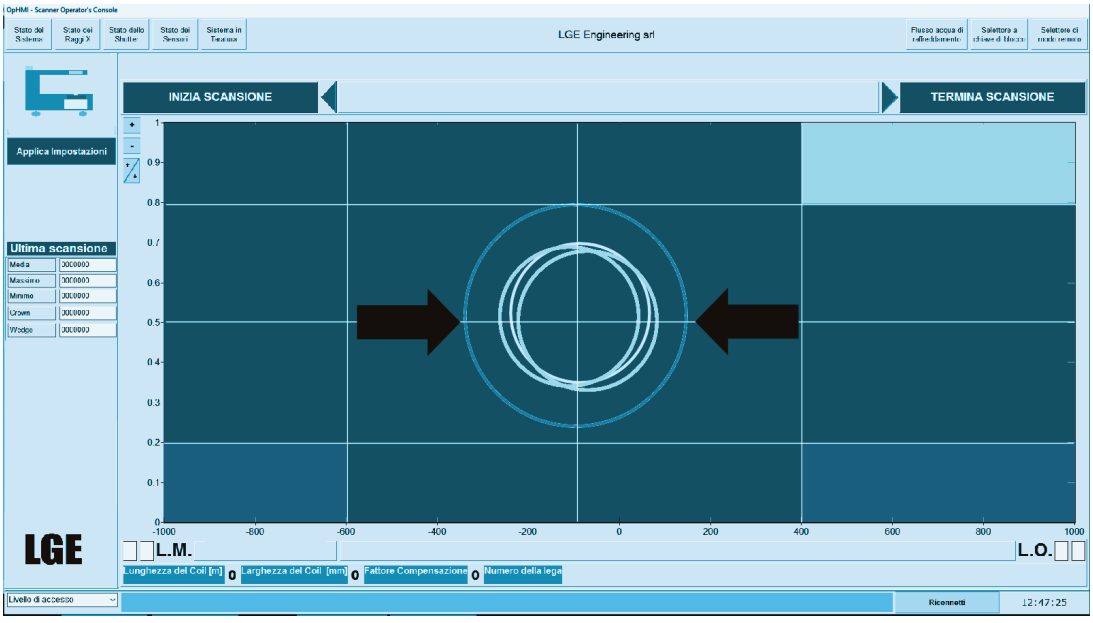
Slitted bands online **width** measurement

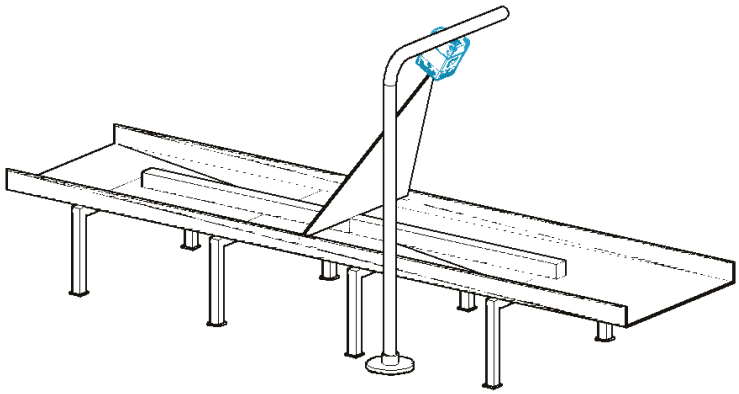




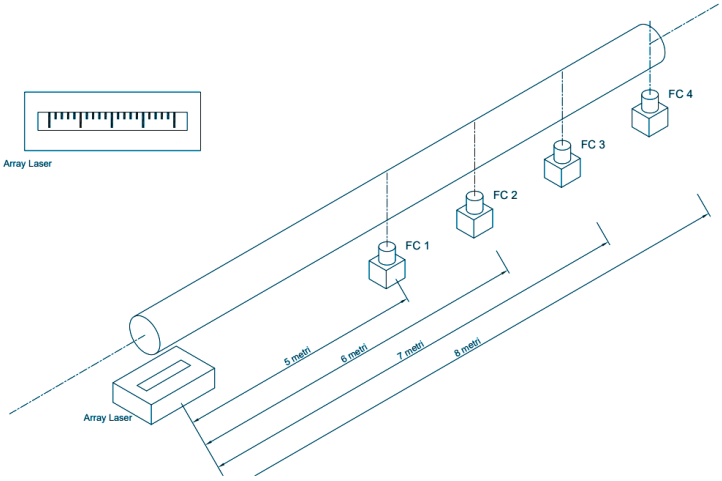


Shape and straightness on long products with relevant sizes, still or moving.





Online **welding detection** on long unguided products for selection and quality control



Online **length detection** on long unguided products with relevant dimensions





LGE

Your Process Control Partner

Piazza delle Vittoria 14/24
16121 Genova (Italia)

Phone: +39-010 4036735
Email: sales@lgeweb.com
SDI: M5UXCR1

© 2025 LGE Engineering srl P.IVA IT03615560103. All Rights Reserved