

Dimensional metrologies

- Metrologies using CMM in accordance with method accredited by ENAC in 17025
- Metrologies using CMM in accordance with internal method
- 3D arm metrologies at CTAG or at the client's site
- Optical metrologies using 3D CNC Vision Measuring Machine (Optical CMM) with or without ENAC accreditation
- Metrologies/Digitizations using laser scanning on CMM and on portable 3D arm
- Programming and measuring services at the client's site using the client's measuring

Equipment

Three-dimensional coordinate-measuring machine CMM

- Brand: Hexagon Dea
- Model: Gloval D Image 12-22-10
- Measuring range: X = 1200 mm, Y = 2200 mm, Z = 1000 mm
- Contact Uncertainty = $1.7 + 3L/1000 \mu\text{m}$
- Laser digitization accuracy = $\pm 0.009 \text{ mm}$
- Measuring software: Pc Dmis, Metrolog, Focus Scan
- Data processing software: Spc-light, Secciones, Geomagic Qualify and Focus Inspection



Metris Laser Scan

- Brand: Metris
- Model: LC60Dx and LC50
- Accuracy: 0.009 mm
- Scanning software: Focus Scan
- Data processing software: Focus Inspection, Geomagic



Three-dimensional coordinate-measuring machine MMC

- Brand: Hexagon Dea
- Model: Gloval D Image 07-10-05
- Measuring range: X = 700 mm, Y = 1000 mm, Z = 500 mm
- Contact Uncertainty = $1.7 + 3L/1000 \mu\text{m}$
- Measuring software: Pc Dmis
- Data processing software: Spc-light, Secciones



Nikon 3D measuring arm 7 axes with laser scan

- Brand: Nikon
- Model: Mcax25+
- Measuring range : \varnothing 2,5 m
- Contact accuracy < 0,038 mm
- Laser digitization accuracy = 0.009 mm
- Measuring software: Pc Dmis, Focus, Inca, Geomagic



3D CNC Vision Measuring Machine (Optical CMM)

- Brand: Mitutoyo
- Model: QV – 606 pro
- Measuring range: X = 600 mm, Y = 600 mm, Z = 250 mm for contact measuring
- Contact Uncertainty = $5 + 5L/1000 \mu\text{m}$
- Optical Uncertainty = $2,2+3L/1000 \mu\text{m}$
- Measuring software: QVPAK
- Data processing software: Cosmos



Romer 3D measuring arm 6 axes

- Brand: Romer
- Model: Arm 2000 Sigma 2030
- Measuring range: \varnothing 3 m
- Accuracy < 0.035 mm
- Measuring software: Pc Dmis, Metrolog



Products

Parts, moulds, checking fixtures, tools, etc.

Linked areas

Engineering: CAD of digitized parts

Engineering: Dimensional validation of manufacturing equipment and checking fixtures

Testing: Dimensional control before and after climatic and fatigue testing. Deformation analysis

Testing: Samples positioning in fatigue and durability testing

Accreditations and certifications

ENAC accreditation in accordance with UNE-EN ISO/IEC 17025:2005 in:

“Dimensional metrology using three-dimensional coordinate-measuring machine”

“2D optical dimensional metrology”