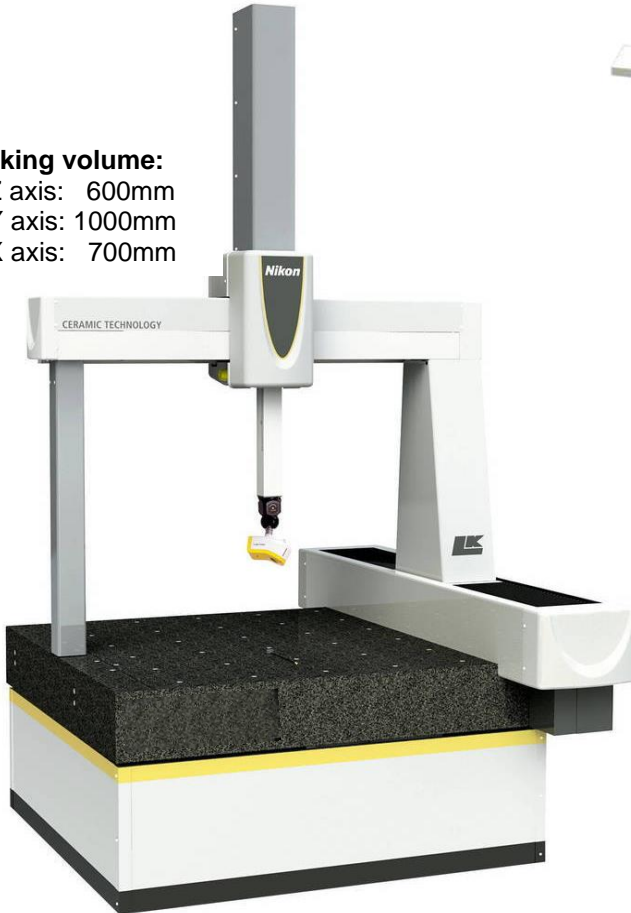


Three-dimensional metrology on CMM with laser head

Working volume:

- Z axis: 600mm
- Y axis: 1000mm
- X axis: 700mm



Laser head as a touch probe:

- Automatic tooling change
- Unique measuring environment
- Laser and standard analysis combined
- Unique measurement report

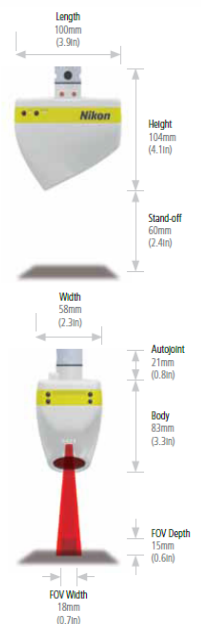
SPECIFICATIONS

Probing error (MPEx) ¹	1.9µm (0.0001in)
Multi-stylus test (MPEx) ²	3.9µm (0.00015in)
Resolution (point spacing)	22µm (0.00087in)
Data acquisition (approx.)	70,000 points/sec
Points per line (approx.)	900
Measuring temperature range	18-22°C (64.4-71.6°F)
Operating temperature range	10-40°C (50-104°F)
Warm-up time	0 (zero) seconds
Weight	370g (13oz)
Ingress Protection	IP30
Power	110/240VAC, 50/60Hz 5A
Enhanced Scanner Performance (ESP3)	✓
Daylight filter	✓
Probe head compatibility ³	PH10M, PH10MQ, CW43, PHS
Laser type	Class 2 (660nm)

¹ Nikon Metrology test comparable to ENISO 10360-2

² Nikon Metrology test comparable to ENISO 10360-5, for CMM with accuracy of 2µm+L/350 or better

³ For CMM controller and probe head compatibility see LC150x datasheet.



Laser head on CMM measuring:

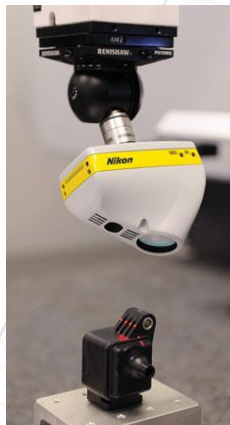
- Accuracy comparable with touch probe.
- Not only single points but point clouds acquisition
- Detail level increase in the analysis
- Confidence level increase in product conformity evaluation

3D controls without limits:

- Castings and forged parts
- Precision machining parts
- Plastic parts
- Rubber parts
- Contactless and touch probe inspection
- 3D scanning, digitalization and reverse engineering with no compromise



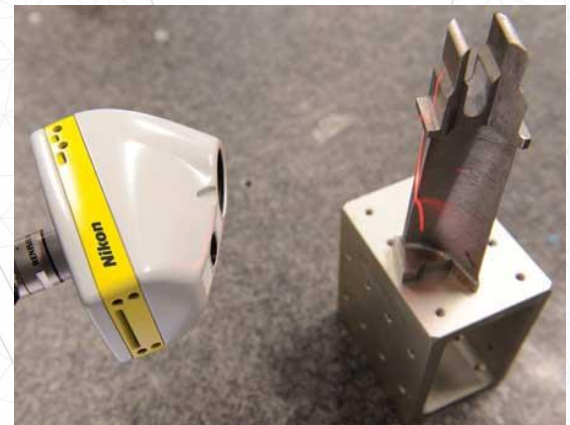
Turbine blades



Complex geometry plastic



Medical implants
Complex free form geometry



High precision tooling

- Nowadays design is in 3D
- Nowadays production is in 3D
- Quality controls must be in 3D.

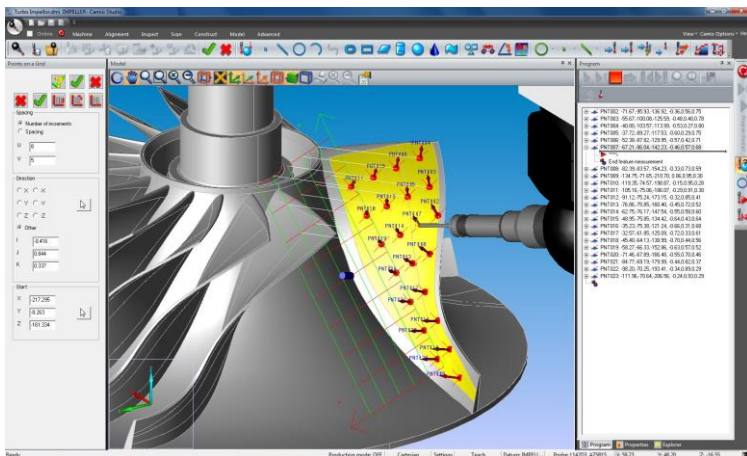
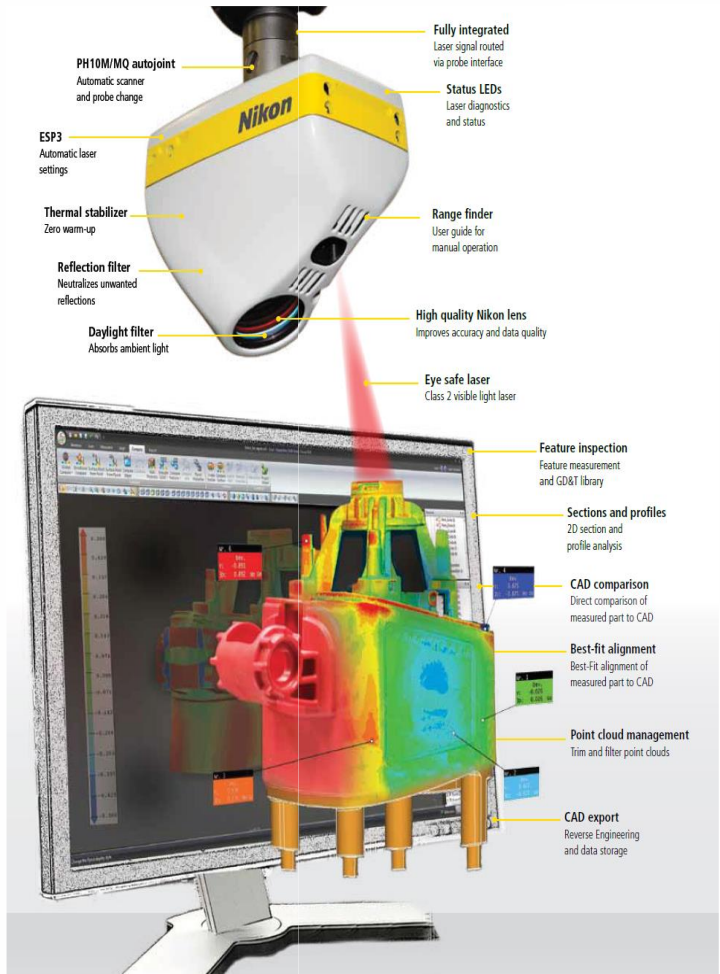
In Metrix 3D all this is reality

AND IT IS NOT ALL

- 3D controls are automated on CMM
- These are 3D controls on serial production

Measurements techniques available:

- Touch probing
- Precision continuous touch scanning
- Contactless laser scanning with integrated laser head



Innovation factors:

- Measurement techniques managed in a single environment
- High information quantity available in parts analysis
- Every type of material can be checked in details
- Controls and reverse engineering can be performed with no compromise

Complete reports with:

- 3D color mapping
- GD&T analysis
- Tables with tolerances evaluation
- Cross section analysis
- Wall thickness analysis

The amount of data acquired can be used for REVERSE ENGINEERING

- Defining modifications, wear and tear and deformations
- Reproducing complex shape objects
- Reproducing soft and flexible objects
- Handwork preservation
- Developing tool paths
- FEM analysis support
- Prototypes Construction