kolibri Flex 40

Optical 3D measuring machine for small parts

Conceptual design

- Automated optical 3D digitizer
- Complete record of object surface without reference markers or matching
- MULTIview technology by 3-camera system and motorized rotation stage
- Detailed and complete measurement results – sensor unit captures and illuminates the object from two different height positions by innovative mirror set up
- Very robust against environmental influences (long term shifts) because of self-calibration
- High ability for reproduction because of predefined measuring schemes
- Easy handling

Fields of application

- Quality inspection
  Inspect as-built vs. as-designed parts (CAD data)
  Geometric dimensioning and tolerancing (GD&T)
  2D and 3D dimensioning
  Wall thickness inspection
- Reverse Engineering
  Rapid technologies
  Digital mock-up
- 3D visualization and virtual reality

Measuring principle

- Triangulation with the help of digital fringe projection in combination with photogrammetric methods
  → Phasogrammetry

Modification

- Double measurement volume corresponding with approx. bisection of resolution → kolibri Flex 80

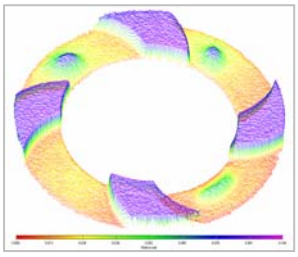
Technical parameter

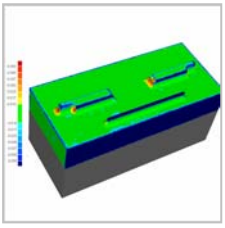
- Measurement volume: max. Ø 80mm, height 25mm
- Data capturing time: 3 min (by 12-24 views)
- Measuring uncertainty σ: ≤ 5 µm
- Point distance: 0,025-0,04mm
- Dimensions: 530 x 400 x 480 mm³

Competence in optical measuring technology

3D measuring system kolibri Flex 40

STL surface (sintered cogwheel, plastic bearing)





3D deviation to CAD
(ceramic milling tool, copper erosion tool)

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