

## KL ACI 3D Surface

Digital microscope system for contact-free measurement of 2D and 3D surfaces



Digital 3D microscope

### Modular 3D microscope system

#### Hardware

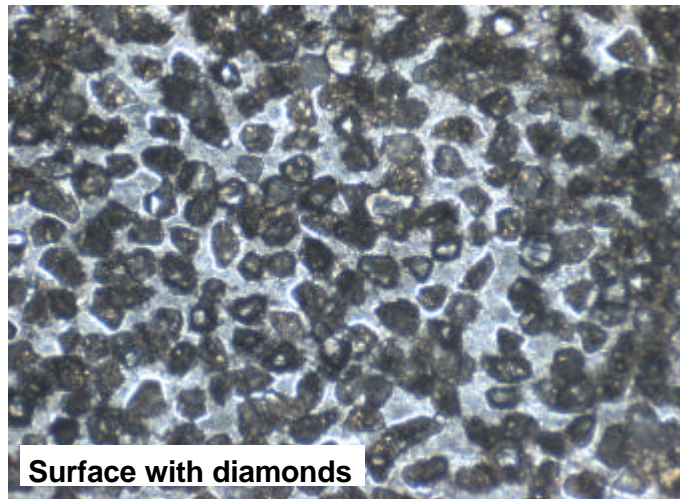
- High resolution CCD camera
- Precision zoom optic - continuous zoom with detents and extra high working distance
- Ringlight-, transmission-, darkfield illumination
- Manual handling  
smallest distance (z-axis): 2  $\mu\text{m}$
- motorized handling, piezo-driven objective  
smallest distance (z-axis): 1  $\mu\text{m}$
- largest FOV 17x22 mm
- smallest FOV 0,019x0,025 mm
- Object height: up to 300 mm
- Vibration isolation

#### Software

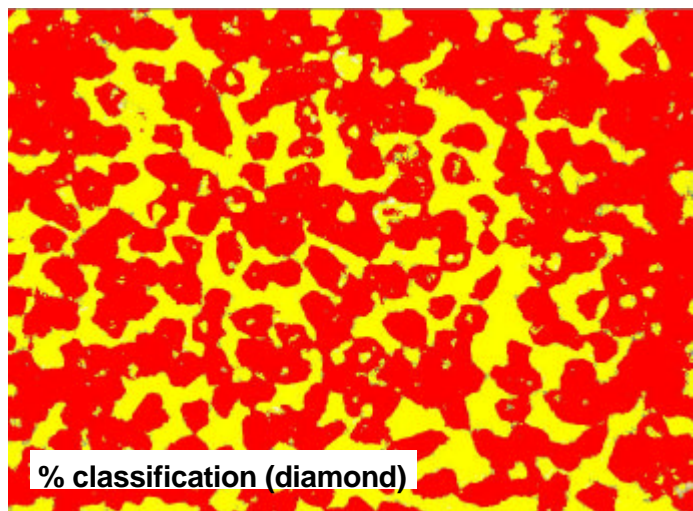
- Measurement 3D
- Calibration
- Measurement 2D (length, angle, area etc.)
- Extended Depth of Field
- 3D Rendering with View of
  - 3D Surface
  - Height Code, colored
  - Height Profile

#### Advantages

- easy handling of hard- and software
- wide range of software functions
- modular, portable
- can be upgraded
- favourable cost/performance ratio

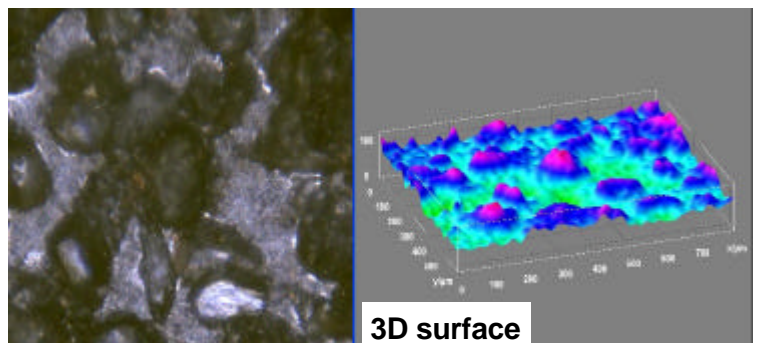


Surface with diamonds



% classification (diamond)

- diamonds 64 %
- embedding material 36 %



3D surface

# KL ACI 3D Surface

Contact-free 2D and 3D surface measurement and reconstruction system

## Technical Specifications

<b>Lightsource:</b>	White-light, LED, Halogen or Xenon
<b>Lightening manner</b>	coaxial, upright, combinable with transmission light
<b>Magnification</b>	Zoom microscope <b>KL-Z-6,5:1</b> 15-104x up to max. 60-420x <b>KL-Z-12:1</b> 10,4-130x up to max. 42-518x <b>KL-Z-16:1</b> 10-160x up to max. 40-640x
<b>Resolution, lateral</b>	Max. 0,6 µm
<b>Resolution, vertical</b>	Manual 2 µm and more Motorized 1 µm and more
<b>Stand</b>	Height max. 100 cm Z-Drive manual or motorized Z-Drive vertically and horizontally adjustable X-Y Table max. 50x50 cm X-Y Table manual or motorized Material board: steel, black powdercoated pillar and microscope holder: stainless steel Weight about 10 kg The stand may be altered according to customer drawings
	Antivibration bearings, passive
<b>Working distance</b>	13 - 114 mm
<b>Field-of-View</b>	Min. 0,019 x 0,025 mm Max. 17 x 22 mm
<b>Camera, USB</b>	<b>KL Infinity 2-1</b> 1,4 MPixel <b>KL Infinity 2-2</b> 2,0 MPixel <b>KL Infinity 2-3</b> 3,3 MPixel <b>KL Infinity 1-5</b> 5,0 MPixel
<b>Software</b>	<b>KL ACI 2D Focus</b> <b>KL ACI 3D Surface</b> <b>KL ACI 3D Roughness</b> (Ra, Rq, Rv, Rp, Rt) <b>KL 2D Measurement-software</b> (length, area, angle, counting etc.)
<b>Images</b>	Capturing and storing of the images in formats like tiff, bmp, jpg etc. Storing of X-Y measurement values in txt- or ASCII files Storing of profile values (x-y) in txt-files
<b>Extras</b>	Modular system (hardware and software) Large working distance 3D surface picture in real color

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