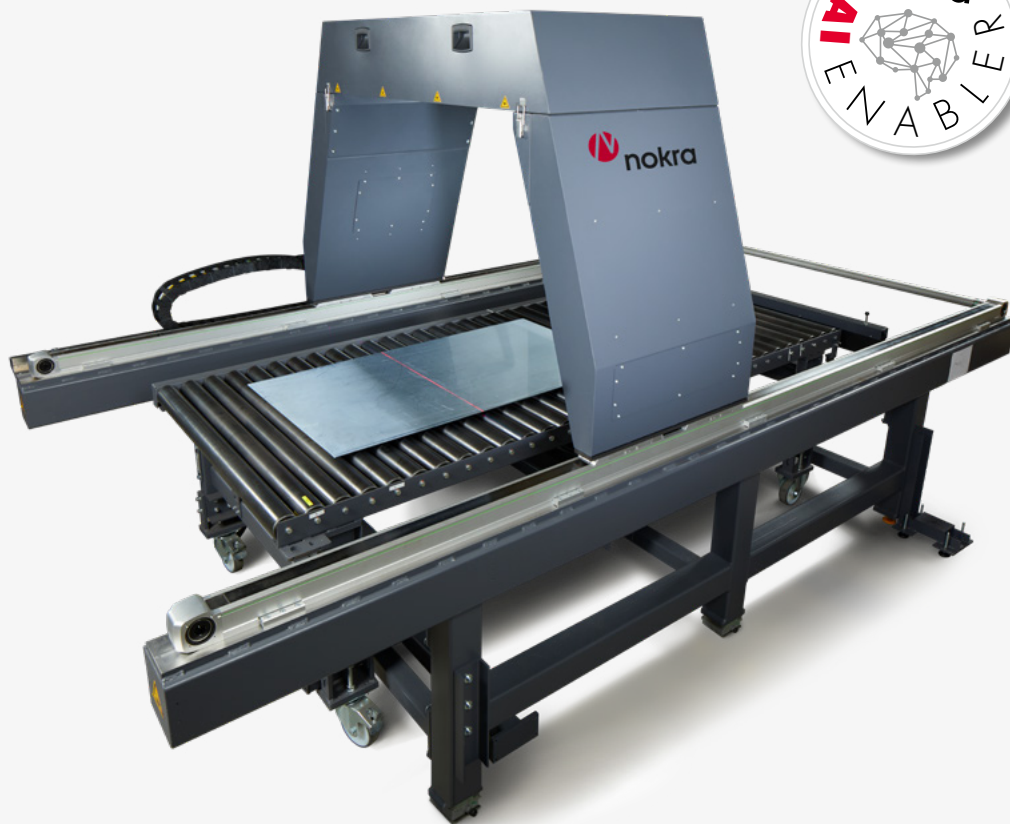


Laser measurement system Flatness and contour



alpha.fi compact

Laser based measurement of flat geometries

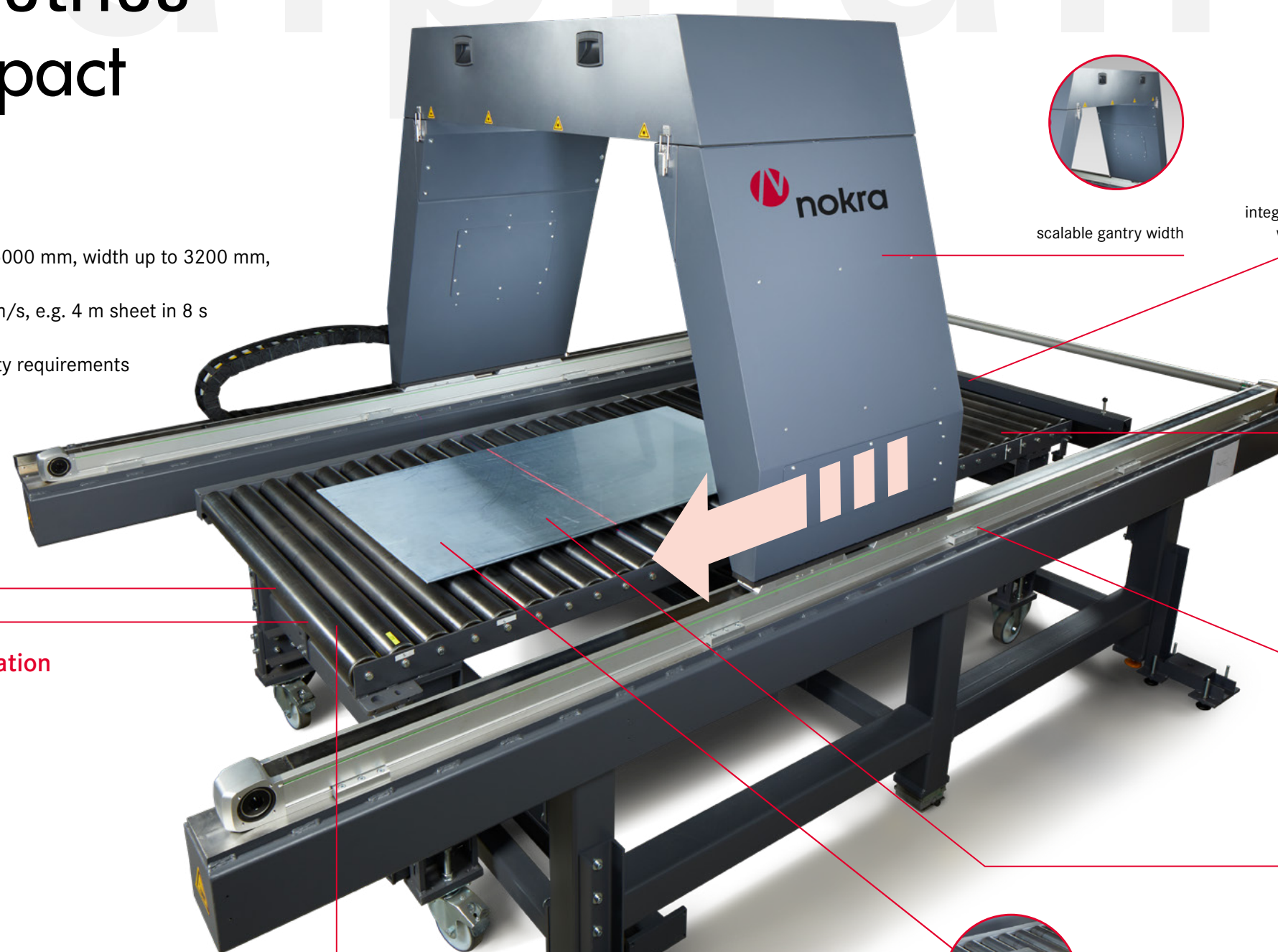
alpha.fi compact

Suitable for sheets and plates

- Scalable portal solution: length up to 5000 mm, width up to 3200 mm, thickness starting from 0.5 mm
- Fast measurement process up to 0.5 m/s, e.g. 4 m sheet in 8 s
- All shapes including any cutouts
- Suitable for production with high quality requirements and an interest in effective processes
- Quality proven (DIN/EN, ASTM), 100 % checked and documented
- Unmanned production due to fully automated inline measurement system
- Laser class 2, no special safety precautions required

Measurement in scanning operation

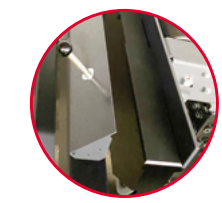
- Portal moves and scans the static sheet



customized solutions for different applications



scalable gantry width



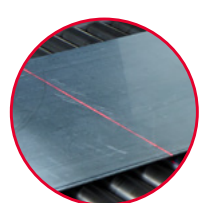
integrated reference ruler with protection cover



measurement base from customer

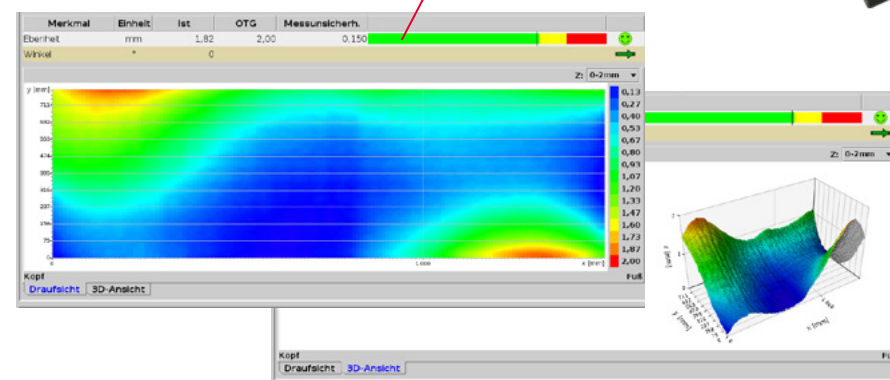


scalable linear guide with servo drive for precise scan operation



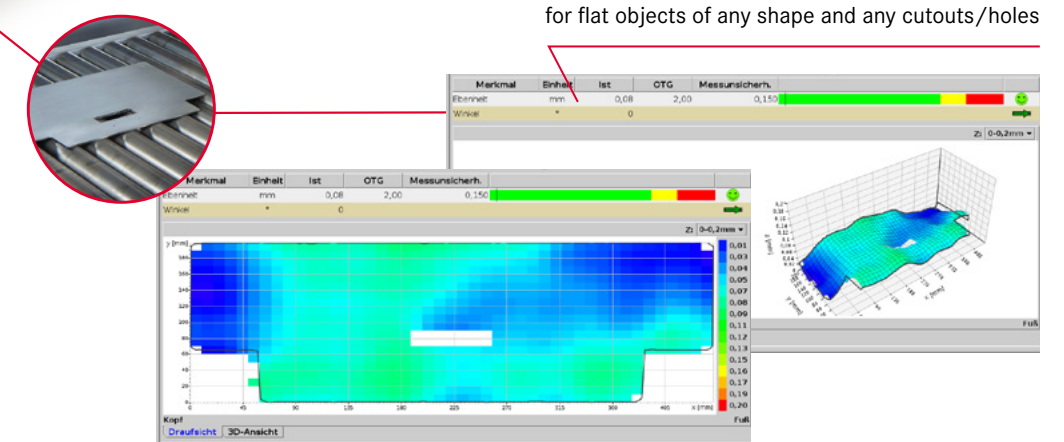
inline or offline operation

2D/3D - visualization with feature overview



continuous measurement data acquisition with high sampling rate and resolution

for flat objects of any shape and any cutouts/holes



Standard configuration

- compact portal system, measuring device capable
- automatic monitoring according to MSA method 1
- E-cabinet 800 x 1200 x 2100 (l x w x h, in mm) including control and evaluation IPC
- operator-PC (desktop version including mouse, monitor, keyboard)
- 30 m cable set (max. 80 m)
- signal inputs for safety-door and E-stop
- standard interfaces Profinet, TCP/IP
- remote maintenance access via Ethernet
- graphical display of results as 2D heatmap and 3D view
- graphical display of the measurement characteristics flatness, length, width
- data storage and management, storage capacity 4 TB
- history view of stored measurement results
- display and storage of warning and fault messages

Technical data – alpha.fi compact

Measurement width	up to 3200 mm
Measurement length	up to 5000 mm
Scan speed	max. 0.5 m/s
Material width	50 mm to measurement width
Material length	100 mm to measurement length
Material thickness	0.5 mm to 250 mm (others on request)
Material shape	flat objects of any shape and any cutouts/holes
Material type	all non-transparent materials
Material surface	no restrictions, smooth or textured, reflective or matt
Material temperature	max. 80 °C
Measurement resolution height	5 µm
Measurement resolution width	10 µm
Measurement resolution length	5 µm
Measurement accuracy flatness	±0.05 mm (without flatness influence of the base)
Measurement accuracy width	±0.15 mm
Measurement accuracy length	±0.10 mm
Flatness evaluation	acc. to DIN EN ISO 12781; strip edge waviness acc. to DIN EN 10251; various other ruler evaluations
Measurement principle	laser triangulation (laser light-section sensors)
Laser class	2 (no laser safety officer)
Laser wave length	660 nm (red)



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Laser measurement system Flatness and contour



alpha.fi compact

Laser based measurement of flat geometries

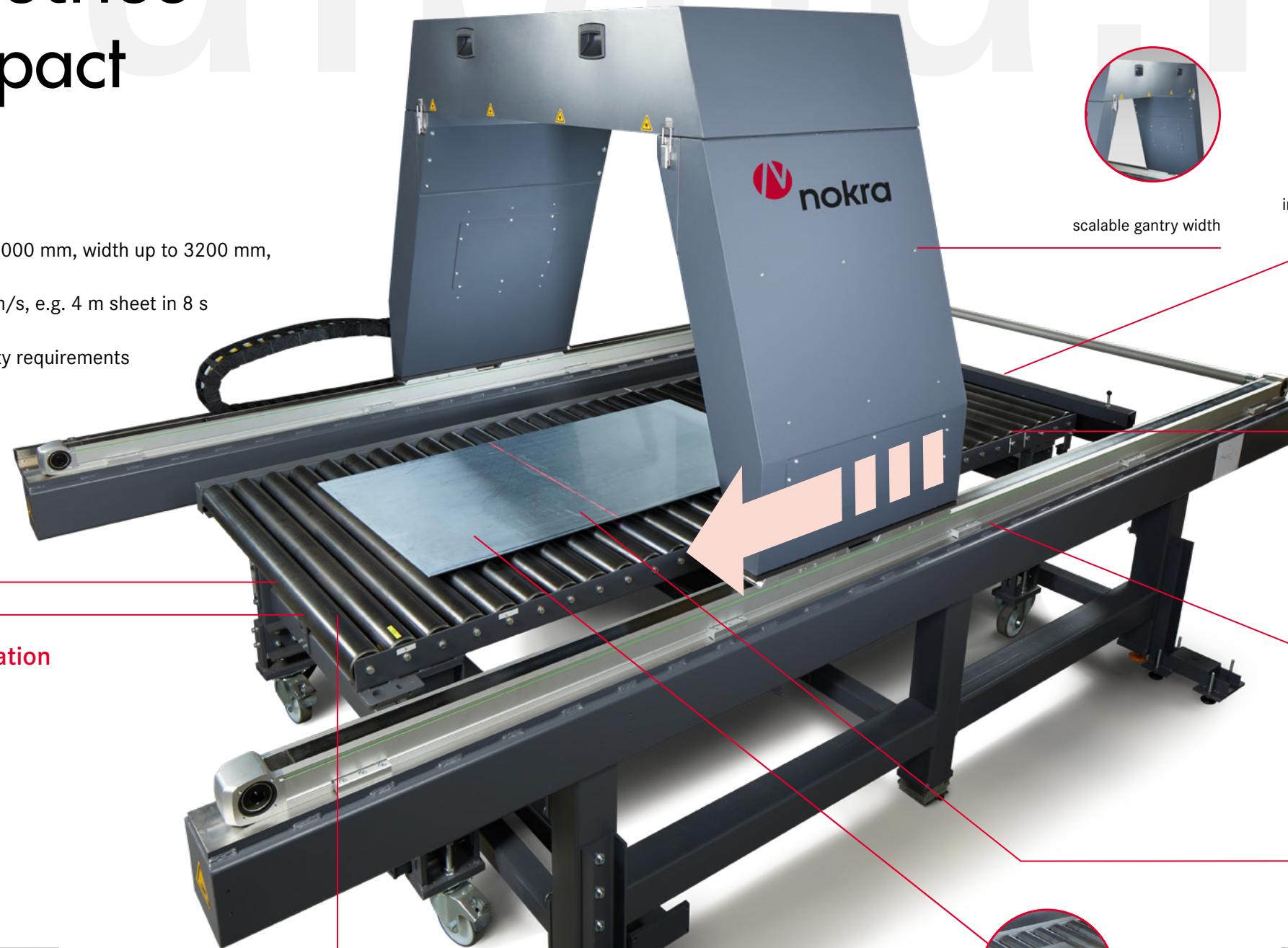
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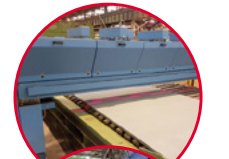
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scalable gantry width



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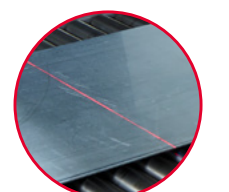
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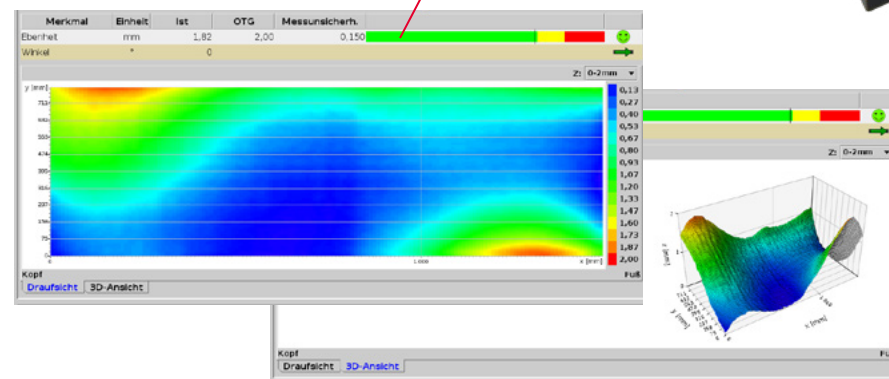


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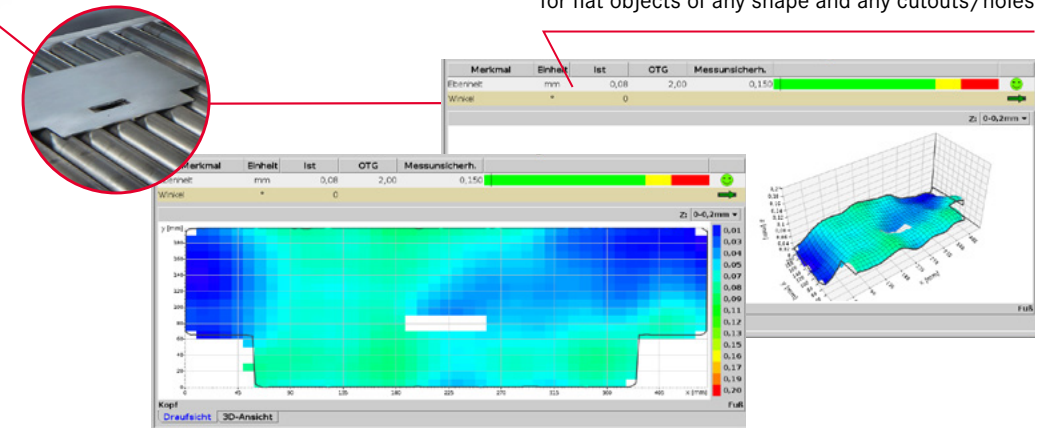
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Laser class	2 (no laser safety officer)
Laser wave length	660 nm (red)
Laser life time (MTBF)	80000 h @ 20 °C



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