Visual inspection system

with AI evaluation for parts

AT A GLANCE

Local AI
Evaluation with locally operated AI models

OK / NOK
Inspection decision for each part in the process

Single cell or inline
with conveyor belt as an inline inspection system

Inspection recipes
set up new parts within your own team



With the NIKLAS Vision Check visual inspection system you inspect parts by camera for missing components, position, surface defects and codes. You set up new parts yourself, and locally operated AI models evaluate the images.

Inspection features

- Missing components
- Position and orientation
- Surface defects such as scratches
- Assembly and completeness
- Marking and codes
- Contour and dimensions
- Holes and outlines in backlight
- Deviations from the good part (anomaly)

Equipment

Part feeding
The conveyor belt feeds the parts into the inspection cell. We define belt width, transfers and guidance according to part format and material flow.

Inspection recipes and AI
After the initial set-up, your team creates new parts and inspection recipes itself via the user interface.

Camera and lighting
We select camera, optics and lighting according to features and surfaces, so the system captures each part under the same conditions.

Controls and data
Via an interface, your PLC or higher-level system receives the inspection decision and the inspection data.

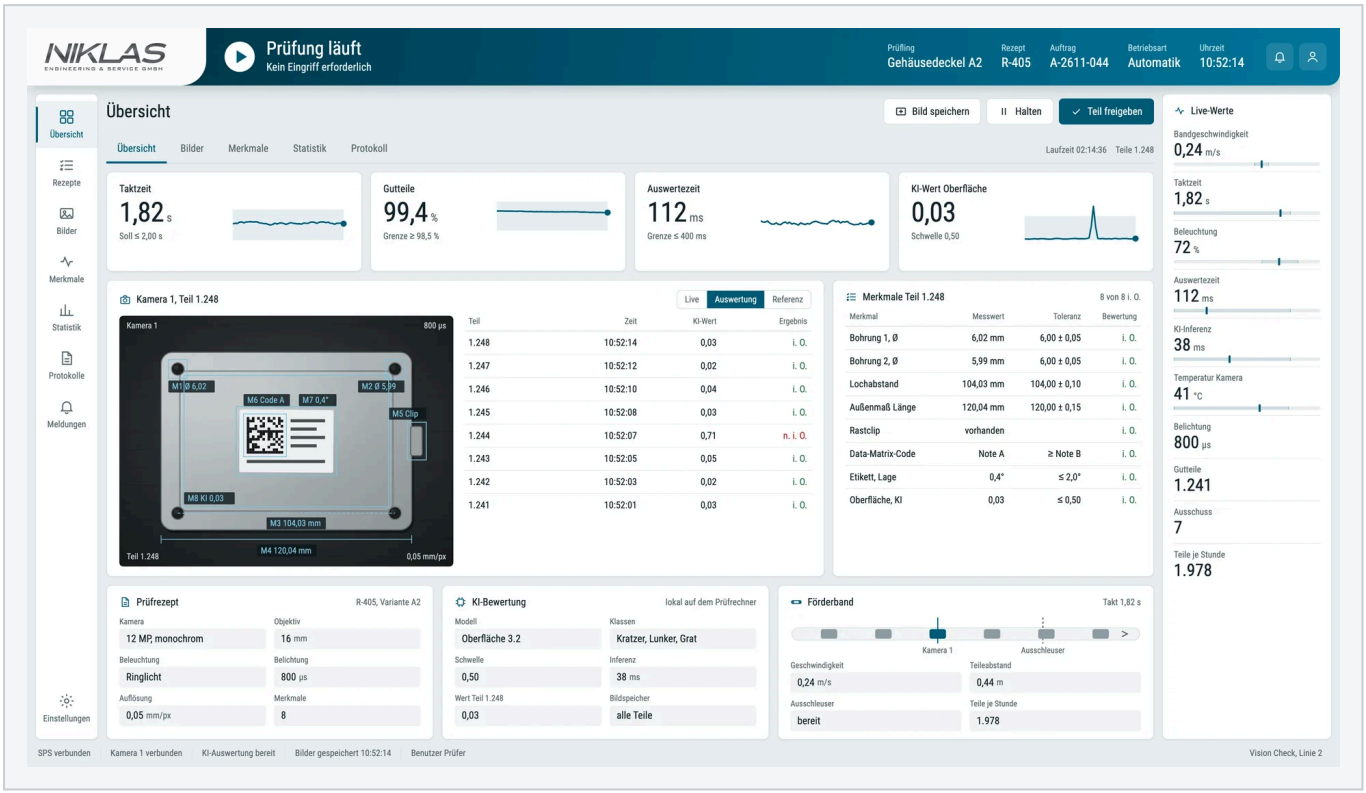
Technical data

Feature	Specification
Test items	Your parts, you set up new parts yourself
Inspection features	missing parts, position, surface, codes, contour and dimensions
Evaluation	locally operated AI models, anomaly detection based on the good part
Camera, optics, lighting	selected according to feature and surface, backlight for holes and outlines
Camera resolution	5 to 24 MP, up to 5,328 × 4,608 pixels, global shutter, monochrome or colour
Field of view	30 × 26 mm to 300 × 260 mm per camera, depending on lens
Smallest defect size	from 0.02 mm at 30 mm field of view, around 0.17 mm at 300 mm
Cycle rate	up to 120 parts/min, depending on part size, inspection scope and sorting
Conveyor belt	usable width 100 to 400 mm, up to 0.5 m/s, depending on part format
Design	Single cell or inline with conveyor belt
Sorting	Delta picker (optional), separate outputs for OK and NOK
Interface	Inspection decision and inspection data to PLC or higher-level system
Documentation	Inspection image and inspection data for each part
Dimensions (W × D × H)	to customer specification
Mains connection, compressed air	230 V AC, 50 Hz, 16 A, compressed air 6 bar only with picker or air blast

Options

- Delta picker for sorting the inspected parts
- Conveyor belt for inline inspection
- Separate sorting outputs for OK and NOK

Software



With the NIKLAS Vision Check software, your team creates new parts and inspection recipes itself. The interface shows the inspection task and decision at a glance, and inspection data is documented for each part.

Request a quotation

Send us photos of your parts and typical defects and, if known, tell us the cycle rate, available space and feeding.

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