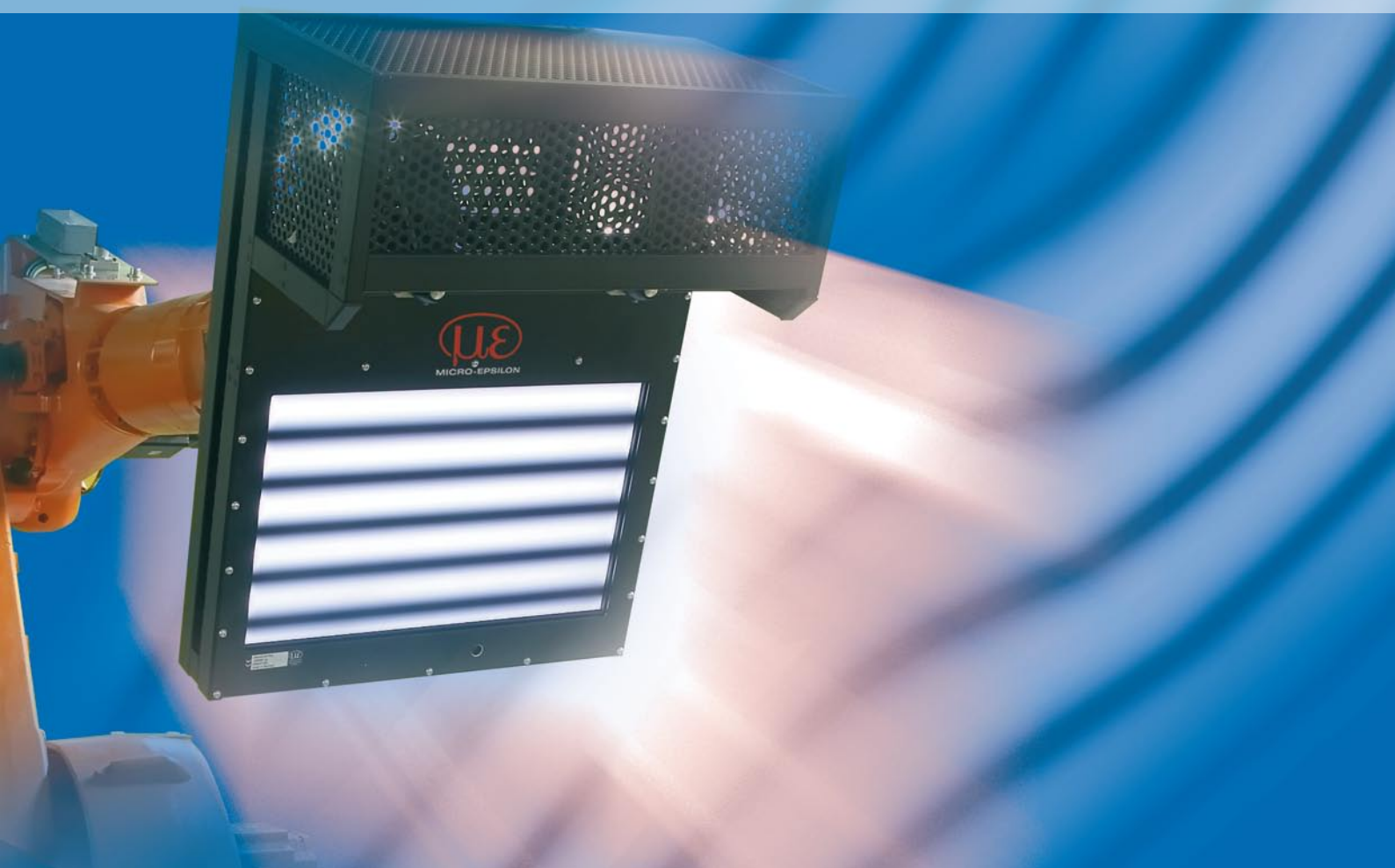
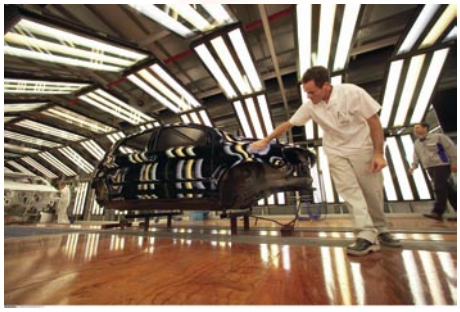
MICRO-EPSILON

REFLECTCONTROL
AUTOMATIC INSPECTION OF SHINY SURFACES





Visual inspections are replaced by the completely automatic reflectCONTROL

Automatic surface inspection and defect recognition

Manual inspection methods such as visual inspection are laborious and time-consuming. This method of detecting defects is often subject to strong daylight fluctuations, particularly in the area of the boundary samples, which only allow limited, comparative assessment of the surface quality.

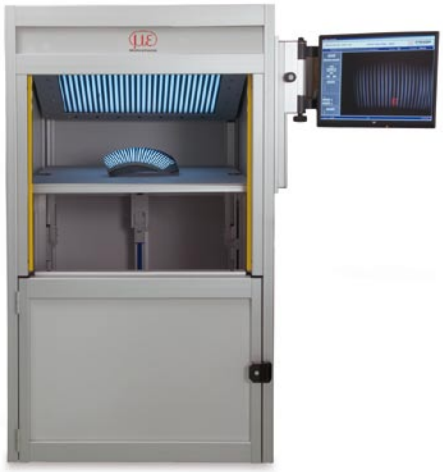
The reflectCONTROL product line is used for the inspection of reflecting surfaces and measures differences in the surface texture. Evaluation software recognises the smallest deviations from the ideal surface and indicates these defective locations.

Defect inspection on reflecting surfaces

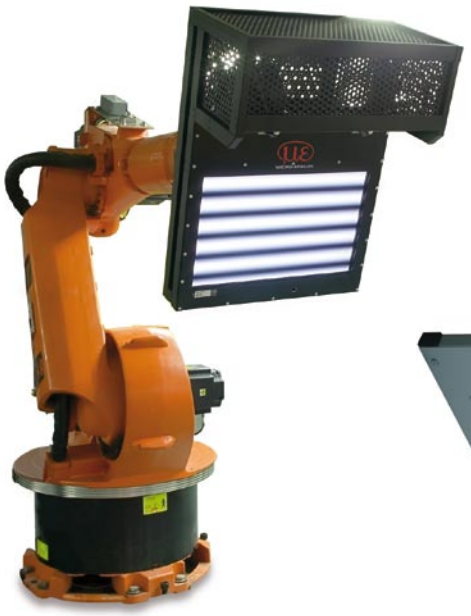
The reflectCONTROL concept is based on deflectometry which precisely analyses reflecting surfaces down to micrometre-sized defects. The automated surface inspection now also means that a comparative quality assessment can be made in faster cycle times.

Benefits of reflectCONTROL

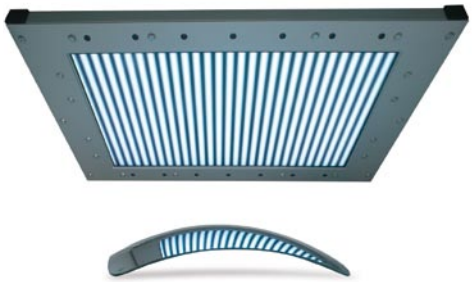
- Surface analysis of reflecting parts
- Defects are discovered and classified automatically
- Modular design enables use in the production line and as laboratory equipment
- Provides OK / NOT OK decisions, evaluations and defect reports
- Surface resolution can be adjusted down to the micrometre range



RC-Compact inspection system with motorised object carrier



RC-Robotic: Complete inspection of a passenger car body shell in only 60 seconds (4 robots)



RC-Custom: Base module for customer-specific integration

RC-Compact

For repeatable inspections, the measuring table positions are stored in a project-related database and are integrated with an automatic measuring process.

- **Inspection of flat and slightly curved parts**
- **Intuitive user interface**
- **Scalable to object sizes and measuring processes**
- **Ideal for small series in the laboratory and production processes**
- **Attractive price/performance ratio**

RC-Compact with 2 cameras and special 32” TFT screen achieves a surface resolution of 0.2mm on a DIN A3 size measuring area in a measuring time of a few seconds.

RC-Robotic

This system is for repeatable inspections when the size or geometry of the components to be inspected require flexible positioning of the sensor unit. Automatic defect marking supplements RC-Robotic as the ideal in-line solution (option).

- **Ideal for complex components**
- **Intuitive user interface**
- **Use of several robots simultaneously enables complete scanning in the production cycle**
- **Automatic marking unit option**

RC-Robotic with 3 or more cameras and special 40” TFT screen achieves a surface resolution of less than 0.3mm on a DIN A2 size measuring area in a measuring time of a few seconds.

RC-Custom

Sector-independent solution for the surface inspection of any components. We create the customised system for you based on defined customer requirements.

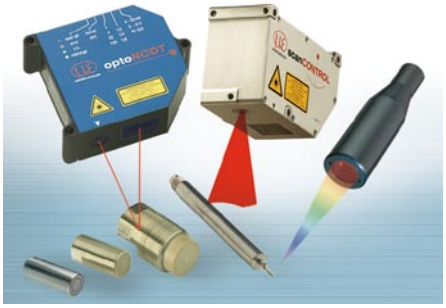
- **Complete integration in the production line**
- **Freely definable defect classification and evaluation**
- **Optimisation of resolution, field of view and measuring time**

The RC-Custom complete solution includes design and production of the mechanical components, all technical measuring equipment and the interface to the system controller.

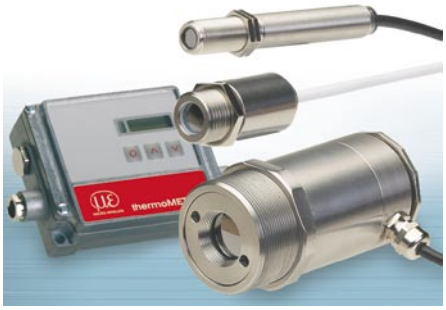
Types of defects detected (extract)

Impressions, contact, inclusions, fluff / hair, adhesive residues, mottles, craters, scratches, paint delamination, paint drops, runs, pinholing, overspray, moulding defects, scoring, shell defects, slide marks, abrasion marks, welding beads, spitters, specks, partial / missing paint, soiling, water droplets

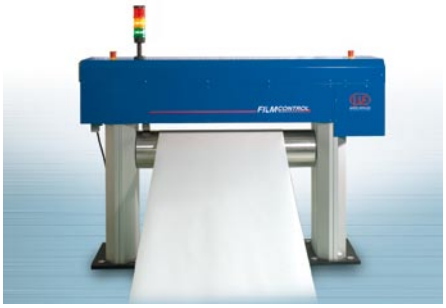
High performance sensors made by Micro-Epsilon



Sensors and systems for displacement, position and dimension
Eddy current sensors
Optical and laser sensors
Capacitive sensors
Inductive sensors
Draw-wire sensors
Optical micrometers
2D/3D profile sensors
Image processing



Sensors and measurement devices for non-contact temperature sensors
Online instruments
Handheld devices



Measuring systems for quality control
for plastic and film
for tyre and rubber
for web material
for automotive components
for glass

MICRO-EPSILON
Koenigbacher Str. 15 · 94496 Ortenburg / Germany
Tel. +49 (0) 8542 / 168-0 · Fax +49 (0) 8542 / 168-90
info@micro-epsilon.com · **www.micro-epsilon.com**