Lens Quality Inspection

Optical inspection of artificial lenses from ocular/intra-ocular lenses to industrial micro-lenses.

**21 CFR PART 11 COMPLIANT**
Includes audit trail, comfortable user administration and product management.

**VALIDATION GUARANTEED**
Project processing according to GAMP guidelines and validation support on site.

**FLEXIBILITY / FREEDOM**
Multiple camera solutions, optical fault detection from combinations of different procedures and specific lighting techniques.
Over the past two decades, Compar has developed multiple complete solutions for optical quality inspection of contact lenses.

Our custom built systems are used in almost all production steps: from lens mould inspection, mould completeness check, lens inspection (dry and hydrated), package integrity, and label verification on primary and secondary packaging components.

Optical inspection tasks are distinguished into geometrical measurement (ADI) and cosmetic defect detection (AOI). Quality features are geometry, shape, scratches, cracks, particles, discoloring, etc.

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### Criteria / models

<table>
<thead>
<tr>
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<th>Inspection of contact lenses</th>
<th>Inspection of intraocular lenses (IOL)</th>
<th>Inspection of industrial micro lenses</th>
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<tbody>
<tr>
<td>Part size</td>
<td></td>
<td>application specific</td>
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<tr>
<td>Resolution</td>
<td>from 10 um</td>
<td>from 10 um</td>
<td>from 2um</td>
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<tr>
<td>Cycle time</td>
<td>from 0.1 sec / part</td>
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<tr>
<td>Vision system</td>
<td>vision expert® PC based machine vision software</td>
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<td>Machine vision highlights</td>
<td>Teach-in mode for new products, integrated product management, production statistics, GAMP project procedures, 21 CFR Part 11 compliance, audit trail, user access control, multiple languages, validation support, etc.</td>
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<td>Inspection tasks</td>
<td>• Mould orientation detection, monomer bubble detection in moulds</td>
<td>• Cosmetic inspection with regard to scratches, edge defects, surface defects, broken and torn lenses</td>
<td>• Detection of sealing defects, dirt and sealing spots, film overpressure test, film alignment control, OCR / OCV, 1D and 2D code verification</td>
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<td>• Tray inspection for misaligned moulds, missing mould caps and turned moulds, foreign materials, mould batch inspection, unsealed mould detection</td>
<td>• Lens inspection in open and sealed blisters, detection of duplicates and empties, foreign material, blister film sealing</td>
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**Artificial lens inspection system price (including basic engineering)**

- **from EUR 40K**
- **from EUR 45K**
- **from EUR 45K**

**Options**

- Multi camera solutions
- Special designs are also possible on request

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(1) Cycle time strongly dependent on test criteria.

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**REALIZED APPLICATIONS / EXAMPLES / MARKETS**

- contact lens
- ocular lens
- eye lens
- mobile lens
- industrial lens
- micro lens