Defect Detection System
SMART INSPECTION IN SECONDS

Deep learning based defect detection system identifies surface imperfections with speed, reliability and precision

Featuring deep learning technology, the Defect Detection System quickly identifies defective or anomalous parts, helping manufacturers reduce costs and meet consumer quality expectations.

Key Benefits:
- Flexible inspection system combines advanced machine vision with deep learning algorithms
- Surface defect detection distinguishes desired features from anomalies while tolerating natural variations in complex patterns
- Detects defects on glossy, shiny or rough surfaces
- Easy setup and operation with automatic orientation of part for inspection
- Provides precise placement without marring the part surface
- Rapid inspection part programming allows for efficient setup of different part configurations
- Identifies production defects in real-time, enabling adjustment of upstream processes to reduce waste
- Available as a standalone system or as an option on other DWFritz metrology and assembly systems

Key Features:
- High powered GPU image processing system
- High resolution camera with global shutter optimizes field of view and measurement precision
- Custom multispectral lighting and strobe controller
- Custom fixturing and part handling capabilities

High-Definition Inspection Images

SMART INSPECTION IN SECONDS

Defect Detection System

Defective or anomalous parts

Flexible inspection system

Surface defect detection

Detects defects on glossy, shiny or rough surfaces

Easy setup and operation

Provides precise placement

Rapid inspection part programming

Identifies production defects in real-time

Available as a standalone system

DWFritz metrology and assembly systems

High powered GPU image processing system

High resolution camera with global shutter

Custom multispectral lighting and strobe controller

Custom fixturing and part handling capabilities

Defective or anomalous parts detected by system
## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work volume</td>
<td>203 x 135 x 6 mm (L x W x H)</td>
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<tr>
<td>X-axis</td>
<td>600 mm [± 2 µm repeatability]</td>
</tr>
<tr>
<td>Y-axis</td>
<td>220 mm [± 2 µm repeatability]</td>
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<tr>
<td>Z-axis</td>
<td>10 mm [± 2 µm repeatability]</td>
</tr>
<tr>
<td>Theta-axis</td>
<td>∞, 5 µm runout</td>
</tr>
<tr>
<td>Payload</td>
<td>0-5 kg range</td>
</tr>
<tr>
<td>Pitch</td>
<td>180° [± 0.004° positional accuracy]</td>
</tr>
<tr>
<td>Lighting</td>
<td>Custom strobe, bright field, dark field, coaxial</td>
</tr>
<tr>
<td>Camera</td>
<td>5 MP [3.45 µm resolution]</td>
</tr>
<tr>
<td>Electrical service</td>
<td>208-240 VAC 50/60 Hz 15A, 1-Phase</td>
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<tr>
<td>CDA/AIR service</td>
<td>142 l/min [5 CFM] @ 0.55 MPa [80 psi]</td>
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<tr>
<td>System dimensions</td>
<td>112 x 70 x 209 cm (W x D x H)</td>
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<tr>
<td>System weight</td>
<td>725 kg (1600 lbs)</td>
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<tr>
<td>System controllers</td>
<td>High performance industrial PC operator station with touch screen and secondary display screen</td>
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<tr>
<td>Options</td>
<td>Barcode reader</td>
</tr>
</tbody>
</table>

## Key Industries

- Automotive
- Consumer Electronics
- Medical Devices
- Aerospace
- Semiconductors
- Energy Storage