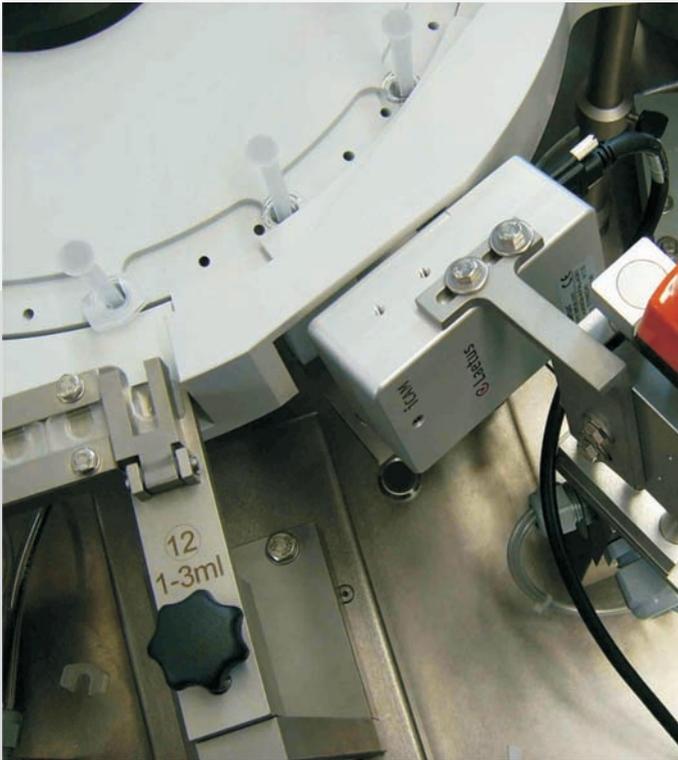


INSPECT wt

Machine Vision of Quality Inspections



The Laetus INSPECT wt multi purpose camera system offers a huge range of software application modules that make INSPECT wt a uniquely flexible web-based camera system, capable of meeting a wide variety of inspection requirements throughout the packaging process.

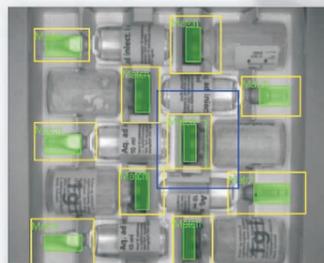
The modular design makes INSPECT wt the solution of choice for all essential control areas, guaranteeing packaging quality and security and efficiently quickly.

INPSECT wt provides various Application Modules to perform a huge range of automatic and 100% quality inspections:

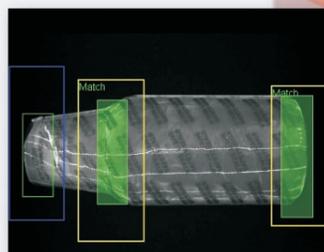
- Large selection of pattern and object integrity inspections
- Alignment inspection i.e. of label positions
- Colour based applications like ampoule colour ring identification or vial flip-off integrity
- Wide range of physical presence inspections
- Fast, accurate and consistent reading of all standard one- and two-dimensional bar codes, including verification of the bar code print quality
- Highly reliable for plain text recognition and reading of various fonts regardless of the background-design
- Flexible mix of Application Modules to solve complex requirements
- Controlled operator access to system parameters allows easy system adjustment
- Application tracking software to adjust the camera inspection area to various object positions and rotational positions



Rotation tolerant print inspection and incremental number check



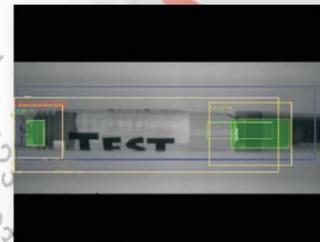
Inspection of trays and boxes with mixed content of vials, ampoules or syringes. The inspection verifies product integrity (defects), product identity (colour rings) and product presence, including the label



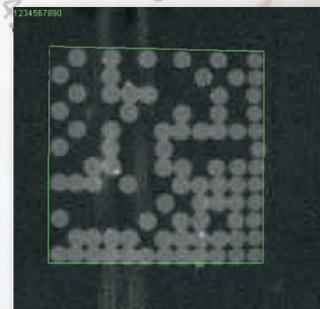
Checks the sleeve for presence, correct position and integrity (defects)



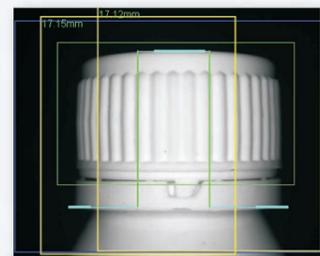
Label alignment inspection, including verification of bar code and human readable text



Inspection of filling level indicator position on syringes



UV Data Matrix code on glass ampoules



Cap presence and position inspection



Track & Trace application with verification of GS1-Data Matrix and human readable text consistency (same data content), with additional Data Matrix quality inspection in accordance to ISO 15415



Application Module	Feature Description
Bar Code	<p>Omni-directional reading of normal or inversely printed bar code. Total or partial content match function.</p> <p>Compatible to GS1 (EAN-UCC) data structures (Data Matrix, GS1 DataBar).</p> <p>ISO related verifier mode to check the bar code print quality in accordance with ISO standards ISO / IEC 15415 (2D-Code) and ISO / IEC 15416 (1D-Code).</p> <p>Reads EAN / UPC, Code 39, Code 32, 2/5 Interleaved, Code 128, Code 93, Codabar, GS1 DataBar, PDF 417, Data Matrix ECC 0...140, Data Matrix ECC200, GS1-Data Matrix, 2D-Pharmacode, QR Code, Composite Symbology (GS1).</p>
PHARMA-CODE™	<p>Code conforms to Laetus specification (PHARMA-CODE Guide from 1997) and additional adjustable sizes like Micro Code.</p> <p>Min. 2 bars, max. 16 bars, direction sensitive decoding standard / reverse, quiet zone check (adjustable quiet zone), omni-directional reading with adjustable rotation angle 0...180, partial read mode (horizontal / vertical only).</p>
OCV/OCR	<p>Font based OCR reader, OCV modus for an easy to operate show and go mode. Auto character / auto line segmentation, multi character reference, multi font support.</p> <p>Within OCR modus all decoded characters are checked against all trained characters for best matching.</p>
Consistency Check	Checks results of different applications for matching results (i.e. bar code, OCR).
Pattern Matching	Checks objects against a pattern / against a taught reference. Horizontal or vertical matching. The match score is based on the grey value or colour model of the pattern.
Grid Integrity	<p>Checks objects placed within a grid against the taught reference. The pixels inside each grid cell are compared against the reference by an algorithm, which determines the main grey values or colour.</p> <p>Adjustable grid structure (column / row cell number), adjustable cell acceptance.</p>
Alignment Check	Checks objects against a taught reference. The module operates with a full 360°-view and includes adjustable position and rotation tolerances. The match score is based on a contrast model of the object.
Distance Measurement	Checks object by measuring of based distances towards the edge. Single edge position check. Adjustable edge detection algorithm (direction, area, contrast, shape). Adjustable distance or position tolerances.
Colour Analysis	Checks objects for colour features like colour type, colour area, colour object alignment (sequence).
Application Tracker	Pattern based x / y and rotation sensitive tracker to adapt the application window position.

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