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FRAUNHOFER INSTITUTE OF OPTRONICS, SYSTEM TECHNOLOGIES AND IMAGE EXPLOITATION IOSB



VisioChrom HR

Inspection of pharmaceutical Products

**Fraunhofer Institute of Optronics,
System Technologies and Image
Exploitation IOSB**

Fraunhoferstraße 1
76131 Karlsruhe

Contact
Visual Inspection Systems

Dipl.-Ing. Michael Palmer
Phone +49 721 6091 376
michael.palmer@iosb.fraunhofer.de

www.iosb.fraunhofer.de

VisioChrom HR is an innovative and versatile inspection system for pharmaceutical products packaged in blister packs. It is used to ensure that no faulty products are shipped and is able to detect:

- Shape errors, color errors, mix-ups,
- Breakages, incorrect quantities
- Incorrect products, crumbs, packaging errors, etc.

The system meets the high quality requirements of the pharmaceutical industry as well as meeting the most demanding GMP requirements thanks to the entirely closed design of the system.

Areas of Application

The VisioChrom HR system was designed for inspection of a wide variety of pharmaceutical products, including:

- Tablets, sugar-coated pills,
- Oblongs, capsules and powders.

By means of optimized image capture and special illumination developed by the Fraunhofer IOSB, the VisioChrom HR is capable of performing inspection tasks that were previously impossible.

Amongst other things, it is able to recognize gray products packed in aluminum foil. The inspection of closed blister packs has also posed serious problems in the past due to the reflections from the packaging, a challenge that VisioChrom HR has successfully mastered.



Innovations

In addition to the technical benefits, **VisioChrom HR** is also the first system to offer a modular and intuitive teach-in process. Instead of providing a blister model with specific product characteristics, the teach-in process offers a number of methods to create a blister model. The user friendly software is all controllable via the touch screen.

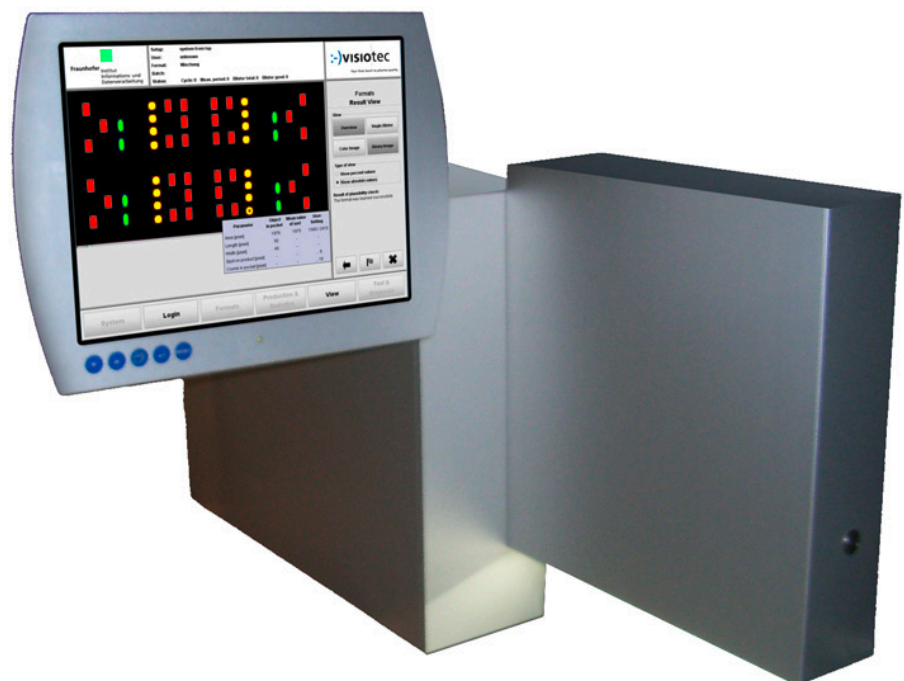
The LED illumination system is almost maintenance-free. The software runs on an embedded operating system, meaning that it is not susceptible to power outages. The system is very secure, since changes to the operating system can only be made by technical staff, who are backed up by a tailor-made service system, which provides support when making changes.

The system is 21 CFR Part 11 compliant. All of the relevant user inputs are saved in a database for several years, can be accessed at any time, and allow the individual responsible for them to be identified. Over and above this, all of the products learned by the system are also saved in the database.

System Components

The image below shows the most up-to-date version of the **VisioChrom HR** system. The compact overall system consists of the central processing unit, the image capture unit and the display unit. The system can be controlled remotely from any authorized computer connected to the same network.

The latency period of the remote control is so minimal that there is no perceptible difference between remote control and local control, meaning that no display unit is required.



Technical Specifications

Smallest detectable error:
Approximately one pixel

Camera resolution: RGB line-scan
camera – 3 lines x 2098 pixels

Material speed: 1.4 m/s

Resolution: 150 μ m

Processing speed: 2000 items per cycle at
60 cycles/min

Illumination: LED illumination

Machine type: Cyclic and continuous
machines (all manufacturers)