VisioChrom HR
Inspection of pharmaceutical Products

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 µm
- **Processing speed:** 2000 items per cycle at 60 cycles/min
- **Illumination:** LED illumination
- **Machine type:** Cyclic and continuous machines (all manufacturers)