VA350 COLORVISION

**VA350 COLORVISION
compact, flexible and productive
vision system.**

VA350 COLORVISION is a flexible
and efficient colour quality
inspection system for pharmaceu-
tical quality inspection. With expe-
rience from machine producers with
more than 2000 installations in the
pharmaceutical industry and with
analysis and implementation of
many requirements from customers
VA350 proves to be a qualified and
solid vision system.

VA350 COLORVISION characteristics:
- Options for intermittant and continuous production.
- Unrestricted formats.
- Fill and breakage inspection of tablets, dragées, capsules, gelatine products in various shapes, ampoules, colour code rings, syringes and labels in different foils:
  transparent, opal, dyed
  aluminium foils
- Reliable operation through many methods of measurement.
- Comprehensive collection of statistics for each blister.
- Mountable on almost all blister machines.
- Simple display of symbols on monitor for measurement results,
  green = ok, red = error.

Pharmaceutical security.
- Possible to validate.
- Protection of set-up and inspection data with key lock.
- Detection of serial errors.
- Possible to enter production and product data.
- Statistics for the pharmaceutical filling protocol.
- Continuously running system check routines and unbreakable output signals.
- Quality guarantee through complete inspection.
- Detection of empty blisters for separate rejection.
- CIM integration possibility.

System components.
A typical VA350 COLORVISION system consists of the following items:
- Vision computer.
- CCD camera.
- Colour monitor - VGA.
- Trackball.
- Light for transillumination or
- Light for overhead light.
- Read/write unit for saving on external memory card.
- Mechanical components.

VA350 COLORVISION is easy to integrate.
VA350 is a vision system, which can easily be adapted to different configurations.
- It can work as an independent inspection system.
- It can be integrated with different shift registers:
  - MSR
  - Lässle-SR
  - Integrated shift registers
  - Or own internal shift register (option).
- It can be integrated with existing control systems e.g. PACCONTROL.
- It can interface with a host-computer system.

VA350 COLORVISION is fast.
- VA350 can inspect up to 28.000 products/minute
- Machine speed up to 70 strokes/minute. Even faster in case of smaller formats.

VA350 COLORVISION is user friendly.

All adjustments are easily made and without problems by using trackball and monitor with simple and clear menus.

- Simple functions for saving/retrieving set-ups.
- Easy functions for handling foreign languages. Danish, English and German are standard languages; further languages are recorded from memory card or host.
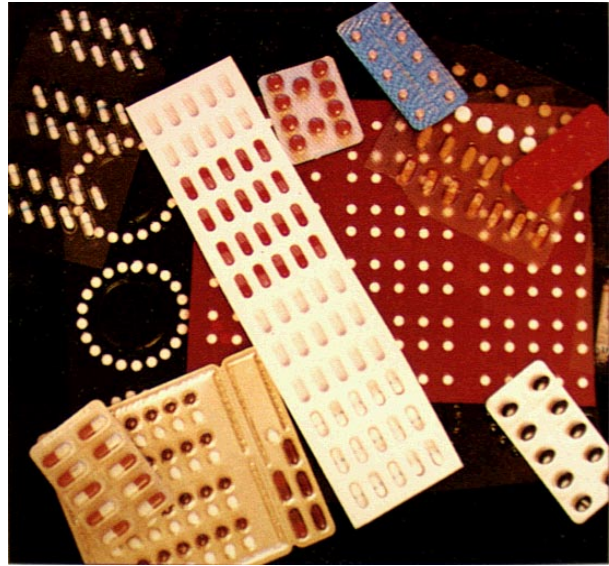
VA350 COLORVISION is comprehensive.

- Illumination measurement for inspection of variations in illumination.
- Measurering of reference points for compensation of inaccuracies in product feed.
- Measuring windows for inspection of special product qualities.
- Tool box with filter functions.
- Measuring methods:
  - Up to 16 colours per blister.
  - Handling of multicoloured products
  - Colour measurement via HSI or RGB
  - Calculation of size on the basis of grey tones.
  - Definition of position in x and y direction.
  - Definition of circumference.
  - Definition of dimension.
  - Check for extra products outside the blister holes.
- Automatic tolerance recommendations for all parametres - e.g. limit recommendations.
- Real-time clock including date.
- Protocol of all settings and all produced measuring results (used for validation purposes).
- Diagnostic functions:
  - RGB line-level display of image contents.
  - Histogram display.
  - Display of all inspection results.
  - Display of inspection speed.
  - Run-time display of reject reason.

VA350 COLORVISION has many applications.

VA350 vision system is very flexible and is used also outside the pharmaceutical industry:

Advantages.

- 100% product inspection.
- Rise in product quality and productivity.
- Production statistics.
- Reduction in product handling and sorting,thus reducing wage costs.
- Minimal operator training time.

Technical data.

- VA350 PACVISION uses up to 2 high-resolution shuttered CCD cameras.

- 32 bit microprocessor.

- Image resolution from 512 x 256 pixels to 1024 x 1024 pixels standard.

- Up to 400 products per inspection.

- Up to 24 blisters per machine feed.

- 8 inputs
  - Trigger inputs.
  - Key input.

- 24 outputs
  - Result outputs for OK-blisters.
  - Valid synchronization signals.
  - Signal for empty blisters.
  - Consecutive errors signal.
  - System control signal.

- Optional up to 64 in- and outputs.

- Serial data channels RS-232
  - Trackball.
  - Read/write unit for memory card.
  - Printer.
  - PC, PLC, Host computer.