



Pharma

COMPLETE SERIES OF AUTOMATIC
VISUAL INSPECTION MACHINES FOR
PHARMA AND MEDICAL SECTORS

UTP VISION
VISUAL INSPECTION



ALUMINIUM CAPS



SPRAY VALVES



STOPPERS



PLUNGERS



NEEDLE SHIELDS



LINUX



DATABASE
INTEGRATION



STATISTICS
REPORTS



PATENTED
COLOR VISION



ARTIFICIAL
INTELLIGENCE

Pharma

Pharma is a complete series of visual inspection systems for pharma and medical applications: aluminium caps, spray valves, plungers, stoppers and needle shields. The range is composed by three models: **Pharma**, **Pharma Cap** and **Pharma Valve** with different fields of view according to their applications.

The hermetic seal and the non-contamination are determining factors for all those components that come into contact with pharma/medical contents. UTPVision's defects inspection technology is the most efficient the market can offer and for this reason our artificial vision systems have been part of the industry for several years.

Pharma is the latest evolution of our visual inspection technology and it's designed specifically for dimensional and surface control of pharmaceutical and medical packaging components in rubber, aluminium and plastic.

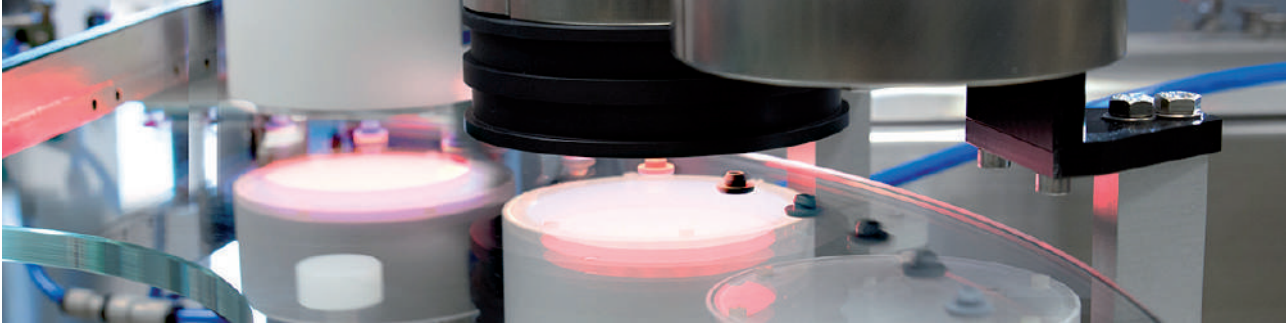
TELECENTRIC STATION

Independent measurement sensor for dimensional control pieces, with the following characteristics:

- Progressive scan high resolution B/W camera
- Nearly zero distortion bi-telecentric lenses
- Dedicated lighting system

Related control program features

- Measurement of the inner/outer diameter
- Measurements of general lengths, angles, radii
- Flash defects inspection
- Nicks defects inspection
- Roundness inspection



CONTROL SOFTWARE

The software for analysis and control of components with complex shapes allow the recognition of planar rotation of the pieces. It also recognizes the top and bottom sides and independently processes the image of the piece regardless of load position.

Control program

- Irregular profiles identification and related control with reference to the sample profile
- Control of the maximum and minimum height of holes and flash on linear and curvilinear profiles
- Definition of multiple calipers and control of their dimensions
- Simultaneous analysis of surface defectiveness in many inspection areas

CONTROL DEVICE OF THE EXTERNAL AND INTERNAL SURFACE

This system consists of two stations (**internal side and external side**) with each 6 progressive 2 Mpixel color scan cameras, with framing of the outside and inside of the piece. Each camera has a very low distortion lens. In addition, the system is characterized by 2 levels of colored LED lighting arranged above and below the piece. The system allows to optimize the illumination of the piece thanks to the **independent regulation** of the illuminators with pulsed light. The control program allows you to detect defects on the external and internal edge of a piece and anomalies related to the mold closure and production defects that frequently occur in that area.

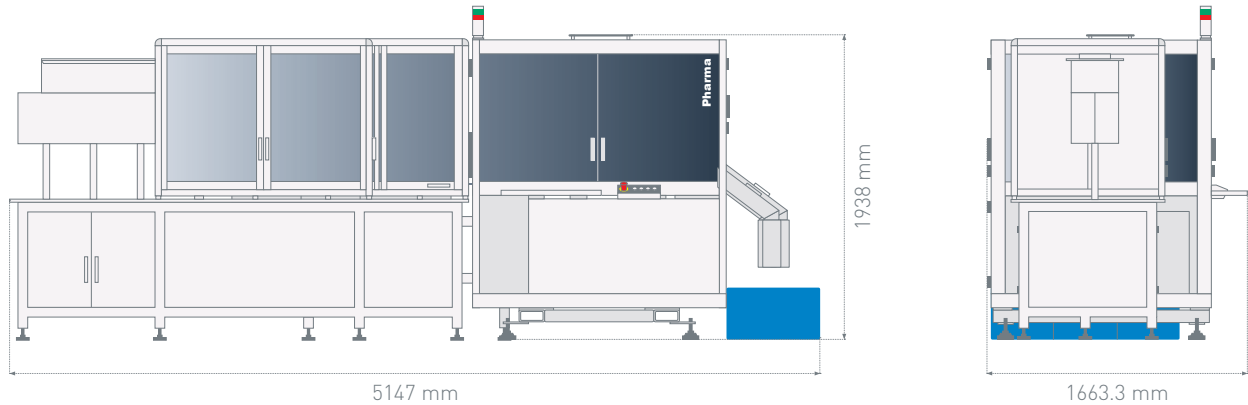
Other features:

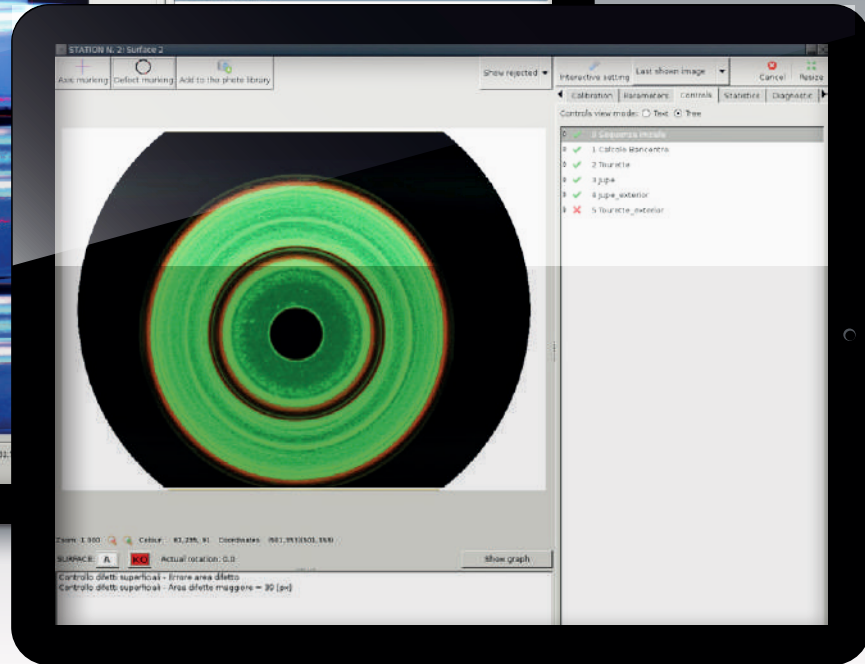
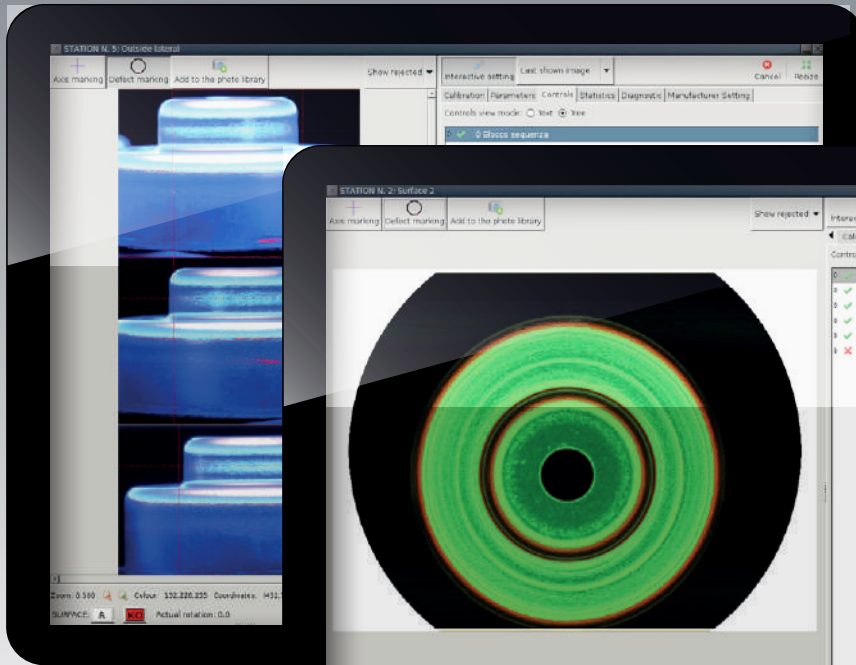
- VIM designed for **clean room** installation
- Closed system with filter unit to provide the best cleanliness
- Possibility of metal detector device



ILLUMINATION

- Digital regulation of bright intensity for inside and outside surfaces
- Possibility to control piece with reflecting surface
- Good precision of dimensional and surface controls
- No decadence of bright intensity







TECHNICAL SPECIFICATIONS

MAIN FEATURES

Type of piece	aluminium caps, spray valves, plungers, stoppers and needle shields
Material	rubber, metal, plastic
Min. outside diameter (mm)	3
Max. outside diameter (mm)	35
Min. thickness (mm)	0.9
Max. thickness (mm)	22
Control speed	up to 13 pc/sec

CONTROL FLATNESS

Max. thickness (mm)	22
Resolution (mm/px)	0.003
Accuracy ($\pm 3\sigma$)	± 0.06

CONTROL OF DIMENSIONS

Max. dimension (mm)	35
Accuracy ($\pm 3\sigma$)	± 0.005

CONTROL TOP AND BOTTOM SURFACE

Max. dimension (mm)	20	35
Resolution (mm/px)	0.028	0.035
Minimum size detectable defect	0.040 x 0.040	0.070 x 0.070

CONTROL PERIPHERAL SURFACES

Max. dimension (mm)	up to 35
Resolution (mm/px)	0.020
Minimum size detectable defect	0.06 x 0.06

The technical data and images contained herein are indicative only. UTPVision reserves the right to modify its products at any time without prior notice.



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