



Loring X

Visual inspection equipment for dimensional and surface defects control



LoringX

Visual inspection equipment for dimensional and of the surface defects control

LoringX is a manual machine for visual inspection, dimensional and surface control for big size O-Rings. The range of dimension is for O-Rings with minimum Inside Diameter of 200 mm with no limitation for the maximum. LoringX is an advanced product of UTPVision and is able to control all the surfaces of the workpiece using the optical inspection combined to the best piece positioning under the cameras.

The equipment is controlled by a PC managed by an operating system Real-Time that make both the elaborations on the images and the interaction with the operator through simple and intuitive windows interface.

The system Real-Time offers a good stability to the system and extremely elevated control speed.

The images are captured by digital industrial cameras and are transferred, without losses or interferences to the PC.

The loading system to delivers the pieces to check is manual as well as the parts download after the control operations.

We can installed a marking system to engrave codes or characters directly on the surface of the parts.

Operational Characteristics

After the capture of images and the following elaboration the pieces have to be manually downloaded.

You can view real time statistics and all production times, the number and the type of defects, it is possible to save the production reports with graphics and statistic data and integrate them on the management system for subsequent processing. The statistic software elaborates the data and calculates the values of production capability (CPK), furnishing a feed-back on the production parameters.

Machine downtime is kept to a minimum by:

- Storing of all configuration parameters
- Automatic positioning of optics
- Automatic positioning of mechanical devices
- Easy cleaning of the machine and the loader.

Illumination

Illumination is multiple crown flash led:

- Digital regulation of the bright intensity for inside and outside surfaces.
- Possibility to control piece reflection
- Good precision of dimensional and surface control
- No decadence of the bright intensity

Dimensional sensor

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

- High resolution camera
- Dedicated lighting system

Control Program:

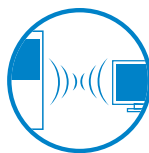
- Measurement of the inner/outer diameter
- Measurement of the radial cross section

Control device of whole surface

This system consists in 4 color cameras and two levels of color led lighting placed at 90° around the piece. Allows you to detect defectiveness on 100% of the surface of pieces, anomalies related to the closed of the mould and production defects that frequently are locate in that area. The control program allows to regulate the different crowns of led in order to optimize the illumination of the component. Can be defined several independent control areas.



LINUX



REMOTE MANAGEMENT



ALARM MANAGEMENT



DATABASE INTEGRATION



STATISTICS AND REPORTS

General characteristics	
Seal	O-Rings
Material	rubber
Colors	any color
Min. outside diameter	250 mm
Max. outside diameter	(no limit)
Thickness field 1	2.5 mm
Thickness field 2	12 mm
Cycle time	30" per 1000 mm OD

Surface COLOR SENSOR: top, bottom and lateral

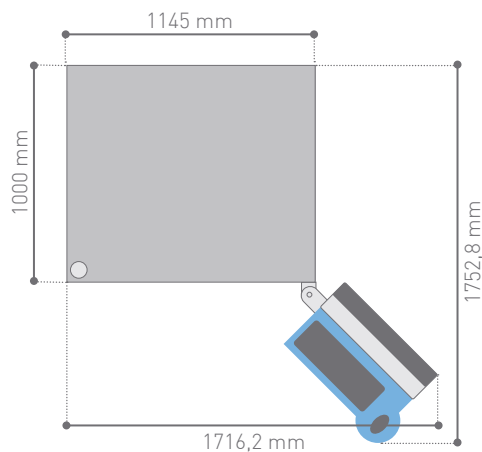
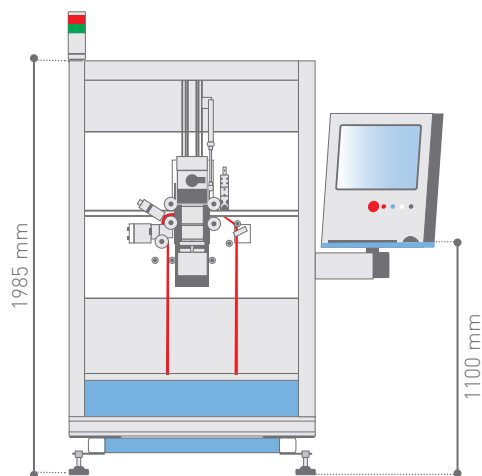
Pixel resolution:	0,045 mm
Min size of defect (with a tone difference at least 30 points in adjacency)	0,135X0,135 mm 0,12X0,12 mm

Dimensional SENSOR FOR DIAMETRICAL CONTROL

Resolution	0.001 mm
Accuracy	±0.1% de diametro

Dimensional SENSOR FOR CROSS SECTION CONTROL

Field of view	28 mm
Max. CS	12 mm
Resolution	0.001
Accuracy	±0.012 mm



Headquarter

via Tonale 9
24061 Albano S.Alessandro (BG) Italy
phone +39 035 4521465
fax +39 035 4521082

skype: utpvision
info@utpvision.it
www.utpvision.it