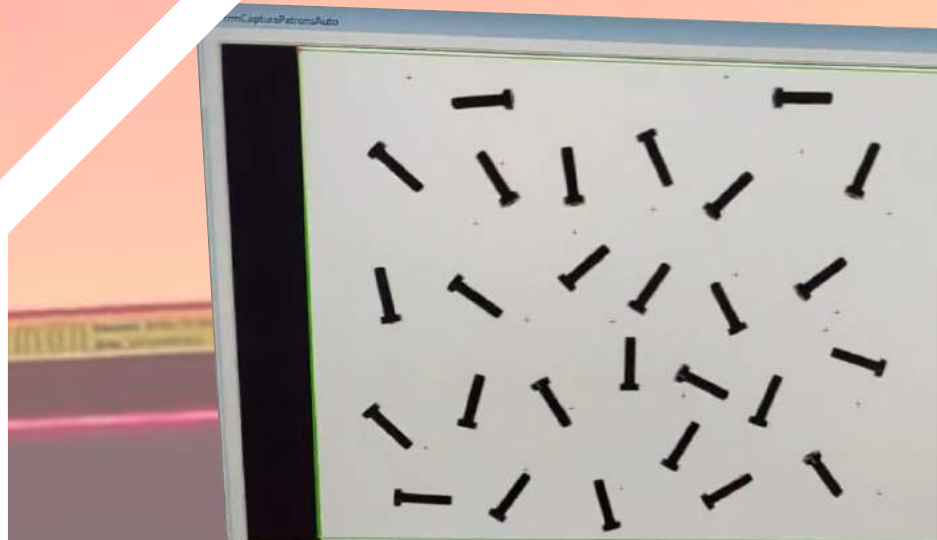


Quality control by artificial vision

COPIV-1

images analysis by image captures



Quality control process

Artificial vision technology is a type of artificial intelligence (AI) that detects, processes and projects images of the real world in the computer. This technology allows us to detect objects giving inputs of the characteristics of the object and then to search for objects with these characteristics.

MCR are specialists in artificial vision systems for quality control and inspection of components. For this purpose, we design systems that recognise patterns and shapes, detect defects and analyse colour. We are committed to the use of new technologies and advanced techniques based on artificial intelligence systems.

Propierties

- To be able to examine products manufactured one by one in real time, without having to slow down the lines.
- Avoiding physical contact with the product during verification.
- Guaranteeing that all the products are within acceptable quality margins.
- To remove any non-compliant product from the line.
- Avoid customer complaints and returns.
- Optimize human resources.



General Info			
NAPOLITANA CREMA RAPID			
Date Interval	30 min		
Line Speed:	10,0 mts/min		
	Ok	Warning	Error
Total Pcs	47885	380	2553
Shift Pcs	47885	380	2532
	Interval	Hour	Shift
Box X Hour	542	560	546
Pcs X Hour	45.538	46.998	45.874

Counters			
	Ok	Warning	Error
Height	22298	29	41
Width	22237	34	97
Lenght	22334	26	8
Total	22133	89	146

Statistics			
	Min	Mean	Max
Height	1,70	1,70	1,98
Width	4,50	4,50	4,70
Lenght	10,00	10,00	10,50

We carry out complete integration of vision systems for made to measure applications at all levels (electrical, mechanical, programming, customised software, etc.). With our know-how regarding the incorporation of artificial vision, we will help you increase productivity in your business, optimize the resources of your installations, reduce manufacturing costs, avoid human errors and increase the final quality of your product.

We carry out a rigorous prior examination of the application we are going to develop, the lighting conditions and all the factors that may affect the development of the solution in order to decide which is the best system to implement.



MCR has developed two different systems with artificial intelligence technology, which together with MCR's proprietary software can control the traceability of components. These equipments can be customised according to the customer's needs by offering also options of accessories for rejecting and grouping for packaging.

By laser

SIQ-C equipment carries out quality control on a production line with artificial vision by laser, executing 3D scanning and thus detecting and counting the correct and incorrect components .

By image analysis

COPIV-1 equipment carries out quality control of components by artificial vision using a camera that periodically captures images and those are regularly sent to a computer, which with the MCR application, processes them, detecting, counting the correct and incorrect components and/or validating the batch for packaging.

BY IMAGE ANALYSIS COPIV-1

Introduction



By means of an artificial vision camera system, correctly calibrated and adjusted, the equipment's software calculates the results using patterns for processing the captured images and establishing whether the parts are correct or incorrect.



Food



Chemical



Aeronautical



Industrial



Textile

Advantages

1. Reliability

The equipment has a calibration system with standards to adjust the ranges.

3. Report personalization

We can personalise and generate any sort of report the customer considers necessary.

2. Information management

The Fastness COPIV-1 equipment has powerful software for analysing the images, as well as communicating with the server in information exchange for drawing up dossiers or required information and for batch traceability.

4. Additional systems can be added as options

The equipment is prepared to add systems for rejecting faulty parts as well as a system to prepare the bagging and boxing.



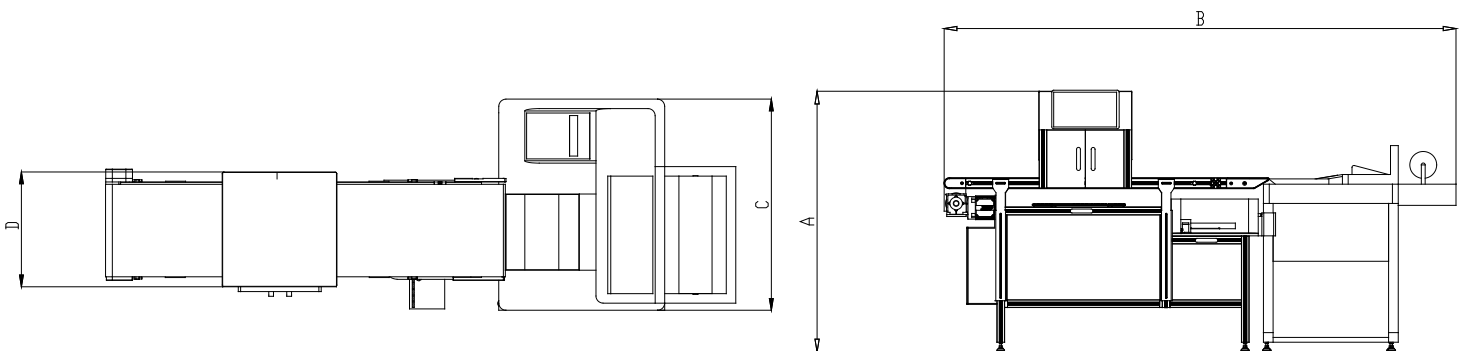
Operation

By means of an artificial vision system with a camera, correctly calibrated and adjusted, and an optimised light source to view the components, the software of the equipment calculates results using patterns for processing images captured and establishing if the components are correct or incorrect corresponding to the batch to prepare for subsequent automatic or manual bagging. The batch in preparation can be external sent by a computer to COPIV-1 automatically or manually, by reading from a sheet of paper.

All MCR equipment is manufactured with top quality materials and components as well as holding certificates for food and chemical processing (AISI 304 or AISI 316) stainless steel, electronic components made by leading manufacturers.

It is robust and compact equipment, easy to use. It is also possible to add different accessories for picking, rejection systems, bagging and packing.

Technical Specification



COPIV-1 Quality control system using artificial vision

Model	A	B	C	D	Productivity	Installed elec. power
COPIV-1	1350	2200	890	480	Customisable	0,75 kW

Dimensions in mm

Industrial automation is a global trend that is necessary to be more competitive. MCR is qualified to accompany you on this path, to make your company more competitive using Industry 4.0 and the cutting-edge technology of the moment.

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MCR's continuous improvement may result in changes to machinery specifications without notice. Technical data are purely as an indication. MCR reserves the right to modify them without notice.

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