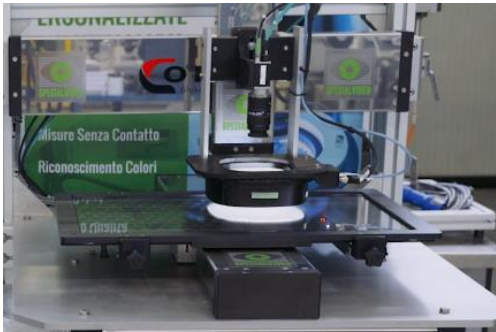




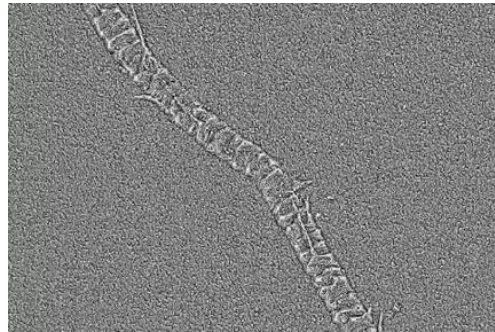
## SURFACE ENGRAVING AND RELIEF CONTROL SYSTEM

## MAIN ADVANTAGES



### ✓ Efficiency

Improve efficiency by identifying and correcting defects and **reducing downtime**



### ✓ Quality control

ensures constant identification of defects, maintains product integrity, **meets the highest quality standards**



### ✓ Savings

**identifies defects early** and minimizes the risk of defective products reaching the market

## AUTOMATED MULTIFUNCTIONAL COUNTER

System composed of:

- Cartesian manipulator
- fixed wide-field camera
- high-resolution narrow-field mobile camera
- mobile multi-band sector lighting system
- PC with Specialvideo software
- electrical panel with drives and controllers

## SURFACE ENGRAVING AND RELIEF CONTROL SYSTEM

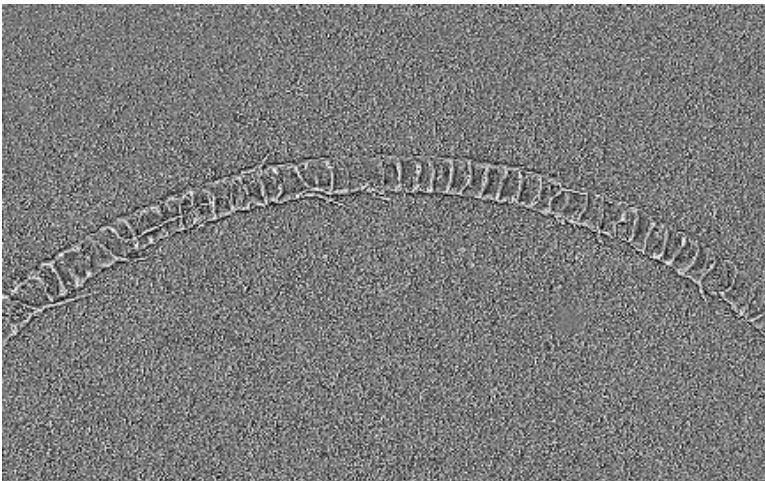
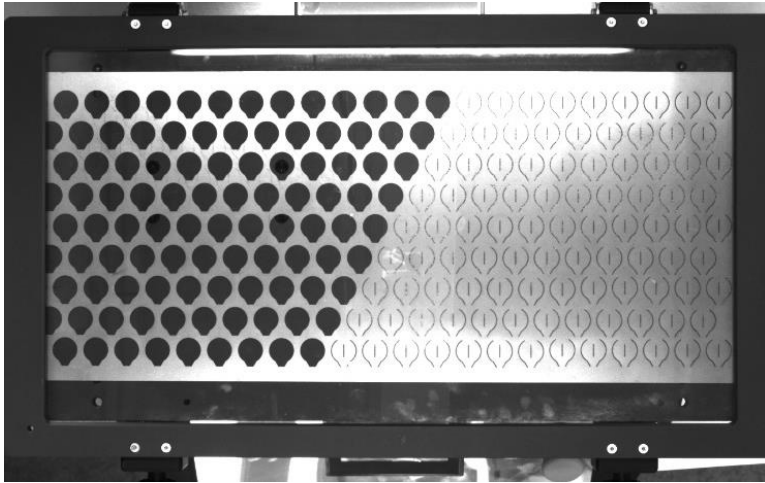
The vision system **automatically locates** the sub-parts of the sample to be analysed , moves the camera with multi-band sector illuminator over each of them , and performs quality control of the **detail at very high resolution** .

The system is suitable for both matte and glossy products, metallic or other materials, screen-printed and non- screen-printed surfaces.

Collaborative mode for “lab” use or with maximized performance for “online” use.

# SYSTEM LAYOUT





## SYSTEM OVERVIEW

### KEY FEATURES AND FUNCTIONALITY

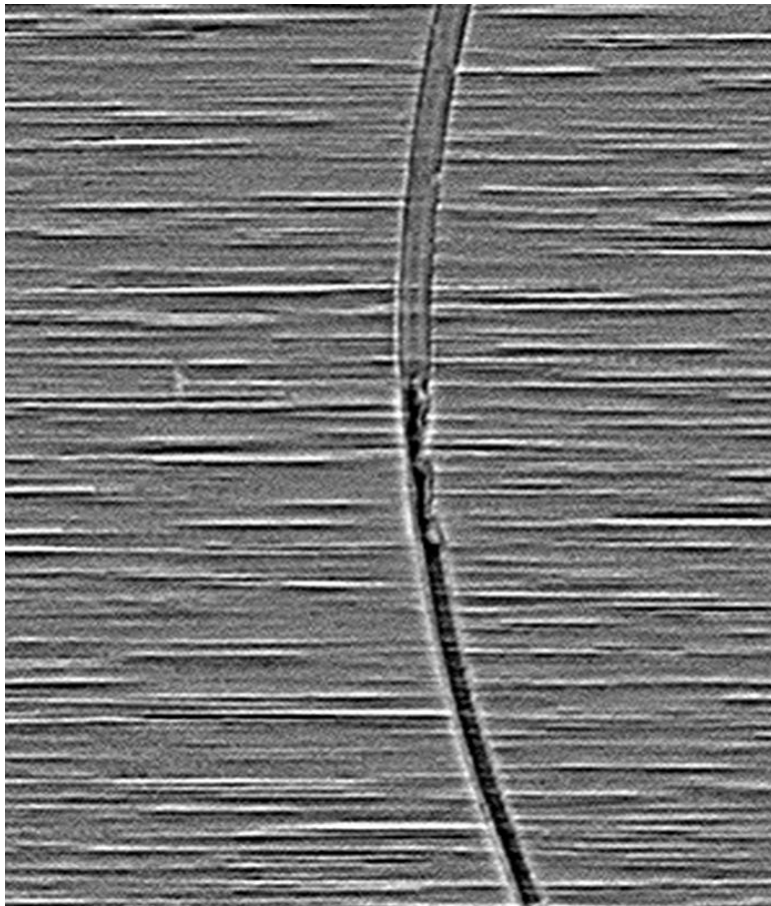
The system is able to perform the following checks:

- ✓ Presence/absence and/or dimensional conformity of surface engravings/reliefs
- ✓ Presence of surface defects such as scratches, dents, etc.
- ✓ Screen printing quality control
- ✓ Matching the expected model

The system can also:

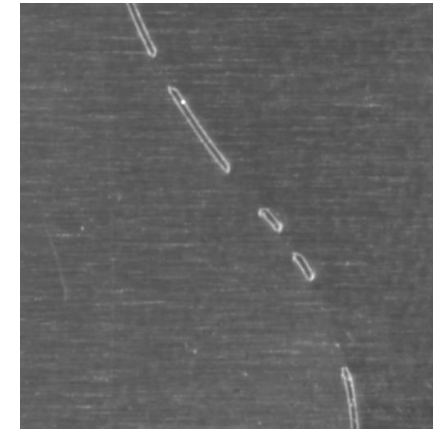
- ✓ activate alarms in case of rejection
- ✓ generate reports, statistics
- ✓ Maintain an image archive on the company network.

# DEFECT DETECTION



## CONTROL OF ENGRAVINGS AND RELIEFS

Detection of gaps, interruptions, and anomalies in the measurement of thickness and depth of through and non-through incisions



## SCREEN PRINTING QUALITY CONTROL

Printing errors, pattern matching, color registration

## PRESENCE OF SURFACE DEFECTS

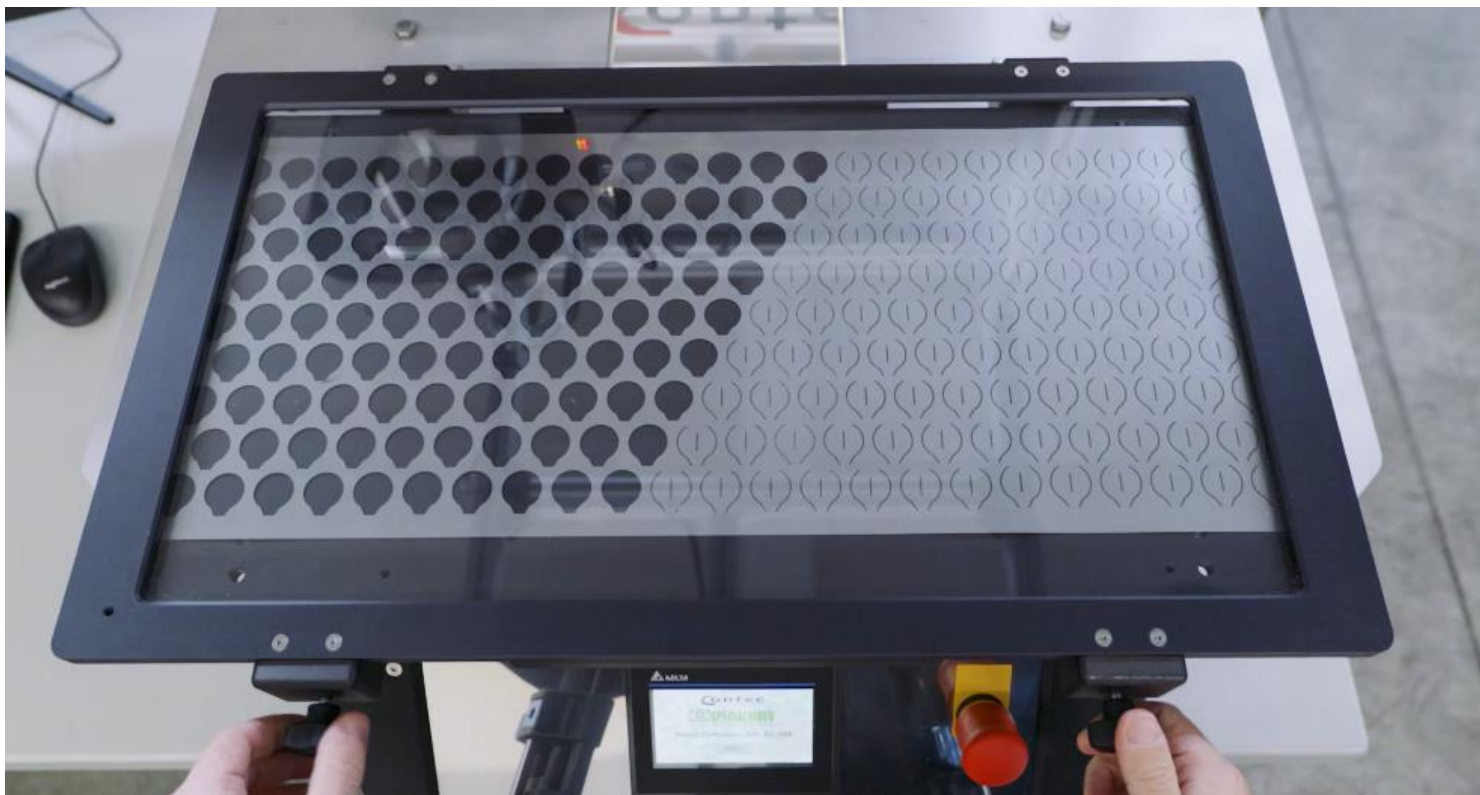
Locating scratches, dents, etc.

## TECHNICAL SPECIFICATIONS

Specifications	Value
Low speed for "laboratory" applications	50mm/sec
High speed for "inline" applications	500mm/s
Maximum product size	500x300 mm
Control field of view	45x45mm
Resolution	0.01mm/px
Minimum detectable engraving/relief width	0.05 mm
Product appearance	Metallic or silkscreened surface of any color
Lighting of your choice	Visible or IR, diffuse or grazing
Machine dimensions	900x1000 x H1500 mm

# PRODUCT TIGHTENING

The counter is equipped with a manually (or optionally automatically) closing door that allows the product to be clamped and kept flat on the support surface, correcting any creases present, for example when the product is a partially cut metal sheet.





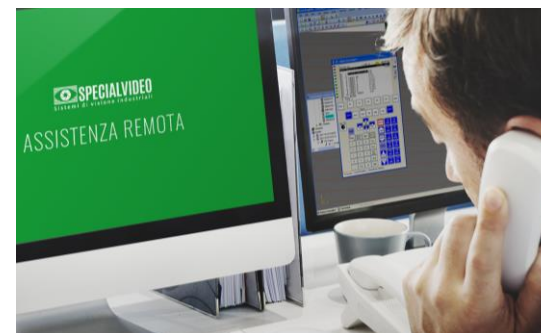
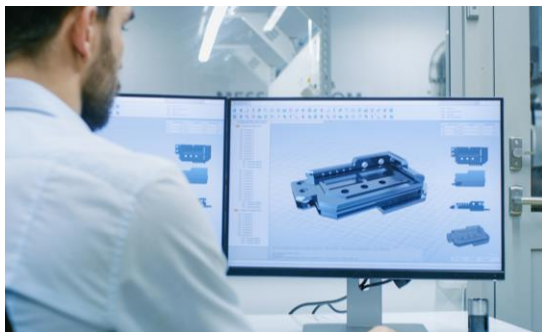
## TRACKING DATA AND STATISTICS

The vision system is able to **record counts and statistics useful in the context of Industry 4.0**

We can integrate the system into the plant network, providing and receiving machine vision data useful for the customer's specific production tracking needs.

Possibility of inserting a manual barcode reader to read the product ID code

## SERVICES



### ✓ Design

Hardware selection and configuration.  
Vision software design and development.

### ✓ Testing

Testing at Specialvideo.  
Commissioning and testing at the customer's premises.

### ✓ Assistance

Remote assistance included for the entire warranty period.  
On-site interventions with specialized technicians.  
We are structured to serve our clients all over the world.

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