

A NEW AGE IN QUALITY CONTROL

RA VISION

Bobbins Quality Inspection

THEMA SYSTEM

www.themasystem.com



Ra Vision is an instrument for the first visual control of the yarn bobbins produced into the spinning process (extrusion and take-up winders) to identify possible problems such as: broken filaments, curls, loops, single cross yarn traverse, loose tubes, damaged bobbins, irregular shapes, wasted yarns mix, color differences within the same bobbin, stains and possible lack of the transfer tail...

This new tool can be installed directly on the automatic sorting system and sorting lines equipped with conveyor belt, or other solutions, which move the spinning bobbins to the packaging system and the warehouse.

The interface with the PLC for automation management can take place through the computer network or with the assistance of simple digital exchanges. The instrument carries out the whole series of checks, automatically classifying the bobbins by quality, based on the percentage and type of defects detected.

All the detected parameters, in addition of being stored on the instrument PC, can be transmitted by a computer network (wireless or Ethernet cable) to the company management system and shared on a common DB for a complete traceability of the quality control performed and a consequent correct production management.

Bobbin Analysis Time

3 cameras	60 sec
5 cameras	30 sec
9 cameras	15 sec

Other times available on request and based on used technologies

Working Conditions

Temperatures	10/40 °C
Umidity	90% (no condensation)

Bobbins Specifications

Tubes lenght	150 - 200 mm
Tubes diameter	120 - 140 mm
Bobbins diameter	180 - 440 mm

Other measures available on request and based on used technologies

Electrical Characteristics

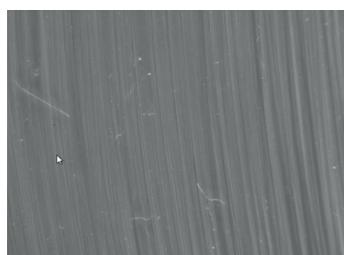
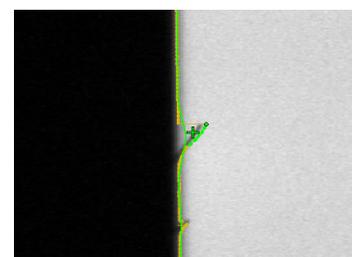
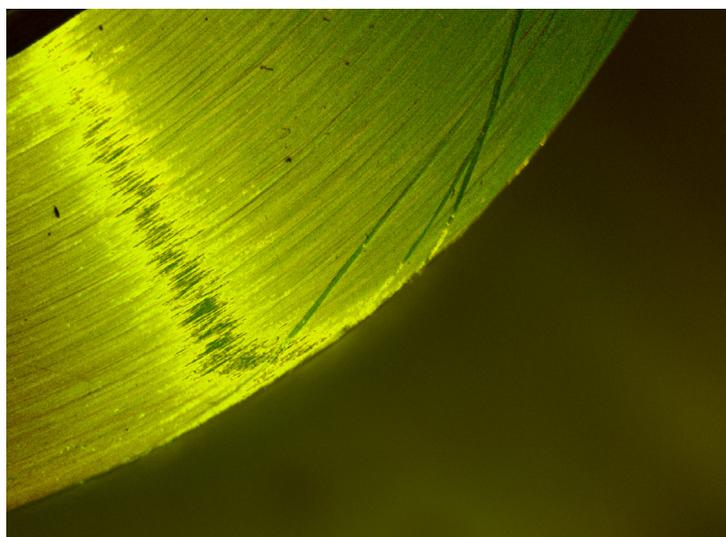
Nominal tension	380 Vac
Max. power	1 kWatt
Connection	3Ph + PE
Frequency	50 / 60 Hz
IP	IP54
Communication port	Ethernet

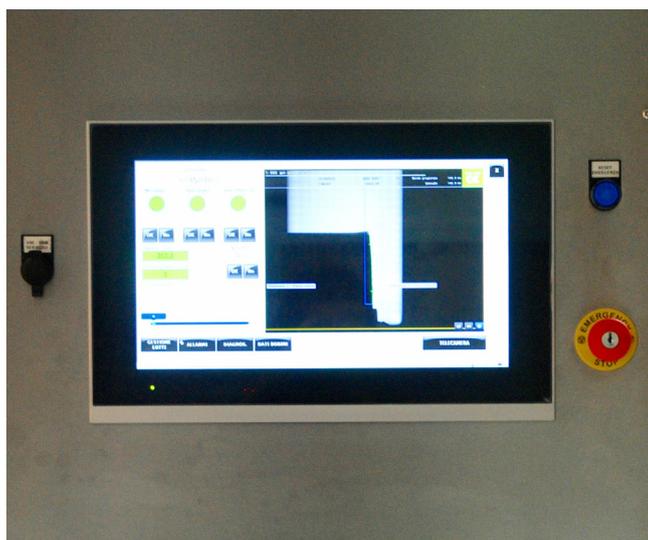
Mechanical Characteristics

Dimensions L x H x P	650 x 1930 x 1800 mm
Weight	390 kg
Paint on metal parts	Suitable for yarn finishing oil

SKILLS

- count of broken filaments on the entire vertical face of the bobbin: protruding at least 2 mm
- check the presence / absence of tails
- measure of diameter
- create personalized lots
- create a database with results
- work autonomously synchronized with the quality control department h24 d365
- count crushed broken filaments < 2mm
- discrimination between broken filaments and spiral effect
- check single cross yarn traverse





INDUSTRIAL PC

Main Characteristics

Operating system	Microsoft
Database	Microsoft SQL
Display	15.6 inch wide LCD TFT 16:9 HD
Touch-screen	✓
	Suitable for yarn finishing oil
Wi-fi	✓
Ethernet	✓
USB	✓



IN-LINE AUTOMATIC ROTATION SYSTEM

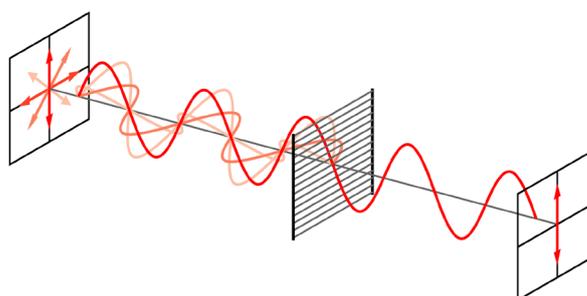
Main Characteristics

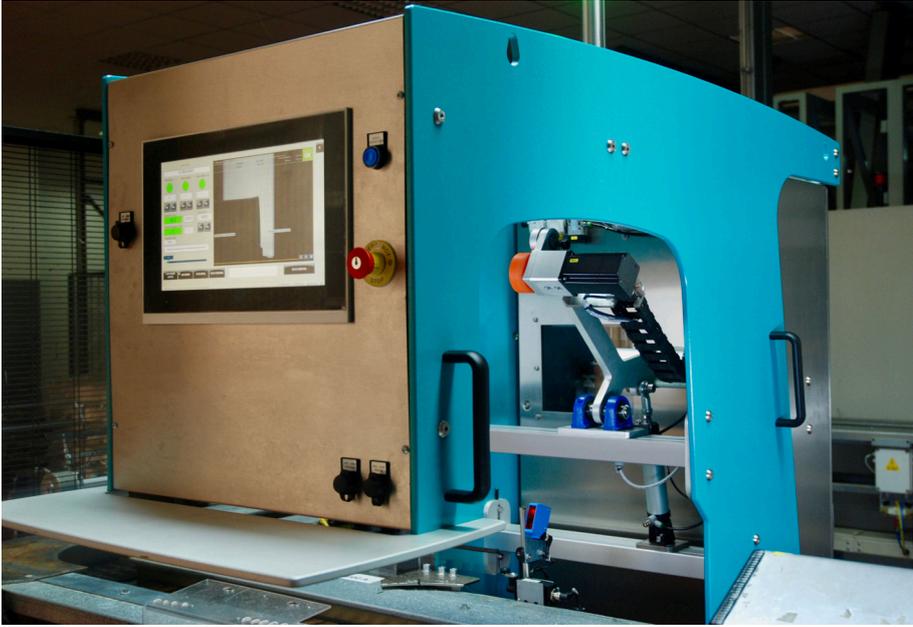
Motor	Brushless precision angular positioner powered by a numerical control system
Motion transmission	A special roller moves the knurled pegs, that allow the rotation of the yarn bobbin.
Positioning	Pressure controlled tire + Tilting adaptation system for a precise transmission of the bobbin motion

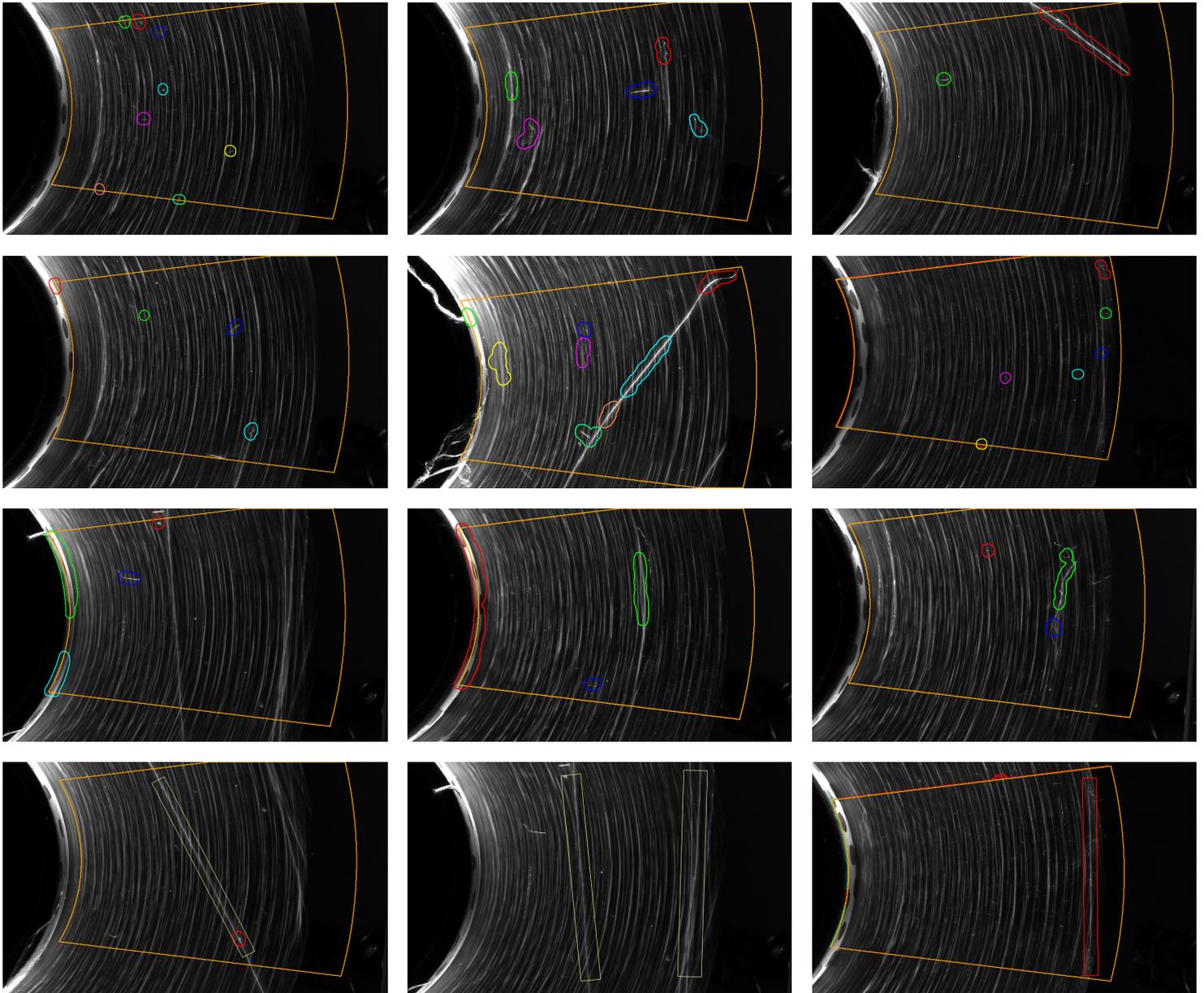


INNOVATIVE LIGHTING SYSTEM AND CAMERA

The intersection between precise light angle and polarisation plans can discriminate very thin details, and these are the keys of our research.







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 **THEMA SYSTEM**

PARTNER OF

