Loptex

OPTOSONAR CENTRA

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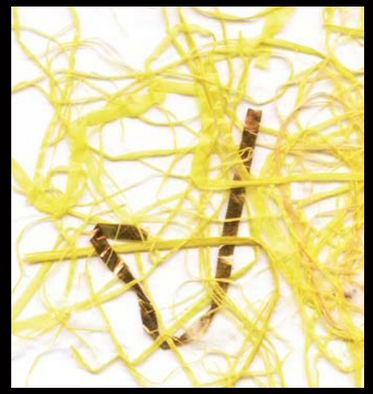
THE OPTOSONAR CENTRA COUPLES THE SONAR ACOUSTIC TECHNOLOGY WITH THE IN-HOUSE EMBEDDED COLOR CAMERAS OPTIC TECHNOLOGY FOR THE DETECTION AND REMOVAL OF CONTAMINATION IN COTTON PREPARATION LINES.
THIS IS THE UNIQUE LOPTEX FEATURE IN THE WORLD.

THE OPTOSONAR CENTRA DETECTS WHITE AND TRANSPARENT PLASTICS INCLUDING WHITE POLYPROPYLENE; FLUORESCENT AND NON FLUORESCENT PLASTICS; VERY THIN COLOR, LIGHT COLOR AND COLOR LESS POLYPROPYLENE STRINGS.

THIS INNOVATIVE MODULAR SYSTEM BY MEANS OF STATE OF THE ART EMBEDDED ACOUSTIC TECHNOLOGY COUPLED WITH EMBEDDED OPTIC TECHNOLOGY AND ELECTRONICS, PERMITS TO IMPLEMENT TAILOR MADE SOLUTIONS AND CONTINUOUS INNOVATIONS FOR PRODUCTIONS UP TO 1.200 KG/H.









BASE CENTRA

EASYLINK CENTRA

made in Italy

Technical Specifications	
Maximum production rate BASE CENTRA:	up to 800 Kg/h (1000/1200 Kg/h on demand)
Maximum production rate EASYLINK CENTRA:	up to 800 Kg/h (1000/1200 Kg/h on demand)
Power supply:	400 VAC +/- 10% 50Hz
Installed power:	1,5KW (Sorter)
	2,2 KW (Waste extraction)
Air consumption:	0,6/1,2 Nl (per contamination removal)
Compressed air supply:	approx. 6-8 bar
Dimensions BASE CENTRA:	Heigth 2250 mm/Width 1700 mm/Depth 1200 mm/Weigth 860 Kg
Dimensions EASYLINK CENTRA:	Heigth 3400 mm/Width 1800 mm/Depth 1400 mm/Weigth 950 Kg

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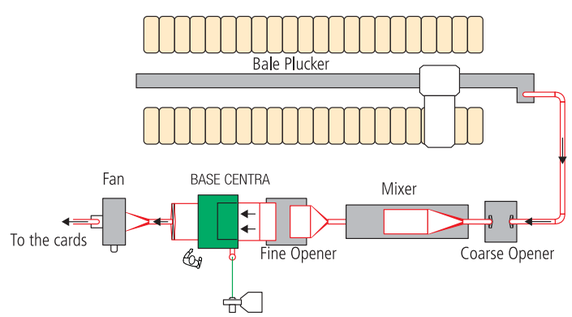
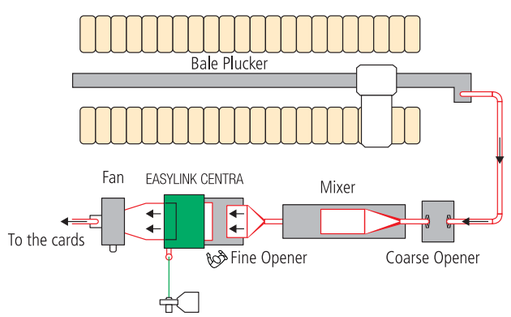
BASE CENTRA
Downward fiber flow



EASYLINK CENTRA
Upward fiber flow



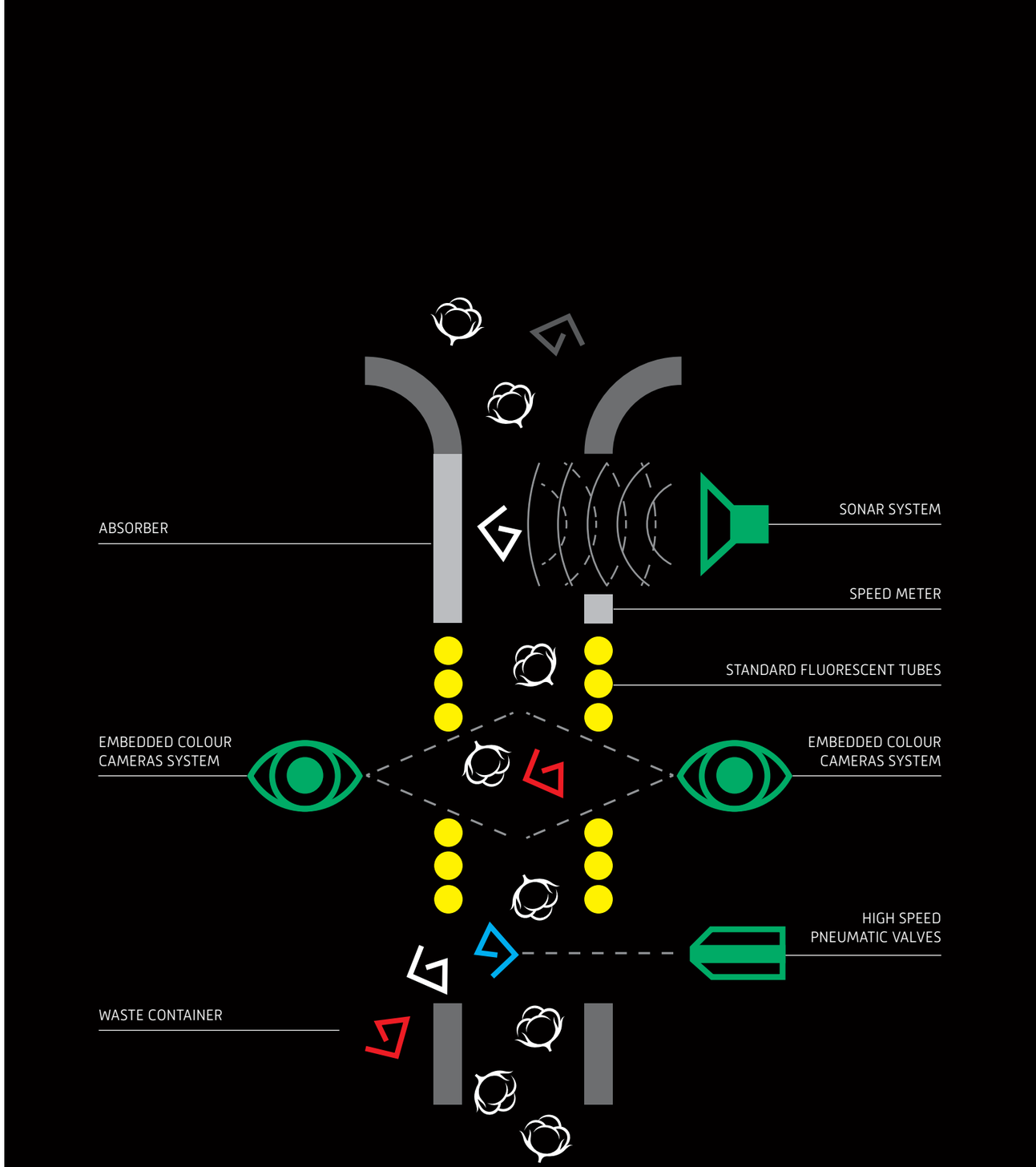
COMPREHENSIVE AND ACCURATE DETECTION AND ELIMINATION OF CONTAMINATION.

THE OPTOSONAR CENTRA IS A FOREFRONT SYSTEM DESIGNED TO GRANT COMPREHENSIVE AND ACCURATE DETECTION AND ELIMINATION OF CONTAMINATION.

IT IMPLEMENTS THE DOUBLE CONTROL ON CONTAMINANT BY MEANS OF ACOUSTIC SYSTEM COUPLED WITH OPTICAL SYSTEM WITH IN-HOUSE LENSES FOCAL ADJUSTMENT.

THE DIRECT VIEWING FEATURE BY MEANS OF 12 EMBEDDED CAMERAS PER CHANNEL SIDE (TOTAL OF 24 EMBEDDED COLOR CAMERAS) ELIMINATES THE CAMERA SIDES DISTORTIONS. IT EXCLUDES THE USE OF OPTICAL MIRRORS WHICH ATTRACT DUST DEPOSIT.

THE HIGH SPEED PNEUMATIC VALVES SORT OUT THE CONTAMINATION FROM THE FIBERS STREAM INTO A WASTE CONTAINER. DEDICATED SOFTWARE AND FIRMWARE COMPLETE THE DESIGN.



THE SONAR SYSTEM

The system consists of a high frequency ultrasound emitter bar generating acoustic waves, whose geometrical propagation is close to the optical geometrical propagation of straight beams.

A second bar of high reliable and accurate receiving acoustic sensors is placed underneath. Any contamination with different structure and density than the processed fiber, reflects the acoustic wave towards a receiving sensor which activates the corresponding solenoid valve for its removal.

The Sonar system detects white PP, plastics with the same color as the cotton processed, hidden contaminant, transparent plastics and non transparent plastics, fluorescent and non fluorescent plastics.

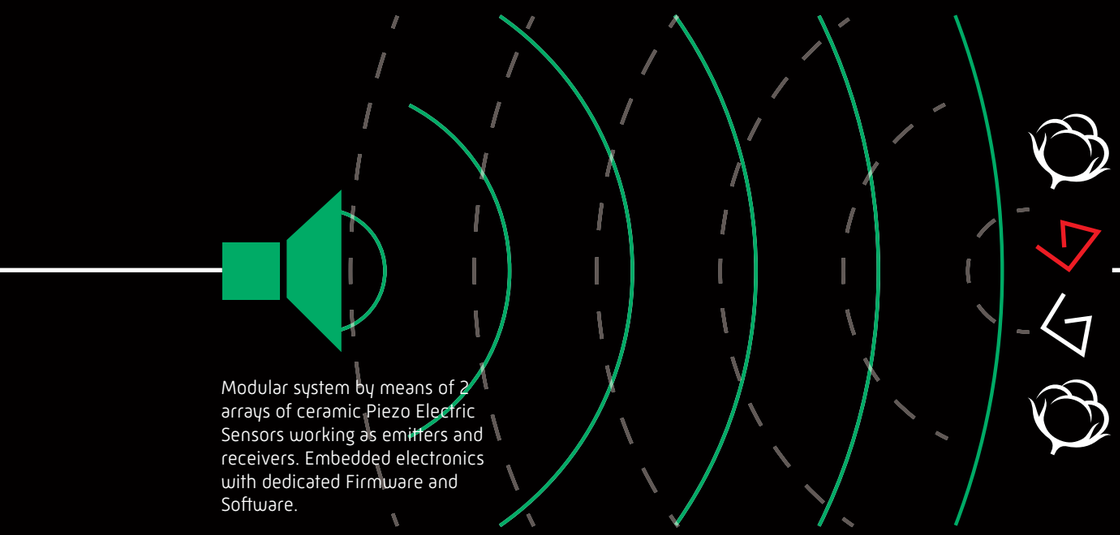
THE NEW EMBEDDED COLOR CAMERAS SYSTEM

The system consists of 2 rectangular plexiglass implementing the monitoring channel. The cotton fibers are free to flow without interruption of production.
A blackened aluminum bar is placed on both sides of the monitoring channel. Each bar houses 12 sealed dust proved Embedded Color Cameras. A total of 24 sealed dust proved Embedded Color Cameras are implemented. This feature permits a direct viewing of the contamination with elimination of cameras side distortions effect with constant sensitivity level all over the monitoring channel. The Embedded Color Cameras system offers a resolution of 3.840 pixels per channel side (0.3 mm).

A powerful 32 bit ARM microprocessor per each Color Camera performs a spot wise image analysis for the identification and for the detection of the contamination. It assures high processing speed and significant reduction of processing faults.

It increases the efficiency and the consistency on results on the detection of all type colored contamination including color thin PP strings, light color thin PP strings and colorless thin PP strings.

<u>The unique Loptex know-how optimizes the coupling of the Sonar system with the Embedded Color Cameras system.</u>



Modular system by means of 2 arrays of ceramic Piezo Electric Sensors working as emitters and receivers. Embedded electronics with dedicated Firmware and Software.

Due to its modular concept, the system offers a very low maintenance cost.

24

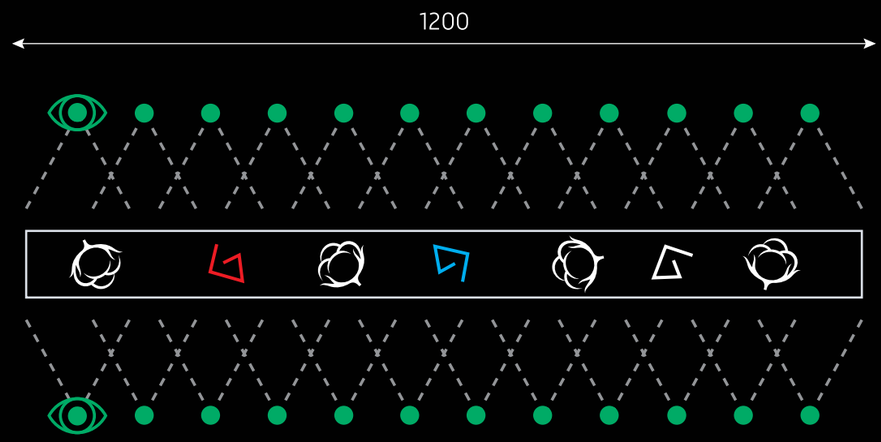
Modular system by means of 12 Embedded Color Cameras per channel side (total of 24 Embedded Color Cameras) with dedicated Firmware and Software. In-house focal lenses adjustment.

Due to its modular concept, the system offers a very low maintenance cost.

DETECTION PERFORMANCE
DIRECT/INDIRECT SENSING

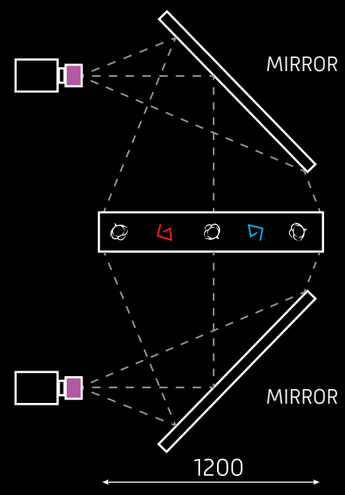
Loptex

-Direct viewing (no mirrors) with high resolution
-Completely sealed optical path
-Short distances with elimination of optical sides distortion
-Compact and modular design



OTHERS

- Indirect viewing i.e. through mirrors which can attract dust deposit.
- Long and variable viewing distance
- Unsealed optical path.
- Sides optical distortion.



RELIABILITY AND CONSISTENCY ON RESULTS

BY MEANS OF:

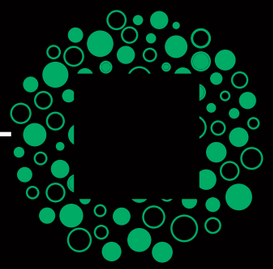
-DIRECT VIEWING SYSTEM (NO MIRRORS USE).

-ELIMINATION OF OPTICAL SIDE DISTORSIONS.

-MODULAR AND DUST PROVED SYSTEM

-ROBUST EMBEDDED TECHNOLOGY SUITABLE TO WORK UNDER THE MOST CRITICAL ENVIRONMENT CONDITIONS

-HIGH PERFORMING PNEUMATIC VALVES WITH MINIMUM LOSS OF FIBROUS MATERIAL



Modular system by means of Sonar coupled with Embedded Color Cameras.

In-house focal lenses adjustment. It doesn't not requires further adjustment in production line.

High Speed Pneumatic Solenoid Valves granting the minimum loss of fibrous material.

ADDITIONAL KEY FEATURES

NO NEED OF HEAT EXCHANGER AND/OR MECHANICAL COOLING SYSTEM. NO NEED OF CLEANING OF SONAR AND OPTICAL DEVICES DUE TO DUST DEPOSIT.

THE SONAR COUPLED WITH THE NEW EMBEDDED COLOR CAMERAS SYSTEMS HAVE BEEN DESIGNED, ENGINEERED AND TESTED TO PERFORME IN PREPARATION LINES. .
RESULTS EXCEED THE EXPECTATIONS FOR THOSE APPLICATIONS WHERE COTTONS WITH HIGH DEGREE OF TRASH AND CONTAMINATION ARE USED AND FOR THOSE APPLICATIONS WHERE HIGH QUALITY STANDARDS ARE MET.

LOPTEX CONTINUOUS TO OFFER TO THE MARKET COST EFECTIVE SOLUTIONS WHICH LEAD TO HIGH EFFECTIVENESS AND FAST RETURN OF INVESTEMENT.

SUPPLIER OF SUSTAINABLE TECHNOLOGIES

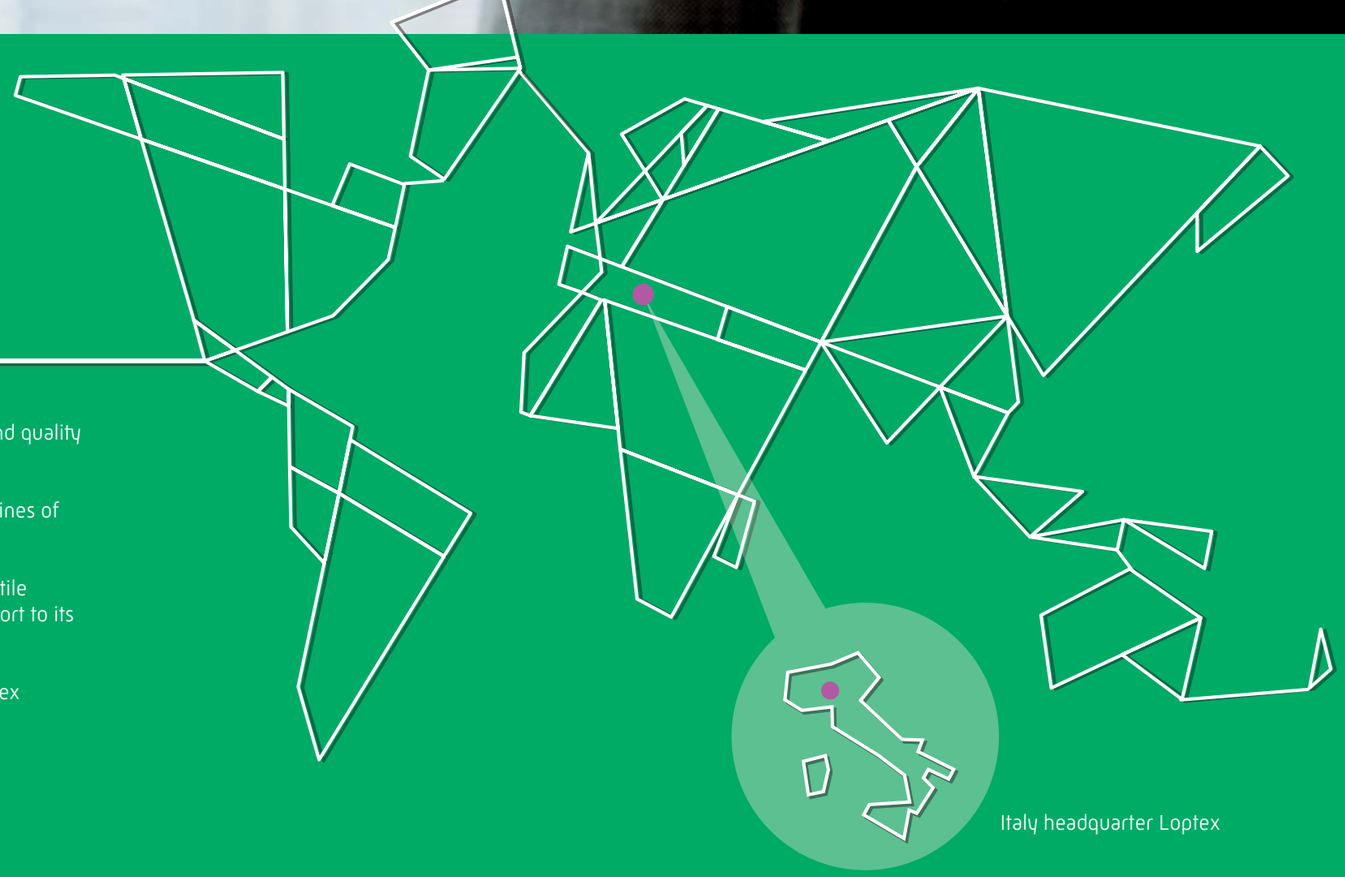
LOPTEX IN THE WORLD

Loptex through innovations improves the competitiveness and quality of its customers.

Loptex systems are suitable to all existing and new opening lines of the main worldwide machine manufacturers.

Loptex through agencies and service stations in the main textile areas of the world, guarantees an excellent service and support to its customers.

Local technicians are trained on regular basis in Italy by Loptex specialized personnel.



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