

PICVISA

ECOPACK

Optical sorting equipment
for a wide range of material sorting



Wide spectrum **machine-vision**.

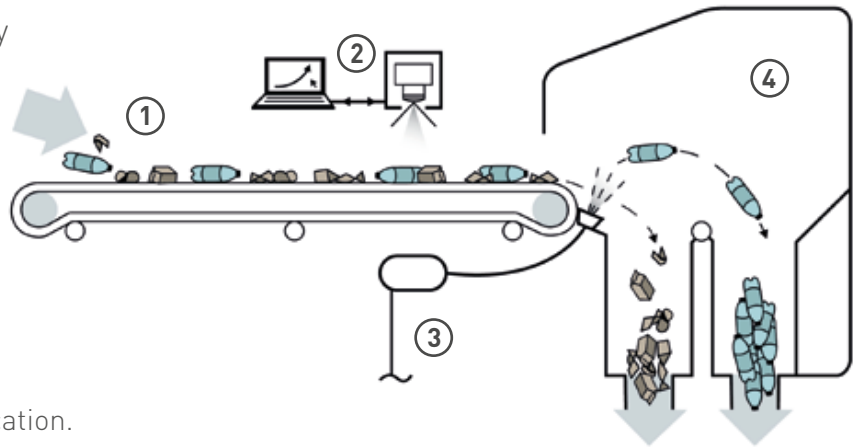
Versatility, speed and precision when identifying and separating materials according to their chemical composition, shapes and colours.

Industry 4.0: Self-monitoring and connectivity data management and computer control.

Artificial Intelligence: Optional Brain add-on for deep learning.

Hyperspectral machine vision technology and fast data processing.

- ① Feeding conveyor
- ② Machine-vision camera and sensors
- ③ Separation with compressed air
- ④ Separation chamber



High resolution for:

- Machine vision and/or sensor identification.
- Ejection separation with compressed air.

Wide variety of equipment configurations depending on separation objectives and materials to be processed.

Applications and materials		Technologies*			
		NIR	VIS	EM	AI
Plastic packaging	Polymer separation (PET, HDPE, PP, PS, PVC, EPS, ABS) and beverage cartons	✓	✓		
PET/PE recycling	Colour sorting	✓	✓		
Plastic film (PEBD, PP,...)	Sorting by material type	✓			
Paper & Cardboard (P&C)	P&C recovery from a mixed stream and sorting of cartons and boxes	✓	✓		
Refuse-Derived Fuel (RDF)	PVC and other impurities removal	✓			
Construction and Demolition waste (C&D)	Recovery of wood and polymers	✓	✓	✓	
Wood recycling	Removal of impurities (polymers, P&C)	✓		✓	
Metal recycling	Removal of impurities	✓	✓	✓	
Other applications	Please check with PICVISA	✓	✓	✓	✓

(*)Technologies applied individually or in combination: NIR = Near-Infrared spectrometry ; VIS = Visual light and colours ; EM = Electromagnetic sensors / induction; AI = Artificial intelligence.

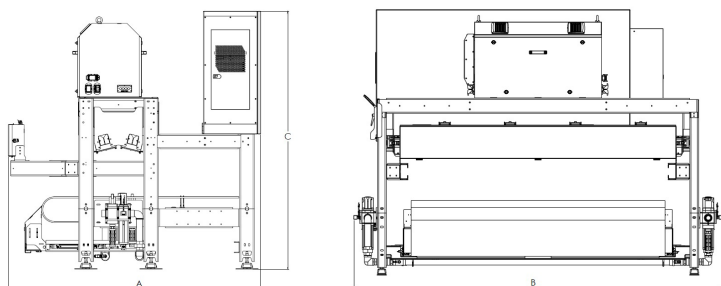
- High production capacity and availability under demanding industrial conditions.
- High recovery (efficiency) and purity rates of targeted materials.
- Short payback period.
- Versatility and flexibility when separating different materials with the same optical sorter.
Easy programming and reprogramming.
- Computer-aided calibration for high reliability and production stability.
- Easy maintenance and cheap spare parts.
- Direct online customer support service with remote connection.
- Real-time access to sorted material statistics (dedicated interface, online accessibility).
- Testing capacity with Customer materials at PICVISA's own test centre.**

(**) PICVISA provides its Customers, in Calaf (Barcelona, Spain), with 800 sqm test centre, fully equipped with mechanical and machine vision means, for a wide range of material sorting.

Industry 4.0:

- Computer-aided calibration and control. ●
- Local and remote connectivity. ●

Main features of the optical sorters



Dimensions and total weight of equipment					
Optical sorter	Width	A	B	C	Approx. weight
EP 1000	1.000 mm	1.870 mm	2.013 mm	2.099 mm	1.044 Kg
EP 1500	1.500 mm	1.891 mm	2.307 mm	2.099 mm	1.250 Kg
EP 2000	2.000 mm	1.923 mm	2.722 mm	2.099 mm	1.568 Kg
EP 2500	2.500 mm	1.923 mm	3.221 mm	2.335 mm	1.822 Kg
EP 3000	3.000 mm	1.923 mm	3.721 mm	2.099 mm	2.190 Kg

High-resolution valve-block for pneumatic ejection

Table of possible valve-block solutions		
Valve-block resolution	Air jet pitch	Electro-valves / Air jets
Standard - STD 1:2	15.6 mm	1 electro-valve for 2 air jets
High resolution - HR 1:1	15.6 mm	1 electro-valve for 1 air jet
High resolution - HR 1:2	7.8 mm	1 electro-valve for 2 air jets
Very high resolution - VHR 1:1	7.8 mm	1 electro-valve for 1 air jet

Air pressure : 6 to 8 bars

Compressed air consumption and power for the solution of a Standard STD valve-block

Optical sorter	Amount of air jets	Air jet pitch	Approx. airconsumption (STD case)	Power ⁽¹⁾
EP1000	64	15,6 mm	1.000 lpm	2,65 kW
EP1500	96	15,6 mm	1.500 lpm	3,45 kW
EP2000	128	15,6 mm	2.000 lpm	4,25 kW
EP2500	160	15,6 mm	2.500 lpm	5,05 kW
EP3000	192	15,6 mm	3.000 lpm	5,85 kW

(1) Power without acceleration belt

Options

- One or more NIR, VIS machine vision cameras or artificial intelligence.
- High-resolution camera for small-sized elements.
- Inductive sensors for metals.
- High or very high blowing resolution valve-block.
- Multi-channel: double or triple-track for simultaneous sorting of two or three material streams (up to 9 sorting operations) on a same optical sorter.
- Different levels of ingress protection of control boards.

Design and manufacturing

of machine vision, artificial intelligence
and sensor-based sorting equipment



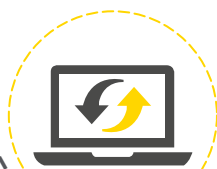
On-site and remote
technical support



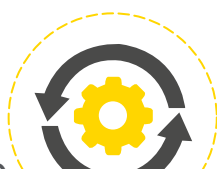
Spare parts



Training



Equipment and software
updates / upgrades



Second-hand equipment



Renting / leasing service



PICVISA Test Centre

PICVISA

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