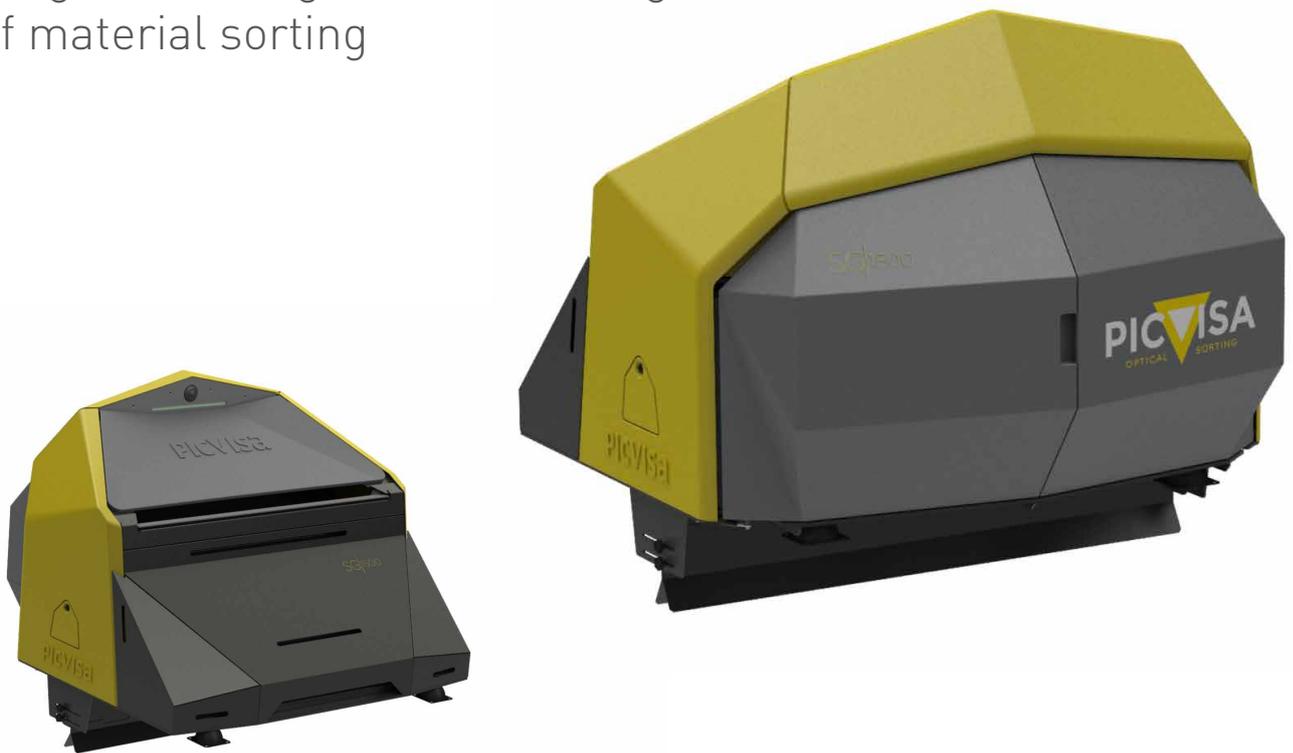


PICVISA

ECOGLASS

Optical sorting equipment

for glass sorting and a wide range of material sorting



Wide spectrum **machine-vision**.

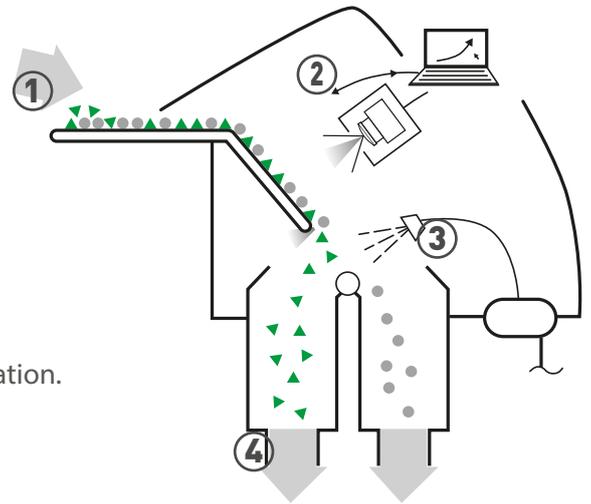
Versatility, speed and precision when identifying and separating materials according to their chemical composition, shapes and colours.

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

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

Machine vision technology and fast data processing.

- ① Vibratory feeder
- ② Machine-vision and sensors
- ③ Separation with compressed air
- ④ Separation chamber



High resolution for:

- Machine vision, artificial intelligence 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*				
		VIS	NIR	EM	UV	AI
Glass	Removal of impurities (CSP) and sorting of glass by colour	✓			✓	
Municipal solid waste (MSW)	Glass recovery from compost or the rejects of compost refining	✓				
Slags. incineration bottom-ash	Glass and metals recovery	✓		✓	✓	
Refuse-derived fuel (RDF)	Glass, plastics and metals recovery	✓	✓	✓		
Construction and Demolition waste (C&D)	Withdrawal of PVC and other impurities	✓	✓			
Minerals, ores, mining by-products	Recovery of glass, metals, aggregates, etc.	✓	✓	✓		
Minerals, ores, mining by-products	Purification and colour separation	✓		✓	✓	
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; UV = Ultraviolet Light; 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.

High-resolution valve-block for pneumatic ejection: Standard (EG /SG) and Fines (SGF)

ECOGLASS (EG and SG) product range	Model	Width	Amount of air jets	Air jet pitch
STANDARD	EG600	600 mm	118	5.2 mm
	EG1000	1000 mm	192	5.2 mm
	SG1500	1500 mm	240	6.2 mm
FINES	SGF600	600 mm	144	4.2 mm
	SGF1000	1000 mm	240	4.2 mm
	SGF1500	1500 mm	360	4.2 mm

Examples of air consumption and power of equipment

ECOGLASS Glass sorting: hollow and container glass, cullet, flat glass, MSW glass, etc.

	Optical sorter	Material's features			Nominal throughput	Air consumption per valve-bloc		Power				
		Width	Infeed glass	Target material		Density	Standard (EG/SG)	Fines (SGF)	EG: 1 v.-block	EG: 2 v.-blocks	SGF: 1 v.-block	Vibratory feeder
EG 600 (118 air-jets) / SGF 600 (144 air-jets)	600	Container	CSP	1000	5,0	1000	1200	1.1	1.4	2.3	0.9	
	600	Container	Colour (<30 %)	1000	4,0	2000	2300	1.1	1.4	2.3	0.9	
	600	Flat glass	CSP	1500	5,0	1000	1200	1.1	1.4	2.3	0.9	
	600	MSW: 1st	Glass	750	2,0	2000	2300	1.1	1.4	4.5	0.9	
	600	MSW: 2nd	CSP	900	3,0	1000	1200	1.1	1.4	4.5	0.9	
	600	Fine glass	CSP	500	1,5	N/A	1200	N/A	N/A	2.3	0.9	
EG 1000 (192 air-jets) / SGF 1000 (240 air-jets)	1000	Container	CSP	1000	10,0	1500	1900	1.2	2.1	3.8	4.2	
	1000	Container	Colour (<30 %)	1000	8,0	3000	3800	1.2	2.1	3.8	4.2	
	1000	Flat glass	CSP	1500	10,0	1500	1900	1.2	2.1	3.8	4.2	
	1000	MSW: 1st	Glass	750	4,0	3000	3800	1.2	2.1	7.5	4.2	
	1000	MSW: 2nd	CSP	900	6,0	1500	1900	1.2	2.1	7.5	4.2	
	1000	Fine glass	CSP	500	3,0	N/A	1900	N/A	N/A	3.8	4.2	
SG 1500 (240 air-jets) / SGF 1500 (360 air-jets)	1500	Container	CSP	1000	15,0	2300	2800	1.6	3.1	5.7	3.8	
	1500	Container	Colour (<30 %)	1000	12,0	4600	5800	1.6	3.1	5.7	3.8	
	1500	Flat glass	CSP	1500	15,0	2300	2800	1.6	3.1	5.7	3.8	
	1500	MSW: 1st	Glass	750	6,0	4600	5800	1.6	3.1	11.3	3.8	
	1500	MSW: 2nd	CSP	900	9,0	2300	2800	1.6	3.1	11.3	3.8	
	1500	Fine glass	CSP	500	5,0	N/A	2800	N/A	N/A	5.7	3.8	

- Moisture is limited to 1% of the infeed material.
- Container glass or hollow glass includes bottles & jars, flaconnage and tableware.
- Flat glass may be issued from building & demolition waste, as well as car manufacturing & end-of-life vehicles (ELV) wastes.
- Glass issued from MSW may be treated by two optical sorters: 1st sorter ejects glass and 2nd sorter ejects CSP.
- CSP impurities: ceramics, stones and porcelain.
- Colour sorting considers 30% maximum content of the target colour.
- The "EG" model includes 1 electro-valve for every 2 air-jets (air-jet pitch of 5.2 mm) and the "SG" model includes 1 electro-valve per air-jet (air-jet pitch of 4.2 mm or 6.2mm).

Design and manufacturing

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



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