



# WASTE MANAGEMENT SOLUTIONS

Rely on the best partner!





OUR GROUP  
AT YOUR  
SERVICE!

4 decades of history & expertise  
250 specialized employees  
premises 28500m<sup>2</sup>  
global presence in 50+ countries

90% exports  
more than 650 clients  
over 750 completed projects  
600+ installed robots

SABO S.A. a Greek company founded in 1984 operates in more than 50 countries worldwide, exporting 90% of its annual turnover. It is a member of SABO GROUP with headquarters located in Vassiliko of Evia in Greece and has subsidiaries in Brazil, Romania and Italy.

SABO S.A. is one of the leading companies worldwide specialized in construction of turnkey plants and machinery for the heavy clay industry. It also stands out in other areas of industrial sectors by providing specialized automation and robotic systems for material handling and packaging, turnkey electrical solutions and industrial automation, equipment and services for heavy industrial units, customized equipment and integrated solutions for the management of solid waste as well advanced technical support to the shipping community.

Technical know-how and innovation, high-quality standards, qualified and experienced personnel along with strong after-sales support services, are the key competitive advantages of the company.



Integrated solutions  
for recycling & waste  
management



Turnkey plants  
& machinery for the  
heavy clay industry



Robotic, handling  
& conveying systems,  
automated warehouses



Turnkey power distribution  
systems, automation  
& electrical installations



Projects, solutions  
& services in heavy  
industry sector



Advanced technical  
services & solutions for  
the shipping community



Augers, dies, frames,  
cores & spare parts  
for heavy clay extrusion



Civil works & buildings,  
marine works & ports  
construction



*"We deliver the complete range of services needed throughout the project's lifecycle"*

### Conceptual design

Our design team consists of highly skilled and experienced engineers, capable to deliver the optimum solution based on your needs and requirements.

### Detailed engineering

The realization of the machinery and general arrangement drawings is performed in the latest and most efficient 3D software to ensure flawless design and assembly.

### Manufacturing

Cutting, machining, assembling, sandblasting and painting are taking place in our premises under the supervision of our highly skilled and experienced engineers and technicians. All machines are assembled and tested within our plants to ensure that they meet the technical specifications, efficiency targets and quality standards.

### Power and automation

Our technical office for electrical and automation systems undertakes the design, assembly and programming of all electrical systems of your plant, incorporating customized software for automatic operation, control and maintenance.

### Installation

Our expert team of technicians and fitters ensure correct installation and montage of the mechanical and electric components.

### Commissioning

After installation and integration of the machinery, our engineers and programmers perform on-site trial and control tests to ensure problem-free and optimized start-up of the equipment and systems. Based on our contract's provisions, we provide cold and hot commissioning of our machinery or the whole plant to ensure problem-solving and optimize operation.

### Training

Experienced personnel perform the training of your staff to ensure effective operation in the long-term.

### After sales service

Our sales department are available 24 / 7 at your disposal to provide you with the necessary service and maintenance instructions on the spot or remotely via the internet.



## Support Services

Service Support

**365** | **24**  
DAYS | HOURS





TURNKEY PLANTS



# Integrated Solutions for Recycling & Solid Waste Management



SABO provides integrated solutions for turnkey plants, tailor-made to your needs.

Our infrastructure can efficiently support you throughout the project lifecycle, from planning and engineering, up to manufacturing, erection, commissioning, maintenance and aftersales service.

Our vertical organization structure and the coordination with our subsidiary companies provides the advantage of high productivity, ensuring timely and effective delivery of large-scale projects all over the world.

Apart from the waste treatment machinery, our production can deliver all power and automation systems (electrical boards, PLC, SCADA), guaranteeing not only an efficient and well-coordinated solution, but also the most cost effective one.





TURNKEY PLANTS

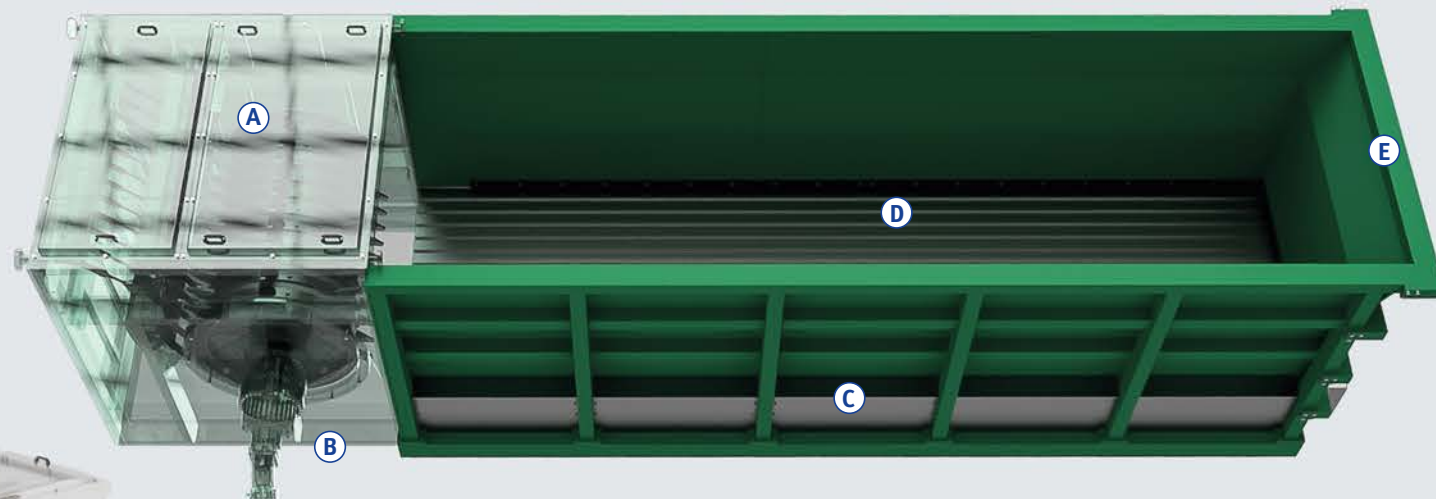
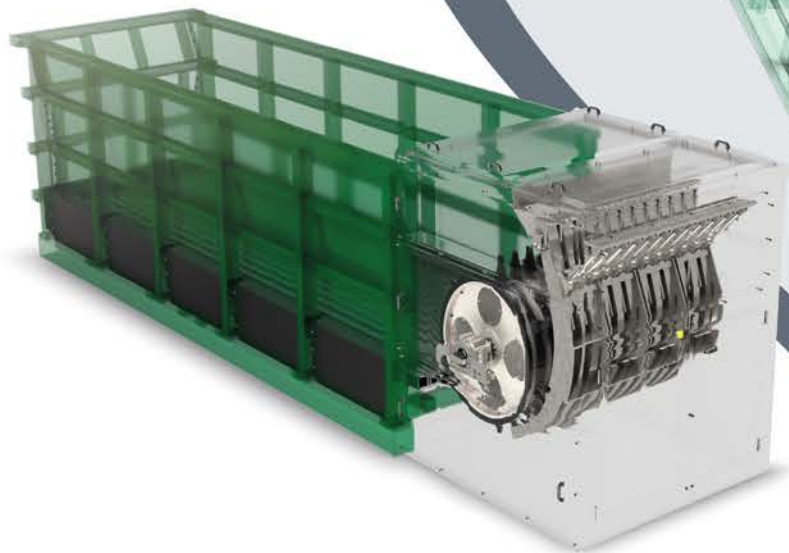


*Your Technology  
Provider for the  
establishment of  
Integrated Waste  
Management  
Facilities*





# Bag Opener Single-Shaft



## Single-Shaft: Technical Specifications

Model	SB BOS 2000	SB BOS 1700	SB BOS 1300
Throughput* Capacity	Up to 40 tons/h	Up to 35 tons/h	Up to 18 tons/h
Working Width	2000 mm	1700 mm	1300 mm
Length of walking floor	6000 mm	6000 mm	6000 mm
Volume of feeding hopper	22 m <sup>3</sup>	18 m <sup>3</sup>	12 m <sup>3</sup>
Installed Power	57 kW + 5.5 kW	47 kW + 5.5 kW	32 kW + 5.5 kW
Drive	Hydraulic motor	Hydraulic motor	Hydraulic motor
Bag Opener Weight	8700 kg	8100 kg	7500 kg
Control system	Electrical cabinet with PLC, touchscreen display for operation control and function monitoring		

## Main Components

- A.** Cutting Chamber
- B.** Hydraulic Motor
- C.** Metal Frame
- D.** Walking Floor
- E.** Feeding Hopper

SABO's Single & Double Shaft Bag Openers achieve bags ripping without damaging, smashing or blending the containing materials, having high efficiency and availability rates.

This way sorting and ease separation of the different waste streams is being facilitated at the upcoming process stages.

The exchangeable cutting elements are made of special alloys, prolonging service life, while maintaining effectiveness and durability.

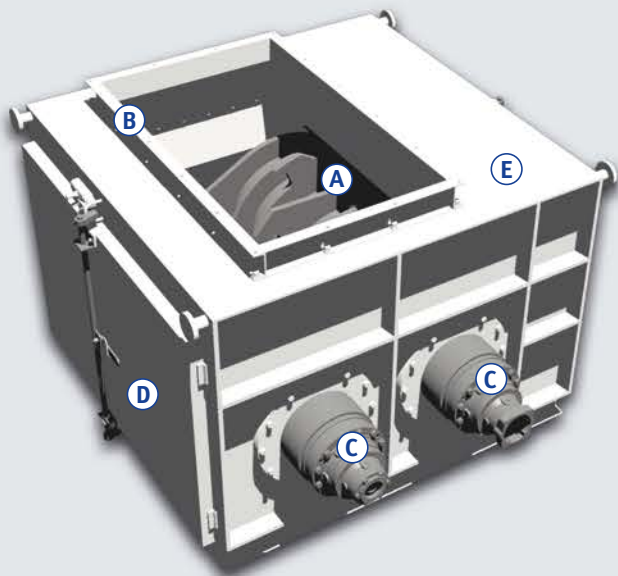
Counter knives fixed on hydraulically controlled steel arms assist the ripping process, providing the appropriate pressure.

Drums' movement is performed by means of hydraulic motor and planetary gearbox, providing high flexibility, torque and system safety.

\*Throughput may vary depending on the material, moisture and composition. All specifications are reference values.



# Bag Opener Double-Shaft



## Double-Shaft: Technical Specifications

Model	SABO DS-200	SABO DS-130
Throughput* Capacity	30-40 tons/h	10-20 tons/h
Number of Shafts	2	2
Total dimensions (LxWxH)	2830 x 2200 x 1550 mm	2200 x 2000 x 1550 mm
Total Power	36 kW	22 kW
Drive	2 Hydraulic motors	2 Hydraulic motors
Control system	Electrical cabinet with PLC, touchscreen display for operation control and function monitoring	

## Main Components

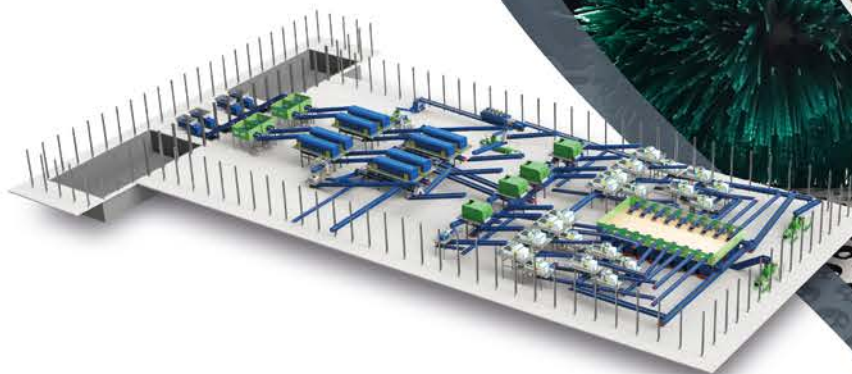
- A. Cutting Chamber
- B. Feeding Hopper
- C. Hydraulic Motors
- D. Maintenance Doors
- E. Metal Frame

\*Throughput may vary depending on the material, moisture and composition. All specifications are reference values.





# Rotary Drum Screens "TROMMEL"



Rotary Drum Screens achieve material separation by size.

SABO manufactures rotary drum screens of variable length, diameter and mesh size for screening any type of incoming waste (mixed MSW, recyclables, compost, RDF, C&D, etc.), completely adjustable to client needs.

Mesh surface can be fixed or exchangeable, of single or double size perforation, to separate two screening size.

Special elements can be installed on the drum's surface to enhance movement and breakage of materials.

The drum screens are completely enclosed to eliminate dust emissions during operation.

Access doors are situated around the housing of the drum for easy inspection, maintenance and service.

Rotating speed is adjustable through frequency inverter to optimize screening efficiency.

## Special Arrangements

**Mesh diameter:**  
size and shape adjustable to the screening application.

**Screening surface:**  
fixed or exchangeable, of standard or high resistant quality, single or double screening.

**Rotation speed range:**  
0-24 rpm, adjustable through inverter.

**Inclination:**  
standard or adjustable 2°-6° through hydraulic system

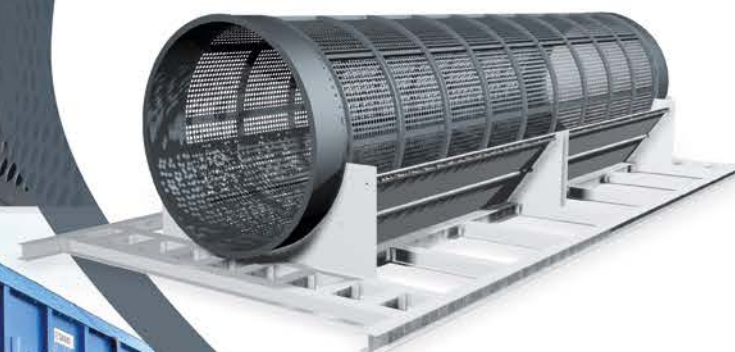
**Lifting elements:**  
special design fixed elements, for material breaking / lifting.

**Anticorrosion protection:**  
sandblasting SA 2.5 - epoxy painting layers up to 160µm DFT.

**Control system:**  
local electrical cabinet with HMI touch panel, emergency stop circuit, frequency inverters, electrical connection, safety arrangements.

**Power:**  
electrical motor or diesel engine unit.





Manufacturing  
Highest-Quality  
Customized  
Machinery &  
Solutions for the  
Solid Waste  
Sector

### Main Components

- |                          |                                  |                       |                     |
|--------------------------|----------------------------------|-----------------------|---------------------|
| 1. Feeding belt conveyor | 4. Inclination adjustment system | 7. Gear motor         | 10. Stairways       |
| 2. Drum housing          | 5. Heavy-duty wheels             | 8. Screenings chute   | 11. Walkways        |
| 3. Rotary drum           | 6. Inspection doors              | 9. Discharge conveyor | 12. Supporting legs |

Models	Drum diameter (mm)	Drum length (mm)	Total length (mm)	Power (kW)
RDS 1.5 / 4000	Ø1,500	4,000	6,000	2 x 5.5
RDS 2.0 / 6000	Ø2,000	6,000	8,000	2 x 7.5
RDS 2.0 / 8000	Ø2,000	8,000	10,000	2 x 7.5
RDS 2.5 / 6000	Ø2,500	6,000	8,000	2 x 11.0
RDS 2.5 / 8000	Ø2,500	8,000	10,000	2 x 11.0
RDS 2.5 / 10000	Ø2,500	10,000	12,000	2 x 15.0
RDS 2.5 / 12000	Ø2,500	12,000	14,000	2 x 18.5
RDS 3.0 / 10000	Ø3,000	10,000	12,000	2 x 15.0
RDS 3.0 / 12000	Ø3,000	12,000	14,000	2 x 18.5





# Conveying Systems

## Plane Belt Conveyors

Plane Belt Conveyors are used for transporting all kinds of materials (MSW, recyclables, RDF, C&DW).

The belt is supported by horizontal rollers and may be equipped with flaps to push transported materials when inclined. Side barriers are used to hold the materials on the belt.

## Chain Conveyors

Chain Conveyors are steel-plated or rubber-belt conveyors used for transporting heavy loads of waste and materials over high elevations.

The plates or belt are equipped with flaps to push transported materials when inclined and the side barriers are used to prevent the materials for falling.

## Trough Belt Conveyors

Trough Belt Conveyors are used for transporting bulky materials, i.e. mixed MSW, bio-waste, RDF, minerals.

The belt is supported by V-shaped rollers and may be equipped with flaps to push transported materials when inclined. Side barriers are used to hold the materials on the belt.

## Scrapers

Scrapers are used for transporting light, bulky materials, usually at higher elevations.

The material is transported by means of moving special poly-amide beams attached on metal slats, which drag it from the floor of the casing towards the discharge of the scraper.

## Screw Conveyors

Screw conveyors are suitable for transporting powdery or granular materials.

The transport of materials is served by a low RPM spiral screw placed within a U-shaped trough. The trough is lined with a special low friction PU liner.

Can be supplied with EX-proof certified equipment if requested.

## Vertical Belt Conveyors Z

Vertical Belt Conveyors "Z" are used for elevating bulk materials from one level to another.

Corrugated belt for transport of bulk materials offer high-incline conveyance solutions.





KEY COMPONENTS



# Conveying Systems





INTEGRATED SOLUTIONS FOR RECYCLING & WASTE MANAGEMENT



Rely on the best partner!

THE  
SAFEST  
WAY TO  
SUCCESS  
WILL LEAD  
YOU  
TO US!



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