

BALLISTIC TECHNOLOGY

# SMART BALLISTIC SEPARATOR

## Model SBS

**TECHNICAL SPECIFICATIONS**

The purpose of the SGM Smart Ballistic Separator (SBS) is to facilitate the recovery of solid pieces of metals from moist ash (typically around 20%) by concentrating the metals into a fraction that is about 50% less in mass and a third in moisture content making the subsequent ferrous and eddy current metal separation much easier and better performing.

The SBS consists in a high-speed rotating drum provided with hitting plates around its circumference that catapult the particles as they are encountered during their free fall to the drum. The larger the mass of a particle, the longer the trajectory it takes when thrown by the SBS. The SBS separates the infeed Incinerator Ash into a short throw fines fraction (minus approximately 2mm - 5/64") where moisture is concentrated and a large long throw fraction mainly made of solid pieces including the metals.

The launch performed by the ballistic separator is not an immediate impact launch, but a centrifugal launch, with particles leaving the hitting plates from their tips. A centrifugal launch means that particles encounter the hitting plates on their upper part, leave the hitting plates earlier than particles encountering the hitting plates on their lower part.

This delay results in different particles leaving the hitting plates in different moments with the hitting plates in different positions which has an impact on the ballistic trajectory of the particles.

The special design of the hitting plates of the SGM Smart Ballistic Separator reduces the spectrum of the flow of particles leaving the separator, making a more accurate separation based on the different masses of the particles.

**PRODUCT HIGHLIGHTS**

Smart Ballistic Separator has adjustments that influence the trajectories which can assist in optimizing the separation. These adjustments are:

- Position between the loading belt and drum (adjustment through a hydraulic actuator)
- Height of the layer that falls on the drum (adjustment through a hydraulic actuator)
- Speed of the drum.



Standard hitting plates



SGM hitting plates



Trajectory with traditional plates



Trajectory with SGM plates

MODEL mm - ft	DRUM WIDTH	CAPACITY	LENGTH	WIDTH	HEIGHT	WEIGHT
SBS 150 60	1500 mm 60"	30 t/h	2660 mm 104"	3100 mm 76"	3100 mm 122"	4,000 Kg 8,818 lbs
SBS 200 80	2000 mm 80"	40 t/h	2660 mm 104"	3100 mm 76"	3580 mm 141"	4,700 Kg 10,360 lbs

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### TYPICAL APPLICATIONS

**Incinerated Municipal Solid Waste Ash (Bottom + fly ash)**  
Infeed material: Ash minus 16 mm, moisture content 20% maximum.

