

RPM REFERENCE:	2025-0226
MANUFACTURER:	TST OVERSEAS GMBH
TYPE:	ZIG-ZAG AIR SHIFTER
MODEL:	ZZS350/1600/3
YEAR:	2022
CONDITION:	EXCELLENT
PRICE:	POA
LOCATION:	LEEDS



Description

Air Classification & Cleaning System

Equipment Description

The **TST Zig-Zag Air Shifter (ZZS)** is a **closed-loop air separation and cleaning system** designed to separate bulk materials according to their **specific weight (density)**. Using controlled upward airflow within a multi-stage zig-zag separation channel, the system efficiently removes **light contaminants** from heavier material fractions in a fully dry process.

Operating Principle

Material is fed into the zig-zag separation channel via a rotary airlock. An adjustable upward airflow counteracts gravity, causing **light particles** to be lifted and extracted, while **heavier particles** fall downward and are discharged separately. The zig-zag geometry repeatedly re-classifies material, improving separation accuracy. Process air is cleaned and recirculated in a closed-loop circuit.

System Components

- **Feed Rotary Valve**
Ensures controlled, continuous material feed and maintains airlock between system and upstream equipment.
- **Zig-Zag Separation Channel**
Primary density-based sorting chamber; multi-stage design maximizes air-material interaction and separation efficiency.
- **Blower / Fan System**
Generates adjustable upward airflow; typically equipped with variable frequency drive (VFD) for precise control.

› Cyclone or Dust Extraction Unit

Separates light fraction, dust, and fines from the air stream; cleans air before recirculation.

› Control Panel

Centralized control of airflow, fan speed, operating parameters, and maintenance functions.

Typical Technical Data (Indicative – depends on material and configuration)

- › **Separation principle:** Air classification by density
- › **Process type:** Dry, closed-loop air system
- › **Throughput range:** Project-specific (typically several t/h)
- › **Air volume:** Adjustable via fan and control system
- › **Cut point:** Adjustable via airflow and feed rate
- › **Installation:** Vertical or semi-mobile configuration

Key Advantages

- › Dry separation – no water consumption
- › Efficient removal of light contaminants (film, paper, dust, organics)
- › Closed-loop airflow reduces dust emissions and energy loss
- › Adjustable separation performance for different materials
- › Robust industrial design for continuous operation

Typical Applications

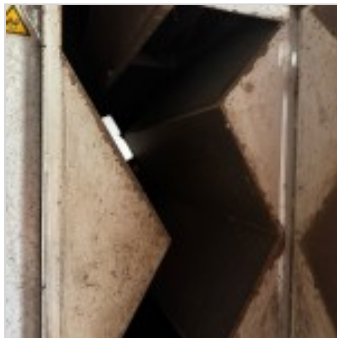
- › Recycling and waste processing
- › Glass cleaning and cullet preparation
- › RDF / SRF and shredder residue treatment
- › Plastic, packaging, and film separation
- › Bulk material and mineral cleaning

Materials Handled

- › C&D Waste
- › Glass Recycling
- › Plastics
- › PVC
- › RDF/SRF
- › Scrap Metal
- › Waste Fines

Industry Sectors

- › Glass Recycling Plants
- › Plastics Recycling
- › Recycling Plants
- › Scrap Metal
- › Waste to Energy





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