Shape Sorter v3

Vollstädt Vdiamant

Our Basic Model

Shape Sorter v3

Our Shape Sorter sorts industrial diamonds or other grains of a similar size range based on their varying shapes. It includes an oscillating table, an oscillating storage reservoir, and 15 collection boxes.

Vollstädt Diamant

Cutting Edge Technology.
Replication Guaranteed.

The table surface inclination can be adjusted using electrical drives, with the angles measured by sensors and displayed on the digital display.

The oscillation frequency of the table is electronically controlled, ensuring that fluctuations in the mains frequency do not affect the sorting process. An acceleration sensor is utilized for precise control of the oscillation amplitude, making the device insensitive to mains voltage changes. This electronic control system facilitates the replication of machine settings for sorting different materials.

Operating Principle.

The operating principle relies on the distinct movement behavior of particles on an inclined oscillating table.

The system effectively separates various shapes such as spheres, cubes, cubooctahedrons, broken particles, irregular shapes, and platelets.

During oscillation, diamonds are transported from the backside corner of the sorting tray towards the open edge with the collecting receptacles at the opposite corner.

Shape Sorter v3

Laws of Physics.
Effectively Used.

The inclination of the sorting table produces the following effect:

- Blocky crystals, resembling rolling balls, move downward and collect in the lower boxes.
- Irregularly shaped crystals, unable to roll, are propelled upward by the oscillation and are collected in the upper boxes.

Optimal sorting angle and vibration amplitude must be selected based on the specific sorting task.

Vollstädt diamant

Technical Data.

Power supply	230 V, 50/60 Hz, 4 A (100 / 115 V upon request)
Protection class	IP 22
Dimensions	95 x 70 x 140 cm
Weight	ca. 95 kg
Inclination (max.)	X-axis: 0 ... 15°, Y-axis: 0 ... 15°
Sorting tables	Type 0: D46 ... D76 Type 1: D91 ... D126 Type 2: D151 ... D251 Type 3: D301 ... D601 Type 4: D601+ ...
Edge length	800 mm
Surface material	Aluminium
Yield	30/40 mesh: ca. 800 cts./h 40/50 mesh: ca. 500 cts./h 325/400 mesh: ca. 100 cts./h
Atmospheric conditions	20 ... 25°C / 45 ... 60 % relative humidty
Cleaning	With alcohol

Technical Data.

Feeder	
Type	Powder Feeder
Reservoir volume	ca. 3.5 liters
Material	Stainless steel

Sorting boxes	
Quantity	15
Volume	ca. 500 ml
Material	Stainless steel

Control unit	
Mechanical knobs	Rotatable knobs for controlling feeding and sorting vibration, with a scale ranging from 0 to 100.
Motor switches	X, Y
Displays for inclination	X, Y

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