

# Feeding of powder coating systems Recovery of powder coatings by means of AZO cyclone screening technology

## Optimum utilisation of product

### Closed system

### Fast amortisation due to substantial cost-reduction

### Rapid change of colour due to easy-to-clean construction

## Task

Cost reduction through optimum product utilization. As is the case in many other sectors, powder coating is exposed to increasing cost pressure and must at the same time fulfil the highest quality demands. Efficient powder recovery improves process safety and is economically decisive. Systems reliably eliminating foreign particles and agglomerates must be used in order to avoid any loss of quality. In combination with the proven suction conveyor systems,

AZO cyclone screening technology has proved themselves to be outstanding in the recovery of powder coating. These systems are also the most suitable for the recycling of overspray powder.

## The advantages

- Fully automatic separation of agglomerates and foreign particles
- Particularly effective function
- Patented, innovative, state-of-the-art
- Compact, space saving construction
- Easy integration in existing systems
- Especially easy-to-clean and fast inspection of screen

## SYSTEMS



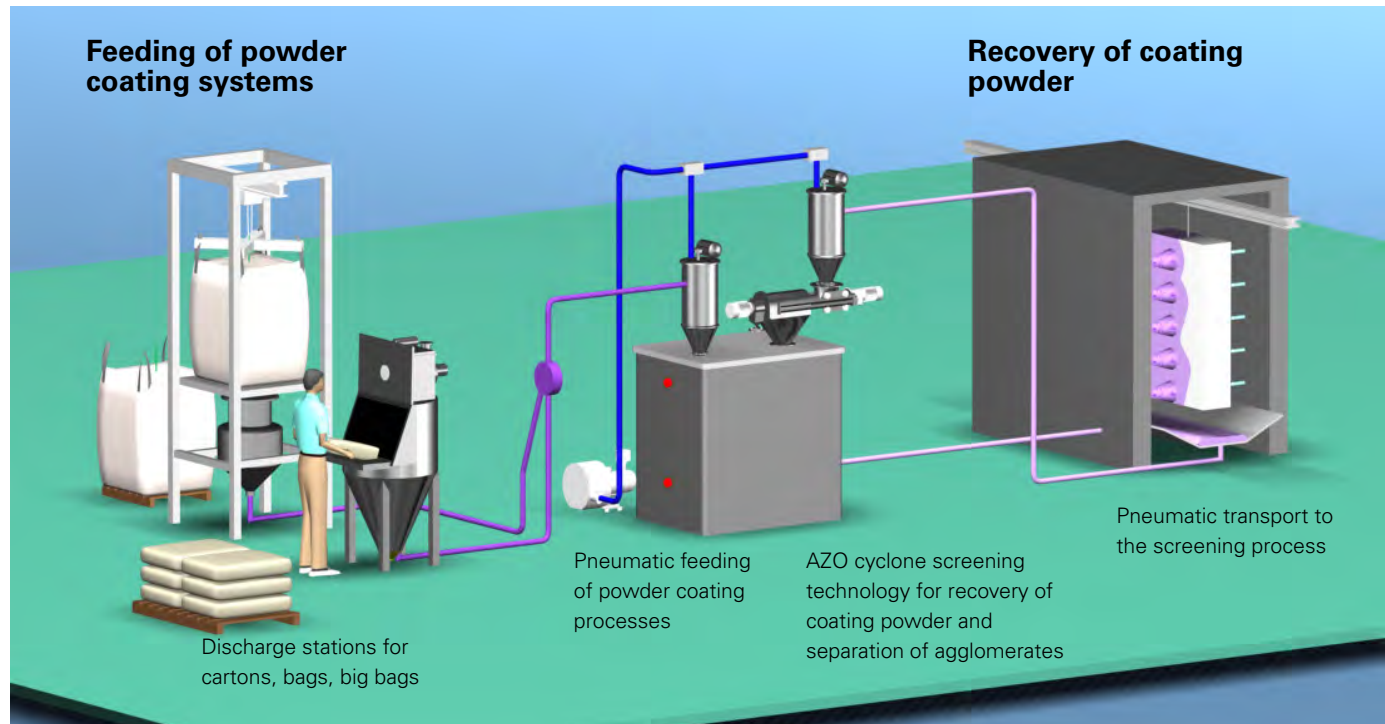
## AZO solution

As the inventors of cyclone screening technology and pneumatic conveying systems with decades of experience, we have opened new dimensions for the powder coating industry. Our cyclone screening technology combines operationally safe technology with high performance and easy maintenance and cleaning.

The pneumatic conveying system ensures a dust-free working method. The screening machines can easily be integrated into existing systems due to their compact design.



## Automation solutions for powder coating systems



### System description:

#### Feeding of powder coating processes

Powder coatings are supplied in cartons, bags or big bags. For the product intake in a closed pneumatic conveying system the bags or cartons are discharged with low formation of dust by means of feeding hoppers equipped with filters and aspiration. Within this conveying system the product is transferred to the powder coating system. Large quantities supplied in big bags are discharged by means of special dumping stations. The big bag standing on a pallet is lifted over the discharge station by means of a chain hoist. Afterwards the inlay is connected by a special docking device and the big bag is discharged in a dust free manner.



#### Recovery of powder coatings

The overspray powder that is sprayed past the workpieces to be coated falls into a collecting tray where it is collected and fed to the AZO cyclone screener by the suction conveyor system. This eliminates agglomerates, lumps and any impurities that may have been created during spraying. The fine material obtained in this way is fed back to the spraying process.

#### Cyclone screener type E

Since often small throughput capacities are concerned the E240 type is the mostly used type, but the types E360 and E650 are available, too. The powder coatings collected in the above mentioned tray are metered into the screener by means of a small rotary feeder. The feeding screw transfers the

product through the screen basket. Coarse particles such as contamination and agglomerates are separated automatically while the fine particles are fed back to the spraying process. More than thousand of these screeners are in operation for this application worldwide.

#### Cyclone screener type DA

This new development includes two drives, one at the product intake and a second one at the screen. The special features of this screener type are self-dosing function, eliminating the use of

an upstream dosing device and its very low construction height. It is possible to adjust the speed of each drive in consideration of the product characteristics. Both drives are equipped with an extraction device allowing a simply extraction, swivelling, cleaning and assembling of the screw as well as of the screen basket. This design is almost predestined for often changing products.



The design is subject to change due to our continuous improvement program.