

# AZO cyclone screening with ultrasonic assistance

**Increase in screen capacity**

**Improvement in separation efficiency**

**Efficient and reliable**

**Simple to retrofit cyclone screeners**

## Preferred applications

Sonic excitation of the screen mesh can be used or fitted retroactively in the AZO type E, DA, FA and RA cyclone screeners.

The use of ultrasound causes the stainless steel screen to vibrate at high frequency. These minute vibrations prevent near-size particles from sticking in the mesh of the screen fabric.

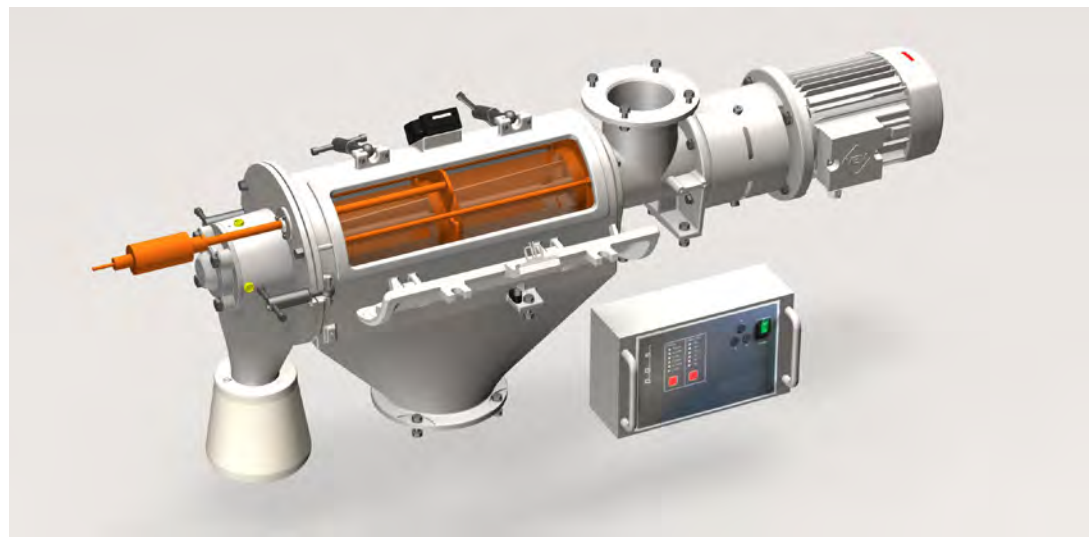
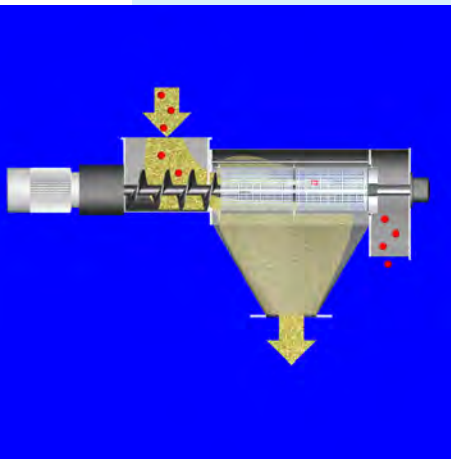
The screen mesh stays clear for longer, which in turn noticeably improves separation efficiency. This may result in an increase in screen capacity.

The screen basket needs to be removed for cleaning far less often and this significantly increases the useful life of the machine.

## Special advantages

- Increase in screen throughput
- Improvement in separation efficiency
- Longer times between cleaning
- Straightforward retrofitting in existing machines
- Converter is outside the screener and hence outside the flow of powder

## THE INNOVATION



## How it works

The material to be separated enters the cyclone screener via the flow guide and a screw feeder then conveys it into the screen chamber. Cyclone strips swirl the product through the screen mesh. Oversized material is held back by the screen mesh and ejected through the outlet for oversized material.

The ultrasound generator causes minute vibrations in the stainless steel screen, which reduce the amount of particles clogging the screen and improve separation

efficiency. This in turn helps to increase intervals between cleaning and machine tooling times are reduced accordingly.

The cylindrical stainless steel wire mesh is bonded with screen rings. Threaded rods, which are passed through the screen rings without contact, are used to apply the appropriate tension to the mesh.

The sonic frequency produced by the generator is transmitted by the converter via the sonic

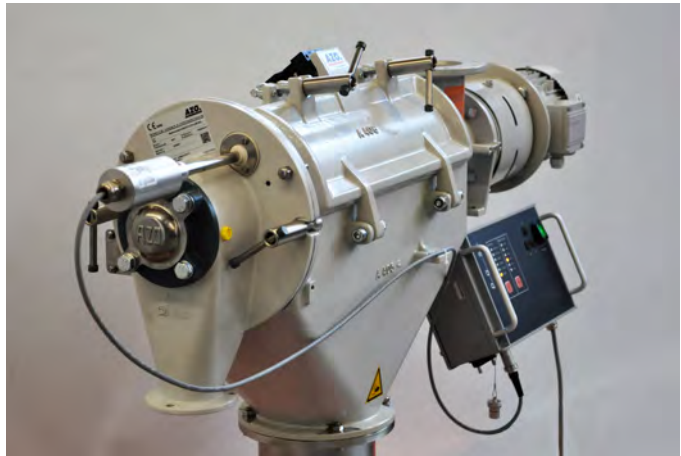
conductor to the centre ring of the screen basket, from where it is uniformly distributed over the screen mesh that is bonded with the screen rings.

Sonic frequencies that vary automatically improve the result even further, as different resonant frequencies are covered.





The cyclone screener type E360 in epoxy coated aluminium casting. Ultrasonic assistance retrofitted.



Cyclone screener with mounted ultrasonic converter and generator



Screen basket with ultrasonic converter. The frequencies were transmitted to the wire mesh via the middle screen ring. The stainless steel wire mesh is bonded with the screen rings.



Generator for the generation of ultrasonic frequencies inclusive controls



Distinct labelling of the screen basket. Identification by QR code

### Screening output

The screening output depends on the size of the machine, the mesh size and the product to screen.

Exact data may be determined in our test centre or on site at the customer.

### Customer quote:

*„We have screened polyester/ epoxy powder with a screen output of 270 kg/h. With 800 kg we had an overflow (Coarse product outlet) of 14.7 kg. That is a really good figure. Without ultrasonic (with plastic fabric) with the same product and output we had an overflow of approx. 80 – 120 kg.“*

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