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**REPRESENTANTE AUTORIZADO**

**ANDRITZ**  
Separation

# Nozzle separators for industrial minerals

Reliable and efficient classification and thickening



# Nozzle separators for industrial minerals

## Reliable and efficient classification and thickening

The industrial minerals sector is changing, and the need to improve efficiency is leading to new applications for separation technologies. Thanks to more than 150 years' experience in solid/liquid separation for mining and minerals, ANDRITZ SEPARATION has anticipated market trends and requirements by introducing a new range of separators. Our state-of-the-art nozzle separators are the most reliable and efficient solution for processing fine particles. They are specially designed for industrial minerals applications to increase performance and profitability through excellence in solid/liquid separation.

### Classification

By means of classification, it is possible to obtain a particle size distribution at the outlet that is different to the distribution at the inlet. Nozzle separators from ANDRITZ SEPARATION ensure the most efficient classification of feed slurries up to 2.0 specific gravity in the feed. Thanks to the high solids content in the feed, less water is needed in the process, and downstream processing and transportation costs are reduced. With a feed stream containing up to 70% solids, depending on the feed viscosity, our separators can classify feed streams of particles of the same material or different materials with similar specific

gravity. With nozzle separators, ultrafine particles as small as 0.3 microns can be classified. The flexibility of using up to 6,400 gravitational force makes it possible to achieve a very precise particle size distribution.

### Thickening

Industrial minerals require high solid concentration in the end product. ANDRITZ SEPARATION nozzle separators allow thickening of fine particles <1.0 microns with 100% certainty. Nozzle separators are designed to capture 100% of the processed fines, thus reducing the solids load in the water to be disposed of in downstream

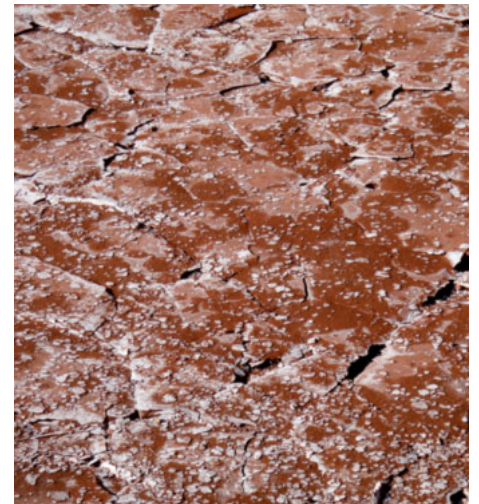
processing or recycled in the main process. Compared to traditional thermal dewatering processes, nozzle separators drastically reduce energy consumption, environmental impact, and operational costs.

### Your benefits

- Low total cost of ownership due to low power and water consumption
- Optimal process performance thanks to variable speed drive
- Reduction of processing times compared to traditional technology thanks to the continuous process
- Minimal floor space requirement
- Easy to handle and to maintain
- Cost savings for spare parts and maintenance



▲ Nozzle separator



▲ Bauxite

## Design features

- High-quality material of construction for the bowl, to run up to 6,400 G's
- Special bowl configuration allowing easy passage by the coarse particles, without risk of clogging
- Special design to process product up to 75 °C
- Robust frame, specifically designed for industrial minerals
- Special wear protection against abrasion

## Fields of application

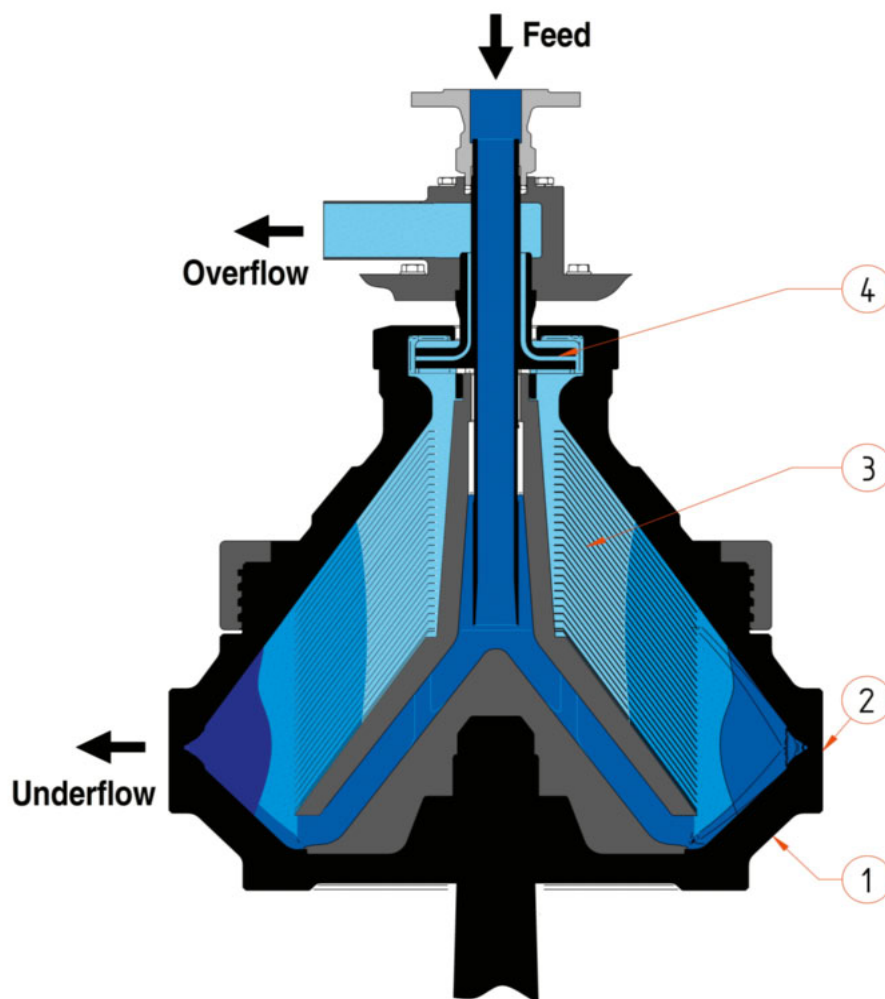
- Classification of feed slurries
- Classification of ultrafine particles
- Thickening of fine particles

## Scope of supply

- Nozzle separator
- Variable frequency drive, to allow optimum acceleration and deceleration and for fine-tuning of the process to maximize performance
- Upstream screens to prevent oversize particles from plugging the nozzles
- Back-pressure control valve with pressure transducer for a fully automatic process

## Optional features

- Entirely skid-mounted with all controls
- Color touch panel with graphic visualization of the process
- Feed control system



▲ 1. Bowl assembly, 2. Nozzles, 3. Disc stack, 4. Centripetal pump

Model	Overall floor dimensions	Bowl weight	Motor	Max. SpG	Max. G-force	Max. water m <sup>3</sup> /h	Max. process m <sup>3</sup> /h	Number of nozzles
CNZ 601	1.95 m x 1.48 m	550 kg	37 kW	2.0	6,400	35	20	8
CNZ 1001	3.0 m x 2.6 m	1,400 kg	125 kW	2.0	6,400	130	100	16

# The strength to support your needs

## We call it 360 degrees of separation

For more than 150 years, ANDRITZ SEPARATION has been providing state-of-the-art separation solutions to the mining and minerals industry. Whether your product is gold, coal, iron ore, calcium carbonate, potash or aluminum, our aim is the same: to help you improve your products, boosting throughputs while reducing operating costs. With thousand of references

worldwide, 250 production sites, service and sales companies, we provide a 360-degree range of separation expertise. For the industrial minerals industry, ANDRITZ SEPARATION offers solutions designed to increase performance and profitability through excellence in solid/liquid separation, reliable technologies, and by accepting any challenge. As a separation

specialist we not only supply and start up innovative equipment and systems, but also support customers in maximizing process efficiency over the complete plant lifecycle.

Let's sit down and see how we could take your operations to the next level. Contact us today.

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