NETZSCH

Proven Excellence.

# NETZSCH Air Classifier *MISTRAL*

Air Classifier for Ultra-fine Products

Business Unit
GRINDING & DISPERSING

# NETZSCH Air Classifier *Mistral*

*Mistral* Air Classifiers have been designed to produce ultra-fine products down to $d_{98} < 2$ µm on an industrial scale at a highly competitive energy consumption

With its strong commitment to research and development, NETZSCH introduced a whole new generation of horizontal turbo classifiers with outstanding performance. These classifiers have been creating business opportunities and opening new markets for already well established customers.

In developing the *Mistral* the main objective was to achieve products of high fineness, combined with a sharp cut point at a high fines yield and a low specific energy consumption. These criteria have been met by optimising the dynamics of the air flow and mechanical resistance of the rotating parts. In addition, NETZSCH's philosophy of building hybrid-rotors with a high length/diameter ratio is a proven advantage in achieving these objectives.

NETZSCH can offer an air classifier to meet your most demanding product fineness requirements. The use of sophisticated composite materials for the rotor con-struction has enabled us to reach tip speeds up to 108 m/s.

*Mistral* air classifiers are designed for the ultrafine classification of industrial minerals such as calcite, dolomite, chalk, talc, wollastonite, graphite, etc. Because of their high precision of separation, the *Mistral* range is also well suited to the production of toner and other similar products.

## Benefits

- Continuous operating cut point down to $d_{98}$ < 2 µm
- Very sharp cut points with high yields
- Production of ultra-fine particles on an industrial scale, which in the past was only achieved by wet processes
- Return of investment in very short time
- Highest throughputs on the market, for example at $d_{98}$ < 3 µm on calcium carbonate – 1 500 kg/h (*Mistral* 510/2)
- Rotor with hybrid-design makes the classification more reliable
- Low maintenance costs and easy maintenance
- Double discharge reduces pressure loss and saves energy costs by over 40 %
- Dynamic air sealing adapted to rotor speed minimizes risk of oversize contamination (< 5 ppm at 25 µm)

## Operating Principle

blue: Air Inlet
red: Coarse
green: Fines

## Technical Data

| *Mistral* | | 510/2 | 720/2 |
|---|---|---|---|
| Air throughput approx. | [m³/h] | 24 000 | 48 000 |
| Feedrate up to | [t/h] | 12 | 24 |
| Rotor speed max. | [rpm] | 4 500 | 4 000 |
| Installed drive | [kW] | 200 | 315 |
| Fineness $d_{98}$ | [µm] | 2 - 50 | 4 - 50 |
| Sealing air approx. | [m³/h] | 2 400 | 3 000 |

The owner-managed NETZSCH Group is a leading global technology company specializing in mechanical, plant and instrument engineering.

Under the management of Erich NETZSCH B.V. & Co. Holding KG, the company consists of the three business units Analyzing & Testing, Grinding & Dispersing and Pumps & Systems, which are geared towards specific industries and products. A worldwide sales and service network has guaranteed customer proximity and competent service since 1873.

# Proven Excellence.

## Business Unit Grinding & Dispersing – The World's Leading Grinding Technology

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NETZSCH Vakumix | Germany
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