

# MaxxClass Dynamic air classifier

for dry classification  
of fine dispersed powders  
in the fineness range  $d_{97} = 5$  to  $400 \mu\text{m}$



# MaxxClass – Dynamic air classifier for industrial ultrafine classification

## Area of application

Alongside the mill, the MaxxClass is one of the key components in the grinding system.

Particularly for ultrafine classification, the classification efficiency and selectivity of the air classifier play a major role in terms of the efficiency and cost effectiveness of the grinding process and of the quality of the end product.

## Flexibility

The MaxxClass is used for classification in the fineness range  $d_{97} = 5$  to 400  $\mu\text{m}$ . Here, the number of classifier wheels depends on the required fineness of the finished material and the required classifier airflow.

For the classification of highly abrasive materials, the design of the classifier wheel, the choice of materials and the type of housing lining are adapted to the relevant application.

The MaxxClass is used both as an inline classifier in EIRICH grinding systems and as an offline classifier for pure classification tasks.

With the aid of the MaxxClass it is also possible to optimize existing grinding systems, including installations of other suppliers.



**MaxxClass**



**MaxxMill®**



# MaxxClass – SINGLE Wheel

## Single-wheel design

The MaxxClass SINGLE Wheel is suitable for classification tasks above a finished material fineness of  $d_{97} = 20 \mu\text{m}$ . It has proved itself in practice to be particularly well suited to the classification of abrasive materials and for applications with high mass flow rates.

The MaxxClass SINGLE Wheel is used in conjunction with FLuxxMill, MaxxMill®, third-party mill designs and for offline classification.

Classifier type	Airflow m <sup>3</sup> /h	Motor kW
MCSW 26	400	0.55 - 1.5
MCSW 40	800	1.5 - 5.5
MCSW 60	1700	3 - 18.5
MCSW 65	1700	3 - 18.5
MCSW 80	3500	22
MCSW 100	4800	4 - 30
MCSW 120	7000	4 - 30
MCSW 140	10000	4 - 30
MCSW 160	14000	5.5 - 30
MCSW 180	18000	7.5 - 30
MCSW 200	22000	15 - 30
MCSW 220	28000	22 - 30
MCSW 240	35000	22 - 37
MCSW 260	43000	37 - 55
MCSW 280	49000	55 - 75

### Machine configuration

- Central air supply and central supply of the material to be classified
- One vertically arranged classifier wheel
- Low-maintenance drive via belt drives or direct drive

The selection of the suitable classifier design for your classification task depends on:

- Required fineness of the finished material
- Sharpness of the topcut
- Mass flow rate
- Wear and corrosion behavior of the material that is to be classified

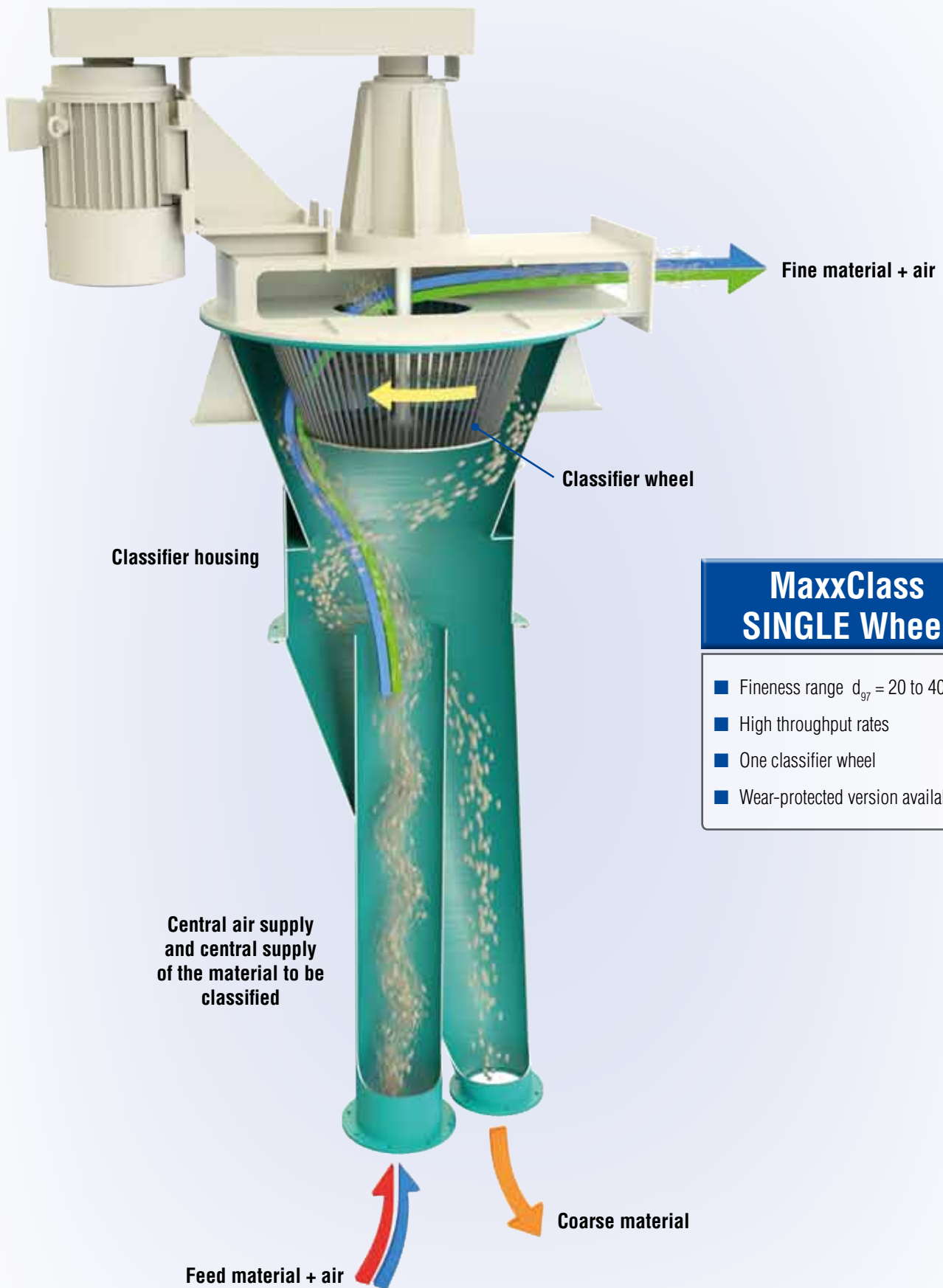
The design of the classifier wheel, the required volume flow rate, the size of the drive and the type of drive chosen are coordinated with the particular application, as are the materials and any wear protection used.

### Principle of operation

The incoming feed material that is to be classified flows with the main airflow from below into the classifier and is uniformly distributed in the region of the vertically arranged classifier wheel. The fineness of the finished material can be quickly and easily adjusted during operation by changing the rotating speed of the classifier.

The fine material leaves the classifier with the classifying air through the rotor blades of the classifier wheel. The classified coarse material is rejected by the classifier wheel and makes its way to the coarse material outlet.

Drive with stepless adjustment of rotational speed



## MaxxClass SINGLE Wheel

- Fineness range  $d_{97} = 20$  to  $400 \mu\text{m}$
- High throughput rates
- One classifier wheel
- Wear-protected version available

# MaxxClass – MULTI Wheel

## Multi-wheel design

The MaxxClass MULTI Wheel is used for challenging classification tasks in the ultrafine range. Thanks to the multi-wheel design, high fineness with sharp limitation of oversize particles can be achieved.

The MaxxClass MULTI Wheel is used in conjunction with FLuxxMill, MaxxMill®, third-party mill designs and for offline classification.

On the MaxxClass MULTI Wheel, several classifier wheels are arranged vertically on the classifier head. Depending on the required fineness of the finished material and the required volume flow rate, 3 to 6 classifier wheels can be integrated in one classifier housing.

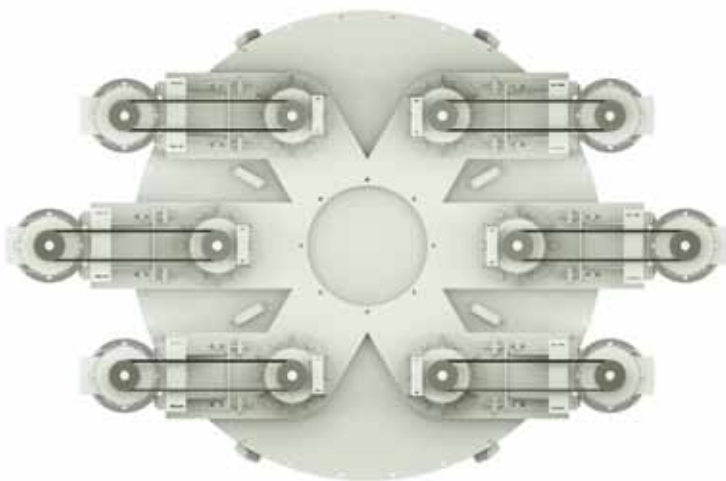
Here, each classifier wheel has its own drive. The fine material outlets of the individual classifier wheels are combined in the classifier head.

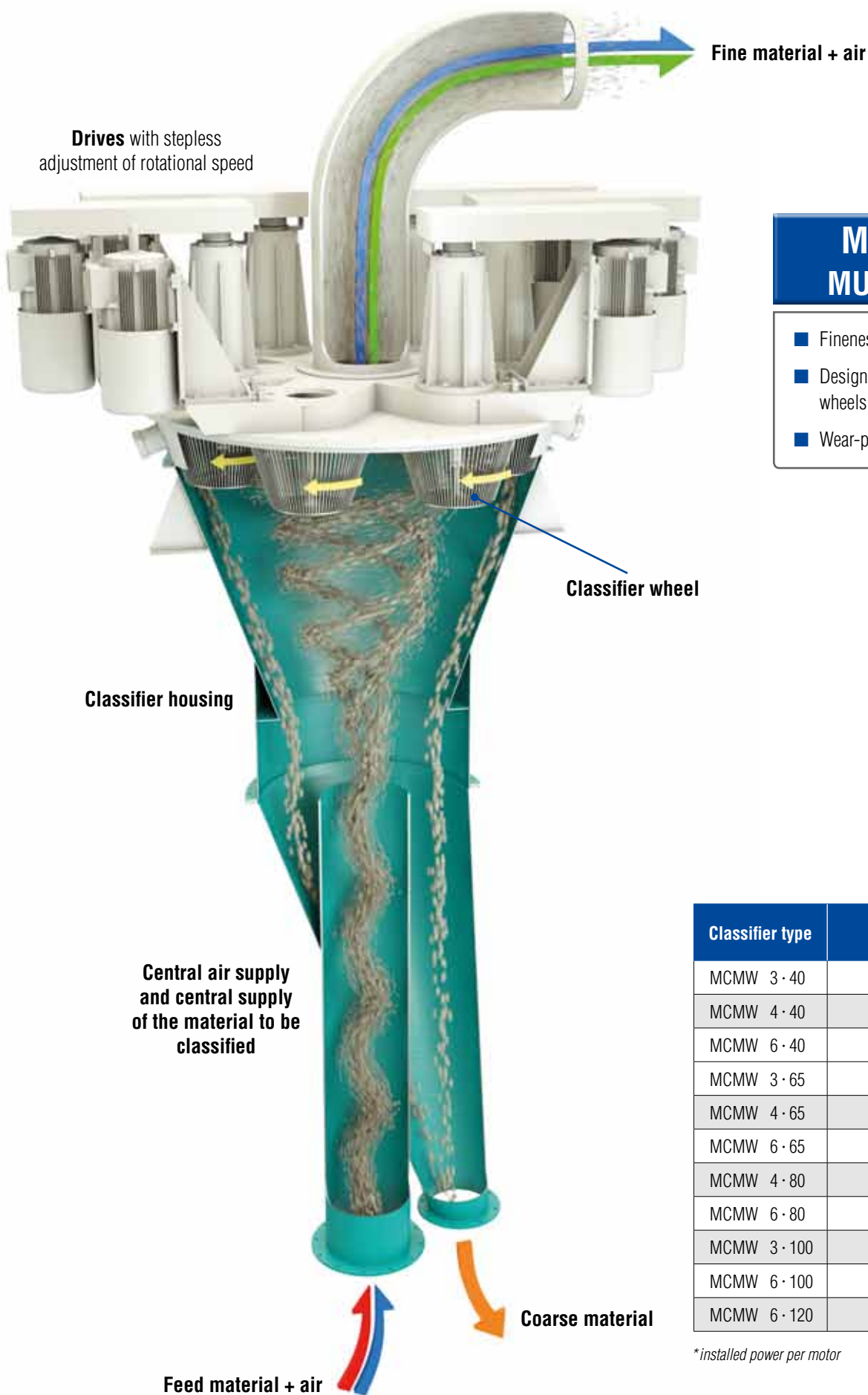
The fine material is carried with the air out of the classifier via a central pipe bend. As a result, the air classifier thus only has one connection point for the fine material and can be quickly disassembled.

**Classifier head**  
with vertically arranged  
classifier wheels



**Separate drives**  
via belt drives or direct drives





## MaxxClass MULTI Wheel

- Fineness range  $d_{97} = 5$  to  $45 \mu\text{m}$
- Design with 3 to 6 classifier wheels
- Wear-protected version available

Classifier type	Airflow $\text{m}^3/\text{h}$	Motor $\text{kW}^*$
MCMW 3 · 40	3000	1.5 - 5,5
MCMW 4 · 40	4600	1.5 - 5,5
MCMW 6 · 40	7000	1.5 - 5,5
MCMW 3 · 65	7500	3 - 18,5
MCMW 4 · 65	10000	3 - 18,5
MCMW 6 · 65	13000	3 - 18,5
MCMW 4 · 80	13500	3 - 22
MCMW 6 · 80	20000	3 - 22
MCMW 3 · 100	18000	4 - 30
MCMW 6 · 100	28000	4 - 30
MCMW 6 · 120	36750	4 - 30

*\*installed power per motor*

# MaxxClass – flexible operating mode

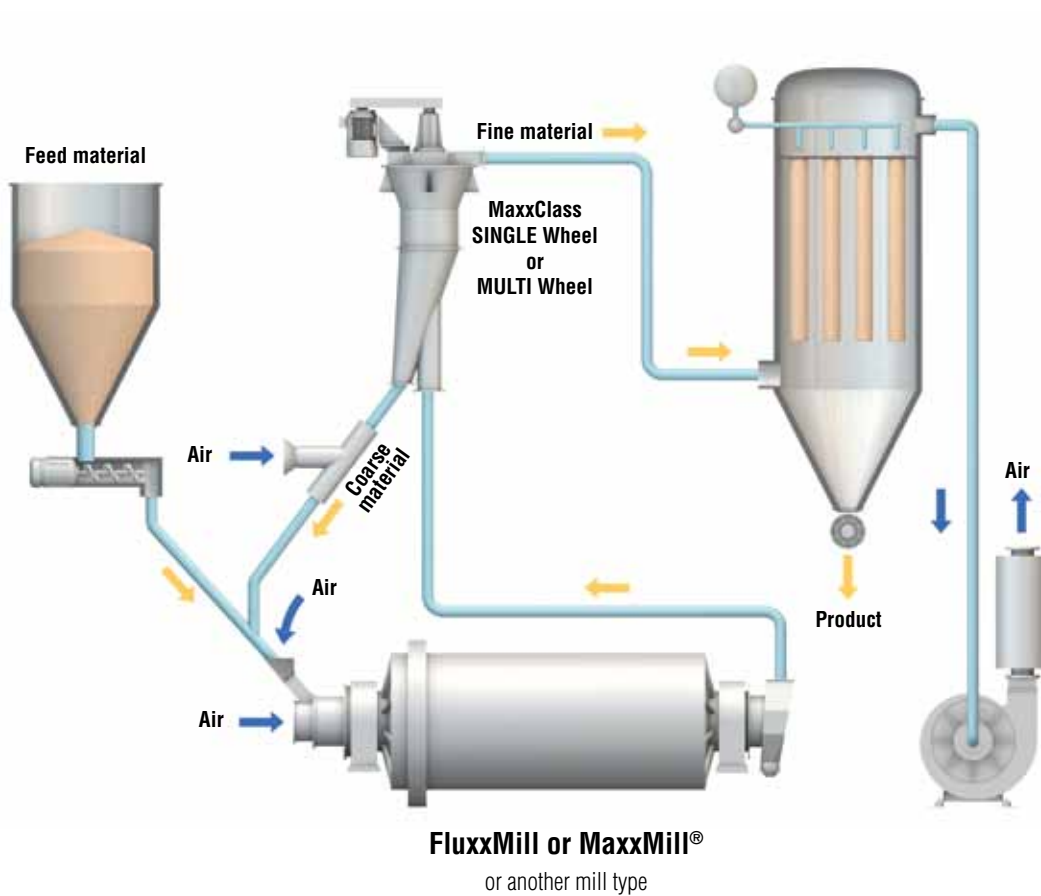
## Inline operation

In EIRICH grinding systems with FluxMill or MaxxMill®, the MaxxClass is connected directly in the air and material flow between the mill and the filter. In this inline operating mode, a stable material cycle between mill and classifier is automatically established.

The coarse classifier material is returned downstream of the classifier directly back to the mill for re-grinding. The target fraction is the fine classifier material, which is separated from the air in the filter downstream of the classifier and delivered as a powder.

### The MaxxClass is suitable for:

- Standard grinding systems with airflow
- Optimization of existing grinding systems



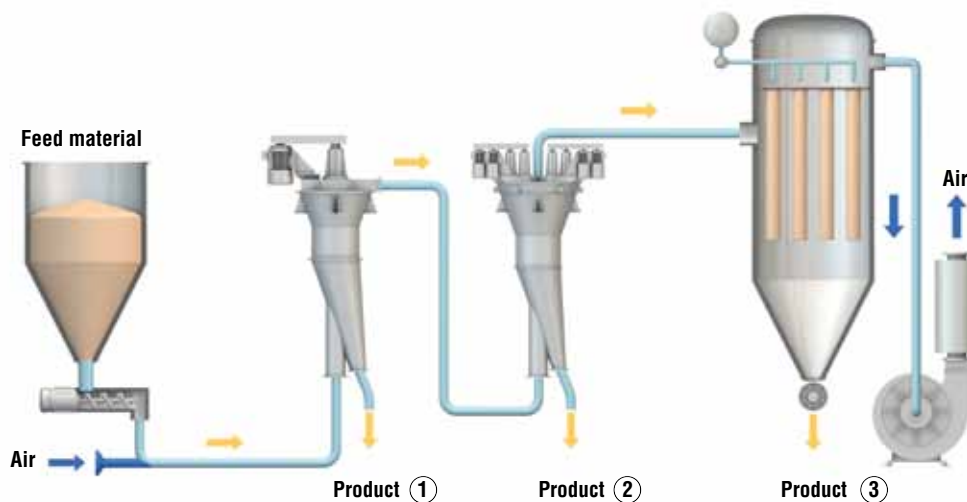
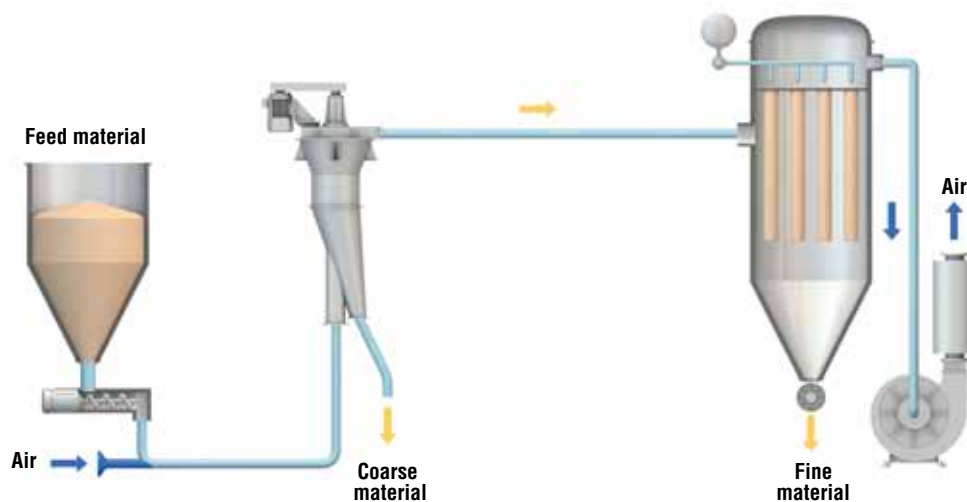


## Offline operation

The MaxxClass can also be operated independently of grinding systems as a separate classification system, either with just one classifier or with several classifiers connected in series for the production of narrow grain fraction bands. Depending on the particular task, different classifier versions can also be combined with each other. There are many different and varied potential applications for the MaxxClass.

### Possible offline operating modes:

- Classification independently of grinding systems
- Dedusting upstream of a grinding system in order to reduce the workload on the mill
- Arrangement downstream of a grinding system that does not yet have a classifier
- Production of narrow grain distributions and selective fractionation
- Series connection of multiple classifiers



# MaxxClass – for diverse applications

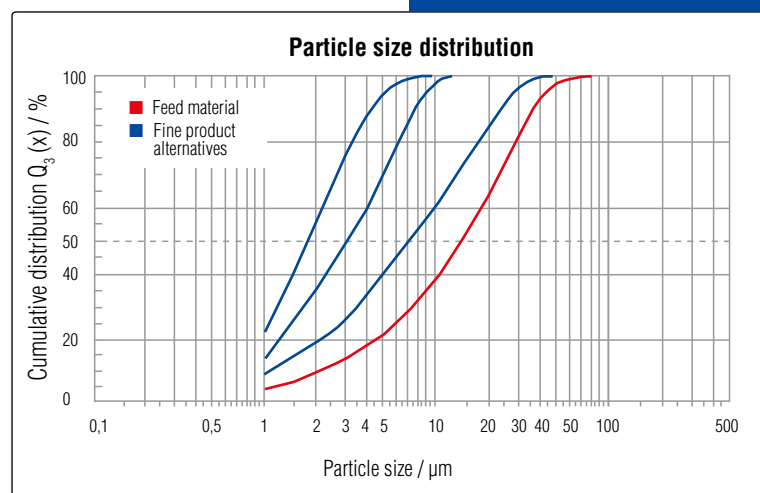
The MaxxClass is suitable for industrial ultra-fine classification of dry, fine dispersed dusts. Typical fineness grades for the fine classifier material are in the range  $d_{97} = 5$  to  $100 \mu\text{m}$ . For the classification of highly abrasive materials, the classifier is designed to be correspondingly wear-resistant:

- with wear protection surface in the classifier housing and in the central air supply and the central supply of the material to be classified
- with wear protection on the classifier wheel
- through adjustment of the size, geometry and materials of the classifier wheel

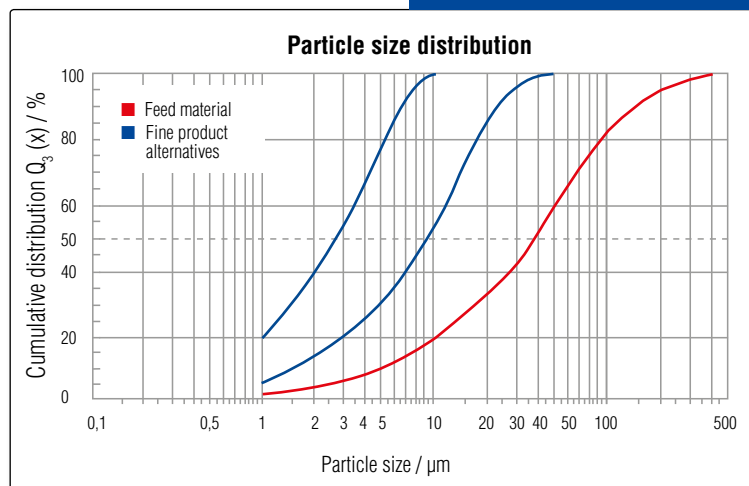
## Typical applications

- Calcium carbonate (GCC)
- Industrial fillers
- Kaolin
- Glass
- Aluminum oxide
- Fly ash

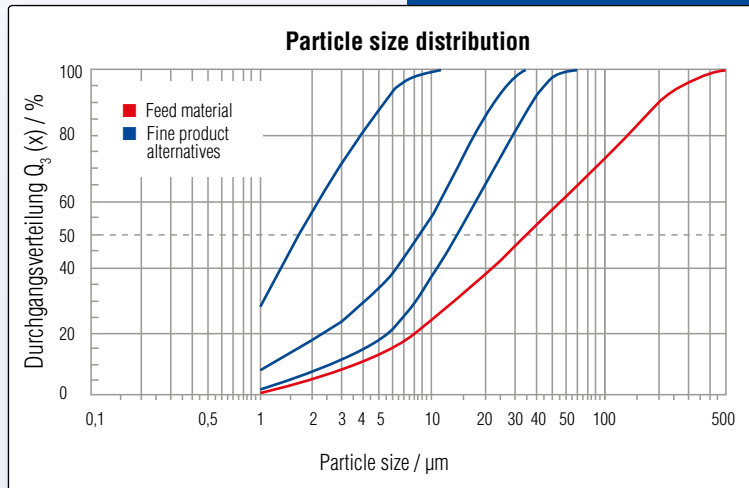
## Calcium carbonate



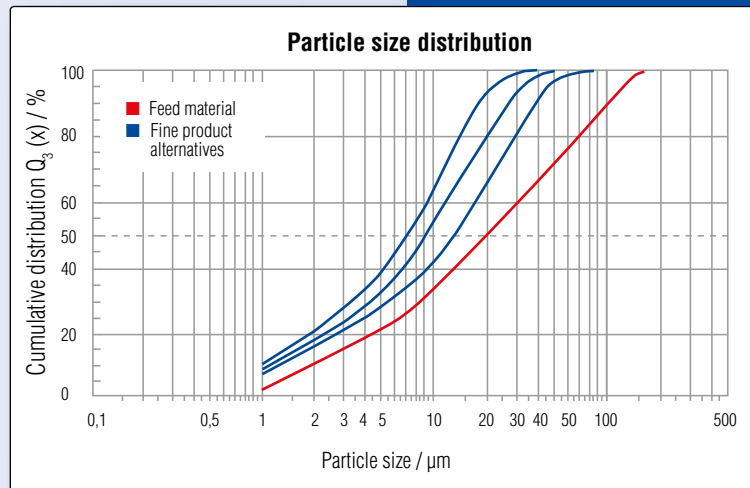
## Kaolin



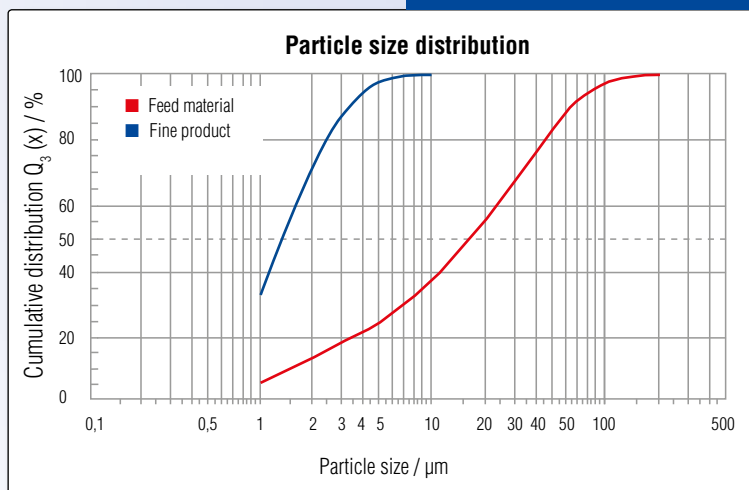
## Bentonite



## Magnesite



## Zirconium oxide



## Industrial Mixing and Fine Grinding Technology

### Tradition and innovation since 1863

EIRICH stands worldwide for a comprehensive range of products and services in the field of preparation technology. Its particular focus is on mixing and fine grinding technology, with know-how developed over 150 years of close cooperation with industrial users, universities and research institutions.

Pursuing a corporate philosophy of operating internationally and thereby ensuring close proximity to every customer, the EIRICH Group has secured its place in all the key economic regions of the world.

The focus is on innovative technology for machinery and systems engineering designed to offer solutions for high-standard preparation tasks from a single source.

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