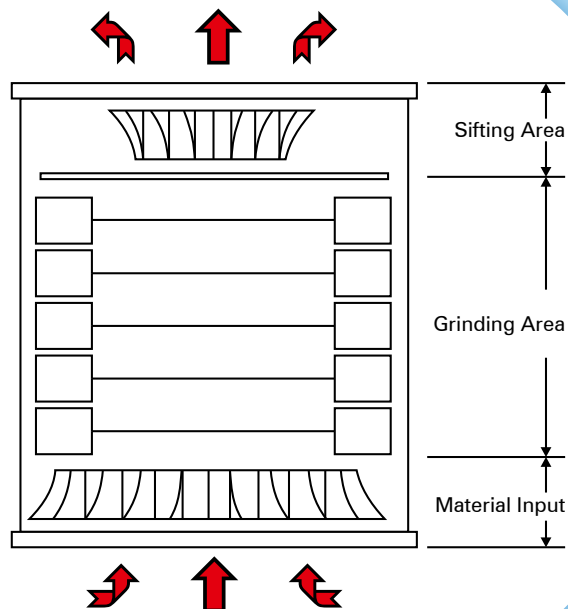




TurboRotor-System
Micronising • Mixing • Drying

Micronising – Mixing – Drying



The Micro-Vortex-Mill can be divided into three sections

Classifier Area

For separation of overs

Grinding Area

Different profiles for the inner grooved liner available

Variable number and geometry of grinding tools possible stepless variation of rpm

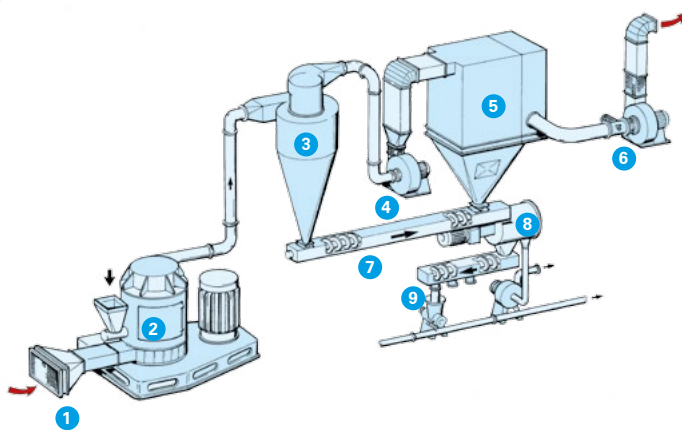
Variable residence time and turbulence for efficient evaporation

Product Input Area

Feeding into the airstream or by feeding screw

Dispersion and homogenisation before reaching the Grinding Area

TurboRotor-System



1. Heat exchanger for cooling or heating of the process air
2. Micro-Vortex-Mill with load-dependent and temperature-dependent dosing
3. High-duty cyclone HFA for pre-separation
4. High-duty fan with high total pressure
5. High-duty bag filter with low pressure reverse air-jet
6. High-duty fan with automatic volume flow control
7. Collecting screw for micronised product
8. Rotational screen for product seizing
9. Distribution worm for bagging-off or pneumatic conveying

Grinding of heat sensitive products



Such as various plastic materials, thermoplastics as well as duroplastics, flexible synthetic and natural rubbers, caoutchouc, waxes, stearates, soaps, sticky materials, agro products and those with a high fat content, materials with a softening or melting point just slightly

above the ambient temperature, food products, such as extruded materials, cereals, starch and protein-derivates, germs fibres, bran, defatted cacao beans, herbs, spices and others for the pharmaceutic and cosmetic industries.



NBR
(Input)



NBR
(Output)



PVC
(Input)



PVC
(Output)

Selective grinding



of composite materials consisting of metal and/or paper and/or plastics, such as wrapping materials, aluminium-plastic foils, printed circuits, electronic waste and thin copper cables. These materials are treated in a way, that the metal fraction

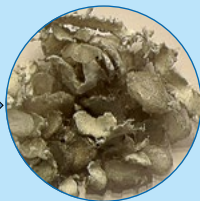
is converted into more or less tiny balls, whilst the other fractions are made available in form of flakes with view to separate them downstream from each other.



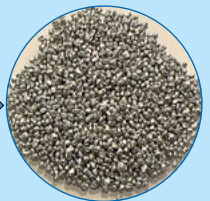
floorheating pipes
(pregrinding)



floorheating pipes
(Input TurboRotor)



plastic
(Output)



aluminium
(Output)

Micronisation



especially of crystalline materials like minerals, pigments, carbon, paint, sulphur, sugar as well as fibrous materials such as cellulose and its various derivatives, bio-masses, bran and husk of various cereals,

saw dust and others are micronised down to the micron range. To obtain a narrow particle size distribution the TurboRotor is combined with a dynamic classifier.



crystalline sugar
(Input)



icing sugar
(Output)



fertilizer
(Input)



fertilizer
(Output)

Simultaneous grinding and spray drying



Mainly in food-, mineral-, in pigment- and chemical industries a wide range of products made available in liquid form. It has been proven since a few years, that the TurboRotor grinding spray drying process needs much less in-

vestment, less space and is operated with a much higher thermal yield than any type of spray-drier. The TurboRotor grinding spray drying system is a process to produce a final dry powder free of agglomerates.



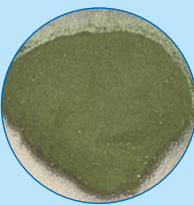
wheat protein
(Input)



wheat protein
(Output)



spirulina
(Input)



spirulina
(Output)



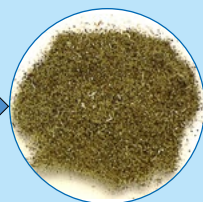
Simultaneous grinding and drying

Of mechanically or thermally concentrated suspensions or slurries or in form of filter cake or in a crumb form or products from extruders. The TurboRotor is able to treat those wet feed materials with a very high thermal yield. Due to the very short residence time of the product in the system, the product

does not suffer from quality. Some of our installations are in operation as a dryer only. Most food products (cereals, starch, proteins – both from plants and animals), spices, sea weeds, dairy products, paint and pigments, as well as a wide range of waste products are turned into higher value products.



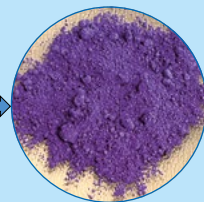
seaalgae
(Input)



seaalgae
(Output)



phthalocyanin blue
(Input)



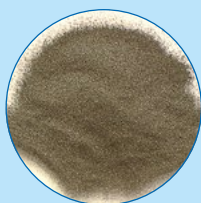
phthalocyanin blue
(Output)

Grinding, Mixing or Coating



of different components in food-, cosmetic- and pharmaceutical industries. Grinding and simultaneous drying and/or

coating of minerals or food or animal feed materials with waxes, stearates, hydrated fats or stabilizers.



aluminum powder



aluminum powder
with 0,5% stearic acid



calcinated caolin



calcinated caolin
with 1% silane

Type	Driving power [kW]	Revolutions [upm]	Air volume [m ³ /h]
G-35	7,5-18	4000-8000	800
G-55	15-55	1800-3600	2000
G-90	45-110	1350-2500	5000
G-130	90-200	1100-1700	8000
G-150	132-315	900-1450	15000
G-180	200-450	800-1200	25000
G-200	315-630	650-1000	50000

The contact parts can be executed in different materials of construction matching the product's requirements. Safety devices to be regarded according to the product parameters are executed following ATEX 94/9/EG



test station

About us

With our TurboRotor-Milling and Drying Systems, we support both users in the food and chemical industry. TurboRotor-Milling and Drying Systems are used for the production of final and intermediate products, as well as for processing of homogeneous production waste that get part of the final or intermediate product with high added value after being worked up.

Mahltechnik Görgens GmbH has developed with the ever-growing demands of the international markets continuously since foundation in 1985. We have a suitably well equipped test station to simulate the different tasks for the design of large-scale production devices for ambient and cryogenic grinding and simultaneous grinding and drying.



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