

Dispersion dryers

Rapid drying of powdery bulk materials



Efficient drying technology for powders, filter cakes and fibres

Allgaier dispersion dryers are suitable for the treatment of all materials that can be pneumatically conveyed when dry.

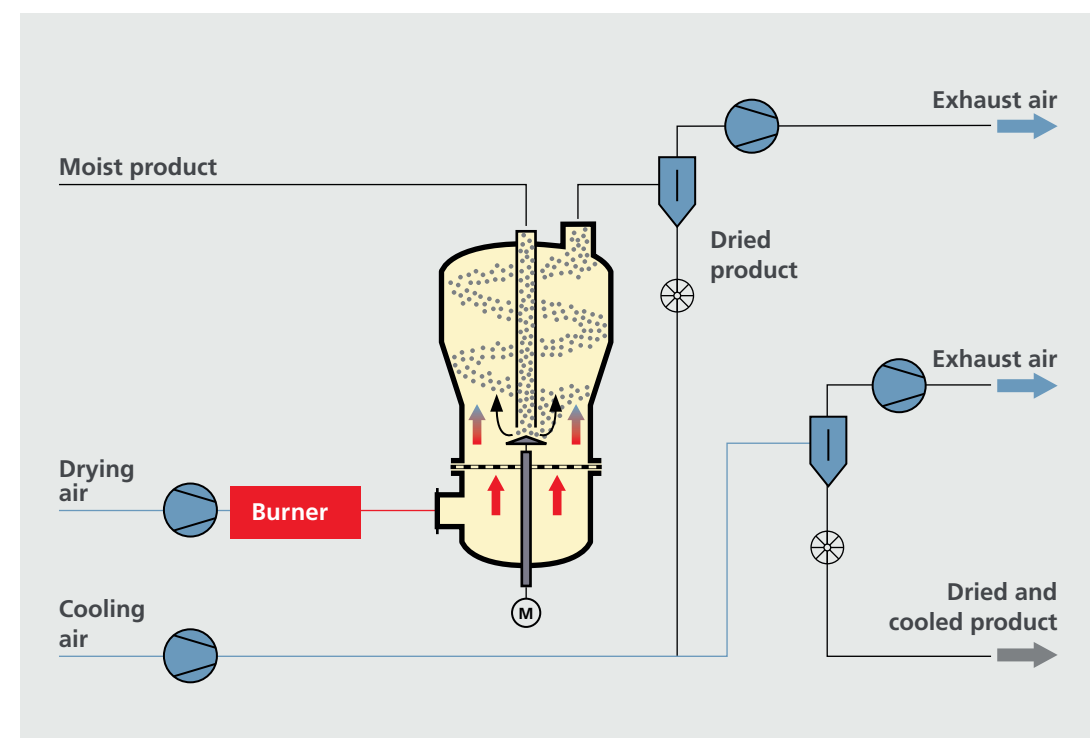
The dispersion principle differs from the fluidized bed principle in particular due to the velocity at which the drying or cooling air is passed through the product.

It is generally possible to dry products with very high moisture contents in just one pass without having to return the product.

Filter cakes break down during the drying process into dry, free-flowing powders.

Coarse particles can be discharged by means of a special design of the distribution plate – separate from the dried product flow – via a rotary valve.

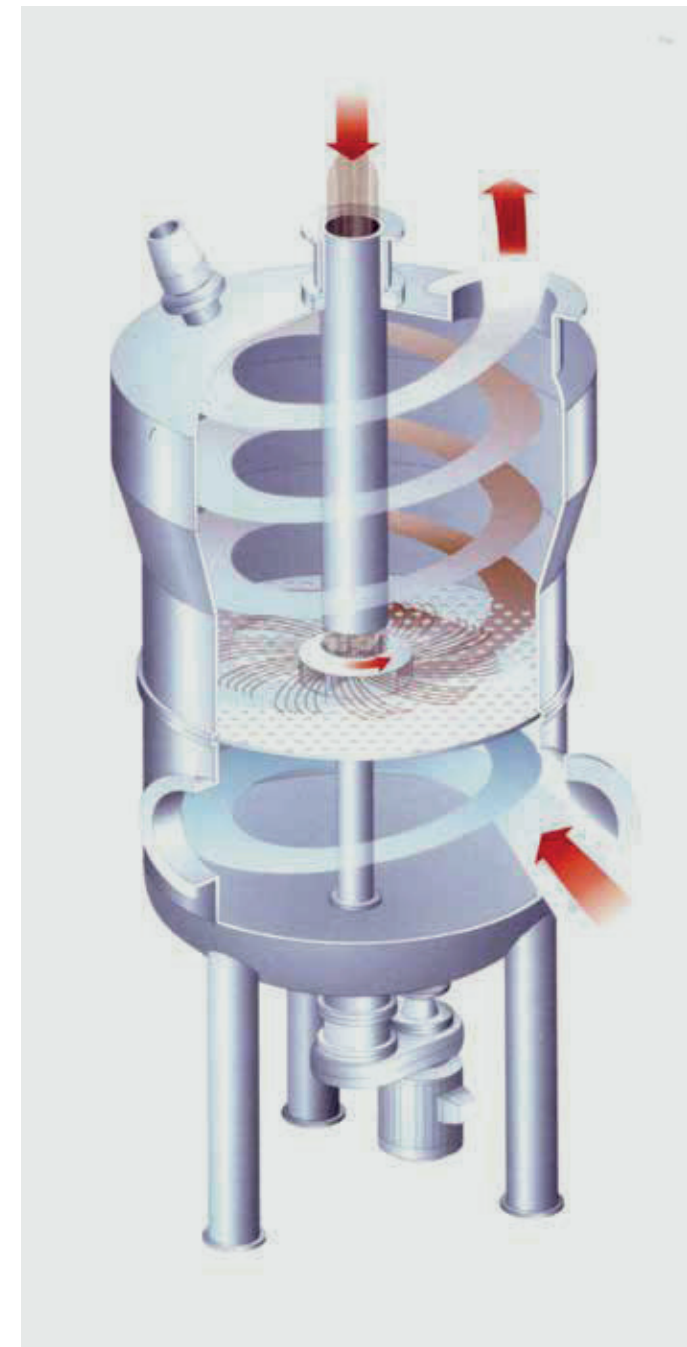
The Allgaier dispersion dryer has an exceptionally high evaporation rate and at the same time a small footprint.



Energy-optimized process technology for an uniform drying result

The dispersion dryer consists of an upright cylindrical housing that is divided into two parts by a perforated distribution plate.

The drying air enters the dryer via an inlet air intake below the distribution plate and flows spirally upwards.



The moist product is fed in centrally from above onto a fast rotating disc located above the distribution plate and hence dispersed into the drying air.

By using various rotating tools, filter cakes are efficiently broken down and quickly and gently dried.

The specially designed distribution plate and the tangential air inlet ensure intensive drying in a very short time.

The intensive circulation of product and drying air ensures a best possible heat and mass exchange, and hence far more efficient drying compared with conventional flash dryers.

The control of the system by the exhaust air allows gentle and fast drying of free-flowing dusty or powdery, crystalline, fine-grained or fibrous products.

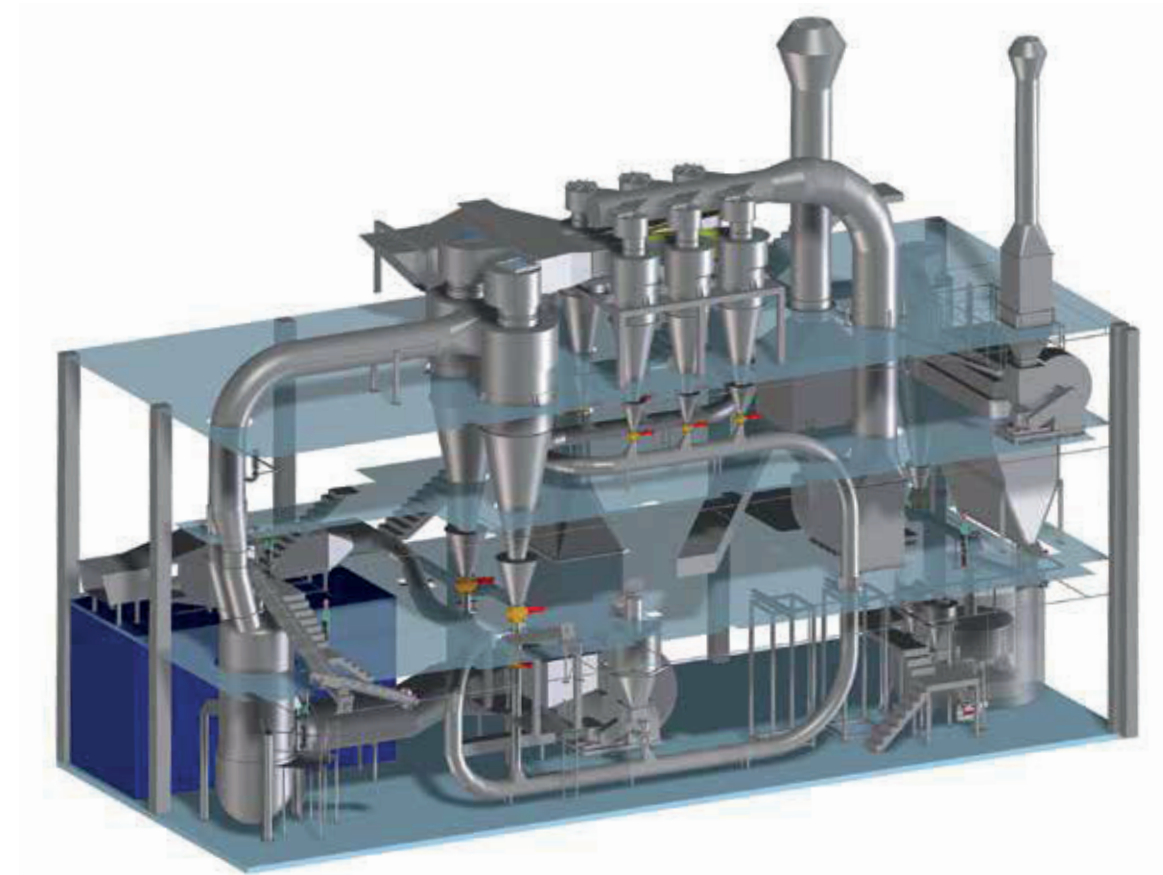
For adhesive products, the parts of the system coming into contact with the product inside the dryer can be specially coated.

The dried finished product is discharged by downstream cyclones or fine dust filters.

**Whether single unit or plant systems –
we have the customised solution for you**



**Complete solutions for the starch industry
Plant engineering in large format**



Example of a complete plant for starch drying and cooling

Wide choice of design variants

- Heat recovery from the dryer exhaust air
- Cyclone or filter separator
- Pressure and pressure-shock resistant design
- Standard version with air intake from the atmosphere
- Inert gas circuit and solvent recovery
- Direct or indirect heating using steam, gas, oil, electricity or waste heat
- Pressure relief and explosion suppression systems
- Simple control or completely automated via process control systems
- Hygienic system design in accordance with the EHEDG guidelines
- Combinations of dispersion dryer and downstream pneumatic cooling section for product cooling



Dryer upper section with moist product infeed



Dryer lower section with drying air inlet

An endless spectrum of applications

Foodstuffs industry:

- Brans
- Cereal flours and starches
- Corn starch
- Dextrose
- Potato starch
- Tapioca starch
- Wheat starch

Chemical industry:

- Aluminium hydroxide
- Cellulose
- Dicalcium phosphate dihydrate
- Exolith
- Glass fibres
- Guanidine nitrate
- Magnesium hydroxide
- Pigments
- Plastic powders
- Polymethyl methacrylate
- Potassium sulphate
- Sodium sulphate
- Sodium sulphite
- Trisodium phosphate
- Urea polymer
- Zeoliths

Pharmaceutical industry:

- Active ingredients
- Additives
- Auxiliary materials
- Chitosan
- Fillers
- Glucose derivatives
- Silymarin

Environmental engineering:

- Film chips
- Filter cakes
- Grass fibres

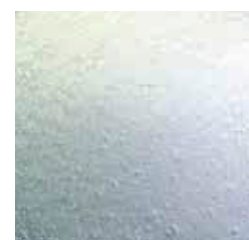
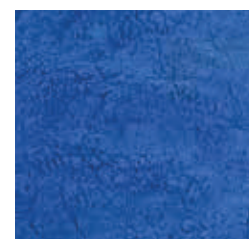
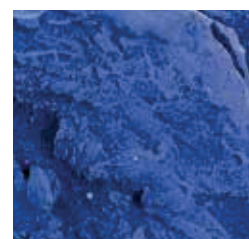
Agriculture, mineral industry, metallurgy:

- Casting powders
- Chalk
- Gypsum
- Limestone powder
- Peat and peat substitutes

Moist material



Dry material



Visit us for a drying trial in our test centre

Convince yourself of the quality of the Allgaier dispersion dryer in our test centre. This will enable you to not only test the performance of the dryer with your product, we can also assist you in the product development and sample production.

We will be happy to put our experience at your disposal and look forward to welcoming you to our test centre.



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