

# VETTERTEC RING AND FLASH DRYERS

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The VetterTec ring and flash dryer technologies are pneumatic type drying systems well-known for their reliability and drying efficiency. Our ring and flash dryer systems are suitable for drying a range of products from wet cakes to wet pastes.

Optimal wet product preparation is part of our specially designed and easily cleanable wet product feed system forming an integral part of our dryers. Based on our extensive experience, VetterTec carefully selects each part of the drying systems, including mechanical dewatering as well as milling and cooling to suit each specific application.

## ADVANTAGES

- ✓ Options for direct and indirect heating
- ✓ Gentle drying due to short residence time
- ✓ Low maintenance cost – only few moving parts
- ✓ Suitable for drying in an inert atmosphere
- ✓ Option for exhaust gas recycle to provide inert atmosphere for increased safety and save heating energy
- ✓ Design in accordance with all relevant ATEX/NFPA or similar local requirements
- ✓ Optimized design for easy cleanability



## SPECIAL FEATURES

Ancillary equipment supplied with VetterTec plants include:

- ✓ Back-mixers
- ✓ Special feeders
- ✓ Wet scrubbers
- ✓ Solvent recovery systems
- ✓ Bag filters
- ✓ Single or multi-stage cyclones (with option for special suction discharge)



Full ring dryer by VetterTec

VetterTec ring and flash dryers are employed for a wide range of applications by adjustment of the wet feed system, dryer inlet/outlet temperatures, internal and external product recycle and product collection system.



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VetterTec **flash dryers** are used to produce fine granular or powdered material when short residence times are required. A stream of turbulent hot air dries the product particles whilst being conveyed co-currently in a continuous process. Rapid evaporation ensures that the product temperature is maintained as low as possible, ideal for temperature sensitive materials.



VetterTec **ring dryers** are flash type dryers which incorporate a centrifugal classifier to increase the residence time selectively for particles with higher moisture content and larger material. Within the classifier, drier and finer particles are separated from larger and wetter particles. Adjustable blades in the classifier allow the degree of separation to be set to optimize dryer performance. Larger particles are recirculated through the dryer, usually by a disintegrator that provides size reduction. This extended residence time allows efficient drying of many different products that cannot be flash dried.



VetterTec flash and ring dryers can be supplied in open circuit, partially closed circuit and fully closed circuit design. A partially closed circuit allows drying efficiency to be increased by recirculating a majority of the exhaust gases back into the dryer.

This minimizes heat release in the exhaust air and provides self-inertization. Fully closed circuit systems enable operation at higher wet bulb temperatures and maximize energy recovery in the evaporator. According to requirements, it may be useful to run drying tests with the product.

## Fields of Application

### Starch and Grain Industry:

- ✓ Native starch
- ✓ Modified starch
- ✓ Protein
- ✓ Vital wheat gluten
- ✓ Soya products
- ✓ Corn gluten
- ✓ High protein feed (DDGS)
- ✓ Wheat feed (bran + syrup)
- ✓ Potato protein

### Alcohol/Ethanol Industry:

- ✓ DDGS

### Food Industry:

- ✓ Sauce powders
- ✓ Flours
- ✓ Food ingredients
- ✓ Protein
- ✓ Casein
- ✓ Dietary fibres
- ✓ Pea fibres

### Chemical Industry:

- ✓ Carbonates
- ✓ Sodium Sulphate
- ✓ Silicates
- ✓ Epsom salt
- ✓ Kaolin
- ✓ Calcium carbonate
- ✓ Silicas
- ✓ Zeolite

### Pulp & Paper and Environmental Industry:

- ✓ Lignin
- ✓ Specialized wood pulp
- ✓ Algae
- ✓ Minerals (e.g. lithium carbonate & hydroxide)
- ✓ Fly ash
- ✓ Coal
- ✓ Paper sludge

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