

Flash Cooler



High flexibility cooling

Proven design - low maintenance

The Flash Cooler is designed especially for use with fine materials and is characterized by **very rapid cooling rates and high efficiency of heat transfer**. A major advantage is that no rotating parts are required for the cooling process.

The Flash Cooler can be installed downstream of different kiln equipment, for instance as the lowest stage at a flash calcining system (POLCAL®) for materials cooling by preheating of the combustion air. Furthermore, the Flash Cooler can be operated as after cooler stages with a separate gas system.

The hot, fine grained material is introduced into the riser duct of the cyclone cooling system via a dispersing chute. Due to the dispersing properties of the chute the material is well distributed in the cold air atmosphere. This results in a high efficient heat transfer. The final product is further smoothly separated in the counteracting flow of a cyclone separator.

Depending on the cooling requirements the cooler system consists of one or several cyclone stages and will be connected to different interconnections. The Flash Cooler can be designed as single system or connected in series (each riser duct is operated with fresh ambient air, resulting in high performance of material cooling) or as cyclone cascade (resulting in high performance of gas preheating).

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Fields of application

Phosphate, lime, gypsum, clays, metal ores, etc.

Grain size range of feed material: up to 2 mm

Main features

Cooling of fine grained materials

High capacity

Direct heat transfer

High efficiency

Smooth operation

Low maintenance

No moving parts

Small footprint

Design parameters

0.5 to 2 s of residence time

1 to 4 cyclone stages

Daily capacity: 100 to 8000 tons

Cooler diameter: 0.4 to 3.6 m

Temperature of feed material: up to 1100°C

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