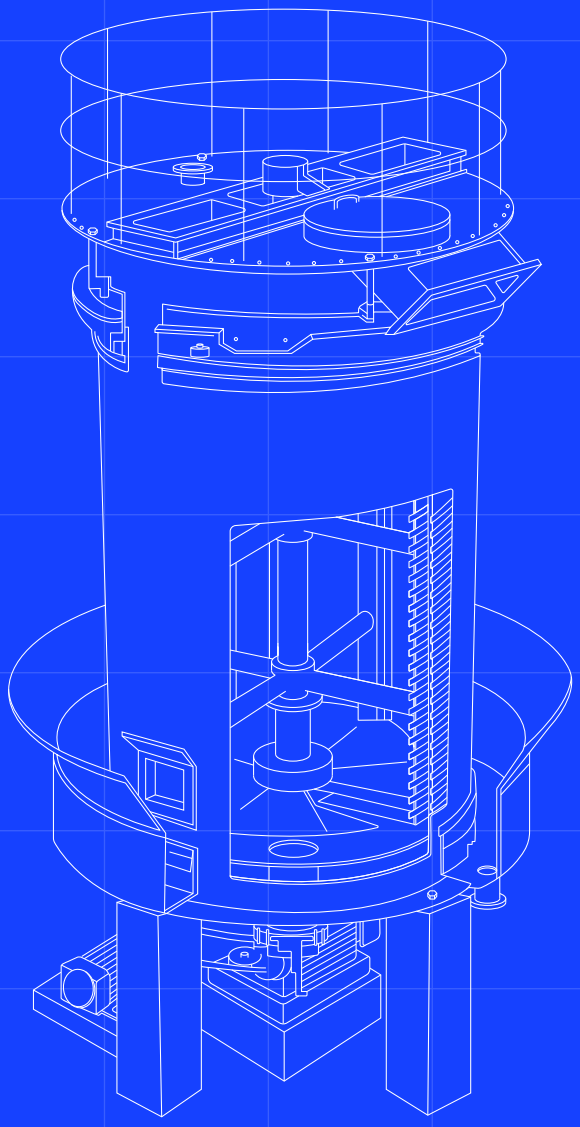
FULLER®



POWDER COOLER

FOR CEMENT AND OTHER PULVERIZED MATERIALS

EFFICIENT, FLEXIBLE COOLING OF HOT POWDERED MATERIALS

KEY BENEFITS

- Efficient cooling
- Flexible application
- Easily integrates into existing circuits
- Low maintenance, reliable operation

CEMENT AND MORE

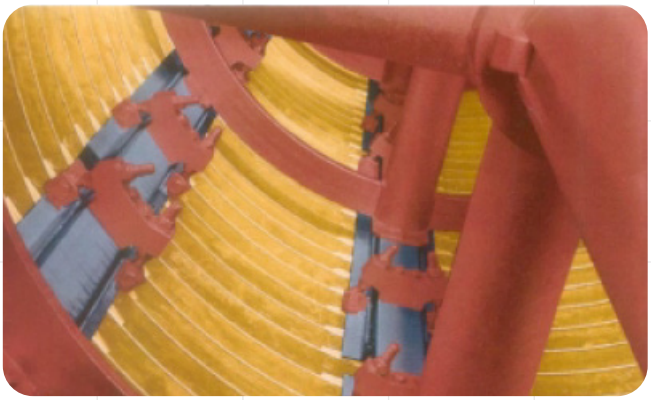
Our powder coolers are ideal for cooling hot milled materials. Initially designed to handle cement, they are equally applicable to other powders, with cooled output ready for onward handling, packing, and dispatch.

Design and operation

The powder cooler comprises a cylindrical steel tank with internal rotating spiral flights mounted onto a framework attached to a central vertical steel shaft, which is supported on dust-proof roller bearings. An electric motor powers the mechanism via a right-angle speed reducer directly connected to the main shaft.

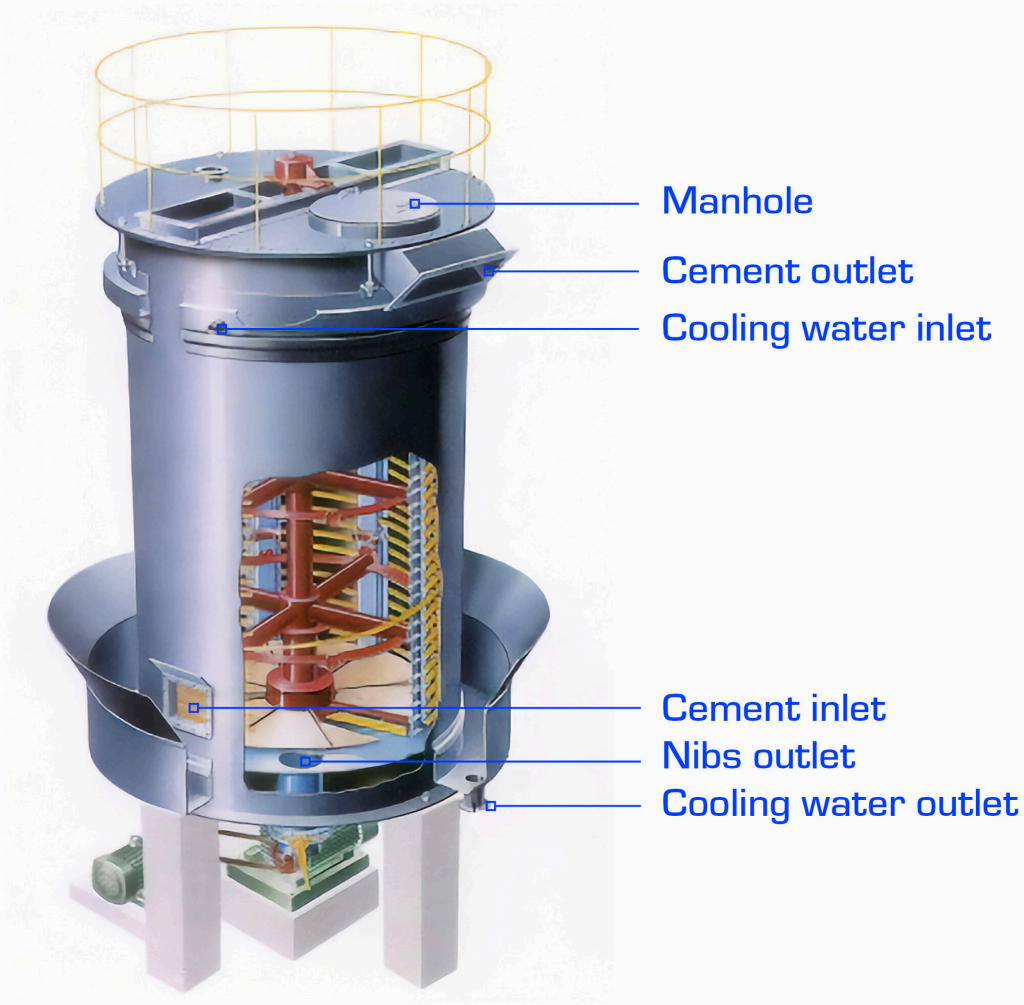
Cement is fed into a bottom inlet. From the inlet, it falls onto a rotating plate, flinging it outwards to form a thin layer on the inner wall of the cylinder. Screw flights convey the material upwards, while ensuring particles are in constant motion and close contact with the cooled surface of the cylinder. The process keeps the cylinder's inner surface clean and coating-free, producing highly efficient heat transfer between the hot material and the cool wall.

Cooling is delivered via a continuous and even flow of water around the outside of the cylinder. The design eliminates any possibility of water leaking into the cement flow, prevents condensation from forming on the tank's inner surface, and keeps the outside clean of solid buildup.



Detail of spiral fligfhts. Note eyebolts for adjusting flights

DESIGN AND OPERATION



Specifying and installation

Powder coolers are available with capacities up to 180 tonnes per hour and can be installed anywhere in the mill circuit. They can often be installed at existing plants with minimal modifications to conveying equipment.Selecting an appropriate cooler size is based on various factors, including:

- Site layout
- Material characteristics
- Screen analysis and the material's specific heat
- Throughput required
- Feed temperature
- Required outlet temperature.
- Cooling water temperature and other characteristics

FULLER® TECHNOLOGIES

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