

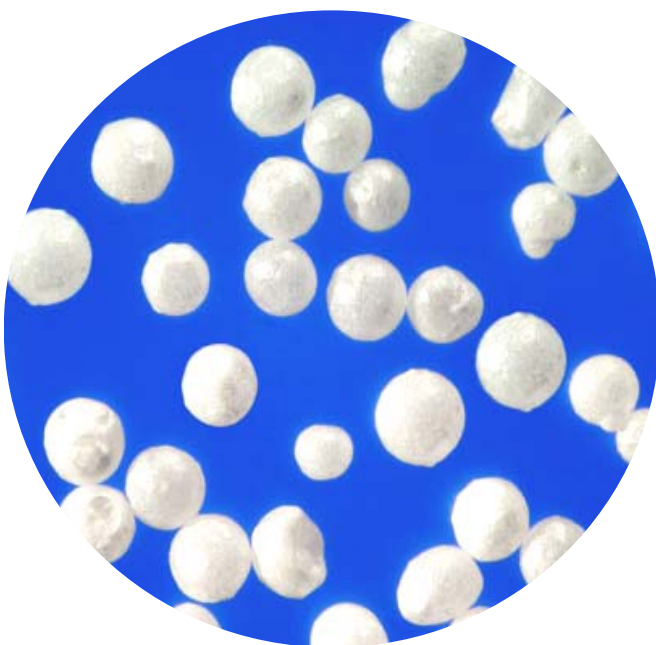
Spray Cooling

Engineered for

- Simplicity
- Top quality products
- On time delivery
- Supplier commitment
- High plant availability
- Process know how and technology
- After sales service and spare parts delivery



Prilling wheels are based on Niro's extensive experience with rotating atomizers and the latest high tech cutting methods.



Micro photo of stearic acid particles



New Design Features

Niro has developed a new and more compact design of the well-proven Niro spray cooling process for production of free-flowing spherical particles from melts of a variety of products:

- Encapsulated materials
- Fats
- Glycerides
- Hydrates
- Inorganic/organic melts
- Quaternary ammonium compounds
- Stearic acid/stearates
- Waxes

ADVANTAGES

The advantages of selecting a Niro spray cooler in latest design comprise:

Investment

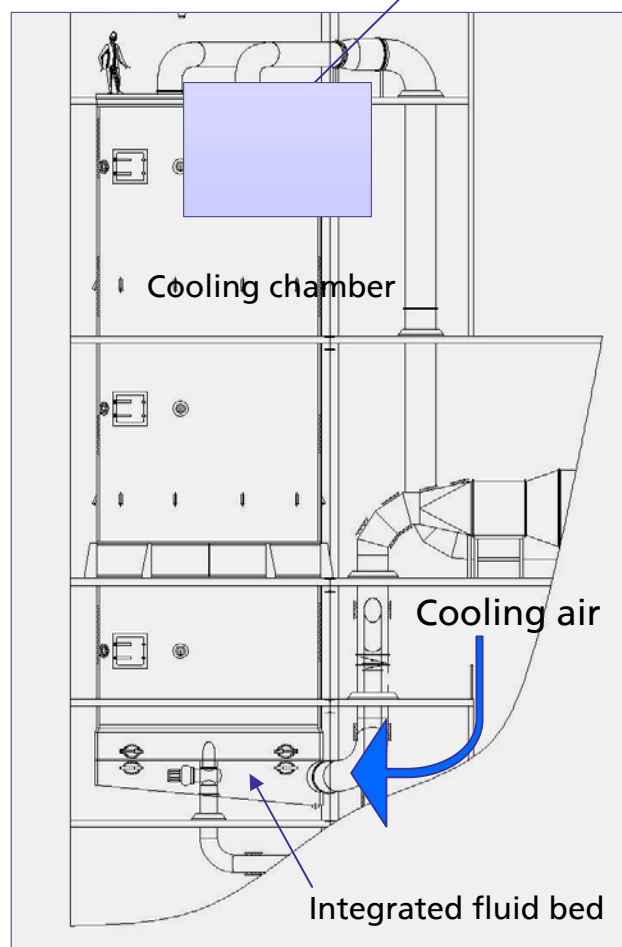
- Smaller building
- Reduced process equipment

Operation

- Simpler plant, e.g. only one wheel needed compared to multi-nozzle heads with extensive and complex feed supply piping and valve system
- Higher standard plant capacities
- Easy change between open or closed cycle operation to reduce energy consumption.
- Water injection to reduce cooling station energy consumption
- Higher flexibility in produced particle size from 450 micron up to 2,000 micron by simple modification of the prilling wheel. (Lower particle size achievable by nozzle atomization).
- A narrow and uniform particle distribution is produced by the Niro prilling wheel which among others gives a nice free-flowing product



Rotary atomization at chamber top



Drawing illustrates a Niro Spray Cooling chamber where the rotating atomizer distributes a melt slowly downwards to bottom of chamber where melt is further cooled in the integrated fluidbed. The cooling air is introduced via ducts.

BU 135/GB 09/05