



Tetra Pak® Flash Cooler SCM

Continuous flash cooler system for sweetened condensed milk (SCM).



Application

Tetra Pak® Flash Cooler SCM provides a fully automatic and continuous flash cooling system. Tetra Pak Flash Cooler SCM is suitable for the production of (recombined) sweetened condensed milk (SCM). The system is customer specific designed, so available for a wide range of product compositions and capacities.

Highlights

- Completely flexible in recipes
- Long production runs due to high hygienic standards
- Proven technology
- Fully cleanable (Cleaning in Place)

Working principle

Tetra Pak Flash Cooler SCM is fed from the mixing unit, where milk (or milk powder) and sugar are mixed. The hot premix is cooled down by instantaneous evaporation of water (flashing). Depending on the capacity and specific product needs the number of stages and thermo-compressors are defined.

At the bottom of each stage the product concentrate is pumped to the next stage. Before the last stage extra lactose is seeded to stimulate the lactose crystallisation in the crystallisation tanks.

Capacity

Capacity of the flash cooler system depends on customer requirement. For example if a product output of 5,000 l/hr of 74% total solids is required, a typical system would be as follows:

SCOPE OF SUPPLY

- Balance tank
- Thermo-compressor
- Flash cooler (2x)
- Condensor
- Ducting
- Instrumentation
- Documentation and engineering
- Positive pump (2x)
- Centrifugal pump
- Vacuum pump

Options

- Steam side cleaning
- Sanitation in Place (SIP)

Consumption

Based on an output of 5,000 l/hr at 74% (20°C) and 71% feed solids (60°C) and during normal production:

TETRA PAK® FLASH COOLER

Steam	150 kg/hr
Electricity	10 kW (absorbed)
Cooling water	125 m ³ /hr with 32°C in and 36°C out
Ring water	<1.0 m ³ /hr
Sealing water	<1.0 m ³ /hr

Dimensions

Required footprint	15 x 7 m
Required building height	18 m

