Solar Instant Milk Cooler

Instant milk cooler (IMC) reduces fresh milk temperature to below 7°C in an instant, avoiding milk quality deterioration and bacterial growth.

IMC uses solar power during the day and stores the energy in Inficold thermal storage system so it can be utilized to cool milk in non-solar hours – i.e. morning and evening. This significantly reduces energy expense for cooling.

IMC can be used in conjunction to existing Bulk Milk Cooler (BMC). Simultaneous cooling provided via IMC & BMC –
- In first pass milk flows through IMC and it cools to 7°C instantly, eliminating any bacteria growth
- BMC further cools to 4°C and maintains it

Features

- **Capacity Enhancer**: Cool more milk in each shift without upgrading your existing BMC
- **Improves Quality**: Instantaneous cooling of milk, leads to better quality by stunting bacterial growth
- **High Solar Utilization**: Variable speed compressor enables cooling even during cloudy period
- **Minimize DG Usage**: 70% lower compressor runtime during cooling. Cool 1000L milk to 7°C without grid and DG
- **Retrofittable**

Specifications

- **Footprint (Excluding BMC & CDU area)**: 30 sq. ft.
- **Cooling Capacity (daily)**: 1000 L
- **Cooling Storage Capacity**: 150 MJ
- **Solar Photovoltaic Panel Capacity**: 7 kWp
- **Alternative Power Supply**: 3-Ph Grid
- **Refrigerant**: R134a
- **Milk flow rates**: 500 to 1500 L/hr
- **Milk outlet temperature**: 4°C - 10°C
- **Auxiliary load handling equipment**: 3kVA Solar UPS with electrical batteries

Cooling Performance

2000L milk collected within 2hrs in a 2000L BMC

Notes:
1. Milk from Instant Milk Chiller is transferred to Bulk Milk Cooler where it is further cooled to 4°C
2. Daily Cooling capacity is based on 5kWh/m2-day of global solar horizontal irradiance; Milk cooling is assumed to be done from 35°C to 4°C
3. Equivalent to cooling 1000L of milk from 35°C to 4°C, primarily on thermal storage
4. Milk Outlet temperature is dependent on the milk flow rate and charge levels of thermal battery

This product is protected by multiple issued and pending patents

Inficold India Pvt Ltd
Address: G-21, Sector 11, Noida, UP – 201301, India | Email: info@inficold.com | Mobile: +91-8595076065 | Web: www.inficold.com