1000 & 2000 Litre Bulk Milk Cooler

Powered with Hybrid Ice Technology

This system works on a hybrid ice energy storage technology to provide fast cooling, high milk quality and in-built cooling backup.

In hybrid technology, compressor and ice energy storage work together to boost the cooling performance. The cooling output at 30 ºC milk temperature is 2.5 times of the compressor capacity. The average cooling output from 35 to 4 ºC is 1.5 times of the compressor capacity.

Additionally, ice energy storage acts as a backup to eliminate diesel generator. It completely charges with 10 hours of electricity any time of the day to provide more than 24 hours of cooling.

The entire system is automatic and doesn't require user intervention. Off-grid integration of solar photovoltaics panels is also an option.

Features

FAST COOLING RATES

80 vs 145 mins to cool from 35 to 10 ºC

120 vs 180 mins to cool from 35 to 4 ºC

EFFICIENT OPERATIONS

Fully automatic control ensures highest milk qualify

WORLD'S ONLY ICE ENERGY STORAGE BASED SOLAR BMC

Optional solar integration without electrical batteries

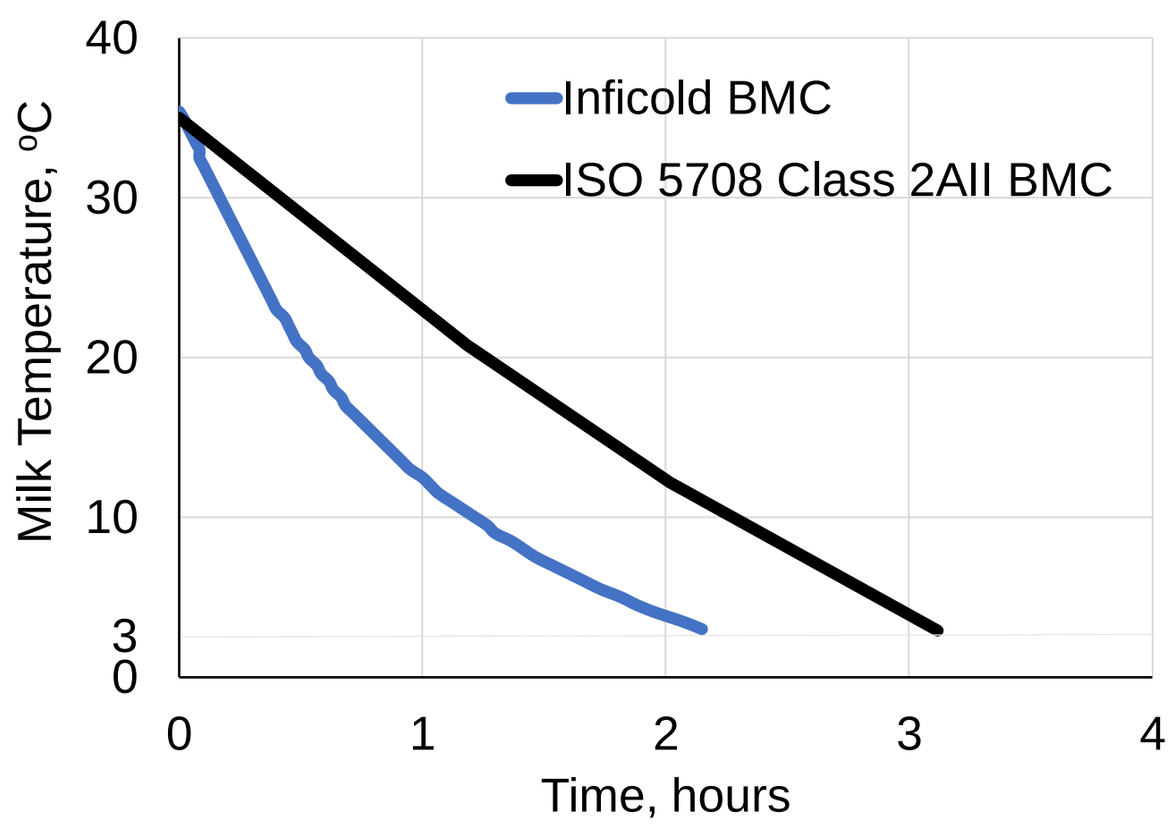
LOWER OPERATING COST

1 day of cooling autonomy during grid outages completely eliminates diesel

Specifications

Description	1000 L BMC	2000 L BMC
Rated daily cooling capacity	1000 L	2000 L
Ice energy storage capacity	200 MJ	350 MJ
Cooling backup capacity from 35 to 3 °C	1250 L	2000 L
Power requirement	5 kVA	8 kVA
Refrigerant	Zero ODP	
Off grid solar integration	Available	

Cooling Performance



Notes:

1. Data shown in the brochure is based on cooling of 500 L milk from 35 ºC to 3 ºC in 1000 L BMC

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Advantages over traditional bulk milk coolers

Parameters	Inficold	Traditional ISO 5708 2AII	Implications
Cooling output at 30 ºC – 1kL BMC	60 kBTU/h	24 kBTU/h	2.5 times fast cooling High milk quality
Cooling output at 10 ºC – 1kL BMC	27 kBTU/h	21 kBTU/h	
Cooling output at 4 ºC – 1kL BMC	13 kBTU/h	17 kBTU/h	0.75 times slow cooling Lower freezing chances
Time to cool 50% capacity 35 to 10 ºC	80 mins	145 mins	High milk quality
Time to cool 50% capacity 35 to 4 ºC	120 mins	180 mins	High milk quality
Cooling cost with grid	0.15 INR/L	0.15 INR/L	No additional cooling cost for high milk quality
Cooling cost during grid failure	0.15 INR/L	1.1 INR/L	Low cooling cost
User intervention during grid failure	Automatic	Manual	High milk quality
Pollution & Noise	None	High	Environment friendly

Advantages over other ice energy storage based bulk milk coolers

Parameters	Inficold	Competition	Implications
Off grid solar integration	Available	No	
Cooling backup	1250 L for 1000 L BMC 2000 L for 2000 L BMC	500 L for 1000 L BMC 1000 L for 2000 L BMC	2.5 times autonomy during grid failure
Condenser area	25% higher	-	Lower energy consumption
Liquid to suction heat exchanger	Yes	No	Lower energy consumption
Expansion valve	TXV (standard); EEV (optional)	TXV	Lower energy consumption
Material of construction of sheet metal parts	PU coated mild steel (standard); SS 304 (optional)	Plastic or powdered coating mild steel	Longer life
Design	Integrated on a single skid	Separate Ice energy storage, condensing unit & control panel with cluttered piping & wiring	Smaller footprint Ease of installation Higher reliability
Heat transfer fluid	Glycol (standard); salt HTF (optional)	Iso propyl alcohol	Non flammable & food grade heat transfer fluid
Phase change material	Nano engineered spill proof	Water	Faster cooling rates

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