500 to 5000 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 3.3 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 the requirement of a diesel generator. It gets completely charged with 10 hours of electricity daily to provide more than 24 hours of cooling.

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

Features

FAST COOLING RATES

60 vs 145 mins to cool from 35 to 10 ºC

102 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

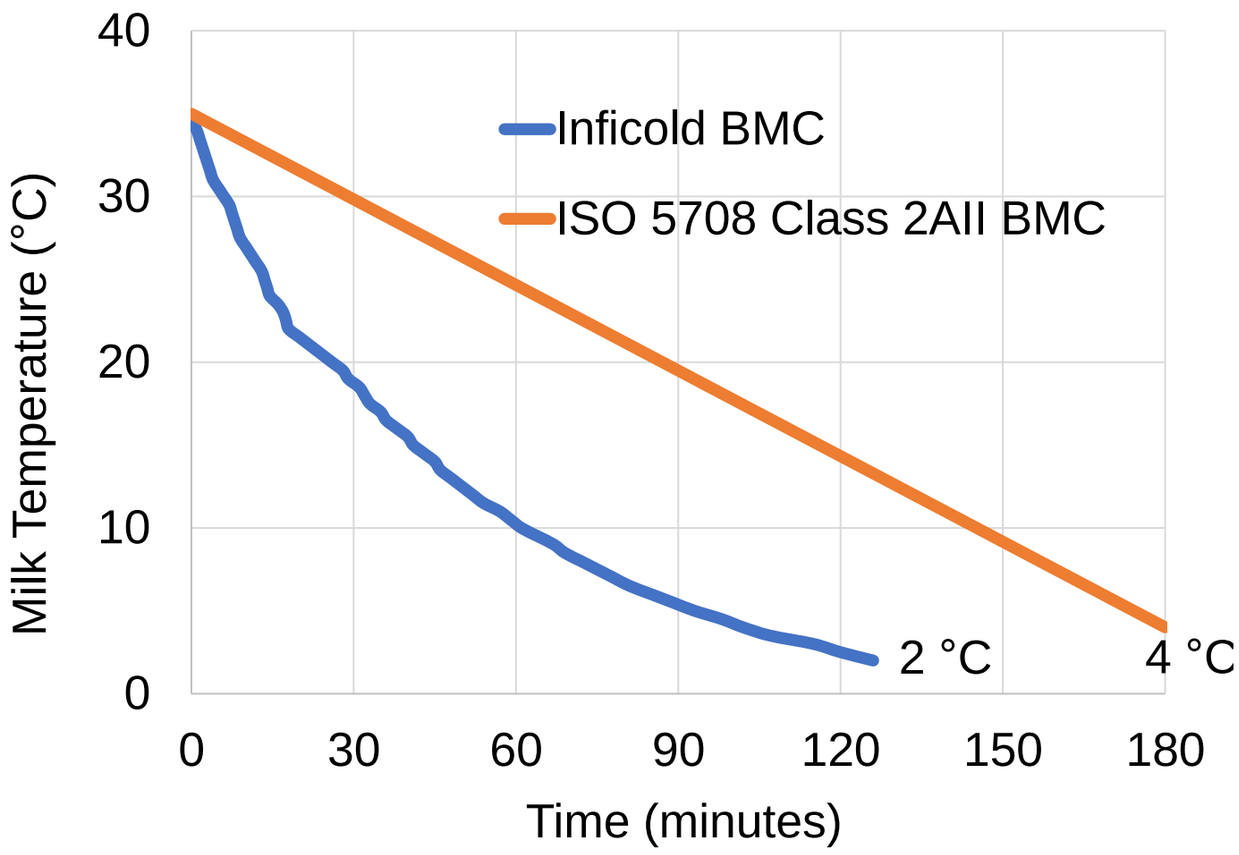
LOWER OPERATING COST

One day of cooling autonomy during grid outages completely eliminates requirement of diesel

Specifications

Description	Value
Rated daily cooling capacity	500 to 5000 L
Cooling backup capacity	1 day
Time to cool 50% capacity 35 to 10 ºC	60 minutes
Time to cool 50% capacity 35 to 4 ºC	100 to 120 minutes
Refrigerant	R407c / As requested
Off grid solar integration	Available

Cooling Performance



Notes:

1. Data shown in the brochure is based on cooling of 1000 L milk from 35 to 2 ºC in 2000 L horizontal BMC

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Advantages over traditional bulk milk coolers

Parameters	Inficold	Traditional ISO 5708 2AII	Implications
Cooling output at 30 ºC – 2000 L BMC	159 kBTU/h	48 kBTU/h	3.3 times fast cooling High milk quality
Cooling output at 10 ºC – 2000 L BMC	40 kBTU/h	42 kBTU/h	
Cooling output at 4 ºC – 2000 L BMC	21 kBTU/h	34 kBTU/h	0.62 times slow cooling Lower freezing chances
Time to cool 50% capacity 35 to 10 ºC	60 mins	145 mins	High milk quality
Time to cool 50% capacity 35 to 4 ºC	102 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	1 day	0.5 day	2.5 times autonomy during grid failure
Liquid to suction heat exchanger	Yes	No	Lower energy consumption
Material of construction of sheet metal parts	PU coated mild steel (standard); SS304 (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	Brine	Iso propyl alcohol	Optional high performance heat transfer fluid
Phase change material	Nano engineered spill proof packs	Water	Faster cooling rates

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