

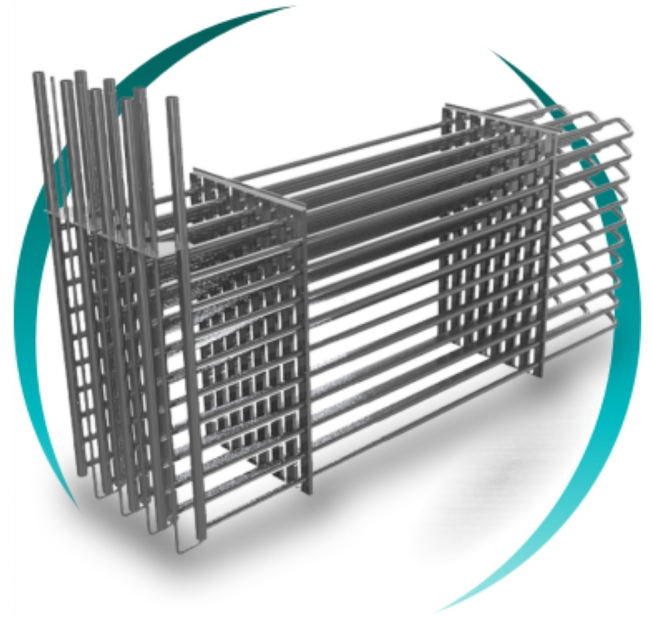
Ice machine

Cold storage during off-peak hours



Deferred-refrigeration system that produces and stores ice during the hours of lowest energy demand —generally at night— for use as a low-cost energy source during peak-demand hours. It allows refrigeration equipment to be sized at lower power, reducing acquisition, energy and maintenance costs.

The system consists of a heat exchanger submerged in a water tank, connected to a refrigeration circuit. As the refrigerant fluid circulates, ice rings form around the tubes during the economy-tariff electricity time slots. The ice is preserved for later use in industrial cooling, HVAC or food-product conditioning processes. It can be designed with pillow-plate plates or with I-SNAKE smooth-tube coils, depending on the volume of ice required and the available space.



TECHNICAL SPECIFICATIONS

Principle	Thermal storage (ice storage)
Production mode	Night-time (off-peak hours)
Exchange technology	Pillow plate / I-SNAKE coil
Storage medium	Water tank (ice rings)
End application	Industrial cooling, HVAC
Economic advantage	Electricity-tariff reduction
Typical ROI	3-12 months

Off-peak

night-time ice production

ROI

~ 3-12 months payback

∇ cons.

smaller refrigeration units