Control your cooling process and profits with *"Latent Liquid Energy"* 

# Maximice<sup>®</sup> Slurry lce Systems

Slurry Ice Thermal Energy Storage (TES) for process cooling is the logical choice for dairies, breweries, tea and other beverage plants, meat & food processing plants and manufacturing plants. Slurry Ice excels in these applications because of the high latent energy found in the microscopic, fluid ice crystals which can maintain solution temperature being pumped to heat loads and absorb massive amounts of heat very quickly and consistently. This translates into significant system design, installation and operational savings.

- Deliver constant 28°F (-2.2°C) to your process regardless of sudden cooling spikes or heavy loads.
- Crash large heat loads quickly with minimal refrigeration in off-peak hours.
- Use the latent energy of ice slurry with the heat exchanger to achieve a greater ∆t and reduce heat exchanger size.
  Out presses loss minimum by 50% with
- Cut process loop piping by 50% with latent energy of ice slurry.



#### **Basic MaximICE Slurry Ice System**

## Maxim**ICE**® slurry ice technology saves money

The MaximICE® Slurry Ice System is powered by the patented Orbital Rod Evaporator (ORE). This evaporator is a breakthrough technology in ice crystal slurry generation that incorporates agitating rods to enhance the heat transfer effectiveness of a shell and tube heat exchanger. This agitated flow generated by orbiting whip rods creates a very high heat transfer coefficient and prevents the adhesion of ice crystals to the heat transfer surface.

#### **Superior Energy Efficiency Saves Money**

The ORE can produce 1 ton-hr of ice using  $1 \sim 1.2$  kWh, which is more efficient than static ice-on-coil systems. Unlike ice-on-coil systems where ice adheres to the heat transfer surface, the ORE slurry ice does not adhere, resulting in a much higher, constant "U" Factor – about 10X greater. Likewise, the ORE requires no defrost cycle like ice harvesters, resulting in at least  $10\% \sim 15\%$  higher energy efficiency.

#### System Design Flexibility Saves Money

#### • Simplified Tank Design:

Slurry ice can be pumped into simple insulated storage tanks of almost any geometry.

- No need for extra structural support as required for ice harvesters.
- Eliminate miles of heat transfer coils and water agitation devices as required inside ice-on-coil systems tanks.

#### • Ice Generator Design:

The highly efficient MaximICE ORE has a footprint 60% ~70% smaller than other ice generators available. Additionally, the capability of separating the condensing package, tank and the ORE in system design provides extreme design flexibility for saving space in crowded mechanical rooms.



#### MaximICE Customers around the World

- General Mills Yogurt Plant
- Kirin Beer Brewery
- Suntory Beer Brewery
- Meiji Milk Dairy Plant
- Jura-Fleisch Meat Plant
- Zipf Brewery -

- USA Japan
- Japan
- Japan
- Germany
- Austria



### APPLYING INTELLIGENT ENERGY

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