Milk Cooling Systems

DARI-KOOL®

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fabdec

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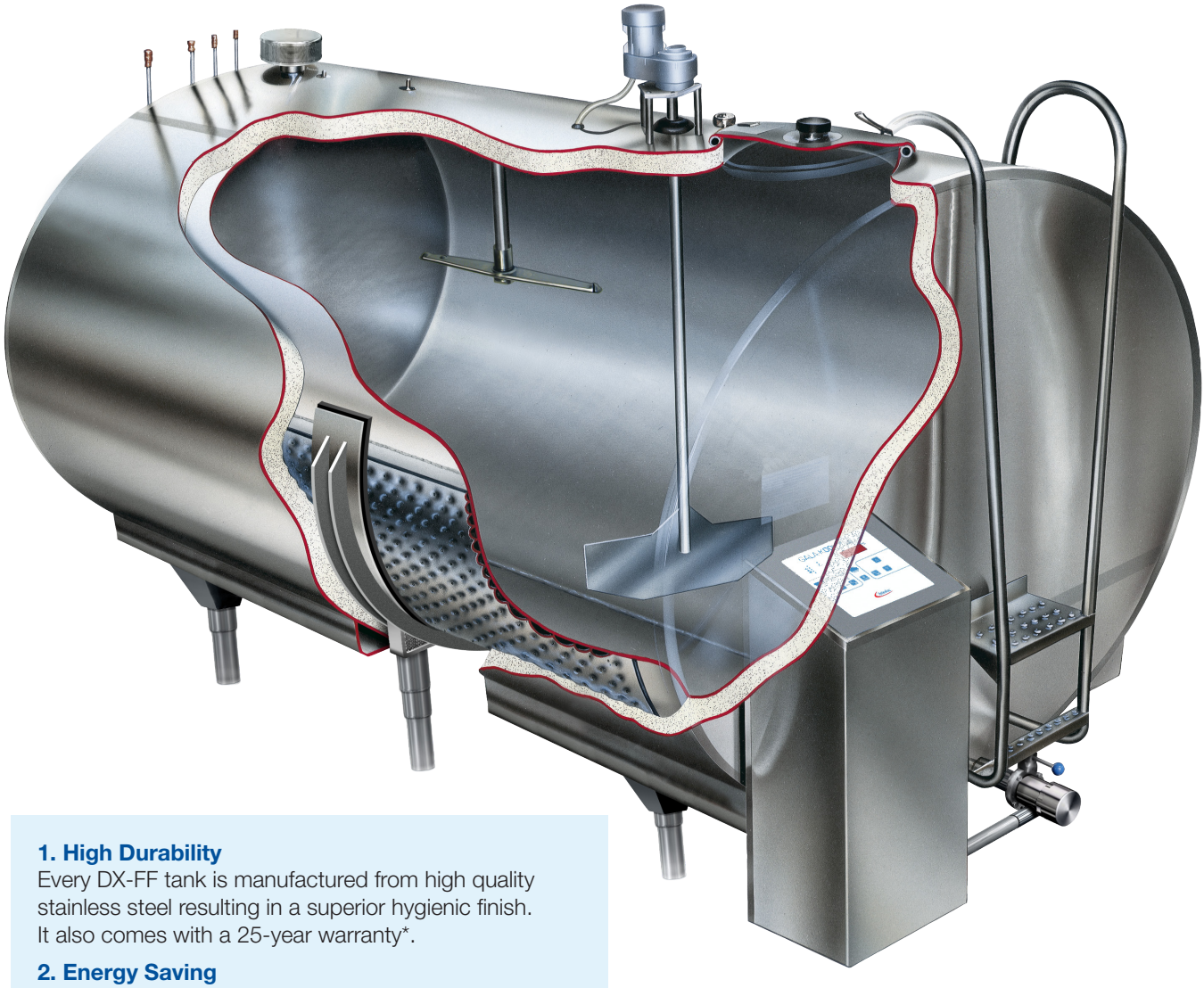
DARI-KOOL DX-FF



1. High Durability
Every DX-FF tank is manufactured from high quality stainless steel resulting in a superior hygienic finish. It also comes with a 25-year warranty*.

2. Energy Saving
Polyurethane foam (CFC Free) is injected between the inner and outer tanks creating high rigidity and excellent insulation, thereby reducing running costs.

3. Outstanding Washing
High pressure water jetting action from the rotating spray head and a fully programmable wash sequence with automatic dosage of chemicals ensures tank cleaning of the highest standards.

4. Excellent Milk Quality
Gentle agitation keeps the milk in motion, ensuring it preserves its milk fat quality.

5. Efficient Cooling
The large surface area of Fabdec's unique dimple plate technology allows the milk to be cooled efficiently via direct contact with the plates, even at low milk volumes.

6. Range of Tank Sizes
We produce tanks in various profiles up to 32,000 litres to suit any farm. Please call for details.

* Subject to terms and conditions.

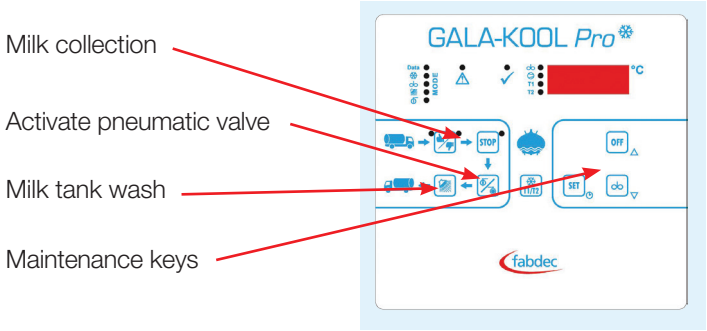
A front manway is possible, offering easier access and better inspection

Milk Cooling Systems

Efficiency, choice and reliability

State-of-the-Art Control and Wash System GALA-KOOL *Pro*

- For conventional milk tanks and tanks linked to robotic milking systems
- Fully adjustable parameters, programmable wash cycle, wash fill level probe, pneumatic actuator operation for robots
- Emergency cooling & stirring over-ride switch built into the console
- Ability to communicate via SMS
- Integrated data logger



Condensing Units CHILL-PAK with Copeland Scroll Compressors

- Stainless steel base plate with adjustable legs
- Factory built to the highest build standards
- Terminal box installed with contactor, motor circuit switch, high and low pressure switches
- Scroll type compressors prevent damasge to the condensing unit when low levels of milk are being cooled

Standalone Tank Monitoring System DATA-SAFE

- Measures the milk temperature and then stores and analyses the data
- Monitors the stirring mechanics and cleaning control
- Completely independent from the tank control
- Intelligent probe mounts directly on inner milk vessel
- Can be retrofitted to all makes of milk tank
- Meets Arlagarden Green farm technology requirements
- Alarm function can be linked to buzzer, warning light or dialling unit

Outdoor Solutions

Hi-KOOL - Vertical Milk Tank

Fabdec's vertical milk tank Hi-KOOL is an additional option when storage space is limited.

The milk is cooled by using ice water from an ice builder and/or by using the evaporator plates located in the vessel walls. The level sensors and a cooling jacket on the outlet pipe ensure efficient cooling.

The milking room is easy to access via an alcove panel.

Many options are available, including a conical base or sloped bottom design and extra level and overfill sensors. Please call for full details.

Features

- Outer vessel of stainless steel
- Manway in tank wall
- Alcove front panel with 2 doors
- 2 level sensors for capacity controlled cooling
- Ladder support hooks
- Automated wash system
- Threadwash outlet as standard
- Outlet pipe with cooling jacket
- Cover for expansion valves
- Softstart for agitator motor
- Sample tap
- Sizes up to 40,000 litres

KOOL-STOR - Outdoor Tank

Where space is limited, outdoor bulk milk tanks provide milk storage without the need for additional buildings, saving interior space and reducing cost.

The KOOL-STOR range of DX (direct expansion) tanks are fitted with lockable weatherproof housings to keep agitators and controls waterproof.

A built-in heater keeps the temperature in the cabinet above freezing and a bulk-head manway allows for a safe and easy access and sampling.

Features

- External milk storage without additional buildings
- Lockable, weatherproof housing
- Bulk head manway for easy access and sampling
- Dual sample tap with auto wash
- Tanker driver hose assembly wash facility
- Optional piggyback condensers
- Sizes up to 32,000 litres

Instant & Pre-Cooling

KOOL-PAK - Ice Builder

Ice builders work by generating ice using cheaper night rate electricity or by using solar energy. They are thus highly energy efficient and can cut cooling costs by a third.

Also by reducing the temperature rapidly they help to maintain a low bacteria count.

The milk flow first passes through a double stage plate cooler which uses bore hole or mains water in the first stage.

The second stage uses ice water generated by the ice builder, which will drop the milk temperature almost instantly before it reaches the milk tank.

Features

- Economical milk cooling system using off-peak rate electricity
- Reduces the load on milk tank
- Twin pump models available
- Sizes from 20kW to 300kW

QUANTUS & MAGNUS - Plate Coolers

Plate coolers ensure milk is cooled quickly for storage, reducing the demand for electrical energy, especially if a source of naturally cool water is freely available.

This is an inexpensive way to pre-cool milk from about 35°C to 18-20°C, reducing the load on the refrigeration system significantly.

Fabdec plate coolers are manufactured from high quality stainless steel with food-grade rubber gaskets, easy to dismantle for inspection and maintenance.

We offer the QUANTUS model intended for wall-mounting and the MAGNUS model for use with large milk volumes.

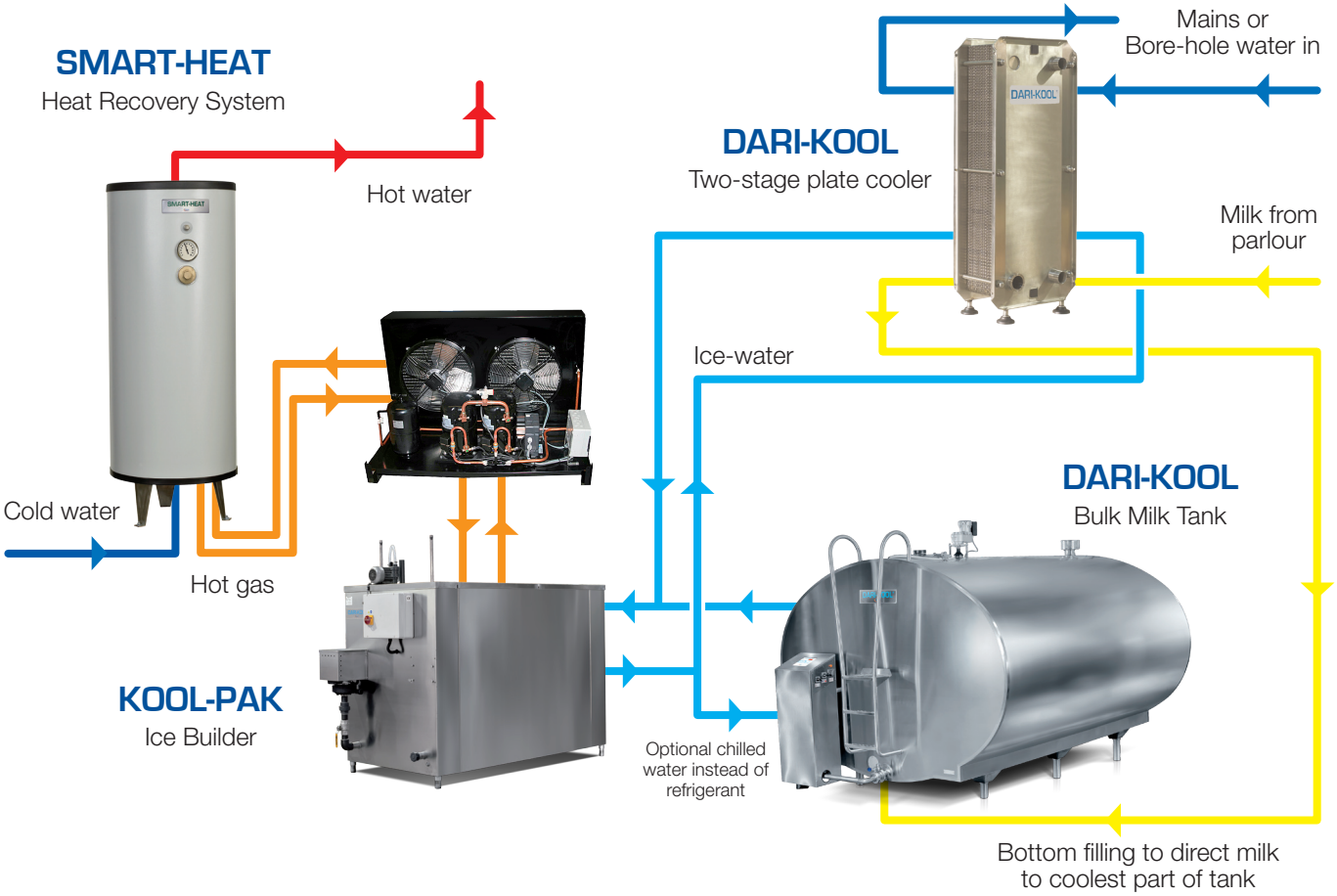
Both can be used in a double circuit with ice water.

Features

- High quality stainless steel
- Can be used in double circuit with ice water
- Easy to dismantle for inspection and maintenance
- Floor or wall mounting
- Herringbone profile of plates enhances flow
- Full range of sizes

Efficiency Plus Range

Uniting energy efficiency with milk quality



System Summary

Milk coming from the receiver passes through a two stage DARI-KOOL plate cooler which uses mains or bore-hole water in the first stage.

The second stage uses ice water generated by a KOOL-PAK ice builder. This reduces the milk temperature almost instantly before it reaches the milk tank. This instant cooling will yield a considerable gain in milk quality when compared to other types of pre-cooling.

The ice created by the KOOL-PAK will largely be produced at night, using off-peak electricity.

The ice water is then used to circulate through the double jacket of the bulk milk tank to cool the milk even further and without the risk of the milk freezing in the tank.

By using the KOOL-PAK ice builder smaller condensing units are required which lowers the peak power demand.

Finally, heat generated by the condensing unit is used to produce hot water by the SMART-HEAT heat recovery system.

Features

- **The Best Milk Quality**
  Milk temperature drops instantly.
- **Low Running Costs**
  Off peak electricity utilised, lower energy consumption and integrated heat recovery.
- **Smaller Condensing Unit**
  Lower peak power demand.
- **No Ice Build Up In Milk Tank**
- **Longer System Working Life**
  Less stress on pumps etc.
- **Consistent Bulk Milk Tank Temperature**
  Consistently lower temperature with no blend.

Heat Recovery

SMART-HEAT and SPAR-HEAT

How does SMART-HEAT work?

SMART-HEAT uses integrated wrap-around thermoplates to collect the heat generated by the refrigeration system to heat water.

Leaving the compressor as a hot gas the refrigerant flows into the thermoplate where the energy is transferred to the water inside. The gas/condensate leaves the SMART-HEAT to complete the process in the condenser.

How does SPAR-HEAT work?

For use with a single cooling circuit SPAR-HEAT uses an internal double-walled coil heat exchanger to recover the waste heat.

Two immersion elements can be fitted to boost the heated water up to 85°C at around a third of the traditional water heating costs associated with a standard boiler.

Features

- Simple and efficient systems that reduce energy bills
- Easy to fit into existing system with no moving parts
- Indirect heat exhange meeting DIN standard EN12897 and PD5500

SMART-HEAT

- Integrated thermoplates
- For use with up to 6 refrigeration units
- Options: stainless steel outer cladding for outdoor use; saddles for horizontal use
- Sizes from 220 to 3000 litres

SPAR-HEAT

- Indirect coil heat exchange
- For use with 2 immersions
- Sizes from 150 to 500 litres

Water Heating

UNI-HEAT

The UNI-HEAT agricultural water heater provides hot water for tank washing and use around the farm.

Constructed from Duplex stainless steel with butt-welded joints for the inner tank, the UNI-HEAT offers superior corrosion resistance.

A long life expectancy is assured as there is no sacrificial anode to replace and few serviceable parts.

Features

- For effective washing with economical performance
- Superior corrosion resistance
- Accessory boss ½" BSP for thermometer or sensor pocket
- Sizes from 150 to 500 litres

KOOL-SPARES - Milk Cooling Spares

To see our comprehensive range of milk cooling spares please visit our webshop at www.fabdec-store.com.

www.fabdec.com

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