

# Milk Cooling Systems



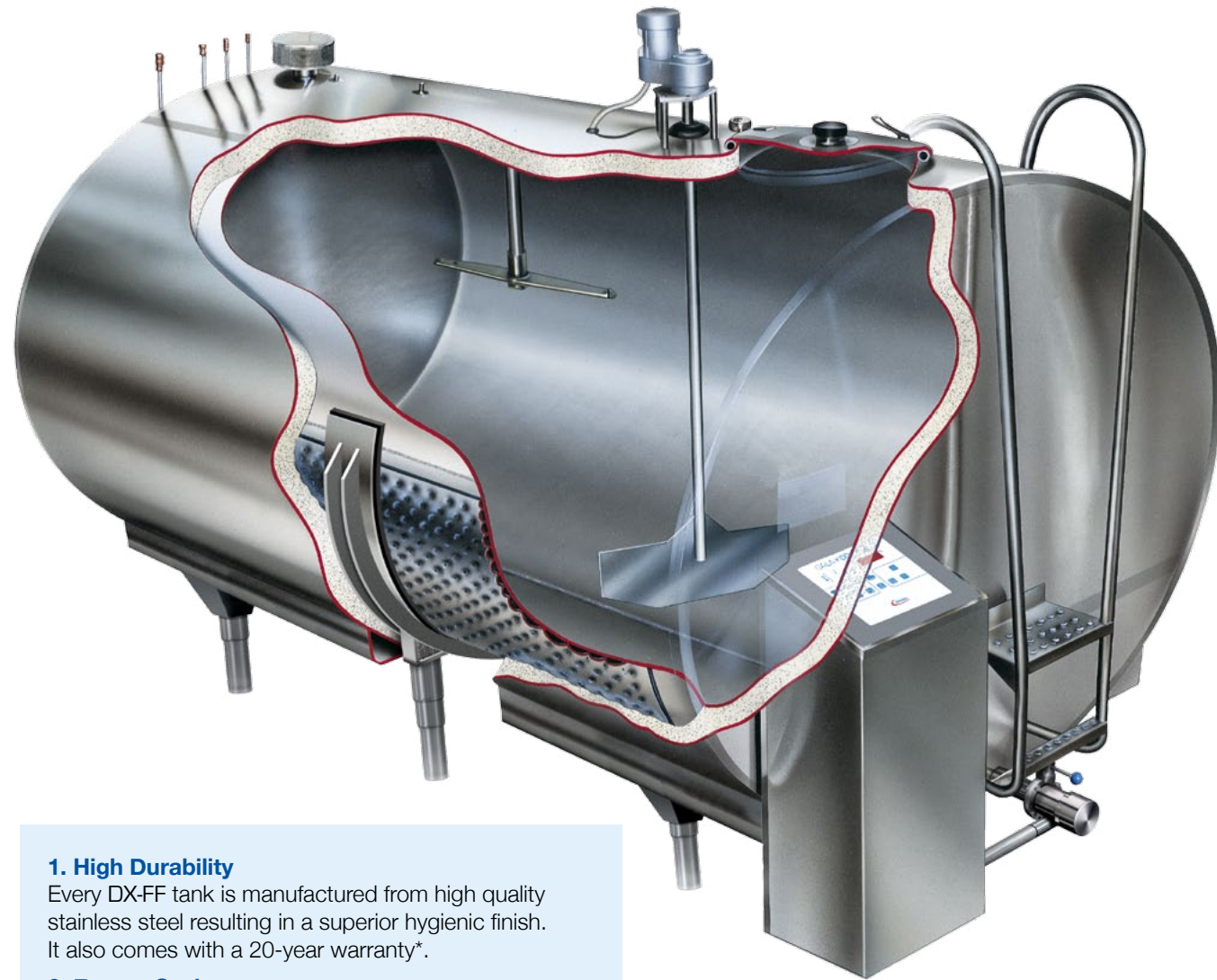
**DARI-KOOL®**

Milk cooling systems



# Milk Cooling Systems

## 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 20-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
- High volume circulation pump included as standard
- Conversion kits available to replace older consoles
- "Light" version also available, incl. 7m probe



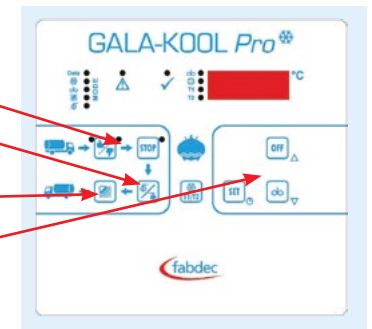
GALA-KOOL Pro  
"Light" version

Milk collection

Activate pneumatic valve

Milk tank wash

Maintenance keys



### 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 damage to the condensing unit when low levels of milk are being cooled



# 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 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 overflow 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
- 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



## Plate Coolers & Tubular Cooler

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 produced 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.

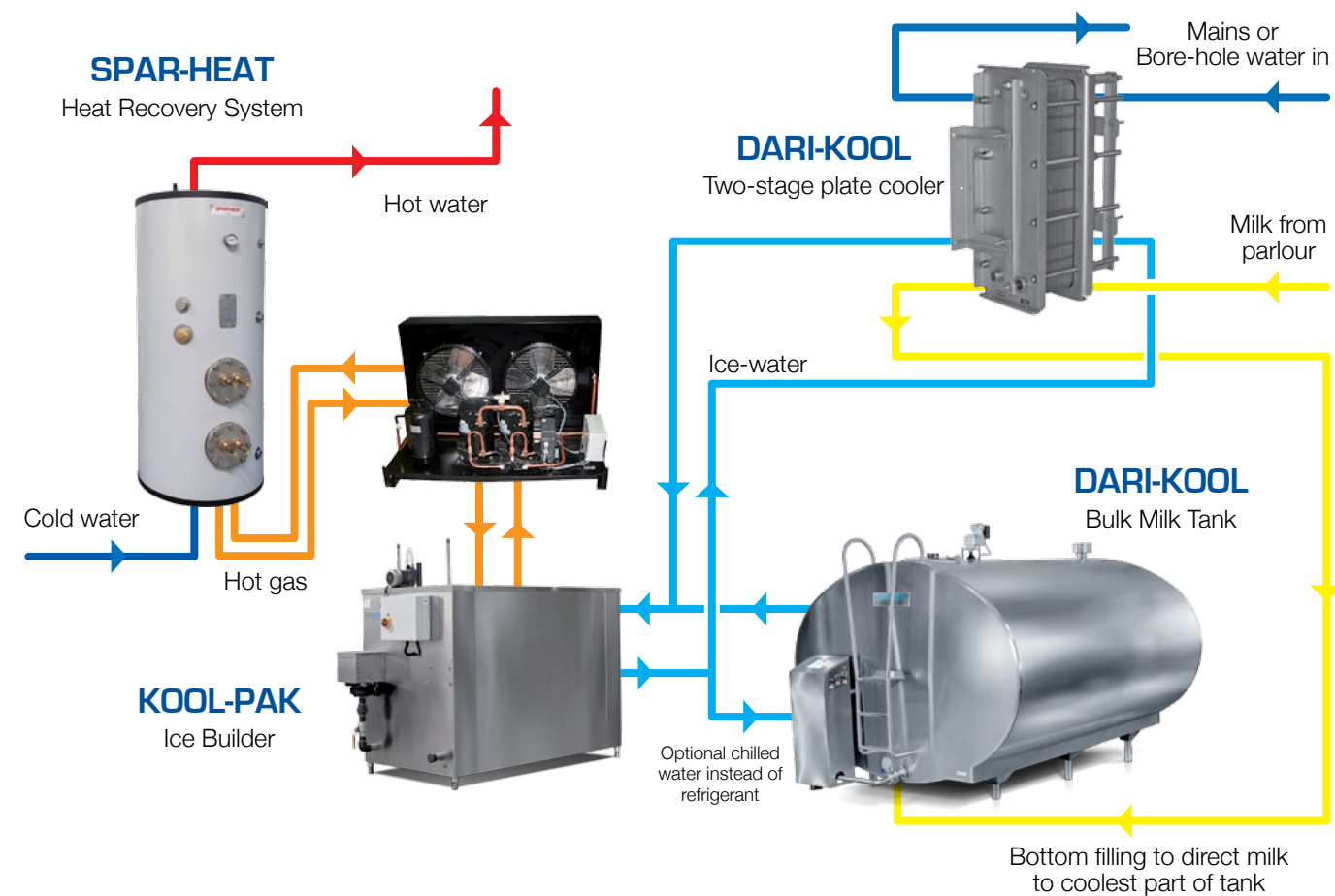
We also offer a tubular cooler SPIRA-KOOL, which is well suited to robotic milking systems.

The milk is only in contact with the stainless steel tube within SPIRA-KOOL and cleaning takes place together with the robot milkline.

Unlike a plate cooler SPIRA-KOOL has no seals and can be emptied with compressed air, meaning that milk does not remain in the pre-cooler for long.

# 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 **SPAR-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

## SPAR-HEAT



### How does SPAR-HEAT work?

SPAR-HEAT is a durable stainless steel cylinder with double-walled spiral heat exchangers which recover the waste heat in a safe and efficient manner, generating hot water at temperatures of up to 60°C.

Immersion heaters can then boost it up to 85°C at around a third of the traditional water heating costs associated with a standard boiler.

Stainless steel cladding is an option for outdoor installation.

### Features

- Simple and efficient system that reduces energy bills
- Maintenance free with no moving parts
- Sizes from 130 to 3000 litres
- Multiple heat exchanger coil options
- Durable duplex stainless steel
- Market leading heat retention and CFC-free insulation
- Safe potable water protection thanks to secure double wall heat exchange
- Hygienic scratch resistant plastisol cladding
- Immersion bosses for boosting water temperature

# 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.



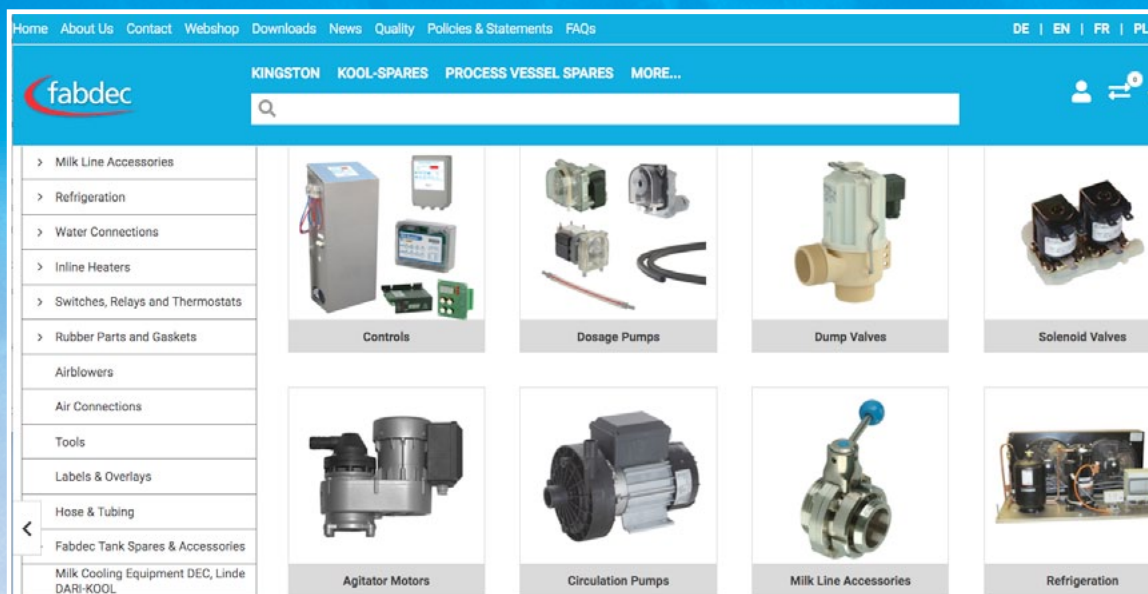
### Features

- 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](http://www.fabdec-store.com).



[www.fabdec.com](http://www.fabdec.com)

**Fabdec Ltd**  
Grange Road  
Ellesmere  
Shropshire  
SY12 9DG

Tel: +44 (0) 1691 627200  
Fax: +44 (0) 1691 627222  
Email: [sales@fabdec.com](mailto:sales@fabdec.com)

Accreditation:

