

Smart Cooling and Energy Savings



FRE-HEATER[®]
E STAR[®] HIPERFORM[®]
PIPE COOLER

MUELLER

MUELLER

Heat Recovery.

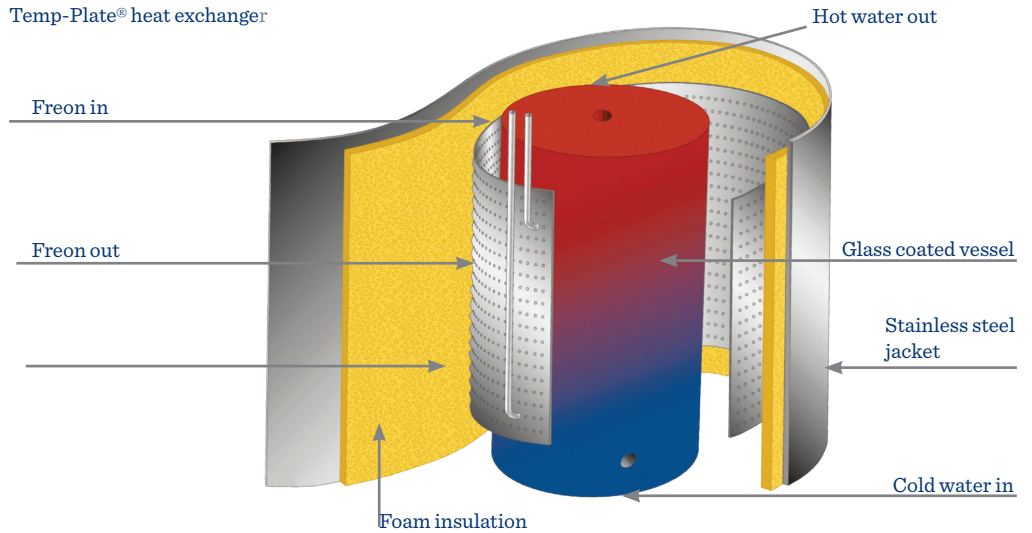
Fre-Heater®



Save energy and drastically reduce water heating costs by adding a Fre-Heater® to your milk cooling system.



Temp-Plate® heat exchanger



Features

- Heavy duty, glass coated vessel. Surrounded by stainless steel heat transfer surface and covered with two inches of foam insulation.
- Outer vessel manufactured in high quality stainless steel for corrosion protection and appearance.
- Temperature of the hot water depends on size of condensing units and cooling time.
- Under normal circumstances the Fre-Heater® provides hot water of 35°C up to 50°C.
- Reliable and maintenance free: no moving parts within the system
- Return on Investment: 3 to 4 years
- 5 year warranty

Hot Water - Almost for Free

The Fre-Heater® recovers wasted heat from your milk cooler's condensing units. This energy recovery heats the water, which you can use to clean milking equipment, the milk tank, and for udder preparation. The result? Improved profitability!



Scan to watch the video

| MEASUREMENTS | | | | | | |
|--------------|------------------|------------------------|-------------------|------------|------------|--------|
| Model No. | Content (liters) | No. of refig. circuits | Heating capacity* | Hight (cm) | Diam. (cm) | Anodes |
| D-50 | 190 | 2 | 3,5-10 kW | 137 | 55 | 1 |
| D-80 | 300 | 2 | 6-12 kW | 148 | 65 | 1 |
| D-120 | 450 | 2 | 7-18 kW | 157 | 75 | 1 |

* at 0°C evaporating and 32°C ambient temperatures



Efficient Cooling.

E-Star[®] HiPerForm[®]



Digital capacity control for robot milking.

Efficiency and optimal cooling with Mueller[®] condensing unit.

ElectroFin[®] Protective Coating.

The E-Star®HiPerForm® is specifically engineered and designed for cooling milk. Combined with a Milk Cooling Tank, the E-Star HiPerForm provides the maximum return on your investment. The E-Star HiPerForm is available in single phase (230V/50Hz) and 3-phase (400V/50Hz).

Models

E-Star HiPerForm – Traditional Milking

The E-Star HiPerForm is designed to handle the large temperature changes required to cool milk by flooding the entire milk cooler evaporator with liquid refrigerant. This results in maximum refrigeration efficiency.

Digital E-Star HiPerForm– Robotic Milking

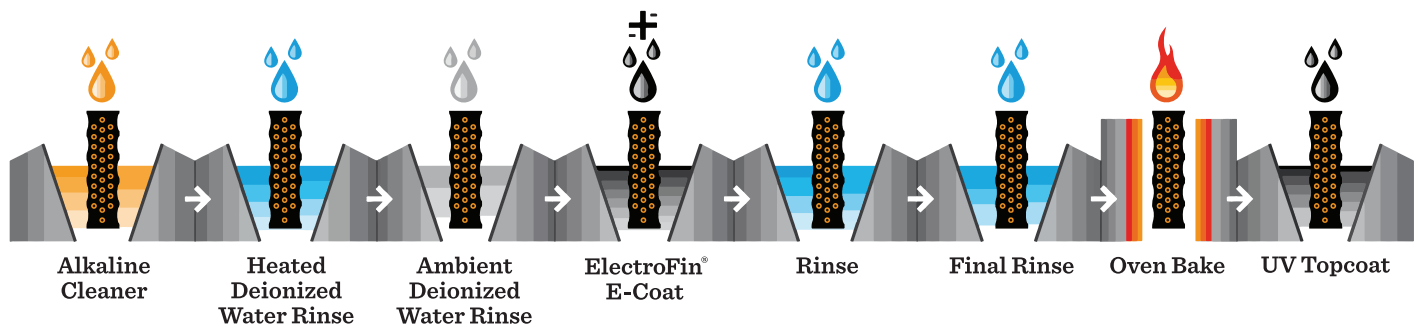
The Digital E-Star HiPerForm EVC is a perfect match for robotic milking. Its ability to reduce capacity allows small volumes of milk to be cooled immediately, no matter what size milk cooler you may have.

Special ElectroFin® Coating

ElectroFin® protective coating increases the service life of the E-Star HiPerForm. The coating is designed to prevent the corrosion caused by the high concentrations of ammonia found in the atmosphere on farms.



Electrofin® E-Coat process



Features

- Efficient cooling/energy saving product
- Indoor or outdoor use
- Fully flooded evaporator principle (E-Star HiPerForm EVC)
- Head pressure control to optimize performance in all ambient temperatures
- Low-load accumulator
- Minimal floor space required
- Energy saving up to 27% when compared to conventional condensing units
- EVC electronic valve for precise refrigerant flow

| MUELLER E-STAR® DIMENSIONS | | | | |
|----------------------------|--------------|-------------|--------------|--------------|
| HP | Length cm | Width cm | Height cm | Weight kg |
| 3,5 | 102 | 77 | 80 | 162 |
| 5 | 102 | 77 | 80 | 176 |

Milk Cooling—The Sooner The Better.

Pipe Cooler



Single



Twin



Ideal for conventional and robot milking.

Ideal for conventional milking.



Pre-cooling the milk immediately stabilizes the bacteriological level. In addition, you can save on costs: there is up to 50% less energy consumption.

Benefits

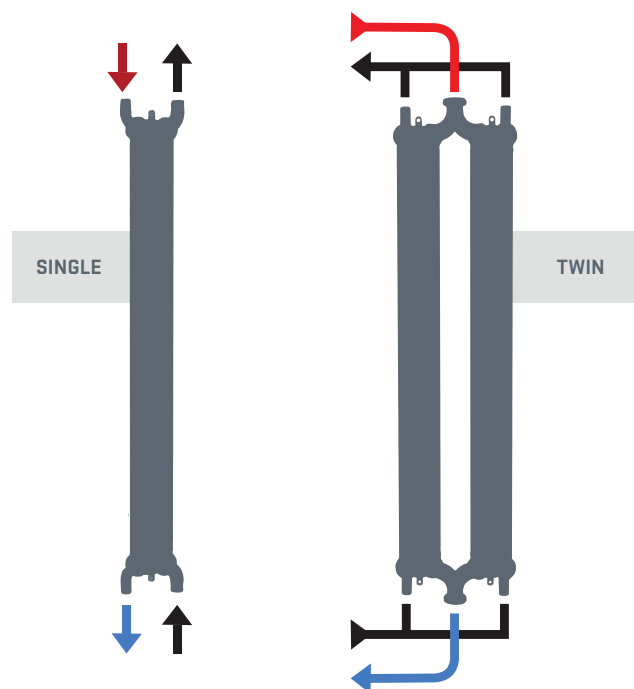
- Cools efficiently due to extremely large heat exchange surface
- Easy to clean
- Low pressure drop
- Suitable for all milk quantities and robot milking
- No milk blending risk
- Short payback period
- Easy to install
- Maintenance free

Technical Specifications

- Material pipe: stainless steel AISI 316
- Length: 160 cm
- Diameter: 14 cm
- Weight: 30 kg
- Connections
- Milk connection: 40 mm / 50 mm
- Water connection: 1"
- Max. pressure: 16 Bar
- Max. temperature: 250 °C
- Milk capacity: max. 4,000 l/h

A Pipe Cooler cools the milk before it reaches the milk cooling tank. Heat of the milk is being removed due to cold water flowing in opposite direction of the warm milk. The pipe cooler reduces the in-tank cooling load and the energy required resulting in significant savings on the overall milk cooling process.

Approved drinking water for cattle can be used as cooling water, allowing your animals to benefit from the Pipe Cooler. They will appreciate the lukewarm drinking water, which aids in milk production. .



MUELLER

We are united by the belief that the only quality that matters is quality that works for life. With every piece of equipment we build, our goal is to have lasting impact. Our equipment allows farmers, brewers, and engineers to keep their products fresh and their inventory strong. We are making an impact whether our equipment preserves milk in rural areas or manufactures medicine with world-changing health benefits.

Creating Quality for *Life*



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