

## DeLaval heat recovery system Wash away high heating costs



### How much electricity could you save?

A farm with 200 cows uses 150 litres of hot water and 500 litres of luke-warm water in its daily routine. The yearly electricity consumption to meet this demand without a heat recovery system is 13 200 kWh, but with a system this figure drops to 2 000 kWh. So by using the DeLaval heat recovery system on a farm this size, you could save 11 200 kWh of electricity per year.

To calculate how much you could save with heat recovery – talk to your local DeLaval representative today.

### Did you know...

Cows tend to produce more milk in cold weather if they drink luke-warm water. Supplying luke-warm drinking water during the winter can significantly raise milk production.

The energy recovered from 1000 litres of milk per day over a year generates heat equal to:

- 13 100 kWh of electrical energy
- 1 900 litres of oil
- 1 650 m<sup>3</sup> of natural gas
- 950 kg of propane gas

### Technical specifications

#### DeLaval heat recovery system includes:

- Plate heat exchanger
- Water storage tank
- Low energy consumption circulation pump
- Automation set to control the system

Heat recovery	Recommended	
	Condensing unit kW	Water storage tank
HR 10*	< 1.7	100–150 litres
HR 24	1.7	100–200 litres
HR 34	2.0	200–300 litres
HR 50	2.9	300–400 litres
HR 70	3.7 and 4.4	400–500 litres
HR 100	> 4.4	500–800 litres
HR 24, double	< 1.7x2	200–300 litres
HR 34, double	2.0x2	400–600 litres
HR 50, double	2.9x2	600–800 litres
HR 70, double	3.7 and 4.4x2	800–1000 litres
HR 100, double	> 4.4x2	1000–1600 litres

\*Number of plates



# Reduce costs with efficient energy exchange



Hot

Luke warm

## Reduce energy costs

DeLaval heat recovery system generates warm water using a milk cooling process. This solution can recover up to 60 percent of the heat extracted from cooling milk and convert it to hot water for use in all your pipeline and parlour cleaning.

Milk cooling to a low storage temperature is an essential part of your daily routine. The environmentally-friendly DeLaval heat recovery system generates warm water from the milk cooling process. The energy removed from this process generates warm water rather than hot air. In fact for every litre of milk cooled, 0.7 litres of warm water is produced.

## Unique and professional technology

DeLaval heat recovery system generates warm water as soon as the milk cooling process begins. Water pumped through the plate heat exchanger reaches 50°C to 55°C and this temperature is then efficiently maintained in a well insulated storage tank.

## Help reduce Legionella risk

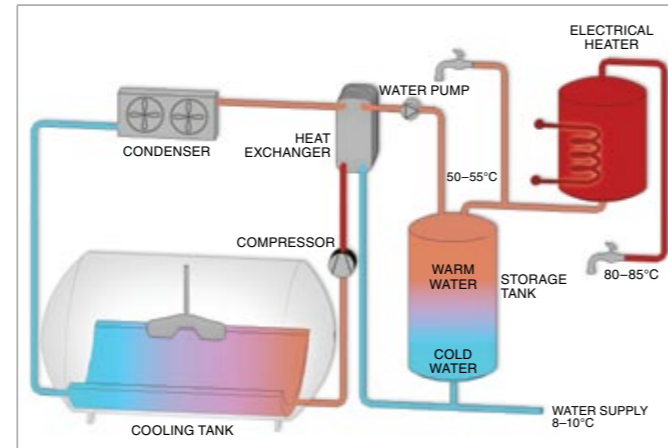
Legionella bacteria cause Legionnaires disease and Pontiac fever. The bacteria grow in still water at temperatures between 25°C and 46°C. Using the DeLaval heat recovery system to warm this water before it reaches your storage tank, can substantially inhibit bacterial growth.

## Profit from heat recovery

The heat transferred from milk to water is maximized through the thermostat or water pressure valve control set, to reduce your energy consumption and related costs. You may even be able to further reduce these costs via subsidies from local energy usage reduction programmes.

No labour is needed for daily adjustments because DeLaval heat recovery system operates automatically and you only need minimal space for this compact, well designed solution. You can also customize your choice from a wide range of heat exchangers and storage tanks.

## Compact heat exchange system



## Numerous uses for on-farm water heating

- You need an adequate quantity of hot water (80°C to 85°C) to clean the milking system after each milking and the cooling tank whenever it is emptied. Our heat recovery unit warms water (50°C to 55°C) and an additional heater is installed to make the water hot. When compared to heating tap water directly from 10°C, this dual approach consumes far less energy and that means less cost.
- Warm water sourced straight from the storage tank can be used for manual milk room washing and cleaning together

with general household demands like showers or washing your hands.

- Luke-warm water (15°C to 35°C) is a combination of storage tank water mixed with cold water. It can be used to clean udders before milking, as drinking water for cows and calves during winter time and in milk powder preparation for calf feeding.

