

NEW MILK COOLING REGULATIONS

Effective 1 June 2018. The Ministry of Primary Industries (MPI) has set new NZCP1 raw milk temperature standards to align New Zealand with other countries' standards.

New raw milk cooling requirements

Raw milk must:

- be cooled to 10°C or below within 4 hours of the commencement of milking; and
- be cooled to 6°C or below within the sooner of: six hours from the commencement of milking, or two hours from the completion of milking; and
- be held at or below 6°C without freezing until collection or the next milking;
- not exceed 10°C during subsequent milkings.

What this means for NZ dairy farmers

Aware of widespread confusion among dairy farmers over what the new milk cooling regulations actually require, DTS has sought technical clarification on the incoming regulations.

The new regulations are very outcome based. Compliance is determined by the tank milk temperature at the end of the stated timeframes. Not the temperature of milk going into the vat.

Are you milking under or over 4 hours?

Under four hours – there are only two things you need to worry about.

1. The milk is cooled to 6°C within 2 hours of completing milking.

2. The blended temperature must not exceed 10°C during subsequent milkings.

Over 4 hours – it's a little more complicated.

You need to have your milk down to 10°C within four hours of the commencement of milking. It then must be down to 6°C within 6 hours.

Note: there are only two exceptions to this, where snap chilling milk is compulsory.

1. If milking for longer than 6 hours.
2. If you have a robotic milker.

If neither of these things apply to you, there are no specific rules as to the refrigeration you need to put in. As long as you're meeting the outcomes required for your milking timeframes, how you do it should be determined by what's best for your business, budget and infrastructure.



MILK COOLING ASSESSMENT

Know that your refrigeration system is up to scratch and able to meet the new NZCP1 on-farm milk cooling standards.

DTS's Milk Cooling Assessment will give you accurate, reliable data on your plate cooler performance and your milk vat temperatures. It will also help identify any system issues early. The results are analysed by dairy refrigeration experts who provide a report with no-obligation recommendations for system improvement. So you can be confident you are investing in the right places.

- A comprehensive assessment of your on-farm dairy refrigeration.
- Documentation of current dairy refrigeration operations on farm.

- Continuous monitoring over a minimum of four milkings with data loggers of:
 - vat temperature
 - milk entry line temperature
- A summary report including:
 - analysis and comparison of your plant performance with the new NZCP1 milk cooling standards.
 - recommendations tailored to your individual dairy refrigeration needs.
- No obligation to proceed with recommendations.



GROWTH THROUGH INNOVATION

To find out more about how we are helping dairy farmers grow through innovation, don't hesitate to contact us. Our local DTS representative will be happy to pay you a no-obligation visit.

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PROCOOL™

Solutions for milk pre-cooling.



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WHY PRE-COOL YOUR MILK?

Through the season, herd size, flow rates and water source temperatures change. You need certainty that your milk temperature will meet the new milk cooling regulation requirements. Pre-cooling the milk before it reaches the vat is often the best way to confidently achieve low milk temperatures.

When assessing the best method of cooling on farm, a number of factors come into play; site constraints, power reliability, size of your herd, water availability and variable costs. Selecting the right pre-cooling system for your farm can help you to reduce energy costs by reducing peak power loads and ongoing shed operating costs. We provide an end-to-end service including expert advice, components, installation and ongoing support. Before recommending upgrades we come to farm to log your current system performance so you know what you need to do to comply with current and incoming regulations. The DTS ProCool™ range of pre-cooling solutions can be configured to meet your specific on-farm needs.

Standing water (thermal storage)

Thermal storage systems use a large storage tank to hold and chill a large volume of water. They are easily installed and maintained and currently are the most common form of farm pre-cooling system in New Zealand. Check out our ProCool Water solutions.

Ice banks

Ice banks build ice in a tank over night or pre-milking. The ice chills incoming water. Warm water generated

from the milking process is returned to the ice bank and cooled again. If working on night electricity rates, ice banks can be very cost effective to run.

Ice banks take up less space than storage of chilled water. Check out our ProCool Ice solutions.

Glycol systems

Glycol systems tend to use a very small volume of food grade glycol and water mixture to create the chilled fluid on demand (at milking time). A glycol system is typically designed to chill milk to 4°C prior to vat entry and will need a large appropriately-sized refrigeration unit. Check out our ProCool Glycol solutions.

Installation and Maintenance

We can arrange delivery, installation, commissioning and ongoing maintenance of your system.

We undertake a commissioning check with every system we install so you can be confident of your system's pre-cooling performance.

We also offer Service Checks and a range of Asset Care Plans for peace of mind and hassle free operation.

WHICH PRE-COOLING SOLUTION IS RIGHT FOR ME?

Every farm is different. To make sure you get the best pre-cooling solution for your dairy operation, call your local DTS Area Sales Manager.

	ProCool Ice	ProCool Water	ProCool Glycol
Type	Uses power between milkings. Available in single and three phase.	Uses power between milkings. Good for farms with power issues.	High power draw at same time as milking. Not suitable for farms on single phase supply.
Capacity	Compact	Large	Compact



A ProCool Water Chiller is ideal for pre-cooling a large volume of milk.



Ice Banks can be a cost effective pre-cooling option especially for smaller farms.

PROCOOL WATER

Save time and hassle with a plug-in chiller unit with the option of heat recovery.

The mix and match system can be configured to meet your farming needs. See your DTS Area Sales Manager for advice.

- Several sizes of water chillers.
- We can supply a water holding tank (several sizes are available).
- Heat recovery can be added to your water chiller to efficiently pre-heat your HWC water.

PROCOOL GLYCOL

Compact, on-demand snap chilling.

- Suitable for areas with extreme ambient temperatures.
- Designed to chill milk to 4°C regardless of primary water supply.
- Several sizes of refrigeration unit available to suit your needs.
- Compact system with a small buffer tank.
- Uses a small volume of fluid; ideal for areas with severe water restrictions or limited access to uncontaminated water.

PROCOOL ICE

When space and power are limited ProCool Ice may be the solution for you. Uses ice made in between milking sessions to pre-cool your milk.

- Builds ice between milkings for reduced peak power load.
- Single phase and three phase power supply options available.
- Compact system.
- DTS units are solidly built from stainless steel.
- The pillow plate technology used in the DTS ProCool Ice has been proven over many years in the base of milk vats built by DTS for cooling milk.
- Delivered to farm as a complete all-in-one unit ready for plumbing into your plate cooler.
- Heat recovery can be added to your water chiller to efficiently pre-heat your HWC water.