*Model may differ from the one shown here
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Please cut out the instructions on the final page of this guide, and affix them to the office or shed wall.


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**Safety requirements**

This product contains electrical equipment and pressurised refrigerant gases. Repair, maintenance, commissioning and decommissioning may only be carried out by people appropriately licensed/registered to perform electrical installation work (wiring) and the handling of refrigerant gases.

This equipment is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the equipment by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the equipment.

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**Warning!** The ice bank is heavy. Always use appropriate hoisting equipment.

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**Before you start**

**Checklist**

1. Check that the ice bank will have enough clearance around it to allow for good air flow.

   ![0.5 m clearance](image)

   ![1.5 m clearance in front of fan for ventilation](image)

2. Ensure the drain is where you want it to be.

3. Fill water to the top of the cross-bars of the plate bank. Put the lid on the ice bank.
Suitable water for the ice bank

Fill the ice bank with clean, fresh water (rain water if possible). Do not use bore water that is visibly discoloured or causes iron staining.

Water with high dissolved solids may alter the ice making process, reduce the ice yield and interfere with the ice sensing circuit that controls the ice bank.

Water with extremely low dissolved solids (e.g. some reverse osmosis treated water) may also prevent the ice bank from running as there won’t be a conductive path across the probes of the ice bank sensor.

Powering on the ice bank

1. Bleed the water pump and check all valves are open (except the drain valve).

2. Before powering on the unit, check that the cooling and chilled water pump switches are in the OFF position.
3 Power on the ice bank and check that the white power light is ON. If not, check the circuit breakers in the control cabinet.

**Building the ice**

1. Rotate the cooling switch to ON. This will start the bubble pump and compressor. Allow a short time delay before the compressor starts.
2. The bubble pump will run when the water temperature is between 16 °C and 4 °C, and then it will switch OFF automatically. The compressor will keep running to make the ice needed.
3. The compressor will turn OFF when the ice thickness sensor is covered with ice.

**At milking**

1. To begin the cooling process for milking, rotate the chilled water pump switch to ON. Or, if installed, use the remote switch to turn the unit ON. This will start the bubble pump and water pump, and deliver chilled water to the plate cooler.
2. At the end of milking, turn the chilled water pump switch to OFF.

For best performance, the ice should be fully melted at the end of each milking. The ice sensor can be moved to optimise the ice build-up. If it is closer to the plates, it will build up less ice. Do not set more than 40 mm away from the plates.

At the start and end of the season, if the ice is not fully melted on minimal settings, it is recommended that the cooling switch is turned OFF between morning and afternoon milkings and the sensor position adjusted for the cooling load.
You can use the timer to switch the cooling ON/OFF for certain times in the day.

Cleaning the water filter

It is recommended that the water filter is checked and cleaned after the first week of the season. Debris that may have built up during the off season will have been flushed through, and these will affect the ice bank performance if not removed.

Before you get started, have a bucket of clean water on hand. This will be used to clean the rings around the cylinder which is housed inside the water filter.

1. Unscrew the cap off the water filter and pull the cylinder with the orange rings out.

2. Unscrew the cap off the cylinder. Be careful not to drop the rings on the floor!

3. Slide the rings off the cylinder and into the bucket of water.
4. Clean the rings in the water and put them back on the cylinder. Screw the cylinder cap back on.
5. Put the cylinder back into the water filter and screw the cap back on.
Controller settings for limited power supply environments

The ice bank is supplied with the controller preset. If power supply is limited, it is possible to set up the ice bank so that the refrigeration doesn’t run at the same time as the milking plant. Set this up before milking:

1. Ensure the mains switch is ON.
2. Rotate the chilled water pump switch to ON. This activates the pump for milk cooling. At this point the ice should have built up.
3. Rotate the milk cooling switch to OFF. This will stop the compressor running during milking.
4. At the end of milking, turn the chilled water pump OFF and the milk cooling switch back ON so that ice making can resume.

The chilled water pump switch must always be OFF when doing a hot wash, or the wash will not be effective.

At the end of the season

1. Turn the cooling switch and chilled water pump switch to OFF. Drain the ice bank.
2. Turn the main power OFF.
3. Check and clean air and water filters and drain water from the pump bleed.
4. Check that there is no debris in the tank.
5. If you are restarting for the new season, see *Powering on the ice bank* on page 4.
Troubleshooting

The alarm is sounding
1. Check the thermal overloads inside the control cabinet and press the green button/s to reset.
2. Check the HP switch and reset it.

Milk is not chilling
1. Check that the chilled water pump is operating. Lift the lid and look into the tank. Water should be flowing into the tank.
2. Check that there are no restrictions in the plumbing system. This will prevent adequate water flow from the pump.
3. Check and clean the water filter. See Cleaning the water filter on page 6.
4. Bleed the air from the water pump. Check that the time switch is not set to OFF. It should be set to ON or AUTO if using the timer function.

Warranty
For more information see www.dts.co.nz