

Ice Cycle (NZ) Ltd manufactures and supplies water chillers and heaters for just about every application. All of our chilling and heating units are manufactured in Napier and can be modified if necessary to suit the application. We are a father/son owned business with over 70 years experience who pride ourselves on delivering an outstanding product and service to all of our customers. We can help you with sizing and designing your next project.

We utilise inverter compressor technology providing massive savings in electricity costs over fixed speed compressors. Ice Cycle units come pre-charged with new ozone friendly R32 refrigerant increasing unit performance and efficiency. This combined with our grade 1 spiralled pure titanium heat exchangers ensures our products can withstand salt, chlorinated and nutrient rich water as well as other fluids. We can provide you with heat exchanger packages for remote mounting into plant rooms (split system). This will allow you to install interconnecting pipework and cabling (cable supplied with package) to offer more flexibility. Below are some of the many applications for our products.

#### MILK CHILLING SYSTEMS

Ice Cycle manufactures and supplies water chillers with electronic expansion valves ensuring close temperature control preventing freezing, heat exchanger failures and unnecessary use of glycol. supply insulated We can water tank/chiller and pump sets on easily transported frames ready to connect to dairy vats or milk heat exchangers. These "plug and play" systems are also available as icebanks to maximise power savings and minimise electrical supply cable sizing. Storing energy as ice allows for smaller chilling units and no need to upgrade electrical supply cabling to dairy sheds. Inverter units are also available to directly connect refrigeration pipes to existing Dimple plates within milk vats. Please contact us to find out more about our flexible and surprisingly price competitive solutions. www.icecycle.co.nz or email technical@icecycle.co.nz



## SWIMMING POOL HEAT PUMPS

Heat pumps are the most cost effective and reliable way of heating swimming pools. Ice Cycle inverter compressor technology, coupled with grade 1 pure titanium heat exchangers ensures both commercial and domestic swimming pools can now be used almost year round. Simply plumb to the existing pool pump, and install an electrical supply to our heat pump and you are ready to enjoy warm pool temperatures. Please contact us to help size your next pool heating project. www.icecycle.co.nz or email technical@icecycle.co.nz



#### AQUACULTURE

New Zealand is a world leader in the aquaculture industry and Ice Cycle technology compliments our strong reputation. We supply automatic change over heat/cool chillers to many of New Zealand's leading aquaculture farmers and research institutes. Ice Cycle's grade 1 pure titanium heat exchangers can withstand the harsh salt water conditions and can be easily taken apart and cleaned if necessary. Our chilling/heating units are constructed from durable materials minimising corrosion and damage in harsh environments. Please contact us to learn more about our extensive knowledge and product email www.icecycle.co.nz range. or technical@icecycle.co.nz



#### UNDERFLOOR HEATING

Most homes built in New Zealand nowadays are constructed with a concrete base. By installing a labyrinth of special plastic piping within the concrete floor, we can pump warm water through this to heat the home and make the floor warm to the touch. This technology is not new however our inverter compressor technology makes this a more efficient way to heat your home than ever before. Please contact us to help with any sizing and design requirements www.icecycle.co.nz email or technical@icecycle.co.nz



#### AIR CONDITIONING

Reverse cycle water chillers are an efficient solution to effectively heat and cool commercial and large buildings. Ice Cycle reverse cycle chillers have the capability to communicate with each other and other external building management systems (BMS) via the Modbus protocol. This technology allows for advanced control and functionality for all cooling and heating requirements. Please contact us to find out more about our smart adaptive control systems. <u>www.icecycle.co.nz</u> or email technical@icecycle.co.nz



#### HYPROPONICS

Ice Cycle can provide reverse cycle water heating and chilling units capable of withstanding nutrient rich solutions. While efficiently maintaining close control of water temperatures with our electronic expansion valve technology, our inverter compressors can adapt speed and duty via our integrated PLC. Please contact us for more information about our product range. www.icecycle.co.nz email or technical@icecycle.co.nz



#### MEAT INDUSTRY

TEMPERCYCLE

Chilled water is used extensively in the meat industry for a myriad of process applications. Ice Cycle has supplied many water chillers into this market as our chillers can chill water down to 2°C without need for the addition of expensive glycol. This capability allows Ice Cycle chillers into applications that others can't. If you are looking to go below 2°C then glycol would need to be added to our water chilling systems. Please contact us to learn more about product and applications. www.icecycle.co.nz or email technical@icecycle.co.nz

# TITANIUM HEAT EXCHANGERS

#### **KEY ADVANTAGES**

- Grade 1 spiralled titanium for high heat transfer and increased efficiency.
- Removable black nylon case for easy cleaning of titanium coil.
- Reinforced glass nylon case for high durability.
- Heat exchangers can be mounted vertically or horizontally to suit requirements.
- Flow switch can be factory fitted into case for detecting water flow.
- Titanium pocket can be fitted into heat exchanger for water temperature sensing probe.
- Heat exchangers are available in 2 sizes and may be purchased separately.





#### HEAT EXCHANGER SPECIFICATIONS



А	388mm
В	210mm
С	126mm
D	Approx. 60mm 19.5mm titanium tube
E	Approx. 100mm ¾" OD copper tube

	ICE25	ICE40
Heating kW	25	40
Cooling kW	12	18
Water Flow	>100 L/Min	>150 L/Min

Nominal capacity based on cooling +7c LWT 35 ambient, heating +27c LWT 19 ambient dry bulb.

### CHILLER SPECIFICATIONS

	ICECYCLE 200 SERIES SINGLE PHASE	ICECYCLE 200 SERIES 3 PHASE	ICECYCLE 400 SERIES	ICECYCLE 600 SERIES	ICECYCLE 800 SERIES
Nominal Cooling (kW)	18 @ 100% rps	18 @ 100% rps	22 @ 100% rps	32 @ 100% rps	44 @ 100% rps
Nominal Heating (kW)	30 @ 100% rps	30 @ 100% rps	40 @ 100% rps	60 @ 100% rps	80 @ 100% rps
Power Supply	Single Phase	3 Phase	3 Phase	3 Phase	3 Phase
Compressor Type	Scroll Inverter R32	Scroll Inverter R32	Scroll Inverter R32	Scroll Inverter R32	Scroll Inverter R32
Dimensions W x H x D (mm)	1126 x 1165 x 422	1120 x 1165 x 425	1126 x 1470 x 422	1306 x 1572 x 462	1595 x 1307 x 1041
Weight (kg)	120	120	150	180	270
Water Flow	150L/m	150L/m	200L/m	250L/m	300L/m

Nominal Cooling Capacity conditions: Water temperature 7c Ambient 35c DB Nominal Heating Capacity conditions: Water temperature 27c Ambient 19c DB

Optimum Water Flow 300 L/m Compressor 100% rps



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