

The Climate Wizard
By SEELEY INTERNATIONAL ™

Multi-Cycle Indirect Evaporative Air Conditioning





World-leading evaporative cooling solutions

Seeley International is Australia's largest air conditioning manufacturer and a global leader in developing ingenious, energy-efficient cooling products.

Award Winning Company

Seeley International consistently wins awards each year for new product design, innovation and the environment.

Recent awards include:



The world's coolest, quietest and most energy efficient evaporative air conditioners



Hyper-efficient Multi-Cycle indirect evaporative air conditioners



High performance evaporative air conditioning. Unbelievable value.



Compact, modular Multi-cycle indirect evaporative air conditioners

About The Climate Wizard

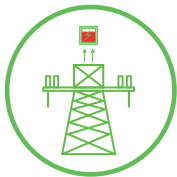


Pure indirect evaporative cooling system:

no one cools as low as The Climate Wizard.

Featuring a unique Multi-Cycle indirect evaporative heat exchange core, the Climate Wizard provides hyper-efficient cooling of outside air — using no chemical refrigerants and delivering 100% fresh, cool air without adding any moisture.

Reduced energy use by up to 80%*



No high electrical demand charges even in extreme hot weather.

Savings on the installation costs.

Comfortable Indoor Air Quality



100% fresh, cool outside air

Continuous ventilation reduces airborne diseases and viruses

Flexible applications



Can be installed in conjunction with existing A/C to improve cooling performance.

Ideal for a wide range of industries.

No moisture added to the air



Ideal for use in environments that require precise climate control, such as food processing facilities and the pharmaceutical industry.

No synthetic refrigerants or chemicals



Only water used as a refrigerant (R-718).

Features a Water Manager System to minimise water consumption and to maintain quality.

Cooling performance increases when air temperature rises



Unlike traditional refrigeration systems, whose efficiency and performance decrease as the temperature rises.

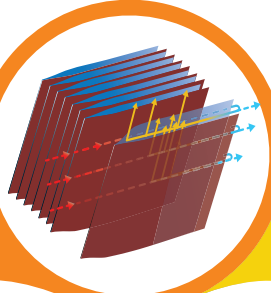
*Compared to refrigerated systems performing the same duty.



How it works

The Climate Wizard indirect evaporative air conditioners use a **hyper-efficient Multi-Cycle counter-flow heat exchanger** to produce 100% fresh, cool, outside air, with no added moisture.

The fresh cold air produced by The Climate Wizard can be similar to that produced by refrigerated systems, with temperatures that approach the ambient dew-point temperature.

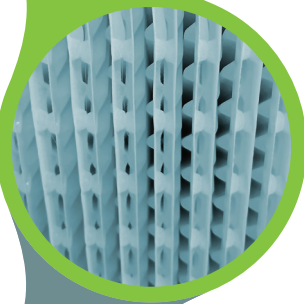
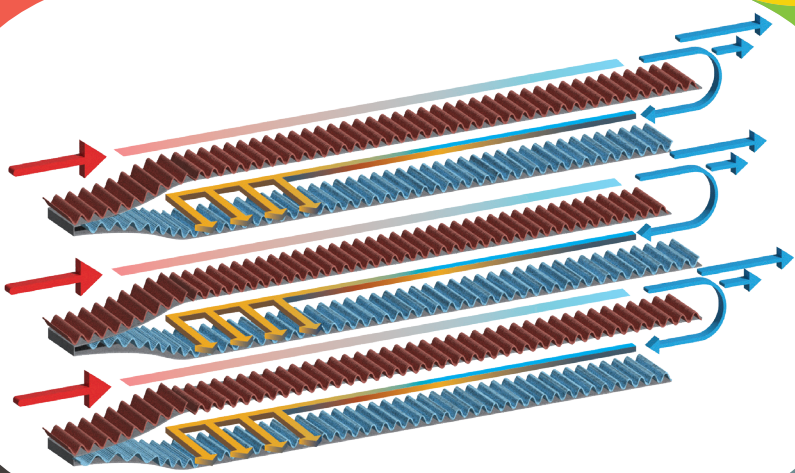
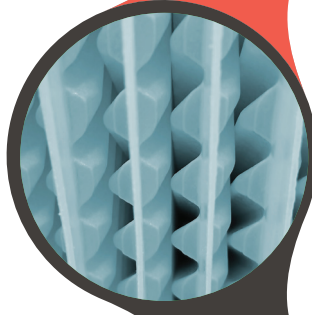


①

The heat exchanger is made up of two channels, dry and wet. 100% of the warm outdoor air enters and flows only through the dry channels, never coming into contact with water.

②

Once the air has passed through the dry channels, 45% of it is diverted into the wet channels, thus creating a counter-flow heat exchanger.

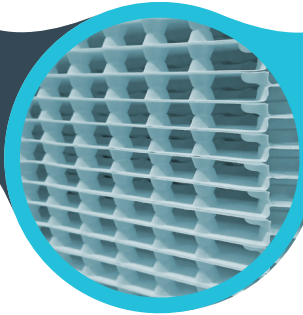


④

The outdoor air that passes through the dry channels is cooled by exchanging heat with the portion of air diverted into the wet channels. The remaining 55% of the cooled air is then supplied into the building.

③

In the wet channels, where water is distributed, the evaporation process takes place, resulting in the cooling of the air.



Explore the workings of
The Climate
Wizard in our
informative video

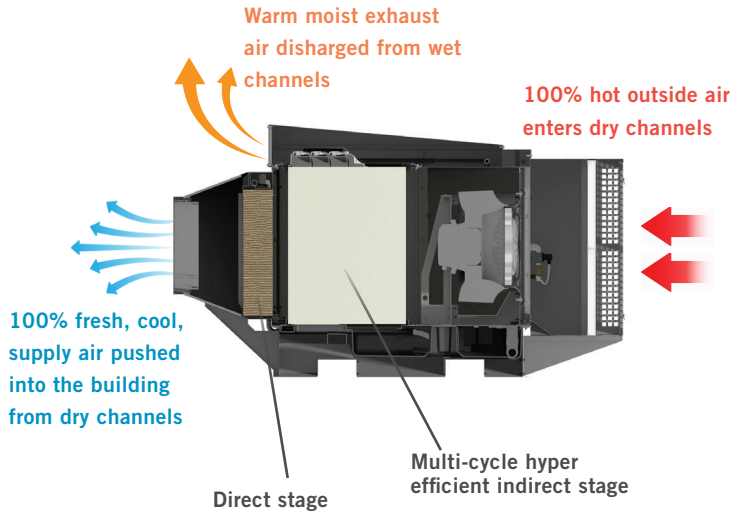


*Supply and return air flow ratio depend on application requirements and on the type of unit.

The Climate Wizard Supercool

Multi-Cycle indirect evaporative cooling with direct evaporative stage

Designed to maintain precise temperature and humidity levels – at very low operating costs.



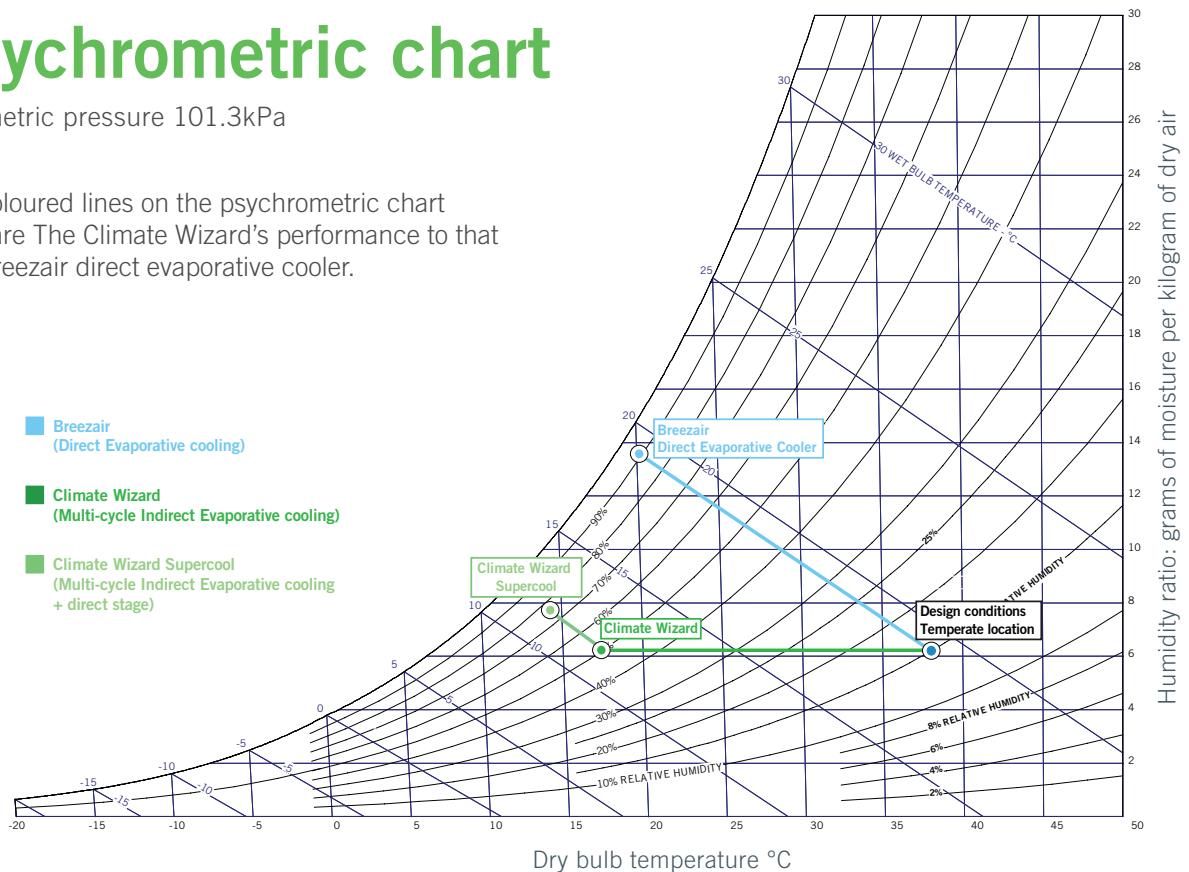
Adding a Direct Evaporative Cooling pad after the Multi-Cycle indirect stage, we have the so-called Supercool Model.

The result of adding this new direct stage downstream to the heat-exchanger core is that we can reduce the DB (dry bulb) supply air temperature adding a very small quantity of moisture only, for ever lower temperatures and super-cool effect!

Psychrometric chart

Barometric pressure 101.3kPa

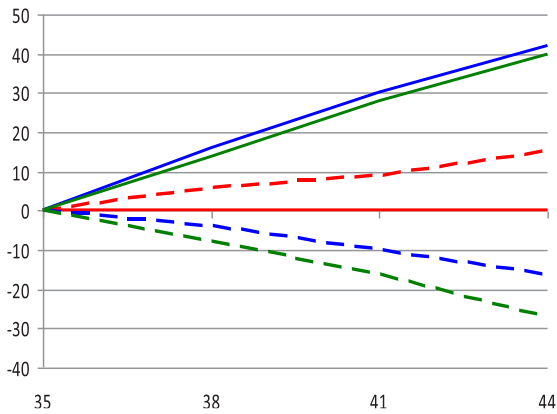
The coloured lines on the psychrometric chart compare The Climate Wizard's performance to that of a Breezair direct evaporative cooler.



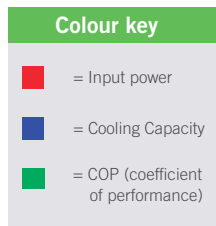
The Cooling Performance

The Climate Wizard's cooling performance increases as temperature rises

and can rival that of refrigerated systems, using up to 80% less energy.



Outdoor Temperature (Degrees Celsius DB)
Source: Uni SA Roxby Downs Report June 2009



That's not only great for reducing power bills; it's also great for the environment.

And, no matter how hot it gets outside, The Climate Wizard uses the same amount of power and still delivers 100% fresh, cool air inside.

This is in direct contrast to refrigerated systems, which require increasing amounts of power as outside temperatures rise. The performance of Climate Wizard improves as the outdoor temperature increases, resulting in reduced energy consumption.

Supply Air Temperature

| Location | Design condition | CW-3 | CW-H15 | CW-H15S | CW-H15S Plus | CW-80 | CW-80S | CW-80 Hicap | CW-80S Hicap |
|--------------|-------------------|------|--------|---------|--------------|-------|--------|-------------|--------------|
| Arid | 42°C DB / 21°C WB | 19 | 19 | 15 | 16 | 19 | 16 | 20 | 16 |
| Temperate | 37°C DB / 19°C WB | 17 | 17 | 14 | 15 | 18 | 15 | 18 | 15 |
| Continental | 31°C DB / 20°C WB | 19 | 19 | 17 | 18 | 20 | 18 | 20 | 18 |
| Sub-Tropical | 31°C DB / 23°C WB | 23 | 22 | 21 | 22 | 23 | 21 | 23 | 22 |
| Tropical | 33°C DB / 26°C WB | 26 | 25 | 24 | 25 | 26 | 25 | 26 | 25 |

Cooling Capacity

| Location | Design condition | CW-3 | | CW-H15 | | CW-H15S | | CW-H15S Plus | | CW-80 | | CW-80S | | CW-80 Hicap | | CW-80S Hicap | |
|--------------|-------------------|------|-----|--------|-----|---------|-----|--------------|-----|-------|-----|--------|-----|-------------|-----|--------------|-----|
| | | kW | COP | kW | COP | kW | COP | kW | COP | kW | COP | kW | COP | kW | COP | kW | COP |
| Arid | 42°C DB / 21°C WB | 42 | 24 | 31 | 17 | 36 | 20 | 50 | 24 | 207 | 17 | 228 | 18 | 234 | 17 | 261 | 19 |
| Temperate | 37°C DB / 19°C WB | 36 | 21 | 27 | 15 | 32 | 18 | 43 | 20 | 175 | 14 | 196 | 16 | 198 | 14 | 225 | 16 |
| Continental | 31°C DB / 20°C WB | 21 | 12 | 16 | 9 | 19 | 11 | 26 | 12 | 104 | 8 | 117 | 9 | 116 | 8 | 134 | 10 |
| Sub-Tropical | 31°C DB / 23°C WB | 15 | 9 | 12 | 7 | 13 | 7 | 19 | 9 | 75 | 6 | 83 | 7 | 82 | 6 | 95 | 7 |
| Tropical | 33°C DB / 26°C WB | 13 | 7 | 10 | 6 | 12 | 7 | 16 | 8 | 66 | 5 | 72 | 6 | 71 | 5 | 82 | 6 |

The Climate Wizard cooling performance calculator

Enter the key parameters to check The Climate Wizard performance for your project. Typically the results are compelling.

You will be provided with a summary and a report of your results to meet local climate conditions.

Go to seeleyinternational.com/eu/commercial/tools



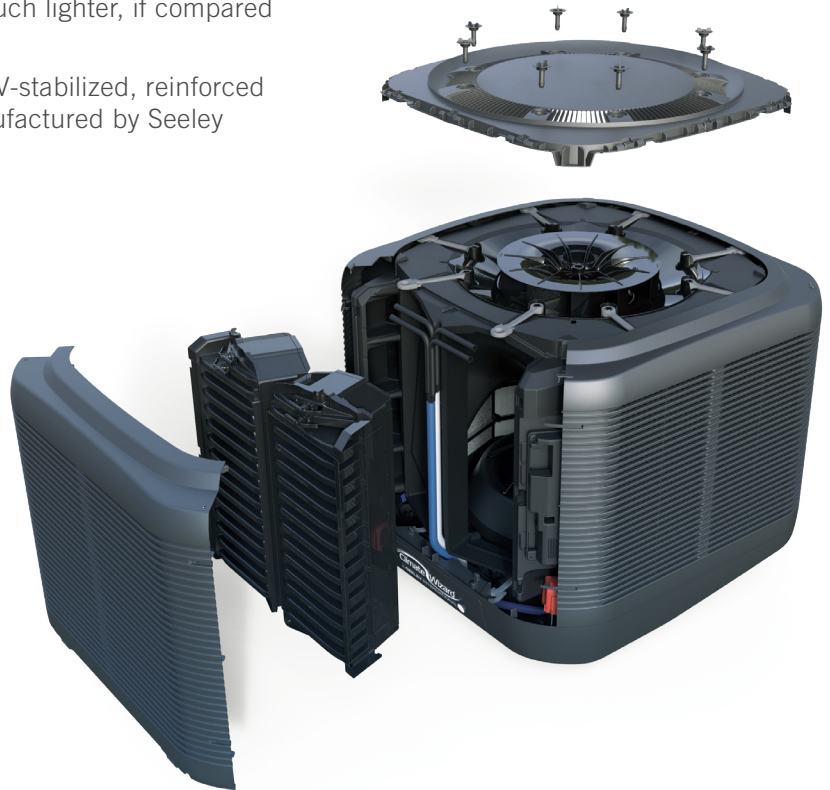
CW-3 Micro-Core®

Multi-Cycle indirect evaporative air conditioning

CW3 is the latest breakthrough in the Climate Wizard range: with its compact footprint, CW3 is easy to install and much lighter, if compared with other models.

The cabinet is made from injection-moulded, UV-stabilized, reinforced polypropylene and all the components are manufactured by Seeley International.

- Polymer, UV-stabilized, structure.
- Supercool (Indirect + Direct stage).
- Can be installed directly on the duct.
- Can be used in Free-cooling mode.
- Equipped with two fans driven by a high efficiency electric inverter motors for optimal performance.
- Includes a G4 washable filters for superior air quality.
- Custom designed water management system minimises water consumption and maximises cleanliness.



Scan the QR code to browse technical specifications

Micro-Core®

The CW3 uses a series of Seeley International's patented Micro-Core® heat exchangers. The Micro-Core® is characterised by its compact and efficient design which incorporates both an indirect cooling stage and an additional direct stage. It is fully manufactured by Seeley International and provides sub-wet bulb cooling temperatures.



CW-3*

UP TO **42 kW** COOLING CAPACITY

- COP 24
- Up to 5,360 m³/h (1490 l/s) @50Pa
- Input Power 1.75 kW

| | |
|-------------------|---|
| Electrical supply | 1-phase, 220-240 V, 50 Hz |
| Dimensions | 1.160mm (L) x 1.160mm (W) x 1.020mm (H) |
| Operating weight | 210 kg |

*All CW models with a direct evaporative stage can also work on Only Indirect Mode (No added moisture).

CW-H15 Series

The only sub-wet bulb Pure Indirect evaporative cooling technology

The Climate Wizard CW-H15 Series utilises three hyper-efficient counter-flow indirect evaporative heat exchanger cores, supplying outdoor air at a temperature close to the dew point and always lower than the ambient air's wet-bulb temperature.

Designed for long service life and consistent performance.



- Aluminum with a marine-grade coated finish for enhanced durability.
- Includes washable G4 filters for superior air quality.
- Backward curved, direct drive fan driven by a high-efficiency variable-speed inverter motor for optimal performance.
- The water reservoir is a one piece moulded polymer construction. It is sloped to prevent standing water when drained. Durable and corrosion free. Provides excellent sound deadening properties.
- Custom designed water management system minimises water consumption and maximises cleanliness monitoring continuously the water salinity level in the tank and controlling water cleanliness using a factory installed Electro-chlorinator.



Scan the QR code to browse technical specifications

| | 31 kW COOLING CAPACITY | 36 kW COOLING CAPACITY | 50 kW COOLING CAPACITY |
|--------------------------|---|---|--|
| CW-H15 | <ul style="list-style-type: none"> • COP 17 • Up to 3,960 m³/h (1100 l/s) @150Pa • Input Power 1.8 kW | <ul style="list-style-type: none"> • COP 20 • Up to 3,960 m³/h (1100 l/s) @120Pa • Input Power 1.8 kW | <ul style="list-style-type: none"> • COP 24 • Up to 5,760 m³/h (1100 l/s) @80Pa • Input Power 2.1 kW |
| Electrical supply | 3-phase, 380-415 V, 50 Hz | 3-phase, 380-415 V, 50 Hz | 3-phase, 380-415 V, 50 Hz |
| Dimensions | 2,290mm (L) x 1,825mm (W) x 1,285mm (H) | 2,290mm (L) x 1,825mm (W) x 1,285mm (H) | 2,290mm (L) x 1,825mm (W) x 1,285mm (H) |
| Operating weight | 330 kg | 345 kg | 345 kg |

*All CW models with a direct evaporative stage can also work on Only Indirect Mode (No added moisture).

CW-80 Series

The only sub-wet bulb Pure Indirect evaporative cooling technology

The Climate Wizard CW-80 Series utilizes sixteen hyper-efficient counter-flow indirect evaporative heat exchanger cores.

By supplying 100% continuous fresh, filtered outside air with no added moisture, the Climate Wizard units can be seamlessly integrated as pre-coolers as part of a total HVAC solution.



- Stainless steel structure-weather proof and corrosion resistant.
- Equipped with 6 high-efficiency electric inverter motors driving.
- Includes 16 washable G4 filters for superior air quality.
- Features 16 hyper-efficient indirect CORES for maximum cooling efficiency.
- The water reservoir is a one piece moulded polymer construction. It is sloped to prevent standing water when drained. Durable and corrosion free. Provides excellent sound deadening properties.
- Custom designed water management system minimises water consumption and maximises cleanliness monitoring continuously the water salinity level in the tank and controlling water cleanliness using a factory installed electro-chlorinator.



Scan the QR code to browse technical specifications

| | | | | | |
|--------------------------|---|---|--|---|---|
| | CW-80 | UP TO 207kW COOLING CAPACITY | | CW-80 Hicap | UP TO 234kW COOLING CAPACITY |
| | <ul style="list-style-type: none"> • COP 17 • Up to 26,600 m³/h (7400 l/s) @190Pa • Input Power 12.5 kW | | | <ul style="list-style-type: none"> • COP 17 • Up to 30,600 m³/h (8500 l/s) @270Pa • Input Power 14 kW | |
| Electrical supply | 3-phase, 380-415 V, 50 Hz | | | 3-phase, 380-415 V, 50 Hz | |
| Dimensions | 3,980mm (L) x 2,550mm (W) x 3,515mm (H) | | | 3,980mm (L) x 2,550mm (W) x 3,515mm (H) | |
| Operating weight | 2.700 kg | | | 2.700 kg | |
| | CW-80S* | UP TO 228kW COOLING CAPACITY | | CW-80S* Hicap | UP TO 261kW COOLING CAPACITY |
| | <ul style="list-style-type: none"> • COP 18 • Up to 25,600 m³/h (7100 l/s) @180Pa • Input Power 12.5 kW | | | <ul style="list-style-type: none"> • COP 19 • Up to 29,500 m³/h (8200 l/s) @240Pa • Input Power 14 kW | |
| Electrical supply | 3-phase, 380-415 V, 50 Hz | | | 3-phase, 380-415 V, 50 Hz | |
| Dimensions | 3,980mm (L) x 2,550mm (W) x 3,515mm (H) | | | 3,980mm (L) x 2,550mm (W) x 3,515mm (H) | |
| Operating weight | 2.850 kg | | | 2.850 kg | |

CW-80 and CW-80S can work at external static pressure of up to 820 Pa!

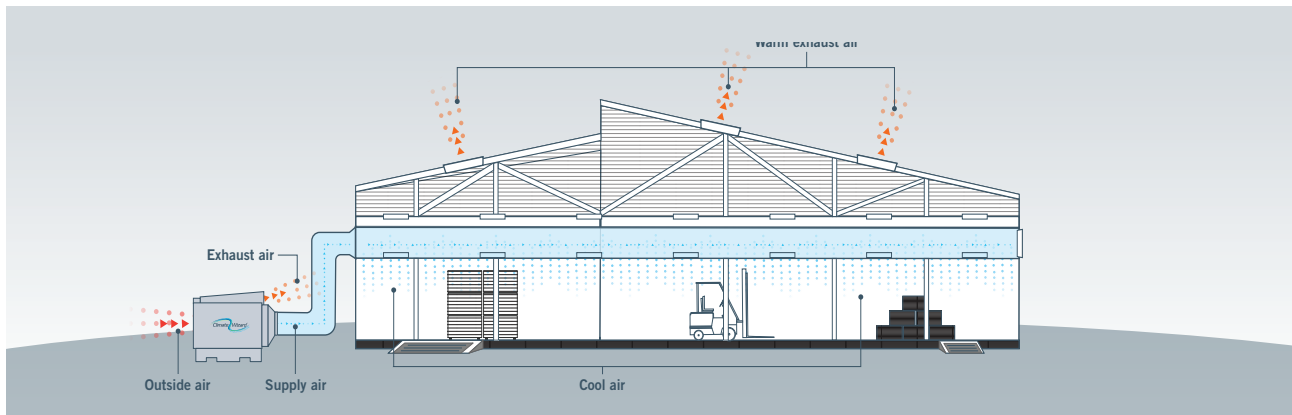
*All CW models with a direct evaporative stage can also work on Only Indirect Mode (No added moisture).

Diverse configurations and applications

Dramatically reduce energy consumption and cooling costs by incorporating The Climate Wizard with other HVAC systems.

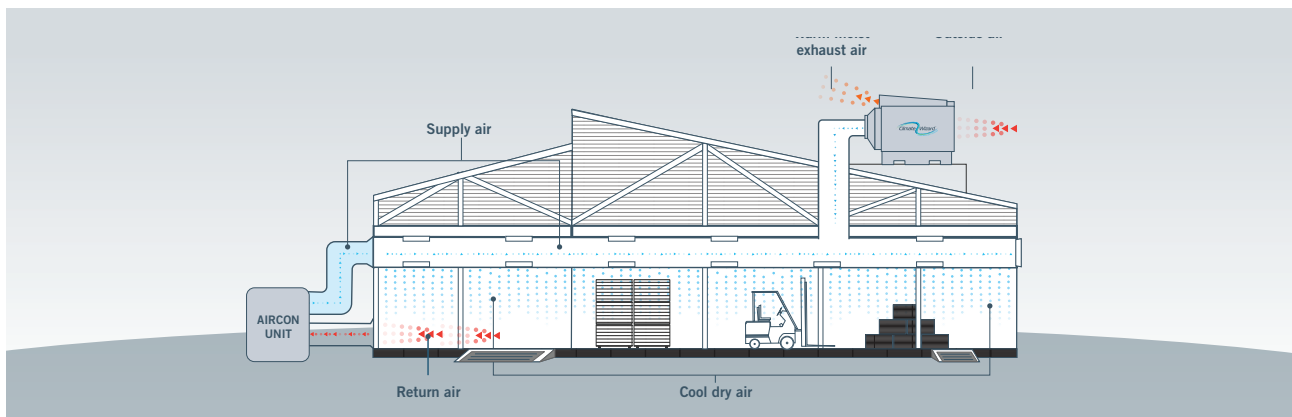
Stand-alone cooling

Ideal for open plan and outdoor access applications



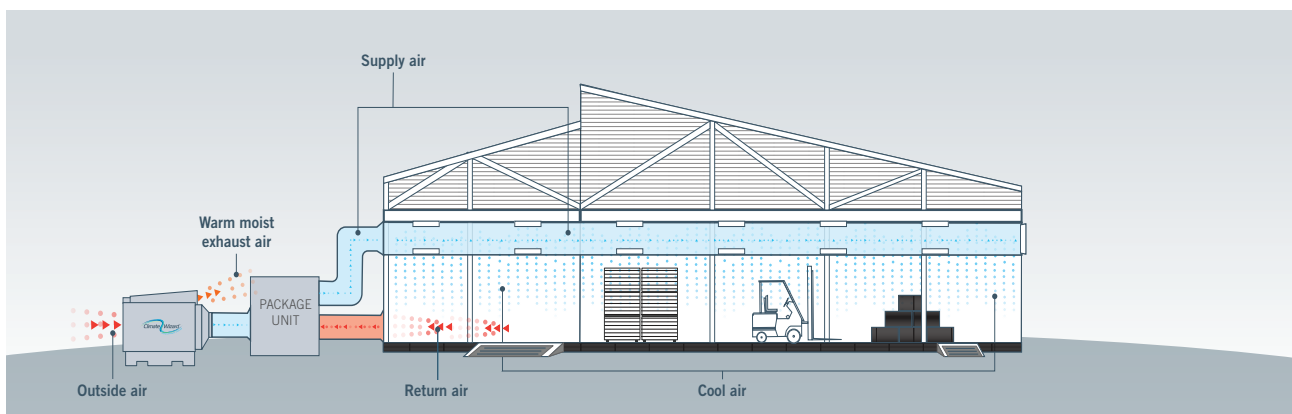
Supplementary cooling

Meet fresh air requirements and reduce load on refrigerated systems



Pre-cooling

A super cost-effective way of cooling outside air required by refrigerated systems

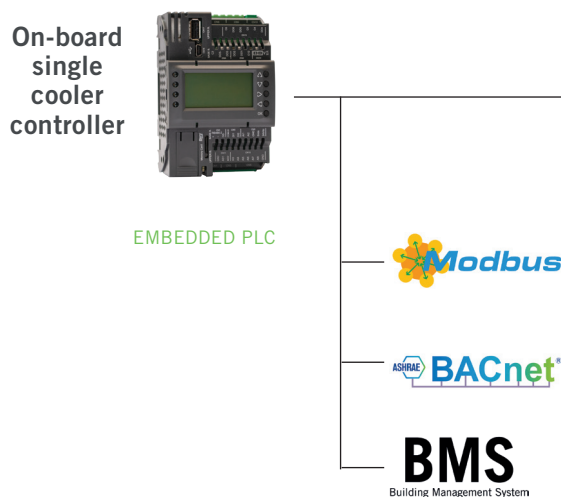
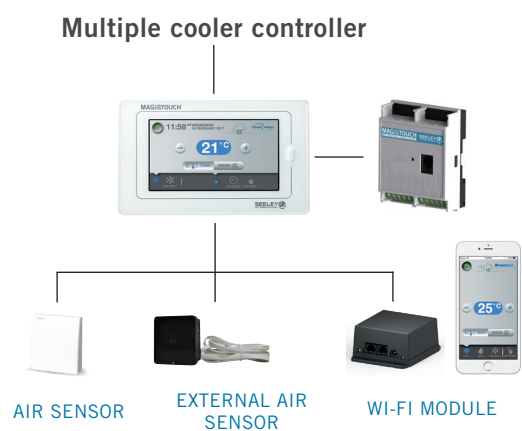
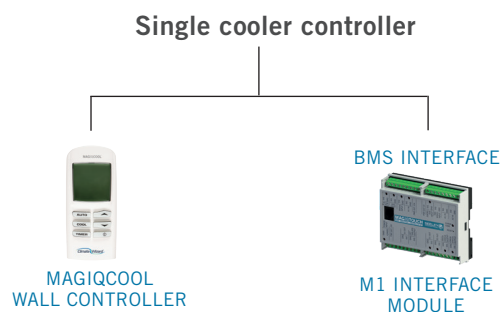


Control options

Maintaining an optimal indoor climate across various environments

We offer a wide range of intuitive controllers and sensors, providing complete flexibility for seamless integration with building management systems. All our controls offer unit fault management, multiple coolers control and advanced automatic control algorithms that maximise energy efficiency of the cooling equipment, plus a series of additional features:

- Programmable 7- day timer to automatically control on/off times and mode of operation.
- Remote Indoor & Outdoor Temperature and Humidity Control.
- Easy commissioning process due to in-built Installation Wizard.
- Min. and max. fan speed settings to ensure minimum outside air ventilation requirements are met.
- Controls unit operation to minimise water consumption and maximise efficiency.





BREEZAIR

Direct Evaporative Air Conditioning

THE CLIMATE WIZARD

Multi-cycle indirect Evaporative Air Conditioning

COOLAIR

Direct Evaporative Air Conditioning

COOLERADO

Multi-cycle indirect Evaporative Air Conditioning

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