



## Delivering peak comfort and efficiency at KFC Goodna with an advanced HVAC solution for a leading quick-service restaurant

### KFC Goodna, QLD

#### Project Address

16 Queen St, Goodna QLD 4300

#### Consultant

Ralph Engineering  
Concepts

#### Installer

MC Industries

#### Equipment

1 x Climate Wizard Indirect Direct Evaporative  
High Capacity Air Conditioning Unit

Model: Climate Wizard **CW-H15S Plus**

#### CUSTOMER PROFILE

KFC Goodna delivers a convenient and community-friendly dining experience featuring classic favourites and quick bites for locals to enjoy a quality meal on the go.

#### INDUSTRY

- Restaurant
- Kitchen
- Food outlet

#### APPLICATION

- Pre \ Supplementary cooling
- Stand-alone cooling
- Dedicated ventilation
- Integration

KFC Goodna, located in Queensland, faced a familiar challenge experienced by many quick-service restaurants, managing the heat and airflow in a high-demand kitchen environment, particularly around the exhaust hoods.

To address this, KFC Goodna took a forward-thinking approach by installing a Climate Wizard CW-H15S Plus (Supercool), an advanced indirect evaporative cooling system. This installation not only delivered fresh, cool, and filtered air but also addressed the broader needs of staff comfort, HVAC efficiency, and energy savings, despite being in a high-humidity region traditionally considered less suitable for this type of technology.

#### Project Requirements

KFC required a sustainable and cost-effective solution that could operate reliably in Queensland's variable climate conditions.

The project aimed to:

- » Deliver filtered, cooled make-up air for the kitchen exhaust hood system.
- » Improve staff comfort by reducing kitchen temperatures impacted by cooking equipment.
- » Reduce the load on existing HVAC systems, ultimately extending their lifespan.
- » Minimise energy consumption and operational costs.
- » Enhance the overall indoor environment with fresh, odorless air for both customers and staff.

#### Proposed Solution

Seeley International's Climate Wizard CW-H15S Plus (Supercool) was selected as the ideal solution to complement the remaining HVAC equipment. This high-performance indirect evaporative cooler was installed to supply cool, filtered, and fresh outside air into the kitchen to offset the air exhausted by the commercial hood system.

Key features of the system include:

- » Indirect evaporative cooling mode, ensuring no added moisture to the indoor environment.
- » Optional Chillcel® module, available to further reduce supply air temperature if required.
- » Hyper-efficient energy usage, reducing electrical demand and contributing to lower operational costs.
- » The fresh air advantage, improving both kitchen and dining area environments with clean, odor-free airflow.

What sets this project apart is the strategic deployment in Queensland, where the perception often suggests indirect evaporative cooling systems are less suitable due to seasonal humidity. Despite this, the CW-H15S Plus performs reliably, delivering high-quality cooled air.

# The Outcome

The installation at KFC Goodna has delivered multiple benefits:

- » Improved working conditions for kitchen staff by significantly reducing heat build-up, contributing to higher comfort and safety during peak cooking hours.
- » Energy savings and HVAC load reduction, with the Climate Wizard system taking on a substantial share of the cooling demand.
- » Extended equipment life, as the reduced thermal load eased the strain on conventional HVAC units.
- » Enhanced customer experience, with cooler, fresher air entering front-of-house zones, free from odors and humidity.
- » Sustainability and operational efficiency, aligning with broader corporate goals for energy-conscious design and operation.

This installation demonstrates the viability of Climate Wizard technology in subtropical climates like Queensland, especially when implemented as a pre-cooling or supplementary cooling solution for make-up air strategies.



## ASHRAE 0.4% Monthly Conditions (Brisbane Archerfield Design Conditions) - Ambient - 33.0 °C DB / 22.8 °C WB / Indoor - 25.0 °C DB / 50% RH

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Dry Bulb</b>	35.4°C	34.1°C	32.8°C	29.7°C	27.0°C	24.5°C	24.8°C	27.1°C	30.7°C	32.5°C	33.5°C	34.4°C
<b>Wet Bulb</b>	24.1°C	24.0°C	23.5°C	20.1°C	18.0°C	17.1°C	15.8°C	16.8°C	17.2°C	18.7°C	20.8°C	22.3°C
<b>Dew Point</b>	19.5°C	19.9°C	19.7°C	15.2°C	12.8°C	12.7°C	9.8°C	10.2°C	8.1°C	10.4°C	14.3°C	16.7°C
<b>1 x CW-H15S PLUS (1,600 L/s @ 80Pa Max. ESP) - Performance for Stand-alone &amp; Pre-Cooling</b>												
<b>CW-H15S PLUS Supply Air Temp</b>	22.4°C	22.5°C	22.1°C	18.5°C	16.5°C	15.9°C	14.3°C	15.1°C	14.8°C	16.3°C	18.7°C	20.4°C
<b>Pre-cool Cap</b>	25.4 kW	22.7 kW	20.9 kW	21.8 kW	20.4 kW	16.7 kW	20.4 kW	23.5 kW	30.9 kW	31.6 kW	28.9 kW	27.4 kW
<b>Pre-cool COP</b>	11.5	10.3	9.5	9.9	9.3	7.6	9.3	10.7	14.1	14.4	13.1	12.4
<b>Stand Alone Cap</b>	10.0 kW	9.8 kW	10.6 kW	17.5 kW	21.4 kW	22.5 kW	25.6 kW	24.2 kW	24.7 kW	21.8 kW	17.2 kW	13.9 kW
<b>Stand Alone COP</b>	4.5	4.5	4.8	7.9	9.7	10.2	11.6	11.0	11.2	9.9	7.8	6.3



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