



High-performance sustainable cooling for Australia’s next-generation food processing hub, delivering cleaner air and greater operational efficiency.

**Thomas Foods
Murray Bridge, SA**

Project Address

191 Temora Way Pallamana South Australia

Builder\Consultant

BADGE Constructions
Ahrens Steel

Contractor

Specific Refrigeration
& Mechanical

Equipment

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

Model: Climate Wizard **CW-80S Hi-Cap**

CUSTOMER PROFILE

Thomas Foods is one of Australia’s largest meat processors, with a strong commitment to sustainability, food safety, and operational excellence. The new Murray Bridge facility is designed to set global benchmarks for hygiene, automation, and environmental performance.

INDUSTRY

- Food Processing
- Meat Processor

APPLICATION

- Stand-alone cooling
- Dedicated ventilation

Thomas Foods International’s rebuild of its Murray Bridge meat processing facility represents one of the most significant food manufacturing infrastructure projects in Australia. Following the devastating 2018 fire, the new site has been designed to showcase world leading technology, sustainability, and operational efficiency.

A key component of this vision is the HVAC system responsible for cooling and ventilating critical processing areas. The facility required a solution capable of delivering 100% outside air, maintaining strict temperature control, and supporting high air change rates, all while minimising energy consumption and avoiding the penalties associated with traditional refrigerated cooling systems.

Project Requirements

The facility’s processing environment demanded a highly specialised HVAC solution capable of meeting stringent operational and hygiene requirements:

- **One Pass Cooling and Ventilation**
The system needed to supply 100% fresh, filtered outside air with no recirculation, supporting food safety protocols and preventing cross contamination.
- **Strict Temperature Control**
Processing areas required a stable room temperature of 22°C ± 2°C, even under high heat loads and during washdown cycles.
- **High Air Change Rates**
The facility required an average of ~40 air changes per hour (ACH) to maintain hygiene, remove contaminants, and support ventilation requirements.
- **Positive Pressurisation**
The HVAC system needed to maintain positive pressure in clean areas to ensure airflow moved from clean zones toward dirtier zones, supporting food safety workflows.
- **Energy Efficiency and Sustainability**
Cooling 100% outside air is traditionally energy intensive. The client required a solution that avoided the high electrical demand and refrigerant use associated with conventional refrigerated systems.

Proposed Solution

To meet these demanding requirements, Seeley International supplied 14 x CW 80S Hi Cap Climate Wizard units, forming a high capacity, one pass cooling and ventilation system.

Climate Wizard’s indirect direct evaporative cooling technology deliver, 100% fresh outside air with no added moisture to supply air and no refrigerants. This technology uses significantly lower energy consumption than mechanical refrigeration and provides high cooling performance even in extreme ambient conditions.

Engineered to maintain temperature stability, support high ACH, and ensure positive pressure across critical zones, the system proved an ideal fit for a facility prioritising sustainability, hygiene, and operational efficiency.

System Performance

- Total Airflow: 114,800 L/s
- Application: Standalone cooling for food processing areas
- Supply Air Temperature: 17.2°C (at 39.4°C DB / 21.4°C WB ambient)
- Total Cooling Capacity: 1,095 kW
- COP: 5.5

The Outcome

The Climate Wizard installation successfully met all project expectations, delivering measurable operational and environmental benefits:

1. Achieved Temperature Stability

The system consistently maintained room temperatures below 22°C, meeting the strict processing requirements of the facility.

2. Improved Indoor Air Quality

By supplying 100% fresh, filtered outside air with no recirculation, the system enhanced air quality and supported the facility's hygiene and food safety objectives.

3. Significant Energy and Water Savings

Compared with a conventional refrigerated system, the Climate Wizard solution delivered:

- Lower peak electrical demand
- Reduced operating costs
- Minimal water usage
- No refrigerant related environmental impact

4. Enhanced Sustainability Credentials

The project aligned with Thomas Foods' strong sustainability mandate and demonstrated Seeley International's capability to deliver high performance, low energy HVAC solutions for the food and beverage sector.



Design Conditions (Adelaide Murray Bridge Design Conditions) - Ambient - 39.4 °C DB / 21.4 °C WB / Indoor - 22.0 °C DB / 50% RH												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dry Bulb	43.5°C	39.9°C	38.6°C	33.8°C	25.9°C	19.4°C	20.1°C	24.3°C	28.6°C	35.1°C	38.2°C	41.0°C
Wet Bulb	19.9°C	18.7°C	17.9°C	16.8°C	14.3°C	11.8°C	12.5°C	12.9°C	13.9°C	15.8°C	17.6°C	19.6°C
Dew Point	3.6°C	3.4°C	2.0°C	3.9°C	5.1°C	5.3°C	6.3°C	2.8°C	0.4°C	-1.7°C	1.3°C	5.3°C
14 x CW-80S Hi-Cap (114,800 l/s @ 240 pa) - Performance for Stand-alone												
CW-80S Hi-Cap Supply Air Temp	14.2°C	13.5°C	12.8°C	12.6°C	11.6°C	10.5°C	11.2°C	10.3°C	10.3°C	10.9°C	12.5°C	14.5°C
Stand Alone Cap	1556.8 kW	1653.4 kW	1759.8 kW	1776.6 kW	1916.6 kW	2076.2 kW	1983.8 kW	2105.6 kW	2112.6 kW	2028.6 kW	1801.8 kW	1519 kW
Stand Alone COP	7.8	8.3	8.8	8.9	9.6	10.4	10.0	10.6	10.6	10.2	9.1	7.6



For more information, please call 1300 475 091 or email commercialsales@seeleyinternational.com



We provide full technical support to ensure optimal design for each application.

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