

# Optimus Series

AC-OPT-VSP-590-TP



The Optimus series from Aqua Chiller offers an advanced range of outdoor chillers with capacities from 17 kW to 211 kW, specifically designed for Australian conditions. Engineered for superior efficiency, these units utilise tandem-configured scroll compressors to deliver exceptional part-load performance, making them an ideal choice for demanding outdoor applications.

## Features

- Capacity range from 17kW to 211kW.
- Superior part-load efficiency is achieved by using scroll compressors in a tandem configuration.
- Advanced range of outdoor chillers.
- European built and designed for Australian conditions.
- Onsite commissioning included (a).
- 3 year warranty included as standard (b).
- Compact, space saving design, suitable for indoor or outdoor installation with an electrical panel protected by a double enclosure.
- Galvanized steel frame further protected with polyester powder paint.
- Heavy duty adjustable feet to provide stability.
- High efficiency and quiet operation with scroll compressors.
- Less refrigerant charge by using an efficient brazed plate heat exchanger as the evaporator.
- Equipped with a thermostatic expansion valve.
- Includes a generously sized copper pipe aluminum finned condenser coil for high efficiency.
- Includes fan speed controller.
- Features the Carel µChiller microprocessor controller with Carel APPLICA NFC technology - connects your mobile phone to the chiller for parameter monitoring and easy changes.
- Optional Modbus capability and remote control panel.
- Thermally insulated stainless steel water tank.
- Internal stainless steel pump with 4 bar of pressure.
- Convenient pressure gauge included on the case for water pressure, high and low refrigerant pressures.
- Easy to service design.
- Non corrosive pipe material.
- Flow switch protection.
- High and low pressure protection.
- Thermal overloads on motors.
- Phase Rotation, Fail, and Frequency protection.
- Alarm output contact.
- Remote on/off contact.
- Anti Freezing Alarm to protect evaporator.
- All models are tested under real conditions before shipment.
- Installation and maintenance plans are available.



## Benefits

The Optimus series stands out with its high-quality components, including Danfoss/Copeland compressors, Carel controllers, and EBM fans, ensuring reliable and consistent cooling. The use of a brazed plate heat exchanger and a thermally insulated stainless steel water tank optimises cooling performance while minimising refrigerant charge. These chillers are designed not only for efficiency but also for ease of use, featuring Modbus capability, an internal pump, and fan speed control. Rigorous testing ensures that every unit performs reliably right out of the box, backed by a 1-year warranty for added peace of mind. The Optimus series is the ultimate solution for those seeking high-performance, dependable cooling in challenging outdoor environments.

## Notes

- (a) Onsite commissioning included in metro areas only. Additional travel fees apply for areas outside of metro regions and will be specified on quotation.
- (b) 3 year warranty valid when unit installed to our specifications verified by Aqua Chiller commissioning visit. 6 month maintenances must be completed and logged on our website by qualified personnel. Annual water treatment and filter changes must occur with proof provided. Aqua Chiller can offer install and maintenance packages to suit.

### 3 year warranty

All Aqua Chiller units are tested throughout the manufacturing process followed by a substantial and comprehensive test upon completion. Coupled with the world's most trusted component brands, Aqua Chiller's products are designed and built to last.



Your Partner in Cool.

Online: [www.aquacooler.com](http://www.aquacooler.com)

Email: [care@aquacooler.com](mailto:care@aquacooler.com)

Phone: 1300 278 226

**AQUA**  
**CHILLER**

# Optimus Series

AC-OPT-VSP-590-TP



Optimus™

## Specifications

Model	AC-OPT-VSP-590-TP	
Cooling Capacity +7C supply +35C ambient	kW	53.8
Compressor Power Input	kW	17.1
Fan Power Input	kW	0.76
Pump Power Input	kW	2.2
Combined Power Input	kW	17.1
Power Supply	V/Ph/Hz	415/3/50
Operating Current	Amp	31.8
Max Current Draw	Amp	58
Locked Rotor Amps	Amp	284
Type of Refrigerant	R410a	
Outdoor Installation	Suitable	
Expansion Device	Thermostatic Expansion Valve	
Condenser Type	Copper Pipes, Aluminum Fins	
Fan Type	Axial (Ø50)	
No. of Fans	3	
Fan Motor Power	kW	3 x 0.76
Fan Speed Control	Yes	
Condenser Air Flow Rate	m3/h	3x8000
Compressor Type	Scroll	
No. Compressors	2	
Compressor Capacity Control Steps	%	0, 50%, 100%
Number of Refrigerant Circuits	1	
Nominal Compressor Power	HP	2 x 10
Evaporator Type	Braze Plate Heat Exchanger	
Evaporator Flow Rate	m3/h	9.2
Tank	Included, non-pressurised	
Tank Material	AISI 304 Stainless Steel	
Tank Volume	L	300
No of Pumps	1	
Pump Type	Centrifugal	
Pump Power Input	kW	2.2
Pump Pressure	bar	4 bar
Flow Protection	Flow Switch	
Water Inlet Connection Size	DN	40
Water Outlet Connection Size	DN	40
Type of Controller	Carel uChiller	
HP Control	Semi-Auto Reset Switch	
HP Gauge	Yes	
LP Control	Transducer	
LP Gauge	Yes	
Dimensions	mm	950 W x 2450 D x 2010 H
Dry Weight	Kg	720

## Notes

- Nominal cooling capacity is calculated with 7°C chilled-water supply and 35°C inlet cooling air temperature at system flow rate and pressure
- Recommended temperature range of chilled fluid: 3°C and 25°C. Use of glycol recommended for set points under 6°C.
- Temperature difference between inlet and outlet chilled fluid between 4°C and 7°C. Contact us for temperature splits outside of this range
- All figures are at the rating point of 7c supply in 35c ambient.
- We recommend the use of R134a when ambient temperatures are expected to reach 42°C+

## Features

- Flow switch protection.
- High and low pressure protection.
- Thermal overloads on motors.
- Phase Rotation, Fail, and Frequency protection.
- Alarm output contact.
- Remote on/off contact.
- Anti freezing alarm to protect evaporator.
- All models are tested under real conditions before shipment.
- Installation and maintenance plans are available.

## Company details

<b>Registered Company Name:</b>	Aqua Cooler Pty Ltd
<b>ABN Number:</b>	88 151 215 351
<b>Address</b>	38-44 Relentless Court PARK RIDGE QLD 4125
<b>Postal Address:</b>	PO Box 3225 LOGANHOLME QLD 4128
<b>Telephone:</b>	1300 278 226
<b>Website:</b>	www.aquachiller.com
<b>Email:</b>	care@aquachiller.com

Your Partner in Cool.

Online: [www.aquacooler.com](http://www.aquacooler.com)

Email: [care@aquacooler.com](mailto:care@aquacooler.com)

Phone: 1300 278 226

**AQUA**  
**CHILLER**