



## Range from 20 to 100kW

Introducing the Apex range from Aqua Chiller—our premium selection of industrial chillers, designed to deliver unmatched performance and reliability in outdoor Australian conditions. With capacities ranging from 20 to 100 kW, the Apex chillers feature advanced variable speed scroll compressors from Danfoss, ensuring precise cooling and energy efficiency.

## Benefits

The Apex series represents the peak of industrial cooling solutions, delivering unmatched efficiency and precise cooling control with state-of-the-art technology. Equipped with Danfoss variable speed compressors, electronic expansion valves, EBM brushless EC fans, and Carel pCO5 control technology, these chillers adapt perfectly to your cooling demands, significantly reducing energy waste.

Each unit undergoes rigorous testing under real-world conditions before dispatch and is built for longevity, with a galvanized steel frame and a thermally insulated stainless steel water tank and pump.. Designed for those who demand top-tier performance, the Apex series ensures reliable cooling and is backed by a comprehensive 3-year warranty (b).

## Features

- Capacity range 20-100 kW.
- High efficiency and quiet operation with variable speed driven scroll compressors and EC Brushless fans
- Chiller has stepless capacity control in 1% increments from 25% through to 100% - ensuring the chiller only works as hard as it needs to at all times.
- 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.
- Less refrigerant charge by using an efficient brazed plate heat exchanger as the evaporator.
- Equipped with a electronic expansion valve.
- Includes a generously sized copper pipe aluminum finned condenser coil for high efficiency.
- Features the Carel pCO5 series advanced controller with optional web control card, remote display or RS485 capabilities.
- 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.
- 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.

### 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.



## 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 personel. Annual water treatment and filter changes must occur with proof provided. Aqua Chiller can offer install and maintenance packages to suit.

# Specifications: 20-100 kW

Aqua Chiller Model Name	Units	AC-APE-VMP-I-230-TP	AC-APE-VMP-I-460-TP	AC-APE-VMP-I-615-TP
Cooling Capacity +7C supply +35C ambient	kW	20	40	56.9
Compressor Power Input	kW	6.3	12.8	18.1
Fan Power Input	kW	0.8	0.8	1.6
Pump Power Input	kW	1.1	1.5	2.2
Combined Power Input	kW	8.2	15.1	21.9
Power Supply	V/Ph/Hz	415/3/50	415/3/50	415/3/50
Operating Current	Amp	9.1	20.3	28.8
Max Current Draw	Amp	17.8	31.5	41.5
Type of Refrigerant		R410a	R410a	R410a
Outdoor Installation		Suitable	Suitable	Suitable
Expansion Device		Electronic Expansion Valve	Electronic Expansion Valve	Electronic Expansion Valve
Condenser Type		Copper Pipes, Aluminum Fins	Copper Pipes, Aluminum Fins	Copper Pipes, Aluminum Fins
Fan Type		EC Axial (Ø50)	EC Axial (Ø80)	EC Axial (Ø63)
No. of Fans		1	1	2
Fan Motor Power	kW	1.3	2.0	2x1.0
Fan Speed Control	Stepless Increment EC Fan	10%-100%	10%-100%	10%-100%
Condenser Air Flow Rate	m3/h	9000	15600	2x11000
No. of Condensers		1	1	2
Compressor Type		AC Inverter Scroll	AC Inverter Scroll	AC Inverter Scroll
No. Compressors		1	1	1
Compressor Capacity Control Steps	Stepless Increments	0%, then stepless from 25% to 100%	0%, then stepless from 25% to 100%	0%, then stepless from 25% to 100%
Number of refrigerant circuits		1	1	1
Evaporator type		Brazed Plate Heat Exchanger	Brazed Plate Heat Exchanger	Brazed Plate Heat Exchanger
Evaporator flow rate (m3/h)		3.5	6.9	9.8
Tank		Included, non-pressurised	Included, non-pressurised	Included, non-pressurised
Tank material		AISI 304 Stainless Steel	AISI 304 Stainless Steel	AISI 304 Stainless Steel
Tank volume		100	300	350
Number of pumps		1	1	1
Pump Type		AISI SS304 Centrifugal	AISI SS304 Centrifugal	AISI SS304 Centrifugal
Pump Pressure		4 bars	4 bars	4 bars
Flow Protection (Flow displayed on controller)		Yes	Yes	Yes
Water Inlet Connection Size	DN	32	32	40
Water Outlet Connection Size	DN	32	32	40
Type of controller		Carel pCO5	Carel pCO5	Carel pCO5
Modbus		Yes	Yes	Yes
Supervisory connection and web interface card		Option	Option	Option
HP Control		Semi Auto Reset Switch and Transducer	Semi Auto Reset Switch and Transducer	Semi Auto Reset Switch and Transducer
HP Gauge		Transducer	Transducer	Transducer
LP Control		Yes	Yes	Yes
LP Gauge		Transducer	Transducer	Transducer
Dimensions	mm	900 W x 1000 D x 1830 H	1050 W x 1900 D x 2050 H	950 W x 2450 D x 2050 H
Dry Weight	kg	330	600	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+

AC-APE-VMP-I-900-TP	AC-APE-VMP-I-1230-TP
80.0	100.0
24.5	30.8 (2x15.4)
2.7	3
3	4
30.2	37.8
415/3/50	415/3/50
38.2	49.4 (2x24.7)
58.5	83.0 (2x41.5)
R410a	R410a
Suitable	YES
Electronic Expansion Valve	Electronic Expansion Valve
Copper Pipes, Aluminum Fins	Copper Pipes, Aluminum Fins
EC Axial (Ø80)	EC Axial (Ø63)
2	4
2.0	4x1.0
10%-100%	10%-100%
2x22500	4x11000
2	2
AC Inverter Scroll	AC Inverter Scroll
1	2
0%, then stepless from 25% to 100%	0%, then stepless from 12.5% to 100%
1	2
Brazed Plate Heat Exchanger	Brazed Plate Heat Exchanger
13.8	17.2
Included, non-pressurised	Included, non-pressurised
AISI 304 Stainless Steel	AISI 304 Stainless Steel
350	400
1	1
AISI SS304 Centrifugal	AISI SS304 Centrifugal
4 bars	4 bars
Yes	Yes
50	65
50	65
Carel pCO5	Carel pCO5
Yes	Yes
Option	Option
Semi Auto Reset Switch and Transducer	Semi Auto Reset Switch and Transducer
Transducer	Transducer
Yes	Yes
Transducer	Transducer
1100 W x 3180 D x 2300 H	1400 W x 3180 D x 2250 H
1100	1500

## 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.
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