



Industrial Water Chilling

Cooling Solutions

Consulting



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**RELIABLE
COOLING
SOLUTIONS**

Aqua Cooler is an Australian company that has been established since 1946 producing water chilling products for Australian and international markets.

Aqua Cooler continues to supply some of the world's largest blue chip companies with cooling products that are robust, efficient and innovative. All Aqua Cooler chillers are manufactured in Sydney using only the highest quality components from the industry's leading suppliers.

AQUA COOLERS PRODUCT RANGE INCLUDES

- The S, R, L and H series air cooled chillers from 0.3kW to 250 kW
- Water cooled chillers from 5kW to 240kW
- Data centre cooling solutions including water cooled chillers and pump and transfer systems
- Closed loop systems for food production
- Free cooling coils
- Pump-less chillers for economic large scale installation
- Chilled water system BMS controller, with secondary pump control, buffer tanks and chiller duty cycling
- Explosion proof intrinsically safe chillers

FEATURES OF ALL AQUA COOLER CHILLERS ARE

- Powder coated galvanised steel construction
- Internal buffer tank on units up to 100kW
- BacNet, Modbus and SNMP high level communication
- Integrated stainless steel pumps available in any size for any application

INDUSTRIES THAT AQUA COOLER CHILLERS SERVICE:

- Medical industry – MRI cooling, CT cooling, equipment sterilization
- Air conditioning
- Ice production
- Data centre cooling
- Mining, soil analysis, large scale cold water production
- Scientific instruments industry



Cooling Solutions & Consulting

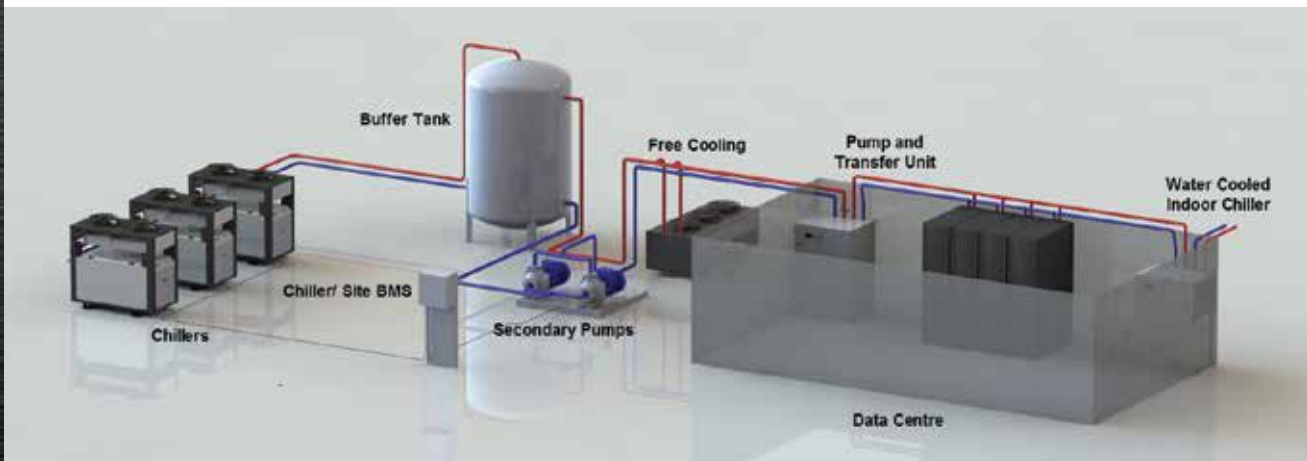
Aqua Coolers team can supply a full range of consulting services for any installation.

Aqua Cooler not only manufactures quality chillers, but we also supply a full range of consulting services for any installation and application.

Every chiller installation is unique. Consideration needs to be taken for requirements such as tolerance control, cooling capacity, pipe run, load control and site specific requirements. The team at Aqua Cooler has vast experience and in-depth knowledge to provide a solution to meet all cooling requirements.

AQUA COOLER CAN SPECIFY AND SUPPLY

- Chillers - in the installation shown below, 2 duty chillers and 1 in redundancy and an indoor chiller using cooling tower water for heat rejection
- Insulated buffer tanks from 800 to 4500 litres – either vented or sealed pressure tanks
- Secondary pumps installed in redundancy with VSD control
- A central management controller to monitor and duty cycle the chillers, monitor and duty cycle the secondary pumps and monitor the buffer tank
- A pump and transfer unit for the hydraulic interface between primary water and secondary water for the data centre cooling racks



The options section at the rear of this document outlines some of the options available for the chillers. Aqua Cooler has an in-house design team and a sheet metal facility to allow for maximum adaptability of design for any application.

SERVICE AND INSTALLATION

Aqua Cooler has a team of experienced, qualified refrigeration technicians that provide site inspections and consultation on specific servicing and site requirements and to carry out installations.

Once a chiller is installed the service agents can provide 24/7 service response to mission critical installations to ensure

minimum downtime. Integration of the chiller to the BMS or remote monitoring can also be carried out via a number of high tech communication systems. Aqua Cooler employs a full network of service agents nationally to provide the highest level of service. A full range of spare parts are also available in all capital cities to minimize downtime.

QUICK FIND GUIDE

Air Cooled Outdoor Chillers				
Model	Cooling Capacity - kW		Dimensions L x W x H	Notes
	5° CHW Supply	10° CHW Supply	Cooling capacities are for unit operating in a 45° environment. Add 20 % cooling capacity for 35° environment. Models R420 to H220 are available with R134a – reduce cooling capacity by 30%.	
S190	0.5	0.7	890 X 575 X 550	All models can be supplied with options such as: - quiet operation - VSD's on compressors - Close tolerance on the smaller units - Heat recovery - Modbus, BACNet and LON high level interface - All have internal buffer tanks - Multiple pump sizes - Water cooled - Remote condensers - Filters - Remote control and display - Reverse cycle - Tandem installation with duty cycling - UPS power feed for pump - Redundant pumps or compressors on some models RTC Range has dual refrigeration circuits.
S240	0.6	0.9		
S315	0.7	1.1		
S400	1.0	1.4	890 x 575 x 595	
R150	2.2	2.5		
R180	2.8	3.3		
R230	3.7	4.4		
R300	4.5	5.5	1080 x 675 x 1120	
R330	5.1	6.3		
R420	6.1	7.5		
R540	8.1	9.7		
R670	10.3	12.5	1490 x 810 x 1330	
R830	11.7	14.2		
R1000	15.6	18.8		
R1200	17.5	21.2		
R1330	19.2	24.4	2170 X 970 X 1660	
R1500	26.0	32.00		
R2000	36.0	44.0		
R2500	45.0	55.0		
RTC20 to 26	31 to 40	37 to 55		
R3000	52.0	64.0	2540 x 1285 x 1830	All these models have multiple compressors.
R4000	72.0	88.0		
R5000	90.0	110.0	2980 x 1450 x 2030	This range of chillers have all the features of the standard range but are not supplied with an internal buffer tank.
R6000	112.0	136.0		
H120	104.0	128.0	2925 x 2200 x 2400	Evaporators can be plate pack or shell and tube.
H140	144.0	176.0		
H180	180.0	220.0	3400 x 2400 x 2200	
H220	224.0	272.00		
Indoor Chillers for Data Centre Application				
I20	20		800 x 1000 x 1450	The "R" range of chillers come with redundant pumps and compressors. All chillers are rated using 29.5°C Cooling tower water.
I30	30			
I20R	20		800 x 1200 x 1450	
I30R	30			
Pump and Transfer Units				
PT100	Heat Transfer Capacity	100	8000 x 1000 x 1450	All models are supplied with redundant pumps as standard. Units can be plumbed through the roof or floor.
PT150		150	800 x 1200 x 1800	
PT200		200	800 x 1200 x 1800	
Indoor Scientific Chiller Range				
S150	Cooling Cap @ 5° and 20° Water in watts	500/1100	410 x 670 x 575	These chillers are available with two pump options for all instrument needs.
S200		600/1500		
S275		700/1900	410 x 670 x 675	
S360		1000/2500		
L Series Chillers				
L3500	Cooling Cap @ 5° water – 45° ambient	55kW	2015 x 1690 x 1640	These chillers are designed to be a flexible platform to provide enough internal space for all chiller requirements.
L5000		78kW		
L6000		90kW		
T Series				
T1500	Cooling Cap @5° water – 45° ambient	28 kW	2170 x 960 x 1660	These chillers are supplied without a pump and are designed to be ganged together easily for large heat load applications
T2000		39 kW		
T2500		47 kW		

S50 Chiller

190 Watts to 450 Watts



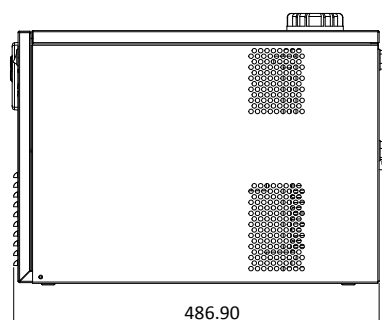
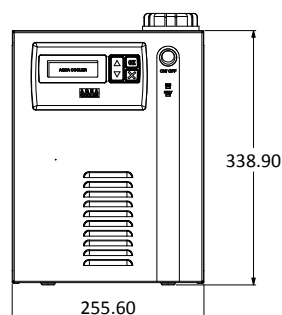
The S50 chiller is designed to be installed in an indoor environment to provide cooling for low heat loading processes such as personal computer over-clocking, aquariums and thermoelectric performance improvements.

The chiller has a variable speed compressor to allow the chiller to match the heat load exactly and minimize noise from compressor start up. The cooling fans are also controlled with heat load to minimize noise.

TECHNICAL DATA – S50		
Cooling Capacity @ 5°C Supply Watts	20 Ambient	310
	45 Ambient	220
Cooling Capacity @ 20°C Supply Watts	20 Ambient	600
	45 Ambient	440
Tank Capacity	Litres	.45
Dry Weight	Kg	10
Power Requirements	240V 50 Hz Single Phase	
Total Amps	A	2

OPTIONS AVAILABLE

- Remote monitoring via Wifi
- Dew point control to prevent water lines sweating
- Choice of two pumps to match requirements



S Series Chillers

0.7 kW to 4.5 kW



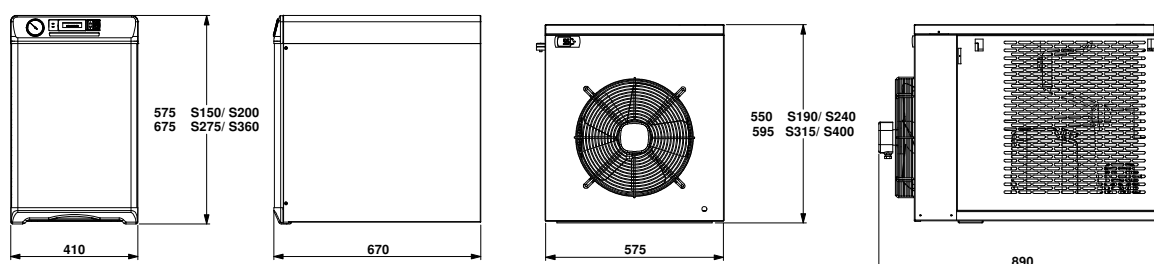
The S Series chillers are a smaller range of chillers designed to be as flexible as possible to suit as many applications as possible. These include:

- Laboratory equipment
- Food preparation
- Pre-cooling water for ice machines

Technical Data Indoor Chiller Range					
Model		S150/S190	S200/ S240	S275/ S315	S360/ S400
Cooling Capacity @ 5° Supply Watts	Watts 20 Ambient	700	1000	1200	1500
	45 Ambient	500	600	700	1000
Cooling Capacity @ 10° Supply Watts	Watts 20 Ambient	1000	13000	1700	2200
	45 Ambient	700	900	1100	1400
Cooling Capacity @ 15° Supply Watts	Watts 20 Ambient	1200	1700	2200	2800
	45 Ambient	900	1100	1500	1900
Cooling Capacity @ 20°Supply Watts	Watts 20 Ambient	1600	2200	2900	3700
	45 Ambient	1100	1500	1900	2500
Cooling Capacity @ 25° Supply Watts	Watts 20 Ambient	1900	2600	3600	4500
	45 Ambient	1300	1900	2400	3000
Tank Capacity	Litres	4 Indoor unit, 25 outdoor unit			
Dry Weight	Kg	40		45	
Power Requirements		240V 50 Hz Single Phase			
Total Amps	A	4.6	5.6	6.3	7.2

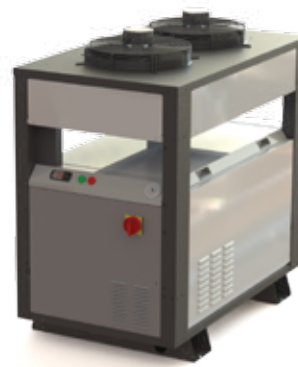
FEATURES INCLUDE

- Standard 10 amp outlet power connection
- Choice of pumps to suit every application
- Full computerized control for close tolerance (to 0.1°C) and efficient operation
- Wifi monitoring
- Fan speed control for low noise operation



R Series I

2.2 kW to 9.7 kW

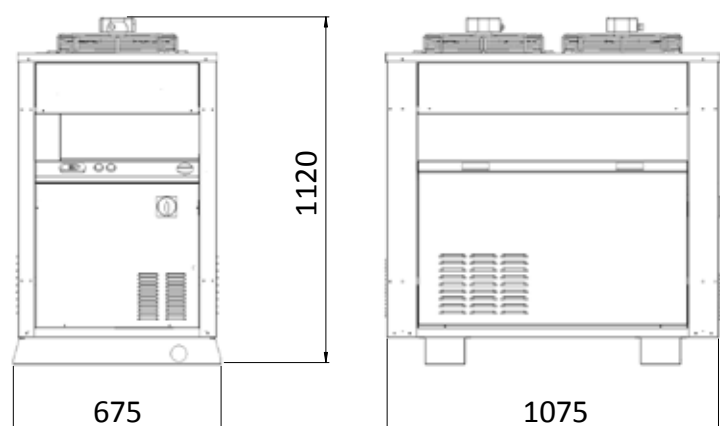


The R Series I range of chillers are designed to be used in an outdoor environment providing cold water for light heat load applications. For the list of options available see the quotation section at the rear of the brochure.

TECHNICAL DATA						
		R150	R180	R230	R300	R330
Compressor horsepower	hp	1.5	1.8	2.3	3	3.3
Cooling capacity at 5° supply1	Watts	2200	2800	3700	4500	5100
Cooling capacity at 10° supply		2500	3300	4400	5500	6300
Cooling capacity at 15° supply		3100	4100	5500	6600	8000
Cooling capacity at 20° supply		3900	5100	6800	8100	9700
Tank holding capacity	L	80				
Dry weight	kg	160		170	180	
Power requirements – single phase		240V 50 Hz Single Phase			Not readily available in single phase	
Maximum current draw – single phase2	A	15	17.1	22.1		
Power requirements – 3 phase		415V 50 Hz 3 phase plus neutral (4A Max)				
Maximum current draw – 3 phase	A	9.0	9.8	10.9	11.8	13.1
1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient. 2. Rated at 25 water supply whilst operating within a 45° ambient environment and fitted with a option 3 pump.						

STANDARD FEATURES INCLUDE

- Integrated stainless steel circulation pump
- Galvanised steel construction
- 80 Litre buffer tank
- High efficiency scroll compressor



R Series II

6.1 kW to 19.2 kW

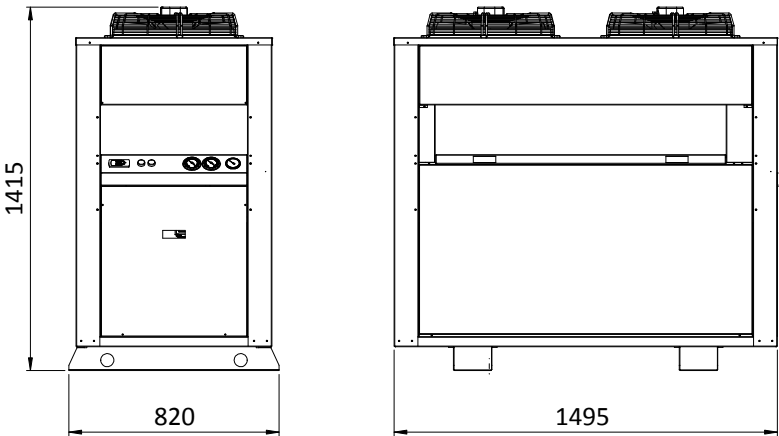


The R Series II range of chillers are designed to be used in an outdoor environment providing cold water for medium heat load applications. For the list of options available see the quotation section at the rear of the brochure.

TECHNICAL DATA								
		R420	R540	R670	R830	R1000	R1200	R1330
Compressor horsepower	hp	4.2	5.4	6.7	8.3	10	12	13.3
Cooling capacity at 5° supply ¹	Watts	6100	8100	10300	11700	15600	17500	19200
Cooling capacity at 10° supply		7500	9700	12500	14200	18800	21200	24400
Cooling capacity at 15° supply		8900	11600	14900	17100	22300	25200	28400
Tank holding capacity	L	180						
Dry weight	kg	270			310			
Power requirements – 3phase		415V 50 Hz 3 phase plus neutral (4A Max)						
Maximum current draw – 3 phase	A	13.3	15.7	20.2	22.9	27.5	33.2	34.1
1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient. 2. Rated at 25 water supply whilst operating within a 45° ambient environment and fitted with a option 6 pump.								

STANDARD FEATURES INCLUDE

- Integrated stainless steel pump
- 180 litre buffer tank
- Galvanised steel construction
- High efficiency scroll compressors



R Series III

25 kW to 45 kW

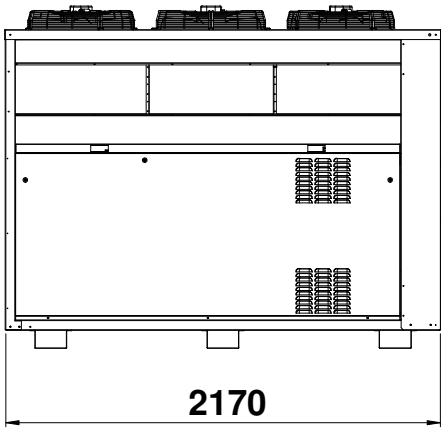
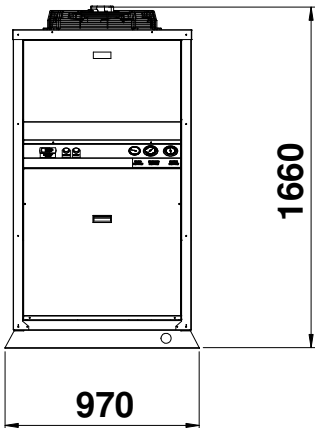


The R Series III range of chillers are designed to be used in an outdoor environment providing cold water for higher heat load applications. For the list of options available see the quotation section at the rear of the brochure.

TECHNICAL DATA				
		R1500	R2000	R2500
Compressor horsepower	hp	15	20	25
Cooling capacity at 5° supply ¹	kW	26	36	45
Cooling capacity at 10° supply		32	44	55
Cooling capacity at 15° supply		39	54	67
Tank holding capacity	L	500/ 300 for units with VSD or redundant pumps		
Dry weight	kg	500	600	650
Power requirements – 3 phase		415V 50 Hz 3 phase plus neutral (4A Max)		
Maximum current draw – 3 phase	A/ph	40	50	58.5
1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient.				

STANDARD FEATURES INCLUDE

- Integrated stainless steel pump
- 500 litre buffer tank
- Galvanised steel construction
- High efficiency scroll compressors



R3000 to R6000

60kW to 110kW



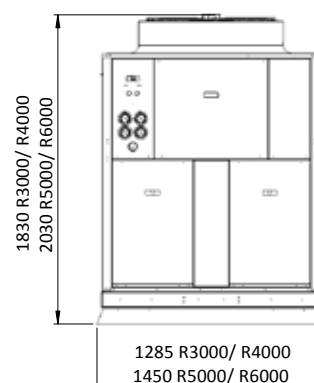
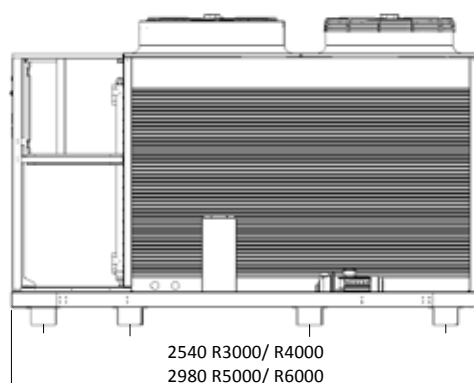
The R3000 to R6000 range of chillers are designed to be used in an outdoor environment producing cold water for high heat load applications. This range of chillers are for larger capacities and do not have an internal buffer tank. The features offered as standard are listed below – a full range of options available for the unit are listed in the rear of the brochure.

TECHNICAL DATA					
		R3000	R4000	R5000	R6000
Compressor horsepower	hp	2 x 15	2 x 20	2 x 25	2 x 30
Cooling Capacity at 5° supply ¹	kW	52	72	90	112
Cooling Capacity at 10° supply	kW	64	88	110	136
Buffer Tank Capacity		N/A			
Dry Weight kg		950	1000	1050	1100
Power requirements		415V 50Hz 3 phase plus neutral (4A Max)			
Maximum Current Draw ¹	A/Ph	72	95	110	140
Compressor Type		Scroll – 2 off.			
No. Of Pumps		1 - option for redundant pump			
Minimum flow rate- 10° CHWS	l/s	2.5	2.8	3.5	4.1

1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient.

FEATURES INCLUDED AS STANDARD

- Dual refrigeration circuits for short term redundancy and closer capacity control
- Internal stainless steel water pump available in multiple flow/pressure options
- Microprocessor control with high level monitoring and email alarm feature as standard
- Pre-wired for tandem installations with duty cycling and redundancy
- On board data logging for instantaneous trouble shooting and reduced down time
- High efficiency fans for high COP operation



L Series Chillers

60 kW to 110 kW

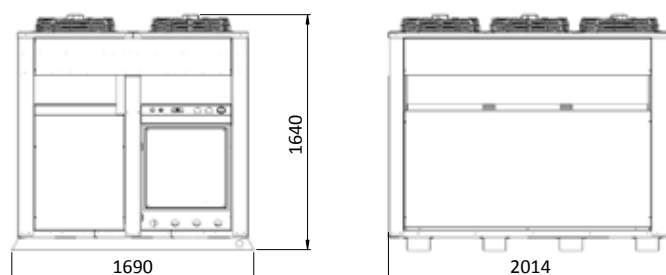


The L series range of chillers are designed to be used in an outdoor environment for high heat load applications. The L series chillers have a large amount of internal space, to be as flexible in their configuration to accommodate any customer requirements. The primary function is to allow a 500 litre buffer tank to be installed with a chiller up to 100kW. A full range of options available is listed in the rear of the brochure.

TECHNICAL DATA				
		L3500	R5000	L6000
Compressor horsepower	hp	2 x 15	2 x 20	2 x 25
Cooling capacity at 5° supply ¹	kW	52	72	90
Cooling capacity at 10° supply		64	88	110
Cooling capacity at 15° supply		78	108	134
Buffer tank capacity	L	500		
No. Of compressors		2		
No. Refrigeration Circuits		2		
Compressor type		Scroll		
No. Pumps		1 - option for redundant pump		
Dry weight	kg	950	1050	1150
Power requirements – 3 phase		415V 50 Hz 3 phase plus neutral (4A Max)		
Maximum current draw – 3 phase	A	75	82	105
1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient.				

FEATURES INCLUDED AS STANDARD

- Dual refrigeration circuits for short term redundancy and closer capacity control
- Internal stainless steel water pump available in multiple flow/pressure options
- Microprocessor control with high level monitoring and email alarm feature as standard
- Pre-wired for tandem installations with duty cycling and redundancy
- On board data logging for instantaneous trouble shooting and reduced down time
- High efficiency fans for high COP operation



H120 to H220

120 kW to 270 kW

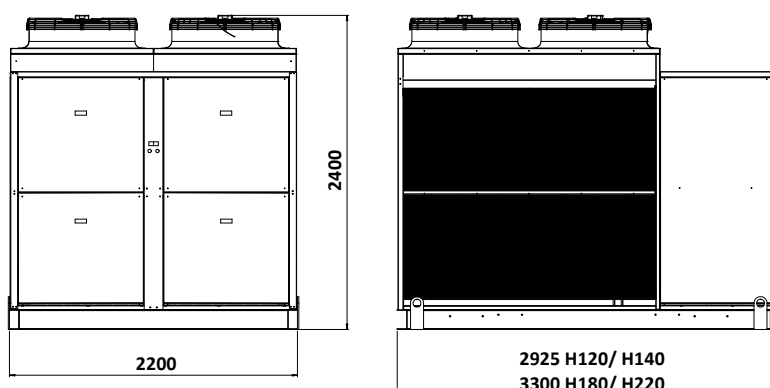


The H120 to H220 range of chillers are designed to be installed in an outdoor environment for high heat load applications. This range of chillers are for larger capacities and do not have an internal buffer tank. The features offered as standard are listed below – a full range of options available for the unit are listed in the rear of the brochure.

TECHNICAL DATA					
		H120	H140	H180	H220
Compressor horsepower	hp	4 x 15	4 x 20	4 x 25	4 x 30
Cooling Capacity at 5° supply ¹	kW	104	144	180	224
Cooling Capacity at 10° supply	kW	128	176	210	272
Buffer Tank Capacity		N/A			
Dry Weight kg		1750	1900	2200	2400
Power requirements		415V 50Hz 3 phase plus neutral (4A Max)			
Maximum Current Draw ¹	A/Ph	130	155	165	170
Minimum flow rate	l/s	4.5	7.5	7.0	8.2
1. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient					

FEATURES INCLUDED AS STANDARD

- Dual refrigeration circuits for short term redundancy
- Sturdy powder coated galvanised steel chassis construction with welded galvanised steel base
- Internal stainless steel water pump available in multiple flow/pressure options
- Microprocessor control with high level monitoring and email alarm feature as standard
- Pre-wired for tandem installations with duty cycling and redundancy
- On board data logging for instantaneous trouble shooting and reduced down time
- Proportional compressor staging for maximum efficiency
- Compressor rotation and duty cycling for prolonged compressor life



I Series Indoor Chiller for Data Centre Applications



I series of water chillers are designed to be installed in or near the data centre in an indoor environment. Cooling tower condensing water is required for the cooling or Aqua Cooler can supply a remote air cooled condenser. The chillers have been designed to provide as a full range of redundancy with a high level controller monitoring all aspects of the systems operation. The chillers can be installed in an N+1 arrangement to provide redundancy or internal compressor and/ or pump redundancy.

MODEL		I20/ I20R	I30/ I30R
Compressor Horsepower	HP	10 7°C CHW Supply 8.3 15C CHW Supply	15 10.8
Cooling Capacity*	kW	20	30
Dry Weight	Kg	300/ 350 for R Model	350/ 400 for R Model
Power Requirements	415V 3 Phase Plus Neutral (4A Max)		
Maximum Current Draw - 7° CHW Supply	A	15	20
Maximum Current Draw - 15° CHW Supply		10	14
Power cable (Supplied)	6 Meter 4 Core Plus Earth V75 O/C		
Chilled Water Flow	l/s	1.5	1.5
Pump Power Consumption	kW	1.6	1.8
Compressor Power Consumption - 7° supply	Amps	15	20.5
Compressor Power Consumption – 15° supply		15	17.5
Pressure drop - CHW	kPa	100 Max	
Pressure drop – condensing water	kPa	100 Max	
Minimum condensing water flow	l/s	1.5	
Dimensions W x D x H	mm	1000 x 800 x 1450 1200 x 800 x 1450 R Model	
* based on condenser water supply of 29.5 degrees			

FEATURES AS STANDARD

- **BacNet, Modbus and SNMP high level control and monitoring**
- **Microprocessor control maximum efficiency reliability**
- **Stainless steel evaporators and condensers**
- **Automatic condenser water regulating valve to prevent over condensing**
- **Fully serviceable from the front of the unit**
- **Tandem wired for easy installation with redundant chillers in N+1 installations**

OPTIONS

- **Unit can be supplied with VSD on the compressor or a hot gas bypass valve to maintain a constant water temperature to the racks**
- **Can be plumbed through the floor or through the ceiling**
- **Internal redundant pump and/ or compressor**



Pump and Transfer Units

These units are designed to provide separation between existing central primary water supply and the sensitive indoor cooling environment. Where the existing primary chilled water supply can have varying pressures and flows the pump and transfer system provide consistent flow and pressures for peace of mind.

Model Number		PT100	PT150	PT200
Cooling Capacity	kW	100	150	200
Primary Circuit				
Flow Rate	L/s	5.8	4.5	6.8
Max Pressure Drop	kPa	100	120	120
Water supply temp	°C	8	8	8
Water leaving temperature		15	15	15
Secondary Circuit				
Flow Rate	L/s	4.35	4	5
Max Pressure Drop	kPa	70	100	110
Pressure Available Outside Unit	kPa	Min 270	Min 200	Min 2
Water supply temp	°C	15	15	15
Water return temp		22	22	22
Power Requirements	V	3Ph 415 V		
Power Consumption	KW	5	5	6
Power Consumption – per pump	A/Ph	8.2	8.2	9.3
Dimensions - W x D x H	mm	1000 x 800 x 1450	1200 x 800 x 1800	1200 x 800 x 1800

SOME FEATURES OF THE AQUA COOLER PUMP AND TRANSFER UNIT ARE:

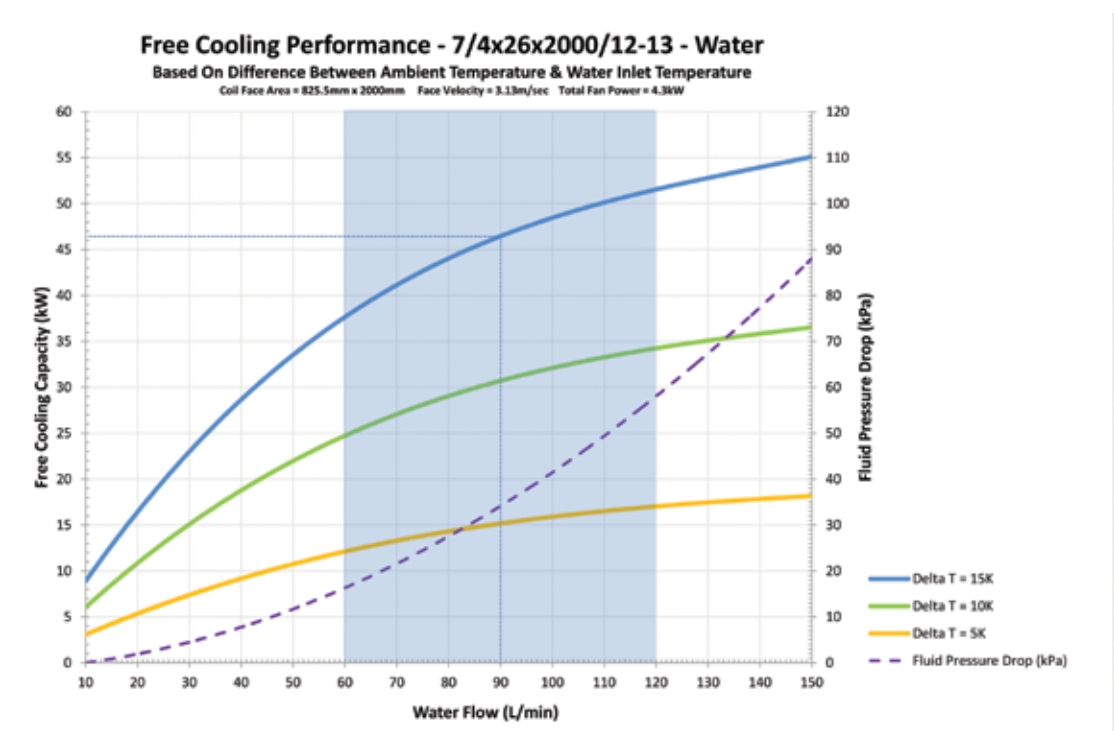
- Dew point control to prevent condensation
- Redundant pumps
- Hydraulic isolation under low field load
- Leak detection
- BMS interface via SNMP, BacNet, Modbus or LonWorks
- 100-200 kW
- Can be installed for full tandem and multi unit redundancy
- Serviceable from the front of the unit



Free Cooling Coils

The free cooling coil is designed to take heat out of water returning from the heat developing process before it returns to the water chiller. If the return water's temperature is above the ambient temperature then the system will automatically start the fans and the booster pump and remove heat more efficiently than the chiller, lessen the load on the chiller and reduce chiller run time.

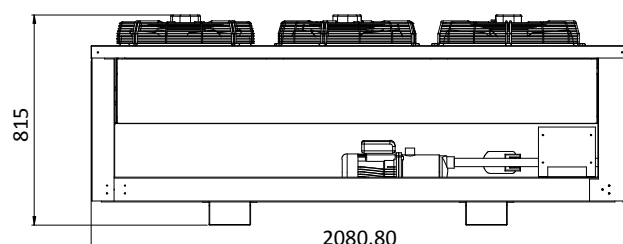
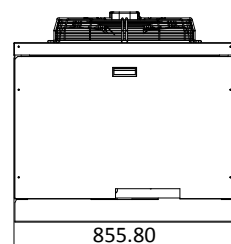
This graph demonstrates the various performances of the coil with different flows through the coil and different ambient temperatures.



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Free Cooling Coil Performance

Issue A



T Series

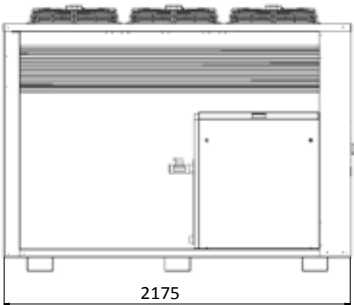
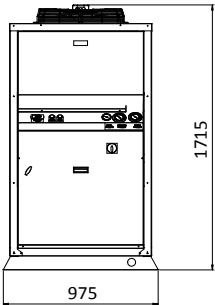


The T Series range of chillers, are designed to be used in an outdoor environment providing cooling water for high heat load applications. They are supplied without a circulation pump or buffer tank to keep cost down and allow them to be ganged together economically with a central circulation pump and a remote buffer tank.

TECHNICAL DATA				
		T1500	T2000	T2500
Compressor horsepower	hp	15	20	25
Cooling capacity at 5° supply1	kW	27	37	47
Cooling capacity at 10° supply		34	46	58
Cooling capacity at 15° supply		41	57	70
Dry weight	kg	420	520	590
Power requirements – 3 phase	415V 50 Hz 3 phase plus neutral (4A Max)			
Maximum current draw – 3 phase	A	40	50	58.5
2. Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient				

STANDARD FEATURES INCLUDE

- Galvanised steel construction
- High efficiency scroll compressors
- High efficiency condenser coils
- Computerised control for maximum reliability and efficiency
- BacNet and Modbus communication



RTC Range

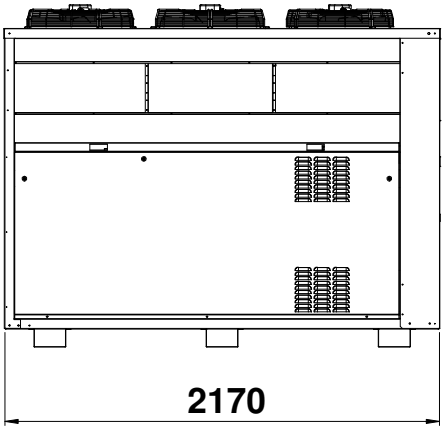
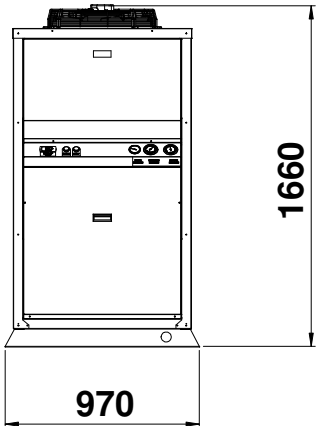


The RTC Range of chillers are air cooled water chillers designed to be installed in an outdoor environment. This range of chillers differs from a standard range in that rather than one large compressor, they are supplied with twin refrigeration circuits with two smaller compressors to provide redundancy and closer load balancing under low load conditions.

TECHNICAL DATA				
		RTC20	RTC24	RTC26
Compressor horsepower	hp	2 x 10	2 x 12	2 x 13.5
Cooling capacity at 5° supply1	kW	36	40	43.4
Cooling capacity at 10° supply		42.6	47.4	53.8
Cooling capacity at 15° supply		49.6	55.4	61.4
Tank Holding Capacity	L	300		
Dry weight	kg	500	600	650
Power requirements – 3 phase	415V 50 Hz 3 phase plus neutral (4A Max)			
Maximum current draw – 3 phase	A	40	50	58.5
Based on operation within a 45° ambient. Increase cooling capacity by 20% for operation within a 35° ambient				

FEATURES INCLUDED AS STANDARD

- High efficiency scroll compressors
- Sturdy powder coated galvanised steel chassis construction
- Internal 300 litre insulated buffer tank
- Internal stainless steel water pump available in three flow options
- Condensers coated for corrosion protection



Other Aqua Cooler Products

Wine Cooler and Dispenser

In 2001 Aqua Cooler in conjunction with the big bottle group began the development of the Big Bottle dispensing system.

This patented, unique system uses a layer of inert gas to protect the wine and keep it fresh to the last drop. Inside the unit there is a reservoir of white wine kept at chilled temperatures and a red reservoir at room temperature. Aqua Cooler has recently redeveloped the software for the unit to include measured pour technology. When a glass is placed on the paddles on the front of the dispenser the unit automatically dispenses a measured pour and automatically keeps a stock take of wine dispensed.



Drinking Water Fountains

Aqua Cooler has Australia's leading manufacturer of drinking water fountains for over 50 years. The range includes mains pressure bubblers, bottle water coolers, central drinking water storage units, under bench coolers and more recently boiling water dispensers. Aqua Cooler can provide a drinking water dispenser for every application.



QUOTATION SHEET

This sheet is designed to allow the full specification of the chiller and to explain some of the options available. When asking Aqua Cooler for a quote this sheet can be filled out and sent to us or have it handy when contacting the sales team.

HEAT LOAD REQUIRED

Use this section to calculate the heat load required. If the application does not have a rated heat load then a value for the first three questions must be supplied.

- **Supply Flow Rate**
- **Supply CHW Temperature**
- **Return CHW Temperature**
- **Rated Heat Load**

PUMPS

- **Pressure drop on the application**
- **What is the pipe run between the chiller and the application**
- **Is the chiller feeding a buffer tank**

OPTIONS

- **Redundant Refrigeration Circuit/ Compressors** – for capacities 30 to 60 kW, the chiller can be manufactured with two smaller compressors to share the load, offer limited redundancy (keeping the unit running until a service visit can be organized), extend compressor life through less start ups and closer capacity control - see the RTC range.
- **Remote Condensers** – in an installation where space is an issue the chillers can be manufactured with the cooling unit (typically installed in a plant room) and the condensers (typically on the roof) as separate components.
- **Variable Speed Drive** – A variable speed drive can be installed on the lead compressor in the chiller improve efficiency at partial heat loads or for exacting close chilled water tolerance control.
- **Electronic TX Valves** – an electronic TX valve can be installed on the chiller for application where the heat load is changing quickly. By reacting faster than a traditional valve, the chiller will run more efficiently.
- **Redundant Pumps** – a redundant pump can be installed in most models of chillers. The controller detects an interruption in flow and starts the redundant pump and sends out alarm signal for service visit.
- **Instantaneous Water Supply** – chillers can be fitted with stainless steel heat exchangers to supply potable water for food preparation or for equipment with sensitive water requirements.
- **Reverse Cycle** – Aqua Cooler has a full range of reverse cycle chillers from 5 to 200 kW for air conditioning applications.
- **Heat Recovery** – chillers can be fitted with a heat recovery kit which includes a controller and pump for installation where latent heat from the compressor can be used to heat water.

OPTIONS

- **UPS Power connection to pump** – the chiller can be wired so an uninterrupted power supply can be used to keep the pump running at all times.
- **Remote Control Panel** – the chiller can be supplied with a remote control panel in either basic on/off control or a digital display with full chiller operation and control.
- **Water Cooled Condenser** – where the chiller has access to a condenser water loop typically fed from a cooling tower the chiller can be supplied with a water rather than an air cooled condenser.
- **Variable Speed Pump Control** – in application where variable pressures or flows are required a VSD can be supplied on the pump for automatic or manual control of pump flows.
- **Ultra Quiet Running** – where chiller noise is a concern the chiller can be supplied with compressor hoods, ultra quiet fans and compressor soft starters to reduce noise.
- **High Ambient Operation** – the chillers can be supplied with refrigerant gases designed to operate more efficiently in high ambient conditions.
- **Condenser Spray Cooling System** – Chillers can be supplied with a water spray system to cool condensers in ultra high ambient conditions.
- **Chiller Installation Central Control** – Aqua Cooler can supply full chiller and site management system in installations where there are multiple chillers installed, buffer tanks and secondary pumps. This management system also interfaces with most BMS systems .
- **Hazardous Conditions Chillers** – Chillers can be supplied with EXD rated components for hazardous environments.
- **Condenser Coatings** – Chillers can be supplied with coatings that offer protection in corrosive environments.
- **Close Tolerance** – on smaller capacity chillers a hot gas bypass valve can be installed to offer cost effective close supply water temperature control.
- **Filtration** – chillers can be supplied with various levels of filtration should water quality be an issue.
- **Stainless Steel Buffer Tank** – Should specialized water be required for an application a stainless steel buffer tank can be supplied .
- **Single Phase** - the smaller capacity range of chillers can be supplied with single phase power feed.
- **Control Circuit Protection** – in areas where the chillers may be subject to power surges or fluctuating power the control circuit can be supplied with an isolation transformer and surge arrestor.

Aqua Cooler can quote, specify, manufacture, install and commission a water cooling system for any application. The company has in house design engineers with decades of experience in the water chiller industry. Aqua Cooler also has experience in providing solutions for tricky installations for example suspended platforms or site access solutions. In short a turn-key solution can be found for any installation.

A full data sheet booklet can be supplied with all the features, installation requirements and options available for all the models listed above.



For more information call 9721 9315