

## TECHNICAL SPECIFICATIONS - CW-H10, CW-H15, H15S, H15S Plus

### GENERAL

Climate Wizard coolers are characterised by the supply of 100% fresh, cool, outside air with NO additional moisture added, with greatly reduced energy consumption relative to an equivalent refrigerated system performing the same duty.

The coolers comprise of a supply air fan, an indirect heat exchanger pack, integrated water reservoir, pump, and chlorinator system.

CW-H15S and CW-H15S Plus can be operated in "Supercool" mode producing even colder supply air with added moisture (direct cooling). Supercool coolers have an additional pump and Chillcel® pads.

### CABINET

The cabinet is constructed from coated marine grade aluminium incorporating the motor/fan assembly, non-corrodible heat exchange core and other ancillary equipment mounted on a heavy gauge base frame for structural stability. Forklift tine channels are provided within the frame to facilitate transport and lifting. Components are effectively treated to ensure corrosion resistance and mechanical fasteners are zinc coated, stainless steel or aluminium. Connection surfaces are provided for outlet supply air and exhaust ductwork to be fitted using established industry practices.

### FAN & MOTOR

The fan is a multi-blade, centrifugal type with backward curved blades. It has a cast aluminium rotor and plastic impeller which is statically and dynamically balanced. The fan is directly mounted to the electric motor. The electric motor is high efficiency, inverter driven and responsive to 0-10V control signals to implement speed control that delivers optimum efficiency at lower speed operation.

### HEAT EXCHANGE CORE

The heat exchange cores are designed to facilitate heat exchange between the wet air passages and the dry air passages such that high efficiency heat transfer takes place without the addition of any additional moisture. They are designed to provide long life and consistent, long term high efficiency.

Supercool models are fitted with additional Chillcel® fabricated honeycomb, direct cooling pads.

### WATER MANAGEMENT SYSTEM

The water supply connection is a ½" BSP fitting that connects directly to the internally mounted solenoid valve.

Water is held in an internal reservoir manufactured as a one-piece moulded polymer construction to ensure durability and corrosion resistance.

Heat exchange core saturation is achieved through internally mounted pumps delivering water to a specially designed non-clog water distribution system guaranteeing continuous uniform flow.

The pumps are manufactured from engineering plastics, with stainless steel shafts and fully encapsulated synchronous motors with thermal overload protection. They are provided with an easily cleanable strainer within the reservoir section.

An electronic water management system controls the maximum salinity level and chlorination of the reservoir water through continuous monitoring and replenishment.

The reservoir is drained by an electric drain valve which responds to the water management control system. The design of the reservoir ensures that no water remains after draining.

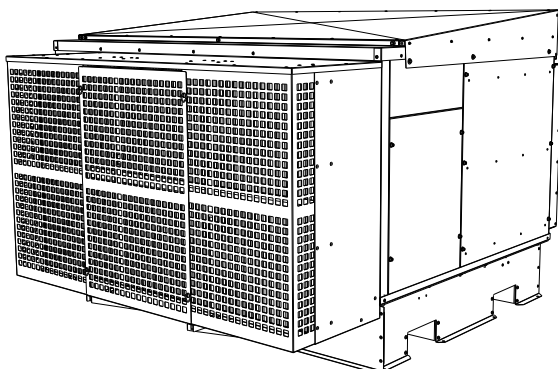
### ELECTRICAL CABINET AND CONTROLS

All electrical control equipment including supply connection terminals, motor control hardware, BMS interface electronics, and water management hardware is pre-wired and factory mounted within a robust IP66 enclosure meeting the requirements for outdoor mounting.

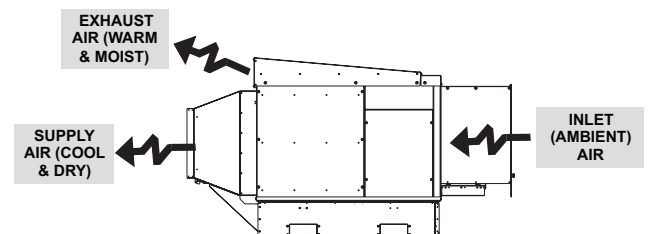
BMS remote control of the Fan ON-OFF, Fan Speed, Pumps ON-OFF, Error Signal is possible via dedicated low voltage plug receptacles fitted inside the electrical cabinet.

### AIR FILTER

Intake air is filtered through aluminium framed, washable, pleated filters. The assembly includes a safety screen to protect the fan and a cover to minimise intrusion of rain.



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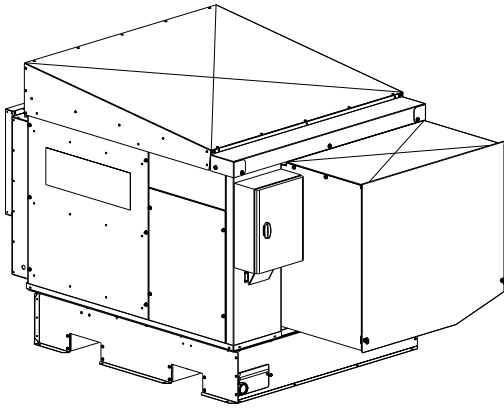


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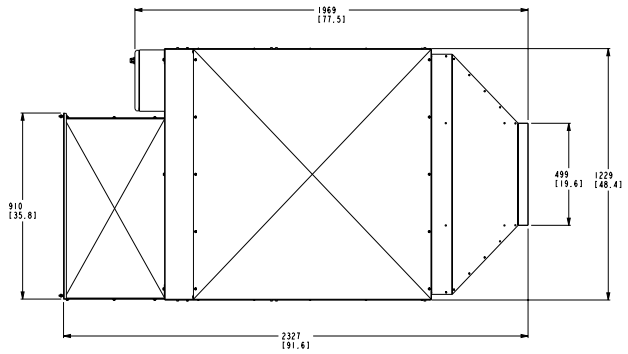
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### ISOMETRIC

CW-H10 views shown



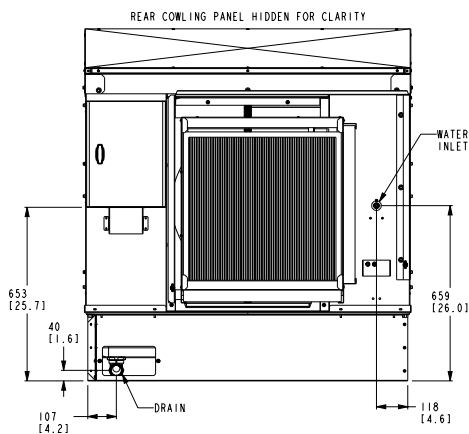
### TOP



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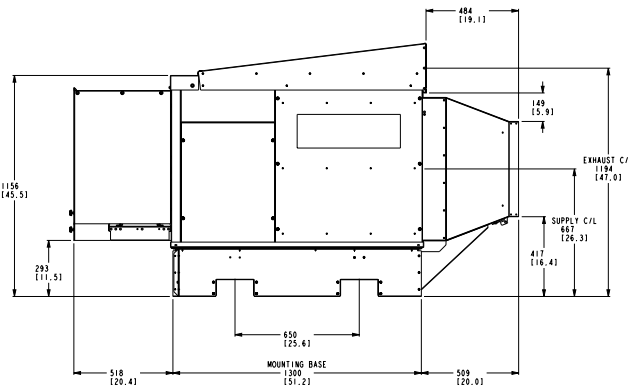
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### REAR



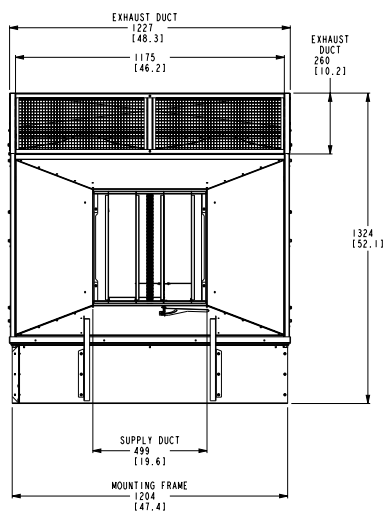
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### SIDE



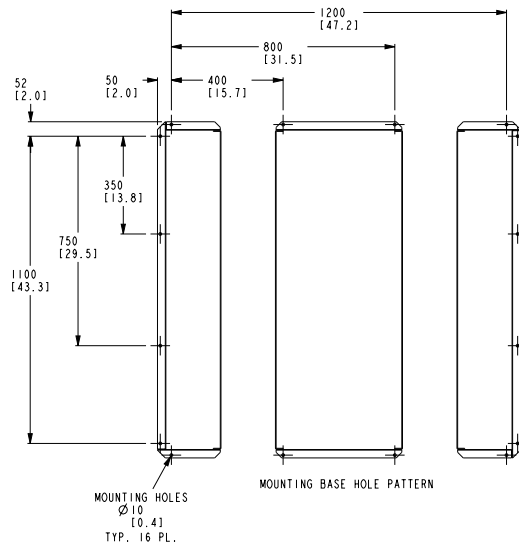
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### FRONT



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### BOTTOM



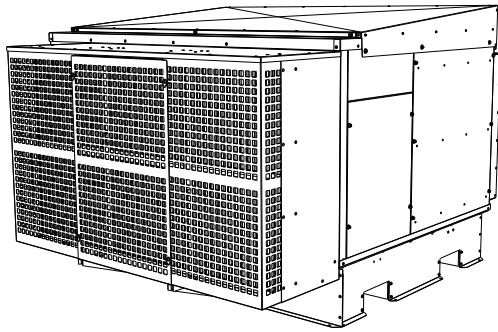
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Dimensions are in mm (inches in brackets).

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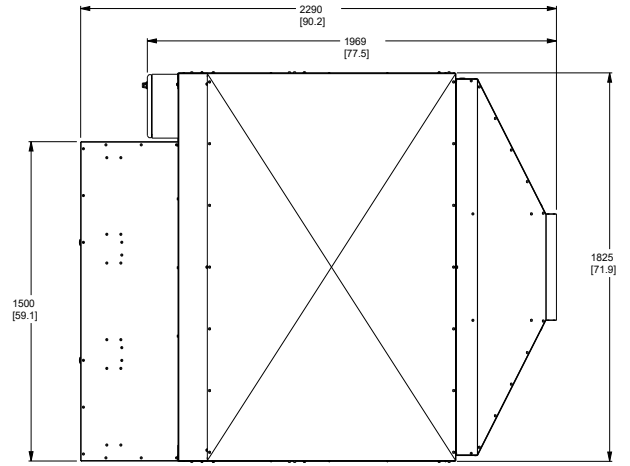
### ISOMETRIC

CW-H15 views shown



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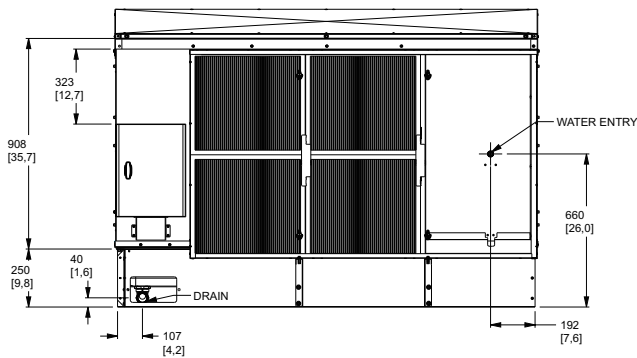
### TOP



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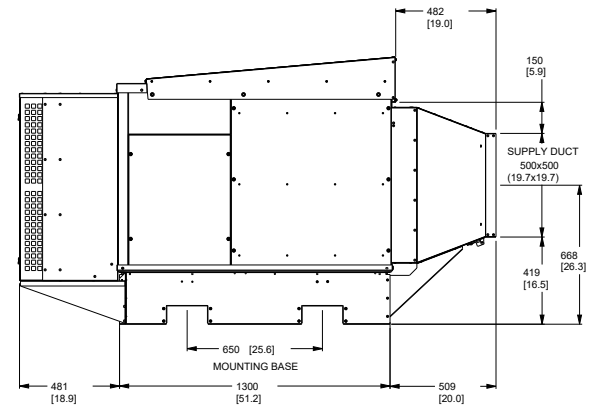
### REAR

REAR COWLING PANEL AND TWO RIGHT FILTERS HIDDEN FOR CLARITY



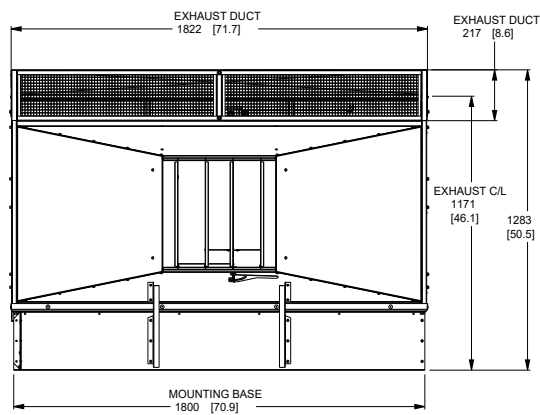
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### SIDE



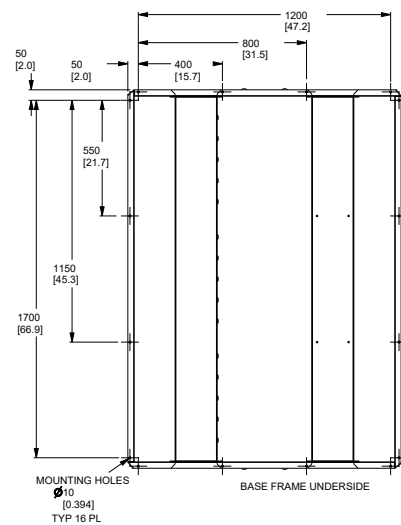
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### FRONT



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### BOTTOM



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Dimensions are in mm (inches in brackets).

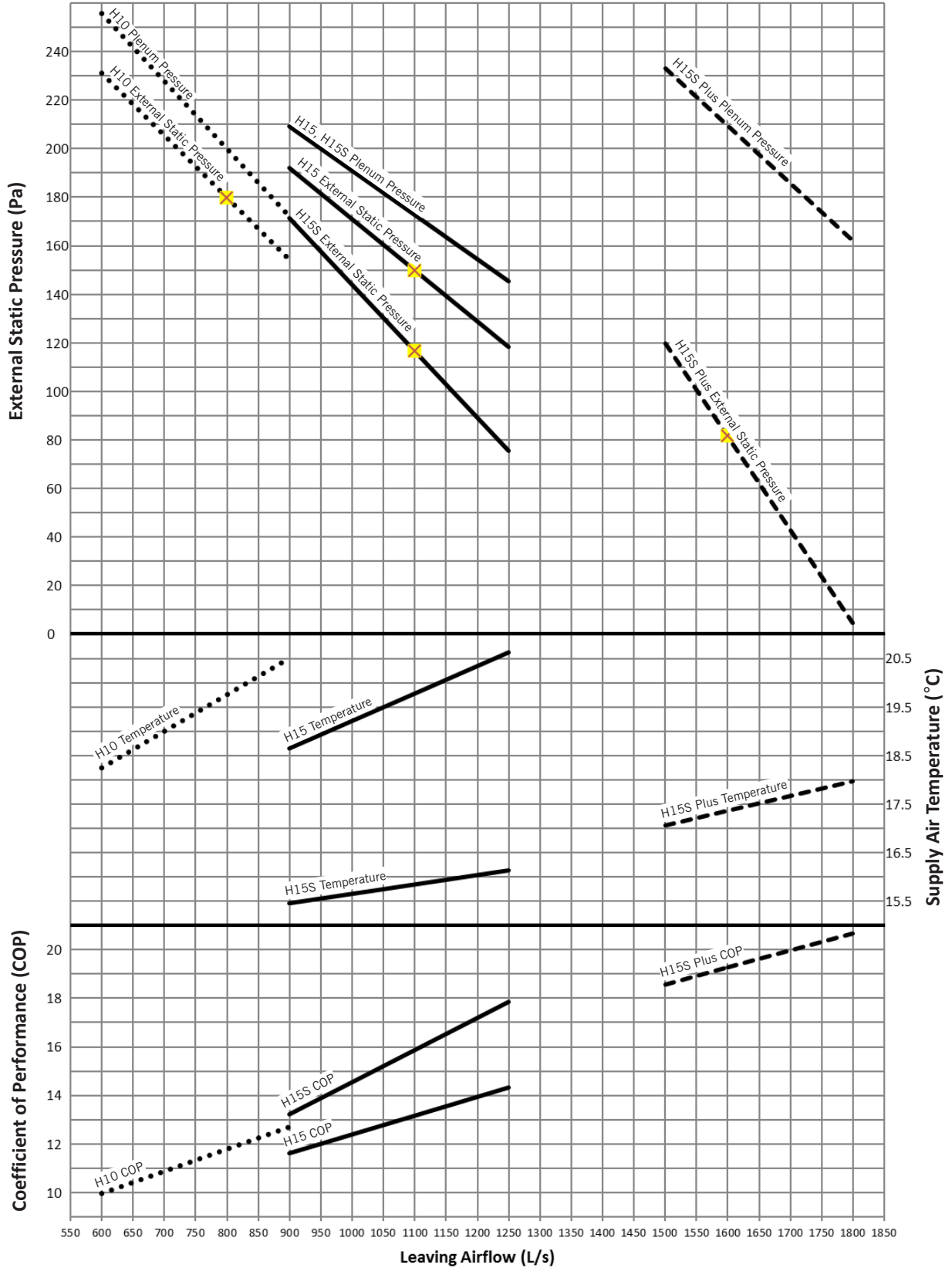
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MODEL:		CW-H10	CW-H15	CW-H15S	CW-H15S Plus	
<b>OPTIMUM PERFORMANCE</b>	Airflow	Supply Air	800 L/s @ 180 Pa	1100 L/s @ 150 Pa 3960 m³/h @ 150 Pa	1100 L/s @ 120 Pa 3960 m³/h @ 120 Pa	1600 L/s @ 80 Pa 5760 m³/h @ 80 Pa
		Exhaust Air	655 L/s	900 L/s 3240 m³/h	900 L/s 3240 m³/h	530 L/s 1910 m³/h
	Temperature*	Supply Air	19.5 °C	19.5 °C	15.8 °C	17.4 °C
	Cooling Capacity*	Standalone	8 kW	11 kW	16 kW	20 kW
		Pre-Cooling	18 kW	25 kW	29 kW	40 kW
	COP*	Standalone	5	6	8.5	9.5
Pre-Cooling		12	14	16	19	
<b>ENVIRONMENT</b>	Maximum Inlet Air Temperature	55 °C	55 °C	55 °C	55 °C	
<b>SERVICES</b>	Electrical	Voltage	380-415 V / 3N~ / 50Hz	380-415 V / 3N~ / 50Hz	380-415 V / 3N~ / 50Hz	380-415 V / 3N~ / 50Hz
		Current	4.9 A	4.9 A	4.9 A	4.9 A
		Input Power	1.50 kW	1.80 kW	1.80 kW	2.10 kW
	Water	Supply	20 L/min @ 100 kPa - 800 kPa	20 L/min @ 100 kPa - 800 kPa	20 L/min @ 100 kPa - 800 kPa	20 L/min @ 100 kPa - 800 kPa
		Max Temperature	40 °C	40 °C	40 °C	40 °C
		Inlet	1/2" Male BSP	1/2" Male BSP	1/2" Male BSP	1/2" Male BSP
		Consumption*	44 L/hr	56 L/hr	60 L/hr	72 L/hr
		Drain	40mm Male BSP or 40mm Flexible Coupling	40mm Male BSP or 40mm Flexible Coupling	40mm Male BSP or 40mm Flexible Coupling	40mm Male BSP or 40mm Flexible Coupling
	Drain Flow Rate	Supply Air	15 L/m	35 L/m	35 L/m	35 L/m
		Exhaust Air	Side Discharge 500 x 500 mm	Side Discharge 500 x 500 mm	Side Discharge 500 x 500 mm	Side Discharge 500 x 500 mm
<b>AIR SYSTEMS</b>	Supply Air Fan/Motor	Fan	1x 560mm Centrifugal Backward Curve	1x 560mm Centrifugal Backward Curve	1x 560mm Centrifugal Backward Curve	1x 560mm Centrifugal Backward Curve
		Motor	3.5 kW	3.5 kW	3.5 kW	3.5 kW
		Control	Variable Speed, ECM, PWM Control	Variable Speed, ECM, PWM Control	Variable Speed, ECM, PWM Control	Variable Speed, ECM, PWM Control
		Max Speed	1285 rpm	1390 rpm	1390 rpm	1450 rpm
	Exhaust Air Fan/Motor	Fan	NONE	NONE	NONE	NONE
		Motor				
		Control				
		Max Speed				
	Air Filters	Inlet	G4 Pleated Washable 305 x 610 x 50mm - 2 610 x 610 x 50mm - 1	6x G4 Pleated Washable 457 x 508 x 50mm	6x G4 Pleated Washable 457 x 508 x 50mm	6x G4 Pleated Washable 457 x 508 x 50mm
<b>HEAT EXCHANGERS</b>	Indirect Evaporative	2 Cores	3 Cores	3 Cores	3 Cores	
	Direct Evaporative	NONE	NONE	3 Chillcel Pads	3 Chillcel Pads	
<b>WATER SYSTEMS</b>	Tank (Reservoir) Capacity	45 L	65 L	65 L	65 L	
	Inlet Valve	12 VDC Solenoid Valve	12 VDC Solenoid Valve	12 VDC Solenoid Valve	12 VDC Solenoid Valve	
	Pumps	2 Pumps	2 Pumps	2 Pumps	2 Pumps	
	Indirect Heat Exchangers	13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	
	Pump	NONE	NONE	1 Pump	1 Pumps	
	Direct Heat Exchangers			13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	13 LPM @ 1.5m Head 230V 50Hz Input Power 30W ea.	
	Salinity Management	Conductivity Probe	Conductivity Probe	Conductivity Probe	Conductivity Probe	
	Chlorinator	12 VDC	12 VDC	12 VDC	12 VDC	
Drain Valve	12 VDC Vertical	12 VDC Vertical	12 VDC Vertical	12 VDC Vertical		
<b>DIMENSIONS</b>	Shipping	2050 L * 1375 W * 1280mm High		2290 L * 1950 W * 1270mm High		
	Operating inc. Accessories	2330 L * 1230 W * 1325mm High		2290 L * 1825 W * 1285mm High		
<b>WEIGHT</b>	Shipping	250 kg	340 kg		355 kg	
	Operating inc. Water/Accessories	255 kg	330 kg		345 kg	
<b>STANDARDS COMPLIANCE</b>	Electrical Safety IEC 60335.1:2011 +A1 +A2, AS/NZS 60335.1:2011 +A1, +A2, +A3, +A4, +A5 IEC 60335.2.98:2002 +A1 +A2, AS/NZS 60335.2.98:2005 +A1, +A2 Ingress Protection IEC 60529:2011 EMC IEC 61000-6-3:2006, AS/NZS 61000-6-3:2012 EMF EN 62233:2008					

\* Supply Air Temperatures, Cooling Capacities, COP and Water Consumption tested to Australian Standard AS 2913-2000 and ASHRAE 143 with design condition of: 38 C dry-bulb, 21 C wet-bulb and 27.4 C room exit temperature.

FREQUENCY (Hz)	Air Inlet Sound Power level (db re 1 pW) Octave Band Centre Frequency							Total Sound Power (db re 1pW)
	125	250	500	1k	2k	4k	8k	
CW-H10	70	60	58	57	54	50	42	63
CW-H15	84	68	65	62	55	51	44	70
CW-H15S	68	69	64	63	60	53	44	73
CW-H15S Plus	71	70	66	64	61	55	48	75

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\*Tested in accordance with ASHRAE 143 with conditions of 38.0 C Dry Bulb / 21.0 C Wet Bulb.



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