

TECHNICAL DATA SHEET – CW3

GENERAL

Climate Wizard coolers are characterised by the supply of 100% fresh, cool, outside air, with greatly reduced energy consumption relative to an equivalent refrigerated system performing the same duty.

The cooler comprises of a supply air fan, an exhaust air fan, a combined indirect/direct heat exchanger pack, integrated water reservoir, pumps, and water management system.

CABINET

The cabinet consists of a reservoir, four side panels and a lid constructed of injection molded UV stabilized reinforced polypropylene.

Components are effectively treated to ensure corrosion resistance and mechanical fasteners are zinc coated, stainless steel or aluminum.

Connection interface surfaces are provided for the outlet supply air ductwork to be fitted using established industry practices.

The cooler is fitted with two semi-circular, polypropylene blades, hinged and counterbalanced, to open automatically when the supply fan is activated, and to close when the supply fan is switched off. The weather seal prevents the escape of room air through the ductwork.

FAN & MOTOR

The supply fan is a statically and dynamically balanced multi-blade, aerofoil shaped axial assembly. The exhaust fan is a multi-blade, centrifugal type with backward curved blades.

Both fans are constructed from glass reinforced polypropylene and are mounted to their electric motor shaft by means of an axial co-molded hub.

The electric motors are high efficiency, inverter driven and responsive to pulse width modulation to implement speed control that delivers optimum efficiency at lower speed operation.

HEAT EXCHANGE CORE

The cooler uses a series of Seeley International's patented Micro-Core® heat exchangers. The Micro-Core® is characterized by its compact and efficient design which incorporates both an indirect cooling stage and an additional ChillCel® fabricated honeycomb, direct cooling pad.

ELECTRICAL CABINET AND CONTROLS

The electrical control box is pre-wired within the cooler. The cooler requires a 220V-240V, 10A supply outlet with a 3m power cable supplied.

The cooler is compatible with the MagIQtouch® range of controls and is supplied with 20m control cable.

WATER MANAGEMENT SYSTEM

The water supply connection is via a flexible connector which is terminated with a 1/2" male nipple.

Water is held in an internal reservoir which forms an integral part of the polymer cabinet to provide integrity to the structure and to ensure durability and corrosion resistance.

Heat exchanger 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.

AIR FILTERS

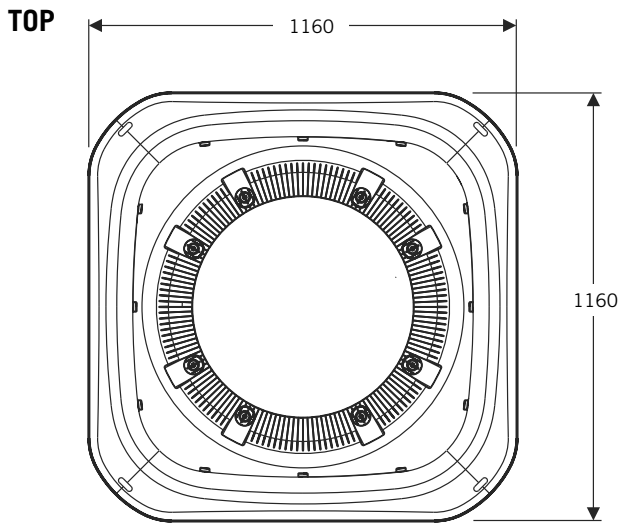
Intake air is filtered through aluminum framed, washable, pleated filters, protected by the intake louver forming the sides of the cabinet to minimise intrusion of rain.

INSTALLATION

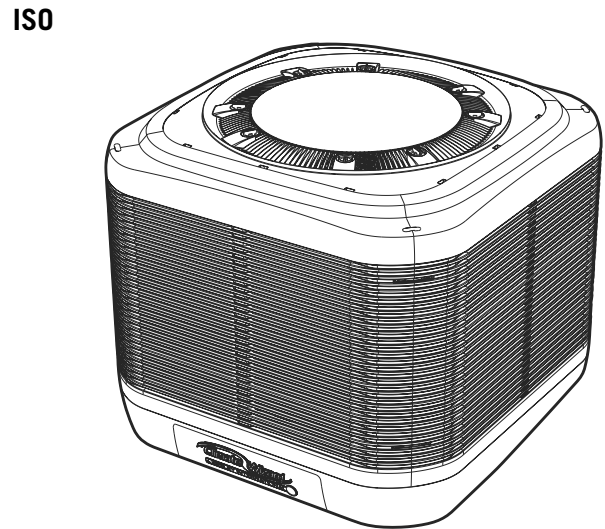
The cooler is supplied on a pallet with support blocks that are designed to allow the cooler to be readily craned into position onto its supporting supply ductwork.

Alternatively, the cooler may be stripped of its major sub-assemblies to allow them to be handled onto the roof in more manageable pieces.

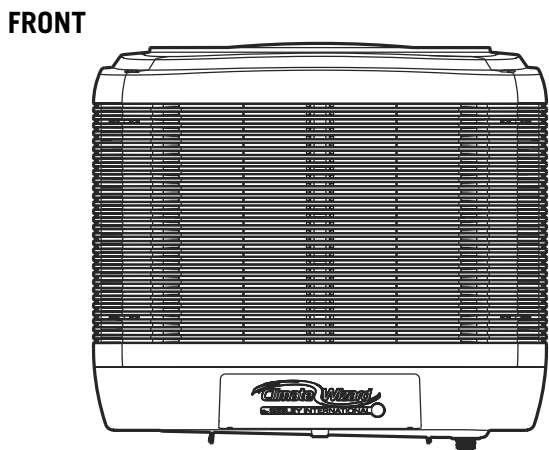
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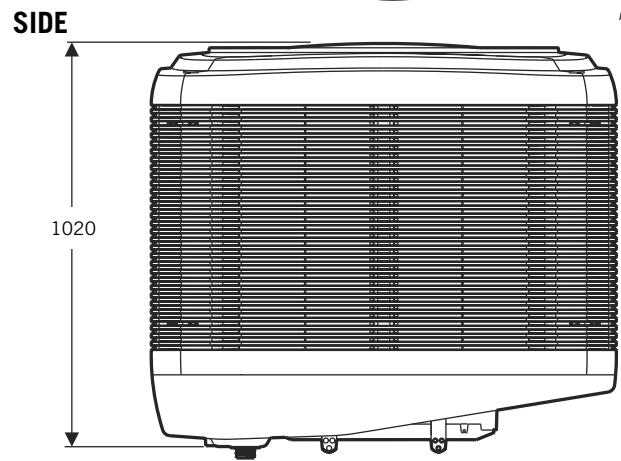
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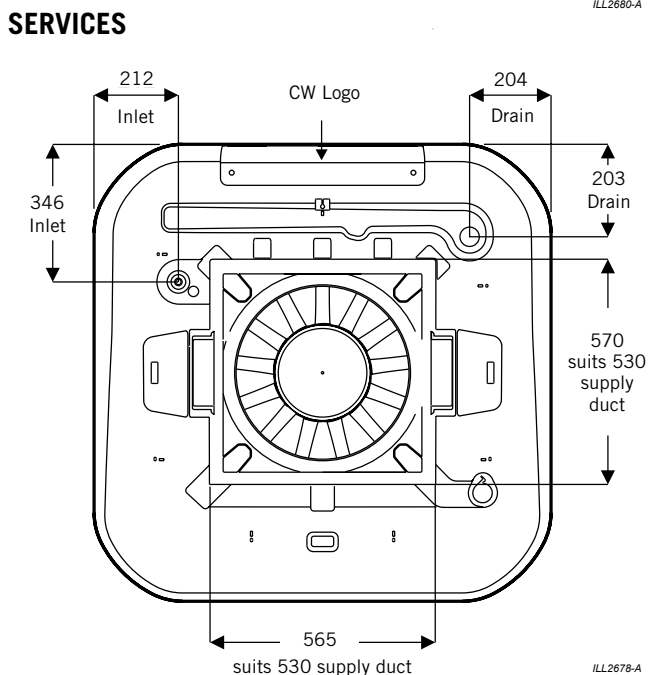
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ILL2678-A



ILL2676-A

NOTE: Installers must allow adequate access to and around the cooler for Maintenance. Provision must be made for access to power, control, water supplies and drains. It is important that the cooler is level in all directions. Refer to the Installation Manual for full details.

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MODEL:		CW3		
SERVICES	Electrical	Voltage	220-240 V / 1~ / 50Hz	
		Current	7A	
		Input Power	1.75 kW	
	Water	Supply	10 L/min MINIMUM 20 L/min RECOMMENDED @ 100 kPa - 800 kPa	
		Max Temperature	40 °C	
		Inlet	1/2" Male	
		Drain	20mm Push-On	
	Duct Connections	Drain Flow Rate	15 L/min	
		Supply Air	Bottom Discharge 530 x 530 mm	
		Exhaust Air	Top Discharge	
ENVIRONMENT	Maximum Inlet Air Temperature		50 °C	
AIR SYSTEMS	Supply Air Fan/ Motor	Fan	400mm Axial	
		Motor	750 W	
		Control	Variable Speed, ECM, PWM Control	
		Max Speed	2400 rpm	
	Exhaust Air Fan/ Motor	Fan	380mm Centrifugal Backward Curved	
		Motor	950 W	
		Control	Variable Speed, ECM, PWM Control	
		Max Speed	1100 rpm	
	Air Filters	Inlet	ISO Coarse Washable 343 x 622 x 22mm - Qty. 8	
	HEAT EXCHANGERS	Indirect Evaporative		8 Micro-Core®
Direct Evaporative		8 Chillcel® Pads		
WATER SYSTEMS	Tank (Reservoir) Capacity		30 L	
	Inlet Valve		12 VDC Solenoid Valve	
	Indirect Heat Exchanger Pump		13 LPM @ 1.5m Head 230V 50Hz Input Power 32W	
	Direct Heat Exchangers Pump		13 LPM @ 1.5m Head 230V 50Hz Input Power 32W	
	Salinity Management		Conductivity Probe	
	Chlorinator		12 VDC	
	Drain Valve		12 VDC Vertical	
	DIMENSIONS	Shipping		1175mm Long x 1175mm Wide x 1045mm High
Operating inc. Accessories		1160mm Long x 1160mm Wide x 1020mm High		
WEIGHT	Shipping		175 kg	
	Operating inc. Water/Accessories		210 kg	
STANDARDS COMPLIANCE	Electrical Safety: IEC 60335.1:2010 +A1 +A2, IEC 60335.2.98:2002 +A1 +A2 EMC : CISPR14.1: 20120, EMF : EN 62233:2008			

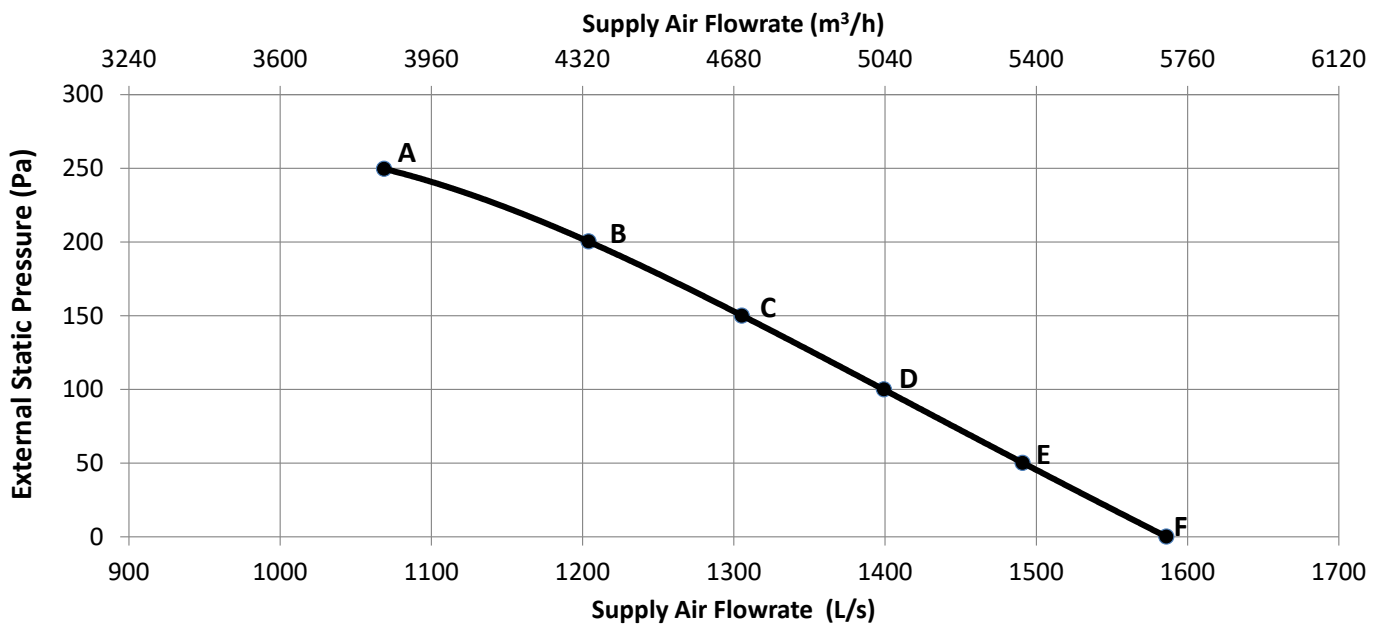
		Maximum Speed Sound Power Level (dB re 1 pW)							
		Octave Band Centre Frequency							
FREQUENCY (Hz)		125	250	500	1k	2k	4k	8k	Total
CW3	Radiated	62	69	77	76	71	64	54	81

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MAXIMUM FAN SPEED PERFORMANCE SUMMARY*						
	A	B	C	D	E	F
EXTERNAL STATIC PRESSURE (Pa)	250	200	150	100	50	0
SUPPLY AIR FLOWRATE (L/s)	1065	1210	1300	1405	1490	1585
SUPPLY AIR FLOWRATE (m ³ /h)	3830	4360	4680	5060	5360	5710
EXHAUST AIR FLOWRATE (L/s)	630	615	600	585	575	560
EXHAUST AIR FLOWRATE (m ³ /h)	2270	2210	2160	2110	2070	2020
IEC LEAVING AIR TEMPERATURE (°C)	22.5	23.3	23.8	23.9	24.3	24.9
IDEC LEAVING AIR TEMPERATURE (°C)	18.7	19.1	19.3	19.4	19.7	20.2
STANDALONE COOLING CAPACITY (kW)	11	12	13	14	14	14
INPUT POWER (W)	1750	1745	1725	1695	1660	1620
STANDALONE COP	6.5	7.1	7.5	8.1	8.5	8.7
WATER CONSUMPTION (LPH)	46	49	50	53	54	56

* 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.

MAXIMUM SPEED FAN CURVE



MAGIQTOUCH CONTROLS

CW3 is compatible with a wide range of MagIQtouch® control solutions, including Wall Controllers, Building Management System (BMS) Controllers and Sensor Accessories.

Contact your local Sales office for compatible kits and installation literature.

