

**TECHNICAL SPECIFICATIONS - CW3 (USA)**

Job Name:  
Order No.:  
Project Manager:  
Submitted To:  
Date:

Location:  
Contractor:  
Engineer:  
Submitted By:  
Mechanical/Schedule ID  
Tag No.:

Special  
Instructions:

**Application**

Stand Alone Cooling  
Pre-Cooling  
Supplementary Cooling

**Cooling Performance**

Outdoor Design Temp:      °F DB      °F WB  
Elevation Above Sea Level:      FT  
Supply Air Ext. Static Pressure:      IWG Total  
Supply Air @ Full Speed:      CFM  
Supply Air Temp (+/- 2° F):      °F DB      °F WB  
Pre-cooling Capacity:      BTU/hr

**Water Specifications**

Refer to table Pg4.

**Cooler Weight and Dimension Specifications**

Refer to table Pg4.

**Standard Features**

- Indirect and Direct Evaporative cooling
- Patented high technology Microcore™ Indirect Cooling cores.
- Fresh, outside air for better indoor air quality (IAQ).
- No refrigerants or ozone depleting chemicals.
- Quiet and vibration free operation.
- MERV10 filtered air with reduced dust, pollens and allergens.
- Cooling capacity increases as ambient temperature increases.
- High EER (Energy Efficiency Ratio).
- Horizontal discharge for conditioned air.
- Horizontal discharge for exhaust air.
- Low maintenance, simple winterization
- Water Management System for trouble-free operation.
- Removable panels for easy maintenance access.
- Easy to connect power/control wiring.
- 65ft (20m) control cable.
- External air temperature sensor
- 2x fans with inverter motors.
- Compact footprint.
- Cabinet constructed from high grade, UV stabilized polymer.
- 1-year limited warranty.
- Unit is not UL Listed, but is manufactured from UL Listed components.

**Optional Features**

- MagiQtouch Wall Controller.
- MagiQtouch WIFI Controller.
- MagiQtouch BMS Industrial Controller M1.
- MagiQtouch BMS Industrial Controller MS1.
- MagiQtouch Internal Air Sensor.

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### GENERAL

Climate Wizard coolers are characterized 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 coolers comprise of a supply air fan, an exhaust air fan, a combined indirect/direct heat exchanger pack, integrated water reservoir, pumps, and chlorinator 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 CW3 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, aero foil 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.

### WATER MANAGEMENT SYSTEM

The water supply connection is via a flexible connector which is terminated with a 1/2" NPT compression 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 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

The electrical control box is pre-wired within the cooler.

The cooler requires a 220V-240V, 10A, supply outlet with a 10ft power cable supplied.

The cooler is also compatible with the MagIQtouch range of room wall controls and the MS1 BMS controller.

### AIR FILTER

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

### INSTALLATION

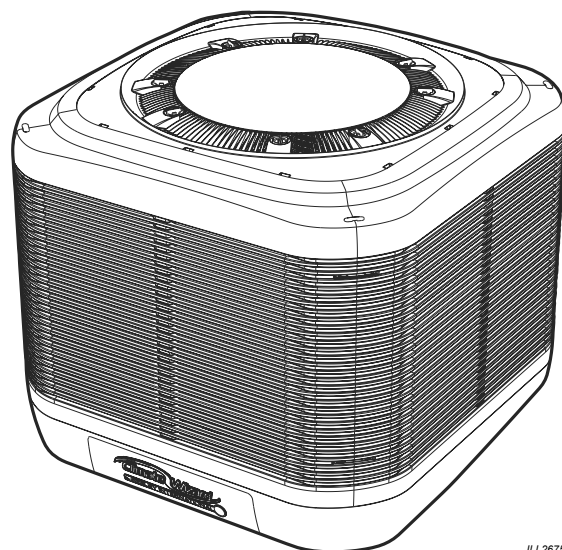
It is essential that the roof truss design is adequate to support the weight of the cooler.

Reinforcement may be required for existing roof structures. For a structural reinforcement guide for timber nail-plated truss roofs, see "CW3 Design Guide, Reinforcement of Timber Nail-plated Truss Roofs". Contact your Seeley International agent for a copy.

The cooler is designed to be installed on dropper with a minimum metal thickness of 20 gauge to support the operating weight of the cooler. The top edge of the dropper must incorporate a raw, but deburred, safe edge to avoid fouling of the weather seal.

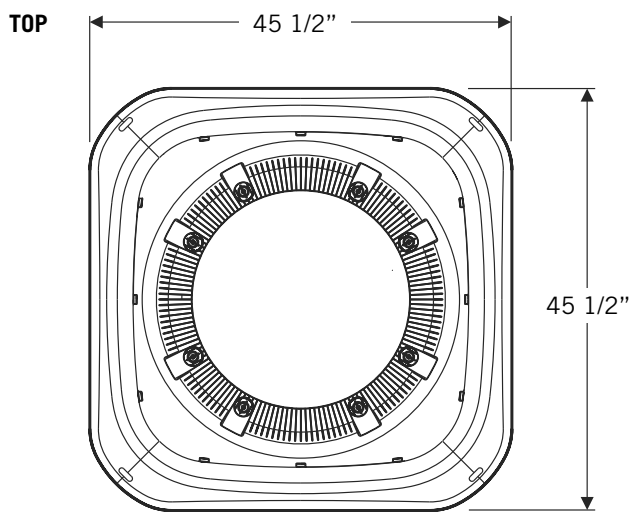
For information on the air duct design requirements, see Document: "Pre-installation Considerations for CW3 Duct Design". Contact your Seeley International agent for a copy.

The cooler is supplied on a pallet that is designed to allow the cooler to be readily craned into position. Features in the pallet provide for the safe sling lifting of the cooler. Given the weight of the product, the use of a crane to lift the cooler onto its mounting dropper is preferred. Alternatively, the cooler may be stripped of its major sub-assemblies to allow them to be handled onto the roof in more manageable pieces.

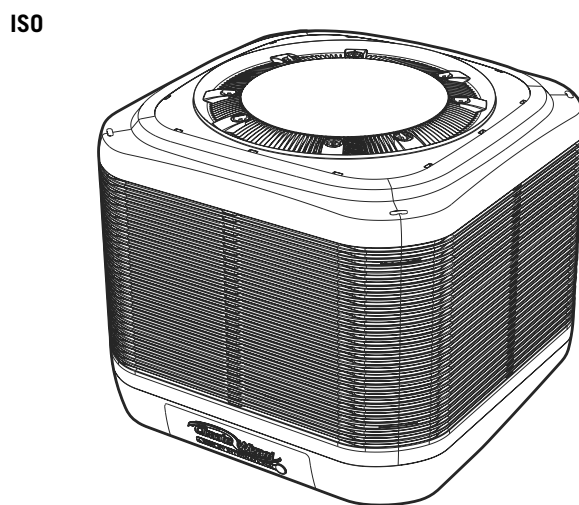


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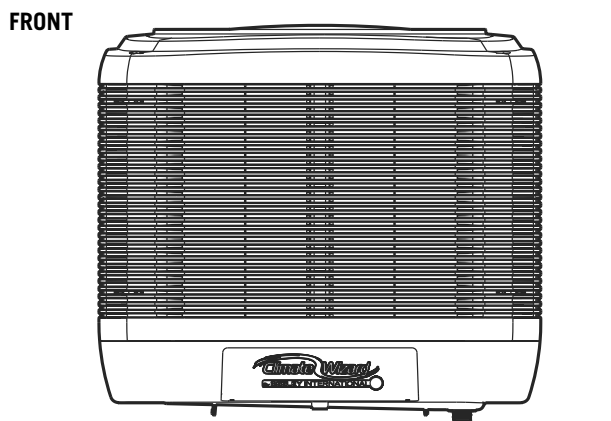
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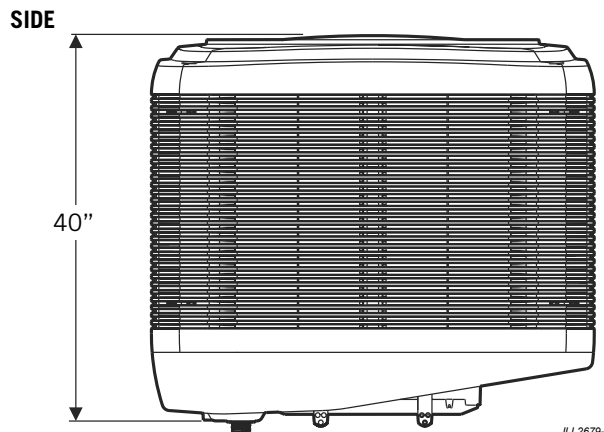
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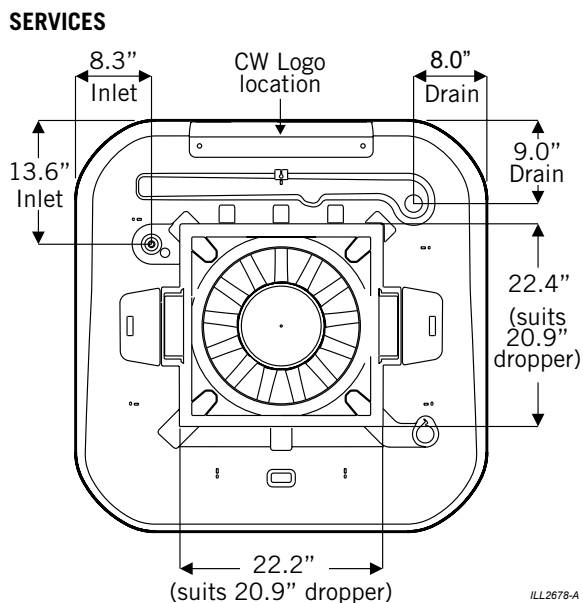
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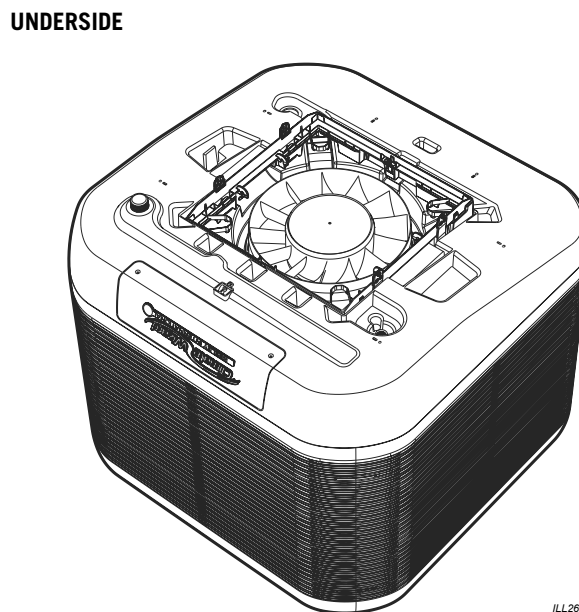
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ILL2676-A

Dimensions are in inches.

**NOTE:** Installers must allow adequate access to and around the cooler for Maintenance. Provision must be made for access to electricity, water supplies and drains. Refer to the Installation Manual for full details.

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MODEL:			SET	
<b>OPTIMUM PERFORMANCE</b>	Airflow	Supply Air	2750 CFM @ 0.60 in.w.g.	
		Exhaust Air	1270 CFM	
	Temperature*	Supply Air	66.7 °F	
	Cooling Capacity*	Standalone	43,300 BTU/hr	
		Pre-Cooling	98,800 BTU/hr	
EER*	Standalone	25		
	Pre-Cooling	57		
<b>ENVIRONMENT</b>	Maximum Inlet Air Temperature		122 °F	
<b>SERVICES</b>	Electrical	Voltage	220-240 V / 1~ / 60Hz	
		Current	7A FLA / 14.0 MCA / 20 MOPD	
		Input Power	1.75 kW	
	Water	Supply	5.3 GPM @ 15 PSI - 115 PSI	
		Max Temperature	105 °F	
		Inlet	1/2" Male NPT	
		Consumption*	16 GPH	
		Drain	40mm Male BSP	
	Drain Flow Rate	4 GPM		
	Duct Connections	Supply Air	Bottom Discharge 21 x 21 in	
Exhaust Air		Top Discharge		
<b>AIR SYSTEMS</b>	Supply Air Fan/Motor	Fan	1x 15-3/4" Axial Forward Curve	
		Motor	750W	
		Control	Variable Speed, ECM, PWM Control	
		Max Speed	2400 rpm	
	Exhaust Air Fan/Motor	Fan	1x 15" Centrifugal Backward Curve	
		Motor	950W	
		Control	Variable Speed, ECM, PWM Control	
	Air Filters	Max Speed	1100 rpm	
		Inlet	MERV 8 Washable 14" x 25" x 1" - 8	
<b>HEAT EXCHANGERS</b>	Indirect Evaporative		8 Micro-Core™	
	Direct Evaporative		8 Chillcel Pads	
<b>WATER SYSTEMS</b>	Tank (Reservoir) Capacity		7.9 Gal	
	Inlet Valve		12 VDC Solenoid Valve	
	Pumps Indirect Heat Exchangers	1 Pump		
		3.4 GPM @ 60" Head 220-240V 60Hz Input Power 32W		
	Pump Direct Heat Exchangers	1 Pump		
		3.4 GPM @ 60" Head 220-240V 60Hz Input Power 32W		
	Salinity Management		Conductivity Probe	
Chlorinator		12 VDC		
Drain Valve		12 VDC Vertical		
<b>DIMENSIONS</b>	Shipping		46-1/4" L * 46-1/4" W * 41-1/4" H	
	Operating inc. Accessories		45-1/2" L * 45-1/2" W * 40" H	
<b>WEIGHT</b>	Shipping		460 lb	
	Operating inc. Water/Accessories		530 lb	

\* Supply Air Temperatures, Cooling Capacities, COP and Water Consumption tested to ASHRAE 143 with design condition of: 100 °F dry-bulb, 70 °F wet-bulb and 81 °F room exit temperature.

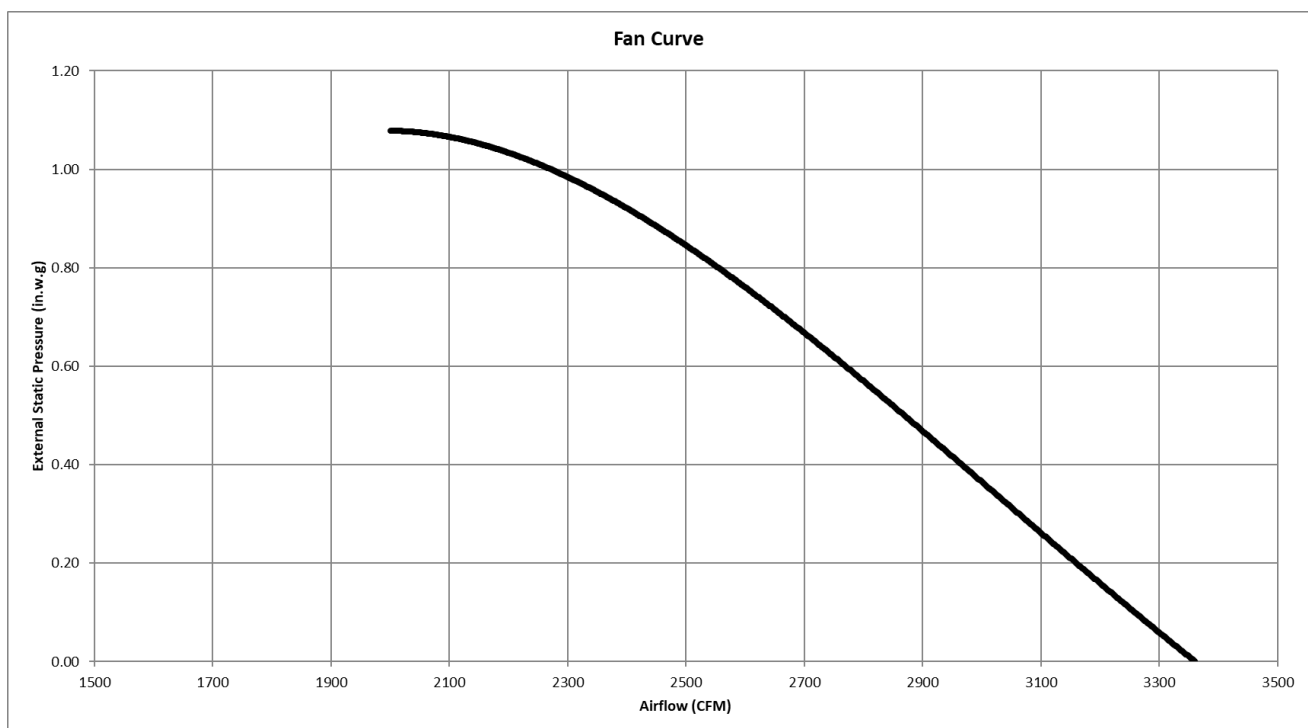
Frequency (Hz)	Radiated Sound Power level (db re 1 pW) Octave Band Centre Frequency							Total Sound Power (db re 1pW)
	125	250	500	1k	2k	4k	8k	
<b>CW3</b>	62	69	77	76	71	64	54	<b>81</b>

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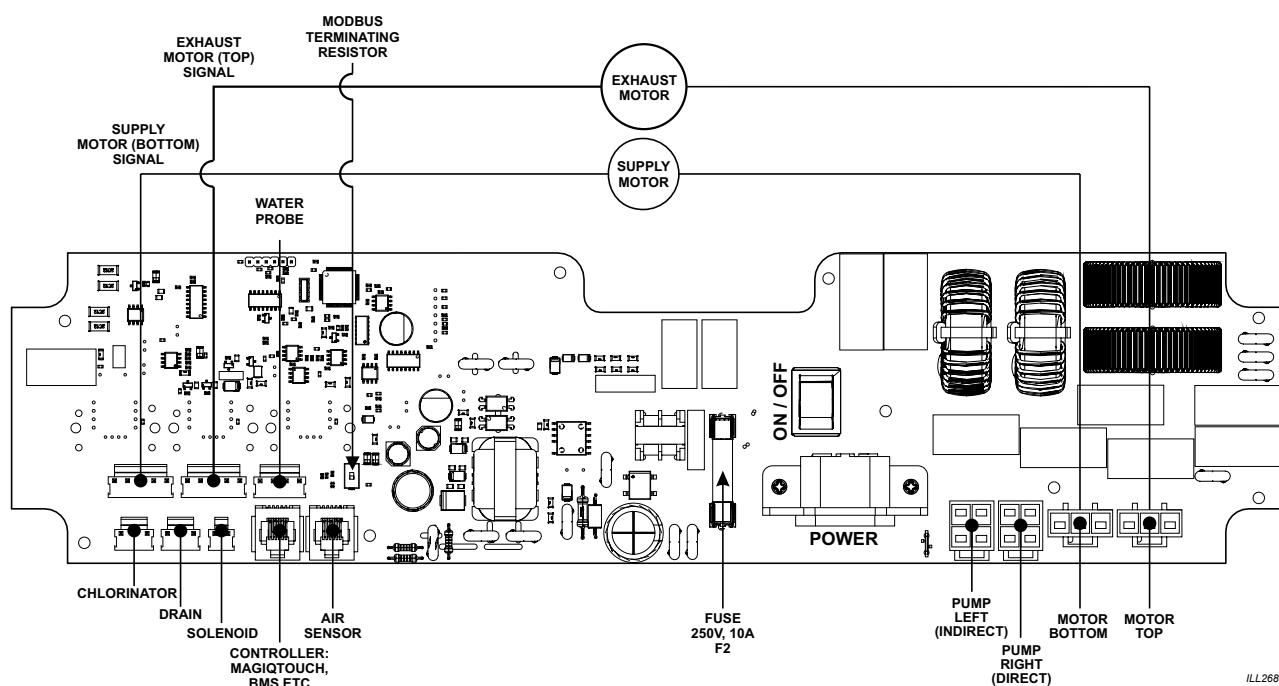
Performance Summary*						
Static Pressure (in w.g.)	0	0.20	0.40	0.60	0.80	1.00
Airflow (CFM)	3360	3160	2980	2750	2560	2260
Temperature (°F)	68.4	67.5	66.9	66.7	66.4	65.7
Standalone Cooling Capacity (BTU/hr)	47,000	47,300	46,300	43,300	41,300	38,200
Input Power (W)	1620	1660	1695	1725	1745	1750
Standalone EER	29	28	27	25	24	22

\* Supply Air Temperatures, Cooling Capacities, COP and Water Consumption tested to ASHRAE 143 with design condition of: 100 °F dry-bulb, 70 °F wet-bulb and 81 °F room exit temperature.

**FAN CURVE**



**WIRING SCHEMATIC DIAGRAM**



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