

CLIMATE WIZARD CW-80 Specifications

The high volume CW-80 Climate Wizard is a self-contained indirect evaporative air conditioner that is specifically designed for applications where large air volume of cool outside air is required either for stand- alone cooling or as pre-cooling for refrigerated systems.

The energy saving performance of the high volume Climate Wizard is superior to any other systems and can be calculated by reference to the psychrometric chart provided by Seeley International and the specifics of the intended application.

The CW-80 is complete with all the required fan systems, control systems and accessories, making it simple to install and operate independently or interface with conventional building management systems.

General description:

All Climate Wizard air coolers use the same technology and use 100% outside air. A bank of patented high efficiency heat exchanger cores are housed in a cabinet along with centrifugal fans for supply and exhaust air, driven by electronically commutated high efficiency motors. A water circulating pump delivers water to the cores, while water quality monitoring sensors and controls take care of the water salinity and provide automatic chlorination of the tank water. Dust filters clean the intake air stream. Cooled, cleaned air is delivered to the conditioned space or application and moisture and heat laden air is rejected to atmosphere.

The CW-80 is self-contained and includes all necessary switchgear and control equipment for external control systems to fully control the Climate Wizard equipment.

SPECIFICATIONS

CW-80

General:

Nominal cooling capacity	80 kW (22.7 Tons) * (Stand –alone cooling) 146 kW (41.5 Tons)* (Pre-Cooling OA)
Rated Airflow	6,500 l/s (13,772 cfm) supply, 5,320 l/s (11,272 cfm) exhaust at 100 Pascals (0.4 in WG) external static pressure
Max. external static pressure	250 Pascals (1.0 inch WG) (refer to fan curve)
Max inlet air temp	55 ⁰ C (131F)

Water supply	80 l/min (21.1 gpm) delivered at 100 kPa (14.5 psi) min, 800 kPa (116 psi) max (External in-line filtration recommended)
Supply air configuration	Side discharge, (top and bottom discharge by special order)
Dimensions	3,800mm (149.6 in) L x 2,570mm (101.2 in) W x 3,600mm (141.7 in) H
Weight	Shipping weight 2,160 kg (4,762 lbs) Operating weight 2,620 kg (5,776 lbs)
Motor /Fan	
Supply fans	2 x Backward curved centrifugal fan with direct coupled EC motor, EBM Type K3G560-AP23-05
Exhaust fans	4 x Backward curved centrifugal fan with direct coupled EC motor, EBM Type K3G355-AY40-02
Power Requirement	Input power for the CW-80 is a 10.0kW at 6,500 l/s (13,772 cfm) supply, 5,320 l/s (11,272 cfm) exhaust at 100 Pascals (0.4 in WG) external static pressure 3-Phase, 380-480 volt, 50/60 Hz
Heat exchange core	16 x Climate Wizard patented counter flow heat exchanger Seeley Pt No 114286
Air filtration	G4 pleated washable filters with metal frames size 625mm (24.6 in) x 625mm (24.6 in)x 45mm (1.77 in)
Construction and major components;	
Heat exchanger module	Austenitic Stainless Steel, Grade 304 Blind stainless steel rivets Grade 304 fasteners
Support chassis	Galvanised steel cold rolled sections Galvanised steel fastenings
Water storage tank	Moulded Acrylonitrile Styrene Acrylate (ASA)
Water circulation pump	Grundfos Type AP12-40-04-3
Watering sequence valve	K. Rain Type 4402 and 4404
Water drain valve	Seeley type 114293
Water inlet solenoid	1" Burkert Type 134333
Water high pressure relief	Tomson ECV (H50)



Automatic chlorinator	Watermaid type 400 T/C
Salinity probe	Seeley Pt No. 833842
Water level sensor	Hamlin type 59630-1-T-02-A or 05-B
Control Cabinet complete	Seeley International Pt 82334
PLC Controller	Mitsubishi Type FX3G-40MR-DS
Touch screen	Mitsubishi GT1020-LBL-C
Converter ADP bus	Mitsubishi FX3G-CNV-ADP
Analogue I/O	Mitsubishi FX3U-3A-ADP
Internal piping	Rigid UPVC Class 12
	Flexible 25mm (1 in) PVC

*cooling capacity based on design ambient condition of 36.1°C db (97F db) / 17.8°C wb (64F wb) and a room air exit temperature of 27.7°C (81.8F) Specifications are subject to change and reference to Seeley International should be made to ensure up to date information is used.