# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## GENERAL

Climate Wizard coolers are characterized 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 two supply air fans, four exhaust air fans, an indirect heat exchanger pack, integrated water reservoir, pump, and chlorinator system.

CW-80S 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 304 stainless steel incorporating the motor / fan assemblies, non-corrodible heat exchange cores and other ancillary equipment all supported by a heavy gauge galvanized base frame for structural stability.

Fork lift tine channels are provided within the base frame to facilitate transport and lifting.

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.

## FANS & MOTORS

The fans are a multi-blade, centrifugal type with backward curved blades. They have a cast aluminum coated rotor and aluminum impellers which are individually statically and dynamically balanced. The fans are directly mounted to the electric motors.

The electric motors are 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 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 ¾" fitting that connects directly to the internally mounted solenoid valve.

Water is held in an internal reservoir manufactured from molded polymer 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.

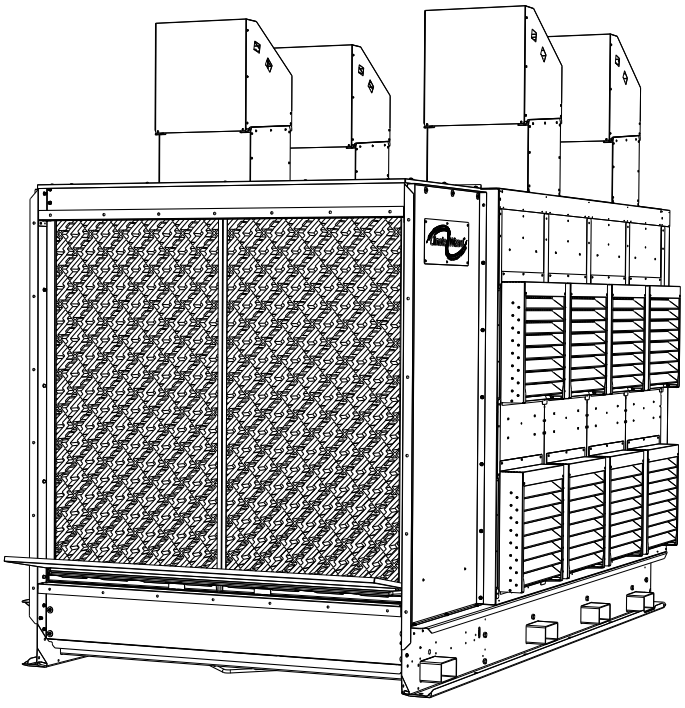
The wet components of each pump are manufactured from stainless steel and the pumps are driven by a 3-phase industrial, fully enclosed fan cooled electric motor with thermal overload protection. Easily cleanable in line strainers are provided for both the incoming water supply and the water distribution system.

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 that responds to the water management control system. The design of the reservoir ensures that no water remains after draining.

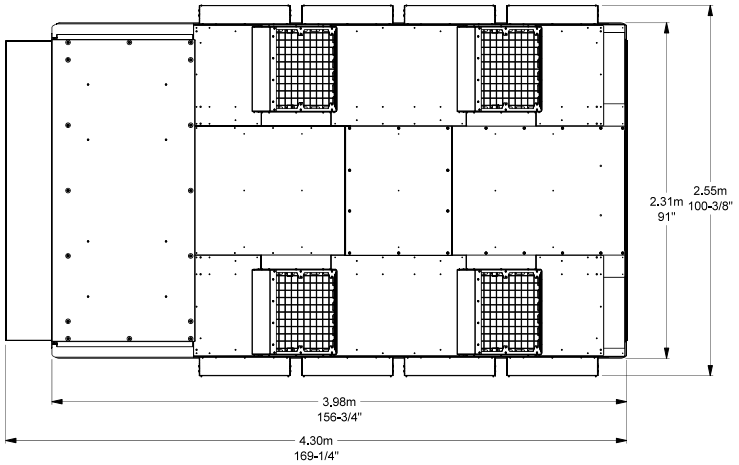
## AIR FILTERS

Intake air is filtered through aluminum framed, washable pleated filters protected by intake louvers to minimize intrusion of rain.

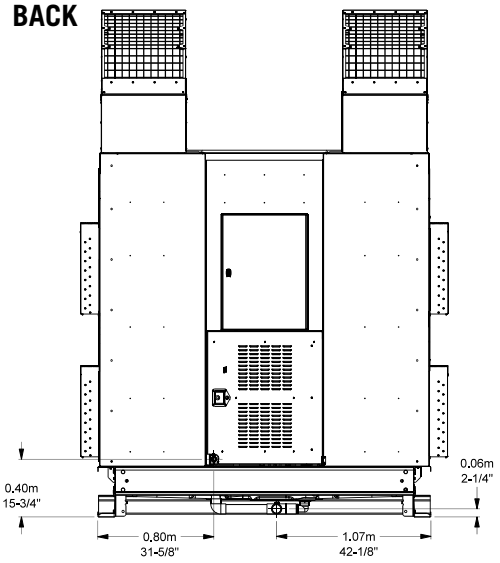


# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

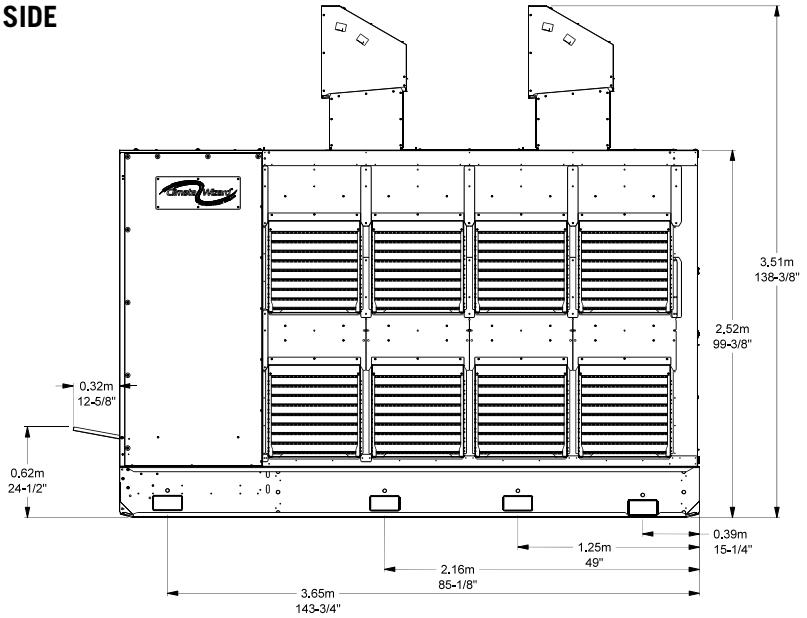
## TOP



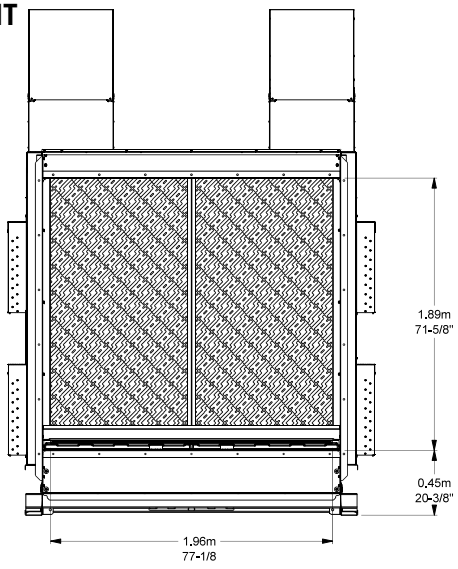

## BACK

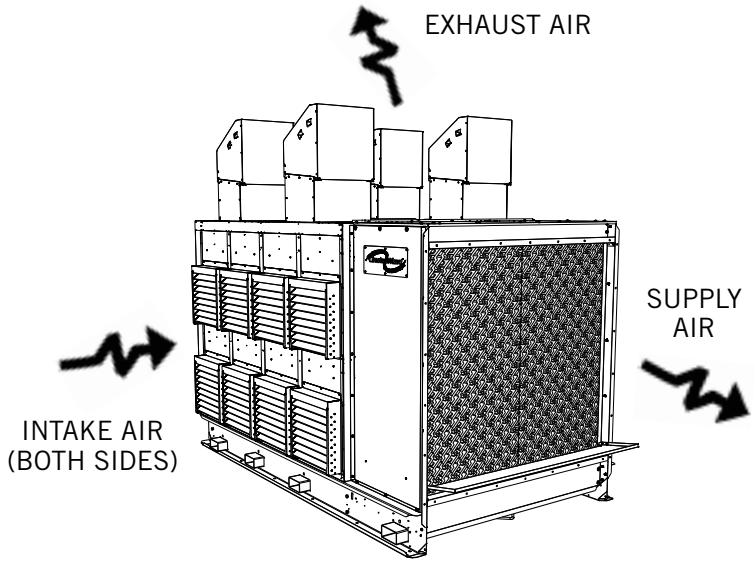



## SIDE




## FRONT



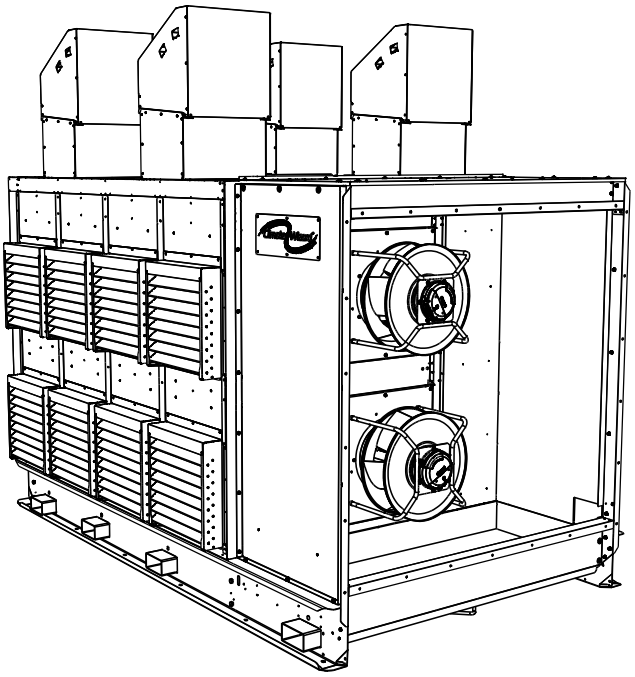




**NOTE:** Installers must allow adequate access to and around the cooler for Maintenance.

Provision must be made for access to power, control, water supplies and drains.

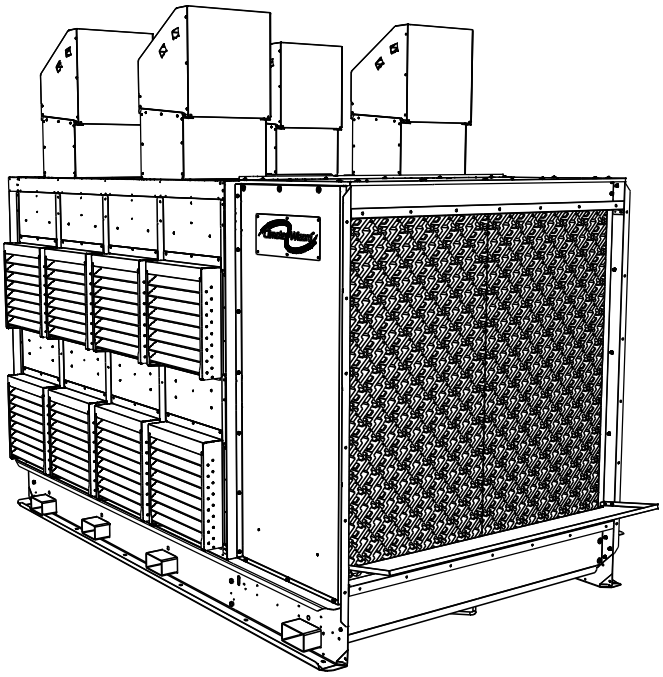
Refer to the Installation Manual for full details.

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS



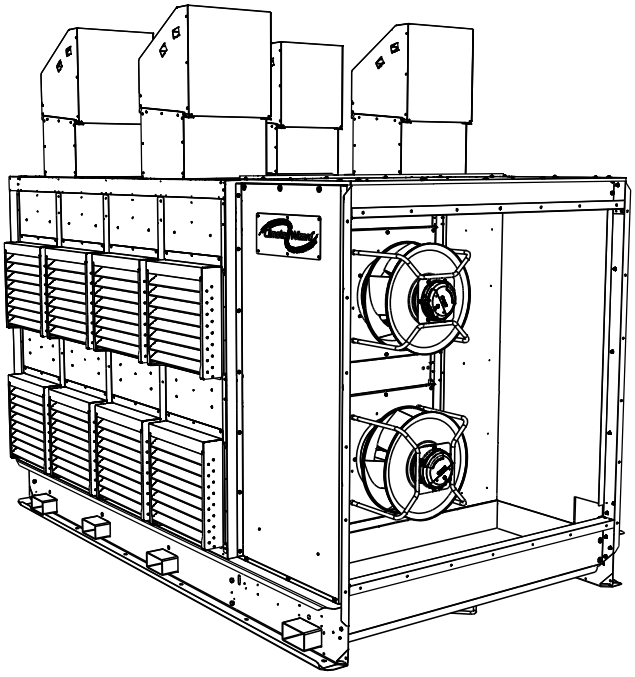
### CW-80 IEC STANDARD CAPACITY FANS

- Primary Indirect Evaporative Cooling Stage
- No added Moisture



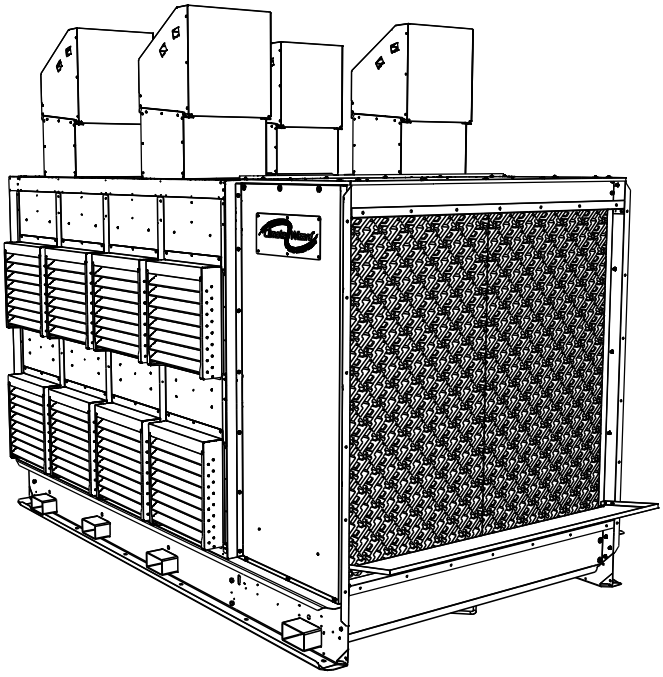
### CW-80 SUPERCOOL STANDARD CAPACITY FANS

- Primary Indirect Evaporative Cooling Stage
- Secondary Direct Evaporative Cooling Stage
- Highest Energy Efficiency



### CW-80 IEC HIGH CAPACITY FANS

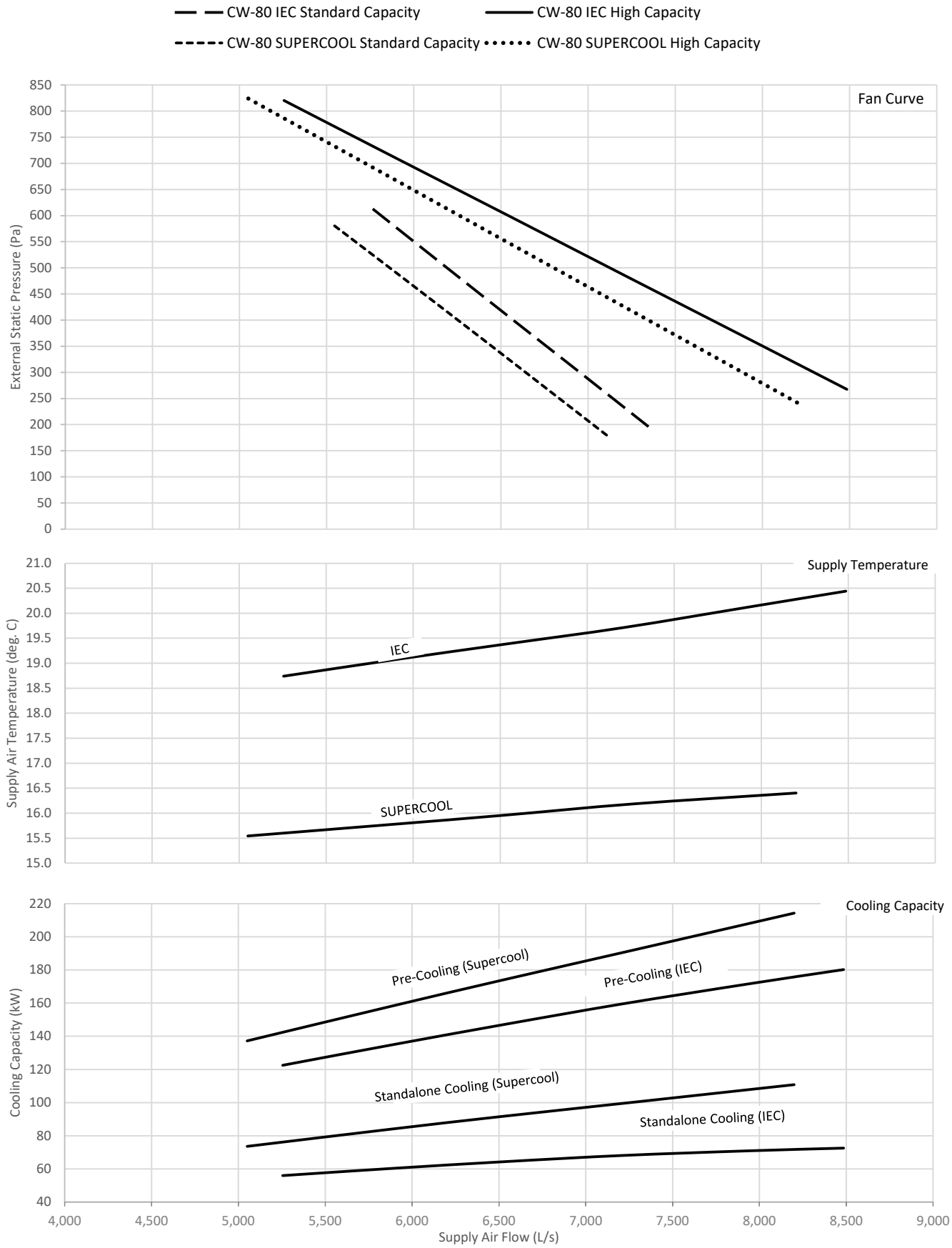
- Primary Indirect Evaporative Cooling Stage
- No added Moisture
- Highest External Static Pressure Capacity



### CW-80 SUPERCOOL HIGH CAPACITY FANS

- Primary Indirect Evaporative Cooling Stage
- Secondary Direct Evaporative Cooling Stage
- Highest Cooling Capacity

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

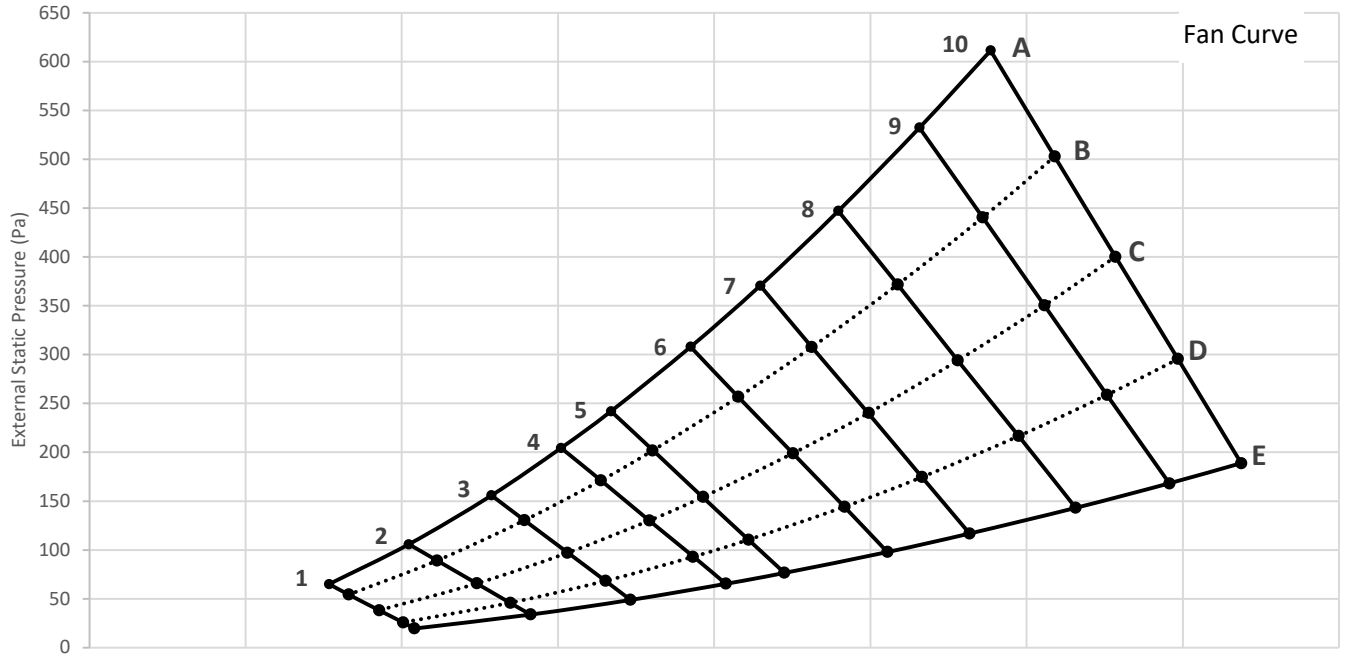


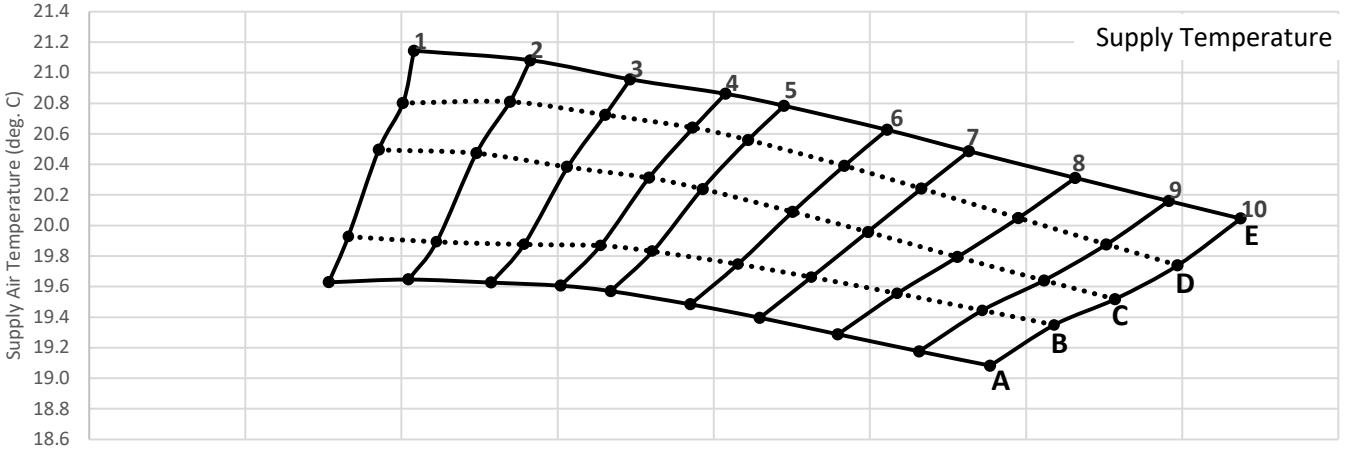
# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

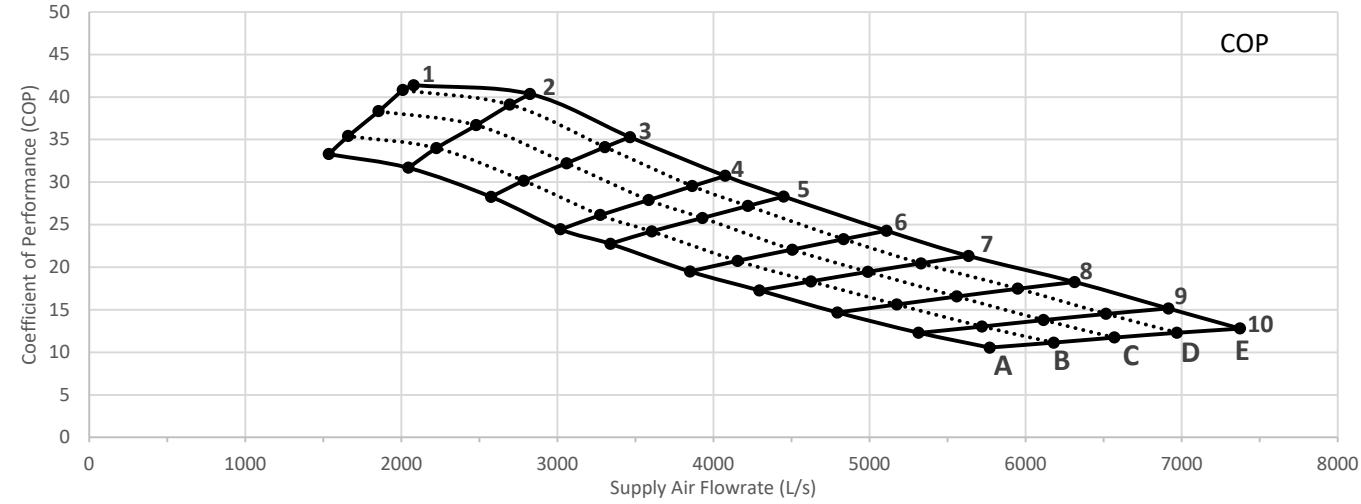
| MODEL: | | | CW-80 IEC STANDARD CAPACITY FANS | CW-80 SUPERCOOL STANDARD CAPACITY FANS |
|---|---|---|---|---|
| SERVICES | Electrical | Voltage | 380-440 V / 3~ / 50-60Hz | 380-440 V / 3~ / 50-60Hz |
| | | Rated Current | 26 A | 27 A |
| | | Input Power | 12.5 kW | 12.5 kW |
| | Water | Supply | 45 L/min @ 85 kPa - 800 kPa | 45 L/min @ 85 kPa - 800 kPa |
| | | Max Temperature | 40 ºC | 40 ºC |
| | | Inlet | 3/4" Male BSP | 3/4" Male BSP |
| | | Drain | 2" Flexible Coupling | 2" Flexible Coupling |
| | | Drain Flow Rate | 40 L/min | 40 L/min |
| | Duct Connections | Supply Air | Side Discharge 1890 x 2310mm | Side Discharge 1890 x 2310mm |
| | | Exhaust Air | 4x Top Discharge Vents | 4x Top Discharge Vents |
| ENVIRONMENT | Maximum Inlet Air Temperature | | 50 ºC | 50 ºC |
| AIR SYSTEMS | Supply Air Fan/Motor | Fan | 2x 560mm Centrifugal | 2x 560mm Centrifugal |
| | | Motor | 3.5 kW | 3.5 kW |
| | | Control | Variable Speed, ECM, 0-10V | Variable Speed, ECM, 0-10V |
| | | Maximum Speed | 1750 rpm | 1750 rpm |
| | Exhaust Air Fan/Motor | Fan | 4x 355mm Centrifugal | 4x 355mm Centrifugal |
| | | Motor | 1.7 kW | 1.7 kW |
| | | Control | Variable Speed, ECM, 0-10V | Variable Speed, ECM, 0-10V |
| | | Maximum Speed | 2600 rpm | 2600 rpm |
| | Air Filters | Inlet | 16x G4 Washable 635 x 635 x 50mm | 16x G4 Washable 635 x 635 x 50mm |
| HEAT EXCHANGERS | Indirect Evaporative | | 16 Cores | 16 Cores |
| | Direct Evaporative | | NONE | 2 Chillcel Pads |
| WATER SYSTEMS | Tank (Reservoir) Capacity | | 180 L | 180 L |
| | Inlet Valve | | 24 VAC Solenoid Valve | 24 VAC Solenoid Valve |
| | Pump Indirect Heat Exchangers | | 1x 75 LPM @ 24.7m Head 380-440V / 3~ / 50-60 Hz Input Power 0.75 kW | 1x 75 LPM @ 24.7m Head 380-440V / 3~ / 50-60 Hz Input Power 0.75 kW |
| | Pump Direct Heat Exchangers | | NONE | 1x 38 LPM @ 13.8m Head 380-440V / 3~ / 50-60 Hz Input Power 0.25 kW |
| | Salinity Management | | Conductivity Probe | Conductivity Probe |
| | Chlorinator | | 230V, 50-60Hz | 230V, 50-60Hz |
| | Drain Valve | | 12 VAC Vertical | 12 VAC Vertical |
| DIMENSIONS | Shipping | Note: Exhaust Fans/ Motors, Weatherseals & Filters shipped loose. | 3980mm (L) x 2310mm (W) x 2550mm (H) | 3980mm (L) x 2310mm (W) x 2550mm (H) |
| | Operating | | 3980mm (L) x 2550mm (W) x 3515mm (H) | 3980mm (L) x 2550mm (W) x 3515mm (H) |
| WEIGHT | Shipping | exc. Loose items | 2000 kg | 2100 kg |
| | Operating | inc. Water & Extras | 2700 kg | 2850 kg |

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## CW-80 IEC STANDARD CAPACITY FANS

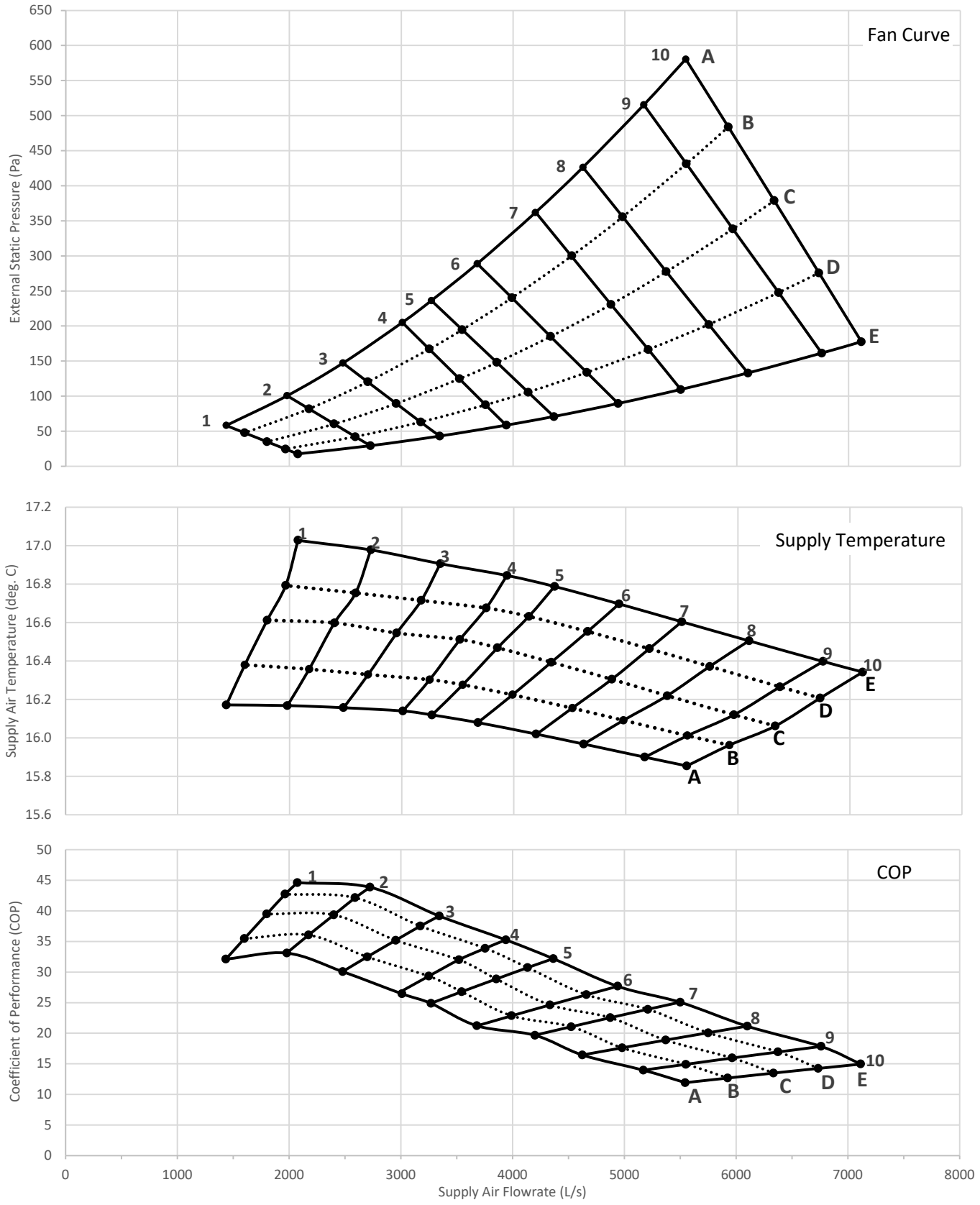


# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## CW-80 SUPERCOOL STANDARD CAPACITY FANS



# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

| CW-80 IEC STANDARD CAPACITY SPEED 10 PERFORMANCE SUMMARY* | | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| EXTERNAL STATIC PRESSURE (Pa) | 610 | 505 | 400 | 295 | 190 |
| SUPPLY AIR FLOWRATE (L/s) | 5800 | 6200 | 6600 | 7000 | 7400 |
| SUPPLY AIR FLOWRATE ($m^3/h$) | 20,900 | 22,300 | 23,800 | 25,200 | 26,600 |
| IEC SUPPLY TEMPERATURE (ºC) | 19.1 | 19.3 | 19.5 | 19.7 | 20.0 |
| STANDALONE COOLING CAPACITY (kW) | 59 | 61 | 64 | 66 | 67 |
| PRE-COOLING CAPACITY (kW) | 133 | 140 | 148 | 155 | 161 |
| INPUT POWER (kW) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| STANDALONE COP | 5 | 5 | 5 | 5 | 5 |
| PRE-COOLING COP | 11 | 11 | 12 | 12 | 13 |
| WATER CONSUMPTION (L/hr) | 240 | 245 | 250 | 255 | 260 |

| CW-80 SUPERCOOL STANDARD CAPACITY SPEED 10 PERFORMANCE SUMMARY* | | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| EXTERNAL STATIC PRESSURE (Pa) | 580 | 485 | 380 | 275 | 180 |
| SUPPLY AIR FLOWRATE (L/s) | 5500 | 5900 | 6300 | 6700 | 7100 |
| SUPPLY AIR FLOWRATE ($m^3/h$) | 19,800 | 21,200 | 22,700 | 24,100 | 25,600 |
| IEC SUPPLY TEMPERATURE (ºC) | 19.2 | 19.4 | 19.7 | 19.9 | 20.1 |
| SUPERCOOL SUPPLY TEMPERATURE (ºC) | 15.9 | 16.0 | 16.1 | 16.2 | 16.3 |
| STANDALONE COOLING CAPACITY (kW) | 78 | 83 | 88 | 92 | 96 |
| PRE-COOLING CAPACITY (kW) | 147 | 157 | 167 | 177 | 186 |
| INPUT POWER (kW) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| STANDALONE COP | 6 | 7 | 7 | 7 | 8 |
| PRE-COOLING COP | 12 | 13 | 13 | 14 | 15 |
| WATER CONSUMPTION (L/hr) | 255 | 265 | 275 | 285 | 295 |

* Leaving Air Temperatures, Cooling Capacities and Water Consumption valid at design condition of:
38 ºC dry-bulb, 21 ºC wet-bulb, 27.4 ºC relief temperatures

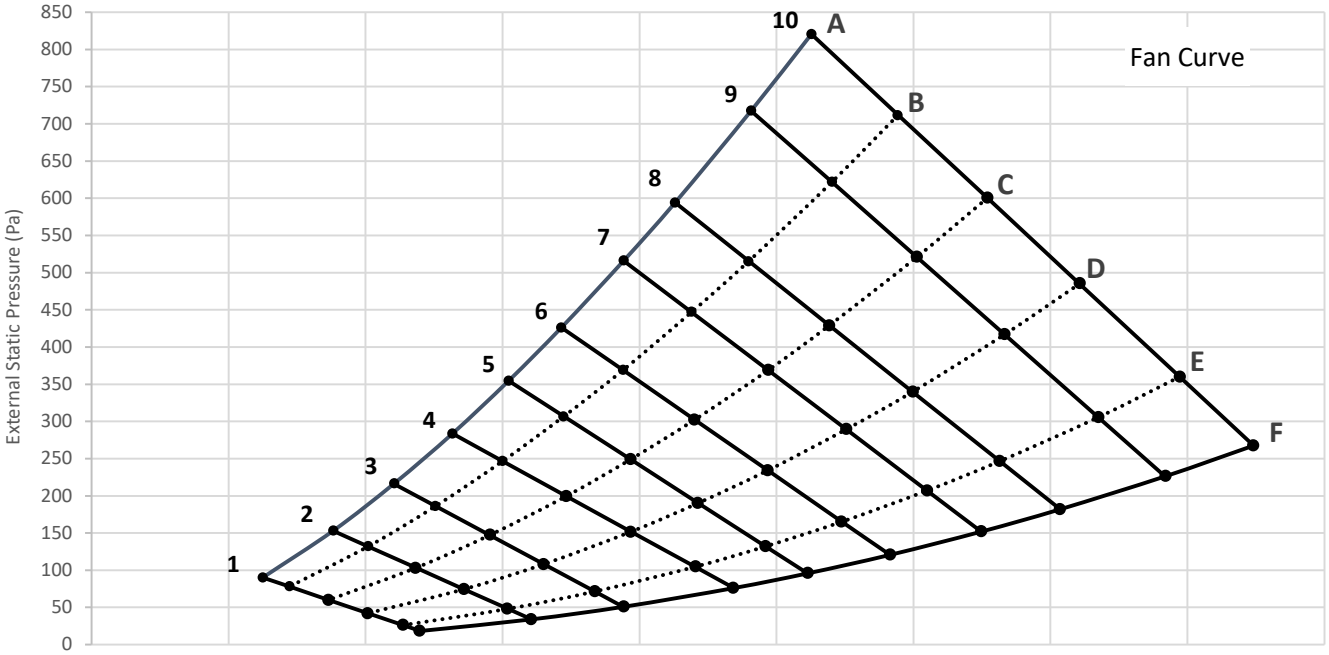
| INPUT POWER (KW) | | | | | |
|---|---|---|---|---|---|
| SPEED | CW-80 IEC STANDARD CAPACITY | CW-80 SUPERCOOL STANDARD CAPACITY | SPEED | CW-80 IEC STANDARD CAPACITY | CW-80 SUPERCOOL STANDARD CAPACITY |
| **10** | 12.5 | 12.5 | **5** | 3.3 | 3.5 |
| **9** | 9.9 | 9.9 | **4** | 2.8 | 2.9 |
| **8** | 7.4 | 7.5 | **3** | 2.0 | 2.2 |
| **7** | 5.6 | 5.7 | **2** | 1.4 | 1.6 |
| **6** | 4.4 | 4.6 | **1** | 1.0 | 1.2 |

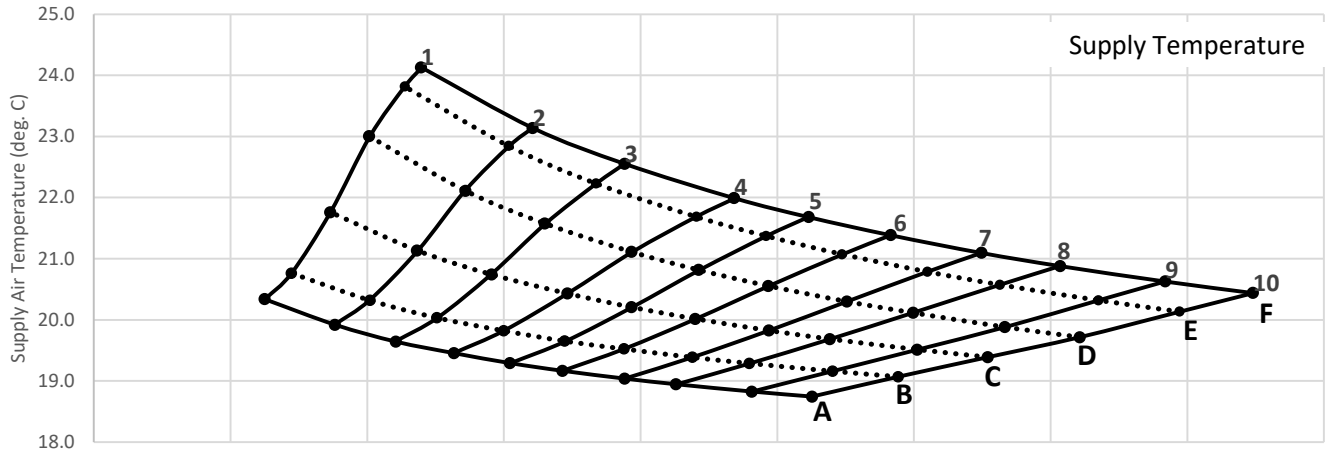
# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

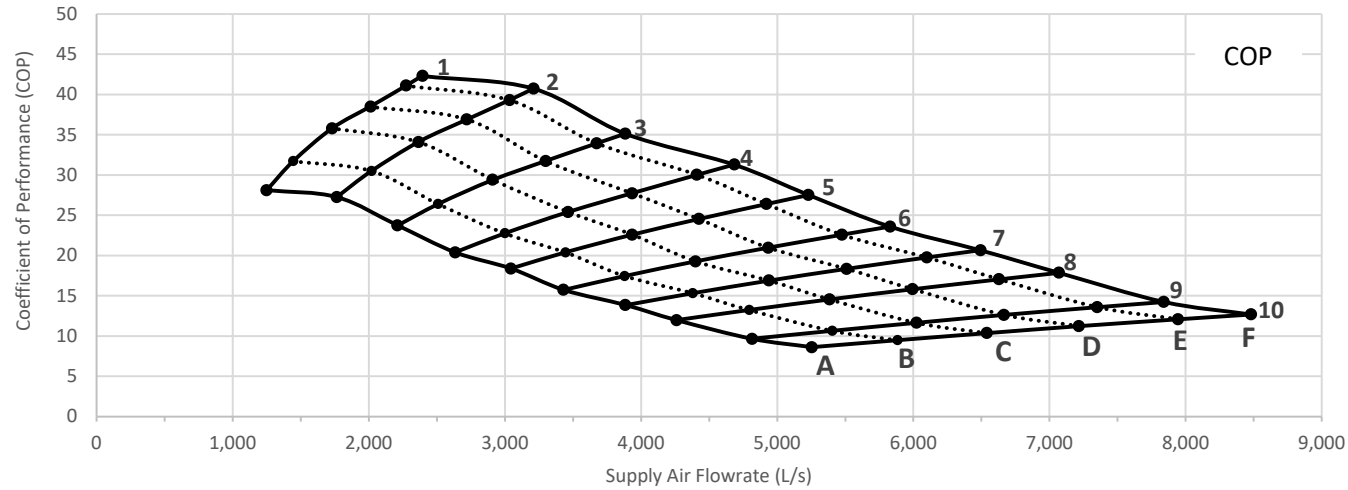
| MODEL: | | | CW-80 IEC HIGH CAPACITY FANS | CW-80 SUPERCOOL HIGH CAPACITY FANS |
|---|---|---|---|---|
| SERVICES | Electrical | Voltage | 380-440 V / 3~ / 50-60Hz | 380-440 V / 3~ / 50-60Hz |
| | | FLA | 29 A | 30 A |
| | | Input Power | 14 kW | 14 kW |
| | Water | Supply | 45 L/min @ 85 kPa - 800 kPa | 45 L/min @ 85 kPa - 800 kPa |
| | | Max Temperature | 40 ºC | 40 ºC |
| | | Inlet | 3/4" Male BSP | 3/4" Male BSP |
| | | Drain | 2" Flexible Coupling | 2" Flexible Coupling |
| | | Drain Flow Rate | 40 L/min | 40 L/min |
| | Duct Connections | Supply Air | Side Discharge 1890 x 2310mm | Side Discharge 1890 x 2310mm |
| | | Exhaust Air | 4x Top Discharge Vents | 4x Top Discharge Vents |
| ENVIRONMENT | Maximum Inlet Air Temperature | | 50 ºC | 50 ºC |
| AIR SYSTEMS | Supply Air Fan/Motor | Fan | 2x 560mm Centrifugal | 2x 560mm Centrifugal |
| | | Motor | 3.5 kW | 3.5 kW |
| | | Control | Variable Speed, ECM, 0-10V | Variable Speed, ECM, 0-10V |
| | | Maximum Speed | 1750 rpm | 1750 rpm |
| | Exhaust Air Fan/Motor | Fan | 4x 355mm Centrifugal | 4x 355mm Centrifugal |
| | | Motor | 1.7 kW | 1.7 kW |
| | | Control | Variable Speed, ECM, 0-10V | Variable Speed, ECM, 0-10V |
| | | Maximum Speed | 2600 rpm | 2600 rpm |
| | Air Filters | Inlet | 16x G4 Washable 635 x 635 x 50mm | 16x G4 Washable 635 x 635 x 50mm |
| HEAT EXCHANGERS | Indirect Evaporative | | 16 Cores | 16 Cores |
| | Direct Evaporative | | NONE | 2 Chillcel Pads |
| WATER SYSTEMS | Tank (Reservoir) Capacity | | 180 L | 180 L |
| | Inlet Valve | | 24 VAC Solenoid Valve | 24 VAC Solenoid Valve |
| | Pump Indirect Heat Exchangers | | 1x 75 LPM @ 24.7m Head 380-440V / 3~ / 50-60 Hz Input Power 0.75 kW | 1x 75 LPM @ 24.7m Head 380-440V / 3~ / 50-60 Hz Input Power 0.75 kW |
| | Pump Direct Heat Exchangers | | NONE | 1x 38 LPM @ 13.8m Head 380-440V / 3~ / 50-60 Hz Input Power 0.25 kW |
| | Salinity Management | | Conductivity Probe | Conductivity Probe |
| | Chlorinator | | 230V, 50-60Hz | 230V, 50-60Hz |
| | Drain Valve | | 12 VAC Vertical | 12 VAC Vertical |
| DIMENSIONS | Shipping | Note: Exhaust Fans/ Motors, Weatherseals & Filters shipped loose. | 3980mm (L) x 2310mm (W) x 2550mm (H) | 3980mm (L) x 2310mm (W) x 2550mm (H) |
| | Operating | | 3980mm (L) x 2550mm (W) x 3515mm (H) | 3980mm (L) x 2550mm (W) x 3515mm (H) |
| WEIGHT | Shipping | exc. Loose items | 2000 kg | 2100 kg |
| | Operating | inc. Water & Extras | 2700 kg | 2850 kg |

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## CW-80 IEC HIGH CAPACITY FANS

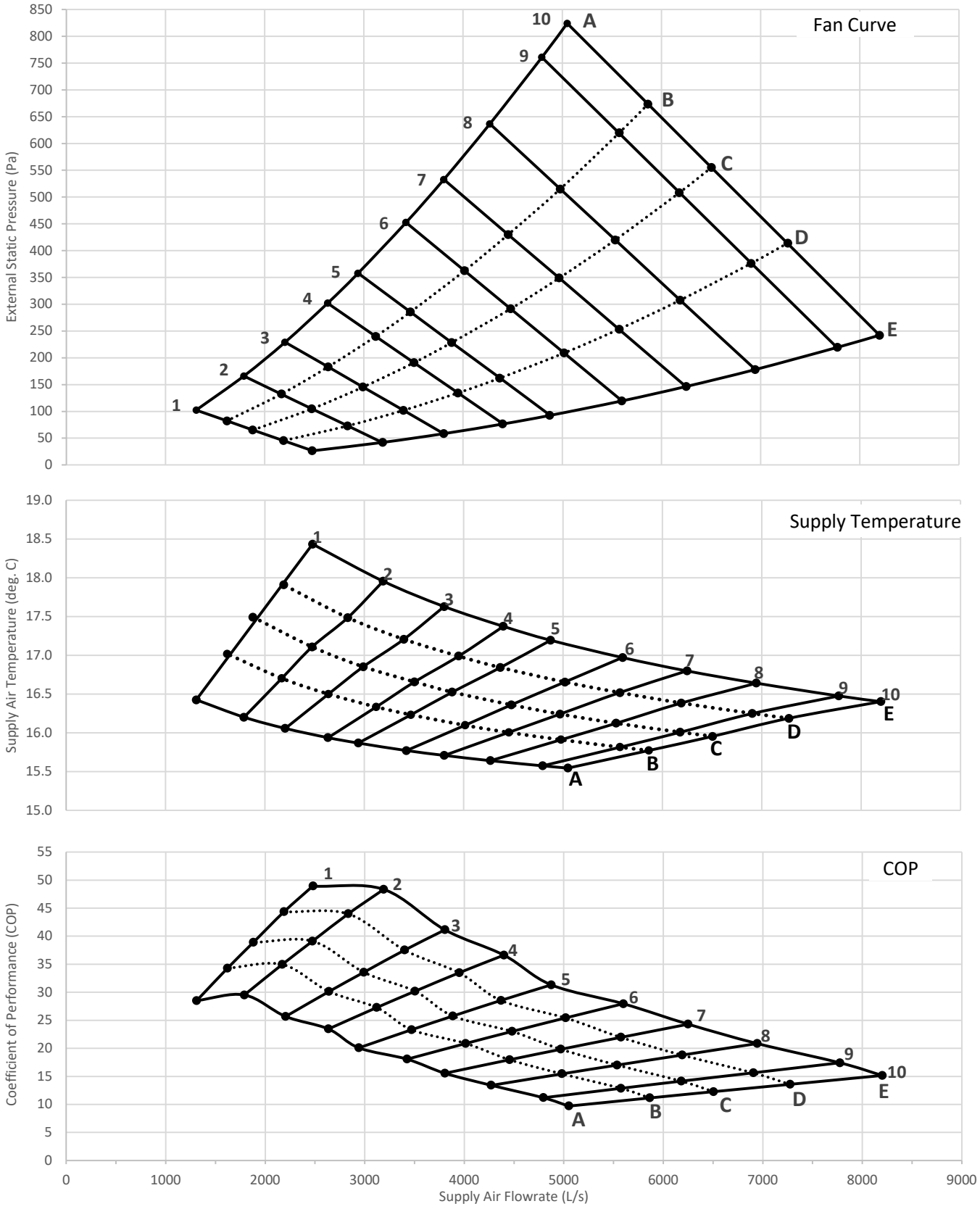


# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## CW-80 SUPERCOOL HIGH CAPACITY FANS



# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

| CW-80 IEC HIGH CAPACITY SPEED 10 PERFORMANCE SUMMARY* | | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| EXTERNAL STATIC PRESSURE (Pa) | 820 | 710 | 600 | 485 | 360 | 270 |
| SUPPLY AIR FLOWRATE (L/s) | 5300 | 5900 | 6500 | 7200 | 7900 | 8500 |
| SUPPLY AIR FLOWRATE ($m^3/h$) | 19,100 | 21,200 | 23,400 | 25,900 | 28,400 | 30,600 |
| IEC SUPPLY TEMPERATURE (ºC) | 18.7 | 19.1 | 19.4 | 19.7 | 20.1 | 20.4 |
| STANDALONE COOLING CAPACITY (kW) | 56 | 60 | 64 | 68 | 71 | 73 |
| PRE-COOLING CAPACITY (kW) | 124 | 135 | 146 | 159 | 171 | 181 |
| INPUT POWER (kW) | 14.2 | 14.2 | 14.2 | 14.2 | 14.2 | 14.2 |
| STANDALONE COP | 4 | 4 | 5 | 5 | 5 | 5 |
| PRE-COOLING COP | 9 | 10 | 10 | 11 | 12 | 13 |
| WATER CONSUMPTION (L/hr) | 235 | 245 | 255 | 265 | 270 | 275 |

| CW-80 SUPERCOOL HIGH CAPACITY SPEED 10 PERFORMANCE SUMMARY* | | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | E |
| EXTERNAL STATIC PRESSURE (Pa) | 825 | 675 | 555 | 415 | 240 |
| SUPPLY AIR FLOWRATE (L/s) | 5000 | 5900 | 6500 | 7300 | 8200 |
| SUPPLY AIR FLOWRATE ($m^3/h$) | 18,000 | 21,200 | 23,400 | 26,300 | 29,500 |
| IEC SUPPLY TEMPERATURE (ºC) | 18.6 | 19.1 | 19.4 | 19.8 | 20.2 |
| SUPERCOOL SUPPLY TEMPERATURE (ºC) | 15.5 | 15.8 | 16.0 | 16.2 | 16.4 |
| STANDALONE COOLING CAPACITY (kW) | 73 | 84 | 91 | 101 | 111 |
| PRE-COOLING CAPACITY (kW) | 136 | 159 | 173 | 193 | 214 |
| INPUT POWER (kW) | 14.2 | 14.2 | 14.2 | 14.2 | 14.2 |
| STANDALONE COP | 5 | 6 | 6 | 7 | 8 |
| PRE-COOLING COP | 10 | 11 | 12 | 14 | 15 |
| WATER CONSUMPTION (L/hr) | 265 | 280 | 295 | 310 | 335 |

* Leaving Air Temperatures, Cooling Capacities and Water Consumption valid at design condition of:
38 ºC dry-bulb, 21 ºC wet-bulb, 27.4 ºC relief temperatures

| INPUT POWER (KW) | | | | | |
|---|---|---|---|---|---|
| SPEED | CW-80 IEC HIGH CAPACITY | CW-80 SUPERCOOL HIGH CAPACITY | SPEED | CW-80 IEC HIGH CAPACITY | CW-80 SUPERCOOL HIGH CAPACITY |
| 10 | 14.2 | 14.2 | 5 | 3.8 | 3.9 |
| 9 | 11.6 | 11.6 | 4 | 2.9 | 3.0 |
| 8 | 8.2 | 8.6 | 3 | 2.1 | 2.3 |
| 7 | 6.4 | 6.6 | 2 | 1.4 | 1.6 |
| 6 | 5.0 | 5.1 | 1 | 1.0 | 1.2 |

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## OPTIONS, FEATURES & ACCESSORIES

Multi-Magic coolers are supplied with a series of interface terminals inside the electrical enclosure for use with additional accessories.

| ITEM | ID | TYPE |
|---|---|---|
| MODBUS | + | RS-485 MODBUS Communication for Wall Controller or 3rd Party Master |
| | - | |
| | GND | |
| POWER SUPPLY | 24Vdc | DC Power Supply for Wall Controller, Sensors or BMS |
| | 0Vdc | |
| MULTI-MAGIC SENSORS (sold separately) | RM TEMP | Room Temperature 0-10V |
| | RM RH | Room Humidity 0-10V |
| | AMB TEMP | Ambient Temperature 0-10V |
| | AMB RH | Ambient Humidity 0-10V |
| | SUP TEMP | Duct Temperature 0-10V |
| | SUP RH | Duct Humidity 0-10V |
| FAN STATUS | FAN STS | Fan Run Output. Relay Output Dry Contact, Adjustable Timer |
| | FAN COM | |
| FIRE | FIRE | Fire Terminals. Bridge to Run. |
| | FIRE | |

Multi-Magic coolers can be controlled via 4 different methods.

## OPTION 1: BUILDING MANAGEMENT SYSTEM (BMS)

Multi-Magic coolers are supplied with a series of low voltage BMS Interface Terminals to allow external devices, such as 3rd party controllers, to control the basic functions of the cooler.

| ITEM | ID | TYPE |
|---|---|---|
| BMS | IEC | Digital Input Dry Contact |
| | DEC | Digital Input Dry Contact |
| | SPD | Speed: Analogue Input 0-10Vdc |
| | ERR | Error: Relay Output Dry Contact. Configurable NO/NC |
| | GND | GND |

## OPTION 2: MULTI-MAGIC WALL CONTROLLER

(sold separately)

- MODBUS RS-485 to control up to 15 Devices
- Inbuilt Temperature & RH Sensors
- Manual or Automatic Speed Control
- Thermostatic Speed Control
- Supercool Humidity Setpoint
- 7-Day Program
- Room Sensor Averaging
- Ambient Condition Monitoring
- Min & Max Fan Speed Limits
- Screen Security Lock
- Auto-Restart Function
- Device Fault History
- English, Spanish, French, Italian, Portuguese

## OPTION 3: RS-485 MODBUS PRIMARY

Multi-Magic coolers can be controlled via a 3rd Party RS-485 Modbus Primary. Modbus Registers are available for controlling and monitoring the basic functions of the connected coolers.

| REGISTER | TYPE | | DETAILS |
|---|---|---|---|
| COMMANDS | | | |
| 9200 | UINT | Bit 0 | IEC Enable |
| | | Bit 1 | DEC Enable |
| | | Bit 2 | Fault Reset |
| | | Bit 3 | Manual Drain |
| 9201 | UINT | 0-1000 | Supply Fan Speed (0-100%) |
| STATUS | | | |
| 9205 | UINT | Bit 0 | Fault State |
| | | Bit 1 | Low Probe WET |
| | | Bit 2 | High Probe WET |
| | | Bit 3 | Inlet Solenoid Valve OPEN |
| | | Bit 4 | Drain Valve OPEN |
| | | Bit 5 | Indirect Pump RUNNING |
| | | Bit 6 | Direct Pump RUNNING |
| | | Bit 7 | Chlorinator RUNNING |
| 9206 | UINT | 0-1000 | Supply Fan Speed (0-100%) |
| 9207 | UINT | 0-6615 | Water Salinity Level |
| 9208 | UINT | 0-100 | Chlorinator Output (%) |
| 9209 | UINT | | Fault Code |
| 9210 | INT | -400 - 700 | Ambient Temperature |
| 9211 | INT | 0 - 1000 | Ambient Relative Humidity |
| 9212 | INT | 0 - 500 | Room Temperature |
| 9213 | INT | 0 - 1000 | Room Relative Humidity |

## OPTION 4: BACNET MS/TP OR BACNET IP

Multi-Magic coolers can be controlled via a 3rd Party BACnet Controller, either via MS/TP or IP protocols. BACnet objects are available for controlling and monitoring the basic functions of the connected coolers.

| OBJECT | DETAILS |
|---|---|
| COMMANDS | |
| CMD_IEC | IEC Enable |
| CMD_DEC | DEC Enable |
| CMD_Spd | 0 to 10 Fan Speed |
| CMD_Drain | Manual Drain |
| BCN_CMD_ON_OFF | Cooler Run |
| CMD_FaultReset | Reset Fault Codes |
| STATUS | |
| STSIEC | IEC Pump RUNNING |
| STSDEC | DEC Pump RUNNING |
| STSERROR | Fault |
| STSLowProbe | Low Probe WET |
| STSHighProbe | High Probe WET |
| STSSolenoid | Inlet Solenoid OPEN |
| STSDrain | Drain Valve OPEN |
| STSChlorinator | Chlorinator RUNNING |
| STSSupplyFSpd | Supply Fan Speed Range 0 to 10 |
| STSSalinity | Water Salinity Level (uS/cm) |
| STSChlPWM | Chlorinator PWM % |
| STSFaultCode | Fault Code. |
| STSAmbientTemp | Ambient Sensor Temperature -40 to 70°C |
| STSAmbientRH | Ambient Sensor RH, Range 0 to 100 % |
| STSRoomTemp | Room Sensor Temperature 0 to 50°C |
| STSRoomRH | Room Sensor RH, Range 0 to 100 % |

# TECHNICAL DATA SHEET – CW-80 WITH MULTI-MAGIC CONTROLS

## TEMPERATURE & RELATIVE HUMIDITY SENSORS

(sold separately)

For all sensors:
Operating Voltage DC 24V
Signal Output DC 0...10 V
Accuracy at 23ºF and 50% r.h.
Temperature: ± 0.3K
Relative Humidity: ± 3% r.h.

Each CW-80 cooler had dedicated inputs for one each of the following optional sensors.

### ROOM SENSOR

Temperature Range
0...+50ºC

Relative Humidity Range
0...100% r.h.

IP30

When used in conjunction with the Multi-Magic Wall Controller:

- Allows the Wall Controller to be located safely away from the conditioned space. Wall Controller sensor values are disabled and only Room Sensor used for setpoint control.
- Multiple Room Sensor values from multiple coolers be average together to provide an overall temperature and relative humidity ales for larger spaces.

### DUCT SENSOR

Temperature Range
0...+50ºF

Relative Humidity Range
0...100% r.h.

IP54
Probe length inside duct min. 90mm, max 150mm

When used in conjunction with the Multi-Magic Wall Controller:

- Can be used by Building Management Systems (Low Voltage, Modbus or BACnet) to monitor cooler supply air conditions.

### AMBIENT SENSOR

Temperature Range
-40...+70ºC

Relative Humidity Range
0...100% r.h.

Radiation Shield
IP65

When used in conjunction with the Multi-Magic Wall Controller:

- Ambient Condition Monitoring mode uses advanced formulas to calculate a predicted supply temperature. Coolers are disabled if the predicted supply temperature is greater than the current room temperature.
- Particularly suitable for applications which require room temperatures less than 20 °C