



DATA SHEET 1603

ECP80 - ECPL Large EcoCooler**Down Discharge • Side Discharge • Top Discharge**

The ECPL range of evaporative coolers designed to meet all European electrical, water and other safety legislation.

- The ECPL range includes top, side or down discharge configurations of the large EcoCooler.
- It cools air through evaporation of water as part of a balanced ventilation system.
- It includes and integrated electronically commutated fan with speed control to drive air flow.
- The cooler can handle 13,500m³/hr or 18,000m³/hr of fresh air dependent on its configuration.
- All air supplied to the area being cooled must be extracted or exhausted from it.

Material

- Cabinet components are injection moulded in polypropylene.
- The cabinets are UV stabilised and corrosion resistant.

Flow rate, Cooling pad area, Weights, Dimensions and Ductwork Connections

See configuration sheets for the above information

Electrical Supply

Voltage	3~ 400V 50Hz
Current	6.25 A running (Soft Start)
Max Power Draw	3.75kW
Protection	External isolator supplied

Control Options

- 2-speed Control
 - Manual via wall-mounted panel
 - Automatic via optional connection to:
 - Thermostat
 - Timer
 - Humidistat
- Wall-mounted controller complete with 30m Control cable supplied as standard
- Integrated contact for fire alarm shutdown

Water Requirements

Water Supply	
Water quality	Fresh potable water only
Minimum supply rate	500l/hr minimum
Minimum pressure	1 bar
Maximum pressure	7 bar
Connection	15 mm compression fitting to braided hose c/w adjustable flow restrictor
Control	<ul style="list-style-type: none"> • Solenoid inlet valve • Float level probe activated shut off
Compliance	<ul style="list-style-type: none"> • WRAS compliant • Double check valve recommended
Drain	
Capacity	2,000 l/hr minimum
Connection offered	1" BSP male thread
Control	Drive Open-Spring Close drain valve

Cooling Pads

Manufacturer	Munters
Material	CELdek® 5090
Saturation Efficiency	85-89%
Dimensions	860 x 960 x 100 mm

Circulation Pump

Flow Rate	30l/min (intermittent)
Power	50W
Voltage	220-240V
Running Current	0.23A
Pump Type	Centrifugal
Motor Type	Encapsulated shaded pole
Transmission	Magnetically coupled
Protection	Auto-reset Overload

Air Filtration

- Integrated Insect Screens
- Optional EU4 filtration
See separate sheet for detail.

Maintenance

- Integrated testing sequence
- Recommended interval of 3-6 months
Contact the manufacturer for application specific advice

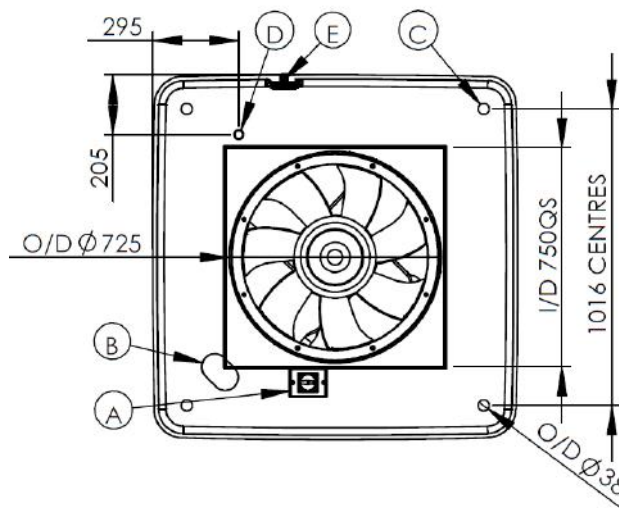
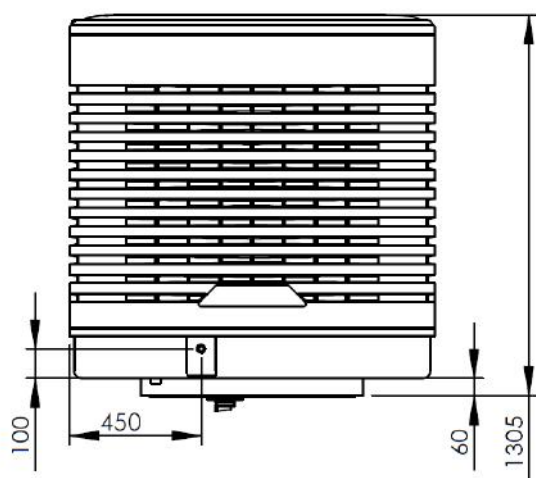
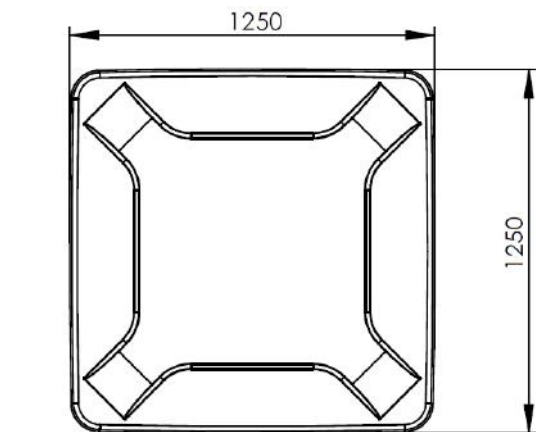
Warranty

2 years parts only



ECP80-01 Configuration Details

Down Discharge



Configuration Features

Maximum Flow Rate	18,000m ³ /hr or 5 m ³ /s
Cooling Pad Area	3.3m ²
Unit Size (H x W x D)	
Installed	1306 x 1250 x 1250 mm
Delivered (incl. pallet)	1350 x 1300 x 1300 mm
Duct Connection Port	
Square	750 mm I/D (Female)
Round	725 mm Ø O/D (Male)
Weight	
Ventilation mode	147kg
Cooling mode	212kg
Sump at full capacity	232kg
Delivered	162kg

Serviceable Cooling Load (kW)

Dependant on:

- Temperature rise between supply and exhaust.
- Volumetric air flow rate.

Note that this does not describe the adiabatic cooling function.

Temp. Rise, ΔT	5°C	7.5 °C	10 °C	12.5 °C	15 °C
Air Flow					
18,000 m ³ /hr	31	46	61	76	91
13,500 m ³ /hr	23	34	46	57	68
9,000 m ³ /hr	16	23	31	38	46
4,500 m ³ /hr	8	12	16	19	23

Calculated using $\dot{Q} = (\dot{m}C_p)_{air} \Delta T$ with $\rho_{air,NTP} = 1.204$ & $C_{p,air,NTP} = 1.005$

Note that all dimensions shown are nominal and have a ±10mm tolerance due to manufacturing processes employed.

A	Rotary Isolator
B	Control Panel Port
C	Support Socket (x4)
D	1" BSP Drain Valve
E	1/2" BSP Supply Spigot





ECP80-02 Configuration Details

Side Discharge



Configuration Features

Maximum Flow Rate	13,500m ³ /hr or 3.7 m ³ /s
Cooling Pad Area	2.5m ²
Unit Size (H x W x D)	
Installed	1306 x 1368 x 1250 mm
Delivered (incl. pallet)	1350 x 1368 x 1300 mm
Duct Connection Port	
Square	700 mm (Plain)
Fixing points	4 off M12 holes on 747.5 mm centres
Weight	
Ventilation mode	148kg
Cooling mode	213kg
Sump at full capacity	233kg
Delivered	163kg

Serviceable Cooling Load (kW)

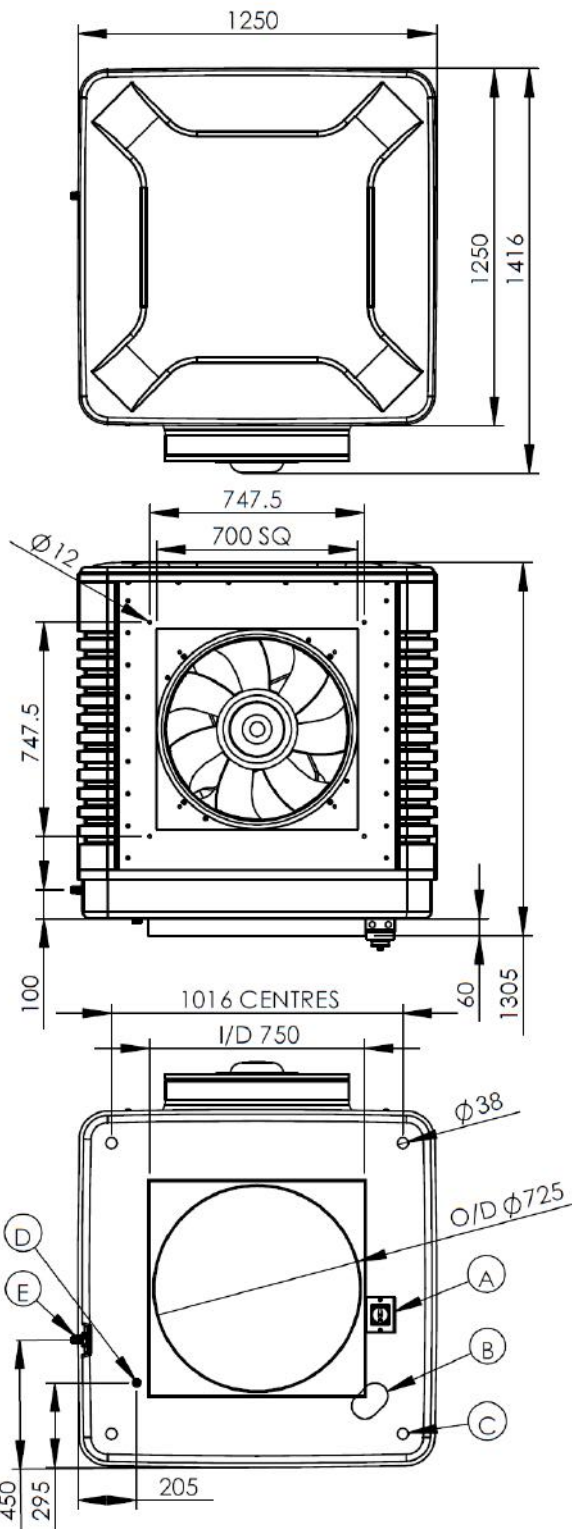
Dependant on:

- Temperature rise between supply and exhaust.
- Volumetric air flow rate

Note that this does not describe the adiabatic cooling function.

Temp. Rise, ΔT	5°C	7.5 °C	10 °C	12.5 °C	15 °C
Air Flow					
13,500 m ³ /hr	23	34	46	57	68
10,125 m ³ /hr	17	26	34	43	51
6,750 m ³ /hr	12	17	23	29	34
3,375 m ³ /hr	6	9	12	15	17

Calculated using $\dot{Q} = (\dot{m}C_p)_{air} \Delta T$ with $\rho_{air,NTP} = 1.204$ & $C_{p,air,NTP} = 1.005$



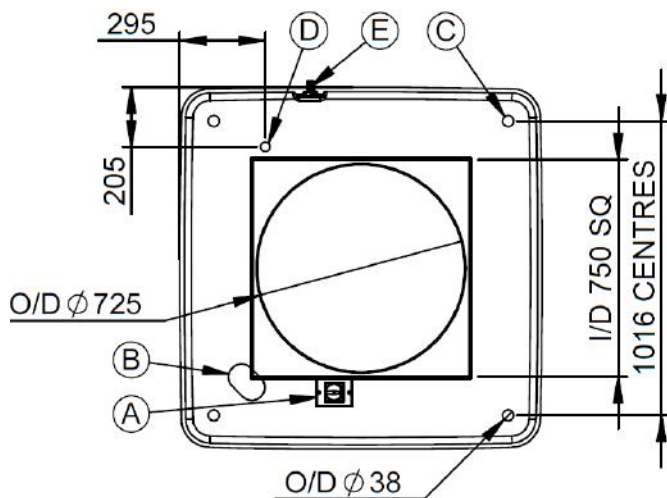
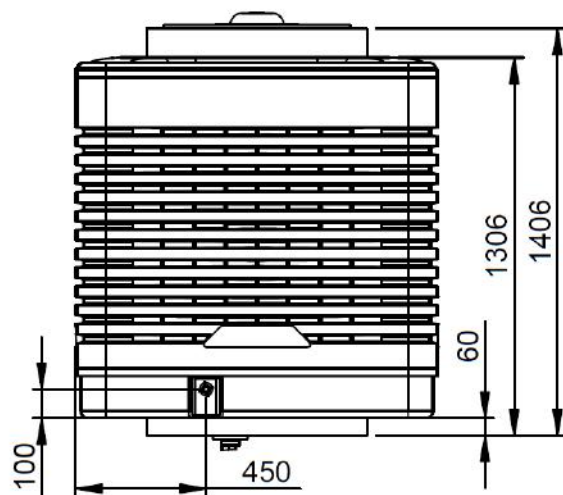
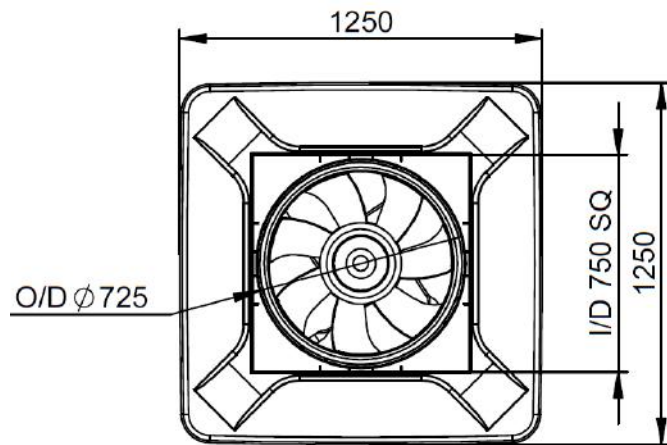
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A	Rotary Isolator
B	Control Panel Port
C	Support Socket (x4)
D	1" BSP Drain Valve
E	1/2" BSP Supply Spigot



ECP80-03 Configuration Details

Top Discharge



Configuration Features

Maximum Flow Rate	18,000m ³ /hr or 5 m ³ /s
Cooling Pad Area	3.3m ²
Unit Size (H x W x D)	
Installed	1406 x 1250 x 1250 mm
Delivered (incl. pallet)	1506 x 1300 x 1300 mm
Duct Connection Port	
Square	750 mm I/D (Female)
Round	725 mm Ø O/D (Male)
Weight	
Ventilation mode	150kg
Cooling mode	215kg
Sump at full capacity	235kg
Delivered	165kg

Serviceable Cooling Load (kW)

Dependant on:

- Temperature rise between supply and exhaust.
- Volumetric air flow rate

Note that this does not describe the adiabatic cooling function.

Temp. Rise, ΔT	5°C	7.5 °C	10 °C	12.5 °C	15 °C
Air Flow					
18,000 m ³ /hr	31	46	61	76	91
13,500 m ³ /hr	23	34	46	57	68
9,000 m ³ /hr	16	23	31	38	46
4,500 m ³ /hr	8	12	16	19	23

Calculated using $\dot{Q} = (\dot{m}C_p)_{air} \Delta T$ with $\rho_{air,NTP} = 1.204$ & $C_{p,air,NTP} = 1.005$

Note that all dimensions shown are nominal and have a ±10mm tolerance due to manufacturing processes employed.

A	Rotary Isolator
B	Control Panel Port
C	Support Socket (x4)
D	1" BSP Drain Valve
E	½" BSP Supply Spigot