

## ECP External Evaporative Cooler

The ECP is part of EcoCooling's external evaporative cooler range. At its design flow rate of 12,600m<sup>3</sup>/hr it can service an area of 250m<sup>2</sup> or an IT cooling load of 40kW. The ECP range is also available in a ECPL model for larger loads (~60kW) and also as a wetbox (without a fan). A list of approved installers is available on request.

## Technical Specifications

Characteristic/Feature	Value/Detail
Power Supply	240V 50 Hz
Cooling Capacity in Adiabatic Mode	40kW
Design Supply Flow Rate	12,636m <sup>3</sup> /hr .
Weight Dry Operating	55kg 92kg
Dimensions (h x d x w)	950 x 1170 x 1170mm
Design Power Usage (60% fan speed): Cooling Mode Ventilation Mode	0.9kW 0.9kW
Duct Size (d x w)	645 x 645mm
Standard Control	5-speed wall control



Down Discharge ECP Unit

## Installation Requirements

- Fresh air intake through pads
- Water supply and drain through the sump supply 500 L/hr. Sump Capacity 23L
- 3~ power supply
- Extract fan or non-return damper
- Additional temperature sensors
- Ducting into room



Example ECP Installations

## Core Features

**EcoCooling Control System:** The standard unit is controlled via a 5 speed wall control module.

**Simple Servicing:** The cooler should be serviced quarterly. Three stages are involved in a routine visit:

- ❖ Running a test routine to check the functionality of all components;
- ❖ Cleaning the sump and pads with fresh water and a damp cloth;
- ❖ Inspection and changing of filters.

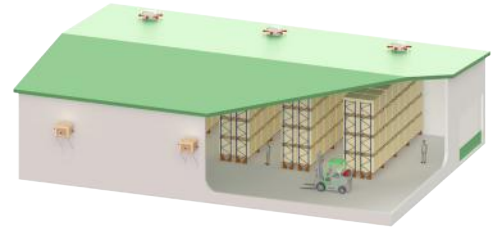
All core components are situated at the front of the machine, just inside the cabinet doors and any of the electrical components can be changed in 30 minutes.



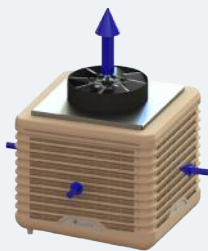
## Energy Usage and Operation Costs

Compared to a traditional refrigeration system the estimated energy savings are expected to be around 90%. A single EcoCooler, rated at 35kW, can show carbon savings of up to 10,000kg per year and cost less than 15p per hour to run.

Utility	Usage and Cost per Hour
Electrical Consumption	£0.120
Water Consumption (average)	£0.012
Total Cost per Hour	£0.132
Total cost per 168 hour continuous working week	£22.18



## Basic Principles



### Ventilation Mode

In ventilation mode, the water circulation system is not in operation. The coolers supply fan is used to bring external ambient air into the building.

### Cooling Mode

In cooling mode, the water circulation system is in operation and the cooling pads are wetted. The evaporation of water from the pads results in a reduction in air temperature.

## Optional Add-Ons

**Noise Reduction:** Coolers can be fitted with noise reducing fans and anti-vibration mounts.

**EU4 Filtration:** Wrap around filter jackets are available for all configurations.

**Configuration Options:** The coolers standard configuration is down discharge (air supplied through the bottom of the cooler. Top discharge and side discharge are available.

**CREC Control:** Additional functionality can be added through a CREC control module which includes logging of performance data and faults, altering of system parameters, a functional test routine and password protection. Software can be managed through an ESCROW account.

**Air Distribution:** EcoCooling stock a number of different plenums which can be used for air distribution in buildings.

**Colour Coating:** Units can be colour coated to a specified RAL number.

## Legionnaires

EcoCooling's process control system ensures the risk of legionella is kept to a minimum. The main risk factors for legionella formation have all been addressed in the design and controls of the ECT units. For more information and risk assessment forms please contact EcoCooling directly.

## Commissioning Service

EcoCooling offer a commissioning service. Parameters within the software will be set to client specifications and energy use optimised during the service. Commissioning can also be performed remotely.

