



## DATA SHEET 1504

## ECT 5400 Internal Evaporative Cooler

Front Discharge • Side Discharge • Down Discharge

The ECT 5400 evaporative cooler is manufactured by EcoCooling in the United Kingdom. The cooler is designed to meet all European electrical, water and other safety legislation.

- The ECT5400 cools air through evaporation of water and serves as an air handling unit.
- The cooler is designed to handle 5,400m<sup>3</sup>/hr.
- All air supplied to the area being cooled must be extracted or exhausted from it.

**Material**

The cabinet is manufactured from a combination of stainless steel, mild steel and AluZinc ©.

**Dimensions**

Unit Size (H x W x D)	
Installed	1800 x 1220 x 820 mm
Delivered (incl. pallet)	2000 x 1350 x 1050 mm

Note: that the intake connecting section will add 50mm to the width or depth depending on its position

**Electrical Supply**

Voltage	1~ 240V 50Hz
Current	
Design	2.1 A
Maximum	6.6 A
Power	
Design	0.32 kW
Maximum	1.08 kW
Protection	Integrated isolator switch

**Air Routes**

Intake Size	600 x 300mm
Intake Location	Left or Rear of cooler
Recirculation Size	600 x 300mm

**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"> <li>• Solenoid inlet valve</li> <li>• Float level probe activated shut off</li> <li>• Optional actuated valves available for frost protection</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• WRAS compliant</li> <li>• Double check valve recommended</li> </ul>
Drain	
Capacity	2000 l/hr minimum
Connection offered	1" BSP male thread
Control	Drive Open-Normally Closed drain valve

**Weight**

Ventilation mode	285 kg
Cooling mode	301kg
Max. at overflow	385 kg
Delivered	300 kg

**Cooling Pads**

Manufacturer	Munters
Material	CELdek® 5090
Saturation Efficiency	85-89%
Dimensions	680 x 870 x 100 mm
Quantity	2

**Circulation Pump**

Flow Rate	1850l/hr (intermittent)
Power	50W
Voltage	220-240V
Pump Type	Centrifugal
Motor Type	Encapsulated shaded pole
Transmission	Magnetically coupled
Protection	Auto-reset Overload

**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, $\Delta T$	5°C	7.5°C	10°C	12.5°C	15°C
Air Flow					
5,400 m <sup>3</sup> /hr	9	13.5	18	22.5	27

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

**Control**

- Integrated EcoCooling PLC control system  
*See associated documentation for further detail.*
- 7" Touchscreen HMI/GUI for local control
- Remote communication options
  - VPN access to Touchscreen GUI
  - TCP/IP over Ethernet
  - Modbus RTU RS485

**Air Filtration**

- Integrated Insect Screens
- Intake air subject to EU4 filtration as standard
- Filtration of return or supply air optional

**Maintenance**

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

**Warranty**

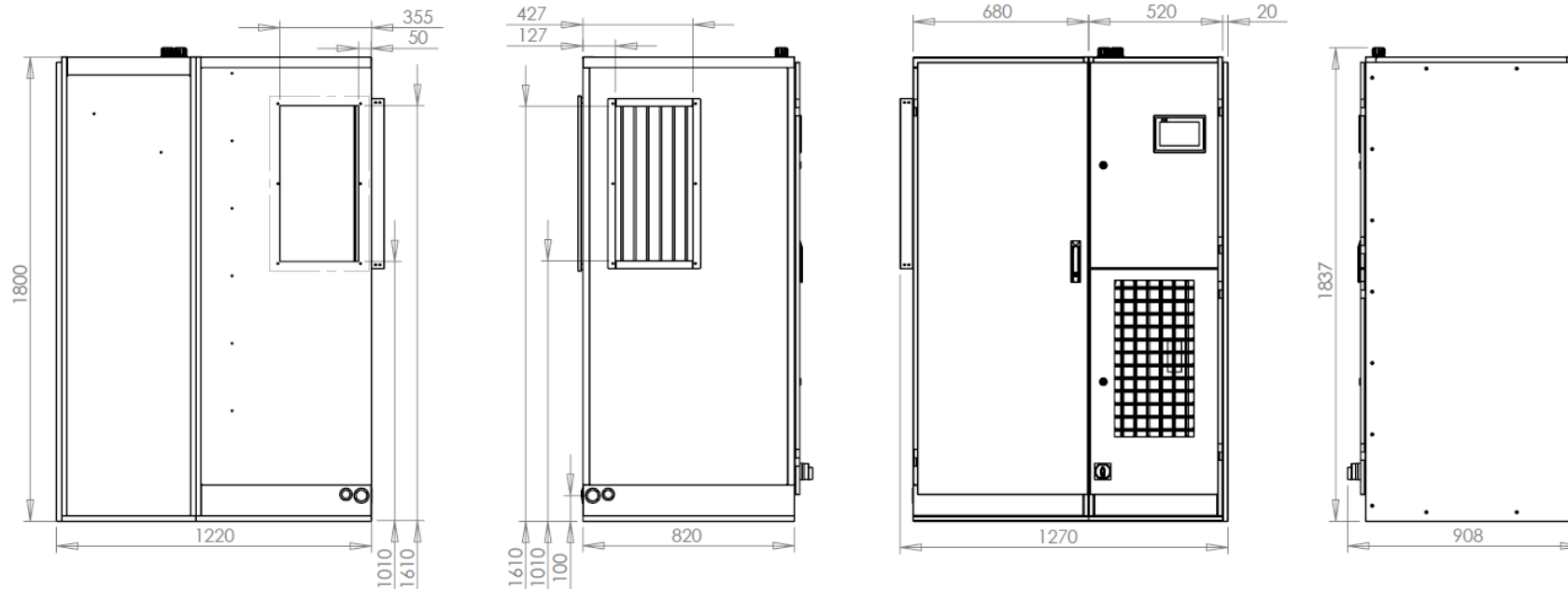
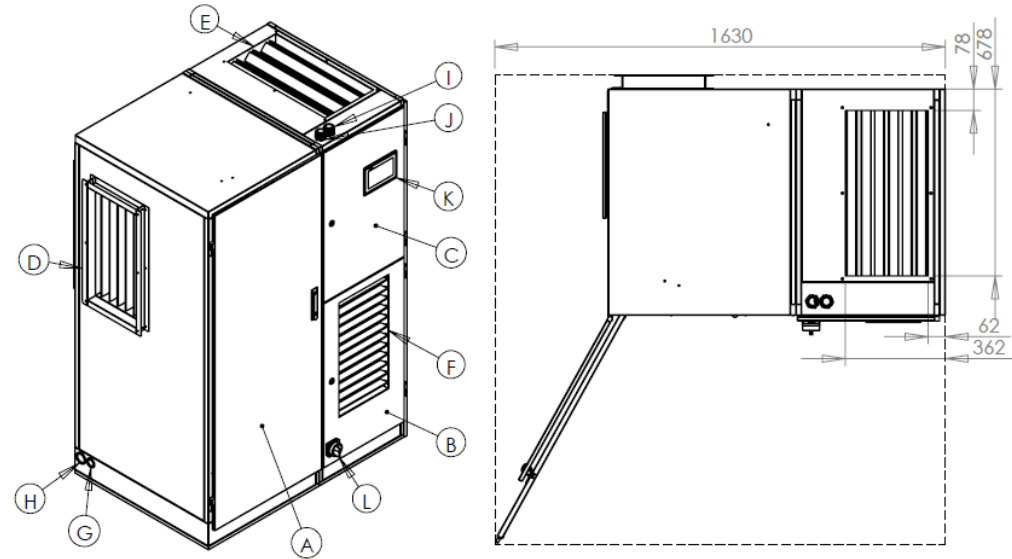
2 years parts only



# ECT5400 Technical Drawing

## General Overview

ITEM	DESCRIPTION
A	COOLING CHAMBER
B	FAN CHAMBER
C	CONTROL PANEL ENCLOSURE
D	AIR INTAKE 300X600MM C/W 30MM DUCT FLANGE (REAR OR SIDE)
E	RECIRCULATION AIR INTAKE 300X600MM
F	DOUBLE DEFLECTION SUPPLY GRILL 300X600MM
G	Ø37 MAINS WATER INLET PORT (REAR OR SIDE)
H	Ø47 DRAINAGE PORT (REAR OR SIDE)
I	COMMS CONNECTION PORT - 32MM CONDUIT GLAND
J	POWER CONNECTION PORT - 32MM CONDUIT GLAND
K	7" TOUCH SCREEN USER INTERFACE
L	1~ PANEL MOUNT DISCONNECT ROTARY ISOLATOR SWITCH



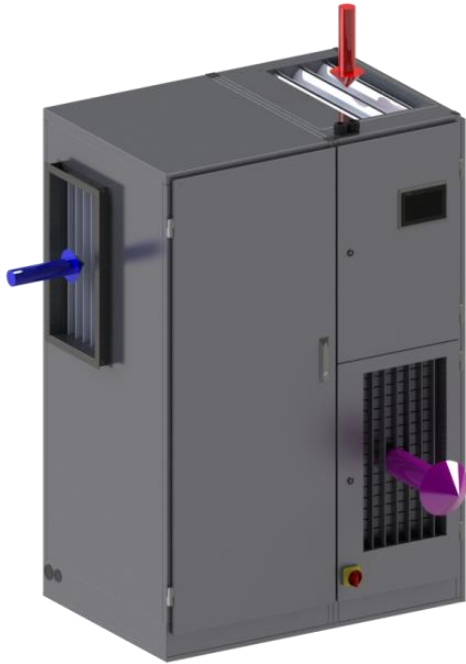
Do Not Scale. Front Discharge configuration shown. See subsequent sheet for detail of the side discharge grille location.



## ECT5400 Configuration Options

Front Discharge • Side Discharge • Down Discharge

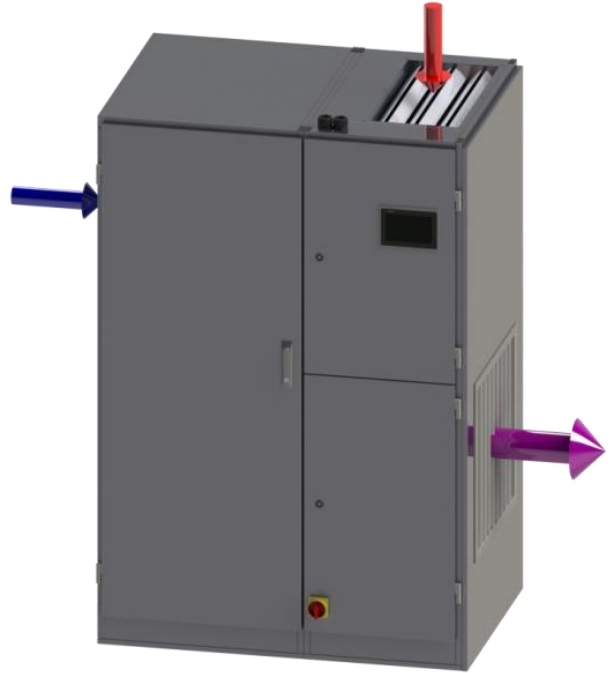
### Front Discharge



#### Configuration Features

Air Supply Point	635 x 320mm grille with double deflection vanes
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### Side Discharge



#### Configuration Features

Air Supply Point	520 x 520mm grille with double deflection vanes
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### Down Discharge



#### Configuration Features

Air Supply Point	740 x 440mm port
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## ECT5400 Additional Filtration Options

Supply Filter Plinth • Recirculation Filter Module

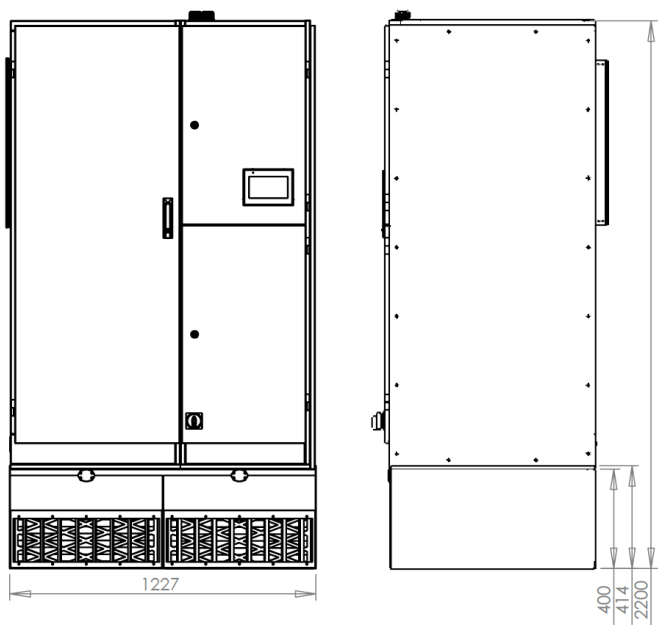
### Supply Filter Plinth



#### Configuration Features

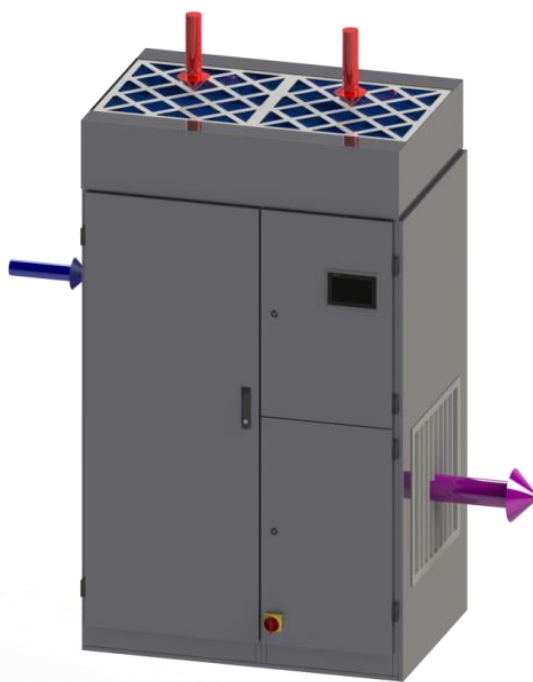
Compatibility	Down Discharge Only (Lowered HMI available)
Filter Type	EU4 pleated cartridge
Filter Dimensions	595 x 595x 100mm
Quantity	2
Air Supply Point	170 x 1170mm grille with single deflection vanes
Weight	60kg

#### Technical Drawings



Down Discharge ECT5400 complete with Supply Filter Plinth  
Front and Right view

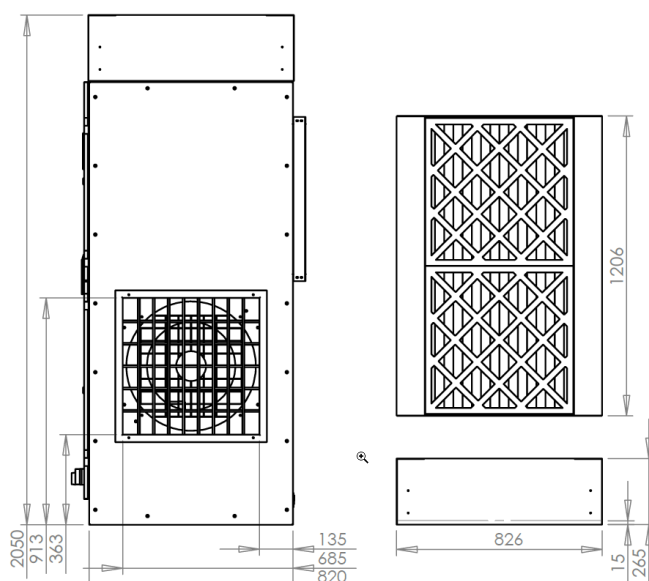
### Recirculation Filter Module



#### Configuration Features

Compatibility	All Configurations
Filter Type	EU4 pleated cartridge
Filter Dimensions	595 x 595x 100mm
Quantity	2
Air Supply Point	As per base configuration
Weight	23 kg

#### Technical Drawings



Side Discharge ECT5400 complete with Recirculation filter module  
Right view

Recirculation filter module  
Top and Side View