DATA SHEET 1801

ECV18000 Internal Direct FreeCooler

The ECV18000 FreeCooler is manufactured by EcoCooling in the United Kingdom.
The cooler is designed to meet all relevant European electrical, water and other safety legislation.

- The ECV18000 serves as an air handling unit delivering filtered fresh air at a consistent temperature.
- It is intended for deployment in modules of between 1 and 3 coolers on a common controller.
- The cooler is designed to handle 18,000 m³/hr as part of a balanced ventilation system.
- All air supplied to the area being cooled must be extracted or exhausted from it.

Material

The cabinet is manufactured in mild steel treated with a zinc primer and powder coating.

Dimensions (see drawings for detail)

Unit Size (H x W x D)	
Nominal	2200 x 1200 x 900 mm
Maximum features	2212 x 1265 x 900 mm*
Delivered (palletised)	2362 x 1265 x 900 mm
Maintenance footprint	2212 x 2400 x 1780 mm*

*Excluding height of levelling feet

Weight

Installed	290 kg
Delivered	305 kg

Electrical Supply

Voltage	3~ 400V 50Hz
Current per phase	7.4 A (Soft start)
Design Power	3.5 kW
Maximum Power	4.6 kW
Protection	Integrated isolator switch

Air Route Sizes

Fresh Air Intake	700 x 700 mm
Recirculation Intake	700 x 700 mm
Supply Grille Size	600 x 840 mm

Air Filtration

- Supply air subject to EU4 filtration as standard

Control

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

Maintenance

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

Warranty

- 2 years parts only

Serviceable Cooling Load (kW)

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

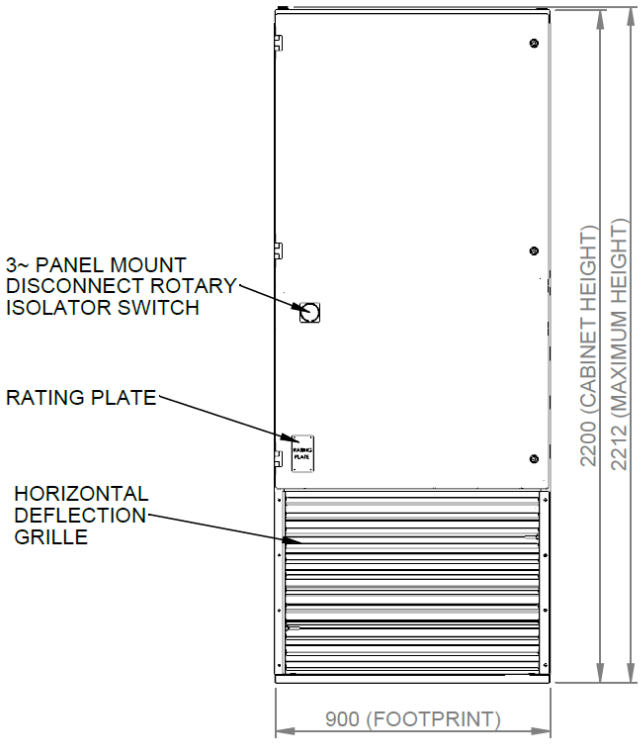
Temp. Rise, ΔT	5°C	7.5 °C	10 °C	12.5 °C	15 °C
Air Flow (m³/hr)/(m³/s)					
18,000 / 5.0	30	45	61	76	91

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

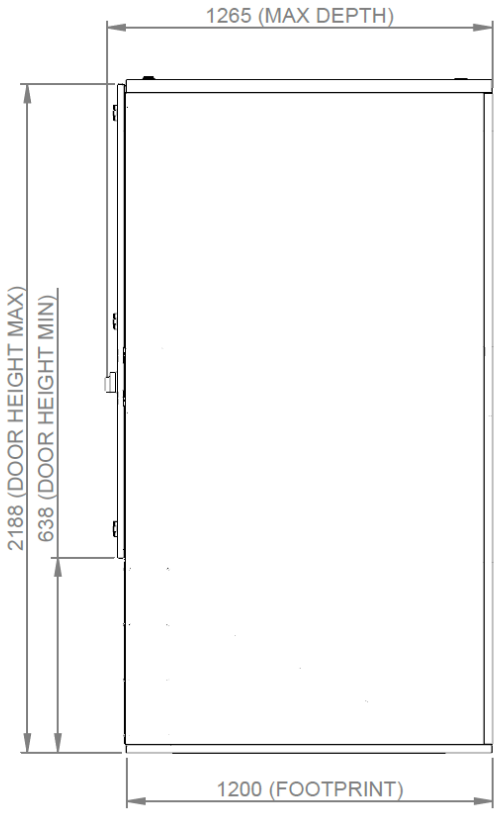
ECV18000 Technical Drawings

General Overview

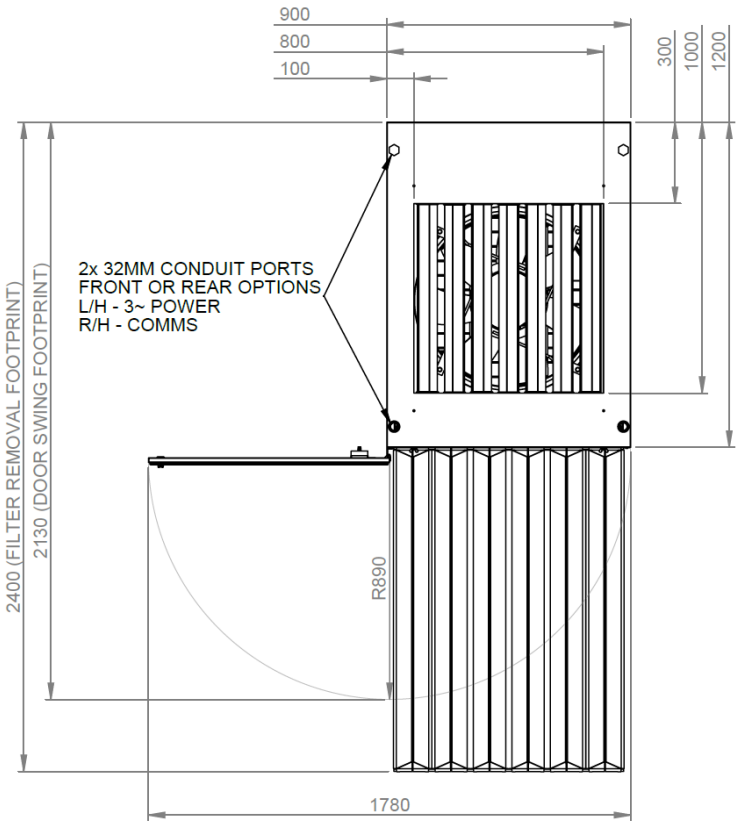
Front



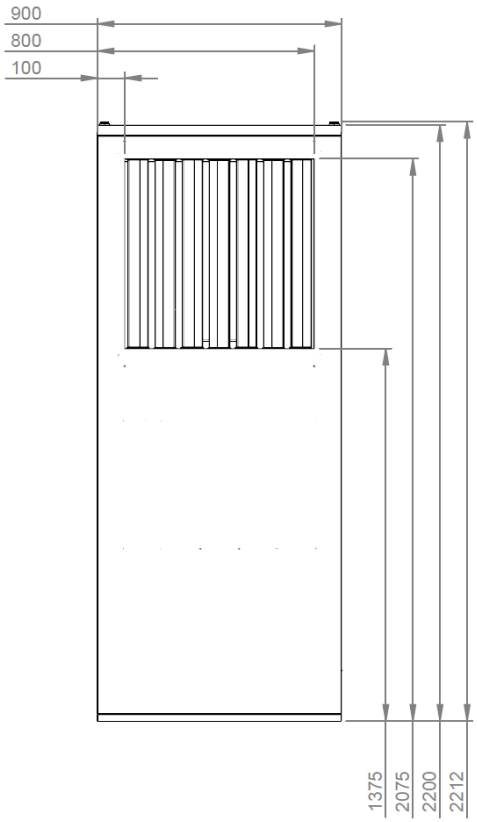
Side



Top



Rear

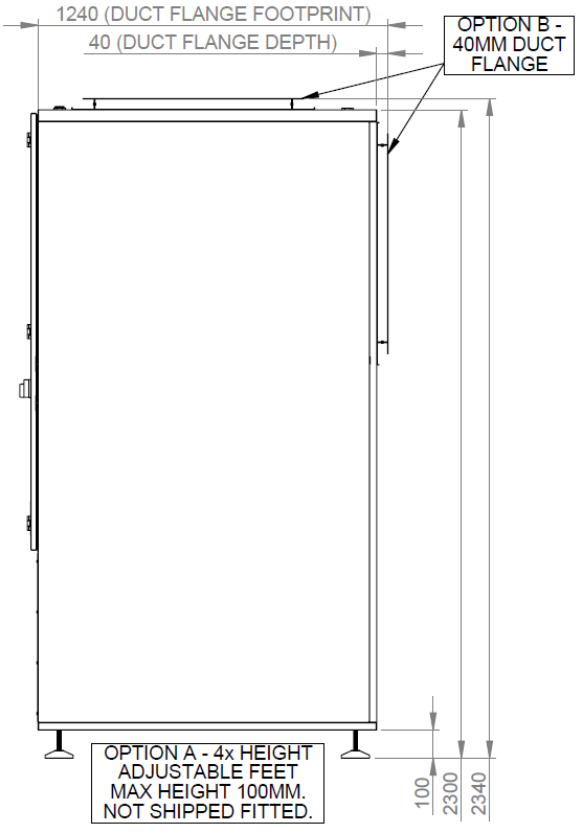


Do Not Scale. Optional duct connection flanges and intake grilles not shown.
Contact EcoCooling for additional dimensioned drawings of optional features.

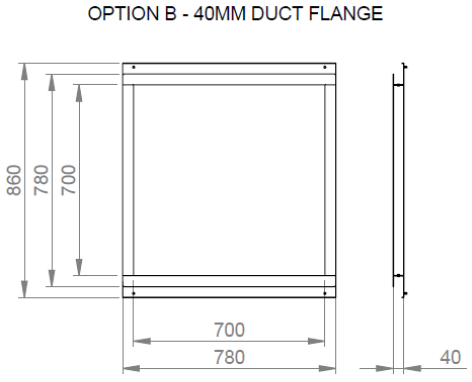
ECV18000 Technical Drawings

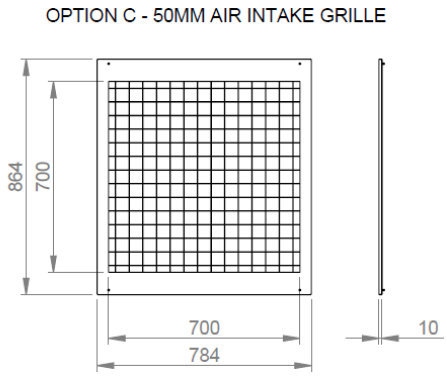
Options

Option A (adjustable feet) & Option B (duct flange)

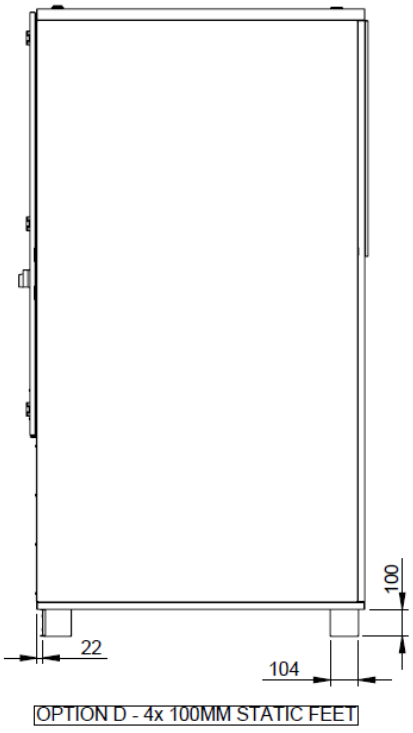


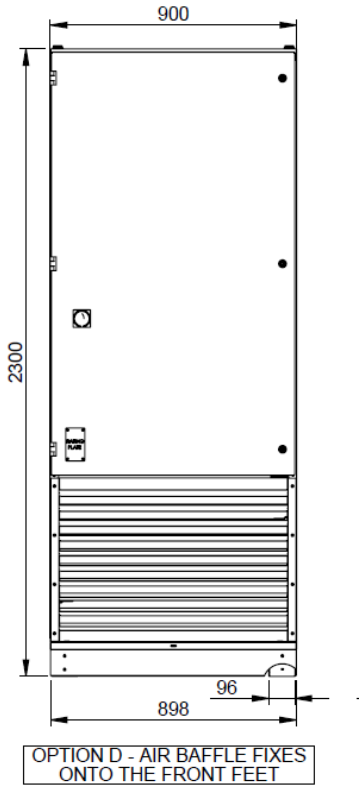
Option B (Duct Flange) & Option C (Intake Grille)





Option D (Fixed Feet and Blanking plate for air containment)





Do Not Scale. Optional duct connection flanges and intake grilles not shown.
Contact EcoCooling for additional dimensioned drawings of optional features.