

Ecotel Free Cooling

5 - 19kW



> Ecotel Outdoor range

Typical applications

- > Telecoms cabins installations
- > Internet service providers
- > Computer rooms
- > Switching / relay stations

Ecotel Outdoor range

Specifications

Ecotel Outdoor

The Ecotel Outdoor is a self-contained packaged unit that has been specifically designed and purpose-built for outdoor telecom and ISP applications, including cabins, shelters, computer rooms and telecom base stations.

The upflow unit is available in 5 model sizes – 5kW, 8kW, 11kW, 15kW and 19kW. The single circuit downflow unit is available in 4 capacity sizes – 5kW, 8kW, 11kW and 15kW.

The unit utilises single or dual systems to provide one, two or three stages of cooling (dependent on unit selected) in addition to its standard free-cooling capabilities and uses the latest hermetic scroll compressor technology. The Ecotel Outdoor has been designed for applications where floor space is unavailable, utilising a secure 'clip-on' mounting that is quick and easy to install.

Due to its external placement particular attention has been made to security with vandal-proof fixings employed on all external service panels and the added security of integrally-punched grilles and low-profile fan mountings.



Controls

The unit is controlled by a microprocessor controller operating one free-cooling stage and one, two or three mechanical cooling stages. An optional remote display is available which allows adjustment of setpoints and monitoring of temperatures, alarms and hours run. In addition the Ecotel Outdoor offers a variety of options including electric heating, emergency cooling, shut-off dampers and BMS communication.

Key Features

- > 5kW – 19kW cooling capacity
- > Microprocessor controller
- > Upflow and downflow configurations
- > Backward curved centrifugal fans
- > Hermetic scroll compressors
- > Anti-vandal construction
- > Large surface area coils
- > Extra quiet unit option
- > Electric heating option
- > Emergency cooling option



Key feature : Free-cooling

Operating continuously 24 hours a day, 365 days a year, there is the potential to reduce the energy consumption of the heat management system by utilising the benefits of lower ambient temperatures for a significant proportion of the year.

The internal operating temperatures of modern day telecom cabins is higher than the actual outdoor dry bulb temperature for more than 95% of the year. Specific attention has been paid to this factor when designing the Ecotel product.

The Ecotel Outdoor has been developed to utilise a 'free-cooling' cycle which can totally satisfy the internal heat loads produced by the telecoms equipment for 67%* of the year. Where free-cooling cannot completely satisfy the cooling load the Ecotel will also operate on partial free-cooling which is topped up with an element of mechanical cooling. This feature means that the Ecotel only needs to operate entirely on mechanical cooling for about 4%* of the year and typically saves 70%* of the energy consumed by a conventional cooling system.

* (Based on ambient hours for London produced by the Meteorological Office, Bracknell, UK and cabin setpoint of 27°C)

Technical Specifications

Ecotel Outdoor - Upflow						
Model No.	Total Cooling Duty (kW)*	Nominal Supply Airflow (m ³ /s)	Dimensions (HxWxD)mm	Operating Weight (kg)	Sound Pressure @ 3m dB(A)**	Sound Pressure @ 10m dB(A)***
VTCU5	6.14	0.41	1716 x 775 x 451	185	64	53
VTCU8	7.94	0.41	1716 x 775 x 451	210	64	53
TCU11	11.0	0.95	2040x1365x595	280	64	55
TCU15	16.0	1.20	2040x1365x595	285	66	55
TCU15D	15.3	1.20	2040x1365x595	296	66	55
TCU19D	22.5	1.15	2040x1365x661	400	74	59

* Nominal Cooling Duty based on 27°C db / 19°C wb and 35°C ambient
 ** Full DX Cooling
 *** Free-cooling / Evaporator fans only

Ecotel Outdoor - Downflow						
Model No.	Total Cooling Duty (kW)*	Nominal Supply Airflow per supply pan (m ³ /s)	Dimensions (HxWxD)mm	Operating Weight (kg)	Sound Pressure @ 3m dB(A)**	Sound Pressure @ 10m dB(A)***
DTCU5	5.7	0.70	1838x1005x645	245	63	35
DTCU8	10.1	0.70	1838x1005x645	250	64	35
DTCU11	13.3	1.20	2315x1105x600	315	64	55
DTCU15	18.1	1.20	2315x1105x600	320	66	55

* Nominal Cooling Duty based on 27°C db / 19°C wb and 35°C ambient
 ** Full DX Cooling
 *** Free-cooling / Evaporator fans only