

AIREDALE

air conditioning for every environment

Ecotel Indoor Range

5 - 21kW

5 - 21kW



> **Ecotel Indoor Range**

Typical Applications

- > Telecommunications
- > Internet service providers
- > Computer rooms
- > Switching / Relay stations

www.airedale.com

Ecotel Indoor Range

Specifications

Ecotel Indoor

The Ecotel Indoor range of self contained packaged air conditioning units has been specifically designed and purpose-built for indoor telecom applications, including cabins, shelters, computer rooms and telecom base stations.

The indoor range is available in upflow and downflow variants comprising six model sizes with cooling capacities ranging from 5kW to 21kW.

The range utilises single or dual refrigeration circuits to provide one, two or three stages of cooling, dependent on unit selection, in addition to its standard free-cooling capabilities and uses the latest hermetic scroll compressor technology.

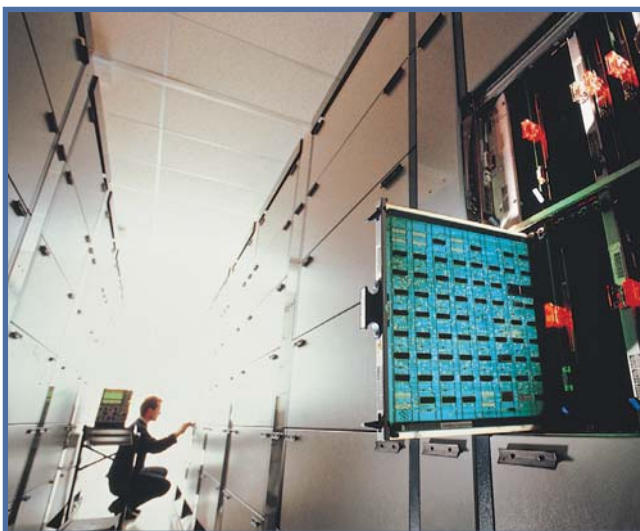
The units are constructed of an anodised aluminium frame with bolted, painted steel panels, which can be removed to allow front, side and rear access to interior components. The cabinet provides an airtight enclosure within which the packaged unit is positioned and this, together with the internal acoustic insulation, greatly reduces noise breakout.

Key Features

- > 5kW to 21kW cooling capacity
- > 6 model sizes
- > Energy efficient free-cooling operation
- > Advanced AireTronix controls technology
- > Low noise
- > Full 360° service and maintenance access
- > Upflow and downflow configuration
- > Small footprint
- > Direct drive fan technology
- > Single and dual circuit models
- > Scroll compressor technology
- > BMS compatibility
- > Fully packaged unit



Typical Applications



Switching Stations



Computer Rooms

Key Feature : Easy to install, commission, maintain and service

All major components, such as the expansion valve and compressor are accessible from the side of the unit and the control panel from the front. Isolated from the air flow, this area can be worked on, (along with the control panel) with the unit in operation, helping to simplify commissioning and maintenance.

Designed and delivered as a fully-charged packaged system, the Ecotel Indoor unit eliminates the need for on site pipe work installation. This has the benefit of reducing installation costs in terms of both materials and time. An anodised exo-frame combined with removable access panels allows for 360° unit access if required.



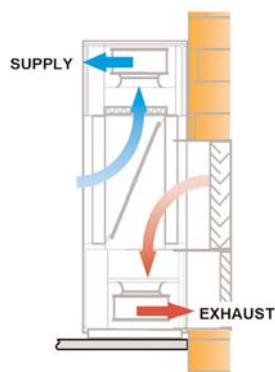
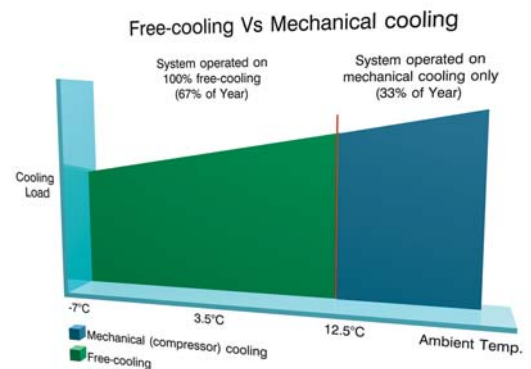
Key Feature : Free-cooling

When 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.

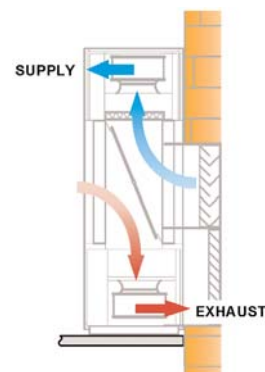
The internal operating temperatures of modern day telecom cabins is higher than the actual outdoor dry bulb temperature for more than 95% of the year and Airedale have paid specific attention to this factor when designing the Ecotel product.

The Ecotel units have 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.

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



High ambient mode
Mechanical cooling



Low ambient mode
Free-cooling

Key Feature : Direct-drive supply air fans

Direct-drive backward-curved impeller fans are fitted as standard across the Ecotel Indoor range. A key feature of the direct-drive fan is its high performance impeller that is dynamically balanced for maximum efficiency, offering easy set-up and speed adjustment.

The belt-free operation of the direct-drive fans ensures minimal maintenance and eliminates belt particles from contaminating the air flow. Being fully adjustable by means of the microprocessor display, allows for simple alteration of air flow and static pressure, reducing commissioning time to a minimum.



Ecotel Indoor							
Model No.	Total Cooling Duty (kW)*	Sensible Cooling Duty (kW)*	Nominal Supply Airflow (m ³ /s)	Dimensions (H x W x D) mm	Operating Weight (kg)	Indoor Noise (Sound Pressure @ 3m dB(A))**	Indoor Noise (Sound Pressure @ 3m dB(A))***
ITCU 5	4.8	4.5	0.30	1940 x 600 x 600	185	61	61
ITCU 6.5	6.4	5.6	0.36	1940 x 600 x 600	190	64	63
ITCU 11	11.1	10.0	0.70	2107 x 1067 x 790	280	48	46
ITCU 14	13.2	11.7	0.90	2107 x 1567 x 790	310	57	56
ITCU 17D	14.8	14.1	1.20	2107 x 1567 x 790	420	52	47
ITCU 21D	18.1	16.8	1.50	2107 x 1567 x 790	450	56	54

* Nominal cooling duty based on 24°C db / 19°C wb and 45°C ambient
 ** Full DX Cooling
 *** Free-cooling / Evaporator fans only

AIRETronix Controller

Ecotel Indoor units are equipped with the very latest microprocessors available from Airedale. These fully programmable controllers are specifically developed for use with Airedale air conditioning systems, offering powerful analogue and digital control to meet a wide range of monitoring and control features. The Controller's in-built display allows viewing of the unit's operating status and it's multi-button keypad allows adjustment to control parameters by allowing the operator easy access to a menu system.



Standard Microprocessor Features:

- > 4 x 20 LCD back-lit display
- > 14MHz 16 bit CPU
- > Remote on/off capability
- > Compressor anti-cycle control
- > Compressor rotation
- > Duty/standby operation
- > Duty rotation (network units)
- > Visual alarm display
- > Password protection

AIRETronix Duty/Standby

AireTronix microprocessors can be set-up for duty/standby operation without the requirement for an external sequence panel. Up to six Ecotel Indoor units can be networked together.

AIRETronix Connections

The controller can be connected and integrated into a wide range of other BMS systems either by using additional internal plug-in serial cards or external gateways. The plug-in serial cards have options to communicate with the following systems – Carel, Modbus-Jbus, Trend, Echelon LonWorks devices and Metasys Johnson Controls. With the addition of external gateways the following integration is available - BACnet, Fax, SMS, GSM, SNMP (Simple Network Management Protocol) and Ethernet TCP IP.

AIRETronix Supervisory Options

AireWorks

AireWorks is the software program for the supervision, monitoring and control of chillers and air-conditioning systems managed by AireTronix controllers. AireWorks can act as a server allowing access to a graphical representation using a web browser such as Internet Explorer.

AireWeb

The AireWeb device is a gateway for interfacing AireTronix controllers to an Ethernet network. The web pages are created based on specific parameters of the installation, and can be adjusted remotely via the internet.

GSM

For very simple remote alarm indication, a recipients mobile telephone number can be entered into the controller, allowing alarms to be sent to any required person.

Airedale International have developed an AireTronix Control Centre at it's corporate headquarters in Leeds. The Centre features live, working AireTronix controllers, including full live technical presentations and pre-sales product demonstrations. The facility also features a remote site monitoring bureau.



Standard Features

Through its use of carefully selected components and advanced technological features, the Ecotel Indoor provides a wide range of technical advantages in an excellent value package. AireTronix controls are fitted as standard, to allow for full intelligent control that maximises system efficiency and minimises unit life-cycle costs.

- > Backward-curved centrifugal fans for improved efficiency and reduced noise breakout
- > The Ecotel Indoor range has been designed with a small footprint (models 5 & 6.5 - 600 x 600mm), this enables easier installation and is ideal for limited space applications
- > Hermetic scroll compressors
- > Intelligent variable head pressure control ensures energy efficient operation of the condenser fans while protecting the system during low ambient conditions
- > Large surface area coils positioned to optimise airflow and heat transfer
- > Sight glass and filter drier included for system reliability
- > G4-rated pleated disposable filters, give superior performance with lower airside pressure drops
- > AireTronix controller allows for intelligent unit control and full communication to BMS systems
- > An outside air damper is capable of supplying 100% fresh air into the room as free-cooling
- > Spring return damper actuator prevents fresh air entering during 'off' periods or power failure
- > Dual circuit models available (models 17-21 only)
- > Flexible design allows for a variety of supply and return air patterns
- > Master/slave configurations allows up to 6 units to be networked together
- > Default factory settings allows simple plug in and switch on operation
- > Standard RAL 7035 colour ensures an aesthetic match to almost all applications

Options

In addition to its wide range of standard features the Ecotel Indoor range offers a number of enhanced options that can be specified to create a bespoke product that meets each individual customers unique application requirements.

- > LCD backlit display allows for password protection along with on-site adjustment and interrogation of all major components
- > Multilingual display (French, German and English)
- > Modbus, Trend, Lonworks, Carel and Johnson Metasys interface cards ensure full network connectivity
- > Clock card for date and time tagging of alarms
- > GSM modem kit for remote alarm monitoring via specified mobile telephones
- > Epoxy-coated aluminium finned coils can be supplied for atmospheres where high corrosion is anticipated
- > Electric heating
- > Mains electric isolator
- > Unit-mounted emergency stop button
- > An evaporator filter can be fitted for areas where the unit is exposed to above average levels of airborne particles/debris
- > Wall transition sleeve and weather louvers
- > An acoustic jacket can be fitted to each compressor for noise sensitive areas (models 11-21 only)
- > Split-case design simplifies site access and improves unit mobility (models 11-21 only)

Key Feature : Fully packaged indoor unit

The Ecotel Indoor is a fully packaged indoor unit incorporating integrated evaporators and condensers. It is designed to be aesthetically pleasing, eliminating the need for external condensers, thereby increasing architectural freedom in the design of roofs and facades. The Ecotel Indoor also benefits from a compact footprint and streamlined interior, easing installation and maintenance.



- > For the latest information on our Close Control products please visit : www.airedale.com
- > Please refer to the technical manuals for more detailed information
- > Airedale participates in the Eurovent Certification programme as a founder member. The performance data of certified products is independently verified and identified within the relevant sales literature

Your nearest Airedale distributor is:



**Airedale International
Air Conditioning Limited**

Leeds Road, Rawdon
Leeds, LS19 6JY, England

T : +44 (0) 113 239 1000
F : + 44 (0) 113 250 7219
E : enquiries@airedale.com
W : www.airedale.com