



# ECO SLIM



## **ECOTEL** Specialised applications

#### **TECHNICAL EXCELLENCE AND SUPPORT - QUALITY & VALUE**

ECOTEL is an innovative, application-focused company which develops specialised heat-transfer products for different industries. Our 25-year history brings with it a vast amount of experience, innovation and technical knowledge.

Subsequently, our understanding of the client's requirement as well as the development and production of specialized products is quick and efficient. Our engineering, 3D CAD drawing, mould manufacturing and software development teams are all in place with highly trained professionals in each one of these areas.

**ECOTEL** currently offers four products designed to meet the specific challenges of the Telecommunication Industry in their Base Stations and Small Data Centres

**ECO CUBE:** A compact, highly efficient packaged unit, designed to replace old-style window units in the telecommunication industry. It is available in 3,5 kW and 5,5 kW.

**ECO RACK:** A compact, highly efficient unit designed to fit in a standard computer rack of 600w x 450d x 300h (7U). This unit supplies and returns both cooling and condensing air at multiple entries and exits, making it the most versatile cooling unit available. The high static pressure fans for both evaporator and condenser allow air to be ducted in and out of the cabinet with ease. It is available in 1,5kW.

**ECO SLIM:** An active cooling, compact, high-efficiency packaged unit, designed to fit onto exterior walls or doors of telecommunication equipment enclosures. The high-static evaporator fan allows cool air to be ducted with small flexible ducts to direct the air to specific hot spots within the cabinet. Available in 1,5kW and 3,5kW.

**ECO SPLIT:** A special split air-conditioning unit designed for highsensible loads in telecom nodes and small computer rooms. It is available in 2,6kW, 3,5kW, 5,5kW and 7kW.

## Technology

The holistic design approach of **ECOTEL** seeks to incorporate all the elements, factors and challenges presented by the telecommunications industry. We've taken into account highly remote and volatile site conditions vs the high requirement for accuracy, reliability and sustainability in a cooling unit. To achieve this ECOTEL uses the best technologies available on the market. Addressing these challenges the following points were considered: **Cooling:** We uses free cooling instead of mechanical cooling where possible. When mechanical cooling is necessary, we employ the best possible technology currently available, considering a two-pronged approach: Firstly, units are designed with a high sensible heat ratio to match the high sensible loads generated in electronic component cooling. Secondly, we use BLDC compressors, evaporator and condenser fans which all operate at different speeds to minimize power usage and ensure stable operation. Further enhancing efficiency, electronic expansion valves are utilized, ensuring optimised refrigerant flow.

**Controls:** Our controls have been purposely designed and programmed to ensure that optimum running conditions are achieved in a wide variety of conditions, including remote monitoring via a TCP/IP MODBUS communication port. This ensures no thermal shock to equipment with the added advantage of reduced power consumption to the client.

**Dual power supply:** Our unique integrated inverter system allows for both 220VAC and 48VDC and permits an ultra-wide frequency and input voltage range ensuring stable operation in unstable conditions.

## All these products focus on enhancing the reliability of networks while reducing operational costs.

#### Reliability

The construction of the unit is strong and robust and with an industrial design. Only top quality components are used

#### High energy efficiency

Units have a free cooling option

Compressors, condensers and evaporator fans are all BLDC and can operate at variable speed. This ensures stability in both the refrigeration system and the temperature control of the system

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## ECO SLIM

An active cooling, compact, high-efficiency packaged unit, designed to fit onto exterior walls or doors of telecommunication equipment enclosures. The high-static evaporator fan allows cool air to be ducted with small flexible ducts to direct the air to specific hot spots within the cabinet. Available in 1,5kW and 3,5kW.

### ES7I / ES12I





Model No		E	S7I	ES12I
Dual Power Supply		220-240V/1PH/50Hz - 48 VDC		
Supply Voltage Range		176 - 230 VAC - 36 - 60 VDC		
PERFORMANCE		1		
Cooling	Total Capacity <sup>1</sup>	W	2000	3500
	Sensible Capacity <sup>2</sup>	W	1650	5100
	Power Input @ 100%1	W	1100	1900
	Power Input @ 50%1	W	270	960
E.E.R. / C.O.P @ 100%1		W/W	3.6	/3.2
E.E.R. / C.O.P @ 50%1		W/W	5.3	/4.5
Unit Running Amps 220 VAC		А	5	8.9
Unit Running Amps 48 VDC			19.5	39
Noise Level		dB(A)	75	77
SUPPLY AIR FAN				
Air Flow Volume (H)		m3/h	440	900
COMPRESSOR				
Rated Load Amps (RLA) 310 VDC		А	2.1	4.6
REFRIGERATION CIRC	CUIT			
Compressor Control		BLDC Inverter Compressor		
Refrigerant Control		Electronic Expansion Control		
Refrigerant (410A) Weight		kg	0.3	0.7
DIMENSIONS AND W	EIGHT			
Dimensions		W×H×D	450 x 600 x 300	500 x 850 x 350
Unit Weigh		kg	33	53

<sup>1</sup>Indoor 27°C DB, 47% RH / Outdoor 35°C DB, 40% RH

 $^2$  Indoor 30°C DB, 40% RH / Outdoor 35°C DB, 40% RH Specifications subject to change without notice

#### FEATURES

- 1. An integrated free cooling feature
- 2. A unit specially designed for high sensible loads
- 3. Energy ecient inverter technology with R410 gas
- 4. Dual power supply with 220V AC and 48V DC
- 5. Over sized filtration to improve running hours between services
- 6. Compact unit: to fit in the already large installed base
- 7. MODBUS RTU standard (TCP/ IP communication as an optional extra)
- Intelligent change over between unit 1 & 2

#### BENEFITS

- 1. Strong, robust and industrial design
- 2. Direct replacement, not requiring site alterations
- Energy saving of greater than 60% compared to conventional units
- 4. N+1 duty standby option with intelligent change over
- 5. Remote monitoring
- 6. Extended life-time due to reduced compressor run time

## ECO SLIM

### ES7I / ES12I

### DIMENSIONS

