

Eltek Cooling Box

Type A

Eltek is a world leader in the development of telecom power systems / solutions that are designed to meet the rapid growth within the field of telecommunication, as well as the increasingly stringent reliability requirements. A key to this reliability in the outside plant is creating a cool, dry and secure environment for the electronics. The Eltek Cooling Box incorporates an optimized thermal system controller and a high efficient Fan and Filter Solution that will keep even the most sensitive electronics functioning. This cost effective solution has a unique cube design that gives flexibility on multiple mounting options to meet the demands on different Shelter layouts and thus maximize the cooling performance.



ELTEK COOLING BOX

TYPE A

Doc: 2116082 – rev3.2

PRODUCT DESCRIPTION

Eltek's cooling box (ECB) is a cost effective and power saving solution for cooling and OPEX saving initiatives for the modernization of Telecom Shelters.

The ECB has the advantage that a large amount of ambient air can be filtered / exchanged, giving very high cooling performance with low power consumption while maintaining the internal environmental temperature, dust and humidity.

The ECB when used with Eltek's SmartPack Controller technology enables a total shelter environmental control including any installed box, split type or Inverter type Air conditioner.

Applications

- Telecom BTS 2G,3G,4G (LTE) Shelter
 - Repeater Station
 - Wimax
 - Broadband
- GSMR
- Industrial

KEY FEATURES

- ALUMINUM AND GALVANISED STEEL CONSTRUCTION
- LOW COST SINGLE BOX SOLUTION FOR ALL TYPES OF SITE.
 - New sites, Modernization of existing sites
- LIGHT WEIGHT AND EASY TO INSTALL.
- UNIQUE FAN SPEED DESIGN
 - Full speed control 0 to 100%
- MAXIMIZE FAN LIFE WITH REDUCE MAINTENANCE COSTS.
- DELTA ΔT TRACKING.
 - Internal temperature probe, External temperature probe and-Humidity sensor (optional)
- MOUNTING AIR FLOW OPTIONS:
 - Vertical, horizontal and Max flow integrated (optional)
- DATA LOGGING USING ELTEK SMARTPACK CONTROLLER
 - Temperature logging: Indoor, Outdoor, Fan speed and Event Logger (ACU Run Time)
- EVENT & DATA LOGGER FILES RETRIEVABLE BY USING SD CARD
- ALARMS: FAN FAIL, HIGH TEMP, MCB TRIP, FILTER BLOCK (OPTIONAL)
- ABLE TO CONTROL EXISTING AIRCON SYSTEM (MAX 2)
- COMPLETE SITE OVERVIEW
 - locally and remotely with Multi-Site Monitoring (Web Power , LAN connection)
- ONE CONTROLLER FOR ALL SITE FUNCTIONS
 - Basic control - I/O Monitor Type 3
 - Advanced control – Smartpack 1 or 2 + I/O Monitor Type 3

INPUT DATA

Air Flow	2000 m ³ /h	
Power	190 W (with zero pressure drop)	
Cooling capacity ($\Delta T=2.5^{\circ}C$) ($\Delta T=5^{\circ}C$) ($\Delta T=10^{\circ}C$)	1.5KW Heat Load 3.0 KW Heat Load 6.0 KW Heat Load	
DC Current	4.0 A	
DC Input	36-57 V	
Fan	<ul style="list-style-type: none"> ○ backward curved blades offering an extreme aerodynamic airflow efficiency ○ • Impeller: sheet aluminum, laser-welded Rotor: coated in black ○ control input 0-10 VDC / PWM ○ tach output ○ over-temperature protected motor ○ reverse polarity and locked-rotor protection, rotation is CW. 	
CF Filter Series (Std)	G4: 1.1 m ² [EN779] at Max 200PA and 2600 m ³ /h	F5: 8.2 m ² [EN779] at Max 350PA and 2837 m ³ /h
EF Filter series (washable filter options)	G4: 1 m ² [EN779] at Max 250PA and 2500 m ³ /h	F5: 6.5 m ² [EN779] at Max 250PA and 2500 m ³ /h
Operating temperature	-20 to +65 °C	
Operating Humidity	RH 0-95%	
Weight	Approximately 30kg	

CONTROLLER SPECIFICATIONS

Basic Control	Standalone - I/O Monitor Type 3	
Dual Control	1 Controller can control 2 ECB Fans	
Advanced Control	Smartpack 1, 2 + I/O Monitor Type 3	
Input Voltage	36-57 VDC	
Alarms	<ul style="list-style-type: none"> ○ Relay Alarming N/O – N/C ○ Configurable Inputs / Outputs 	<ul style="list-style-type: none"> ○ Climate Control ○ Filter Clog (optional)
Event Log	<ul style="list-style-type: none"> ○ Alarm Log ○ ECB On/Off 	○ ACU On/Off
Data Logging SP1 or SP2 Integrated (Optional)	<ul style="list-style-type: none"> ○ Temperature (Indoor, Outdoor) ○ Fan Speed 	○ Fan Deviation

CONSTRUCTION SPECIFICATIONS

Body Material	Galvanised Steel
Rain Covers	Aluminium
Filter change	Removable access panel for fast filter change
Filter detection	Optional: sends an alarm when filter gets clogged
Security	Minimum intrusion risk with no external exposed fixings or access.
Exhaust damper outlet (std)	99.9% reliable pressure damper with internal & external bug traps

PHYSICAL SPECIFICATIONS

ECB	H x W x D: 502 x 502 x 528.5 (mm)
ECB rain cover	H x W x D: 644 x 500 x 270 (mm)
Exhaust damper	H x W x D: 520 x 550 x 30 (mm)
Exhaust damper rain cover	H x W x D: 540 x 550 x 270 (mm)
Temperature probe cable lengths	10 Meters

DESIGNS STANDARDS

Electrical Safety	EN 60950-1 : 2006 + A11:2009 + A1:2010 + A12:2011
EMC	ETSI EN 300 386 V1.5.1 : 2010 EN 61000-6-1 : 2007, EN 61000-6-2 : 2005, EN 61000-6-3 : 2007 + A1:2011, EN 61000-6-4 : 2007 + A1:2011
Environment	RoHS compliant WEEE compliant

ORDERING INFORMATION

Part Number ECB Type A (EF Filter)	Part Number ECB Type A (CF Filter)	Description
ECB0102.007	ECB0102.001	Fan mode only Integrate into new/existing rectifier system
ECB0102.008	ECB0102.002	Fan mode only Standalone ECB with control box (Note: includes CAN Power)
ECB0102.009	ECB0102.003	Fan & ACU mode Integrate into new/existing rectifier system
ECB0102.010	ECB0102.004	Fan & ACU mode Standalone ECB with control box (Note: includes CAN Power)
ECB0102.012	ECB0102.006	Fan & ACU mode Standalone ECB with control box & SP2 as display (Note: includes CAN Power)
*G4 & F5	*G4 & F5	G4 & F5 Filters

CONSUMABLES

Part Number	Description
287628	G4 Filter 495 x 455 x 45 CF
287629	F5 Filter 495 x 455 x 96 CF
290201	G4 Filter 495x455x48 EF
290203	F5 Filter 495x455x96 EF

AIRFLOW OPTIMIZATION

