

### **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

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#### **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

# ELTEK COOLING BOX (TYPE A)



INPUT DATA		
	2000 m <sup>3</sup> /h	
Air Flow		
Power Cooling capacity	190 W (with zero pressure drop)	
$(\Delta T=2.5^{\circ}C)$	1.5KW Heat Load	
$(\Delta T=5^{0}C)$	3.0 KW Heat Load	
$(\Delta T=10^{0}C)$	6.0 KW Heat Load	
DC Current	4.0 A	
DC Input	36-57 V	
Fan	<ul> <li>backward curved blades offering an extreme aerodynamic airflow efficiency</li> <li>Impeller: sheet aluminum, laser-welded Rotor: coated in black</li> </ul>	
	<ul> <li>control input 0-10 VDC / PWM</li> </ul>	
	o tach output	
	<ul> <li>over-temperature protected motor</li> <li>reverse polarity and locked-rotor protection, rotation is CW.</li> </ul>	
CF Filter Series (Std)	$G4: 1.1 \text{ m}^2$ F5: 8.2 m <sup>2</sup>	
	[EN779] at Max 200PA and 2600 m <sup>3</sup> /h [EN779] at Max 350PA and 2837 m <sup>3</sup> /h	
EF Filter series (washable filter options)	G4: 1 m <sup>2</sup> F5: 6.5 m <sup>2</sup>	
	[EN779] at Max 250PA and 2500 m <sup>3</sup> /h [EN779] at Max 250PA and 2500 m <sup>3</sup> /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	• Relay Alarming $N/O - N/C$ • Climate Control	
Event Log	o     Configurable Inputs / Outputs     o     Filter Clog (optional)       o     Alarm Log     o     ACU On/Off	
Event Log	o ECB On/Off	
Data Logging SP1 or SP2 Integrated (Optional)	<ul> <li>Temperature (Indoor, Outdoor)</li> <li>Fan Deviation</li> <li>Fan Speed</li> </ul>	
CONSTRUCTION SPECIFICATIO	ONS	
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	
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Specifications are subject to change without notice

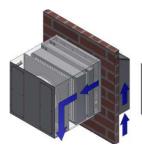
## ELTEK COOLING BOX (TYPE A)



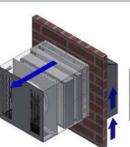
#### **ORDERING INFORMATION**

Part Number ECB Type A (EF Filter)	Part Number ECB Type A (CF Filter)	Description
	(01 1 1101)	Fan mode only
ECB0102.007	ECB0102.001	Integrate into new/existing rectifier system
ECB0102.008	ECB0102.002	Fan mode only Standalone ECB with control box (Note: includes CAN Power)
		Fan & ACU mode
ECB0102.009	ECB0102.003	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	

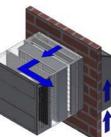
#### AIRFLOW OPTIMIZATION



Option A Vertical mount- Downward Airflow

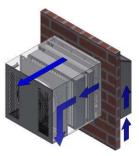






Option C Horizontal mount- Side Airflow

Option D Horizontal mount- Straight Airflow



Option E Vertical & Downward Airflow