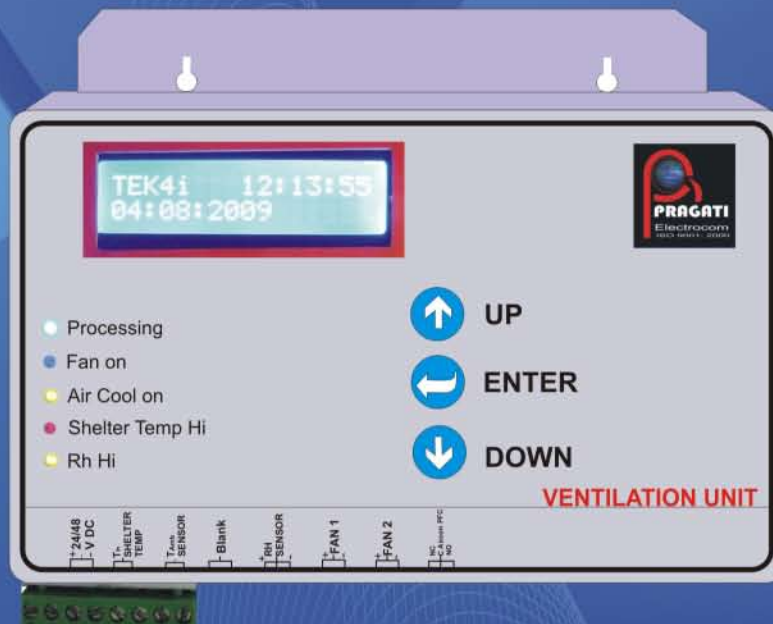




# PRAGATI'S EFFICIENT & ENERGY SAVING FREE COOLING SYSTEM



Environment Friendly Cooling

## **PRAGATI's**

### **Free Cooling, Efficient, Energy Saving & Environmentally Protective Cooling**

#### ***Economic operation - Freon Free - Energy Saving - Long Service Intervals***

Pragati's free cooling is a simple solution designed for easy installation. It is no longer necessary to have energy and maintenance demanding cooling machines for the telecom shelters. Our energy-saving system of free cooling is easy to handle and ensure an economic operation, apart from that it is a Freon free system.

The principle is easy, instead of cooling the warm air the system makes sure the heat is transported out. The cool outdoor air is forced through the filter hoses displacing the hot air in the shelter to the ceiling, where it is transported out through an exhaust grill.

#### **Easy Installation**

Unit delivered is operation ready. Unpack the unit, mount it on the wall and plug it. Install the exhaust and start up the unit.

#### **Monitoring over the Internet or via modem**

Pragati's FCS (Free Cooling System) has a cooling unit, which enables communication with TCP/IP and a modem, through an additional module, which is placed beside the supply air unit. The control unit with LCD-display and function buttons is easy to use.

#### **Appropriate cooling at all the times**

A room temperature sensor controls the air volume steplessly with regard to the temperature. The fans are efficient with a coefficient of utilization and low power consumption. The service is easy, the filters are easily accessible, and the time between filter changes is long and does not require any specialists to perform.

The system senses shelter temperature, ambient temperature and relative humidity. Based on the logical conditions, it provides suitable outputs in the form of 48V DC supply to ventilator fans and PFC for air conditioner operation.

When  $(T_{in} > \text{Temp set}) \& \{(T_{in} - T_{amb}) > \text{Temp Diff Set}\} \& (RH, \text{Set RH})$ , 48VDC is available at Output-1 and 2 to run two fan arrays. Simultaneously, PFC condition is available to keep air-conditioners (if deployed) in off position.

When  $(T_{in} - \text{Temp Set}) \& \{(T_{in} - T_{amb}) > \text{Temp Diff Set}\} \& (RH, \text{Set RH})$ , 48V DC is not available at Output-1 and 2 to run two fans but PFC condition is available to keep air-conditioners (if deployed) in on position. Air conditioners take care of humidity control while in free cooling option, ingress of humidity is limited by the offered system.

## Features

1. Reduces Electric tariff of 25-25%
2. Reduces wear & tear of Air-conditioners due to very less operation
3. Very low Power Consumption around 100-200w
4. It monitors shelter inside, outside temperature & outside humidity
5. Controller allows AC operation only in case outside temperature is high and humidity is within specified limit.
6. Free Cooling increases the life of batteries and other Electronic Products
7. Long service intervals
8. Remote monitoring through TCP/IP and modem (Optional)
9. Inbuilt AC Controller

## Specifications:

| Parameter                    | Value   |
|------------------------------|---|
| Input Voltage                | 24/ 48V DC  |
| Sensing                      | Temperature inside Shelter (Tin)<br>Temperature Outside Shelter (Tamb)<br>Humidity Outside Shelter (Tamb) |
| Output                       | 24/ 48 VDC for 2 fans<br>PFC for Aircon Switching   |
| Indications                  | Blue- Processing<br>Green- Fan on<br>Green- Aircon on<br>Red- RH High<br>Red- Shelter temp. high          |
| LCD Display (16X2)           | Company Name<br>Date, Time<br>RH, Tin & Tamb  |
| Settable Parameters          | Date, Time<br>Tin Set<br>Tdiff Set<br>RH Set  |
| Size (HXWXD)                 | 250 mm X 220 mm X 50 mm   |
| Mounting                     | Wall Mountable  |
| Weight                       | 1.5 Kg approx.  |
| Ambient temp °c<br>Min / Max | -25/60  |

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