

FlexAir[®] GFCS-60

Energy Efficient Thermal Management Solutions



The Green Free Cooling System (GFCS) is a thermal management solution for installation on new and existing telecom shelters. GFCS provides an energy efficient and reliable free cooling system for managing the interior environment of a shelter. The solution is optimized for low energy consumption and long filter replacement intervals while maintaining the prescribed cooling capacity performance.

The cooling capacity is managed based on the temperature difference between the interior and exterior of the shelter. The system adjusts the cooling capacity based on actual heat load and degree of pollution within the inlet air filter. The control system ensures both the power consumption and fan rotations (RPMs) are kept to a minimum, while extending the lifetime of the fan and filter, reducing the need for maintenance and repair calls to the shelter.

The Green FCS consists of three main components; Fan Filter Module (with integrated controller located on the door or wall), and Outlet Module (gravity damper located on the rear).

Applications:

Provides a thermally-controlled environment for electronic equipment and batteries within a telecom shelter.

Product Features:

- Microprocessor control provides optimal fan speed for energy saving
- Easy to install in new and existing shelters
- Over pressure system eliminates unfiltered air and unwanted water ingress from exterior
- Reduces power consumption
- Control of existing air conditioning and heater

The Purcell Advantage

Purcell Systems designs and manufactures thermally-managed outdoor enclosures that meet the exact needs of the enclosed equipment for network operators and utilities. Our enclosures provide comparable solutions to prefabricated buildings, containers and shelters at a fraction of the cost. Both standard and custom enclosures are delivered with the following capabilities:

Choice of Options: Pre-engineered and interchangeable modules provide optimal configurations with minimal cost and lead time.

Thermal Management: The industry's widest selection of heating and cooling systems ensures the most efficient thermal management solution with the lowest energy consumption.

Lowest Total Cost of Ownership: Engineering analysis and modeling ensures your enclosure configuration minimizes installation, maintenance, repair, capital, and operational expenses.

Equipment Integration and Staging: Electronic equipment can be staged and installed in our enclosures prior to final deployment and installation.



GFCS 60		Thermal Management Systems
Exterior Dimensions		Direct Air Cooling
Filter Module	410mm x 370mm x 700mm 16.1"W x 14.6"D x 27.6"H	3700 m3/h 2200 cfm -48VDC
Controller Module with Fan	420mm x 175mm x 733mm 16.5"W x 16.9"D x 28.9"H	
Outlet Module	465mm x 250mm x 410mm 18.3"W x 9.8"D x 16"H	

Specifications		
EXTERIOR	Thermal Performance	OTHER
Construction <ul style="list-style-type: none"> Material thickness 1mm / .039" corrosion resistant Aluzinc® (steel substrate coated with aluminium-zinc alloy) Finish: Light Grey (RAL 7035) polyester powder coat Weight (Base Configuration): 30 kg / 66 lbs 	<ul style="list-style-type: none"> Cooling Capacity Range: 6 kW of heat load (at dT 5°C); 2 fans Fan Type: Centrifugal fan Air filter: G4 or EU5 Filter available per request Power Requirements: 0,6 - 7,8 A depending on load and filter status Acoustic Emissions (max): 62 dB(A) at 1,5m / five feet 	Environmental <ul style="list-style-type: none"> IP Protection: IP 55 Operating Temperature: -25° to +50°C Humidity: 10-90%
Mounting Requirements <ul style="list-style-type: none"> Cut-out for Fan Filter Module: 250mm / 9.8" diameter per fan Cut-out for Outlet Module: 425mm x 370mm / 16.7"W x 14.6"H per outlet module 	Other Options <ul style="list-style-type: none"> Alarms: fan failure, temp sensors out of range, high temperature, controller failure, LVD 	Warranty <ul style="list-style-type: none"> 1 year