# User Manual — Temperature Controlled Fans

Model: GCF-1201

Model: GCF-1202

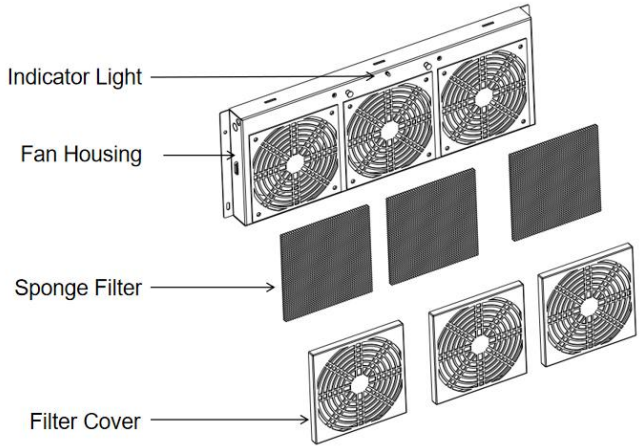
Model: GCF-1203

## 1. Product Overview

Thank you for choosing our Temperature Controlled DC Fan. This product is designed to provide automatic cooling performance based on temperature changes. It uses a high-quality DC brushless motor to ensure stable operation, low noise, and long service life. The fan automatically adjusts its speed according to temperature, providing efficient heat dissipation while minimizing power consumption and noise.

## 2. Product Features

- DC Brushless Dual Ball Bearing Motor for high reliability and low maintenance.
- Automatic Temperature Control — intelligent speed adjustment according to the detected temperature.
- Built-in Status Indicator Light for quick system diagnosis.
- Low Noise Operation — less than 35dB at normal speed.
- High Airflow — up to 48.43 CFM at full speed.
- Removable Air Filter — easy to clean for long-term performance.
- Available Models: Single Fan, Double Fan, Triple Fan.




## 3. Specifications

- Motor Type: DC Brushless Motor
- Rated Voltage: 12VDC
- Rated Current: 0.4A
- Speed Reference: 3000 RPM
- Air Flow: 92.4 CFM
- Noise Level: <41.5 dB(Max)
- Temperature Control Range: >45°C

## 4. Indicator Light Description

- Green Light: Power ON, fan operating normally.
- Red Light: Power ON, fan fault or malfunction detected.

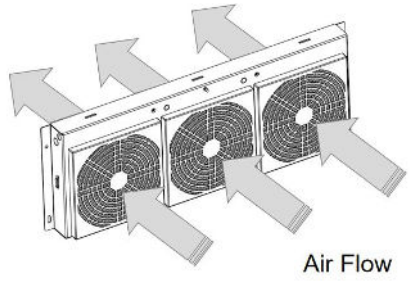
Note: If the red indicator is on, please disconnect power and check the fan or sensor connection.

## 5. Temperature Control Logic

- The fan begins to operate automatically when the detected temperature reaches 45°C.
- For every 1°C increase, the fan speed increases by 10%.
- When the temperature reaches 55°C or above, the fan runs at full speed.
- When the temperature drops below 45°C, the fan will stop automatically to reduce noise and save energy.

## 6. Airflow Direction

The fan draws air from the filter side toward the fan mounting surface.




Please ensure the air filter faces the air inlet and is not obstructed. This design helps ensure dust is captured by the filter and prevents contamination of internal components.

## 7. Dimensions and Weight

| Model | Overall Dimensions (L×W×H) | Mounting Hole Distance | Weight |
|---|---|---|---|
| GCF-1201 | 155*150*29mm | 143.5*104mm | 0.58kg |
| GCF-1202 | 286*150*29mm | 273.5*104mmn | 1.02kg |
| GCF-1203 | 426*150*29mm | 413.5*104mm | 1.46kg |

## 8. Installation Instructions

**(1) Power Supply:**

Connect to a 12V DC power source with adequate current capacity. Ensure polarity is correct — Red (+) and Black (–).

**(2) Mounting:**

Mount the fan securely using screws or brackets. Ensure airflow direction matches your cooling requirements.

**(3) Temperature Sensor Placement:**

The temperature sensor must be in direct and firm contact with the surface to be monitored.

## 9. Filter Maintenance

- The fan's air inlet is equipped with a sponge filter to prevent dust accumulation.
- Regular cleaning of the filter is necessary to maintain optimal airflow and cooling efficiency.
- To clean: Disconnect power, uninstall the filter cover, remove the filter, wash with mild detergent and water, and dry completely before reinstalling.

## 10. Operation

When powered, the fan will automatically monitor temperature through its sensor. The fan speed will increase gradually with rising temperature and decrease when cooling down. The indicator light provides real-time system status.

## 11. Maintenance and Safety

Ensure the fan blades and filter are free from dust and debris. Do not block airflow or touch the fan while operating. Disconnect power before cleaning. Use only with 12VDC regulated power supply. Avoid moisture or corrosive gases.

## 12. Troubleshooting

Fan not running: Temperature below 45°C (normal behavior).

Fan not starting above 45°C: Check 12VDC power and connections.

Unusual noise: Clean blades and filter.

Fan speed unstable: Reposition temperature sensor.

Red light on: Check wiring, fan, and sensor.

## 13. Disclaimer

Specifications are subject to change without prior notice. Please use the product within the rated voltage range. Damage caused by misuse or improper installation is not covered under warranty.