

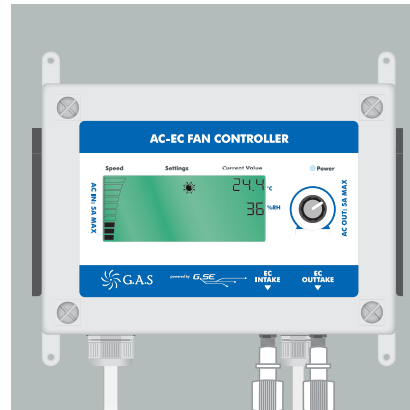


THE G.A.S CONTROLLER RANGE

GLOBAL AIR SUPPLIES UK



UK DISTRIBUTOR

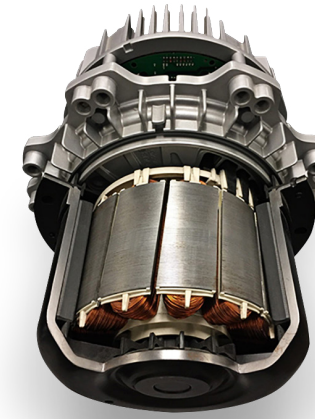


Version 2
2021

WHAT IS A FAN MOTOR?

Standard Electric motors turn electricity into rotational power. They work by energising electromagnets that generate magnetic force. This is turned into rotational power which is used to rotate the fan blades. All fans have the electro magnets fixed to the motor body and the rotor spins around the magnets forcing the fans to spin and direct the air through the fan body.

The rotor has permanent magnets around its circumference, and magnets have both a positive and a negative pole. The magnets are arranged so the poles of the magnets alternate between positive and negative. As the electro magnets are energized they are either positive or negative and repel or attract the permanent magnets in the rotor. This makes the fan spin causing air movement, the faster the magnets are energized the faster the fan spins.



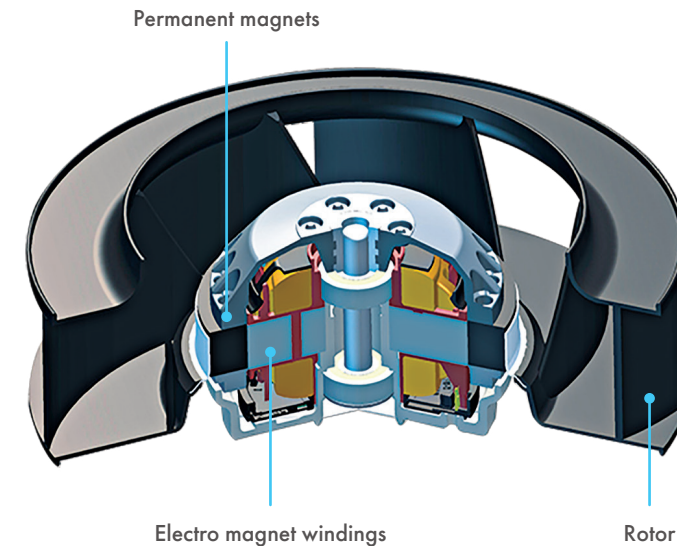
WHAT IS AN AC FAN MOTOR?

AC (Alternating Current) motors use the alternating current from the main supply directly to energize and change the pole of the electro magnets. In the UK the electricity alternates between positive and negative at 50 Hz or 50 times per second. This means that the electro magnets in the motor change from positive to negative 50 times per second. AC motors under a normal load at full speed are efficient, economical to make, and offer years of reliability.

Speed Control an AC Motor

Controlling the speed of an AC motor is a challenge - one method that can be used is a Triac controller. This is essentially an electronic switch that switches on the electro-magnets for only a proportion of each cycle. As the same amount of power is input then the unused power is lost, creating buzzing and humming at low speeds.

The second method is stepped hybrid controller which reduces the voltage with a transformer reducing the magnetic strength and in turn reduces the speed of the motor. Transformers only offer a limited number of steps, usually 5 steps. The benefit is that as the frequency remains constant there is no humming or buzzing.



WHAT IS AN EC FAN MOTOR?

NEW EC Technology (electronically commutated) motors convert alternating current (AC) into direct current (DC). The current is then used to energize the electro magnets. The DC current also converts the electro magnets from positive to negative.

The intelligent built-in electronics in an EC motor monitor the exact location of the external rotor and only energize the electro magnets when they are needed, and with the correct amount of power to maintain the speed.

EC motors use less than half the power at half the speed.

The built-in electronics in the EC motor constantly monitors the speed of the fan and can react if any change is recorded.

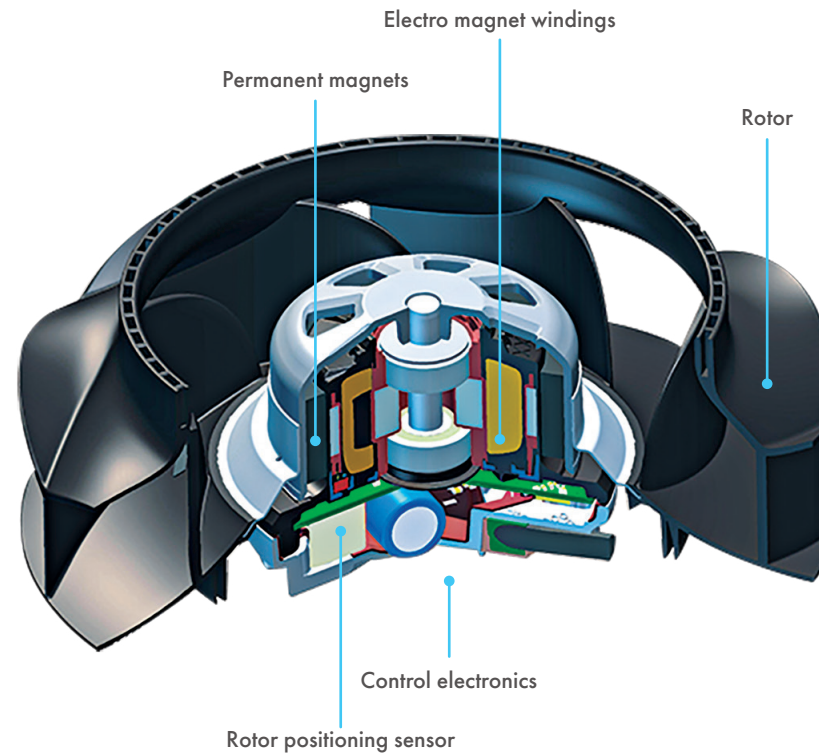
Controlling EC Motors

EC motors are controlled by supplying a low voltage signal from a controller (10 volt = 100% speed, 0 volt = off).

EC motors can run at very low speeds and will remain silent because you are not cutting the power during the AC cycle to control the motor, like you do with AC fans.

They can perfectly maintain environments by altering the speed in very small increments, stopping any sudden movements in room temperature or humidity.

EC motors are built for years of hassle free service.



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ENVIRO CONTROLLER V2

The G.A.S Enviro Controller will control every aspect of your grow room environment.

Control your grow room temperature and humidity by increasing or decreasing your fan speeds. There are day and night settings and a dump feature for closed loop environments.

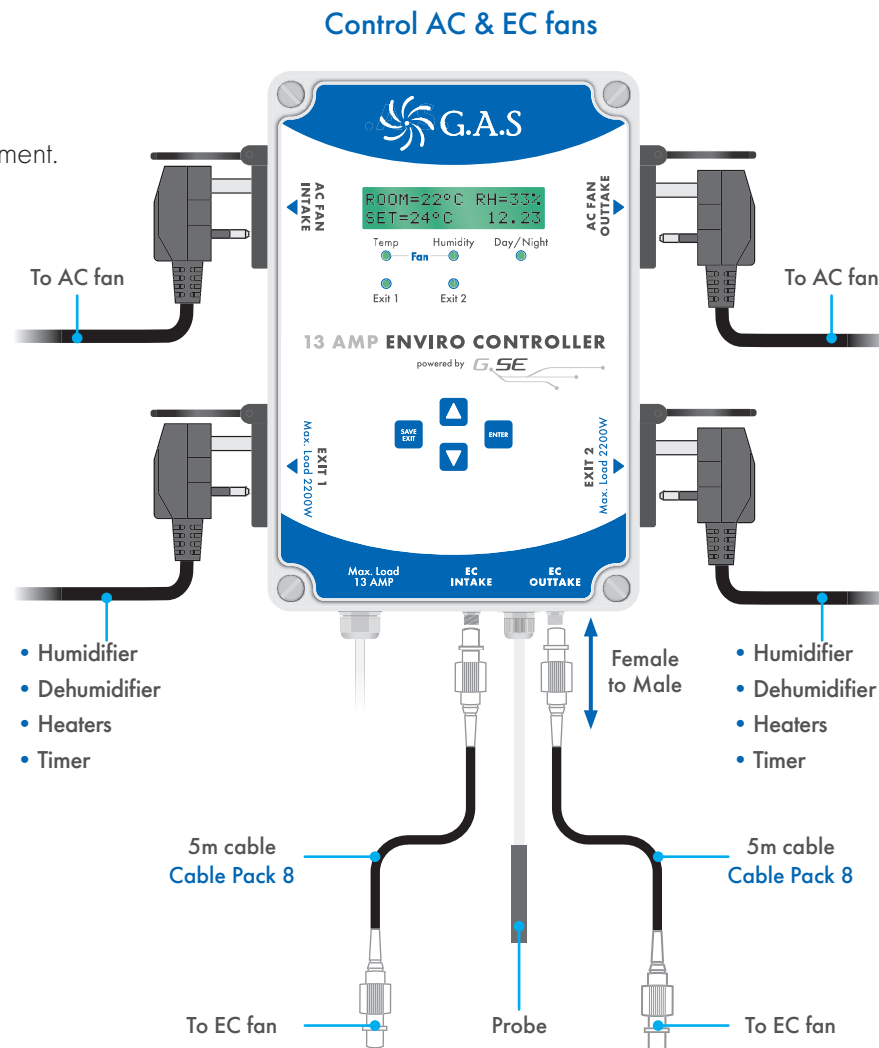
- Control AC fans to a maximum 2200 watts
- Compatible with EC Revolution or Phresh Hyperfan
- Requires EC cables, supplied separately

New V2 Features:

- Minimum and maximum day and night fan speed settings
- Calibrate the sensor – both temperature and humidity
- Green LED indication lights
- The screen and LED's dim automatically

Exit 1 and 2 on the Enviro controller will control your other grow room environment equipment.

- Humidifier
- Dehumidifier
- Heaters
- Timer (can run 2 x 600 watt lights)



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AC-EC FAN CONTROLLER

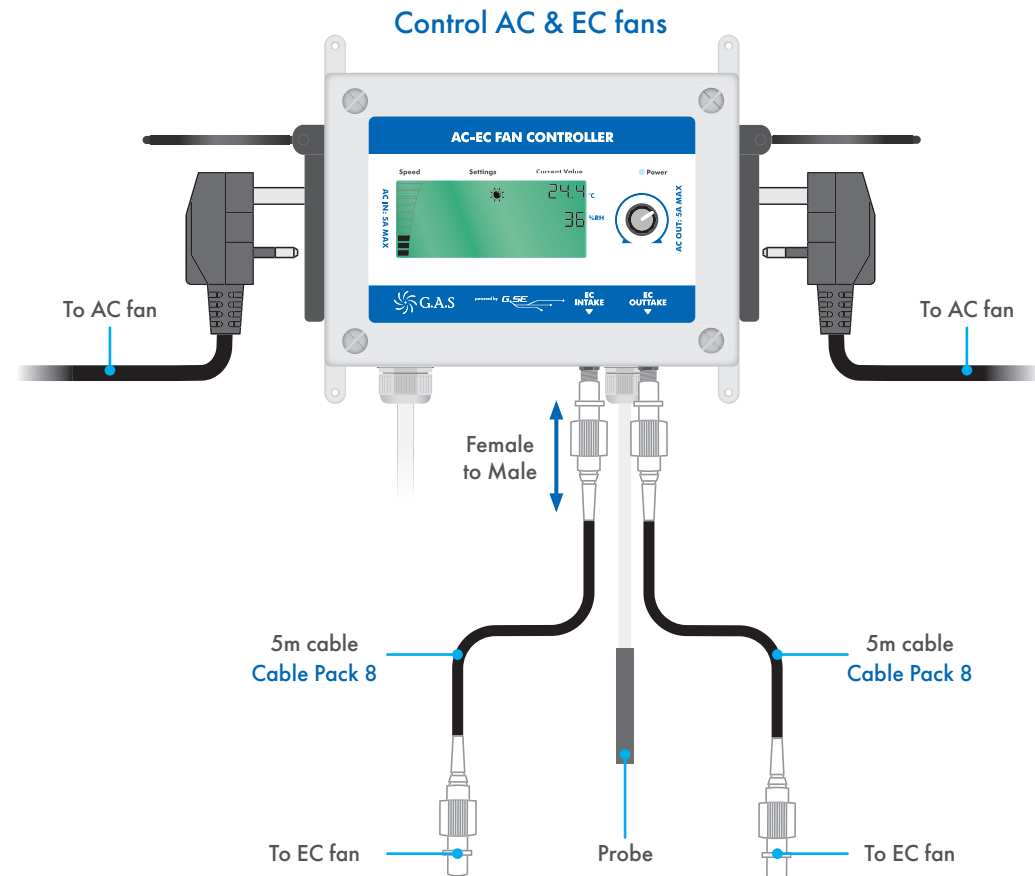
The G.A.S AC-EC Fan Controller is the ultimate controller offering precision control over intake and exhaust fans, with separate day and night settings. The digital sensor monitors the temperature humidity and light whilst the controller automatically maintains the environment to the desired settings.

The combination of the EC and AC enables control of all professional fans. The built-in fan balancer enables negative pressure to be established accurately to 1% of fan speed. The intake fan will remain off until the temperature or humidity increase, at which point the fans ramp up, saving energy and reducing wear on the ventilation system.

The settings in the controller also allow for minimum and maximum fan speeds to be set.

- New easy to mount enclosure
- Temperature and humidity control
- Set maximum and minimum fan speeds
- Set day and night temperature and humidity values
- Set negative pressure
- Plugs directly into all Systemair's AC and EC fans
- Requires EC cables, supplied separately

NON-ACTIVE
& ACTIVE
CABLES CAN
BE USED



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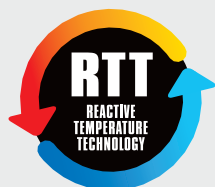
EC5 FAN CONTROLLER

The EC5 Fan Controller plugs directly into any of the Systemair EC fan range.

The EC5 Fan Controller is a thermostatic controller with RTT technology - meaning it intelligently reacts to changes in your grow room temperature and will increase or decrease your fans speeds accordingly.

Easy to set up and use, just plug straight into your EC fan with no power packs required. The EC5 controller lets you set minimum and maximum fan speeds, it maintains the grow room temperature and controls negative pressure with the in-built fan balancer.

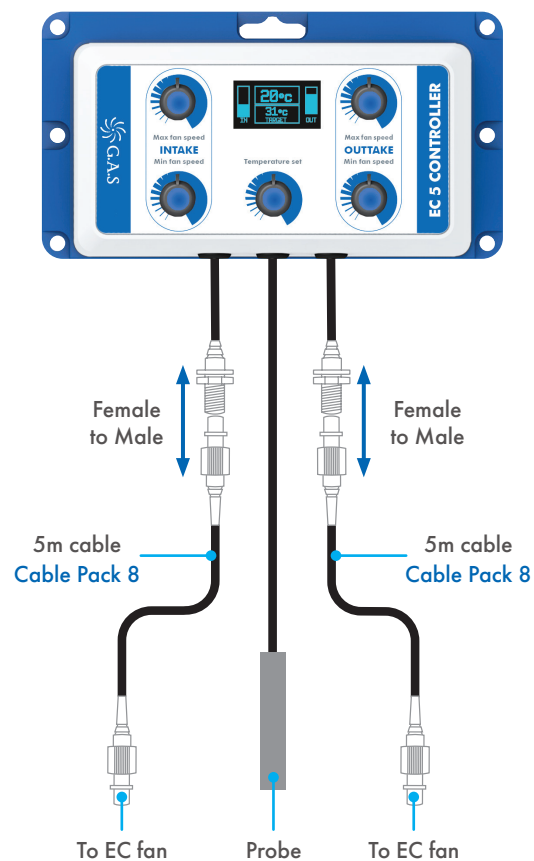
- Control and balance your EC fans
- Reactive temperature technology
- Set maximum and minimum fan speeds for intake and outtake
- Set negative pressure
- Powered from your fan so no power pack required
- Plugs directly into all Systemair's EC fan range



Reactive Temperature Technology (RTT) is a brand new technology developed specially for indoor climate rooms. The controller has a built-in microchip that stands guard over your climate room.

If there is a sudden spike in temperature the controller will react quickly, stabilising the temperature. If there is a small rise in temperature, the controller will increase the fan speed gradually.

Control / balance
intake, outtake fans



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PHRESH HYPERFAN V2 CONTROLLER

Control your Phresh Hyperfan easily and efficiently with the Hyperfan V2 controller from Global Air Supplies.

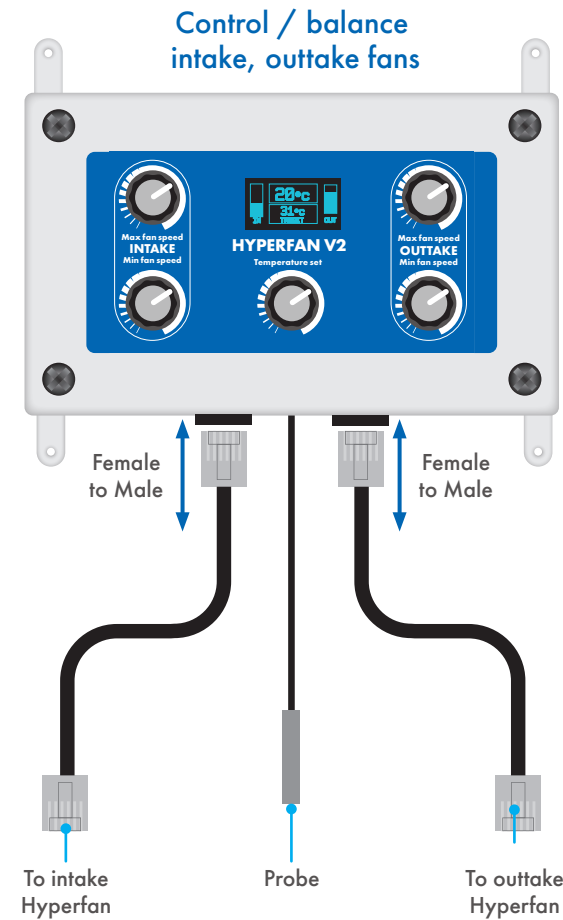
Improve environments and increase yields with the Hyperfan V2 Controller from Global Air Supplies. It will help control your Hyperfans to improve your grow environment easily and efficiently. Thermostatically control your intake and outtake fans.

- Control and balance your Hyperfans
- Reactive temperature technology
- Set maximum and minimum fan speeds for intake and outtake
- Set negative pressure
- Powered from your fan - no power pack required
- Plugs directly into all Phresh Hyperfans V2's
- Cable supplied with V2 fan



Reactive Temperature Technology (RTT) is a brand new technology developed specially for indoor climate rooms. The controller has a built-in microchip that stands guard over your climate room.

If there is a sudden spike in temperature the controller will react quickly, stabilising the temperature. If there is a small rise in temperature, the controller will increase the fan speed gradually.



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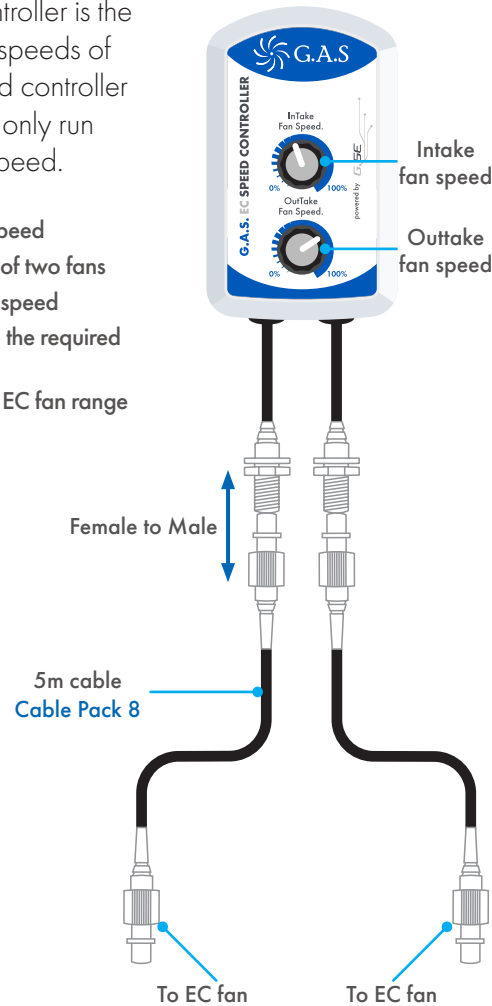
EC SPEED CONTROLLER

The G.A.S EC Speed Controller is the perfect way to control the speeds of two EC fans. The EC speed controller is not thermostatic and will only run the at the predetermined speed.

- Precisely set your intake fan speed
- Control the maximum speeds of two fans
- Precisely set your outtake fan speed
- Balance your fans, to achieve the required negative pressure
- Plugs directly into Systemair's EC fan range

CABLE SUPPLIED

ACTIVE POWER CABLE



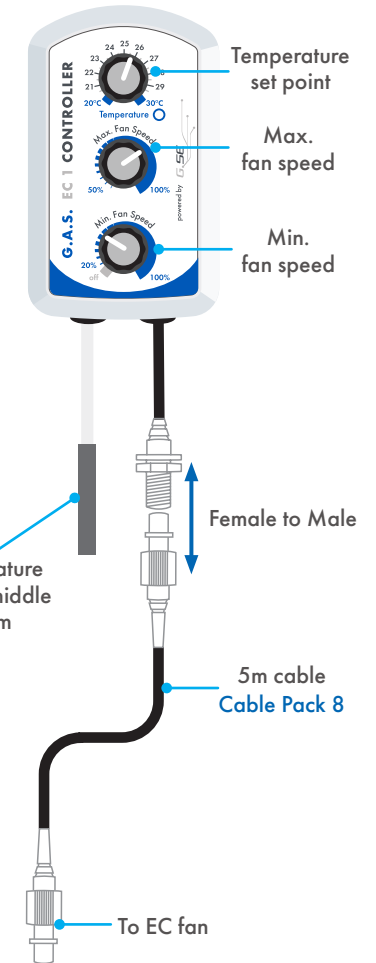
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EC1 CONTROLLER

The G.A.S EC1 thermostatic speed controller is the perfect way to control your outtake EC fan.

With a minimum and maximum speed control and powered from the fan, there is no need for a power pack.

- Temperature control your fan
- Set maximum fan speed to reduce running costs and reduce noise
- Set minimum fan speed. Keep air fresh and CO₂ rich
- Plugs directly into Systemair's EC fan range



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EC2 CONTROLLER

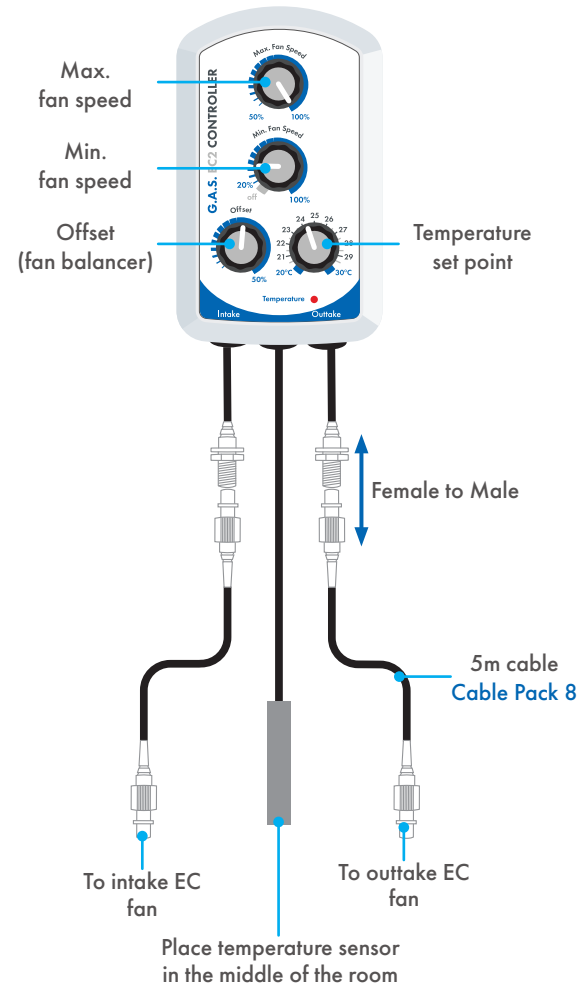
The new EC2 controller is an active controller that will control intake and outtake fans thermostatically with built in fan balancer.

Powered from the fan there is no need for an extra power supply. The built in fan balancer allows fine tuning of difference in speed between the intake and outtake fan making sure you can create the perfect balance between the fans. A small but powerful controller to create the perfect environment.

- Control and balance your EC fans
- Set maximum and minimum fan speeds for outtake fan (intake follows)
- Set negative pressure
- Powered from your fan so no power pack required
- Plugs directly into all Systemair's EC fan range



COMING SOON



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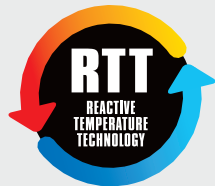
EC FAN CONTROLLER

Digital EC Fan Controller for improved control over Systemair EC fans.

In addition to thermostatically controlling intake and exhaust fans, the controller consists of Reactive Temperature Technology (RTT) which intelligently monitors and adjusts fan speed, reducing wear and saving on energy.

- No humming from the fans
- Precise grow room climate control
- Shows minimum and maximum temperature
- Switch between °C and °F
- Plugs directly into Systemair's EC fan range

The G.A.S EC fan controller can be coupled to a fan balancer to give you the ultimate control over your intake and exhaust fans.

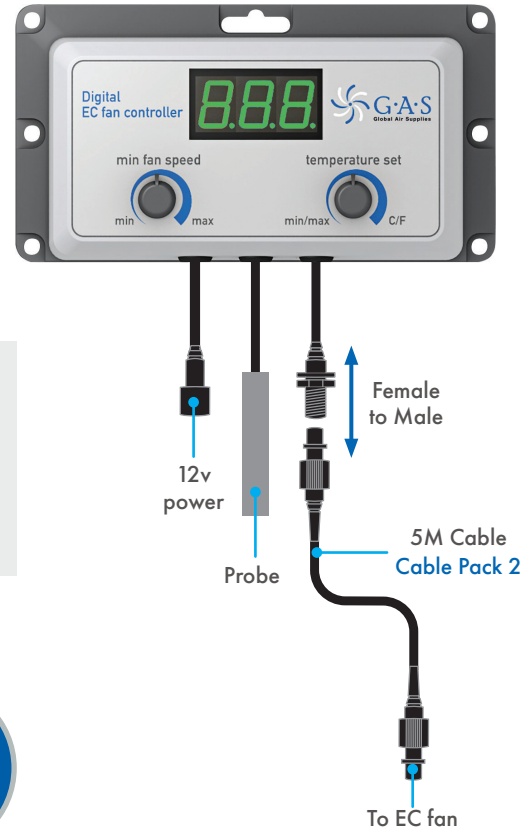


Reactive Temperature Technology (RTT) is a brand new technology developed specially for indoor climate rooms. The controller has a built-in microchip that stands guard over your climate room.

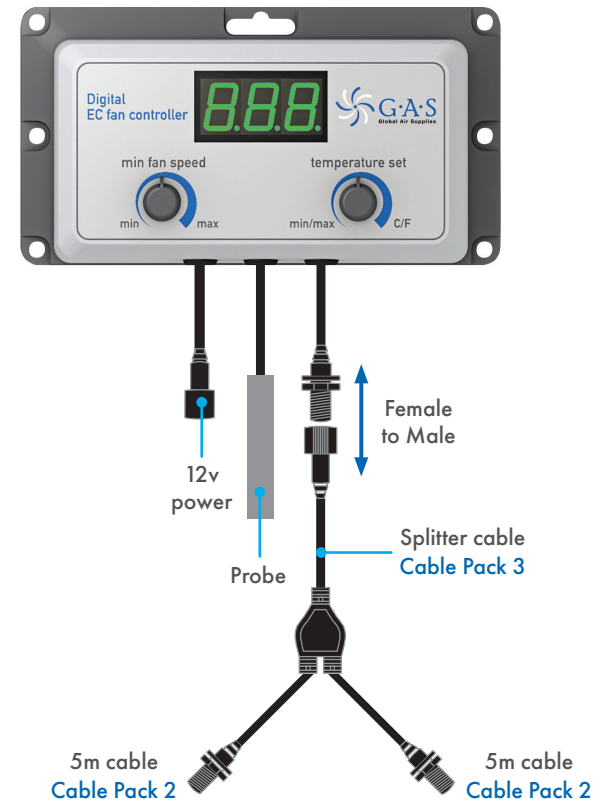
If there is a sudden spike in temperature the controller will react quickly, stabilising the temperature. If there is a small rise in temperature, the controller will increase the fan speed gradually.



Control single fan



Control multiple fans



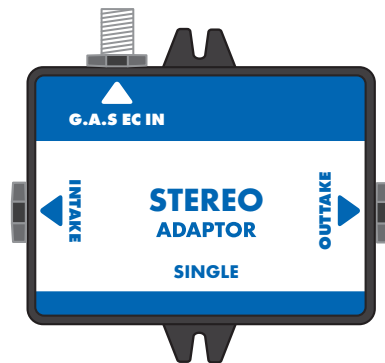
STEREO ADAPTOR

Our Stereo Adaptor lets you control your EC Fans (with stereo jack cables) using the G.A.S range of EC controllers.

All you have to do to use the Stereo Adaptor is plug in one of our controllers to the top and your stereo jack cables into the sides, this provides a simple and effective fix to connect these products.

- Compatible with all G.A.S EC controllers
- Plug and play

Single input adaptor



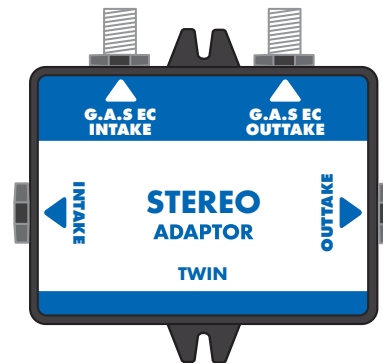
STEREO TWIN ADAPTOR

Our Twin Stereo Adaptor lets you control both the intake and outtake fans from the intake and outtake of a G.A.S controller.

The two way adaptor allows a separate signal to be sent to the intake and outtake allowing for fan balancing. Being able to control fans with our more advanced controllers allows you to control all aspect of your environment from one controller.

- Compatible with all G.A.S EC controllers
- Allows the controller to balance fans
- Plug and play

Double input adaptor



PHRESH HYPERFAN V2 ADAPTOR CABLE

The Phresh Hyperfan V2 cable enables any of the G.A.S EC controllers to be used with the Hyperfan V2's.

The adaptor simply connects to the controller and a Hyperfan V2 can be controlled, one adaptor is needed per fan. Please note you cannot split the EC signal so only one fan per an EC controller connection can be used.

Hyperfan v2 to G.A.S adaptor cable



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AC 1 CONTROLLER

The latest addition to G.A.S' range of controllers, the new AC 1 is the easy and effective way to control AC fans.

Two modes ensure you can maintain a perfect environment. Either set fan speed manually, or control thermostatically. The AC 1 automatically increases and decreases the fan speed to maintain a set temperature, when at or below set temperature the controller maintains minimum speed.

- Designed for one or more fans, up to 5 Amps
- Plug & play controller complete with a 2-metre cable and sensor to monitor and create the desired environment
- Digital sensor measures temperatures from 20°C to 30°C, with a $\pm 0.5^\circ\text{C}$ accuracy reading
- 2 degree hysteresis

A key feature of the new the AC1 is the **built-in overload protection** that monitors the controllers temperature. In the case of overload, the controller lets the fans run at full speed protecting your equipment from overheating and ensuring the environment maintains a desired temperature.

Control an AC fan



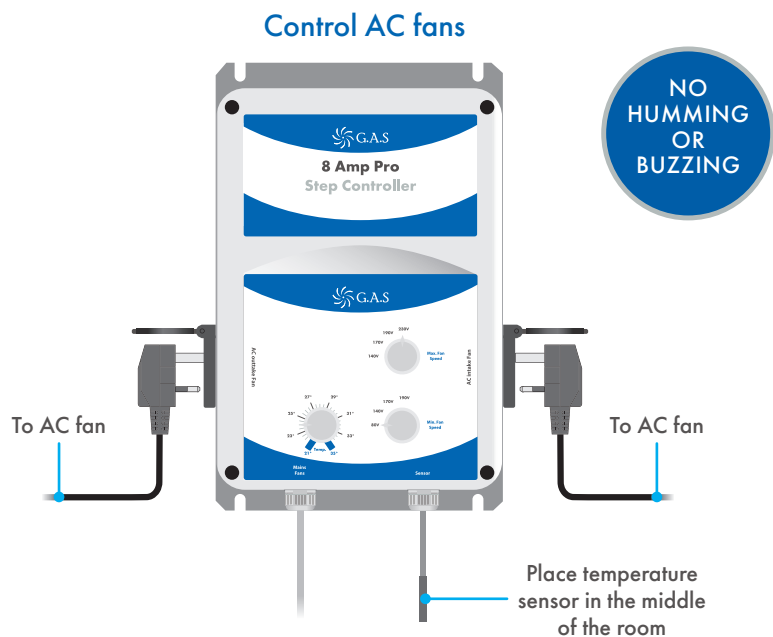
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PRO STEP CONTROLLER

The G.A.S Step Controllers are the best AC fan controllers available. Quiet, simple to use and the most efficient way to regulate your AC fans, with no clicking between steps like other AC fan controllers.

Digital controller technology with solid state relays creating a top quality 5 step transformer. Made in Europe to the highest quality standards, the silent seamless changes between steps removes the loud clicking that some controllers have.

- Silent controller no clicking between the steps
- Made in Europe to the highest European standards
- Accurate temperature control
- The most efficient controller for AC fans
- No humming or vibration from your AC fan even at low speeds
- Available in 4 or 8 amp versions



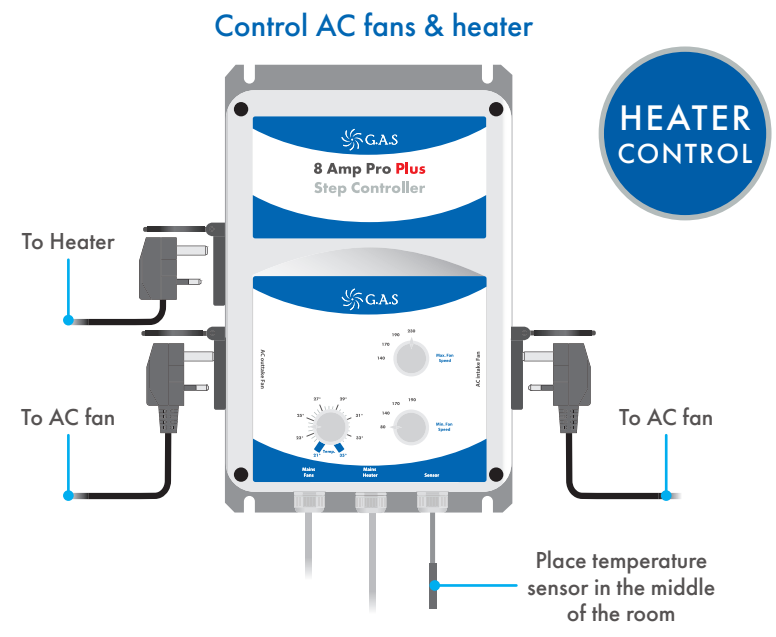
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PRO PLUS STEP CONTROLLER

The Pro Plus Controller has the same top quality transformer and silent step transitions as the pro version.

It has the addition of a heater control that works in unison with the fan controller keeping your grow room close to your set temperature all the time.

- Heater control – Max 2.5kW
- Up to 13 amps
- Maintains your grow room temperature
- Fan motor protection

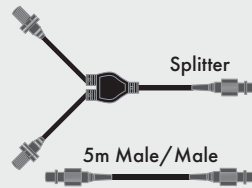


Non-Active Cables

Non-Active cables do not carry power and can only be used with G.A.S Digital Fan Controllers, AC-EC Controllers and Enviro Controllers.

Cable Pack 1 Y Splitter, 5m Male/Male

Splits an EC signal to allow more than one fan to be used on a controller.



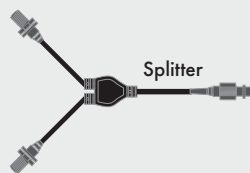
Cable Pack 2 5m Male/Male Cable

Male/Male cable to connect an EC fan to an EC controller.



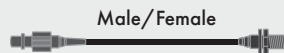
Cable Pack 3 Y Splitter Connector

Splits the signal from a EC controller so more than one fan can be connected.



Cable Pack 4 2m Male/Female Cable

Connects a balancer to the EC controller.



Cable Pack 7 Female/Female Extension Cable

Extends EC signal cable by connecting two Male/Male cables together.



Active Cables

Active cables carry power and can be used with EC Speed Controllers, EC1 & EC5 Controllers, and any other G.A.S EC Controller.

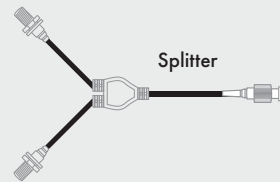
Cable Pack 8 Active 5m Male/Male Cable

Active Male/Male cable that connects an active controller to an EC fan.



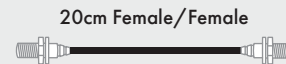
Cable Pack 9 Active Y Splitter

Splits the signal from an active EC controller so more than one fan can be connected.



Cable Pack 11 Active Female To Female Cable

Used to connect two active Male/Male cables together.



Cable Pack 13 Terminator Cable

Use this cable to run the fan at 100% continuously.

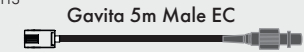


Gavita Fan Cables

Gavita cables enable the Systemair fans to be connected to the Gavita ELF1 & ELF2 Controllers.

Cable Pack 10 Gavita 5m Male/Male Cable

Connects Systemair EC Fans to Gavita ELF Controllers, or EC Fans to a Gavita Fan Balancer.



Cable Pack 12 Gavita Female Cable

Converts a Gavita connection to a Systemair EC fan connection. Can be used on ELF Controllers or the Gavita Balancer.

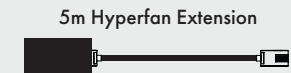


Hyperfan V2 Adaptor

Hyperfan V2 Adaptors enable the Phresh Hyperfan V2 to be connected to any G.A.S EC Controller.

Cable Pack 15 Hyperfan V2 Extension Cable




Extension cable for the Phresh Hyperfan V2.



Cable Pack 16 Hyperfan V2 to G.A.S EC Cable

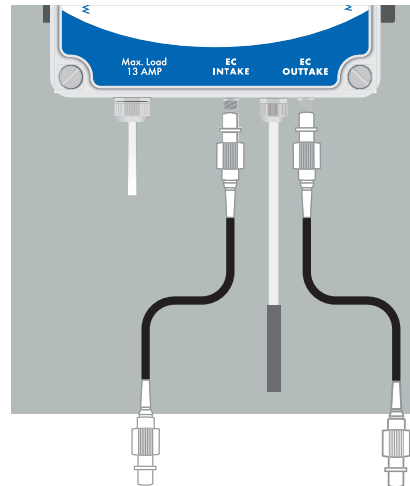
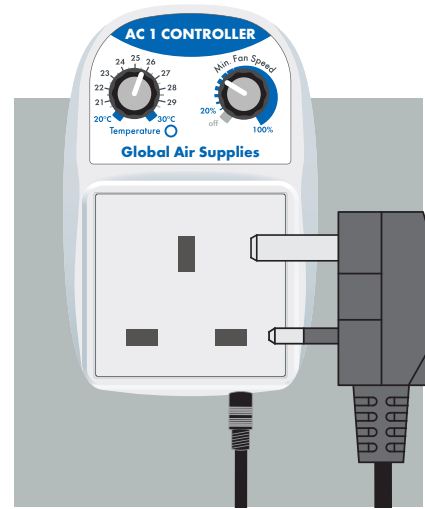
Active Adaptor cable to connect Hyperfan V2 to any G.A.S EC Controller.



	AC	EC	Active EC Cable	Temp Control	Intake & Outtake Fan Control	Min. Speed Setting	Max. Speed Setting	Fan Balancing	Day / Night Fan Settings	Humidity Control	Heater Control	Control of Environmental Equipment	Band Width	None Active EC Cables	Compatible with Hyperfan (Hyperfan adaptor needed)
AC 1 CONTROLLER	✓			✓		✓							✓		
PRO STEP CONTROLLER	✓			✓	✓	✓	✓						✓		
PRO PLUS STEP CONTROLLER	✓			✓	✓	✓	✓				✓		✓		
EC SPEED CONTROLLER Powered from the fan		✓	✓		✓	✓	✓	✓							✓
EC1 CONTROLLER Powered from the fan		✓	✓	✓		✓	✓						✓		✓
EC2 CONTROLLER Powered from the fan		✓	✓	✓	✓	✓	✓	✓							✓
EC CONTROLLER		✓		✓		✓	✓							✓	✓
EC BALANCER (has to be used with EC Controller)		✓		✓	✓	✓	✓	✓					✓	✓	
EC 5 FAN CONTROLLER Powered from the fan		✓	✓	✓	✓	✓	✓	✓							✓
HYPERFAN CONTROLLER Powered from the fan		✓		✓	✓	✓	✓	✓							✓ (No adaptor needed)
AC EC FAN CONTROLLER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
ENVIRO CONTROLLER V2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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