

ADVANTAGE AIR®



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Live life in complete creature  
comfort with **Advantage Air**



Energy efficient air-conditioning with all the creature comforts

# Live life in complete creature comfort with Advantage Air



To make an informed decision about air-conditioning systems, you need to know a bit about how they work. This brochure walks you through the fundamentals of air-conditioning so you can see how the Gen III from Advantage Air differs from standard reverse cycle systems.

## Who is Advantage Air?

Before we get down to the technical stuff, you're probably wondering who is Advantage Air? We are air-conditioning innovators who have been manufacturing and distributing state-of-the-art systems in Australia and South Africa for over 20 years. We have our own in-house research and development team who are committed to improving air-conditioning energy efficiency without compromising comfort.

## ADVANTAGE AIR®

We spent over \$3 million and 3 years developing our flagship system, the Gen III; and over the years earned 6 patents, 24 registered designs, 2 innovation patents, 4 trademarks and 2 design marks.

No other reverse cycle air-conditioning system on the market gives you greater comfort, better energy efficiency or more control.



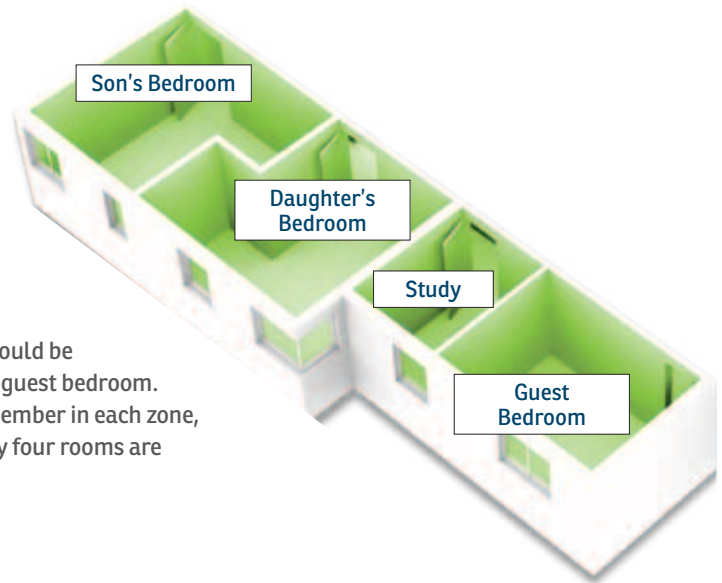
## Design flaws in conventional systems

# To understand what makes the Gen III so advanced, you need to understand how conventional ducted air-conditioning systems are designed.

### 1. Limited zones

Standard systems divide your home into a number of zones, usually only four or five. This means that in large homes, several rooms are grouped together in each zone. When a zone is selected all the rooms in it will receive conditioned air, irrespective of whether they are being used.

The diagram on the right gives you an idea of how wasteful multi-room zones are. For example, during the night you would be paying to cool two rooms that weren't in use: the study and guest bedroom. During the day it can get even worse. If you have a family member in each zone, you have to air-condition the entire home, even though only four rooms are actually in use.



### 2. Single thermostat, fixed air quantity

Conventional systems are controlled by a single thermostat usually placed in the centre of the house. When the temperature thermostat senses that the average home temperature is higher than the selected temperature, it switches the air-conditioning system on. As there is no way to measure the real temperature of each room, all rooms in an active zone receive the same amount of conditioned air regardless of their actual temperature.

This results in hot and cold spots throughout the home – in two storey homes the difference is magnified and can be particularly uncomfortable. The only control you have over air allocation is to turn zones on or off manually.

### 3. The dump zone

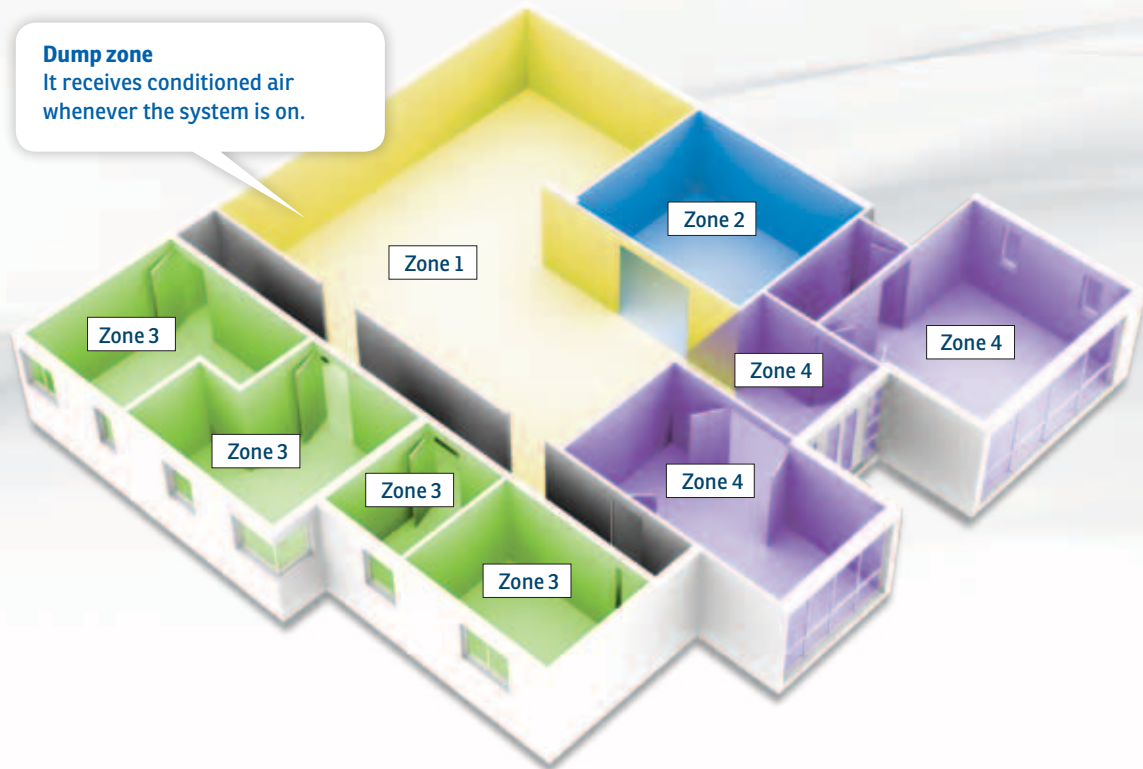
Conventional zone systems have a built-in dump zone that must remain permanently open as a "pressure relief valve" for excess air build-up. The dump zone is usually in a large common living area and can occupy up to 25% of a home. It will receive conditioned air at all times, regardless of whether that area is being used.

**NO HOT AND COLD SPOTS**



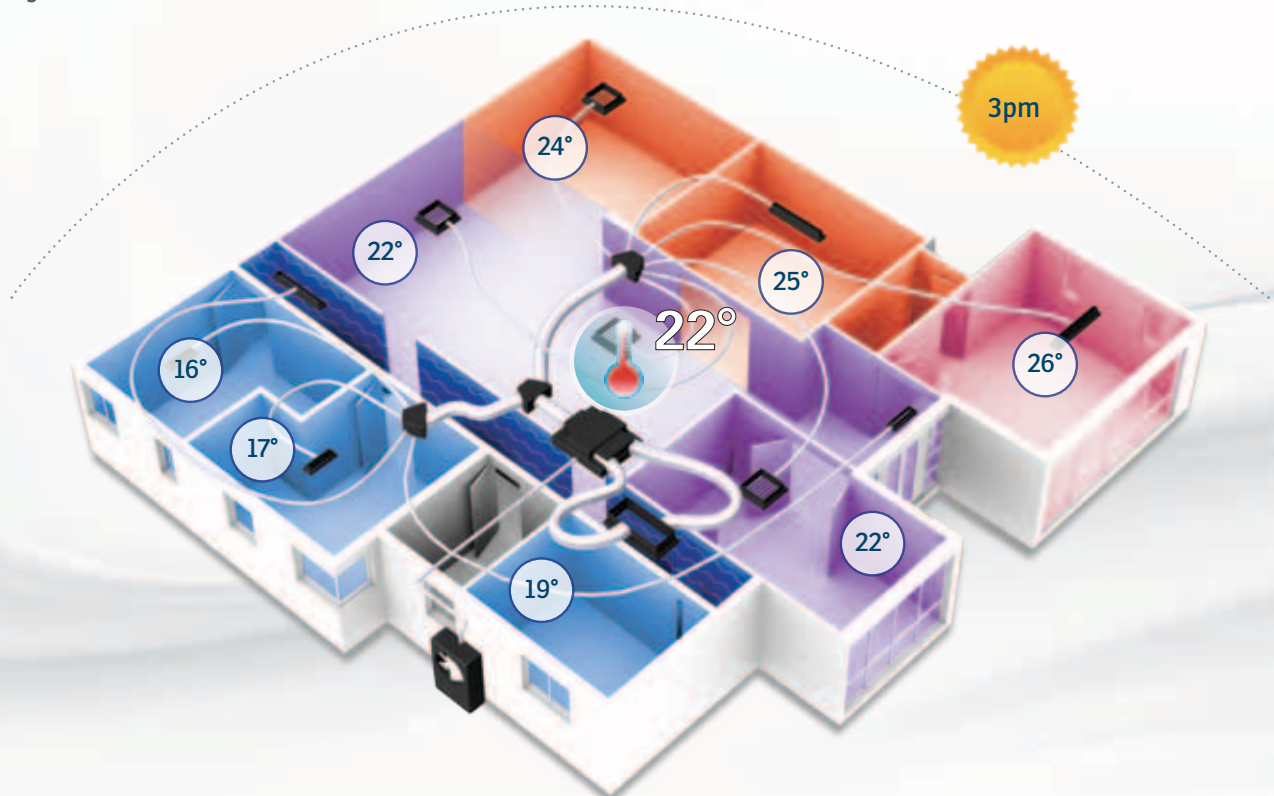
## Limited zones

How a typical standard zone system breaks up a house.



## Single thermostat

With only one centrally placed thermostat it is not possible for a standard system to control the temperature in every room. The area where the thermostat is placed is at temperature, but west facing rooms are hotter and east facing rooms are colder in the afternoon.



## Design flaws multiply in multi-storey homes

### Single thermostat systems in large or double storey homes just don't add up.

For starters, where do you put the thermostat to give an accurate temperature reading for the whole house? If you place it downstairs, you're ignoring the fact that hot air rises and upstairs rooms will be hotter than the thermostat reading. If you place it upstairs, the reverse problem results. And don't forget to factor in that west facing rooms are hotter than east ones. Add in extensive glazing and it gets even more confusing!

Thermostat location is important because it's the thermostat that controls the whole system and determines how much conditioned air is generated. If there is only one centrally located thermostat, the system has to work on an average temperature for the entire house. As a result, it ends up sending too much air to the naturally cooler downstairs and east facing rooms, and not enough to the warmer west facing and upstairs rooms.

The very unpleasant result is you end up with hot and cold spots throughout the house. And if that doesn't leave you feeling uncomfortable, the wasted electricity you get billed for will.

### The Gen III solution: temperature sensors in every room.

In single storey homes over 250m<sup>2</sup> or two storey homes, the only way you can get an accurate temperature reading for every room is to have a temperature sensor in every room. While the solution seems so obvious, the Gen III from Advantage Air is the only system that does it. In total, you can have up to 32 temperature sensors – enough for even the largest of homes.

There are multiple benefits to having multiple temperature sensors:

- **Individual room temperature control.** As each room has its own temperature sensor, everyone can select their preferred temperature for their own room.
- **No hot and cold spots.** With each temperature sensor acting like a thermostat, Gen III keeps the temperature in each room at the precise temperature you select, regardless of a room's orientation to the sun or whether it's upstairs or downstairs.
- **More control equals less energy wastage.** As the Gen III is able to deliver the precise amount of air that each room needs, you don't waste energy. CSIRO tests show the Gen III is 26% more energy efficient than standard single thermostat systems. This figure rises to 38% when you add on our Fresh Air option.

**GEN III DOESN'T  
WASTE A PUFF  
OF AIR**





## Single thermostat

Because heat rises the single thermostat system cannot cope with the temperature discrepancies in a 2 storey home.



## Multi-thermostat

With a temperature sensor in every room, Gen III can manage the flow of conditioned air into each room to maintain the desired temperature.



## A temperature sensor in every room is just the start of what sets Gen III apart from standard systems.

### You choose the temperature that suits you

As each room has its own sensor, each room can be zoned individually, allowing you to pick and choose precisely which room, or combination of rooms, you want air-conditioned. You wouldn't dream of having only 3 or 4 light switches in your house as this would mean you were lighting rooms that weren't required – it's the same with air-conditioning!

### No dump zone

Gen III does not need to use one of your rooms as a dump zone as it cleverly recycles any excess conditioned air through the system. This boosts performance and gets the job done faster when you are only conditioning 1 or 2 rooms. It also results in lower running costs, and importantly, eliminates the discomfort caused by over-conditioning a designated dump zone.

### Extensive programs

By setting your system to go on before your house gets too hot or cold, you'll stay more comfortable and save more energy. Gen III has extensive programming, allowing you to plan a full week in advance and features 4 favourites to quickly select your preferred settings.

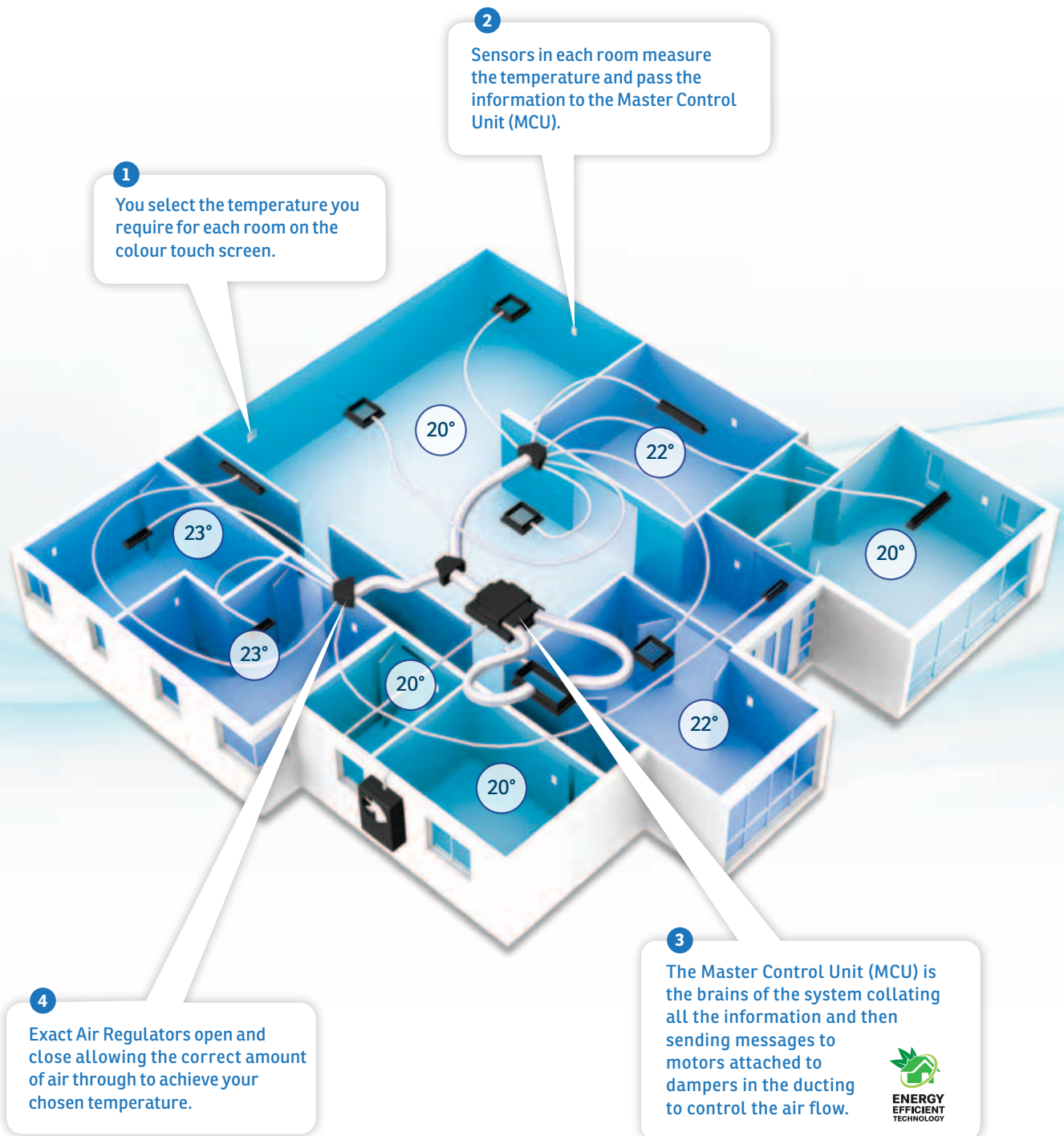
### Easy to use colour touch screen

The entire system is controlled by an easy to use colour touch screen. We think of it as the iPad of controllers as it is so intuitive to use.





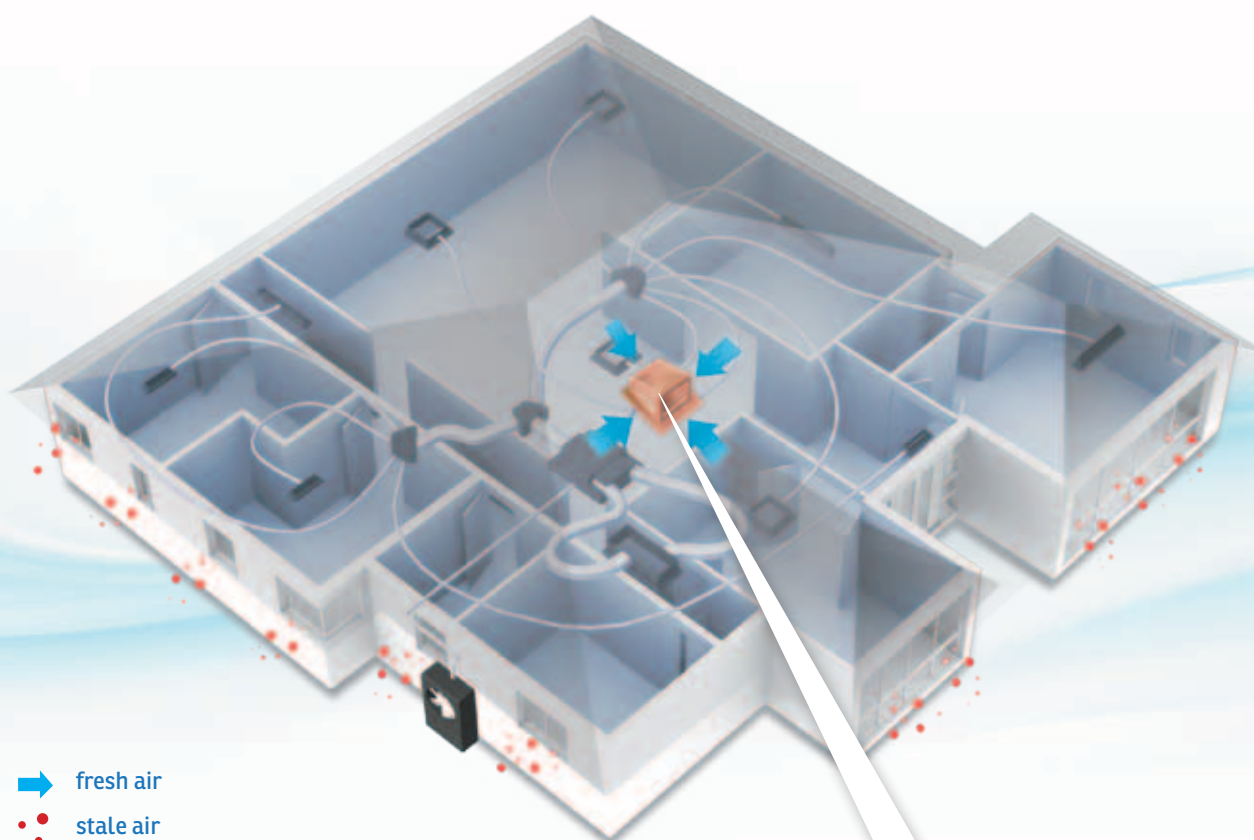
## The **GENIII** Difference



## You have the option of making your Gen III system even more sophisticated by adding on any of the following options.

### Fresh Air Option

On automatic, the Fresh Air function senses the temperature and humidity of the outside air and decides whether it is suitable to bring this fresh air into your home. It lets you enjoy both the comfort of air-conditioning and the freshness of outside air. It can also be manually turned on any time you want to replace the air in the house, eg. after cooking.



➡ fresh air  
••• stale air

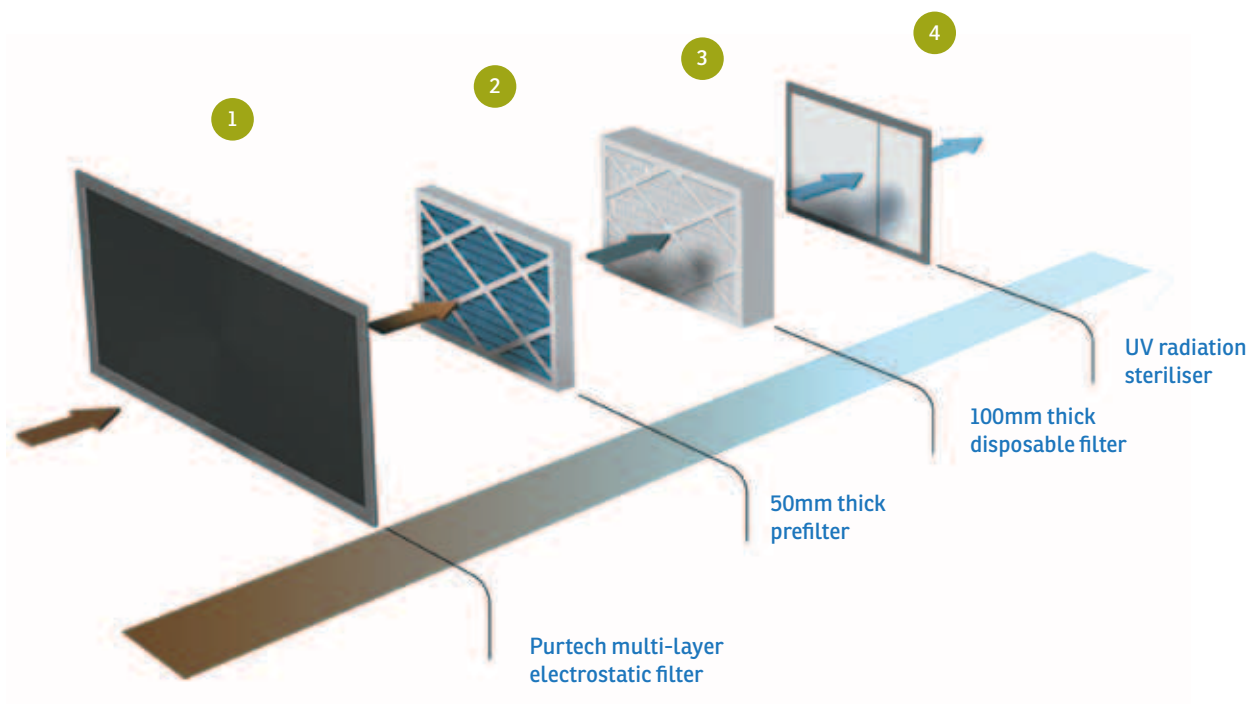
Independent testing estimates this function can lead to energy savings of up to 38%\* compared to regular ducted systems.

Another great way to use **Fresh Air** is at night. When the outside temperature drops down to 15-20 degrees, you can manually set Gen III to only bring in 100% fresh air from outside. This leaves you filtering in pleasant night air using only the low power consuming fan. What's more, you can set your system to switch to fresh air at anytime and you still have temperature control, so your room won't get too cold!

## Pure Air Option

This option is ideal for people with asthma or allergies. It is an intensive 4-stage filtration system that will produce air on par with the level of purity demanded by hospital wards.

In stage 1, air passes through the Purtech Return Air Grille, removing 78% of general household dust. The second stage sends the air through a disposable 50mm thick prefilter. In stage 3, any dust, pollen or bacteria left in the air is then captured by an incredibly efficient 100mm thick disposable filter that removes up to 95% of particles as tiny as 1 micron. The final 4th stage subjects air to an ultra violet radiation steriliser.



## Home Automation Integration

Gen III is an advanced ducted air-conditioning system that can fully integrate with most home automation systems. This technology allows you to control and monitor virtually all the functions of your air-conditioner from your home automation control panel.

Other air-conditioning systems allow only a basic on/off function. Gen III functions that can be controlled via your home automation control panel:

- A/C system on/off
- Zone open/close
- Zone set point temperature adjustment
- Zone actual temperature indication
- Fan speed control – high, medium and low
- Mode control – heat, cool, vent, auto
- Fresh Air and Pure Air control and status reporting.



## The **GENIII** components that make the difference



### Colour Touch Screen

This is your control panel that lets you monitor and set the temperature for every room in your home. Using the screen, you can set everything from a simple daily on/off schedule, to up to 10 on/off schedules per day for the entire week.

The screen will also let you know how the system is functioning. For example, it will warn you if too many zones have been opened.

You have the option of installing additional touch screens if desired.

### Gen III Master Control Unit (MCU)

Constantly monitoring all parts of the system, the Master Control Unit is the nerve centre of Gen III. It interprets your selections and in turn instructs the various parts of the system to produce the exact amounts of air needed to achieve your desired temperature.



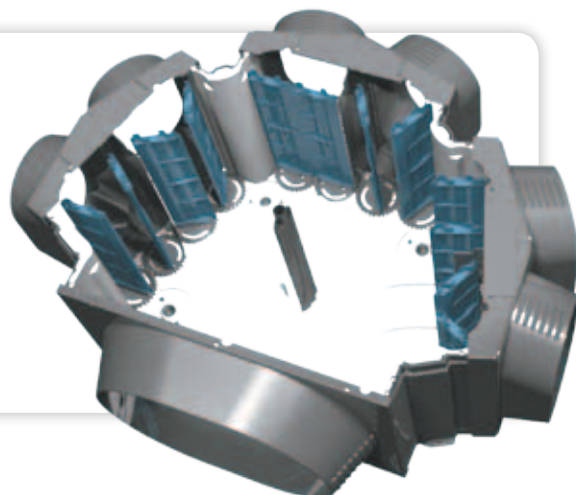
### Wall Temperature Sensor

In each room you'll have a wired or wireless sensor that monitors the temperature. It interacts with the MCU to ensure the desired room temperature is achieved. These sensors can be discreetly and easily placed in any room.

### Exact Air Regulator

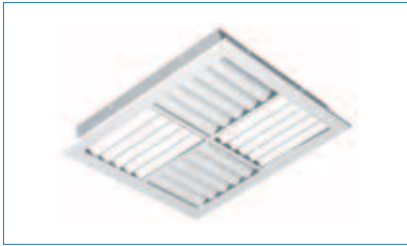
To ensure that Gen III controls the air to each room precisely, we have used advanced commercial technology to create the most precise home damper system in the world.

It uses an Opposed Blade Damper system – similar to those in multi-storey buildings – for far more precise control over airflow and therefore temperature.



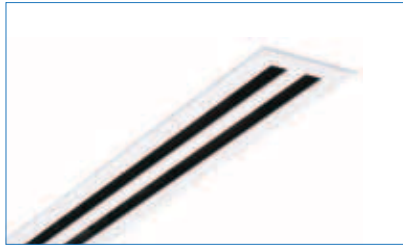
# Energy efficient technology

## Diffuser Options



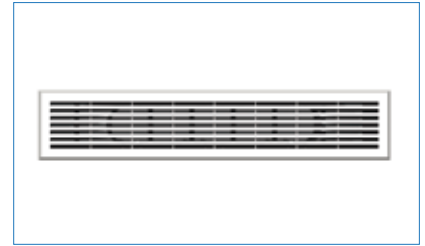
### StreamLine Diffuser

A diffuser that features adjustable blades that sit completely flush with the ceiling. Unique 7 point setting system allows blades to be adjusted precisely to diffuse cool air across the ceiling or to direct warm air down into the room.



### Linear Elite Diffuser

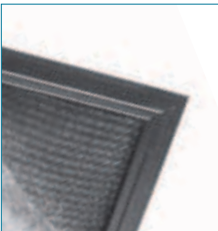
The cutting-edge, sophisticated design of the Linear Elite will enhance the interior of any home. They can be used in specific rooms whilst choosing a standard diffuser in other rooms.



### Small Linear Diffuser

A smaller compact version of the Linear Elite Diffuser that still delivers a big impact. Excellent diffuser option for those tight spots or bulkheads where the traditional range simply will not fit.

## Air Quality



**30%**

Cleaner Air

Multi-Layer  
Electrostatic  
Filter

### Purtech Return Air Grille

The Purtech Return Air Grille is another example of Advantage Air leading the way in delivering quiet and efficient systems. The multi-layer electrostatic technology can produce up to 30% cleaner air. Plus, it's easy to remove and clean.



### Dirty Filter Warning

A discreet warning message on your Touch Screen lets you know when it's time to clean the filter. A dirty filter increases your power usage and makes the system work harder, causing unnecessary additional wear-and-tear.





**The advantage of being Australian**

## **Australian Made**

In the unlikely event your system needs parts, they are available in days not weeks as Gen III is manufactured in Australia. We are so confident of the quality of our components that we offer a 10 year warranty on ducting and a 5 year warranty on electronic components.

## **We're not satisfied until you are 100% satisfied**

At Advantage Air we aim to deliver comfort on every level. We welcome all questions and view any feedback as a way for us to learn and improve our product and service.

Our staff are here to fix problems, not add to them. ALL calls are handled locally by people who have the authority to solve your issue. Warranty calls are passed to experienced technicians, who more often than not, can give you a solution over the phone.

## **Maintaining your Gen III system**

As a dirty air filter restricts air-flow and puts a strain on your system, we recommend you clean the Return Air Filter every 6 months or as advised by the message on your Touch Screen.

To clean the filter, simply remove it and take it outside. You can either vacuum it or wash it down with a hose – just be sure to let it dry in the shade before replacing it.

We recommend that you arrange to have your system serviced annually to protect the validity of your Gen III warranty. This service involves checking the refrigerant charge, air discharge temperatures, electrical connections, zone motor operation and the ducting for any air leakages.

## **Deactivation feature**

Please note: This system can be deactivated 7 days after successful installation. A 4 digit code is required to reactivate the system.



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