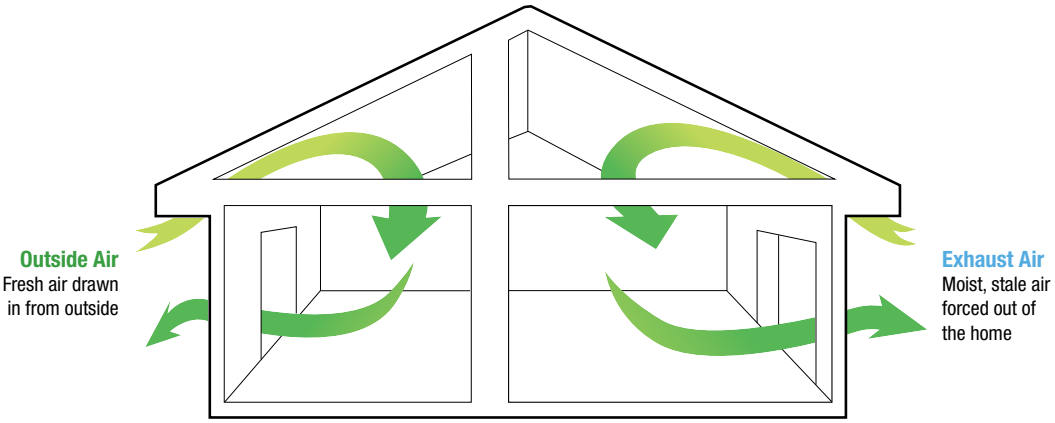
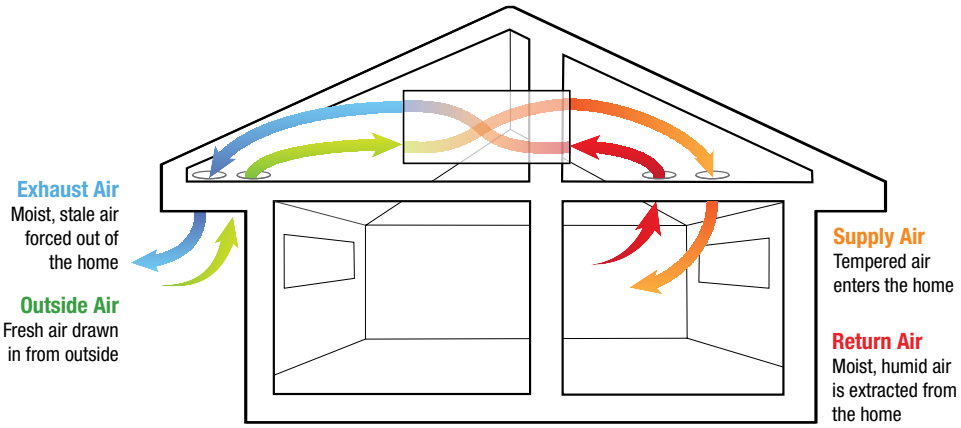
SmartVent

the expert's choice



POSITIVE PRESSURE SYSTEMS



HEAT & ENERGY RECOVERY SYSTEMS

Product Guide

The experts' guide to specifying a healthier home

Help Us Protect Our Environment

Please note that all SmartVent packaging bearing this ♻ symbol is made from recyclable and/or reusable New Zealand materials.

Recycle yourself, or, by returning all your SmartVent product packaging to your source of supply, we can then reuse, or recycle to reuse, those items and together we will be doing our small part to help achieve a sustainable living environment for us to enjoy today

you return *we collect* *we reuse*

Leading Brands

As a leading supplier to the New Zealand building and electrical industry, Simx is committed to the development and delivery of high quality products. Products that are sustainable and promote better health for people and in buildings with features that exceed market standards. Investment in product development, designs specific to New Zealand conditions and product and service reliability have been key forces driving the company to the forefront of the market for over 35 years.

Simx is now an integral part of the UK publicly listed Volution Group, a leading supplier of ventilation products in markets including the UK, Europe and Australasia.

Sustainability and a commitment to a low-carbon future are key to the Volution Group which is demonstrated by the recent awarding of the London Stock Exchange's Green Economy Mark. This mark is only given to companies, or funds, that derive more than 50% of revenues from environmental solutions. Currently, fewer than 100 organisations have it and Volution Group were only the fourth Building Material's Company to receive it.

The Mark recognises that Volution Group plc are contributing to the global green economy and helps the company emphasise to investors their commitment to support the transition to a sustainable, low carbon economy.

With approximately 100 staff and operations in Auckland and Christchurch, the Simx business includes new product design and development, sales, technical support and product training services for its customers throughout New Zealand. A network of local channel partners further complement these services and close alliances with overseas and local suppliers establishes the company as a truly credible supplier of a vast range of electrical, ventilation and lighting products.

Trusted by electricians and industry professionals, the Simx range covers residential, commercial and industrial markets, with leading global and local brands such as MANROSE, VENT-AXIA, SIMX LIGHTING and SMARTVENT.

SmartVent home ventilation systems are recommended and installed by qualified electrical and HVAC contractors across the country.

Market feedback from these groups and consumers, along with ongoing investment in research and development has led to SmartVent having the most flexible, future–proofed home ventilation systems in the New Zealand market.

Contents

Why Ventilate?

Over a year a family can produce as much as 3,500 litres of moisture in the air inside their home and damp homes are much harder to heat than dry ones.

Ventilating our homes creates and maintains the air quality we need to ensure that a healthy indoor living environment exists every day.

Many of us are not aware that the well-intentioned energy efficiencies we introduce to our homes often negatively affect the air quality which can then compromise our health. In winter, the issue of poor air quality is compounded further in the simple act of taking every possible measure to retain the precious heat we generate in an effort to keep the cold at bay.

Insulation solutions make homes easier to heat, however, this can affect the good ventilation essential for better air quality, no matter what the age of your home.

In our New Zealand climate, poor ventilation can create the perfect environment for the ever-present moisture in the air to not just exist, but to then expose itself as the unwanted condensation, mould, mildew, proliferation of dust mites and other airborne nasties that can all damage your home and your health. Indeed, as international research shows, introducing fresh air, to dilute airborne particles, can reduce the transmission of undesirable airborne viruses by over 70%.

Employing an active approach to ventilation, which uses a controlled process to continuously regulate and distribute clean, filtered air throughout your home, increases the positive benefits of good indoor air quality, to assist protecting the health and wellbeing of your family.

Almost a third of all rental homes have been found to feel damp.

Why Smartvent?

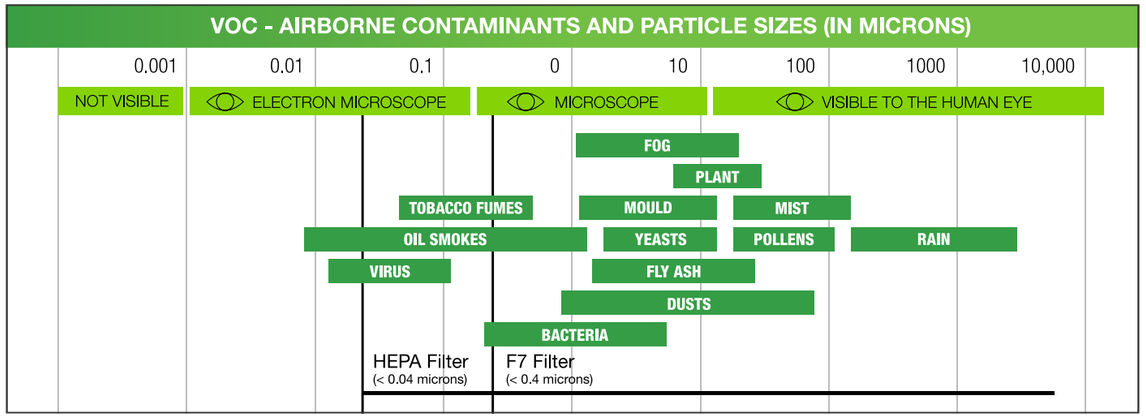
SmartVent is proudly owned by Simx, a business unit of the Volution Group. As a leading international designer and manufacturer of energy-efficient, indoor air quality solutions, Volution Group is committed to providing healthy air, sustainably.

An efficient home ventilation system may well be just a low-cost product that keeps moisture build-up at bay. An effective system, however, is an investment that delivers on the quality of life promise we now expect, as the minimum, for in-home comfort. SmartVent offers a wide range of home ventilation solutions with systems designed to best suit the specific needs of any home today.

With up to 69% of your lifetime spent in your home, a comfortable and healthy living environment is the least you should expect.

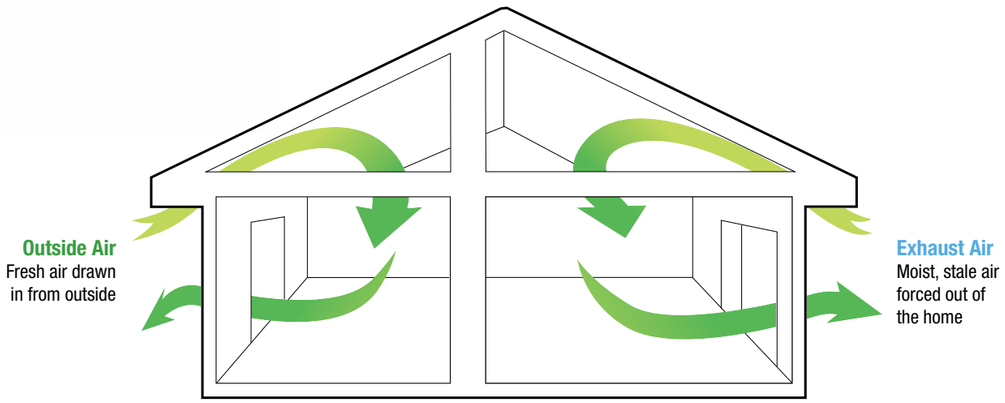
Filters

The filter is an important component of a ventilation system if it is to contribute towards a better indoor environment. On average, we breathe in 20-30kg of air every day, so it is essential that the atmospheric particles that can adversely affect our health, are effectively, and efficiently, filtered out.



All centralised SmartVent systems feature high grade F7 filters that capture up to 90% of 0.4 microns particles such as fine pollens, dusts and allergen from the air making the air cleaner to breathe. High quality HEPA filters are also available for asthma and allergy sufferers.

Positive Pressure Systems



better air = better health

Positive pressure systems draw in fresh air from the roof cavity and filters it before distributing the clean air into,

and around, your home via a network of ceiling diffusers. The air movement created forces the moist, stale air that causes condensation, mould and mildew out.

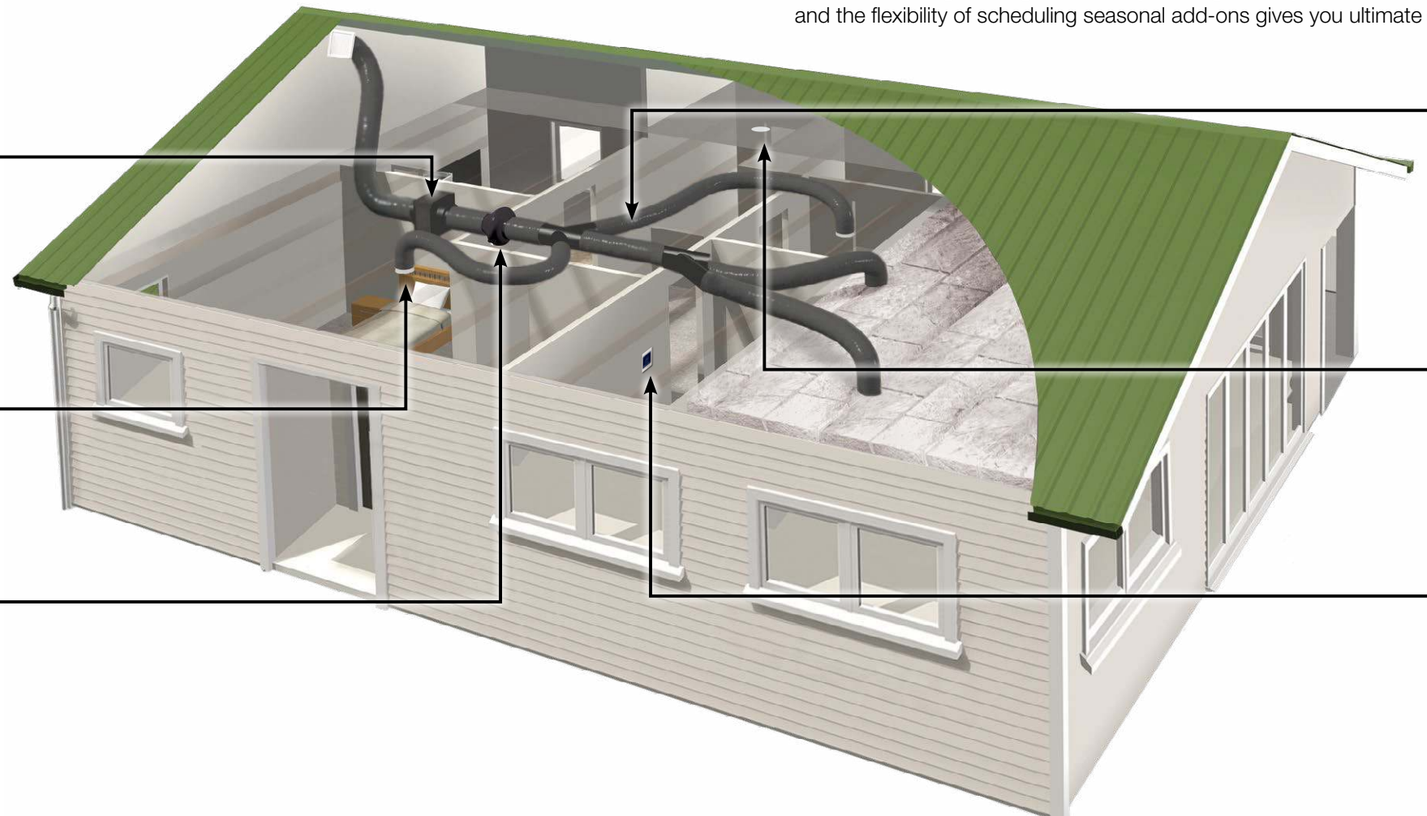
In winter, good air circulation and home heating are essential for maintaining air quality. A home ventilation system

from SmartVent reduces the excess damp, moisture-filled air and improves the overall air quality inside the house, making it much healthier for you and your family. A good investment for the well-being of your family and the overall health of your home.

Air Filter

Diffuser

Centrifugal Fan



Like a cold drink on a hot day, moisture will form when the temperature of the air drops when it contacts colder glass surfaces. We refer to the warm air reaching dew point as condensation.

Seasonal Add-Ons

SmartVent Evolve2, Positive+, Positive2 systems can be further enhanced with the addition of any of the following seasonal add-ons. Heat Transfer and Tempering Heater operations can be scheduled to maximise convenience.

Summer Feature
During warmer months, outside air can be used as the primary air source for the system, instead of the roof cavity. Keep bugs and pollens out overnight and bring a fresh filtered breeze in when you need it most.

Heat Transfer
During cooler months, excess heat from your heated lounge can be transfered to your bedrooms. The recycle function is a bonus feature which allows inside air to be recirculated when outside temperatures are still a bit too cool.

Tempering Heater
When it's cold outside and you want to take the chill off the incoming air, a 1 or 2kW tempering heater allows you to make the most of the driest air available.

System Components

SmartVent positive pressure solutions include a range of control options, backed up by quality components.

System operation is, primarily, set-and-forget. Simply enter your preferred temperature and the system does the rest. Depending on the model that suits your lifestyle and budget, sensing temperature alone, or temperature and the amount of moisture present, with or without seasonal add-ons, there is a SmartVent system for you. Your fully automated, smart wall controller determines the amount of air required to ventilate your home while temperatures and moisture conditions change throughout the day and night. All systems can be manually operated if you want more control, and the flexibility of scheduling seasonal add-ons gives you ultimate control of your home environment.

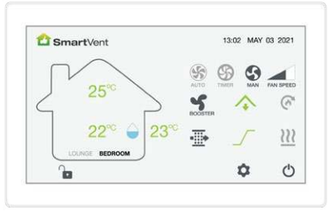
Acoustic Insulated Ducting

Sensors

Full-Featured Controller

Positive Pressure Systems

SmartVent evolve



Control Your Climate

Comprehensive humidity control protection against moisture, mould and mildew with multiple seasonal add-on options

SmartVent positive+

Condensation Control Plus

Integral humidity guard against moisture, mould and mildew with multiple seasonal add-on options

SmartVent positive

Control Condensation

Reduce moisture, mould and mildew with multiple seasonal add-on options

SmartVent lite+

Investment Protection Plus

Cost effective solution including an integral humidity guard against moisture, mould and mildew

SmartVent lite

Protect Your Investment

Cost effective solution to reduce moisture, mould and mildew

Systems	Evolve2	Positive+	Positive2	Lite+	Lite2
1 Room		**SV01P+**	**SV01P2**	**SV01L+**	**SV01L2**
2 Room (expandable to 3 room)	**SV02E2**	**SV02P+**	**SV02P2**	**SV02L+**	**SV02L2**
4 Room (expandable to 6 room)	**SV04E2**	**SV04P+**	**SV04P2**	**SV04L+**	**SV04L2**
6 Room (expandable to 12 room)	**SV06E2**	**SV06P+**	**SV06P2**	**SV06L+**	**SV06L2**

Features	Evolve2	Positive+	Positive2	Lite+	Lite2
Dew Point Control	✓				
Humidity Sensing	x4	x2		x2	
Temperature Sensing	✓	✓	✓	✓	✓
Low Temperature Protection	✓	✓	✓	✓	✓
Auto or Manual Operation	AUTO MAN	AUTO MAN	AUTO MAN	AUTO MAN	AUTO MAN
Rental Property Lock		✓	✓	✓	✓
Boost Control	✓	✓	✓	✓	✓
Filter Change Alert	✓	✓	✓	✓	✓
Screen Brightness Control	✓	✓	✓	✓	✓
Scheduler	WEEKLY	DAILY	DAILY	DAILY	DAILY

Seasonal Add-Ons	Evolve2	Positive+	Positive2	Lite+	Lite2
Summer Feature	✓	✓	✓		
Heat Transfer	✓	✓	✓		
Tempering Heater	✓	✓	✓		

Overview

SmartVent Evolve2 is a centralised positive pressure system that constantly evaluates the environmental dynamics in and around your home. Four temperature and humidity sensors measure moisture content throughout the home, in the roof cavity and outside, to calculate dew point which is the measure of when condensation will appear on the windows given the internal temperature and moisture conditions combined with the temperature of the coldest surface. This comprehensive and clever solution can then determine how much improved air quality to introduce to effect change without the risk of over-ventilating. Market-leading Evolve2 technology comes with a range of fantastic features such as flexible upgrade options with weekly scheduling, dew point control, all easily navigated with the intuitive wall controller. Just set the preferred temperature and the system does the rest.

SmartVent Evolve2 Range

Home ventilation system suitable for most types of homes.

Model	Description	Product Code
SV02E2	2 room system (expandable to 3 max.) for homes up to 100m^2	FAN6910
SV04E2	4 room system (expandable to 6 max.) for homes up to 280m^2	FAN6911
SV06E2	6 room system (expandable to 12 max.) for homes up to 560m^2	FAN6912

System Extensions

3m Duct	6m Duct	Through Wall
DCT2276	DCT2667	DCT2286

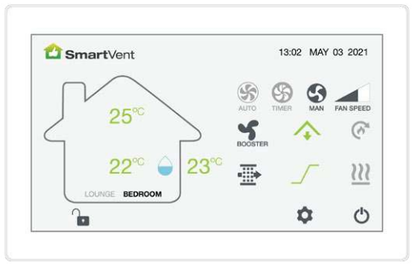
Extension kits can be used to add more rooms to your SmartVent home ventilation system.

Features and Seasonal Add-Ons

Features
Dew Point Control
Humidity Sensing x4
Temperature Sensing
Low Temperature Protection
Auto or Manual Operation (AUTO MAN)
Boost Control
Filter Change Alert
Screen Brightness Control
Scheduler (WEEKLY)

Seasonal Add-Ons [1]
Summer Feature
Heat Transfer
Tempering Heater

1) *See page 23 for full information on Seasonal Add-On options*

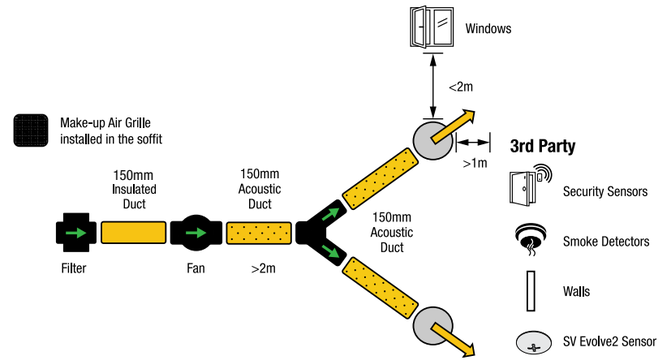


Control Your Climate

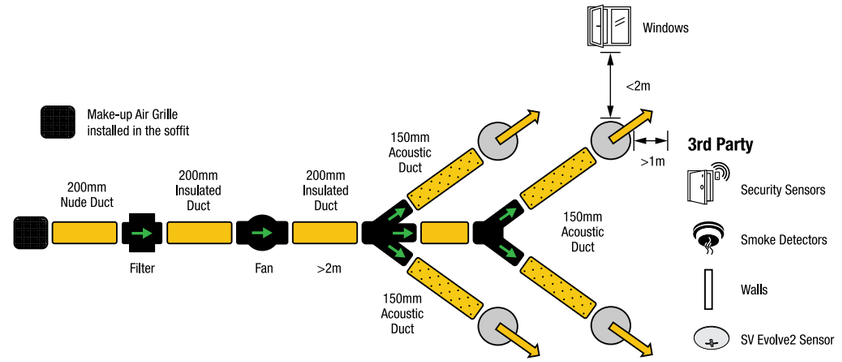
Comprehensive humidity control protection against moisture, mould and mildew with multiple seasonal add-on options

5 YEAR WARRANTY

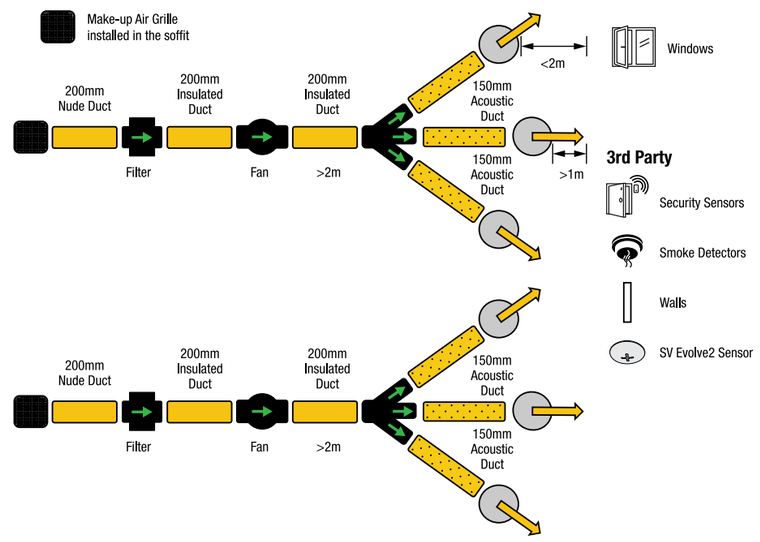
SV02E2



SV04E2



SV06E2



SmartVent positive+

Overview

SmartVent Positive+ is an all-new centralised positive pressure system that monitors both temperature and humidity conditions in your home and at the incoming air source, to ensure that you are benefiting from improved air quality always circulating around your home, and that the home is kept dry. Additional features, such as heat transfer scheduler and heater functions that allow users to easily operate upgrades, are included as standard. Enter your preferred temperature into the easy to use, fully automated, controller and your system will ventilate your home, providing fresh clean air when you need it most. As a temperature and humidity based solution in winter, SmartVent Positive+ not only introduces air faster when warmer and slower when cooler, the system also measures the moisture content in the home and of the incoming air and uses this data to reduce under or over ventilation. Temperature protection, set at a user adjustable 5°C default, ensures that continuous cold air is not introduced when the incoming air temperature is below the set temperature protection level. The flexible upgrade options allow users to customise the system to suit their individual needs.

SmartVent Positive+ Range

Home ventilation system suitable for most types of homes.

Model	Description	Product Code
SV01P+	1 room system (expandable to 3 max.) for homes up to 100m²	FAN7280
SV02P+	2 room system (expandable to 3 max.) for homes up to 100m²	FAN7281
SV04P+	4 room system (expandable to 6 max.) for homes up to 280m²	FAN7282
SV06P+	6 room system (expandable to 12 max.) for homes up to 560m²	FAN7283

System Extensions

Extension kits can be used to add more outlets to your SmartVent home ventilation system.

3m Duct	6m Duct	Through Wall
DCT2276	DCT2667	DCT2286

Features and Seasonal Add-Ons

Features	
Humidity Sensing	x2
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Rental Property Lock	
Boost Control	
Filter Change Alert	
Screen Brightness Control	
Scheduler	DAILY

Seasonal Add-Ons [1]	
Summer Feature	
Heat Transfer	
Tempering Heater	

Condensation Control Plus

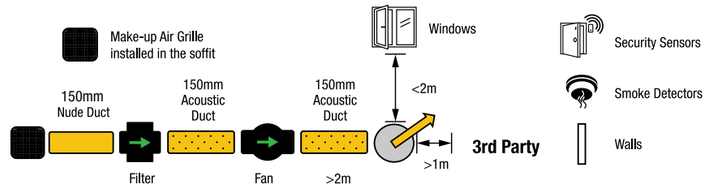
Integral humidity guard against moisture, mould and mildew with multiple seasonal add-on options

1) *See page 23 for full information on Seasonal Add-On options*

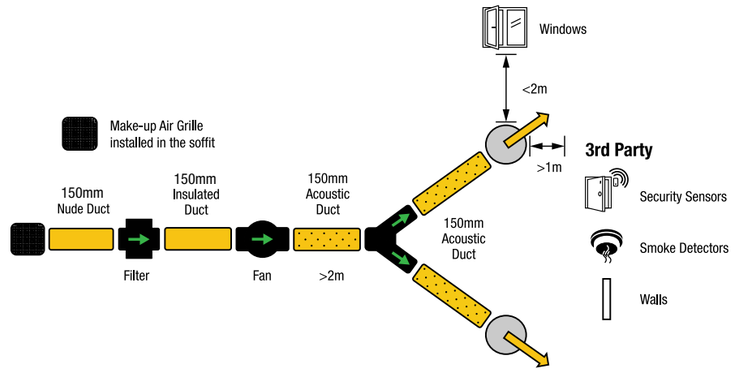
5 YEAR WARRANTY

SmartVent positive+

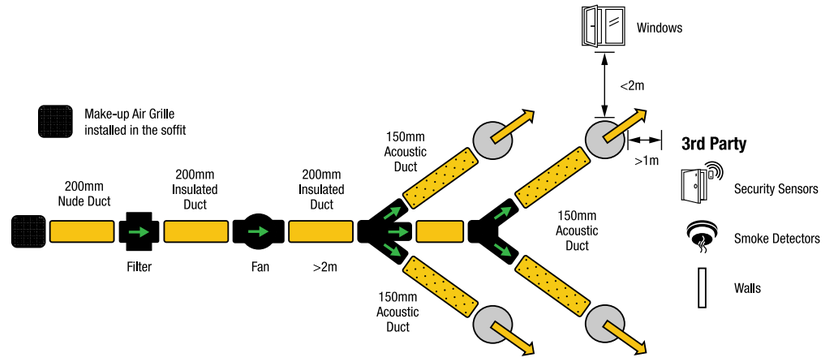
SV01P+



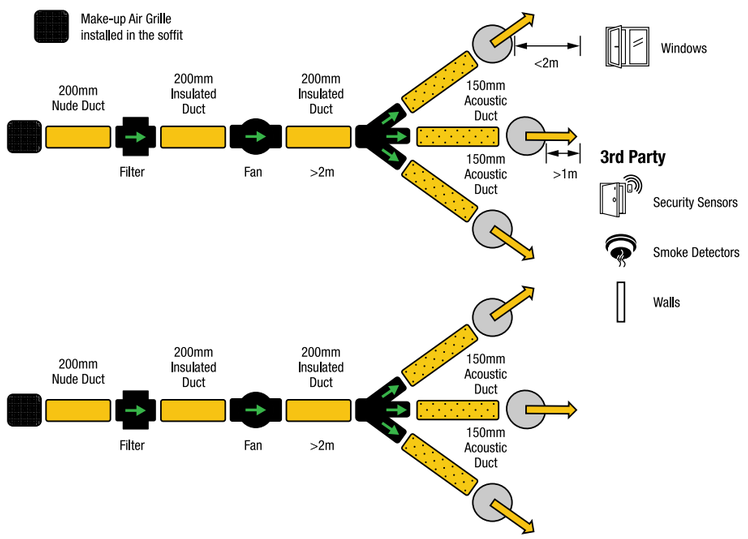
SV02P+



SV04P+



SV06P+



Overview

SmartVent Positive2 is a classic centralised positive pressure system that monitors temperature conditions in your home and at the incoming air source, to ensure that you are benefiting from improved air quality always circulating around your home. This proven SmartVent technology has been used reliably in thousands of New Zealand homes over many years. Additional features, such as heat transfer scheduler and heater functions to easily operate upgrades, are included as standard. Enter your preferred temperature into the easy to use, fully automated, controller and your system will ventilate your home, providing fresh clean air when you need it most. As a temperature and humidity based solution in winter, SmartVent Positive2 introduces air faster when warmer and slower when cooler. Temperature protection, set at a user adjustable 5°C default, ensures that continuous cold air is not introduced when the incoming air temperature is below the set temperature protection level. The flexible upgrade options allow users to customise the system to suit their individual needs.

SmartVent Positive2 Range

Home ventilation system suitable for most types of homes.

Model	Description	Product Code
SV01P2	1 room system (expandable to 3 max.) for homes up to 100m^2	FAN2023
SV02P2	2 room system (expandable to 3 max.) for homes up to 100m^2	FAN0939
SV04P2	4 room system (expandable to 6 max.) for homes up to 280m^2	FAN1057
SV06P2	6 room system (expandable to 12 max.) for homes up to 560m^2	FAN1064

System Extensions

3m Duct	6m Duct	Through Wall
DCT2276	DCT2667	DCT2286

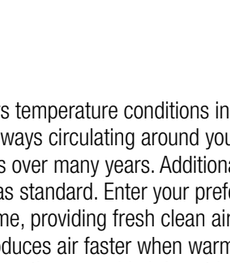
Extension kits can be used to add more rooms to your SmartVent home ventilation system.

Features and Seasonal Add-Ons

Features	
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Rental Property Lock	
Boost Control	
Filter Change Alert	
Screen Brightness Control	
Scheduler	DAILY

Seasonal Add-Ons [1)]	
Summer Feature	
Heat Transfer	
Tempering Heater	

1) See page 23 for full information on Seasonal Add-On options

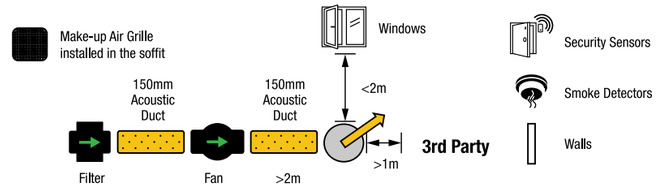


Control Condensation

Reduce moisture, mould and mildew with multiple seasonal add-on options

5 YEAR WARRANTY

SV01P2



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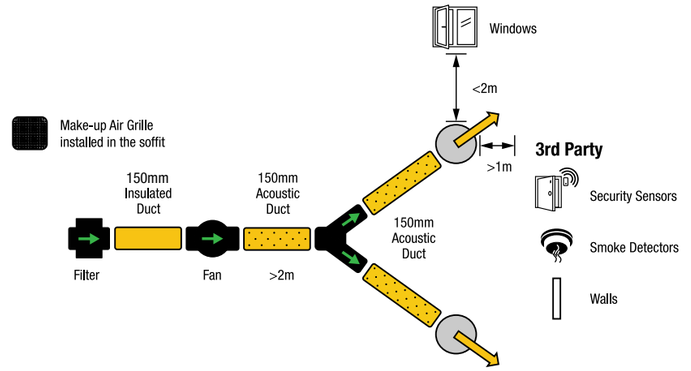
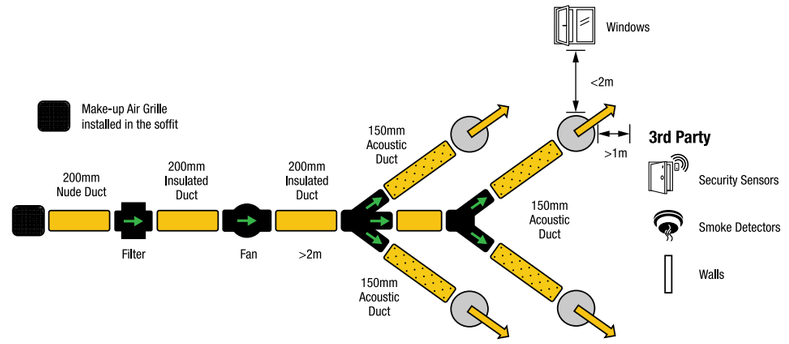
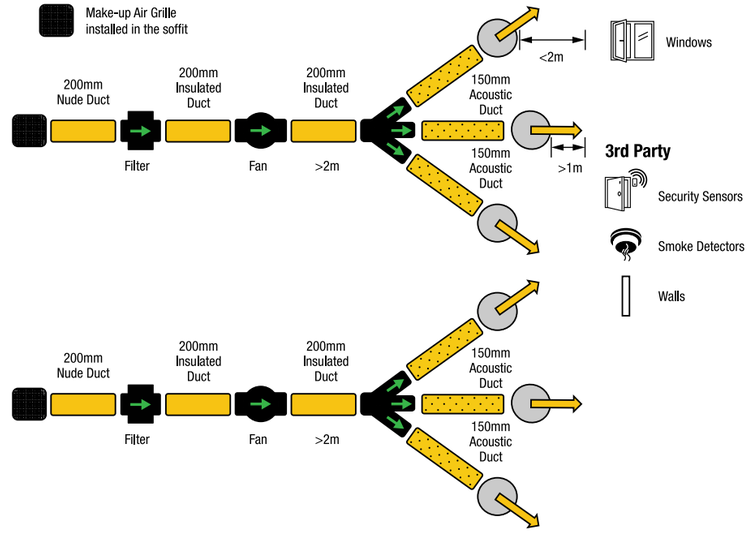


SV04P2



SV06P2



Overview

SmartVent Lite+ is a home ventilation system that monitors both temperature conditions and humidity to ensure that you are protecting your home or rental property with quality air always circulating and keeping the property dry. As a temperature and humidity based solution, in winter, SmartVent Lite+ not only introduces air faster when warmer and slower when cooler, the system also measures the moisture content in the home and of the incoming air and uses this data to reduce under or over ventilation. The rental lock feature enables a property owner to lock the controller to prevent tenants from switching the system OFF while still allowing system temperatures, fan speeds and ventilation scheduler adjustments to suit the lifestyles/needs of the occupants. Low temperature protection, set at a user adjustable default setting of 5°C, ensures that continuous cold air is not introduced when the incoming air conditions are too cold.

SmartVent Lite+ Range

Home ventilation system best suited for rental properties

Model	Description	Product Code
SV01L+	1 room system (expandable to 3 max.) for homes up to 100m²	FAN7270
SV02L+	2 room system (expandable to 3 max.) for homes up to 100m²	FAN7271
SV04L+	4 room system (expandable to 6 max.) for homes up to 280m²	FAN7272
SV06L+	6 room system (expandable to 12 max.) for homes up to 560m²	FAN7273

System Extensions

Extension kits can be used to add more outlets to your SmartVent home ventilation system.

3m Duct
DCT4276

Features

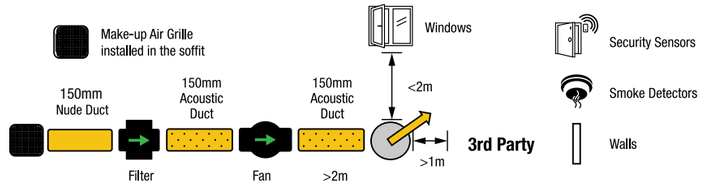
Features	
Humidity Sensing	x2
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Rental Property Lock	
Boost Control	
Filter Change Alert	
Screen Brightness Control	
Scheduler	DAILY

Investment Protection Plus

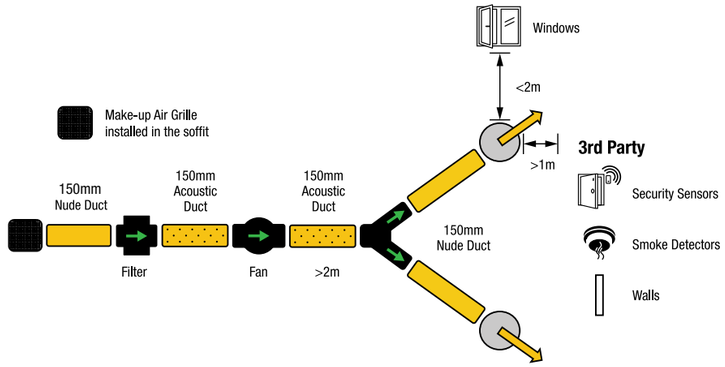
Cost effective solution including an integral humidity guard against moisture, mould and mildew

5 YEAR WARRANTY

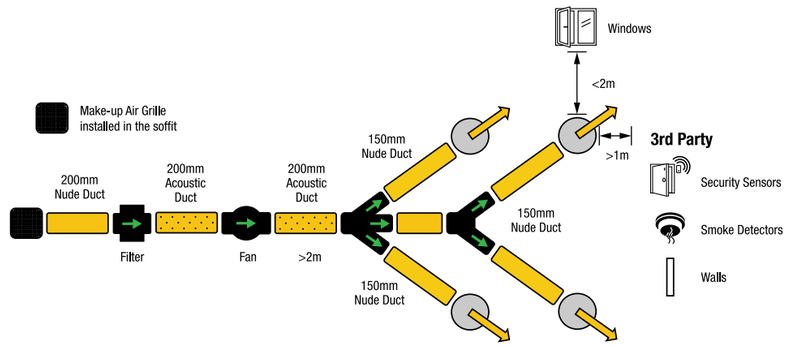
SV01L+



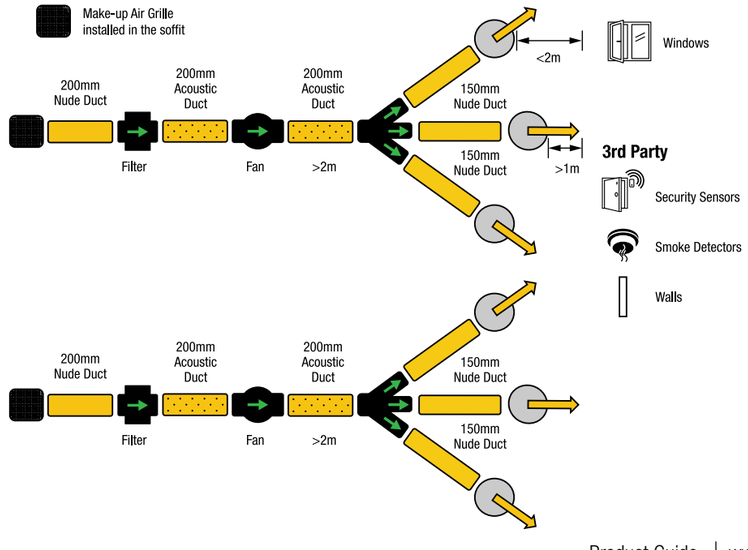
SV02L+



SV04L+



SV06L+



Overview

SmartVent Lite2 is an economical home ventilation system that monitors temperature conditions to ensure that you are protecting your home or rental property with quality air always circulating. As a standard temperature-based solution, bringing air in faster when warmer and slower when cooler, SmartVent Lite2 is commonly referred to as a "Landlord Solution" or a cost-effective solution to protecting their property investment. The rental lock feature enables a property owner to lock the controller to prevent tenants from switching the system OFF while still allowing system temperatures, fan speeds and ventilation scheduler adjustments to suit the lifestyles/needs of the occupants. Low temperature protection, set at a user adjustable default setting of 5°C, ensures that continuous cold air is not introduced when the incoming air conditions are too cold.

SmartVent Lite2 Range

Home ventilation system best suited for rental properties

Model	Description	Product Code
SV01L2	1 room system (expandable to 3 max.) for homes up to 100m²	FAN6803
SV02L2	2 room system (expandable to 3 max.) for homes up to 100m²	FAN6804
SV04L2	4 room system (expandable to 6 max.) for homes up to 280m²	FAN6805
SV06L2	6 room system (expandable to 12 max.) for homes up to 560m²	FAN6806

System Extensions

3m Duct
DCT4276

Extension kits can be used to add more rooms to your SmartVent home ventilation system.

Features

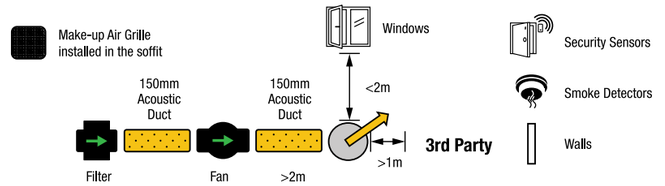
Features	
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Rental Property Lock	
Boost Control	
Filter Change Alert	
Screen Brightness Control	
Scheduler	DAILY

Protect Your Investment

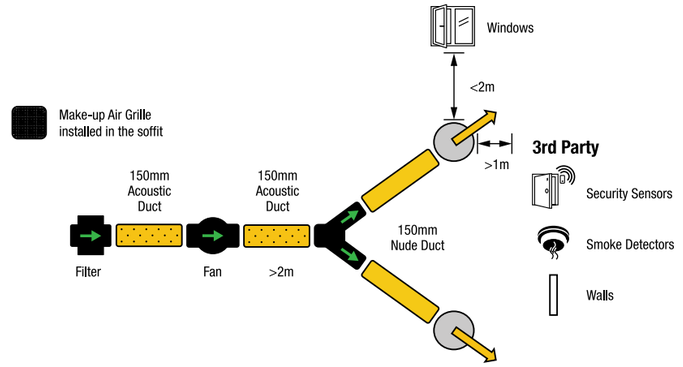
Cost effective solution to
reduce moisture, mould and mildew

5 YEAR WARRANTY

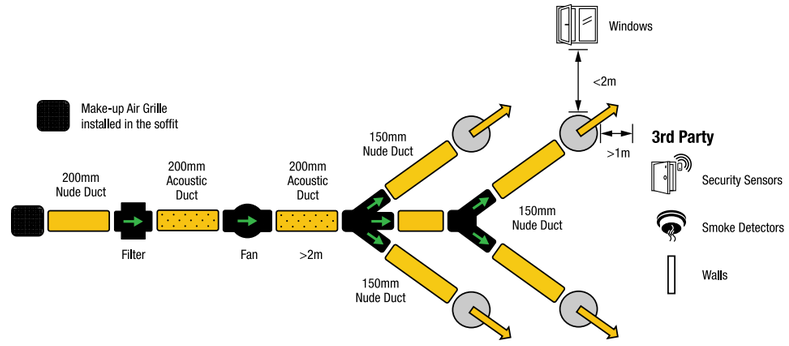
SV01L2



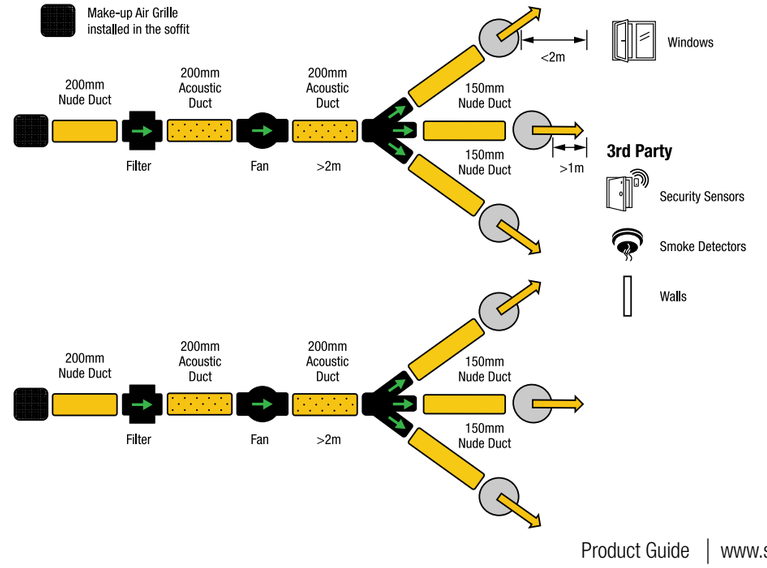
SV02L2



SV04L2



SV06L2



What is the size of your home (m^2)?	Range selection	How many rooms do you wish to distribute to?	Model	Product Codes
Up to 100m²	SmartVent Evolve2 SmartVent Positive+ SmartVent Positive2	1	SV01P+	FAN7280
			SV01P2	FAN2023
		2	SV02E2	FAN6910
			SV02P+	FAN7281
			SV02P2	FAN0939
		3	Extension Kit	DCT2276
	SmartVent Lite+ SmartVent Lite2	1	SV01L+	FAN7270
			SV01L2	FAN6803
		2	SV02L+	FAN7271
			SV02L2	FAN6804
		3	Extension Kit	DCT4276
Up to 280m²	SmartVent Evolve2 SmartVent Positive+ SmartVent Positive2	4	SV04E2	FAN6911
			SV04P+	FAN7282
			SV04P2	FAN1057
		5 – 6	Extension Kit	DCT2276
	SmartVent Lite+ SmartVent Lite2	4	SV04L+	FAN7272
			SV04L2	FAN6805
		5 – 6	Extension Kit	DCT4276
Up to 560m²	SmartVent Evolve2 SmartVent Positive+ SmartVent Positive2	6	SV06E2	FAN6912
			SV06P+	FAN7283
			SV06P2	FAN1064
		7 – 12	Extension Kit	DCT2276
	SmartVent Lite+ SmartVent Lite2	6	SV06L+	FAN7273
			SV06L2	FAN6806
		7 – 12	Extension Kit	DCT4276

IMPORTANT

- If you exceed the number of rooms listed in the selection guide above, the performance of the system will not work as designed. Your system should be reviewed with SmartVent before purchase and installation.
- Maximum outlets are listed above, do not exceed the number listed.
- For the SV06 systems do not exceed 3 additional extension kits per branch of the system.

Seasonal Add-Ons		SV01P+ SV01P2	SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2	SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2	SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2	SV06P	SV06L+ SV06L2
Summer Feature		DCT2134		–	DCT2134		–	DCT2128		–	DCT2135		–
Heat Transfer		FAN2027		–	FAN2027		–	FAN2028		–	FAN2028 (1 branch)	–	–
											FAN4438 (2 branch)		
Tempering Heater	1 kW	DCT3478	DCT1226	–	DCT3478	DCT1226	–	DCT3231	DCT1483	–	DCT3231	DCT1483	–
	2 x 1 kW*	–			–			–			DCT3418	DCT1491	–
	2 kW	–			–			DCT3230	DCT1484	–	DCT3230	DCT1484	–
	2 x 2 kW**	–			–			–			DCT4613	–	–

** DCT1491 and DCT3418 consist of 2 x 1kW heaters for installation into each branch of an SV06P, SV06P2, SV06P+ or SV06E2 system.*
***DCT4613 consists of 2 x 2 kW heaters for installation into each branch of an SV06P2, SV06P+ or SV06E2 system.*

Add–On Kits		SV01P+ SV01P2 SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2 SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2 SV06P	SV06L+ SV06L2
Additional Room	3m Duct	DCT2276	DCT4276	DCT2276	DCT4276	DCT2276	DCT4276	DCT2276	DCT4276
	6m Duct	DCT2667	–	DCT2667	–	DCT2667	–	DCT2667	–
	Through Wall	DCT2286	–	DCT2286	–	DCT2286	–	DCT2286	–
Additional Fan	150mm	FAN5836	–	FAN5836	–	FAN5836	–	FAN5836	–
	200mm	FAN5837	–	FAN5837	–	FAN5837	–	FAN5837	–
Outdoor Air Supply		SV01P2 SV01P	SV01L2	SV02E2 SV02P2 SV02P	SV02L2	–		–	
		FAN6264							

System Touch Screen Controllers	1 Room		2 Room		4 Room		6 Room	
Evolve2	–		SV02E2	FAN6910	SV04E2	FAN6911	SV06E2	FAN6912
Positive+	SV01P+	FAN7280	SV02P+	FAN7281	SV04P+	FAN7282	SV06P+	FAN7283
Positive2	SV01P2	FAN2023	SV02P2	FAN0939	SV04P2	FAN1057	SV06P2	FAN1064
Lite+	SV01L+	FAN7270	SV02L+	FAN7271	SV04L+	FAN7272	SV06L+	FAN7273
Lite2	SV01L2	FAN6803	SV02L2	FAN6804	SV04L2	FAN6805	SV06L2	FAN6806

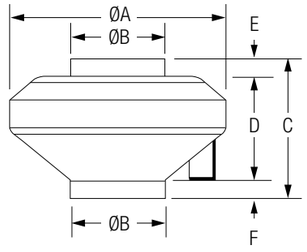
System Componentry	SV01P+	SV01P2	SV01L+	SV01L2	SV02E2	SV02P+	SV02P2	SV02L+	SV02L2	SV04E2	SV04P+ SV04P2	SV04L+ SV04L2	SV06E2	SV06P+ SV06P2	SV06L+ SV06L2
150mm Supply Diffuser	1				2					4			6		
150mm Fixed Grille	2	1	2	1	1	2	1	2	1	1			–		
200mm Fixed Grille	–				–					1			3		
F7 Filter	1				1					1			2		
150mm 3 Speed Fan	1				1					–			–		
200mm 3 Speed Fan	–				–					1			2		
150mm x 3m Nude Ducting	1	–	1	–	–	1	–	1	–	–			–		
150mm x 6m Nude Ducting	–				–			1		–	3		–	4	
150mm x 3m Acoustic Insulated Ducting	1				–			1		–			–		
150mm x 6m Acoustic Insulated Ducting	–				1			–		3	–		4	–	
150mm x 3m Insulated Ducting	–				1			–		–			–		
200mm x 3m Nude Ducting	–				–					1			–		
200mm x 6m Nude Ducting	–				–					–			1		
200mm x 3m Acoustic Insulated Ducting	–				–					–	1		–		
200mm x 6m Acoustic Insulated Ducting	–				–					–			–	1	
200mm x 3m Insulated Ducting	–				–					1	–		–		
200mm x 6m Insulated Ducting	–				–					–			1	–	
150/150/150mm Y–Branch	–				1					1			–		
200/150/150/150mm Double–Branch	–				–					1			2		
150mm Duct Joiner	–				–					1			2		

These recommendations are based on the standard components in the system.

- This selection guide assumes 2.4m stud height, if greater please increase the square metre size by 4% for every 0.1 metre (e.g. For a 2.8m stud height, increase your house size by 16%).
- If you choose to exceed the number of rooms listed in the selection guide above, the performance of the system will be affected.
- By adding additional outlets to the system the available air is being divided amongst more rooms.
- Extra duct may be required depending on the size and layout of the home *(see Accessories on page 54)*.
- For larger homes please contact SmartVent for technical advice on 0800 140 150.

Specifications	SV01P+ SV01P2	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2	SV02L+ SV02L2	SV04E2	SV04P+ SV04P2	SV04L+ SV04L2	SV06E2	SV06P+ SV06P2	SV06L+ SV06L2
House Size	up to 100m²	up to 100m²	up to 100m²	up to 100m²	up to 280m²	up to 280m²	up to 280m²	up to 560m²	up to 560m²	up to 560m²
Max. Fans	4	2	4	2	4	4	2	4	4	2
Fan Type	AC Centrifugal				AC Centrifugal					
Spigot Size	150mm				200mm					
Fan Speeds	3				3					
Max. Air Flow per Fan @ 0 Pa	175 l/s, 630m³/hr				296 l/s, 1066m³/hr					
Max. Air Flow per Fan @ 150 Pa	107 l/s, 385m³/hr				211 l/s, 760m³/hr					
Max. Static Pressure per Fan	320 Pa				440 Pa					
Power Supply	220–240V AC 50 Hz				220–240V AC 50 Hz					
Input Power per Fan	57W				105W					
Current (A) per Fan	0.26A				0.47A					
Operating Temp	–25°C to 50°C				–25°C to 50°C					
Sound Level	47 dB(A)				53 dB(A)					

Fan Dimensions (mm)	A	B	C	D	E	F
Spigot Size – 150mm	340	150	280	170	50	60
Spigot Size – 200mm	340	200	280	170	50	60



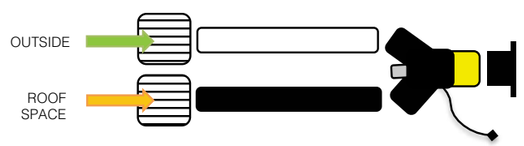
Summer Feature

Seasonal Add-On	SV01P+ SV01P2 SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2 SV06P	SV06L+ SV06L2
Summer Feature	DCT2134	–	DCT2134	–	DCT2128	–	DCT2135	–

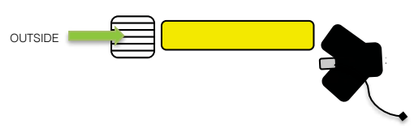
The Summer Feature seasonal add-on is an optional second air intake located under the eaves or at the gable end of the home (weatherproof grille maybe required). This feature provides an alternative air supply for use during summer months.

- When installed on the south side of the house it ensures the coolest possible air is used.
- If the house design prevents the installation of a Summer Feature Seasonal Add-On, there are alternative options for a second air source such as through roof kits. SmartVent have a full range of accessories available to assist.

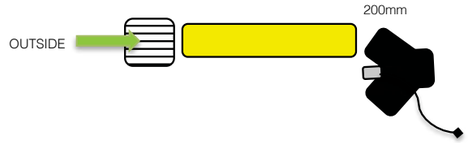
DCT2134

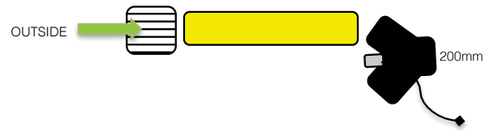


DCT2128



DCT2135 (for both branches of an SV06P/SV06P2/SV06P+/SV02E2 system)



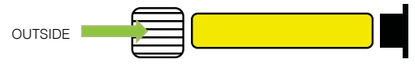


Outdoor Air Supply

Kit	SV01P2 SV01P	SV01L2	SV02E2 SV02P2 SV02P	SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2 SV06P	SV06L+ SV06L2
Outdoor Air Supply	FAN6264				–			

The outdoor supply kit is designed specifically for SV01 & SV02 systems when roof cavity air is not desirable.
The kit contains a fixed grille, duct and filter spigots.*

FAN6264



*** All other systems include these parts in the standard kit.**

Heat Transfer

Seasonal Add-On	SV01P+ SV02P2 SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2 SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2	SV06P+ SV06P2 SV06P	SV06L+ SV06L2
Heat Transfer	FAN2027	–	FAN2027	–	FAN2028	–	FAN2028 (1 branch)	–	–
							FAN4438 (2 branch)		

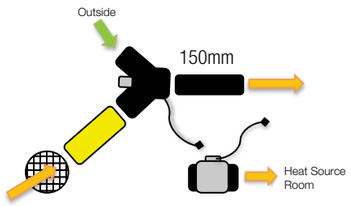
Heat Transfer has a motorised damper that operates to switch the air drawing from either the outside or roof cavity to instead draw air from the room where there is a heat source (usually a lounge) and transfer it to the bedrooms. This seasonal add-on can also provide internal air circulation when roof cavity and/or outside temperatures are too cold. When installing a Heat Transfer seasonal add-on, an adequate heat source is required that is capable of delivering enough excess heat to warm rooms it is transferred to, while remaining effective in the source room.

– It is important to point out that when Heat Transfer is activated, the system is not bringing in fresh air, therefore not ventilating the home – however the home is getting the benefit of transferring heat around the house (e.g. cold winter nights). It also shuts off the air supply back into the heat source room.

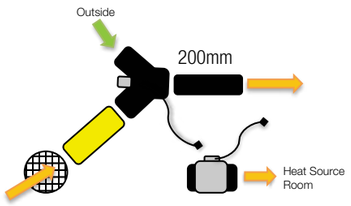
Note:

– Heat Transfer is recommended when there is a heat source that creates excess heat (i.e. wood fire or similar).
– A heat pump sized for the room it occupies may not be suitable for Heat Transfer.
– If planning to use a heat pump with Heat Transfer, first consult the heat pump installer/manufacturer.

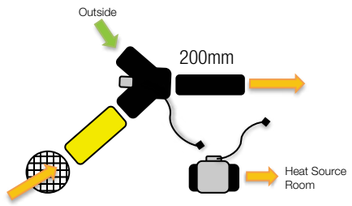
FAN2027



FAN2028



FAN4438



(Includes two sets for each branches
of an SV06P/SV06P2/SV06P+/SV02E2 system)

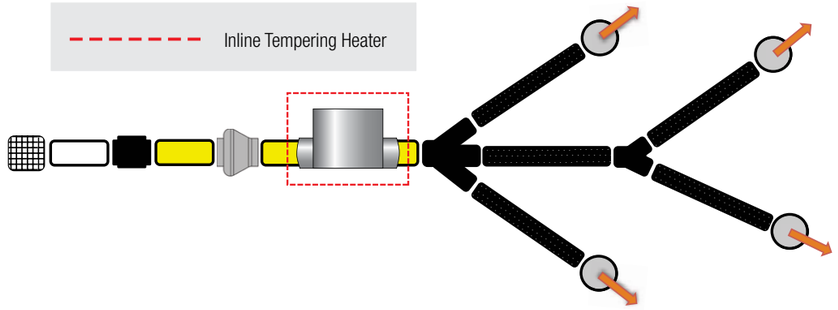
Tempering Heaters

Seasonal Add-Ons		SV01P+ SV01P2	SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2	SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2	SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2	SV06P	SV06L+ SV06L2
Tempering Heater	1 kW	DCT3478	DCT1226	–	DCT3478	DCT1226	–	DCT3231	DCT1483	–	DCT3231	DCT1483	–
	2 x 1 kW*	–			–			–			DCT3418	DCT1491	–
	2 kW	–			–			DCT3230	DCT1484	–	DCT3230	DCT1484	–
	2 x 2 kW**	–			–			–			DCT4613	–	–

** DCT1491 and DCT3418 consist of 2 x 1kW heaters for installation into each branch of an SV06P, SV06P2, SV06P+ or SV06E2 system.*
***DCT4613 consists of 2 x 2 kW heaters for installation into each branch of an SV06P2, SV06P+ or SV06E2 system.*

A Tempering Heater is a 1kW or 2kW element inline heater designed to take the chill off incoming air.

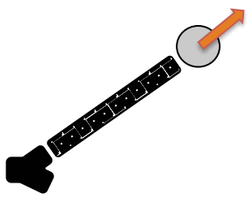
– Specified when the ability to temper the delivered air to a more comfortable temperature is required.
– Tempering heaters will not provide a home heating solution.
– Using a 1kW heater, the temperature of the introduced air can be raised by up to 8°C. The temperature of the home will not increase by this much.
– A SmartVent system with an inline tempering heater is not intended to be a substitute for an effective heating system in the home.



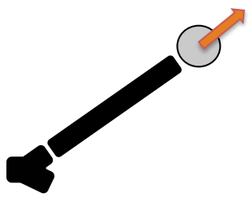
Additional Room Outlets

Kit		SV01P+ SV01P2 SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2 SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2 SV06P	SV06L+ SV06L2
Additional Room	3m Duct	DCT2276	DCT4276	DCT2276	DCT4276	DCT2276	DCT4276	DCT2276	DCT4276
	6m Duct	DCT2667	–	DCT2667	–	DCT2667	–	DCT2667	–
	Through Wall	DCT2286	–	DCT2286	–	DCT2286	–	DCT2286	–

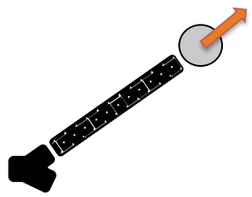
DCT2276



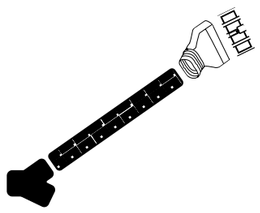
DCT4276



DCT2667



DCT2286

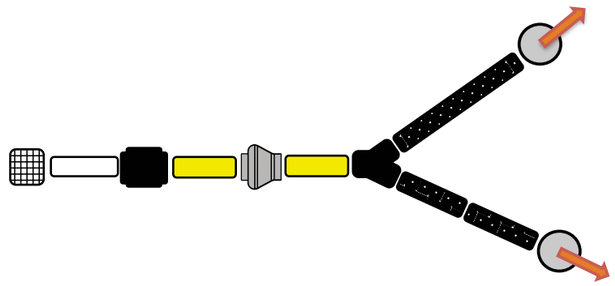


Additional Fans

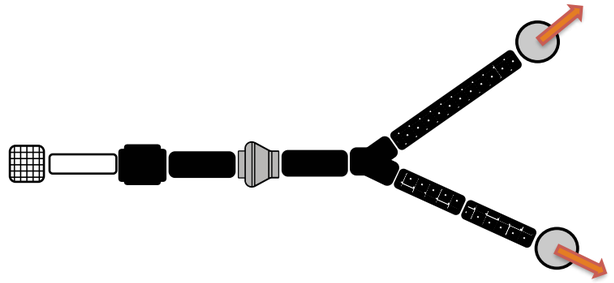
Kit		SV01P+ SV01P2 SV01P	SV01L+ SV01L2	SV02E2 SV02P+ SV02P2 SV02P	SV02L+ SV02L2	SV04E2 SV04P+ SV04P2 SV04P	SV04L+ SV04L2	SV06E2 SV06P+ SV06P2	SV06P	SV06L+ SV06L2
Additional Fan	150mm	FAN5836	–	FAN5836	–	FAN5836	–	FAN5836	–	
	200mm	FAN5837	–	FAN5837	–	FAN5837	–	FAN5837	–	

An additional fan kit allows an additional branch with fan, filter and outlet to be fitted to the system. The additional fan kits enable a single controller to operate two systems where longer duct runs or between floor configurations would normally be required.

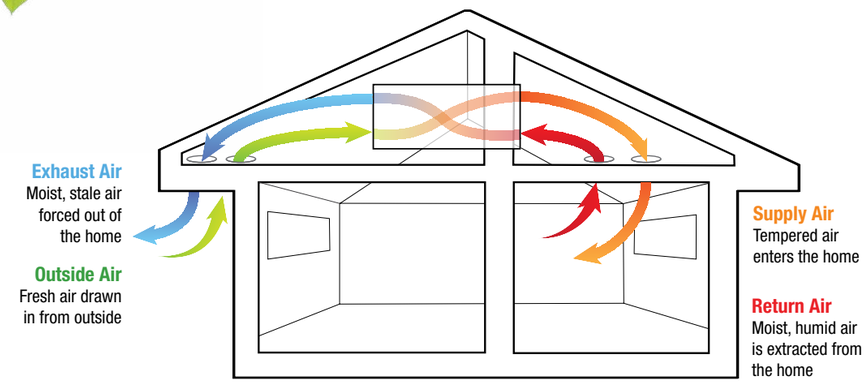
FAN5836



FAN5837



Heat & Energy Recovery Systems



better air = better health

Heat recovery systems recover heat or cooling energy from extracted room air and also heat energy from moist air areas such as bathrooms, while energy recovery systems recover the heat or cooling energy from extracted room air only. Both systems draw fresh air into the home primarily from outside while simultaneously extracting moisture-laden, stale air from inside the home. This simultaneous process is referred to as a balanced system.

Being balanced, the systems are able to use the warmth of the extracted air to temper the clean incoming air as the two airflows pass by each other without the clean incoming air being polluted. The clean air is then distributed in, and around, the home via ceiling diffusers, giving your home a breath of fresh air and more comfortable indoor living conditions.

In winter, it is just so much more important that ventilation systems not only perform their basic function of extracting moist, stale air, but do it in such a way that complements the costly efforts made to warm the home in the first place. A home is not going to remain comfortable and cosy if the “efficient, low cost” ventilation option just brings in a constant flow of cold air from the outside. System performances are best measured by the efficiency of the core. Synergy2 models, with a cross-flow core, deliver up to 75% efficiency. Balance models, with a counterflow core, deliver up to 90%.

Modern homes are significantly more airtight than older homes, meaning moisture build up is more likely to happen ... and faster

Seasonal Add-Ons

SmartVent Synergy2 systems can be further enhanced with the addition of any of the following seasonal add-ons. Heat Transfer and Tempering Heater operations can also be scheduled to maximise convenience.

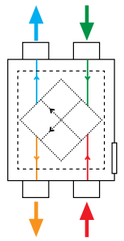
Second Air Source
While standard heat/energy recovery solutions draw air directly from outside, a second air source kit allows air to be drawn from either outside or the roof cavity, allowing you to take advantage of any solar gain, automatically.

Heat Transfer
During cooler months, excess heat from your heated lounge can be easily transfered to your bedrooms.
The recycle feature is a bonus as it can be used to recirculate inside air when the outside temperature is still a bit too cool.

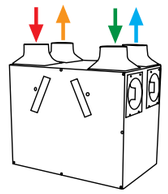
Tempering Heater
When it’s cold outside and you want to take the chill off the incoming air, a 1 or 2kW tempering heater allows you to make the most of the driest air available.

System Components

SmartVent heat and energy recovery solutions deliver filtered fresh air into your home, via an energy or heat recovery core combined with powerful centrifugal fans. System operation is, primarily, set-and-forget. Simply enter your preferred temperature in the home and the system does the rest. Depending on the model that suits your lifestyle and budget, sensing temperature alone, or temperature and the amount of moisture present, with or without seasonal add-ons, there is a SmartVent system for you. Your fully automated, smart wall controller determines the amount of air required to ventilate your home while temperatures and moisture conditions change throughout the day and night. All systems can be manually operated if you want more control, and the flexibility of scheduling seasonal add-ons gives you ultimate control of your home environment. The Balance and Tempra deliver the latest in energy efficient EC fan technology. SmartVent Balance systems include a core bypass to allow outdoor air to be introduced, in warmer months, without being tempered by the hot outgoing air as would normally be the case. Keep bugs and pollens out overnight and bring a fresh filtered breeze in when you need it most.



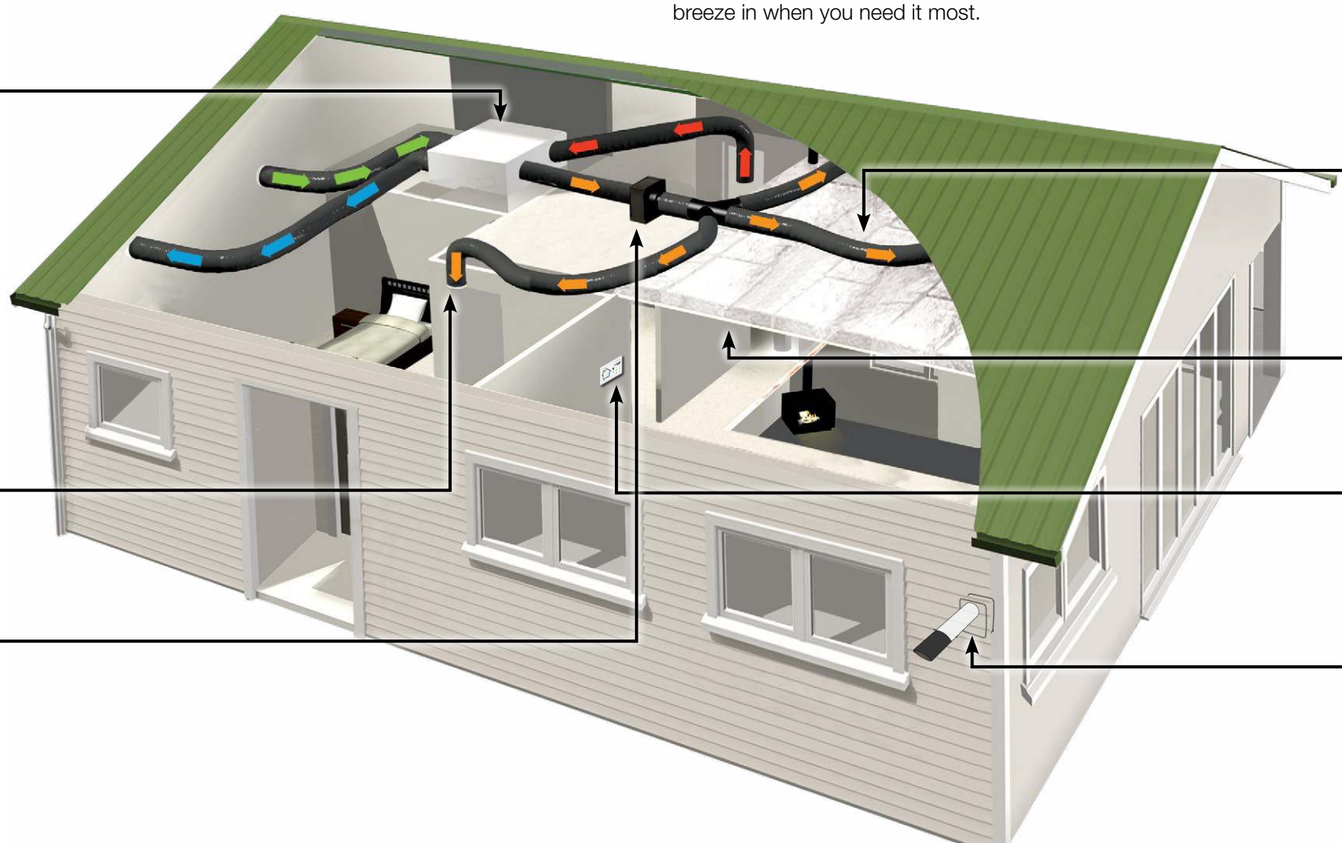
Energy Recovery Core
Synergy2



Heat Recovery Core
Balance

Diffuser

Air Filter



Acoustic Insulated Ducting

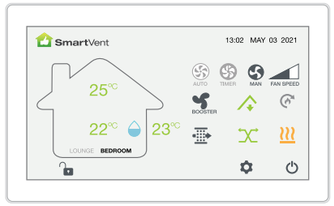
Sensors

Full-Featured Controller

Compact Heat Exchanger

Heat & Energy Recovery Systems

SmartVent synergy2



Control Indoor Climate

Reduce moisture, mould and mildew with multiple seasonal add-on options

SmartVent balance

Control Condensation

Reduce moisture, mould and mildew while maximising energy efficiency

SmartVent tempra

Ventilate Your Room

Single room heat recovery

Systems	Synergy2	Balance	Tempra
1 Room IN / 1 Room OUT			**Tempra**
3 Room IN / 1 Room OUT (expandable)	**SYN1015E2** **SYN2025E2** **SYN3035E2**	**BAL225**	
5 Room IN / 2 Room OUT (expandable)		**BAL405**	

Features	Synergy2	Balance	Tempra
Dew Point Control			
Humidity Sensing	x4		
Temperature Sensing			
Low Temperature Protection			
Auto or Manual Operation	AUTO MAN	AUTO MAN	
Core Efficiency	up to **75%**	up to **90%**	up to **80%**
Core Bypass			
Boost Control			
Filter Change Alert			
Screen Brightness Control			
Trickle Ventilation			
Scheduler	WEEKLY		

Seasonal Add-Ons	Synergy2	Balance	Tempra
Flexible Air Source - Roof Cavity			
Heat Transfer			
Tempering Heater			

Overview

SmartVent Synergy2 is a centralised energy or heat recovery system that constantly evaluates the environmental dynamics in and around your home. Four temperature and humidity sensors measure moisture content throughout the home, in the roof cavity and outside, to calculate dew point which is the measure of when condensation will appear on the windows given the internal temperature and moisture conditions combined with the temperature of the coldest surface. This comprehensive and clever solution can then determine how much improved air quality to introduce to effect change without the risk of over-ventilating. At the heart of these systems the exchange of heat energy from the outgoing air to the incoming air provides an excellent solution for homes built after 2002.

SmartVent Synergy2 Range

Home ventilation system best suited to homes built to modern standards

Model	Description	Product Code
SYN1015E2	3 supply outlets/1 extract (expandable to 4 outlets/2 extracts*) for homes up to 150m^2	FAN6914
SYN2025E2	3 supply outlets/1 extract (expandable to 4 outlets/2 extracts*) for homes up to 250m^2	FAN6915
SYN3035E2	3 supply outlets/1 extract (expandable to 4 outlets/2 extracts*) for homes up to 350m^2	FAN6916

** Contact SmartVent for design advice if more outlets or extracts are required*

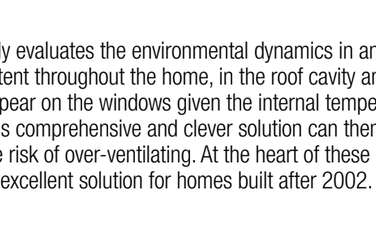
System Extensions

Model	Outlet	Extract
SYN1015E2 / SYN2025E2 / SYN3035E2	DCT4015	DCT4016

Extension kits can be used to add more outlets and extracts to your SmartVent home ventilation system.

Features and Seasonal Add-Ons

Features	SYN1015E2 SYN2025E2 SYN3035E2
Dew Point Control	
Humidity Sensing	x4
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Core Efficiency (ºC)	up to **75%**
Boost Control	
Filter Change Alert	
Screen Brightness Control	
Scheduler	WEEKLY
Seasonal Add-Ons [1]	
Flexible Air Source - Roof Cavity	
Heat Transfer	
Tempering Heater	



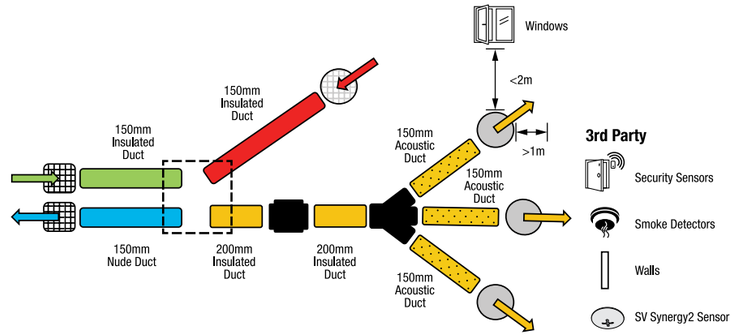
Control Indoor Climate

Reduce moisture, mould and mildew with multiple seasonal add-on options

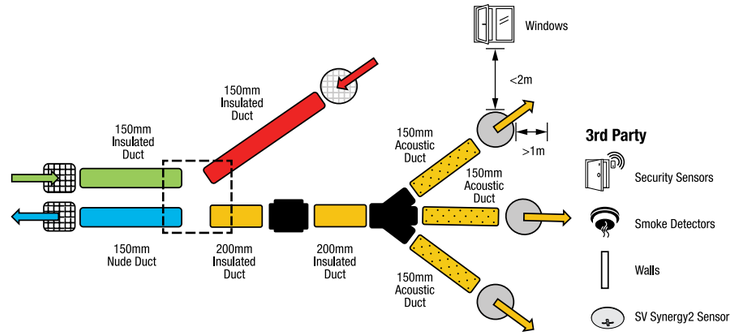
1) See page 41 for full information on Seasonal Add-On options

5 YEAR WARRANTY

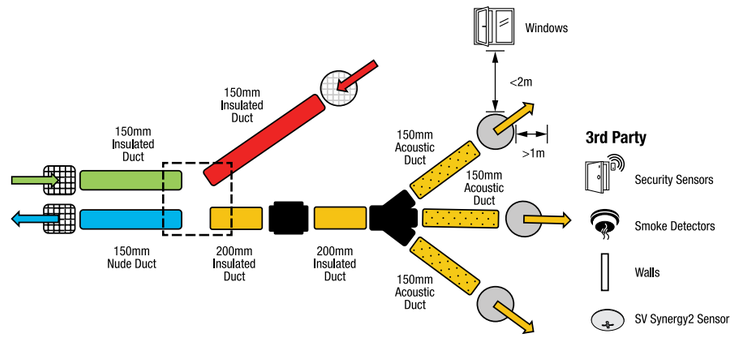
SYN1015E2



SYN2025E2



SYN3035E2



Overview

SmartVent Balance is an energy efficient heat recovery ventilation system designed specifically for new build and low–permeability properties.

These systems incorporate MVHR (mechanical ventilation with heat recovery) technology which effectively uses the heat of the stale air being extracted to temper the incoming cold air to ensure that the loss of heat in the home is kept to a minimum. The warm, moist, stale air is extracted from a central point in the home, such as the hallway or wet rooms, through ducting and passed through the heat exchanger before being exhausted to the outside. Incoming fresh air is filtered and then tempered, without being polluted, via the integral counterflow heat exchanger which recovers up to ***90%*** of the heat energy from the home, that would otherwise be wasted, thus maximising energy efficiency. A built-in core bypass allows for effortless summer operation, this European-inspired and manufactured system is set to impress those looking for the best.

SmartVent Balance Range

Home ventilation system best suited to homes built to modern standards

Model	Description	Product Code
BAL225	3 supply outlets/1 extract (expandable to 4 outlets/2 extracts*) for homes up to 150m^2	FAN6838
BAL405	5 supply outlets/2 extract (expandable to 6 outlets/3 extracts*) for homes up to 350m^2	FAN6839

** Contact SmartVent for design advice if more outlets or extracts are required*

System Extensions

Model	Outlet	Extract
BAL225	DCT4363	DCT4362
BAL405	DCT2334	DCT2335

Extension kits can be used to add more outlets and extracts to your SmartVent home ventilation system.

Features

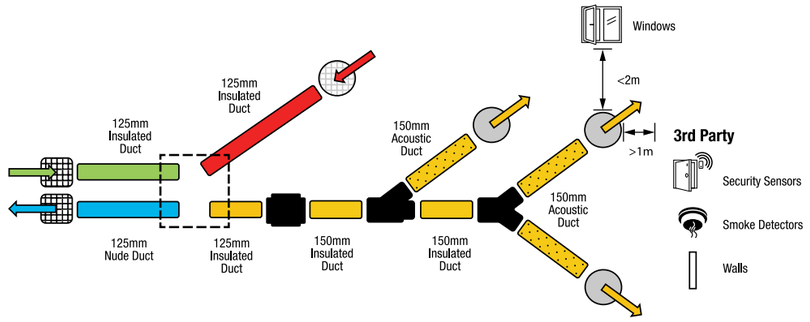
Features	BAL225 BAL405
Humidity Sensing	
Temperature Sensing	
Low Temperature Protection	
Auto or Manual Operation	AUTO MAN
Core Efficiency (ºC)	up to **90%**
Core Bypass	
Boost Control	
Filter Change Alert	

Control Condensation

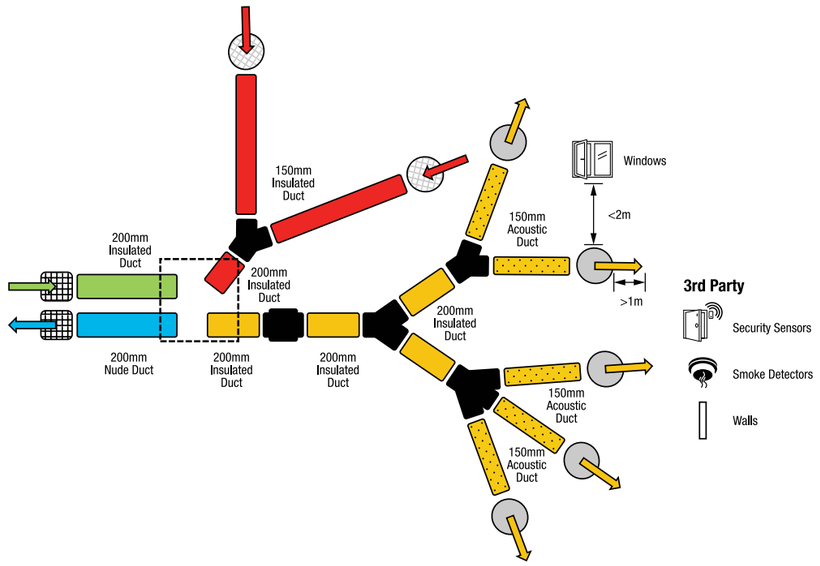
Reduce moisture, mould and mildew while maximising energy efficiency

5 YEAR WARRANTY

BAL225



BAL405



SmartVent tempra

Overview

SmartVent Tempra is a single room heat recovery unit suitable for residential retrofit and new builds, elderly care facilities, student accommodation, military barracks and apartments.

SmartVent Tempra meets the performance requirements for continuous ventilation under the NZ Building Regulations. With a 100mm diameter heat recovery outlet, these units have low energy consumption and low noise levels.

Based on a 2.4m stud and 0.35 ACH (as per NZS4303.1990), SmartVent Tempra can be set to run continuously at 6 l/s (for rooms up to 25m2) or 9 l/s (for rooms up to 37m2), boosting up to 13 l/s, recovering energy from the extracted air and returning it to the dwelling.

The unique, compact heat exchanger has a temperature ***efficiency up to 80%***, saving energy and reducing your carbon footprint while providing quality ventilation in situations where a traditional heat recovery ventilation system is not practical.

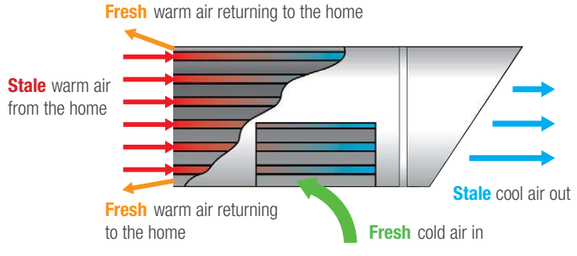
SmartVent Tempra Range

Description	Product Code
Standard Tube	FAN4439
Long Tube	FAN5945

Constant trickle ventilation (24 hours, 7 days) with airflow boost option.
Separated airflows so that extracted moisture extracted is not re-introduced.
Consistently higher heat recovery than units that use "extract-supply cycling" methods.
Low energy consumption.
Low noise.
Security - reduces risk of theft as windows are not required to be left open.
Can be switched to 'extract only' if desired.

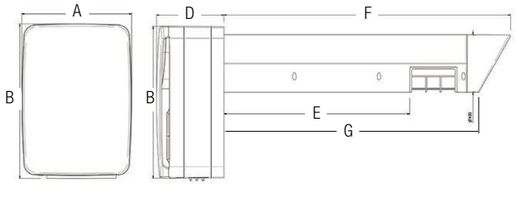
Heat Exchanger

Moist, humid air is extracted from the home
Extracted moist/stale air exits the home
Fresh drier air supplied from outside
Warmed supply air enters the home



Dimensions (mm)

Model	A	B	C	D	E	F	G
FAN4439	190	266	262	117	321	496	450
FAN5945	190	266	262	117	461	636	590



Performance

Specification	Trickle – Low	Trickle – High	Boost
Free Air Performance	6 l/s	9 l/s	15 l/s
Power	3.2W	5.7W	26.6W
Sound*	20 dB(A)	22 dB(A)	36 dB(A)

5 YEAR WARRANTY

** Octave band frequency range of 250Hz to 4KHz at 3m. Unit mounted on a reflective surface.*

SmartVent fresh

NEW COMING SOON

Overview

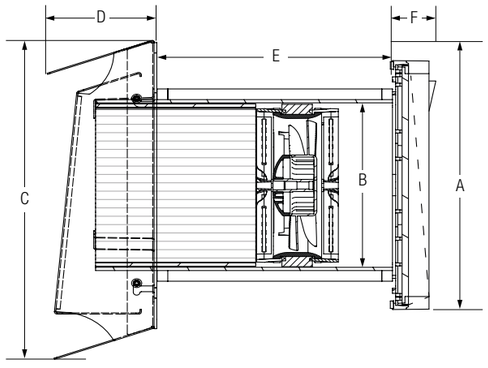
SmartVent Fresh is a decentralised heat recovery system that can scale to provide ventilation from individual rooms to entire properties. The units can work stand-alone, or a specific unit can be turned into a master that can communicate with and control other system components via wireless RF communication (RF866MHz) or via a wired RS485 bus. The system supports simple manual modes and advanced configuration via Bluetooth. The dedicated app supplied with the product supports direct connections with the master device and allows the addition and configuration up to 16 devices/sensors in up to 4 Ventilation Zones.

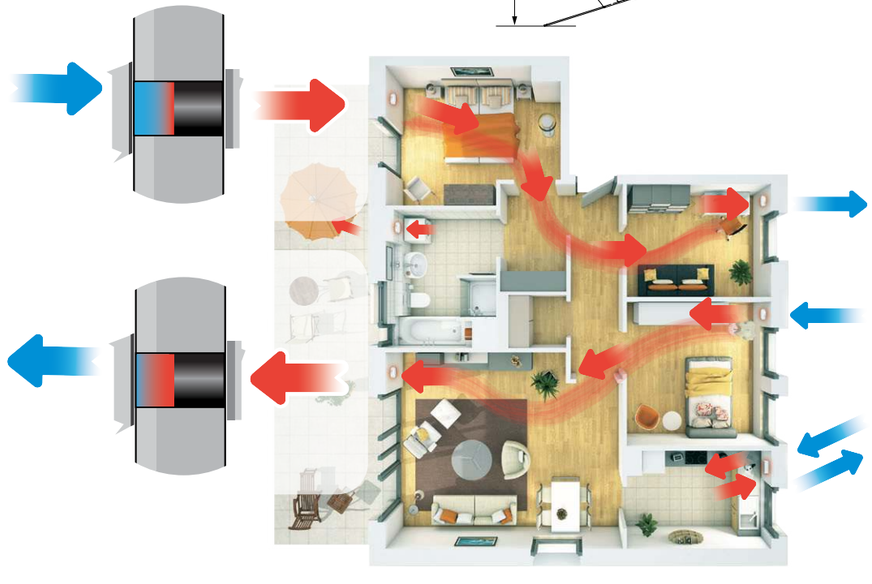
SmartVent Fresh Range

Description	Order Code
dMVHR Decentralised Mechanical Heat Recovery with App control	FAN7390
Wireless e16 wall controller	FAN7391
Outdoor Humidity and Temperature sensor	FAN7392
Indoor Humidity and Temperature sensor	FAN7393
Indoor CO^2 sensor	FAN7394

Dimensions (mm)

A	B	C	D	E	F
270	Ø160	276	80	≥140	44





What is the size of your home (m^2)?	Range selection	How many rooms do you wish to supply to?	How many rooms do you wish to extract from?	Model	Product Codes
Up to 150m²	SmartVent Synergy2	3	1	SYN1015E2	FAN6914
		4	2		DCT4015 Supply DCT4016 Extract
	SmartVent Balance	3	1	BAL225	FAN6838
		5	2		DCT4363 Supply DCT4362 Extract
Up to 250m²	SmartVent Synergy2	3	1	SYN2025E2	FAN6915
		4	2		DCT4015 Supply DCT4016 Extract
Up to 350m²	SmartVent Synergy2	3	1	SYN3035E2	FAN6916
		4	2		DCT4015 Supply DCT4016 Extract
	SmartVent Balance	5	2	BAL405	FAN6839
		6	3		DCT2334 Supply DCT2335 Extract

IMPORTANT

– The information listed above is a guide only. If there is any doubt, please use our design service.

Seasonal Add-Ons		SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Second Air Source		DCT4361			–	
Heat Transfer		FAN6905			–	
Tempering Heater	1 kW	DCT3231			–	
	2 kW	DCT3230			–	
Core Bypass		–			Integrated	

Add–On Kits	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Additional Outlet	DCT4015			DCT4363	DCT2334
Additional Extract	DCT4016			DCT4362	DCT2335
Additional Fans	FAN7017	FAN7018	FAN7019	–	

These recommendations are based on the standard components in the system.

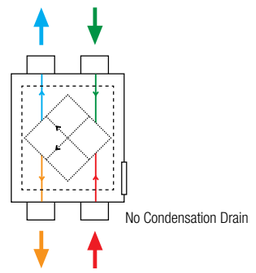
– This selection guide assumes 2.4m stud height, if greater please increase the square metre size by 4% for every 0.1 metre (e.g. for a 2.8m stud height, increase your house size by 16%).
– If you choose to exceed the number of rooms listed in the selection guide above, the performance of the system will be affected.
– Ensure that there is sufficient ceiling space to install all componentry.
– By adding additional outlets to the system the air is being divided amongst more rooms.
– Extra duct may be required depending on the size and layout of the home *(see Accessories on page 54)*.
– For larger homes, or advice on adding outlets or extracts, please contact SmartVent for technical advice on 0800 140 150.

System Controllers	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Synergy2 - Touch Screen 3 Rooms - IN, 1 Room - OUT	FAN6914	FAN6915	FAN6916	FAN6838	–
Balance - Keypad 5 Rooms - IN, 2 Room - OUT	–			–	FAN6839

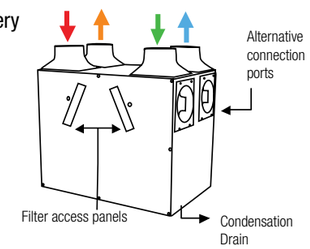
System Componentry	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
150mm Supply Diffuser	3			3	5
125mm Extract Diffuser	–			1	–
150mm Extract Diffuser	1			–	2
125mm Fixed Grille	–			2	–
150mm Fixed Grille	2			–	
200mm Fixed Grille	–			–	2
F7 Filter	1			1	
G3 Filter	2			2	
High Performance Fans	Integrated			Integrated	
Energy Recovery Core	1			–	
Heat Recovery Core	–			1	
150mm x 6m Acoustic Insulated Ducting	3			3	
125mm x 6m Insulated Ducting	–			2	–
150mm x 3m Insulated Ducting	–			1	–
150mm x 6m Insulated Ducting	2			–	2
200mm x 3m Insulated Ducting	1			–	2
125mm x 6m Nude Ducting	–			1	–
150mm x 6m Nude Ducting	1			–	
200mm x 6m Nude Ducting	–			–	1
150/150/150mm Y–Branch	–			1	–
200/150/150mm Y–Branch	–			–	2
200/200/200mm Y–Branch	–			–	1
200/150/150/150mm Double–Branch	1			–	1
150mm Duct Joiner	1			1	1
200mm Duct Joiner	–			–	1
Condensation Drain	–			3m x 19mm	
150mm : 125mm Reducer	–			1	–
200mm : 150mm Reducer	1			–	–
150/150/150mm Branch Take Off	–			1	–

Recovery Core Types

Energy Recovery
SYN1015E2
SYN2025E2
SYN3035E2



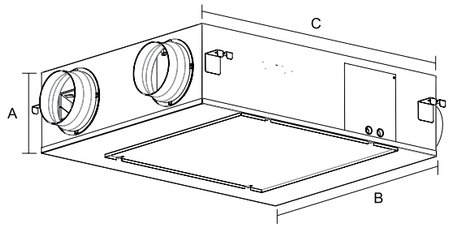
Heat Recovery
BAL225
BAL405



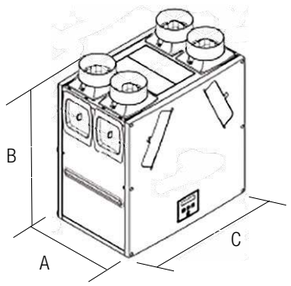
Extracted moist/stale air exits the home
Moist, humid air is extracted from the home
Fresh drier air supplied from the roof cavity or outside
Warm supply air enters the home

Specifications	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Fan Type	AC Centrifugal	AC Centrifugal	AC Centrifugal	EC Centrifugal	EC Centrifugal
Max. Fan Cores	2	2	2	–	–
Spigot Size	150mm	150mm	150mm	125mm	150mm
Fan Speeds	3	3	3	10	10
Max. Air Flow per Fan @ 0 Pa	55 l/s, 198m³/hr	84 l/s, 301m³/hr	122 l/s, 440m³/hr	76 l/s, 275m³/hr	136 l/s, 490m³/hr
Max. Air Flow per Fan @ 150 Pa	29 l/s, 106m³/hr	51 l/s, 183m³/hr	93 l/s, 333m³/hr	62 l/s, 223m³/hr	110 l/s, 395m³/hr
Max. Static Pressure per Fan	263 Pa	308 Pa	401 Pa	380 Pa	600 Pa
Power Supply	220–240V AC 50 Hz	220–240V AC 50 Hz	220–240V AC 50 Hz	220–240V AC 50 Hz	220–240V AC 50 Hz
Total Input Power	95W	136W	215W	128W	173W
Current (A)	0.45A	0.66A	1.03A	0.58A	0.79A
Operating Temp	–10°C to 40°C	–10°C to 40°C	–10°C to 40°C	–20°C to 45°C	–20°C to 45°C
Sound Level	31.5 dB(A)	34 dB(A)	37 dB(A)	39 dB(A)	

Energy Recovery Core Dimensions (mm)	A	B	C
SYN1015E2	220	625	750
SYN2025E2	220	650	820
SYN3035E2	230	770	960



Heat Recovery Core Dimensions (mm)	A	B	C
BAL225	285	550	550
BAL405	524	745	776

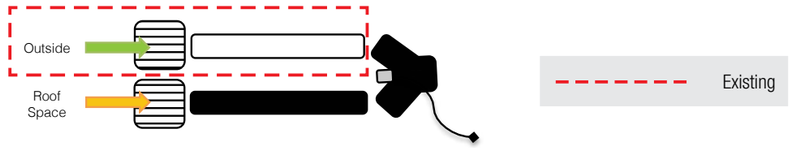


Roof Cavity Air Supply

Seasonal Add-On	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Second Air Source	DCT4361			–	–

Roof Cavity Air Supply is an optional second air intake located in the roof cavity. This seasonal add-on allows the system to utilise the roof cavity temperature for increased air source flexibility.

DCT4361



Heat Transfer

Seasonal Add-On	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Heat Transfer	FAN6905			–	–

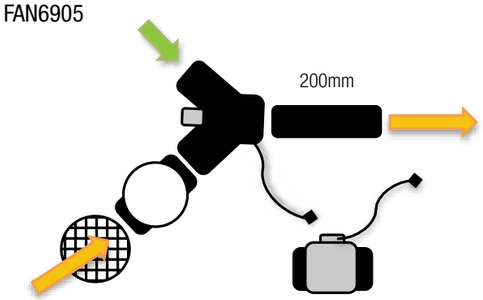
Heat Transfer has a motorised damper and external fan that operates to switch the air drawing from either the outside or roof cavity to instead draw air from the room where there is a heat source (usually a lounge) and transfer it to the bedrooms. This feature can also provide an alternative air supply. When installing a Heat Transfer feature, an adequate heat source is required that is capable of delivering enough excess heat to warm rooms it is transferred to, while remaining effective in the source room.

– It is important to point out that when Heat Transfer is activated, the system is not bringing in fresh air, or extracting stale air, therefore not ventilating the home – however the home is getting the benefit of transferring heat around the house (e.g. cold winter nights). It also shuts off any supply back into the heat source room.

Note:

– Heat Transfer is recommended when there is a heat source that creates excess heat (e.g. wood fire or similar).
– Heat Transfer can also be used to manage the preferred temperature and moisture conditions in the home when added to a SmartVent Synergy2 system.
– A heat pump sized for the room it occupies may not be suitable for Heat Transfer.
– If planning to use a heat pump with Heat Transfer, first consult the heat pump installer/manufacturer.

FAN6905



Recycle

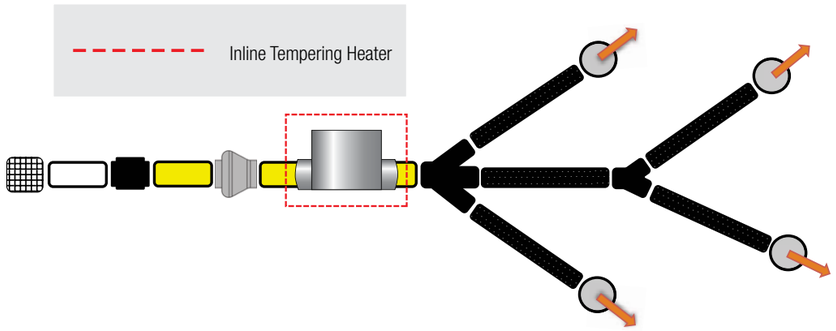
The Recycle function will recycle inside air around the home when other air sources are not suitable. The recycle function for SmartVent Synergy2 systems is a feature of the Heat Transfer seasonal add-on.

Tempering Heater

Seasonal Add-On		SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Tempering Heater	1kW	DCT3231			–	
	2kW	DCT3230			–	

A Tempering Heater is an element in line heater designed to take the chill off incoming air.

- Specified when the ability to temper the delivered air to a more comfortable temperature is required.
- Tempering heaters will not provide a home heating solution.
- The temperature of the introduced air can be raised by up to 8°C. The temperature of the home will not increase by this much.
- A SmartVent system with an inline tempering heater is not intended to be a substitute for an effective heating system in the home.



Core Bypass

Model	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Core By–pass	–			integrated	

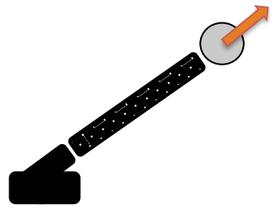
This feature diverts fresh filtered air around the core. This is useful in summer when the outside temperature is assumed to be lower than the inside and you do not want to warm the incoming air with the air you are extracting from the home. A Core Bypass is included as standard in Balance BAL225 and BAL405.

- The Core Bypass enables the system to bypass the core in the summer when heat recovery is not desirable.
  In the summer, Core Bypass ensures the coolest possible air is used to ventilate the home.

Additional Outlets and Extracts

Kits	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Additional Outlet	DCT4015			DCT4363	DCT2334
Additional Extract	DCT4016			DCT4362	DCT2335

DCT4015



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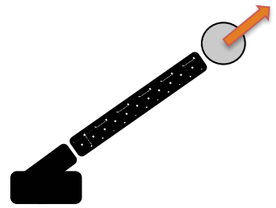

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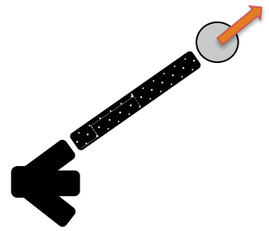

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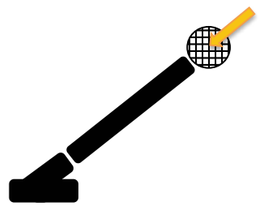

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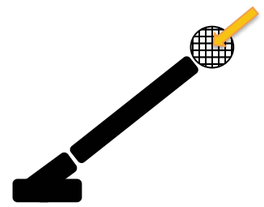

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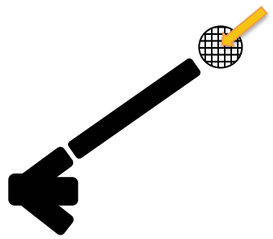
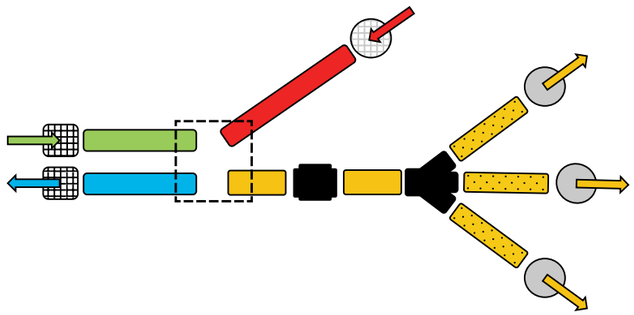


Additional Fans

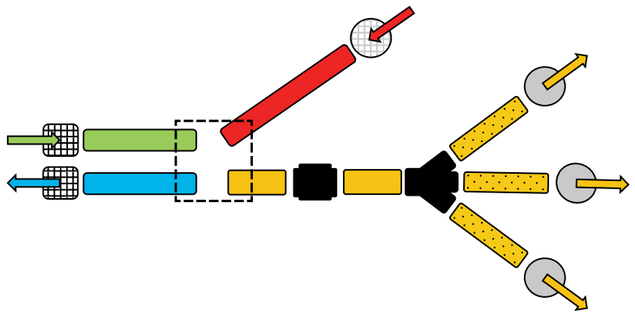
Kits	SYN1015E2	SYN2025E2	SYN3035E2	BAL225	BAL405
Additional Fans	FAN7017	FAN7018	FAN7019	–	

An additional fan kit allows an additional branch with fan, filter and outlet to be fitted to the system. The additional fan kits enable a single controller to operate two systems where longer duct runs or between floor configurations would normally be required.

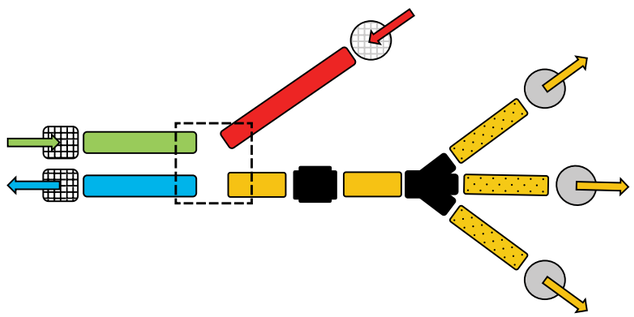
FAN7019



FAN7018



FAN7017



PureAir Room 260X

Vent-Axia

NEW COMING SOON

PURIFY YOUR INDOOR AIR FOR A HEALTHIER HOME ENVIRONMENT

Overview

The Vent-Axia PureAir Room provides a safe space for people suffering from allergies or who want to be sure they are not breathing in harmful pollutants and wish to improve their indoor air quality. The filters of an air purifier will remove airborne contamination and allergens such as dust, pollen, animal dander, dust mites, tobacco smoke, traffic fumes and more. Removing these can make a positive impact to the indoor air you breathe and therefore help to improve your health and wellbeing.

Mycotoxins released by mould spores can cause headaches, eczema & lung conditions such as asthma

House hold dust can be an irritant to our skin and lungs. It is also perfect food for dust mites which produce allergens

Bacteria and viruses spread easily around the home in the air causing cold and flu like symptoms

Odour can be unpleasant but odour also caused by pollutants like aerosols and air fresheners are detrimental health

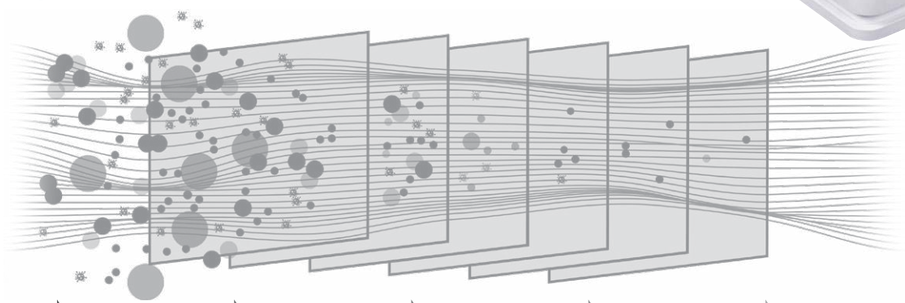
PureAir Room 260X Range

Description	Order Code
PureAir Room 260X Air Purifier with App Control	FAN7450
PureAir Room 260X Replacement Filter	DCT4615

Technical

Supply	220–240V AC, 50Hz	Noise Range	27-45 dB(A)
Rated Power	60W	Dimensions (W*D*H):	350 x 230 x 560mm
Air Flow Rate	260m³/h	Weight	5.8 kg
Timer	1-8 hours	Room size	30m²

Advanced 6 Stage Filtration System



1 Washable Pre–Filter → 2 HEPA Filter → 3 Activated Carbon Filter → 4 Cold Catalyst Filter → 5 Ultraviolet Light → 6 Ionizer

Ideal Room Types: Living Room · Dining Room · Bedroom · Nursery · Home Office · Hotel Rooms

2 yr WARRANTY

SmartVent Evolve2

Q. Can existing SmartVent Positive Pressure systems be upgraded to SmartVent Evolve2?

A. Yes. Product code FAN6990.

Q. What are the main differences between SmartVent Evolve and the new SmartVent Evolve2?

A. *SmartVent Evolve* was operated by a wireless device connected to the ceiling control box via either the supplied router or the customers own internal Wi–Fi.

SmartVent Evolve2 comes with a touch screen wall controller, connected via a cable to new generation sensors and hard–wired to the control box housed in the roof cavity. The *SmartVent Evolve2* control system also has increased functionality, giving more control than ever before to end users.

Q. Is there any difference to the duct and grilles, or generic kit contents for SmartVent Evolve2?

A. *SmartVent Evolve2* models have the same base components that are available in other SmartVent models of the same series, i.e. the base components for SV04P2 (quantity and quality of duct, grilles, branch take–offs, diffusers etc.) are the same for SV04E2.

Q. What are the features of Evolve2?

A. *SmartVent Evolve2* includes features such as:

Air source and in-home temperature and humidity sensing - four combination temperature and humidity sensors are located in and around the home - the roof cavity, outside, living area and one bedroom. This unique combination of sensors measure dew point, which is also known as the point condensation will form on cold surfaces.
Indoor dew point indicator - for the two rooms with sensors, showing the condition of the room selected (lounge or bedroom)
Auto-Ventilation mode - the system chooses where to draw air from and at what speed depending on indoor dew point and temperature levels - in that order. The lounge and bedroom moisture levels have the highest priorities in dictating the fan speed, followed by temperature.
Timer-Ventilation mode - allows user to schedule air source and fan speed over four time periods on any day. This feature allows programming for singular days of the week or multi-selection of days for added convenience.
Manual-Ventilation mode - allows user to manually control fan speed and air source.
Boost mode - allows user to increase to high fan speed for twenty minutes. Also known as 'burnt toast' setting.
Keylock - allows users to lock the screen so settings cannot be accidentally changed.
Timer function - up to four time periods can be customised for operating system enhancements such as Heater or Heat Transfer upgrades.
Seasonal Add-Ons - Heat transfer, Summer Feature and Tempering Heater

SmartVent Positive+

Q. How is SmartVent Positive+ different to SmartVent Positive2?

A. The humidity sensing function monitors humidity in the supply air and inside your home, ensuring your home will only be ventilated with air that helps make it healthier and drier.

SmartVent Positive+ includes new features such as:

Incoming air humidity sensing – the humidity sensor located in the filter housing, allows true air humidity reporting, whether the air coming into the home is from the roof cavity, outside or the lounge.
Room air humidity sensing – integral to the wall controller; the humidity sensor measures the humidity of the home and uses this to assist with the systems operation.

SmartVent Positive+ has the same features such as:

Boost mode – allows user to increase to high fan speed for a short period of time – also known as 'Burnt toast' setting. The time spent in Boost is user adjustable.
Keylock – allows users to lock the screen so settings cannot be accidentally changed.
Timer function– up to four time periods can be customised for operating system enhancements such as Heater or Heat transfer upgrades.
Rental property lock – allows property owners to set the system so tenants cannot switch off the system, but can still adjust functions such as fan speed, preferred temperature, and timer modes.
Incoming air temperature sensing – the temperature sensor located in the filter housing, allows true air temperature reporting, whether the air coming into the home is from the roof cavity, outside or the lounge.
Room temperature sensing – integral to the wall controller; the temperature sensor measures the temperature of the home and uses this to assist with the system's operation. Best practice is to install the wall controller in the living area, such as a lounge. This ensures the system is futureproofed for upgrades.
Seasonal Add-Ons – Heat Transfer, Summer Feature and Tempering Heater.

Q. Can I replace my current SmartVent Positive2 wall controller with the SmartVent Positive+ wall controller?

A. Not directly. To replace the wall controller and gain the benefits of the SmartVent Positive+ range, you may also need to replace the filter housing, the sensor cable and depending on the generation of ceiling control box this may also need to be replaced. The product code for SmartVent Positive+ controller upgrade is FAN7361. The product code for the SV04 and SV06 filter housing is DCT4558. The product code for the SV01 and SV02 filter housing is DCT4612.

Q. Are the SmartVent Positive2 fan, duct, and grill components the same for SmartVent Positive+?

A. Yes.

SmartVent Positive2

Q. How do the sensors differ between SmartVent Positive2 and SmartVent Positive+?

A. *SmartVent Positive2* has two temperature sensors, one located on the wall controller and an NTC temperature sensor that fits in the filter housing, measuring the temperature of the supply air and inside your home.

SmartVent Positive+ has two temperature and humidity sensors, one located on the wall controller and one that fits in the filter housing, measuring the temperature and humidity of the supply air and inside your home.

Q. What are the features of Positive2?

A. *SmartVent Positive2* includes features such as:

Boost mode - allows user to increase to high fan speed for a short period of time. Also known as 'burnt toast' setting.
Keylock - allows users to lock the screen so settings cannot be accidentally changed.
Timer function - up to four time periods can be customised for operating system enhancements such as Heater or Heat Transfer upgrades.
Incoming air temperature sensing - the temperature sensor located in the filter housing, allows true air temperature reporting, whether the air coming into the home is from the roof cavity, outside or the lounge.
Room temperature sensing - integral to the wall controller; the temperature sensor measures the temperature of the home and uses this to assist with the system's operation. Best practice is to install the wall controller in the living area, such as a lounge. This ensures the system is future-proofed for upgrades.
Seasonal Add-Ons - Heat transfer, Summer Feature and Tempering Heater

SmartVent Lite+

Q It looks similar, but is SmartVent Lite+ the same as SmartVent Positive2 or SmartVent Positive+?

A. No. Both *SmartVent Positive2* and *SmartVent Positive+* allow seasonal add-ons such as Summer Feature, Heat Transfer and Tempering Heaters and incorporate greater functionality that is not available with *SmartVent Lite+*.

Q. How is SmartVent Lite+ different to SmartVent Lite2?

A. The humidity sensing function monitors humidity in the supply air and inside your home, ensuring your home will only be ventilated with air that helps make it healthier and drier.

SmartVent Lite+ includes new features such as:

Incoming air humidity sensing – the humidity sensor located in the filter housing, allows true air humidity reporting, whether the air coming into the home is from the roof cavity, outside or the lounge.
Room air humidity sensing – integral to the wall controller; the humidity sensor measures the humidity of the home and uses this to assist with the systems operation.

SmartVent Lite+ has the same features such as:

Boost mode – allows user to increase to high fan speed for a set period – also known as 'Burnt toast' setting. The time spent in Boost is user adjustable.
Keylock – allows users to lock the screen so settings cannot be accidentally changed.
Timer function – up to four time periods can be scheduled using the ventilation scheduler, which allows users to customise how the system operates including set OFF periods.
Rental property lock – allows property owners to set the system so tenants cannot switch off the system but can still adjust functions such as fan speed and preferred temperature.
Incoming air temperature sensing – the temperature sensor located in the filter housing, allows true air temperature reporting, whether the air coming into the homevis from the roof cavity, outside or the lounge.
Room temperature sensing – integral to the wall controller; the temperature sensor measures the temperature of the home and uses this to assist with the systems operation. A central location in the home for the wall controller is recommended.

Q. Are the duct components in SmartVent Lite+ the same as SmartVent Positive+?

A. No. The duct used in *SmartVent Lite+* is the same high-quality duct, however there is more nude duct in the system as it is not necessary to insulate duct in systems without upgrade potential.

Q. Can I replace my current SmartVent Lite or SmartVent Lite2 wall controller with the SmartVent Lite+ wall controller?

A. Not directly. To replace the wall controller and gain the benefits of the *SmartVent Lite+* range, you may also need to replace the filter housing and the sensor cable.
We are not planning a replacement kit at this stage.

SmartVent Lite+

Q. Are the SmartVent Lite2 fan, duct, and grill components the same for SmartVent Lite+?

A. Yes.

Q. How do the sensors differ between SmartVent Lite2 and SmartVent Lite+?

A. *SmartVent Lite2* has two temperature sensors, one located on the wall controller and an NTC temperature sensor that fits in the filter housing, measuring the temperature of the supply air and inside your home.

SmartVent Lite+ has two temperature and humidity sensors, one located on the wall controller and one that fits in the filter housing, measuring the temperature and humidity of the supply air and inside your home.

SmartVent Lite2

Q Is SmartVent Lite2 the same as SmartVent Positive2?

A. No. *SmartVent Positive2* allows seasonal add-ons such as Summer Feature, Heat Transfer and Tempering Heaters and incorporates greater functionality that is not available with *SmartVent Lite2*.

Q. Are the duct components in SmartVent Lite2 the same as SmartVent Positive2?

A. No. The duct used in *SmartVent Lite2* is the same high–quality duct, however, there is more nude duct in the system as it is not necessary to insulate duct in systems without a seasonal add-on such as heat transfer.

Q What SmartVent Lite2 & Lite+ features are the same?

A. *SmartVent Lite2* has the same features such as:

Boost mode – allows user to increase to high fan speed for a set period – also known as 'Burnt toast' setting. The time spent in Boost is user adjustable.
Keylock – allows users to lock the screen so settings cannot be accidentally changed.
Timer function – up to four time periods can be scheduled using the ventilation scheduler, which allows users to customise how the system operates including set OFF periods.
Rental property lock – allows property owners to set the system so tenants cannot switch off the system but can still adjust functions such as fan speed and preferred temperature.
Incoming air temperature sensing – the temperature sensor located in the filter housing, allows true air temperature reporting, whether the air coming into the home is from the roof cavity, outside or the lounge.
Room temperature sensing – integral to the wall controller; the temperature sensor measures the temperature of the home and uses this to assist with the systems operation. A central location in the home for the wall controller is recommended.

Q. Are the SmartVent Lite2 fan, duct, and grill components the same for SmartVent Lite+?

A. Yes.

Q. How do the sensors differ between SmartVent Lite2 and SmartVent Lite+?

A. SmartVent Lite2 has two temperature sensors, one located on the wall controller and an NTC temperature sensor that fi ts in the filter housing, measuring the temperature of the supply air and inside your home.

SmartVent Lite+ has two temperature and humidity sensors, one located on the wall controller and one that fits in the filter housing, measuring the temperature and humidity of the supply air and inside your home

SmartVent Synergy2

Q. Can existing SmartVent Synergy or Synergy Evolve systems be upgraded to SmartVent Synergy2?

A. Yes. Product code FAN6997.

Q. What are the main differences between SmartVent Synergy Evolve systems and SmartVent Synergy2?

A. *SmartVent Synergy Evolve* was operated by a wireless device connected to the ceiling control box via either the supplied router or the customers own internal Wi–Fi.

SmartVent Synergy2 comes with a touch screen wall controller, connected via a cable to new generation sensors and hard–wired to the control box housed in the roof cavity. The *SmartVent Synergy2* control system also has increased functionality, giving end users more control than ever before.

Q. Is there any difference to the duct and grilles, or generic kit contents for SmartVent Synergy2?

A. No. *SmartVent Synergy2* models have the same base components that are available in other SmartVent models of the same series, i.e. the base components for *Synergy Evolve 1015E* (quantity and quality of duct, grilles, branch take–offs, diffusers etc.) is the same for SYN1015E2.

Q. Is there a Heat Transfer seasonal add-on available for SmartVent Synergy2?

A. Yes. We have redesigned the heat transfer seasonal add-on for this release. Product Code details can be found in the Accessories selection guide.

Q. When should I recommend SmartVent Synergy2?

A. *SmartVent Synergy2* is best installed into homes built to modern building standards. It is not usually recommended to install ERV or HRV systems into homes built prior to the year 2002. Please contact us for advice on best practice.

SmartVent Balance

Q. Can existing SmartVent 405 systems be upgraded to SmartVent Balance?

A. Please contact us for technical advice.

Q. What is special about SmartVent Balance?

A. The *SmartVent Balance* system comes in two sizes with the very latest counterflow core construction to maximise heat recovery. *SmartVent Balance* includes an integrated core bypass as standard for use in the summer months and energy efficient EC fan technology.

Q. When should I recommend SmartVent Balance systems?

A. *SmartVent Balance* is best installed into homes built to modern building standards. It is not usually recommended to install HRV systems, such as *SmartVent Balance*, into homes built prior to the year 2002.

Q. Can I install SmartVent Balance in spaces other than the roof cavity?

A. *SmartVent Balance* is installed vertically and can also be installed into either cupboard space in utility rooms or in a roof cavity. The spigots can be orientated in two positions on top, or on the side, for maximum versatility. Please contact us for advice on best practice.

Air Changes per Hour (ACH)

The New Zealand Building Code recommends a minimum of 0.35 air changes per hour.

Our positive pressure systems are designed to deliver 1 air change per hour. Our energy recovery systems are designed to deliver 0.5 air changes per hour.

Note: The number of ACH required will vary from house to house.

Bathroom Extraction MANROSE

From 27 June 2019 the new G4 and AS/NZS standards came into effect. The G4 Building Code covers the now mandatory extract ventilation requirements for bathrooms and kitchens and the updated AS/NZS standards provide the latest guidelines for internal wet area zones in general. In addition, the Healthy Homes Standard makes it a requirement to fit extract fans in rental properties.

Filters

F7 Filter

SmartVent high grade F7 filters capture 80 – 90% of fine pollens, dusts and allergens from the air are included with all systems, making the air cleaner to breathe. All SmartVent systems come standard with an F7 filter.

F7 Filter with Carbon

If there is concern about smell from the roof cavity, outside, or from the fire if heat transfer is installed. Carbon filters remove odours.

Note: Carbon filters will reduce the air flow through the system.

HEPA Filter with Carbon

A high quality HEPA filter is available if required, for families with asthma and allergy sufferers.

Note: HEPA filters will reduce the air flow through the system.

G3 Filters

SmartVent Synergy2 and Balance systems have two primary G3 filters installed, as standard, to protect the core from debris build–up. Periodically, these filters will need to be maintained/cleaned. Replacement G3 filters are available as a spare part. Contact SmartVent on 0800 140 150 for assistance.

Diffusers

The diffusers are flat so therefore distribute the air across the ceiling and down the walls and windows to help reduce condensation. As a result the air is distributed further around the room.

Note: Diffusers are adjustable to allow balancing of airflow delivery for each room.

Heating Systems

- ☑ Pellet fires, wood fires, electric heaters or heat pumps
- ☒ Portable LPG gas heaters or un–flued fixed gas appliances

Un–flued gas appliances of both kinds release large volumes of moisture into the air the entire time they operate. This can result in condensation levels being higher and also make the moisture content in the air difficult to treat with a ventilation system. We recommend homeowners use different forms of heating. Gas appliances with a flue are acceptable because they expel moisture externally.

Note:

- Heat transfer should only be specified when there is a heat source that creates excess heat i.e. wood fire or similar.
- A heat pump sized for the room it occupies is not suitable for heat transfer.
- If planning to use a heat pump with heat transfer, first consult your heat pump installer/manufacturer.

Heat Trans Systems HeatTrans

If the home already has a Simx HeatTrans system installed you have three options:

- Re–use the duct and diffusers and install a SmartVent Positive Pressure system with a Heat Transfer seasonal add-on incorporated.
- Re–use the duct and diffusers and install a SmartVent Synergy2 system to replace a HeatTrans system
- Upgrade older models of HeatTrans with a touchscreen controller (FAN7194).

House Size

The first step when specifying a SmartVent system is how many square metres the home is excluding the garage.

A secondary (but just as important) factor is the stud height. The square metre (m^2) used in the selection charts is based on a stud height of 2.4m.

House Layout

The layout and orientation of the home, the way it is heated, as well as the construction all have an influence on the system to specify.

Note: Use graph on the last few pages of this guide to map your layout. Plan where the outlets will be placed in each room.

Two Storey Houses

Access to lower floors can be achieved through cupboards, wardrobes and other voids.

Consider increasing the size of the kit specified if there is more than one duct run required to a lower floor.

It is better to specify a larger or two–fan system particularly if the ground floor is concrete block with aluminium joinery and/or a large area. See page 21 for additional fan options.

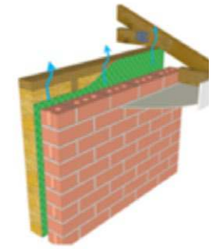
Open Cavity Walls

There are three general classifications for wall cavity systems. A drained and ventilated cavity separates the cladding from the wall by a cavity that is vented at the top and bottom and detailed to allow water to drain from the base of the wall. Open rainscreen walls follow a similar design, but without deliberate openings at the top of the cavity. A drainage plane separates the cladding from the inner wall by a narrow cavity of only a few millimetres thickness that is only intended to drain water from the back of the cladding.

Brick veneer is the most widely used drained and ventilated wall type in New Zealand, with a sound history of managing water leakage. Recommendations for cavity depth and ventilation opening sizes vary little between standards and the practical literature on design and construction, with minimal change to the systems underlying principles.

A typical eave detail allows the wall cavity to open into the roof cavity (see below). Considering the purpose of the wall cavity is to remove moisture by using air to transport it away, it stands that air vented into the roof cavity increases the risk of moisture –related issues in roof spaces.

Large amounts of moisture can enter the roof space,particularly when the wall cavity is subject to excessive wetting from poor window flashings or non–sealed façade materials. Protecting the structure from moisture has always been one of the primary goals of product manufacturers, builders and practitioners. Buildings are not perfect, leaks still occur, and the role of drying is very important to the moisture balance.



Moisture ventilated into roof cavity increases the risk of condensation in the roof cavity

Typical examples of NZ homes with open –wall cavities

Usually described as a 1950 or 1960's brick home, these types of homes are very common throughout New Zealand. A quick on –site check is all it takes to identify whether this is the case.

1. Identify whether the home is on piles.
2. Yes – its open–wall cavity – you need to assist your customer to understand the next steps
3. No – its on a concrete base – usually you are ok to specify a standard system

If the home is on piles it is unlikely a positive pressure system drawing air from the roof cavity will be a practical addition to the property. You have the following options:

1. Always install a vapour barrier to cover the ground under the home (regardless of other recommendations you make, this is critical to moisture control) and,
2. Install a SmartVent system drawing directly from under the eave (no roof cavity intake) and,
3. Add an optional 1kW or 2kW tempering heater.

Unvented Appliances

Unvented range–hoods, bathroom extraction fans and clothes dryers not only fill the roof cavity or home with moisture, they may not be compliant with current building regulations. If you are installing any ventilation system into your customer's home, you should also recommend the homeowner duct these appliances to the outside.

Roof Cavity and Access

Ensure you have enough room to install the system and access it for maintenance. Note any areas you may not be able to access (i.e. flat roof, lower floor rooms), be aware of any potential problem areas and discuss these with your customer.

A minimum of 500mm is recommend to fit SmartVent positive pressure systems.

Note: Check the dimensions of the product to ensure access to the roof space is available.

Supply Outlets and Return Air Supply

SmartVent supply outlets should be placed in your living areas and bedrooms, ideally in a central position. If necessary to offset do so on the window side of centre.

Place the supply outlets at least one metre from any vertical surface (wall) and away from the entrance to an ensuite or bathroom. In a living room try to install a supply outlet near the centre of the room.

A centrally placed supply outlet in the hall is not recommended as there is no guarantee the occupants of the home will keep the bedroom doors open overnight or that sufficient amounts of air would enter the bedroom, which are areas where condensation is often a problem.

Under ideal conditions, supply air to the perimeter of the home and extract from the centre. Consider the overall airflow pattern.

SmartVent Synergy2 and SmartVent Balance return air vents should be centrally placed in the home for maximum benefit.

Ducting Runs

Once you have decided the supply outlet locations, connect ducting to the back of the diffuser, then work towards the centre of the home to ascertain a central position for the fan, preferably above a utility room, bathroom or similar. Positioning the fan above bedrooms is not recommended.

Note: Avoid long duct runs by placing the fan centrally.

- Longer duct runs should have fewer supply outlets.
- The highest percentage of air should go through the longest duct run – adjust diffusers to suit.
- Two duct runs in parallel will move more air than one long run.
- The more duct and bends, the less air that will be delivered into spaces.
- The longer the duct run the more resistance against the fan and the less air will be delivered to the home.
- Install duct fully extended. Do not install in a compressed state.
- Cut out excess duct and avoid unnecessary bends.

Ducting Joins

Double tape every join in the duct and always use a duct joiner to join two lengths of duct.

Note: If you do not use a duct joiner the duct may collapse over time and the join may separate. This is a common fault in installations and the simplist to get right. Be sure to correctly pull down the blanket insulation and double tape a join.

Ducting Support

Hanger or saddle material in contact with the flexible duct shall be of sufficient width to prevent any restriction of the internal diameter of the duct when the weight of the supported section rests on the hanger or saddle material.

Flexible duct may rest on ceiling joists or truss supports. Maximum spacing between supports should not exceed 1.5m.

Ducting Branches

- Y–branches will split the air 50/50.
- DBTO (Double Branch Take Off) will split the air relative to the outlet sizes. If a DBTO is used, ensure the central take–off is used to where the most air is required.

Note: When you add branches or extension kits to the system try to ensure duct runs are of similar lengths.

Extract – Heat Transfer

Do not place the intake less than 2 metres away from the flue, in order to protect the fan motor from high heat.

Place the Heat Transfer intake across the room from the heat source to ensure heat travels across the room prior to being extracted.

SmartVent Evolve2 Systems

One of the sensors must be in the heat source room

The wall controller does not need to be located in the heat source room.

SmartVent Positive2 and Positive+ Systems

The wall controller must be in the heat source room.

Non–Standard installations

SmartVent can recommend solutions (e.g. roof kits, low profile ducting) for unusual installations.

A useful onsite tool. Use this graph to sketch a plan of the home and intended layout.

Accessories

Acoustic Insulated Duct

150mm x 3m	DCT0633
150mm x 6m	DCT0634
200mm x 3m	DCT0635
200mm x 6m	DCT0636

Insulated Duct

150mm x 3m	DCT0583
150mm x 6m	DCT0584
200mm x 3m	DCT0585
200mm x 6m	DCT0586

Nude Duct

150mm x 3m	DCT0561
150mm x 6m	DCT0562
200mm x 3m	DCT0563
200mm x 6m	DCT0564

Duct Fasteners

Hanging Strap	DCT2299
Duct Tape 48mm x 5m	DCT0173
Duct Tape 48mm x 30m	DCT0807

Duct Joiners

150mm Metal	DCT0723
200mm Metal	DCT0724

Y Branch

150–150–150	DCT1233
200–150–150	DCT0379
200–200–200	DCT0376
250–200–200	DCT0471

Branch Take Off

200–200–150	DCT0877
250–250–150	DCT0880

Double Branch Take Off

200–150–150–150	DCT0889
250–200–150–150	DCT0891

Fixed Louvre Grilles – White Plastic

125mm	DCT0041
150mm	DCT0063
200mm	DCT0340

Ceiling Diffuser – Square White Plastic

150mm Flat	DCT2208

Extract Diffuser – Round White Plastic

150mm	DCT2610
200mm	DCT2611

Noise Reduction Fan Housing

150/200mm Centrifugal	DCT2297
150/200mm Mixed Flow	DCT2298

Replacement Filters

G4 Sock	DCT1411
G4 Filter	DCT2221
F7 Filter/EU 7	DCT2093
F7 with Carbon Filter	DCT2277
HEPA with Carbon Filter	DCT2278

Replacement Filters (2 Pack)

G3 Filter for BAL225	DCT4493
G3 Filter for BAL405/405 PLUS	DCT4494
G3 Filter for SYN190/E/E2	DCT4495
G3 Filter for SYN1015/E/E2	DCT4496
G3 Filter for SYN2025/E/E2	DCT4497
G3 Filter for SYN3035/E/E2	DCT4498

Extension Leads

3m Fan Lead (4–wire)	FAN2190
3m Heater or Damper Lead (3–wire)	FAN2194

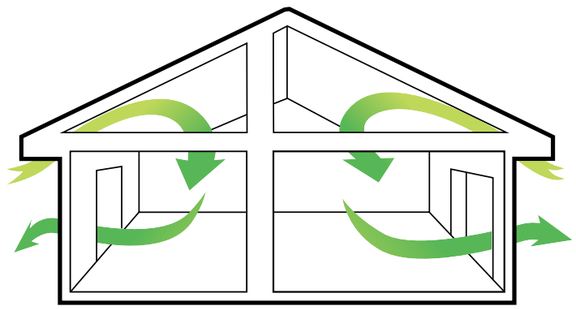
Other Accessories

SmartVent is able to offer a full range of ducting accessories. Contact us to discuss any specific ducting requirements you may have.

Available in soft copy to send out with every quote

SmartVent

the expert's choice



Fresh filtered air in - moist stale air out

ASK HOW WE CAN DO IT FOR YOU

www.smartvent.co.nz

The team at SmartVent is committed to our sustainability goals including reusing all packaging bearing this mark ♻ please ask your installer for more information on this exciting initiative.

SmartVent

www.smartvent.co.nz

General enquiries ph: 0800 140 150

Specifications are subject to change without notice